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VISION 2100

A BLUEPRINT FOR HUMANITY

The Foundational Vision, Strategic Agenda, and Long-Term Global Development Framework of Ambassador Ivonne A-Baki

Ambassador Ivonne A-Baki
Foundational Vision and Leadership Principles

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Vision 2100 — A Blueprint for Humanity

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The Foundational Vision, Strategic Agenda, and Long-Term Global Development Framework of Ambassador Ivonne A-Baki

Building a world of sovereign nations, shared prosperity, technological advancement and lasting peace — 2026 to 2100: from vision to implementation.

Credits

Ambassador Ivonne A-Baki — Foundational Vision and Leadership Principles

William Michael Hadala Jr. — Principal Strategic and Technical Architect

A113 Partners — Strategic Research, Architecture, and Publication Development

Origin of the recommendations

The foundational vision and leadership principles credited to Ambassador A-Baki are those she has stated in public, principally in her interactive dialogue with the United Nations General Assembly on 20 August 2026 and in the original Vision 2100 statement (2026). Passages drawn from her public record are labeled DOCUMENTED throughout the book.

All technical, economic, geopolitical and implementation recommendations in this book — including its programs, pilots, architectures, cost ranges, financing structures, governance mechanisms, decision gates and performance indicators — originate with A113 Partners under the direction of the Principal Strategic and Technical Architect. Where the book says "Vision 2100 proposes" or "this book recommends", it speaks for A113 Partners. It does not speak for Ambassador A-Baki, for the United Nations or any of its organs, or for any government, institution or royal household.

> ENDORSEMENT
>
> Ambassador Ivonne A-Baki reviewed this book and endorsed it for publication on 2 November 2026, including its publication identity, the credits shown on this page, the Message that bears her name and every passage presenting her statements. Her endorsement does not make her the author of the book's technical, economic, geopolitical or implementation recommendations, which remain those of A113 Partners.

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Comments, corrections and challenges to any claim, figure or recommendation in this book are invited at the address above. The verification and assumptions registers in Appendices A and C set out how corrections are logged and published.

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Ambassador Ivonne A-Baki reviewed this book and endorsed it for publication on 2 November 2026, including its publication identity, her credit, the Message that bears her name and every passage labeled DOCUMENTED. Her credit refers to the foundational vision and leadership principles she has stated publicly; the book's technical, economic, geopolitical and implementation recommendations remain those of A113 Partners.

This book contains no photographs of persons and does not reproduce the emblem, flag or name of the United Nations as a mark of sponsorship. References to the United Nations describe an institution, not a partner.

The evidence convention

Every passage that makes a claim falls into one of four classes.

- **Evidence.** Independently sourced facts, shown by numbered citations to dated sources listed at the end of each part and consolidated in Appendix B.
- **Proposals.** Recommendations of Vision 2100, developed by A113 Partners and written explicitly as proposals ("Vision 2100 proposes..."). A proposal is not a commitment by any person, government or institution.
- **DOCUMENTED.** Statements by Ambassador A-Baki drawn from her 20 August 2026 dialogue with the UN General Assembly or the original Vision 2100 statement (2026), marked with a gold label. The UN transcript of that dialogue is machine-generated and not an official record; paraphrases have been checked against it.
- **ILLUSTRATIVE.** Scenarios, archetype examples, cost ranges and planning assumptions, marked with a grey label. They are not forecasts.

Appendix A sets out the research method and evidence standards; Appendix C records each verified claim, its source, date and confidence, and every planning assumption.

Conflict-of-interest disclosure

> **CONFLICT-OF-INTEREST DISCLOSURE**
>
> The Principal Strategic and Technical Architect, William Michael Hadala Jr., serves as Chief Strategy Officer of American Lithium Energy Corporation, a U.S. battery manufacturer, and founded A113 Partners and A113 Defense, which work on federal technology intelligence and autonomous systems integration. Recommendations in this book touching batteries, energy storage, autonomy and peace technology are written to be technology-neutral and independently justified, and are to be assessed by independent technical reviewers before implementation.

Independence and procurement safeguards

Vision 2100 proposes, and A113 Partners undertakes to observe, the following safeguards. Appendix I sets them out in full.

- **No supply, finance or transaction role.** A113 Partners and its affiliates do not act as supplier, financier or transaction adviser to any pilot they help design.
- **Open procurement.** Procurement for every pilot is open, competitive and multi-vendor, under the host government's procurement law, and reviewed by an independent finance and integrity panel. The book recommends capabilities and standards, not vendors.
- **Independent governance.** The Vision 2100 Steering Board has an independent majority; A113 Partners holds no more than two seats and no veto. Members disclose interests and recuse.
- **A shrinking role.** The initiative's secretariat is to pass to an independent foundation, registered in 2029, with transfer complete by 2031.
- **Separation from the selection process.** The initiative does not lobby member states on the selection of the Secretary-General, and its records are kept separate from any campaign activity.
- **Published spending.** The initiative's own spending, including on stopped pilots, is to be published on a Results Ledger.

Figures and financial information

Cost ranges, budgets, capital structures and milestones in this book are illustrative planning assumptions built from stated inputs. They are not budgets approved by anyone, offers of finance or forecasts of any project. No funding has been committed by any party, and no government, development bank, investor or philanthropy has agreed to finance any element of Vision 2100. Currency is U.S. dollars unless stated.

Currency of data

Data are current to 1 November 2026 unless otherwise stated. Statistics are cited to the latest release available at that date; later releases may revise them. Corrections are logged in Appendix C and in the public correction log described in Part XIII.

Not advice

This book is a policy and implementation study. It is not legal, investment, engineering, nuclear-safety or medical advice. Decisions on any matter it discusses rest with the bodies that hold authority for them, and with the qualified regulators, advisers and communities concerned.

How to cite

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When quoting a DOCUMENTED passage, cite Ambassador A-Baki's original statement (UN General Assembly interactive dialogue, 20 August 2026), not this book.

MESSAGE FROM AMBASSADOR IVONNE A-BAKI

A Promise Made in Beirut

Many years ago, during the war in Lebanon, I sat in a basement in Beirut holding my three children while the city shook above us. I did not know whether we would see the morning. In that moment I made a promise: if my children were spared, I would devote my life to peace.

They were spared. I have spent my life keeping that promise — as a painter who used the image of mothers as a symbol of peace, as a negotiator, as an ambassador and as a minister. I was at the table, often the only woman there, during the negotiations that brought Ecuador and Peru to a peace agreement in 1998. That work took years. It was patient, personal and unglamorous. It taught me that peace is not declared. It is built, one conversation and one act of trust at a time, by people who are willing to sit in a room with those they disagree with and stay there.

When I spoke with the members of the General Assembly in August 2026, I said that my north star is not necessarily reform. It is renewal. Reform can mean rearranging boxes on an organizational chart. Renewal means recommitting ourselves to what the United Nations was created to do: to save succeeding generations from the scourge of war, to defend human dignity, and to help nations work together for the common good. I still believe the United Nations is the best institution we have for the problems we face. But an institution is only as strong as the trust people place in it.

I have also said that the world does not need a manager in the office of Secretary-General. A manager follows a mission statement. A leader follows a north star. The good offices of the Secretary-General should also be active offices — present on the ground, in the places where conflicts begin, not only at headquarters. Prevention and direct mediation, undertaken early and in person, save more lives and cost far less than responding after the fighting starts. Every party must be heard. It is very difficult to gain credibility without listening.

Peace tables have been dominated by men for too long, while women and children suffer most from war. I am not asking for women to replace men. I am asking that women and men sit together, because peace made by half of humanity is fragile. When a woman has economic stability, she is able to claim her rights. And when girls are denied an education, as they are in some places today, the world must say clearly and loudly that this is not acceptable in the twenty-first century.

Children are not only our future. They are our present. Everything I have worked for has been for them. And young people know what they want. We must listen to them, involve them and believe in them, because they will live with the decisions we make today.

People everywhere ask for the same things: dignity, a job worth having, and a fair chance to build a life at home. Artificial intelligence will change the work people do, and education must change with it. But new kinds of jobs will come, and technology must be used for good. Today the rules for artificial intelligence are being written by a few powerful actors without the consent of most of humanity. I believe the United Nations should be the universal table where every nation, large and small, helps set guardrails that are ethical and fair.

For the small island developing states, climate change is not an abstract threat. It is an existential reality. I am grateful to the Kingdom of Tonga for nominating me, and I carry with me what the Pacific has taught me about the ocean and our shared future. From my work on the Galápagos debt-for-nature conversion, I know that finance can protect nature and relieve debt at the same time, and I believe the same idea can serve education and health. The problem of development is

often not a lack of ambition but a failure of execution — and, too often, corruption that keeps resources from reaching the people they were meant for. Money is important. But trust is more important. When people see results, the resources follow.

It is in this spirit that I have welcomed the effort of William Michael Hadala Jr. and A113 Partners to think rigorously about what a renewed and cooperative world could look like by the end of this century, and how it might be built step by step. Vision 2100 is a framework I am considering. Its technical, economic and institutional proposals are theirs, offered for scrutiny by governments, institutions and citizens. What I share with its authors is a conviction that the century ahead can be better than the one behind us, that sovereign nations can cooperate without anyone dominating anyone else, and that every promise should be measured by what it delivers to people.

A child born today will be seventy-four years old in 2100. I think often of the mothers in Beirut, in the Andes, in the Pacific and in every place where war or poverty has made the future feel impossible. Nothing is impossible. For me, this has never been about a position. It is a mission, and a promise I intend to keep.

Ambassador Ivonne A-Baki

PRINCIPAL ARCHITECT'S PREFACE

Why I Built This, and Why You Should Test It

I have spent my career building systems that have to work the first time — in the U.S. Air Force as a Prime BEEF engineer, in autonomy and robotics programs, and now in the manufacture of defense-grade batteries. That work teaches one lesson above all others: a system fails at its weakest joint, not at its strongest component. Most plans for the future of humanity are built the other way around. They pick a favorite technology or a favorite institution, make it the hero, and assume the rest will follow. It does not.

This book exists because I came to believe that the questions Ambassador Ivonne A-Baki has raised in public — how to make peace earlier, how to put women and children at the center, how to give small and developing nations an equal voice in the rules that govern them, how to make the United Nations deliver results people can see — are engineering questions as much as moral ones. They can be decomposed, sized, sequenced, costed and measured. And if they can be measured, they can be held to account.

The systems view

The core of Vision 2100 is one chain. Reliable, clean electricity makes compute and industry possible. Compute makes modern education, health care and accountable government possible. Capable government and productive industry create jobs. Jobs give people dignity and a stake in stability. Stability lets diplomacy succeed. And peace protects the investments that keep the power on. Honest institutions and financing run through every link. Women, children and the environment are the test of every link.

Take any link out and the chain breaks. A sovereign AI node with no reliable power is a demonstration, not a service. A corridor with no honest procurement becomes a source of grievance. An early-warning system with no mediator ready to act is an expensive way to watch a war start. That is why this book treats energy, digital infrastructure, industry, prevention, human development, accountability and finance as one design problem — and why its five pilots are deliberately placed at the joints where the chain is weakest.

How it was researched and verified

Every part of this book answers the same five questions: where we are, where we should be in 2100, how to get there, what begins now and how we measure progress. Every material number was checked against a primary source wherever one could be reached — UN bodies, the World Bank and IMF, the IEA and IAEA, specialized agencies, governments and peer-reviewed research. Where only a secondary source was available, the text says so; where a claim could not be verified, it was removed. Appendix C consolidates the verification logs and Appendix A explains the method.

The book also corrected itself along the way. Early drafts made SMRs sound like the backbone of sovereign AI. Sized honestly, they are not: a small island state can run AI for its public services on roughly 50 kilowatts. Early drafts attributed positions to the Ambassador that she never took — on Article 99, for example. Those were struck. Discipline about who said what is not a formality; it is the foundation of trust in everything else.

What is honest about uncertainty

Nobody can forecast 2100. The cost ranges in this book are planning assumptions with stated inputs, not budgets. The archetype hosts are hypothetical; no country has agreed to anything. The horizons are a sequence of conditional commitments, each ending at a public gate where stopping is a legitimate result. If the five pilots fail, the chain does not hold, and the book should be revised fundamentally at the 2031 review. I would rather publish a plan that can be proved wrong than one that cannot be tested at all. Several of the most important variables — the cost of capital, the pace of reactor licensing, the politics of the Security Council — are outside anyone's control, so the book is built to be robust: its early steps pay off in a fragmented world and a concentrated one as well as in the world we hope for.

My conflicts of interest, and the safeguards

I am Chief Strategy Officer of American Lithium Energy Corporation, a U.S. battery manufacturer, and I founded A113 Partners and A113 Defense, which work in federal technology intelligence and autonomous systems integration. Batteries, storage and autonomy appear in this book. You are entitled to ask whether my interests shaped its conclusions.

So the book binds its own architect. A113 Partners and its affiliates will not act as supplier, financier or transaction adviser to any pilot they help design. Procurement is open, multi-vendor and reviewed by an independent finance and integrity panel. Recommendations on storage and autonomy are written to be technology-neutral and are to be reviewed by independent technical experts before anyone acts on them. A113 holds no more than two seats and no veto on the Steering Board, and the secretariat transfers to an independent foundation by 2031. My role is designed to shrink. That is the point.

An invitation to scrutiny

This is a first edition, and it is meant to be tested. If you are a nuclear regulator, check the newcomer pathway. If you are a development economist, attack the capital structures. If you are a UN legal adviser, test the decision-rights matrix. If you lead a small island state, tell us what we got wrong about yours. Every challenge will be logged, answered and, where it holds, reflected in the next edition.

A child born this year will be seventy-four in 2100. We owe that child more than good intentions. We owe a plan that can be built, measured and corrected — and the humility to change it when the evidence says so.

William Michael Hadala Jr. Principal Strategic and Technical Architect, A113 Partners November 2026

EXECUTIVE OVERVIEW

One System, Five Pilots, Seventy-Four Years

VISION 2100 IN ONE SENTENCE

Vision 2100 proposes a single, evidence-gated system — clean power, sovereign compute, honest institutions, productive jobs, prevention and peace — that sovereign nations can begin building in November 2026 with existing mandates, existing institutions and five modest pilots, and that stops anything that does not work.

Why this book exists

The original Vision 2100 statement (2026) described a world worth building. This book sets out how it could be built. For every subject it treats, it answers five questions: where the world stands today; what the world should look like in 2100; how to get from here to there; what must begin immediately; and how progress will be measured, with baselines, milestones, owners, risks and corrective actions running to the end of the century.

The book is published by A113 Partners, with William Michael Hadala Jr. as Principal Strategic and Technical Architect. Its foundation is the set of principles Ambassador Ivonne A-Baki has stated in public — peace as a life's work, renewal rather than reform, prevention and direct mediation, women and children at the center, trust earned through results. Its technical, economic, geopolitical and implementation recommendations are those of A113 Partners, not hers. It is written to stand on its own whether or not she becomes Secretary-General, and its recommendations are addressed to whoever holds that office, to member states, to regional institutions, to development banks and investors, and to the public.

Throughout, proposals are written as proposals ("Vision 2100 proposes..."), sourced facts carry citations in the parts referred to, statements by the Ambassador are labeled DOCUMENTED, and scenarios, archetypes and cost ranges are labeled ILLUSTRATIVE. The copyright and disclosures page explains the convention; Appendix A sets out the method and Appendix C the verification and assumptions registers.

The case for action

The world of 2026

The world is more capable and more fractured than at any time in living memory. There were 65 state-based armed conflicts in 2025, the most since records began in 1946, and world military spending reached about $2.9 trillion (Part I). Some 117.8 million people were forcibly displaced at the end of 2025, and about 520 million children lived in conflict-affected areas in 2024 (Parts I and VIII).

Human development has stalled. About 831 million people lived in extreme poverty in 2025, measured at $3.00 a day; in fragile and conflict-affected economies the rate has not fallen in fifteen years (Part I). Some 655 million people lack electricity and about 2 billion lack clean

cooking; 2.1 billion lack safely managed drinking water and 3.4 billion safely managed sanitation; about 645 million faced chronic hunger in 2025 (Part I). About 3.7 billion people lived in 2023 in countries that spend more on interest than on health or education, according to UNCTAD (Parts I and X).

The century's defining capability is concentrated. In 2025 only 32 countries hosted specialized AI data centers, and about 2.2 billion people remained offline (Parts I and IV). Data-center electricity use, about 415 terawatt-hours in 2024, is projected by the IEA to more than double by 2030 in its base case (Parts IV and V). Satellites in low Earth orbit are changing who can be connected: Starlink alone reported more than 12 million customers in more than 160 countries in 2026, and satellite links kept Tonga connected after its only cable was cut in 2022 and Ukraine's institutions connected through the war (Part IV).

The institutions meant to manage these pressures are weakened. The Security Council adopted fewer resolutions in 2025 than in any year since 1991. The UN's 2026 regular budget of $3.45 billion reflects cuts of about 15 percent in resources and about 19 percent in staffing, and in January 2026 the Secretary-General warned of a risk of imminent financial collapse, with only 76.7 percent of assessments collected (Parts I and III). Peacekeeping runs on a separate $5.38 billion budget for 2025–26, with about 70,000 personnel (Part III).

The same record shows what cooperation can achieve. Smallpox was eradicated through cooperation between Cold War rivals. The ozone layer is recovering under the Montreal Protocol. Extreme poverty fell from about 2.3 billion people in 1990, and under-five deaths fell by more than 60 percent between 1990 and 2023 (Parts I and II). Vision 2100 adopts the conditions those successes shared — narrow, verifiable tasks; measurable targets; cheap proven interventions; joint monitoring — as its design rules (Part I).

Causes, not symptoms

Vision 2100 proposes that programs be judged by whether they change six structural causes, not merely relieve their symptoms: energy poverty; weak or captured institutions; unaffordable capital; concentrated technology; the cooperation deficit; and climate and demographic stress (Part I). Each program below is mapped to the causes it addresses, and each pilot is designed to show whether a cause can be moved.

Why the next five years decide

About 1.2 billion young people will reach working age over the next decade, against about 420 million projected jobs (Part II). Clean-energy investment in emerging and developing economies outside China would need to rise from about $270 billion a year to about $1.6 trillion by the early 2030s (Part V). Member states have already adopted the mandates on which to build — the Pact for the Future and Global Digital Compact (2024), resolution 79/325 on AI governance (2025) and the UN80 mandate-review resolution, adopted 168 to 4 in March 2026 (Part III). The Global Dialogue on AI Governance meets in New York on 3–4 May 2027, months after a new Secretary-General takes office (Part XII).

ILLUSTRATIVE Grids, schools and institutions built — or neglected — in the next five years will still shape the world of 2070. A transmission line commissioned in 2030 will be carrying power in 2070; a child who does not learn to read by 2031 will be in the workforce until the 2080s (Part II).

The world we seek in 2100

ILLUSTRATIVE A child born in 2026 will be 74 in 2100. Part II follows five such children — born on a Pacific atoll, in the Sahel, in Central America, in a South Asian megacity and in an ageing advanced economy — and shows that each life depends on the same chain of energy, services, work and

peace, and on decisions taken in other countries. In the world Vision 2100 aims for, each grows up with reliable power, a good school, a functioning clinic, safe water and food, honest public services reachable from home, and work worth staying for; each lives in a nation that controls its own resources and data and cooperates with others by choice.

Vision 2100 proposes measurable aspirations for 2100 in ten domains. They are illustrative targets offered for member-state deliberation, not agreed goals (Part II).

TABLE FM-1 **Ten domains: measurable aspirations for 2100 (Vision 2100 proposals for deliberation; Part II)**

Domain	Measurable 2100 aspiration
1. Peace and security	Conflict deaths under one-tenth of the 2020s average; zero children recruited
2. Work	Formal or secure work for 90%+ of adults who seek it, in every region
3. Energy	100% reliable access; power-sector emissions near zero
4. Education	Universal secondary completion; foundational learning for all
5. Health	Under-five mortality <10 per 1,000; maternal mortality <20 per 100,000 everywhere
6. Water and food	Safe water and sanitation for all; hunger below 1%
7. Digital rights	Universal access; rights-based digital identity; open budgets
8. Sovereignty	Every nation able to run AI in its own languages under its own law
9. Environment	Warming stabilized, then declining; 30%+ of land and sea well protected
10. Cooperation	Every UN mandate tracked publicly; stable financing

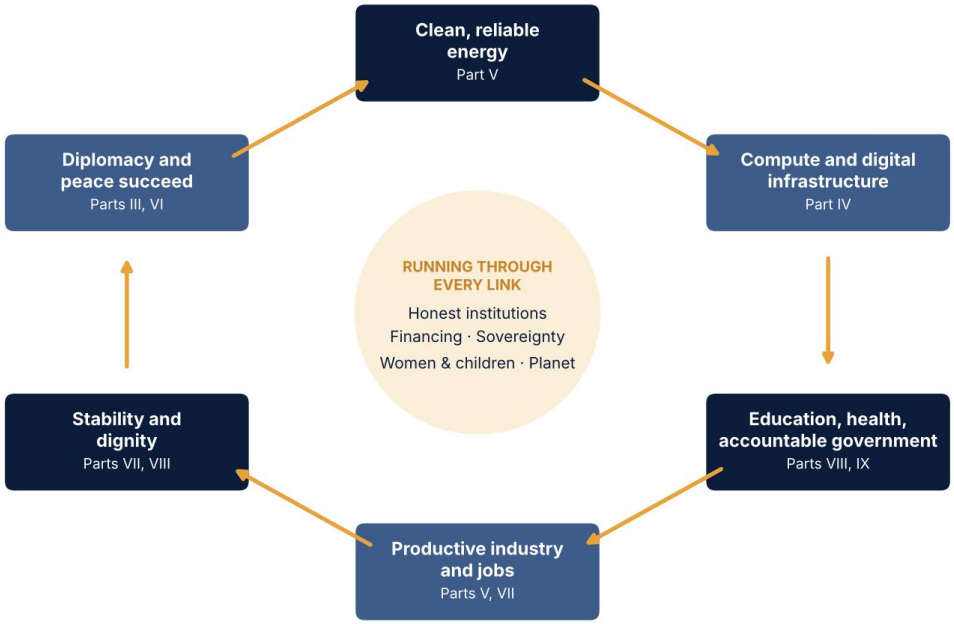
ILLUSTRATIVE Part II tests the plan against three futures; the real century will mix all three. In a **fragmented** future, rival blocs build incompatible technology, trade and finance, warming approaches or exceeds 2.5–3°C, and small states must choose sides. In a **concentrated** future, a few states and firms control frontier AI, energy technology and capital, and most nations depend on systems they neither own nor govern. In the **Vision 2100** future, every nation owns its energy, compute and data under shared standards, conflicts are prevented earlier, and warming stabilizes and begins to decline. The Vision 2100 future is not the most likely, but its early steps — clean energy, educated children, honest budgets, early mediation — pay off in the other two as well. That is the strongest argument for starting now.

The integrated system

Vision 2100 is one system, not a list of separate policies. Reliable, clean electricity makes computing and industrial production possible. Computing, carried to every citizen by connectivity, makes modern education, health care and accountable government possible. Capable government enables productive industry and jobs. Jobs give people dignity and a stake in stability. Stability creates the conditions in which diplomacy and peace succeed. And peace protects the investments that sustain energy and industry, closing the loop (Part XII).

FIGURE FM-1

The Vision 2100 system: each link enables the next



Peace protects the investments that sustain energy and industry — closing the loop.

Conceptual model developed for this book. Part numbers show where each link is developed.

Five threads run through every link of the chain shown in Figure FM-1: honest institutions that make public money and public promises verifiable (Part IX); financing matched to purpose (Part X); national sovereignty over resources, data and decisions (Parts IV and V); the protection and full participation of women and children (Part VIII); and the health of the planet on which all of it depends (Parts II and V).

The design consequence is that no link can be optimized alone. A sovereign AI node without reliable power is a demonstration, not a service; a power corridor without honest procurement becomes a grievance; an early-warning system without a mediator ready to act only watches a war begin. The five flagship pilots are therefore placed at the chain's weakest joints: whether nations can own their energy and compute (P1, P2), whether resources become industry (P4), whether earlier warning yields earlier diplomacy (P3) and whether money reaches people (P5). If all five fail, the chain does not hold, and this book proposes that it be revised fundamentally at the 2031 review (Part XII).

> **THREE GOVERNING RULES**
>
> Sovereign consent: no pilot proceeds without a written request from the host government, and no named country has agreed to anything. Evidence before scale: nothing moves to the next horizon without independent evaluation against published criteria. Authority matched to action: each step sits with the lowest level of authority able to take it (Part XII).

The ten programs

Vision 2100 proposes ten integrated programs, each with a reference design, a legal pathway, a financing model and metrics. Decision rights follow Part III's matrix, an illustrative assignment pending UN legal review. A Secretary-General cannot create pillars, amend the Charter or command member states, but can convene, warn, mediate, report and publish results; the table therefore names, for each program, the body whose decision is required.

TABLE FM-2 The ten programs: what each does, who decides and the first action (Vision 2100 proposals)

Program (Part)	What it does	Who decides	2030 milestone	First action
Renewing the United Nations (III)	Uses the Secretary-General's own powers — good offices, convening, reporting — and builds on agreed mandates; proposes published Article 99 criteria and Technology for Peace and Security as a cross-cutting priority	SG alone for criteria and reporting; GA for a priority resolution; Art. 108 for Council change, on which Vision 2100 does not depend	Half of Secretariat mandates with public Ledger entries	Legal review of the decision-rights matrix
National AI Sovereignty Model and UN Shared Layer (IV)	Each nation owns the inference, data and services that touch its citizens; a three-layer connectivity architecture (satellites, high-altitude platforms and HyperEdgeX sovereign edge nodes) reaches people beyond the network; a thin UN layer sets safety and interoperability standards and holds an emergency compute reserve, but no one's data	Sovereign governments; GA for recognition of standards	1–3 pilot countries running core services under national control	Publish architecture, sizing method and procurement rules for comment
Clean Power and Compute Corridors (V)	Technology-neutral clean power for households and clinics first, then industry, a sovereign AI node and mineral processing; anchor loads lower the cost of capital	Host governments and corridor authorities; regulators; bank boards	One P2 corridor at financial close or in construction	Test cost assumptions with development banks
Minerals-to-Industry Framework (V)	Staged value chains so producers capture value, skills and jobs, with consent and environmental standards	Host ministries, regulators, communities holding consent rights	One P4 host with baseline and feasibility complete	Draft a model Minerals-to-Industry accord
Prevention and the six-layer shield (VI)	Human-led early warning tied to mediation and money; non-lethal Watch, Warn, Protect, Deliver, Clear, Verify for mandated missions	Host states and regional bodies (P3); Security Council with host consent (shield); GA (Peace Technology Pool)	P3 live and independently evaluated	Draft P3 data-sharing template and a SOFA technology annex
Americas Compact and regional frameworks (VII)	Opportunity built where people live, through existing regional institutions, so that migration becomes a choice	Each participating state; bank boards; the UN convenes only	Charter signed by a first group of states	Public register of precedents and verified results

Program (Part)	What it does	Who decides	2030 milestone	First action
Women, children and human development (VIII)	Women at Every Table; Children's Shield; Mothers and Children Peace Fund; clinic electrification; learning companion that supports, never replaces, teachers	SG for the Secretariat standard; governments for curriculum and child-protection law	One-third floor applied; companion pilots evaluated	Draft the learning-companion safety standard
Results Ledger (IX)	Public money followed from appropriation to verified outcome; AI ranks anomalies, people decide, with a right of reply	SG for Secretariat programs (subject to legal confirmation); GA for all mandates; governments nationally	Two pilots evaluated, five in preparation	Prototype on public budget data
Financing architecture (X)	No new fund or bank: instruments matched to purposes, every flow published	MDB shareholders and boards; IMF members; host governments; GA	All five pilots' financing published	Publish the classification for MDB review
Cooperation and stewardship (XI)	Voluntary compacts with five-year sunsets on narrow, verifiable tasks; Council of Long-Term Stewards; Royal Compact for 2100 without decision authority	Each state or body; monarchs on government advice	Three of five permanent members in a technical cooperation task	Draft a model compact

Three programs carry bright lines that this book proposes as conditions of any support. In prevention: under the UN flag, technology never selects or engages a human target, AI estimates risk for places and never for people, and a named person is accountable for every decision about force (Part VI). In energy: nuclear power is supported only where safety, licensing, IAEA safeguards, economics and public consent all support it, and for newcomer countries only with a voluntary commitment not to enrich or reprocess; no corridor may raise household tariffs (Part V). In minerals: free, prior and informed consent where Indigenous peoples are affected, independent water and tailings monitoring, and publication on the Ledger are conditions of support (Part V).

The financing architecture matches instruments to the economics of each activity. Public goods — the Shared Layer, P3, P5, a Peace Technology Pool — are financed by grants, assessed and in-kind contributions, never debt. Bankable infrastructure — the P2 corridor, the P4 plant, nuclear where feasible — is financed by equity and debt made affordable by guarantees and development-bank co-lending. Human development is financed by grants, pooled funds, IDA and debt swaps, moving to domestic budgets over time. P1 is a grant-led hybrid (Part X). The instruments already exist: about $400 billion of new multilateral lending headroom identified in 2024, IDA21's $100 billion, and sovereign wealth funds holding more than $15 trillion (Part X).

◆ DOCUMENTED POSITION Ambassador A-Baki has called for an end to new layers of debt on the Global South, described the SDG shortfall as a failure of financial execution rather than ambition, and suggested debt swaps for education and health as well as for nature. She described the Galápagos conversion as about $1.6 billion in total, with about $1.1 billion of debt reduction and about $500 million for a conservation fund (Parts VII and X).

Part X records the independently confirmed terms, broadly consistent with hers: about $1.628 billion of bonds exchanged, lifetime debt-service savings of more than $1.126 billion, and about $323 million for conservation over 18.5 years (Part X).

Six findings that change the conversation

01 **Most of the agenda already has a mandate.** The Pact for the Future and Global Digital Compact (2024), resolution 79/325 establishing the Independent International Scientific Panel on AI and the Global Dialogue on AI Governance (2025), and the UN80 mandate-review resolution (2026) already authorize much of what Vision 2100 proposes. The book builds on them rather than around them (Part III).

02 **A Secretary-General can start almost everything but finish very little alone.** The book maps every initiative to the body that must decide it — the Secretary-General alone, the General Assembly, the Security Council, a Charter amendment under Article 108, or sovereign governments. Only Council enlargement and veto change require a Charter amendment, and Vision 2100 depends on neither (Part III).

03 **Sovereign AI is a skills and governance problem, not a power problem.** Sized honestly, the electricity a nation needs to run AI for its own public services is modest: about 50 kilowatts for a small island state, about 12 megawatts for an emerging economy and about 26 megawatts for an advanced economy, in central cases. Identity, services, security, connectivity and skills dominate cost. Small modular reactors are not the backbone of sovereign AI; frontier-model training still requires very large facilities, reached through trusted and contestable arrangements (Part IV).

04 **The cost of capital, not the cost of panels, decides who gets clean power.** The same solar plant costs about 75 percent more per kilowatt-hour at a 12 percent cost of capital than at 4 percent (Part V). In the book's illustrative calculation, a first-of-a-kind small modular reactor financed at emerging-market rates costs roughly $270–330 per megawatt-hour, several times the cost of solar or wind (Part X). The conclusion is not anti-nuclear; it is against financing a reactor like a merchant solar farm. De-risking capital is the highest-return energy investment, and energy strategy must be technology-neutral (Parts V and X).

05 **Verification beats promises — including for this book.** Every initiative, and the initiative's own spending, is to be published on a Results Ledger, reviewed by independent panels and subject to gates at which stopping is a legitimate result (Parts IX and XII).

06 **Space has changed the arithmetic of connectivity — but sovereignty has to be written into the contract.** Satellites in low Earth orbit now serve more than 12 million customers in more than 160 countries; they restored links to Tonga when its only cable was cut in 2022 and have kept Ukraine's government and emergency services connected since 2022. Ukraine also showed the risk of depending on one private operator. Vision 2100 proposes a three-layer architecture — satellites, high-altitude platforms and nationally owned HyperEdgeX edge nodes — under operator-neutral conditions: national gateways, two independent paths and no unilateral switch-off (Part IV).

The five flagship pilots

ILLUSTRATIVE The five pilots are small, host-requested tests of the whole system. Hosts are described as archetypes; no country has been approached for, or has agreed to, any pilot. The figures below are the book's canonical planning ranges in three tiers: first-year preparation

(November 2026 – October 2027), initial implementation (the first phase, which includes first-year preparation) and long-term capital (replication in the PROVE horizon, only if gates pass). All are planning assumptions; no funding is committed.

TABLE FM-3 The five flagship pilots: archetype hosts and three-tier planning budgets (ILLUSTRATIVE planning assumptions; no funding committed. Sources: Parts IV, V, VI, IX, X and XII)

Pilot (archetype host)	First-year preparation (Nov 2026–Oct 2027)	Initial implementation (first phase; includes first-year preparation)	Long-term capital (PROVE replication, only if gates pass)
P1 Sovereign Digital Nation (small island state of about 100,000 people)	$1.0–3.0m	$20–65m over ~4.5 years (breakdown in Part IV, Table IV-5)	$0.3–1.3bn (15–20 states)
P2 Clean Power and Compute Corridor (emerging economy)	$1.5–4.0m	$15–40m studies and pre-development (2026–2029); phase-one construction $0.5–2.0bn, project-financed (decision ~2029; counted in PROVE)	$1–10bn (2–5 corridors)
P3 Prevention Early-Warning (climate- and water-stressed region of 2–3 states)	$1.0–2.0m	$20–50m over five years	$0.06–0.3bn extension
P4 Minerals-to-Industry (lithium or copper producer)	$1.0–3.0m	$10–25m studies and preparation; first processing plant $0.3–1.2bn (PROVE)	$0.6–4.8bn (2–4 plants)
P5 Results Ledger (one UN program and one national infrastructure program)	$1.5–3.0m	$8–20m over three years	$0.04–0.2bn extension
Secretariat and initiative core	$4–8m per year	—	—

Source: canonical planning ranges, Parts IV, V, VI, IX, X and XII. First-year total: $10–23 million (secretariat $4–8 million plus pilot preparation $6–15 million). FOUND horizon total (2026–2030): about $120–300 million excluding P2 construction, or about $0.6–2.3 billion including it. PROVE (2031–2040): about $2–17 billion, mostly national, development-bank and private capital.

Each pilot is designed to answer one question about the chain. **P1** asks whether a small state can run its core digital public services — identity, payments, health and education records, AI assistance in its own languages — under national control, on a node sized in kilowatts, with skills and security as the binding constraints (Part IV). **P2** asks whether a coordinated corridor of clean generation, storage and transmission, anchored by industrial and compute loads, can lower the cost of capital and reach households and clinics first without raising their tariffs (Part V). **P3** asks whether a regional unit of 10–14 analysts and data staff, with community monitors and a mediation liaison, can turn earlier warning into earlier diplomacy — decision within 72 hours, mediation within 14 days (Part VI). **P4** asks whether a producer can move one step down the value chain, with community consent and verifiable environmental standards, and retain more of the value (Part V). **P5** asks whether a team of 14–20 people can publish one UN program and one national infrastructure program from appropriation to verified outcome, with AI flagging anomalies and humans deciding (Part IX).

The common Gate 0 criteria, applied in October 2027, are a written host request; a completed feasibility and ethics review; a financing path for at least 60 percent of first-phase cost; and an agreed evaluation design, together with vendor neutrality, no unresolved conflict of interest and no premature nuclear element (Part XIII). For each pilot the Steering Board decides to proceed, redesign or stop; a pilot without a host request is recorded as held. P2 adds a household-impact test and requires anchor offtake for financial close in 2029; P3 requires data-sharing agreements and a rights review before any live use; P4 requires community consent before feasibility work proceeds; P5 faces a publication gate in 2028 (Part XII).

The FOUND portfolio of $120–300 million is under 2 percent of one year of blended finance, which closed about $18 billion of deals in 2024 (Part XII). The binding constraints are preparation, host readiness and trust, not the global availability of capital.

The road from 2026 to 2100

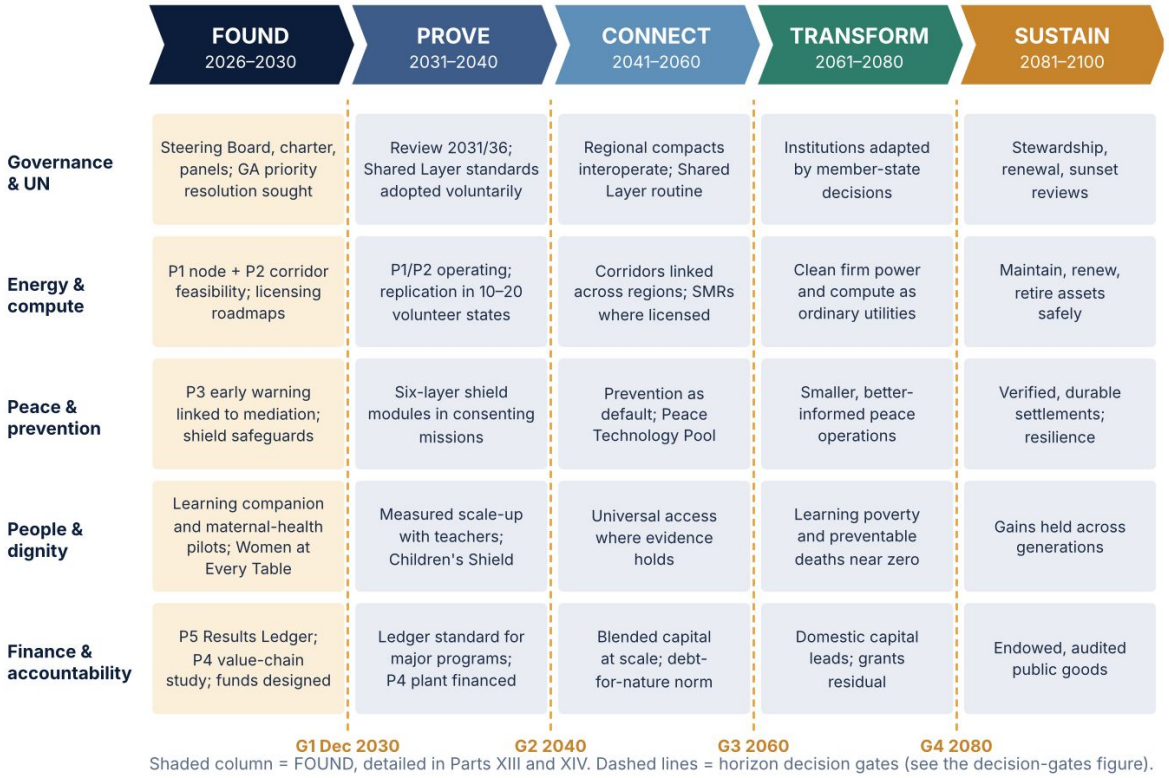
The century is divided into five horizons, each ending at a public decision gate. The horizons are not a forecast but a sequence of conditional commitments; detail falls with distance, so that FOUND is planned by month, PROVE by year, and later horizons by objective and gate (Part XII).

TABLE FM-4 The five horizons, their objectives, milestones and decision gates (Vision 2100 proposal; Part XII)

Horizon	Objectives	Key milestones	Decision gate
FOUND 2026–2030	Govern the initiative; build evidence and a coalition of voluntary hosts; take all five pilots through feasibility	Gate 0 (Oct 2027); first Results Ledger publication (2028); P1 node in service and P3 live (2029); foundation registered (2029); mid-FOUND review (mid-2029)	**Gate 1 (December 2030):** ≥3 pilots operating with hosts still requesting them; measurable gains; no unremedied rights, safety or integrity finding; ≥60% of PROVE finance path identified
PROVE 2031–2040	Demonstrate at national and regional scale; replicate in 10–20 volunteer states; stop what fails	PROVE readiness test and first five-year review (Oct 2031); secretariat transfer to the independent foundation complete (by 2031); first corridor operating; first processing plant	**Gate 2 (2040, PROVE to CONNECT):** outcomes beat baselines in ≥10 states across all three archetypes; costs within 25% of plan or explained
CONNECT 2041–2060	Interconnect proven systems through voluntary agreements; make prevention the default	Corridors linked across regions; federated Shared Layer; domestic and private capital leads	**Gate 3 (2060):** regional interoperability; public-trust thresholds met
TRANSFORM 2061–2080	Clean firm power and sovereign compute as ordinary utilities; preventable maternal and child deaths near zero	Any UN institutional change made by member states (Art. 108 where required)	**Gate 4 (2080):** institutions renew themselves without the initiative; gains held ≥10 years
SUSTAIN 2081–2100	Preserve gains; adapt institutions; maintain accountability and resilience	Five-yearly reviews	Sunset 31 December 2100 unless renewed

FIGURE FM-2

Vision 2100 roadmap, 2026–2100, by horizon and domain



ILLUSTRATIVE — planning framework developed for Vision 2100 (Part XII); horizon content is indicative and subject to five-year reviews and decision gates.

The first year and the first five years

Part XIII sets out the first year in detail and Part XIV the first five years. In summary, this book proposes the following sequence.

01 **First 30 days (to December 2026).** Publish the book with its attribution key and conflict-of-interest disclosure; seat an interim steering group of five to seven people with a majority unaffiliated with A113 Partners; open the evidence register for expert challenge; begin a listening round with UN regional groups, small island and least-developed-country groupings and regional organizations; secure conflict-free seed funding.

02 **By 90 days (end of January 2027).** Publish a draft charter, conflict-of-interest code and procurement-neutrality rule for comment; establish baselines for every scorecard indicator; prototype the Results Ledger on public budget data; open nominations for the four independent panels.

03 **By 180 days (end of April 2027).** Adopt the charter and seat the Vision 2100 Steering Board and panels; seek letters of intent from prospective hosts for at least three pilots, limited to feasibility; commission feasibility studies with ethics review from the start; offer a contribution on Shared Layer standards to the Global Dialogue on AI Governance (3–4 May 2027) through member states or accredited stakeholders.

04 **First year (to October 2027).** Gate 0 decisions on all five pilots, published with reasons; a first annual report during the high-level week of the General Assembly's 82nd session, through side events hosted by willing member states.

05 **Years two to five (to October 2031).** First Ledger publication (2028); P1 node in service, P3 live and the P2 financing decision (2029); mid-FOUND review (mid-2029); mid-term evaluation (2030) and Gate 1 (December 2030); first five-year review, including what failed, the PROVE readiness test and completion of the secretariat's transfer to the independent foundation registered in 2029 (by October 2031).

Governance of the initiative itself

A book that asks for accountability must be accountable itself. The **Vision 2100 Steering Board** — 11 to 13 members drawn from every UN regional group, at least half women, with an independent majority, preceded by an interim steering group of five to seven until its charter is adopted in about April 2027 — governs the initiative, decides at each gate whether Vision 2100 continues to support a pilot and owns the book's revision cycle. A113 Partners holds no more than two seats and no veto. Each pilot is governed separately by a **Pilot Governance Board** chaired or co-chaired by its host government; host governments retain sovereign decision rights at every stage. Four independent panels — technical; human rights and ethics; nuclear safety and nonproliferation; finance and integrity — review the work, and the rights panel holds a binding stop recommendation where rights findings are unremedied. The secretariat passes to an independent foundation, registered in 2029, with the transfer complete by 2031. The book is revised every five years from 2031, after public consultation (Part XII).

> **CONFLICT-OF-INTEREST FIREWALL**
>
> The Principal Strategic and Technical Architect serves as Chief Strategy Officer of American Lithium Energy Corporation, a U.S. battery manufacturer, and founded A113 Partners and A113 Defense, which work on federal technology intelligence and autonomous systems integration. Pilots P1 and P2 involve energy storage, P4 concerns battery-materials value chains, and the six-layer shield involves autonomy. A113 Partners and its affiliates therefore do not act as supplier, financier or transaction adviser to any pilot they help design; the Principal Architect is recused from storage and battery-materials specifications; Board, panel members and staff publish declarations of interest and recuse; procurement is open and multi-vendor; and storage and autonomy recommendations are to be independently reviewed. The name and concept of the HyperEdgeX edge node originate in commercial work associated with the Principal Architect; in this book it is an open reference design, independently reviewed and openly procured (Part XII; Appendix I).

Whether or not the Ambassador becomes Secretary-General

Vision 2100 is designed to stand either way. If Ambassador A-Baki is selected, a Secretary-General could use the office's convening, reporting and good-offices powers to advance proposals within existing mandates; she has made no commitment to any specific Vision 2100 proposal, and none is implied. If she is not, every FOUND element remains feasible: pilots depend on hosts and financiers, the Results Ledger can start on public data, and the Global Dialogue and Scientific Panel already exist. The cost would be slower progress on UN-level elements, not failure of the whole (Part XII).

Risks and safeguards

Part XII scores twelve risks by likelihood and impact and assigns each an owner, a mitigation and a corrective trigger; the panels re-score them at Gate 0. Three need candor. Financing is most likely to bind, because pilots compete with humanitarian needs for shrinking concessional budgets; hence small first phases and bankable later ones. Surveillance and misuse carry the highest impact on trust; one credible misuse would discredit the whole agenda, hence the rights panel's stop power. Leadership change — of a Secretary-General, a host government or a sponsor — is near-certain over 74 years; the answer is gates, a charter and a foundation that do not depend on any person or office. Corruption, cybersecurity, sovereignty concerns, geopolitical resistance and climate shocks complete the highest-scoring group (Part XII; Appendix G).

Decisions requested

Nothing in this book has been agreed by anyone. Each request below is addressed to the body that holds the relevant authority (Part III), is voluntary unless marked as a formal decision, and stands whoever is Secretary-General (Part XII). Part XV sets out in fuller terms what each kind of actor can contribute.

TABLE FM-5 Decisions requested by audience (Vision 2100 proposals; nothing has been agreed)

Audience	What Vision 2100 asks
Heads of state and government	Consider hosting a pilot (a letter of intent covers feasibility only; consent can be withdrawn at any gate); enact data, identity, cybersecurity and AI laws first; consider co-sponsoring a priority resolution from 2028 (Parts IV, XII)
Secretary-General and Secretariat	Within the office's own authority: published Article 99 criteria; women in senior roles of every mediation team; open cash and mandate data; a Secretariat AI policy; a Results Ledger pilot for one program (Parts III, IX)
General Assembly *(formal decision)*	When members choose: recognize Shared Layer standards and an emergency compute reserve; extend the Ledger to all mandates; later, a Peace Technology Pool (Parts IV, IX, XII)
Security Council *(formal decision)* and permanent members	Shield capabilities and a SOFA technology annex in at least one mandate; the non-lethal rule codified. Permanent members: one technical cooperation task, with no contested preconditions (Parts VI, XI)
Development banks, IMF and sovereign funds	Complete capital-adequacy reforms *(board decisions)*; co-design a project-preparation facility and P2/P4 guarantees; co-invest in bankable assets on commercial terms (Part X)
Industry and technology	Frontier-model access on sovereign terms; open standards; Ledger disclosure; compute for an emergency reserve; no lock-in (Part IV)
Satellite and telecommunications operators	Service for schools, clinics and emergency services on operator-neutral sovereignty conditions — national gateways, two independent paths, continuity of service and universal-service pricing; pre-agreed disaster activation (Part IV)
Universities and civil society	Independent evaluation; peer review of baselines; seats on oversight bodies; shadow reports on Ledger entries (Parts IX, XI)
Faith communities and royal households	An interfaith peace convening that issues no rulings; consideration of the Royal Compact for 2100, on which no household has been consulted or has endorsed (Part XI)

Measuring success

ILLUSTRATIVE The headline indicators below are drawn from the master scorecard in Appendix H and Part XII. The "Agreed international target" column shows the SDG or other agreed commitment where one exists. The 2030–2100 columns are Vision 2100 planning milestones; they do not replace agreed commitments. Where a 2030 milestone is less ambitious than the agreed target, it is marked with an asterisk.

TABLE FM-6 Headline indicators: baselines, agreed targets and Vision 2100 planning milestones (ILLUSTRATIVE milestones; Appendix H and Part XII)

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
People without electricity (national governments; SDG7 custodians)	655m, 2024, Tracking SDG7 2026	SDG 7.1: universal access by 2030	≤400m*	≤50m	0	0
Chronic hunger (FAO; national governments)	645m, 2025, FAO SOFI 2026	SDG 2.1: end hunger by 2030	≤500m*	≤250m	≤100m	<1% of people
Under-five deaths per year (ministries of health; UNICEF)	4.9m, 2024, UN IGME (revised method)	SDG 3.2: under-five mortality ≤25 per 1,000 live births in every country by 2030	≤4.0m*	≤2.5m	≤1.2m	≤0.5m
State-based armed conflicts (UCDP data; DPPA)	65, 2025, UCDP	—	≤55	≤40	≤25	≤10
Military burden, % of world GDP (member states; SIPRI data)	2.5%, 2025, SIPRI	—	No further rise	Declining	Below 2009 level	National decisions
Women in senior roles of UN-convened mediation teams (Secretary-General; DPPA)	To be established by DPPA, 2027 (Part VIII definition)	— (SCR 1325: equal participation; no numeric target)	≥one-third	Parity (≥50%)	Parity	Parity
P3 median warning lead time (P3 Pilot Governance Board; regional unit)	To be established in shadow mode, 2027–28	—	≥60 days (≥30 days by 2028)	≥90 days in all P3 regions	Standard practice	Standard practice
Results Ledger coverage (UN Secretariat; GA; governments)	0 programs, 2026	—	≥1 UN and ≥1 national program by 2028; ≥10% of Secretariat programme budget by 2030 only if the Secretary-General adopts it	Majority of Secretariat programme budget	All	All, audited
People offline (national governments; ITU)	2.2bn, 2025, ITU	—	<1.5bn	<0.5bn	Near zero	0

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
States operating a sovereign AI node, pilot model (hosts; Steering Board)	0, 2026	—	1–3	15–20	60+	All that choose
Forcibly displaced people (UNHCR; host states)	117.8m, end-2025, UNHCR	—	<100m	<60m	<30m	Durable solutions for all
CPI global average score (national governments; TI data)	42, 2025, Transparency International	SDG 16.5: substantially reduce corruption (no numerical target)	45	50	60	70+

Source: Part XII master scorecard and Appendix H; baselines as cited in Parts I, IV, VI, VIII and IX. *2030 milestone is less ambitious than the agreed international target; it is a planning floor for Vision 2100's own monitoring and does not revise the SDG commitment.

Corrective actions follow the gate logic. Two consecutive off-track annual reports trigger a redesign plan within twelve months; an off-track result at a gate holds related funding; and a rights, safety or integrity breach stops the activity, with the reasons published. Indicators moving the wrong way are published too (Part XII).

How to use this book

Part I sets out the 2026 baseline and the foundation on which the book rests. Part II describes the world Vision 2100 seeks in 2100. Parts III to XI develop the ten programs, each ending with what begins now and how progress is measured. Part XII draws them together into horizons, pilots, gates and a scorecard. Part XIII is the first-year implementation plan; Part XIV the execution strategy for 2026 to 2031. Part XV sets out what each kind of actor — governments, institutions, industry, academia, civil society, faith communities, young people and individuals — can do. Appendices A to J hold the method, bibliography, verification and assumptions registers, financial models, technical architectures, decision rights, risks and unresolved decisions, master scorecard, disclosures and terminology.

Readers with one hour should read this overview, Part XII and Part XV. Readers responsible for a decision should read the part that names their institution in Table FM-5, and the corresponding entries in Appendices F and G. Every reader is invited to challenge any claim; the correction process is described in Appendix A.

VISION 2100 DECLARATION OF PRINCIPLES

Twelve Principles for a Century of Shared Responsibility

PROPOSED FOR ADOPTION

This Declaration is proposed by A113 Partners as the governing principles of the Vision 2100 initiative and is offered for adoption by any government, institution, organization or person who chooses to subscribe to it. Ambassador Ivonne A-Baki endorsed it for publication with this book on 2 November 2026; it has not been adopted by the United Nations, any government or any other body. Subscribing to it creates no legal obligation and no commitment to any specific proposal in this book.

We who subscribe to these principles, mindful that a child born in 2026 will be seventy-four years old in 2100, and that the decisions of this decade will shape that child's whole life, declare the following.

01 **Sovereign equality and consent.** Every nation, large or small, is the owner of its resources, its data and its decisions. No program is imposed on any people; every pilot, compact and partnership begins with a written request and may be ended by the host at any stage.

02 **Prevention before war.** The first duty of international cooperation is to prevent armed conflict. Warning must reach someone with the authority, the means and the mediator to act — early, in person and with every party heard.

03 **Human dignity and the shared moral rule.** Every person has equal and inalienable dignity. We hold to the rule found in every great moral tradition — to treat others as we would be treated — and to the duties it implies toward the child, the stranger and the poor, as a floor that complements and never replaces human-rights law.

04 **Women and children at the center.** Peace made without women is fragile, and a world that fails its children fails its future. Women and men sit together at every table, and the welfare of women and children is the test applied to every program.

05 **Value created where resources are.** Nations that hold energy and mineral resources should capture the skills, industry and jobs those resources make possible, with the free, prior and informed consent of affected communities and with protection of their water, land and health.

06 **Technology serves people; humans stay accountable.** Technology is a tool for human purposes, not a substitute for human judgment. Artificial intelligence supports decisions and never determines guilt, targets a person or authorizes force; a named human being is accountable for every consequential decision.

07 **Verifiable results.** Promises are measured by what they deliver. Public money is followed from appropriation to outcome, results are published — including failures — and anyone may examine the evidence and challenge it.

08 **Financing matched to purpose.** Public goods are paid for with grants and shared contributions, not debt; bankable infrastructure with capital made affordable; human development with lasting public budgets. No nation should be buried under new debt to secure its people's basic needs.

09 **Stewardship for future generations.** We act as trustees for those not yet born — for the climate, the oceans, biodiversity and the institutions they will inherit — and we build what we begin to outlast any term of office.

10 **Cooperation without domination.** Rivals can cooperate on narrow, verifiable tasks without resolving every disagreement. No nation, bloc, company or institution should use shared systems to dominate another, and no plan depends on a single power or region.

11 **Independence from any person or office.** These principles and the work that follows from them belong to no candidate, government or company. They stand whether or not any individual holds any office, and they bind their own authors first.

12 **Honesty about uncertainty.** We state what we know, what we assume and what we do not know. We test before we scale, stop what does not work and change course when the evidence requires it.

Proposed by A113 Partners, November 2026. Offered for adoption by all who share these commitments.

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PART I

THE FOUNDATION

The Foundation: Why Vision 2100, Why Now, and the World We Inherit

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THE FOUNDATION IN ONE SENTENCE

The United Nations was founded to spare succeeding generations from war; Vision 2100 asks what it would take to keep that promise to the people who will be alive in 2100, and how to measure, from November 2026 onward, whether the world is getting closer.

I.1 Why Vision 2100 exists

Every generation inherits institutions built by the one before it, and every generation decides whether to renew them or let them drift. The present generation faces that decision under unusual pressure. Armed conflicts involving states are at their highest number since records begin in 1946, the United Nations is cutting its budget and staff to stay solvent, and a technology that may reshape every economy and every army is being built in a handful of countries (Sections I.9, I.12 and I.13). At the same time, the record of the past eighty years shows that deliberate cooperation, even among rivals, can eradicate a disease, heal the ozone layer and lift more than a billion people out of extreme poverty (Section I.16). Vision 2100 starts from both facts.

This book has two objectives, and it is important to keep them distinct.

01 **A strategic foundation for Ambassador A-Baki's vision.** The first objective is to give Ambassador Ivonne A-Baki's vision for renewing the United Nations and advancing international cooperation a rigorous strategic and evidentiary foundation: the baseline facts, the institutional constraints, the options and the implementation logic that any serious leadership agenda for the Organization would need. Her role is the foundational vision and the leadership principles she has stated in public (Section I.3). She reviewed this book and endorsed it for publication on 2 November 2026; how she draws on it in her own agenda remains for her alone to decide.

02 **An enduring framework for 2026–2100.** The second objective is to offer governments, international institutions, development banks, civil society and future leaders a long-term framework for cooperation from 2026 to 2100 that does not depend on any election result, administration, institution or individual. Its proposals are designed to proceed through voluntary host governments, existing UN mandates, published gates and independent measurement, and they remain usable whoever holds any office (Part XII).

The technical, economic, geopolitical and implementation recommendations in this book originate with A113 Partners, the book's research and publication team, under its principal strategic and technical architect. They are written as "Vision 2100 proposes" or "this book recommends" because they are proposals offered for debate, not commitments made by Ambassador A-Baki, by any government or by the United Nations. Where the book reports what the Ambassador has said, it says so explicitly and cites the public record (Section I.7 explains the convention).

The book builds on the original Vision 2100 statement (2026), which set out the themes developed here: sovereign nations connected by a renewed United Nations, technology placed at the service of peace and development, and a long view running to the end of the century. It tests those

themes against evidence, separates what a Secretary-General can do from what only member states can decide, and turns them into pilots that can succeed or fail in public.

I.2 Ambassador Ivonne A-Baki: her candidacy and record

Ivonne A-Baki was born in Guayaquil, Ecuador [1], to Lebanese parents [23]. She spent many years in Lebanon, including during the civil war that began in 1975, and began her diplomatic career there as Ecuador's consul in Beirut in 1981 [4]. In her General Assembly dialogue she recalled sheltering her three children in a Beirut basement during the bombing more than forty years ago, an experience she presents as the origin of her commitment to peace [5].

She has represented Ecuador abroad under several governments. She became ambassador to the United States in 1998 [4], the first woman to hold that post [23], and was appointed ambassador in Washington again in February 2020 [6]. She served as ambassador to Qatar for about two and a half years before that second Washington appointment [6], and as ambassador to France from February 2024 [7]; she lists her Paris posting as covering France and Monaco [5]. At home she was Ecuador's minister responsible for foreign trade and industry from 2003 to 2005 [81], a candidate for the presidency in 2002 [1], and president of the Andean Parliament in 2007–2008 [14]. She holds a 1993 master's degree from the Harvard Kennedy School and has been a UNESCO Goodwill Ambassador for the Dialogue of Civilizations since 2010 [8].

Her peace and conservation record is described somewhat differently by different sources, and this book reports each as stated. In her own account to the General Assembly, she helped broker the 1998 treaty that ended the long-running border conflict between Ecuador and Peru [5]. Independent profiles describe her as having advised Ecuador's president during the talks that produced the 1998 agreement [8], as having been instrumental in the peace [1], and as having helped broker dialogue between the two countries after their brief 1995 border war [3]. She headed Ecuador's Yasuní initiative, which sought international contributions in exchange for leaving oil beneath an Amazon national park [1]; the government shelved the initiative in 2013 and authorized drilling [3].

◆ DOCUMENTED POSITION On the Galápagos debt-for-nature conversion, she told the General Assembly that the operation totaled about $1.6 billion, reduced Ecuador's debt by about $1.1 billion and created a conservation fund of about $500 million [5].

The independent terms are set out in Part X. At financial close in May 2023, Ecuador exchanged about $1.628 billion of international bonds using a $656 million Galápagos Marine Bond loan; the US International Development Finance Corporation estimated lifetime debt-service savings of more than $1.126 billion and about $323 million for marine conservation over 18.5 years [9]. The two descriptions measure different things over different periods, and Part X discusses them side by side.

Her international candidacies began before 2026: she was a candidate for Director-General of UNESCO in 2009 [1]. In August 2026 the Kingdom of Tonga nominated her for Secretary-General of the United Nations. The UN's candidate page records the nomination on 17 August 2026, with the joint letter of the Presidents of the General Assembly and Security Council dated 18 August [10]; Tonga's Permanent Representative, Ambassador Viliami Va'inga Tone, transmitted the nominating letter [2]. As the UN's selection rules allow, the nominating state need not be the candidate's own [8]. She took part in the General Assembly's interactive dialogue with candidates on 20 August 2026 [510].

The selection process is ongoing. Under the Charter, the General Assembly appoints the Secretary-General on the recommendation of the Security Council, and the incumbent's second

term ends on 31 December 2026 [211]. As of 1 November 2026 the UN's candidate page lists several nominated candidates, some others having withdrawn [10]. This book makes no prediction about the outcome, reports no poll and compares no candidates. It is written to remain useful whatever the result (Part XII).

I.3 The principles guiding her documented leadership vision

This section reports only what Ambassador A-Baki said in her interactive dialogue with the General Assembly on 20 August 2026 [5]. The source is the UN's automatic transcript of that meeting, which is not an official record and transcribes her name in several ways; passages were re-read in full, including the final question-and-answer segment, on 1 and 2 November 2026. Each principle is paraphrased, and each is followed by the Vision 2100 proposals that build on it. Those proposals are A113 Partners' work. She did not propose or author them in her dialogue; she endorsed this book for publication on 2 November 2026.

I.3.1 A leader, not a manager: renewal as the north star

◆ DOCUMENTED POSITION Ambassador A-Baki distinguished a manager, who follows a mission statement, from a leader, who follows a north star. She described her north star for the Organization as not necessarily reform but renewal [5].

Building on this principle, Vision 2100 proposes that renewal be organized around outcomes the Charter already names (peace, development and human rights) and measured against a public baseline (Sections I.8 to I.17), with a proposed cross-cutting priority, Technology for Peace and Security, that member states could choose to adopt (Part III). These are A113 Partners' proposals.

I.3.2 Direct peacemaking that is not delegated

◆ DOCUMENTED POSITION She said a Secretary-General should be on the ground in war zones and areas of tension, not only at headquarters, and that "the good offices of the Secretary-General should also be the active offices" [5]. She described the Secretary-General as a mediator who forges common ground, said she was deeply interested in acting as one, and, asked about the war in Ukraine, said she would have to remain neutral and listen to both sides [5]. Asked about Article 99 of the Charter, she spoke about independence and neutrality; she made no commitment to invoke it [5].

Vision 2100 proposes a prevention operating model that links human-led early warning to mediation, the P3 Prevention Early-Warning pilot, a Prevention and Mediation Fund and published criteria for when a Secretary-General might consider raising a matter under Article 99 (Part VI). These are A113 Partners' proposals; any use of Article 99 would remain solely the Secretary-General's judgment.

I.3.3 Modernizing the Security Council through persuasion

◆ DOCUMENTED POSITION She said the Security Council remains frozen in the geopolitical landscape of 1945 and that she would use the persuasive force of the office to work with member states toward a modernized Council that reflects twenty-first-century realities [5]. Asked about Africa's representation, she said the present arrangement is not fair, that she would listen to member states and make suggestions, and that she was committed to finding a formula, without naming one [5].

Vision 2100 does not choose among the reform models. Part III sets out the positions of the main negotiating groups, the requirement of a Charter amendment under Article 108 for any change in membership, and steps that need no amendment, such as working-method changes and the General Assembly's veto initiative. These analyses are A113 Partners' work.

I.3.4 Development debt and the finance to deliver

◆ DOCUMENTED POSITION She called for an end to new layers of debt on the Global South and described the shortfall on the Sustainable Development Goals as a failure of financial execution rather than of ambition [5]. She suggested debt swaps for education and health, not only for the environment, citing Ecuador's Galápagos and Amazon experience; named corruption as a reason developing countries lack resources; and argued that the deeper constraints are political decisions, implementation and transparency rather than money alone [5].

Building on this principle, Vision 2100 proposes a financing architecture that matches instruments to purposes, including debt-for-development conversions and risk-sharing to lower the cost of capital (Part X), and public accountability for where money goes (Part IX). These are A113 Partners' proposals.

I.3.5 Human dignity, and AI governed at a universal table

◆ DOCUMENTED POSITION She called for renewing human dignity across all the UN's pillars and said that dignity now reaches frontiers the founders could not have envisioned, including artificial intelligence. She said the UN should serve as the universal negotiating table at which every nation, large and small, helps set the guardrails for AI, and that the technology should be used for positive ends, including faster progress on the development goals [5].

Vision 2100 proposes the National AI Sovereignty Model, in which each country builds AI services under its own law, and a UN Shared Layer of common safety standards, interoperability and verification in which the UN holds no one's data (Part IV). It builds on the Global Dialogue on AI Governance and the Independent International Scientific Panel on AI that member states have already created [12]. These are A113 Partners' proposals.

I.3.6 The outsider's advantage

◆ DOCUMENTED POSITION She presented herself as an outsider to the UN bureaucracy who brings no bureaucratic habits, and she described replacing paper projects with implementation as a minister [5].

Vision 2100 proposes that its own work follow the same discipline: a small number of pilots, each with a host request, a budget range, an evaluation design and a gate at which stopping is a legitimate result (Parts XII and XIII). These are A113 Partners' proposals.

I.3.7 Women and men together at the table

◆ DOCUMENTED POSITION She said she prefers to work with both men and women, that the absence of women's voices from peace tables is a loss, and that the Organization has never had a woman Secretary-General. She described girls' education as very important to her and said discrimination against women and girls of the kind seen in Afghanistan is unacceptable in this century [5].

Vision 2100 proposes Women at Every Table, with measurable targets for women in senior mediation roles, together with the Children's Shield and the Mothers and Children Peace Fund (Part VIII). These are A113 Partners' proposals.

I.3.8 Trust that rests on results

◆ DOCUMENTED POSITION She said what is lacking is trust in results, and that when member states trust the UN, financing follows. She asked what results the development goals have produced and where the money went, and pledged an open door to delegations [5].

Vision 2100 proposes the Results Ledger, a public, verifiable record of what UN and national programs spend and achieve, to be piloted as P5 (Part IX). This is an A113 Partners proposal; it would cover UN programs only if the Secretary-General and member states chose to adopt it.

I.3.9 Listening to the young

◆ DOCUMENTED POSITION She observed that people have two ears and one mouth yet speak more than they listen, and said young people should be heard, involved and trusted [5]. She closed by describing the candidacy as a mission rather than a position [5].

Vision 2100 proposes at least two seats for people under 35 on its own Steering Board, together with long-horizon stewardship that gives future generations a voice (Parts VIII, XI and XII). These are A113 Partners' proposals.

I.4 From the United Nations of 1945 to the world of 2100

Representatives of 50 countries met in San Francisco from April to June 1945 to draw up the Charter, which was signed on 26 June 1945; the United Nations came into existence on 24 October 1945 [1113]. The Charter's first stated purpose is to save succeeding generations from the scourge of war; its others are friendly relations based on equal rights and self-determination, international cooperation on economic, social, cultural and humanitarian problems and on human rights, and a center for harmonizing the actions of nations [11]. The Organization is based on the sovereign equality of its members [11].

The world the Charter now governs is very different. About 2.5 billion people lived on Earth in 1950; the total passed 8 billion in November 2022 [14], reached about 8.2 billion in 2024 and is projected to peak at about 10.3 billion in the mid-2080s [15]. Nuclear weapons, the internet, satellites and now artificial intelligence have changed what war, commerce and government mean. And the climate has warmed to about 1.44 °C above the pre-industrial average [16], a risk the founders could not have foreseen.

The system has succeeded more often than is remembered. Smallpox has been eradicated, ozone-depleting substances have been almost entirely phased out, wild polio cases have fallen by more than 99 percent, the under-five mortality rate fell by more than half between 2000 and 2023, and extreme poverty fell from about 2.3 billion people in 1990 to about 831 million in 2025 on the World Bank's current line (Section I.16) [17][18][19][20][21]. No world war has been fought since 1945.

It also stalls where agreement among the most powerful states is required. In 2025 the Security Council adopted 44 resolutions, the fewest since 1991 [22]; armed conflicts involving states reached a record 65 [23]; and the Organization ended 2025 with record arrears of about $1.57 billion [24]. Member states have begun to respond: the Pact for the Future (September 2024) set an agenda for reforming the multilateral system [25], and the UN80 mandate review, adopted in March 2026, is reviewing what the Organization does [26].

ILLUSTRATIVE A child born in 2026 will be 74 in 2100. The institutions that child relies on in old age, from the electricity grid to the peace operations that may protect a grandchild, will be designed, financed or neglected in the next few decades. The gap between 1945 and 2100 is not only one of time; it is the difference between an Organization designed for a small number of states dealing with war among themselves and one that must help nearly every country cope with conflict, climate, technology and demographic change at once.

I.5 A new approach to sovereignty, cooperation, technology and human development

Vision 2100 proposes one organizing idea: **sovereign but connected**. Every nation should be able to build its energy, digital, industrial and public services on its own resources, under its own law and in its own languages, and be connected to others through shared standards that no single power controls. This follows the Charter's principle of sovereign equality [11]. It also responds to the

evidence: today only 32 countries host the data centers needed for advanced AI, and American and Chinese companies operate more than 90 percent of the data centers that others use for AI work [27].

Sovereignty in this sense is capability, not isolation. Vision 2100 proposes that countries keep decision rights over their own data, minerals and infrastructure, while the United Nations provides what no country can provide alone: common safety and interoperability standards, verification, emergency reserves and a neutral table (the UN Shared Layer, Part IV). The UN would hold no one's data. Host governments retain sovereign decision rights at every stage of every pilot.

Vision 2100 proposes to treat development as **one integrated system**, not a list of separate policies. Reliable clean energy makes compute and digital infrastructure possible; these strengthen education, health and accountable government; capable government supports productive industry and jobs; jobs underpin social stability and dignity; stability creates the conditions in which diplomacy and peace succeed; and peace protects the investments that sustain energy and industry. Honest institutions and financing run through every link, and the condition of women, children and the environment tests every link. Section I.17 shows how the 2026 baseline maps onto this chain, and each later part locates its subject within it.

In this chain, **technology is an enabler, not an end**. According to the IEA, data centers already used about 415 TWh of electricity in 2024, about 1.5 percent of world consumption, and it projects about 945 TWh by 2030 in its base case [28]. Vision 2100 therefore proposes technology-neutral energy strategies chosen by each country on cost, safety and consent (Part V), AI that supports human decisions and never determines guilt or authorizes force (Parts IV and VI), and procurement that is open and multi-vendor. The test of any technology is whether it improves a measured human outcome.

Cooperation, in this approach, is built from verifiable bargains rather than declarations. The successes reviewed in Section I.16 share six design conditions (a specific objective, shared evidence, verification without humiliation, money attached to obligations, technology that makes compliance cheap, and benefits for every major power), and Vision 2100 proposes to apply them to every initiative in this book.

I.6 The responsibility of the present generation to future generations

Member states have already accepted a duty to the future in formal terms. On 22 September 2024 the General Assembly adopted, without a vote, the Pact for the Future with two annexes, the Global Digital Compact and the Declaration on Future Generations [2529]. The Declaration defines future generations as all those generations that do not yet exist and who will inherit this planet [29]. It sets out guiding principles that include peace, human rights, intergenerational solidarity, a clean and healthy environment and the responsible use of science and technology; commits states to long-term planning that uses science, data and foresight; takes note of the Secretary-General's proposal to appoint a Special Envoy for Future Generations; and decides to hold a high-level plenary meeting of the General Assembly on future generations during its eighty-third session, informed by a report of the Secretary-General [29].

The people who will inherit this century are already visible in the data. Africa's share of the world's under-25s is projected to rise from about 28 percent today to 46 percent by 2100 [30], while the population aged 65 and over rises from 857 million to about 2.4 billion [31]. The 3.3 to 3.6 billion people who live in places highly vulnerable to climate change [32] include most of the children born this decade. In her dialogue, Ambassador A-Baki described the climate threat to small island states as an existential reality (Section I.11.3) [5].

Vision 2100 proposes three practical consequences of this responsibility. First, decisions with century-long effects, such as grids, reactors, mineral concessions and data systems, should be judged by their effects on people not yet born as well as on today's voters, using the long-term planning tools the Declaration calls for. Second, institutions should be designed to outlast any term of office: Part XI proposes a Council of Long-Term Stewards with an advisory role and no budget authority or veto, and Part XII proposes five-year public reviews of this book to 2096. Third, the present generation should leave behind not only assets but the measurement systems that let its successors judge whether promises were kept. The 2028–2029 high-level meeting on future generations offers member states a natural point at which to review such tools.

The responsibility is urgent because the costs of delay compound. Today's young age structure alone accounts for about 79 percent of the world's projected population increase through 2054 [15], and the jobs, schools and power supplies those young people will need must be planned and financed now.

I.7 How Vision 2100 moves from ideas to measurable implementation

Vision 2100 is designed to be tested, not admired. Five features turn its ideas into decisions that can be checked.

01 **Decision rights first.** For every proposal the book states who can decide it: what a Secretary-General can do alone within existing mandates; what requires the General Assembly or the Security Council; what requires a Charter amendment under Article 108; and what belongs to sovereign national governments (Part III, the matrix in Part XII and Appendix F). Nothing in this book assumes powers that its proposers do not hold.

02 **Pilots and gates.** Vision 2100 proposes five flagship pilots (P1 Sovereign Digital Nation, P2 Clean Power and Compute Corridor, P3 Prevention Early-Warning, P4 Minerals-to-Industry and P5 Results Ledger), each run only where a host government asks for it and governed by a Pilot Governance Board chaired or co-chaired by that host. A proposed Vision 2100 Steering Board, with an independent majority, would decide at published gates (the first in October 2027) whether Vision 2100 continues to support each pilot. Stopping is a legitimate result (Part XII).

03 **A Results Ledger.** Vision 2100 proposes that its own spending, including on pilots that are stopped, be published on the Results Ledger it proposes for others (Part IX).

04 **A scorecard.** Every part ends with a *Measuring progress* table that uses the same seven-column format: indicator and owner, baseline with source, any agreed international target, and planning milestones for 2030, 2040, 2060 and 2100. The milestones never replace agreed commitments such as the Sustainable Development Goals. Appendix H consolidates them into a master scorecard.

05 **A plan for the first year and the first five years.** Part XIII sets out the first year, from November 2026 to October 2027, with an illustrative budget of $10–23 million and no funding yet committed; Part XIV sets out the first five years to 2031. Appendix G records the unresolved decisions and risks, and Appendix I the governance and conflict-of-interest disclosures, including the rule that A113 Partners and its affiliates may not act as supplier, financier or transaction adviser to any pilot they help design.

How to read this book. Every material number carries a bracketed citation to the numbered sources at the end of its part, and Appendix C records how each was verified. Recommendations are written as proposals ("Vision 2100 proposes", "this book recommends") and originate with A113 Partners. Statements by Ambassador A-Baki are marked with a gold "In her words" label and cite the public record; nothing else is attributed to her. Scenarios, archetype examples and planning ranges are marked "Illustrative"; they are planning assumptions, not forecasts or commitments. Where authoritative sources disagree, both are shown. Appendix A sets out the method in full.

The rest of this part sets out the starting line: the condition of the world in 2026, measured as carefully as public data allow.

I.8 Why the foundation includes a baseline

A plan for 2100 cannot be judged unless it states where it starts. The remainder of this part records, with figures available on 1 November 2026, the condition every later part sets out to change. It separates structural causes from the symptoms usually measured, explains why many problems have persisted for generations, and records where international institutions have plainly succeeded and why.

> **THE BASELINE IN ONE SENTENCE**
>
> In 2026 the world has more armed conflicts involving states than at any time since 1946, its highest military burden since 2009, and stalled progress on poverty, hunger and energy access. Yet its record of institutional successes shows what deliberate cooperation can achieve.

Four rules govern this part. Every material number is sourced, dated and logged. Figures are reported as their publishers report them; where two authoritative series differ, both are shown. This part does not forecast; planning numbers elsewhere are labeled illustrative. And the indicators in *Measuring progress* are the ones every later part reuses, so that progress toward 2100 is measured against a single, public starting line.

I.9 Peace and security: more wars, more weapons, more people uprooted

I.9.1 Armed conflict

The Uppsala Conflict Data Program (UCDP) recorded 65 armed conflicts involving states in 2025, the highest number since its records begin in 1946 [23]. Eight were fought between states, up from two in 2023 and also a record; thirteen reached the threshold of war (1,000 battle-related deaths a year), the most since 1992 [23]. Total deaths from organized violence were about 244,600, making 2025 the second-deadliest year since the 1994 genocide in Rwanda [23]. The war between Russia and Ukraine accounted for about 94,700 battle-related deaths, roughly 62 percent of the global total [23]. Deaths from one-sided violence (deliberate killing of civilians) rose to about 76,500, mostly from massacres after the fall of El Fasher in Sudan [23]. PRIO's companion overview places the 2025 conflicts across 35 countries and reports more than 255,000 fatalities, a broader aggregation than the UCDP release figure used here as the baseline [33].

An event-based measure shows persistence, though not escalation: the Armed Conflict Location and Event Data project (ACLED) recorded 204,605 conflict events between December 2024 and November 2025, slightly fewer than the 208,219 in the previous twelve months [34]. ACLED

describes conflict as holding at a steady but high level [34]. UCDP counts conflicts and deaths above defined thresholds; ACLED counts incidents. Vision 2100 tracks both.

PRIO estimates that about 520 million children lived in conflict-affected areas in 2024, more than one in five children worldwide [35].

I.9.2 Military spending

The Stockholm International Peace Research Institute (SIPRI) estimates world military expenditure in 2025 at $2,887 billion. That is a 2.9 percent real-terms rise, the eleventh in a row, and 2.5 percent of world GDP, the highest share since 2009 [36]. The United States ($954 billion), China ($336 billion) and Russia ($190 billion) accounted for about 51 percent, and European spending rose 14 percent to $864 billion [36].

The United Nations' 2026 regular budget is $3.45 billion [37]. The approved peacekeeping budget for 2025–26 is $5.38 billion, for roughly 70,000 personnel [38]. Together they equal about 0.3 percent of world military spending, a ratio of published figures rather than a claim that one could substitute for the other.

I.9.3 Forced displacement

UNHCR counted 117.8 million forcibly displaced people at the end of 2025, about one in 70 people on Earth and the first annual decline in a decade (down 4 percent) [39]. They include 41.6 million refugees (including those under UNRWA's mandate), about 9 million asylum-seekers and 68.7 million internally displaced people [39]. About 14.7 million people returned home during 2025, though many in adverse conditions [39]. Sudan remains the largest internal displacement crisis, with 9.1 million internally displaced [39]. Low- and middle-income countries host 68 percent of refugees and others needing international protection, and neighboring countries 65 percent [39]: the burden falls on the states least able to carry it.

I.10 Human development: progress that has stalled

I.10.1 Extreme poverty

On the World Bank's $3.00-a-day line (2021 purchasing-power terms, adopted June 2025), about 831 million people lived in extreme poverty in 2025, roughly one person in ten, compared with about 2.3 billion in 1990 [17]. The Bank's 2026 nowcast is about 811 million [40]. Some 71 percent of the extreme poor live in Sub-Saharan Africa, and about 3.7 billion people live below the $8.30-a-day upper-middle-income line [17].

Poverty is now concentrated where conflict is. The World Bank classifies 39 economies as fragile or conflict-affected; nearly 40 percent of their people are extremely poor [41], against about 6 percent across developing economies according to Down To Earth's report of the same study, which also reports that these economies are home to about one billion people and that extreme poverty in them has not fallen in fifteen years [42]. These economies are expected to hold nearly 60 percent of the world's extreme poor by 2030, up from 50 percent in 2024 [41]. The Bank also warns that, without faster per capita growth, the number of extremely poor people in 2030 will be higher than it is today [40].

I.10.2 Electricity and clean cooking

Tracking SDG 7 (2026) reports that 655 million people lacked electricity in 2024, a global access rate of about 92 percent, with about 89 percent of the unserved in Africa. Nearly 2 billion (1,991 million) still cooked with polluting fuels [43]. On current policies, about 644 million would still lack electricity and 1.6 billion clean cooking in 2030, leaving Sustainable Development Goal 7 unmet [43].

International public finance for clean energy in developing countries was $24.6 billion in 2024, almost unchanged from 2023 [43].

I.10.3 Water and sanitation

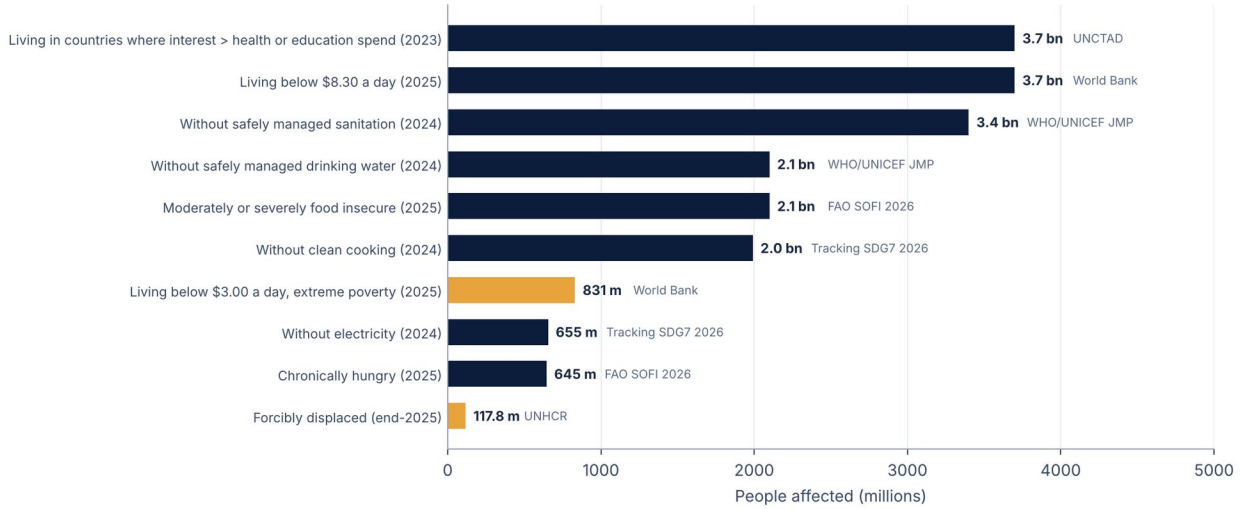
The WHO/UNICEF Joint Monitoring Programme reports that in 2024 2.1 billion people, about one in four, lacked safely managed drinking water, 106 million of them drinking untreated surface water. Some 3.4 billion lacked safely managed sanitation, 354 million still practice open defecation, and 1.7 billion lacked basic hygiene at home [44].

I.10.4 Hunger and food insecurity

FAO and partners (*SOFI 2026*) estimate that about 645 million people, 7.8 percent of the world's population, faced chronic hunger in 2025, the third straight annual decline [45]. About 2.1 billion faced moderate or severe food insecurity, and nearly a third of humanity cannot afford a healthy diet [45]. Africa is the outlier, with hunger affecting about 20 percent of its population, roughly 309 million people [46]. The agencies project that around 520 million people could still be hungry in 2030 [4546]. Figure I-1 summarizes how many people each of these conditions affects.

FIGURE I-1

The 2026 baseline: how many people each condition affects



Sources: UNCTAD A World of Debt 2026 [47]; World Bank Poverty and Inequality Update, Fall 2025 [17]; WHO/UNICEF JMP 2025 [44]; FAO SOFI 2026 [45]; Tracking SDG7 2026 [43]; UNHCR Global Trends 2025 [39]. Millions of people; reference years as labeled. Categories overlap and are not additive.

I.11 People and planet: demography, migration and climate

I.11.1 A population that will peak, and a center of gravity that will move

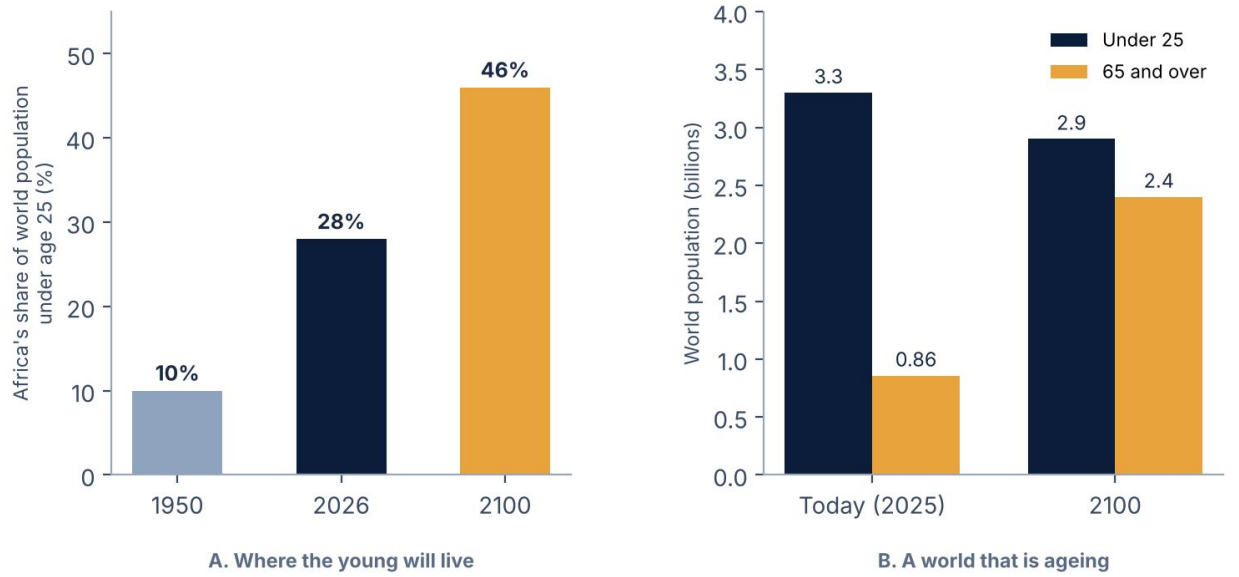
World Population Prospects 2024 puts world population at 8.2 billion, peaking at about 10.3 billion in the mid-2080s and 10.2 billion in 2100 [15]. Sixty-three countries and areas, home to 28 percent of humanity, have already peaked [15]. Today's young age structure alone accounts for 79 percent of the projected increase through 2054, about 1.4 billion people [15].

The geography of youth is changing faster than the total (Figure I-2). Africa's share of the world's under-25s rose from 10 percent in 1950 to about 28 percent today and is projected to reach 46 percent by 2100; its median age is about 19 [30]. Elsewhere the world is ageing: people aged 80 and over will outnumber infants by the mid-2030s, and those 65 and over will outnumber under-18s by the late 2070s [15]. By 2100 the 65-and-over population rises from 857 million to 2.4 billion, the

under-25 population falls from 3.3 to 2.9 billion, and China's population falls from about 1.4 billion to about 633 million [31].

FIGURE I-2

Where the young will live, and a world that is ageing



Source: UN World Population Prospects 2024, medium variant, as analyzed by Pew Research Center [3031]. Panel A: percent of world population under 25 living in Africa. Panel B: billions of people.

ILLUSTRATIVE The largest cohorts of new workers this century will come of age where electricity, capital and institutions are weakest; the largest ageing populations will be where capital is plentiful and young workers scarce. Whether that becomes shared opportunity or century-long instability depends on decisions taken this decade (see Parts V, VII and VIII).

I.11.2 Migration

IOM's *World Migration Report 2026* counts about 304 million international migrants (mid-2024, 3.7 percent of world population), and projected remittances to low- and middle-income countries at $685 billion for 2024 [48]. The report warns that more restrictive policies are pushing migrants onto more dangerous routes [48]. Most migration is voluntary and orderly; this book's concern is distress migration, where conflict, poverty or climate stress leave no real choice at home (see the stay-and-build proposals in Part VII).

I.11.3 Climate pressure

The World Meteorological Organization puts 2025 at 1.44 °C (±0.13 °C) above the 1850–1900 average; 2015–2025 were the eleven warmest years on record, and the 2023–2025 average was 1.48 °C [16]. The IPCC's Sixth Assessment Synthesis Report found that 3.3 to 3.6 billion people live in contexts highly vulnerable to climate change, where deaths from floods, droughts and storms in 2010–2020 were 15 times higher than in regions of very low vulnerability [32].

◆ DOCUMENTED POSITION In her 20 August 2026 dialogue, Ambassador A-Baki described climate risk for small island states such as Tonga, which nominated her, as an existential reality rather than an abstract future threat [5].

Vision 2100 independently proposes a small island state as the first archetype host for Pilot P1 (Parts IV and XII); that choice is A113 Partners', not hers.

I.12 Money, integrity and technology

I.12.1 The weight of debt

UNCTAD puts global public debt at about $111 trillion in 2025. Developing countries owe about $35.1 trillion and paid about $995 billion in net interest in 2025 [47]. In 2023, 46 countries spent more on net interest than on health and 20 more than on education, and about 3.7 billion people lived in countries that spent more on interest than on health or education [47]. UNCTAD's summary of the same report counts 51 developing countries in this position (Part X); this book dates the 3.7 billion figure to 2023, the year of UNCTAD's underlying comparison. No measure shows more clearly how capital costs crowd out development.

I.12.2 Corruption

Transparency International's Corruption Perceptions Index 2025 scored 182 countries and territories; the global average fell to 42 of 100, the first decline in more than a decade, and 122 countries scored below 50 [4950]. Since 2012, 50 countries' scores have declined and 31 have improved [4950]. According to Reuters' report of the IMF's 2016 staff discussion note *Corruption: Costs and Mitigating Strategies*, bribery alone costs $1.5 trillion to $2 trillion a year, about 2 percent of global GDP, an extrapolation from 2005 World Bank research [51]. The estimate is dated and excludes wider losses; Vision 2100 uses it only as an order of magnitude.

◆ DOCUMENTED POSITION Asking in the same dialogue why developing countries lack resources, Ambassador A-Baki answered that the problem is corruption, and she asked where development money had been used and what results it produced [5].

Part IX sets out the Results Ledger and related accountability tools, which Vision 2100 proposes; they are A113 Partners' proposals, not hers.

I.12.3 Concentration of AI and compute

The century's defining capability is unusually concentrated. UNCTAD's *Technology and Innovation Report 2025* found that 100 companies, mostly in the United States and China, account for 40 percent of the world's private research and development, and that 118 countries, mostly in the Global South, are absent from the main AI governance discussions [52]. According to a June 2025 study by University of Oxford researchers (Hawkins, Lehdonvirta and Wu), as reported by the ITU, only 32 countries host data centers that provide the compute essential for advanced AI [27]. The ITU adds, citing a separate 2024 analysis by the Center for Strategic and International Studies, that American and Chinese companies operate more than 90 percent of the data centers that others use for AI work, and reports that more than 150 countries have none and that Africa and South America have almost no computing hubs (see Part IV) [27]. The IEA's *Energy and AI* report, as reported by Scientific American, estimates that data centers used about 415 TWh of electricity in 2024, roughly 1.5 percent of global consumption, with the United States, Europe and China together accounting for about 85 percent, and projects about 945 TWh by 2030 in its base case [28]. A secondary summary of the same report gives the individual shares as about 45 percent (United States), 25 percent (China) and 15 percent (Europe) [53]. Later IEA analysis puts 2024 use nearer 460 TWh and 2030 above 1,000 TWh; this book keeps the April 2025 figures as its shared series and Part IV sets out the difference.

Member states have begun to respond. The Pact for the Future and Global Digital Compact (September 2024) committed states to inclusive digital cooperation, and resolution 79/325 (August 2025) created the 40-member Independent International Scientific Panel on AI and the Global Dialogue on AI Governance, which met in Geneva in July 2026 and meets next in New York in May 2027 [12]. These are mandates to build on (see Parts III and IV).

I.13 The cooperation deficit

I.13.1 A Security Council that produces less

In 2025 the Security Council adopted 44 resolutions, the fifth straight annual decline and the lowest number since 1991 [22]. Only 61.4 percent were adopted unanimously, compared with 83.9 percent between 2014 and 2023 [22]. It took little formal action on Ukraine, Gaza, Sudan or Myanmar [22]. Four vetoes were cast in 2025, after eight on seven drafts in 2024, the most since 1986 [2254]. Since resolution 76/262 (April 2022), every veto triggers a General Assembly debate within ten working days, the first time a UN body acted to change how the veto is used [54].

Member states hold sharply different reform positions (the G4, Uniting for Consensus and the African Union's common position), and any change in membership requires a Charter amendment under Article 108 (see Part III). This part records the deadlock as a condition and takes no position among the models.

I.13.2 An Organization short of cash

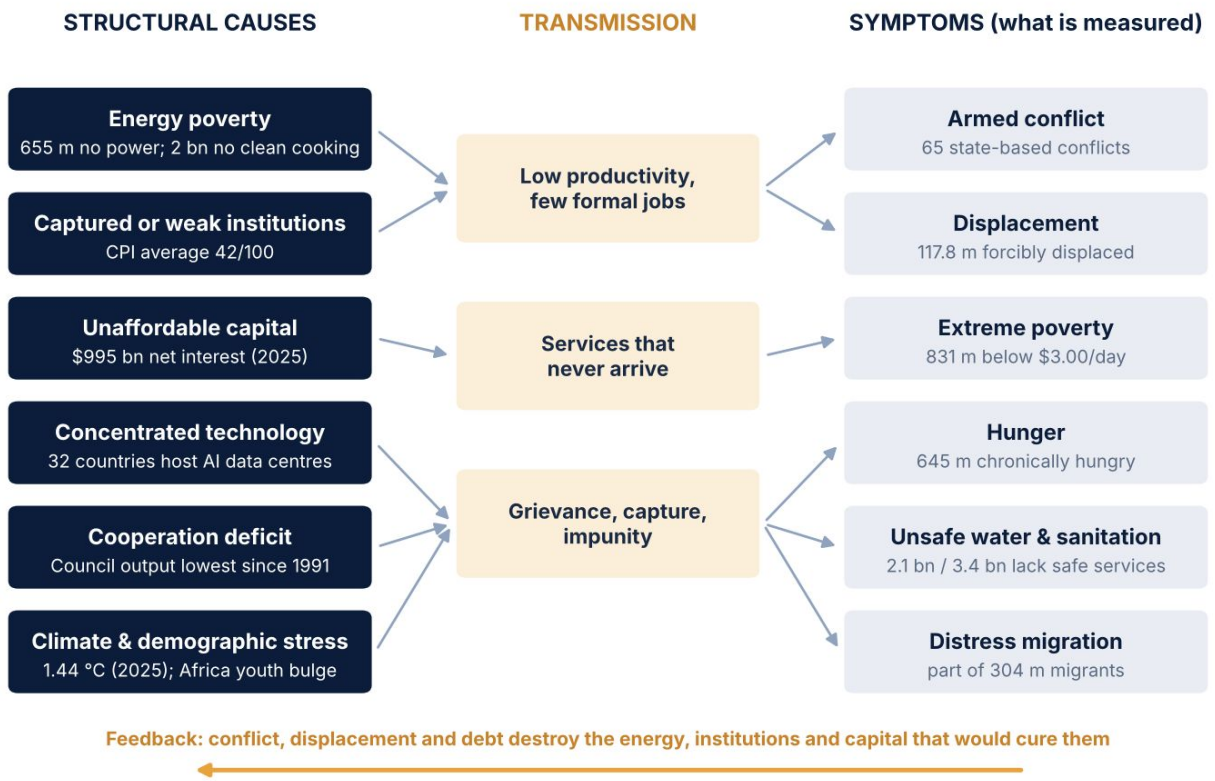
Finances now directly constrain the UN. The 2026 regular budget of $3.45 billion reflects cuts of about 15 percent in resources and 19 percent in staffing [37]. In January 2026 the Secretary-General warned of a risk of imminent financial collapse, partly because financial rules still required credits to be returned for "unspent" funds never received [55]. The Secretariat's May 2026 statement to the Fifth Committee confirmed record arrears of $1.57 billion at the end of 2025 and a final 2025 collection rate of 76.7 percent, the lowest in seven years, and warned that regular-budget cash would meet legal obligations only through mid-August [2456]. In October, according to a member state's statement in the Fifth Committee as reported by the press, unpaid regular-budget assessments stood at about $1.46 billion, over 90 percent owed by one member state, with peacekeeping arrears at about $4.1 billion [57]; the Secretariat's own year-end figures are awaited. The UN80 mandate review, adopted on 31 March 2026 by 168 votes to 4 [26], is an opportunity for leaner, results-reviewed mandates and a risk if cuts fall first on prevention and development.

I.14 Structural causes versus symptoms

Most international reporting measures symptoms: deaths, the displaced, the hungry, the poor. They must be counted, but treating them as the problem confuses outcomes with causes. Vision 2100 proposes distinguishing six structural causes from the symptoms they produce (Figure I-3) and judging programs by whether they change the causes, not only relieve the symptoms.

FIGURE I-3

Structural causes and symptoms of the 2026 condition



Vision 2100 analytical framework. Figures as cited in this part [2339174344451647492722]. Arrows show principal, not exclusive, pathways.

- **Energy poverty.** Without reliable power there is little modern industry, refrigeration, irrigation, digital service or night-time study. Energy is the first link in the chain.
- **Captured or weak institutions.** When public money leaks, services are not built, trust collapses and revenue becomes private wealth and grievance.
- **Unaffordable capital.** High borrowing costs crowd out the investment that would remove the other causes and shift risk onto the countries least able to bear it.
- **Concentrated technology.** When compute, data and models sit in a few countries and firms, others become customers rather than builders, and AI widens gaps instead of closing them.
- **The cooperation deficit.** A deadlocked Council and an underfunded Secretariat cannot prevent, mediate or verify at the scale the conflict data demands.
- **Climate and demographic stress.** Not causes in the same sense, but multipliers that raise the cost of every other weakness, especially where young populations grow fastest.

ILLUSTRATIVE These causes reach people through three channels: too few formal jobs; services budgeted but never delivered; and grievance, capture and impunity that turn disputes into violence. Symptoms then feed back into causes. Conflict destroys power plants and drives out investors, displacement empties schools, and debt crises cut the institutions that could fight corruption.

I.15 Why these problems persist

That feedback is visible in the data: as reported from the World Bank's study, fragile and conflict-affected economies have seen no fall in extreme poverty for fifteen years while poverty fell elsewhere [42]. Beyond it, five historical patterns explain much of the persistence.

01 **Time horizons are mismatched.** Grids, school systems and honest procurement agencies pay off over decades; electoral, budget and donor cycles last one to five years. Part XI responds with long-horizon stewardship.

02 **Response is funded more readily than prevention.** Prevention succeeds when nothing happens, which makes it hard to fund and harder to credit. Part VI proposes the Prevention and Mediation Fund.

03 **Capital is priced on perceived, not actual, risk.** Countries with thin data pay more for the infrastructure that would build a track record. Part X addresses blended finance and risk-sharing.

04 **Value leaves with raw materials.** Exporting unprocessed minerals leaves jobs, skills and profits elsewhere. Part V sets out the Minerals-to-Industry Framework.

05 **Accountability is weak where it matters most.** Results are rarely published in checkable form, so failing programs continue and working ones are not scaled. Part IX proposes the Results Ledger.

None of these patterns is a law of nature. Each is the product of rules and incentives that people designed and can redesign, as the next section shows.

I.16 Where institutions have succeeded, and why

Six achievements stand out because they were global, measurable and achieved among rivals (Table I-1).

TABLE I-1 **Six institutional successes and the conditions that enabled them. Sources as cited in each row.**

Achievement	What was achieved	Key enabling conditions
Smallpox eradication	WHO's intensified program began in 1967; the World Health Assembly declared eradication on 8 May 1980 [21]	One clear target; a shared technical method; Cold War rivals cooperating through WHO; total cost about $300 million [21]
Montreal Protocol (1987)	More than 99% of controlled ozone-depleting substances phased out; ozone on track to recover to 1980 levels by about 2040, 2045 (Arctic) and 2066 (Antarctic) [20]	Science-led assessment; binding, adjustable schedules; financial support for developing countries; available substitutes
Polio	Wild poliovirus cases down more than 99% since 1988, from an estimated 350,000 in more than 125 endemic countries; endemic transmission remains in two [19]	A global partnership with sustained financing; community health workers; independent surveillance
Child survival	Under-five mortality rate fell 52% between 2000 and 2023 [18]; about 4.9 million under-five deaths in 2024 (revised method) [58]	Cheap, proven interventions (vaccines, oral rehydration, bed nets); measurable targets; joint UN monitoring

Achievement	What was achieved	Key enabling conditions
Extreme poverty	From about 2.3 billion people in 1990 to about 831 million in 2025, on the $3.00 line [17]	Broad-based growth, especially in East and South Asia; open trade; public investment in infrastructure and people
Antarctic Treaty (1959)	A continent reserved for peace and science; military activity and nuclear explosions banned; territorial claims frozen; open inspection; 58 parties, 29 of them consultative (decision-making) parties, as of January 2026 [59][60]	A narrow, verifiable bargain; inspection rights; science as a shared interest; claims frozen rather than resolved

Several of these gains have slowed. The pace of reduction in child mortality has slowed by more than 60 percent since 2015, and UN IGME warns that its estimates are not directly comparable across reporting rounds [58]; poverty reduction has stalled in fragile settings [42], and polio eradication remains incomplete [19]. Successes must be maintained, not only achieved.

Read together, these cases suggest six design conditions, and Vision 2100 proposes to apply them to every initiative in this book:

- **A specific, measurable objective.** One disease, named chemicals, one continent. Vague goals do not mobilize rivals.
- **Shared, trusted evidence.** Independent assessment or surveillance that all parties accept.
- **Verification without humiliation.** Checking compliance without demanding that states abandon their positions, as when the Antarctic Treaty froze claims rather than resolving them.
- **Money attached to obligations.** Financing made Montreal compliance possible for developing countries.
- **Technology that makes compliance cheap.** Vaccines, substitute chemicals and oral rehydration salts turned commitments into action.
- **Benefits for every major power.** Each success served the states whose cooperation it required.

These conditions underlie the operating models proposed in Parts III to XII and explain why Vision 2100 favors verifiable pilots over declarations (see also Part XI).

I.17 One system, and what it implies for 2100

Vision 2100 reads the baseline as one interlocking system, and its proposed chain runs through it. **Reliable clean energy** is missing for 655 million people. Without it there is no **compute and digital infrastructure**, now concentrated in about 32 countries, and without that, digital tools cannot strengthen **education, health and accountable government** where corruption is high and interest outweighs health spending. Without capable government, **productive industry and jobs** do not reach the youngest populations; without jobs, **social stability and dignity** erode into the conflicts now at record levels; without stability, **diplomacy and peace** fail; and without peace, **the investments in energy and industry** that started the chain are destroyed or never made.

Vision 2100 proposes two tests that run through every link. **Honest institutions and financing** decide whether money reaches each link; debt service and corruption are the main leaks (Parts IX and X). **Women, children and the environment** test each link: half a billion children in conflict areas, girls kept from school by missing water and clean cooking, and record temperatures are the clearest signs of failure (Part VIII). This book recommends that a program which improves one

indicator while worsening another, such as compute powered by unabated fossil generation in a water-stressed region, be judged to fail the Vision 2100 test.

This also explains the book's order: the 2100 destination (Part II); what the UN can and cannot decide (Part III); the compute and energy foundation (Parts IV and V); peace, regional prosperity, human development and honest institutions (Parts VI to IX); financing, cooperation and the roadmap (Parts X to XII); and the first year and first five years (Parts XIII and XIV).

ILLUSTRATIVE The baseline also bounds what is realistic for 2100 (detailed in Part II). With about 10.2 billion people and nearly half of all young people in Africa [1530], a credible 2100 has universal electricity, clean cooking, water and sanitation; extreme poverty at a residual level by mid-century; armed conflict well below today's record; capital costs that no longer force governments to choose between creditors and classrooms; and AI capability distributed across every region under national law and shared standards.

What begins now

Vision 2100 proposes that Part I's immediate deliverable be the **Vision 2100 Baseline Dataset and Dashboard**: a public, versioned record of this part's indicators, with source, date, method and confidence attached to each value, updated as custodian agencies publish, which would sit within the Results Ledger (Part IX). It would not compete with official statistics: it cites the custodian agencies and SDG indicator framework and would add only the cross-cutting indicators Vision 2100 needs, such as compute distribution and interest-to-health ratios.

TABLE I-2 **Proposed actions for the Baseline Dataset and Dashboard, November 2026–2031 (Vision 2100 proposal; no partner has yet agreed to the partnered steps)**

Horizon	Action	Owner	Independent or partnered
30 days (by Dec 2026)	Freeze Baseline v1.0 from the sources in this part; publish the indicator dictionary and verification log	A113 Partners research team	Independent
90 days (by Feb 2027)	Publish a public dashboard with download access; invite review by statisticians from at least three custodian agencies or universities	A113 Partners with academic partners	Partnered (review only)
180 days (by May 2027)	Add country-level series for the five pilot archetypes (Part XII); align definitions with SDG indicator codes; present at the Global Dialogue on AI Governance side events where invited	A113 Partners; pilot-country statistics offices if they volunteer	Partnered
First year (to Oct 2027)	Publish the first annual "State of the Baseline" note; open a correction and appeal channel; obtain an independent methodological review	Independent review panel	Partnered
First five years (to 2031)	Seek recognition of cross-cutting indicators through existing UN statistical processes; hand custody of any adopted indicator to the relevant agency	Member states via UN Statistical Commission; custodian agencies	Requires UN authority

The proposed decision rights are straightforward. A113 Partners can compile and publish the dataset independently because it uses public data. The Secretary-General can direct the Secretariat to publish results in a common format but cannot create official statistical standards; those belong to member states through the UN Statistical Commission and to the custodian

agencies. National statistics offices own national data. The dashboard holds no one's private data, consistent with the UN Shared Layer principle (Part IV).

The main risks are mis-citation, selective presentation and the appearance of bias. This book recommends these safeguards: full source links, publication of figures that cut against the book's arguments, a standing correction log, and a rule that no figure appears unless a custodian agency has published it.

Measuring progress

ILLUSTRATIVE Table I-3 sets the baseline that later parts reuse. The 2030–2100 columns are Vision 2100 planning milestones, not forecasts; they never replace an agreed international commitment. Where a 2030 milestone is less ambitious than the agreed target (electricity, clean cooking, water, sanitation and hunger), the agreed target remains the commitment and the milestone is only an interim planning marker. Shared indicators use the same values as Parts II and XII and Appendix H.

TABLE I-3 Part I baseline indicators and Vision 2100 planning milestones. Baselines as cited; milestones are ILLUSTRATIVE and, for electricity, clean cooking, water, sanitation and hunger, less ambitious in 2030 than the agreed SDG target, which remains the commitment.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
State-based armed conflicts per year (UCDP/PRIO data; UN DPPA)	65, 2025, UCDP [23]	—	≤ 55	≤ 40	≤ 25	≤ 10
Deaths from organized violence (UCDP data; UN DPPA)	~244,600, 2025, UCDP [23]	SDG 16.1: significantly reduce violence-related deaths everywhere	Half of 2025	< 50,000	Sustained low	Sustained low
World military burden, % of world GDP (SIPRI data; member states)	2.5%, 2025, SIPRI [36]	—	No further rise	Declining	Below 2009 level	National decisions
Forcibly displaced people (UNHCR; host states)	117.8m, end-2025, UNHCR [39]	—	< 100m	< 60m	< 30m	Durable solutions for all
Extreme poverty, $3.00/day (World Bank; national governments)	831m, 2025, World Bank [17]	SDG 1.1: eradicate extreme poverty by 2030	Below 2025 level	< 300m	< 3% of people	Residual
People without electricity (SDG7 custodian agencies)	655m, 2024, Tracking SDG7 2026 [43]	SDG 7.1: universal access by 2030	≤ 400m	≤ 50m	0	0
People without clean cooking (SDG7 custodian agencies)	~2.0bn, 2024, Tracking SDG7 2026 [43]	SDG 7.1: universal access by 2030	< 1.6bn	< 0.5bn	0	0
Without safely managed drinking water (WHO/UNICEF JMP)	2.1bn, 2024, JMP [44]	SDG 6.1: universal access by 2030	≤ 1.8bn	≤ 1.0bn	≤ 0.3bn	0
Without safely managed sanitation (WHO/UNICEF JMP)	3.4bn, 2024, JMP [44]	SDG 6.2: access for all by 2030	< 3.0bn	< 1bn	0	0
Chronic hunger (FAO and SOFI partners)	645m, 2025, FAO SOFI 2026 [45]	SDG 2.1: end hunger by 2030	≤ 500m	≤ 250m	≤ 100m	< 1% of people

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Under-five deaths per year (UN IGME; ministries of health)	4.9m, 2024, UN IGME (revised method; not comparable across rounds) [58]	SDG 3.2: under-five mortality ≤ 25 per 1,000 live births in every country by 2030	≤ 4.0m	≤ 2.5m	≤ 1.2m	≤ 0.5m
People in countries where interest exceeds health or education spending (UNCTAD; IMF; World Bank)	~3.7bn, 2023, UNCTAD [47]	—	< 2.5bn	< 1bn	0	0
CPI global average score (TI data; national governments)	42, 2025, Transparency International [49]	—	45	50	60	70+
Countries hosting AI data centers (to be established; ITU and UNCTAD candidates)	32, 2025, Oxford via ITU [27]	—	50	100	All regions	Every nation with access to sovereign or shared capacity
Global temperature anomaly, °C above 1850–1900 (WMO; UNFCCC parties)	1.44 °C, 2025, WMO [16]	Paris Agreement: well below 2 °C, pursuing 1.5 °C	Track annually	Track annually	Stabilized	Per Paris Agreement
UN regular-budget collection rate (member states; UN Controller)	76.7%, 2025 final, UN Secretariat [24]	Charter Art. 17: assessments are binding	95%	98%	98%	98%
Security Council unanimity rate (Council members)	61.4%, 2025, Security Council Report [22]	—	> 70%	> 80%	Tracked	Tracked

Source: as cited in the baseline column. Milestones: Vision 2100 planning assumptions (ILLUSTRATIVE), to be refined in Part XII and validated with custodian agencies.

PART II

II

THE WORLD WE SEEK IN 2100

Five lives to 2100: the world worth building, and the path back to today

IN THIS PART

II.1 Why begin at the end
II.2 The frame: what the evidence says about 2026 to 2100
II.3 Five lives, 2026 to 2100
II.4 The desired condition in 2100: ten domains
II.5 Working backward: from 2100 to November 2026
II.6 What could prevent this future
II.7 Three futures
II.8 Objections and limits

THE QUESTION THIS PART ANSWERS

A child born in 2026 will be 74 in 2100. What must be true of the world she grows old in, and what must start before 2031 for that world to be possible?

II.1 Why begin at the end

Plans that extend today's systems forward work for budgets and fail for centuries: over seventy-four years, small annual differences in growth, emissions or school completion compound into different worlds.

This part therefore uses **backcasting**: it defines a desired condition in 2100, then works backward to the systems, institutions and decisions that must exist at each earlier stage. The method exposes lead times. A teacher workforce or a trusted mediation institution must be started a decade or two before it is needed. The method's weakness is a pleasing picture that ignores what could prevent it, so every claim about today is sourced, every picture of the future is labeled an illustration, and Sections II.6 and II.7 set out the obstacles and two rival futures.

Part II defines the destination that every link of the Vision 2100 chain serves: reliable clean energy (Part V), compute and sovereign AI (Part IV), education, health and accountable government (Parts VIII and IX), productive industry (Parts V and VII), and the peace that protects them (Part VI). Part I describes the world we inherit; Part XII sets out the road, and Parts XIII and XIV the first year and the first five years.

II.2 The frame: what the evidence says about 2026 to 2100

II.2.1 People

The United Nations projects that the world's population, about 8.2 billion in 2024, will peak at about 10.3 billion in the mid-2080s and ease to about 10.2 billion by 2100, with about an 80 percent chance that the peak comes this century. Sixty-three countries and areas, with 28 percent of humanity, have already peaked. Life expectancy, 73.3 years in 2024, is projected to reach about 77.4 by 2054, and by the late 2070s people aged 65 and over will outnumber children under 18 [15].

Growth is concentrated. Africa holds about 19 percent of the world's people but is projected to hold 46 percent of everyone under 25 by 2100. Its median age, about 19, is projected to reach 35, and its fertility rate to fall from about 3.9 to about 2.0 births per woman [30]. At the other extreme, South Korea's fertility rate was 0.75 in 2024 [61], and Japan's preliminary 2024 vital statistics, which include foreign residents, recorded about 721,000 births against 1.62 million deaths [62].

The century will also be urban. Cities hold 45 percent of the world's people. There were 33 megacities in 2025, up from 8 in 1975; the largest, Jakarta and Dhaka, each have roughly 40 million residents. Two-thirds of population growth to 2050 is projected to occur in cities [63].

II.2.2 Climate

The World Meteorological Organization estimates that 2024 was about 1.55°C above the 1850–1900 average, likely the first calendar year above 1.5°C, and gives a 70 percent chance that the 2025–2029 average will exceed 1.5°C [64]. The UN Environment Programme finds that full implementation of national pledges points to 2.3–2.5°C of warming this century, and current

policies to 2.8°C [65]. The International Energy Agency's scenarios give almost 3°C under current policies and about 2.5°C under stated policies [66].

The IPCC's very likely ranges for warming in 2081–2100 run from 1.0–1.8°C in its very-low-emissions scenario to 2.1–3.5°C in its intermediate scenario and 3.3–5.7°C in its very-high scenario. Its likely range for sea-level rise by 2100 is 0.28–0.55 meters under very low emissions and 0.63–1.01 meters under very high emissions; sea level is committed to keep rising for centuries [67]. NASA projects that Pacific island nations such as Tuvalu, Kiribati and Fiji will see at least 15 centimeters of rise by about 2050 regardless of emissions, with high-tide flood days rising roughly tenfold in most of them [68].

II.2.3 The starting line for human development

In 2024, 655 million people lacked electricity, about 89 percent of them in Africa, and nearly 2 billion still cooked with polluting fuels [43]. About 4.9 million children died before age five in 2024, according to the latest UN IGME round, whose updated data and methods put estimates slightly above earlier rounds, so they should not be compared directly with figures published before 2026 [69]. About 260,000 women died from pregnancy and childbirth, 70 percent of them in sub-Saharan Africa [70]. About 645 million people faced chronic hunger in 2025 [45]. Some 2.1 billion people lacked safely managed drinking water and 3.4 billion safely managed sanitation [44]. About 272 million children and youth were out of school in 2023 [71], and about 2.2 billion people were still offline in 2025 [72].

The Uppsala Conflict Data Program recorded 65 state-based armed conflicts in 2025, the most since 1946 [23]. World military spending reached about $2.9 trillion in 2025, an eleventh consecutive annual rise [36]. About 520 million children lived in conflict-affected areas in 2024 [35], and UNHCR counted 117.8 million people forcibly displaced at the end of 2025 [39]. V-Dem counted 45 countries autocratizing in 2024, up from 12 twenty years earlier [73]. AI capability is concentrated: in 2024, US-based institutions produced 40 notable AI models, China 15 and Europe 3 [74].

None of these numbers is destiny. Maternal mortality fell by about 40 percent since 2000 [70], and the cost of running a capable AI model fell more than 280-fold in about eighteen months [74]. The question for 2100 is whether change reaches everyone, and on what terms.

II.3 Five lives, 2026 to 2100

> **HOW TO READ THESE LIFE-PATHS**
>
> The five people are composites and their countries archetypes, not named states. Each path shows one life if Vision 2100 succeeds and if it fails (Figure II-1). They are not forecasts.

FIGURE II-1

Five illustrative life-paths: children born in 2026 who turn 74 in 2100

	2035 · age 9	2050 · age 24	2075 · age 49	2100 · age 74
Mele Pacific atoll born 2026	Learning companion in her mother tongue; island on solar + storage, diesel imports falling	Coastal engineer; plans managed retreat to raised ground; votes on national data law from home	Leads island adaptation authority; chooses to stay or move under a dignified mobility agreement	Nation still sovereign, online and offshore-zone secured; grandchildren learn on the same atoll
Moussa Sahel born 2026	Finishes primary school despite drought years; early-warning alerts reach village by phone	Solar-irrigation technician in a minerals-to-industry zone; first formal wage in family	Runs a regional water cooperative; local disputes settled by mediation, not militias	Region feeds itself in a hotter climate; no child in his town dies before age five
Lucía Central America born 2026	Clinic and school within walking distance; mother earns in a stay-and-build project	Electrical engineer on a clean power and compute corridor; chooses to stay	Municipal leader; public contracts audited on an open Results Ledger	Remittances optional, not essential; migration a choice, not a flight
Rahim South Asian megacity born 2026	Heat-safe school, clean air days rising; digital ID lets family claim benefits directly	Nurse-technician using AI diagnostics under a human doctor; flood defences hold	City cooled and electrified; he and his partner share care and paid work	Megacity resilient to 1-in-100-year flood; lives in a liveable, low-carbon city
Hana Ageing economy born 2026	One of few children in her town; learning companion supports a stretched teacher	Software and care-robotics engineer; works with migrants recruited fairly	Pension system rebuilt for long lives; healthy-life expectancy keeps pace	Ages with dignity at home, supported by care tech and human carers

ILLUSTRATIVE — composite archetypes, not forecasts. Demographic and climate framing from UN WPP 2024, IPCC AR6, WMO and NASA (see text).

II.3.1 Mele: a girl on a Pacific atoll

ILLUSTRATIVE Mele is born on an atoll a few meters above the sea, in a nation of about ten thousand people. (Her nation is a separate illustration; the archetype host for pilot P1 in Part IV is a small island state of about 100,000 people.) A real precedent shows what is at stake: under the Falepili Union treaty, signed in 2023 and in force since August 2024, Australia opened a mobility pathway for citizens of Tuvalu, with up to 280 places in the first ballot and later annual numbers agreed by the two governments [75].

ILLUSTRATIVE **2035, age 9.** Mele learns with a **learning companion** in her own language while her teacher stays in charge (Part VIII). Solar and batteries are cutting diesel imports (Part V), and a government-run cyclone warning gives her family two days' notice (Part VI).

ILLUSTRATIVE **2050, age 24.** Sea level has risen by roughly the 15 centimeters NASA projects [68]. Mele, a coastal engineer, uses her government's **sovereign AI node** (Part IV, pilot P1) to model which land can be defended; citizens vote on the plan.

ILLUSTRATIVE **2075–2100.** Mele leads the adaptation authority. Some families move under dignified mobility agreements; others stay, and the nation's statehood and maritime zones remain recognized. Whether her grandchildren can stay depends on whether the world followed the 0.28–0.55 meter path or the path toward a meter [67]. Success is a nation that is sovereign, connected and still home. Failure is a government in exile with a flag and no land.

II.3.2 Moussa: a boy in the Sahel

ILLUSTRATIVE Moussa is born in a dryland region where many villages lack power and both drought and armed groups drive people from their land.

ILLUSTRATIVE **2035, age 9.** Moussa finishes primary school despite drought because meals and cash transfers reach his family directly through digital identity and payments (Part IX). Human-led early warning flags tension over a water point, and mediators, including women from both communities, act before violence starts (Part VI, pilot P3; **Women at Every Table**).

ILLUSTRATIVE **2050, age 24.** He is a solar-irrigation technician in a zone built under the **Minerals-to-Industry Framework** (Part V, pilot P4), the first in his family with a formal wage. The World Bank estimates that 1.2 billion young people will reach working age over the next decade, against only about 420 million jobs projected over the same period [76]. Moussa's job exists because someone decided to build it.

ILLUSTRATIVE **2075–2100.** He runs a water cooperative; farmer-herder disputes go to mediation and courts, not militias. In the success case his region feeds itself and his grandchildren choose whether to stay or go. The failure case is visible in the World Bank's *Groundswell* analysis: as many as 86 million internal climate migrants in sub-Saharan Africa by 2050, a figure that early emissions cuts and inclusive development could reduce by up to 80 percent [77].

II.3.3 Lucía: a girl in Central America who stays and builds

ILLUSTRATIVE Lucía is born in a Central American town; her uncle works in the north and sends money home. Remittances to Latin America and the Caribbean reached a record of about $173.7 billion in 2025, according to Inter-American Development Bank estimates for 23 countries based on central-bank and statistical-office data [78], a lifeline that also measures the opportunity missing at home (Part VII).

ILLUSTRATIVE **2035, age 9.** Her mother earns a wage building a local clinic and school on a **stay-and-build** program under an **Americas Compact**, where an **Americas Build Corps** nurse trains staff (Part VII).

ILLUSTRATIVE **2050, age 24.** Lucía is an electrical engineer on a **Clean Power and Compute Corridor** (Part V, pilot P2) that runs on hydropower, solar and storage, with firm low-carbon power, including small reactors, only where licensed, economic and publicly accepted. She has offers abroad and stays.

ILLUSTRATIVE **2075–2100.** As mayor, she publishes every contract on a **Results Ledger** (Part IX, pilot P5). Success means remittances are optional and migration a choice, not a flight. The failure case is a hemisphere where the current still runs north.

II.3.4 Rahim: a boy in a South Asian megacity

ILLUSTRATIVE Rahim is born in a delta megacity of about 40 million people [63] facing heat, floods and air pollution together. The Lancet Countdown estimates that heat already causes about 546,000 deaths a year and cost about 640 billion potential working hours in 2024 [79].

ILLUSTRATIVE **2035, age 9.** His school is retrofitted for heat, his family claims benefits without bribe-seeking middlemen, and clean-air days rise as transport electrifies.

ILLUSTRATIVE **2050, age 24.** He is a nurse-technician using AI diagnostics under a physician's authority (Part VIII), and the city's flood defenses hold.

ILLUSTRATIVE **2075–2100.** Trees, reflective roofs and clean-powered cooling have cooled the city. Success is a low-carbon megacity built for a 1-in-100-year flood; failure is months of unsafe outdoor heat and seasonal floods in the poorest districts.

II.3.5 Hana: a girl in an ageing advanced economy

ILLUSTRATIVE Hana is born in a wealthy country where deaths outnumber births, as in several East Asian and European countries today [6261]. Her problem is the reverse of Moussa's: too few young people, not too few jobs.

ILLUSTRATIVE **2035, age 9.** Her teacher covers several grades and uses a learning companion for individual practice.

ILLUSTRATIVE **2050, age 24.** Hana is a software and care-robotics engineer. Her country recruits nurses and builders abroad under agreements that fund training in sending countries, so recruitment builds capacity rather than draining it.

ILLUSTRATIVE **2075–2100.** Pension and care systems are rebuilt for long lives. In the success case she ages at home with dignity, supported by care technology and human carers. In the failure case an ageing society turns inward, cuts aid and closes its borders.

II.3.6 What the five lives share

The five paths depend on the same chain: power, compute, services, jobs, stability and peace, with honest institutions throughout, and each tests how the chain treats women, children and the environment. Mele's survival depends on emissions decided elsewhere, Moussa's job on capital decided in other capitals, Hana's old age on young people elsewhere being educated and willing to come. **The five lives are one system.**

II.4 The desired condition in 2100: ten domains

Vision 2100 proposes ten domains in which the condition of the world in 2100 should be defined, measured and pursued. Figure II-2 summarizes them. The aspirations are ambitious, illustrative targets proposed for member-state deliberation; many extend commitments in the 2030 Agenda and the 2024 Pact for the Future.

FIGURE II-2

The 2100 outcome dashboard: ten domains, their 2026 starting points and proposed aspirations

	Domain	2026 starting point (sourced in text)	2100 aspiration (ILLUSTRATIVE target)
1	Peace and physical security	65 state-based conflicts (2025)	Conflict deaths a small fraction of 2020s; mediation first
2	Economic opportunity and work	1.2bn reach working age vs ~420m jobs	Decent work open to every adult who seeks it
3	Affordable, reliable, clean energy	655m without electricity (2024)	Universal reliable power; near-zero-carbon systems
4	Education and lifelong learning	272m out of school (2023)	Every child completes secondary with core skills
5	Health	4.9m under-5 (2024); 260k maternal deaths/yr	Under-5 mortality < 10 per 1,000 in every country
6	Clean water and food security	2.1bn lack safe water; 645m hungry	Safe water for all; hunger effectively ended
7	Digital rights, trustworthy gov.	2.2bn offline; 45 countries autocratizing	Universal meaningful access; rights-based digital state
8	Cultural and national sovereignty	AI capacity concentrated in few states	Every nation runs AI in its own languages and law
9	Environmental stewardship	2024 ~1.55 °C; policies point to ~2.8 °C	Warming stabilized and declining; nature recovering
10	International cooperation	UN 2026 budget $3.45bn (~15% cut)	Trusted, funded, accountable multilateral system

Starting points sourced in Section II.2 (row 10 from Part I); aspirations are ILLUSTRATIVE targets proposed for deliberation, not forecasts or agreed goals.

II.4.1 Outcome statements

Vision 2100 proposes the following outcome statement for each domain.

1. Peace and physical security. Wars are rare, short and resolved by negotiation; disputes are caught early and mediated; no child grows up in a war zone; peace operations mainly watch, warn, protect and verify (the **six-layer shield**, Part VI).

2. Work. Every adult who wants decent work can find it near home, and value from minerals, energy and data is created where they are found (Parts V and VII).

3. Energy. Every household, school, clinic and firm has reliable, affordable, near-zero-carbon power from a technology-neutral mix each nation chooses (Part V).

4. Education. Every child completes secondary school with foundational and digital skills; every adult can retrain; AI tutors support teachers and never replace them (Part VIII).

5. Health. Preventable maternal and child deaths are rare everywhere, healthy life expectancy keeps pace with life expectancy, and primary care reaches every community (Part VIII).

6. Water and food. Everyone has safe water, sanitation and enough nutritious food in a hotter climate.

7. Digital rights and trustworthy government. Everyone has affordable connectivity, a secure digital identity, control of personal data and a right to appeal automated decisions; citizens can trace public money (Part IX).

8. Sovereignty. Every nation can run AI in its own languages and law under its own jurisdiction, connected through a **UN Shared Layer** of safety and interoperability standards that holds no one's data (Part IV).

9. Environment. Temperature has stabilized and is declining; ecosystems are recovering, and nations are paid to protect them.

10. Cooperation. A renewed, adequately funded UN and regional bodies are trusted because their results are public and verifiable, and every nation has a voice in the rules that govern it (Parts III and XI).

II.4.2 Aspirations and the systems they require

Table II-1 sets out what Vision 2100 proposes for each domain: a measurable 2100 aspiration, the systems that must exist to reach it, and what must begin in the FOUND horizon.

TABLE II-1 Ten domains: proposed 2100 aspirations, required systems and FOUND-horizon starting actions (ILLUSTRATIVE targets proposed by Vision 2100 for member-state deliberation; not agreed goals)

Domain	Measurable 2100 aspiration	Systems that must exist	Must begin 2026–2030
1. Peace and security	Conflict deaths under one-tenth of the 2020s average; zero children recruited	Early warning tied to mediation; six-layer shield; mine clearance	P3 early-warning pilot; women mediator roster; **Prevention and Mediation Fund** design
2. Work	Formal or secure work for 90%+ of adults who seek it in every region	Industrial corridors; skills systems; fair labor mobility	P2 and P4 pilots; Americas Compact design; youth jobs baselines
3. Energy	100% reliable access; power-sector emissions near zero	**Clean Power and Compute Corridors**; grids; nuclear licensing where chosen	Access finance; regulator training; P2 corridor feasibility
4. Education	Universal secondary completion; foundational learning for all	Teacher pipelines; **learning companion** standards; credentials	Learning-outcome baselines; companion safety standards
5. Health	Under-5 mortality below 10 per 1,000 and maternal mortality below 20 per 100,000 in every country	Primary care; health workforce; disease surveillance	**Mothers and Children Peace Fund** design; workforce compacts
6. Water and food	Safe water and sanitation for all; hunger below 1%	Climate-resilient agriculture; water governance; early warning	Water-stress data in P3; adaptation finance
7. Digital rights and government	Universal meaningful access; rights-based digital ID; open budgets	Digital public infrastructure; Results Ledger; appeal rights	P1 and P5 pilots; rights framework for automated decisions
8. Sovereignty	Every nation able to run AI in its own languages under its own law	**Sovereign AI nodes**; UN Shared Layer; open models	P1; language-data programs; shared-layer standards
9. Environment	Warming stabilized, then declining; 30%+ of land and sea well protected	Clean energy; carbon removal; nature finance; monitoring	Debt-for-nature scale-up; satellite monitoring

Domain	Measurable 2100 aspiration	Systems that must exist	Must begin 2026–2030
10. Cooperation	Every UN mandate tracked publicly; stable financing	Results Ledger; mandate review; inclusive governance	P5 pilot linked to UN80 mandate review

Several aspirations extend paths already underway. Under-five deaths have fallen by more than half since 2000, although the pace of reduction has slowed sharply since 2015 [69], and the IEA has set out a pathway to universal electricity access by 2035 and clean cooking by 2040 [66]. The obstacle is finance and delivery, not technology.

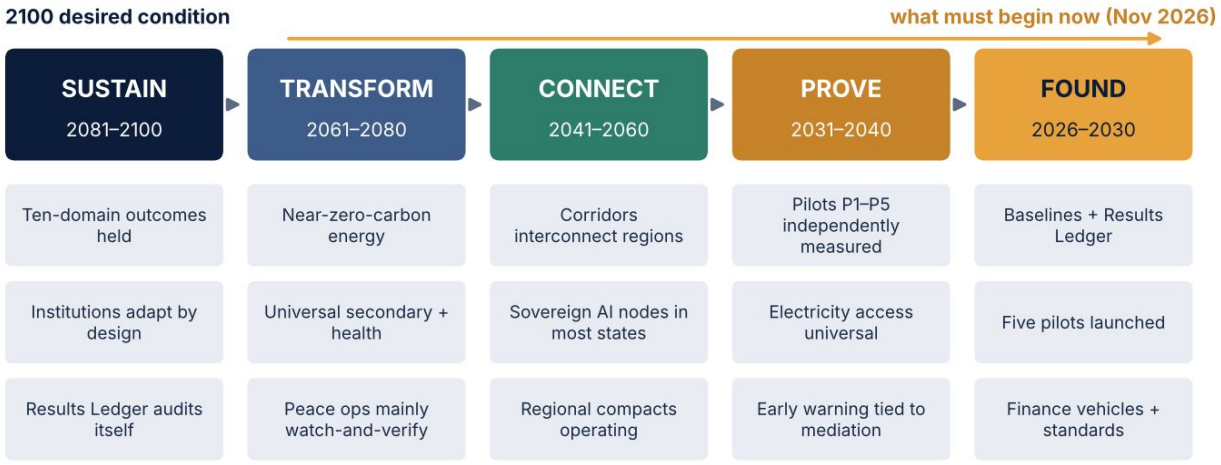
◆ DOCUMENTED POSITION In her 20 August 2026 dialogue with the General Assembly, Ambassador A-Baki said that for small island developing states, including Tonga, climate risk is an existential reality rather than an abstract future threat; that the United Nations should be the universal negotiating table at which every nation, large and small, helps set ethical, fair and binding guardrails for AI; and that instruments such as blue and green bonds and debt swaps, as in Ecuador's Galápagos Islands and Yasuní, can protect biodiversity while delivering debt relief [5].

The ten domains, their aspirations and the targets in this part are Vision 2100 proposals developed by A113 Partners. Domains 7, 8 and 9 address themes she raised, but they were developed by A113 Partners rather than proposed by her; she endorsed this book for publication on 2 November 2026.

II.5 Working backward: from 2100 to November 2026

FIGURE II-3

The backcasting chain: each horizon is a precondition of the one before it



Backcasting runs left to right, from the 2100 condition to what must begin now. Delivery runs right to left.

ILLUSTRATIVE planning logic. Horizon names and dates as used throughout this book; detailed gates in Part XII.

Vision 2100 proposes reading the horizons backward, as Figure II-3 shows: each must deliver the preconditions of the next.

SUSTAIN (2081–2100). The task is to hold and adapt the outcomes, which requires self-reforming institutions, an audited Results Ledger and public trust in the data, all built by 2060.

TRANSFORM (2061–2080). For SUSTAIN to begin, energy systems must be near zero-carbon, secondary schooling and primary health care universal, and peace operations reliant mainly on watch-and-verify capabilities. A child in primary school in 2035 becomes a 2065 regulator, so that workforce must be trained from the 2030s.

CONNECT (2041–2060). For TRANSFORM to begin, proven systems must already be scaling through interoperable infrastructure: corridors linking regions, sovereign AI nodes in most states, and regional compacts that run on their own. These must be designed in PROVE.

PROVE (2031–2040). For CONNECT to begin, the five flagship pilots must have been independently measured and refined in real countries, near-universal electricity access (no more than about 50 million unserved) reached broadly in line with the IEA's access pathway [66], and early warning shown to feed mediation that prevents violence.

FOUND (2026–2030). For PROVE to be possible, the following must exist by 2030: agreed baselines for the ten domains, a working Results Ledger, five pilots launched with willing host governments, financing vehicles designed with development banks, and draft standards for the UN Shared Layer. See "What begins now" below.

FOUND does not start from zero; the 2024 Pact for the Future and Global Digital Compact already commit states to inclusive digital cooperation. Resolution 79/325 created an Independent International Scientific Panel on AI and a Global Dialogue on AI Governance, which met in Geneva in July 2026 and meets next in New York in May 2027 [12]. The UN80 mandate-review resolution, adopted on 31 March 2026 by 168 votes to 4, provides the institutional hook for a results ledger [26].

Decision rights. Backcasting does not alter authority. The Secretary-General can convene, report, mediate and publish Secretariat results; the General Assembly decides budgets and priorities; the Security Council mandates peace operations; states decide their own energy, AI and industrial programs. Vision 2100 therefore proposes that Figure II-3 be read against Part III's decision-rights matrix (and Appendix F).

II.6 What could prevent this future

The 2100 described here is not the default. Four forces could prevent it, and each is already visible.

Climate overshoot. WMO judges it more likely than not that warming will average above 1.5°C over 2025–2029 [64], and current policies point to about 2.8°C this century [65]. At those levels Mele's atoll faces existential risk and Rahim's city spends more on survival than development; overshoot also drives displacement, food shocks and competition for water.

ILLUSTRATIVE **AI concentration.** If frontier AI and the compute to run it stay in a few countries and firms [74], most nations become customers rather than owners of the century's defining technology, relying on systems no national institution can inspect. The opposite failure is fragmentation into incompatible national systems. Part IV's hybrid model is designed to avoid both.

Great-power war. A record number of state-based conflicts in 2025 [23] and an eleventh consecutive annual rise in world military spending [36] show that the risk of major-power confrontation has returned. A major war between nuclear-armed states could foreclose every outcome here. Vision 2100 cannot prevent one alone, but it can strengthen what makes war less likely: interdependence on shared goods, verified agreements and channels that stay open in crises (Parts VI and XI).

Demographic stress. About 1.2 billion young people will reach working age over the next decade against far fewer expected jobs [76], while advanced economies age and shrink [156261]. Badly managed,

both breed instability; managed well, they complement each other through investment, trade and fair, legal mobility.

ILLUSTRATIVE **Other risks.** Pandemics, financial crises, backsliding (45 countries autocratizing in 2024, according to V-Dem [73]), collapse of multilateral funding and technology failures could each cost a decade. A credible plan assumes some will happen and builds capacity to recover.

II.7 Three futures

ILLUSTRATIVE Three contrasting scenarios test the plan. They are not predictions; the real century will likely mix all three. Their value is in signposts showing which path the world is on (Figure II-4).

FIGURE II-4

Three contrasting futures for 2100

	Fragmented	Concentrated	Vision 2100
Warming by 2100	~2.5–3 °C+	~2–2.5 °C	Toward 1.5–2 °C
AI capability	Blocs, incompatible	Few firms/states	Distributed + shared layer
Conflict	Frequent, regional	Suppressed, brittle	Prevented early
Energy access	Gaps persist	High but dependent	Universal, owned
Small-state agency	Low	Very low	High
Trust in institutions	Low	Mixed	High, verified

ILLUSTRATIVE scenarios. Warming ranges are indicative and anchored to UNEP, IEA and IPCC scenario ranges cited in Section II.2; they are not model outputs.

ILLUSTRATIVE **Fragmented.** Rival blocs build incompatible technology, trade and finance; climate cooperation stalls and warming approaches or exceeds the 2.5–3°C of today's policies [65][66]. Regional wars are frequent and small states must choose sides; Mele's nation becomes a diaspora. Signposts: falling trade between blocs, collapsing UN funding, repeated failure of climate negotiations.

ILLUSTRATIVE **Concentrated.** A few states and firms control frontier AI, energy technology and capital. Material conditions improve for many, but most nations depend on systems they do not own or govern, and stability rests on the restraint of a few actors. Lucía has a job whose terms are set elsewhere. Signposts: rising concentration in compute, cross-border data dependence for core public services, declining local technical capacity.

ILLUSTRATIVE **Vision 2100.** Every nation owns its energy, compute and data under shared standards, and conflicts are prevented earlier. Warming stabilizes and, with carbon removal, begins to decline toward 1.5–2°C. Trust rises because results are visible. Signposts: independently verified pilots, rising local ownership of energy and compute, falling conflict deaths, and published, audited results.

ILLUSTRATIVE The Vision 2100 scenario is not the most likely of the three. It is the one worth working toward, and its early steps (clean energy, educated children, honest budgets, early mediation) pay off in the other two as well. That is the strongest argument for starting now.

II.8 Objections and limits

First, that seventy-four-year plans are fantasy. No one can forecast 2100. But decisions taken in the next five years on power plants, grids, cities, schools and institutions will still shape 2070. Backcasting checks those long-lived choices against the world they will produce, and is revised as evidence arrives.

Second, that the aspirations are unaffordable. Many involve redirected spending: diesel replaced by local power, leakage cut by open procurement, conflict costs avoided. Part X tests these claims with explicit assumptions. Where the arithmetic does not work, the aspiration must change.

Third, that "sovereign" and "connected" contradict each other. They do not, any more than national airlines and aviation standards do. The UN Shared Layer sets standards and holds no one's data (Part IV). The real contradiction is between sovereignty and dependence.

What begins now

The destination is useful only if measured from a common baseline and revisited. The actions below are those Part II itself requires; initiative-specific actions are in the relevant parts, Part XIII (the first year) and Part XIV (the first five years). Vision 2100 proposes the following steps.

01 **Within 30 days (by early December 2026).** A113 Partners finalizes the ten-domain indicators and baselines below, publishes the three scenario definitions as an open supplement to Appendix C, and invites expert comment. A113 can do this alone.

02 **Within 90 days (by February 2027).** A113 Partners convenes an informal review of the aspirations with independent demographers, climate scientists and UN statistical specialists, and maps each indicator to existing SDG and Pact for the Future indicators to avoid duplication. This needs willing partners, not UN authority.

03 **Within 180 days (by May 2027).** Partners publish a first "State of the 2100 Cohort" baseline report from public data and present it at a side event of the Global Dialogue on AI Governance in New York in May 2027 [12], which requires a co-sponsoring member state or UN entity.

04 **First year (to October 2027).** At least one willing member state in each archetype (advanced, emerging, small or resource-constrained) adopts the ten-domain dashboard for its own long-term planning. A113 can offer technical support; adoption is a sovereign decision.

05 **First five years (to 2031).** The dashboard is updated annually on the **Results Ledger** (pilot P5), and each flagship pilot reports against the domains it affects. A Secretary-General may reflect the framework in the office's own reporting; formal UN adoption of targets requires a General Assembly decision.

Vision 2100 proposes that the **Council of Long-Term Stewards** described in Part XI be the natural body to review progress every five years; until it exists, an independent academic panel can do so.

Measuring progress

ILLUSTRATIVE Baselines are sourced; the 2030–2100 columns are Vision 2100 planning milestones proposed for deliberation, not forecasts. They never replace an agreed international commitment:

where a 2030 milestone is less ambitious than the agreed target (electricity, hunger, under-five mortality, water, schooling), the agreed target stands and the milestone shows only the minimum pace this book plans against. "Owner" names the body best placed to report, not one that has agreed to do so. Shared indicators use the same values as Part I, Part XII and Appendix H.

TABLE II-2 Part II outcome indicators: baselines, agreed international targets and Vision 2100 planning milestones (ILLUSTRATIVE milestones; agreed targets prevail where they are more ambitious)

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
State-based armed conflicts (UCDP/PRIO data; UN DPPA)	65, 2025, UCDP [23]	—	≤ 55	≤ 40	≤ 25	≤ 10
World military burden, % of world GDP (SIPRI data; member states)	2.5%, 2025, SIPRI [36]	—	No further rise	Declining	Below 2009 level	National decisions
Children living in conflict-affected areas (PRIO; UNICEF)	~520m, 2024, PRIO [35]	—	≤ 450m	≤ 300m	≤ 100m	Near zero
People without electricity (SDG7 custodian agencies)	655m, 2024, Tracking SDG7 2026 [43]	SDG 7.1: universal access by 2030	≤ 400m	≤ 50m	0	0
Out-of-school children and youth (UNESCO UIS)	272m, 2023, UNESCO UIS [71]	SDG 4.1: all children complete primary and secondary school by 2030	≤ 200m	≤ 100m	≤ 25m	Near zero
Under-five deaths per year (UN IGME)	4.9m, 2024, UN IGME (revised method; not comparable with earlier rounds) [69]	SDG 3.2: under-five mortality ≤ 25 per 1,000 live births in every country by 2030	≤ 4.0m	≤ 2.5m	≤ 1.2m	≤ 0.5m
Maternal deaths per year (WHO; UNFPA)	~260,000, 2023, MMEIG [70]	SDG 3.1: global maternal mortality ratio < 70 per 100,000 live births by 2030	≤ 200,000	≤ 120,000	≤ 50,000	≤ 15,000
People facing chronic hunger (FAO)	645m, 2025, FAO SOFI 2026 [45]	SDG 2.1: end hunger by 2030	≤ 500m	≤ 250m	≤ 100m	< 1% of people
People lacking safely managed drinking water (WHO/UNICEF JMP)	2.1bn, 2024, JMP 2025 [44]	SDG 6.1: universal access to safe, affordable drinking water by 2030	≤ 1.8bn	≤ 1.0bn	≤ 0.3bn	0
People offline (ITU)	2.2bn, 2025, ITU [72]	— (SDG 9.c set universal, affordable Internet access in least developed countries by 2020, now passed; no current dated global target)	≤ 1.5bn	≤ 0.5bn	Near zero	0
Projected warming by 2100 under current policies (UNEP)	~2.8°C, 2025, UNEP EGR 2025 [65]	Paris Agreement: well below 2°C, pursuing 1.5°C	≤ 2.5°C	≤ 2.0°C	≤ 1.7°C	Stabilized, declining
Nations able to run AI in national languages under own law (UNESCO; ITU)	To be established	—	Baseline set	50%	90%	All

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
UN programs publishing on a public Results Ledger (UN Secretariat; General Assembly)	To be established (UN80 mandate registry [26])	—	≥ 1 UN and ≥ 1 national program by 2028; ≥ 10% of Secretariat programme budget by 2030 only if the Secretary-General adopts it	Majority	All	All, independently audited

Source: baselines as cited; agreed targets from the 2030 Agenda (A/RES/70/1) and the Paris Agreement; milestones are Vision 2100 planning assumptions. Note: the 2030 milestones for electricity, hunger and under-five deaths are less ambitious than SDG 7.1, 2.1 and 3.2 and reflect the custodian agencies' own projections of slow progress; they do not replace those commitments.

Corrective actions. Vision 2100 proposes that if two consecutive annual updates show a domain off path, the dashboard flags it publicly and the relevant initiatives are reviewed for problems of delivery, finance or a wrong target. An unrealistic target is revised openly, not quietly abandoned. The proposed **risk owners** for the four threats in Section II.6 are, respectively, the UNFCCC process and national governments (climate), the Global Dialogue on AI Governance and national regulators (AI concentration), the Security Council and the parties (great-power war), and governments working with the ILO, IOM and development banks (demographic stress).

PART III

III

RENEWING THE UNITED NATIONS

What a Secretary-General can do, and what member states must decide

IN THIS PART

III.1 Where the Organization stands in November 2026
III.2 The office: formal powers, informal power and practical limits
III.3 Ambassador A-Baki's documented positions
III.4 Decision rights: who must decide what
III.5 Prevention and mediation: strengthening machinery that already exists
III.6 Security Council reform: the honest picture
III.7 Development finance within UN authority
III.8 Administrative accountability: UN80, mandate review and the liquidity crisis
III.9 Funding the human rights pillar
III.10 AI governance: from the universal table to the UN Shared Layer
III.11 Initiative profile: Technology for Peace and Security
III.12 The United Nations of 2100
III.13 The first 100 days of any Secretary-General who adopts Vision 2100

THE CORE CORRECTION

A Secretary-General cannot create pillars, amend the Charter or command member states. A Secretary-General can convene, warn, mediate, propose, report, manage the Secretariat and publish results. Vision 2100 is therefore built as an agenda the office can champion, with every initiative assigned to the body that must decide it.

This part sits at the hinge of the Vision 2100 system. Energy, compute, industry and education (Parts IV, V, VII and VIII) create the conditions in which diplomacy can succeed; the United Nations is where diplomacy is institutionalized. If the Organization cannot prevent wars, account for its money or offer a credible table for the rules of artificial intelligence, the investments described elsewhere lose the peace that protects them. Parts VI, IX and X develop prevention, the Results Ledger and financing. This part answers a prior question: under whose authority can any of it happen?

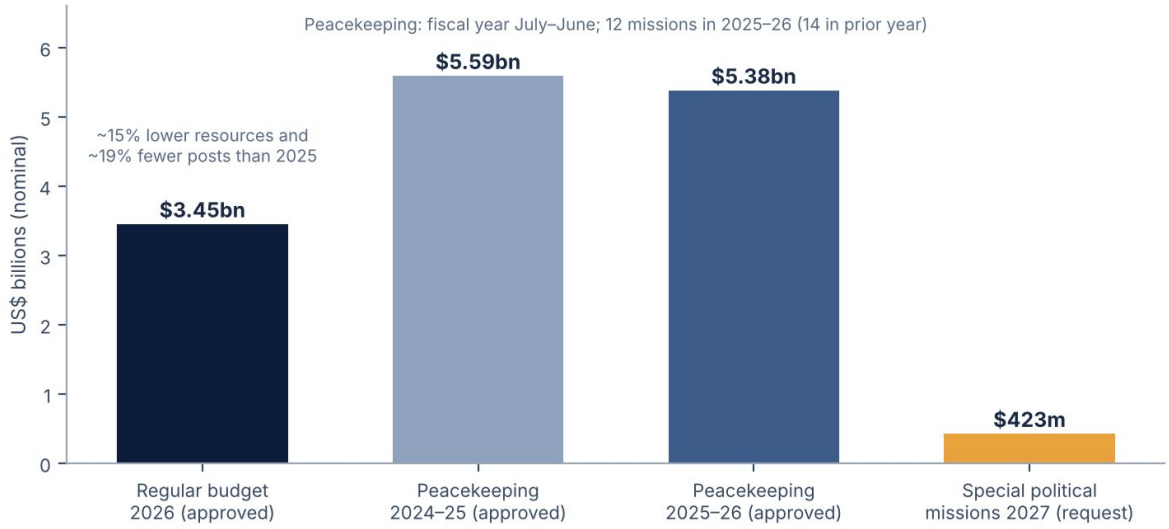
III.1 Where the Organization stands in November 2026

The United Nations enters the selection of its tenth Secretary-General under financial strain. On 30 December 2025 the General Assembly approved a 2026 regular budget of about $3.45 billion, reflecting roughly a 15 percent reduction in resources and close to a 19 percent reduction in staffing [37][80]. According to UN meetings coverage of the Fifth Committee, in October 2026 the outgoing Secretary-General proposed a 2027 regular budget of about $3.3 billion and separately requested about $423 million for some three dozen special political missions [37]; the proposal document itself (A/81/6) did not give a consolidated total on the page consulted, and the Assembly will decide the final figure in December 2026. The Secretariat's percentage comparison of the 2027 proposal with 2026 appears to use a different costing basis from the approved headline, so the two should not be subtracted directly (see Appendix G). Figure III-1 shows the main envelopes. Peacekeeping runs on a separate budget: $5.38 billion for July 2025 to June 2026, down from $5.59 billion the year before, covering 12 missions and nearly 70,000 personnel [38].

Cash, not only budget, is the constraint. In July 2025 the UN Controller warned that cash shortages routinely force spending 10 to 20 percent below approved levels [38]; in October 2026 delegations again described the liquidity crisis as impeding mandates [37]. Member states have nonetheless agreed a reform foundation: the Pact for the Future and Global Digital Compact (September 2024), resolution 79/325 on AI governance [12], and the UN80 mandate-review resolution adopted on 31 March 2026 by 168 votes to 4 [26].

FIGURE III-1

The United Nations' main budget envelopes, 2024–2027



Sources: UN Fifth Committee press coverage (2026 approved regular budget; 2027 special political missions request); UN News, 1 July 2025 (peacekeeping). Nominal US dollars. Peacekeeping and regular budgets are assessed on different scales and fiscal years.

III.2 The office: formal powers, informal power and practical limits

III.2.1 Formal powers in the Charter

Article 97 makes the Secretary-General the "chief administrative officer" of the Organization, appointed by the General Assembly on the recommendation of the Security Council [81]. Article 98 lets the Assembly and the Councils entrust the office with other functions and requires an annual report on the work of the Organization. Article 100 protects the Secretary-General and staff from instruction by any government. Article 101 lets the Secretary-General appoint staff, but under regulations the Assembly sets. Article 17 gives the Assembly, not the Secretary-General, the power to approve the budget and apportion expenses among members [81].

Article 99 is the office's only independent political power in the Charter. It allows the Secretary-General to bring to the Security Council's attention any matter which, in the Secretary-General's opinion, may threaten the maintenance of international peace and security [81]. It compels attention, not action.

III.2.2 Good offices and the power of the report

The office's informal authority far exceeds its formal grant: "good offices" — confidential mediation, envoys and convening — and reports that set the agenda. Boutros Boutros-Ghali's *An Agenda for Peace* (1992), requested by the Security Council at its first summit in January 1992, defined preventive diplomacy, peacemaking, peacekeeping and post-conflict peacebuilding, the last added on the Secretary-General's own initiative [82]. Kofi Annan's *In Larger Freedom* (2005) proposed a Peacebuilding Commission and a smaller Human Rights Council to replace the Commission on Human Rights [8384]. Member states created both: the Commission by resolution 60/180, adopted without a vote on 20 December 2005, and the Council by resolution 60/251 on 15 March 2006, by 170 votes to 4 with 3 abstentions [8586].

None of these Secretaries-General changed the Charter. Each changed what the Organization did by writing a coherent proposal, building a coalition of member states behind it and leaving the

decision to the bodies that hold it. Vision 2100 proposes that any Secretary-General who takes up its agenda follow the same model.

III.2.3 Article 99 in practice

On 6 December 2023 António Guterres invoked Article 99 in a letter to the President of the Security Council on the war in Gaza. His spokesperson called it the first such use since he took office in 2017 and the office's most powerful tool [87]. It forced the matter onto the Council's agenda but created no obligation to act and could not overcome a veto.

Vision 2100 proposes that any Secretary-General adopting this agenda publish, early in the term, the criteria the office will apply before invoking Article 99: the evidence threshold, the prior steps of quiet diplomacy, consultation with regional organizations, and the form of the follow-up report. Transparent criteria protect the office from charges of selectivity. This lies within the Secretary-General's sole authority, and is a Vision 2100 proposal, not a commitment by Ambassador A-Baki (see III.3).

III.2.4 Practical limits

Five limits constrain every proposal in this part.

- **Money.** The Secretary-General proposes budgets; the Assembly decides them, and liquidity cuts approved spending [3738].
- **Mandates.** Missions and new bodies exist only when the Council or the Assembly creates them.
- **Consent.** Operations and pilots require host-state consent. The UN holds no one's data and no one's territory.
- **Staffing.** Appointments follow Assembly regulations, geographic norms and member-state lobbying.
- **Time and politics.** One term is short, and the permanent members' confidence is needed for reappointment and most Council action.

Vision 2100 proposes treating these limits as design constraints: begin with what the Secretary-General can do alone, build evidence, then ask the relevant body to decide.

III.3 Ambassador A-Baki's documented positions

Ambassador Ivonne A-Baki was nominated as a candidate for Secretary-General by Tonga on 17 August 2026 [2] and took part in an interactive dialogue with the General Assembly on 20 August 2026 [5]. The positions below are hers; the proposals elsewhere in this part are Vision 2100's, developed by A113 Partners, not proposals she made herself; she endorsed this book for publication on 2 November 2026.

◆ DOCUMENTED POSITION In the dialogue, Ambassador A-Baki outlined what she called the five pillars of her vision [5]. The machine-generated UN transcript, which is not an official record, supports the following summary (re-checked against the transcript on 2 November 2026).

01 **Direct, undelegated peacekeeping and peacemaking.** She described the office's role as personal engagement in conflict zones rather than management from New York, stating that "the good offices of the Secretary-General should also be the active offices" [5].

02 **Security Council modernization.** She said the Council remains frozen in the geopolitical landscape of 1945 and noted that only about 2 percent of the world's population, some 174 million people, were alive when the UN was created. She contrasted the continents whose share of world population has fallen most, which keep their permanent seats, with the continent that has grown fastest, which has none. She acknowledged that the Secretary-General cannot alone alter the Charter, but said the office can help build momentum for a modernized Council and that she did not intend to exercise administrative neutrality [5].

03 **Development debt and finance.** She said the failure on the Sustainable Development Goals is one of financial execution rather than ambition and that the Global South should not be burdened with new layers of debt. She cited Ecuador's debt swap for the environment, the Galápagos and Yasuní experience, and blue and green bonds as models, and later in the dialogue spoke of debt swaps for education and health [5].

04 **Human dignity and emerging frontiers.** She called for the UN to serve as the universal negotiating table where every nation, large and small, helps set ethical, fair and binding guardrails for artificial intelligence, and said that for small island developing states, including Tonga, climate risk is not an abstract future threat but an existential reality [5].

05 **An institutional outsider's advantage.** She presented her outsider status as freedom from bureaucratic habits, promising fresh talent, new ideas, clear accountability and measurable results. In answer to the Netherlands she said that more than five priorities will be lost [5].

Two corrections to earlier Vision 2100 drafts follow from the transcript. First, when Ireland, for the Accountability, Coherence and Transparency (ACT) group, asked what steps she would take before invoking Article 99, the transcript records no direct answer; she spoke instead about independence and neutrality [5]. Second, when the European Union asked how she would raise funding for the human rights pillar, which it described as receiving about 1 percent of UN system spending, she linked human rights to peace and to women's economic security and education but set out no funding plan [5]. Article 99 criteria and human rights financing in this part are therefore Vision 2100 proposals, not her commitments.

III.4 Decision rights: who must decide what

Vision 2100 proposes assigning every one of its initiatives to the bodies that must decide it, across five public decision tiers — the Secretary-General acting alone; the General Assembly; the Security Council; a Charter amendment under Article 108; and sovereign decisions of member states and host governments — plus the initiative's own governance. Table III-1 is the master decision-rights matrix for this book; Appendix F reproduces and extends it, and Parts IV–XII apply it. It corrects the original Vision 2100 statement (2026), which presented several initiatives as if the office could create them.

The last column separates two kinds of Vision 2100 body, which must not be confused. The **Vision 2100 Steering Board** (11–13 members with an independent majority; an interim steering group of five to seven until its charter is adopted, expected around April 2027) governs the Vision 2100 initiative only: at each gate it decides whether Vision 2100 continues to support a pilot, and it owns the revision cycle of this book (Part XII). It has no authority over any government, UN body or pilot operation. Each pilot instead has its own **Pilot Governance Board**, chaired or co-chaired by the

host government, with the regional body, independent members and, where relevant, the UN entity; it governs that pilot's operations. Host governments retain sovereign decision rights at every stage, and A113 Partners holds no decision right in any pilot.

TABLE III-1 Decision-rights matrix for Vision 2100 initiatives and pilots P1–P5 (master for Appendix F). ● decides or acts; ◐ proposes, convenes, consents, funds or must participate; blank: no formal role. SB = Vision 2100 Steering Board; PGB = Pilot Governance Board. ILLUSTRATIVE assignment by A113 Partners from the UN Charter (Articles 17, 97–101, 108) [81], to be validated by independent UN-law review.

Initiative (part)	SG alone	General Assembly	Security Council	Charter change (Art. 108)	Member states and hosts	Vision 2100 bodies
Good offices, envoys, personal mediation (III, VI)	●		◐		◐ consent of parties	—
Article 99 referrals and published criteria (III)	●		◐			—
Secretariat AI use policy (III)	●					—
Technology for Peace and Security as a cross-cutting priority (III)	◐ coordination office	●			◐ co-sponsors	SB: advocacy only
"Fourth pillar" status (III)	◐	●			◐	—
UN Shared Layer standards; AI capacity track (III, IV)	◐ commissions technical work	●			● adoption	SB: technical panel review
P1 Sovereign Digital Nation; sovereign AI nodes under the National AI Sovereignty Model (IV)	◐ convene; agencies advise				● host owns node, data law, procurement	SB: support gate; P1 PGB: operations
P2 Clean Power and Compute Corridor (V)	◐				● host; regulators (and IAEA advice for any nuclear element)	SB: support gate; P2 PGB: operations
P3 Prevention Early-Warning (VI)	◐ DPPA analysis and mediation link				● host states and regional organization	SB: support gate; P3 PGB: operations
P4 Minerals-to-Industry Framework (V)	◐				● host; communities' consent	SB: support gate; P4 PGB: operations
P5 Results Ledger — pilot on one UN and one national program (IX)	● Secretariat program; ◐ other UN entities' heads				● national program host	SB: support gate; P5 PGB: operations
Results Ledger for all Secretariat programs (IX)	● if the SG adopts it	◐				—

Initiative (part)	SG alone	General Assembly	Security Council	Charter change (Art. 108)	Member states and hosts	Vision 2100 bodies
Results Ledger extended to all mandates (IX)	◐	●	◐			—
Six-layer shield in peace operations (VI)	◐	◐ budgets	● mandates		● host consent; contributors	—
Peace Technology Pool (VI)	◐	● financing	◐		● contributions	—
Prevention and Mediation Fund (VI, X)	◐	● if assessed			● if voluntary	—
Women at Every Table in SG-convened processes (VIII)	●				◐ party delegations	—
Children's Shield (VIII design; VI technology)	◐	◐	◐ in mandates		●	—
Mothers and Children Peace Fund (VIII, X)	◐	◐ if a UN trust fund			● donors	—
Learning companion (VIII)					● education ministries	SB: support gate
Americas Compact, Americas Build Corps, stay-and-build; other regional compacts (VII)	◐				● with regional bodies	SB: support only
Debt-for-development review; standardized swap terms (III, X)	◐ convene, publish with consent				● debtor and creditor states	—
Human rights funding: assessed core monitoring (III)	◐ shield from cuts	●			◐ voluntary funding	—
Council working-methods reforms (III)	◐		●			—
Veto restraint (III)	◐	◐	◐		● P5 pledges	—
Council enlargement or veto change (III)	◐	●	◐	●	● ratification incl. all P5	—
Royal Compact for 2100; Council of Long-Term Stewards (XI)	◐				● voluntary	SB: convening only
Interfaith peace convening; Arts for Peace (XI)	◐				◐	SB: convening only
Vision 2100 gates, revisions; secretariat transfer to a foundation (registered 2029, complete 2031) (XII)						● SB

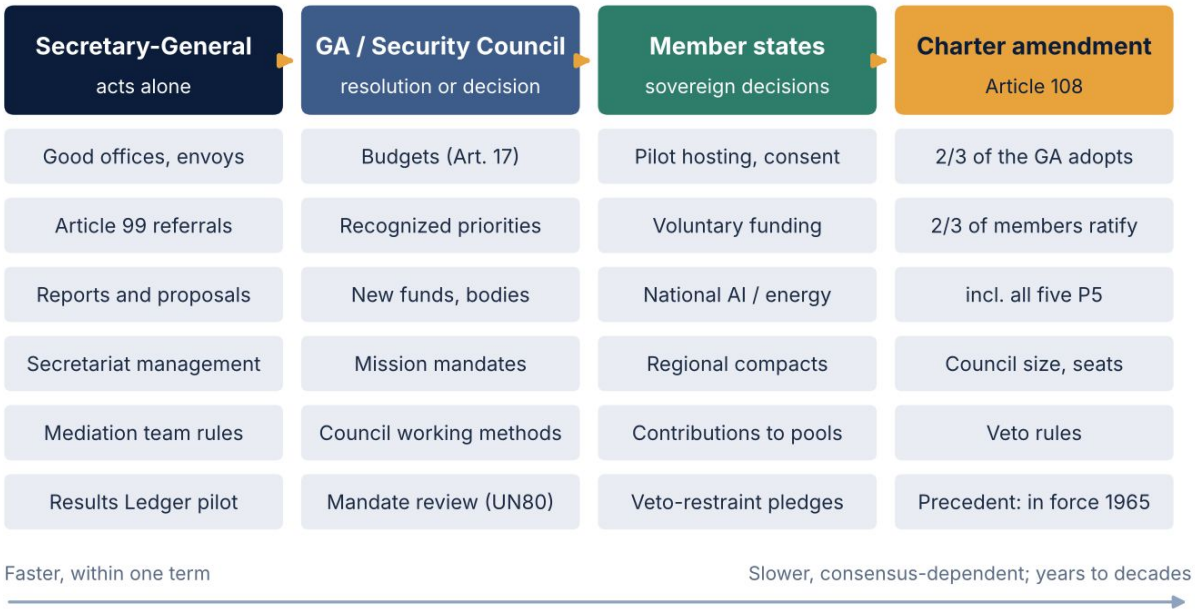
The Results Ledger rows carry the book's agreed milestones (Part XII is the master): at least one UN program and one national program publishing by 2028 (the P5 pilot); at least 10 percent of the Secretariat's programme budget covered by 2030, but only if the Secretary-General adopts the Ledger for Secretariat programs; and a majority by 2040. Pilot budgets follow the book's three tiers (Part XII): for example, P3 $1.0–2.0 million in first-year preparation and $20–50 million over

five years; P5 $1.5–3.0 million and $8–20 million over three years. All are ILLUSTRATIVE planning assumptions; no funding is committed.

Read as a Vision 2100 proposal, the matrix shows three patterns. The Secretary-General can start almost everything in this book but finish very little alone. The most transformative items — the Shared Layer, the Peace Technology Pool, the six-layer shield — need both an intergovernmental decision and willing member states. Only Council enlargement and veto change require a Charter amendment, and Vision 2100 does not depend on them. Figure III-2 shows the sequence Vision 2100 proposes, from the office's own authority outward.

FIGURE III-2

Reform pathway: from the Secretary-General's own authority to Charter amendment



ILLUSTRATIVE classification by A113 Partners based on the UN Charter (Articles 17, 97–101, 108). Items move right only when the office's own authority is exhausted.

III.5 Prevention and mediation: strengthening machinery that already exists

The UN does not need to invent a prevention system. The Department of Political and Peacebuilding Affairs (DPPA) manages political analysis, special political missions and mediation support. Its Mediation Support Unit backs envoys and parties with process design, complemented by a DPPA-funded Standby Team of Senior Mediation Advisers available to deploy within 72 hours on themes from ceasefires and power-sharing to constitutions, gender and inclusion; the Team carried out 128 operational support assignments in 2025 [88]. The Peacebuilding Fund finances fast, catalytic projects in countries at risk. Regional organizations often lead, with the UN supporting under Chapter VIII of the Charter.

The weaknesses appear in the system's own budget debates: thin, voluntary and unpredictable funding, cut further by cash shortages [3738]. Early warning is plentiful; early action is rare.

Vision 2100 proposes to strengthen this machinery in five ways, detailed in Part VI:

01 **Close the warning-to-action gap.** The P3 Prevention Early-Warning pilot, governed by the P3 Pilot Governance Board under host-state and regional leadership, would link human-led analysis of climate, water, price and displacement data to a defined decision path: analyst, DPPA regional division, Secretary-General, then quiet diplomacy, envoy or Article 99. AI assists analysts; it never designates individuals.

02 **Make mediation capacity predictable.** A Prevention and Mediation Fund, built first from voluntary contributions and later, if members agree, from savings in peace operations, gives the Standby Team and envoys multi-year resources.

03 **Women at Every Table.** The Secretary-General can require women in every UN-convened mediation team and press parties to include them; Part VIII proposes a floor of one-third of senior team members, rising to parity. Women were about 13 percent of negotiators and 6 percent of mediators in major processes from 1992 to 2019 (sourced in Part VIII).

04 **Regional first.** Joint UN–regional prevention compacts let the regional organization lead where it has standing, with the UN supplying analysis, mediation expertise and verification.

05 **Measure prevention.** The Results Ledger would record warning-to-action lead time and outcomes, against Part VI's absolute targets (median lead time of at least 30 days by 2028, 60 days by 2030 and 90 days by 2040).

III.6 Security Council reform: the honest picture

III.6.1 The legal threshold

Any change to the Council's size, its categories of membership or the veto requires a Charter amendment. Under Article 108 an amendment must be adopted by two-thirds of the General Assembly and ratified by two-thirds of member states, including all five permanent members [81]. It has happened once for the Council: amendments adopted by the Assembly on 17 December 1963 (resolution 1991 A (XVIII)) enlarged it from 11 to 15 members and raised the voting threshold from seven to nine; they entered into force on 31 August 1965 [89].

III.6.2 The negotiating landscape

Since decision 62/557 of 2008, Council reform has been negotiated in the Intergovernmental Negotiations (IGN) in informal plenary of the General Assembly, renewed every session [90]. Decision 62/557 sets the five key issues the IGN addresses: categories of membership; the question of the veto; regional representation; the size of an enlarged Council and its working methods; and the relationship between the Council and the Assembly [91]. In August 2025 the Assembly rolled it over for the 17th time [92]. An L.69 outcome document was transmitted on 10 November 2025, an African model on 7 April 2026 and a revised Elements Paper on convergences and divergences on 10 June 2026 [90].

The central procedural dispute is whether to move to text-based negotiations. India said in June 2026 that the Elements Paper understated support for permanent expansion and called for a negotiating text with milestones [9394]. China's representative said in October 2026 that reform should proceed as a package by consensus and warned against text-based negotiations or artificial deadlines [95].

Table III-2 summarizes the publicly stated positions of the main groups and the permanent members.

TABLE III-2 Security Council reform: publicly stated positions of negotiating groups and permanent members (latest statement found for each, as of 1 November 2026; to be refreshed before publication)

Group or member	Publicly stated position (summary)	Source
G4 (Brazil, Germany, India, Japan)	New permanent and non-permanent seats; text-based negotiations; non-permanent expansion alone not sufficient	9692
Uniting for Consensus	Opposes additional permanent members; has proposed a category of longer-term elected seats with possible re-election; in April 2026 supported more equitable representation of Africa while questioning new permanent status	9798
African Union (Ezulwini Consensus)	At least two permanent seats with all prerogatives, including the veto while it exists, and five non-permanent seats for Africa	99
L.69 (developing countries, cross-regional)	Equitable representation in both categories; Africa per the Common African Position; text-based negotiations with milestones and timelines	10093
United States (Sept 2024)	Two permanent seats for Africa and an elected seat for small island developing states; permanent seats for India, Japan and Germany; text-based negotiations; no extension of the veto	101
United Kingdom and France (2022)	Permanent seats for the G4 and permanent African representation; UK supported a Council in the mid-20s	102
Russia (Sept 2026)	Supports Brazil and India; opposes additional seats for Western states; preserve permanent members' powers	103
China (Oct 2026)	More voice for developing and small and medium states; priority for Africa; consensus and package approach; no artificial deadlines	95

Source: as cited in the last column. The United States, United Kingdom and France entries predate their current governments' terms and have not been re-confirmed; a later statement may differ.

III.6.3 What the Council can change without an amendment

Under Article 30 of the Charter the Council adopts its own rules of procedure, and it sets its working methods in notes by its President [81]. The consolidated note adopted on 30 August 2017 (S/2017/507) addresses co-penholding of draft outcomes, discussion of drafts with all members, consultation on the programme of work and annual consultations with the African Union Peace and Security Council [104]. Further reforms sought by elected members — earlier circulation of drafts, more open briefings, fairer penholder roles and closer consultation with troop contributors — likewise require only Council agreement.

III.6.4 Veto restraint

Three initiatives seek to restrain the veto without amending the Charter.

- **The France–Mexico initiative.** Launched in 2015, it asks permanent members to refrain voluntarily from the veto in cases of mass atrocities. As of 30 September 2026, 126 member states and two observers supported it [105]. The United Kingdom joined in September 2026, leaving it one state short of two-thirds of the membership [106]; France has said it hopes to seek an Assembly vote [107].

- **The ACT Code of Conduct.** Launched on 23 October 2015, it commits signatories to support timely Council action against genocide, crimes against humanity and war crimes and not to vote against credible draft resolutions to prevent or end them [108]. According to the Swiss Federal Department of Foreign Affairs, it had 129 signatories by May 2023, including France and the United Kingdom [109]; no later official count was found.
- **The General Assembly "veto initiative."** Resolution 76/262, adopted without a vote on 26 April 2022 and introduced by Liechtenstein with 83 co-sponsors, requires the Assembly to meet within 10 working days of any veto, with the vetoing members given precedence in the debate [110][111].

These measures raise the political cost of a veto. They do not remove the legal right [110][105][108].

III.6.5 What Vision 2100 proposes

This book does not choose among reform models. Choosing would cost the support of members whose votes or ratification any amendment requires. Vision 2100 proposes instead that the Secretary-General use the office's real tools: publish an annual report on the costs of Council deadlock, measured in delayed mandates, unaddressed atrocity warnings and humanitarian outcomes; offer all groups the same Secretariat analysis of the options' legal and budgetary implications; support working-methods reforms the Council can adopt itself; encourage universal adherence to the ACT Code and the France–Mexico initiative; and keep the IGN moving. This approach is compatible with the Ambassador's documented acknowledgment that the Secretary-General cannot alone alter the Charter but can help build momentum [5]; it is a Vision 2100 proposal, not a position she has taken.

III.7 Development finance within UN authority

The Fourth International Conference on Financing for Development met in Sevilla, Spain, from 30 June to 3 July 2025. Its intergovernmentally negotiated outcome, the *Compromiso de Sevilla*, was adopted at the opening, and addresses debt sustainability, the SDG financing gap and reform of the international financial architecture; a Sevilla Platform for Action gathered more than 130 initiatives [112]. The UN does not lend at scale; its authority in finance is convening, norm-setting, data and advocacy.

Within that authority, Vision 2100 proposes that the Secretary-General convene an annual debt-for-development review publishing, with consent, each country's debt service against health and education spending; support standardized terms for debt-for-nature, debt-for-education and debt-for-health swaps, drawing on the Galápagos experience the Ambassador cited [5] (independent terms of that transaction are set out in Part X); and require that UN-supported finance for the five flagship pilots carry Results Ledger reporting. Part X develops capital structures.

III.8 Administrative accountability: UN80, mandate review and the liquidity crisis

The UN80 mandate-review resolution of 31 March 2026 targets the full mandate lifecycle — creation, implementation and review — through a mandate registry, implementation review clauses in new mandates, and checks for duplication and completed mandates. A formal Ad Hoc Working Group began on 1 May 2026 [26].

The liquidity crisis is distinct from the budget level: approved budgets cannot be spent when assessed contributions arrive late or not at all [38]. Arrears by member state are published by the Secretariat; this part does not reproduce them because they could not be re-verified.

Vision 2100 proposes the Results Ledger (pilot P5, Part IX) as the public face of mandate review. The P5 pilot, run by its own Pilot Governance Board with a team of 14–20 people and an ILLUSTRATIVE budget of $8–20 million over three years, would first publish for one UN program and one national program by 2028. A Secretary-General who chose to adopt it could then extend it to Secretariat programs alone — each mandate in the registry linked to its budget line, outputs, independent evaluation and closure date — reaching at least 10 percent of the Secretariat's programme budget by 2030 and a majority by 2040 (Part XII). Extending it to all mandates needs the Assembly. The office can also publish monthly cash-position data showing the effect of late payment on mandates, and report each new mandate request's multi-year cost and overlaps.

ILLUSTRATIVE A Ledger entry for a hypothetical special political mission would show its mandate, approved and actual spending, staffing, three to five outcome indicators, the last independent evaluation and the review date. It requires no new technology, only the decision to publish.

III.9 Funding the human rights pillar

In the 20 August 2026 dialogue, the European Union stated that only about 1 percent of UN system spending is dedicated to human rights mandates [5]. That is the EU's figure; no independent UN figure for the system-wide share was found. The High Commissioner's own account is consistent in direction: launching a $400 million voluntary appeal for 2026, he described human rights as an extremely small portion of all UN spending and noted that the Office's 2026 regular-budget allocation of $224.3 million was 10 percent lower than in 2025 [113].

Vision 2100 proposes three steps, in order of authority. The Secretary-General can shield human rights functions from disproportionate liquidity cuts and report when they occur. The General Assembly can move core, mandated monitoring functions from voluntary to assessed funding, phased over a budget cycle. Member states can provide multi-year, unearmarked voluntary funding. Every technology deployed under the UN flag should also carry a human rights impact assessment (Part IX). None of these steps is a commitment of the Ambassador, who gave no funding plan; her documented position links human rights to peace, security and women's economic security [5].

III.10 AI governance: from the universal table to the UN Shared Layer

A universal forum of the kind the Ambassador described already exists in early form [512]. Resolution 79/325 established the Independent International Scientific Panel on AI (40 members, first meeting 3 March 2026) and the Global Dialogue on AI Governance, which met in Geneva on 6–7 July 2026 and meets next in New York in 2027 alongside the Global Digital Compact's high-level review [12]. The Panel assesses non-military AI and is supported by voluntary contributions [12].

Vision 2100 proposes that the UN do more in four areas, each with a clear decision owner:

- **Capacity, not just dialogue (member states and the Assembly).** Use the 2027 Global Digital Compact review to agree a capacity-building track for countries building national AI under the National AI Sovereignty Model (Part IV), starting with pilot P1.
- **The UN Shared Layer (member states, with the Assembly).** Common safety-evaluation standards, interoperability profiles, verification methods and an emergency compute reserve for disasters. The UN holds no one's data; the Secretary-General can commission technical work, but adoption is for members.

- **The UN's own use of AI (Secretary-General alone).** A Secretariat AI use policy: human accountability for every consequential decision, model documentation, data minimization, appeal rights and independent audit.
- **Military AI (member states).** The Panel's mandate excludes the military domain [12]. Norms on military AI are for member states. Vision 2100's own bright line — non-lethal systems only under the UN flag, humans accountable for any use of force — governs UN operations regardless.

The Ambassador called for guardrails that are ethical, fair and binding [5]. Binding rules require a treaty or Council decision; the current architecture is advisory, and moving beyond it is for member states.

III.11 Initiative profile: Technology for Peace and Security

This profile applies the 14-point template used for every initiative in this book. Technology for Peace and Security is a Vision 2100 proposal throughout.

01 **Strategic objective.** Vision 2100 proposes to make technology a deliberate, governed enabler of the three existing pillars — peace and security, development and human rights. It is proposed as a cross-cutting priority; "fourth pillar" is an aspiration member states could adopt, not something the Secretary-General can create.

02 **Present conditions.** Technology work is spread across entities, each with its own mandate and donors; AI governance has a Panel and Dialogue [12]; budgets are falling [3738]. No public inventory shows what the system spends on technology or delivers.

03 **Future state.** 2030: a small coordination function, a public inventory, agreed safeguards and three pilots under way. 2050: technology embedded in prevention, development delivery and human rights monitoring under audited standards. 2100: trusted, interoperable public-interest technology as ordinary UN infrastructure.

04 **Operating model.** Phase 1 (2027–2028) consolidates existing capabilities under a coordination office of perhaps ten to fifteen redeployed posts reporting to the Secretary-General. Phase 2 (2028–2030) seeks a General Assembly resolution recognizing the priority and endorsing safeguards. Phase 3 (PROVE, 2031 onward) integrates into mission planning where the Council mandates it.

05 **Precedents.** The Peacebuilding Commission and Human Rights Council, created after a Secretary-General's report [838586]; the UN80 mandate review [26]; resolution 79/325 [12]. Pilots P3 and P5 provide the first operational tests.

06 **Technology architecture.** Shared data standards, secure analytics environments that keep national data under national control, satellite and sensor data-sharing agreements, transparent model documentation, and tamper-evident logs for verification. Detailed in Parts IV, VI and IX.

07 **Governance and authority.** Coordination office: Secretary-General. Recognition as a priority: General Assembly. Use in missions: Security Council mandates and host consent. An independent ethics and human rights review board: established first by the Secretary-General as advisory, later by Assembly decision if members want it binding. Pilots P3 and P5 are governed by their own Pilot Governance Boards under host leadership; the Vision 2100 Steering Board decides only whether Vision 2100 continues to support them (Table III-1).

08 **Financial model.** Map and consolidate existing spending before requesting new assessed resources. Pilots would run on voluntary, pooled, publicly reported contributions within the book's three budget tiers (Part XII): P3 $1.0–2.0 million first-year preparation and $20–50 million over five years; P5 $1.5–3.0 million and $8–20 million over three years. No funding is committed. As a planning assumption only, 12 posts at an average fully loaded cost of $200,000 would cost about $2.4 million a year, to be offset by redeployment.

09 **Implementation roadmap.** Year 1: inventory, safeguards draft and coordination office. Years 2–3: Assembly resolution and first pilot results published. Years 3–5: system-wide adoption with Results Ledger reporting. PROVE (2031–2040): independent evaluation and scale-up decisions.

10 **Workforce.** Data scientists, security engineers, satellite analysts and human rights specialists, recruited with geographic balance; training of national counterparts so capability stays when the UN leaves.

11 **Risks and objections.** Surveillance and sovereignty concerns; perception that technology-rich states dominate; competition with development budgets; vendor lock-in; cyberattack on UN systems; error in AI-assisted analysis.

12 **Safeguards.** Host consent; human accountability; open documentation; data minimization; independent review; appeal rights; diversified, open-standard suppliers; non-lethal only under the UN flag; publication of failures as well as successes.

13 **Performance metrics.** Lead time from warning to action; share of programs reporting verified outcomes; member-state trust surveys; cost per verified outcome; independent audits completed and findings closed.

14 **Immediate action (November 2026).** Map existing UN technology mandates and spending from public documents; draft the decision-rights matrix for Appendix F; prepare a briefing for incoming senior officials; identify member states willing to co-sponsor a future resolution.

ILLUSTRATIVE Three archetypes show the priority in practice. An **advanced economy** contributes satellite time and engineers to the Peace Technology Pool and accepts Shared Layer audit. An **emerging economy** hosts the P2 corridor and uses Shared Layer interoperability to exchange data with neighbors under its own law. A **small island state** uses shared climate and satellite data, under its own control, to plan cyclone evacuations. None refers to any real country's commitment.

This book recommends the cross-cutting priority after considering alternatives. A new specialized agency would require a treaty and duplicate existing bodies; leaving technology to each entity preserves fragmentation. A cross-cutting priority is faster, cheaper and reversible.

III.12 The United Nations of 2100

ILLUSTRATIVE By 2100 the Organization this book aims for is not larger but more trusted: a Council reflecting the world's regions through whatever formula members agree, mandates with review dates and published results, predictable prevention funding, and open, audited technology owned by the nations it serves. FOUND (2026–2030) proves the office can deliver what it controls; PROVE (2031–2040) tests the pilots and the Assembly's priority; CONNECT (2041–2060) and TRANSFORM (2061–2080) are where reform of membership, if it comes, is most likely; SUSTAIN (2081–2100) keeps institutions adaptive.

III.13 The first 100 days of any Secretary-General who adopts Vision 2100

This sequence applies to any Secretary-General, whoever is appointed, and each step is within the office's own authority. It is a Vision 2100 proposal, not a plan announced by any candidate.

01	**Days 1–30: listen and set a short list.** Meet every regional group, the permanent members, troop contributors and civil society. Publish no more than five system-wide priorities; the Ambassador said in her dialogue that more than five priorities will be lost [5], and Vision 2100 adopts the same discipline as its own proposal.
02	**Days 1–30: publish the prevention doctrine.** Issue Article 99 criteria and a commitment that every UN-convened mediation team includes women.
03	**Days 30–60: open the books.** Publish the Secretariat's cash position, a list of mandates with costs from the UN80 registry, and a timetable for the first Results Ledger entries.
04	**Days 30–60: appoint for delivery.** Senior appointments with published criteria and gender and geographic balance; one official accountable for technology coordination.
05	**Days 60–90: go to the conflicts.** Personal engagement, coordinated with regional organizations, where risk is greatest.
06	**Days 60–100: frame the reform agenda.** A report to the Assembly on Technology for Peace and Security, the Shared Layer and the Results Ledger, with the decision-rights matrix annexed, and a first report on the costs of Council deadlock.
07	**Day 100: report.** A public account of what was done, what was not and why.

What begins now

Vision 2100 proposes that the actions in Table III-3 start in November 2026. Most can be taken by A113 Partners and research partners independently; anything involving UN authority waits on the selection process and on the bodies that hold that authority.

TABLE III-3 What begins now: actions from November 2026, who takes them and the authority each needs (Vision 2100 proposal)

Period	Action	Who	Authority needed
30 days	Commission independent UN-law review of the decision-rights matrix (Table III-1); correct the record on Article 99 and human rights funding in all Vision 2100 materials	A113 Partners, outside UN-law counsel	None
30 days	Maintain the approval log: the Ambassador approved every DOCUMENTED passage on 2 November 2026; any new or changed passage needs her written approval	A113 Partners, the Ambassador	None
90 days	Public inventory of UN technology mandates and spending from open documents	A113 Partners, university partner	None
90 days	Briefing pack for whoever is appointed: 100-day plan, Article 99 criteria draft, Results Ledger design	A113 Partners	None
180 days	Results Ledger prototype on one public UN program using published data	A113 Partners, P5 partners	None for prototype; Secretariat for adoption
First year	Secretariat AI use policy; adoption of the Results Ledger for Secretariat programs; deadlock-cost report	Secretary-General, if the office takes up these proposals	SG alone
First year	Identify co-sponsors for an Assembly resolution on Technology for Peace and Security	Interested member states	Member states
First year	Interim steering group (5–7) seated; Steering Board charter adopted (~April 2027); Gate 0 support decisions on P1–P5 (October 2027)	A113 Partners; interim group; Steering Board	Vision 2100 governance only
2027–2031	Pilot Governance Boards formed under host chairs; first P5 Ledger publication (2028); Assembly resolution; P3 and P5 pilots evaluated; Prevention and Mediation Fund launched with voluntary money	Hosts, GA, member states, SG	Host governments; GA; member states

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Measuring progress

TABLE III-4 Part III indicators: baselines, agreed international targets and Vision 2100 planning milestones. Milestones (2030–2100) are ILLUSTRATIVE planning milestones proposed by Vision 2100, not forecasts and not agreed commitments; none of these indicators has a numeric SDG target, and no milestone replaces an agreed commitment. Shared indicators (Results Ledger, women in mediation, P3 lead time) match Parts VI, VIII and XII and Appendix H; Part XII is the master for the Results Ledger.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Results Ledger coverage (P5 Pilot Governance Board; Secretary-General; GA)	0 programs publishing, 2026 (UN80 mandate registry being established [26])	—	≥1 UN and ≥1 national program publishing by 2028; ≥10% of Secretariat programme budget by 2030, only if the SG adopts the Ledger	Majority of Secretariat programme budget	All Secretariat programs; other mandates if GA decides	All
New mandates carrying review clauses (GA; Security Council)	To be established, 2026 (UN80 registry [26])	UN80 mandate-review resolution, 31 Mar 2026: review clauses in new mandates [26]	All new mandates	All mandates	All	All
Assessed regular budget collected by 31 March (member states; Secretariat reports)	To be established, 2026 (Secretariat contributions data)	—	+15 points on baseline	90%	95%	95%
Women among senior members of UN-convened mediation teams (Secretary-General; DPPA)	6% of mediators in major processes, 1992–2019 (CFR; Part VIII)	— (UNSCR 1325 calls for women's participation; no numeric target)	≥ one-third	Parity	Parity	Parity
P3 median warning lead time, days (P3 Pilot Governance Board; DPPA)	To be established in shadow mode, 2027–28 (Part VI)	—	≥60 days (≥30 days by 2028)	≥90 days in all P3 regions	Standard practice	Standard practice
Supporters of the France–Mexico veto-restraint declaration (member states)	126 member states + 2 observers, 30 Sep 2026 (GCR2P [105])	—	≥129 (two-thirds of members)	150	Universal	Universal
Human rights share of UN system spending (GA; member states)	About 1%, 2026 (EU statement in the 20 Aug 2026 dialogue [5]; not independently confirmed)	—	Phased funding plan adopted by GA	Doubled	Set by GA	Set by GA
Countries using UN Shared Layer standards (member states)	0, 2026 (standards not yet agreed)	—	10	60	150	All willing states

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Security Council reform negotiations (GA; permanent members for ratification)	IGN rolled over for the 17th time, Aug 2025; revised Elements Paper, 10 Jun 2026 [9092]	Charter Art. 108 procedure (no target date)	Decision on text-based negotiations	Members decide	Members decide	Members decide

Source: as cited per row. Results Ledger milestones follow Part XII; women-in-mediation milestones follow Part VIII's definition (senior members of UN-convened teams); P3 lead-time milestones follow Part VI.

Vision 2100 proposes building corrective action into the cycle. If Ledger coverage stalls, the Secretary-General reports the reasons by mandate. If the Assembly does not adopt the priority by 2030, Vision 2100 continues as a set of SG-led and voluntary programs and reassesses at the PROVE gate in 2031.

PART IV

IV

SOVEREIGN AI AND DIGITAL INFRASTRUCTURE

Sovereign AI and Digital Infrastructure: The National AI Sovereignty Model and the UN Shared Layer

IN THIS PART

IV.1 Purpose and place in the system
IV.2 Where we are today
IV.3 What 2100 should look like
IV.4 Reference architecture: the National AI Sovereignty Model
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IV.1 Purpose and place in the system

This part sets out how a nation can own the digital and AI systems that serve its people without cutting itself off from the world. It turns the "sovereign AI node" of the original Vision 2100 statement (2026) into an architecture that engineers can build, regulators can license, financiers can appraise and citizens can hold to account. It also defines what the United Nations should and should not do: a thin **UN Shared Layer** of standards, interoperability, verification and an emergency compute reserve. The UN holds no one's data.

THE ARGUMENT IN ONE SENTENCE

Nations should own the inference, data and public services that touch their citizens, reach frontier AI capability through trusted and contestable arrangements rather than dependency, and cooperate through shared UN standards. That hybrid is cheaper, safer and more achievable than either full self-sufficiency or full reliance on a few foreign platforms.

In the Vision 2100 chain, this is the second link. Clean energy (Part V) powers compute and digital infrastructure, which carry education, health and accountable government (Parts VIII and IX). Without it, the learning companion has nowhere to run and the Results Ledger has no trusted data; prevention (Part VI) and regional compacts (Part VII) also depend on it. Each design choice is tested against whether it serves women, children and the most excluded, and whether it lightens environmental load.

This part corrects two weaknesses in the original Vision 2100 statement (2026). The statement argued that hyperscale "cannot carry the century"; in fact hyperscale remains necessary for frontier training and some workloads, but should not be the only option for public services. The statement also presented small modular reactors as the backbone of sovereign compute. This part is technology-neutral: national public-service inference needs tens of kilowatts in a small island state and tens of megawatts in a large economy (Section IV.8), which grids, renewables and storage can supply, with SMRs one option where they qualify (Part V). It also adds what the original statement left implicit: connectivity. Section IV.9 sets out how satellites in low Earth orbit, high-altitude platforms and nationally owned HyperEdgeX edge nodes can connect the 2.2 billion people still offline without surrendering control of national communications.

IV.2 Where we are today

IV.2.1 Compute is concentrated

In its *Energy and AI* report (April 2025), the International Energy Agency (IEA) estimated that data centres consumed about 415 terawatt-hours (TWh) of electricity in 2024, about 1.5 percent of world consumption, rising to about 945 TWh by 2030 in its base case. The United States accounted for 45 percent of 2024 use, China 25 percent and Europe 15 percent, and the United States and China account for nearly 80 percent of projected growth. These consumption figures are as reported by NS Energy and DatacenterDynamics, because the IEA's summary pages could not be opened for this book [53114]. The report's own chapter on energy supply for AI, which is reachable, gives a higher supply-side figure of about 460 TWh in 2024, rising to over 1,000 TWh

in 2030; coal supplied about 30 percent of that electricity, renewables 27 percent, gas 26 percent and nuclear 15 percent [115]. This book uses the consumption figures shared across its parts and notes the difference. In April 2026 the IEA reported that data-centre electricity demand rose 17 percent in 2025 and is set to double by 2030 [116].

AI-capable capacity is more concentrated still. The International Telecommunication Union (ITU), citing a June 2025 Oxford study by Hawkins, Lehdonvirta and Wu, *AI Compute Sovereignty: Infrastructure Control Across Territories, Cloud Providers, and Accelerators*, reports that only 32 countries host data centres providing the compute needed for advanced AI [27]. The study counts the public-cloud regions of major providers. Press coverage of the same paper reports 132 regions with AI accelerators in 33 countries, 24 of them with training-grade hardware, so the count depends on the definition and date used [117]. Citing a separate 2024 analysis by the Center for Strategic and International Studies, ITU adds that American and Chinese companies operate more than 90 percent of the data centres that others use for AI work. It also reports that more than 150 countries have none and that Africa and South America have almost none [27]. According to the New Zealand Herald's account of the Oxford research, US firms operate 87 of these AI computing hubs, about two-thirds of the total, against 39 for Chinese firms and 6 for European firms [118]; the three figures sum to the 132 regions reported in [117]. The primary paper itself could not be opened for this book. An earlier study by the same team found rentable public-cloud GPUs (graphics processing units, the chips that run modern AI) in only about 30 countries [119].

Connectivity is the floor: ITU estimates that about 2.2 billion people were still offline in 2025, most in low- and middle-income countries [72].

IV.2.2 Dependency follows the data

When public services run on foreign-operated infrastructure, the data are subject to more than one legal system; sovereignty becomes, in the words of the original Vision 2100 statement, "a matter of trust rather than right." The issue is not that foreign providers are untrustworthy, since many offer strong security and contractual protection. It is leverage. A country with no domestic capability or credible alternative cannot negotiate terms, audit easily, or keep services running if a provider, a cable or a foreign government cuts it off. For advanced AI, most countries are in that position [27].

IV.2.3 Most languages are poorly served

A 2025 Stanford Institute for Human-Centered AI (HAI) white paper found that most major large language models underperform in non-English languages, especially low-resource ones, are poorly attuned to local cultural contexts, and in parts of the Global South are not accessible at all [120]. Stanford recommends subsidized compute, better data, participatory research in which language communities co-own the results, and fair data-ownership frameworks [120]. Roughly 2,000 of the world's languages are African [121].

◆ DOCUMENTED POSITION In her opening statement to the General Assembly's interactive dialogue on 20 August 2026, Ambassador A-Baki said that the rules governing AI are being written by a handful of private-sector actors and powerful states without global consent. She said the UN must serve as the universal negotiating table where every nation, large and small, helps set guardrails that are ethical, fair and binding. Answering a question on multilingualism, she described AI as the product of human intelligence, said it cannot be stopped, and argued that nations must work together to ensure it is used for good [5]. (Machine transcript, not an official record. The architecture, pilots and recommendations in this part are Vision 2100 proposals, not hers.)

IV.2.4 Nations are already responding

National and regional efforts show the gap can be narrowed without training frontier models from scratch.

- **India, Bhashini.** By March 2026 India's national language platform reported more than 350 models, over 15 million inferences a day, 36 text and 23 voice languages, and use on more than 500 government websites [122].
- **Singapore, SEA-LION.** AI Singapore's open models cover 11 Southeast Asian languages. They were built by continued pretraining of Llama 3.1 8B and Gemma 2 9B on about 200 billion tokens, 55 percent in regional languages, under the MIT licence [123]. A later version (November 2025) adapts Alibaba's Qwen3-32B [124]. The base model, and some dependency, still comes from abroad.
- **Switzerland, Apertus.** Released on 2 September 2025 by EPFL, ETH Zurich and the Swiss National Supercomputing Centre, Apertus (8 and 70 billion parameters) was trained from scratch on 15 trillion tokens covering more than 1,000 languages, using more than 10 million GPU hours on the publicly funded Alps supercomputer [125]. Press reports describe more than 4,000 GPUs for about three months at about a kilowatt each [126]: several megawatts, for a model below the frontier.
- **Africa, Masakhane.** Founded at the Deep Learning Indaba in 2019, Masakhane is a grassroots community building language technology for African languages "for Africans, by Africans" [121][127]. Within months it had 144 participants from 17 African countries [127], and it uses participatory methods in which native speakers help build datasets and models [128].

IV.3 What 2100 should look like

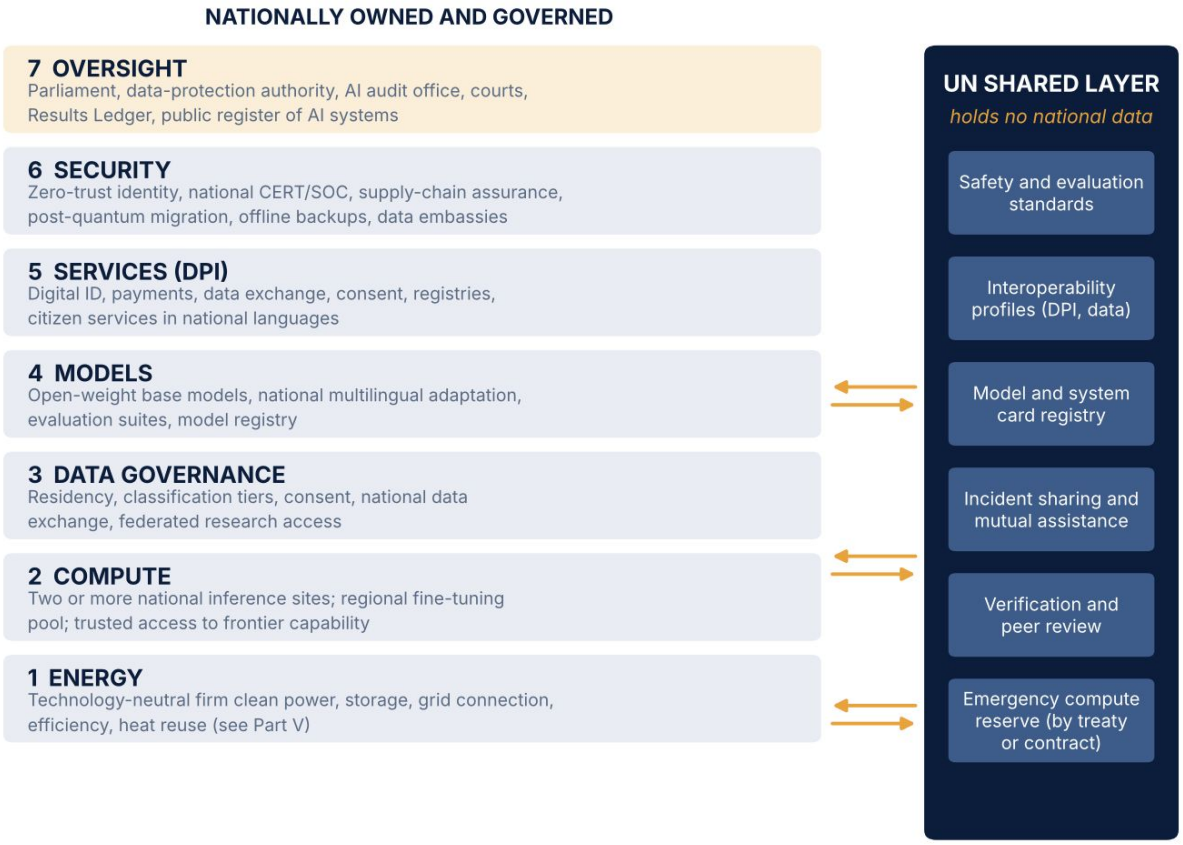
ILLUSTRATIVE By **2030** (end of FOUND), at least one pilot country runs core citizen services on infrastructure it controls, in its national languages, with a published independent evaluation. By **2050** (CONNECT), every country that wants one has a national or shared regional inference capability; citizens complete common public transactions in their own language by phone, voice or assisted office; and cross-border health, climate and science cooperation runs through federated methods under Shared Layer standards. By **2100**, digital public infrastructure is as ordinary as roads and water, no country's services can be switched off by a foreign decision, and AI used by the state is registered, tested and contestable.

IV.4 Reference architecture: the National AI Sovereignty Model

Vision 2100 proposes the **National AI Sovereignty Model**, a seven-layer reference architecture (Figure IV-1). Each layer has a clear owner and a clear interface to the **UN Shared Layer**. A nation can adopt the layers in sequence, buy parts as managed services, or share them regionally. Ownership means legal control, the ability to audit and the ability to leave. It does not mean building everything domestically.

FIGURE IV-1

The National AI Sovereignty Model and the UN Shared Layer



Arrows: standards, attestations and incident reports flow across the boundary; raw national data does not.

Vision 2100 reference architecture (PROPOSAL). Layers are logical; a small state may share layers 2–6 regionally. The UN Shared Layer sets standards and holds no national data.

IV.4.1 Layer 1 — Energy

Vision 2100 proposes that every node have firm, clean, affordable power with two independent supply paths. The layer is technology-neutral: grid, solar or wind with batteries, hydro, geothermal, and SMRs where licensing, safeguards, economics and consent support them (Part V, **Clean Power and Compute Corridors**). Because inference loads are modest (Section IV.8), most first nodes can run on existing grids plus on-site storage and backup; dedicated generation matters only for training pools or corridor-scale loads.

IV.4.2 Layer 2 — Compute

Vision 2100 proposes a compute layer with three tiers.

01 **National inference sites.** At least two sites, in separate locations, with failover, sized for citizen and government inference. These host the models that touch personal data.

02 **Regional fine-tuning pool.** Capacity shared among neighbouring states under a treaty or consortium agreement, for adapting open-weight models to national languages and domains. Most small and medium states should not build training clusters alone.

03 **Trusted frontier access.** Contracted access to frontier models and hyperscale training, with conditions on data use, key custody, location, audit and exit (Section IV.7).

IV.4.3 Layer 3 — Data governance

Vision 2100 proposes four data-governance controls.

- **Residency by classification.** Tier 1 (national security, biometrics, health records, child data) is stored and processed in-country or in a data embassy under national law. Tier 2 (personal data in routine services) is in-country by default, with offshore processing only under audited contracts. Tier 3 (de-identified statistics) may be shared through approved federated arrangements. Tier 4 (open data) is published.
- **Consent and access logs.** Citizens can see who accessed their data and why.
- **A national data exchange.** Registries stay with the agencies that own them and exchange data through a secure, logged, standards-based bus rather than a central database (Section IV.5).
- **Federated research access.** For health, climate and science, models travel to the data. Only aggregated, privacy-tested results leave the jurisdiction.

IV.4.4 Layer 4 — Models

This book recommends that most nations adapt open-weight models rather than pretrain from scratch. SEA-LION reached strong regional-language performance with about 200 billion tokens of continued pretraining [123]; Apertus needed 15 trillion tokens and about 10 million GPU hours [125]. Adaptation costs orders of magnitude less, suits a regional pool and can be repeated when a better base appears. Pretraining from scratch buys full knowledge of the training data and freedom from a foreign licence, worth it only for a few well-resourced states or blocs.

Either way, Vision 2100 proposes that the layer include a national evaluation suite in each official language, built with native speakers; a model registry recording provenance, licence and evaluation results; and a rule that any model used in a decision affecting rights carries a published system card and a human appeal route (Part IX). Language communities that contribute data should share ownership and benefit [120].

IV.4.5 Layer 5 — Services (digital public infrastructure)

Digital public infrastructure (DPI) lets any service identify a person, pay or be paid, and exchange data with consent. Vision 2100 proposes that AI sit on top of DPI, not in place of it, with a minimum stack of digital identity with non-digital alternatives; payments; a data exchange; consent management; core registries (civil, land, business); and services in every official language through apps, voice, SMS and assisted offices. GovStack's building-block specifications provide a vendor-neutral starting point [129].

IV.4.6 Layer 6 — Security

Vision 2100 treats security as a layer, not a feature: zero-trust identity for every person and machine, a national computer emergency response team (CERT) and security operations centre (SOC), supply-chain assurance, encrypted offline backups and data embassies, and a post-quantum migration plan (Section IV.6).

IV.4.7 Layer 7 — Oversight

Vision 2100 proposes that oversight belong to national institutions: parliament, an independent data-protection authority, an AI audit function, courts and the **Results Ledger** (Part IX). A public register lists every AI system the state uses, its purpose, legal basis and evaluation results.

IV.4.8 The UN Shared Layer

Vision 2100 proposes a deliberately thin Shared Layer with six functions: common safety and evaluation standards; interoperability profiles for DPI and data exchange; a voluntary registry of model and system cards; incident sharing and mutual assistance; verification and peer review on request; and an emergency compute reserve that member states and providers commit by contract or agreement for disaster response. Standards, attestations and incident reports cross the boundary. Raw national data do not.

It builds on agreed mandates. The Global Digital Compact (September 2024) commits states to digital cooperation, DPI and AI capacity-building; its review is scheduled at the 82nd General Assembly [12]. Resolution A/RES/79/325 (26 August 2025) created the 40-member Independent International Scientific Panel on AI and the Global Dialogue on AI Governance, which met in Geneva on 6–7 July 2026 and meets next in New York in May 2027. The Dialogue is a forum, not a regulator [12]. The Universal DPI Safeguards Framework, promoted by the UN Tech Envoy, UNDP and the Digital Public Goods Alliance, gives rights-based guidance across the DPI lifecycle [130].

Under Vision 2100's proposal, decision rights follow the Part III matrix. The Secretary-General can convene, propose a design, direct Secretariat entities to align their DPI support and champion it in the Global Dialogue. Formal recognition of standards and any assessed funding need the General Assembly. Technical standards would be developed with the ITU and other agencies under their own governing bodies. Building nodes, passing data laws and signing compute agreements are sovereign decisions. With a 2026 UN regular budget of about $3.45 billion after a cut of roughly 15 percent [37], the Shared Layer must start by consolidating existing work, with voluntary pilot funding.

IV.5 Digital public infrastructure: what has worked and what has failed

The original Vision 2100 statement cited Estonia, India, Brazil and Ukraine as proof that digital government works. They are real successes, but each also has documented failures or criticisms that this book must learn from.

IV.5.1 Results

TABLE IV-1 Documented digital public infrastructure precedents: scale and lessons. Sources as cited in each row; X-Road, Diia and MOSIP figures are self-reported by operators.

Precedent	What it does	Verified scale	Lesson
Estonia X-Road	Decentralized exchange between registries	3,800+ e-services; ~2.2 bn transactions a year [131]; 1,083 member organizations in logs, Dec 2025–May 2026 [132]; federated with Finland since 2018 [131]	Connect registries; do not centralize
India Aadhaar	Biometric digital identity	~1.45 bn numbers generated [133]; 150 bn+ authentications by April 2025 [134]	Scale is possible; exclusion risk is real
India UPI	Interoperable real-time payments	228 bn+ transactions in 2025, worth nearly ₹300 trillion [135]	Open rails, competing private apps

Precedent	What it does	Verified scale	Lesson
Brazil Pix	Central-bank instant payments	~64 bn transactions in 2024 [136][137]; ~170 m people and 20 m+ businesses as reported from Banco Central do Brasil data [136] (other reports give 148 m individuals, a narrower definition); launched November 2020	Public rail, mandatory for large banks, free to individuals
Ukraine Diia	Mobile app and portal for state services	23 m+ users; 70+ services; 33 digital documents (October 2025) [138]	Fast delivery under extreme stress
MOSIP	Open-source identity platform	14 national rollouts incl. Tonga; 161 m+ residents registered by end-2025 [139]	Open source lowers lock-in for small states

Multilateral support is growing. The 50-in-5 campaign, launched in November 2023 by 11 first-mover countries with UNDP, the Gates Foundation, the Digital Public Goods Alliance and others, aims for 50 countries to launch at least one safe, inclusive and interoperable DPI component by the end of 2028 [140]. According to Biometric Update, a trade publication, it had 37 member countries by June 2026 [141]; further countries, including Italy, joined at a milestone event in New York in September 2026 [142]. MOSIP's rollout figures in Table IV-1 are the platform's own and have not been independently confirmed [139]. GovStack, founded by Estonia, Germany, ITU and the Digital Impact Alliance, publishes reusable building-block specifications [129].

IV.5.2 Failures and criticisms

Exclusion. A randomized evaluation covering about 15 million public-distribution beneficiaries in Jharkhand, India, found that requiring Aadhaar biometric authentication did not reduce leakage, slightly raised transaction costs, and cut benefits by 10.6 percent for beneficiaries who had not previously linked their ID [143]. According to ThePrint's report of the operative holdings read in court, in September 2018 India's Supreme Court upheld Aadhaar for welfare by four to one but struck down the provision allowing private companies to require it, ruled that no one may be denied state benefits for lacking it, and limited retention of authentication records; the dissenting judge found the whole scheme unconstitutional [144].

Legal process. In October 2021 Kenya's High Court declared the rollout of the Huduma Namba digital ID unlawful because no data-protection impact assessment (DPIA) had been done under the Data Protection Act 2019, and ordered one before further processing [145].

Supply chain. In 2017 Estonia suspended the certificates on up to 760,000 ID cards after researchers found a cryptographic flaw in their chips. Owners updated remotely or at service points, and no identity theft was confirmed [146].

This book draws four design rules from these cases. Never make a digital credential the only route to an entitlement; keep a non-digital alternative and an assisted channel. Do the DPIA, and publish it, before collecting data. Prefer federated exchange over central databases, so one breach cannot expose a whole population. Use more than one supplier for critical cryptographic hardware and rehearse mass revocation.

IV.6 Cybersecurity and resilience

IV.6.1 Threat model

Vision 2100 proposes that every node plan against six classes of threat (Table IV-2).

TABLE IV-2 Threat model for a national AI and DPI system, with proposed primary controls (Vision 2100 proposal)

Threat	Examples	Primary controls
State-sponsored intrusion	Theft of registries; persistent access to ministries	Zero trust, segmentation, SOC with threat-intelligence sharing
Ransomware and fraud	Encrypted hospital or payment systems; identity fraud	Offline immutable backups, rehearsed recovery, transaction monitoring
Supply-chain compromise	Malicious firmware or updates; chip flaws	Software bills of materials, signed builds, multi-vendor sourcing, hardware attestation
AI-specific attacks	Prompt injection, data poisoning, model theft, extraction of personal data	Red-teaming, input and output filtering, data provenance, no Tier 1 data in general-purpose models
Insider misuse	Officials querying records without cause	Purpose-bound access, citizen-visible logs, audit and sanctions
Physical and systemic disruption	Cyclones, cable cuts, power loss, conflict	Two or more sites, data embassies, satellite fallback, offline modes

IV.6.2 Resilience, response and quantum-safe migration

Vision 2100 proposes that identity verification, payments and emergency information run in degraded mode for at least 72 hours without international connectivity. Incident response needs a written national plan, a legal duty to report significant incidents to the CERT, and yearly exercises. Through the Shared Layer, states could voluntarily share anonymized incident indicators and request mutual assistance.

In August 2024 the US National Institute of Standards and Technology approved its first three post-quantum cryptography standards: FIPS 203 for key encapsulation and FIPS 204 and 205 for digital signatures [147].

Quantum computers able to break today's public-key cryptography do not yet exist, but data stolen now can be decrypted later, so Vision 2100 proposes that long-lived identity, health and land records come first. Every node should inventory its cryptography, adopt these standards as suppliers support them, and design for crypto-agility. New identity documents and root certificates issued after 2028 should support post-quantum or hybrid schemes.

IV.7 Comparing architectural approaches

Vision 2100 compares four approaches against seven criteria in Figure IV-2 (authors' qualitative judgement) and recommends the hybrid.

FIGURE IV-2

Four architectural approaches compared



Qualitative assessment by the authors against the criteria shown; see Section IV.7 for reasoning. Gold outline: recommended hybrid.

Vision 2100 qualitative assessment (PROPOSAL). Ratings reflect typical cases; individual contracts and national contexts vary.

Centralized hyperscale. Public services run on large commercial clouds, possibly in-region but not in-country. It is the fastest route to service and the only practical route to frontier training, which needs clusters beyond almost any national budget [125126]. The weaknesses are dependency, limited audit, foreign-law exposure and concentration risk.

Distributed national nodes. Every country builds its full stack at home: maximum control, but duplicated fixed costs, no frontier reach, and beyond what small states can staff or secure.

Federated regional pools. States share compute and expertise regionally, keeping data national. Costs fall and resilience rises, but regional governance takes years to agree.

Hybrid (recommended). Nations own inference, data and services in-country; share fine-tuning and specialist capacity in regional pools; and reach frontier capability through trusted arrangements. This balances control, cost and feasibility best, especially for small states, which can buy managed services under strong contracts while keeping data and keys at home.

Vision 2100 proposes that "trusted arrangements" for frontier access include at a minimum: no training on national data without explicit agreement; customer-held encryption keys; contractual processing location; independent audit rights; incident notification within agreed hours; portability of data and fine-tuned weights; exit assistance; and more than one qualified provider, so the state keeps bargaining power. Confidential computing, which keeps data encrypted during processing, reduces but does not remove the need for legal protection.

IV.8 Compute sizing for three archetypes

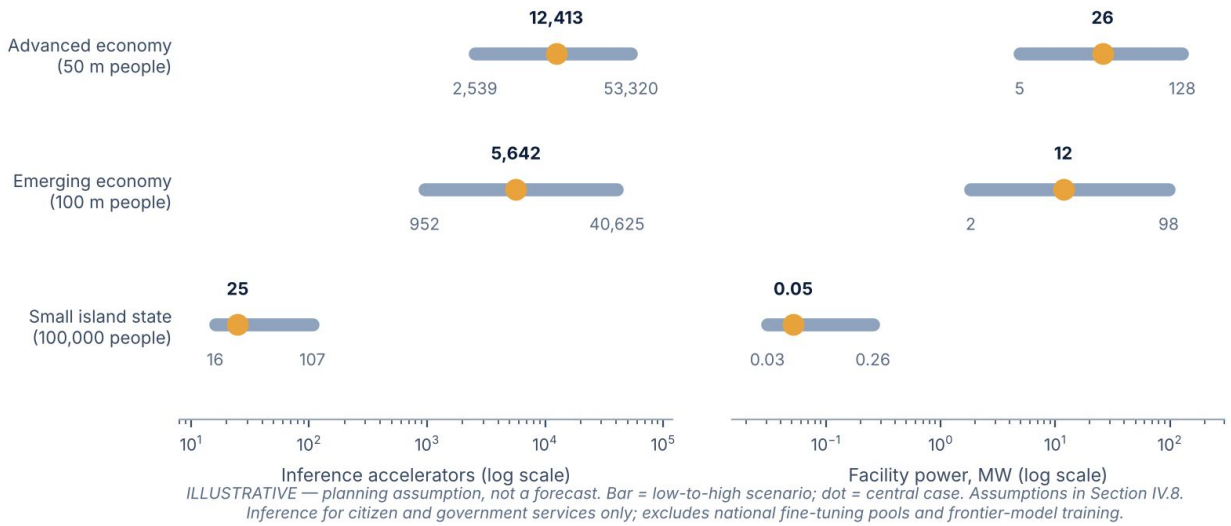
ILLUSTRATIVE The method below estimates public-service inference demand from citizen use, then converts it to accelerators (GPUs or equivalent) and power. Fine-tuning pools and frontier training are excluded. Table IV-3 lists the assumptions and Figure IV-3 the results.

TABLE IV-3 Compute-sizing assumptions for public-service inference (ILLUSTRATIVE planning assumptions, not vendor benchmarks)

Assumption	Low	Central	High	Note
Daily active share (advanced and small island / emerging)	40% / 15%	55% / 25%	70% / 40%	Share using any AI-assisted public service on a given day
Interactions per active user per day (same split)	2 / 1	4 / 2	6 / 4	Learning companion, health triage, service queries
Tokens per interaction (input + output)	1,500	2,000	3,000	Voice converted to token equivalents
Sustained tokens per second per accelerator	1,600	1,200	800	Batched serving of small-to-mid open-weight models
Peak factor; back-office multiplier; redundancy	3; 1.3; 1.5	3; 1.3; 1.5	3; 1.3; 1.5	Daytime peaks; government analytics; either of two sites carries two-thirds of peak
Minimum per node	16	16	16	Two sites of eight accelerators
Facility kW per accelerator	1.0 × 1.6 × PUE 1.2	× PUE 1.3	× PUE 1.5	~1 kW per GPU [126]; 1.6 for servers, storage, network; PUE = power usage effectiveness

FIGURE IV-3

Compute sizing for citizen and government AI services, three archetypes



ILLUSTRATIVE — planning assumption, not a forecast. Bar = low-to-high scenario; dot = central case. Assumptions in Section IV.8. Inference for citizen and government services only; excludes national fine-tuning pools and frontier-model training.

ILLUSTRATIVE — planning assumption, not a forecast. Method and assumptions in Table IV-3. Excludes fine-tuning pools and frontier training.

ILLUSTRATIVE **Advanced economy, 50 million people.** Central case: about 220 billion tokens a day, roughly 12,000 accelerators and about 26 MW of facility power; range about 2,500–53,000 accelerators and 5–130 MW. Even the high case is a fraction of one large commercial AI campus, and the country already has the grid and most of the skills.

ILLUSTRATIVE **Emerging economy, 100 million people.** Central case: about 100 billion tokens a day, roughly 5,600 accelerators and about 12 MW; range about 950–41,000 accelerators and 2–100 MW. The binding constraints are reliable power, connectivity for those still offline [72], and skilled staff, not chips. It is the natural host of a **Clean Power and Compute Corridor** (P2, Part V) with a

regional fine-tuning pool. Corridor campuses (20–50 MW of IT load in P2) may host regional and commercial workloads beyond this national public-service inference need.

ILLUSTRATIVE **Small island state, 100,000 people.** Central case: about 0.4 billion tokens a day; about 25 accelerators and about 50 kW, just above the 16-accelerator two-site minimum; range 16–107 accelerators and 0.03–0.26 MW. Its constraints are few specialists, cyclones, cable cuts and high fixed costs per citizen, which is why P1 (Section IV.11) shares security operations and model adaptation regionally.

ILLUSTRATIVE Sovereign inference for public services is affordable in energy terms almost everywhere; skills, governance, security and connectivity bind before megawatts do. Pretraining a national foundation model is a different scale (Apertus-class training implies several megawatts for months [125][126]) and is a regional or flagship choice, not a precondition for sovereignty. Results are highly sensitive to adoption and model size: larger or multimodal models could raise needs several-fold, more efficient ones cut them. Each country should rerun the method with its own data.

IV.9 Connecting every nation: space, stratosphere and the sovereign edge

A sovereign AI node is useless to a family that cannot reach it. Vision 2100 proposes that connectivity be treated as the eighth layer of the National AI Sovereignty Model: no longer only a national cable or tower network, but a combination of satellites in low Earth orbit, high-altitude platforms in the stratosphere and nationally owned edge nodes on the ground. This section sets out why that combination has become possible, what recent experience shows about its value and its risks, and the conditions under which a nation can use it without giving up control.

IV.9.1 Why connectivity is the missing layer

About 2.2 billion people were still offline in 2025, most of them in low- and middle-income countries [72]. Many of the hardest cases are small, scattered or remote: island states, mountain and forest regions, border areas and places recovering from disaster or war, where laying fibre and building towers costs most per person served.

Single points of failure are common. On 15 January 2022 the eruption of an undersea volcano and the tsunami that followed severed Tonga's only international fibre-optic cable. Repairing it took more than five weeks, during which a repair ship replaced about 90 kilometres of cable. During that period SpaceX set up a Starlink ground station in Fiji to help restore links, and Tonga Cable Ltd. tested Starlink connections in the week the cable was restored [148]. The outer-island cable, which runs near the volcano, remained cut for longer [148].

IV.9.2 What space-based broadband has already shown

Low Earth orbit (LEO) broadband has scaled faster than any previous satellite service. Starlink, operated by SpaceX, reported more than 12 million active customers in more than 160 countries and territories in mid-2026, served by more than 10,400 satellites in orbit [149]. Since July 2025, a direct-to-cell service operated with T-Mobile in the United States has connected ordinary mobile phones to satellites in places without cellular coverage, starting with text messages [150].

Ukraine. Since 2022 Starlink terminals have kept communications running for Ukraine's government, emergency services, critical infrastructure and armed forces while Russian attacks damaged terrestrial networks. About 15,000 terminals were operating by July 2022, and Ukraine has since received more than 40,000, funded by SpaceX itself and by governments including the United States, the United Kingdom, Poland and the Czech Republic; Poland said in May 2024 that it was paying for more than 20,000 [151]. The Pentagon later disclosed a $23 million contract with

SpaceX for Starlink service in Ukraine, which a U.S. official called "a vital part of the security assistance" the United States provides [152].

The other side of the lesson. Ukraine's experience also showed what dependence on one private operator means. In September 2023 Elon Musk said on X that he had declined an emergency request to activate Starlink coverage as far as Sevastopol, which he said was intended for an attack on the Russian fleet; his biographer reported that coverage near the Crimean coast had been turned off [151]. Whatever view one takes of that decision, it was taken by a company, not by the state whose communications depended on it.

Licensing is a sovereign decision. Governments decide whether a satellite operator may sell service in their territory, on what spectrum and under what ownership rules. As of April 2026 Starlink was still awaiting approval in South Africa, where ownership requirements are in dispute, and in India, where its application has been pending since 2021 amid reported security review [153]. Competitors are scaling: Eutelsat OneWeb operates about 650 satellites; Amazon's Leo constellation had launched 239 of a planned 3,236; China's Qianfan and Xingwang constellations had more than 100 and nearly 200 satellites in orbit respectively; and the European Union's IRIS² is planned to begin deployment around 2027 [154].

The stratosphere is the next layer. The ITU's World Radiocommunication Conference 2023 identified frequency bands — including parts of the 694–960 MHz, 1.7–2.2 GHz and 2.5–2.69 GHz ranges — that high-altitude platforms may use as mobile base stations (HIBS), subject to conditions set in the Radio Regulations [155]. Solar- and battery-powered aircraft operating at about 20 kilometres can, in principle, provide 4G or 5G coverage over a wide area directly to ordinary phones. The technology is in demonstration, not yet in routine commercial service; persistent operation depends on advances in batteries, solar cells and, potentially, wireless power transmission.

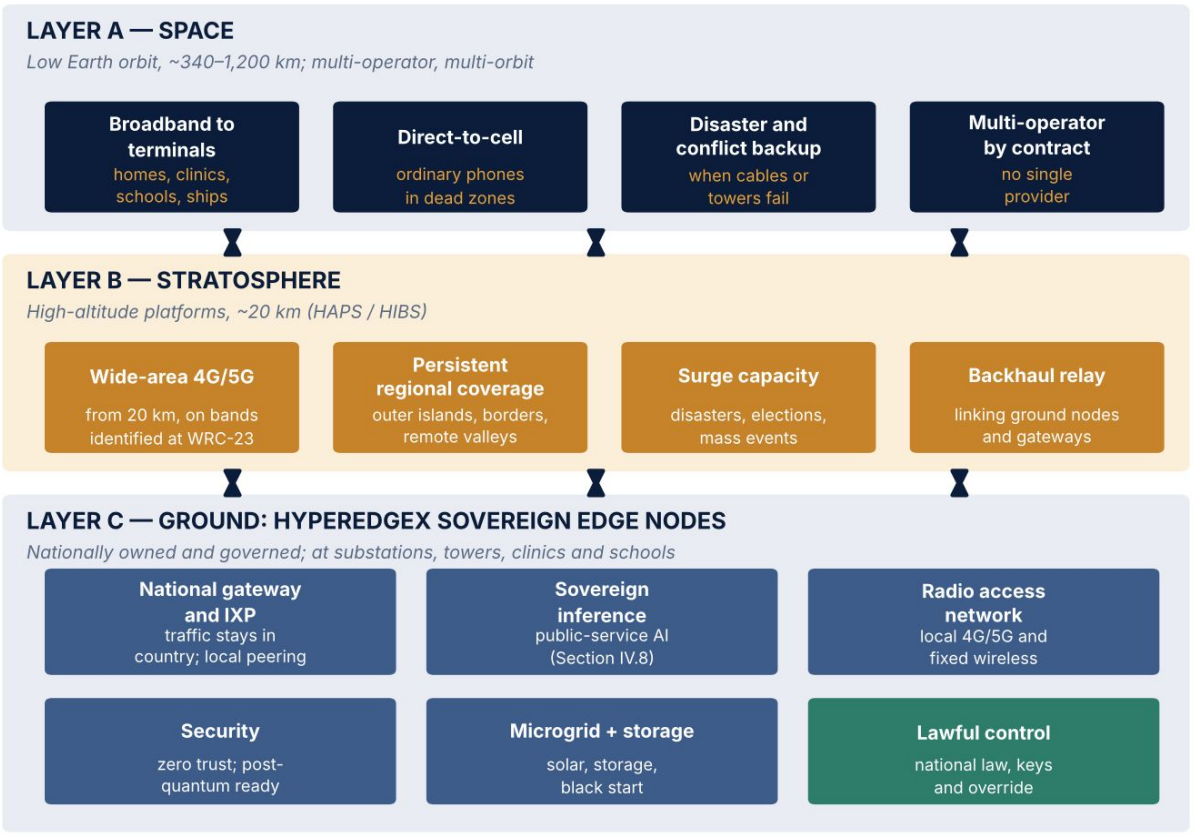
The conclusion Vision 2100 draws is neither enthusiasm nor suspicion. Satellite and stratospheric connectivity can reach the last 2.2 billion people faster and more cheaply than terrestrial networks alone, and it has already protected lives and institutions in disaster and war. But connectivity that one company or one foreign government can switch off is not sovereignty. The task is to use these systems on terms that keep the decisions with the nation served.

IV.9.3 The proposal: a three-layer national connectivity architecture

Vision 2100 proposes a three-layer architecture (Figure IV-4). Each layer is optional and procured from more than one supplier; every link terminates in a nationally controlled gateway.

FIGURE IV-4

Three-layer national connectivity architecture: space, stratosphere and HyperEdgeX sovereign edge nodes



Vision 2100 reference architecture (PROPOSAL). Altitudes indicative. HIBS bands as identified at WRC-23 [155]. No operator, manufacturer or government has agreed to take part.

01 **Layer A — Space.** LEO broadband for schools, clinics, government offices, ships and homes beyond the terrestrial network; direct-to-cell messaging and data for ordinary phones in dead zones; and an always-available backup path when cables or towers fail. Contracts are held with at least two operators, in more than one orbit where available.

02 **Layer B — Stratosphere.** High-altitude platforms providing wide-area 4G or 5G coverage over outer islands, border regions and remote valleys, surge capacity after disasters or during elections, and backhaul relays between ground nodes and gateways. Vision 2100 treats this layer as a technology to be demonstrated and evaluated, not yet as a planning assumption.

03 **Layer C — Ground: HyperEdgeX sovereign edge nodes.** Nationally owned and governed edge nodes at electricity substations, towers, clinics and schools. Each combines the national gateway and internet exchange point (IXP), so that domestic traffic stays in the country; sovereign inference for public-service AI (Section IV.8); a radio access network for local 4G, 5G and fixed wireless; zero-trust security with post-quantum readiness; a microgrid with solar, battery storage and black-start capability; and lawful control under national law, with national custody of keys.

ILLUSTRATIVE **The HyperEdgeX reference design.** HyperEdgeX is the name this book gives to the Layer C node design. The reference configuration is a modular, factory-built edge data centre in two air-cooled sizes (about 60 kW and about 120 kW of IT load) or a two-phase immersion-cooled variant for higher densities and hot climates, integrating carrier-class networking, IXP functions, post-quantum cryptography and an on-site microgrid with battery storage scalable from kilowatts to several megawatts. The sizing in Section IV.8 suggests why this scale matters: the central-case public-service inference load of a small island state of 100,000 people is about 50 kW, within the envelope of a single 60 kW unit, with a second unit at a separate site for redundancy. An emerging economy's national load of about 12 MW would be served by a distributed fleet of such nodes plus larger corridor campuses (Part V).

> **CONFLICT-OF-INTEREST NOTE**
> The HyperEdgeX name and design concept originate in commercial work associated with the Principal Strategic and Technical Architect. In this book HyperEdgeX is an open reference design: its specification is to be published for comment, any qualified manufacturer may build to it, and procurement for any pilot is open and multi-vendor. Under the firewall in Appendix I, A113 Partners, the Principal Architect and their affiliates do not act as supplier, financier or transaction adviser to any pilot using it, and the design is to be independently reviewed before any pilot adopts it.

IV.9.4 Sovereignty conditions for satellite and stratospheric service

Vision 2100 proposes that governments, and any development bank that finances connectivity, require the conditions in Table IV-4 in licences and contracts. They are drafted to be operator-neutral: they apply equally to Starlink, OneWeb, Amazon Leo, IRIS², Chinese constellations and any future stratospheric operator.

TABLE IV-4 **Proposed sovereignty conditions for satellite and stratospheric connectivity (Vision 2100 proposal; operator-neutral)**

Condition	Why it matters	How it is secured
National gateway and lawful control	Traffic and lawful-access decisions stay under national law	Licence requires in-country gateway or virtual gateway and national key custody for government traffic
Two independent paths	No single company or state can disconnect essential services	At least two operators, or one satellite and one terrestrial path, for every hospital, emergency service and government site
Continuity of service	Prevents a repeat of unilateral restriction of contracted service	Contract bars geographic or functional restriction of contracted service in the host's territory without the host's written consent, except under court order or international law

Condition	Why it matters	How it is secured
Data localization for public data	Government and citizen records stay under national jurisdiction	Tier 1–2 public data routed to national HyperEdgeX nodes, not processed abroad
Universal-service obligations	Connectivity must reach the poorest, not only the profitable	Discounted or free capacity for schools and clinics; affordability targets in the licence
Spectrum and landing rights through the national regulator	Spectrum is a national resource	Competitive licensing; ITU coordination; transparent fees
Emergency activation protocol	Speed after disasters	Pre-agreed activation with the national disaster authority and the UN Emergency Telecommunications Cluster
Space sustainability	Orbital debris and astronomy affect everyone	Operators meet deorbit and collision-avoidance norms and share orbital data

IV.9.5 Bringing space to every nation

The United States' commercial space industry, led today by SpaceX's Starlink, has shown that space-based connectivity can be one of the century's most consequential exports — comparable in reach to the telephone or the transistor. Europe, China and others are building their own systems. Vision 2100 proposes that launching states and their development-finance institutions treat affordable, sovereignty-compatible satellite connectivity as a development good: financing terminals and service for schools, clinics and local governments through development-bank guarantees and universal-service funds, on the conditions in Table IV-4. The aim is that every school and clinic on Earth has a broadband connection by 2040.

This book proposes three uses where satellite connectivity yields the most for peace and development. **First, protection:** pre-positioned satellite terminals and HyperEdgeX nodes give governments, hospitals and emergency services a path that survives cable cuts, storms and attacks, as Tonga and Ukraine showed. **Second, prevention:** the P3 early-warning unit (Part VI) needs reports from community monitors in places without towers; satellite messaging from ordinary phones makes that possible. **Third, inclusion:** P1 (Section IV.11) can reach outer islands from the first year through satellite links into the national node, instead of waiting for submarine cables.

ILLUSTRATIVE No satellite or stratospheric operator, aircraft manufacturer, mobile operator or government has been consulted about, or has agreed to, any element of this section. Satellite connectivity for P1 sites is costed within P1's existing services and infrastructure lines; it does not change the canonical P1 range of $20–65 million. Stratospheric platforms carry no FOUND budget: Vision 2100 proposes a technology watch, with an independent assessment at Gate 1 (December 2030) of whether a stratospheric demonstration should enter PROVE.

IV.9.6 Risks of the connectivity layer

Five risks need managing. **Dependence:** a single operator becomes indispensable; mitigated by two paths and continuity clauses. **Surveillance:** foreign operators or states could see or redirect traffic; mitigated by national gateways, end-to-end encryption and key custody. **Affordability:** terminals and service remain too expensive for the poorest households; mitigated by universal-service funding focused on schools, clinics and shared community access. **Spectrum**

interference and space debris: mitigated through ITU coordination and operator deorbit obligations. **Technology risk in the stratosphere:** persistent high-altitude flight is not yet proven at scale; mitigated by treating Layer B as an evaluated option, not a dependency.

IV.10 Procurement, workforce and regulation

IV.10.1 Procurement that avoids lock-in

Sovereignty is won or lost in procurement, and this book recommends the following rules. Specify open standards and interfaces, using GovStack specifications where they fit [129]. Prefer mature digital public goods, such as MOSIP for identity [139] and X-Road-class exchange [131], with paid professional support. Separate layers in contracts so no supplier holds hardware, platform and services together. Require source-code escrow or open licensing for custom software, and tested exit and data-portability clauses in every contract. Weight bids for local staffing and knowledge transfer. Select vendors only by competitive, transparent tender; Vision 2100 recommends no supplier.

IV.10.2 Workforce

ILLUSTRATIVE Planning assumptions for national operating teams, excluding contractors: a small island node needs about 25–45 full-time staff across platform engineering, security (partly in a shared regional SOC), data and machine learning, service design, facilities, and legal and audit roles. An emerging-economy node needs about 150–400 and an advanced-economy node 400–1,000 or more, depending on outsourcing. Every node also needs assisted-service agents for people without smartphones or literacy; these posts create local jobs, especially for women and young people. The binding risk is brain drain (Section IV.12).

IV.10.3 Regulation

The European Union's AI Act entered into force on 1 August 2024 [156]. Its prohibitions have applied since 2 February 2025 and its general-purpose model obligations since 2 August 2025. The Digital Omnibus on AI, published in the *Official Journal of the European Union* on 24 July 2026 and in force from 27 July 2026, moved obligations for stand-alone Annex III high-risk systems from 2 August 2026 to 2 December 2027, and obligations for Annex I product-embedded systems to 2 August 2028 [157][158]. The African Union Executive Council endorsed a Continental AI Strategy in July 2024, covering national strategies, talent, infrastructure, datasets, compute and protection from AI misuse, with a five-year implementation plan [159]. Data-protection law is not yet universal. UNCTAD found in April 2020 that 66 percent of countries had data-protection and privacy legislation, and only 43 percent of least developed countries [160]; by 2021 the share of least developed countries had risen to 48 percent [161]. UNCTAD's live Global Cyberlaw Tracker, which reports a higher current share, could not be opened for this book.

Vision 2100 proposes that each pilot country have four legal instruments before services go live: a data-protection law with an independent, funded authority; a digital-identity law that guarantees non-digital alternatives and limits use of the identifier; a cybersecurity law with incident-reporting duties; and a public-sector AI rule requiring a register, impact assessment and human appeal. Countries may borrow from the EU's risk-based structure or the AU strategy's priorities, adapting both to their own legal traditions. Kenya's 2021 ruling shows courts will enforce the order of steps [145].

IV.10.4 International interoperability

Vision 2100 proposes Shared Layer interoperability profiles that, reusing existing standards bodies' work, would let a national ID be verified across borders with consent, payments move between national rails, and federated studies run without moving raw data. Mutual recognition

would be agreed bilaterally or regionally; the Estonia–Finland X-Road federation shows it can work [131].

IV.11 Flagship pilot P1: Sovereign Digital Nation

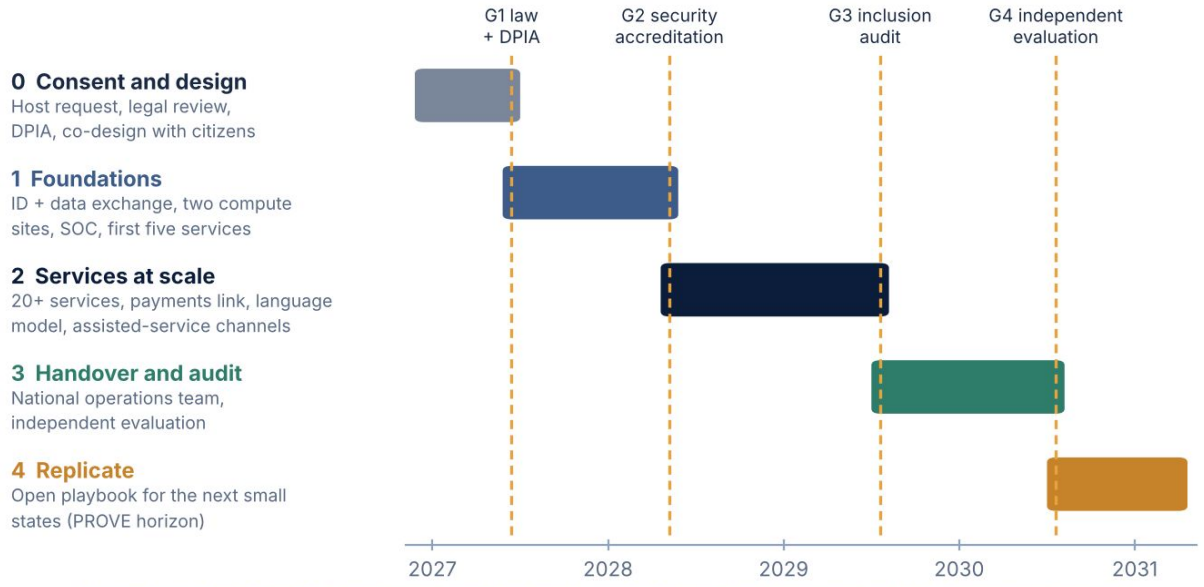
IV.11.1 Design

Vision 2100 proposes **P1 Sovereign Digital Nation** to demonstrate the full National AI Sovereignty Model in a small island state archetype first. A small state is the hardest test of fixed costs, skills and resilience and the easiest place to measure whole-population results. P1 would begin only on the written request of a host government, with parliamentary approval where national law requires it. P1 would build digital identity with non-digital alternatives; a data exchange; consent and access logs; payments interoperability with the existing banking system; two in-country inference sites; a national-language model adapted from an open-weight base with community-built evaluation; at least 20 services, including the learning companion and maternal-health information (Part VIII); a national CERT linked to a shared regional SOC; and a Results Ledger page for the programme itself (Part IX, pilot P5). A P1 Pilot Governance Board, chaired by the host government with the regional body and independent members, would govern operations; the Vision 2100 Steering Board decides only whether Vision 2100 continues to support the pilot at each gate.

ILLUSTRATIVE No country has agreed to host P1. The archetype is a small island state of about 100,000 people on several islands, with weak outer-island coverage, cyclone exposure and fragmented government databases. Part XII's eligibility range for P1 hosts is 100,000 to 1 million people; the atoll life-path in Part II is a separate illustration. Figure IV-5 shows the phases and gates.

FIGURE IV-5

P1 Sovereign Digital Nation: phases and decision gates



ILLUSTRATIVE schedule for a small island state archetype; dates indicative and contingent on host-government decisions.

ILLUSTRATIVE schedule for a small island state archetype. Gates G1–G4 are go/no-go decisions held by the host government, informed by independent reviewers.

IV.11.2 Phases

Vision 2100 proposes five phases, each closed by a gate decided by the host government and its P1 Pilot Governance Board.

01 **Phase 0, consent and design (about 6–9 months).** Host request; legal gap analysis; public consultation; published DPIA; co-design of first services with citizens, including women's groups, outer-island communities and people with disabilities. Gate G1: required laws in force and DPIA published.

02 **Phase 1, foundations (about 12 months).** Identity and data exchange live for the first registries; two compute sites commissioned; CERT and SOC operating; first five services. Gate G2: independent security accreditation.

03 **Phase 2, services at scale (about 15 months).** Twenty or more services; payments link; national-language model in production for information and translation, not for rights decisions; assisted-service offices on every inhabited island. Gate G3: independent inclusion audit.

04 **Phase 3, handover and audit (about 12 months).** National staff run operations; contractors step back to support; independent evaluation published. Gate G4: evaluation results and decision on continuation.

05 **Phase 4, replicate (from 2031, PROVE horizon).** An open playbook, code and contracts for the next small states.

IV.11.3 Budget planning range

ILLUSTRATIVE The canonical planning range for P1 is **$20–65 million over about four and a half years** (from first-year preparation, which starts in November 2026, through Phase 0 and Gate G4, about 2031 if a host requests P1 in the first year). It includes the first-year preparation budget of $1.0–3.0 million and excludes Phase 4 replication, which belongs to the PROVE horizon ($0.3–1.3 billion for 15–20 states, only if gates pass). Table IV-5 is the single P1 cost breakdown used throughout this book (Parts X, XII and XIII and Appendix D cite it). It is built from planning assumptions, not market quotes, and must be replaced by tendered prices. No funding is committed.

TABLE IV-5 **P1 Sovereign Digital Nation: canonical cost breakdown, small island state archetype of about 100,000 people, ~4.5 years (US$ million; ILLUSTRATIVE planning assumptions, not quotes)**

Component	Driver and planning assumption	Phases	Range (US$ m)
Design, legal and DPIA	8–12 specialists for 6–9 months at an assumed $150,000–250,000 per person-year (with early workforce and evaluation lines, funds the $1.0–3.0m first-year preparation)	0	1–2.5
Identity, data exchange, registries	15–25 FTE integration team for 2 years at an assumed $100,000–200,000; enrolment devices and operations	1–2	4–13
Compute sites	16–107 accelerators at an assumed $30,000–60,000 installed, incl. server share and storage; two sites with solar, battery and backup power	1	1.5–10
Security	CERT and SOC staffing, regional SOC fees, testing, accreditation	1–3	2–5

Component	Driver and planning assumption	Phases	Range (US$ m)
Language model and evaluation	Community data collection, fine-tuning in a regional pool, evaluation suite	1–2	1–3
Services and assisted channels	20+ services; assisted-service offices on inhabited islands	1–3	4–10
Workforce and training	Scholarships, academy, mentoring for 25–45 national staff	0–3	2–5
Independent evaluation and Results Ledger	3–5% of programme	0–3	1–2
Contingency	20–30% of the above	All	3.5–15
Total	Sum of components (16.5–50.5) plus contingency, rounded		**about 20–65**

Source: Vision 2100 planning model (assumptions in this section and in the Part IV gaps record). Recurrent operating costs after handover (15–25% of capital a year) are a host-budget item and are not included.

ILLUSTRATIVE At $200–650 per resident, P1 is expensive per person because fixed costs fall on a small population. Compute is a minor share (roughly 7–15 percent); identity, services, security and skills dominate. That is the strongest argument for regional sharing among three to five small states, though the size of the saving is a Phase 0 research question. Vision 2100 proposes financing that combines grants for public goods, concessional loans for infrastructure and the host budget for operations (Part X). Recurrent operating costs, perhaps 15–25 percent of capital a year, must be in the national budget before Gate G2.

ILLUSTRATIVE **Staffing.** P1 needs a delivery team of 8–12 design and legal specialists in Phase 0 and a 15–25-person integration team in Phases 1–2, mostly contracted, plus a national operating team of 25–45 that grows through Phases 1–3 and takes over at Gate G4 (Section IV.10.2). This is the P1 staffing referred to elsewhere in this book.

IV.11.4 P1 KPIs

ILLUSTRATIVE Baselines are set in Phase 0. Pilot-specific targets for 2030, beyond those in the Measuring progress table: at least 90 percent of adults able to use a credential, with no one denied an entitlement for lack of one; at least 20 services online with median completion time halved; at least 30 percent of outer-island transactions through assisted or voice channels; failed authentication below 1 percent, with a fallback every time; and published satisfaction and complaint-resolution data.

IV.12 Risks, safeguards and alternatives

TABLE IV-6 Principal risks of national AI and DPI programmes and proposed safeguards (Vision 2100 proposal)

Risk	How it could happen	Safeguards
Surveillance and authoritarian misuse	Identity, data exchange and AI combined for population monitoring	Purpose limits in law; federated data; citizen-visible logs; independent data-protection authority; Shared Layer standards bar mass surveillance; support suspended on breach
Fragmentation	Sovereignty becomes isolation	Interoperability profiles; open standards; federated cooperation
Cost overrun, stranded assets	Hardware ages fast; operating budgets unfunded	Size to demand; lease or managed services; recurrent budget before G2; modular expansion
Brain drain	Trained staff leave for higher pay abroad	Competitive pay bands; remote diaspora roles; regional career paths; return-service terms on scholarships
Poor model quality	National models trail frontier models	Frontier access for hard tasks; published evaluations; human review for consequential uses
Exclusion	Digital-only services shut out the poor, elderly or disabled	Non-digital alternatives by law; assisted channels; inclusion audit at G3 [143]
Vendor or geopolitical dependence	One supplier or country controls critical parts	Multi-vendor sourcing; exit clauses; open source; regional pooling
Conflict of interest	Advisers benefit from recommendations	A113 Partners and affiliates act as no supplier, financier or transaction adviser to any pilot they help design; competitive tenders; published disclosures

Vision 2100 regards conditionality as the safeguard that matters most. Vision 2100 proposes that pilot support go only to hosts that have an independent data-protection authority, publish their AI register and accept independent inclusion and human-rights review. A design that serves a democracy can serve an authoritarian state; the law and oversight around it make the difference, so pilots put those first.

Alternatives considered. Beyond the approaches in Section IV.7, Vision 2100 considered and rejected two. A single UN-run global AI cloud would concentrate data and power in one institution, contradict the principle that the UN holds no national data, and exceed the UN's budget and mandate. Waiting for global AI regulation before building would delay better services, while well-governed pilots produce the evidence regulators need.

IV.13 How this part connects

This part depends on Part V for power and Part X for financing. It supplies the platform for the learning companion and maternal-health services (Part VIII), data for the Results Ledger (Part IX), and secure analytics behind prevention and the six-layer shield (Part VI), always under human control. Regional compacts (Part VII) can host the fine-tuning pools; Part XII sequences P1 with the other pilots. The connectivity layer (Section IV.9) gives P3 community monitors a reporting path where there are no towers (Part VI), lets P2 corridors place HyperEdgeX nodes at substations as anchor loads (Part V), and supplies the resilient communications on which the shield and humanitarian response depend.

What begins now

Vision 2100 proposes that the first-year focus be to make P1 ready for a host decision and to put a credible Shared Layer design before member states (Table IV-7). Detailed first-year steps are in Part XIII and the 2026–2031 sequence in Part XIV.

TABLE IV-7 **Proposed actions from November 2026: owners and decision rights**

Horizon	Action	Owner	Independent or partnered
30 days (by Dec 2026)	Publish the reference architecture, sizing method and procurement rules as an open technical note; open public comment	A113 Partners	Independent
90 days (by Feb 2027)	Publish the operator-neutral connectivity sovereignty conditions (Table IV-4) and the HyperEdgeX reference design as open specifications for comment; commission an independent review of the design	A113 Partners (publication); independent reviewer	Independent; A113 Partners does not supply
90 days (by Feb 2027)	Convene a working group of DPI, security and language-AI practitioners to review the note; publish the sizing tool as open code	A113 Partners with academic and practitioner partners	Partnered
180 days (by May 2027)	Present a draft Shared Layer concept at Global Dialogue side events (New York, May 2027) where invited; hold exploratory talks with small island states that request them	A113 Partners; interested member states	Partnered; any UN process needs member-state sponsors
First year (to Oct 2027)	If a host government requests it, begin P1 Phase 0 with a published DPIA and legal gap analysis; seek grant funding for design and evaluation; secure an independent evaluator	Host government; funders; independent evaluator	Sovereign decision
First five years (to 2031)	Complete P1 Phases 1–3 and the independent evaluation; publish the open playbook; seek General Assembly recognition of Shared Layer standards and a voluntary emergency compute reserve; start pilots in other archetypes	Host governments; Secretary-General (convening); General Assembly; ITU and agencies under their governing bodies	UN authority and sovereign decisions

A113 Partners can independently publish the architecture, sizing method, model contracts and evaluation templates, and convene technical review. It cannot select a host, commit UN resources or speak for any government. UN and sovereign decision rights are as set out in Section IV.4.8.

Measuring progress

ILLUSTRATIVE The milestones for 2030–2100 are Vision 2100 planning milestones, not agreed commitments. Where an agreed international target exists it is shown and prevails. The 2030 milestone for people offline is less ambitious than SDG 9.c, whose 2020 target for universal and affordable access in least developed countries was not met; it is a planning floor, not a substitute for that commitment.

TABLE IV-8 Part IV indicators: baselines, agreed international targets and Vision 2100 planning milestones (ILLUSTRATIVE milestones; agreed targets prevail)

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Countries hosting AI-capable data centres (ITU / UNCTAD, to be agreed)	32, 2025, Oxford via ITU [27] (33 under a later count [117])	—	50	100	All regions	Every nation, alone or shared
People offline (ITU)	~2.2 bn, 2025, ITU [72]	SDG 9.c: universal and affordable internet access in least developed countries (target date 2020, not met)	Below 1.5 bn	Below 0.5 bn	Near zero	Universal meaningful access
Schools and health facilities with broadband, pilot countries (host governments; ITU and UNICEF Giga for schools)	To be established in Phase 0	SDG 4.a (schools with internet for pedagogical purposes; no numeric global target)	100% in P1 host	100% in all pilot countries	Universal	Universal
Essential public sites with two independent connectivity paths, pilots (national regulators; CERTs)	To be established in Phase 0	—	100% of hospitals and emergency services in P1 host	100% in pilot countries	Standard practice	Standard practice
Countries with a safe, inclusive DPI component, 50-in-5 definition (UNDP; 50-in-5 partners)	37 campaign members, June 2026 [141]	50-in-5 campaign goal: 50 countries by end-2028 [140] (voluntary campaign, not an intergovernmental target)	50+	120	All willing states	Universal
Official languages with a public evaluation suite and adapted model (language communities; UNESCO, to be agreed)	To be established	—	All languages of pilot countries	500	2,000	Every living community language
Pilot countries running core services under national control (host governments)	0, 2026	—	1–3	20	80	All willing states
Share of Tier 1–2 public data under national legal control, pilots (national data-protection authorities)	To be established in Phase 0	—	100%	100%	100%	100%

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Countries with data-protection legislation and an independent, funded authority (national governments; UNCTAD tracking)	66% with legislation, 2020, UNCTAD [160]; authorities to be established	—	+10 countries	Majority with authority	All	All
Core-service availability; degraded operation without international links (national CERTs)	To be established in Phase 0	—	99.9%; 72 hours	99.95%; 7 days	99.99%; 14 days	Resilience norm
Public-sector AI systems in a public register, pilots (national oversight bodies; Results Ledger)	0, 2026	—	100%	100%	100%	100%
Long-lived records under post-quantum or hybrid cryptography, pilots (national CERTs)	To be established	—	Inventory complete; new IDs hybrid	100%	100%	Crypto-agile norm
Nationals in node operating roles, women's share in brackets (host governments)	To be established	SDG 5.5 (women's full participation and equal opportunities for leadership)	80% (40%)	90% (50%)	95% (50%)	Self-sustaining (parity)
UN Shared Layer standards formally recognized (Secretary-General convening; General Assembly)	None, 2026	—	Concept discussed in Global Dialogue	Recognized by GA	Updated each decade	Living standard

Results Ledger coverage, the shared indicator for public accountability, is set in Part XII (master) and Part IX and is not repeated here.

PART V

V

ENERGY, INDUSTRY AND RESOURCE SOVEREIGNTY

Power, Compute and Minerals: Building Industry Where the Resources Are

IN THIS PART

V.1 Where energy, industry and minerals sit in the Vision 2100 system
V.2 Where we are today: access, demand and the cost of clean power
V.3 Section A — A technology-neutral energy strategy
V.4 Nuclear power: large reactors, SMRs and microreactors
V.5 The newcomer pathway: Milestones, safeguards, fuel, waste, regulators and consent
V.6 Data centres, sovereign compute and the water–energy nexus
V.7 Financing reality and workforce
V.8 A decision framework for choosing a national energy mix
V.9 Section B — Clean Power and Compute Corridors
V.10 Section C — The Minerals-to-Industry Framework: where we are
V.11 Staged value chains: what is realistic, and when
V.12 Precedents: what has worked, and at what cost
V.13 Safeguards: consent, water, tailings, standards and trade rules
V.14 Flagship pilot P4: Minerals-to-Industry
V.15 Objections and alternatives
V.16 The road to 2100

THE ARGUMENT IN ONE SENTENCE

Nations that control reliable, affordable clean power can host their own compute and process their own minerals. Nations that do not will import all three. Vision 2100 proposes a technology-neutral, evidence-gated path to that control: renewables, storage, hydro, geothermal and grids first, firm low-carbon power including nuclear where it is safe, licensed, safeguarded, affordable and consented, and staged mineral value chains that a country can realistically run.

V.1 Where energy, industry and minerals sit in the Vision 2100 system

Energy is the first link in the Vision 2100 chain. Reliable clean power makes compute possible (Part IV), which supports schools, clinics and accountable government (Parts VIII and IX). Power and minerals create industry and jobs (Part VII), which underpin the stability in which prevention and diplomacy succeed (Parts III and VI). Peace, in turn, protects the assets this part describes: grids, reactors and refineries built to last forty to eighty years.

Section A sets out a technology-neutral energy strategy, including nuclear power. Section B describes the Clean Power and Compute Corridors and pilot **P2**. Section C sets out the Minerals-to-Industry Framework and pilot **P4**. Financing is developed in Part X and decision gates in Part XII.

CONFLICT-OF-INTEREST DISCLOSURE

The principal architect of this book is an executive of a U.S. battery manufacturer and founded an autonomy integrator. Battery storage and battery value chains appear in this part. Each recommendation that involves them is justified on public evidence cited here, and Vision 2100 bars A113 Partners and affiliated companies from acting as supplier, financier or transaction adviser to any pilot they help design (Part XII).

Vision 2100 proposes three principles to govern everything that follows. First, technology neutrality: Vision 2100 recommends capabilities and standards, never vendors or a single technology. Second, households first: no corridor, data centre or smelter may raise household tariffs or reduce household reliability. Third, evidence gates: each expensive or irreversible step proceeds only after a published, independently reviewed decision gate.

V.2 Where we are today: access, demand and the cost of clean power

V.2.1 The access gap

About 730 million people had no electricity in 2024, a decline of only 11 million from the year before. Roughly eight in ten of them live in sub-Saharan Africa [162]. Under today's stated policies, the IEA projects that about 645 million people would still lack access in 2030, about 85 percent of them in sub-Saharan Africa [163]. The goal of universal access by 2030 will be missed by a wide margin. (Part I and this book's scorecards use the 655 million reported by the five SDG7 custodian

agencies in Tracking SDG7 2026; the IEA's own estimate is higher because it draws on different survey and modeling data, and the two series should not be mixed.)

The gap is also industrial: a manufacturer running on diesel pays several times the grid price and cannot compete.

V.2.2 Demand is accelerating, mostly in emerging economies

The IEA's *Electricity 2026* report expects global electricity demand to grow by more than 3.5 percent a year on average through 2030. Advanced economies account for only about a fifth of the increase; emerging and developing economies account for the rest. Renewables and nuclear together are expected to generate about half of the world's electricity by 2030, up from 42 percent today [164]. The IEA's July 2026 mid-year update raised the near-term outlook to growth of 3.6 percent in 2026 and 3.8 percent in 2027, and expects renewables to overtake coal-fired generation in 2026. It also recorded the cost of fossil dependence: the temporary loss of nearly a fifth of global LNG supply pushed Asian and European gas prices to their highest since 2022–2023, and wholesale power prices in the EU and Japan rose more than 30 percent year on year in the second quarter of 2026 [165]. Countries that import fuel import price shocks.

V.2.3 Clean power is now usually the cheapest new power

IRENA's cost data for 2024 put the global weighted-average levelized cost of electricity (LCOE, the average lifetime cost per unit of electricity) at about $0.034 per kWh for onshore wind and $0.043 for solar PV, about 53 and 41 percent below the cheapest fossil-fuel alternative. Hydropower averaged about $0.057, geothermal about $0.060 and offshore wind about $0.079 per kWh. The installed cost of utility-scale battery storage fell 93 percent between 2010 and 2024, to about $192 per kWh [166]. In high-risk markets, however, finance rather than equipment decides the cost (V.7).

V.3 Section A — A technology-neutral energy strategy

V.3.1 The building blocks

Variable renewables and storage. Solar and wind are the cheapest new energy in most markets [166] and should form the energy base of nearly every national plan. Their limit is firmness: batteries shift energy by hours, not weeks, so a system needs overbuilding, interconnection or a firm complement.

Hydropower. Mature and low-cost [166], reservoir hydro balances solar and wind. Its constraints are geography, displacement, river ecology and drought; new dams need climate-stressed water assessments.

Geothermal. Geothermal provides firm power [166] where geology allows, chiefly along rift valleys and volcanic arcs.

Kenya shows what an emerging economy can build on such a resource. Geothermal supplied 39.8 percent of Kenya's electricity generation in 2024, down from 44.6 percent in 2023 after a plant shutdown, according to regulator data reported by the national business press [167]. The IEA reports that geothermal made up about 26 percent of Kenya's installed capacity of more than 3.5 GW in 2025, and that nearly 90 percent of the country's generation now comes from clean sources [168]. Public risk-sharing for exploration drilling is often decisive.

Grids, efficiency and flexibility. Transmission is the most neglected element of energy strategy; regional interconnectors deserve priority in development-bank lending because they lower the cost of every other option. Flexible loads such as desalination, pumping and some compute can run when power is abundant and pause when it is scarce.

Firm low-carbon power. Reservoir hydro, geothermal, biomass, gas with carbon capture and nuclear run regardless of weather. Nuclear is treated at length below because it most requires institutional preparation.

V.3.2 Comparing the options

Table V-1 compares the options. It deliberately avoids a single "best" answer.

TABLE V-1 Energy options compared for national planning

Option	Cost signal (2024, global)	Firmness	Typical lead time	Main constraints	Best fit
Solar PV + batteries	PV ~$0.043/kWh; storage ~$192/kWh installed [166]	Variable; hours-scale shifting	1–3 years	Land; night and seasonal gaps; finance cost	Nearly all countries; islands; mini-grids
Onshore wind	~$0.034/kWh [166]	Variable	2–5 years	Siting, grid access, consent	Windy regions with transmission
Hydropower	~$0.057/kWh [166]	Firm to flexible	5–10+ years	Displacement, ecology, drought	River basins; regional exporters
Geothermal	~$0.060/kWh [166]	Firm	4–8 years	Geology; drilling risk	Rift valleys, volcanic arcs
Grids and interconnectors	Lowers system cost of all options	Shares firmness	4–10 years	Cross-border agreements; finance	Every region
Large reactors (≥1 GW)	High capital; long build	Firm	10–15+ years incl. preparation [169]	Grid size, finance, institutions	Large grids with nuclear experience
SMRs (≤300 MWe)	About C$20,000 per kW for the first unit (Darlington, derived) [170]; ~$270–330/MWh at EM cost of capital (Part X)	Firm	Darlington ~2030; most after 2030 [115][170]	FOAK cost, licensing, fuel, consent	Industrial loads; retired coal sites
Microreactors (≤~20 MW)	Not yet commercially proven	Firm	Demonstration stage [171]	Licensing, security, cost per MW	Remote sites; future island option

Source: as cited in each cell. The Darlington figure divides the C$6.1 billion standalone first-unit budget by 300 MWe, excluding about C$1.6 billion of common site systems [170]. The $/MWh range is Part X's illustrative calculation at emerging-market cost of capital. Lead times are indicative planning judgments.

V.4 Nuclear power: large reactors, SMRs and microreactors

V.4.1 What the categories mean

Large reactors produce about a gigawatt or more; small modular reactors (SMRs) up to roughly 300 MWe from factory-made modules; microreactors a few to perhaps twenty megawatts. The promise of SMRs — lower capital per project, shorter builds, sizes that fit smaller grids — is not yet proven at commercial scale.

V.4.2 Verified status of leading projects, November 2026

Canada, Darlington BWRX-300. Ontario Power Generation received a construction licence and took its investment decision in spring 2025 for the first of four 300 MWe units, placed the basemat in April 2026 and targets grid connection by end-2030. The first unit is budgeted at C$6.1 billion

standalone, plus about C$1.6 billion of common systems, within a C$20.9 billion four-unit envelope; later units are expected to fall toward about C$4 billion [170].

China, Linglong One (ACP100). First concrete for this 125 MWe integrated pressurized-water SMR at Changjiang, Hainan, was poured on 13 July 2021; cold functional tests were completed in October 2025, and in October 2026 hot functional tests were reported under way, with fuel loading targeted within 2026 [172]. The design was the first SMR to pass an IAEA safety review, in 2016 [172]. Fuel loading, criticality and grid connection had not been reported at the time of writing.

Russia, Akademik Lomonosov. A floating plant with two 35 MWe reactors has supplied power and heat to an isolated Arctic grid at Pevek since May 2020 [173]; the IAEA made its first visit in 2025 [174]. Public cost data are limited.

United States. In 2025 the NRC approved NuScale's 77 MWe-per-module US460 design and TVA completed a construction permit application for a BWRX-300 at Clinch River [171]. In March 2026 the NRC permitted construction of TerraPower's 345 MWe Natrium reactor in Wyoming, targeted for 2030 [175]. None is yet operating.

The IEA expects the first SMRs to supply data centres only after 2030 [115].

V.4.3 Realistic costs and the first-of-a-kind problem

Darlington is the most transparent data point: about C$20,000 per kW for the first unit before common systems, and about C$13,000 per kW for the expected fourth [170]. These figures come from a country with a mature nuclear industry and regulator, on an existing nuclear site. Even the fourth unit costs far more per kilowatt than solar, wind or storage.

ILLUSTRATIVE Part X converts these costs to electricity prices. Financed at the cost of capital typical of emerging markets, a first-of-a-kind SMR delivers power at roughly $270–330 per MWh, several times the cost of solar or wind in the same market. Even at target costs for later units, the economics work in emerging economies only with low-cost public or export-credit finance and a firm-power need that renewables plus storage cannot meet more cheaply.

Vision 2100 concludes that SMRs are a firm-power option for the 2030s and beyond, not a near-term solution for countries without nuclear institutions; that cost claims should be judged against built projects, not vendor targets; and that newcomers should let first-of-a-kind risk be borne by countries that have already built a design, entering only once fleet costs are documented. SMRs are one firm-power option for industry and corridors where feasible. They are not the backbone of sovereign AI, whose power needs are modest (V.6).

V.5 The newcomer pathway: Milestones, safeguards, fuel, waste, regulators and consent

V.5.1 The IAEA Milestones Approach

The IAEA's Milestones Approach is the internationally accepted framework for countries considering nuclear power. It has three phases, each ending in a milestone. Phase 1 ends with readiness to make a knowledgeable commitment, or to decide not to proceed; Phase 2, with readiness to invite bids; Phase 3, with readiness to commission the first plant [169176]. It covers 19 infrastructure issues, from safety, financing, regulation and safeguards to the grid, human resources, stakeholder involvement and waste [176].

The IAEA states that the journey from first consideration to operating a first plant typically takes 10 to 15 years, and that a nuclear programme is a commitment of at least 100 years. Integrated Nuclear Infrastructure Review (INIR) missions provide peer review at each stage [169176]. Revised

guidance adds an SMR annex; the 19 issues still apply [177][178]. Experience confirms the timeline: Nigeria decided to pursue nuclear power in 2005, reached Milestone 1 in 2009, and, according to a 2019 fact sheet by the Vienna Center for Disarmament and Non-Proliferation, by then expected a first plant only around 2030, largely because training qualified people took longer than planned [179].

Vision 2100 therefore treats the Milestones Approach as the gate for any nuclear element in a pilot. No corridor plan should count on nuclear power in a newcomer country before the late 2030s. A country entering Phase 1 in 2027 would, on the IAEA's typical timeline, operate a first unit between about 2037 and 2042.

V.5.2 Safeguards, fuel and waste

Every nuclear element in a Vision 2100 programme must meet five conditions: a comprehensive IAEA safeguards agreement with the Additional Protocol in force; a voluntary commitment not to enrich or reprocess on the host's territory; long-term fuel contracts from diversified suppliers; participation in IAEA peer reviews; and adherence to the main safety, security and liability conventions.

Some states view forgoing enrichment and reprocessing as a restriction on rights under the Non-Proliferation Treaty. Vision 2100 asks no state to surrender rights by treaty; it recommends only that pilots it supports proceed with this voluntary commitment, reciprocated by assured fuel supply.

The cleanest arrangement for a newcomer is fuel leasing with take-back, so the host never holds material of proliferation concern beyond what is in the reactor and its cooling pool. Take-back terms vary and are not offered by every supplier; Vision 2100 proposes that supplier states and the IAEA, on request, document the options and their cost so newcomers can compare them. This is a research task, not an assumption. A funded waste plan from Phase 2 and a decommissioning fund from day one of operation should be licence conditions.

V.5.3 Regulators and public consent

An independent regulator, separate from the promoting ministry and the operator and staffed years before the first application, is the precondition for everything else. Small states may not sustain one alone.

Vision 2100 proposes regional regulatory cooperation, building on the IAEA's harmonization work [177], in which smaller states share technical review capacity while keeping licensing decisions national. It also proposes that the Milestones "stakeholder involvement" issue [176] be treated as a decision gate, not a communications task: a programme proceeds past Milestone 1 only with documented, broad-based public support measured independently, including the real possibility of saying no.

V.6 Data centres, sovereign compute and the water–energy nexus

V.6.1 How much power AI needs

The IEA estimates that data centres accounted for about 1.5 percent of global electricity demand in 2024 and projects their consumption to more than double to around 945 TWh by 2030 in its base case, about 3 percent of the global total [180]. The 2024 volume, about 415 TWh, and the regional split — about 45 percent of data-centre consumption in the United States, 25 percent in China and 15 percent in Europe — are taken from the IEA's *Energy and AI* report as summarized by NS Energy [53]; the IEA's own report pages could not be opened for this edition. The IEA's 2026 follow-up found that data-centre electricity demand grew 17 percent in 2025, to about 485 TWh, and still expects about 950 TWh by 2030 [181]. In 2024 data centres drew about 30 percent of their electricity

from coal, 27 percent from renewables, 26 percent from gas and 15 percent from nuclear; renewables meet nearly half of the growth in data-centre demand to 2030 in the IEA's base case [115].

V.6.2 Siting sovereign compute

Sovereign compute for public services is a small fraction of this demand. Part IV's sizing finds that national inference needs are modest: about 50 kW in its central case for a small island state, about 12 MW for an emerging economy of 100 million people, and about 26 MW for an advanced economy (Part IV). Nodes at this scale can run on existing grids with dedicated renewables and storage; they need not wait for new nuclear capacity.

Vision 2100 proposes four siting rules: pair each node with new clean capacity at least equal to its consumption; throttle non-urgent workloads such as training when the grid is stressed; use water-light cooling in dry regions; reuse waste heat where there is a user. Distributed HyperEdgeX edge nodes (Part IV, Section IV.9), sited at electricity substations with their own microgrids and battery storage, can also serve the grid: they shift load away from peaks, provide black-start support after outages and reduce the need for long-haul data links. Like every node, they would be procured openly from more than one supplier.

V.6.3 The water–energy nexus

Thermal plants and evaporative data-centre cooling use water; brine evaporation and processing consume it in arid basins; desalination consumes power. Vision 2100 therefore proposes that corridors plan water and energy together: desalination as a flexible load that stores its product as water, closed-loop cooling as the default in arid corridors, and a published water balance for every corridor.

V.7 Financing reality and workforce

V.7.1 The cost of capital decides the cost of clean power

The IEA finds that the cost of capital for utility-scale solar in emerging and developing economies is more than twice that in advanced economies. Clean energy investment in these economies outside China needs to rise from about $270 billion a year to about $1.6 trillion by the early 2030s, and narrowing the cost-of-capital gap by one percentage point would cut financing costs by about $150 billion a year [182]. IRENA's 2024 assumptions put the cost of capital for renewables at about 12 percent in Africa and 3.8 percent in Europe; as a result, onshore wind in Africa averaged about the same LCOE as in Europe ($0.051 versus $0.052 per kWh) despite good resources [166].

ILLUSTRATIVE Assume a solar plant costing $750 per kW, a 22 percent capacity factor, $15 per kW per year in operating costs and a 25-year life. At a 4 percent cost of capital, the LCOE is about $0.033 per kWh; at 8 percent about $0.044; at 12 percent about $0.057, roughly 75 percent higher for the same panels in the same sun. Capital-intensive technologies with long build times, such as hydro and nuclear, are even more sensitive.

◆ DOCUMENTED POSITION In her 20 August 2026 dialogue with the General Assembly, Ambassador A-Baki said that developing nations are trapped under crippling debt burdens and that the Global South must not be burdened with new layers of debt. She pointed to climate instruments such as blue and green bonds, and to Ecuador's debt-for-nature swap for the Galápagos, as examples of finance that protects biodiversity while creating fiscal space [5].

Separately, and on its own analysis, Vision 2100 proposes treating risk reduction — guarantees, local-currency lending, standard power purchase agreements, transparent auctions (Part X) — as

the highest-return energy investment, because a concessional dollar spent reducing risk usually mobilizes more clean power than one spent on equipment.

V.7.2 Workforce

Vision 2100 proposes that every energy programme it supports start training before procurement; even Darlington, in a mature industry, needs a peak workforce of about 2,000 [170]. Grid and renewable trades take one to three years to train; nuclear engineers, regulators and licensed operators five to ten, so nuclear training should begin in Milestones Phase 1. The Americas Build Corps and comparable regional programmes (Part VII) can supply experienced engineers on multi-year tours with an explicit mandate to train national successors. Women should make up a rising, published share of trainees.

V.8 A decision framework for choosing a national energy mix

Vision 2100 proposes a seven-question framework that makes a country's choices explicit and reviewable without dictating an answer.

01	**Demand.** What is current and projected demand, its daily and seasonal shape, and the share from industry, cooling, transport and compute?
02	**Resources.** What sun, wind, water, geothermal heat and land are available, and how do they vary across seasons and drought years?
03	**Grid.** How large and interconnected is the grid, and what is the largest unit it can lose without blackouts? (A common rule of thumb is that no unit should exceed about a tenth of system size, which rules out gigawatt reactors on small grids.)
04	**Cost of capital.** What can the country borrow at, in what currency, and with what guarantees?
05	**Institutions.** Is there an independent regulator, a creditworthy utility and competitive procurement? For nuclear, where does the country stand on the 19 Milestones issues?
06	**Security of supply.** How exposed is the country to imported fuel prices?
07	**Consent and environment.** What do communities support, and what are the land, water, ecological and climate-adaptation constraints?

ILLUSTRATIVE **Advanced economy archetype.** A large interconnected grid with existing nuclear and gas, rising data-centre demand and a mature regulator. Build renewables and storage as fast as the grid allows; invest heavily in transmission; extend existing reactor life where safe; add SMRs at retiring coal sites once fleet costs are documented, possibly from the early-to-mid 2030s. This archetype bears first-of-a-kind risk for others and should publish its costs.

ILLUSTRATIVE **Emerging economy archetype.** A growing grid of 5–30 GW, unserved industrial demand, good solar and some hydro, a real cost of capital in Part X's emerging-economy band of 9–15 percent (the shaded range in Figure X-2), and no nuclear experience. Build renewables, storage and transmission at scale now, financed with guarantees; use hydro or geothermal for firmness where available; pursue regional interconnectors and efficiency standards. Nuclear begins, if at all, with Milestones Phase 1 studies and a training pipeline, with any reactor no earlier than the late 2030s and only if it proves competitive and consented. This is the P2 archetype.

ILLUSTRATIVE **Small island state archetype.** A 20–100 MW diesel-dependent grid exposed to cyclones. Solar with batteries, cyclone-rated wind, geothermal on volcanic islands and hardened mini-grids so one storm cannot black out the nation. Microreactors are an option to watch, not to plan on.

◆ DOCUMENTED POSITION In the same dialogue, Ambassador A-Baki said that for small island developing states, including Tonga, climate risk is not an abstract future threat but an existential reality [5]. She did not discuss nuclear power or the choice among energy technologies; the archetypes above are Vision 2100's own analysis.

V.9 Section B — Clean Power and Compute Corridors

V.9.1 The problem they solve

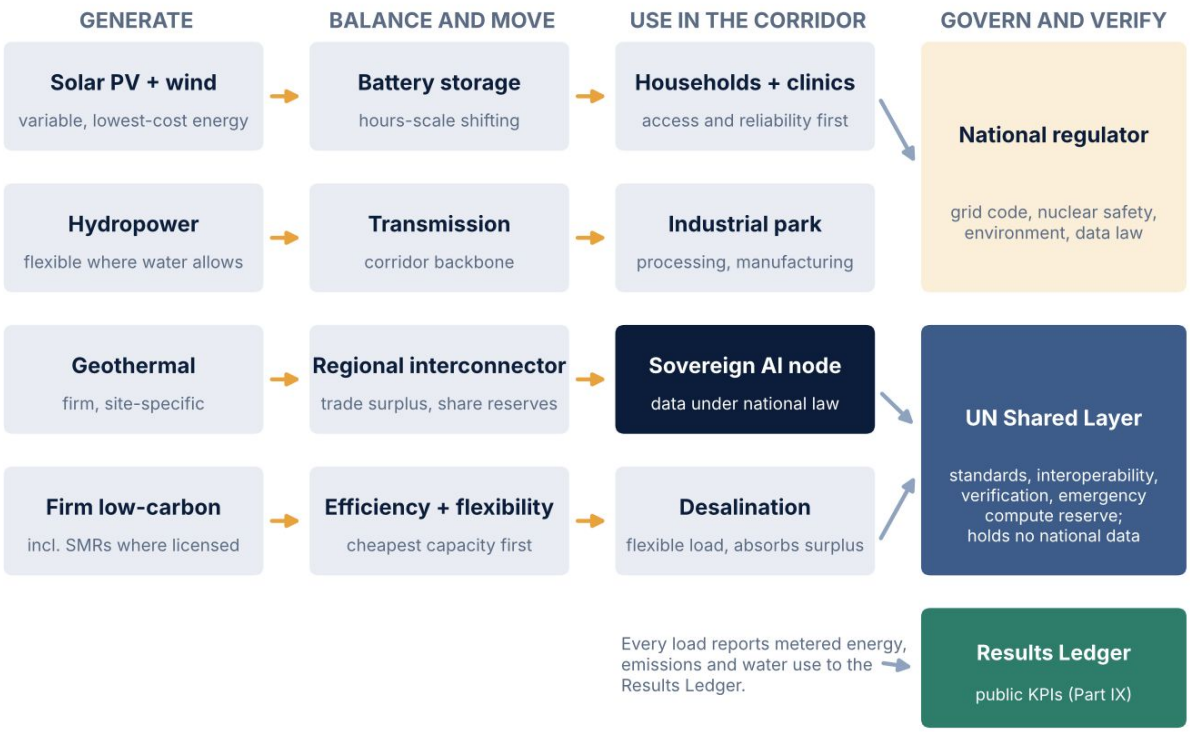
Emerging economies face three linked shortfalls — power for industry, domestic compute, and processing for minerals exported raw — each handled by a different ministry and financier. The result is a smelter waiting for transmission and a solar park waiting for a buyer.

Vision 2100 proposes Clean Power and Compute Corridors to coordinate these investments. A corridor would coordinate them in one geographic and contractual frame. New clean generation, storage and transmission serve an industrial park, a sovereign AI node and, where relevant, mineral processing and desalination. Anchor industrial and compute loads provide creditworthy offtake that lowers the cost of capital for generation, and households along the corridor gain a stronger grid. Industry is the main load; compute is a modest, flexible tenant. The corridor is technology-neutral: its firm power may come from hydro, geothermal, interconnection, storage or, later, nuclear.

Existing approaches are siloed: economic zones lack power, renewable auctions lack buyers beyond a struggling utility, and data centres are often built by foreign providers for foreign customers. The corridor bundles these under national ownership and public accountability.

FIGURE V-1

Reference architecture of a Clean Power and Compute Corridor



Firm power and data stay under national control; the UN layer sets common rules and verifies, it does not operate.

ILLUSTRATIVE — Vision 2100 reference architecture. Technology-neutral: any firm low-carbon source may fill the firm-power role; nuclear only after the IAEA Milestones gates [169]. The UN Shared Layer is described in Part IV.

V.9.2 How a corridor operates

As Vision 2100 proposes it, the corridor has four layers (Figure V-1): generation (lowest-cost renewables plus whatever firm source V.8 selects); balancing (storage, transmission, efficiency); use (households and clinics first, then the industrial park, the sovereign AI node and flexible loads); and national governance (grid codes, environmental conditions, data law). The UN Shared Layer (Part IV) provides common standards and holds no national data; every load reports energy, emissions and water to the Results Ledger (Part IX). Corridors are sovereign national projects: the Secretary-General can convene and report, the IAEA advises on request, development banks decide their own lending, and no UN body owns or approves a corridor. The corridor also carries connectivity: fibre along transmission rights-of-way, HyperEdgeX nodes at substations acting as national gateways and internet exchange points, and satellite links (Part IV, Section IV.9) to reach villages beyond the fibre, so that households served with power can be served with broadband in the same project.

V.9.3 Flagship pilot P2: Clean Power and Compute Corridor

Objective and host. Show that new clean power paired with an industrial park and a sovereign compute node can anchor jobs and investment without diverting power from households. The archetype host is an emerging economy that requests the pilot; no country has been approached or has agreed.

Phases. These align with Part XII.

01 **Host request and scoping (2026–2027).** Gate 0 tests feasibility, household impact and the host's commitment.

02 **Grid, site, water and community studies (2027–2028).** Including environmental and social baseline, consultation and household tariff analysis.

03 **Financing decision (2029).** Financial close requires signed anchor tenants, a published household-impact analysis and independent review.

04 **Phase-one construction (2029–2032).** Renewables, storage, transmission upgrades and a modular compute node.

05 **Industrial tenants and expansion (2031 onward).** A second phase adds capacity sized to proven demand.

06 **Parallel nuclear track (optional).** If the host chooses, Milestones Phase 1 studies run from 2027. No reactor is assumed before the late 2030s, and any reactor decision is separately appraised.

ILLUSTRATIVE **Planning budget.** Table V-2 sets out P2's planning budget in the book's three canonical tiers: first-year preparation, initial implementation (studies and pre-development, then a project-financed phase-one construction decided around 2029), and long-term replication capital that is spent only if the PROVE gates pass. These are planning assumptions; no funding is committed and no host has been identified.

TABLE V-2 **P2 Clean Power and Compute Corridor: planning budget by tier (ILLUSTRATIVE planning assumptions; no funding committed)**

Tier and component	Period	Planning range	Basis and financing
1. First-year preparation	Nov 2026–Oct 2027	$1.5–4.0 million	Host request, scoping, Gate 0 appraisal, first studies; grants and initiative funds
2a. Initial implementation: studies and pre-development (includes tier 1)	2026–2029	$15–40 million	Grid, site, water, environmental and social, tariff and community studies; consultation; transaction preparation; concessional and project-preparation finance
2b. Initial implementation: phase-one construction	Decision ~2029; build 2029–2032	$0.5–2.0 billion	Project-financed; counted in the PROVE total, not in FOUND (Part XII)
— Solar and wind with battery storage		$0.2–0.9 billion	200–500 MW at an assumed $1.0–1.8 million per MW including storage
— Compute campus, excluding processors		$0.2–0.75 billion	20–50 MW of IT load at an assumed $10–15 million per MW; processors financed separately
— Transmission and industrial-park infrastructure		$0.1–0.4 billion	Upgrades and park services; concessional share likely
3. Long-term capital (PROVE replication, only if gates pass)	2031–2040	$1–10 billion	Two to five corridors, each appraised separately; private, development-bank and export-credit finance

Source: Vision 2100 planning assumptions, consistent with the canonical budget in Part XII and Appendix D. Component ranges sum to $0.5–2.05 billion; the phase-one envelope is capped at $2.0 billion. Any nuclear element is excluded and would be appraised separately.

ILLUSTRATIVE The compute campus exceeds Part IV's central national inference need (about 12 MW for the emerging-economy archetype) because it may host a regional fine-tuning pool and commercial tenants; a host can size it down, which lowers the phase-one cost toward the bottom of the range.

ILLUSTRATIVE **Sensitivity.** A two-percentage-point fall in the cost of capital, from guarantees and local-currency lending, would lower the lifetime cost of the corridor's renewable power by roughly 10–15 percent on the arithmetic of V.7.1, more than any plausible equipment saving. By contrast, a single first-of-a-kind 300 MWe SMR at Darlington is budgeted at C$6.1 billion before common systems [170], several times the entire phase-one budget. This is why P2 treats nuclear as a separately appraised option for a later phase.

Financing and institutions. Vision 2100 proposes project finance with development-bank anchor lending, political-risk and currency guarantees, private equity in the node and park, and long-term power purchase agreements; concessional funds go to transmission, studies, training and public-interest compute (Part X). The host owns and leads through a corridor authority; the regulator licenses; development banks lend; UN agencies assist on request. A113 Partners may support scoping but may not act as supplier, financier or transaction adviser.

ILLUSTRATIVE **Workforce.** A few hundred construction workers at peak and perhaps 150–400 permanent staff, with training beginning at least 18 months before commissioning.

KPIs. See "Measuring progress" below.

Risks and mitigations. Cost overrun (phased build, fixed-price contracts); demand that does not materialize (anchor tenants before construction); grid strain (studies and storage); water stress (water-light cooling); capture by private or political interests (open procurement, full publication); currency mismatch (local-currency tranches).

V.10 Section C — The Minerals-to-Industry Framework: where we are

V.10.1 Demand is rising and supply is concentrated

Lithium demand rose nearly 30 percent in 2024 [183]. The IEA expects lithium demand to roughly triple by 2035 and copper demand to rise about 30 percent by 2040, and on current pipelines projects supply shortfalls by 2035 of about 40 percent for lithium and 30 percent for primary copper [184]. Across copper, lithium, nickel, cobalt, graphite and rare earths, the average share of the top three refining countries rose from about 82 percent in 2020 to 86 percent in 2024. China is the leading refiner for 19 of the 20 energy-related strategic minerals the IEA tracks, with an average share of about 70 percent [183].

The IEA's 2026 *Global Critical Minerals Outlook* found that the dominant suppliers (Indonesia for nickel, China for the others) accounted for more than three-quarters of refined supply growth over the past two years. Critical mineral investment fell 9 percent in 2025, while government public finance commitments more than quadrupled between 2023 and 2025, to about $65 billion. Full enforcement of China's October 2025 rare-earth export controls could put about $6.5 trillion a year of downstream production outside China at risk [185].

V.10.2 Mining is spread out; refining is not

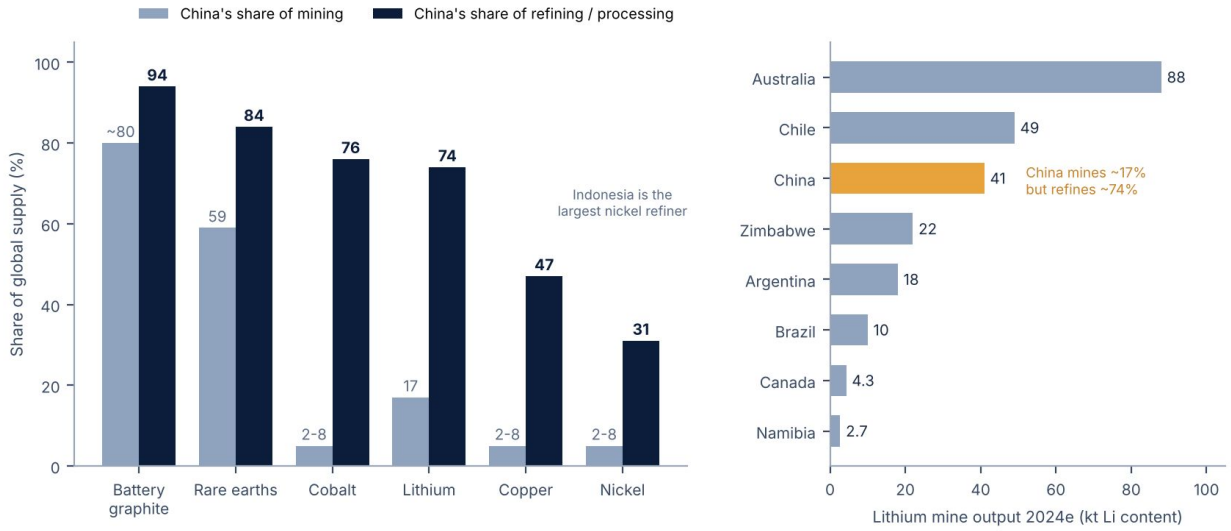
The decisive fact for the Minerals-to-Industry Framework is that mining is far less concentrated than refining (Figure V-2). According to the IEA's 2026 outlook as summarized by the Bank of

Finland's BOFIT, China refines about 74 percent of lithium, 76 percent of cobalt, 94 percent of battery-grade graphite, 47 percent of copper, 31 percent of nickel and 84 percent of magnet rare earths, while mining only about 2–8 percent of copper, cobalt and nickel [186]. The IEA's own report confirms China's share of graphite and rare-earth refining at over 90 percent [187].

USGS data illustrate the gap for lithium. In 2024 Australia mined an estimated 88,000 tonnes of lithium content, Chile 49,000, China 41,000, Zimbabwe 22,000 and Argentina 18,000, of a world total of about 240,000 tonnes [188]. China therefore mined about 17 percent of the world's lithium but refined around three-quarters of it. Brazil holds 21 million tonnes of rare-earth reserves, second to China's 44 million, but mined only about 20 tonnes in 2024 [189].

FIGURE V-2

Mining versus refining: China's share of global supply by mineral, and lithium mine output by country



Left: IEA Global Critical Minerals Outlook 2026, as summarized by Bank of Finland BOFIT [186] (per-mineral shares not available in IEA's open web text; the IEA confirms >90% for graphite and rare-earth refining [187]); shares are approximate, recent year; mining shares for cobalt, copper and nickel reported as 2–8% (bar drawn at 5%); rare-earth mining 59%; graphite mining ~80%. Right: USGS Mineral Commodity Summaries 2025, estimated 2024 lithium mine production, thousand tonnes lithium content [188]; China share computed as 41/240.

Refining is where producers could capture more value and where the world most needs diversified supply. It is also capital-intensive, power-hungry and exposed to price swings by a dominant incumbent: the IEA reports that refining projects outside established producers frequently face capital costs 20 percent to over 150 percent higher, and operating costs about 50 percent higher [187].

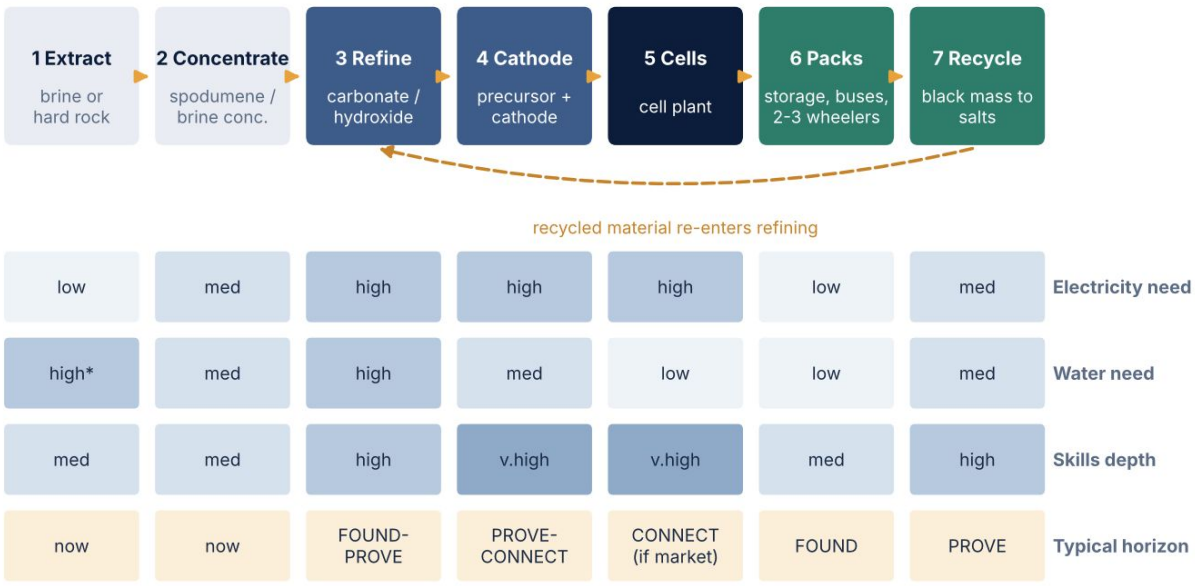
V.11 Staged value chains: what is realistic, and when

The Minerals-to-Industry Framework that Vision 2100 proposes rests on staging. A country moves one step down the value chain at a time, and only when power, water, skills, finance and a market exist for that step. Each step is a decision gate, not an entitlement.

Figure V-3 shows the stages for lithium and what each requires.

FIGURE V-3

Staged lithium-to-battery value chain and its requirements



**Brine evaporation is water-intensive in arid basins; direct lithium extraction changes but does not remove the water question.*
Qualitative ratings: ILLUSTRATIVE planning judgment, to be replaced by project-specific studies.

ILLUSTRATIVE — qualitative planning judgment by the Vision 2100 authors; ratings to be replaced by project-specific studies. Horizons refer to FOUND 2026–2030, PROVE 2031–2040 and CONNECT 2041–2060.

Lithium. The realistic next step after concentration is refining to battery-grade carbonate or hydroxide, which needs reliable power, reagents, water management and chemists. Cathode production needs a nearby cell market or firm offtake. Cell manufacturing is hardest: capital-intensive, fast-moving and dominated by a few firms.

Copper. Many producers already smelt and refine. The realistic step beyond refined cathode is semi-fabrication: wire rod, cable, busbars and transformer windings, for which grid and corridor build-outs create local demand. Motor and transformer manufacturing can follow where an industrial base exists.

Rare earths. Separation into individual oxides is chemically complex and generates radioactive residues from some ores; magnet manufacturing is harder still. The IEA expects the dominant supplier's share of rare-earth refining to fall from about 85 percent in 2025 toward 70 percent by 2035 if planned projects proceed [185]. Countries with deposits but no separation capacity should usually export concentrate to diversified, transparent partners first, and build separation only with a credible partner, an offtake contract and a funded plan for residues.

Batteries. Packs and storage systems for local buses, two-wheelers and grids are the most accessible steps, combining imported cells with local assembly and service. Critical minerals account for about a quarter of battery cell cost [185]; value lies as much in manufacturing know-how and scale as in the minerals.

Semiconductors. Leading-edge fabrication plants cost tens of billions of dollars and are not proposed by Vision 2100. Assembly, test and packaging are realistic where electronics manufacturing exists. Most countries should focus on mobile, capital-light chip-design talent and on secure supply of finished chips for their sovereign AI nodes (Part IV).

V.12 Precedents: what has worked, and at what cost

These documented national choices have benefits and costs. None is a template.

Indonesia: nickel ore export ban and downstreaming. Indonesia banned all nickel ore exports from January 2020 under Minister of Trade Regulation No. 96/2019, ending a 2017–2019 relaxation that had allowed exports of lower-grade ore below 1.7 percent nickel content [190]. It now mines about 60 percent of the world's nickel, processes about 45 percent and accounted for about 90 percent of supply growth from 2020 to 2024 [191]. Investment and jobs followed, but Chinese-owned firms control about 75 percent of refining [186], and the nickel hubs run largely on captive coal, whose national pipeline would exceed 31 GW [192]. A WTO panel ruled for the European Union in November 2022 [193]; Indonesia appealed in December 2022 [194], and with the Appellate Body unable to sit, the report remains unadopted [195]. Leverage over ore attracted processing, but not domestic ownership or clean power.

Botswana: diamonds through partnership. Debswana is a 50:50 joint venture between the government and De Beers. In February 2025 the two signed a ten-year sales agreement to 2035, with an option to extend, under which the state-owned Okavango Diamond Company's share of Debswana production rises from 30 to 50 percent; mining licences were extended by 25 years, with a De Beers-funded development fund [196]. Cutting employment remains modest and the economy undiversified, but negotiated partnership has delivered more than bans.

Chile: the National Lithium Strategy. The April 2023 strategy is implemented in the Salar de Atacama through NovaAndino Litio, the Codelco–SQM joint venture constituted on 27 December 2025 with majority state participation and a horizon to 2060 [197]; according to trade press, SQM leads operations to 2030 and Codelco holds the majority from 2031 [198]. Critics, including some investors and Indigenous communities, cite investment certainty and water use in arid basins.

Bolivia: holding the resource. Bolivia holds about 23 million tonnes of lithium resources, among the world's largest, yet USGS reported no production in 2025 or 2026 [188][199]; insisting on downstream control first has so far generated little value.

DRC–Zambia and the Lobito Corridor. In April 2022 the DRC and Zambia agreed to cooperate on a battery value chain, later funding a pre-feasibility study of economic zones with Afreximbank and UNECA [200]; manufacturing has been slower than announced. In 2025 the DRC suspended cobalt exports and then, under ARECOMS Decision No. 004/2025, replaced the suspension from 16 October 2025 with quotas of 96,600 tonnes a year for 2026 and 2027 [201][202]. In mid-2026 the Lobito Atlantic Railway, linking the copper belt to Angola's coast, closed $753 million of finance from the U.S. DFC ($553 million) and the Development Bank of Southern Africa ($200 million) [203]. Cheaper export of concentrate may entrench raw exports unless processing is built along the route — the design question P4 addresses.

The lesson Vision 2100 draws: partnerships with clear terms, transparent revenue, reliable power and consent create more durable value than bans, and countries that attempt the hardest steps first often capture nothing.

V.13 Safeguards: consent, water, tailings, standards and trade rules

Community consent. Vision 2100 proposes that, where Indigenous peoples are affected, free, prior and informed consent (FPIC), as set out in the UN Declaration on the Rights of Indigenous Peoples, be a condition of Vision 2100 support, sought before decisions with the real possibility of refusal. Benefit-sharing, local hiring and grievance mechanisms should be published.

Water, tailings and standards. Mining and processing can deplete aquifers and contaminate rivers, and tailings dams can fail catastrophically. Vision 2100 pilots should require independent water-balance studies before permits, continuous public monitoring of water quality and tailings, design to the highest available international tailings standard with an independent engineer of record, and independent assessment against at least one credible multi-stakeholder standard, such as the Initiative for Responsible Mining Assurance (IRMA) Standard (version 1.0 in force; version 2.0 was still in draft consultation as of late 2026 [204]). The choice of standard is the host's; independent verification and publication on the Results Ledger are not optional.

Export restrictions and trade law. The GATT generally prohibits export bans, with narrow exceptions; the Indonesia panel (V.12) applied these rules [193].

The IEA reported in 2025 that more than half of the 20 energy-related strategic minerals it tracks were subject to some form of export control [183]. In June 2026 G7 leaders agreed that by 2030 no single non-G7 country should supply more than 60 percent of their rare earths and permanent magnets [186].

Vision 2100 takes no side on the legality of individual measures, which is for the WTO and the parties. It favors instruments more clearly compatible with trade rules and more durable: processing commitments negotiated in licences, competitive royalties, export taxes where bound commitments permit, and joint ventures with technology-transfer terms. The framework is judged not by tonnes exported but by domestic value added retained, national and women's share of skilled jobs, investment disbursed, and environmental performance.

V.14 Flagship pilot P4: Minerals-to-Industry

Objective and host. Show that a staged lithium or copper value chain can move from extraction to first processing in the producing country, with consent and environmental standards that hold. The archetype host is a producer with an operating mine and plannable power, possibly via P2; no country has been approached or has agreed.

Phases. These align with Part XII.

01 **Value-chain screen and baseline (2027–2028).** Map steps against power, water, skills and markets; community and environmental baseline; FPIC begins. Gate 0 tests consent and feasibility.

02 **Feasibility for one processing step (2029).** For example lithium hydroxide refining, or copper rod and cable.

03 **Financing decision (2030–2031).** Requires signed offtake, a published community benefit agreement and independent environmental review.

04 **Construction and commissioning (PROVE, 2031–2035).** First plant built; national technicians trained alongside.

05 **Next-step decision (late PROVE).** Only if the first step meets its KPIs does the host appraise the next, such as cathode materials, cable manufacturing or pack assembly.

ILLUSTRATIVE **Planning budget.** Table V-3 sets out P4's planning budget in the book's three canonical tiers. The first processing plant covers small to mid-scale chemical or metallurgical plants and depends heavily on technology, power and logistics; power supply is excluded where it

comes from a P2 corridor. Plant capital would be private, joint-venture and development-bank finance; public money funds studies, skills, community benefit structures and environmental monitoring. These are planning assumptions to be replaced by feasibility estimates.

TABLE V-3 P4 Minerals-to-Industry: planning budget by tier (ILLUSTRATIVE planning assumptions; no funding committed)

Tier and component	Period	Planning range	Basis and financing
1. First-year preparation	Nov 2026–Oct 2027	$1.0–3.0 million	Host request, value-chain screen design, Gate 0 appraisal, start of FPIC process; grants and initiative funds
2a. Initial implementation: studies and preparation (includes tier 1)	2027–2031	$10–25 million	Value-chain screen, environmental and community baseline, consultation and FPIC, feasibility for one processing step; public and concessional funds
2b. Initial implementation: first processing plant	Decision 2030–2031; build 2031–2035	$0.3–1.2 billion	One small to mid-scale plant (e.g., lithium hydroxide refining or copper rod and cable); private, joint-venture, development-bank and export-credit finance; counted in the PROVE total (Part XII)
3. Long-term capital (PROVE replication, only if gates pass)	2031–2040	$0.6–4.8 billion	Two to four plants, each conditional on the first meeting its KPIs

Source: Vision 2100 planning assumptions, consistent with the canonical budget in Part XII and Appendix D. Power supply excluded where provided by a P2 corridor.

Financing and institutions. Vision 2100 proposes joint ventures with offtake, development-bank and export-credit finance, price-risk management and a transparent community benefit fund, all published on the Results Ledger (Part IX). Host ministries lead; the environmental regulator permits; communities and Indigenous bodies hold consent rights; UNCTAD, UNIDO and the regional commissions assist on request.

ILLUSTRATIVE **Workforce.** A few hundred permanent process staff, with training through national colleges beginning at feasibility.

KPIs. Domestic value added per tonne; national and women's share of skilled jobs; water and emissions per tonne; tailings incidents (target zero); grievance resolution time.

Risks and mitigations. Price collapse driven by a dominant incumbent (offtake, staging, cost discipline); community opposition (consent before feasibility, real benefit-sharing); corruption (full publication, independent audit); environmental harm (independent monitoring, bonded closure funds); power shortfall (P2 linkage or contracted supply).

V.15 Objections and alternatives

In reaching its proposals, Vision 2100 rejected a renewables-only mandate because it excludes firm options some countries need; a nuclear-led strategy because it fits neither newcomer timelines, small grids nor the cost evidence. Raw-material export with fiscal capture remains legitimate and is often the right first step; staging is preferred because it raises value added without betting the budget on the hardest step. Vision 2100 is neutral among mineral buyers. Unintended consequences — concentrated benefits, mineral-boom corruption, nuclear budgets

crowding out cheaper options — are what the gates are built to catch; the corrective action is to pause, publish and redesign.

V.16 The road to 2100

ILLUSTRATIVE **2030 (end of FOUND).** One P2 corridor at financial close or in construction; one P4 host with a completed baseline and feasibility study; at least two newcomer countries using the Milestones Approach with published INIR results; first commercial SMRs operating in countries with nuclear experience.

ILLUSTRATIVE **2040 (end of PROVE).** Two to five corridors operating; first P4 plants independently verified; documented SMR fleet costs informing newcomer decisions.

ILLUSTRATIVE **2060 (end of CONNECT) to 2100 (SUSTAIN).** Universal electricity access by 2060 and interconnected regional grids across most of Africa and the Americas; producers capturing a substantially larger share of mineral value added; recycled materials supplying a meaningful share of battery demand. By 2100, every nation has reliable, affordable, low-carbon power; nuclear, where chosen, operates under safeguards with no state acquiring weapons capability through a civil programme; and mineral wealth is translated into skills, industry and savings rather than conflict.

What begins now

Within 30 days (by December 2026). Vision 2100 proposes the following sequence. A113 Partners, independently, completes this part's verification log and resolves the remaining flagged sources; prepares a four-page P2 and P4 concept note; and drafts terms of reference for an independent energy and minerals panel with nuclear-safety, finance, Indigenous-rights and environmental experts.

Within 90 days (by February 2027). A113 Partners convenes informal technical consultations with development banks and specialized agencies to test the P2 and P4 cost assumptions, and publishes the energy-option comparison and decision framework for comment. No country is named until it requests support publicly.

Within 180 days (by May 2027). With partners, design the Gate 0 criteria for P2 and P4; prepare a project-preparation facility proposal with a development finance partner (Part X); and prepare a contribution on energy for compute to the Global Dialogue on AI Governance through interested member states. Host commitments, finance and IAEA technical cooperation require voluntary partners and sovereign requests.

First year (to October 2027). P2 and P4 hosts identified on their own request; Gate 0 decisions published; P2 grid and site studies and P4 value-chain screens begun; interested newcomer countries supported in requesting IAEA Milestones Phase 1 assistance through their own channels.

First five years (to 2031). P2 reaches financial close and begins construction (2029–2031); P4 completes feasibility and reaches a financing decision (2030–2031); the energy-and-minerals panel publishes an annual review; corridor and processing contracts are on the Results Ledger. If a Secretary-General adopts the agenda, the office can convene development banks and producers, report annually on energy access and mineral value addition, and ask the IAEA and UN regional commissions to coordinate support. Lending, licensing, consent and investment decisions remain with member states, communities and financiers.

Measuring progress

TABLE V-4 Part V indicators: baselines, agreed international targets and Vision 2100 planning milestones (ILLUSTRATIVE). The 2030 milestone for electricity access (≤400 million) is less ambitious than the agreed SDG 7.1 target of universal access by 2030; it is a realistic planning milestone and does not replace the agreed commitment.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
People without electricity (governments; SDG7 custodian agencies)	655 m, 2024, Tracking SDG7 2026 (Part I); IEA series ~730 m [162], not mixed	SDG 7.1: universal access by 2030	≤400 m	≤50 m	0	0
Cost of capital for utility-scale solar, EMDE vs advanced economies (DFIs; finance ministries)	>2x, 2024, IEA [182]	—	<1.8x	<1.4x	<1.2x	Parity band
P2 corridor clean capacity (P2 host governments)	0 MW, 2026	—	200–500 MW in construction	1,000+ MW across corridors	Regional scale	Normal infrastructure
Household tariffs and reliability in P2 areas (P2 host regulator)	To be established at Gate 0	—	No worse than baseline	Improved	Improved	Universal reliability
Newcomer states with published INIR results, supported by Vision 2100 (member states; IAEA)	To be established	—	2+	5+	As chosen	As chosen
Sovereign AI node power from clean sources (node operators)	To be established	—	≥70%	≥90%	100%	100%
Water use per MWh and per unit of compute in corridors (corridor authority)	To be established	SDG 6.4: substantially increase water-use efficiency by 2030	Published	−30% vs baseline	Best practice	Best practice
Domestic value added, P4 host (P4 host government)	To be established at Gate 0	—	Baseline +10 pts	Baseline +25 pts	Components made locally	Mature industry
Top-three refining share, key energy minerals (markets; producer governments)	86%, 2024, IEA GCMO 2025 [183]	—	<84%	<78%	<70%	Diversified
Skilled jobs held by nationals / women in P2 and P4 (hosts; employers)	To be established	SDG 5.5 (women's full participation)	60% / 25%	80% / 35%	90% / 45%	Parity
Tailings incidents in pilot projects (regulators; independent monitors)	To be established	—	0	0	0	0

Source: baselines as cited; milestones are ILLUSTRATIVE Vision 2100 planning values, to be set by hosts and reviewed at each decision gate (Part XII). Electricity-access values match Parts I, II, XII and Appendix H. Corrective action when a target is missed: publish the shortfall, convene an independent review within six months, and pause expansion until the cause is addressed.

PART VI

VI

PEACE THROUGH PREVENTION AND PROTECTION

Acting Before the First Shot: A Prevention Operating Model and a Non-Lethal Shield for Peace Operations

IN THIS PART

VI.1 Where we are: more war, thin prevention
VI.2 The sources of risk Vision 2100 will watch
VI.3 Early-warning systems that already exist and what they teach
VI.4 A complete conflict-prevention operating model
VI.5 The six-layer shield in operational depth
VI.6 Legal authority and the bright line
VI.7 The Peace Technology Pool and the Prevention and Mediation Fund
VI.8 Realistic use cases
VI.9 What technology cannot do: an honest assessment

THE ARGUMENT OF THIS PART

Early warning has seldom failed for lack of data. It fails because warnings do not reach someone who must decide, with money and a mediator ready, in time. Vision 2100 proposes to close that gap first. Technology comes second, and it stays non-lethal, human-led and under consent.

VI.1 Where we are: more war, thin prevention

The world entered 2026 with more armed conflict than at any point since records began. The Uppsala Conflict Data Program (UCDP) counted 65 state-based conflicts in 2025, the highest since its series began in 1946. Thirteen were wars, and eight were interstate. Organized violence killed about 244,600 people; one-sided violence against civilians killed about 76,500, more than five times the previous year, driven mainly by atrocities around El Fasher in Sudan [23]. ACLED logged 204,605 conflict events between December 2024 and November 2025 [205].

◆ DOCUMENTED POSITION In her interactive dialogue with the General Assembly on 20 August 2026, Ambassador A-Baki referred to the more than 60 state-level conflicts under way in the world. She named direct, undelegated peacekeeping and peacemaking as her first priority, said she would apply the tools of preventive diplomacy, mediation and early warning, and spoke of engaging every party directly to stop conflicts before they erupt. She added that the Secretary-General's good offices should also be active offices [5]. The UCDP figure confirms the scale she described.

When Ireland asked about Article 99 during the same dialogue, her answer addressed independence and neutrality, including choosing neutral people for her team; she did not mention Article 99 and made no commitment on it [5]. Criteria for the Secretary-General's use of Article 99 are a Vision 2100 proposal, set out in Part III. The early-warning model, the P3 pilot, the six-layer shield, the Peace Technology Pool and the Prevention and Mediation Fund in this Part are likewise Vision 2100 proposals developed by A113 Partners. She did not propose them in her dialogue; she endorsed this book for publication on 2 November 2026.

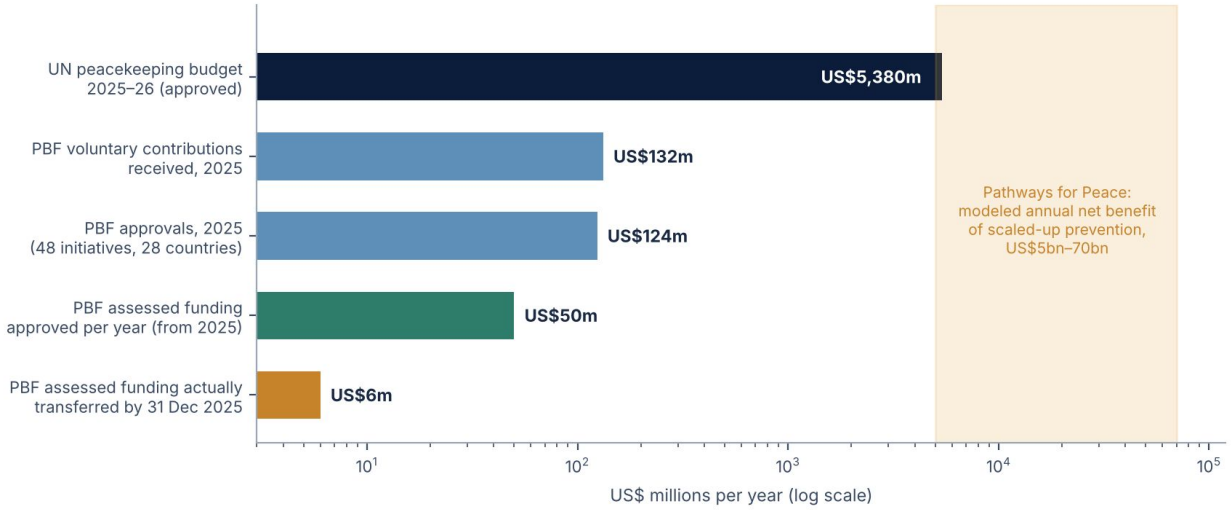
The economic case for prevention is long established. In 2018 the joint UN–World Bank study *Pathways for Peace* estimated that a scaled-up system of preventive action would yield a net benefit of between US$5 billion and almost US$70 billion a year [206][207]. These are modeled bounds, not budget lines. The background model assumed that prevention succeeds in 25%, 50% or 75% of cases, at a cost of US$1 billion, US$500 million or US$100 million per case per year, discounted at 3% over 15 years. Its central case gave about US$33 billion a year [208]. Its central finding was not technical: most violent conflicts grow out of grievances about exclusion from power, natural resources, security and justice, so prevention works when it is inclusive and built into development policy [207].

Money has not followed that case. The Peacebuilding Fund (PBF), the UN's main pooled instrument for prevention, approved about US$124 million for 48 initiatives in 28 countries in 2025. Voluntary contributions were US$132.3 million from 29 member states, 8% less than in 2024 and well below the US$180 million of 2020. The US$500 million annual target has not been met [209][210]. In December 2023 the General Assembly approved US$50 million a year in assessed contributions to the PBF from 2025, "on an exceptional basis" [211][212]. The liquidity crisis held back even this: by 31 December 2025 only US$6 million had reached the Peacebuilding Account [209]. Peacekeeping, by

contrast, was budgeted at US$5.38 billion for 2025–26 [38]. Prevention instruments remain a small fraction of that [213], as Figure VI-1 shows.

FIGURE VI-1

Prevention finance in perspective



Sources: PBF 2025 annual report [209]; A/RES/78/257 [212]; peacekeeping 2025–26 budget [38]; Pathways for Peace [206208]. Log scale. The Pathways band is a modeled net benefit, not a budget line.

Nor is the problem a lack of warning. Regional organizations, UN country teams, academic forecasters and private providers produce more conflict information than ever, yet international actors remain largely reactive [213]. This "warning–response gap" is the problem this Part sets out to solve.

VI.1.1 Where this Part sits in the Vision 2100 system

Part VI is the link where social stability becomes the conditions in which diplomacy and peace succeed, and it closes the loop: peace protects the energy, compute and industry investments of Parts IV and V. A sovereign AI node or a Clean Power and Compute Corridor does not survive a civil war, and a Minerals-to-Industry value chain can fund an armed group as easily as a school. Prevention in turn depends on the other Parts. Honest institutions and the Results Ledger (Part IX) reduce the grievances that drive violence. Women at Every Table (Part VIII) and the Children's Shield (Part VIII design; Part VI protective technology) shape who mediates and who is protected. The Prevention and Mediation Fund and the Peace Technology Pool are financed under Part X. The UN authority map in Part III governs who may decide what.

VI.2 The sources of risk Vision 2100 will watch

Risk factors are well known even where timing is not. In 2025 the PBF approved seven new projects on climate- and resource-related conflict risk across eight countries, worth about US$23 million [209].

Vision 2100 proposes that every prevention system it supports monitor five families of structural and trigger risk, each with a named data source and a named owner:

- **Water and climate stress.** Rainfall anomalies, river flows, pasture condition and access to water points. These drive seasonal conflict between herders and farmers, the original focus of IGAD's CEWARN [214].

- **Food prices.** Local staple prices against seasonal norms. A price shock turns latent grievance into mobilization, especially in cities.
- **Elections and political transitions.** Election calendars, disputes over results, term-limit changes and security-force deployments.
- **Displacement.** Arrivals of refugees and internally displaced people, which strain host communities and change local balances.
- **Hate speech and incitement.** Coordinated dehumanizing language in local languages, which often comes before mass violence. Monitoring targets patterns and networks, not individual speakers.

None of these indicators predicts violence alone. Their value comes from being combined, read by people who know the place, and tied to a decision. The operating model Vision 2100 proposes below is built around that.

VI.3 Early-warning systems that already exist and what they teach

Vision 2100 does not need to invent early warning. It proposes to connect what exists to decisions and to evaluate it honestly. Table VI-1 summarizes the main systems.

TABLE VI-1 Existing conflict early-warning systems: methods, strengths and documented limits

System	Operator	Method	What it does well	Documented limits
CEWARN (since 2002)	IGAD	Field reporting on cross-border pastoral conflict; Rapid Response Fund	2003–15 retrospective review supported its risk model [214]	Uneven national capacity and field reporting [214]
ECOWARN	ECOWAS	Field monitors on human-security indicators	Regional coverage; 77 monitors trained in 2024 [215]	Political will of member states decides response
VIEWS	PRIO / Uppsala	Machine-learning forecasts of conflict fatalities, 1–36 months ahead	Public, transparent, sub-national [216217]	Probabilistic and conservative; state-based conflict only [218]
ACLED	Independent	Event data from media and local partners	Near-real-time, global [205]	Reporting bias where media is weak
UNOSAT	UNITAR	Satellite imagery analysis	Independent, verifiable damage evidence [219]	Funded voluntarily; after-the-fact more than predictive

Source: as cited in each row. CEWARN and VIEWS performance claims are the operators' own assessments; no independent evaluation with counterfactuals was located.

IGAD's CEWARN, set up in 2002, links local monitors, national units and regional analysis, and holds a Rapid Response Fund for small, fast interventions. A retrospective assessment of 2003–2015 data supported its risk model but found a need for more national capacity and consistent field reporting; its reported falls in border violence are its own qualitative claims, without published counterfactuals [214]. ECOWARN's warnings, like most regional systems', carry weight only when the heads of state they concern decide to act [215].

VIEWS, run by the Peace Research Institute Oslo and Uppsala University, publishes monthly public forecasts of state-based conflict fatalities, 1 to 36 months ahead, with sub-national forecasts for Africa and the Middle East [216217]. By its own evaluation, its 2024 forecasts identified seven of the ten deadliest countries; its authors call them best estimates, not certainties [218]. UNOSAT's independent

imagery analysis, such as its September 2024 finding that about 66% of structures in Gaza were damaged, contributes most to the Verify layer below [219].

Inside the Secretariat, capacity already exists. The Department of Political and Peacebuilding Affairs (DPPA) set up an Innovation Cell in 2020 that uses AI, remote sensing and multilingual data analysis to support early warning, preventive diplomacy and mediation [220]. UN Global Pulse serves as the Secretary-General's innovation lab for data, digital, behavioral science and foresight work across the system [221]. The peacekeeping digital transformation strategy, launched in August 2021, added workstreams on situational awareness and on mis- and disinformation [222223]. Vision 2100 builds on these and proposes no parallel structure.

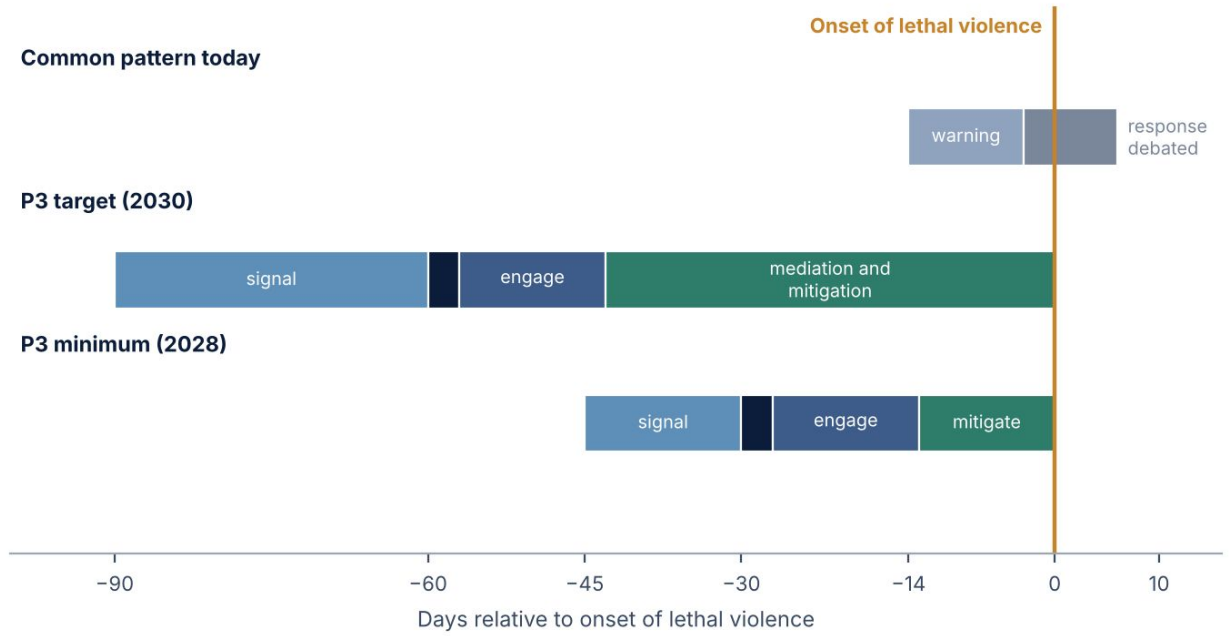
VI.3.1 The warning–response gap

The lesson is consistent. Detection has improved faster than response. EU analysts note that data-driven "conflict arithmetic" remains limited [213]. Even good forecasts are probabilistic. They identify places of high risk. They do not say which week a militia will attack, and they cannot make a government want to act.

Vision 2100 therefore treats the gap as a design problem with three parts. **Ownership:** every warning goes to a named decision-maker with authority to act. **Pre-positioned response:** money, mediators and options exist before the warning. **Measurement:** the system records what was warned, decided, done and what happened. Without that record, no one can learn or be held accountable. Figure VI-2 contrasts the common reactive pattern with the P3 targets.

FIGURE VI-2

Warning–response timeline: today and P3 targets



ILLUSTRATIVE — planning assumption. "Common pattern today" is a schematic of the reactive pattern described in [213], not a measured average. P3 lanes are proposed targets (≥30 days by 2028; ≥60 days by 2030).

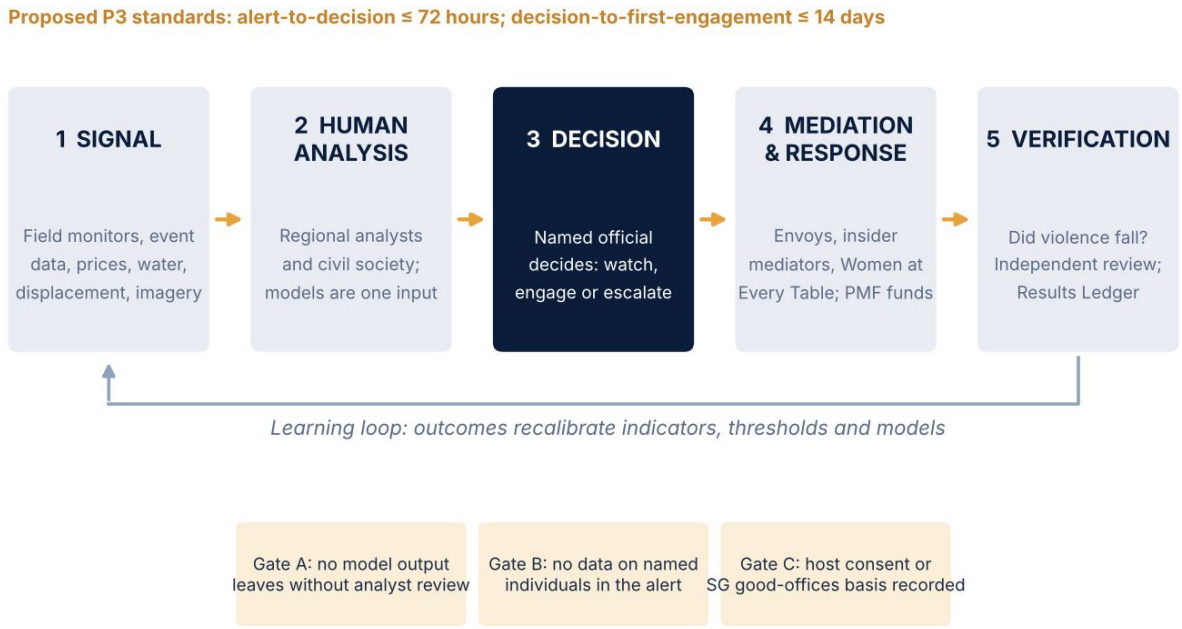
VI.4 A complete conflict-prevention operating model

The prevention operating model that Vision 2100 proposes has five stages, each with a responsible actor, a time standard and a safeguard gate (Figure VI-3). It plugs into existing

regional systems, national peace infrastructures and the Secretary-General's good offices. It does not replace them.

FIGURE VI-3

Prevention workflow: signal to verification



PROPOSAL — Vision 2100 operating model. Time standards are proposed P3 targets, to be validated in pilot.

01 **Signal.** Field reports, event data, prices, water and vegetation indices, displacement and incitement monitoring feed models that produce district-level risk scores. They never score individuals.

02 **Human analysis.** A regional cell of analysts, joined by women's, youth and other civil-society networks, reviews every elevated signal and may overrule a model in either direction, with the reason logged.

03 **Decision.** A named official decides within 72 hours of an alert. "Watch" means continue to monitor. "Engage" means send a mediator or support a local peace committee. "Escalate" means refer to the regional organization, the Resident Coordinator or the Secretary-General. The decision and its reasons are recorded.

04 **Mediation and response.** Pre-approved options are funded from a standing window of the Prevention and Mediation Fund: insider and women mediators, dialogue facilitation, water-point repair, cash-for-work for at-risk youth and rumor-control radio. First engagement is targeted within 14 days of decision.

05 **Verification.** At 90 and 180 days, an independent reviewer assesses whether violence fell against a comparison area and whether the response caused harm. Results feed the Results Ledger (Part IX) and recalibrate the model.

VI.4.1 Conflict-sensitive AI and human review thresholds

AI in this model supports human judgment. It does not replace it. Vision 2100 proposes six binding rules for any model used in P3 or under the UN flag:

- **Areas, not people.** Models estimate risk for places and periods. They never produce lists of individuals, groups or "likely perpetrators."
- **Human gate.** No model output leaves the analysis cell without review by a qualified analyst. Every "escalate" alert needs a second analyst's concurrence.
- **Calibrated thresholds.** Thresholds are set openly, by a stated tolerance for false alarms against missed events, and reviewed quarterly.
- **Do-no-harm review.** Analysts check whether an alert could itself inflame tension or endanger informants.
- **Documented models.** Every model has published documentation: data sources, known biases, performance on held-out data and the date of last validation.
- **Local language competence.** Hate-speech monitoring uses fluent human reviewers; classifiers alone misread idiom.

These rules follow the UN Personal Data Protection and Privacy Principles of 11 October 2018, including purpose specification, proportionality, retention limits and accountability [224][225], and the peacekeeping digital strategy's commitment to ethical review and a complaints mechanism [226].

VI.4.2 Flagship pilot P3: Prevention Early-Warning

Vision 2100 proposes P3, detailed in Part XII, to show in one water- and climate-stressed cross-border region that human-led early warning tied to funded mediation shortens the time from warning to action and measurably reduces violence. Two or three neighboring states sharing a basin or rangeland would host it inside an existing regional framework.

Design. As proposed, P3 runs for an initial five years. Consistent with the Part XII sequence, region selection and protocols come in 2027, shadow-mode operation (warnings logged and later scored but not acted on) in late 2027–2028, live operation linked to mediation from 2029, and an independent evaluation in 2030. A regional unit of 10–14 analysts and data staff sits with the existing regional early-warning secretariat, supported by a network of about 80–150 community monitors, at least 40% of them women, recruited with local peace committees, and by a mediation liaison who connects the unit to the mediator roster. Data are those of the five risk families above, plus satellite change detection where host states consent. Response capacity is a roster of insider and women mediators and a rapid-response grant window. Table VI-2 sets out the staffing and budget together.

Communications that survive the crisis. Community monitors often work where there are no towers, and conflict is precisely what cuts cables and power. Vision 2100 proposes that P3 reporting use two independent paths: ordinary phones with satellite messaging where direct-to-cell service is licensed, and pre-positioned satellite terminals at the regional unit and its partner offices, terminating in a nationally or regionally controlled gateway under the operator-neutral conditions of Part IV (Section IV.9). Ukraine's experience since 2022 shows both the protective value of satellite links and the risk of depending on one operator's decisions (Part IV).

Governance. Vision 2100 proposes that the P3 Pilot Governance Board, chaired or co-chaired by a host government and composed of the host states and the regional organization, with two civil-society seats, independent members and UN advisers, set policy and thresholds. An independent ethics and data-protection panel would hold a veto over new data sources. Day-to-day decisions

sit with the regional early-warning director, not the UN. Host governments retain sovereign decision rights at every stage. The Vision 2100 Steering Board, which governs the Vision 2100 initiative, decides only whether Vision 2100 continues to support P3 at each gate; it does not direct the pilot. The Secretary-General's role is good offices and escalation.

Data-sharing agreements. Vision 2100 proposes that each host state sign one before operations. It fixes purpose; storage in the region under host-state law (the National AI Sovereignty Model, Part IV); raw-data access for the hub only; retention limits; the ban on individual-level targeting; and each state's right to suspend. Through the UN Shared Layer, the UN provides standards and audit. It holds no one's data.

Safeguards. Vision 2100 proposes no facial recognition, no interception of private communications, and no data sharing with intelligence or security services. Monitors are protected by anonymity, duty-of-care protocols and an evacuation plan. A public annual report gives aggregate results.

ILLUSTRATIVE **Budget and staffing planning range: US$20–50 million over five years.** Table VI-2 gives the canonical P3 figures used throughout this book, in the three tiers of Appendix D: first-year preparation (November 2026–October 2027) of US$1.0–2.0 million; initial implementation of US$20–50 million over five years, which includes the first-year preparation; and, only if the PROVE gates pass, long-term capital of US$0.06–0.3 billion to extend P3 to three to six further regions. These rest on planning assumptions, not costed estimates, and no funding is committed. The first year funds region selection, consultations, the ethics and data-protection panel, the data-sharing agreements and baseline design. The four years that follow carry the operating lines. The response window is deliberately the largest line. A pilot that spends most of its money on detection would repeat the gap it is meant to close.

TABLE VI-2 **P3 Prevention Early-Warning: staffing and budget planning range (ILLUSTRATIVE planning assumptions, US$ million)**

Line	Staffing or basis (assumption)	Per operating year	Five-year first phase
First-year preparation (Nov 2026–Oct 2027)	Small core team; consultations, panel, agreements, baseline design	—	1.0–2.0
Regional unit: analysts and data staff	10–14 staff at US$90,000–150,000 each, fully loaded	0.9–2.1	3.6–8.4
Mediation liaison	1–2 posts linking the unit to the mediator roster	0.1–0.3	0.4–1.2
Community monitors	About 80–150 monitors, at least 40% women, at US$4,000–7,000 each including training and protection	0.3–1.1	1.2–4.4
Data, imagery and connectivity	Commercial and open data; satellite change detection with host consent	0.3–0.8	1.2–3.2
Compute, software and security	Hosted in the region under host-state law	0.2–0.5	0.8–2.0
Governance, ethics panel and legal	P3 Pilot Governance Board; independent ethics and data-protection panel	0.2–0.4	0.8–1.6
Independent evaluation	90- and 180-day reviews; 2030 evaluation	0.2–0.4	0.8–1.6
Mediation and rapid-response window	Pre-approved responses; insider and women mediators	2.5–4.5	10.0–18.0

Line	Staffing or basis (assumption)	Per operating year	Five-year first phase
Subtotal	Four operating years plus first-year preparation	4.7–10.1	about 20–42
Contingency	Up to about 18% of the upper subtotal	—	up to about 8
Initial implementation (first phase)	**Canonical range; includes first-year preparation**	—	**20–50**
Long-term capital (PROVE, only if gates pass)	Extension to 3–6 further regions at US$20–50m each	—	60–300

Source: Vision 2100 planning assumptions; canonical tiers as in Appendix D and Part XII. Salary and monitor costs are assumptions to be replaced by host-region costings in the first year. Spending on the response window in the shadow-mode year will be lower; any underspend is carried to live operation.

TABLE VI-3 **P3 pilot-level KPIs (proposed standards; baselines to be set in shadow mode)**

KPI	Definition	Baseline	2028 target	2030 target
Lead time	Median days from first alert to onset of lethal violence, for events that occur	To be established in shadow mode	≥ 30 days	≥ 60 days
Warning-to-action rate	Share of escalate-level alerts with a documented response within 14 days	To be established	≥ 60%	≥ 85%
Alert-to-decision time	Median hours from alert to logged decision	To be established	≤ 96 h	≤ 72 h
Violence reduction	Change in fatalities vs. matched comparison districts	Pre-pilot 3-year average	Measured	Statistically significant reduction
False-alarm burden	Share of alerts not followed by an elevated event within 90 days	To be established	Published	Within the threshold set by the P3 Pilot Governance Board
Women's participation	Share of mediators and monitors who are women	To be established	≥ 35%	≥ 40%

ILLUSTRATIVE **Three archetypes.** *An advanced economy* does not host P3 but contributes seconded analysts, satellite time and evaluation funding under the same data rules. *An emerging economy* hosts the hub and keeps the capability afterward. *A small or resource-constrained nation* in the basin joins as a full member, contributes no money, receives district-level products and may suspend participation at any time.

VI.5 The six-layer shield in operational depth

Prevention will sometimes fail. When a peace operation is then mandated, Vision 2100 proposes that missions be equipped with a six-layer shield of non-lethal technology: Watch, Warn, Protect,

Deliver, Clear and Verify (Figure VI-4). The shield adds to peacekeepers. It does not replace them. Every layer has a documented precedent, known limits and a proposed binding safeguard.

FIGURE VI-4

The six-layer shield: capabilities, precedents and safeguards

Layer	Core capabilities	Documented precedent	Binding safeguard
WATCH	Satellites, unarmed UAVs, fixed cameras, acoustic sensors	MONUSCO UAVs (2013); OSCE SMM (2014–22)	Imagery minimization; no facial recognition
WARN	Event data, forecasts, price/water/displacement feeds	CEWARN, ECOWARN, VIEWS, ACLED	Human review gate; no individual targeting
PROTECT	Perimeter sensors, alerting, passive counter-drone detection	Mission base protection; limited civilian-site use	Non-lethal only; defensive, logged
DELIVER	Medical drones, robotic logistics, route sensing	Rwanda blood delivery (since 2016)	Airspace approval; humanitarian principles
CLEAR	Drone survey, ground-penetrating sensors, demining machines	Mechanical demining is standard; AI mapping early	Release only after human QA to IMAS
VERIFY	Tamper-evident shared record, simultaneous release to parties	SMM public reports; UNOSAT damage analysis	Agreed attribution rules; independent audit

PROPOSAL. Precedents cited in text [227]–[228]. Safeguards are Vision 2100 standards, to be adopted through mission mandates and SOFAs.

VI.5.1 Watch

The UN first flew surveillance drones in a peacekeeping mission in December 2013, when MONUSCO launched unarmed Falco aircraft from Goma to watch the eastern DRC's borders, track armed groups and follow population movements. The force commander stated they would fly only over Congolese territory [227]. UN budget documents give the scale. The General Assembly's Advisory Committee on Administrative and Budgetary Questions (ACABQ) reported that the unmanned aircraft system, five unarmed aircraft under a turnkey contract for 2,400 flight hours a year, was estimated to cost about US$15.5 million for 2016/17, and recommended a 10% cut. Utilization was low: 27.9% of contracted hours in 2013/14 (half a year), 43.7% in 2014/15 and 46.4% in 2015/16 to February [229]. Earlier press accounts had put the cost at about US$13 million a year [230]. In May 2014 a drone found a capsized boat on Lake Kivu, and 14 people were rescued. The limits were as instructive: only one aircraft could fly at a time, weather grounded them, and about 15 people reviewed the imagery, too few for the volume [230]. Researchers warned that possessing such systems creates new moral and legal obligations, for example to act on what a mission sees [231].

The OSCE Special Monitoring Mission to Ukraine (SMM), deployed in March 2014, became the most technology-intensive civilian monitoring mission of its era. It ran more than 50 drones of several ranges, fixed cameras and satellite imagery, and its drones were shot at, shot down or jammed almost twice a week [232]. In 2016 the long-range service was suspended after losses made

the contract prohibitively expensive [233]; in early 2018, six of nine long-range flights in one two-week period were jammed [234]. In April 2021 the mission reported that 62.5% of its long-range flights over the previous two months had met GPS signal interference, and that jamming had for the first time stopped a long-range aircraft from taking off [235]. The mandate also barred the SMM from attributing violations to a party [232]. The mission closed in 2022 after the OSCE Permanent Council failed to reach consensus on extending its mandate at the end of March [236]. Practitioners concluded: define needs first, invest in analysis rather than collection, harden against jamming, and keep a visible human presence [237].

Vision 2100 therefore proposes Watch packages that combine satellite tasking, unarmed drones, fixed cameras and acoustic sensors, budgeted analysts first, specified for jamming resilience and deployed only under mandate and host consent. Imagery excludes facial recognition and is retained for limited periods.

VI.5.2 Warn

Inside a mission, the proposed Warn layer is the operating model of Section VI.4 applied at mission scale. It feeds the mission's joint operations and joint analysis centers and builds on platforms the UN already uses, such as SAGE, the incident database peacekeepers use to map hotspots [226]. The same rules apply: area-level risk only, a human gate and documented models.

VI.5.3 Protect

The proposed Protect layer covers schools, hospitals, water systems and displacement camps with sensors, passive drone detection and rapid alerts to peacekeepers or community committees. It detects and alerts; it does not engage. Under the Children's Shield (designed in Part VIII; this layer supplies its protective technology), attacks on protected sites are documented to an evidentiary standard and reported to the Security Council. This layer is the least proven of the six, so it would be tested first at sites mission bases already protect.

The digital transformation strategy names armed drones, remotely triggered explosives and disinformation as risks to peacekeepers [226]. Counter-drone capability under Vision 2100 is limited to detection, warning and, where law and mandate allow, legally reviewed non-kinetic measures.

VI.5.4 Deliver

The strongest evidence for autonomous delivery comes from health systems at peace. Since 2016 Rwanda's government has worked with a drone operator to deliver blood products to hospitals. Research with the Rwandan Ministry of Health found that in-hospital deaths from postpartum hemorrhage fell by 51%, with gains concentrated in hospitals closer to the drone port [238][239].

The proposed Deliver layer covers medical resupply to cut-off clinics, robotic logistics on dangerous routes and route sensing. Peacetime results do not transfer automatically to contested airspace. Deliveries follow humanitarian principles and are agreed with humanitarian agencies, so they never become military logistics.

VI.5.5 Clear

Landmines and explosive remnants of war killed or injured 6,279 people in 2024. Nine in ten were civilians, and almost half of the civilian casualties were children [228]. Five states are withdrawing from the Mine Ban Treaty, and victim assistance funding fell by almost a quarter in 2024 [228].

The proposed Clear layer pairs established methods with drone survey, ground-penetrating radar and AI-assisted analysis that prioritize suspected hazardous areas. The near-term gain is in survey, shrinking the area people must clear by hand. Land is released only after human quality assurance under the International Mine Action Standards. No algorithm declares land safe.

VI.5.6 Verify

Verification gives parties a shared factual baseline, as the SMM's daily reports and UNOSAT's assessments showed [232219]. The proposed Verify layer merges data from the other five into a tamper-evident record, with agreed products going to all parties at the same time. Ceasefire agreements should state in advance what will be verified, by which means, under which attribution rules and with what dispute channel. Verify is where technology most directly supports a political agreement. It does nothing without one.

VI.6 Legal authority and the bright line

Technology in peace operations rests on the operations' own legal foundations: a Security Council mandate, host-state consent, and privileges and immunities, including for equipment and aircraft, set in a status-of-forces agreement (SOFA). MONUSCO's drones were confined to Congolese airspace because the mission had no mandate in neighboring countries [227]. The OSCE mission's access rested on a consensus decision of participating states; when consensus failed, the mission ended [232236].

Vision 2100 therefore proposes the decision rights in Table VI-4, consistent with the matrix in Part III and Appendix F.

TABLE VI-4 Proposed decision rights for prevention and peace-operations technology (Vision 2100 proposal)

Action	Who decides	Instrument
P3 and other prevention pilots outside missions	Host states and regional organization, through the P3 Pilot Governance Board	Data-sharing agreements; regional protocol
SG good offices, envoys, Article 99 referral	Secretary-General alone	Charter Arts. 98–99
Shield capabilities in a mission	Security Council; host consent	Mandate resolution; SOFA annex on technology
Peace Technology Pool	General Assembly (financing); member states (contributions)	Fifth Committee; PCRS-type pledges
Prevention and Mediation Fund	General Assembly; donors	PBF terms of reference or successor
Data protection standards	Secretary-General (Secretariat); HLCM (system)	UN Privacy Principles; mission policy

Vision 2100 proposes a standard **technology annex to SOFAs** covering sensor and aircraft categories, airspace and frequency coordination, host-state data ownership and access, limits on third-state sharing, and suspension.

International humanitarian law applies to peacekeepers when they become parties to an armed conflict. Data protection applies throughout: the UN Personal Data Protection and Privacy Principles bind UN entities' processing of personal data [224225].

The debate on lethal autonomous weapons is unresolved. On 2 December 2024 the General Assembly adopted resolution 79/62 on lethal autonomous weapons systems by 166 votes to 3 (Belarus, the DPRK and the Russian Federation), with 15 abstentions [240]. On 1 December 2025 it adopted A/RES/80/57 by 164 to 6, with 7 abstentions [241]; according to the un-project.org compilation of the recorded vote, Belarus, Burundi, the DPRK, Israel, the Russian Federation and

the United States voted against [242]. In Geneva, the CCW Group of Governmental Experts has worked since 2023 to formulate, by consensus, elements of an instrument [243]. In October 2026 the EU welcomed consensus on a set of elements and called for the Seventh CCW Review Conference to adopt a negotiating mandate [244]. States still differ on the scope of prohibitions and on whether rules should be legal, political or both. The Secretary-General and the ICRC have jointly called for a legally binding instrument by the end of 2026 [243].

The Seventh Review Conference of the CCW is scheduled for 16–20 November 2026 at the Palais des Nations in Geneva [245]. As this book goes to press its outcome is not known. This section will need to be updated after the conference to record whether a negotiating mandate was adopted and on what terms.

Vision 2100 does not ask member states to settle that debate to adopt the shield. It proposes its own narrower line. **Under the UN flag, autonomous and AI-enabled systems are non-lethal only.** No UN-operated or UN-contributed system may select or engage a human target, and none may be armed. Decisions about force remain with accountable humans under existing rules of engagement. This line is compatible with every position in the CCW debate, gives contributors a clear standard and removes the most serious objection to technology in peace operations.

> **THE BRIGHT LINE**
> Under the UN flag, technology watches, warns, protects, delivers, clears and verifies. It never selects or engages a human target, and a named person is accountable for every decision about force.

VI.7 The Peace Technology Pool and the Prevention and Mediation Fund

VI.7.1 The Peace Technology Pool

The UN already has a working model for pooled national contributions. The Peacekeeping Capability Readiness System (PCRS), launched in 2015, registers military, police and enabling capabilities at readiness levels verified by Secretariat visits. Units at the highest, the Rapid Deployment Level, commit to deploy within 60 days of an invitation. About 200–300 pledges are registered at any time, and since 2019 all peacekeeping deployments have come from PCRS [246].

Vision 2100 proposes a Peace Technology Pool that extends this model to technology. Member states would pledge capability packages through a PCRS-type register, with readiness levels and verification: satellite tasking hours, unarmed drone units with operators, imagery analysts, demining survey teams, secure communications and data engineers. Contributors would be reimbursed at rates set by the General Assembly, as for contingent-owned equipment. Three rules keep the Pool from becoming a showroom: needs come from mission requirements; open standards prevent any supplier or country becoming indispensable; and every package trains host-nation technicians.

ILLUSTRATIVE An advanced economy might pledge satellite hours and analysts; an emerging economy, a drone unit with crews; a small state, data-protection specialists or women mediators. Each counts as service under the UN flag.

VI.7.2 The Prevention and Mediation Fund

The Prevention and Mediation Fund should not compete with the PBF. Vision 2100 proposes it as a dedicated prevention and mediation window built on the PBF. The PBF's revised terms of reference already allow the Secretary-General to find a country on the verge of conflict eligible,

and its Immediate Response Facility can allocate funds immediately [210]. The proposal is to ring-fence a share for three things: pre-positioned response windows tied to early-warning systems such as P3; standing rosters of mediators, including women mediators under Women at Every Table (Part VIII); and independent evaluation.

The constraint is money, not authority. The PBF's US$500 million target remains unmet, voluntary contributions fell in 2025, and most assessed funding approved for 2025 had not been transferred by year-end [209]. The 2025 review of the peacebuilding architecture, reflected in Security Council resolution 2805 of 26 November 2025, pressed for measurable implementation benchmarks [247].

ILLUSTRATIVE The original Vision 2100 statement (2026) pictures savings from leaner, better-informed missions being partly reinvested in prevention. That is an illustration, not a forecast: peacekeeping savings return to member states unless the Fifth Committee decides otherwise. This book suggests, as a realistic first target, that verified savings from technology-enabled missions be matched by an equal voluntary contribution to the prevention window.

VI.8 Realistic use cases

ILLUSTRATIVE **Ceasefire monitoring.** A Watch-and-Verify package from the Pool deploys within weeks of a ceasefire: satellite tasking, fixed cameras, short-range drones and a dozen analysts. Summaries reach both parties and the mediator at once, under attribution rules agreed in advance, and the budget assumes jamming and drone losses [232][233].

ILLUSTRATIVE **Protecting a hospital and school cluster.** With host consent, sensors at a twice-attacked hospital and three schools alert a quick-reaction platoon and a community protection committee. People decide. Success means fewer attacks, not more footage.

ILLUSTRATIVE **Post-conflict demining.** Drone survey and AI-assisted analysis shrink a suspected hazardous area across farmland; national deminers clear what remains to International Mine Action Standards. Under the Minerals-to-Industry Framework (Part V), cleared land becomes eligible for investment only after release is verified.

VI.9 What technology cannot do: an honest assessment

Technology cannot replace political agreements, host-state consent or peacekeepers. A drone cannot negotiate, and a forecast cannot make a government accept a mediator. Even with dozens of drones, SMM practitioners found a visible human presence essential [237].

The documented risks are real. **Hostile interference:** monitoring drones were shot down and jammed for years in eastern Ukraine, at rising cost [232][233][235]. **Analysis bottlenecks:** MONUSCO had too few analysts for its imagery [230]. **Uneven adoption:** in a 2021 survey of about 500 peacekeeping staff, 83% saw opportunities for digital technology, but more than half said key tools were unused or underused [226]. **Rotation:** personnel rotate every six to twelve months, and many contributors have limited digital capacity [226].

Vision 2100 also names the risks it may create:

- **Surveillance creep.** Systems built to protect civilians can be turned on dissidents, journalists or minorities. Mitigations: purpose limits in the SOFA annex, bans on facial recognition and interception, independent audit and published annual reports.
- **Escalation.** A watched party may attack sensors, monitors or suspected informants.
- **False alarms and missed warnings.** Every threshold trades one against the other; the trade-off must be set openly and reviewed.

- **Vendor capture and data misuse.** Proprietary systems can lock missions in; open standards and multiple contributors are required. Raw data stay with the hub, and sharing with third states is prohibited.

Troop contributors and host states have legitimate objections. Contributing countries, many of them developing states, may see a technology-led model as a way to replace their soldiers and cut reimbursements; host states and neighbors may see sensors as intelligence collection. The answers: the Pool counts contributions from any state; peacekeepers stay central to protection of civilians; host states co-own data and may suspend systems; and member states decide any transition, mission by mission.

VI.9.1 Alternatives considered

Vision 2100 considered three alternatives before making its proposal. **Detection-led investment** was rejected because it deepens the warning–response gap. **A new UN early-warning agency** would duplicate regional systems and run against UN80's push for fewer mandates. **Doing nothing new** fails because adoption stalls without dedicated resources and standards [226]. The preferred approach puts response first, builds on regional systems, sets standards through the UN Shared Layer and draws capabilities through a Pool. It asks the least of new authority and the most of existing institutions.

VI.9.2 Horizons to 2100

ILLUSTRATIVE **FOUND 2026–2030:** P3 moves from shadow mode to live operation in one region; a SOFA technology annex template exists; the Pool register is piloted; a prevention window is set up within the PBF. **PROVE 2031–2040:** P3 is evaluated and replicated in three to five regions; shield packages are standard in new mandates; the warning-to-action rate is published annually. **CONNECT 2041–2060:** regional systems interoperate through the UN Shared Layer; the Pool is a normal contribution channel. **TRANSFORM 2061–2080:** prevention is a substantial share of peace spending. **SUSTAIN 2081–2100:** standards, audits and the non-lethal line are kept and adapted to technologies not yet invented.

What begins now

This book recommends the following sequence. **Within 30 days (by early December 2026).** A113 Partners can act independently. Map regional early-warning systems and their evaluations. Draft the P3 concept note and data-sharing template. Draft the SOFA technology annex template and the non-lethal standard for independent legal review. Follow the CCW Seventh Review Conference, scheduled for 16–20 November 2026, and update Section VI.6 and the bright-line text once its outcome is known.

Within 90 days (by February 2027). This requires partners. Consult two or three regional organizations with early-warning mandates and the PBF secretariat about a candidate P3 region. Convene an expert review of the P3 design, including women mediators. Hold informal consultations with troop-contributing countries on the Peace Technology Pool, with their objections written into the design.

Within 180 days (by May 2027). This requires host states and donors. Secure expressions of interest from host states in one water-stressed cross-border region. Identify funders for the US$1.0–2.0 million first-year preparation (Table VI-2). Establish the ethics and data-protection panel. A113 Partners cannot commit any state or UN body and will not represent interest as agreement.

First year (to October 2027). Pass the Part XII Gate 0 decision for P3. Sign the data-sharing agreements. Recruit the first members of the regional unit (10–14 analysts and data staff at full strength), the mediation liaison and the first community monitors, at least 40% women. Seat the P3 Pilot Governance Board. Set baselines for every KPI and begin shadow-mode operation in at least two districts. Prepare, with willing member states, a proposal for a prevention window within the PBF for the next review of its terms of reference.

First five years (to 2031). Take P3 live with a mediation link by 2029 and publish an independent evaluation by 2030, within the US$20–50 million planning range. Seek Security Council inclusion of shield capabilities and SOFA technology annexes in at least one new or renewed mandate, at the Council's discretion. Pilot the Pool register with at least five contributing states. Publish the warning-to-action rate and lead time in the Results Ledger (Part IX). The Secretary-General alone can act only through good offices, Secretariat standards, reporting and Article 99. Everything else requires the General Assembly, the Security Council or sovereign host-state decisions.

Measuring progress

TABLE VI-5 Part VI indicators: baselines, agreed international targets and Vision 2100 planning milestones (2030–2100 columns are proposed milestones, not agreed commitments)

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
State-based armed conflicts (member states; UCDP measures)	65, 2025, UCDP [23]	—	≤ 55	≤ 40	≤ 25	≤ 10
P3 median warning lead time (P3 Pilot Governance Board; P3 regional unit)	To be established in shadow mode, 2027–28	—	≥ 60 days (≥ 30 days by 2028)	≥ 90 days in all P3 regions	Standard practice	Standard practice
P3 warning-to-action rate (P3 Pilot Governance Board; regional organizations; DPPA)	To be established, 2027–28	—	≥ 85% in P3 (≥ 60% by 2028)	≥ 85% in 5 regions	Universal reporting	Universal reporting
PBF annual contributions (General Assembly; donors)	US$132.3m voluntary, 2025, PBF [209]; US$50m a year assessed approved from 2025, A/RES/78/257 [212]	— (US$500m a year is the PBF's funding target, not an agreed commitment [209][210])	≥ US$500 m	Prevention window ≥ US$1bn	Prevention a substantial share of peace spending	Prevention a substantial share of peace spending
Missions with a SOFA technology annex (Security Council; DPO)	0, 2026 (no standard template exists)	—	1	Majority of new missions	All missions	All missions
Peace Technology Pool pledges (member states; Secretariat)	0, 2026 (Pool not established)	—	≥ 5 states	≥ 30 states	Normal contribution channel	Normal contribution channel
Lethal autonomous or AI-enabled systems under the UN flag (Secretary-General; Security Council)	0, 2026 (policy not yet codified)	—	0, codified	0	0	0
Landmine and ERW casualties (mine action authorities; UNMAS)	6,279, 2024, Landmine Monitor 2025 [228]	—	≥ 25% below 2024	≥ 50% below 2024	≥ 90% below 2024	Near zero

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Women among P3 mediators and monitors (P3 Pilot Governance Board)	To be established, 2027–28	—	≥ 40%	≥ 45%	Parity	Parity

Note: Baselines carry one source and reference year each. P3 lead-time milestones are the absolute medians that Part XII and Appendix H also use. Women's share of senior mediation roles across the UN system is tracked in Part VIII; the P3 indicator above covers pilot staff and monitors only. The 2060 landmine milestone is a planning target added for this edition.

Corrective actions. Vision 2100 proposes the following. If the warning-to-action rate stays below 60% after two years, the P3 Pilot Governance Board reports why and changes thresholds or response windows before expansion. If lead time does not improve, the model and data mix are reviewed independently. If any host state reports misuse of data, operations in that state are suspended pending audit. If P3 spending tracks above the US$50 million ceiling, or shield costs exceed planning ranges by more than 25% at mission level, analysis and response are protected and hardware is cut first.

PART VII

VII

ECONOMIC DIGNITY AND REGIONAL PROSPERITY

Building the Future at Home: The Americas Compact and Regional Frameworks for Shared Prosperity

IN THIS PART

VII.1 Why economic dignity is the hinge of the system
VII.2 The Americas in 2026: where we are today
VII.3 What has been tried: documented precedents and honest results
VII.4 The Americas Compact: an operating model
VII.5 Adaptable regional frameworks
VII.6 How the compact model applies: three archetypes
VII.7 Risks, objections and alternatives considered

THE HINGE OF THE SYSTEM

Clean energy, compute and honest institutions matter to most people through one thing: a decent job close to home. Vision 2100 proposes an Americas Compact, a voluntary agreement among states delivered through the hemisphere's own institutions, so that no one has to leave home to have a future. It then offers adaptable frameworks, not one model, to every other region.

This part sets out the condition of the Americas in 2026, reviews what earlier regional efforts achieved, specifies the Americas Compact as an operating model, and adapts it for Africa, the Middle East and North Africa, Europe, Asia and the Pacific.

VII.1 Why economic dignity is the hinge of the system

VII.1.1 Where this part sits in the chain

Reliable clean energy (Part V) powers compute and digital public infrastructure (Part IV), which support education, health and accountable government (Parts VIII and IX), which make productive industry and formal jobs possible. Jobs are where the earlier links become visible in a household's life. Steady income gives people a stake in stability, in which mediation and prevention succeed (Parts III and VI); peace then protects the investments that sustain energy and industry. Financing (Part X) runs through every link.

If the jobs link fails, the earlier investments do not pay back and the later ones do not hold. A grid that powers no factory is a stranded asset; a sovereign AI node that trains no local engineers becomes an enclave; a ceasefire where young men have no prospect of work is fragile.

VII.1.2 The evidence on youth, informality and conflict risk

The International Labour Organization (ILO) reports that global youth unemployment fell to 13 percent in 2023, a 15-year low, with about 64.9 million young people unemployed [248]. The headline hides the larger problem. One young person in five (20.4 percent) was not in employment, education or training (NEET). The rate for young women (28.1 percent) was more than double that for young men (13.1 percent) [248]. More than half of young workers worldwide are informal, and in low-income countries about three in four have only self-employment or temporary paid work [248].

The ILO links this directly to conflict. The share of young people in conflict-affected areas struggling to start working lives rose from 2.9 percent to 4.6 percent over the two decades after 2002; the livelihoods of 57 million young people are at risk, and a lack of jobs can push them toward migration or extremism [249].

Informality is the wider form of the same problem. In its latest trend series (2004–2024), the ILO puts informal employment at 57.8 percent of all employment worldwide, rising from 12.9 percent in high-income to 88.3 percent in low-income countries [250]. In Latin America and the Caribbean, informality was 46.7 percent in the first half of 2025: 56 percent among young workers and 43 percent among adults, with youth unemployment nearly three times the adult rate [251]. Rates exceed 70 percent in Peru, Bolivia and Ecuador and are about 25 percent in Chile and Uruguay [252].

The joint United Nations–World Bank study *Pathways for Peace* (2018) found that grievances over exclusion from power, opportunity and security are central to mobilization toward violence, and that inclusion matters as much as growth for resilience [253][254]. It estimated that scaled-up prevention could save between US$5 billion and US$70 billion a year [253].

◆ DOCUMENTED POSITION Ambassador A-Baki has spoken to these themes in her own words. In her 20 August 2026 dialogue with the General Assembly, she tied the middle class to democracy, warning that a country that loses its middle class becomes poorer, loses democracy and lets corruption in, and said the UN should work with countries to identify their own problems so that the chance to create jobs and raise incomes is not lost [5]. She described migrants as people who have to leave because of wars and political decisions, with children suffering most [5].

VII.1.3 What the evidence does not say

Three limits matter. Poverty does not mechanically cause conflict; exclusion and blocked aspirations matter as much as income [253][254]. Jobs are not interchangeable: a formal job with social protection does more for stability than the same income earned insecurely. And causation runs both ways: violence destroys jobs as surely as joblessness feeds violence. Job programs must therefore be designed with security and justice programs, not in place of them (VII.4.3).

VII.2 The Americas in 2026: where we are today

VII.2.1 Central America: why people leave, and what they send home

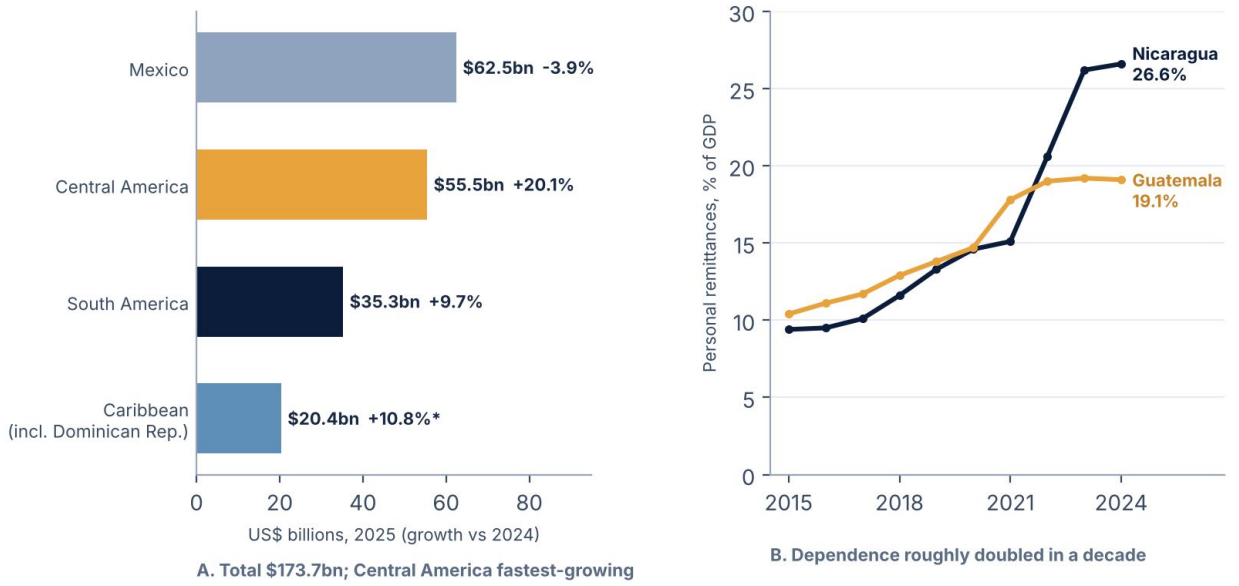
People leave Central America for intertwined reasons: low wages and informal work, violence and extortion in some communities, droughts and storms that ruin smallholder harvests, and family networks abroad. Vision 2100 treats migration as a human decision made under pressure, not as a threat. Migrants and their families are the principal actors in this story, not its problem.

Their remittances sustain whole economies. The Inter-American Development Bank (IDB) estimates that remittances to Latin America and the Caribbean reached a record US$173.7 billion in 2025, up 7.3 percent. Central America received US$55.5 billion (up 20.1 percent), Mexico US$62.5 billion (down 3.9 percent) and South America US$35.3 billion (up 9.7 percent) [78]. Growth was strongest in Honduras (27.1 percent) and Guatemala (18.7 percent), and slowed in the first quarter of 2026 to 9.1 percent for Central America [78]. IOM-compiled data put 2025 inflows at US$25.5 billion for Guatemala, US$12.2 billion for Honduras and US$10.0 billion for El Salvador [255].

Dependence has deepened (Figure VII-1). World Bank data, as republished, show personal remittances rising between 2015 and 2024 from 10.4 to 19.1 percent of GDP in Guatemala, 9.4 to 26.6 percent in Nicaragua, 17.5 to 25.7 percent in Honduras and 18.2 to 24.3 percent in El Salvador [256][257][258][259]. The International Fund for Agricultural Development (IFAD) uses a different frame: its *Sending Money Home 2026* report covers low- and middle-income countries only and puts their 2025 receipts at US$728.6 billion, more than four times global official development assistance [260][261]. On that low- and middle-income definition, IFAD estimates US$168.6 billion for Latin America and the Caribbean; because coverage and method differ, this book uses the IDB's US$173.7 billion as the regional figure [78]. According to IFAD as reported by the Caribbean Media Corporation, remittances in 2025 equalled about 30 percent of GDP in Honduras and 28 percent in El Salvador, and a study IFAD cites found that 61 percent of surveyed returnees to Guatemala had been their household's main earner [260]. These IFAD shares use 2025 estimates and are not directly comparable with the 2024 World Bank series.

FIGURE VII-1

Remittances to Latin America and the Caribbean, and rising dependence in Central America



Panel A: IDB estimates for 2025, published June 2026 [78]; the Caribbean bar is derived as the regional total minus the three named subregions and includes the Dominican Republic (US$11.9bn); its growth rate (*) is the IDB's Caribbean figure. Panel B: World Bank, World Development Indicators, personal remittances received (% of GDP) [256257].

Remittances are private money that funds food, school fees and medical care [262260]. In Honduras, 60 percent of recipient households save, against 9 percent of non-recipients, yet 59 percent lack a bank account and only about 10 percent of remittances go into accounts or digital wallets [263]. The Inter-American Dialogue study that reported these figures found that formalized savings are associated with a lower intention to migrate [263], which points to one Compact instrument: remittance-linked savings and investment products (VII.4.4).

Remittances are not a problem to be reduced; they measure family commitment, and how much opportunity is missing at home. The Compact's goal is that remittances become optional for household survival rather than essential, and that families can turn them into assets.

VII.2.2 South America: minerals, agriculture, energy and the Amazon

South America holds the hemisphere's largest stocks of critical minerals, farmland, fresh water and tropical forest. Argentina, Bolivia and Chile hold a large share of the world's identified lithium resources; Chile and Peru are among the leading copper producers (Part V).

The U.S. Geological Survey puts Brazil's rare-earth reserves at 21 million tonnes, second only to China's 44 million [264]. Reserves are not production, and processing is far more concentrated than either [264]. The region's challenge is not geology. It is capturing more of the value chain without repeating the damage of earlier extraction booms.

The Amazon shows that paying to protect forests can work, and that it is politically fragile. The Amazon Fund, created in 2008 and managed by Brazil's development bank BNDES, had received R$3.4 billion in donations by 2023, 93.8 percent from Norway; contributions were frozen from 2019 and resumed in 2023 [265]. Five more donors paid in about €100 million in 2024, and disbursement depends on Brazil showing that forest loss has slowed [266]. By mid-2025 the fund had approved R$5.6 billion across 133 initiatives over its life, with R$2.7 billion disbursed, and approved a record R$1.19 billion in the first half of 2025 alone [267].

◆ DOCUMENTED POSITION Ambassador A-Baki described the situation in the Andean region as very dangerous, linking Ecuador's decline to drug trafficking, organized crime and the cartels and noting that Peru faces the same problem; she called these regional threats that like-minded countries should address jointly, coordinated through the UN [5].

VII.2.3 The Caribbean: climate exposure, debt and tourism

Caribbean states face hurricanes that can destroy a large share of GDP in a day, high public debt in several states (much of it from rebuilding), and heavy dependence on tourism. According to an IDB projection reported by Caribbean National Weekly, Caribbean remittances would reach about US$20.9 billion in 2025, more than half to the Dominican Republic, or roughly 10 percent of subregional GDP [268]; the IDB's later estimate puts actual Caribbean growth at 10.8 percent and the Dominican Republic at US$11.9 billion [78].

For Caribbean states, Vision 2100 judges that the most valuable Compact instruments are probably not factories but climate-resilient infrastructure, debt instruments that pause payments after disasters, nature-linked finance, and digital public services for small administrations (Part IV, pilot P1).

VII.2.4 North America: nearshoring, trade frameworks and investment

The United States and Canada are the hemisphere's largest sources of capital, technology, demand and remittance income; Mexico is a major U.S. manufacturing partner and the region's largest remittance recipient [78]. Two trade frameworks shape the opportunity: the United States–Mexico–Canada Agreement (USMCA) and the Dominican Republic–Central America–United States Free Trade Agreement (CAFTA-DR). Their rules of origin, which set how much of a product must be made within the trade area to qualify for preferences, decide whether nearshoring brings deep supply chains or only final assembly.

The USMCA's first mandatory joint review took place on 1 July 2026. The U.S. Trade Representative stated that day that the United States did not agree to renew the agreement in its current form and that it remains in force pending resolution of the issues raised [269]. Under the agreement's review clause, as analyzed by White & Case, non-renewal triggers annual joint reviews until the parties agree to extend or the agreement expires on 1 July 2036 [270]; in October 2026 USTR opened public comment for the 2027 joint review [271]. For investors weighing nearshoring, this adds a period of rules uncertainty. Rules of origin also matter further south: when companies announced Central American sourcing commitments in 2023, analysis cited in reporting found that shifting more textile production to the region would require trade-policy changes, including to rules of origin [272].

Vision 2100 takes no position on any state's trade or immigration policy. The Compact is designed to work across policy settings and to give each participant something it values: for northern partners, stable neighbors, secure supply chains and orderly migration; for southern partners, investment, industry and dignity.

VII.3 What has been tried: documented precedents and honest results

The Americas are not short of plans. They are short of plans that were sustained, measured and finished (Table VII-1).

TABLE VII-1 Documented regional precedents, their results and lessons for the Americas Compact. Sources as cited in each row; results for the Partnership for Central America are self-reported.

Precedent	What it did	Documented results	Lesson for the Compact
Partnership for Central America / Call to Action (2021–)	Mobilized private commitments for Guatemala, Honduras, El Salvador	US$5.2bn+ committed by March 2024; 70,000+ jobs reported; ~US$650m deployed by Feb 2023 [273][274]	Commitments are not disbursements; verify independently
Alliance for Prosperity plan (2014–)	Northern Triangle governments' plan with IDB support; U.S. strategy funding	US$1.4bn U.S. appropriations FY2016–17; GAO found limited information on progress [275][276]	Multi-year, cross-administration finance and measurement
Amazon Fund (2008–)	Results-based payments for reduced deforestation via BNDES	R$3.4bn donated by 2023; frozen 2019–22; R$5.6bn approved by mid-2025 [265][267]	Works, but needs political durability
Plan Colombia (2000–)	U.S.–Colombian security, counternarcotics and institutional program	Homicides −35%, kidnappings −90% (2000–07); coca +15% (2000–06) [277]	Match security gains with rural development and rights safeguards
Maquila and nearshoring	Export assembly under trade preferences	Large formal job creation; often low value added	Move up the value chain; rules of origin decide depth

VII.3.1 Partnership for Central America

The Call to Action for Northern Central America, launched in May 2021 with the Partnership for Central America, reported more than US$5.2 billion in private commitments and more than 70,000 new jobs by March 2024 [273]. An earlier fact sheet reported about US$650 million deployed by February 2023 against US$4.2 billion then committed, and a 2027 target of 460,000 jobs and income opportunities [274].

It proved that firms will commit capital when convened with clear goals, but its results were self-reported, several of them projections, without published independent verification [273]. Vision 2100 proposes that the Compact require every pledge to enter a public results ledger (Part IX, pilot P5) that distinguishes *committed*, *disbursed*, *built* and *verified*.

VII.3.2 The Alliance for Prosperity plan

The Plan of the Alliance for Prosperity was announced in September 2014 by El Salvador, Guatemala and Honduras, drafted with IDB technical assistance as a five-year initiative to stimulate productive sectors, develop human capital, improve citizen security and strengthen institutions [275]. The three governments reported about US$2.8 billion of their own 2016 budget commitments to it, and the U.S. Congress appropriated US$750 million in FY2016 and US$655 million in FY2017 for its parallel U.S. strategy for Central America [275]. The U.S. Government Accountability Office later found that U.S. agencies had allocated about US$2.4 billion for 370 projects in the three countries over FY2013–2018, but had limited information on how the assistance improved prosperity, governance and security; results across reviewed projects were mixed [276].

The plan was owned by the region's governments, not designed abroad. Its weaknesses were continuity and measurement: donor conditions shifted with administrations, and outcome data was not collected consistently [275][276]. Financing and measurement must outlast any single government.

VII.3.3 Amazon Fund, Plan Colombia and the maquila model

The Amazon Fund (VII.2.2) shows that results-based nature finance can operate at scale through a national development bank, with payments tied to demonstrated reductions in deforestation; its 2019 freeze shows its dependence on political will in host and donor countries [265][266]. The Compact's proposed "paid to protect" instrument would add diversified funders and independent satellite verification.

GAO found that the United States provided about US$6.13 billion for Plan Colombia in fiscal years 2000–2008, about US$4.9 billion for Colombia's military and police. Homicides fell from about 26,540 in 2000 to about 17,200 in 2007 and kidnappings by more than 90 percent, but coca cultivation was about 15 percent higher in 2006 than in 2000, and GAO cautioned that security gains were not yet irreversible [277][278]. Some cite the plan as proof that sustained partnership can restore state authority; others as a warning about militarized approaches and abuses. The Compact draws a narrow lesson: security and opportunity must be delivered together, in the same places, with human-rights safeguards and a planned transfer to national institutions.

Export assembly plants (maquilas) created many formal jobs, often the first formal wage for young rural women, but showed the limits of assembly-only models: low value added and exposure to changes in trade preferences. Vision 2100 proposes that the Compact link nearshoring to skills, power and rules-of-origin strategy so that suppliers, engineering and design follow assembly.

VII.4 The Americas Compact: an operating model

VII.4.1 Problem, objective and the shape of success

The hemisphere's development efforts have been fragmented across donors, short-lived across administrations, and measured by money committed rather than lives changed. The objective Vision 2100 proposes for the Compact is to make formal, dignified work at home attainable for every young person in participating states, so that migration becomes a choice rather than a necessity.

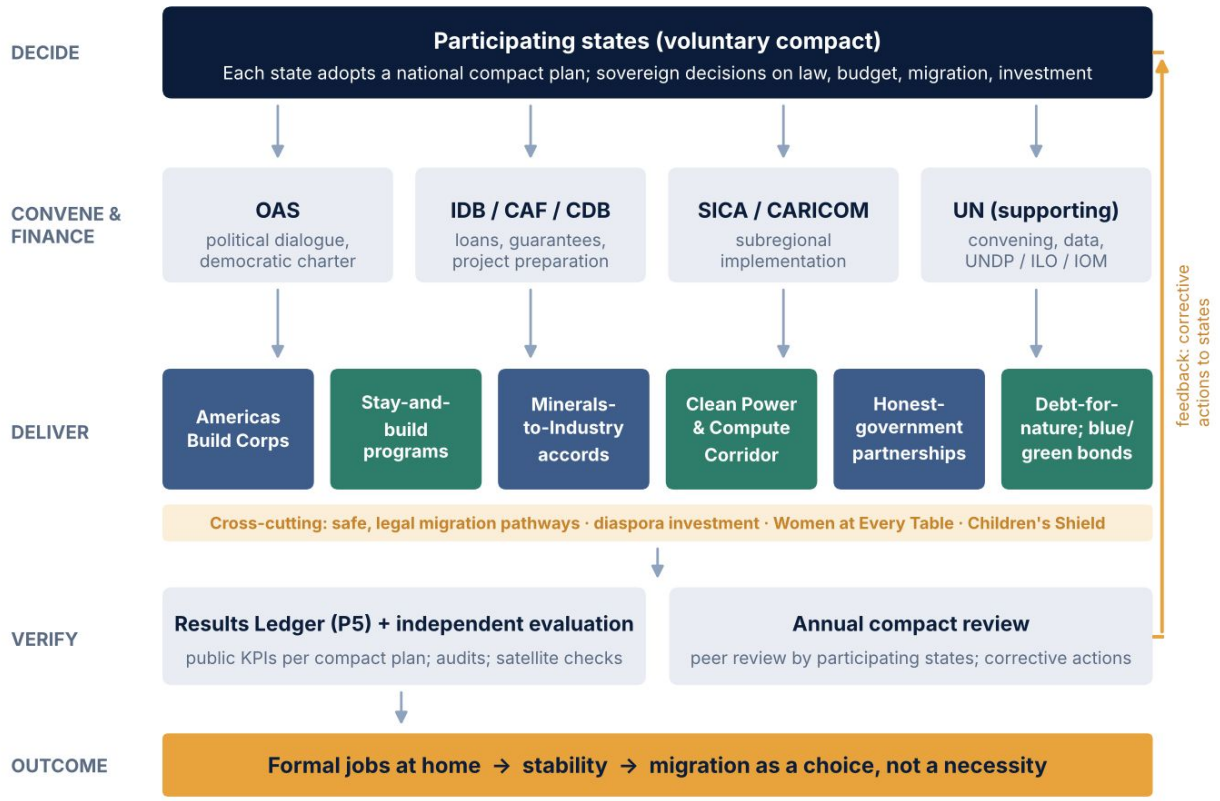
ILLUSTRATIVE Success might look like this. **By 2030 (end of FOUND):** a compact charter signed by a first group of states; stay-and-build pilots operating in selected municipalities; first Build Corps cohorts deployed; every Compact investment published in a results ledger. **By 2050 (within CONNECT):** youth informality in participating states falling toward the levels of the region's best performers; the clean power and compute corridor interconnected across several countries; mineral producers capturing materially more value. **By 2100 (SUSTAIN):** remittances a supplement rather than a lifeline; migration across the hemisphere safe, legal and chosen; the model adopted voluntarily elsewhere.

VII.4.2 Governance and decision rights

Vision 2100 proposes that the Americas Compact be a **voluntary compact among states**. It is not a treaty organization and creates no new bureaucracy. Each participating state adopts a national compact plan setting its own priorities, targets and safeguards. Existing institutions carry the work: the Organization of American States (OAS) for political dialogue; the IDB, CAF–Development Bank of Latin America and the Caribbean, and the Caribbean Development Bank (CDB) for finance and project preparation; the Central American Integration System (SICA) and the Caribbean Community (CARICOM) for subregional implementation. The United Nations plays a **convening and supporting role only**: the Secretary-General can convene, and agencies such as UNDP, the ILO and IOM can contribute data, technical assistance and delivery at the request of states. Figure VII-2 shows the proposed model and Table VII-2 the decision rights.

FIGURE VII-2

Americas Compact operating model (proposed)



PROPOSAL. Conceptual model; roles of named institutions are proposed and subject to their own governing bodies' decisions. No institution has agreed to them.

TABLE VII-2 **Americas Compact decision rights (proposed). Follows the Part III decision-rights matrix; no institution named has agreed to these roles.**

Decision	Who decides	Who supports	Formal instrument
Joining the Compact; national plan	Each participating state	IDB, CAF, CDB, UN country teams	Executive or legislative act, as national law requires
Lending, guarantees, project approval	Boards of IDB, CAF, CDB, World Bank	Participating states	Existing institutional mandates
Trade preferences, rules of origin	Parties to USMCA, CAFTA-DR, other agreements	Trade ministries, private sector	Existing agreements and their review processes
Migration pathways and visas	Sovereign national governments	IOM, ILO, employers	National law; bilateral labor agreements
UN convening and technical support	Secretary-General; agency heads within mandates	OAS, regional banks	Good offices; existing mandates
Results publication and review	Participating states collectively	Independent evaluators; Results Ledger (P5)	Compact charter

Following the Part III decision-rights matrix, the Secretary-General cannot create the Compact, assign tasks to regional banks, or change any state's migration law, but can convene, mobilize agencies within their mandates, and report publicly on progress.

VII.4.3 The six instruments

The original Vision 2100 statement (2026) named six commitments. Vision 2100 proposes turning each into an instrument with a defined design, owner and safeguard.

01 **Americas Build Corps.** Multi-year professional tours by engineers, nurses, teachers and technicians, recruited across the hemisphere including the diaspora, working under host-country direction with a duty to train their replacements. Success is measured by local professionals left behind.

02 **Stay-and-build programs.** Place-based packages in the municipalities with the highest youth out-migration: employer-linked training, small-business finance, community security and basic services, delivered together. The headline indicator is the share of young people who say they can build a future where they live, alongside measured employment and income.

03 **Minerals-to-Industry accords.** Agreements among producing states, investors and buyers that stage local value addition (refining, then precursors, then components; Part V, pilot P4), with realistic timelines, skills programs, and environmental and Indigenous-consent standards. They do not mandate uneconomic processing.

04 **Clean Power and Compute Corridor.** Technology-neutral interconnected power (hydro, solar, wind, geothermal, storage and, where safety, licensing, IAEA safeguards, economics and public consent support it, small modular reactors) feeding industrial parks and sovereign AI nodes (Parts IV and V, pilot P2). Firm, affordable power is among the constraints investors most often cite for nearshoring and processing.

05 **Honest-government partnerships.** Open budgets, digital procurement and AI-assisted audit attached to every Compact investment (Part IX). AI flags anomalies; accountable people decide; every flag can be appealed.

06 **Paid to protect.** Debt-for-nature swaps and blue and green bonds that fund conservation and create fiscal space, verified by independent satellite monitoring and published results.

◆ DOCUMENTED POSITION Ambassador A-Baki has cited the Galápagos debt-for-nature swap, which she described as the first and biggest of its kind. As she stated it on 20 August 2026, the operation involved about US$1.6 billion, with about US$1.1 billion of debt reduction for Ecuador and about US$500 million for a conservation fund for the islands (Galápagos Forever) [5]. In the same dialogue she called for debt swaps on education and health to ease the debt burden [5]. These statements are her own; the "paid to protect" instrument above is a Vision 2100 proposal, not hers.

The official records describe the same operation in their own terms. Ecuador's Ministry of Economy and Finance reports that about US$1.628 billion of global bonds were bought back in May 2023, financed by a new US$656 million blue loan, reducing the stock of external debt by about US$972 million and generating more than US$450 million for marine conservation: over US$324 million in annual payments across 18.5 years plus an endowment projected to exceed US$227 million by 2041 [279]. The IDB, which provided an US$85 million guarantee alongside US$656

million of political-risk insurance from the U.S. International Development Finance Corporation, puts lifetime debt-service savings above US$1.126 billion and conservation funding at about US$323 million over 18.5 years [280]. The headline figures measure different things (face value repurchased, stock reduction, lifetime savings, annual payments versus endowment); Part X (X.4.8) sets out the full terms.

VII.4.4 Voluntary, safe and legal migration

States hold sharply different views on border enforcement, asylum, work visas, regularization and returns. Those positions are sovereign and legitimate, and this book does not choose among them. What can be said without taking sides is that a hemisphere in which people can find dignified work at home, and can migrate safely and legally when they choose to, serves origin and destination countries better than one in which the main routes are irregular and dangerous.

Vision 2100 therefore proposes that the Compact pair stay-and-build with three migration components, each a national decision:

- **Legal labor pathways.** Bilateral temporary and seasonal work agreements with fair recruitment, no fees charged to workers, portable skills certification and protections enforced by both governments, drawing on ILO fair-recruitment guidance.
- **Diaspora investment.** Low-cost remittance channels, remittance-linked savings accounts, diaspora bonds and matching funds for diaspora-owned businesses at home, supported by the Honduran evidence on savings and migration intention [263]. Transfer costs matter: according to IFAD's 2026 report as reported by the Caribbean Media Corporation, digital transfers cost about 4.6 percent on average against 7.3 percent for non-digital services [260].
- **Return and reintegration.** Recognition of skills gained abroad, access to Compact training and finance, and protection from stigma for those who return.

The guiding principle, stated in the original Vision 2100 statement (2026), is choice: no one should have to leave home to have a future, and anyone who does leave should be able to do so safely, lawfully and with dignity.

VII.4.5 Financing

ILLUSTRATIVE The Compact would be financed mainly through existing channels, not a new fund: development-bank lending reprioritized toward national plans; private investment reported as disbursed and verified; grants limited to Build Corps stipends, stay-and-build social components, preparation and evaluation; and nature-linked debt operations where debt profiles allow. As an order-of-magnitude illustration only: if each stay-and-build municipality required US$15–40 million over five years, 30 pilot municipalities would require roughly US$0.5–1.2 billion, a fraction of one year's remittances to Central America [78]. The P2 corridor and P4 minerals pilot follow the canonical ranges in Parts V, X and XII: for P2, US$1.5–4.0 million of first-year preparation, US$15–40 million of studies and pre-development (2026–2029) and US$0.5–2.0 billion of phase-one construction, project-financed, with a decision around 2029 and counted in PROVE; for P4, US$1.0–3.0 million of first-year preparation, US$10–25 million of studies and preparation, and US$0.3–1.2 billion for a first processing plant (PROVE). These are planning assumptions; no funding is committed.

The principle: grants pay for what markets will not (public goods, preparation, verification), concessional finance de-risks what markets might, and private capital does the rest.

VII.4.6 Workforce

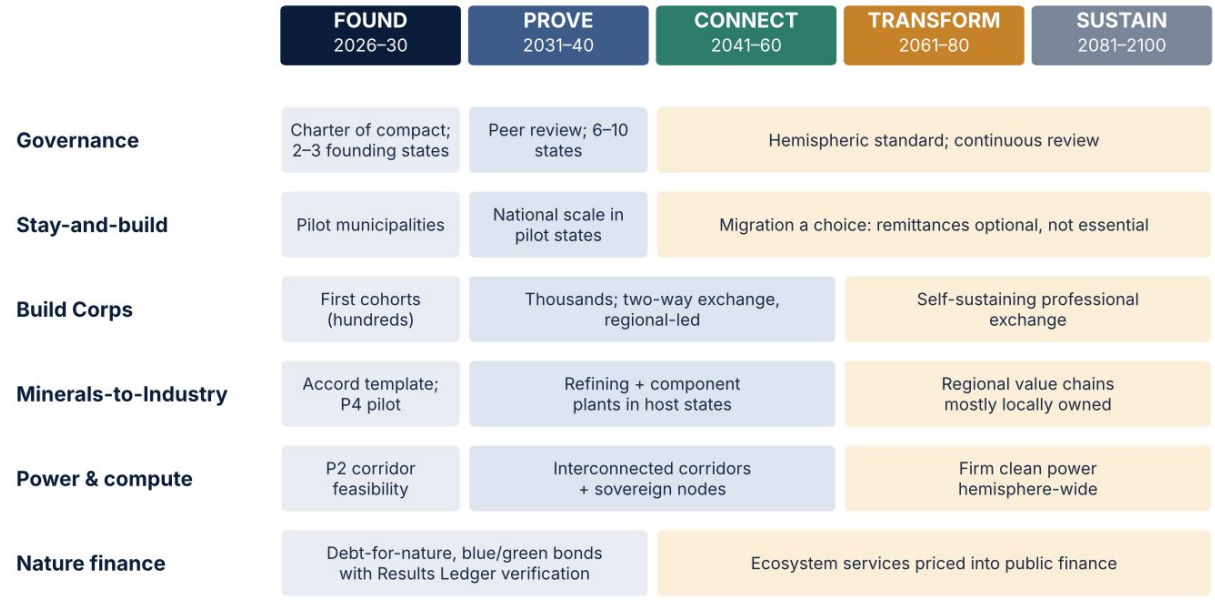
The binding constraint is skilled people: electricians, process technicians, nurses, teachers, engineers and auditors. Vision 2100 proposes treating the Build Corps as a bridge; the lasting

solution is national training pipelines linked to real employers, with credentials portable across participating states. Women's participation is a design requirement: young women's NEET rate is more than double young men's [248], and Part VIII sets out the education and care measures that make participation possible.

VII.4.7 Sequencing across the horizons

FIGURE VII-3

Americas Compact sequencing across the five horizons



ILLUSTRATIVE — planning assumption. Scale and timing depend on decisions by participating states and institutions.

ILLUSTRATIVE Vision 2100 proposes the sequence shown in Figure VII-3. FOUND (2026–2030) is about proof, not scale. PROVE (2031–2040) expands to national scale and admits members on evidence. CONNECT (2041–2060) interconnects power, compute and value chains. TRANSFORM (2061–2080) and SUSTAIN (2081–2100) keep the gains and pass the model on.

VII.5 Adaptable regional frameworks

The Americas Compact is a proof of concept, not a template to export unchanged. Each region has different needs and assets and its own institutions, which should lead (Table VII-3).

TABLE VII-3 **Adaptable regional frameworks (proposed): needs, assets, lead institutions and priority instruments. Vision 2100 proposal; each region's own institutions decide whether and how to adapt it.**

Region	Core needs	Core assets	Lead institutions	Priority instruments
Americas	Formal youth jobs; security; climate resilience	Minerals, clean power, water, market proximity	OAS, IDB, CAF, SICA, CARICOM	Full Americas Compact
Africa	Jobs for a fast-growing youth labor force; energy access; industry	Minerals, solar, young population, continental market	African Union, AfCFTA Secretariat, AfDB	Minerals-to-Industry; corridors; skills

Region	Core needs	Core assets	Lead institutions	Priority instruments
Middle East & N. Africa	Youth and women's jobs; reconstruction; water	Capital, energy, logistics hubs	League of Arab States, GCC, IsDB	Reconstruction compacts; water-energy nexus
Europe	Ageing workforce; energy security	Capital, technology, institutions	EU, EIB, EBRD	Partnership; legal pathways; co-investment
Asia	Moving up the value chain; South–South cooperation	Manufacturing depth, technology, scale	ASEAN, ADB, AIIB	South–South industrial partnerships; skills
Pacific / SIDS	Climate survival; finance access; connectivity	Ocean, culture, regional solidarity	Pacific Islands Forum, CARICOM, AOSIS	Ocean economy; climate finance; P1

VII.5.1 Africa

Africa's challenge is scale. Sub-Saharan Africa's youth labour force is projected to grow by 72.6 million between 2023 and 2050, and informality is about 86 percent [249][281]. The African Continental Free Trade Area (AfCFTA) entered into force on 30 May 2019, trading began on 1 January 2021, and 50 states had ratified it by September 2026 [282][283].

◆ DOCUMENTED POSITION Ambassador A-Baki has said that the minerals the world will most need are those Africa has, that investment should go especially to Africa given its resources, and that Africa's problems must be solved together [5].

Vision 2100 proposes an African framework led by the African Union and anchored in the AfCFTA market, which makes regional value chains viable: Minerals-to-Industry (processing copper, cobalt, lithium and graphite closer to the mine), Clean Power and Compute Corridors (energy access remains the foundational constraint; Parts I and V), and skills pipelines at scale, with a Build Corps equivalent drawing first on Africa's own diaspora and universities.

VII.5.2 Middle East and North Africa

In the Arab States and North Africa, more than one in three economically active young people were unemployed in 2023, and fewer than one in ten young women were employed [249].

The region combines Gulf states with large capital surpluses and states facing reconstruction and acute water stress. Vision 2100 proposes a framework that would emphasize reconstruction compacts tying investment to verified delivery; the water-energy nexus (pilot P3 links water stress to early warning); and employment for young women. Gulf sovereign funds can co-invest on commercial terms under the same transparency rules. Anything touching active conflicts follows Part VI's prevention model and takes no sides.

VII.5.3 Europe

Northern America and Europe (excluding Eastern Europe) host almost half of the world's international migrant workers [281].

Vision 2100 proposes that Europe act primarily as a partner: an ageing workforce, energy-security priorities and the EIB and EBRD give it reasons to co-invest in clean power and processing in Africa and Latin America, and in legal labor pathways agreed with origin states. The EuroLat parliamentary assembly offers an existing Europe–Latin America channel; Ambassador A-Baki has recalled that it was created while she presided over the Andean Parliament [5].

VII.5.4 Asia

Asia and the Pacific received about US$384.9 billion in remittances in 2025, 53 percent of the global total [261]; South Asia's informality is about 86 percent [281].

Vision 2100 proposes an Asian framework that would emphasize South–South industrial partnerships, in which experienced manufacturing economies co-invest in and transfer skills to less industrialized ones in Asia, Africa and Latin America, with partners such as the ADB and AIIB. Vision 2100 is neutral on geopolitical competition and welcomes investment from any source that meets the same transparency, labor and environmental standards.

VII.5.5 The Pacific and small island developing states

In 2024 remittances were about 38 percent of GDP in Tonga and 26 percent in Samoa [284]. Pacific Islands Forum leaders endorsed the 2050 Strategy for the Blue Pacific Continent on 14 July 2022; its seven thematic areas include resource and economic development, climate change and disasters, ocean and environment, and technology and connectivity [285].

◆ DOCUMENTED POSITION Ambassador A-Baki has called small island developing states a priority, noting that climate impacts hit such vulnerable places hardest, and said that resources for them need not come only from the UN: institutions and the private sector, working with the public sector, could provide them [5].

Vision 2100 proposes a Pacific framework led by the Forum around its 2050 Strategy: climate finance on terms small administrations can manage; the ocean economy (sustainable fisheries, marine protected areas, blue bonds); digital public infrastructure (pilot P1); and labor mobility that is fair to workers and does not drain islands of essential skills. The same logic applies to Caribbean SIDS through CARICOM and to AOSIS at the UN.

VII.6 How the compact model applies: three archetypes

The archetypes are composites. They are not real countries, and no country has agreed to anything described.

ILLUSTRATIVE **Archetype A: an advanced economy (a northern partner).** A high-income country with an ageing workforce, a large diaspora from the region and an interest in secure supply chains contributes concessional finance through development banks, political-risk cover for firms that nearshore with local suppliers, a fair-recruitment labor agreement and Build Corps professionals. It gains reliable suppliers, orderly migration channels and stable neighbors. Its risk is domestic backlash if the Compact is framed as aid or immigration policy; it is framed and measured as a supply-chain and security investment. KPIs: imports with verified local content; workers placed through fee-free pathways; placements that leave a trained successor.

ILLUSTRATIVE **Archetype B: an emerging economy (a mineral and energy producer).** A middle-income country with lithium or copper, strong hydropower and a partly informal young workforce centers its plan on a staged Minerals-to-Industry accord linked to a corridor and to technical institutes; Indigenous and local communities hold consent rights and benefit-sharing agreements. Risks are elite capture, damage to water supplies, and investor flight if local-content rules outpace costs; mitigations are a public ledger, independent water monitoring and local-content targets tied to productivity milestones. KPIs: value added per tonne exported; formal processing jobs; water-quality compliance; royalties reaching producing regions.

ILLUSTRATIVE **Archetype C: a small or resource-constrained nation (a Central American or island state).** A lower-middle-income country where remittances exceed a fifth of GDP and climate shocks recur concentrates on stay-and-build in high-out-migration municipalities, digital public

services (P1), resilient infrastructure partly financed by a debt-for-nature or debt-for-resilience operation, and diaspora investment products. Risks are thin administrative capacity, debt vulnerability and violence; mitigations are delivery through SICA or CARICOM, disaster-pause clauses in debt, and security and jobs delivered together. KPIs: youth formal employment in pilot municipalities; young people who say they can build a future at home; households with formal savings; days to restore services after a disaster.

VII.7 Risks, objections and alternatives considered

Table VII-4 sets out the principal risks and the safeguards Vision 2100 proposes.

TABLE VII-4 Americas Compact: principal risks and proposed safeguards

Risk	How it could happen	Safeguard
Dependency	Grants crowd out national effort; Build Corps substitutes for local hiring	Grants limited to public goods and preparation; every placement trains a successor; time-bound support
Elite capture	Contracts, mineral rents and land go to connected insiders	Open contracting; Results Ledger; independent audit; beneficial-ownership disclosure
Debt	Compact investment financed with unsustainable borrowing	IMF–World Bank debt-sustainability analysis; concessional and state-contingent instruments
Environmental damage	Plants and corridors harm water, forests or Indigenous lands	Free, prior and informed consent where applicable; independent monitoring
Political backlash	Compact seen as interference, aid giveaway or immigration program	Voluntary national ownership; mutual-interest framing; transparent results
Discontinuity	New governments abandon commitments	Charter with multi-year targets; regional institutions as custodians; cross-party briefings
Trade-rule uncertainty	Annual USMCA reviews or preference changes deter nearshoring investment	Diversify markets; design projects viable under several trade scenarios
Security failure	Violence and extortion deter investment and workers	Security and justice programs co-located with job programs; human-rights monitoring

Objections. Some argue that trade and private investment alone will deliver jobs; the precedents show capital comes when convened, but without coordinated power, skills, security and verification, commitments outrun delivery [273][274]. Others argue that development cannot reduce migration because rising incomes first let more people afford the journey. That is a serious point, and it is why the goal is choice, not a quota: success is whether young people *can* stay, not whether they are prevented from leaving. Others object that the UN has no role in hemispheric economic policy; Vision 2100 agrees it should not lead.

Alternatives considered. A new hemispheric fund (slow, duplicative of the IDB and CAF); a binding treaty (slow, uncertain ratification); bilateral programs only (fragmented and short-lived, as the Alliance for Prosperity record shows [276]); and security first (Plan Colombia shows gains are possible, but drivers persist without rural development [277]). A voluntary compact through existing institutions is preferred because it can start quickly, respects sovereignty, survives changes of government better, and makes results visible.

What begins now

This book recommends the actions below, which distinguish what A113 Partners can do independently from what requires partners, states or UN authority (Table VII-5). Under the conflict-of-interest firewall, A113 Partners and affiliates do not act as supplier, financier or transaction adviser to any pilot they help design.

First 30 days (November–December 2026). A113 Partners drafts a Compact concept note and charter outline, starts a public register of precedents and their verified results, and identifies regional research partners for evaluation design. No statement implies that any state or institution has agreed to anything.

First 90 days (by February 2027). With partners, A113 Partners holds informal technical consultations with interested governments, regional banks and private-sector groups; drafts a results framework aligned with ILO, IDB and World Bank statistics; and prepares a stay-and-build pilot design for illustrative municipality profiles.

First 180 days (by May 2027). The results framework is published for comment. Interested states, if any, indicate willingness to prepare national plans. A model Minerals-to-Industry accord (with Part V and P4) and a Build Corps operating manual are drafted. A113 Partners prepares a briefing for the Global Dialogue on AI Governance in New York (May 2027).

First year (to October 2027). Founding states, if they choose, sign a charter at a regional meeting they convene, with the OAS and regional banks invited. The Results Ledger (P5) begins publishing commitments. First pilot preparation is financed through existing project-preparation facilities. If a new Secretary-General chooses to support the Compact, the office can convene and ask agencies to align technical support within their mandates.

First five years (to 2031). Stay-and-build pilots operate in 20–30 municipalities; first Build Corps cohorts deploy; one P4 accord is signed and one P2 corridor reaches its construction decision (planned around 2029), with construction finance and the first processing plant counted in PROVE; at least one debt-for-nature or debt-for-resilience operation is linked to the ledger. An independent mid-term evaluation is published in 2029. At the FOUND–PROVE gate (2030–31), participating states decide whether to scale, modify or stop each instrument, and the Vision 2100 Steering Board decides whether Vision 2100 continues to support it; host governments retain sovereign decision rights throughout. Conversations open with the African Union, the Pacific Islands Forum and others on whether they wish to adapt the framework.

TABLE VII-5 **Who can act: what A113 Partners can do alone versus what needs partners, states, institutions or the UN**

Action	A113 Partners alone	Needs partners	Needs states / institutions / UN
Concept note, charter outline, precedent register	●		
Results framework and baselines	◐	● research partners	
Stay-and-build pilot design	◐	●	● participating states
Compact charter		◐	● states sign
Development-bank finance			● bank boards

Action	A113 Partners alone	Needs partners	Needs states / institutions / UN
Migration pathways			● national governments
UN convening and agency support			● Secretary-General; agency mandates

● leads or decides ◐ contributes

Measuring progress

ILLUSTRATIVE The KPIs apply to participating states unless noted (Table VII-6). The 2030–2100 columns are Vision 2100 planning milestones, to be set by participating states in their national compact plans; they do not replace any agreed international commitment. Where the 2030 milestone is less ambitious than the agreed target (remittance costs, below), the agreed target stands.

TABLE VII-6 Americas Compact and regional frameworks: KPIs, baselines, agreed targets and planning milestones. Milestones are ILLUSTRATIVE planning assumptions. The SDG 10.c remittance-cost target refers to the global average cost of sending US$200 (World Bank Remittance Prices Worldwide), not to the IFAD digital-cost average used as this table's baseline; the baseline is therefore indicative. The 2030 milestone for remittance costs matches SDG 10.c only for digital transfers and does not cover the target's 5 percent corridor ceiling. "Pilot states falling" in 2030 for youth informality is a direction, not a numerical target.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Youth (15–24) informality, LAC (states; ILO)	56%, H1 2025, ILO Labour Overview 2025 [251]	SDG 8.3: encourage formalization and growth of MSMEs (no numerical target)	Pilot states falling	≤40%	≤25%	≤10%
Youth NEET rate, women / men (states; ILO)	Global 28.1% / 13.1%, 2023, ILO GET Youth 2024 [248]; national to be established	SDG 8.6: substantially reduce youth NEET (target date 2020, lapsed)	Gap narrowing	Gap halved	Parity	Parity
Young people in pilot municipalities who say they can build a future at home (states; independent evaluators)	To be established, 2027 baseline survey	—	+10 points	+25 points	Majority	Large majority
Remittances, % of GDP, Central American participants (central banks; IDB)	GT 19.1%, HN 25.7%, SV 24.3%, NI 26.6%, 2024, World Bank WDI as republished 256257258259	—	Monitored, no target	Falling as incomes rise	Supplementary	Optional for household survival

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Remittances saved formally in accounts or wallets (states; IDB)	Honduras ~10%, 2023, Inter-American Dialogue survey [263]	SDG 8.10: expand access to banking and financial services (no numerical target)	25%	50%	75%	Universal access
Average cost of digital remittances (regulators; providers)	~4.6%, 2025, IFAD *Sending Money Home 2026* as reported [260]	SDG 10.c: transaction costs below 3%; no corridor above 5%, by 2030	≤3%	≤2%	≤1%	Negligible
Compact commitments disbursed and independently verified (Results Ledger, P5)	To be established, 2027	—	100% published; ≥50% verified	≥80% verified	≥90% verified	Standard practice
Domestic value added per tonne of mineral exported, P4 states (states; investors)	To be established, at P4 feasibility	—	Accord signed; plant decision taken	First plant operating; ×2	×4	Mostly local value chains
Labor migrants on legal pathways paying zero recruitment fees (governments; ILO; IOM)	To be established	SDG 10.7: safe, orderly, regular migration (indicator 10.7.1, recruitment cost)	Pilot agreements	Majority	Norm	Norm
Regional frameworks adopted voluntarily outside the Americas (AU, PIF, other regional bodies)	0, 2026	—	1–2 dialogues	2 operating	4–5	All that choose

The Results Ledger (P5) publishes all indicators. If an indicator stalls for two consecutive annual reviews, the compact review must publish a corrective-action plan or retire the instrument.

PART VIII

VIII

WOMEN, CHILDREN AND HUMAN DEVELOPMENT

Every Generation Counted: An Intergenerational Strategy for Women, Children and Human Development

IN THIS PART

VIII.1 Why this part tests every other part
VIII.2 Women at Every Table
VIII.3 Mothers and newborns: health systems inside the chain
VIII.4 Water, sanitation, food and nutrition as foundations
VIII.5 Protecting children in conflict
VIII.6 Education: teachers first, with a learning companion
VIII.7 Youth, skills and women in the digital economy
VIII.8 Risks, objections and safeguards
VIII.9 The road to 2100

VIII.1 Why this part tests every other part

In the Vision 2100 systems chain — energy, compute, education and health, industry, stability, peace — women and children are not a separate link. They are the test of every link. A power corridor that bypasses the rural clinic has failed the test. A sovereign AI node that profiles children for advertising has failed it. A peace agreement negotiated without the people who will rebuild the villages has failed it too.

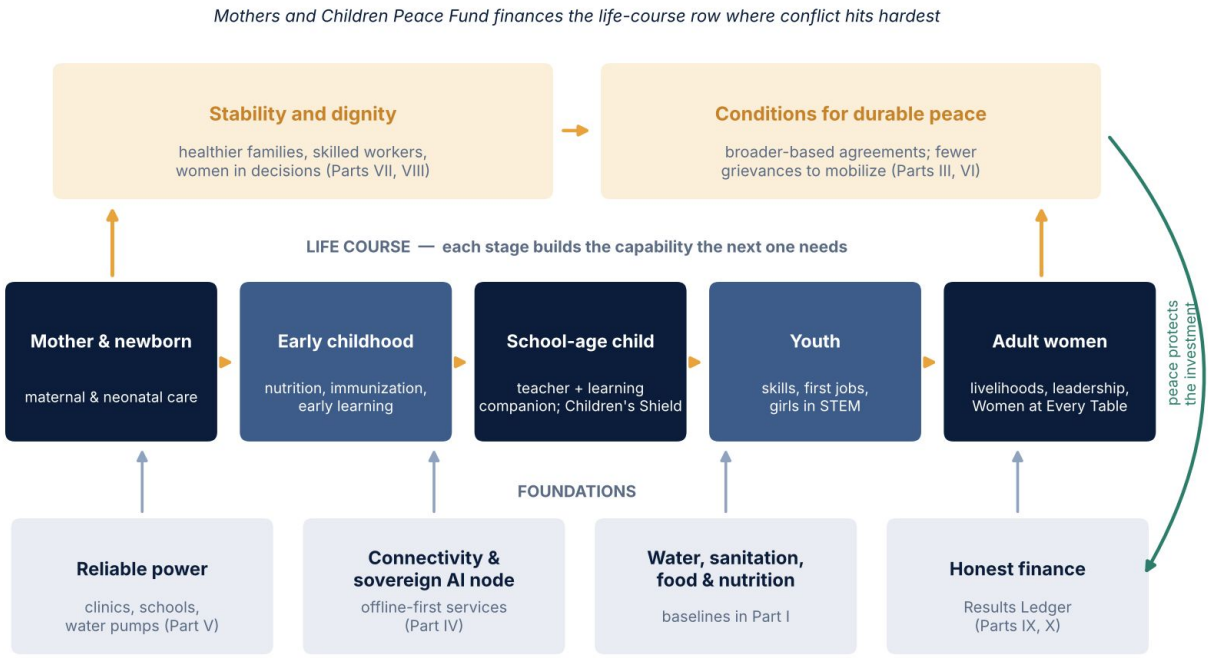
THE CENTRAL CLAIM

Human development is the return on every other Vision 2100 investment. Energy, compute, finance and diplomacy are justified only if a mother survives childbirth, her child learns to read, and her daughter has a voice when peace is negotiated.

◆ DOCUMENTED POSITION In her interactive dialogue with the General Assembly on 20 August 2026, Ambassador Ivonne A-Baki said that peace negotiations remain dominated by men, recalled that she was the only woman at the table during the Ecuador–Peru negotiations, and described women and children as those who suffer most from war. She said that, if she took on the role, her first priority would be the children; she linked economic stability for women to the realization of women's rights; and, answering a question on artificial intelligence and jobs, she said education everywhere will have to change. Later in the dialogue she suggested debt swaps for education and health to ease countries' debt burdens [5]. She did not set out detailed health, education or child-protection programs, and she did not propose mediation targets, the Children's Shield, the Mothers and Children Peace Fund or a learning companion. Everything below that goes beyond those statements is a proposal of Vision 2100, developed by A113 Partners; she did not propose it in her dialogue, and it is not a commitment she has made; she endorsed this book for publication on 2 November 2026.

FIGURE VIII-1

Human development in the Vision 2100 systems chain



ILLUSTRATIVE — conceptual architecture. Part references show where each foundation is developed.

Programs for women and children fail most often at the foundation row of Figure VIII-1: a midwife cannot run an incubator without power. Each program below therefore names its dependencies on Part IV (digital infrastructure), Part V (energy), Part VI (protection) and Part IX (institutions).

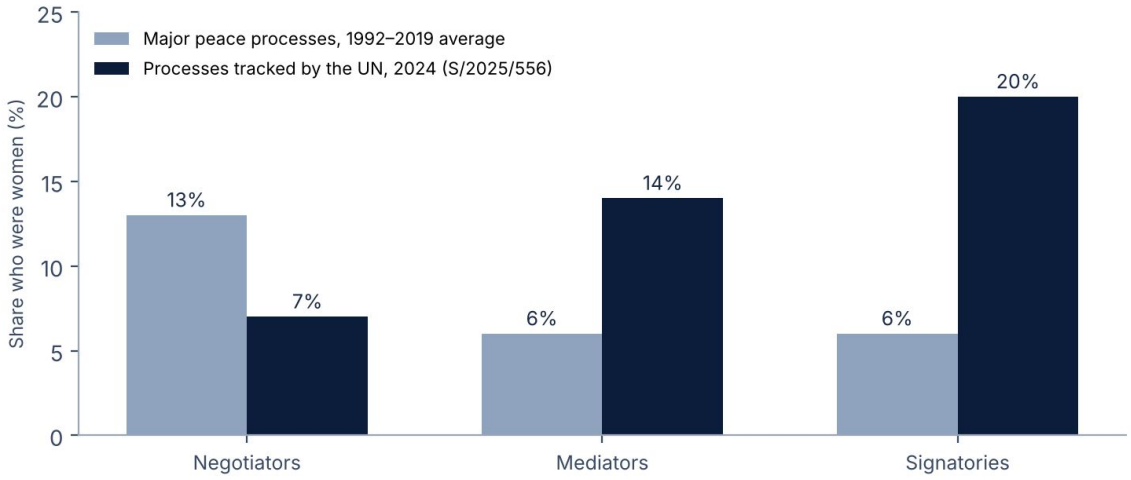
VIII.2 Women at Every Table

VIII.2.1 The problem and the evidence

Security Council resolution 1325, adopted in October 2000, called for women's equal participation in peace and security decision-making [286]. Participation remains low. Across major peace processes between 1992 and 2019, women were on average 13 percent of negotiators, 6 percent of mediators and 6 percent of signatories [287]. The Secretary-General's 2025 report on women and peace and security (S/2025/556, 5 September 2025) found that in 2024 women were on average 7 percent of negotiators, 14 percent of mediators and 20 percent of signatories of peace agreements; nearly nine in ten negotiation tracks had no women negotiators, and about two-thirds of mediation efforts had no women mediators [288][289]. The report notes that all three shares remain well below the United Nations' minimum benchmark of one-third: in 2023 the Secretary-General committed the Organization to advocate for at least one-third women among participants in mediation and peace processes, while working toward parity [288]. About 676 million women and girls lived within 50 kilometers of deadly conflict in 2024, the most since the 1990s, and conflict-related sexual violence rose by 87 percent over two years [288][289]. More than 100 countries have national action plans on women, peace and security, yet a UN Women survey found that 90 percent of local women-led organizations in conflict settings were in dire financial condition, and nearly half expected to close within six months [290].

FIGURE VIII-2

Women at the peace table: long-run average and 2024



Sources: CFR, Women's Participation in Peace Processes (1992–2019 averages for major peace processes) [287]; UN Secretary-General, S/2025/556, paragraph 24 (2024) [288]. The two series use different samples and are not strictly comparable.

Figure VIII-2 shows the gap. The 2024 mediator and signatory shares are higher than the long-run averages, but the negotiator share has fallen, and no category approaches one-third.

According to the International Peace Institute's 2015 study *Reimagining Peacemaking*, which drew on a comparative study of 40 peace and transition processes, as summarized by CFR and by IPI, processes that included women were associated with a 20 percent higher probability that an agreement lasts at least two years and a 35 percent higher probability that it lasts fifteen [287][291]. These are observational associations from a limited sample, not proof of cause. The case also rests on legitimacy, information (women's networks often know where weapons and grievances are) and implementation (returns, land and services are carried out by communities in which women are central).

VIII.2.2 Why existing approaches are insufficient

The WPS agenda has resolutions, national action plans and a UN entity. It lacks enforcement at the moment of decision. Sponsors pick mediators under time pressure, parties pick delegations, and a mediator who insists on inclusion risks losing access. Women's organizations are funded on short cycles that collapse during crises [290]. Participation is counted without consequence.

VIII.2.3 How Women at Every Table operates

Vision 2100 proposes Women at Every Table to convert the WPS commitment into an operating standard for every process the Secretary-General convenes or supports, and an offer — not a condition — to processes led by others. The proposal has five components.

01 **A standing, funded roster.** Senior women mediators, technical experts and gender advisers, maintained by the Department of Political and Peacebuilding Affairs (DPPA) with existing regional women mediator networks; pre-cleared and deployable within 72 hours.

02 **A Secretariat standard.** No mediation team convened by the Secretary-General deploys without women in senior roles, and every envoy's terms of reference include a written inclusion plan reported to the Results Ledger (Part IX).

03	**Targets with consequences, not imposed quotas on parties.** Discussed below.
04	**Practical support.** Travel, security, childcare, interpretation and secure communications for women delegates and advisers, budgeted from the first day.
05	**A local women's networks channel.** Structured, protected consultation with women's organizations in affected communities, with multi-year core funding through the Mothers and Children Peace Fund (VIII.5.3).

VIII.2.4 Quotas versus targets

According to UN Women's Policy Division Director, as reported by UN News, the Secretary-General's 2025 report calls for binding targets and quotas for women's participation [289]; the report itself states that temporary special measures such as gender quotas have proven effective in raising women's participation, and records that only one of the 2024 peace agreements it reviewed (South Sudan's) contained a gender quota [288]. For quotas: voluntary targets have existed for 25 years and the 2024 negotiator share was below the long-run average. Against quotas on parties: the UN cannot dictate a sovereign government's or armed movement's delegation, and parties may walk away or seat women without authority.

Vision 2100 recommends a split. Within its own authority — Secretariat mediation teams, envoys' offices, technical advisers, observer missions — the Secretary-General should apply a mandatory floor for women in senior roles, applied to new appointments from 2027, reaching at least one-third of senior team members by 2030 — the benchmark the Secretary-General already advocates [288] — and parity by 2040. The indicator is defined in the Measuring progress table and is the one used in Part XII and Appendix H. For party delegations, the UN should use targets backed by incentives: additional seats for delegations that include women, women's advisory bodies with formal access to the table, and public reporting of composition in the Results Ledger. Sponsoring states may adopt stronger requirements themselves.

VIII.2.5 Decision rights and financing

The Secretary-General can establish the standard, roster and reporting alone; the General Assembly decides assessed funding; the Security Council can mandate inclusion in missions; parties and sponsors decide their own delegations and terms.

ILLUSTRATIVE Assuming 150 senior roster members at a fully loaded $40,000–$80,000 each per year across retainers and deployments, plus a secretariat of 10–15 staff, a planning range is $8–15 million a year — within reach of a voluntary coalition of member states and foundations before any assessed contribution is sought.

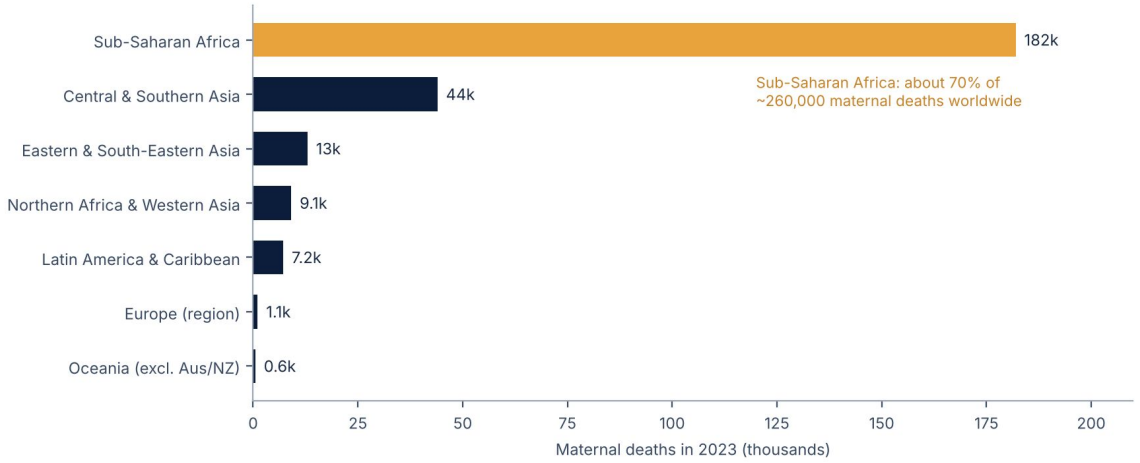
VIII.3 Mothers and newborns: health systems inside the chain

VIII.3.1 Where we are

About 260,000 women died from pregnancy- or childbirth-related causes in 2023, roughly one every two minutes. The global maternal mortality ratio was 197 per 100,000 live births, almost three times the SDG target of 70 by 2030. Maternal deaths fell by 40 percent from 2000, but the ratio has declined by only about 1.5 percent a year since 2016. Nearly 70 percent of maternal deaths occurred in sub-Saharan Africa (Figure VIII-3), and ratios in fragile or conflict-affected settings were more than five times those elsewhere [292][293].

FIGURE VIII-3

Maternal deaths by region, 2023



Source: WHO, UNICEF, UNFPA, World Bank Group and UN DESA, Trends in Maternal Mortality 2000 to 2023 (April 2025), key messages [292293]. SDG regions except "Europe," which the key messages report for the WHO European Region; Northern America is not reported separately in the key messages and is not shown. Australia and New Zealand: 11 deaths. Regional values to be confirmed against Table 4.2 of the full report before print.

The UN Inter-agency Group for Child Mortality Estimation (UN IGME) reported in March 2026 that about 4.9 million children died before age five in 2024, including 2.3 million newborns — nearly half of all under-five deaths. For the first time it estimated that more than 100,000 children aged 1–59 months died directly from severe acute malnutrition, likely an underestimate. The agencies caution that estimates are not directly comparable across rounds [58]. The previous round showed under-five mortality more than halved since 2000 but a 42 percent slowdown in the annual rate of reduction since 2015 [29418]. A child born in sub-Saharan Africa is about 18 times more likely to die before five than one born in Australia and New Zealand, and fragile and conflict-affected countries account for about a quarter of births but nearly half of under-five deaths [18].

The main causes — hemorrhage, hypertensive disorders, sepsis, prematurity, birth asphyxia, pneumonia, diarrhea and malaria — and their interventions are known [294]. The failure is delivery: an attendant who is present, a facility with power, water, oxygen and blood, a timely referral, and financing that survives donor withdrawal.

VIII.3.2 Electricity: the missing link between Part V and the delivery room

Energizing Health (WHO, World Bank, IRENA, SEforALL, 2023) found that close to 1 billion people in low- and lower-middle-income countries rely on health facilities with unreliable electricity or none; more than one in ten facilities in South Asia and sub-Saharan Africa have no access, and about 64 percent need urgent intervention. The World Bank estimated that about $4.9 billion is urgently needed to bring facilities in 63 countries to a minimal or intermediate standard [295296]. WHO reports that only about 40 percent of facilities in sub-Saharan Africa have reliable electricity [295].

Vision 2100 proposes treating clinic electrification as a first call on every Clean Power and Compute Corridor (Part V) and sovereign AI node program (Part IV): power sized for essential load (lighting, vaccine refrigeration, oxygen, ultrasound, incubators, communications), with remote monitoring and maintenance funded for ten years rather than one. The front-matter disclosure applies (the principal architect's employer manufactures batteries). The recommendation is technology-neutral: grid extension where reliable and cheaper, otherwise solar with any storage chemistry that meets safety, lifetime and local-maintenance requirements.

ILLUSTRATIVE The $4.9 billion is one-time capital. Assuming operations and maintenance at 2–3 percent of capital a year and battery replacement at year 8–12, 20-year lifetime cost is roughly 1.6–2 times that figure. Results-based contracts paying providers for verified uptime, logged in the Results Ledger, are the preferred structure.

VIII.3.3 Universal health coverage, telemedicine and AI-assisted diagnostics

Within universal health coverage, Vision 2100 proposes no new architecture, only three additions to national systems, financed in fragile settings by the Mothers and Children Peace Fund and elsewhere by domestic budgets and development banks.

- **Connected primary care.** Every powered facility receives connectivity for referral, supply management and teleconsultation, using the sovereign digital infrastructure in Part IV.
- **Telemedicine with accountable clinicians.** Community health workers and midwives can reach an obstetrician or pediatrician in real time; the remote clinician, licensed nationally, is responsible for the advice.
- **AI-assisted diagnostics with safeguards.** Decision support for prenatal risk screening, point-of-care ultrasound, newborn danger signs and childhood pneumonia can extend scarce expertise.

Under the proposal, safeguards are mandatory. Tools are validated on local populations, support a named clinician and never make an unreviewed decision. Patient data stay under national control (National AI Sovereignty Model); the UN Shared Layer sets standards but holds no health data. Tools are registered with national regulators, monitored after deployment and withdrawn if they fail, with WHO guidance on AI for health as the reference.

VIII.3.4 Archetypes

ILLUSTRATIVE *Advanced economy.* A health ministry with strong maternal outcomes offers clinician time for teleconsultation and shares validated diagnostic models under open licenses, with local revalidation, and funds a women's technician academy in a partner country. *Emerging economy.* A middle-income country with large rural disparities ties national health insurance payments to verified facility uptime and teleconsultation availability in its poorest districts, and integrates water and school meals into district budgets with results-based transfers. *Small or resource-constrained nation.* A small island state of about 100,000 people (the P1 archetype defined in Part IV) powers every outer-island clinic with solar and storage, trains young women as the technicians who maintain them, routes emergency obstetric referrals through one national telemedicine hub, and hosts patient records domestically through the P1 Sovereign Digital Nation pilot (Part XII).

VIII.4 Water, sanitation, food and nutrition as foundations

Part I sets the global baselines: in 2024, 2.1 billion people lacked safely managed drinking water and 3.4 billion lacked safely managed sanitation [44], and about 645 million people faced chronic hunger in 2025 [45]. The child mortality evidence confirms the mechanism: beyond the newborn period, pneumonia, malaria and diarrhea lead the preventable causes of child death, and safe water, sanitation and nutrition are among the proven interventions [29458].

Vision 2100 proposes four programs that place water and nutrition inside the systems chain.

- **WASH-in-facilities first.** Every clinic and school electrified under VIII.3.2 is assessed at the same visit for water, sanitation and handwashing, and the package is financed together. A delivery room with power but no water is not a functioning delivery room.

- **Powered water.** Solar pumping and treatment for community water points, built into corridor and node programs (Part V), with water-quality sensors reporting to district dashboards and maintenance funded in the contract. Small island and coastal states prioritize climate-resilient rainwater and renewable-powered desalination where saltwater intrusion threatens groundwater.
- **School meals as education and nutrition.** School feeding serves attendance and nutrition, and it is under acute pressure: UNICEF projected in September 2025 that donor funding for school feeding could be cut by more than half [297]. Procurement from local smallholders, especially women farmers, links meals to livelihoods.
- **Nutrition surveillance tied to early warning.** Growth monitoring at clinics feeds the human-led Prevention Early-Warning pilot (P3, Part VI). Rising wasting in a district is both a health emergency and a conflict signal.

VIII.5 Protecting children in conflict

VIII.5.1 The scale

The Peace Research Institute Oslo estimated that about 520 million children — more than one in five — lived within 50 kilometers of a lethal conflict event in 2024, the highest number recorded [35]. Landmine Monitor 2025 recorded 6,279 casualties from landmines and explosive remnants of war in 2024; 90 percent were civilians, and almost half of civilian casualties were children [228].

Security Council resolution 1612, adopted unanimously on 26 July 2005, asked the Secretary-General to implement a monitoring and reporting mechanism on grave violations against children and created a Council working group to review its reports [298]. The framework covers six grave violations: killing and maiming; recruitment and use; sexual violence; abduction; attacks on schools and hospitals; and denial of humanitarian access. The Secretary-General's annual report on children and armed conflict (A/80/723–S/2026/357, 16 June 2026) recorded 38,558 verified grave violations affecting 24,174 children in 2025 — the highest number of children affected since the mandate began some 30 years ago — against 22,495 children affected in 2024. Some 6,266 children were killed and 7,958 maimed, increases of 34 and 10 percent on 2024 (4,676 killed and 7,291 maimed); 7,990 of the children affected, about a third, were girls [299][300]. The report finds that government forces were responsible for a majority of grave violations; UN News reported this as the first time government forces led non-state armed groups [299][301].

VIII.5.2 The Children's Shield

Vision 2100 proposes a Children's Shield that strengthens the existing monitoring and reporting mechanism rather than creating a parallel one. The Shield is a Vision 2100 design developed by A113 Partners; no UN entity or member state has adopted it. Its purpose is to make attacks on schools, hospitals and water systems faster to detect, harder to deny and more costly to commit. This part sets its design; its protective technology is the Watch, Warn, Protect and Verify layers of the six-layer shield (Part VI), applied to the places children depend on.

- **Watch.** With host-state consent, schools, clinics and water facilities in conflict zones are registered as protected sites, with coordinates shared through deconfliction channels. Satellite imagery and community reporting detect damage.
- **Warn.** Human analysts — not algorithms — assess signals and alert UN country task forces, humanitarian coordinators and, where relevant, the parties.
- **Protect.** Non-lethal measures only: deconfliction notices, protective presence, evacuation planning, safe-school protocols and blast-resistant design for new construction.

- **Verify.** Every reported attack follows the mechanism's verification standard, with chain-of-custody evidence preserved for the annual report and accountability processes.

Under the Clear layer (Part VI), the proposal directs ordnance survey and risk education to target routes to schools and water points first [228]; clearance decisions remain with accredited human operators.

The Secretary-General controls the reporting mechanism; use inside missions requires Security Council mandates and host consent; site registration needs the parties' cooperation, and imagery agreements must ensure site lists cannot be used for targeting. More data will not stop a determined attacker. The Shield's value is deterrence through attribution, faster response and stronger evidence for accountability. It monitors places, not people.

VIII.5.3 The Mothers and Children Peace Fund

Vision 2100 proposes a Mothers and Children Peace Fund to finance maternal health, early childhood development, education continuity and family livelihoods where conflict hits hardest, plus multi-year core funding for local women's organizations. It is a pooled, multi-donor fund administered under existing UN fund-management arrangements, not a new agency. It complements the Peacebuilding Fund, Education Cannot Wait, the Global Financing Facility for Women, Children and Adolescents and the Women's Peace and Humanitarian Fund, and should begin as a funding window or coordination compact among them if that is cheaper than a new fund.

ILLUSTRATIVE The original Vision 2100 statement (2026) links the Fund to a peace dividend from leaner peace operations. Peacekeeping is financed by assessed contributions; savings return to member states unless the General Assembly decides otherwise. In a planning scenario, a 5 percent reduction in the 2025–26 peacekeeping budget of about $5.38 billion [38] would save roughly $270 million a year; if member states voluntarily redirected one-third, the Fund would receive about $90 million a year. Voluntary contributions, debt-for-development swaps (Part X) and philanthropy would supply the rest. A target of $500 million a year by 2030 is a planning ambition, not a projection.

Vision 2100 proposes three allocation rules: funds go where the gap between need and other financing is largest; at least 15 percent goes as flexible multi-year grants to local women-led organizations; and every grant reports outcomes publicly in the Results Ledger.

VIII.6 Education: teachers first, with a learning companion

VIII.6.1 Where we are

UNESCO estimates that 272 million children and youth were out of school in 2023, about 21 million more than the previous estimate, partly because of revised population data; countries were projected to be about 75 million off their combined national targets by 2025 [71]. According to UNESCO's Global Education Monitoring Report, as reported by *The Guardian* (Nigeria), at least 13 million more children in the ten most conflict-affected countries are likely missed by the data [302]; this figure has not been confirmed against the GEM report itself. Being in school is not learning: according to a 2022 World Bank and UNICEF simulation, the latest global estimate, about 70 percent of ten-year-olds in low- and middle-income countries could not read and understand a simple text, up from 57 percent before the pandemic, and 89 percent in sub-Saharan Africa [303].

Teachers are the binding constraint. UNESCO estimates that 44 million additional primary and secondary teachers are needed by 2030, 15 million in sub-Saharan Africa. Primary teacher attrition nearly doubled from 4.6 percent in 2015 to 9 percent in 2022, and replacing leavers accounts for

58 percent of the need. Low-income countries had 52 pupils per trained primary teacher in 2022, against 15 in high-income countries [304][305]. Financing is falling at the wrong moment: UNICEF projected in September 2025 that official development assistance for education would fall by $3.2 billion by 2026, 24 percent below 2023, and that an estimated 6 million more children could be out of school by the end of 2026 [297].

VIII.6.2 What the evidence says about technology in education

Three bodies of evidence matter. The first is negative. A randomized evaluation of One Laptop per Child in 318 rural Peruvian primary schools raised the computer-to-student ratio from 0.12 to 1.18 but found no effect on mathematics or language scores after 15 months [306]. The Global Education Evidence Advisory Panel's 2023 "smart buys" review rates investment in computer hardware alone as a "bad buy," and ranks teaching at the right level — grouping children by learning level rather than grade — as a "great buy" [307].

The second is positive and points to structured pedagogy: teacher guides, aligned materials, coaching and frequent assessment of foundational skills, which the same panel identifies as a key cost-effective approach [307]. Kenya's PRIMR pilot achieved a median effect of about 0.33 standard deviations across reading tasks in English and Kiswahili [308], and its national successor, Tusome, reached more than 22,000 schools and 3.3 million pupils; its implementer reports that the share of children meeting government reading benchmarks doubled within a year [309]. An independent endline evaluation by NORC at the University of Chicago (2019) found statistically significant gains on all early-grade reading subtasks in both English and Kiswahili, with Grade 2 English gains roughly equal to an additional year of schooling [310].

The third is new and thin. A World Bank randomized trial in Edo State, Nigeria, gave first-year senior secondary students six weeks of after-school tutoring with a GPT-4-based assistant under teacher guidance. It found gains of 0.23 standard deviations in English and 0.31 on a broader assessment that included digital skills [311]. It is one short trial and cannot by itself justify scale.

Technology works when it strengthens what a good teacher does and fails when it substitutes for teaching or is a hardware program.

VIII.6.3 The learning companion: design principles

Vision 2100 proposes a learning companion: an AI-supported tutor that works inside a teacher-led classroom. It is not "an AI teacher for every child." The proposed design rests on seven principles, and Figure VIII-4 sets out how its results would be measured.

01 **Teacher authority.** The teacher assigns, sees and can override everything, and gets a daily view of which children are stuck and on what. The companion never grades high-stakes assessments or decides promotion.

02 **Structured pedagogy first.** Practice is aligned to the national curriculum and a teacher guide, starting with foundational reading and mathematics. Open-ended conversation is limited and age-gated.

03 **Mother tongue and local language.** Early reading is taught in a language the child speaks, as ministries decide. Models for under-resourced languages are built with national institutions and native-speaker review, and owned under the National AI Sovereignty Model.

04 **Offline first.** Content and a compact model run on low-cost devices or a classroom server, synchronizing when a connection exists, with solar charging (Part V).

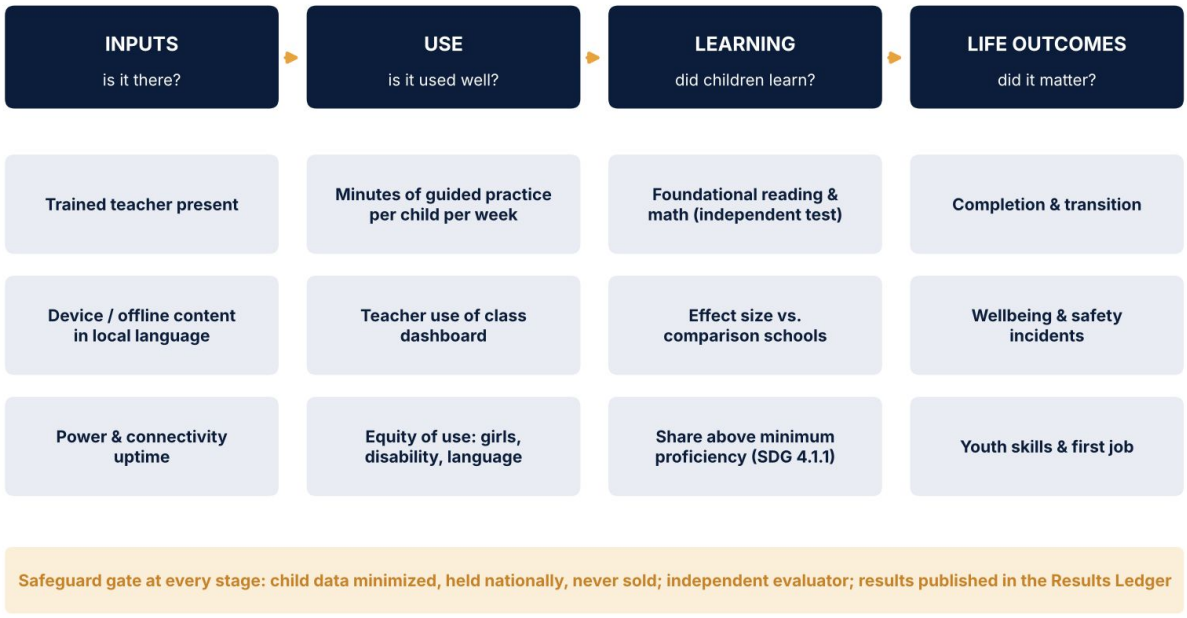
05 **Child safety by design.** No advertising, no engagement-maximizing features, no persuasion; content filtering reviewed by national educators; escalation to a responsible adult when a child discloses harm.

06 **Privacy and data sovereignty.** Data are minimized, held under national control, never sold, never used to train commercial models without lawful national authorization, and deleted on schedule. The UN Shared Layer publishes standards and audits; it holds no child data.

07 **Measured learning.** Success is independently assessed learning gains, not minutes of use.

FIGURE VIII-4

Learning-outcome measurement framework for the learning companion



ILLUSTRATIVE — Vision 2100 proposal. SDG 4.1.1 is the global indicator for minimum proficiency in reading and mathematics.

VIII.6.4 How it operates

The proposed architecture has four layers: the ministry (curriculum, languages, open procurement); the sovereign node (Part IV), which hosts and audits models; the school (a classroom server serving shared devices); and oversight (an independent evaluator and a child-safety board). Interoperability standards from the UN Shared Layer let ministries switch providers without losing content or data.

Workforce needs under the proposal: teachers trained on the dashboard (two to five days plus coaching), district technicians, curriculum and language specialists, and evaluators. The companion is introduced only where a teacher is present and paid; in crisis settings with no teacher it is a bridge run by trained, paid facilitators, never a substitute.

ILLUSTRATIVE The model adapts to setting. In a refugee camp, offline companions in the first and host languages support literacy in double-shift schools, with data held by the host education

authority so nothing reveals a family's location. In a two-teacher rural school without grid power, a solar classroom server lets the teacher group children by level. In an urban district with connectivity, the companion runs from the sovereign node for after-school practice and new-teacher coaching, with screen time capped.

ILLUSTRATIVE Cost planning assumes shared tablets at about $150, one per three children, replaced every four years (about $12.50 per child a year); a classroom server and solar kit at about $1,500 per class of 45 over six years (about $5.50); and content, models, support and teacher training at $5–15. The planning range is roughly $20–35 per child a year before evaluation, to be tested in pilots.

Curriculum, language, procurement and child-protection law are national decisions. The Secretary-General can convene, UNESCO and UNICEF can issue guidance, and the General Assembly can endorse common safety standards under the Global Digital Compact.

VIII.7 Youth, skills and women in the digital economy

The International Telecommunication Union estimates that in 2025, 77 percent of men and 71 percent of women used the internet — about 280 million more men than women — and that the gender parity score of 0.92 has not improved since 2019 [312]. About 2.2 billion people remained offline, 96 percent in low- and middle-income countries [313]. Women were only 35 percent of STEM graduates worldwide in 2018–2023, a share unchanged over ten years [314]. None of the global gender-equality targets is on track [315], and about 708 million women are outside the labor market because of unpaid care work [316].

◆ DOCUMENTED POSITION Ambassador A-Baki told the General Assembly that young people should be listened to and involved, and that artificial intelligence would bring other kinds of jobs that might be better ones [5].

Vision 2100 proposes linking youth employment to the industries the other parts create. Every Clean Power and Compute Corridor (Part V), Minerals-to-Industry project (Part V) and sovereign AI node (Part IV) should carry a workforce compact: apprenticeships with local technical colleges, a published target for the share of women trainees, and paid placements. The Americas Build Corps and stay-and-build programs (Part VII) are the regional model.

For girls and women, Vision 2100 proposes digital access programs that address device cost, online safety, literacy and norms, not only connectivity; STEM pathways from lower-secondary school with women mentors; childcare attached to training; and finance for women-owned enterprises in energy services, clinic maintenance and digital services. The internet parity score and women's share of STEM graduates become tracked indicators in every pilot country.

VIII.8 Risks, objections and safeguards

Table VIII-1 sets out the main risks and the safeguards Vision 2100 proposes.

TABLE VIII-1 **Principal risks of the Part VIII programs and proposed safeguards. Owners are the bodies best placed to act; none has agreed to these roles.**

Risk	How it could happen	Safeguard	Owner
Data exploitation of children	Learning or health data sold, profiled or used to train commercial models	National custody; minimization; no advertising; audited deletion; penalties	Ministries; regulators; Shared Layer audits
Screen dependence	Engagement-optimized design; unsupervised use	Session caps by age; no engagement features; teacher-set schedules	Ministries; providers

Risk	How it could happen	Safeguard	Owner
Teacher displacement	Budgets cut teachers on the promise of AI	Deploy only where teachers are paid; report teacher numbers alongside rollout	Finance and education ministries
Cultural imposition	Content and values from foreign providers	National curriculum ownership; local-language models; community review	Ministries; national institutions
Algorithmic error in health	Diagnostic tools fail on local populations	Local validation; clinician accountability; post-market monitoring	Health regulators
Tokenism at the peace table	Women seated without authority	Senior-role floors; advisory bodies with formal access; reporting of roles	DPPA; sponsors
Shield data misused	Site lists or imagery used for targeting	Access controls; deconfliction-only use; independent review	Secretariat; contributing states
Fund capture or corruption	Grants diverted	Results Ledger; independent verification; local-organization share	Fund board; Part IX mechanisms

Framing women chiefly as mothers or natural peacemakers would narrow their role; the case here rests on rights, legitimacy and evidence, and the programs treat women as negotiators, engineers, clinicians and leaders. Alternatives were weighed: a single global education platform would concentrate children's data and cultural authority, so the federated national model is preferred; pure hardware has repeatedly failed [306307]; and the Fund begins as a window among existing funds to avoid duplication.

VIII.9 The road to 2100

Table VIII-2 summarizes the sequence Vision 2100 proposes across the five horizons.

TABLE VIII-2 Proposed road to 2100 for women, children and human development (Vision 2100 planning milestones, not agreed targets)

Horizon	Women at Every Table	Mothers and children	Education and youth
FOUND 2026–2030	Roster and Secretariat standard; floor applied from 2027; one-third of senior roles in UN teams by 2030	Clinic power and WASH in pilot countries; Fund window opens	Companion pilots with independent evaluation in three archetypes
PROVE 2031–2040	Parity in senior roles of UN teams by 2040; party-delegation incentives tested	Sustained mortality declines in pilot countries	Scale only where learning gains are proven
CONNECT 2041–2060	Inclusion normal practice in regional mediation	Universal powered, connected primary care in participating states	Interoperable systems; local-language models for major languages
TRANSFORM 2061–2080	Women's leadership routine in security institutions	Preventable maternal and child deaths rare	Learning poverty near elimination where adopted
SUSTAIN 2081–2100	Standards maintained and reviewed	Gains defended against climate and conflict shocks	Continuous independent measurement; strong teaching profession

ILLUSTRATIVE A child born in 2026 turns 74 in 2100. If these programs succeed, her mother survives her birth in a powered clinic; she learns to read by eight in her own language with a teacher who knows where she is struggling; she trains as a technician or engineer; and if her country faces conflict, women like her help write the peace.

What begins now

The sequence Vision 2100 proposes (Table VIII-3) separates what A113 Partners can do alone from what needs partners or UN authority.

TABLE VIII-3 Proposed first actions, November 2026 to 2031. First-year actions align with Part XIII and five-year actions with Part XIV.

Period	Action	Who	Authority needed
30 days (Dec 2026)	Close remaining verification items (maternal regional tables; GEM out-of-school figure); see Appendix C	A113 Partners	None
30 days	Draft the learning companion safety and data standard as a discussion paper	A113 Partners with education and child-rights experts	None
90 days (Feb 2027)	Consult women mediator networks and UN Women on roster design	A113 Partners; network partners	Partner agreement
90 days	Map existing funds (PBF, ECW, GFF, WPHF) to test a Fund window versus a new fund	A113 Partners	None
180 days (Apr 2027)	Identify one ministry per archetype to co-design a companion pilot	A113 Partners; ministries	National decision
180 days	Package clinic electrification and WASH as first projects in P1 and P2	A113 Partners; development banks	National decision; lender approval
First year (to Oct 2027)	Secretariat inclusion standard and roster launch; DPPA baseline for women in senior mediation roles	Secretary-General; DPPA	SG authority; voluntary funding
First year	Children's Shield technical concept with the monitoring mechanism	Office of the SRSG for Children and Armed Conflict; UNICEF	SG authority; host consent
Years 1–5 (to 2031)	Companion pilots with randomized or matched evaluation; publish all results, including failures	Ministries; independent evaluators	National decision
Years 1–5	Fund window capitalized; first multi-year grants to local women's organizations	Donor coalition; fund administrator	Donor agreements; GA if assessed
Years 1–5	All pilot programs reporting in the Results Ledger (P5)	Program owners	Per Part IX

A113 Partners can convene experts, draft standards, verify evidence and identify willing partners; it cannot launch UN programs, commit member states or deploy without national consent. Under the conflict-of-interest firewall, it does not act as supplier, financier or transaction adviser to any pilot it helps design. Every action listed for the Secretariat is equally available to any Secretary-General.

Measuring progress

ILLUSTRATIVE Baselines are sourced. The 2030–2100 columns are Vision 2100 planning milestones proposed for deliberation, not forecasts, and they never replace an agreed international commitment. "Owner" names the body best placed to report, not one that has agreed to do so. Shared indicators (under-five deaths; women in senior mediation roles) use the same values as Parts I, II and XII and Appendix H; this part owns the definition of the mediation indicator.

TABLE VIII-4 Part VIII performance indicators: baselines, agreed international targets and Vision 2100 planning milestones

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Women in senior roles of mediation teams convened or led by the UN Secretariat (Secretary-General; DPPA)	To be established by DPPA in 2027; proxy: women 14% of mediators across all tracked processes, 2024, S/2025/556 [288]	— (SG advocacy benchmark since 2023: at least one-third women in mediation and peace processes [288])	≥ one-third	Parity (≥50%)	Parity	Parity
Women as share of negotiators in tracked peace processes (DPPA; sponsors)	7%, 2024, S/2025/556 [288]	— (same SG benchmark, advocacy only)	20%	35%	Parity range	Parity range
Maternal mortality ratio, per 100,000 live births (WHO; ministries)	197, 2023, MMEIG [292]	SDG 3.1: global ratio below 70 by 2030	≤150	<90	<40	<10
Under-five deaths per year (UNICEF; ministries)	4.9m, 2024, UN IGME (revised method; not comparable with earlier rounds) [58]	SDG 3.2: under-five mortality ≤25 per 1,000 live births in every country by 2030	≤4.0m	≤2.5m	≤1.2m	≤0.5m
Health facilities with reliable electricity, sub-Saharan Africa (ministries; Part V programs)	~40%, latest WHO estimate (fact sheet 2026) [295]	—	70%	95%	100%	100%
Children affected by verified grave violations (SRSG-CAAC; Security Council)	24,174, 2025, A/80/723–S/2026/357 [299]	—	Declining	<10,000	Rare	Rare
Children and youth out of school (UNESCO; ministries)	272m, 2023, UNESCO-UIS [71]	SDG 4.1: all girls and boys complete free primary and secondary education by 2030	<200m	<100m	<25m	Near zero
Learning poverty, low- and middle-income countries (World Bank; UNESCO)	~70%, 2022 (simulation), World Bank–UNICEF [303]	SDG 4.1.1: minimum proficiency in reading for all by 2030	<55%	<30%	<10%	<5%
Learning-companion pilot gain vs. comparison schools (independent evaluators)	To be established at pilot baseline	—	Positive, published	Sustained at scale	Maintained	Maintained
Internet gender parity score (ITU; ministries)	0.92, 2025, ITU [312]	SDG 5.b (no numeric target)	0.96	0.98–1.02	Parity	Parity

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Women's share of STEM graduates (UNESCO-UIS; ministries)	35%, 2018–23, UNESCO-UIS [314]	—	38%	42%	45–55%	45–55%
Fund share to local women-led organizations (Fund board)	To be established	—	≥15%	≥20%	≥20%	≥20%

Source: baselines as cited; agreed targets from the 2030 Agenda (A/RES/70/1). Note: the 2030 milestones for maternal mortality, under-five deaths, out-of-school children and learning poverty are less ambitious than SDG 3.1, 3.2 and 4.1 and reflect the custodian agencies' own evidence of slow progress; they show the minimum pace this book plans against and do not replace those commitments. The 2030 negotiator milestone is below the Secretary-General's one-third advocacy benchmark because party delegations are decided by the parties (VIII.2.4). Mediation indicator definition: share of women among senior members (envoy, deputy, lead mediator, senior adviser, head of technical team) of mediation teams convened or led by the UN Secretariat, counted by appointment and reported annually; a mandatory floor applies to new appointments from 2027.

Targets beyond 2030 are ILLUSTRATIVE planning ambitions to be set by member states. Corrective action: any pilot that does not show learning gains after two evaluated years is redesigned or stopped; any Fund grantee that fails verification loses funding; and any indicator off track for two consecutive Results Ledger reports triggers a published review.

PART IX

IX

HONEST INSTITUTIONS

Following the Money to the Outcome: The Results Ledger and Verifiable Public Accountability

IN THIS PART

IX.1 Where we are today: the cost and mechanics of corruption
IX.2 What works: documented precedents and their limits
IX.3 The Results Ledger: flagship pilot P5
IX.4 From "source of truth" to verifiable evidence
IX.5 Three archetypes
IX.6 Objections from governments, and alternatives considered
IX.7 From 2026 to 2100

THE PROPOSITION

Public money should leave a trail that anyone can follow, from the vote that approved it to the service it bought. Vision 2100 proposes a Results Ledger that connects appropriations, contracts, payments, independent inspections and outcomes. AI helps people find what deserves a closer look. It never decides who is guilty.

The original Vision 2100 statement (2026) titled this section "AI as the source of verifiable truth." That phrase gives a machine an authority no machine should hold. This Part keeps the ambition and corrects the framing. Truth in public finance is established by evidence, by independent people who check it and by processes that let the accused answer. AI can make that evidence cheaper to collect, faster to search and harder to hide. That is all this Part asks of it.

IX.1 Where we are today: the cost and mechanics of corruption

IX.1.1 What the evidence says about the cost

◆ DOCUMENTED POSITION In her General Assembly interactive dialogue on 20 August 2026, Ambassador A-Baki said in her opening statement that the world's failure on the SDGs is not one of ambition but of financial execution. Answering a question on why developing countries lack resources, she pointed to corruption, asked where the money goes and whom it serves, and said the United Nations must work extensively on corruption; later she added that countries must also have accountability and show real results. Several times she said that trust and results, more than money, are what allow finance to flow [5]. She did not propose a ledger or any specific accountability system; the Results Ledger described in this Part is a Vision 2100 proposal developed by A113 Partners.

Global estimates are large and uncertain: an IMF Staff Discussion Note (SDN/16/05, May 2016) cited an estimate of about $1.5 trillion to $2 trillion a year in bribery alone, roughly 2% of global GDP, an extrapolation by Daniel Kaufmann from his earlier 2005 estimate [317], and the UN Secretary-General in 2018 cited about $1 trillion in bribes plus $2.6 trillion stolen each year [318][319]. These are orders of magnitude, not measurements, and Vision 2100 builds no target on them.

Cross-country evidence is firmer. The IMF's April 2019 *Fiscal Monitor* found that the least corrupt governments collect about 4% of GDP more in tax than equally developed peers with the most corruption; Georgia's revenue rose 13 percentage points of GDP between 2003 and 2008 after reforms. The most corrupt emerging economies waste about twice as much on public investment as the least corrupt, and in more corrupt low-income countries education and health receive about one-third less of the budget [320].

Waste is not only theft. The IMF estimates that about 30% of the potential value of public investment is lost to inefficiency [321], now more than one-third, with strong governance able to close over half of that gap [322]. Poor selection, weak cost control and unfinished works matter as much as bribes, and a credible system must catch both.

Transparency International's Corruption Perceptions Index 2025, published on 10 February 2026, scored 182 countries and territories. The global average fell to 42 out of 100, its first decline in

more than a decade, and 122 scored below 50 [49323]. The index measures perception, not incidence, but it remains the most widely used baseline.

IX.1.2 Procurement: where public money meets private interest

Procurement is where public money meets private firms: about $11 trillion in 2018, some 12% of global GDP, by a World Bank estimate [324], or about $13 trillion by an Open Contracting Partnership and Spend Network estimate [325]. According to a 2023 OECD presentation, procurement accounts for roughly 12% of GDP and 30% of general government spending in OECD countries [326]; the OECD's *Government at a Glance 2025* updates this series to 2024, but its values could not be confirmed for this edition. In a 2016 study of 123 countries, low-income countries spent more of GDP on it (14.5% on average) than richer ones [327].

Of 80 countries assessed nationally under the 2016 PEFA framework, about 63% awarded more than 40% of contract value non-competitively [328]. As a norm, this removes taxpayers' main protection: price discovery through rivalry.

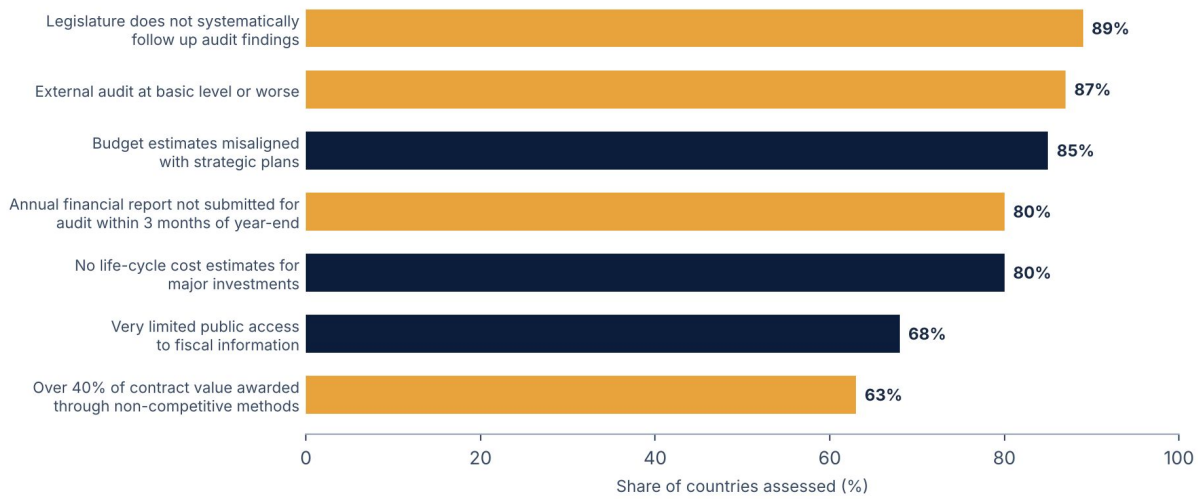
Procurement fraud takes familiar forms: inflated estimates, tailored specifications, split contracts, bid rotation, shell companies, post-award change orders and payment for unfinished work. Almost every one leaves a data trace if the data exist and can be linked. That is the core design insight of this Part.

IX.1.3 Weak public financial management

The Public Expenditure and Financial Accountability (PEFA) program, set up in 2001 by seven partners, assesses public financial management with 31 indicators in seven pillars [329330]. About 750 assessments were completed between 2005 and 2024, 560 of them public [329]. The 2022 global report, drawing on 80 national assessments, found the weakest areas were those that let money disappear after approval (Figure IX-1) [328].

FIGURE IX-1

Where public financial management most often fails



Source: PEFA Secretariat, Global Report on Public Financial Management 2022 (80 countries, national assessments under the PEFA 2016 framework). Gold bars mark audit and procurement weaknesses.

About 87% of the countries scored at a basic level or worse on external audit. In about 89%, the legislature did not systematically follow up on audit findings. In 68%, public access to fiscal

information was very limited. Only 4 of 80 evaluated service-delivery performance in most ministries [328]. The weakness lies after approval: tracking, auditing, follow-up and checking delivery.

IX.1.4 Where honest institutions sit in the Vision 2100 system

Honest institutions are not one link in the Vision 2100 chain; they are the wiring through every link. Clean Power and Compute Corridors and the Minerals-to-Industry Framework (see Part V) involve the largest contracts and royalties a developing country will manage. Sovereign AI nodes and digital public infrastructure (see Part IV) supply the ledger's data rails. Health and education (see Part VIII) depend on budgets that reach clinics and classrooms. Peace operations (see Part VI) need the same tamper-evident evidence for ceasefire verification. Financing (see Part X) costs less for governments that can prove where money went. The test for women and children is direct: when money leaks, maternal health, schools and water are usually the first services lost.

IX.2 What works: documented precedents and their limits

No single tool has ended corruption anywhere. Specific tools, combined and sustained, reduce opportunity and raise the odds of detection. Table IX-1 summarizes the precedents Vision 2100 builds on.

TABLE IX-1 Documented accountability precedents and their limits

Precedent	What it does	Documented result	Limit
Open Contracting Data Standard	Common data model across tender, award, contract, implementation	Used by 50+ governments [331]	Publication alone does not ensure use
ProZorro (Ukraine)	Mandatory e-procurement, open data, civic monitoring	Lower prices in several studies [332][333]	Gains vary by market; exemptions in wartime
PEFA and PIMA	Standard diagnostics of PFM and investment governance	750 PEFA, 190 PIMA-family assessments [329][322]	Diagnose; do not fix
Estonia's X-Road	Secure, logged data exchange between agencies	2.2 billion transactions a year [131]	Built on high trust and a small state
Participatory budgeting (Porto Alegre)	Residents help allocate local investment	Wider water and sewer coverage alongside the program [334]	Outcomes hard to attribute; depends on city politics
Digital benefit payments	Direct transfers to verified recipients	Government-reported savings (not verified here)	Exclusion errors; privacy concerns

Source: as cited in each row; see the Sources list.

IX.2.1 Open contracting and ProZorro

The Open Contracting Data Standard (OCDS), launched in 2014 with support from the World Bank and Omidyar Network and now stewarded by the Open Contracting Partnership [335][336], describes what to publish at four linked stages (tender, award, contract, implementation) tied by one open-contracting identifier. It has an infrastructure profile (OC4IDS) and is implemented by more than 50 national and subnational governments [331]. The Partnership's 2025 report counts 51 data publishers and eight robust mandates, including Ukraine, Ecuador and Thailand [337].

Ukraine's ProZorro is the best-studied case. Piloted in February 2015 as a volunteer and civil-society project hosted by Transparency International Ukraine and later transferred to the state [338], it became mandatory under the new public procurement law for central authorities and state-owned

enterprises from 1 April 2016 and for all remaining buyers from 1 August 2016 [339]. DOZORRO, a monitoring portal run by Transparency International Ukraine since 1 November 2016, lets citizens and bidders give feedback on buyers and tenders and report suspected violations [340]. A Center for Global Development paper (2019) associated it with savings 3.5 to 5 percentage points higher on larger contracts and five to six days faster contracting, while warning that the design was not cleanly causal [332]. A Kyiv School of Economics brief (2022) found competitive tenders about 5% cheaper than non-competitive purchases of the same goods, while noting that wartime rules moved purchases outside the system [333]. ProZorro shows that open procurement can lower prices and widen competition. It does not show that publication alone ends collusion.

IX.2.2 Beneficial ownership, diagnostics and supreme audit institutions

Beneficial-ownership registers close the gap shell companies exploit, though quality and public access vary. Public access is legally contested: on 22 November 2022 the Court of Justice of the European Union (Joined Cases C-37/20 and C-601/20, *WM and Sovim*) declared invalid the EU anti-money-laundering provision requiring that beneficial-ownership information be accessible to the general public in all cases, finding the interference with privacy and data-protection rights disproportionate; several member states then restricted public access [341]. This edition does not state how many countries now operate public registers, because no current count could be verified.

Vision 2100 proposes that the ledger check every contractor against a beneficial-ownership register where one exists, and otherwise collect ownership declarations at bid stage, published only to the extent national law allows; in jurisdictions affected by the 2022 ruling, access would follow the legitimate-interest rules that apply there.

Diagnostics are widely used but often unpublished: of 106 IMF Public Investment Management Assessments (PIMAs), 19 updates and 65 climate PIMAs, only about a third were published [322]. A confidential diagnostic cannot be used by citizens or parliaments.

This book recommends treating supreme audit institutions (SAIs), cooperating through INTOSAI, as the natural owners of independent verification. Their weakness lies less in auditing than in late reports and legislatures that do not act [328]. The proposed ledger is meant to make SAIs faster, not redundant, and to give every audit finding a public status: open, in remediation or closed.

IX.2.3 Participatory budgeting and digital payments

Participatory budgeting, in which residents help choose local investments, began in Porto Alegre, Brazil, in 1989. A World Bank case study reports household water and sewer connections rising from 75% in 1988 to 98% in 1997, and participation growing from under 1,000 people a year in 1990 to about 40,000 in 1999 [334]. The gains coincided with the program rather than being proven to result from it. Citizen choice works best when people can see afterward whether chosen projects were built; the ledger supplies that second half.

Digital payments cut leakage by paying verified recipients directly; India's direct benefit transfer system is the largest example. Government-reported savings are contested by independent researchers, who have also documented eligible people excluded by failed biometric authentication; this edition cites no figures because none could be verified. Vision 2100 therefore proposes that any ledger touching individual payments include an offline fallback and a fast human appeal.

IX.2.4 Estonia and geospatial verification

Estonia's X-Road, open-source software for signed, encrypted and logged data exchange, carries about 2.2 billion transactions a year across more than 3,800 e-services [131]. Its lesson is

architectural: agencies share data without pooling it centrally, and every access leaves a log. The Results Ledger adopts the same principle.

Satellite and drone imagery can confirm that a road or clinic exists and has progressed, but cannot judge concrete quality or whether a clinic has staff and medicine. Vision 2100 proposes using it as one input to verification alongside inspections and service-use data, never as a substitute.

IX.3 The Results Ledger: flagship pilot P5

IX.3.1 The problem it solves and why current approaches fall short

Vision 2100 proposes the Results Ledger as a public, standards-based record linking appropriation, contract, milestone, payment, independent inspection and outcome. It lets a citizen or legislator answer five questions in minutes: What was approved? Who was paid, for what? What was delivered? Who checked? What changed for the people served?

Today those answers sit in separate systems: budgets in the finance ministry, contracts in a procurement portal if one exists, payments in the treasury, inspections on paper, outcomes in a line ministry, audits a year or more later. Each system may be sound. Corruption lives in the joins: a payment with no milestone, a milestone with no inspection, a completed school with no pupils.

IX.3.2 Building on what the UN already has

On 31 March 2026 the General Assembly adopted, by 168 votes to 4, a UN80 resolution calling for a mandate registry, review clauses in new mandates and a formal Ad Hoc Working Group on Mandate Implementation Review from May 2026 [26]. The 2026 regular budget of $3.45 billion, approved on 30 December 2025, reflects a reduction in financial resources of about 15% and a staffing cut of nearly 19% under the UN80 proposals [342]. The Office of Internal Oversight Services (OIOS), established by resolution 48/218 B of 29 July 1994, provides internal audit, inspection, evaluation and investigation [343]. The Board of Auditors, created in 1946, has three members who head national supreme audit institutions [344]. The International Aid Transparency Initiative (IATI), launched in Accra in 2008, provides an open activity-data standard; in 2017 the Secretary-General committed the UN development system to publish through it [345].

Vision 2100 proposes that a UN Results Ledger serve as the public face of the mandate registry. Each mandate becomes an appropriation record, each program and contract a linked record, each review clause a scheduled verification event. OIOS and the Board of Auditors remain the independent verifiers; the ledger gives them a common evidence base without changing their mandates. For activity-level data, it reuses IATI rather than inventing a new standard.

IX.3.3 Data model

In the proposed design, the ledger records events, not opinions: signed, timestamped entries tied to a stable identifier. Table IX-2 sets out the core objects.

TABLE IX-2 Proposed Results Ledger data model: core objects, sources of record and open standards

Object	Key fields	Source of record	Open standard
Appropriation	Mandate or budget line, amount, purpose, outcome target, review date	Legislature or governing body	Mandate registry; budget classification
Contract	Buyer, supplier, beneficial owner, method, value, amendments	Procurement system	OCDS; OC4IDS for works
Milestone	Deliverable, due date, claimed date, evidence files	Implementing agency	OC4IDS implementation fields

Object	Key fields	Source of record	Open standard
Payment	Amount, date, payee, linked milestone	Treasury or UN finance system	IPSAS-consistent accounting; IATI transactions
Inspection	Inspector, method, findings, photos, geolocation	Engineer, SAI, OIOS, third-party monitor	Signed inspection record (to be defined)
Outcome	Service indicator, baseline, measured value, method	Line ministry, survey, administrative data	SDG indicator definitions where possible

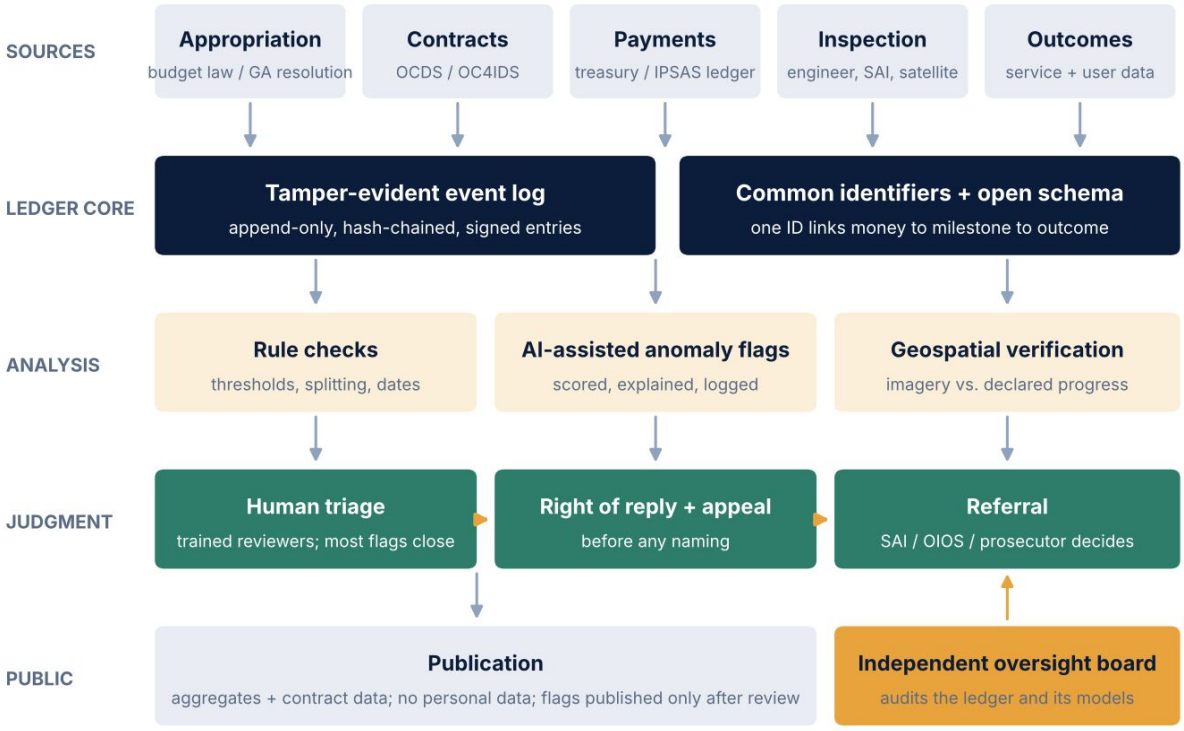
Source: Vision 2100 proposal; standards as named.

Vision 2100 proposes four rules to make the model useful. First, one identifier follows the money from appropriation to outcome. Second, no payment is final unless it links to a milestone, and no milestone closes without an inspection, except under a stated and logged exemption. Third, corrections are new entries, never edits. Fourth, personal data about individual beneficiaries never enter the public ledger, which holds aggregates and the records of organizations and officials acting in their public capacity.

IX.3.4 Reference architecture

FIGURE IX-2

Results Ledger accountability and verification architecture



Conceptual architecture, Vision 2100 proposal. OCDS = Open Contracting Data Standard; OC4IDS = its infrastructure profile; SAI = supreme audit institution; OIOS = UN Office of Internal Oversight Services.

The proposed architecture has five layers (Figure IX-2). Source systems stay where they are and remain authoritative. A tamper-evident log chains a cryptographic fingerprint (hash) of each

record to the one before, so later alteration is detectable. Periodic fingerprints of the whole log are held by independent custodians such as the SAI, a university and a civil-society monitor, so no single operator can rewrite history unseen. No public blockchain is needed: an append-only log with independent witnesses gives the same assurance at lower cost and is easier to correct lawfully.

The proposed analysis layer combines rule checks for known patterns (contracts just under thresholds, payment before signature, a supplier registered days before the tender), AI-assisted anomaly ranking against similar contracts (unit prices, win rates, change-order growth) and geospatial comparison of imagery with declared progress. Every flag carries plain-language reasons and a confidence score. The judgment layer is human: trained reviewers close most flags as explained and refer the rest to the body with legal authority to act.

IX.3.5 Pilot A: one UN program

Vision 2100 proposes that the UN pilot cover one Secretariat-managed program with physical deliverables, several contracts and measurable outcomes, such as a construction program, a mine-action program (see Part VI) or a mission's quick-impact projects. The pilot publishes the full chain publicly; OIOS validates the method; the Board of Auditors reports on it in its regular audit. Member states would see one mandate traced from resolution to outcome.

This book's reading, offered for legal review, is that publishing the Secretariat's own program data appears to fall within the Secretary-General's authority as chief administrative officer, subject to the information-disclosure policy and the Financial Regulations and Rules (to be confirmed by the Office of Legal Affairs). Extending it to funds, programmes and specialized agencies requires their governing bodies; making it system-wide or tying it to assessed budgets requires the General Assembly, through the Fifth Committee and the mandate-review working group.

IX.3.6 Pilot B: one national infrastructure program

Vision 2100 proposes that the national pilot cover one infrastructure program in a volunteer member state (rural roads, schools or water), small enough to finish within three years. The finance ministry, procurement authority and SAI would co-own it, and the P5 Pilot Governance Board for Pilot B would be chaired by the host government, with independent members; it governs the pilot's operations, while the Vision 2100 Steering Board decides only, at each gate, whether Vision 2100 continues to support the pilot. The host government retains sovereign decision rights throughout. The development bank financing the program provides the funding link, since its fiduciary rules already require much of the data. A domestic university or civil-society partner acts as independent witness. The UN role, through the UN Shared Layer (see Part IV), is limited to open standards, reference software and peer review. Data stay under national law on national infrastructure, on a sovereign AI node where one exists (P1, see Part IV).

IX.3.7 A sample accountability workflow

ILLUSTRATIVE The workflow follows one hypothetical rural water scheme from the vote that funds it to confirmation that people drink safe water (Figure IX-3).

FIGURE IX-3

From appropriation to verified outcome: one project through the Results Ledger



ILLUSTRATIVE workflow for a hypothetical rural water scheme. Navy steps are binding decisions; gold steps are independent verification gates.

01 **Appropriate.** The legislature approves a budget line for 40 village water schemes. The ledger issues a program identifier and records the outcome target, with a baseline from the latest household survey.

02 **Contract.** The water authority tenders and awards each scheme. Tender, bids, award, contract and the winner's beneficial owners are published in OCDS format under the program identifier.

03 **Log.** Each record is fingerprinted into the tamper-evident log; independent custodians receive the daily summary fingerprint.

04 **Claim a milestone.** The contractor reports a borehole drilled and tank installed, with dated, geotagged photographs and the site engineer's note.

05 **Inspect.** An inspector independent of contractor and buyer, from the SAI's roster or an accredited third party, visits on a randomized schedule; satellite imagery is compared with the declared site. The inspection is signed and logged.

06 **Pay.** The treasury pays only against a milestone with a matching inspection. Payments under a documented exemption are flagged for later review.

07 **Screen.** Rule checks and AI-assisted analysis flag one scheme: its unit cost is far above similar schemes, and the same two firms have alternated wins across the district.

08 **Review and reply.** A human reviewer gives the agency and contractor the reasons and a set period to respond. The reply cites harder rock and deeper drilling, which the geological survey confirms. The bid pattern is not explained and is referred to the competition authority. Nothing about the referral is published until that authority acts; the aggregate count of open referrals is.

09 **Verify the outcome.** Twelve months after completion, the SAI or an independent survey team checks whether water is flowing and used. The public page shows money approved, paid, verified and delivered, with every open finding and its status.

ILLUSTRATIVE The AI did not find corruption. It found an unusual pattern. People with authority investigated, the party concerned answered, part of the concern was resolved and part was referred to the competent body. That is the intended division of labor.

IX.3.8 Cost, workforce, timeline and dependencies

ILLUSTRATIVE The planning range for P5 is **$8 million to $20 million over three years** for both pilots together; this Part owns that figure and the P5 staffing of **14 to 20 people**, which Parts X, XII and XIII use. The basis: open-source components, existing source systems and no new hardware beyond hosting; a core team of 14 to 20 people (data engineers, procurement and audit specialists, a data-protection officer, inspection coordinators) at $150,000 to $250,000 per loaded person-year; $0.5 million to $1.5 million a year for hosting, security testing, imagery and independent evaluation; and $0.3 million to $0.5 million one-time for costed design, legal review and data-protection impact assessments. That is about $2.6 million to $6.5 million a year at full staffing. Table IX-3 sets the build-up against the book's three budget tiers. Field inspection is the largest variable cost. These assumptions should be replaced by a costed design within 180 days. No funding is committed.

TABLE IX-3 **P5 Results Ledger: staffing, cost build-up and budget tiers (ILLUSTRATIVE planning assumptions; no funding committed)**

Budget line	Basis (planning assumption)	Per year	Total
Core team: 14–20 people	$150,000–250,000 per loaded person-year	$2.1–5.0m	$6.3–15.0m over 3 years
Hosting, security testing, imagery, independent evaluation	Open-source stack; existing source systems; no new hardware	$0.5–1.5m	$1.5–4.5m over 3 years
Design, legal review, data-protection impact assessments	One-time	—	$0.3–0.5m
Initial implementation (canonical)	Both pilots; includes first-year preparation	~$2.6–6.5m at full staffing	**$8–20m over three years**
of which first-year preparation (Nov 2026–Oct 2027)	Team ramps up; costed design, DPIAs, test log	—	$1.5–3.0m
Long-term capital: PROVE extension (only if gates pass)	5–10 further program pairs at $8–20m each	—	$0.04–0.2bn

Source: Vision 2100 cost model (this Part); tiers as in the book's canonical program budgets. The component build-up at full staffing for three years sums to about $8.1–20.0m; because the first year runs below full staffing, the canonical range is rounded to $8–20m.

This book's assessment is that the workforce challenge exceeds the technology: procurement officers who publish structured data, inspectors trained in digital evidence, SAI staff able to audit an algorithm and reviewers versed in due process. Training, via INTOSAI's development arm, regional SAI networks and universities, belongs in the pilot budget. Dependencies are a volunteer government, a financing partner, a working e-procurement or payment system and a willing SAI.

IX.4 From "source of truth" to verifiable evidence

IX.4.1 Why the framing matters

Vision 2100 proposes replacing "AI as the source of truth" with "AI-assisted, verifiable evidence." A source of truth is something people defer to. Verifiable evidence is something people can examine, contest and correct.

Systems that forgot this distinction have done serious harm. Australia's Robodebt scheme averaged annual tax-office income data into fortnightly figures and raised welfare debts when they did not match recipients' declarations. The Royal Commission into the Robodebt Scheme, reporting on 7 July 2023 with 57 recommendations, found income averaging inconsistent with social-security legislation, as quoted in a legal-press summary of the report [346][347]. In the Netherlands, the parliamentary inquiry committee's report *Unprecedented Injustice* (*Ongekend onrecht*), presented on 17 December 2020, found that parents had been incorrectly branded as deliberate fraudsters in the childcare-allowance system and that basic principles of the rule of law had been breached; it noted that the Dutch Data Protection Authority had found the tax administration's risk-classification model, which used applicants' nationality, to be discriminatory [348]. Prime Minister Rutte's government resigned on 15 January 2021 [349]. In both cases automated or profiled outputs were treated as findings, the burden of proof shifted to citizens and redress was slow. The Results Ledger is designed against those failures.

IX.4.2 The risks, specifically

- **Algorithmic error.** Models trained on past audit findings learn where auditors looked, not where fraud was. They miss new schemes and over-flag familiar ones.
- **Bias.** Small firms, new entrants, remote regions and firms owned by women or minorities may look unusual for innocent reasons, so a model can penalize the competition open contracting seeks.
- **False positives.** Even an accurate screen produces many innocent flags. Publishing them unreviewed would harm reputations and deter honest bidders.
- **Political misuse.** A government could aim investigations at opposition-run municipalities or rival businesses while sparing allies.
- **Surveillance.** Linked payments, contracts and identities could be used to monitor citizens, journalists or civil society.
- **Due-process failures.** Flags could be treated as findings, with sanctions before the accused can respond.
- **Opacity.** If no one can explain a flag, no one can contest it.
- **Cyber and integrity risk.** The log is a target for intrusion, deletion or manipulation of source data before it is logged.

IX.4.3 Safeguards

Vision 2100 proposes a matching safeguard and owner for each risk (Table IX-4), as the minimum standard for any ledger carrying the Vision 2100 name.

TABLE IX-4 **Proposed risk and safeguard matrix for the Results Ledger**

Risk	Safeguard	Owner	Test of compliance
Algorithmic error	Rules and models documented; tested against known cases; precision published	Ledger operator; SAI validates	Annual published model card
Bias	Flag rates compared by firm size, region and ownership; thresholds adjusted	Independent oversight board	Disparity report reviewed publicly
False positives	No flag published before human review and right of reply	Review unit	Share of flags closed as explained
Political misuse	Randomized and rule-based selection; all referrals logged; cross-party oversight	Legislature; SAI; oversight board	Referral distribution by jurisdiction
Surveillance	No individual beneficiary data in public layer; purpose limitation in law	Data-protection authority	Data-protection audit
Due process	Flags are leads, not findings; sanctions only by competent bodies	Courts; competition and anti-corruption bodies	Appeals decided within set time
Opacity	Plain-language reasons for every flag; method open to inspection	Ledger operator	Explanation attached to 100% of flags
Cybersecurity	Independent log witnesses; signed entries; penetration tests; incident disclosure	Operator; national CERT	Independent security audit

Source: Vision 2100 proposal.

Vision 2100 proposes four principles above the table. First, AI ranks and explains; people decide. No sanction, debarment, prosecution or public naming follows from an algorithm alone. Second, everyone named in a finding has a right to see the evidence, to reply before publication and to appeal to a body independent of the ledger operator. Third, the ledger is itself audited: an independent oversight board (the SAI, the data-protection authority, a judge or retired judge, civil society and technical experts) reviews its models, flag statistics and referral patterns each year and publishes the results. Fourth, methods are open; specific thresholds may be withheld briefly to prevent gaming, under the board's supervision.

The proposed principles mirror Part IV (National AI Sovereignty Model) and Part VI (early warning): human accountability, documented methods, data minimization and independent review. No part of Vision 2100 asks for powers over evidence that another part denies.

IX.5 Three archetypes

ILLUSTRATIVE **An advanced economy** with mature e-procurement and a strong SAI applies the ledger to school retrofits. Its problem is overruns and unmeasured outcomes, not theft, so the value lies in linking contracts to energy savings and building use. To limit reputational harm to firms, it adopts the strictest review-before-publication rule.

ILLUSTRATIVE **An emerging economy** building a Clean Power and Compute Corridor (P2, see Part V) applies it to bank-financed transmission works. With few, large contracts, change-order

tracking, physical verification and beneficial ownership matter more than price analytics. The main risk is a successor government using ledger data against predecessors, so cross-party oversight and rule-based referral are written into the enabling decree.

ILLUSTRATIVE **A small island state**, also the P1 Sovereign Digital Nation site (see Part IV), applies it to donor-financed sea walls, shelters and water storage. Its constraint is staff, not data: one public IATI/OCDS record replaces several donor reports, and inspections are shared through a regional SAI network. Success includes staff time returned to government and shelters verified as stocked before cyclone season.

IX.6 Objections from governments, and alternatives considered

IX.6.1 Objections and responses

- **"This infringes sovereignty."** National ledgers run on national infrastructure under national law. The UN sets voluntary standards, offers peer review and holds no national data, and it tests the ledger on itself first.
- **"Publication exposes commercial and security secrets."** OCDS allows justified redaction if it is logged with its legal basis. Defense procurement can be excluded at first, with the excluded value published.
- **"Opponents will weaponize flags."** No flag is published before review and reply; referral patterns are published so selective use is visible; cross-party oversight is a pilot condition.
- **"We cannot afford it."** The pilots are small, open-source and financed through the lender already funding the program. IMF loss estimates suggest modest efficiency gains would exceed the cost [321322], but the pilot must show it.
- **"Officials will fear signing anything."** Recorded reasons let officials who follow procedure defend good-faith choices.
- **"The UN should fix itself first."** Agreed. The UN pilot begins first or at the same time.

IX.6.2 Alternatives considered

In reaching its recommendation, this book weighed four alternatives. *Transparency portals alone* are cheaper but leave the joins unexamined. *Audit-only reform* is essential but slow, because auditors still assemble evidence by hand a year later. *A public blockchain* offers tamper evidence but adds cost, cannot lawfully correct entries and does nothing about false data entered at source. *Fully automated enforcement* repeats the failures in IX.4.1. The recommended design takes the linking from the first, the institutions from the second, tamper evidence without the rigidity of the third, and none of the fourth.

IX.7 From 2026 to 2100

ILLUSTRATIVE **FOUND 2026–2030:** two pilots run and are independently evaluated; inspection and outcome record standards agreed. **PROVE 2031–2040:** ten to twenty countries run ledgers; development banks accept them in place of separate fiduciary reports; the UN ledger covers Secretariat programs with physical deliverables. **CONNECT 2041–2060:** ledgers interoperate across borders; payment against verified milestones is standard for public works. **TRANSFORM 2061–2080:** most public investment is traceable from appropriation to outcome. **SUSTAIN 2081–2100:** institutions maintain the ledgers, renew safeguards and keep oversight independent.

What begins now

First 30 days (November–December 2026). Vision 2100 proposes the following sequence. A113 Partners, acting independently, publishes this design as an open draft, convenes an informal technical review group, and maps from public sources which UN and development-bank-financed programs already publish OCDS or IATI data. None of this requires UN authority.

By 90 days (February 2027). Draft inspection-record and outcome-record extensions to OCDS and OC4IDS and submit them to the Open Contracting Partnership for comment. Prepare a brief for the UN80 working group on how a ledger could serve as the public view of the mandate registry. Identify two or three member states and one development bank willing to discuss a national pilot. A113 Partners can prepare these materials; only member states and UN bodies can adopt them. Under the book's conflict-of-interest firewall, A113 Partners does not act as supplier, financier or transaction adviser to either pilot.

By 180 days (April 2027). Produce a costed design and a data-protection impact assessment for each pilot. Agree in principle with one volunteer government, its SAI and a financing partner on Pilot B. Propose to the incoming Secretary-General, whoever that is, a one-program Secretariat pilot, with OIOS and the Board of Auditors invited to validate the method.

First year (to October 2027). Terms of reference signed, the P5 Pilot Governance Board and the independent oversight board seated, and the log running on test data, ready for the Gate 0 decision (see Parts XII and XIII), within the first-year preparation budget of $1.5–3.0 million (Table IX-3). The Secretary-General decides on Pilot A; the host government on Pilot B; the Vision 2100 Steering Board (an interim steering group until its charter is adopted around April 2027) decides only whether Vision 2100 continues to support each pilot.

First five years (to 2031). First public release of linked records in 2028; two pilot cycles completed and independently evaluated, with failures and false-positive rates published; inspection and outcome record standards adopted by at least one standards body; a General Assembly decision, if member states choose, to extend the ledger across the Secretariat; at least five more national ledgers in preparation.

Measuring progress

TABLE IX-5 Honest institutions: indicators, baselines and Vision 2100 planning milestones (ILLUSTRATIVE planning milestones, not forecasts)

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
UN Results Ledger coverage (Secretary-General; General Assembly)	To be established, 2026 (UN80 mandate registry [26])	—	≥1 UN program and ≥1 national program publishing by 2028; ≥10% of Secretariat programme budget by 2030 only if the Secretary-General adopts it	Majority of Secretariat programme budget	All Secretariat programs	All

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Countries with a public ledger linking contracts, payments and verified milestones (national governments)	None known fully linked; 51 OCDS publishers, 2025 (OCP [337])	—	1 national pilot + 5 in preparation	10–20	80	All willing states
Countries at basic level or worse on PEFA external audit (SAIs)	87% of 80 countries, 2016–2022 assessments (PEFA [328])	SDG 16.6 (effective, accountable institutions; no numeric target)	Pilot countries improve one level	60%	35%	Below 15%
Countries without systematic legislative follow-up of audits (legislatures)	89% of 80 countries (PEFA [328])	SDG 16.6 (no numeric target)	Pilot countries publish audit-finding status	60%	30%	Below 10%
Non-competitive share of contract value, pilot programs (procurement authorities)	To be established in pilots, 2027	SDG 12.7 (sustainable public procurement; no numeric target)	Published reduction target	Peer median	Peer median	Peer median
Flags human-reviewed before publication (oversight board)	Not applicable (new system)	—	100%	100%	100%	100%
Median days to decide an appeal (appeal body)	To be established in pilots, 2028	—	Under 60	Under 45	Under 30	Under 30
CPI global average score (contextual; national governments)	42, 2025 (Transparency International [49])	SDG 16.5 (substantially reduce corruption and bribery; no numeric target)	Context only	Context only	Context only	Contex t only

Note: Results Ledger coverage uses the master values in Part XII; the 2030 milestone is a planning milestone that depends on decisions by the Secretary-General and the General Assembly. The SDG 16.5, 16.6 and 12.7 targets carry no numeric thresholds; the milestones here neither replace nor narrow them. CPI is reported for context; Part XII sets its own scorecard milestones for it.

Corrective actions. Vision 2100 proposes the following. If false positives exceed the board's threshold, the model is withdrawn and rules-only screening continues. If referrals show political skew, they pause pending board review. If a host restricts publication beyond agreed redaction rules, the pilot is suspended and the reasons published. If no efficiency gain appears after two cycles, the ledger narrows to verification and publication, and analytics are redesigned or dropped.

PART X

X

FINANCING VISION 2100

Paying for the Century: A Financing Architecture That Matches Instruments to Purposes

IN THIS PART

X.1 Why financing is the hinge of the whole system
X.2 Where we are today: the scale of the gap
X.3 What the world should look like in 2100
X.4 The instruments: what exists and what it has delivered
X.5 A financing classification for every Vision 2100 initiative
X.6 The cost-of-capital problem
X.7 Illustrative capital structures
X.8 Governance of funds
X.9 Risks, objections and alternatives

THE FINANCING PRINCIPLE

Vision 2100 does not need one new global fund. It needs each initiative paired with the instrument that suits it. Public goods get grants and assessed contributions. Bankable infrastructure gets debt and equity, made cheaper by guarantees. Human development gets durable grants and domestic budgets. Every dollar is published on the Results Ledger.

X.1 Why financing is the hinge of the whole system

Every link in the Vision 2100 chain has to be paid for: clean power before compute can run (Part V), the sovereign AI node before digital services reach citizens (Part IV), prevention before a crisis (Part VI), and learning and maternal health over a generation (Part VIII). Honest institutions are what make lenders willing to lend at all (Part IX). Financing is also where a long-range plan is most easily exposed as wishful.

This part does four things. It sizes the gap, using figures from the institutions that measure it. It reviews the instruments available today, including where they have disappointed. It sorts every Vision 2100 initiative into one of three financing classes, so that no one funds a public good with commercial debt or a power plant with grants. And it gives illustrative capital structures for each class and for the five flagship pilots, using the book's single three-tier pilot budget (first-year preparation, initial implementation, long-term capital), with stated assumptions, sensitivity tests and repayment sources. This part is the book's one financial framework; the other parts own the cost basis of their pilots, and this part assembles them. Nothing here is committed funding.

◆ DOCUMENTED POSITION Ambassador A-Baki named development debt and finance as one of the five pillars of her vision. In her General Assembly dialogue of 20 August 2026 she argued that developing countries are trapped under heavy debt, so capital meant for schools and clinics goes to service external loans. She called for an end to new layers of debt on the Global South and described the Sustainable Development Goal (SDG) shortfall as a failure of financial execution rather than ambition. She cited blue and green bonds as instruments that protect biodiversity while delivering debt relief, and suggested debt swaps for education and health, not only for the environment. Asked why developing countries lack resources, she named corruption, and she argued repeatedly that donors hold back money because they do not trust that it will produce results [5].

Vision 2100 proposes to take that last point as its organizing idea for finance. Capital is scarce, but trust in delivery is the other constraint. A financing architecture that publishes where money goes and what it buys can, over time, lower the risk premium that makes development expensive. That is why the Results Ledger (Part IX) appears in every capital structure below.

X.2 Where we are today: the scale of the gap

X.2.1 The SDG financing gap and the Seville framework

The Fourth International Conference on Financing for Development (FfD4), held in Seville from 30 June to 3 July 2025, adopted the *Compromiso de Sevilla*. The text records that the gap between sustainable development aspirations and the financing needed to meet them has widened,

particularly in developing countries, to an estimated $4 trillion a year (paragraph 4) [350][351]. Member states agreed it on 17 June 2025, the conference adopted it by consensus [352][353], and the General Assembly endorsed it on 25 August 2025 as resolution 79/323 [350]. The United States withdrew from the negotiations and did not take part, citing concerns about the text's language on tax, development bank lending and the governance of the international financial institutions [354].

The OECD reaches a similar order of magnitude by a different route. It estimates the gap could widen to $6.4 trillion by 2030 without a major overhaul [355]. According to the OECD's *Global Outlook on Financing for Sustainable Development 2025*, as summarized by the Global Donor Platform for Rural Development, estimated financing needs grew by 36% between 2015 and 2022, while available financing grew by 22%, to about $5.24 trillion in 2022 [356]. The estimates differ in method and should not be added. They agree the shortfall is trillions a year, which only better use of national revenues, development bank balance sheets and private savings can close.

The Compromiso calls on multilateral development banks (MDBs) to increase and optimize their annual lending capacity "with a view to potentially tripling it" (paragraph 37(a)); it is an encouragement to MDB shareholders, not a binding commitment [350][357]. It urges a single global debt data registry housed in the World Bank (paragraph 48(c)), a platform to strengthen borrower countries' voices, and broader representation of developing countries in international financial institutions (paragraphs 48(i) and 53) [350]. The Sevilla Platform for Action launched 130 voluntary initiatives, including a Debt Pause Clause Alliance, a Global Hub for Debt Swaps for Development led by Spain and the World Bank, a Sevilla Forum on Debt, and a coalition for solidarity levies on premium air travel and private jets [351][352]. By December 2025 only 22 initiatives had explicit mobilization targets, averaging about $145 billion a year to 2035, most of it projected tax revenue [358]. Critics note that fossil-subsidy language was removed, commitments on special drawing rights (SDRs), tax and debt were weakened, and the text leans on de-risking that may benefit investors more than the public [359].

Vision 2100 proposes to treat the Compromiso as the agreed floor. It proposes no rival framework. It proposes to implement Seville's tools for specific initiatives and to publish the results.

X.2.2 The debt burden

UNCTAD's *A World of Debt 2026* reports global public debt of about $111 trillion in 2025, of which developing countries hold about $35 trillion. Their net interest payments reached about $995 billion. The median developing country spends 8.1% of government revenue on net interest, nearly double the 2010 level. UNCTAD counts fifty-one developing countries that spend more on interest than on health or education; the population living in countries in that position reached 3.7 billion in 2023, up from 2.5 billion in 2010. Borrowing at developed-country rates would save them around $500 billion a year [360]. Since 2020 they have borrowed at rates two to four times those of the United States [361], and in 2023 they paid $48 billion more to private creditors than they received in new private lending [362].

The implication is direct. Any plan that adds sovereign debt to countries already in distress makes the problem worse. The capital structures below put most new borrowing at project level, secured on project revenues. Where projects have no revenue, they rely on grants. Sovereign guarantees are minimized and counted openly as contingent liabilities.

X.2.3 Energy investment and the cost of capital

The International Energy Agency (IEA) estimates that clean energy investment in emerging and developing economies outside China must rise from about $270 billion a year to about $1.6 trillion by the early 2030s, with concessional finance roughly tripling. For utility-scale solar, the cost of

capital in these economies is more than twice that in advanced economies. Narrowing the gap by one percentage point would cut financing costs by about $150 billion a year [182].

Solar panels cost the same in Nairobi as in Rotterdam; the money to buy them does not. Section X.6 quantifies the effect.

X.3 What the world should look like in 2100

ILLUSTRATIVE By 2100, the system Vision 2100 aims for has five features. Most developing countries finance public services from domestic revenue, and development finance supports investment, not recurrent budgets. The cost of capital for well-governed projects reflects measured project risk, not a country label. Development banks lend at the scale their capital allows, with regular replenishment. Grants are reserved for true public goods and people who cannot pay, and they are pooled, predictable and published. Every public and blended flow can be traced from source to verified result.

ILLUSTRATIVE Milestones: by 2030 (end of FOUND), first-phase financing for the flagship pilots is closed or in preparation under published structures, and MDB reforms under way since 2024 are implemented. By 2040 (PROVE), the clean-energy cost-of-capital gap has measurably narrowed in pilot countries. By 2060 (CONNECT), corridor infrastructure is refinanced through local-currency capital markets. By 2080 (TRANSFORM), concessional flows concentrate on a shrinking group of fragile states. By 2100 (SUSTAIN), the architecture is maintained by institutions accountable to the countries that use it.

X.4 The instruments: what exists and what it has delivered

X.4.1 Multilateral development bank reform

A 2022 G20-commissioned review of MDB capital adequacy frameworks (CAF) recommended fuller use of capital, more weight on callable capital, hybrid capital and risk transfer. In April 2024 the heads of ten MDBs said these measures would create about $300–400 billion of additional lending headroom over a decade [363][364]; by November 2024 they reported reaching about $400 billion, and G20 leaders in Rio endorsed a roadmap for "better, bigger and more effective" MDBs [365][366]. Tools are in use: the African Development Bank's $750 million perpetual hybrid bond of January 2024, treated as equity by the rating agencies; about $8 billion of IDB exposure-exchange agreements; and the World Bank Group Guarantee Platform at the Multilateral Investment Guarantee Agency (MIGA) since July 2024 [364].

Scale still falls short. Boston University analysis finds that MDB lending must at least triple by 2030 and that, under current plans, $255–572 billion of new paid-in capital would still be needed, falling to about $60 billion with more ambitious CAF and hybrid measures. Since 2009, 24 general capital increases have added only $86.2 billion of paid-in capital [367].

Vision 2100 asks shareholders to complete CAF implementation and fund the capital increases that remain necessary, and asks the relevant MDB to state publicly how much headroom it would assign to each initiative. It does not propose a new bank: existing MDBs already have the ratings, country presence and safeguards a new entrant would spend a decade building.

X.4.2 SDR rechanneling

The IMF's 2021 allocation of $650 billion in SDRs followed quotas, so advanced economies received over $500 billion and Africa about 5% [368]. The $100 billion rechanneling target has been exceeded, mainly through the Poverty Reduction and Growth Trust (PRGT) and Resilience and Sustainability Trust (RST) [369]. The IMF reports RST pledges of SDR 35.8 billion (about $48.9 billion)

as of 28 July 2025, from 21 contributors, and lists 28 approved RST arrangements [370]. On 10 May 2024 the IMF Executive Board approved SDR use to acquire MDB hybrid capital, with a cumulative limit of SDR 15 billion, about $20 billion at 2024 exchange rates, and a review once contributions exceed SDR 10 billion [371]. Proponents estimated up to $80 billion of new lending [372][373]. Uptake has been slow. As of late 2024 no holder had formally committed [374]; the European Central Bank has advised euro-area members against using SDRs this way, and US participation would need congressional authorization [375]. Reporting in November 2025 still described SDR channeling to African Development Bank hybrid capital as at the advocacy stage, with no closed transaction named [376]; this book found no IMF record of a completed SDR-hybrid transaction as of November 2026.

Vision 2100 proposes support for completing the first SDR-hybrid transactions and drawing on RST resources for climate-resilience reforms linked to P2 and P3. It does not count on a new SDR allocation.

X.4.3 Concessional windows: IDA21

In December 2024 the World Bank's International Development Association secured a $100 billion replenishment, IDA21, for fiscal years 2026–2028, from $23.7 billion pledged by 59 countries, leveraged roughly four to one through IDA's own resources and market borrowing [377][378][379]. African leaders had sought at least $120 billion [380]. In May 2025 the US administration requested $3.2 billion against a $4 billion pledge [378]. With IDA's market borrowing at 3.25–4.5% in 2025, the subsidy cost of each concessional dollar has risen above 30 cents, and nearly half of IDA countries are at high risk of debt distress or in it [381].

This book regards IDA as the best vehicle for grant and near-grant finance in the poorest countries, and recommends that Vision 2100's human-development and small-state digital initiatives should fit into IDA country programs rather than compete for the same donors.

X.4.4 Guarantees and political-risk insurance

Guarantees let a public institution absorb a defined risk, such as expropriation, inconvertibility or a state utility's failure to pay, so private lenders charge less. MIGA's credit-enhancement guarantee (2023) lets MDBs transfer loan risk, and the 2024 Guarantee Platform consolidates the group's products [364].

In Vision 2100's assessment, guarantees are the most capital-efficient tool for bankable projects, because they consume balance-sheet capacity only if the risk materializes. Vision 2100 proposes that each P2 and P4 transaction be built around a defined package covering political risk and state-utility payment default, the two risks that most often block financial close. Guarantees are contingent liabilities; any sovereign counter-guarantee is recorded in public debt statistics and on the Results Ledger.

X.4.5 Blended finance: an honest record

Convergence counted 123 blended transactions in 2024 totaling about $18.3 billion, down from $23.1 billion in 2023 [382][383]. The median deal grew to about $65 million [384]. Each concessional dollar attracted about $3.76 of commercial capital ($5.46 in deals over $100 million), and philanthropy's share fell from 6% to 3% between 2022 and 2024 [383]. MDBs separately reported mobilizing $101 billion of private finance in 2023 [365].

Blended finance works for particular transactions but has not reached system scale: annual volumes are under one percent of the $4 trillion gap, and the aid cuts since 2025 shrink the concessional capital it depends on [383].

Vision 2100 proposes to use blending narrowly, where a specific risk (first-of-a-kind technology, currency, early demand) blocks an otherwise commercial project. Each concessional dollar would have a stated purpose and an exit date, and mobilization is reported against a counterfactual: would the private capital have come anyway?

X.4.6 Sovereign wealth funds and philanthropy

Sovereign wealth funds passed $15 trillion in assets at the end of 2025, and state-owned investors including public pension funds and central banks held about $60 trillion, according to the data firm Global SWF [385]. Most operate under commercial mandates, and many subscribe to the Santiago Principles maintained by the International Forum of Sovereign Wealth Funds.

Sovereign funds will invest only where risk-adjusted returns meet their mandates, so Vision 2100 proposes to offer them a pipeline of bankable projects with MDB co-lending, guarantee cover and transparent reporting, which lowers due-diligence costs. Support for the Royal Endowment for 2100 is a separate philanthropic decision and is accounted for separately. Philanthropy, about 3% of blended commitments [383], is small but flexible; Vision 2100 proposes that it fund project preparation for P1–P5, independent evaluation, and Category C programs where public money is slow.

X.4.7 Public-private partnerships

◆ DOCUMENTED POSITION Ambassador A-Baki suggested project-by-project public-private partnerships (PPPs) and joint public and private funding for specific purposes when asked how UN priorities and climate-affected states could be financed [5].

In Vision 2100's assessment the PPP record is mixed: they succeed where demand is predictable and contracts are well designed, and fail where governments guaranteed revenues or exchange rates without counting the cost, so that liabilities returned to public balance sheets in downturns. Vision 2100 accepts PPPs for bankable assets only if every government guarantee is valued and published as a contingent liability before signature, procurement is competitive and published on the Results Ledger, and the PPP beats public procurement financed by concessional borrowing on value for money.

X.4.8 Debt-for-nature swaps and labeled bonds

◆ DOCUMENTED POSITION In her 20 August 2026 dialogue Ambassador A-Baki described the Galápagos conversion as the largest of its kind, about $1.6 billion, saying it reduced Ecuador's debt by about $1.1 billion and that about $500 million went to creating a conservation fund, Galápagos Forever. She cited blue and green bonds as instruments that protect biodiversity while delivering debt relief, and suggested swaps for education and health as well as for nature [5].

The official records give the terms in more detail. At financial close in May 2023, Ecuador exchanged about $1.628 billion of international bonds using a $656 million Galápagos Marine Bond loan, backed by $656 million of political-risk insurance from the US International Development Finance Corporation (DFC) and an $85 million IDB guarantee. DFC and the IDB estimate lifetime debt-service savings of over $1.126 billion and about $323 million for marine conservation over 18.5 years, with an endowment (the Galápagos Life Fund) projected to exceed $227 million by 2041; DFC puts total marine conservation funding, combining the two, at more than $450 million [9280]. Ecuador's Ministry of Economy and Finance reports a reduction of about $972 million in the stock of external debt and the same "more than $450 million" conservation total [279]. The figures measure different things (debt stock reduced, lifetime debt-service savings, annual flows and the endowment), so they are presented side by side rather than reconciled into one number. Earlier, Belize in November 2021 repurchased $553 million of debt at a discount, financed by a $364 million blue bond with $610 million of DFC insurance, generating about $180 million for

conservation and committing to protect 30% of its ocean; The Nature Conservancy (TNC) arranged it [386]. Gabon's August 2023 conversion refinanced $500 million with DFC insurance, again with TNC, generating about $163 million for marine conservation over 15 years [387].

Swaps have real strengths and limits. They cut debt and lock in conservation funding for decades. But they are complex and slow, debt relief is modest relative to total debt, advisory fees can be large, the discount depends on distressed bond prices, and critics raise concerns about sovereignty over conservation decisions. The FfD4 swap hub aims to standardize terms and cut costs [351].

Vision 2100 recommends publishing full swap terms, including fees, on the Results Ledger; extending the model, in line with the Ambassador's suggestion of swaps for education and health, to those sectors where outcomes can be verified (Part VIII); and using swaps only where an independent debt sustainability analysis shows they improve sustainability rather than delay a needed restructuring.

X.4.9 Carbon markets and diaspora finance

Article 6 of the Paris Agreement allows international transfer of emission reductions and creates a UN-supervised crediting mechanism. Carbon markets have suffered from over-crediting and weak verification, and prices are uncertain. Vision 2100 proposes to treat carbon revenue as upside only; no capital structure in this book depends on it for debt service.

Remittances to Latin America and the Caribbean reached a record $173.7 billion in 2025, and a 1% US tax on certain remittances took effect on 1 January 2026 [78].

Remittances are family income, not public revenue. Vision 2100 proposes to use them only indirectly: retail diaspora bonds financing named stay-and-build projects under the Americas Compact (Part VII), with results published; and lower transfer fees through instant-payment interoperability (Part IV).

X.5 A financing classification for every Vision 2100 initiative

The most useful discipline in development finance is to match the instrument to the economics of the activity. Vision 2100 proposes three classes (Table X-1).

- **Category A — Public goods.** Benefits are shared and cannot be charged to users: standards, verification, early warning, mediation, transparency. Funding: grants, assessed and in-kind contributions. Never debt.
- **Category B — Commercially financeable infrastructure.** Revenue-earning assets such as electricity, processing and data-centre capacity. Funding: equity and debt, made affordable by guarantees, MDB co-lending and limited concessional tranches. Repaid from tariffs, offtake contracts and service fees.
- **Category C — Grant-dependent human development.** Services for people who cannot pay, with social, long-term returns: child protection, maternal health, learning, demining. Funding: grants, pooled funds and, over time, domestic budgets. Never commercial debt.

Hybrids, such as a sovereign AI node, are split into components, each funded by its class.

TABLE X-1 Financing classification of Vision 2100 initiatives (A = public good; B = bankable; C = grant-dependent)

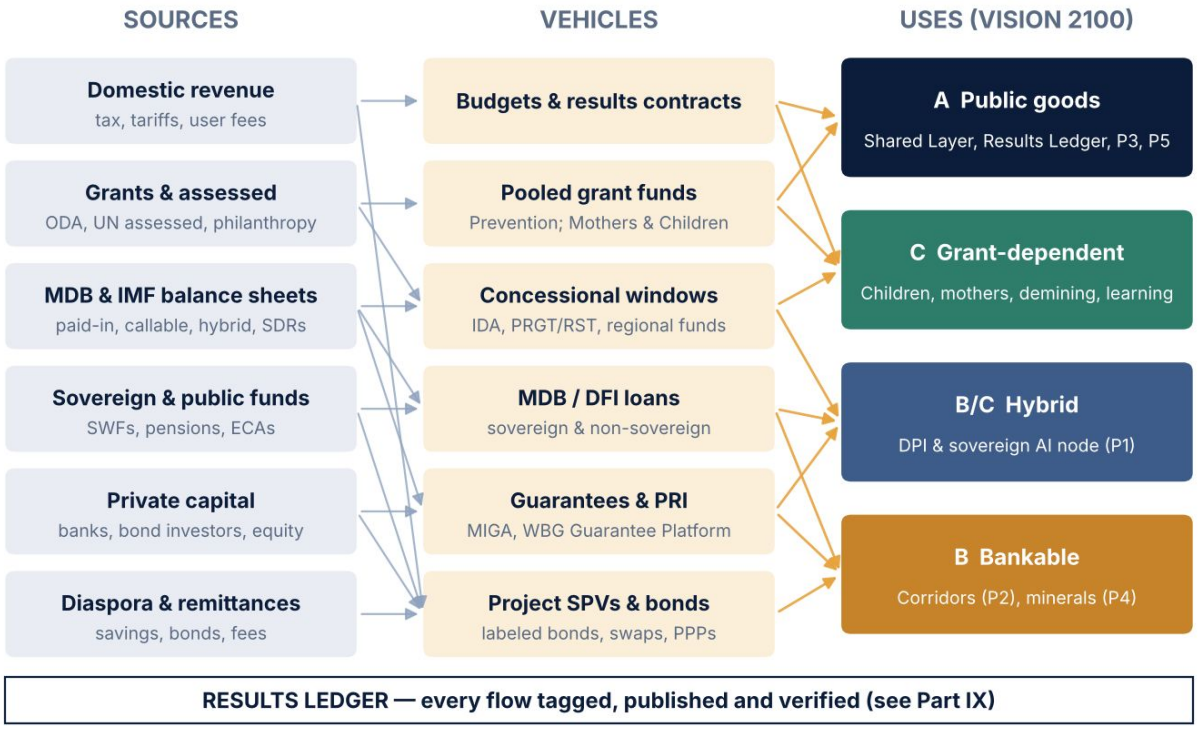
Initiative (part)	Class	Primary sources	Repayment or sustainment
UN Shared Layer (III, IV)	A	Assessed budget, voluntary trust fund, in-kind	Not repaid; member-state budget
Technology for Peace and Security office (III)	A	Existing Secretariat resources, consolidated	Not repaid
Results Ledger, P5 (IX)	A	Grants, host budget, philanthropy	Host budget after pilot
Prevention Early-Warning, P3 (VI)	A	Grants, Prevention and Mediation Fund	Host and regional budgets
Six-layer shield, Peace Technology Pool (VI)	A	Peacekeeping assessments, in-kind	Not repaid
Women at Every Table; mediation rosters (VI, VIII)	A	Regular budget, voluntary funds	Not repaid
Children's Shield (VIII design; VI technology)	A/C	Assessed and voluntary funds	Not repaid
Mothers and Children Peace Fund (VIII)	C	Pooled grants, philanthropy, swaps	Domestic health budgets over time
Learning companion (VIII)	C	Grants, IDA, domestic budget	Education budget; public licensing
Demining, Clear layer (VI)	C	Grants, mine-action trust funds	Land released for use
Sovereign AI node and DPI, P1 (IV)	B/C	Grants, concessional loans, domestic	Substituted IT spend; service fees
Clean Power and Compute Corridor, P2 (V)	B	Equity, guaranteed debt, MDB loans	Power purchase and offtake contracts
SMR programs where feasible (V)	B	Sovereign, ECA, MDB, equity	Long-term power contracts; rate base
Minerals-to-Industry, P4 (V, VII)	B	Equity, guaranteed debt, DFIs	Product offtake; royalties and taxes
Americas Compact, Build Corps (VII)	C, then B	Grants, volunteer service, diaspora bonds	Absorbed by host budgets
Paid-to-protect swaps and labeled bonds (VII)	Hybrid	Swaps, blue and green bonds	Debt-service savings; endowments
Royal Endowment, Council of Long-Term Stewards (XI)	C	Royal and private philanthropy	Endowment income
Interfaith convening; Arts for Peace (XI)	C	Philanthropy, host institutions	Not repaid

Source: ILLUSTRATIVE assignment by A113 Partners; to be validated with MDB and UN finance staff.

Figure X-1 shows how Vision 2100 proposes that sources, vehicles and uses connect, with the Results Ledger beneath every flow.

FIGURE X-1

Global financing architecture: sources, vehicles and uses



ILLUSTRATIVE — conceptual architecture; arrows show principal intended flows, not committed funding.

X.6 The cost-of-capital problem

X.6.1 Why it dominates

For capital-intensive assets with no fuel cost, such as solar, wind and nuclear, the cost of capital is often the largest single driver of electricity prices [182]. IRENA's 2024 cost analysis makes the point concretely. Its cost-of-capital assumptions range from 3.8% in Europe to 12% in Africa, and onshore wind costs about the same per unit in Africa as in Europe, but in Africa financing makes up the majority of the cost while in Europe equipment does [388].

ILLUSTRATIVE This book uses 9–15% real as the typical cost-of-capital range for emerging and frontier economies; it is shaded in Figure X-2, which computes the levelized cost of electricity (LCOE) at different real weighted average costs of capital (WACC):

LCOE = [CAPEX × IDC × CRF(r, n) + Fixed O&M] ÷ (8.76 × CF) + Variable O&M

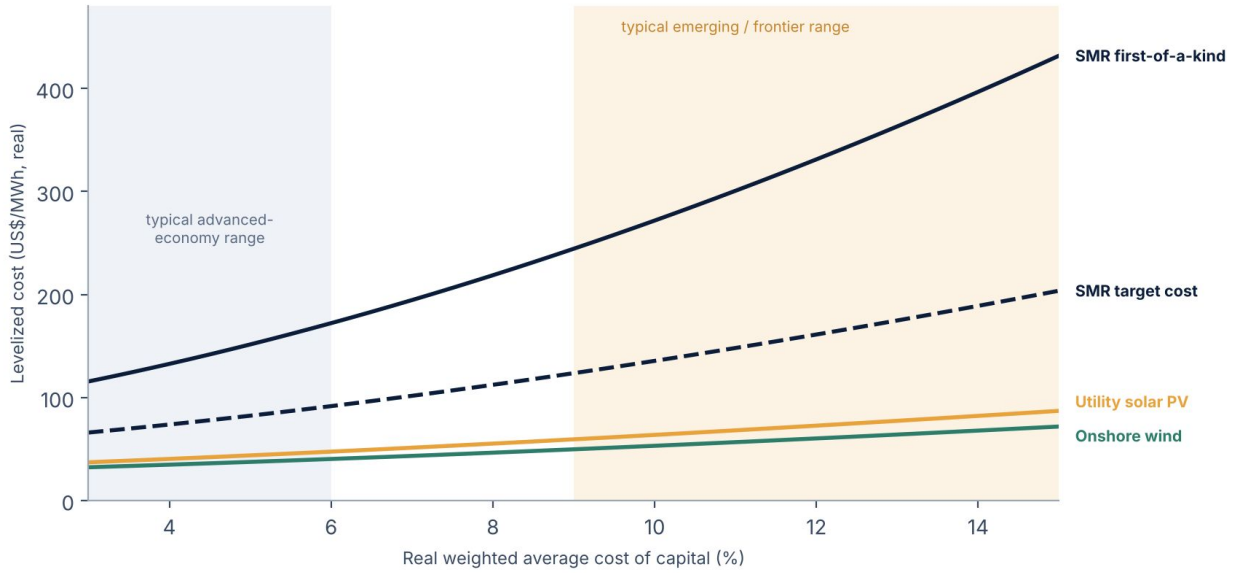
CAPEX is overnight cost in US$/kW; IDC is an interest-during-construction factor assuming even spending over the build; CRF(r, n) = r(1+r)^n ÷ ((1+r)^n − 1) is the capital recovery factor; CF is the capacity factor; 8.76 converts kW-years to MWh. All values are real.

ILLUSTRATIVE Renewable inputs are calibrated to IRENA's 2024 global weighted averages: utility solar at $691/kW and a 17% capacity factor; onshore wind at $1,041/kW and 34% [388]. Operating costs ($15 and $35/kW-year), 25-year lives and build times are assumptions. The first-of-a-kind small modular reactor (SMR) case is derived from Ontario Power Generation's first BWRX-300 unit at Darlington, about C$6.1 billion for 300 MWe [170], about C$20,000 per kW for the first unit, or about US$14,600/kW at an assumed 0.72 USD/CAD, with $150/kW-year fixed and $10/MWh

variable O&M, 90% capacity factor, 40-year life and five-year build. The SMR target case assumes $7,000/kW for later units. The Darlington figure includes first-unit costs later units should avoid.

FIGURE X-2

Levelized cost of electricity vs. cost of capital



ILLUSTRATIVE — stated formula and planning assumptions; renewable capex and capacity factors from IRENA 2024 global weighted averages [388]; SMR first-of-a-kind derived from OPG Darlington unit 1 (C$6.1bn, 300 MWe) [170]. Not a forecast of any project.

ILLUSTRATIVE Solar rises from about $47/MWh at a 6% real WACC to about $73 at 12%; onshore wind from about $40 to about $60. The first-of-a-kind SMR rises from about $172 to about $270 at 10% and $331 at 12%, and the target-cost SMR from about $92 to about $161. At 4–6% real, the model gives $40–47 for solar and $35–40 for wind, close to IRENA's reported 2024 global averages of $43 and $34 [388], which supports the calibration. Cost of capital hurts every technology, but the most capital-intensive most. A first-of-a-kind reactor at emerging-market rates costs several times solar or wind. SMRs in emerging economies make sense only with low-cost public or export-credit finance, a firm-power need that renewables plus storage cannot meet more cheaply, and the safety, licensing and safeguards conditions of Part V. This is not an argument against nuclear power; it is an argument against financing it like a merchant solar farm.

X.6.2 How de-risking lowers the cost of capital

The cost of capital in an emerging economy is a sum of project risks, country risks and information gaps. Vision 2100 proposes to match each to a remedy:

- **Off-taker payment risk.** Escrow accounts, MDB-backed liquidity facilities and partial-risk guarantees against state-utility default.
- **Political risk.** MIGA or bilateral political-risk insurance; contracts registered on the Results Ledger so that changes are visible.
- **Currency risk.** Local-currency lending and hedging facilities, including FfD4's FX EDGE initiative [359]; partial hard-currency indexation only where consumers can bear it.
- **Construction risk.** Fixed-price contracts, independent engineers and contingency sized to evidence on overruns.

- **Information risk.** Standard contracts and ledger-verified performance records that build a track record investors can price.

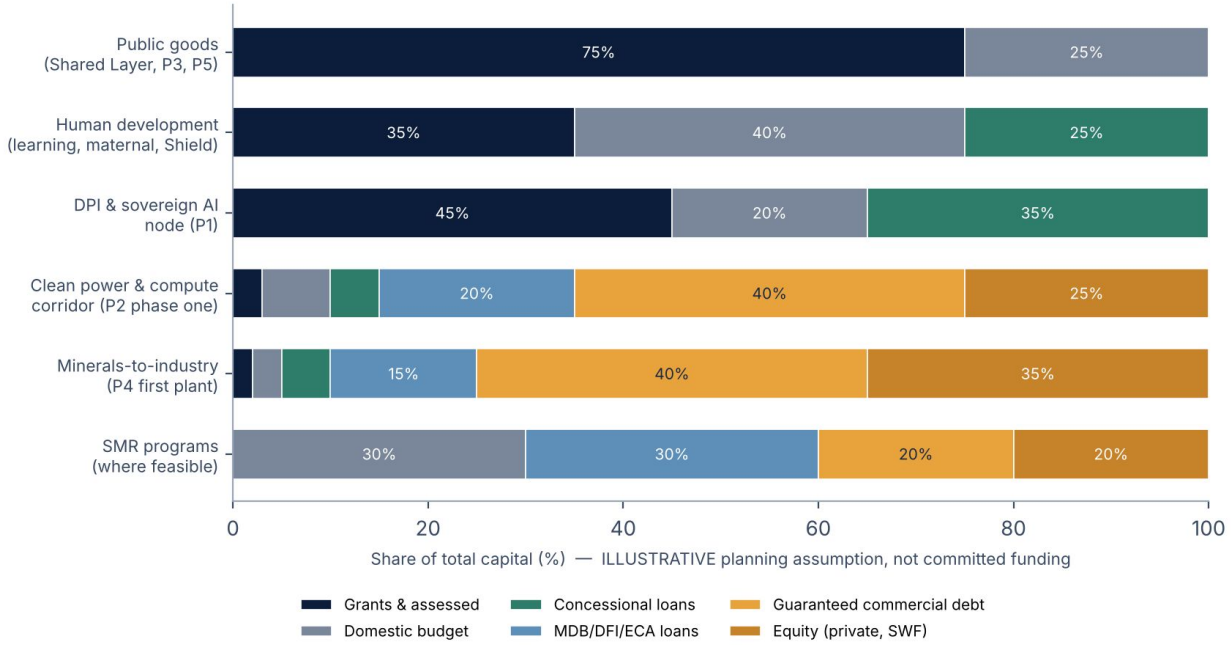
A country that can show a decade of paid tariffs, honored contracts and verified outputs has a basis to ask lenders and rating agencies to price its projects on measured risk, as FfD4's commitments on ratings reform anticipate [351359].

X.7 Illustrative capital structures

X.7.1 By initiative category

FIGURE X-3

Illustrative capital stack by initiative category



ILLUSTRATIVE — planning assumption by A113 Partners; shares of total capital, not committed funding. P1, P2 and P4 bars match the pilot stacks in Table X-2.

ILLUSTRATIVE In Figure X-3, public goods rely mainly on grants and assessed contributions, with a host-budget share to secure ownership. Human-development programs begin with grants and shift toward domestic budgets. Digital public infrastructure and small-state sovereign AI nodes are grant-led hybrids with concessional loans and no commercial debt. Corridors and minerals projects rely on equity and guaranteed commercial debt, with MDBs as anchor lenders and small concessional tranches aimed at first-of-a-kind risk. SMR programs, where pursued, rely on sovereign, export-credit and MDB finance, because private markets will not yet carry first-of-a-kind nuclear risk at an acceptable price.

X.7.2 Flagship pilots P1–P5

ILLUSTRATIVE Each pilot uses an archetype, not a named country, and none has been committed by anyone. Every pilot is budgeted in the same three tiers, used everywhere in this book: **first-year preparation** (November 2026 – October 2027); **initial implementation**, the first phase, which includes the first-year preparation; and **long-term capital**, the PROVE replication or extension, spent only if the pilot passes its gates. Table X-2 gives the canonical ranges and the indicative

capital structure for each tier. The cost basis behind each range is owned by another part: P1 by Part IV (Table IV-5), P2 and P4 by Part V, P3 by Part VI and P5 by Part IX. This part does not re-derive those costs; it finances them.

TABLE X-2 Canonical three-tier pilot budgets and illustrative capital structures (US$; cost basis in the part named in the first column)

Pilot (cost basis)	First-year preparation	Initial implementation (incl. first year)	Long-term capital (PROVE, only if gates pass)	Indicative stack	Repayment / sustainment
P1 Sovereign Digital Nation, small island (Part IV)	$1.0–3.0m	$20–65m over ~4.5 years	$0.3–1.3bn (15–20 states)	Preparation: grants. Implementation and replication: 45% grants; 35% concessional; 20% domestic	Substituted government IT spend; recurrent costs in national budget; regional sharing
P2 Clean Power and Compute Corridor, emerging economy (Part V)	$1.5–4.0m	$15–40m studies and pre-development (2026–2029); phase-one construction $0.5–2.0bn, project-financed (decision ~2029; counted in PROVE)	$1–10bn (2–5 corridors, incl. the pilot corridor)	Studies: grants and MDB preparation funds. Construction: 25% equity; 40% guaranteed debt; 20% MDB/DFI; 5% concessional; 10% domestic and grants	Power purchase and capacity contracts; compute and park leases
P3 Prevention Early-Warning, 2–3 states (Part VI)	$1.0–2.0m	$20–50m over five years	$0.06–0.3bn extension (3–6 regions)	80% grants; 20% host and regional budgets	No repayment; regional budgets after pilot
P4 Minerals-to-Industry (Part V)	$1.0–3.0m	$10–25m studies and preparation; first processing plant $0.3–1.2bn (counted in PROVE)	$0.6–4.8bn (2–4 plants)	Studies: grants. Plant: 35% equity; 40% guaranteed debt; 15% DFI; 10% other	Offtake with price floors; royalties and taxes
P5 Results Ledger (Part IX)	$1.5–3.0m	$8–20m over three years	$0.04–0.2bn extension (5–10 program pairs)	70% grants; 30% host budgets	Host budgets; waste detected
Secretariat and initiative core (Part XIII)	$4–8m per year	—	—	Grants and philanthropy; no debt	Transfers to an independent foundation (registered 2029, complete by 2031)

Source: canonical planning ranges, BOOK integration standard; cost bases in Parts IV, V, VI and IX. ILLUSTRATIVE — planning assumptions by A113 Partners, not quotations or commitments; no funding is committed. Per-MW compute and processing costs require project-level estimates.

ILLUSTRATIVE The tiers add up as follows. **First year:** $10–23 million, of which the secretariat is $4–8 million and pilot preparation $6–15 million. **FOUND (2026–2030):** about $120–300 million excluding P2 construction, made up of the secretariat ($20–40 million over five years), a project-preparation facility ($25–60 million) and the five initial-implementation budgets other than P2 construction (P1 $20–65 million, P2 studies $15–40 million, P3 $20–50 million, P4 studies $10–25 million, P5 $8–20 million); including P2 phase-one construction, about $0.6–2.3 billion. **PROVE (2031–2040):** about $2–17 billion, the sum of the long-term capital column plus a foundation

secretariat ($0.04–0.08 billion) and a second preparation tranche ($0.025–0.06 billion); corridors dominate the range. The horizon arithmetic is set out in Part XII. Most PROVE money is project-level and development-bank capital that is raised only if earlier gates are passed.

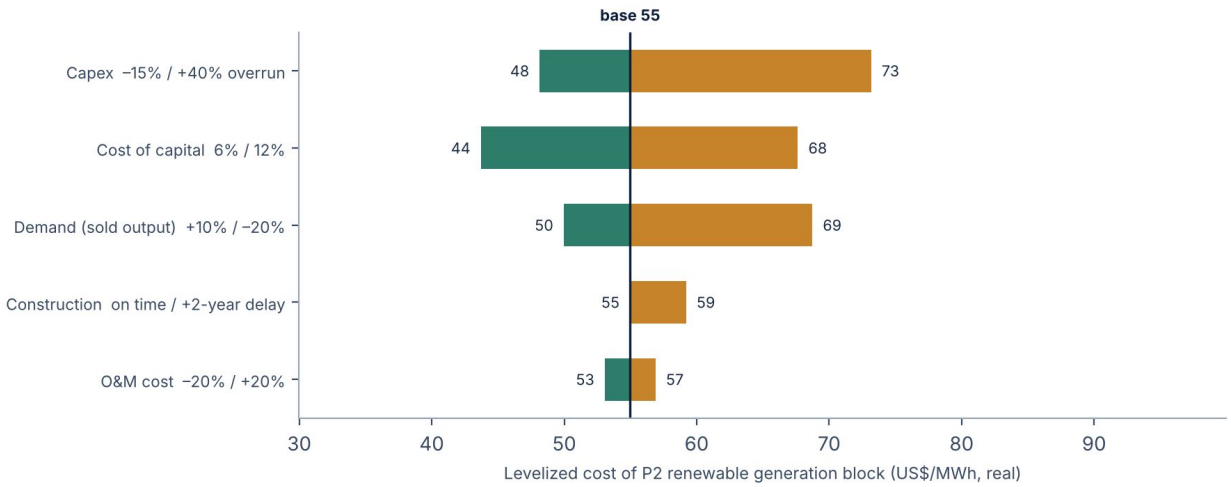
ILLUSTRATIVE **Cost basis, summarized from the owning parts.** P1: two compute sites of 16–107 accelerators (about 0.03–0.26 MW; central about 50 kW) with solar and battery resilience, $1.5–10 million; identity, data exchange and registries $4–13 million; services, security, skills and evaluation; 20–30% contingency (Part IV). P2: 200–500 MW of renewables with storage at $1.0–1.8 million per MW; 20–50 MW of compute IT load, excluding processors, at $10–15 million per MW; transmission and park $0.1–0.4 billion (Part V). P3: analysts, community monitors, data and imagery, governance and evaluation, with the mediation and rapid-response window as the largest line (Part VI). P4: one processing step sized to existing mine output, power from P2-type supply excluded, plant decision about 2030–31 (Part V). P5: one UN program and one national infrastructure program, a core team of 14–20 people, hosting, security testing, imagery and evaluation (Part IX).

ILLUSTRATIVE **P1.** The small-island archetype cannot carry commercial debt. Compute is a small share of cost: inference for a population of about 100,000 needs tens to hundreds of kilowatts, not megawatts (Part IV). Identity, data exchange, services, security and skills dominate. The repayment logic is substitution: agencies already pay for IT, often to foreign providers, so moving that spending covers operations. Recurrent costs of perhaps 15–25% of capital a year must be in the national budget before scale-up.

ILLUSTRATIVE **P2.** This is the one pilot designed to be largely commercial. With 60% debt amortized over 18 years, annual debt service ranges from about $24 million ($0.5 billion at a 4% real rate) to about $166 million ($2.0 billion at 12%). At a 30% capacity factor, 200–500 MW produces about 0.5–1.3 TWh a year. Figure X-4 shows how the generation block's cost responds to the main risks.

FIGURE X-4

Sensitivity of the P2 generation block to key risks



ILLUSTRATIVE — base case: capex $1,100/kW, fixed O&M $25/kW-yr, CF 30%, 25 years, 9% real WACC, 18-month build. Same formula as the cost-of-capital chart.

ILLUSTRATIVE The base case is about $55/MWh. A 40% construction overrun raises it to about $73; a 12% instead of 9% cost of capital to about $68; a 20% shortfall in sold output, from curtailment, grid limits or a missing compute tenant, to about $69. A 6% cost of capital lowers it to about $44. Financing terms, construction discipline and demand certainty matter about equally. A guarantee is

worth little if the transmission line is late or the anchor tenant is missing, so financial close requires a signed anchor offtake, a fixed-price construction contract and a grid connection agreement.

ILLUSTRATIVE **P3** is a pure public good whose value lies in conflicts that do not happen. It is grant-funded through the Prevention and Mediation Fund, with contributions from participating states to secure ownership (Part VI). **P4** separates small, grant-funded studies from a plant financed commercially with offtake contracts carrying price floors, development-finance loans and political-risk cover; any host equity stake is paid for or carried transparently. **P5** is small and grant-funded; its return is waste detected and trust gained (Part IX).

X.7.3 Three archetypes

ILLUSTRATIVE *Advanced economy.* An investment-grade economy finances its own infrastructure cheaply. Its role is as a source: MDB capital, guarantees, SDR channeling and grants to Category A funds. Its test is political: funding them during fiscal pressure and aid cuts.

ILLUSTRATIVE *Emerging economy.* A sub-investment-grade middle-income country can attract private capital for P2-type assets, but at rates that can raise power costs by half or more. Its best route is an MDB-anchored structure with a guarantee package, some local-currency debt and published contracts. Over ten years, a record of paid tariffs is the asset it builds.

ILLUSTRATIVE *Small or resource-constrained nation.* A small island or low-income state at high risk of debt distress takes on almost no commercial debt. Its investments come from IDA grants, RST resources, philanthropy and regional pooling, including shared backup capacity through the UN Shared Layer (Part IV). Swaps can help if a debt analysis supports them.

X.8 Governance of funds

X.8.1 Transparency through the Results Ledger

Vision 2100 proposes that every financing flow it supports, whether grant, loan, guarantee or equity, be registered on the Results Ledger (Part IX) with its source, instrument, terms, recipient, procurement method, milestones and verified results. Contracts and guarantee terms are published, with redactions limited to legitimate commercial confidentiality and reviewed by an independent panel. Host governments or implementing institutions maintain the records under common UN Shared Layer standards; the UN holds no one's data. If donors withhold money because they cannot see results, publishing results is a precondition for more money. Publication does not end corruption, but it makes corruption harder to hide [5].

X.8.2 Fiduciary standards and conflicts of interest

Vision 2100 proposes no new fiduciary standards. It recommends that every project use the procurement, safeguard and sanctions systems of its MDB co-lender, beneficial-ownership disclosure for every contractor and investor, independent audit of every pooled fund, and cross-debarment. Category A and C pooled funds would use an existing trustee, such as a UN multi-partner trust fund or a World Bank financial intermediary fund. Each pilot's financing plan is approved by its Pilot Governance Board, chaired or co-chaired by the host government, which retains sovereign decision rights over borrowing and guarantees; the Vision 2100 Steering Board decides only whether Vision 2100 continues to support the pilot at each gate. A113 Partners and its affiliates do not act as supplier, financier or transaction adviser to any pilot they help design.

X.8.3 Decision rights

Decision rights over finance lie almost entirely outside the Secretary-General's office. The Secretary-General can convene, publish and set Secretariat standards, including a Results Ledger for Secretariat programs. Assessed contributions and any new UN fund need the General

Assembly; peace-operations finance needs Security Council mandates and Fifth Committee approval. MDB capital, CAF reforms and SDR decisions belong to MDB and IMF shareholders and boards. Borrowing, guarantees and PPPs are sovereign decisions. These proposals are addressed to those bodies and stand regardless of who is Secretary-General.

X.9 Risks, objections and alternatives

Table X-3 sets out the mitigations Vision 2100 proposes for the principal financing risks.

TABLE X-3 Principal financing risks and proposed mitigations

Risk	Mitigation	Residual concern
Debt distress	Project-level finance; debt analysis before each deal; pause clauses; contingent liabilities published	Guarantees create exposure if not counted
Crowding out	Counterfactual test; sunset dates on subsidy	Counterfactuals are hard to prove
Stranded assets	Anchor offtake before close; modular staging	Short AI hardware cycles
Currency mismatch	Local-currency lending; hedging facilities	Hedging is costly in thin markets
Political capture	Competitive procurement; beneficial ownership; ledger	Depends on honest data entry
Donor fatigue	Prioritize A and C; MDB leverage; domestic revenue	Category C most exposed

Source: ILLUSTRATIVE assessment by A113 Partners; see Part XII and Appendix G for the consolidated risk matrix.

"This is just more debt." Not if the classification holds: Category A and C carry no debt, Category B debt is serviced from project revenues, and any sovereign support is limited, valued and published. **"De-risking socializes losses and privatizes gains."** This serious critique was raised at Seville [359]. The answer is to price and publish every guarantee, put sunset dates on subsidies, and share upside through public equity or profit-sharing where public money absorbs early risk. **"SMRs and sovereign compute are too expensive for poor countries."** For first-of-a-kind reactors at emerging-market rates, Section X.6 agrees; renewables, storage, hydro, geothermal and grids come first wherever cheaper (Part V). Sovereign compute for a small state is tens to hundreds of kilowatts (Part IV).

Alternatives considered. A new global Vision 2100 fund or a new development bank would compete for the same donors and paid-in capital and take years to build fiduciary systems. Reliance on private capital alone fails because it does not flow to Category A or C and reaches Category B only with risk mitigation. Grants for everything would waste the scarcest money. The preferred approach, existing institutions, a strict classification, targeted guarantees and full publication, is less dramatic but actionable now.

What begins now

Within 30 days (by early December 2026).

01 **Publish the classification.** A113 Partners publishes the financing classification (Table X-1) and the pilot capital structures (Table X-2) as a consultation draft for MDB, UN and finance-ministry review. *A113 independently.*

02 **Close the verification log.** Confirm remaining items (Article 6 status, PPP case data, SDR-hybrid uptake since 2025). *A113 independently.*

03 **Request technical conversations.** Seek staff-level talks with at least one MDB, the World Bank Guarantee Platform and the FfD4 Debt Swaps Hub. *Requires partner willingness.*

Within 90 days (by February 2027).

01 **Pilot finance memos.** A two-page memo for each of P1–P5: archetype, canonical cost range, stack, repayment and the decision each financier must make. *A113 independently.*

02 **Volunteer countries.** Through partner networks and UN country teams, identify governments interested in P1 and P2. No country is named until it agrees in writing. *Sovereign decision.*

03 **Ledger finance module.** Specify financing data fields with the Part IX team. *A113 with technical partners.*

Within 180 days (by May 2027).

01 **Project preparation.** Seek philanthropic or MDB preparation grants for P1, P3 and P5 feasibility work and P2/P4 pre-development. *Requires funders.*

02 **P2 guarantee design.** Design an indicative guarantee and political-risk package with a guarantee provider. *Requires MDB engagement.*

03 **Seville alignment.** Register fitting pilots with the Sevilla Platform for Action. *Requires UN DESA and initiative leads.*

First year (to October 2027). Spending within the illustrative first-year budget of $10–23 million (Table X-2), none of it yet committed; feasibility studies under way for at least two pilots; first financing records on a Results Ledger prototype; the architecture presented at the 2027 FfD Forum and IMF/World Bank Annual Meetings; a P3 funding plan agreed through an existing UN trust fund.

First five years (to 2031; FOUND ends in 2030, Gate 1 in December 2030). P1 financed and operating; P2 at financial close (target 2029) and in construction; P4 studies complete with a plant financing decision; P3 and P5 running with independent evaluation. Publish actual against planned cost of capital, mobilization and debt effects for every pilot, and use those results to decide what scales in PROVE (Part XII).

What needs authority beyond A113 Partners. MDB lending and guarantees require MDB boards; SDR channeling requires IMF members; UN trust funds require the Secretary-General, and new assessed funding the General Assembly; all borrowing, guarantees and PPPs require host-government decisions.

Measuring progress

TABLE X-4 Financing indicators: baselines, agreed international targets and Vision 2100 planning milestones

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Annual sustainable-development financing gap, developing countries (UN DESA, OECD)	~$4tn/yr, 2025, Compromiso de Sevilla para. 4 [350]	— (Compromiso commits to close the gap; no numeric date)	Falling	Below $2tn	Below $0.5tn	Closed for core goals
Developing countries spending more on net interest than on health or education (UNCTAD)	51 countries (UNCTAD, *A World of Debt 2026*); 3.7bn people, 2023, UNCTAD [360]	—	Below 40	Below 20	Below 5	None
Clean energy investment, EMDEs excl. China (IEA)	~$270bn/yr, 2024 report, IEA [182]	—	On path to ~$1.6tn/yr	Need met	Maintained	Maintained
Cost-of-capital ratio, EMDE vs advanced, utility solar (IEA)	>2×, 2024 report, IEA [182]	—	≤1.8× in pilot countries	≤1.4×	≤1.2×	Risk-based pricing only
Annual MDB lending capacity (Heads of MDBs Group)	~$400bn additional headroom identified, 2024, MDBs [365]	Compromiso para. 37(a): increase lending "with a view to potentially tripling it" (encouragement, no date) [350]	Headroom deployed	Tripled vs 2024	Sustained	Sustained
Concessional-to-commercial mobilization in Vision 2100 deals (A113, MDBs)	Market 1:3.76, 2024, Convergence [383]	—	≥1:4, counterfactual-tested	≥1:6	Subsidy phased out in Category B	n/a
Pilots with financing published on Results Ledger (A113, hosts)	0 of 5, 2026	—	5 of 5	All national programs in pilot states	Standard practice	Universal
Category A and C pooled funds with independent audit (fund trustees)	To be established, 2027	—	100%	100%	100%	100%
Contingent liabilities from Vision 2100-supported guarantees disclosed (host finance ministries)	To be established, 2027	—	100%	100%	100%	100%

Note: the 2030–2100 columns are Vision 2100 planning milestones proposed by A113 Partners; they do not replace any agreed commitment. Where no agreed international target exists the column shows "—".

PART XI

XI

COOPERATION AND LONG-TERM STEWARDSHIP

Rivals, Royals, Faiths and Future Generations: Structuring Cooperation That Outlasts Any Term of Office

IN THIS PART

XI.1 Purpose of this part and where it sits in the system
XI.2 Where we are today
XI.3 What made cooperation among rivals work
XI.4 The five permanent members
XI.5 Royal households: the Royal Compact for 2100
XI.6 Faith communities: interfaith peace convening and a shared moral floor
XI.7 Universities, civil society, youth and the private sector
XI.8 Governing for future generations and continuity across administrations
XI.9 How voluntary compacts are structured
XI.10 Arts for Peace
XI.11 Risks, objections and safeguards

THE STEWARDSHIP PRINCIPLE

Vision 2100 asks no one to give up sovereignty or democratic control. It asks governments to cooperate on narrow, verifiable tasks where every party gains. It asks royal households, faith communities, universities, civil society and business to lend continuity, convening power and scrutiny. Only governments and the bodies they create take binding decisions.

XI.1 Purpose of this part and where it sits in the system

Every other part of this book depends on cooperation that outlasts electoral and budget cycles. A Clean Power and Compute Corridor (Part V) takes a decade to build and thirty years to pay back. A prevention system (Part VI) works only if rivals share early-warning data. A Results Ledger (Part IX) means something only if the next government keeps publishing. Financing (Part X) prices political risk, which is largely the risk that cooperation collapses.

In the systems thread, this part is the binding agent: energy, compute, services and jobs create the conditions for diplomacy, and diplomacy must protect those investments long enough to pay off. Part I named the gap between short political cycles and long investment horizons as a root cause of under-investment. This part answers it; Part XII turns its proposals into dated gates, and Parts XIII and XIV set out the first year and the first five years. It asks what made cooperation among rivals work, where Vision 2100 overlaps with each permanent member's priorities, how long-horizon actors can contribute without weakening democratic accountability, how institutions can represent future generations, and how voluntary compacts should be built.

XI.2 Where we are today

The multilateral system is under pressure but still able to agree. On 22 September 2024 member states adopted the Pact for the Future with two annexes, the Global Digital Compact and the Declaration on Future Generations [389]. In August 2025 they created, by consensus, a 40-member Independent International Scientific Panel on AI and a Global Dialogue on AI Governance, which first met in Geneva in July 2026 and meets next in New York in 2027 [12].

Demand for that cooperation is growing. The International Energy Agency (IEA) estimates that data centres accounted for about 1.5% of world electricity demand in 2024 and projects about 945 TWh by 2030 in its base case [180]. Separately, the IEA's 2026 update puts 2025 use at about 485 TWh and 2030 at about 950 TWh, around 3% of global demand [181]. According to the IEA's April 2025 figures as summarized by NS Energy, 2024 use was about 415 TWh, of which the United States, China and Europe accounted for about 45%, 25% and 15% [53]. That concentration is a reason for rivals to agree on rules, and for others to fear exclusion.

The selection of the next Secretary-General is under way. Tonga nominated Ambassador Ivonne A-Baki on 17 August 2026, in a letter transmitted by its Permanent Representative, Ambassador Viliami Va'inga [2]. In announcing her candidacy on X, Ambassador A-Baki thanked King Tupou VI of Tonga for believing in a vision of peace and institutional renewal [390]. In October 2026 CELAC stated that it is time for a national of the region to lead the Organization; the statement named no candidate [391]. This book stands whatever the outcome.

◆ DOCUMENTED POSITION In her interactive dialogue with the General Assembly on 20 August 2026, Ambassador A-Baki said the Security Council remains frozen in the geopolitical landscape of 1945, and described the Secretary-General as a mediator who forges common ground, listens to all members, makes suggestions and works with them as a team. She said the United Nations should unite more than ever and must talk to everyone, not only countries' official representatives. She called climate risk an existential reality for small island states, said Africa is very important to her and a priority for the UN, and thanked Qatar, the United Arab Emirates, Saudi Arabia and all the mediating countries [5]. She did not address monarchy, faith communities or universities; proposals on those subjects here are Vision 2100's own.

XI.3 What made cooperation among rivals work

XI.3.1 Seven precedents

Smallpox eradication. In 1958 the Soviet Deputy Health Minister, Viktor Zhdanov, proposed worldwide eradication, which the World Health Assembly adopted in 1959; the Soviet Union pledged 25 million vaccine doses and the United States became the largest donor. The last natural case occurred in Somalia in October 1977, and eradication was declared in May 1980 [392][393]. International contributions over 1967–79 were about $98 million, with about $200 million from endemic countries [393].

Antarctic Treaty. Signed in 1959 by twelve states including the United States, the Soviet Union, the United Kingdom and France, the treaty entered into force in 1961. It now has 58 parties, 29 of them consultative (decision-making) parties [59]. China acceded in 1983, became a consultative party in 1985 and hosted the annual consultative meeting for the first time in 2017 [394].

International Space Station. A 1998 Intergovernmental Agreement linked each partner's contribution to its share of use [395]. Five agencies, including NASA and Roscosmos, have kept people aboard continuously since 2 November 2000; by late 2025 at least 290 people from 26 countries had visited [396].

ITER. China, Euratom, India, Japan, the Republic of Korea, Russia and the United States signed the ITER Agreement in Paris on 21 November 2006 [397].

Montreal Protocol. In 2014 the Protocol became the first UN treaty with universal ratification; developing countries received later schedules and a Multilateral Fund that had provided more than $3 billion [398]. More than 99% of controlled ozone-depleting substances have been eliminated [399]. On current policies the ozone layer is projected to return to 1980 values around 2040 over most of the world, around 2045 in the Arctic and around 2066 over the Antarctic [400].

Black Sea Grain Initiative. Agreed in Istanbul in July 2022, it ran a Joint Coordination Centre staffed by Russia, Türkiye, Ukraine and the UN [401]. Before ending on 17 July 2023 it carried about 32.8 million tonnes of grain and foodstuffs on 1,003 voyages; 40% of the wheat went to low- and lower-middle-income countries [402].

IAEA safeguards. In 2024 the IAEA applied safeguards in 190 states and conducted more than 3,000 in-field verification activities [403]. As of 30 June 2025, 191 states had safeguards agreements in force and 144 had Additional Protocols [404]. All five permanent members have voluntary offer agreements placing selected civilian facilities under inspection [405].

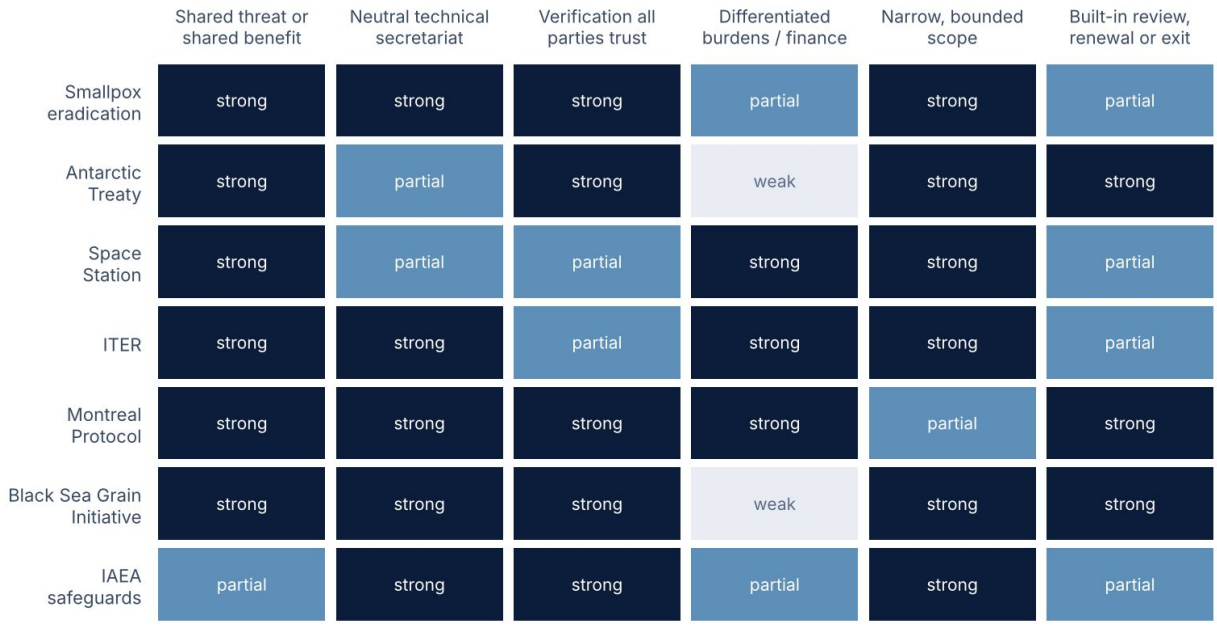
XI.3.2 The common conditions

This book reads the precedents as sharing six conditions (Figure XI-1). Each addressed a threat or benefit all parties valued more than their rivalry. A neutral technical body did the operational work. Verification was credible to all sides. Burdens were differentiated and financed. Scope was

narrow: none tried to settle the underlying rivalry. And most had built-in review, renewal or exit; the Black Sea Initiative ended when one party declined to renew — a failure, but a clean one.

FIGURE XI-1

What made cooperation among rivals work: seven precedents against six conditions



A113 Partners qualitative assessment based on sources [392]–[405]; "strong / partial / weak" are analytical judgments, not measured scores.

Vision 2100 therefore proposes to seek cooperation among rivals only on tasks with these features — AI safety evaluation, nuclear safety and safeguards, early-warning data, humanitarian corridors, verified public-spending reports — and never make contested political settlements a precondition.

XI.4 The five permanent members

XI.4.1 Approach

This book holds that no Secretary-General can succeed without the confidence of all five permanent members, and it therefore proposes showing, from each member's published priorities, where Vision 2100 overlaps and where it does not (Table XI-1). The table is not a list of commitments; none of these governments has endorsed Vision 2100. Contested issues — Ukraine and Russia, Israel and Palestine, Taiwan, NATO enlargement, unilateral sanctions — remain contested, and Vision 2100 takes no position on them. Narrow technical cooperation can continue while they are managed elsewhere.

TABLE XI-1 **The five permanent members: stated priorities, plausible shared benefits and documented precedents. Priorities are A113 Partners summaries; "plausible shared benefit" is a Vision 2100 proposal, not an agreed position of any government. Sources as cited.**

Member	Stated priorities (summarized)	Plausible shared benefit	Documented precedent
United States	Critical-mineral supply chains; UN results; private-led development	Minerals-to-Industry Framework (Part V); Results Ledger (Part IX)	Lobito Corridor rail financing (Angola, Zambia, DRC) [406]

Member	Stated priorities (summarized)	Plausible shared benefit	Documented precedent
China	Development first; non-interference; Global South voice	Corridors with local ownership; AI capacity-building	Linglong One (ACP100) SMR, Hainan [172]
Russia	Sovereign equality; civil nuclear exports; Arctic	Safeguarded civil nuclear cooperation; humanitarian corridors	Akademik Lomonosov floating plant, Pevek [407]; Black Sea Initiative [401]
United Kingdom	AI security; oceans; the Commonwealth	AI evaluation in the UN Shared Layer; ocean stewardship	2023 Bletchley Declaration [408]; AI Security Institute [409]
France	Multilingualism; Paris Agreement; public-interest AI	Multilingual learning companion (Part VIII); regulatory capacity	2025 Paris AI Action Summit, co-chaired with India [410]

In December 2024 the US Development Finance Corporation announced up to $553 million for the Lobito Atlantic Railway in Angola [406]. The Akademik Lomonosov (two 35 MWe reactors) entered commercial operation at Pevek in May 2020 [407]. China's 125 MWe Linglong One began construction in 2021, completed cold functional testing in October 2025 [411] and was in hot functional testing in October 2026 [172]. At Bletchley Park in November 2023, 28 countries including the United States and China, plus the EU, agreed a declaration on frontier AI safety [408]; the UK renamed its institute in February 2025 [409]. At the Paris summit that month, 58 countries signed a statement on inclusive AI; the United States and United Kingdom did not [410]. AI governance divides as well as unites.

XI.4.2 What each member is and is not being asked

United States. Vision 2100 asks for no new assessed funding, only technical partnership in P4 (Minerals-to-Industry) and P5 (Results Ledger) and vendor neutrality. Because the principal architect is a US battery executive, any US-technology role in pilots must be independently justified and openly competed (Part V).

China. Vision 2100 proposes building on the overlap in infrastructure-led development and South-South capacity, under tests — local ownership, local hiring, technology transfer, published contracts — that apply to every investor. China joined the consensus on the AI Scientific Panel [12] and the Bletchley Declaration [408]; those channels suit AI-safety cooperation.

Russia. Vision 2100 proposes building on the overlap in civil nuclear cooperation and inclusive mediation. Any nuclear cooperation is subject to IAEA safeguards, which Russia already accepts for selected facilities [405], and to host-state licensing. Vision 2100 operates within sanctions regimes.

United Kingdom. Vision 2100 proposes building on the overlap in AI evaluation and oceans. The Commonwealth links 56 independent countries, many of them small states [412]; an ocean-stewardship program with Pacific members could test P1 (Sovereign Digital Nation) and P3 (Prevention Early-Warning).

France. Vision 2100 proposes building on the overlap in multilingual public-interest AI, such as a learning companion in French and national languages across francophone Africa, and regulatory capacity where partners choose nuclear, alongside equally weighted alternatives (Part V).

XI.4.3 Regional groups and the wider membership

The permanent members are necessary but not sufficient. Vision 2100 proposes to be adopted region by region through organizations member states already trust.

- **African Union.** P2 and P4 are offered first through the AU; the test is whether value and jobs stay in Africa.
- **CELAC.** The Americas Compact (Part VII) is the vehicle, open to all hemispheric states [391].
- **ASEAN.** Its consensus practice suits stepwise interoperability standards for sovereign AI nodes (Part IV).
- **European Union.** Rules-based AI governance and development finance; a party to ITER through Euratom [397].
- **Gulf Cooperation Council.** Six member states, all monarchies, under a charter signed in Abu Dhabi in May 1981 [413], with sovereign funds and mediation records (XI.5).
- **Pacific Islands Forum and the G77.** Small states gain most from shared infrastructure and fear most becoming test beds; every pilot is host-requested and host-controlled (Part XII).

XI.5 Royal households: the Royal Compact for 2100

XI.5.1 What problem it addresses

Long-horizon public goods — forests, grids, water systems — need champions who outlast a term of office. Many monarchs provide continuity and a voice above party; several lead foundations, hold custodial religious roles or have mediated. The Royal Compact for 2100 is a Vision 2100 proposal to channel that continuity into voluntary service. No royal household has been consulted or has endorsed it.

The constitutional starting point is limiting, and that is the point. In constitutional monarchies the monarch acts on the government's advice. Japan's Constitution requires the Cabinet's advice and approval for all acts of the Emperor in matters of state and gives him no powers related to government (Articles 3 and 4) [414]. Malaysia's requires the Yang di-Pertuan Agong to act on the advice of the Cabinet, except in matters it leaves to his discretion (Article 40) [415]. Other monarchies hold real executive authority. Royal participation must respect each constitutional order and, in constitutional monarchies, the government's advice.

XI.5.2 Precedents

Malaysia has an elected monarchy. Under the Federal Constitution, the Conference of Rulers elects the Yang di-Pertuan Agong for a five-year term (Article 32), and he acts on the Cabinet's advice except in matters left to his discretion (Article 40) [415]. In practice the office has rotated among the nine hereditary Malay rulers, as Malaysian press accounts of the election procedure describe [416].

Jordan. The Hashemite custodianship of Islamic and Christian holy sites in Jerusalem dates, in the Royal Hashemite Court's account, to 1917 [417]; the 2013 Jordanian–Palestinian agreement records that the people of Jerusalem affirmed the custodianship of Sharif Hussein bin Ali in March 1924 and that it has passed without interruption to King Abdullah II. That agreement, signed in Amman on 31 March 2013 by King Abdullah II and Mahmoud Abbas as President of the State of Palestine and head of the PLO, reaffirms the King's role [418]. In Article 9 of the 1994 Treaty of Peace, Israel undertook to respect the present special role of Jordan in the Muslim holy shrines in Jerusalem and to give high priority to Jordan's historic role in them in permanent-status negotiations [419]. In September 2010 King Abdullah II told the General Assembly that Jordan would introduce a resolution for an annual World Interfaith Harmony Week [420], which the Assembly proclaimed on 20 October 2010 [421].

Bhutan. Bhutan's government credits the fourth King, Jigme Singye Wangchuck, with propounding Gross National Happiness in the early 1970s as an alternative to growth-centred development [422]. General Assembly resolution 65/309 of 19 July 2011 invited member states to develop measures that better capture happiness and well-being and welcomed Bhutan's offer to convene a panel on the subject [423]. In 1998 full executive power previously held by the King passed to a Council of Ministers elected by the National Assembly; the first elections to the National Council and National Assembly were held on 31 December 2007 and 24 March 2008, and the Constitution was adopted in July 2008 [424]. Bhutan also carries a warning: according to Human Rights Watch, tens of thousands of ethnic Nepalis were arbitrarily deprived of citizenship in the early 1990s and expelled or forced to flee, and some 106,000 refugees remained in camps in Nepal in 2007 [425]. Royal stewardship is not self-validating.

Gulf monarchies. In May 2008 the Security Council commended the Arab League committee led by Qatar's Emir for helping Lebanese leaders reach the Doha agreement [426]. Qatar hosted the 2011 signing of the Doha Document for Peace in Darfur and convened its implementation follow-up commission [427]. With Egypt and the United States, Qatar facilitated the November 2023 agreement on a humanitarian pause in Gaza and the release of hostages [428]. The US Secretary of State said Qatar and Oman played a vital role in the September 2023 release of Americans detained in Iran [429].

Tonga, a Pacific constitutional monarchy and Commonwealth member [412], nominated Ambassador A-Baki through its Permanent Representative [2], and she thanked King Tupou VI when announcing her candidacy [390]. This implies no endorsement of the Royal Compact by Tonga or its King.

XI.5.3 The four elements

Vision 2100 proposes that the Royal Compact have four elements.

01 **Council of Long-Term Stewards.** Heads of royal households and non-royal elders serve as advisory patrons. The Council meets the Secretary-General yearly, publishes a long-view letter, and reviews the 2100 aspirations every five years (Part II). It has no budget authority, no veto and no role in intergovernmental decisions.

02 **Royal Endowment for 2100.** Royal foundations and willing sovereign funds may contribute to an independently audited endowment for water, health, education and clean energy in the poorest nations. It is legally separate from the UN, has a majority-independent board and a published grant policy, and grants only on host-government request.

03 **Integrity by example.** Every contribution, grant and expense is published on the Results Ledger (Part IX). Members publish their own foundations' accounts to the same standard; a household that cannot meet it does not join.

04 **Royal good offices.** At the parties' request, and coordinated with the Secretary-General and any mandated envoy, a member may offer convening support. It never substitutes for a UN or regional mediation mandate.

> **IN SERVICE OF PEOPLE**
>
> The Royal Compact serves governments and peoples; it never replaces them. Its power is the power of example, of resources given freely and openly, and of a long view.

XI.5.4 Risks and safeguards

Three objections deserve answers, and Vision 2100 proposes a safeguard for each. **Legitimacy:** many citizens object to any international role for hereditary rulers. The Compact has no authority, participation follows government advice, and the Council includes non-royal stewards. **Reputation:** some monarchies face serious human-rights criticism; entry requires published accounts, audit and an ethics panel able to recommend suspension. **Elite capture:** grants are host-requested, contributors may not steer funds to their commercial interests, and all terms are public.

A council of former heads of government alone would carry democratic legitimacy but lack the multi-decade horizon and resources of some royal foundations; this book therefore recommends a design that combines both.

XI.6 Faith communities: interfaith peace convening and a shared moral floor

Interfaith cooperation has institutional precedents. The Parliament of the World's Religions first met in Chicago in 1893; at its centenary gathering there in 1993, an assembly of about 250 religious and spiritual leaders endorsed *Towards a Global Ethic* [430]. Religions for Peace held its first World Assembly in Kyoto in 1970 [431]. On 13 October 2007, 138 Muslim scholars, clerics and intellectuals published *A Common Word*, addressed to the leaders of the world's churches [432]. The International Dialogue Centre (KAICIID), founded by Austria, Saudi Arabia and Spain with the Holy See as founding observer, was inaugurated in 2012 [433]. On 4 February 2019 Pope Francis and the Grand Imam of Al-Azhar, Ahmad al-Tayyeb, signed the Document on Human Fraternity in Abu Dhabi [434].

Faith leaders are engaging with artificial intelligence directly. Pope Leo XIV, elected in May 2025, explained his choice of name by reference to Leo XIII's response to the first industrial revolution and to today's revolution in artificial intelligence [435].

Vision 2100 proposes a standing **interfaith peace convening**, invited jointly by the Secretary-General and existing interfaith bodies rather than created as a new UN entity. It would meet annually, with working groups at the request of parties to conflicts with religious dimensions. Its tasks are peace — trusted channels where politics is blocked, protection of holy sites and minorities — and a contribution to AI ethics. No faith body has endorsed it.

Vision 2100 also proposes a **shared moral floor**, resting on an observation: every major tradition, and secular humanist ethics, holds some version of the golden rule and duties to the child, the stranger and the poor. Vision 2100 uses this, not any one text, as the ethical floor for AI the UN uses (Part IV), framed as four questions. Does the system protect human dignity? Does it serve the weakest as well as the strongest? Does it tell the truth and show its work? Could one people use it to dominate another? It complements, never replaces, human-rights law.

Under the proposed design no tradition is privileged: minority traditions and non-religious voices hold seats, the convening issues no rulings, and women are in every delegation (Women at Every Table, Part VIII).

XI.7 Universities, civil society, youth and the private sector

Vision 2100 proposes **university** partners, at least one per region, to evaluate the pilots and staff each compact's independent review panel, never as grantees of what they evaluate. **Civil society** may file shadow reports and see the data behind Results Ledger entries. **Companies** may join compacts as non-voting members under the open-standards and disclosure rules of Parts IV and V.

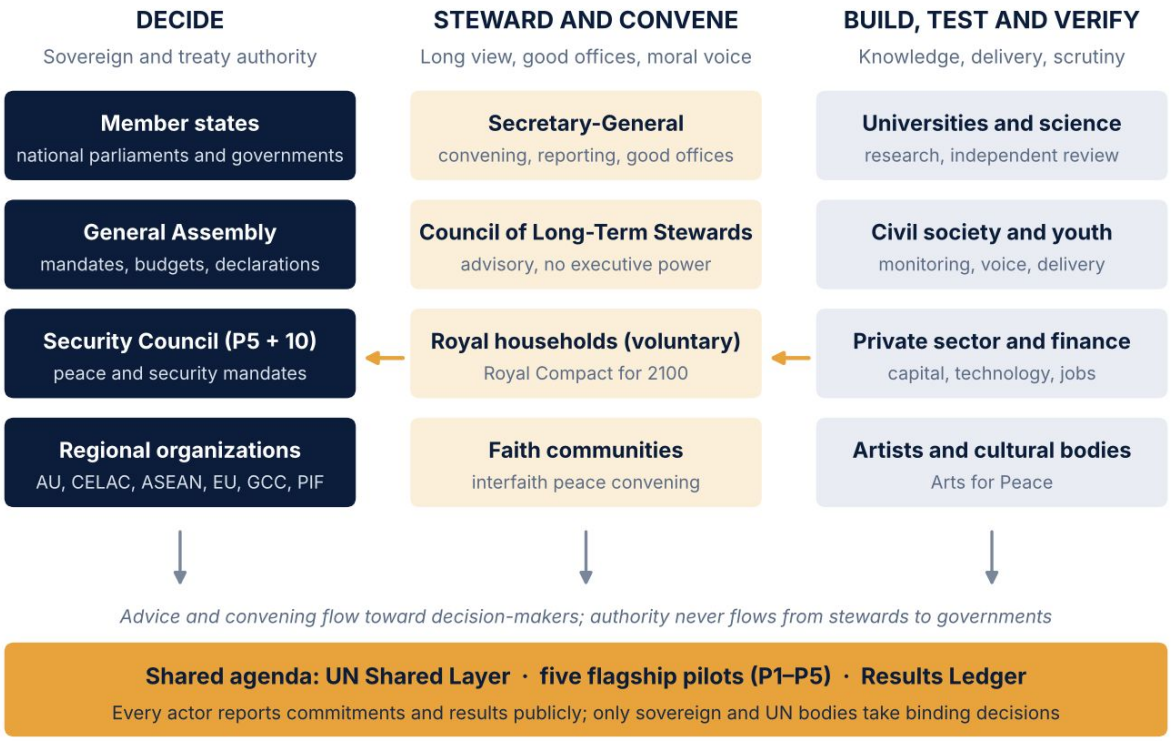
◆ DOCUMENTED POSITION In her 20 August 2026 dialogue, Ambassador A-Baki said the UN must listen to young people and involve them, because they know more than their elders, that leaders should believe in them, and that the Organization must remedy its trust deficit [5].

Vision 2100 proposes that **youth** hold seats with voice in every compact assembly and the Council of Long-Term Stewards, rotating every two years and chosen through UN youth mechanisms and national youth councils, not by sponsors.

Figure XI-2 summarizes the proposed roles.

FIGURE XI-2

Stakeholder map: who decides, who stewards and convenes, who builds and verifies



A113 Partners. Proposed roles; no organization shown has endorsed Vision 2100. Arrows show advice and convening, not authority.

XI.8 Governing for future generations and continuity across administrations

XI.8.1 What exists

The Declaration on Future Generations, annexed to the Pact for the Future in September 2024, commits member states to take the interests of future generations into account in their decisions [389]. National precedents exist. The Well-being of Future Generations (Wales) Act 2015 created a statutory Future Generations Commissioner [436]. Hungary had a parliamentary Ombudsman for Future Generations before 2011; under the 2011 constitution that role became one of the deputy commissioners for fundamental rights, elected by Parliament [437]. In a March 2023 policy brief the Secretary-General stated his intention to appoint a Special Envoy for Future Generations in an advisory and advocacy role [438]; this review found no announcement of an appointment as of November 2026.

XI.8.2 Mechanisms for continuity

Vision 2100 proposes four tools to survive changes of government.

- **Resolution anchors.** Commitments rest on instruments already adopted — the Pact for the Future, A/RES/79/325, the UN80 resolution (Part III) — not on one Secretary-General's pledges.
- **Independent stewards.** The Council and university review panels outlast administrations and publish whether commitments are kept.
- **Sunset and renewal.** Compacts expire after five years unless renewed, so new governments re-commit on their own terms.
- **National future-generations offices.** States are encouraged, not required, to create a commissioner or ombudsperson and report through the Results Ledger.

ILLUSTRATIVE An **advanced economy** adds a future-generations statement to budget bills, reviewed by its audit office. An **emerging economy** has a commissioner review its twenty largest infrastructure contracts, including a P2 corridor. A **small island state** asks its head of state's council for an annual long-view report on climate adaptation, debated in parliament.

XI.9 How voluntary compacts are structured

Vision 2100 proposes that every compact — royal, regional (including the Americas Compact) or pilot-specific — use one five-step structure drawn from XI.3.2 (Figure XI-3).

01	**Membership.** Open to any state or eligible body meeting entry standards published in advance; no member can veto another's entry.
02	**Obligations.** Dated, measurable pledges chosen by each member and published on the Results Ledger; political, not legally binding.
03	**Review.** Annual self-reporting, audit of contributions, and independent peer review every three years.
04	**Dispute resolution.** Consultation; then good offices of the Secretary-General or a steward; then non-binding fact-finding, published in full. The remedy is transparency, not penalties.
05	**Renewal and exit.** Five-year sunset and renewal vote. Any member may leave on six months' notice; contributions already made stay with their stated purposes.

FIGURE XI-3

Voluntary compact structure: membership, obligations, review, dispute resolution, renewal and exit



A113 Partners proposed design. Durations (three-year peer review, five-year sunset, six-month notice) are planning assumptions.

Vision 2100 proposes light governance: a Members' Assembly on one-member-one-voice, a small secretariat hosted by an existing UN entity or regional body, and public reports by an independent auditor and review panel. Until a host agrees, A113 Partners or a university would serve as interim secretariat, handing over to an independent host by 2031, on the same timetable as the transfer of the Vision 2100 secretariat to an independent foundation (registered 2029, transfer complete by 2031; Part XII).

Alternatives considered. A binding treaty would be stronger but slow and would exclude non-state actors; an informal network would be quick but unaccountable. If a compact proves itself in PROVE, members can negotiate a treaty in CONNECT.

XI.9.1 Decision rights

TABLE XI-2 **Who decides: decision rights for the cooperation and stewardship proposals. Source: A113 Partners analysis of existing mandates; see Appendix F for the full decision-rights matrix.**

Action	Who decides
Invite royal households, faith leaders, artists to convene	Secretary-General alone; or A113 Partners and partners informally
Host a compact secretariat in a UN entity	Head of that entity within its mandate; General Assembly if new resources needed
Create a UN Special Envoy for Future Generations	Secretary-General, within existing resources, or General Assembly

Action	Who decides
Create national future-generations commissioners	Each member state, under its own law
Royal participation in a constitutional monarchy	The monarch, on government advice
Royal good offices in a specific dispute	The parties to the dispute, in coordination with any mandated UN envoy
Turn a compact into a treaty	Member states, by negotiation and ratification

XI.10 Arts for Peace

◆ DOCUMENTED POSITION In her 20 August 2026 dialogue, Ambassador A-Baki described painting during the war in Lebanon, using women and mothers as symbols of peace and love when she could not work for peace directly, and spoke of the many languages and cultures at the UN that understand one another [5].

Vision 2100 proposes to revive **Arts for Peace**: exhibitions, music, film and food from every member state at UN headquarters and at venues where peace is negotiated, with a youth program on asking good questions in the age of AI. It should be built with UNESCO and national cultural institutes, not as a new body.

XI.11 Risks, objections and safeguards

TABLE XI-3 **Risks, objections and proposed safeguards for cooperation and stewardship. Source: A113 Partners assessment; safeguards are Vision 2100 proposals. See Appendix G.**

Risk	How it could happen	Safeguard	Residual concern
Legitimacy deficit	Monarchy or religion is perceived as overriding democratic choice	No decision authority; government advice in constitutional monarchies; non-royal and secular stewards	Some publics will object regardless
Elite capture	Wealthy contributors steer grants or reputations	Host-requested grants; conflict-of-interest rules; full publication; independent ethics panel	Soft influence is hard to detect
Reputation laundering	Participation used to deflect human-rights criticism	Entry standards; suspension mechanism; civil-society shadow reports	Requires a willingness to suspend members
P5 politicization	A pilot becomes a proxy for rivalry	Narrow scope; neutral host; multi-vendor rules; no contested issues in scope	Sanctions can still block cooperation
Faith privileging	One tradition dominates the convening	Balanced seats; no rulings; secular voices included	Selection disputes
Continuity failure	A new government withdraws	Sunset and renewal; anchoring in adopted UN instruments; clean exit rules	Withdrawal remains a sovereign right
Conflict of interest	Principal architect's commercial interests shape the agenda	Disclosure; independent review; A113 Partners never supplier, financier or adviser to pilots it designs	Perception risk persists

What begins now

These actions can begin before the selection is complete. A113 Partners can act alone on research, design and informal consultation; anything using the UN name or member-state commitments needs partners and the proper authority.

Next 30 days (November 2026). A113 Partners publishes this part for comment; drafts entry standards, a conflict-of-interest policy and a model compact; closes the open items for this part in Appendix G; and identifies three universities in different regions as independent reviewers. (A113 Partners, independently.)

Next 90 days (by February 2027). Informal consultations with diplomats from each permanent member and each regional group in XI.4 test the overlaps without seeking endorsements. Exploratory talks with royal foundations and interfaith bodies carry no representation of UN support; World Interfaith Harmony Week (1–7 February) suits a first interfaith consultation. (A113 Partners with willing partners.)

Next 180 days (by May 2027). Draft Royal Compact charter, endowment rules and interfaith terms of reference circulate for comment. AI-evaluation inputs reach the Global Dialogue in New York through member-state sponsors.

First year (to October 2027). If the incoming Secretary-General adopts these proposals, the office invites the Council of Long-Term Stewards, the interfaith peace convening and Arts for Peace under existing convening authority. A host for the compact secretariat is identified. The first compact, most likely for P1 in a small island state, is signed by its founding members with published pledges. (Secretary-General; host states; partners.)

First five years (to 2031). Two regional compacts and the Royal Compact operate with annual audits; the Council publishes its first five-year review (Part II); the interim secretariat passes from A113 Partners to an independent host; the permanent members cooperate on at least two technical tasks; and the first renewal decision is taken on evidence.

Measuring progress

TABLE XI-4 Measuring progress: cooperation and long-term stewardship indicators. Baselines are A113 Partners counts as of November 2026 or "to be established" where no published series exists; 2030–2100 values are Vision 2100 planning milestones , not forecasts, and do not replace any agreed commitment. No numeric international target exists for these indicators; the Declaration on Future Generations [389] and SDG 5.5 set qualitative commitments only. The women's-seat indicator is specific to this part and differs from the shared women-in-senior-mediation indicator (Part VIII; one-third by 2030, parity by 2040).

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Permanent members engaged in at least one Vision 2100 technical cooperation task (Secretary-General; member states)	0 (2026, A113 Partners)	—	3 of 5	5 of 5	5 of 5	Sustained
Regional organizations with an operating compact or formal cooperation (regional bodies)	0 (2026, A113 Partners)	—	2	5	7	All major regions

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
States with a future-generations commissioner, ombudsperson or equivalent (member states)	To be established (national precedents include Wales [436] and Hungary [437])	Declaration on Future Generations: take future generations' interests into account (no numeric target) [389]	+5 over baseline	+25	Majority of states	Near-universal
Royal Endowment contributions and grants published and independently audited (Endowment board; auditor)	Not yet created (2026)	—	100%	100%	100%	100%
Compacts completing independent review on schedule (independent review panel)	Not yet created (2026)	—	90%	95%	95%	95%
Share of steward, compact and interfaith seats held by women (Council secretariat)	To be established	SDG 5.5: women's full and effective participation in leadership (no numeric target)	40%	50%	50%	50%
Youth seats with voice in compact assemblies (Members' Assembly)	0 (2026, A113 Partners)	—	Every compact	Every compact	Every compact	Every compact
Mediation processes supported by royal or interfaith good offices at parties' request (Secretary-General)	To be established	—	Reported	Reported	Reported	Reported
Public trust in compact institutions, independent survey (university partners)	To be established	—	Baseline set	Rising	Rising	Majority trust

Corrective actions. Vision 2100 proposes the following. If fewer than three permanent members engage by 2030, narrow the tasks and route cooperation through existing bodies (IAEA, WHO, the AI Scientific Panel). If an audit finds undisclosed contributions, suspend the member pending the ethics panel. A compact that fails peer review twice should sunset. Stopping a compact that does not work is a result, not a failure.

PART XII

XII

THE ROAD FROM 2026 TO 2100

From Vision to Implementation: Horizons, Pilots, Gates and Accountability

IN THIS PART

XII.1 Purpose of this part and how it integrates the book
XII.2 The five horizons
XII.3 The first five years in summary: November 2026 to October 2031
XII.4 The five flagship pilots: summary business cases
XII.5 Governance of Vision 2100 itself
XII.6 Whether or not the Ambassador becomes Secretary-General
XII.7 Consolidated risk matrix
XII.8 Integration across the book

THE IMPLEMENTATION LOGIC

Vision 2100 moves forward only through evidence. Each horizon ends at a public decision gate. Each pilot runs only where a sovereign host asks for it. Each dollar shown here is a planning assumption until a financing partner commits it. And at every gate, stopping is a legitimate result, not a failure.

XII.1 Purpose of this part and how it integrates the book

Parts I through XI each describe one link in a single chain: clean energy (Part V) powers compute (Part IV), which enables education, health and accountable government (Parts VIII and IX), which support industry and jobs (Parts V and VII), which underpin the stability in which diplomacy and prevention succeed (Parts III and VI). Peace protects the investments that sustain energy and industry. Finance (Part X) and honest institutions (Part IX) run through every link; cooperation and stewardship (Part XI) hold it together across political cycles. This part turns that chain into horizons, a set of pilots, a governance system and a scorecard. It works at the level of horizons and gates. The detailed first-year plan is Part XIII, and the 2026–2031 execution strategy, year by year, is Part XIV.

Vision 2100 proposes three rules to govern everything that follows. **Sovereign consent**: no pilot proceeds without a written request from the host government; no named country has agreed to anything, and hosts are described as archetypes. **Evidence before scale**: nothing moves to the next horizon without independent evaluation against published criteria. **Authority matched to action**: each step sits with the lowest level of authority able to take it, from A113 Partners and civil society through governments and regional bodies to the UN Secretariat, General Assembly and Security Council (see the decision-rights matrix in Part III and Appendix F).

The institutional starting point is constrained. The 2026 UN regular budget of $3.45 billion, approved on 30 December 2025, is about 15 percent lower in resources, with staffing cut by nearly 19 percent [342]. Peacekeeping runs on a separate $5.38 billion budget for 2025–26, with nearly 70,000 personnel [38]. On 31 March 2026 the Assembly adopted a UN80 mandate-review resolution, 168 to 4, creating a mandate registry and review clauses [26]. Resolution 79/325 created an Independent International Scientific Panel on AI and a Global Dialogue on AI Governance [12], which met first in Geneva in July 2026 and meets next on 3–4 May 2027 in New York [439].

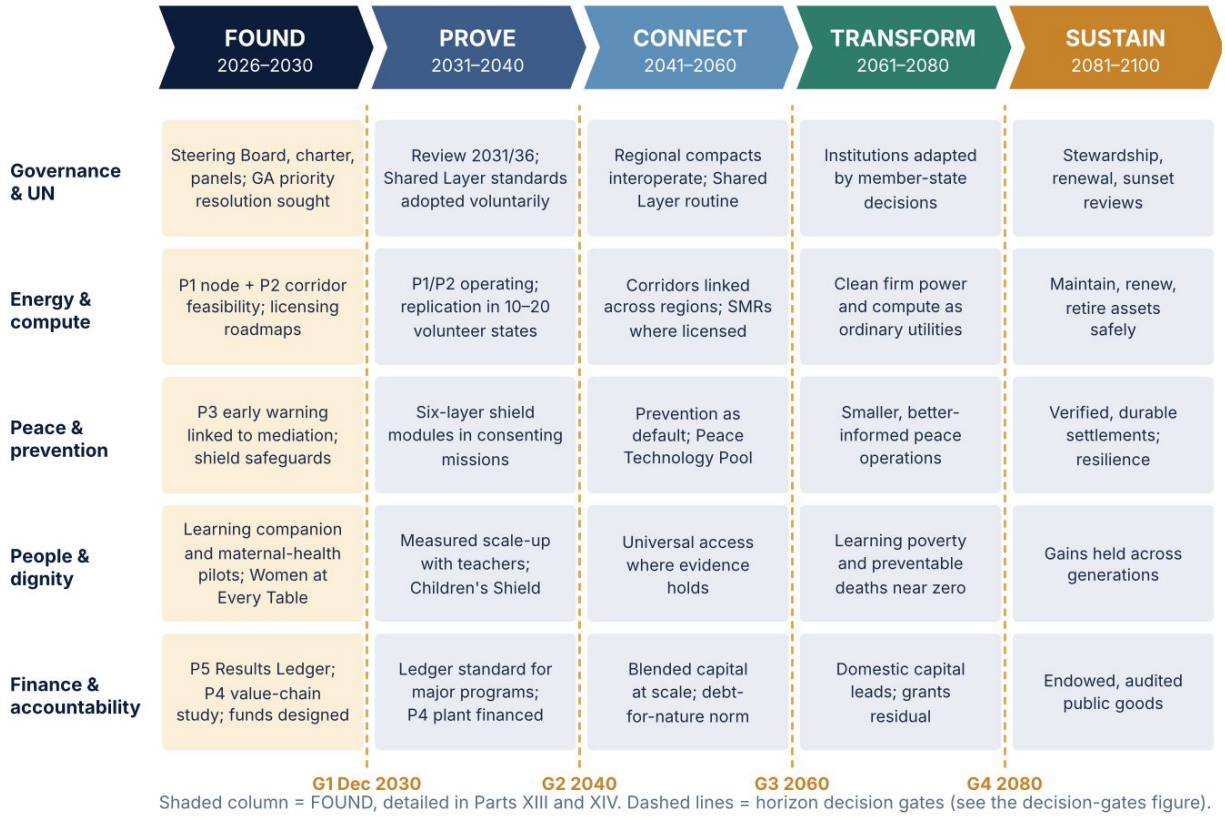
Vision 2100 therefore proposes to begin outside the UN budget, add little or nothing to assessed contributions in FOUND, and attach itself to existing mandates: the UN80 registry for the Results Ledger (P5), and the Global Dialogue for Shared Layer standards (Part IV).

◆ DOCUMENTED POSITION In her General Assembly dialogue of 20 August 2026, Ambassador A-Baki said that what the Organization lacks is trust in results, and that member states do not yet see the UN as a place of action; she warned that more than five priorities will be lost; and, answering Cuba, she named corruption as a reason developing countries lack resources and asked where the money goes [5]. These are her general statements. She did not propose the pilots, gates or institutions in this part, which are Vision 2100 proposals developed by A113 Partners; she endorsed this book for publication on 2 November 2026. The architecture below is designed to meet the test of results she described, whoever holds the office of Secretary-General.

XII.2 The five horizons

FIGURE XII-1

Vision 2100 roadmap, 2026–2100, by horizon and domain



Shaded column = FOUND, detailed in Parts XIII and XIV. Dashed lines = horizon decision gates (see the decision-gates figure).

ILLUSTRATIVE — planning framework developed for Vision 2100; horizon content is indicative and subject to the five-year reviews and decision gates described in XII.2 and XII.5.

Figure XII-1 summarizes the proposed horizons. They are not a forecast but a sequence of conditional commitments. Detail falls with distance: FOUND is planned by month (Part XIII) and by year (Part XIV), PROVE by year, later horizons by objective and gate.

XII.2.1 Decision rights across the horizons

"Lead" means the actor whose decision is necessary; others consent, advise or fund. Table XII-1 extends Part III's decision-rights matrix and Appendix F, and remains subject to UN legal review.

TABLE XII-1 **Proposed lead decision rights by actor and horizon. Source: Vision 2100 proposal, extending the Part III matrix; subject to UN legal review.**

Actor	FOUND 2026–30	PROVE 2031–40	CONNECT 2041–60	TRANSFORM / SUSTAIN 2061–2100
A113 Partners, civil society	Convene; research; secretariat; P5 prototype	Hand secretariat to independent foundation; evaluate	Independent monitoring	Watchdog and stewardship role
Voluntary national governments	Request and own pilots; license sites	Lead national replication	Interconnect via agreements	Own and renew assets

Actor	FOUND 2026–30	PROVE 2031–40	CONNECT 2041–60	TRANSFORM / SUSTAIN 2061–2100
Regional bodies and banks	Co-design compacts; project preparation	Finance regional replication	Operate corridors and compacts	Regional standards bodies
UN Secretariat and agencies	Convene; technical advice (IAEA, ITU, UNDP, WMO); report	Host Shared Layer services within mandates	Shared Layer routine operations	Maintain verification and reserves
General Assembly, Security Council	Priority resolution (GA); no new organs	Shared Layer and Peace Technology Pool decisions; mission mandates (SC)	Institutional adaptation	Any Charter change (Art. 108)

XII.2.2 FOUND 2026–2030

For each horizon, Vision 2100 proposes objectives, active initiatives, responsible institutions, an investment assumption, milestones, success criteria and a decision gate. They are set out below as proposals, not as commitments by any government or UN body.

Objectives. Govern the Vision 2100 initiative; build the evidence base and a coalition of voluntary hosts; take all five pilots through feasibility, with at least three operating by 2030; design financing vehicles; and agree first Shared Layer standards through existing UN processes.

Initiatives active. The five pilots (XII.4); Women at Every Table rosters and learning-companion and maternal-health pilots (Part VIII); Children's Shield (Part VIII design; Part VI protective technology) and six-layer shield safeguards drafted, not deployed (Part VI); first Americas Compact consultations (Part VII); the Prevention and Mediation Fund and Mothers and Children Peace Fund designed as voluntary trust funds (Part X); invitations to the Council of Long-Term Stewards, interfaith peace convening and Arts for Peace (Part XI).

Responsible institutions. A113 Partners staffs an interim secretariat. An interim steering group of five to seven people, with an independent majority, governs the initiative until the Vision 2100 Steering Board's charter is adopted (about April 2027). Host governments decide on pilots and chair or co-chair each Pilot Governance Board (XII.5). Regional banks and agencies (IAEA, ITU, UNDP, WMO, DPPA) advise within their mandates. The Secretary-General may convene and report. A General Assembly resolution recognizing Technology for Peace and Security as a cross-cutting priority would be sought no earlier than 2028, with cross-regional co-sponsors.

ILLUSTRATIVE **Investment requirement: about $120–300 million**, excluding P2 phase-one construction. Table XII-2 shows the arithmetic, using the canonical three-tier pilot budgets in XII.4. The first year (November 2026 – October 2027) accounts for about $10–23 million of it: $4–8 million for the secretariat and initiative core and $6–15 million for preparation of the five pilots (Part XIII). The initial-implementation ranges below include that first-year preparation. No funding is committed.

TABLE XII-2 **FOUND (2026–2030) investment arithmetic. ILLUSTRATIVE planning assumptions using the canonical pilot budgets; no funding committed.**

FOUND component	Planning range
Secretariat, research, panels, evaluation ($4–8m/yr × 5 years)	$20–40m
Project-preparation facility	$25–60m

FOUND component	Planning range
P1 Sovereign Digital Nation, initial implementation (~4.5 years)	$20–65m
P2 studies and pre-development (2026–2029)	$15–40m
P3 Prevention Early-Warning, initial implementation (five years)	$20–50m
P4 studies and preparation	$10–25m
P5 Results Ledger, initial implementation (three years)	$8–20m
Total	**$118–300m (≈ $120–300m)**

P2 phase-one construction ($0.5–2.0 billion), if a financing decision is reached around 2029, is project-financed, spent mostly after 2030 and counted in PROVE. P4 plant capital also falls in PROVE. Including P2 phase one, FOUND-era commitments would total about $0.6–2.3 billion ($118–300 million plus $0.5–2.0 billion).

Milestones. Book published (November 2026). Steering Board charter adopted (about April 2027); Steering Board and four panels seated (by mid-2027). Gate 0 decisions on all five pilots (October 2027). First Results Ledger publication covering one UN program and one national program (2028). P3 early warning in shadow mode (2027–2028), then live with a mediation link, and P1 node in service (by 2029). Independent foundation registered (2029). Mid-FOUND review (mid-2029). Independent mid-term evaluation (2030). Gate 1 (December 2030).

Success criteria and Gate 1 (decided December 2030). At least three pilots operating with host governments still requesting them; independent evaluation finds measurable improvement against baselines; the Results Ledger has published on schedule; no unremedied human-rights, safety or integrity finding stands; and at least 60 percent of the PROVE financing path is identified.

Dependencies. Host requests; preparation finance; UN agency expertise; an independent evaluator; for P2 and P4, regulatory pathways and community consent.

XII.2.3 PROVE 2031–2040

Objectives. Demonstrate the pilots at national and regional scale, replicate them in 10–20 volunteer states, make independent measurement routine, and stop what does not work.

Initiatives active. P1 replicated as a National AI Sovereignty Model package; P2's first corridor operating; P3 linked to the Prevention and Mediation Fund; P4's first plant built; P5 a common ledger standard; six-layer shield modules (Watch, Warn, Verify first) tested where the Security Council authorizes and hosts consent; regional compacts beyond the Americas.

Responsible institutions. Governments lead replication through their Pilot Governance Boards; development banks and sovereign funds lead finance. The secretariat's transfer to the independent foundation (registered 2029) is complete by 2031. The General Assembly decides on assessed-budget Shared Layer services and a Peace Technology Pool; the Security Council on technology in mission mandates.

ILLUSTRATIVE **Investment requirement: about $2–17 billion across the decade**, mostly national, development-bank and private capital, and only for pilots that pass Gate 1. Table XII-3 shows the arithmetic; the first three rows are the long-term capital tier of the canonical pilot budgets.

TABLE XII-3 PROVE (2031–2040) investment arithmetic. ILLUSTRATIVE planning assumptions; replication only if gates pass; no funding committed.

PROVE component	Basis	Planning range
P1 replication	15–20 states × $20–65m	$0.3–1.3bn
P2 corridors, phase one (incl. the pilot corridor)	2–5 × $0.5–2.0bn	$1.0–10.0bn
P4 first processing plants	2–4 × $0.3–1.2bn	$0.6–4.8bn
P3 extension	3–6 further regions × $20–50m	$0.06–0.3bn
P5 extension	5–10 program pairs × $8–20m	$0.04–0.2bn
Foundation secretariat	$4–8m/yr × 10 years	$0.04–0.08bn
Project-preparation facility, second tranche	as in FOUND ($25–60m)	$0.025–0.06bn
Total		**$2.07–16.74bn (≈ $2–17bn)**

Corridors dominate the range. Any small modular reactor would be additional and is treated in Part V.

Milestones. Gate 1 decided (December 2030); PROVE readiness test and first five-year review published (October 2031); review in 2036; Shared Layer standards adopted by a cross-regional group; one corridor delivering firm clean power under host ownership; rigorous learning-companion evaluations published.

Gate 2 (2040, at the PROVE-to-CONNECT transition). Outcomes beat baselines in independently evaluated sites; replication in at least ten states across all three archetypes; no unremedied rights finding; costs within 25 percent of plan or explained.

Dependencies. Gate 1 passed; development-bank appetite; skills pipelines; nuclear licensing where hosts chose that path (the IAEA Milestones approach indicates roughly 10–15 years from first consideration to operation for a newcomer [177]).

XII.2.4 CONNECT 2041–2060

Objectives. Link proven national systems through interoperable infrastructure and voluntary agreements, so nations stay sovereign but connected; make prevention the default in peace operations; make blended and domestic capital the main source of finance.

Initiatives and institutions. Corridors interconnected across regions; federated Shared Layer cooperation in which models travel to data (Part IV); a Peace Technology Pool if member states create it; minerals value chains extended to components. Regional bodies operate corridors and compacts, governments own assets, and the Secretariat runs Shared Layer services within mandates.

ILLUSTRATIVE **Investment requirement.** First-phase unit costs scaled to 40–80 states and 15–40 corridors give about $10–100 billion (P1 40–80 × $20–65 million = $0.8–5.2 billion; corridors 15–40 × $0.5–2.0 billion = $7.5–80 billion; five to ten further processing plants × $0.3–1.2 billion = $1.5–12 billion; sum about $9.8–97 billion). Full corridor build-out and cross-border interconnection could raise this several-fold. This is a placeholder for Part X's financing model, not an estimate.

Gate 3 (2060). Systems interoperate at regional scale; domestic and private capital leads; independent public-trust surveys meet a threshold set in 2040.

Dependencies. Gate 2 passed; stable standards; cyber resilience; continued political consent.

XII.2.5 TRANSFORM 2061–2080

Objectives and institutions. Clean firm power and sovereign compute become ordinary utilities; learning poverty and preventable maternal and child deaths approach zero; peace operations are smaller and better informed. Any UN adaptation is made by member states, through Article 108 for amendments; the Council of Long-Term Stewards provides continuity.

ILLUSTRATIVE **Investment requirement.** Not estimated. By this horizon, infrastructure should be financed as normal public and private investment; Vision 2100's own costs would be governance, evaluation and public goods.

Gate 4 (2080). Institutions renew themselves without the Vision 2100 initiative; asset renewal is funded; gains have held for at least ten years.

XII.2.6 SUSTAIN 2081–2100

Objectives and institutions. Preserve gains, adapt institutions, retire infrastructure safely (including nuclear decommissioning and waste) and maintain accountability, through governments, regional bodies, the UN within its mandates and independent monitors. The Vision 2100 initiative ends in 2100 unless renewed.

ILLUSTRATIVE **Investment requirement.** Maintenance, renewal and endowed public goods. No separate estimate.

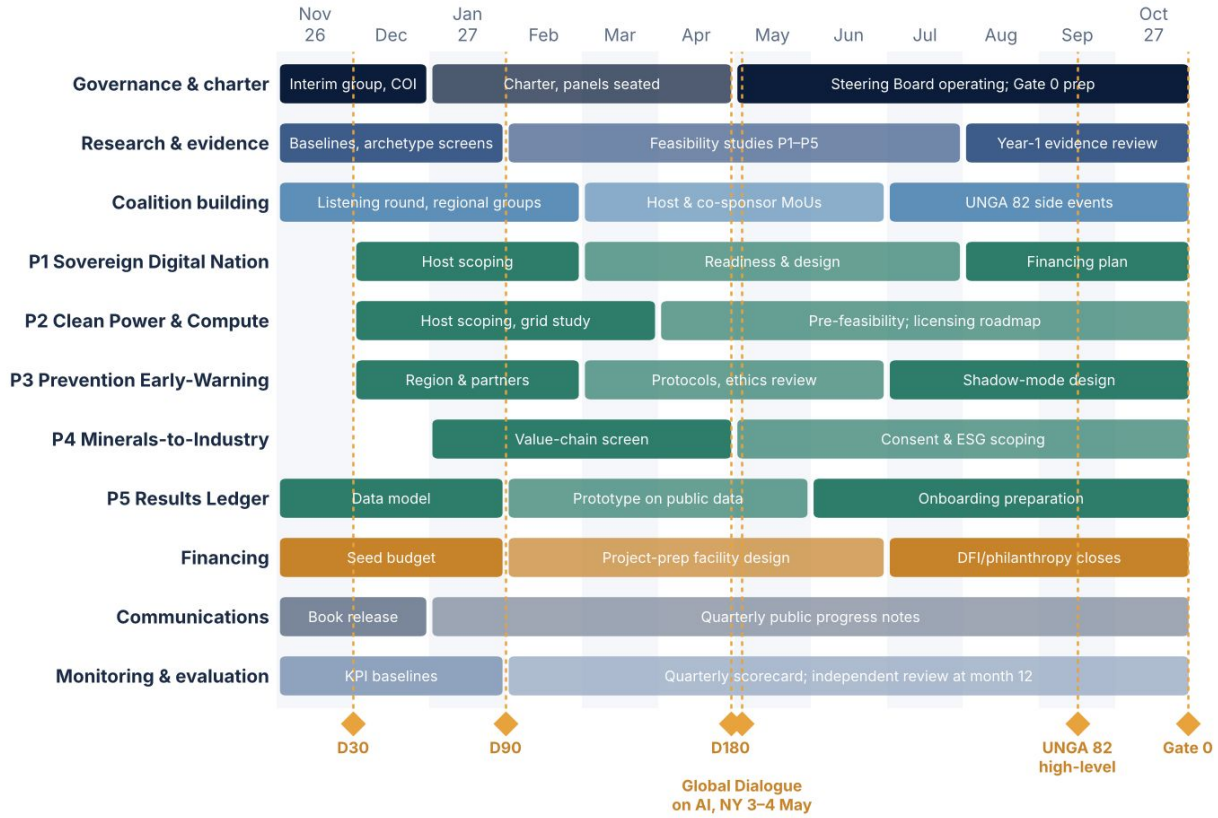
XII.3 The first five years in summary: November 2026 to October 2031

The first five years are where Vision 2100 proposes the most detail, and that detail now sits in two dedicated parts. **Part XIII** gives the full first-year plan (November 2026 – October 2027): the 30-, 90- and 180-day actions, owners, budgets, staffing and the preparation of each pilot. **Part XIV** gives the 2026–2031 execution strategy year by year. This section keeps only the summary that the horizon logic needs.

Vision 2100 proposes that the work run on seven workstreams: governance and charter; research and evidence; coalition building; the five flagship pilots; financing; communications; and monitoring and evaluation. A113 Partners staffs them in the first year through the interim secretariat. Responsibility passes to the Vision 2100 Steering Board once its charter is adopted (about April 2027), and to the independent foundation as the secretariat transfers (registered 2029, transfer complete by 2031).

FIGURE XII-2

First-year implementation schedule, November 2026 – October 2027



ILLUSTRATIVE — planning schedule. Global Dialogue on AI Governance, New York, 3–4 May 2027 per UN [439]; all other dates are planning assumptions. Detailed tasks appear in Part XIII.

ILLUSTRATIVE Figure XII-2 shows the proposed first-year sequence: publication with disclosure and an open evidence register in the first 30 days; a draft charter, baselines, archetype screening, a Results Ledger prototype on public data and panel nominations by day 90; and by day 180 an adopted charter, letters of intent from prospective hosts for at least three pilots (feasibility only), feasibility studies for P1–P3, a project-preparation facility term sheet and a contribution to the Global Dialogue's 3–4 May 2027 session in New York [439]. The first-year budget is about $10–23 million (XII.2.2; Part XIII).

Gate 0 (October 2027). The year ends at Gate 0, when the Vision 2100 Steering Board decides, pilot by pilot, whether Vision 2100 continues to support the pilot: proceed, redesign or stop. A pilot that reaches October without a host request is recorded as held; holding is a status, not a judgment on the pilot's merit (Part XIII). The host government decides separately, through its own processes, whether to proceed. Gate 0 criteria: a written host request; completed feasibility and ethics review; a financing path for at least 60 percent of first-phase cost (for P2 and P4, of pre-development and studies, plus indicative development-finance interest in construction); an agreed evaluation design; vendor neutrality and no unresolved conflict of interest; no premature nuclear element; and a proposed Pilot Governance Board composition, chaired or co-chaired by the host government, put to the host for acceptance (the full six criteria are in Part XIII). The first annual report is presented during UNGA 82's high-level week (September 2027) through side events hosted by willing member states.

ILLUSTRATIVE **Years two to five, in outline.** Pilots that pass Gate 0 begin implementation in 2027–2028; P5 publishes its first Results Ledger in 2028; P3 runs in shadow mode (warnings logged and later scored, triggering no action) before going live with a human-led mediation link in 2029; the P1 node enters service and the P2 phase-one financing decision falls around 2029, when the independent foundation is also registered; a mid-FOUND review in mid-2029, the mid-term evaluation and Gate 1 preparation follow in 2029–2030; Gate 1 is decided in December 2030; and by October 2031 the first five-year review is published (including what failed), the PROVE readiness test is taken and the secretariat transfer is completed. Part XIV sets out each year's deliverables, owners and corrective actions.

Gate 1 (December 2030). The criteria are those set out for FOUND in XII.2.2: at least three pilots operating with host governments still requesting them; independent evaluation showing measurable improvement against baselines; on-schedule Results Ledger publication; no unremedied human-rights, safety or integrity finding; and at least 60 percent of the PROVE financing path identified. Gate 1 decides which pilots proceed; the PROVE readiness test of October 2031, taken with the first five-year review, decides whether the initiative as a whole is ready for a decade of replication (Part XIV).

XII.3.1 What A113 Partners can and cannot do

A113 Partners can publish, convene, research, draft, prototype on public data and fund early preparation. It cannot choose hosts, commit any government, speak for any UN body or attribute positions to Ambassador A-Baki beyond her public record. Only UN organs can create UN institutions, fund them from assessed budgets or mandate technology in missions. A113's role is designed to shrink: the evaluation instrument passes to an independent foundation by 2031, and A113 and its affiliates do not act as supplier, financier or transaction adviser to any pilot they help design.

XII.4 The five flagship pilots: summary business cases

ILLUSTRATIVE Every cost figure here is a canonical planning range, not a quotation or commitment; hosts are hypothetical archetypes. Each pilot carries a three-tier budget: first-year preparation (November 2026 – October 2027, Part XIII), initial implementation (the first phase, which includes that preparation) and long-term capital for PROVE replication, which is spent only if gates pass (Table XII-4). Part X develops financing structures. Each pilot that passes Gate 0 is run by its own Pilot Governance Board, chaired or co-chaired by the host government (XII.5).

XII.4.1 P1 Sovereign Digital Nation

Objective. Show that a small or resource-constrained nation can own a sovereign AI node and digital public infrastructure (identity, payments, data exchange, public services) powered by local clean energy, with its data held under its own law (Part IV).

Archetype host and phases. A small island state of about 100,000 people, reliant on imported diesel and foreign cloud services (the archetype defined in Part IV); small states of 100,000 to 1 million people are eligible. Feasibility (2027); open procurement (2028); node and first services live (2029); service expansion and learning companion (2030–2031); regional sharing (PROVE).

ILLUSTRATIVE **Planning cost: $1.0–3.0 million for first-year preparation; $20–65 million for initial implementation over about 4.5 years** (2027 to mid-2031); $0.3–1.3 billion of long-term capital to replicate in 15–20 states if gates pass. For a small state, public-service AI inference needs tens to hundreds of kilowatts of IT load, not megawatts (Part IV's central case is about 50 kW). Compute is therefore a minor cost line (about $1.5–10 million); identity, data exchange and registries, services and assisted channels, security, skills and contingency dominate. The component

breakdown is owned by Part IV (Table IV-5), the single P1 cost table this book uses throughout; this part carries no separate line-by-line split. The range is driven mainly by how much existing infrastructure can be reused and by connectivity costs.

Financing, KPIs, gates. Grants and concessional finance for public goods; climate finance for solar, repaid from diesel savings; no government data as collateral. KPIs: share of priority services and sensitive data under national jurisdiction; availability; trained national operators; citizen satisfaction. Gate 0 (October 2027), review (2030), replication decided at Gate 1 (December 2030). Operations are governed by the P1 Pilot Governance Board under host-government chairmanship; staffing follows Part IV.

Risks. Vendor lock-in, skills shortage, cyberattack, political change. Mitigations: open standards, multi-vendor procurement, regional backup, training before procurement.

XII.4.2 P2 Clean Power and Compute Corridor

Objective. Show that a corridor pairing new clean firm power with a compute campus and an industrial park can anchor jobs, attract investment and serve national AI needs without diverting power from households (Part V).

Archetype host. An emerging economy with a growing grid, unserved industrial demand and renewable resources.

The demand pressure is real. The IEA's *Energy and AI* report (April 2025) puts data-centre electricity use at about 415 TWh in 2024, about 1.5 percent of global electricity, rising to about 945 TWh by 2030 in its base case, with the United States and China accounting for nearly 80 percent of the growth, according to the IEA as reported by S&P Global and DatacenterDynamics [114440]. The IEA reported in April 2026 that data-centre electricity use rose a further 17 percent in 2025 and still expects it to roughly double by 2030 [441]. Hosts that do not plan power for compute will either import the service or watch it compete with households for the grid.

Phases. Grid and site studies (2027–2028); financing decision (2029); construction (2029–2032); industrial tenants (2031 on). Nuclear is assessed only in parallel, on the IAEA Milestones pathway [177], with no reactor assumed before the late 2030s for a newcomer.

ILLUSTRATIVE **Planning cost: $1.5–4.0 million for first-year preparation; $15–40 million for studies and pre-development (2026–2029), including that preparation; phase-one construction of $0.5–2.0 billion, project-financed, with a decision around 2029 and counted in PROVE; $1–10 billion of long-term capital for two to five corridors if gates pass.** Phase-one assumptions: 200–500 MW of renewables plus storage at $1.0–1.8 million per MW ($0.2–0.9 billion); a compute campus of 20–50 MW of IT load, excluding chips, at $10–15 million per MW ($0.2–0.75 billion); transmission and industrial-park infrastructure ($0.1–0.4 billion). Component sums slightly exceed the phase-one ceiling at the top of every range; phase one is capped at $2.0 billion by scaling the campus to anchored demand. The campus exceeds the roughly 12 MW national public-service inference need of Part IV's emerging-economy case because a corridor campus may also host regional fine-tuning and commercial workloads.

First-of-a-kind SMR costs (Darlington, C$6.1 billion for the first 300 MWe unit [170]; detail in Part V.4) are why P2 appraises nuclear later and separately.

Financing, KPIs, gates. Project finance with development-bank anchor lending, political-risk guarantees, private equity in the campus and industrial power purchase agreements; public funds only for transmission and public-interest compute. KPIs: clean capacity; household tariffs and reliability (must not worsen); jobs held by nationals and women; compute reserved for public services. Gate 0 (2027); financial close (2029) with household-impact analysis; Gate 1.

Risks. Cost overrun, absent demand, grid strain, water use, private capture. Mitigations: phased build, anchor tenants first, water-light cooling, contracts on the Results Ledger.

XII.4.3 P3 Prevention Early-Warning

Objective. Show that a human-led early-warning system can give mediators earlier, better-evidenced warning of rising violence in a water- and climate-stressed region, and that warnings lead to action through the Prevention and Mediation Fund (Part VI).

Archetype host. Two to three neighboring states sharing a stressed basin or rangeland, with a regional organization to host the unit.

The foundation already exists for natural hazards. The WMO reports that 119 countries, about 60 percent, had multi-hazard early-warning systems in 2025, under the Early Warnings for All initiative, which aims to protect everyone by 2027 [442]. P3 extends that model to conflict risk, which requires far stronger safeguards because the subject is human behavior.

Phases. Partners, protocols and ethics review (2027); shadow mode (late 2027–2028); live with mediation link (2029); evaluation (2030–2031).

ILLUSTRATIVE **Planning cost: $1.0–2.0 million for first-year preparation; $20–50 million for initial implementation over five years; $0.06–0.3 billion to extend to further regions if gates pass.** Assumptions: a regional unit of 10–14 analysts and data staff plus community monitors, with emphasis on women's networks, and a mediation liaison (Part VI); satellite and open-source data; mediation support grants; independent evaluation. AI tools aggregate and flag. They never identify individuals as likely perpetrators and never trigger force.

Financing, KPIs, gates. Voluntary contributions, peacebuilding funds and philanthropy; the regional body's budget from PROVE. KPIs: median warning lead time; share of warnings with documented response; false-alarm rate; women among monitors; data-misuse incidents (target zero). Gate 0 (2027); rights-review gate before live operation (2028); Gate 1. Operations are governed by the P3 Pilot Governance Board, co-chaired by the host governments with the regional body, independent members and the relevant UN entity.

Risks. Misuse by security services, politicized warnings, false alarms. Mitigations: aggregate data only, published data protection, independent rights oversight, host access to outputs, not raw data.

XII.4.4 P4 Minerals-to-Industry

Objective. Show that a staged lithium or copper value chain can move from extraction to first processing and then to components in the producing country, with community consent and environmental standards that hold (Part V).

Archetype host and phases. An emerging or lower-middle-income producer with an operating mine and plannable power. Value-chain screen and community baseline (2027–2028); feasibility for one step, such as lithium hydroxide or copper rod (2029); financing decision (2030–2031); construction (PROVE).

ILLUSTRATIVE **Planning cost: $1.0–3.0 million for first-year preparation; $10–25 million for studies and preparation, including that first year; $0.3–1.2 billion for a first processing plant (PROVE); $0.6–4.8 billion for two to four plants if gates pass.** The plant range covers small to mid-scale chemical or metallurgical plants and depends on technology, power and logistics. Plant capital would be private and development-bank finance; public money funds studies, skills and community benefit structures.

Financing, KPIs, gates. Joint ventures with offtake, development-bank and export-credit finance, a community benefit fund, all contracts on the Results Ledger. KPIs: domestic value added; national employment; water and emissions intensity; grievance resolution. Gate 0 (October 2027, a screen-stage decision); community-consent gate before feasibility; financing gate (2030–2031).

Risks. Price swings, community opposition, corruption, environmental harm. Mitigations: offtake contracts, free, prior and informed consent where Indigenous peoples are affected, independent monitoring.

XII.4.5 P5 Results Ledger

Objective. Show that public accountability can follow money from approval to verified delivery for one UN program and one national infrastructure program, published openly (Part IX).

Archetype host and phases. One willing UN entity and one government with an infrastructure program and open-budget commitment. Prototype on public data (2026–2027); two programs onboarded (2027–2028); first publication (2028); evaluation and alignment with the UN80 registry [26] (2029–2030), extension decided on evidence.

ILLUSTRATIVE **Planning cost: $1.5–3.0 million for first-year preparation; $8–20 million for initial implementation over three years; $0.04–0.2 billion to extend to five to ten further program pairs if gates pass.** Assumptions: a team of 14–20 data, audit, inspection and engineering staff (Part IX cost model); satellite verification of physical assets; open-source software; independent audit of the ledger itself.

Financing, KPIs, gates. Philanthropy and governance funds, later a small share of program budgets. KPIs: spending traceable to verified outputs; payment-to-publication time; anomalies resolved. Gate 0 (2027); publication gate (2028); Gate 1.

Risks. Reluctance to publish; errors that unfairly damage reputations. Mitigations: right of reply, human review of every flag, appeal.

XII.4.6 The portfolio in summary

TABLE XII-4 **Canonical three-tier pilot budgets. ILLUSTRATIVE planning assumptions (BOOK standard); initial implementation includes first-year preparation; long-term capital only if gates pass; no funding committed.**

Pilot (archetype)	First-year preparation (Nov 2026–Oct 2027)	Initial implementation (first phase)	Long-term capital (PROVE, if gates pass)	Main finance; first gate
P1 Sovereign Digital Nation (small island state)	$1.0–3.0m	$20–65m over ~4.5 years	$0.3–1.3bn (15–20 states)	Grants, concessional, climate; Oct 2027
P2 Clean Power and Compute Corridor (emerging economy)	$1.5–4.0m	$15–40m studies and pre-development (2026–2029); phase-one construction $0.5–2.0bn, project-financed (decision ~2029; counted in PROVE)	$1–10bn (2–5 corridors)	Project finance, DFIs; Oct 2027, close ~2029
P3 Prevention Early-Warning (2–3 climate-stressed states)	$1.0–2.0m	$20–50m over five years	$0.06–0.3bn extension	Voluntary, peacebuilding funds; Oct 2027
P4 Minerals-to-Industry (mineral producer)	$1.0–3.0m	$10–25m studies and preparation; first plant $0.3–1.2bn (PROVE)	$0.6–4.8bn (2–4 plants)	JV, DFI, export credit; Oct 2027 (screen stage)

Pilot (archetype)	First-year preparation (Nov 2026–Oct 2027)	Initial implementation (first phase)	Long-term capital (PROVE, if gates pass)	Main finance; first gate
P5 Results Ledger (UN entity + national program)	$1.5–3.0m	$8–20m over three years	$0.04–0.2bn extension	Philanthropy, governance funds; Oct 2027
Secretariat and initiative core	$4–8m per year	—	—	Seed and philanthropic funds

First-year total: $10–23 million (secretariat $4–8 million plus pilot preparation $6–15 million). FOUND total (2026–2030): about $120–300 million excluding P2 construction, about $0.6–2.3 billion including it. PROVE (2031–2040): about $2–17 billion.

The finance needed is modest relative to existing markets. Convergence reports that 123 blended-finance transactions totaling about $18 billion reached financial close in 2024 [443]. The FOUND portfolio of $120–300 million is under 2 percent of one year of that market. The constraint is preparation, host readiness and trust, not the global availability of capital.

XII.5 Governance of Vision 2100 itself

An initiative that asks for accountability must be accountable itself. Vision 2100 proposes two distinct layers of governance and five mechanisms. The **Vision 2100 Steering Board** governs the initiative; **Pilot Governance Boards** govern the pilots. Host governments retain sovereign decision rights at every stage.

A Vision 2100 Steering Board. Eleven to thirteen members on staggered three-year terms, renewable once, with an independent majority, drawn from every UN regional group, at least half women, at least two under 35 and at least two from small or resource-constrained states. A113 Partners holds no more than two seats and no veto. Until the charter is adopted (about April 2027), an interim steering group of five to seven people with an independent majority acts in its place. The board decides at each gate whether Vision 2100 continues to support a pilot, approves the initiative's plan and budget, appoints the independent evaluator and owns the revision cycle of this book; members disclose interests and recuse. It has no authority over any government, UN body or host — only over the initiative's own resources and endorsements.

Pilot Governance Boards. One per pilot, chaired or co-chaired by the host government, with the relevant regional body, independent members and, where relevant, the UN entity involved (for example the UN entity whose program P5 publishes). Each board governs its pilot's operations, budget execution, data protection and corrective actions within national law. A Steering Board decision to withdraw Vision 2100's support does not bind the host, which may continue the pilot on its own authority.

Four independent advisory panels of five to nine members, seated by open nomination:

- **Technical.** AI, compute, digital infrastructure, energy and cybersecurity; reviews architectures and procurement neutrality.
- **Human rights and ethics.** Privacy, surveillance, child protection, gender and Indigenous rights; holds a binding stop recommendation where rights findings are unremedied.
- **Nuclear safety and nonproliferation.** Defers to the IAEA and national regulators, who alone hold authority; requires safeguards, fuel take-back and public consent before any nuclear element is endorsed.

- **Finance and integrity.** Cost realism, debt sustainability, procurement and conflicts of interest; reviews every financing structure before close.

Publication. A quarterly note; an annual report during the General Assembly's high-level week; the scorecard updated annually; and the initiative's own spending on the Results Ledger, including stopped pilots.

Five-year revision. The Steering Board owns the revision cycle of this book. Reviews in 2031, 2036, 2041 and every five years to 2096, after public consultation, independent evaluation and panel opinions; changes are logged with reasons.

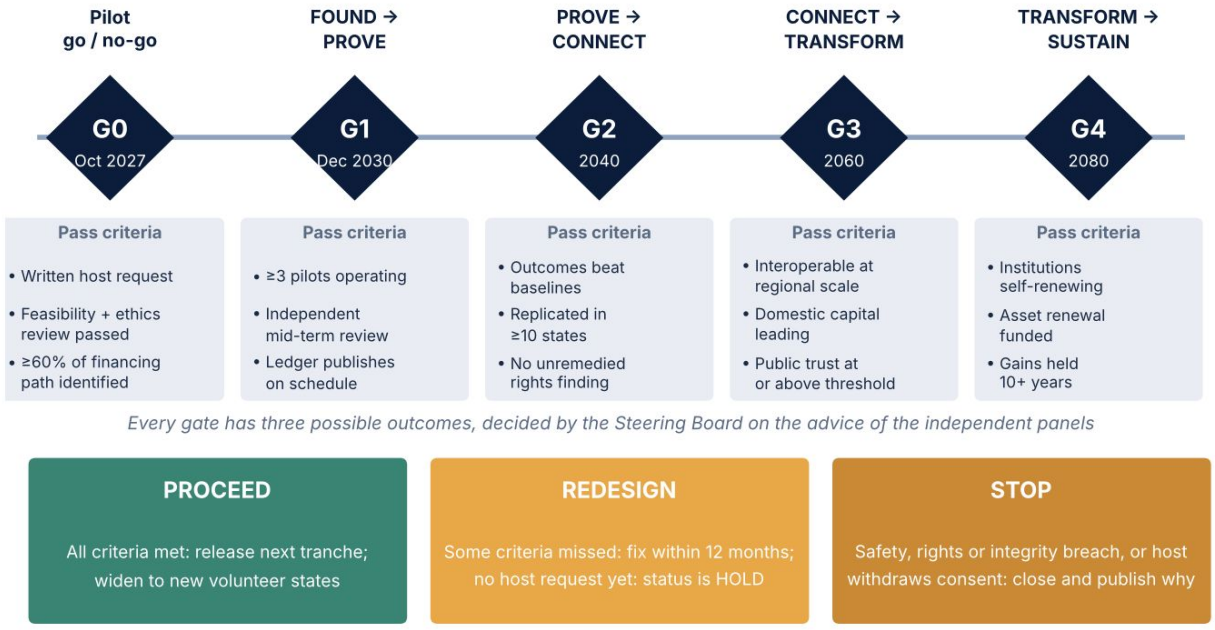
Sunset. The board's mandate expires every ten years unless renewed by a two-thirds vote after consultation. If Vision 2100 stops serving its purpose, it ends and its archive passes to a public university or UN archive. Final sunset: 31 December 2100.

> **CONFLICT OF INTEREST**
>
> The principal architect serves as Chief Strategy Officer of American Lithium Energy Corporation, a U.S. battery manufacturer, and founded A113 Partners, the publisher of this book, and A113 Defense, which work on federal technology intelligence and autonomous systems integration. Pilots P1 and P2 involve energy storage, P4 concerns lithium or copper value chains that supply battery materials, and the six-layer shield involves autonomy. Vision 2100 therefore bars A113 Partners and affiliates from acting as supplier, financier or transaction adviser to any pilot they help design; recuses the principal architect from storage and battery-materials specifications for P2 and P4; requires published declarations of interest and recusal by Board, panel members and staff; and requires open, multi-vendor procurement reviewed by the finance and integrity panel. Full disclosures and the firewall are in Appendix I.

Figure XII-3 summarizes the proposed gate sequence and the outcomes available at each gate: proceed (continue support), redesign, or stop, with "hold" recorded as a status where a pilot has no host request (Part XIII's convention). Gate 1 is decided in December 2030 and Gate 2 at the PROVE-to-CONNECT transition in 2040.

FIGURE XII-3

Decision gates and outcomes, 2027–2080



ILLUSTRATIVE — proposed governance mechanism for Vision 2100; the Steering Board decides on Vision 2100's support, host governments decide on their pilots; criteria are set out in full in XII.2, XII.3 and XII.4.

XII.6 Whether or not the Ambassador becomes Secretary-General

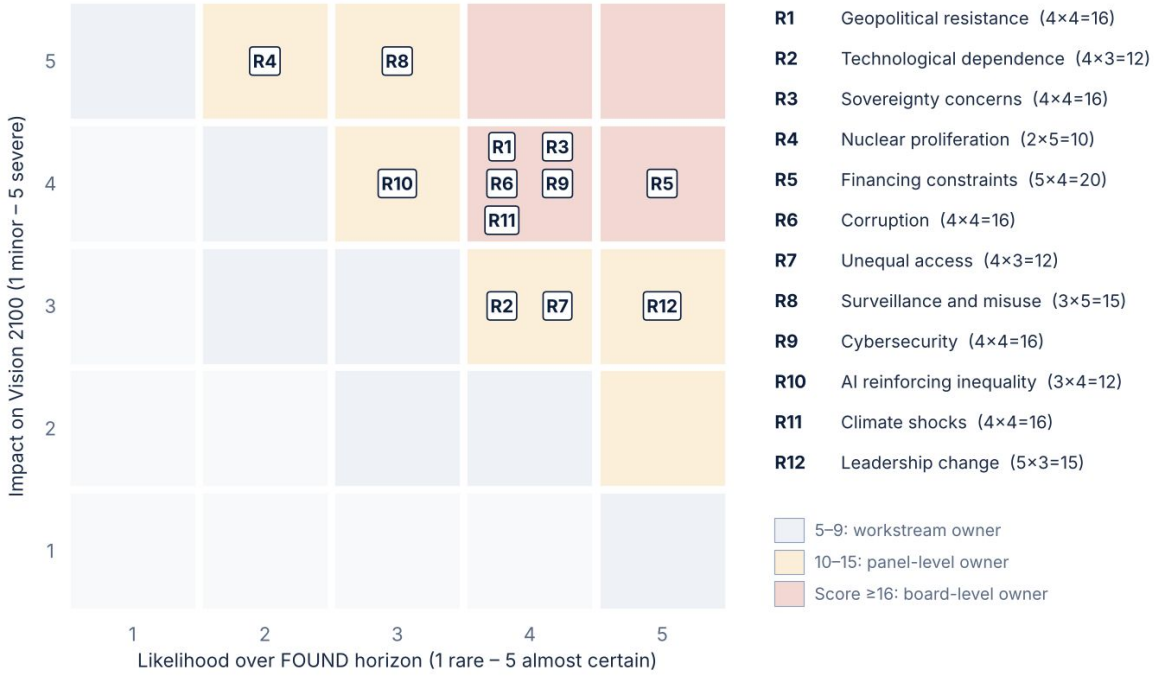
Vision 2100 is designed to stand either way. Ambassador A-Baki was nominated by Tonga on 17 August 2026 [2]. If she is selected, the Secretary-General could use the office's convening, reporting and good-offices powers to advance the proposals within existing mandates (Part III); she has made no commitment to any specific Vision 2100 proposal, including on Article 99, and none is implied. If she is not, every FOUND element remains feasible: pilots depend on hosts and financiers, the Results Ledger can start on public data, and the Global Dialogue and Scientific Panel already exist [12]. The cost is slower progress on UN-level elements such as a priority resolution and Shared Layer services, not failure of the whole. Gates, reviews and published criteria carry Vision 2100 through every change of leadership.

XII.7 Consolidated risk matrix

ILLUSTRATIVE Likelihood and impact are scored from 1 to 5 over the FOUND horizon by the authors and will be re-scored by the panels. Scores of 16 or more are owned at Steering Board level, 10–15 by a panel and lower scores by workstream leads or, for pilot operations, by the relevant Pilot Governance Board. Figure XII-4 plots the scores; Table XII-5 gives mitigations, triggers and owners. Appendix G carries the full strategic-risk register.

FIGURE XII-4

Risk heat map, FOUND horizon



ILLUSTRATIVE — authors' initial scoring; to be re-scored by the independent panels at Gate 0 and annually thereafter.

TABLE XII-5 **Consolidated risk matrix, FOUND horizon (likelihood × impact, 1–5). ILLUSTRATIVE — authors' initial scoring; proposed mitigations and owners.**

Risk (L×I)	Description	Mitigation	Trigger and corrective action	Owner
R1 Geopolitical resistance (4×4)	Major powers see Vision 2100 as serving rivals	Technology-neutral design; cross-regional co-sponsors; no side-taking	Co-sponsor withdrawal: pause UN-track asks, continue voluntary pilots	Steering Board
R2 Technological dependence (4×3)	Hosts locked to one vendor or country	Open standards; multi-vendor tenders; exit clauses	Single-supplier share >50%: re-tender	Technical panel
R3 Sovereignty concerns (4×4)	Fear the UN or donors will control data or assets	Host ownership; UN holds no data; written consent	Host objection: renegotiate or exit	Steering Board
R4 Nuclear proliferation (2×5)	Spread of sensitive technology or material	Safeguards; leased fuel with take-back; IAEA-led review	Any safeguards concern: suspend endorsement	Nuclear panel
R5 Financing constraints (5×4)	Aid cuts and fiscal stress limit capital	Phased design; blended structures; small first tickets	<60% path at gate: hold or rescale	Finance panel
R6 Corruption (4×4)	Diversion in procurement or concessions	Results Ledger; open contracts; independent audit	Integrity finding: freeze tranche, refer	Finance panel
R7 Unequal access (4×3)	Benefits reach capitals, men or elites first	Targets by sex, region and income; rural design	Gap above threshold: redesign rollout	Rights panel

Risk (L×I)	Description	Mitigation	Trigger and corrective action	Owner
R8 Surveillance and misuse (3×5)	Systems used against citizens	Aggregate data; purpose limits; independent oversight	Credible misuse: stop pilot, publish	Rights panel
R9 Cybersecurity (4×4)	Attack on nodes, ledgers or warning systems	Security by design; red-teaming; regional backup	Major incident: isolate, review, report	Technical panel
R10 AI reinforcing inequality (3×4)	Models biased against languages or groups	Local-language data; bias audits; appeal rights	Audit failure: withdraw model	Rights panel
R11 Climate shocks (4×4)	Disasters damage assets or divert budgets	Resilient siting; insurance; contingency reserves	Disaster in host: activate reserve, reschedule	Pilot Governance Boards
R12 Leadership change (5×3)	Change of SG, government or sponsor	Gates, charter and foundation transfer independent of any person	Host change: reconfirm consent within 6 months	Steering Board

Several risks are already visible. Transparency International's Corruption Perceptions Index 2025, published on 10 February 2026, scored 182 countries and territories; the global average fell to 42, its lowest level in more than a decade, and 122 scored below 50 [444]. About 2.2 billion people remained offline in 2025 [72].

This book recommends candor about three risks. Financing (R5) is most likely to bind, as pilots compete with humanitarian needs for shrinking concessional budgets; hence small first phases and bankable later ones. Surveillance (R8) carries the highest impact on trust; one credible misuse would discredit the agenda, hence the rights panel's stop power. Leadership change (R12) is near-certain over 74 years; the answer is institutional design.

XII.8 Integration across the book

Vision 2100 proposes the pilots as tests of the chain at its weakest joints. The pilots test the chain at its weakest joints. P1 (Parts IV, V, VIII) and P2 (Parts V, VII, X) test whether energy and compute can be owned by the countries that use them. P4 (Parts V, VII, IX) tests whether resources become industry. P3 (Parts VI, III, VIII) tests whether earlier warning yields earlier diplomacy. P5 (Parts IX, III, X) tests whether money reaches people. If all five fail, the chain does not hold and Vision 2100 should be revised fundamentally at the 2031 review.

What begins now

Part XIII sets out the first-year plan in detail and Part XIV the 2026–2031 execution strategy. In summary, Vision 2100 proposes:

- **30 days.** Publish with disclosure and evidence register (Appendix C); seat an interim steering group of five to seven with an independent majority; secure seed funding; open the listening round. A113 alone.
- **90 days.** Draft charter for comment; baselines; screening criteria; ledger prototype; panel nominations. A113 with university partners.
- **180 days.** Steering Board charter adopted (about April 2027) and panels seated; letters of intent for three pilots; feasibility for P1–P3; facility design; Global Dialogue contribution. Needs hosts, financiers and member states.

- **First year.** Gate 0 on all five pilots (October 2027), with Pilot Governance Boards constituted for those that proceed; first report at UNGA 82; first-year spending of about $10–23 million. Needs host governments.
- **Five years.** Three or more pilots operating; mid-FOUND review (mid-2029); Gate 1 (December 2030); first five-year review and PROVE readiness test (October 2031) and secretariat transfer to the foundation (registered 2029, complete by 2031); FOUND spending of about $120–300 million, with P2 phase one project-financed separately. Any GA priority resolution needs UN authority and cross-regional co-sponsors.

Measuring progress

ILLUSTRATIVE Table XII-6 is the master scorecard for Vision 2100 and the source for Appendix H. It consolidates headline indicators from Parts I–XI; shared indicators carry the same values in Parts I, II, XII and Appendix H. The "agreed international target" column shows the SDG or other agreed commitment where one exists. The 2030–2100 columns are Vision 2100 planning milestones, re-set at each five-year review; they never replace an agreed commitment. Owners report; they do not deliver outcomes alone.

TABLE XII-6 Vision 2100 master performance scorecard, 2026–2100 (master for Appendix H). ILLUSTRATIVE planning milestones. Where a 2030 milestone is less ambitious than the agreed target — electricity, hunger, under-five deaths, maternal deaths and learning poverty — the agreed target stands and the milestone is a planning floor, not a substitute.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
People without electricity (SDG7 custodians; national govts)	655m, 2024, Tracking SDG7 2026 [43]	SDG 7.1: universal access by 2030	≤400m	≤50m	0	0
Chronic hunger (FAO; national govts)	645m, 2025, FAO SOFI 2026 [45]	SDG 2.1: end hunger by 2030	≤500m	≤250m	≤100m	<1% of people
State-based armed conflicts (UCDP/PRIO data; DPPA)	65, 2025, UCDP [23]	—	≤55	≤40	≤25	≤10
World military burden, % of world GDP (SIPRI data; member states)	2.5%, 2025, SIPRI (total ~$2.9 trillion) [36]	—	No further rise	Declining	Below 2009 level	National decisions
Under-five deaths per year (UN IGME; ministries)	4.9m, 2024, UN IGME; method revised, not comparable with earlier rounds [58]	SDG 3.2: under-five mortality ≤25 per 1,000 live births in every country by 2030	≤4.0m	≤2.5m	≤1.2m	≤0.5m
Maternal deaths per year (WHO; ministries)	260,000, 2023, UN MMEIG [70]	SDG 3.1: global ratio below 70 per 100,000 live births by 2030	≤200,000	≤120,000	≤50,000	≤15,000

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Learning poverty, LMICs, age 10 (ministries; World Bank, UNESCO)	~70%, 2022 simulation, World Bank/UNESCO/UNICEF [303]	SDG 4.1: effective learning outcomes for all children by 2030	<55%	<30%	<10%	<5%
People offline (ITU; national govts)	2.2bn, 2025, ITU [72]	—	<1.5bn	<0.5bn	Near zero	0
States operating a sovereign AI node, pilot model (Steering Board; hosts)	0, 2026	—	1–3	15–20	60+	All that choose
Countries with multi-hazard early warning (WMO; national services)	119 (60%), 2025, WMO [442]	— (the UN Early Warnings for All initiative aims to protect everyone by 2027; not an intergovernmental target)	100%	100%	Maintained	Maintained
Women in senior roles of UN-convened mediation teams, Part VIII definition (Secretary-General; DPPA)	To be established by DPPA, 2027; context: 6% of mediators in major processes, 1992–2019, CFR [287] (Part VIII proxy: 14% of mediators, 2024)	— (SCR 1325: equal participation; no numeric target)	≥one-third	Parity (≥50%)	Parity	Parity
Children living in conflict zones (UNICEF; PRIO data)	~520m, 2024, PRIO [35]	—	≤450m	≤300m	≤100m	Near zero
Landmine/ERW casualties per year (states parties; Landmine Monitor)	6,279, 2024, Landmine Monitor [228]	—	≥25% below 2024	≥50% below 2024	≥90% below 2024	Near zero
Forcibly displaced people (UNHCR; host states)	117.8m, end-2025, UNHCR [39]	—	<100m	<60m	<30m	Durable solutions for all
CPI global average score (national govts; TI data)	42, 2025, Transparency International [444]	SDG 16.5: substantially reduce corruption (no numeric target)	45	50	60	70+
Blended finance closed per year (finance panel; DFIs)	~$18bn, 2024, Convergence [443]	—	2×	5×	Domestic capital leads	Mature markets

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Results Ledger coverage (UN Secretariat; GA; P5 Pilot Governance Board)	0 programs publishing, 2026 (UN80 registry in design [26])	—	≥1 UN and ≥1 national program by 2028; ≥10% of Secretariat programme budget by 2030 only if the Secretary-General adopts it	Majority of Secretariat programme budget	All	All, audited
Share of pilot spending published on the Results Ledger (P5 Pilot Governance Board)	0%, 2026	—	100%	100%	100%	100%
P3 median warning lead time, days (P3 Pilot Governance Board; regional unit)	To be established in shadow mode, 2027–28	—	≥60 days (≥30 days by 2028)	≥90 days in all P3 regions	Standard practice	Standard practice
Domestic value added retained, P4 host (P4 Pilot Governance Board; host govt)	To be established, 2027–28	—	Baseline +10 pts	Baseline +25 pts	Components and goods	Mature industry
FOUND spending vs plan (finance panel)	$120–300m planning range, 2026–2030 (XII.2.2)	—	Within range or explained	—	—	—
Safeguards or rights findings unremedied (nuclear and rights panels)	0, 2026	IAEA comprehensive safeguards where nuclear is chosen	0	0	0	0
Public trust in pilot institutions, survey (independent evaluator)	To be established	—	Threshold set	Threshold met	Met	Met

Source: as cited per row; milestones are Vision 2100 planning assumptions (Appendix H).

Corrective actions follow the gate logic. Two consecutive off-track annual reports trigger a redesign plan within twelve months; off track at a gate holds related funding; a rights, safety or integrity breach stops the activity and the reasons are published. Indicators moving the wrong way are published too.

PART XIII

XIII

FROM VISION TO ACTION: THE FIRST YEAR

First-Year Implementation Plan, November 2026 – October 2027

IN THIS PART

XIII.1 Purpose, scope and authority
XIII.2 Twelve workstreams for the first year
XIII.3 Milestones at 30, 60, 90 and 180 days and 12 months
XIII.4 Responsibilities and stakeholders
XIII.5 Preparation plans for the five flagship pilots
XIII.6 Resources, staffing and decision gates
XIII.7 First-year risks, mitigations and the UN calendar

THE FIRST YEAR IN ONE SENTENCE

Between November 2026 and October 2027, Vision 2100 builds its own governance, publishes its evidence, seats independent panels, listens before it asks, and prepares five flagship pilots to the point where an independent Steering Board can decide, pilot by pilot at Gate 0, whether Vision 2100 should continue to support each one, redesign it or stop.

XIII.1 Purpose, scope and authority

XIII.1.1 What this part is

This part turns the first-year schedule of Part XII (section XII.3) and the "What begins now" sections of Parts I–XI into an operational plan for 1 November 2026 to 31 October 2027. Vision 2100 proposes twelve workstreams, dated milestones, a monthly schedule, a responsibility matrix, a stakeholder framework, five pilot preparation plans, a preliminary budget and staffing plan, and the gate that closes the year. Part XIV continues the plan from November 2027 to 2031.

The plan covers preparation only. No construction, pilot procurement or deployment takes place in the first year. This book recommends that its most important output be a set of honest Gate 0 decisions in October 2027, each based on published criteria, including decisions to stop.

XIII.1.2 Scope and boundaries

In scope is what the interim secretariat, convened by A113 Partners, and its successor, the Vision 2100 Steering Board, can organize, fund or request. Decisions of sovereign governments, of the governing bodies of development banks and agencies, and of UN organs are named only as dependencies; their outcome is not presumed.

This book proposes three boundaries that apply throughout. No country is named as a host until it has requested support in writing and agreed to be named; hosts are described by archetype. No funding is described as committed; every figure is an illustrative planning range. And no statement in this part attributes any commitment to Ambassador Ivonne A-Baki, to any government or to any UN body. The plan stands on its own whether or not she becomes Secretary-General (see Part XII, section XII.6).

XIII.1.3 The three action classes

Vision 2100 proposes that every activity in this plan carry one of three action classes. The classes extend the decision-rights logic of Part III (consolidated in Appendix F) and the authority rule of Part XII: each step is assigned to the lowest level of authority able to take it. The essential line is between what A113 Partners and the interim secretariat can do on their own (Class A) and what only someone else can decide (Classes B and C).

TABLE XIII-1 The three action classes used in this part. Proposed by Vision 2100; no partner named in a class has agreed to any role.

Class	Who can act	Typical activities	What A113 Partners may say about it
A	A113 Partners and the interim secretariat (later the Steering Board and secretariat), independently	Publish, research, draft, convene experts, prototype on public data, raise seed funds, design	"We will do this."
B	Voluntary partners, each deciding for itself: sovereign governments; financial institutions (development banks, DFIs, climate and peacebuilding funds, philanthropies); regional bodies, universities and civil society	Host requests, letters of intent, data agreements, project-preparation grants, side-event sponsorship, peer review	"We will ask; the partner decides."
C	A future Secretary-General or authorized UN bodies (General Assembly, Security Council, agency governing bodies)	Secretariat pilots, use of the UN name, trust-fund windows, recognition of priorities, mandates	"We will prepare material that the office or body may choose to use."

As proposed here, Class B covers three different kinds of partner whose decisions must not be confused. Table XIII-2 shows, for the main first-year actions, who actually decides and what A113 Partners can contribute without anyone's permission.

TABLE XIII-2 Who decides the main first-year actions. A113 Partners' independent role is limited to the first column; every other decision belongs to the partner named.

First-year action	A113 Partners and interim secretariat can do alone (A)	Sovereign governments decide (B)	Financial institutions decide (B)	UN Secretary-General or UN bodies decide (C)
Governance	Seat interim group; draft charter; adopt firewall	—	—	—
Evidence	Publish baseline, registers, dashboard	Volunteer national statistics	—	Custodian agencies may review
Pilot hosts	Publish archetype criteria; respond to requests	Request support; sign letters of intent; name themselves	—	—
Pilot finance	Write financing memos; design facility	Budget recurrent costs; borrow	Preparation grants; guarantees; facility anchor	Any UN trust-fund window
P5 Results Ledger	Build prototype on public data	Run the national ledger pilot (Pilot B)	Finance the national program	Run the Secretariat ledger pilot (Pilot A)
UN processes	Prepare contributions and side-event material	Sponsor side events and submissions	—	Recognize priorities; use the UN name

XIII.1.4 Authority and governance of the first-year plan

Until the Steering Board charter is adopted (target: April 2027), Vision 2100 proposes that the plan be owned by an interim steering group of five to seven people with a majority not affiliated with

A113 Partners (Part XII). After adoption, the Steering Board approves the plan, every amendment and every gate decision. The Principal Architect, William Michael Hadala Jr. of A113 Partners, is accountable for design and technical coherence. A Program Director, appointed through an open process, is accountable for delivery, and workstream leads report to that role. Changes to milestones, budget lines or gate criteria are logged with reasons and published quarterly.

XIII.1.5 The Steering Board and the Pilot Governance Boards

This book distinguishes two levels of governance, and the first year must not blur them.

- **The Vision 2100 Steering Board** governs the Vision 2100 initiative itself. It has eleven to thirteen members with an independent majority (composition in Part XII, section XII.5), and is preceded by the interim steering group of five to seven until the charter is adopted around April 2027. At each gate it decides whether Vision 2100 continues to *support* a pilot. It owns the revision cycle of this book. It has no authority over any government, UN body or host.
- **Pilot Governance Boards**, one per pilot, govern each pilot's operations. Each is chaired or co-chaired by the host government, with the relevant regional body, independent members and, where relevant, the UN entity concerned. For P3 this means the P3 Pilot Governance Board of the participating states and the regional organization (Part VI); for P5, separate boards for the UN program and the national program. These boards are formed only after a pilot passes Gate 0; in year one, each Gate 0 dossier proposes a composition for the host to accept, amend or reject.

Host governments retain sovereign decision rights at every stage. A Steering Board decision to proceed means only that Vision 2100 will continue to support the pilot; the decision to implement belongs to the host. The secretariat that the interim group creates is transitional: Part XII proposes that an independent foundation be registered in 2029 and that the transfer of the secretariat be complete by 2031 (details in Part XIV).

XIII.1.6 The conflict-of-interest firewall

The Principal Architect serves as Chief Strategy Officer of a U.S. battery manufacturer and founded A113 Partners and A113 Defense, which work on federal technology intelligence and autonomous systems integration. Pilots P1 and P2 involve energy storage, and the six-layer shield involves autonomy. Vision 2100 therefore proposes the firewall below, applied from day one and written into the Steering Board charter (full disclosures in Appendix I).

01 **No supplier, financier or transaction-adviser role.** A113 Partners and its affiliates do not act as supplier, financier or transaction adviser to any pilot they help design.

02 **Vendor-neutral specifications.** Specifications are written to capabilities and open standards, not products, and reviewed by the technical panel.

03 **Clean seed funding.** No seed funds from any entity that could bid to supply, finance or advise a pilot; in-kind support from A113 Partners is disclosed at value.

04 **Disclosure and recusal.** Steering Board, panel, staff and contractors file published declarations of interest and recuse, on the record, from related decisions.

05 **Independent integrity officer.** An integrity officer, reporting to the chair of the finance and integrity panel rather than to A113 Partners, maintains the interest register and receives complaints.

06 **Publication.** The secretariat's own spending, contracts and gifts register appear on Vision 2100's own Results Ledger (Workstream 12).

> **WHY THE FIREWALL COMES FIRST**
> A plan that asks governments to publish their contracts must publish its own first. One credible conflict-of-interest finding in year one would discredit every pilot that follows, so the firewall is a precondition for seating the Steering Board, not a later deliverable.

XIII.1.7 Planning assumptions

ILLUSTRATIVE The plan rests on six stated assumptions. (1) Seed funding of at least the low end of the secretariat range, $4 million, is secured by the end of January 2027; if not, the plan is rescaled as described in section XIII.6.3. (2) The core team reaches eight to twelve full-time equivalents by month four (section XIII.6.2). (3) At least one prospective host per pilot archetype requests exploratory conversations by month six; if not, the affected pilot is held, not forced. (4) University and practitioner partners contribute peer review at modest cost. (5) Side events at the Global Dialogue on AI Governance and the UN General Assembly's high-level week are possible only if member states choose to host them. (6) The term of the next Secretary-General begins on 1 January 2027; the plan assumes no decision by that office. All planning assumptions are recorded in Appendix D.

XIII.2 Twelve workstreams for the first year

XIII.2.1 How the workstreams fit together

Part XII organizes the first five years in seven workstreams. For year one, Vision 2100 proposes splitting the pilot workstream into its five pilots, which differ in host type, risk and decision path, and separating the advisory panels from governance, because the panels must be visibly independent of the secretariat that staffs them. The result is twelve workstreams; the schedule appears in Figure XIII-1.

TABLE XIII-3 **The twelve first-year workstreams, accountable roles, main action class and year-one output. Classes as defined in Table XIII-1; "A → B" means work begins under A113 Partners' own authority and is completed by a partner's decision.**

No.	Workstream	Accountable role	Main class	Year-one output
WS1	Governance and charter	Principal Architect, then Steering Board chair	A → B	Charter adopted; Steering Board seated
WS2	Evidence and the Vision 2100 Baseline Dashboard	Research Lead	A	Baseline v1.0; public dashboard
WS3	Independent advisory panels	Program Director (secretariat support only)	A → B	Four panels seated and operating
WS4	Coalition and stakeholder engagement	Partnerships Lead	B	Listening round; letters of intent
WS5	P1 Sovereign Digital Nation preparation	P1 Preparation Lead	B	Gate 0 dossier
WS6	P2 Clean Power and Compute Corridor preparation	P2 Preparation Lead	B	Gate 0 dossier

No.	Workstream	Accountable role	Main class	Year-one output
WS7	P3 Prevention Early-Warning preparation	P3 Preparation Lead	B	Gate 0 dossier
WS8	P4 Minerals-to-Industry preparation	P4 Preparation Lead	B	Gate 0 (screen-stage) dossier
WS9	P5 Results Ledger preparation	P5 Preparation Lead	A → B, C	Prototype; Gate 0 dossier
WS10	Financing and project-preparation facility	Finance Lead	A → B	Seed budget; facility term sheet
WS11	Communications	Communications Lead	A	Quarterly notes; annual report
WS12	Monitoring, evaluation and Vision 2100's own Results Ledger	M&E Lead with independent evaluator	A → B	Scorecard; year-one review

XIII.2.2 WS1 — Governance and charter

The objective is governance independent of A113 Partners and able to take hard gate decisions. Vision 2100 proposes that by day 180 a Steering Board of eleven to thirteen members be seated on staggered three-year terms, including members from every UN regional group, at least half women, at least two members under 35 and at least two from small or resource-constrained states. A113 Partners holds no more than two seats and no veto (Part XII, section XII.5).

TABLE XIII-4 WS1 Governance and charter: deliverables, ownership, dependencies, resources and decision gate. Resource figures are ILLUSTRATIVE planning assumptions.

Element	Detail
Deliverables	Interim group and conflict-of-interest code (day 30); draft charter and gate procedure for comment (day 90); Steering Board constituted, annual plan approved (day 180); Gate 0 decisions (month 12)
Owner and class	Principal Architect, then Steering Board chair; Program Director as secretary. A (drafting); B (members' acceptance, registration)
Dependencies	Counsel, including UN-law review of the decision-rights matrix (Part III; Appendix F); WS3 opinions; WS10 seed funds
Preliminary resources	$0.4–0.8 million: counsel, six Steering Board meetings, translation
Decision gate	Day 180: no independent majority → interim group extends 90 days; letters of intent paused

WS1 also owns attribution control. Every passage presented as Ambassador A-Baki's documented position carries her approval, given on 2 November 2026; any new or changed passage requires her written approval, and nothing else is attributed to her. The charter sets out who may propose a gate decision, what a dossier must contain, and how panel opinions, recusals and reasons are published. It also sets the template for Pilot Governance Boards (section XIII.1.5), so that each Gate 0 dossier can propose one.

XIII.2.3 WS2 — Evidence and the Vision 2100 Baseline Dashboard

The objective is to make the factual foundation of this book public, checkable and correctable. Part I proposes the Vision 2100 Baseline Dataset and Dashboard: a versioned record of each

indicator with source, date, method and confidence, showing only figures a custodian agency has published. WS2 also opens the book's verification log and assumptions register (Appendix C) to challenge, using the evidence standards of Appendix A.

TABLE XIII-5 WS2 Evidence and Baseline Dashboard: deliverables, ownership, dependencies, resources and decision gate. Resource figures are ILLUSTRATIVE planning assumptions.

Element	Detail
Deliverables	Baseline v1.0 and registers (day 30); dashboard and scorecard baselines (day 90); archetype series, SDG alignment (day 180); "State of the Baseline" note and methodological review (month 12)
Owner and class	Research Lead with university partners. A; B for peer review and volunteered national data
Dependencies	Custodian-agency releases; three or more willing statistical reviewers (Part I)
Preliminary resources	$0.6–1.2 million: research staff, data engineering, external review
Decision gate	Month 12: review finds no material misstatement, or corrections are logged before the annual report

XIII.2.4 WS3 — Independent advisory panels

Vision 2100 proposes that WS3 seat four panels whose independence is beyond reasonable doubt: technical; human rights and ethics; nuclear safety and nonproliferation; and finance and integrity. Each has five to nine members chosen by open nomination (Part XII, section XII.5). Opinions are published unedited.

TABLE XIII-6 WS3 Independent advisory panels: deliverables, ownership, dependencies, resources and decision gate. Resource figures are ILLUSTRATIVE planning assumptions.

Element	Detail
Deliverables	Terms of reference, absorbing the panel proposals of Parts V and VI (day 60); open call (day 90); panels seated (day 180); first opinions (months 7–9); opinions on every Gate 0 dossier (month 12)
Owner and class	Program Director (process); panel chairs (opinions). A; B for acceptance
Dependencies	WS1 conflict-of-interest code; WS10 funds; nominations from underrepresented regions
Preliminary resources	$0.5–1.0 million: honoraria, meetings, commissioned reviews
Decision gate	Day 180: an unbalanced panel is not seated; named interim reviewers act until it is

Vision 2100 proposes that two panel powers be fixed in advance. The human rights and ethics panel holds a binding stop recommendation on any pilot with unremedied rights findings. The nuclear safety and nonproliferation panel defers to the IAEA and national regulators; in year one it confirms only that no dossier assumes nuclear power earlier than a newcomer's realistic timeline allows, which is not before the late 2030s (Parts V and XII).

XIII.2.5 WS4 — Coalition and stakeholder engagement

Vision 2100 proposes that WS4 first learn what governments, regional institutions and communities want before asking anything, and only then secure the voluntary interest each pilot needs (framework in sections XIII.4.4–XIII.4.7).

TABLE XIII-7 WS4 Coalition and stakeholder engagement: deliverables, ownership, dependencies, resources and decision gate. Resource figures are ILLUSTRATIVE planning assumptions.

Element	Detail
Deliverables	Listening-round requests (day 30); unattributed summary (day 120); screening of interested governments only (day 150); letters of intent for three or more pilots (day 180); side-event partners for May and September 2027
Owner and class	Partnerships Lead. B; C for UN entities
Dependencies	WS1 (letters only after the Steering Board is seated); WS2; WS11 translations
Preliminary resources	$0.6–1.2 million: two staff, travel, interpretation
Decision gate	Day 180: fewer than three prospective hosts → Steering Board holds pilots rather than widening the search

XIII.2.6 WS5 to WS9 — The five pilot preparation workstreams

Vision 2100 proposes that each pilot have a Preparation Lead, possibly part-time or seconded, who delivers a Gate 0 dossier by September 2027. Section XIII.5 gives host criteria, due diligence, Gate 0 conditions and safeguards for each.

TABLE XIII-8 Pilot preparation workstreams WS5–WS9: objectives, deliverables, class and first-year preparation resources. Resources are the ILLUSTRATIVE first-year preparation tier of Table XIII-21.

Workstream	Objective	Key year-one deliverables	Main class	First-year preparation
WS5 P1	Ready a small island state to decide on a sovereign AI node and digital public infrastructure	Open technical note and sizing tool; readiness assessment; Phase 0 scope with legal gap analysis and DPIA plan	B	$1.0–3.0 million
WS6 P2	Ready an emerging economy to decide on corridor pre-development	Host scoping; grid and site pre-feasibility; household-impact screen; licensing roadmap	B	$1.5–4.0 million
WS7 P3	Ready two to three states and a regional body to start shadow-mode early warning	Regional mapping; protocols; ethics and data-protection review; data-sharing agreements	B	$1.0–2.0 million
WS8 P4	Ready a lithium or copper producer to decide on a community and environmental baseline	Value-chain screen; community engagement plan; consent pathway	B	$1.0–3.0 million
WS9 P5	Ready one UN program and one national infrastructure program for ledger onboarding	Data model; prototype on public data; terms of reference; oversight board design	A, then B and C	$1.5–3.0 million

Under this proposal, each Preparation Lead reports to the Program Director. Each workstream depends on a voluntary host request (WS4), panel review (WS3) and preparation funding (WS10), and closes the year at Gate 0 (section XIII.6.6). Resource figures are first-year preparation only and form a small share of each pilot's initial implementation tier (Table XIII-21).

XIII.2.7 WS10 — Financing and the project-preparation facility

The objective is twofold: to fund the first year without compromising independence, and to design a project-preparation facility that can carry the pilots from Gate 0 to financing decisions. Part XII sizes the facility at about $25–60 million over FOUND; in year one Vision 2100 proposes that it be designed, not capitalized.

TABLE XIII-9 WS10 Financing and project-preparation facility: deliverables, ownership, dependencies, resources and decision gate. Resource figures are ILLUSTRATIVE planning assumptions.

Element	Detail
Deliverables	Donor-eligibility rules (day 30); seed budget ≥ $4m and five pilot financing memos (day 90); staff conversations with multilateral development banks (day 120); facility term sheet (day 180); P1, P3, P5 preparation grants sought (months 6–9); P2 guarantee design (month 10)
Owner and class	Finance Lead with finance and integrity panel. A; B for every funding decision
Dependencies	WS1 charter; WS3 review; WS5–WS9 cost bases
Preliminary resources	$0.4–0.8 million: Finance Lead, modeling, structuring advice
Decision gate	Day 90 funding test (section XIII.6.3); month 12: capitalization only after an anchor partner's own approval

XIII.2.8 WS11 — Communications

The objective is accurate, restrained and multilingual communication that never outruns the facts. Because Vision 2100 draws on a candidate's documented positions, it must not become, or appear to become, a campaign instrument.

TABLE XIII-10 WS11 Communications: deliverables, ownership, dependencies, resources and decision gate. Resource figures are ILLUSTRATIVE planning assumptions.

Element	Detail
Deliverables	Release and "no implied commitment" protocol (day 30); quarterly notes (February, May, August 2027); six-language materials; first annual report at UNGA 82 (September 2027)
Owner and class	Communications Lead. A
Dependencies	WS1 attribution approvals; WS2 for every figure; WS12 for progress claims
Preliminary resources	$0.4–0.8 million: staff, translation, publication
Decision gate	Quarterly: M&E Lead certifies each note against the scorecard

XIII.2.9 WS12 — Monitoring, evaluation and Vision 2100's own Results Ledger

The objective is to hold Vision 2100 to the standard it asks of others. WS12 keeps the year-one scorecard (milestones met, corrections made, spending against plan, hosts entering and leaving), publishes secretariat spending on a ledger built from the P5 data model, and commissions an independent review. The year-one scorecard feeds the master performance scorecard in Appendix H.

TABLE XIII-11 WS12 Monitoring, evaluation and Vision 2100's own Results Ledger: deliverables, ownership, dependencies, resources and decision gate. Resource figures are ILLUSTRATIVE planning assumptions.

Element	Detail
Deliverables	Year-one indicators (day 90); monthly spending on the ledger (from day 120); quarterly scorecard; evaluator appointed (day 210); year-one review (October 2027)
Owner and class	M&E Lead; evaluator reports to the Steering Board. A; B for evaluator
Dependencies	WS9 ledger data model; WS1 Steering Board for evaluator appointment
Preliminary resources	$0.3–0.6 million: M&E Lead, evaluation contract
Decision gate	Month 12: review published with Gate 0, criticism included

XIII.3 Milestones at 30, 60, 90 and 180 days and 12 months

XIII.3.1 How to read the milestone tables

The milestones that follow are proposed by Vision 2100. In the tables, "evidence of completion" means a public artifact or written decision, not an internal claim. Day counts run from 1 November 2026: day 30 falls on 1 December 2026, day 60 on 31 December 2026, day 90 at the end of January 2027, day 180 on 30 April 2027 and month 12 on 31 October 2027. Class A milestones are within A113 Partners' own power; Class B and C milestones are requests whose outcome belongs to the partner.

XIII.3.2 First 30 days (by 1 December 2026)

TABLE XIII-12 Proposed milestones for the first 30 days, with owner role, action class and evidence of completion

Deliverable	Owner role	Class	Evidence of completion
This book published with attribution key and conflict-of-interest disclosure	Principal Architect; Communications Lead	A	Public release; disclosure in front matter and Appendix I
Interim steering group of five to seven, independent majority	Principal Architect	A	Published membership and interest declarations
Conflict-of-interest code and interest register in force	Principal Architect; interim integrity officer	A	Code published; register summary online
Baseline v1.0 frozen; evidence register and assumptions register opened (Appendix C)	Research Lead	A	Versioned dataset and registers online with challenge form
Listening-round requests sent to UN regional groups, SIDS and LDC groupings, regional organizations	Partnerships Lead	B	Letters sent; log of responses
Seed-funding policy and donor-eligibility rules	Finance Lead	A	Policy published
P1 technical note, sizing method and procurement rules opened for comment (Part IV)	P1 Preparation Lead	A	Note published with comment period

Deliverable	Owner role	Class	Evidence of completion
P3 regional mapping started; non-lethal standard draft for legal review (Part VI)	P3 Preparation Lead	A	Mapping workplan; draft sent to counsel

XIII.3.3 By 60 days (by 31 December 2026)

TABLE XIII-13 Proposed milestones by day 60, with owner role, action class and evidence of completion

Deliverable	Owner role	Class	Evidence of completion
Program Director appointment process completed or interim appointed	Interim steering group	A	Appointment announced
Panel terms of reference drafted for all four panels	Program Director	A	Drafts published for comment
P5 data model drafted on open contracting and aid-transparency standards (Part IX)	P5 Preparation Lead	A	Data model specification published
P2 and P4 concept note (Part V)	P2 and P4 Preparation Leads	A	Concept note published
Outcome of the CCW Seventh Review Conference (16–20 November 2026) reflected in the non-lethal standard draft (Part VI)	P3 Preparation Lead	A	Revised draft logged

XIII.3.4 By 90 days (by end of January 2027)

TABLE XIII-14 Proposed milestones by day 90, with owner role, action class and evidence of completion

Deliverable	Owner role	Class	Evidence of completion
Draft charter, procurement-neutrality rule and gate procedure out for public comment	Principal Architect; Program Director	A	Drafts online; comment window open
Public Baseline Dashboard with downloads	Research Lead	A	Live dashboard; review invitations to three or more statistical bodies
Baselines set for every master-scorecard indicator (Appendix H)	Research Lead; M&E Lead	A	Scorecard baseline file published
Archetype screening criteria published (readiness, need, governance, consent, risk)	Partnerships Lead; Preparation Leads	A	Criteria published
Results Ledger prototype running on public data	P5 Preparation Lead	A	Prototype accessible to reviewers
Open call for panel nominations	Program Director	A	Call published in six languages
Seed budget at or above $4 million secured	Finance Lead	B	Signed grant or contribution agreements, published on the ledger
Financing memo for each of P1–P5	Finance Lead	A	Five memos published

XIII.3.5 By 180 days (by 30 April 2027)

TABLE XIII-15 Proposed milestones by day 180, with owner role, action class and evidence of completion. Class B and C items depend on partners' own decisions.

Deliverable	Owner role	Class	Evidence of completion
Charter adopted; Steering Board constituted	Interim steering group; Steering Board chair	B	Signed charter; published membership
Four advisory panels seated	Program Director; panel chairs	B	Published membership and interests
Letters of intent sought for at least three pilots	Partnerships Lead	B	Letters received; published only with the host's agreement
Feasibility or readiness work begun for P1, P2 and P3, each with ethics review from the start	P1–P3 Preparation Leads	B	Signed terms of reference with prospective hosts
Project-preparation facility term sheet drafted with a DFI or philanthropic partner	Finance Lead	B	Term sheet agreed at staff level
Contribution on UN Shared Layer standards prepared for the Global Dialogue (New York, 3–4 May 2027) through member states or accredited stakeholders	Principal Architect; Partnerships Lead	B, C	Submission or side-event program, if a member state sponsors it
P5 costed pilot design and DPIA for each ledger pilot; incoming Secretary-General offered a Secretariat pilot proposal (Part IX)	P5 Preparation Lead	A, C	Design published; proposal transmitted

XIII.3.6 By 12 months (by 31 October 2027)

TABLE XIII-16 Proposed milestones by month 12, with owner role, action class and evidence of completion

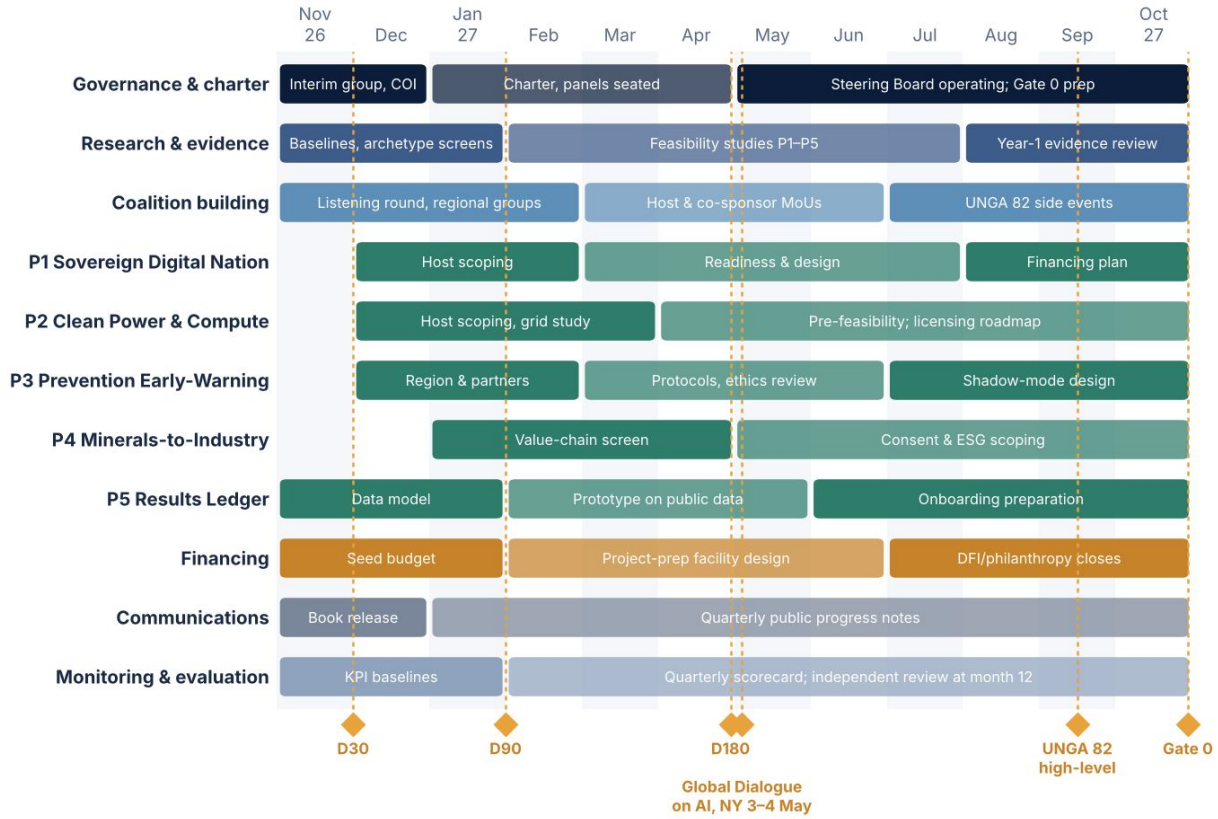
Deliverable	Owner role	Class	Evidence of completion
Gate 0 decision on each of P1–P5: proceed, redesign or stop	Steering Board	A (Steering Board)	Published decisions with reasons and panel opinions
Gate 0 dossier for each pilot, including a proposed Pilot Governance Board	Preparation Leads	B	Dossiers published, redacted only where a host requires it, with logged reasons
First annual progress report presented during UNGA 82 high-level week	Communications Lead; Steering Board chair	A; B for side events	Report published; side event held if a member state hosts one
First "State of the Baseline" note and independent methodological review	Research Lead	B	Note and review published
Independent year-one review	Independent evaluator	B	Review published with Gate 0 decisions
Project-preparation facility approved by at least one anchor partner, or redesign decision	Finance Lead; Steering Board	B	Partner approval or Steering Board minute

Deliverable	Owner role	Class	Evidence of completion
Year-two plan and budget approved (continued in Part XIV)	Steering Board	A (Steering Board)	Published plan

XIII.3.7 The schedule at a glance

FIGURE XIII-1

First-year workstream schedule, November 2026 – October 2027



ILLUSTRATIVE — planning schedule

ILLUSTRATIVE Figure XIII-1 groups the twelve workstreams into the seven Part XII lines plus the five pilots. The timing of the Global Dialogue on AI Governance (New York, 3–4 May 2027) [439] and the UNGA 82 high-level week (September 2027) is set by the United Nations; all other dates are planning assumptions. The bar labels are summaries. Where they differ from the month-by-month schedule in Table XIII-17, the table governs: the P3 "shadow-mode test" bar denotes preparation of shadow-mode protocols and scoring, since no warnings are operated before Gate 0; the P4 bar denotes planning of the community and environmental baseline, which is itself the subject of the screen-stage Gate 0; and the P5 bar denotes negotiation of terms of reference for onboarding the two programs, which begins only after Gate 0.

XIII.3.8 Month-by-month schedule

TABLE XIII-17 Proposed month-by-month schedule, November 2026 – October 2027. ILLUSTRATIVE planning schedule; only the Global Dialogue and UNGA 82 dates are fixed by others.

Month	Governance, evidence, panels	Coalition and finance	Pilots P1–P5	Key public output
Nov 2026	Interim group seated; COI code; Baseline v1.0	Listening-round letters; seed policy	P1 note for comment; P3 mapping; P5 data model begins	Book release
Dec 2026	Program Director appointed; panel ToRs drafted	First listening meetings; seed outreach	P2/P4 concept note; P5 open-data inventory	Panel ToRs for comment
Jan 2027	Draft charter for comment; dashboard live; baselines set	Seed budget secured; five financing memos	Screening criteria published; P5 prototype on public data	Draft charter; dashboard
Feb 2027	Panel nominations close; first statistical review	Staff-level MDB conversations; regional consultations	P1 technical working group; P3 expert design review; P4 value-chain screen begins	First quarterly note
Mar 2027	Panel selection; charter revised after comment	Listening-round synthesis; letters of intent requested	Exploratory conversations with interested hosts; P2 host scoping	—
Apr 2027	Charter adopted; Steering Board and panels seated (day 180)	Facility term sheet; preparation grant applications	P1–P3 feasibility terms of reference; P5 costed designs and DPIAs	Steering Board and panel membership
May 2027	Steering Board approves annual plan; panels' first meeting	Global Dialogue (New York, 3–4 May) side events if hosted by member states	P2 pre-feasibility starts; P3 protocols drafting	Second quarterly note; Global Dialogue contribution
Jun 2027	Evaluator appointed; panel opinions on screening and neutrality	Preparation grants decided by funders	P1 readiness assessment; P4 community engagement plan	Panel opinions published
Jul 2027	Independent methodological review of baseline begins	UNGA 82 side-event planning with willing states	P3 ethics review; P5 ToR negotiation with both programs	—
Aug 2027	Year-one review fieldwork	P2 guarantee design; facility anchor discussions	Dossier drafting for all pilots	Third quarterly note
Sep 2027	Gate 0 dossiers submitted to panels	UNGA 82 high-level week: first annual report	Panel opinions on each dossier	First annual progress report
Oct 2027	Gate 0 decisions; year-two plan	Facility approval or redesign	Gate 0 outcomes communicated to hosts first	Gate 0 decisions; year-one review

Three points in the year are fixed by others, and Vision 2100 proposes that the plan bend around them. The Global Dialogue on AI Governance meets in New York on 3–4 May 2027 [12439]. The UN General Assembly's 82nd session holds its high-level week in September 2027. And Gate 0, while set by this book, must follow the panels' written opinions, which require at least four weeks after dossiers are submitted. Everything else in the schedule can move if evidence requires it.

XIII.4 Responsibilities and stakeholders

XIII.4.1 The RACI convention

In the matrices below, **R** does the work; **A** owns the outcome and signs off; **C** is consulted before a decision; **I** is informed after it. In the internal matrix each row has one A: the Program Director for delivery, the Steering Board for gates and spending. Workstream leads sit under the Program Director. In the external matrix, A marks only a partner's sovereign or institutional decision on its own part of the work, and every role is one this plan proposes to request, not one any partner has accepted.

XIII.4.2 Internal roles

TABLE XIII-18 **Proposed internal responsibility matrix (RACI) for the twelve workstreams. R = responsible, A = accountable, C = consulted, I = informed.**

Workstream	Steering Board	Principal Architect	Program Director	Advisory panels
WS1 Governance and charter	A (after day 180)	R (A before day 180)	R	C
WS2 Evidence and Baseline Dashboard	I	C	A	C (technical)
WS3 Advisory panels	A (appointments)	I	R	R (own opinions)
WS4 Coalition and engagement	I	C	A	I
WS5 P1 preparation	A (Gate 0)	C	R	C (technical, rights)
WS6 P2 preparation	A (Gate 0)	C (recused on storage specifications)	R	C (technical, nuclear, finance)
WS7 P3 preparation	A (Gate 0)	C	R	C (rights: binding stop)
WS8 P4 preparation	A (Gate 0)	C (recused on battery-chain specifications)	R	C (finance, rights)
WS9 P5 preparation	A (Gate 0)	C	R	C (finance and integrity)
WS10 Financing and facility	A (facility approval)	C	R	C (finance and integrity)
WS11 Communications	I	C	A	I
WS12 M&E and Vision 2100 ledger	A (evaluator appointment)	I	R	C

Under the proposed firewall (section XIII.1.6), the Principal Architect would not draft or review energy-storage specifications for P2 or battery-materials specifications for P4; the Preparation Lead drafts them and the technical panel reviews them.

XIII.4.3 External partners

TABLE XIII-19 Proposed external responsibility matrix. Roles are requests, not accepted commitments; "A" marks only a partner's own sovereign or institutional decision. Workstreams with no external role (WS1, WS11, WS12) are omitted.

Workstream	Partner governments	Regional institutions	UN Secretariat (if it chooses)
WS2 Evidence and Baseline Dashboard	C (statistics offices, voluntary)	C	C (custodian agencies, review only)
WS3 Advisory panels	I	C (nominations)	C (nominations)
WS4 Coalition and engagement	C	C	I
WS5 P1 preparation	A (host decision)	C (regional sharing)	C (ITU, UNDP technical advice)
WS6 P2 preparation	A (host decision)	R (development-bank studies)	C (IAEA only on request of host)
WS7 P3 preparation	A (each state for its territory)	R (host of analysis unit)	C (DPPA, WMO, Peacebuilding Fund)
WS8 P4 preparation	A (host decision)	C	C (regional commissions)
WS9 P5 preparation	A (national ledger pilot)	C (development bank financing the program)	A (Secretariat ledger pilot)
WS10 Financing and facility	C	R (anchor partner, if willing)	C (trust-fund options)

XIII.4.4 Stakeholder-engagement principles

Vision 2100 proposes five principles, drawn from Parts III, VII, X and XI, to govern engagement. **Listen first**: ask what partners need before presenting what Vision 2100 offers. **Ask only what the stage requires**: in year one, interest, information and peer review, not commitments. **Never imply agreement**: interest is not support, and support is not endorsement. **Respect sovereignty**: pilots exist only on written request. **Balance regions and rivals**: no plan depends on a single region, bloc or major power.

XIII.4.5 Priority stakeholder groups and what each is asked for

TABLE XIII-20 Priority stakeholder groups, what Vision 2100 would ask of each in year one, timing and action class. No group listed has agreed to any request.

Group	What Vision 2100 asks in year one	Timing	Class
UN regional groups; SIDS and LDC groupings	A briefing slot; views on priorities and on the archetype criteria	Months 1–5	B
Prospective host governments (by archetype)	Exploratory conversation; then, if they choose, a letter of intent limited to feasibility	Months 4–10	B
Regional organizations and economic communities	Views on P3 hosting, P1 regional sharing and regional compacts	Months 3–9	B
Multilateral and regional development banks	Staff-level technical conversations; project-preparation grants; guarantee design for P2	Months 3–11	B

Group	What Vision 2100 asks in year one	Timing	Class
Philanthropic foundations and bilateral governance funds	Seed funding for the secretariat; preparation grants for P1, P3, P5	Months 1–9	B
UN Secretariat entities and specialized agencies	Technical advice within existing mandates; for one entity, voluntary participation in P5	Months 3–12; after 1 January 2027 for any Secretariat decision	C
Universities, statistical bodies, audit institutions	Peer review of the baseline, scorecard, evaluation design and P5 data model	Months 1–12	B
Civil society, women's networks, youth, Indigenous and faith organizations	Design input, especially for P3 monitors and P4 consent; panel nominations; voluntary interfaith consultation (Part XI)	Months 2–12	B
Private sector and investors	Market sounding only, through the Finance Lead, under the firewall; no pre-selection	Months 6–12	B

XIII.4.6 Sequencing

Vision 2100 proposes that engagement move in three waves. **Wave 1 (November–February):** the listening round and technical peer review; no pilot asks. **Wave 2 (March–June):** conversations with governments that have expressed interest, against published criteria; development-bank staff conversations; Global Dialogue contributions if member states sponsor them. **Wave 3 (July–October):** dossier work with prospective hosts, the annual report and Gate 0.

Vision 2100 also proposes two sequencing rules. First, a government hears the outcome of a Gate 0 decision about its own pilot before anyone else. Second, engagement with the UN Secretariat on any Class C matter is directed to the office as it stands after 1 January 2027 and is framed identically whoever holds it. Part XI's consultations with diplomats of the five permanent members and of regional groupings test areas of overlap; they do not seek endorsements.

XIII.4.7 Safeguards against implying commitments

Vision 2100 proposes seven safeguards for every interaction.

01 **No naming without consent.** No country, institution or person is named as a partner, host or supporter without written permission for that specific use.

02 **Standard language.** Records distinguish "expressed interest", "agreed to explore", "signed a letter of intent for feasibility" and "requested implementation". Only the last can lead to implementation, and not before Gate 0.

03 **No attribution to the Ambassador.** No proposal in this part is presented as a commitment, plan or intention of Ambassador A-Baki. Her documented statements are used only as published, with her written approval.

04 **No use of the UN name or emblem.** The secretariat does not use the UN name, emblem or any implication of UN sponsorship.

05 **Separation from the selection process.** The secretariat does not lobby Security Council members or other member states on the selection of the Secretary-General, and engagement records are kept separate from any campaign activity.

06 **Meeting notes shared.** After any meeting with a government, the secretariat sends its summary to the government and corrects it on request before it informs any public material.

07 **Withdrawal without cost.** Any partner may withdraw at any stage, and the withdrawal is recorded neutrally.

XIII.5 Preparation plans for the five flagship pilots

XIII.5.1 Common requirements

All five pilots share a common Gate 0 test, set by Part XII: a written host request; completed feasibility and ethics review appropriate to the stage; an identified financing path covering at least 60 percent of the next phase's cost; and an agreed evaluation design with baselines. For P1, P3 and P5, the "next phase" is the first operating phase. For P2 and P4, where first-phase capital is large and comes later, this book proposes that the Steering Board apply the 60 percent test to pre-development and studies, and require in addition written indicative interest from at least one development finance institution in the construction phase. That calibration is a Steering Board decision to be confirmed in the charter.

Vision 2100 proposes common safeguards for all five: no host named without consent; a published data-protection impact assessment (DPIA) wherever personal data could be involved; multi-vendor procurement rules agreed before any procurement; the firewall; rights review from the start; publication of dossier and decision; and, in every dossier, a proposed composition for the pilot's Pilot Governance Board, chaired or co-chaired by the host (section XIII.1.5).

ILLUSTRATIVE Each pilot's costs are planned in three tiers, used identically throughout this book. First-year preparation, the subject of this part, is a small share of each pilot's initial implementation; long-term capital arises only in PROVE and only if gates pass. Financing structures are developed in Part X and the models in Appendix D.

TABLE XIII-21 **Canonical three-tier program budgets. ILLUSTRATIVE planning assumptions; no funding is committed. Initial implementation includes first-year preparation.**

Pilot	First-year preparation (Nov 2026–Oct 2027)	Initial implementation (first phase)	Long-term capital (PROVE replication, only if gates pass)
P1 Sovereign Digital Nation	$1.0–3.0m	$20–65m over ~4.5 years (breakdown in Part IV, Table IV-5)	$0.3–1.3bn (15–20 states)
P2 Clean Power and Compute Corridor	$1.5–4.0m	$15–40m studies and pre-development (2026–2029); phase-one construction $0.5–2.0bn, project-financed (decision ~2029; counted in PROVE)	$1–10bn (2–5 corridors)
P3 Prevention Early-Warning	$1.0–2.0m	$20–50m over five years	$0.06–0.3bn extension

Pilot	First-year preparation (Nov 2026–Oct 2027)	Initial implementation (first phase)	Long-term capital (PROVE replication, only if gates pass)
P4 Minerals-to-Industry	$1.0–3.0m	$10–25m studies and preparation; first processing plant $0.3–1.2bn (PROVE)	$0.6–4.8bn (2–4 plants)
P5 Results Ledger	$1.5–3.0m	$8–20m over three years	$0.04–0.2bn extension
Secretariat and initiative core	$4–8m per year	—	—
First-year total	**$10–23m** (secretariat $4–8m + pilot preparation $6–15m)		

Source: canonical planning ranges of this book (Parts IV, V, VI, IX and XII). FOUND horizon total (2026–2030) is about $120–300m excluding P2 construction, or about $0.6–2.3bn including it; PROVE (2031–2040) is about $2–17bn (Part XII).

XIII.5.2 P1 Sovereign Digital Nation

Vision 2100 proposes P1 as a test of whether a small nation can own a sovereign AI node and digital public infrastructure under its own law (Part IV). Year one readies one small island state for a decision on Phase 0, consent and design. Part IV's archetype host is a small island state of about 100,000 people; the eligibility range is 100,000 to 1 million (Part XII).

Host-selection criteria. Vision 2100 proposes as eligible a small island developing state of roughly 100,000 to 1 million people that has requested support in writing; that depends on imported diesel and on foreign cloud services for government systems; that has a data-protection law or a stated legislative intention to enact one; that has, or has a plan for, resilient international connectivity; that is prepared in principle to budget recurrent operating costs, which Part IV estimates at perhaps 15–25 percent of capital a year; and that is open to regional sharing of security operations and model adaptation with neighboring states.

Proposed due-diligence steps. (1) Publish the reference architecture and sizing method for comment and convene a technical working group to review it. (2) Conduct a readiness assessment covering identity, registries, data exchange, cybersecurity capacity, connectivity, power and skills. (3) Complete a legal gap analysis against the laws Phase 0 requires. (4) Scope the data-protection impact assessment. (5) Design public consultation, including women's groups, outer-island communities and people with disabilities. (6) Size the node on Part IV's method, which for a small island state yields tens to hundreds of kilowatts of IT load (about 50 kW in the central case), not megawatts. (7) Identify an independent evaluator.

What this book proposes must be true by October 2027. A written request; readiness assessment and legal gap analysis complete; DPIA scope agreed; financing path for at least 60 percent of Phase 0 and Phase 1 costs identified, typically grants for public goods and concessional or climate finance for renewable power; evaluator identified; baselines for P1 indicators set; a P1 Pilot Governance Board composition proposed to the host.

Proposed safeguards. Open standards and multi-vendor tenders; exit clauses; no government data used as collateral; host jurisdiction over all sensitive data; no procurement before Gate G1 of Part IV (laws in force, DPIA published).

XIII.5.3 P2 Clean Power and Compute Corridor

Vision 2100 proposes P2 as a test of whether a corridor pairing new clean power with a compute campus and an industrial park can anchor jobs and serve national AI needs without diverting power from households (Part V). Year one prepares an emerging economy for a decision on pre-development.

Host-selection criteria. Vision 2100 proposes as eligible an emerging economy that has requested support in writing; with a growing grid and unserved industrial demand; strong renewable resources; an energy regulator able to approve tariffs and grid connection; a stated interest in local compute; and willingness to adopt a household-protection rule under which household tariffs and reliability must not worsen.

Proposed due-diligence steps. (1) Host scoping and confirmation of the policy framework. (2) Grid and site pre-feasibility, including transmission constraints and water availability for cooling. (3) Household-impact screen of tariffs and reliability. (4) Licensing and permitting roadmap. (5) Technology-neutral comparison of energy options (renewables, storage, hydro, geothermal, grid interconnection) using Part V's framework. (6) Indicative financing and guarantee structure with a development finance partner (Part X). (7) Where the host asks about nuclear, a referral to the IAEA Milestones pathway through the host's own channels, with no reactor assumed before the late 2030s for a newcomer country.

What this book proposes must be true by October 2027. A written request; pre-feasibility and household-impact screen complete; licensing roadmap agreed with the regulator; financing path for at least 60 percent of pre-development ($15–40 million, Table XIII-21) identified; written indicative interest from at least one development finance institution in phase one; evaluation design agreed; a P2 Pilot Governance Board composition proposed to the host.

Proposed safeguards. Phased build; anchor tenants identified before any construction decision; water-light cooling; contracts to be published on a Results Ledger; storage and power specifications drafted without input from the Principal Architect and reviewed by the technical panel; and the nuclear safety panel's confirmation that no nuclear element is assumed prematurely. The economics of a first-of-a-kind small modular reactor at emerging-market cost of capital are set out in Part X.

XIII.5.4 P3 Prevention Early-Warning

Vision 2100 proposes P3 as a test of whether a human-led early-warning system can give mediators earlier, better-evidenced warning of rising violence in a water- and climate-stressed region, and whether warnings lead to action (Part VI). Year one prepares two to three neighboring states and a regional organization for shadow-mode operation. At full operation, Part VI plans a regional unit of 10–14 analysts and data staff, plus community monitors and a mediation liaison; year one recruits none of them, but designs the unit.

Host-selection criteria. Vision 2100 proposes as eligible two to three neighboring states sharing a stressed river basin or rangeland, each of which has requested participation in writing for its own territory; a regional organization with an early-warning mandate willing to host the analysis unit; existing response instruments, such as mediation capacity, that a warning can trigger; and a data-protection regime adequate for the data to be used, or agreement to adopt the pilot's regime.

Proposed due-diligence steps. (1) Map existing regional early-warning systems, their response instruments and their evaluations. (2) Consult regional organizations and the Peacebuilding Fund secretariat on a candidate region. (3) Hold an expert design review including regional practitioners, forecasters, data-protection specialists and women mediators. (4) Draft data-sharing agreements and the warning-to-response protocol. (5) Submit the design to ethics and data-protection review by the human rights and ethics panel. (6) Design recruitment of community monitors with at least 40 percent women (Part VI). (7) Secure funding for a start-up phase of $1–2 million.

What this book proposes must be true by October 2027. Written requests from each participating state; a hosting agreement with the regional body; protocols and data-sharing agreements final; rights review complete with no unremedied finding; start-up funding identified; baselines and shadow-mode scoring method agreed; and the composition of the P3 Pilot Governance Board (participating states and the regional organization, with civil-society seats and UN advisers, per Part VI) proposed to the states. In shadow mode, analysts produce warnings that are logged and later scored but do not yet trigger action (Part XII).

Proposed safeguards. Aggregate data only; AI tools aggregate and flag but never identify individuals as likely perpetrators and never trigger force; host governments see outputs, not raw data; independent rights oversight with a binding stop recommendation; a published data-protection regime. Any earlier activity that Part VI contemplates, such as work in two districts, is treated as shadow-mode only until Gate 0.

XIII.5.5 P4 Minerals-to-Industry

Vision 2100 proposes P4 as a test of whether a staged lithium or copper value chain can move from extraction to first processing in the producing country, with community consent and environmental standards that hold (Part V). Because consent cannot be scheduled, this book proposes that P4's Gate 0 be a screen-stage decision on whether to proceed to a full community and environmental baseline; a community-consent gate follows before feasibility.

Host-selection criteria. Vision 2100 proposes as eligible an emerging or lower-middle-income producer that has requested support in writing; with an operating mine; a stated industrial policy; power available or plannable for processing; a revenue-transparency commitment; and agreement that free, prior and informed consent applies wherever Indigenous peoples are affected.

Proposed due-diligence steps. (1) Value-chain screen: which processing step, such as lithium hydroxide or copper rod, is plausible given power, water, logistics and markets. (2) Stakeholder map of affected communities. (3) Community engagement plan agreed with community representatives, not only with government. (4) Environmental scoping of water and emissions. (5) Review of fiscal and contract terms for publication on a Results Ledger. (6) Preliminary market sounding on offtake, conducted under the firewall.

What this book proposes must be true by October 2027. A written request; value-chain screen complete; community engagement plan agreed; financing path for at least 60 percent of the baseline and study phase (part of the $10–25 million preparation tier) identified; evaluation design agreed; a P4 Pilot Governance Board composition, including community representation, proposed to the host. No plant design, offtake negotiation or investor selection occurs before the consent gate.

Proposed safeguards. Free, prior and informed consent where it applies; independent environmental monitoring; publication of contracts and payments; battery-chain specifications drafted without input from the Principal Architect; no A113 affiliate in any supply, offtake, finance or advisory role.

XIII.5.6 P5 Results Ledger

Vision 2100 proposes P5 as a test of whether public accountability can follow money from approval to verified delivery for one UN program (Pilot A in Part IX) and one national infrastructure program (Pilot B). It is the pilot A113 Partners can advance furthest alone, because a prototype can be built on public data without anyone's consent. At operation, Part IX's cost model assumes a team of 14–20 people; in year one only the Preparation Lead and contracted data work are funded.

Host-selection criteria. For Pilot A, Vision 2100 proposes a UN entity whose head decides to publish one program voluntarily, with the Office of Internal Oversight Services and the Board of Auditors invited to validate the method. This is a Class C decision for the Secretary-General or the entity, and the proposal is offered identically to whoever holds office after 1 January 2027. For Pilot B: a national government with an infrastructure program, an open-budget commitment and a supreme audit institution willing to take part, plus a financing partner for the program.

Proposed due-diligence steps. (1) Data model on open contracting and infrastructure transparency standards. (2) Prototype on public data. (3) Draft inspection-record and outcome-record specifications submitted for open comment (Part IX). (4) A brief for the UN80 working group on mandate implementation review, showing how a ledger could serve as a public view of the mandate registry [26]. (5) Costed design and DPIA for each pilot. (6) Design of the ledger's independent oversight board (Part IX), which audits the ledger's models and flags and is distinct from the Pilot Governance Board that runs each ledger pilot.

What this book proposes must be true by October 2027. Prototype running on public data; signed terms of reference with the national partner; a decision by the UN entity, or a Steering Board decision to continue supporting Pilot B alone and keep Pilot A open; oversight board constituted or nominated; financing path for at least 60 percent of the first operating phase identified; publication plan for 2028 agreed; Pilot Governance Board compositions proposed for each program owner.

Proposed safeguards. AI ranks and explains; people decide. No sanction or public naming follows from an algorithm alone. Everyone named has a right to see the evidence, reply before publication and appeal. The ledger itself is audited annually.

XIII.6 Resources, staffing and decision gates

XIII.6.1 The first-year budget

ILLUSTRATIVE The secretariat core is held within Part XII's range of $4–8 million a year. Pilot preparation is funded mainly by partner grants and spent only if a host requests the work. No line includes construction, equipment or pilot capital. The pilot lines are the first-year preparation tier of Table XIII-21.

TABLE XIII-22 Preliminary first-year budget by line, November 2026 – October 2027 (US$ million). ILLUSTRATIVE planning assumptions; no funding is committed.

Line	Low ($m)	High ($m)	Main assumptions	Funding character
WS1 Governance and charter	0.4	0.8	Counsel; six Steering Board meetings; translation	Seed
WS2 Evidence and Baseline Dashboard	0.6	1.2	Two to three researchers; hosting; external review	Seed
WS3 Advisory panels	0.5	1.0	Four panels of five to nine; honoraria; two meetings each	Seed

Line	Low ($m)	High ($m)	Main assumptions	Funding character
WS4 Coalition and engagement	0.6	1.2	Two staff; travel; interpretation	Seed
WS10 Financing and facility design	0.4	0.8	Finance Lead; modeling; structuring advice	Seed
WS11 Communications	0.4	0.8	One to two staff; six-language translation	Seed
WS12 M&E and independent review	0.3	0.6	M&E Lead; evaluator contract	Seed
Program management, integrity officer, operations, contingency	0.8	1.6	Program Director; compliance; office; 10% contingency	Seed
Secretariat core subtotal	**4.0**	**8.0**	Matches Part XII's $4–8 million a year	
WS5 P1 preparation	1.0	3.0	Readiness, legal gap, DPIA scope	Partner grants
WS6 P2 preparation	1.5	4.0	Grid and site pre-feasibility; first share of $15–40m pre-development	Partner grants; DFI preparation funds
WS7 P3 preparation	1.0	2.0	Start-up phase per Part VI	Partner grants; peacebuilding funds
WS8 P4 preparation	1.0	3.0	Value-chain screen; engagement plan; first share of $10–25m	Partner grants; DFI preparation funds
WS9 P5 preparation	1.5	3.0	Prototype; costed designs; first share of $8–20m	Philanthropy; governance funds
Pilot preparation subtotal	**6.0**	**15.0**	Spent only on host request	
Total first year	**10.0**	**23.0**		

ILLUSTRATIVE Several assumptions drive the range. The low case assumes three pilots reach active preparation, heavy use of university partners and virtual meetings, and in-kind statistical review. The high case assumes all five pilots reach active preparation and that P2 and P4 begin funded pre-development work before Gate 0. Staff costs assume eight to twelve full-time equivalents at international nonprofit rates. Pilot preparation spending is a small share of the initial implementation tier: for example, P1 preparation of $1–3 million is roughly 5 percent of its $20–65 million first phase. The project-preparation facility, estimated at $25–60 million over the FOUND horizon, is designed in year one and capitalized only after Gate 0.

XIII.6.2 Staffing

ILLUSTRATIVE Vision 2100 proposes a secretariat core of about eight to twelve full-time equivalents by month four, funded from the secretariat lines of Table XIII-22. The Principal Architect's time is contributed in kind by A113 Partners and disclosed at value under the firewall. Preparation Leads are funded from the pilot preparation lines and may be part-time or seconded from partner institutions, provided the secondment raises no conflict of interest.

TABLE XIII-23 **Proposed first-year staffing of the secretariat core and pilot preparation (full-time equivalents). ILLUSTRATIVE planning assumptions; operating-phase teams are owned by the parts cited.**

Role	First-year FTE	Funded from	Operating-phase team (after Gate 0, not funded in year one)
Program Director	1	Program management line	—
Operations and compliance	0–1 (shared or contracted at the low end)	Program management line	—
Integrity officer	0.5–1	Program management line	—
Research Lead and research staff (incl. data engineering)	2–3	WS2	—
Partnerships Lead and engagement officer	2	WS4	—
Finance Lead	1	WS10	—
Communications Lead and staff	1–2	WS11	—
M&E Lead	0.5–1 (plus evaluator contract)	WS12	—
Secretariat core	**about 8–12**	**$4–8m**	—
P1 Preparation Lead	0.5–1	WS5	National operating team of about 25–45 staff (Part IV)
P2 Preparation Lead	0.5–1	WS6	Set in pre-development studies (Part V)
P3 Preparation Lead	0.5–1	WS7	Regional unit of 10–14 analysts and data staff, plus community monitors and a mediation liaison (Part VI)
P4 Preparation Lead	0.5–1	WS8	Set after the consent gate (Part V)
P5 Preparation Lead	0.5–1	WS9	Team of 14–20 data, audit, inspection and engineering staff (Part IX)

ILLUSTRATIVE The operating-phase teams are not hired in year one. They appear here so that hosts and funders can see, at Gate 0, what a decision to proceed would imply for staffing in year two and beyond (Part XIV).

XIII.6.3 Rescaling rules

If the seed budget at day 90 is below $4 million, Vision 2100 proposes that the plan rescale in a fixed order. Panels, governance, evidence and M&E are protected, because they are the basis of trust. Coalition travel moves to virtual formats. Communications are reduced to English, French and Spanish until funds allow. Pilot preparation proceeds only where a partner funds it directly. If

seed funding is below $2.5 million at day 120, the interim steering group decides publicly whether to continue on a reduced plan or pause.

XIII.6.4 Funding sources that would be approached

No funding has been committed by any party. Consistent with Parts X and XII, Vision 2100 proposes approaching the categories below. Each approach is subject to the donor-eligibility rules in WS10: no funds from entities that could bid to supply, finance or advise a pilot; no single donor above an indicative 25 percent of the secretariat core; and publication of every contribution on Vision 2100's own ledger. Every funding decision is the funder's (Class B, or Class C for any UN trust fund).

- **Philanthropic foundations and bilateral governance funds.** Secretariat seed funding, the evidence workstream and P5.
- **Development banks' project-preparation facilities.** P1, P2 and P4 preparation, and potential anchors for the facility; Part X proposes staff-level conversations with the World Bank Guarantee Platform and the FfD4 debt-swaps hub.
- **Climate funds.** Preparation of P1's renewable power, which displaces diesel.
- **Peacebuilding funds and existing UN trust funds.** P3, through those funds' own procedures; any UN trust-fund route is Class C.
- **Universities and research councils.** In-kind peer review and co-funded research.
- **Sovereign and public investors.** Market sounding only, under the firewall, for later phases of P2 and P4.

Part X also proposes presenting the financing architecture at the 2027 Financing for Development Forum and the IMF and World Bank Annual Meetings, and registering suitable pilots with the Sevilla Platform for Action where they fit existing initiatives. These are presentation and alignment opportunities, not funding sources, and they depend on the organizers.

XIII.6.5 Checkpoints within the year

Vision 2100 proposes four internal checkpoints to keep the plan honest before the formal gate.

TABLE XIII-24 **Proposed checkpoints within the first year and Gate 0, with date, decision and decider**

Checkpoint	Date	Decision	Decider
Day 90 funding test	End of January 2027	Proceed on full plan, or rescale (section XIII.6.3)	Interim steering group
Day 180 governance test	30 April 2027	Steering Board and panels seated with independent majority and balance, or extend interim arrangements	Interim steering group
Day 180 pilot pipeline test	30 April 2027	Which pilots continue preparation, which are held for lack of an interested host	Steering Board
Day 270 dossier readiness	31 July 2027	Which pilots will present a full Gate 0 dossier, which will present a hold or redesign case	Program Director, reported to the Steering Board
Gate 0	**October 2027**	**For each pilot: proceed, redesign or stop**	**Steering Board, with panel opinions**

XIII.6.6 Gate 0 criteria

Gate 0 applies the criteria in Part XII to each pilot separately, with the calibration for P2 and P4 described in section XIII.5.1. It is a decision by the Steering Board about whether Vision 2100 continues to support the pilot; whether the pilot is implemented remains the host's sovereign decision. Vision 2100 proposes that a pilot proceed only if all six of the following hold.

01 **Host request.** A written request from the host government, or from each participating government for P3; for P5, from both program owners or, failing the UN entity, a Steering Board decision to support Pilot B alone.

02 **Feasibility and ethics.** The stage-appropriate feasibility work is complete, and the human rights and ethics panel has completed its review with no unremedied finding.

03 **Financing path.** At least 60 percent of the next phase's cost is identified through named sources in discussion; for P2 and P4, indicative interest in the construction phase from at least one development finance institution.

04 **Evaluation design.** An evaluation design with baselines is agreed with the independent evaluator and the host.

05 **Neutrality and integrity.** The technical panel confirms vendor neutrality of specifications, and the finance and integrity panel confirms that no conflict of interest is unresolved.

06 **Safety.** Where any nuclear element is mentioned, the nuclear safety and nonproliferation panel confirms it is treated only as a separately appraised later option.

XIII.6.7 Possible outcomes

Under this proposal, Gate 0 produces one of three decisions (proceed, redesign or stop). A pilot that reaches October without a host request is recorded as held; holding is a status, not a judgment on the pilot's merit.

TABLE XIII-25 **Possible Gate 0 outcomes, when each applies and what follows**

Outcome	When it applies	What follows
Proceed	All six criteria met	Pilot Governance Board formed with the host; pilot enters its first operating or pre-development phase in year two; implementation review dates set
Redesign	Host request stands, but one or more of criteria 2–6 is not met and can be met	Specific conditions and a re-review date within six months; no new spending beyond the conditions
Hold (status)	No host request, or host has paused	Preparation materials archived and published; pilot can return if a host requests it
Stop	A rights, safety or integrity finding cannot be remedied, or evidence shows the pilot cannot achieve its objective	Reasons published; lessons fed into the five-year review

This book recommends that Gate 0 decisions be published with reasons, panel opinions and recorded recusals. A stop is a legitimate result. The Steering Board also decides at Gate 0 whether the secretariat itself has delivered. If the independent year-one review finds that more than a third of milestones were missed without a published reason, the Steering Board commissions a governance redesign before approving the year-two budget.

XIII.6.8 Relationship to later gates

Vision 2100 proposes that pilots that proceed then face stage gates: Part IV's Gate G1 for P1, a rights-review gate before live operation for P3, a financial-close gate in 2029 for P2, a community-consent gate before feasibility for P4, and a publication gate in 2028 for P5. Gate 1, from FOUND to PROVE, is decided in December 2030 and requires at least three pilots operating with host governments still requesting them (Part XII). The year-by-year path from Gate 0 to Gate 1 is set out in Part XIV.

XIII.7 First-year risks, mitigations and the UN calendar

XIII.7.1 Key risks for the first year

ILLUSTRATIVE The risks below are specific to the first year and complement the consolidated FOUND risk matrix in Part XII and the strategic risks in Appendix G. Likelihood and impact are the authors' initial judgment and will be re-scored by the panels by day 180.

TABLE XIII-26 First-year risks, mitigations, triggers and owners. ILLUSTRATIVE — authors' initial scoring, to be re-scored by the independent panels.

Risk	Likelihood / impact	Mitigation	Trigger and response	Owner
Perception as a campaign vehicle	High / high	Independent Steering Board majority; separation from selection; identical offer to any Secretary-General	Credible public criticism: Steering Board statement and independent review of engagement records	Steering Board
Misattribution to the Ambassador or a government	Medium / high	Written approval log; standard language; communications sign-off	Any error: public correction within five working days	Communications Lead
No host requests for one or more pilots	High / medium	Listen first; archetype criteria published; hold rather than force	Fewer than three prospective hosts at day 180: Steering Board holds pilots	Partnerships Lead
Seed funding shortfall	High / high	Diversified donors; rescaling rules	Below $4m at day 90: rescale; below $2.5m at day 120: decide whether to pause	Finance Lead
Conflict of interest, real or perceived	Medium / high	Firewall; recusals; integrity officer reporting to panel chair	Any finding: disclose, remedy, report in quarterly note	Integrity officer
Rights concern in P3 design	Medium / high	Aggregate data; rights panel binding stop	Unremedied finding: P3 held or stopped	Human rights and ethics panel
Overcommitment of a small team	High / medium	Twelve workstreams with part-time pilot leads; day-90 and day-180 reviews	Two consecutive missed milestones: reprioritize publicly	Program Director
Geopolitical resistance	Medium / high	Technology-neutral design; cross-regional balance; no side-taking	Withdrawal of a regional group: pause UN-track asks, continue voluntary work	Steering Board

Risk	Likelihood / impact	Mitigation	Trigger and response	Owner
Change of government in a prospective host	Medium / medium	Feasibility-only letters of intent	Reconfirm consent within six months (Part XII, risk R12)	Preparation Lead

XIII.7.2 Dependencies on the UN calendar

Several first-year events are fixed by others. The CCW Seventh Review Conference meets on 16–20 November 2026 [244]. The Global Dialogue on AI Governance, created by resolution 79/325, held its first session in Geneva in July 2026 and meets next in New York on 3–4 May 2027 [12439]; Part IV notes that the high-level review of the Global Digital Compact is scheduled at the 82nd session of the General Assembly. The UN80 mandate-review resolution of 31 March 2026 created a mandate registry and a working group that began on 1 May 2026 [26].

Vision 2100 proposes treating these events as follows.

- **1 January 2027: start of the next Secretary-General's term.** Any Class C proposal, including the P5 Secretariat pilot and any trust-fund route for P3, is offered to the office after this date, framed identically whoever holds it. The plan assumes no decision by the office in year one.
- **February 2027: World Interfaith Harmony Week.** Part XI identifies it as a natural moment for a first, explicitly voluntary interfaith consultation (Class B).
- **3–4 May 2027: Global Dialogue on AI Governance, New York.** Contributions on UN Shared Layer standards, energy for compute and AI safety evaluation are offered only through member-state sponsors or accredited stakeholders (Classes B and C). A113 Partners cannot participate as a state.
- **September 2027: UNGA 82 high-level week.** The first annual progress report is released. Side events take place only if willing member states host them (Class B).
- **2027 FfD Forum and IMF and World Bank Annual Meetings.** Opportunities to present the financing architecture, subject to the organizers (Part X).
- **October 2027: Gate 0.** Set by this book; not a UN event.

As planned here, none of these events is a dependency for the core of the plan. If no side event is hosted, the work continues and the annual report is published on schedule. The cost of missing them is reach, not viability; every element of the first year remains feasible whoever holds the office of Secretary-General (Part XII, section XII.6).

XIII.7.3 What success looks like on 31 October 2027

This book proposes that the first year be judged a success if, on 31 October 2027, a skeptical reader can verify seven things from public records: an independent Steering Board and four panels are seated and have published their opinions; the baseline and every figure in this book are open to challenge, with a correction log; the conflict-of-interest firewall has operated, with recusals recorded; at least three pilots have a prospective host that requested feasibility work in writing; every pilot has received a published Gate 0 decision with reasons, including any decision to stop; the secretariat's own spending is published; and no government, institution or person has been described as committed to anything it did not agree to in writing.

PART XIV

XIV

THE FIRST FIVE YEARS

Building the Foundation: The 2026–2031 Execution Strategy

IN THIS PART

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FIVE YEARS TO EARN A SECOND DECADE

The first five years do not aim to change the world. They aim to show, with public evidence, whether five small, well-governed pilots can work under sovereign ownership, and to build an institution independent enough to stop the ones that do not. By October 2031 Vision 2100 should have either earned the right to scale in PROVE or told the world plainly why it has not.

XIV.1 The strategic logic of the five years

XIV.1.1 What this part does

Part XII sets the horizons, the pilots and the gates of Vision 2100 to 2100. Part XIII turns its first year, November 2026 to October 2027, into twelve workstreams and a monthly schedule. This part covers the four years after that: how the first-year workstreams become an operating program, how the five flagship pilots move through their phases and gates, how governance passes from A113 Partners to an independent foundation, and how the FOUND horizon (2026–2030) hands over to PROVE (2031–2040). It covers November 2026 to October 2031: five plan years, the last of which overlaps the first year of PROVE.

Everything in this part is a proposal by Vision 2100, prepared by A113 Partners. No government, development bank, UN body or person has agreed to any of it. Hosts are described by archetype, never by name, until they have requested support in writing and agreed to be named (Part XIII). No commitment is attributed to Ambassador Ivonne A-Baki. The plan is built to work whether or not she is selected as Secretary-General, and whoever holds that office (Part XII, section XII.6).

XIV.1.2 Why five years, and why this sequence

Vision 2100 proposes a five-year execution window for three reasons. First, it is the shortest period in which the pilots can produce evidence that a skeptic would accept. A sovereign AI node needs about four years from consent to an independent evaluation (Part IV). A human-led early-warning system needs at least a year in shadow mode before its warnings can be scored, and another year live before its link to mediation can be judged (Part VI). A results ledger needs two publication cycles before anyone can say whether publication changed behavior (Part IX). Second, five years matches one term of the Secretary-General who takes office on 1 January 2027, so the plan can be offered identically to the office for its full term without depending on it. Third, five years is long enough to build an institution and short enough to hold its founders to account for whether they did.

The sequence follows the systems thread of the book. Clean energy (Part V) powers compute (Part IV), which enables education, health and accountable government (Parts VIII and IX), which support industry and jobs (Parts V and VII), which underpin the stability in which prevention and diplomacy succeed (Parts III and VI). The pilots are placed at the weakest joints of that chain. P1 tests whether a small state can own its digital and compute layer. P2 tests whether new clean power can anchor compute and industry without raising household tariffs. P4 tests whether mineral wealth becomes industry rather than export of raw ore. P3 tests whether earlier warning leads to earlier diplomacy. P5 tests whether money reaches people. Honest institutions and finance (Parts IX and X) run through all of them, and the tests of every link are what happens to women, children and the environment (Part VIII).

The five years therefore carry forward Part XII's three rules (sovereign consent before activity, evidence before scale, and authority matched to action) and add a fourth: a shrinking role for the founders. A113 Partners convenes and staffs the initiative at the start. By 2031 it holds no more than two Steering Board seats, no veto and no control over the secretariat, which passes to an independent foundation. Under the conflict-of-interest firewall, A113 Partners and its affiliates never act as supplier, financier or transaction adviser to any pilot they help design.

XIV.1.3 What must be true by October 2031

Vision 2100 proposes eight conditions as the definition of success for the five years. They are deliberately verifiable from public records.

01	**At least three pilots operating** with their host governments still requesting them, each covering at least two of the three archetypes (advanced, emerging, small or resource-constrained) between them.
02	**Independent evaluations published** for every pilot that operated, including those that failed, with baselines set before activity began.
03	**The Results Ledger publishing on schedule** for at least one UN program and one national program since 2028, and for the initiative's own spending since 2027.
04	**No unremedied human-rights, safety or integrity finding** against any pilot or against the secretariat.
05	**An independent foundation in control of the secretariat**, registered in 2029, with the transfer complete by October 2031.
06	**A financing path for PROVE**, with at least 60 percent of the next phase identified for each pilot that proceeds, and P2's phase-one financing decision taken, deferred with reasons, or abandoned.
07	**A first five-year review of the book itself**, published after public consultation, recording what was changed and why.
08	**No misattribution**: no government, institution or person described as committed to anything it did not agree to in writing.

If these conditions hold, PROVE begins in 2031 on evidence. If some hold, PROVE begins narrower. If few hold, the honest outcome is a fundamental revision of the book, as Part XII requires. Section XIV.9 sets out that test.

XIV.2 Year 1 in summary: November 2026 – October 2027

Part XIII holds the full first-year plan. This section summarizes only what the following four years build on.

Year 1 is a preparation year: no construction, pilot procurement or deployment. Part XIII organizes it in twelve workstreams: governance (WS1), evidence (WS2), the four panels (WS3), coalition (WS4), the five pilots (WS5–WS9), financing (WS10), communications (WS11), and monitoring and evaluation (WS12).

The year has five fixed points. In the first 30 days the book is published with its conflict-of-interest disclosure and evidence register, and an interim steering group of five to seven people with an independent majority takes charge. By the end of January 2027 a day-90 funding test decides whether the plan proceeds in full or rescales. By about April 2027 the Vision 2100 Steering Board charter is adopted, and by mid-2027 the Board of 11–13 members and the four panels (technical; human rights and ethics; nuclear safety and nonproliferation; finance and integrity) are seated. In May 2027 the Global Dialogue on AI Governance meets in New York (Part XII), and Shared Layer contributions go forward only through member-state sponsors or accredited stakeholders. In September 2027 the first annual report is released during the high-level week of the 82nd General Assembly, with side events only where willing member states host them. In October 2027 the Board takes Gate 0 decisions, pilot by pilot: proceed, redesign or stop, with any pilot that has no host request recorded as held (a status, not a judgment; Part XIII).

ILLUSTRATIVE Year 1 costs about $10–23 million: $4–8 million for the secretariat and initiative core, and $6–15 million for pilot preparation, spent only where a prospective host requests the work (Part XIII). The project-preparation facility is designed but not capitalized.

Year 1 succeeds on the seven public-record tests of Part XIII, section XIII.7.3, of which two matter most here: at least three pilots have a prospective host that requested feasibility work in writing, and every pilot has a published Gate 0 decision with reasons.

XIV.3 Years 2 to 5 in depth

XIV.3.1 How the workstreams evolve

The twelve first-year workstreams are built for preparation. Implementation needs a different shape. Vision 2100 proposes that they consolidate, by the end of Year 3, into the seven workstreams of Part XII: governance and charter; research and evidence; coalition building; the five flagship pilots; financing; communications; and monitoring and evaluation.

The change happens in three moves. First, at Gate 0, each pilot preparation workstream (WS5–WS9) that proceeds becomes a pilot delivery unit. Its operations are governed by a Pilot Governance Board chaired or co-chaired by the host government, with the regional body, independent members and, where relevant, the UN entity. The Vision 2100 Steering Board no longer manages the pilot. It decides only, at each gate, whether Vision 2100 continues to support it. Second, during Year 2, monitoring and evaluation (WS12) moves from a secretariat function to a multi-year contract with an independent evaluator appointed by the Board, so that no one who runs a pilot judges it. Third, during Years 3 to 5, governance (WS1) becomes the foundation-transition workstream, and financing (WS10) becomes the management of the project-preparation facility and of the PROVE financing pipeline.

The panels (WS3) do not change shape, and their two fixed powers continue: the rights panel's binding stop recommendation and the nuclear panel's deference to the IAEA and national regulators.

XIV.3.2 Year 2: November 2027 – October 2028 — from decision to delivery

Objectives. Start implementation of every pilot that passed Gate 0 without breaking any safeguard. Produce the first public results. Capitalize the project-preparation facility. Begin the long work of building a cross-regional coalition.

Workstreams. Pilot delivery units are established and Pilot Governance Boards constituted for each proceeding pilot. The evaluator's contract is signed and baselines are locked before any pilot activity that could affect them. Research and evidence publish Baseline v2.0 and the first

archetype-level series (Part I). Communications publish quarterly notes and the second annual report.

Pilots. Vision 2100 proposes the following phase plan for Year 2, conditional on each pilot's Gate 0 outcome.

- **P1 Sovereign Digital Nation.** Phase 0, consent and design (about 6–9 months), runs to mid-2028 if it did not already begin on the host's request in Year 1: legal gap analysis, public consultation, a published data-protection impact assessment (DPIA) and co-design of first services with women's groups, outer-island communities and people with disabilities. Part IV's Gate G1 follows: the required laws are in force and the DPIA is published. Only then does open, vendor-neutral, multi-vendor procurement begin, in the second half of 2028.
- **P2 Clean Power and Compute Corridor.** Grid and site studies, environmental and social impact work, a household-impact analysis and a technology-neutral comparison of energy options (Part V) proceed under a pre-development budget. Indicative term sheets are sought from development finance institutions and guarantee providers. Where the host asks about nuclear power, the work is limited to supporting the host's own request for IAEA Milestones assistance. No reactor is assumed before the late 2030s for a newcomer country.
- **P3 Prevention Early-Warning.** Shadow mode runs from late 2027 through 2028. The regional unit of 10–14 analysts and data staff, community monitors (at least 40 percent women) and a mediation liaison produce warnings that are logged and later scored but trigger no action. The target is a median lead time of at least 30 days by 2028 (Part VI). Before any live operation, the rights-review gate in late 2028 asks the human rights and ethics panel whether the data regime, the ban on individual-level targeting and the separation from security services have held in practice.
- **P4 Minerals-to-Industry.** If Gate 0 approved it, the full community and environmental baseline begins, with community engagement agreed with community representatives, not only with government. Free, prior and informed consent applies wherever Indigenous peoples are affected. No plant design, offtake negotiation or investor selection takes place.
- **P5 Results Ledger.** The national program (Pilot B) and, if the responsible UN entity has decided to publish, the UN program (Pilot A) are onboarded. The publication gate in 2028 requires that every person or body named has had a right of reply, that every algorithmic flag has been reviewed by a person, and that the ledger's own audit is in place. The first public release of linked records follows. This meets the shared indicator of at least one UN program and one national program publishing by 2028, or records honestly that only the national program is publishing.

Governance. The Steering Board completes its first full year and publishes its decisions, recusals and panel opinions. The Board commissions a legal design study for the independent foundation: jurisdiction, charitable or public-benefit status, the rules that keep A113 Partners to a minority position, and the transfer of the initiative's archive, data and contracts.

Financing. The project-preparation facility is capitalized only after an anchor partner's own board approves it. Vision 2100 proposes a first tranche of about $10–25 million, within the $25–60 million FOUND range of Part XII, focused on P1, P3 and P5 implementation support and P2 and P4 pre-development. The secretariat's funding moves from one-year seed grants to multi-year pledges, with no single donor above an indicative 25 percent of the core.

Coalition and UN track. The second annual report is released during the 83rd General Assembly's high-level week in September 2028, again only through side events that willing member states

choose to host. Vision 2100 proposes that the coalition workstream begin to identify cross-regional member states that might, if they choose, co-sponsor a General Assembly resolution recognizing Technology for Peace and Security as a cross-cutting priority. Part XII places any such resolution no earlier than 2028. Coalition work in Year 2 is exploratory. It records interest in the standard language of Part XIII ("expressed interest", "agreed to explore") and never describes interest as support.

XIV.3.3 Year 3: November 2028 – October 2029 — the first systems in service

Objectives. Bring the first systems into real service under host ownership. Take the first large financing decision. Register the independent foundation. Hold a mid-FOUND review that is honest about what is behind schedule.

Workstreams. The consolidation to seven workstreams is completed. The independent evaluator publishes interim findings for P3's shadow-mode year and P5's first publication cycle.

Pilots.

- **P1.** Phase 1, foundations (about 12 months, mid-2028 to mid-2029): identity and data exchange live for the first registries, two compute sites commissioned, a national computer emergency response team and security operations center operating, and the first five services. Part IV's Gate G2, independent security accreditation, is the condition for putting the node into public service in 2029. The node's IT load for a small island state is tens to hundreds of kilowatts, about 50 kW in Part IV's central case. Recurrent operating costs, perhaps 15–25 percent of capital a year, must be in the national budget before G2 is passed.
- **P2.** The financing decision falls in about 2029. It is a decision by the host government, lenders and investors, not by Vision 2100. The Steering Board's role is narrower: it decides whether Vision 2100 continues to support the corridor, after the finance and integrity panel has reviewed the financing structure, debt effects and household-impact analysis. If financing closes, construction of phase one ($0.5–2.0 billion, project-financed) begins in 2029 or 2030 and is counted in PROVE.
- **P3.** If the rights-review gate was passed, P3 goes live in 2029 with a human-led protocol linking warnings to mediation and to a rapid-response grant window. AI tools aggregate and flag; they never identify individuals as likely perpetrators and never trigger force. Host governments see outputs, not raw data.
- **P4.** The community-consent gate decides whether feasibility work for one processing step, such as lithium hydroxide or copper rod, may begin. Consent cannot be scheduled, so this gate has a target date, not a deadline. If consent is withheld, P4 stops at that site and the reasons are published.
- **P5.** The second publication cycle runs. The UN80 mandate registry (Part XII) offers a natural link, and a brief on how the ledger could serve as the public view of that registry is offered to the responsible working group.

Governance. The independent foundation is registered in 2029. Its board is constituted from the Steering Board, with the same composition rules: members from every UN regional group, at least half women, at least two under 35, at least two from small or resource-constrained states, and A113 Partners with no more than two seats and no veto. The foundation and the A113-staffed secretariat run in parallel from registration, with staff, contracts and data moving in stages. In Year 3 the Board also prepares the first rotation of its staggered three-year terms, which begins in 2030.

Mid-FOUND review (2029). Vision 2100 proposes a structured review in mid-2029, two years after Gate 0 and about eighteen months before Gate 1. It is not a gate. Its purpose is to give pilots that are behind schedule time to recover or to be stopped before Gate 1, rather than discovering failure at the gate. Any pilot that has missed two consecutive annual milestones without a published reason receives a redesign plan within six months.

Financing. The second tranche of the project-preparation facility is sought, conditional on the first tranche's published performance. P4 preparation draws on the facility for feasibility work only after the consent gate.

Coalition and UN track. The third annual report is released during the 84th General Assembly's high-level week (September 2029). If cross-regional co-sponsors have come forward of their own accord, a draft resolution text could be prepared for them. Vision 2100 does not table resolutions, does not lobby on the selection or performance of any Secretary-General, and treats the absence of co-sponsors as a reason to continue the voluntary pilots, not to escalate. Regional compact consultations continue in the Americas (Part VII).

XIV.3.4 Year 4: November 2029 – October 2030 — evaluate and prepare the gate

Objectives. Evaluate. Conduct an independent mid-term evaluation of the initiative as a whole. Prepare honest Gate 1 dossiers. Begin to identify PROVE financing for whatever is working.

Workstreams. The research and evaluation workstreams dominate the year. The evaluator's mid-term evaluation covers every pilot and the secretariat itself, including the firewall, attribution control and the use of funds.

Pilots.

- **P1.** Phase 2, services at scale (about 15 months, mid-2029 to late 2030): twenty or more services, a payments link, a national-language model in production for information and translation (not for decisions about rights), and assisted-service offices on every inhabited island. Part IV's Gate G3, an independent inclusion audit, falls in late 2030 and feeds directly into Gate 1. P1's sovereign AI node counts toward the indicator of one to three states operating a sovereign node by 2030.
- **P2.** If financed, construction proceeds, with phased build and anchor tenants identified before each stage. If the financing decision slipped, Year 4 is the last chance to take it before Gate 1. If no decision is reached by October 2030, Vision 2100 proposes that P2 enter PROVE as a preparation-stage corridor, not a construction-stage one.
- **P3.** The first full live year ends. The independent evaluation in 2030 tests the median lead time against the target of at least 60 days, the warning-to-action rate against Part VI's targets, the false-alarm burden and the share of women among mediators and monitors. Fatalities are compared with matched comparison districts. The evaluator is expected to state plainly if a year of live data is too short to detect a difference.
- **P4.** Feasibility for the selected processing step concludes. A plant financing decision, if any, falls in 2030–2031 and belongs to the host and its financiers; the plant's capital ($0.3–1.2 billion) is counted in PROVE.
- **P5.** The three-year budget is complete. Whether the ledger extends to further program pairs is decided on the evaluation's evidence, at Gate 1. The shared indicator for 2030 (at least 10 percent of the Secretariat's programme budget publishing on a results ledger) applies only if the Secretary-General has chosen to adopt it. Vision 2100 does not assume that choice.

Governance. The first rotation of Steering Board members begins. The foundation takes over grant administration and the panels' secretariat support. The Board publishes the Gate 1 procedure and criteria at least six months before the decision.

Financing. For each pilot likely to proceed, the finance workstream assembles a PROVE financing path, identifying at least 60 percent of the next phase's cost through named sources in discussion. Part X's financing architecture is presented, subject to the organizers, at the Financing for Development Forum and the IMF and World Bank Annual Meetings.

Coalition and UN track. The fourth annual report is released during the 85th General Assembly's high-level week (September 2030). Regional compact consultations beyond the Americas begin with regional organizations that ask for them, such as the African Union or the Pacific Islands Forum (Part VII), each on its own terms. Where member states choose, Vision 2100 proposes that the P3 evaluation inform any review of the Peacebuilding Fund's terms of reference, including a possible prevention window (Part VI).

XIV.3.5 Year 5: November 2030 – October 2031 — Gate 1 and the handover

Objectives. Take Gate 1. Complete the foundation transfer. Publish the first five-year review of the book. Close PROVE financing for the pilots that succeeded.

Gate 1, December 2030. Gate 1 is the FOUND-to-PROVE gate that Part XII sets for December 2030. Vision 2100 proposes that the Board decide it in December 2030, at the start of Year 5, on the mid-term evaluation and the pilot-level gates (P1 G3, P2 financing, P3 evaluation, P4 feasibility, P5 three-year evaluation). Section XIV.6 sets out the criteria.

Pilots.

- **P1.** Phase 3, handover and audit (about 12 months, late 2030 to late 2031): national staff run operations, contractors step back to a support role, and the independent evaluation is published. Part IV's Gate G4 decides continuation. If P1 passes, Phase 4 begins in PROVE: an open playbook, code and contracts for the next small states, with replication planned in 15–20 states over the decade.
- **P2.** Construction continues if financed. The corridor's first industrial tenants are expected from 2031. Household tariffs and reliability are reported annually and must not worsen.
- **P3.** Evaluation results are published. If they are positive, the regional body begins to absorb the unit's costs into its own budget from PROVE, and extension to three to six further regions is prepared.
- **P4.** The plant financing decision is taken by the host and its financiers, or deferred. All contracts and payments go on a Results Ledger.
- **P5.** If extended, the ledger standard moves toward adoption by at least one standards body (Part IX), and five to ten further program pairs are prepared for PROVE.

Governance. The secretariat transfer to the foundation is completed by October 2031. A113 Partners' remaining role is that of a disclosed minority participant and contributor of research. Its in-kind support, if any, continues to be published at value. The Steering Board's first five-year review of the book is published after public consultation and panel opinions. Every change is logged with its reason, and the review states what failed.

Financing. PROVE financing closes for pilots that passed Gate 1. The foundation's secretariat is funded at $4–8 million a year for the PROVE decade (Part XII).

Coalition and UN track. The fifth annual report is released during the 86th General Assembly's high-level week (September 2031). The term of the Secretary-General who took office on 1 January 2027 ends on 31 December 2031. Vision 2100 proposes that the five-year review be offered identically to that office and to the candidates for the next term, as a public document, not a request.

XIV.4 Five-year milestones

ILLUSTRATIVE Table XIV-1 consolidates the milestones of sections XIV.2 and XIV.3. Dates set by the UN calendar are marked "fixed"; all others are planning assumptions. Every pilot milestone depends on a host's written request and on passing the preceding gate.

TABLE XIV-1 Five-year milestones, November 2026 – October 2031. ILLUSTRATIVE planning schedule proposed by Vision 2100; only UN-calendar dates are fixed, and no milestone is committed by any government or UN body. Class A = A113 Partners alone; B = voluntary partners; C = UN authority.

Date	Milestone	Domain	Class	Evidence of completion
Nov–Dec 2026	Book published with disclosure; interim steering group seated	Governance	A	Publication; members listed
Jan 2027	Day-90 funding test	Financing	A	Published decision
~Apr 2027	Steering Board charter adopted	Governance	A→B	Charter published
May 2027 (fixed)	Global Dialogue on AI Governance, New York	UN track	B/C	Contributions via sponsors, if any
Mid-2027	Board and four panels seated	Governance	B	Membership and declarations
Sep 2027 (fixed)	UNGA 82 high-level week; first annual report	Coalition	A; B for events	Report published
Oct 2027	Gate 0 on P1–P5	Gates	A (Board)	Decisions with reasons
H1 2028	Facility first tranche, if anchor approves	Financing	B	Anchor board approval
Mid-2028	P1 Gate G1: laws in force, DPIA published	P1	B	Host gazette; DPIA
2028	P5 publication gate; first linked records	P5	B; C for UN program	Public ledger release
2028	P3 shadow mode scored; lead time ≥30 days targeted	P3	B	Evaluator note
Late 2028	P3 rights-review gate	P3	A (panel) / B	Panel opinion
2029	Foundation registered	Governance	B	Registration record
Mid-2029	P1 Gate G2; node in service	P1	B	Accreditation report
Mid-2029	Mid-FOUND review	Gates	A (Board)	Review published
~2029	P2 financing decision	P2	B	Close, deferral or exit published
2029	P3 live with mediation link	P3	B	Protocol and first report
2029 (target)	P4 community-consent gate	P4	B	Community and panel records

Date	Milestone	Domain	Class	Evidence of completion
2030	Independent mid-term evaluation	M&E	B	Evaluation published
2030	P3 and P5 evaluations	P3, P5	B	Reports published
Late 2030	P1 Gate G3: inclusion audit	P1	B	Audit published
Dec 2030	Gate 1: FOUND to PROVE	Gates	A (Board)	Decisions with reasons
2030–2031	P4 plant financing decision	P4	B	Decision or deferral
Sep 2031 (fixed)	UNGA 86 high-level week; fifth annual report	Coalition	A; B for events	Report published
By Oct 2031	Secretariat transfer to foundation complete	Governance	B	Transfer instrument
Oct 2031	P1 Gate G4; five-year review; PROVE readiness test	Gates	A (Board) / B	Review published

XIV.5 Five-year budget

ILLUSTRATIVE Table XIV-2 uses the three canonical tiers of the book: first-year preparation, initial implementation (which includes first-year preparation) and long-term capital for PROVE replication, which is spent only if gates pass. The five-year total reconciles to the FOUND horizon total of about $120–300 million, excluding P2 phase-one construction (Part XII). All figures are planning assumptions. No funding is committed.

TABLE XIV-2 **Five-year budget by canonical tier, US$ million unless stated. ILLUSTRATIVE planning assumptions; no funding committed. Years 2–5 column is the initial-implementation total minus first-year preparation, low minus low and high minus high. Source: canonical pilot budgets (Parts IV, V, VI, IX, XII, XIII).**

Component	Tier 1: first-year preparation (Nov 2026–Oct 2027)	Years 2–5 (Nov 2027–Oct 2031)	Tier 2: initial implementation, five-year total	Tier 3: long-term capital, PROVE (only if gates pass)
Secretariat and initiative core ($4–8m/yr)	4.0–8.0	16–32	20–40	$40–80m (foundation, ten years)
Project-preparation facility	Designed only	25–60	25–60	$25–60m second tranche
P1 Sovereign Digital Nation	1.0–3.0	19–62	20–65 (~4.5 years)	$0.3–1.3bn (15–20 states)
P2 Clean Power and Compute Corridor	1.5–4.0	13.5–36	15–40 (studies and pre-development)	Phase one $0.5–2.0bn (decision ~2029); $1–10bn (2–5 corridors)
P3 Prevention Early-Warning	1.0–2.0	19–48	20–50 (five years)	$0.06–0.3bn extension
P4 Minerals-to-Industry	1.0–3.0	9–22	10–25 (studies and preparation)	First plant $0.3–1.2bn; $0.6–4.8bn (2–4 plants)
P5 Results Ledger	1.5–3.0	6.5–17	8–20 (three years)	$0.04–0.2bn extension
Total	**10–23**	**108–277**	**118–300 (≈ $120–300m)**	**≈ $2–17bn (PROVE, 2031–2040)**

ILLUSTRATIVE Three points of reconciliation matter. First, the five-year total equals Part XII's FOUND arithmetic exactly; the five plan years run to October 2031, so the last year of secretariat spending and the end of P1's 4.5-year program fall in the first year of PROVE, but they are booked in the FOUND total because they complete FOUND work. Second, P2's phase-one construction, if financed around 2029, would bring FOUND-era commitments to about $0.6–2.3 billion; it is project-financed, spent mostly after 2030 and counted in PROVE, not here. P4's first plant is treated the same way. Third, the Tier 3 figures for P2 and P4 include their first corridor and first plant; they are not additional to them.

ILLUSTRATIVE An indicative annual phasing of the Years 2–5 total of $108–277 million is about $25–60 million in Year 2, $30–80 million in Year 3, $30–75 million in Year 4 and $23–62 million in Year 5. Spending peaks in Years 3 and 4, when P1's foundations and services phases, P3's live operation and the facility's second tranche coincide. It falls in Year 5 as P5's three-year budget ends and P1 moves to handover. The low case assumes three pilots proceed at Gate 0 with modest scope. The high case assumes all five proceed and the facility is fully capitalized. A pilot that is held or stopped releases its unspent preparation budget; it is not reallocated to other pilots without a Board decision published with reasons.

Vision 2100 proposes that the money come mainly from outside the UN's assessed budgets, consistent with Part XII: philanthropy and bilateral governance funds for the secretariat and P5; development-bank preparation facilities and climate funds for P1, P2 and P4; peacebuilding funds, through their own procedures, for P3; and host-government budgets for recurrent costs from the point each pilot enters service. Every contribution appears on the initiative's own Results Ledger.

XIV.6 Decision gates

XIV.6.1 The gates and their criteria

Vision 2100 proposes three kinds of decision in the five years. **Initiative gates** (Gate 0 and Gate 1) are taken by the Steering Board and decide whether Vision 2100 continues to support each pilot. **Pilot stage gates** (P1's G1–G4 from Part IV, P3's rights review, P5's publication gate, P2's financing decision, P4's consent gate) are decisions by host governments, Pilot Governance Boards, lenders or communities. Vision 2100 informs these decisions but does not take them. The **mid-FOUND review** and the **five-year review** are structured checkpoints that can trigger redesign but do not by themselves open or close a horizon. Gate 2, the PROVE-to-CONNECT gate, falls in 2040 and lies outside this part.

TABLE XIV-3 **Decision gates in the first five years. PROPOSAL; criteria from Parts IV, VI, IX, XII and XIII. "Proceed" requires every listed criterion.**

Gate and date	Decider	Proceed if	Redesign if	Stop if
Gate 0, Oct 2027	Steering Board, with panel opinions	Written host request; stage-appropriate feasibility and ethics review; ≥60% of next phase financed (P2/P4: plus DFI interest in construction); evaluation design agreed; vendor neutrality and no unresolved conflict; no premature nuclear element	Host request stands but a criterion is unmet and can be met within six months	Unremediable rights, safety or integrity finding, or evidence the objective cannot be met (no host request: hold)
P1 G1–G4, 2028–2031	Host government, informed by independent reviewers	Laws and DPIA (G1); security accreditation (G2); inclusion audit (G3); evaluation (G4)	Gap that can be closed within the phase	Data used against citizens; host withdraws

Gate and date	Decider	Proceed if	Redesign if	Stop if
P3 rights review, late 2028	Rights panel (binding stop); P3 Pilot Governance Board	Data regime and safeguards held in shadow mode	Fixable weakness in protocol or data	Credible misuse or individual targeting
P5 publication gate, 2028	P5 Pilot Governance Board; rights panel	Right of reply, human review and audit in place	Errors found before release	Unfair harm that cannot be remedied
P2 financing decision, ~2029	Host, lenders, investors; Board on continued support	Bankable structure; household impact neutral or positive; debt sustainable	Demand or tariff risk unresolved	Household harm or unsustainable debt
P4 consent gate, ~2029	Affected communities and host; rights panel	Consent obtained where required; baseline complete	Engagement incomplete	Consent withheld
Gate 1, Dec 2030	Steering Board, with panel opinions and mid-term evaluation	Operating with host still requesting; measurable gain against baseline; Ledger on schedule; no unremedied finding; ≥60% of PROVE path identified	Gains unclear but safeguards held; extend up to 18 months	Unremedied finding, host withdrawal, or no gain after evaluation

XIV.6.2 What happens on failure

A stop is a legitimate result, not a failure of the initiative. What would be a failure is a stop that is hidden, delayed or blamed on the host. Vision 2100 therefore proposes five rules for what follows a negative decision.

01 **Publication.** Every redesign, hold or stop is published with reasons and panel opinions. The host government hears the decision about its own pilot before anyone else (Part XIII).

02 **Orderly exit.** A stopped pilot leaves behind assets the host owns, data under the host's law and an exit plan agreed at entry. No government data is ever collateral, and no stopped pilot leaves a debt the host did not choose.

03 **Learning, not penalty.** Lessons from every stop feed the five-year review. A pilot stopped for lack of a host can return if a host later requests it.

04 **Escalation rules.** Two consecutive off-track annual reports trigger a redesign plan within twelve months (Part XII). A pilot off track at a gate has its related funding held. A rights, safety or integrity breach stops the activity immediately.

05 **Portfolio floor.** If fewer than three pilots pass Gate 1, PROVE does not open in its full form. The Board proposes either a narrower PROVE built on the pilots that passed or, if none passed, a fundamental revision of the book at the 2031 review, as Part XII requires.

The secretariat faces the same discipline. At Gate 0 and Gate 1 the Board decides whether the secretariat itself has delivered. If an independent review finds that more than a third of milestones were missed without a published reason, the Board commissions a governance redesign before approving the next budget (Part XIII). If the foundation is not registered by the end of 2029, the

Board publishes the reasons and a revised date. If the transfer is not complete by October 2031, PROVE replication funding is withheld until it is.

XIV.7 Action classes by year

Part XIII assigns every activity to one of three action classes. **Class A** is what A113 Partners and the secretariat can do alone: publish, research, draft, convene experts, prototype on public data and raise seed funds. **Class B** is what voluntary partners decide: governments, regional bodies, development banks, universities and philanthropies. **Class C** is what requires UN authority: a Secretary-General, the General Assembly, the Security Council or agency governing bodies. Table XIV-4 shows how the balance shifts over the five years. Class A shrinks deliberately; Class C items are listed only as material the relevant office or body may choose to use.

TABLE XIV-4 Action classes by year, 2026–2031. PROPOSAL; Class C items are conditional on decisions by the relevant UN office or body and are never assumed.

Year	Class A: A113 Partners and secretariat alone	Class B: voluntary partners decide	Class C: UN authority (conditional)
1 (2026–27)	Publish book and evidence register; interim group; charter drafts; Baseline Dashboard; P5 prototype on public data; annual report	Board and panel acceptance; listening round; letters of intent; seed funders; Global Dialogue and UNGA 82 sponsors	P5 Pilot A offered to the office after 1 Jan 2027; any trust-fund route for P3
2 (2027–28)	Gate 0 decisions; evaluator procurement; foundation legal design; quarterly notes	Pilot Governance Boards; host-led P1 Phase 0; P3 shadow mode; facility anchor approval; ledger onboarding	UN entity's decision to publish (Pilot A); co-sponsor interest for any GA resolution
3 (2028–29)	Mid-FOUND review; transition planning; research and evaluation support	P1 node in service; P3 live; P2 financing decision; P4 consent; foundation registration	Brief to the UN80 working group; any GA text, only if co-sponsors choose
4 (2029–30)	Gate 1 procedure and dossiers; publication of mid-term evaluation	Mid-term evaluation; P2 construction if financed; compacts beyond the Americas; PROVE financing paths	Ledger coverage of Secretariat programmes if the Secretary-General adopts it; any PBF prevention window
5 (2030–31)	Gate 1 decisions; five-year review; transfer of archive	Foundation takes the secretariat; P1 handover; P4 plant decision; PROVE closes	Any Security Council mandate language on shield capabilities, at its discretion; Shared Layer recognition by the GA if member states choose

The table makes one point plain. Every element needed to pass Gate 1 lies in Classes A and B. None of the eight conditions in XIV.1.3 requires a decision by a UN organ. If Class C decisions come, they make PROVE wider and faster: Secretariat-wide ledger coverage, a prevention window in the Peacebuilding Fund, recognized Shared Layer standards. If they do not, the cost is reach, not viability (Part XII, section XII.6).

XIV.8 Risks specific to the first five years

ILLUSTRATIVE Part XII holds the consolidated risk matrix for the FOUND horizon. Table XIV-5 lists the risks that are sharpest in the transition from preparation to operation. Exposure years and triggers are the authors' judgment and will be re-scored by the panels annually.

TABLE XIV-5 Risks specific to the first five years, with early signals and corrective actions. ILLUSTRATIVE authors' assessment; to be re-scored by the independent panels.

Risk	Most exposed	Early signal	Corrective action	Owner
Funding cliff after seed year	Years 2–3	Multi-year pledges below $4m/yr by mid-2028	Protect panels, evidence and M&E; slow pilot support; publish shortfall	Finance lead; Board
Host change of government	All years	Election or cabinet change in a host	Reconfirm consent within six months; pause new spending until reconfirmed	Pilot Governance Board
Procurement capture or lock-in (P1, P2)	Years 2–4	Single supplier above 50% of contract value	Re-tender; enforce exit clauses; technical panel review	Technical panel
P3 warnings misused or politicized	Years 2–4	Request for raw data by security services	Binding stop; publish; suspend data source	Rights panel
P2 financing slips past 2030	Years 3–4	No term sheets by end-2028	Enter PROVE as preparation-stage corridor; rescope	Finance panel
Evaluation not independent	Years 2–5	Evaluator contract renewed without competition	Board-appointed evaluator; open recompetition	Board
Founder dependence; transfer stalls	Years 3–5	Foundation unregistered by end-2029	Publish reasons; withhold PROVE replication funds until transfer	Board
Perception as a campaign vehicle	Years 1–2	Public criticism after the selection	Identical offer to any office; independent review of engagement records	Board
Leadership loss at the UN or a sponsor	Any year	New office priorities differ	Continue Class A and B work; Class C asks paused, not abandoned	Board
Overload of a small team	Years 2–3	Two consecutive missed milestones	Reprioritize publicly; hold weakest pilot	Program Director
Climate shock in a host	Any year	Disaster declaration	Activate contingency; reschedule gates	Pilot Governance Boards

Three risks need candor. The **funding cliff** is the most likely. Seed money for a year of preparation is easier to raise than steady money for four years of operation, and concessional budgets are under strain. The answer is to protect the elements that create trust (panels, evidence, evaluation) and let pilot support flex. The **misuse of P3** carries the highest impact. A single credible case of warnings used against a community would discredit the whole agenda, which is why the rights panel's stop power is binding and why the gate precedes live operation. **Founder dependence** is the risk most particular to these five years. An initiative designed by A113 Partners that never leaves A113 Partners' hands would fail its own conflict-of-interest test. That is why the transfer is a hard condition of PROVE, not an aspiration.

The selection of a Secretary-General is a specific risk in the first two years, in both directions. If Ambassador A-Baki is selected, the initiative may be seen as the office's project. If she is not,

interest may fall. Vision 2100 proposes the same response in both cases: offer the same material identically to whoever holds the office, keep engagement records separate from any campaign activity, and let the pilots stand or fall on host demand and evidence. She has made no commitment to any Vision 2100 proposal, and none is implied.

XIV.9 The PROVE readiness test, October 2031

Gate 1 decides which pilots proceed. The PROVE readiness test, taken with the five-year review in October 2031, decides whether the initiative as a whole is ready to run a decade of replication. Vision 2100 proposes ten questions, each answered yes or no in public, with evidence.

01	**Pilots.** Did at least three pilots pass Gate 1, between them covering at least two archetypes?
02	**Evidence.** Has every pilot that operated published an independent evaluation, including any failure?
03	**Rights and safety.** Is there no unremedied human-rights, safety or integrity finding?
04	**Ownership.** Are operating pilots run by national staff, with recurrent costs in host budgets?
05	**Institution.** Has the secretariat transferred to the foundation, with A113 Partners holding no more than two seats and no veto?
06	**Finance.** Is at least 60 percent of the next phase identified for each proceeding pilot, and has the P2 financing decision been taken or deferred with reasons?
07	**Accountability.** Has the Results Ledger published on schedule since 2028, including the initiative's own spending and stopped pilots?
08	**Cost discipline.** Is five-year spending within the $120–300 million range, or is any variance explained?
09	**Demand.** Have governments beyond the original hosts requested PROVE replication in writing?
10	**Revision.** Has the five-year review been published after public consultation, with changes logged?

ILLUSTRATIVE Three outcomes are possible. **Ready** (nine or ten yes): PROVE opens as Part XII describes, with P1 replication in 15–20 states over the decade, the first corridor operating, P3 extended to further regions, P4's first plant and a common ledger standard. **Ready in part** (six to eight yes): PROVE opens for the pilots that passed, the gaps are named, and the next review in 2036 must close them. **Not ready** (five or fewer yes): replication is not funded, the foundation continues evaluation and publication only, and the book is revised fundamentally, because the chain it describes has not held where it was tested.

No single actor can pass the test alone. A113 Partners cannot make a host request replication; a host cannot make the evaluator find a gain; a financier cannot make the rights panel withdraw a finding. The question for 2031 is whether independent parties, each acting on their own authority, chose to continue.

What begins now

The actions that begin in November 2026 are set out in full in Part XIII, which is the operating plan for the first year: the 30-day, 90-day and 180-day actions, the twelve workstreams, the monthly schedule, the responsibility matrix and the Gate 0 criteria. This part depends on three of them above all. By December 2026 the interim steering group and conflict-of-interest firewall must be in place, because every later gate is only as credible as the body that takes it. By April 2027 the Steering Board charter must set out the gate procedure, including the Gate 1 criteria in XIV.6, so that no pilot is judged against rules written after the fact. By October 2027 each pilot must have a published Gate 0 decision, because Years 2 to 5 begin from those decisions and from nothing else.

Three Year 1 tasks are added by this part. The finance workstream should test, by mid-2027, whether multi-year pledges for Years 2–5 are realistic, because the funding cliff is the most likely risk of the five years. The governance workstream should commission an early opinion on the foundation's jurisdiction and form, so that registration in 2029 is not delayed by a choice that could have been made in 2027. And the evaluator's terms of reference should be drafted in Year 1, so that the evaluator is in place before any pilot activity sets a baseline.

Measuring progress

ILLUSTRATIVE The indicators below track the five-year execution strategy. Shared indicators use the same values as Parts VI, VIII, IX, XII and Appendix H. Process indicators have no agreed international target and are Vision 2100 planning milestones only. 2040–2100 columns show the long-run planning milestone where one exists; "—" means the indicator closes with FOUND or is set at the 2031 review. Where a 2030 milestone is a planning step toward an agreed target, it does not replace that target.

TABLE XIV-6 Five-year indicators, 2026–2031, with long-run planning milestones. ILLUSTRATIVE planning milestones proposed by Vision 2100; owners report and do not deliver outcomes alone.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Pilots operating with host still requesting (Steering Board)	0, 2026, Part XII	—	≥3	Replicated in ≥10 states across three archetypes	—	—
Pilot gate decisions published with reasons (Steering Board)	0, 2026, Part XIII	—	100%	100%	100%	100%
States operating a sovereign AI node, pilot model (Steering Board; hosts)	0, 2026, Part XII	—	1–3	15–20	60+	All that choose

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Results Ledger coverage (P5 Pilot Governance Board; UN Secretariat if adopted)	0 programs publishing, 2026, Part XII	—	≥1 UN and ≥1 national program publishing by 2028; ≥10% of Secretariat programme budget by 2030 only if the Secretary-General adopts it	Majority of Secretariat programme budget	All	All, audited
P3 median warning lead time (P3 Pilot Governance Board)	To be established in shadow mode, 2027–28, Part VI	—	≥60 days (≥30 days by 2028)	≥90 days in all P3 regions	Standard practice	Standard practice
Women in senior roles of UN-convened mediation teams, Part VIII definition (Secretary-General; DPPA)	To be established by DPPA, 2027, Part VIII	— (SCR 1325: equal participation; no numeric target)	≥one-third	Parity (≥50%)	Parity	Parity
Women among P3 monitors (P3 Pilot Governance Board)	To be established, 2027, Part VI	—	≥40%	≥45%	Parity	Parity
Unremedied rights, safety or integrity findings (rights, nuclear, finance panels)	0, 2026, Part XII	—	0	0	0	0
FOUND spending against plan (finance and integrity panel)	$120–300m range, Part XII	—	Within range or explained	—	—	—
Share of pilot and secretariat spending on a Results Ledger (P5 Pilot Governance Board; finance and integrity panel)	0, 2026, Part XII	—	100%	100%	100%	100%
PROVE financing path identified per proceeding pilot (finance lead)	0, 2026, Part XII	—	≥60% by Gate 1	—	—	—
A113 Partners seats on the governing board (foundation board)	Interim group, 2026, Part XIII	—	≤2, no veto; transfer complete by Oct 2031	≤2	—	—
Milestones missed without published reason (independent evaluator)	To be established, 2027 review	—	<10%	<10%	—	—
P2 household tariffs and reliability in host (P2 Pilot Governance Board)	To be established, 2028	SDG 7.1: universal access to affordable, reliable energy by 2030	No worsening	No worsening	No worsening	No worsening

Corrective actions follow the gate logic of XIV.6. Two consecutive off-track annual reports trigger a redesign plan within twelve months. An indicator off track at a gate holds related funding. Any non-zero count of unremedied findings stops the related activity and the reasons are published. Indicators that move the wrong way are published with the same prominence as those that move the right way.

PART XV

XV

A SHARED RESPONSIBILITY FOR HUMANITY

No One Builds the Century Alone: What Each of Us Can Do, and How to Hold Vision 2100 to Account

IN THIS PART

XV.1 Why this book ends with a shared responsibility
XV.2 The principles of participation
XV.3 Governments
XV.4 International institutions
XV.5 Private industry
XV.6 Academia and research institutions
XV.7 Civil society
XV.8 Faith communities and royal households
XV.9 Young people
XV.10 Individuals
XV.11 Matching contributions to the programs
XV.12 How to join, contribute evidence, challenge and hold the initiative accountable
XV.13 What this book does not ask
XV.14 A closing reflection: the generation born in 2026

THE CLOSING ARGUMENT

Vision 2100 cannot be delivered by any one office, government or organization, and it is designed so that it never has to be. It asks each actor for what lies within that actor's own authority, freely given, published and open to challenge — and it asks everyone to hold the initiative itself to the same standard.

XV.1 Why this book ends with a shared responsibility

Fourteen parts have described a single system. Clean, reliable energy powers compute and industry; compute enables education, health and accountable government; capable government and productive industry create jobs; jobs give people dignity and a stake in stability; stability lets diplomacy succeed; and peace protects the investments that keep the power on. Honest institutions and financing run through every link, and women, children and the planet are the test of every link (Executive Overview; Part XII).

The system has a property that matters more than any of its programs: no single actor controls it. A Secretary-General can convene, warn, mediate and report, but cannot command member states or create institutions (Part III). Governments hold sovereign decision rights over their own territory, budgets and laws, but cannot build regional corridors or shared standards alone. Development banks decide their own lending; regulators alone license reactors; communities hold consent rights over land and water; citizens decide whether institutions deserve their trust. Every link in the chain sits with a different holder of authority.

That is why this book ends not with a list of demands but with an account of shared responsibility. Vision 2100 proposes that each kind of actor contribute what lies within its own authority, voluntarily, in public and subject to verification. Nothing in this part is a commitment by anyone. No government, international institution, company, university, faith body or royal household named or described here has agreed to any proposal in this book, and none of the proposals is a commitment or plan of Ambassador Ivonne A-Baki. The aim is to make clear what each actor *could* do, so that each can decide whether to act.

◆ DOCUMENTED POSITION In her dialogue with the General Assembly on 20 August 2026, Ambassador A-Baki argued that trust matters more than money, that resources follow demonstrated results, and that the problems of the moment must be worked on "together as a team" [5]. She also said she regards the United Nations as the best institution available for the problems the world now faces [5]. This part takes those documented principles — trust earned through results, and work done together — as its starting point. The specific actions below are Vision 2100 proposals by A113 Partners, not her statements.

XV.2 The principles of participation

Vision 2100 proposes five principles to govern every contribution described in this part. They restate, for participants, the rules that already govern the pilots (Parts XII and XIII).

01 **Voluntary and revocable.** Every contribution is freely offered and may be withdrawn at any stage without penalty. Withdrawal is recorded neutrally.

02	**Within one's own authority.** Each actor is asked only for what it can lawfully decide for itself. No one is asked to commit another — a ministry cannot commit a parliament, a mission cannot commit a capital, a company cannot commit a host government.
03	**Published.** Contributions, conditions, spending and results are published on the Results Ledger, including what was stopped and why (Part IX).
04	**Verifiable.** Every claim of progress is open to independent evaluation and public challenge, with a right of reply before any adverse finding is published.
05	**Never implied.** No country, institution or person is named as a partner, host or supporter without its written permission for that specific use. Interest is not support, and support is not endorsement (Part XIII).

> **STANDARD LANGUAGE**
>
> Records of engagement distinguish "expressed interest", "agreed to explore", "signed a letter of intent for feasibility" and "requested implementation". Only the last can lead to implementation, and only after a published gate decision (Part XIII).

XV.3 Governments

National governments hold the decisions on which everything else depends: territory, law, budgets, licensing, procurement and the consent of their peoples. Vision 2100 is designed so that governments lose none of that authority by participating.

Vision 2100 proposes that governments consider the following actions, each voluntary and each within their own authority.

- **Lay the legal foundations first.** Before any sovereign AI node or digital public service is built, enact or update the laws on which public trust depends: data protection, digital identity, cybersecurity, access to information and the use of AI by public bodies (Part IV). These are worth doing whether or not a government ever joins a pilot.
- **Consider hosting a pilot.** A government whose circumstances fit one of the five archetypes may request an exploratory conversation and, if it chooses, sign a letter of intent covering feasibility only. Consent can be withdrawn at any gate, and the host chairs or co-chairs the pilot's own Pilot Governance Board (Parts XII and XIII).
- **Publish one program end to end.** Any government can begin, on its own authority, to publish a single national infrastructure program from appropriation to verified outcome — the core of the Results Ledger (Part IX). It needs no partner and no permission.
- **Prepare an energy decision honestly.** Apply the technology-neutral decision framework of Part V before committing to any energy pathway. For governments considering nuclear power, follow the IAEA Milestones approach, establish an independent regulator and, as Vision 2100 proposes for newcomer states, make a voluntary commitment not to enrich or reprocess (Part V).
- **Put women at the table.** Appoint women to senior roles in every national delegation to mediation and peace processes, and report the share publicly (Part VIII).

- **Protect the long view.** Consider a future-generations commissioner, ombudsperson or equivalent office, and a future-generations statement attached to major budget bills (Part XI).
- **Co-sponsor, if persuaded.** Governments that find the evidence persuasive may consider co-sponsoring, from 2028, a General Assembly resolution recognizing Technology for Peace and Security as a cross-cutting priority and Shared Layer standards. Such a decision belongs to member states alone (Parts III and XII).

XV.4 International institutions

XV.4.1 The United Nations

Vision 2100 builds on mandates member states have already adopted — the Pact for the Future and Global Digital Compact, resolution 79/325 on AI governance and the UN80 mandate review — rather than asking for new organs (Part III). It distinguishes clearly between what the Secretary-General may do on the office's own authority and what requires the General Assembly, the Security Council or a Charter amendment.

Within existing authority, this book recommends that any Secretary-General consider: publishing criteria for bringing threats to the attention of the Security Council under Article 99; setting a floor for women in senior roles of every UN-convened mediation team; publishing cash, mandate and programme data in open formats; adopting a Secretariat policy on the use of AI; and piloting the Results Ledger for one programme as the public face of the UN80 mandate registry (Parts III and IX). These are Vision 2100 recommendations addressed to the office, whoever holds it. Ambassador A-Baki has made no commitment to any of them.

For the General Assembly, the book proposes decisions only when members choose to take them: recognition of Shared Layer standards and an emergency compute reserve; extension of the Ledger to all mandates; and, later, a Peace Technology Pool (Parts IV, VI and IX). For the Security Council, it proposes that shield capabilities and a status-of-forces technology annex be included in at least one mission mandate, with the non-lethal rule codified (Part VI). Specialized agencies — the IAEA, ITU, UNDP, UNICEF, UN Women, WHO, WMO and others — are asked only for technical advice within their existing mandates (Part XII).

XV.4.2 Regional bodies

Regional organizations and economic communities are the natural owners of what crosses borders: early-warning cooperation, shared compute pools, power interconnection, mineral standards and regional compacts. Vision 2100 proposes that they consider hosting or co-chairing a P3 Pilot Governance Board, offering regional sharing arrangements for P1, and carrying the Americas Compact and comparable regional frameworks through institutions that already exist rather than new secretariats (Parts VI and VII).

XV.4.3 Development banks and the IMF

Development banks decide their own lending through their boards, and the IMF's members decide on special drawing rights. Vision 2100 asks them for three things within those authorities: to complete capital-adequacy reforms already under way; to co-design a project-preparation facility and guarantee structures for corridor and processing projects; and to test the book's cost-of-capital assumptions at staff level before any pilot reaches financing (Part X). Sovereign wealth funds and institutional investors are invited to co-invest in bankable assets on commercial terms, never to subsidize them (Part X).

XV.5 Private industry

Private capital and private engineering will build most of what Vision 2100 describes: generation, transmission, data centers, processing plants, software and networks. The book asks industry to compete for that work on terms that leave nations sovereign and procurement open.

Vision 2100 proposes that technology and infrastructure companies consider the following.

- **Sovereign terms for frontier access.** Offer access to frontier models and services on terms that keep citizens' data and the inference that touches them under national law, with exit rights and no exclusive lock-in (Part IV).
- **Open standards.** Build to open, interoperable standards so that a nation can change supplier without rebuilding its digital state (Part IV).
- **Disclosure.** Publish contracts, payments and performance for public projects to the Results Ledger standard, and support beneficial-ownership transparency (Part IX).
- **A disaster reserve.** Pledge compute capacity to an emergency reserve that member states may call on after disasters (Part IV).
- **Local value.** In corridors and processing projects, commit to measurable training and employment of nationals and women, and to environmental and tailings standards verified independently (Part V).

Industry participates under the same firewall that binds the book's own authors. Market soundings are open; no supplier is pre-selected; and A113 Partners and its affiliates do not act as supplier, financier or transaction adviser to any pilot they help design (Part XIII; Appendix I).

XV.6 Academia and research institutions

Universities, statistical offices, supreme audit institutions and research centers hold the independence that Vision 2100 depends on. The book proposes that they serve as its evaluators — never as grantees of what they evaluate (Part XI). Specifically, Vision 2100 invites them to:

- **Peer-review the baseline.** Test every figure in Part I, the master scorecard and Appendix C, and log corrections publicly.
- **Design and conduct evaluations.** Agree evaluation designs for each pilot before Gate 0 and conduct the independent evaluations at Gates 1 and 2 (Part XII).
- **Review the data model.** Audit the Results Ledger's data model and anomaly methods, and publish the results (Part IX).
- **Close the research gaps.** Take up the open research questions listed in Appendix G — on cost of capital, local-language models, early-warning lead times and learning-companion safety among them.
- **Staff independent review panels.** Provide at least one university partner per region to staff the independent review of each voluntary compact (Part XI).

XV.7 Civil society

Civil-society organizations — including women's networks, youth groups, Indigenous peoples' organizations, human-rights defenders, journalists and community associations — are the first line of accountability. Vision 2100 proposes that they be given the means to perform that role, not merely be consulted. The book recommends that civil society be able to file shadow reports on

any Ledger entry and see the data behind it; hold seats on the human-rights and ethics panel and on Pilot Governance Boards where hosts agree; nominate community monitors for P3 and participate in consent processes for P4; and call for suspension where a credible misuse of data or technology is found (Parts VI, IX, XI and XII).

The rights panel's binding stop recommendation exists for one reason: a single credible misuse of surveillance would discredit the whole agenda (Part XII). Civil society is asked to use that mechanism without hesitation.

XV.8 Faith communities and royal households

Faith communities hold moral authority, reach into every community on earth and, in some conflicts, trusted channels where politics is blocked. Vision 2100 proposes a standing interfaith peace convening, invited jointly by the Secretary-General and existing interfaith bodies rather than created as a new UN entity, which issues no rulings, privileges no tradition, includes minority and non-religious voices and places women in every delegation (Part XI). Faith communities are also invited to contribute to the shared moral floor for AI that Part XI proposes: four questions about dignity, the weakest, truthfulness and domination. No faith body has endorsed these proposals.

Royal households, where their constitutional orders allow and on the advice of their governments, are invited to consider the Royal Compact for 2100: a Council of Long-Term Stewards with no budget authority or veto, an independently audited endowment that grants only at a host government's request, publication of their own foundations' accounts to the Ledger standard, and good offices offered only at the request of the parties (Part XI). The Compact serves governments and peoples and never replaces them. No royal household has been consulted on, or has endorsed, the Royal Compact.

XV.9 Young people

The generation born in 2026 will live the whole of this book's horizon. Young people today will hold every office this book addresses before 2060.

◆ DOCUMENTED POSITION Ambassador A-Baki told the General Assembly in August 2026 that leaders should listen to young people and involve them, and that children are the present as well as the future [5] (see also Parts VIII and XI).

Vision 2100 proposes that young people hold seats with voice — not token observer status — on the Vision 2100 Steering Board (at least two members under 35), in every compact assembly and on the Council of Long-Term Stewards, chosen through UN youth mechanisms and national youth councils rather than by sponsors (Parts XI and XII). Young people are invited to test the learning companion and report its failures; to serve as community monitors and evaluators; to build the open-source tools and local-language datasets that sovereign AI requires; and to hold their own governments to the milestones in the master scorecard. Stay-and-build programs and the Americas Build Corps proposed in Part VII are designed to give young people a reason, and a means, to build their future at home if they choose.

XV.10 Individuals

Every person can contribute something Vision 2100 cannot buy: attention, skill and scrutiny. The book invites individuals to read the part that touches their own work and challenge it; to ask their own governments whether one public program can be published end to end; to volunteer professional skills — engineering, law, medicine, statistics, teaching, mediation — to evaluation and peer review; to support the education of girls and the protection of children in conflict through

organizations they trust; and to demand, of this initiative as of any other, that its promises be measured by what it delivers.

XV.11 Matching contributions to the programs

The table below maps each actor to the programs and first actions where its contribution matters most. It is a guide to choice, not an assignment of duties.

TABLE XV-1 **Where each actor's voluntary contribution matters most (Vision 2100 proposal; no actor has agreed to any role)**

Actor	Programs where its decision is necessary	First contribution within its own authority	Detail
Governments	All pilots; corridors; minerals; legal foundations; compacts	Data, identity, cyber and AI laws; publish one program end to end	Parts IV, V, IX, XII, XIII
Secretary-General and Secretariat	UN renewal; prevention; Ledger; Women at Every Table	Article 99 criteria; mediation-team floor; open data; one Ledger pilot	Parts III, VI, VIII, IX
General Assembly and Security Council	Shared Layer; Peace Technology Pool; mission mandates	Decisions only when members choose	Parts III, IV, VI
Regional bodies	P3; regional compacts; power interconnection	Co-chair a P3 Pilot Governance Board; carry compacts	Parts VI, VII
Development banks, IMF, sovereign funds	Financing architecture; P2; P4	Staff-level test of cost-of-capital assumptions; preparation facility design	Part X
Private industry	Corridors; sovereign AI; processing; Ledger disclosure	Sovereign-terms access; open standards; disclosure; disaster reserve	Parts IV, V, IX
Academia	Evaluation of every program	Peer review of baseline and scorecard; evaluation designs	Parts I, IX, XI, XII
Civil society	Rights oversight; consent; community monitoring	Shadow reports; panel nominations; P3 monitors	Parts VI, IX, XII
Faith communities and royal households	Interfaith convening; Royal Compact; stewardship	Consider participation on their own terms	Part XI
Young people	Compacts; Steering Board; learning companion	Seats with voice; testing; local-language data	Parts VII, VIII, XI
Individuals	All, through scrutiny	Challenge a claim; volunteer skills	Appendix A

XV.12 How to join, contribute evidence, challenge and hold the initiative accountable

A shared responsibility is meaningful only if the initiative itself can be held to account. Vision 2100 proposes the following channels, each to be operated by the interim secretariat until the Vision 2100 Steering Board adopts its charter (planned for about April 2027) and then under the Board's authority (Parts XII and XIII).

01 **Join.** Any government, institution or organization may express interest in a program or pilot through the secretariat. Each expression is recorded in the standard language of XV.2 and is not published as support without written permission.

02 **Subscribe to the principles.** Any person or body may subscribe to the Vision 2100 Declaration of Principles. Subscription creates no obligation and implies no endorsement of any specific proposal.

03 **Contribute evidence.** The evidence register, verification log and assumptions register (Appendices A and C) are open for challenge. Anyone may submit a correction with a source; the secretariat logs it, responds publicly and, where the challenge holds, corrects the text and records the change.

04 **Nominate.** Nominations for the Steering Board and the four independent panels — technical; human rights and ethics; nuclear safety and nonproliferation; finance and integrity — are open to the public (Part XII).

05 **Challenge a decision.** Every gate decision is published with reasons. Any affected party may request reconsideration, and the human-rights and ethics panel may recommend a binding stop where a rights finding is unremedied.

06 **Raise a conflict of interest.** Any person may report a suspected breach of the conflict-of-interest firewall to the finance and integrity panel, which reports publicly on its findings (Appendix I).

07 **Follow the money.** The initiative's own spending, including on stopped pilots, is published on the Results Ledger. A quarterly note and an annual report during the General Assembly's high-level week report progress against the master scorecard, including indicators moving the wrong way (Part XII).

> **THE TEST WE SET OURSELVES**
>
> On 31 October 2027, a skeptical reader should be able to verify from public records that an independent Board and panels are seated; that every figure in this book is open to challenge, with a correction log; that the conflict-of-interest firewall has operated; that every pilot has a published gate decision; that the initiative's spending is published; and that no government, institution or person has been described as committed to anything it did not agree to in writing (Part XIII).

XV.13 What this book does not ask

It is as important to be clear about what Vision 2100 does not ask. It does not ask any state to surrender sovereignty, data or decision rights. It does not ask the United Nations for new organs or for new assessed contributions in its first horizon. It does not ask any country to choose sides between rival powers or blocs. It does not ask any community to accept a project without its consent, or any country to adopt nuclear power. It does not ask anyone to endorse a candidate: the initiative is kept separate from the selection of the Secretary-General, and it stands whether or not any person holds any office (Parts XII and XIII). And it does not ask anyone to trust it without evidence.

XV.14 A closing reflection: the generation born in 2026

ILLUSTRATIVE Somewhere today a child is being born on a Pacific atoll, and another in the Sahel, in Central America, in a South Asian megacity and in an ageing city in the North. Part II followed five such lives to 2100. They will be four years old when the FOUND horizon closes, fourteen at the end of PROVE, thirty-four when CONNECT ends and seventy-four on the last day of the century. Every decision described in this book will reach them — the grid that does or does not arrive in their village, the school that does or does not teach them to read, the clinic that is or is not powered when their own children are born, the mediator who does or does not reach the valley before the shooting starts.

None of those children will remember who wrote a blueprint in 2026. They will know only whether the lights came on, whether the budgets were honest, whether the wars were prevented and whether the promises made in their name were kept. That is the only measure that will matter, and it is the measure this book asks to be judged by.

The century ahead does not belong to any one leader, nation or institution. It belongs to the generation born this year and to those who come after them. Our responsibility — shared, voluntary, verifiable and undertaken together — is to hand them a world in which every nation is sovereign, every person can live with dignity, cooperation is ordinary and peace is the expected condition rather than the rare one.

Vision 2100 offers itself as one way to begin. It invites every reader to test it, improve it, challenge it and, where the evidence supports it, help build it.

What begins now

The contributions in this part can begin immediately, in the order set out in Parts XIII and XIV. A113 Partners can act alone only on publication, research, convening and prototypes using public data; everything else requires the voluntary decision of the actor concerned.

- **30 days (to December 2026).** The secretariat publishes the book with its disclosures, opens the evidence register and correction log, opens subscription to the Declaration of Principles and begins the listening round with regional groups, small island and least-developed-country groupings and regional organizations. (A113 Partners, independently.)
- **90 days (to end of January 2027).** Nominations open for the Steering Board and panels; universities in at least three regions are invited to peer-review the baseline; civil-society, women's, youth, Indigenous and faith networks are invited to design input on P3 monitoring and P4 consent. (A113 Partners with willing partners.)
- **180 days (to end of April 2027).** The Steering Board and panels are seated; governments that have expressed interest may sign letters of intent for feasibility only; development-bank staff test the cost-of-capital assumptions; contributions reach the Global Dialogue on AI Governance (New York, 3–4 May 2027) only through member states or accredited stakeholders. (Needs partners and, for the Dialogue, member-state sponsorship.)
- **First year (to October 2027).** Gate 0 decisions are published for every pilot; the first annual report, including the first count of participants and challenges received, is presented during the high-level week of the General Assembly's 82nd session through side events hosted by willing member states. (Needs host governments.)
- **First five years (to 2031).** Participation broadens across every regional group; the first five-year review is published after public consultation, including what failed; and the secretariat transfers to an independent foundation (registered 2029, transfer complete by 2031). (Steering Board; independent foundation.)

Measuring progress

ILLUSTRATIVE The indicators below measure whether responsibility is in fact being shared — whether participation is broad, voluntary, independent and accountable. They are Vision 2100 planning milestones; no agreed international target applies to them.

TABLE XV-2 Measuring shared responsibility: participation and accountability indicators (ILLUSTRATIVE planning milestones; owners report, they do not deliver outcomes alone)

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
UN regional groups represented among governments that have requested feasibility or implementation (Steering Board)	0 of 5, 2026, Vision 2100 records	—	≥3 of 5	5 of 5	5 of 5	5 of 5
Public challenges to the evidence register answered within 60 days (secretariat; independent foundation)	Not yet opened, 2026	—	≥90%	≥95%	≥95%	≥95%
Independent members of the Steering Board (Steering Board)	Interim group to be seated, 2026	—	Majority	Majority	Majority	Majority
Share of Steering Board, panel and compact seats held by women (Steering Board; compact assemblies)	To be established, 2026	—	≥50% of Board; ≥40% overall	Parity	Parity	Parity
Youth seats with voice on the Board and in compact assemblies (Steering Board)	0, 2026	—	≥2 Board seats; every compact	Everybody	Everybody	Everybody
Initiative spending published on the Results Ledger, including stopped pilots (finance and integrity panel)	0%, 2026	—	100%	100%	100%	100%
Instances of a party described as committed without written agreement (finance and integrity panel)	0, 2026	—	0	0	0	0
Conflict-of-interest reports investigated and published (finance and integrity panel)	None received, 2026	—	100%	100%	100%	100%

Source: Vision 2100 proposals (Parts XII and XIII); baselines to be established and published by the secretariat.

Corrective actions. If by 2030 fewer than three regional groups are represented among requesting governments, the Steering Board should publish why and redesign the outreach, rather than proceed with an unrepresentative coalition. If challenges to the evidence register go unanswered, the Board should suspend new publications until the backlog is cleared. Any instance of a party described as committed without its written agreement is corrected publicly within seven days and reported in the next quarterly note.

APPENDIX A

A

RESEARCH METHODOLOGY AND EVIDENCE STANDARDS

How the Evidence in This Book Was Found, Checked and Displayed

WHAT THIS APPENDIX DOES

It explains how the research behind Vision 2100 was gathered, checked, rated and displayed. It also sets out the rules the authors applied when sources disagreed, how planning assumptions are kept separate from facts, how the Ambassador's statements were handled, what could not be verified, and how any reader can challenge a claim and see it corrected.

A.1 Purpose and scope

Vision 2100 is written for readers who will test it: heads of government and their legal advisers, UN officials, development economists, nuclear regulators, technology architects, development banks and sovereign investors. Each of them will check the claims in their own field first. This appendix sets out the standard those claims were held to, so that a reader can judge a passage by its method as well as its content.

The standard has three aims. First, a reader must always be able to tell what kind of statement they are reading: a sourced fact, a proposal, a statement by Ambassador Ivonne A-Baki, or an illustration. Second, every sourced fact must lead to a dated source that a reader can open. Third, the book must show its own weaknesses: which claims rest on weaker sources, which numbers are assumptions, and which questions remain open.

This appendix covers method. Appendix B lists every source. Appendix C records each verified claim with its source, date and confidence rating, together with the register of planning assumptions. Appendix D sets out the financial models. Appendix G records unresolved decisions and cross-part issues.

A.2 The four evidence categories

This book sorts every passage that makes a claim into one of four categories. The categories were applied paragraph by paragraph during drafting and audited in each verification pass.

TABLE A-1 The four evidence categories and how each is displayed in the printed book

Category	What it contains	How it appears in print	Rule applied
Evidence	Independently sourced facts: statistics, dates, legal texts, documented precedents	No label. A bracketed citation number follows the claim	Every number or factual claim carries a citation to a dated source the authors opened or saw directly
Proposal	Recommendations of Vision 2100, developed by A113 Partners	No label. The sentence says that it is a proposal: "Vision 2100 proposes...", "This book recommends..."	A proposal binds no person, government or institution. It is never attributed to the Ambassador
Documented	Public statements by Ambassador A-Baki	A small gold label marking her words	Drawn only from her 20 August 2026 dialogue with the General Assembly or the original Vision 2100 statement (2026); paraphrased; approved by her on 2 November 2026
Illustrative	Scenarios, archetypes, life-paths, cost ranges and planning assumptions	A small grey "ILLUSTRATIVE" label	Not a forecast, price or commitment. Assumptions are stated in the text or in Appendices C and D

A.2.1 Evidence

A sourced fact is shown by its citation, not by a label. Each citation is a bracketed number placed after the claim. Numbers run within each part and resolve to that part's entries in the consolidated bibliography in Appendix B, which lists sources by part with publisher, title, date and web address. A reader who wants to check a figure goes from the number to the entry in Appendix B and from there to the source. Appendix C adds the check date and confidence rating for each logged claim.

Facts that appear in several parts carry the same value, source, year and method everywhere. Part I is the reference baseline for shared figures such as conflicts, displacement, poverty, energy access, water, hunger and the UN budget. Other parts either repeat the Part I figure with its source or cite Part I.

A.2.2 Proposals

Because proposals carry no printed label, the wording itself must make the status clear. Throughout the book, recommendations are phrased as recommendations of Vision 2100 or of this book. Verbs of commitment are reserved for the actors who can make them: a government decides, the General Assembly adopts, a Pilot Governance Board approves. Where a proposal would need the authority of a UN organ or a sovereign government, the text names that authority and does not assume its decision. The decision-rights matrix in Appendix F maps each proposal to the body that must decide it.

A.2.3 The Ambassador's statements

Only Ambassador A-Baki's own public statements are marked as hers. The gold label is used for nothing else. Where Vision 2100 develops an idea she raised, the development is a proposal and is written as one. The book never says "the candidate will" or "she will" about a Vision 2100 recommendation. Section A.8 explains the source record for her statements and its limits.

A.2.4 Illustrative content

Illustrative content is labeled because it is easily mistaken for evidence. A cost range built from an assumed price per kilowatt looks like a market figure; a composite child born on a Pacific atoll looks like a case study. The grey label tells the reader that the passage is an analytical construct. Section A.7 sets out the conventions for planning assumptions and scenarios.

A.2.5 Connective narrative

Paragraphs that only link, summarize or introduce, and make no independent claim, carry no category. Where such a paragraph restates a figure, the figure is cited where it first appears in that part.

A.3 Source hierarchy

Authors were instructed to prefer sources in the order below and to record, in the verification log, which tier each claim rests on. The tier sets the highest confidence rating a claim can receive.

TABLE A-2 **Source hierarchy used in this book**

Tier	Source type	Examples	Treatment
1. Primary	Official records; custodian-agency data; treaty secretariats; government publications; peer-reviewed research	UN Digital Library resolutions; UNHCR Global Trends; Tracking SDG7; WHO/UNICEF JMP; FAO SOFI; UN IGME; SIPRI; UCDP; IAEA; IRENA; USGS; DFC and IDB transaction pages	Basis for a High rating
2. Authoritative secondary	Reputable press or institutional summaries that report a named primary source; recognized data firms and research institutes	Wire-service reports of agency releases; specialist trade press reporting IEA findings; think-tank analyses	Medium unless corroborated against the primary
3. Tertiary or interested	Encyclopedias, vendor releases, implementer self-reports, commercial blogs	Wikipedia articles; program self-reporting; company blogs	Provisional only; listed in Appendix C for replacement before publication

Three rules qualify the hierarchy. First, a custodian agency outranks any other publisher for the indicator it maintains: the UN Inter-agency Group for Child Mortality Estimation for under-five deaths, the SDG7 custodian agencies for energy access, the WHO/UNICEF Joint Monitoring Programme for water and sanitation, and FAO for hunger. Second, an implementer's report on its own program is treated as interested, however reputable the implementer, and independent evaluation is sought for any performance claim. Third, a statement by a member state in a UN meeting is primary evidence of that state's position but secondary evidence of any fact it reports about the United Nations.

Tertiary sources may orient research. They may not be the sole support for an evidence claim in the published edition. Any that remain at the time of this edition are listed in Appendix C with the primary source to be opened in their place.

A.4 Verification process

Evidence was gathered and checked in four stages. Each stage left a written record: the verification log for each part, the gaps file for each part, and the consolidated registers now published as Appendices C and G.

TABLE A-3 **Stages of research and verification**

Stage	When	What it did	Record
Initial research	October 2026	Each part's author researched the subject, cited only sources actually opened or seen in search results, and logged every material claim	Part verification logs; part gaps files
First verification pass	1 November 2026	Re-opened weak sources part by part; upgraded secondary citations to primary documents where reachable; corrected wording that overstated a source; removed claims that could not be confirmed; aligned pilot ranges and shared figures to canonical values	Updated logs; resolved items marked in gaps files
Second verification pass	November 2026, during book integration	Checked each part against an itemized list of outstanding claims, High priority first; re-checked the Ambassador's statements against the transcript; reconciled shared indicators, budgets, staffing and governance terms across parts	Logs updated with new check dates; old and new values recorded where a number changed
Final pre-publication verification	Before publication of the final edition	Re-checks every claim rated High priority in Appendix C and every date-sensitive figure against the latest release; the Ambassador approved each passage marked as hers on 2 November 2026; any change requires her renewed written approval	Appendix C status column; approval log

A.4.1 What each pass checked

For each claim, the checker confirmed five things: the source exists and is the one cited; the date is correct; the value or wording matches the source; the context does not change its meaning; and the web address leads to the support. A claim that failed any test was upgraded to a better source, qualified in the text ("according to … as reported by …"), or removed. A number was never changed silently. Where a value changed, the text was corrected and the old and new values were recorded in the log.

A.4.2 Priority claims

Appendix C assigns each open item a priority that reflects consequence, not difficulty. **High** means the claim is attributed to the Ambassador, anchors a performance baseline or a figure, or touches a contested subject. **Medium** means a material figure rests on a secondary source. **Low** means a background detail. No High-priority claim may appear as an unqualified fact in the published edition. It must be confirmed at a primary source, carried with an explicit qualification, or removed.

A.4.3 Canonical alignment

Some figures are used across many parts: the pilot cost ranges, the horizon totals, the shared baseline indicators, staffing levels and governance terms. These are fixed in a single canonical set and every part was aligned to it. Where a part's own analysis produced a different number, the part was changed to the canonical value or the difference was explained in the text. Part X's capital structures and Part XII's horizon totals are computed from the canonical pilot ranges, and Appendix D reproduces the arithmetic.

A.5 Confidence ratings

Each logged claim carries one of three ratings. Ratings attach to the claim as supported by its cited source, not to the underlying truth of the matter.

TABLE A-4 **Confidence ratings and how each may be used**

Rating	Definition	How it may be used in the text
High	Confirmed against a tier-1 source, or an authoritative source that reproduces the primary text, with no material inconsistency	As evidence, without qualification
Medium	Confirmed through a reputable tier-2 source; or confirmed at the primary with minor differences of date, definition or rounding	As evidence; listed in Appendix C where an upgrade is achievable; qualified in the text where the difference matters
Low	Seen only in a tier-3 source, contradicted by another source, or not verified	Never as evidence. Removed, withheld with a note, or retained only as a labeled planning assumption

A small number of log entries record the authors' own calculations rather than external claims, such as the levelized-cost model in Part X and the horizon totals in Part XII. No outside source exists for them, so they are logged without an external rating. They are reproducible arithmetic on stated assumptions, shown in the text and in Appendix D, and they are displayed as illustrative.

A.6 Conflicting sources and statistical series

Reputable sources often disagree, usually because they measure different things, use different reference years or have revised their methods. The book applies one rule: **one source, one reference year and one method per indicator.**

Five practices follow from that rule.

01 **Choose the custodian series.** Where a custodian agency publishes the indicator, its series is used. Other estimates may be discussed, labeled, but are not mixed into the same table or trend.

02 **Never splice incompatible series.** A baseline from one series is never compared with a target or later value from another. Where a custodian revises its method, the book uses the revised series throughout and says so.

03 **Note the disagreement.** Where credible sources differ materially, the text or table note gives both, with their definitions, and states which is used and why. The book does not assert a discrepancy that may only be a difference of definition.

04 **Use the more conservative statement when unconfirmed.** Where a figure could not be confirmed at the primary, the text uses a formulation that remains true on every credible reading.

05 **Keep shared indicators identical.** An indicator that appears in Parts I, II, XII and Appendix H carries the same baseline, source, year and milestones in each.

TABLE A-5 **Examples of how conflicting sources were resolved**

Indicator	Sources in tension	Resolution in this book
Under-five deaths	UN IGME estimate for 2024 versus a 2023 figure reported in the press	4.9 million (2024, UN IGME), with a note that UN IGME revised its method; earlier figures not compared directly
Remittances to Latin America and the Caribbean, 2025	IDB about $173.7 billion versus IFAD about $168.6 billion	IDB figure used as the regional value; IFAD cited only for its own definitions and labeled as such
Parties to the Antarctic Treaty	Secretariat list read through a mirror versus a third-party count	58 parties, 29 of them consultative, as of January 2026, from Japan's Ministry of Foreign Affairs (28 April 2026); the same number and source are used in Parts I and XI, and the Secretariat's own list is to be checked before final publication
Deaths from organized violence	UCDP total versus a higher PRIO figure	One series per use, with definitions noted; the two are not combined
Electricity use by data centers	IEA report unreachable; figures reported by several secondaries	About 415 TWh (2024) and about 945 TWh (2030 base case), from *Energy and AI* (April 2025), kept because independent secondaries agreed and match the IEA's published summary; IEA cited directly where reachable. Later IEA estimates (about 460 TWh for 2024 and above 1,000 TWh for 2030; about 485 TWh for 2025) are reported separately and never mixed with this series in one sentence or chart
Galápagos debt conversion	The Ambassador's stated figures versus DFC and IDB transaction terms	Her figures presented as her statements; independent terms presented separately in Part X; both shown without asserting a discrepancy

A.7 Planning assumptions and scenarios

Much of this book looks forward, and forward-looking numbers cannot be sourced the way a 2025 statistic can. The book therefore keeps them in a separate category and holds them to a different standard: they must be explicit, internally consistent and reproducible, and they must never be presented as facts.

A.7.1 Planning assumptions

Every cost range, budget, staffing level, capital structure and milestone in this book is an illustrative planning assumption. Each is built from stated inputs: an assumed unit cost, an assumed cost of capital, an assumed scale or an assumed schedule. Appendix C records each assumption with its basis, and Appendix D sets out the financial models. No figure implies that any party has committed funds. Every assumption must be replaced by tendered prices, project-level estimates or host data before any financial commitment is made.

The pilot budgets follow a single three-tier convention used in every part: first-year preparation, initial implementation (first phase, including preparation), and long-term capital for replication, which is spent only if decision gates are passed. The first-year total is $10–23 million, the FOUND horizon total (2026–2030) about $120–300 million excluding the construction of the P2 Clean Power and Compute Corridor's first phase, and the PROVE horizon (2031–2040) about $2–17 billion. All are illustrative.

A.7.2 Performance milestones

Every "Measuring progress" table and the master scorecard in Appendix H use the same seven columns: indicator and owner; baseline (value, year and source); the agreed international target; and Vision 2100 planning milestones for 2030, 2040, 2060 and 2100. The agreed target is the Sustainable Development Goal or other commitment member states have adopted, where one exists. The milestones are planning paths, not substitutes for agreed commitments. Where a 2030 milestone is less ambitious than the agreed target, as it is for electricity access and hunger, the table says so. A baseline that has not been measured is shown as "to be established" and is never estimated.

A.7.3 Scenarios, life-paths and archetypes

ILLUSTRATIVE Part II tests the book against three futures: a fragmented world, a concentrated world and the Vision 2100 world. The real century will likely mix them. Part II also follows five composite children born in 2026, each in a different setting, to age 74 in 2100. Parts IV to XI give examples for three country archetypes: an advanced economy, an emerging economy and a small or resource-constrained state. The five pilots are described by host archetypes. All of these are analytical constructs, not forecasts. No real country is implied to match an archetype, to have been consulted or to have agreed to host any pilot. Real countries appear only as documented precedents, with citations.

A.7.4 Horizons

The five horizons — FOUND 2026–2030, PROVE 2031–2040, CONNECT 2041–2060, TRANSFORM 2061–2080 and SUSTAIN 2081–2100 — are a planning sequence of conditional steps, not a forecast. Detail falls with distance: FOUND is planned by month, PROVE by year, and later horizons by objective and decision gate.

A.8 The record of the Ambassador's statements

The source for statements attributed to Ambassador A-Baki is the transcript of her interactive dialogue with the United Nations General Assembly on 20 August 2026, published by the United Nations at transcripts.un.org, together with the original Vision 2100 statement (2026). Nothing else is attributed to her.

The UN transcript is machine-generated. It is an automatic transcription, not an official verbatim record, and it contains recognition errors. Three consequences follow for how this book uses it.

First, the book paraphrases rather than quotes it, and checks each paraphrase against the transcript. Readers who quote a passage marked as hers should cite her original statement, not this book. Second, the record is long (about 125,700 characters), and during initial research some authors read only part of it. A full reading, including the final question-and-answer segment, is a pre-publication requirement listed in Appendix C. Third, every passage marked as hers requires her written approval before publication, as the authors decided on 1 November 2026. Appendix I sets out the approval requirement.

Verification against the transcript corrected several attributions in earlier Vision 2100 material, and the book follows the corrected record:

- **Article 99.** When asked about Article 99 on behalf of the Accountability, Coherence and Transparency group, she answered about independence and neutrality. The record contains no commitment to invoke it. Criteria for using Article 99 are a Vision 2100 proposal.
- **Human-rights funding.** She set out no plan for funding the human rights pillar. Any funding plan in this book is a proposal.

- **Galápagos debt conversion.** Her stated figures (about $1.6 billion in total, about $1.1 billion of debt reduction and about $500 million for a conservation fund) are presented as her statements. The independent transaction terms are documented separately in Part X.
- **Subjects she did not address.** She did not discuss monarchy, faith communities, universities, small modular reactors or sovereign AI nodes. Everything in the book on those subjects is a proposal.

Factual statements about her candidacy — for example, that Tonga nominated her on 17 August 2026 — are evidence, carry citations and are not marked as her statements.

A.9 Known limitations

The research environment could not reach several primary sites during drafting and verification. The most consequential were the International Energy Agency's report and press pages, several World Bank data pages and its data interface, and the Antarctic Treaty Secretariat. Others included the sites of Transparency International, the World Trade Organization, IFAD, the Central Bank of Brazil, the IMF publications site, the UNCTAD Global Cyberlaw Tracker, the IPCC document host, GICHD and UNMAS pages, and a national ombudsman site.

Claims affected by an unreachable primary were handled by four rules.

01 **Corroborate.** A figure was kept only if at least two independent reputable secondary sources agreed on it, or if the primary text was available through an official mirror.

02 **Rate honestly.** Such claims are rated Medium, never High, and are listed in Appendix C with the specific primary source to be opened.

03 **Prefer an official copy over a summary.** Where an official copy of a primary document was hosted elsewhere, for example by a government, it was used and marked for confirmation at the original host.

04 **Remove what cannot be confirmed.** Claims that could not be corroborated were removed rather than softened.

Other limitations should be kept in view. Data are current to 1 November 2026, and several releases and decisions fall after that date but before likely publication, including the Seventh Review Conference of the Convention on Certain Conventional Weapons (16–20 November 2026), the General Assembly's decision on the 2027 regular budget (December 2026) and the selection of the next Secretary-General. Qualitative ratings in the book — approach matrices, precedent comparisons and risk scores — are the authors' judgments and are to be re-scored by the independent advisory panels described in Appendix I. Archetype parameters are planning conventions, not national data. And the research was carried out by a small team in a short period; expert review is invited precisely because no small team can be right about everything in fourteen subjects.

A.10 How readers can challenge the evidence

Any reader may challenge any claim, figure, citation, assumption or recommendation in this book. Challenges may be sent to the publisher at the address on the credits page. Vision 2100 proposes

that, once the Vision 2100 Baseline Dataset and Dashboard is online, challenges can also be lodged through a public form attached to each indicator.

Each challenge is handled in five steps.

01 **Log.** The challenge is recorded in a public challenge register with the claim, the part and section, and the date received.

02 **Acknowledge.** The challenger receives an acknowledgment, and is asked whether they agree to be named in the register.

03 **Re-verify.** The research team re-opens the cited source and any source the challenger supplies, applying the tests in section A.4.1.

04 **Decide.** The claim is confirmed, qualified, corrected or removed. Disputes about method, rather than fact, are referred to the relevant independent advisory panel, whose opinion is published.

05 **Publish.** The outcome and its reasons are entered in the correction log in Appendix C and in the public correction log described in Part XIII. A correction changes the online edition at once and the next printed edition.

Two kinds of error receive faster treatment. A misattribution to Ambassador A-Baki or to any government is corrected publicly within five working days of confirmation, as Part XIII provides. An error that affects a baseline in the master scorecard is corrected before the next quarterly note and flagged in the scorecard itself.

A.11 Revision cycle

Evidence goes out of date, and the book is designed to be revised on a fixed cycle. The Vision 2100 Steering Board owns the cycle; until its charter is adopted, the interim steering group does.

TABLE A-6 **The revision cycle for evidence and the book**

Frequency	What is revised	Basis
Continuous	Corrections arising from challenges and new releases	Challenge register; correction log
Quarterly	Progress note, including corrections made	Secretariat; reviewed by the Steering Board
Annually	Baseline Dataset version; master scorecard (Appendix H); claim register (Appendix C); annual report during the General Assembly's high-level week	Latest custodian releases; independent evaluator
Every five years	Full revision of the book: 2031, 2036, 2041 and every five years to 2096	Public consultation; independent evaluation; panel opinions

Each edition carries a version number and date. Baselines are versioned, and a frozen version is kept for every published edition so that changes over time can be traced. Every change to a figure, assumption, milestone or gate criterion is logged with its reason. Where a revision changes a target, the old target and the reason for the change are published alongside the new one; a missed milestone is reported as missed, not redefined.

APPENDIX B

B

CONSOLIDATED REFERENCES AND BIBLIOGRAPHY

Consolidated References and Bibliography

Every source cited in this book is listed once, numbered in order of first citation. Superscript numbers in the text refer to these entries. Confidence ratings, check dates and notes for each claim are recorded in Appendix C.

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APPENDIX C

C

CLAIM-VERIFICATION AND ASSUMPTIONS REGISTER

Claim-Verification and Assumptions Register

WHAT THIS REGISTER DOES

It records what was checked, against what, when, and with what result. It shows which claims rest on primary sources, which rest on attributed secondary sources, which were removed, and which remain open. It also lists the non-financial planning assumptions, scenario definitions and statistical-series choices on which the book's analysis depends, and the research questions still to be answered. Nothing in this register records an approval, endorsement or commitment that has not been given.

C.1 How to read this register

The evidence in this book was gathered between October and November 2026. Each part's authors logged every material claim with its source, web address, source date, check date and confidence rating. Two editorial verification passes followed, on 1 and 2 November 2026. The first re-checked figures against the sources cited. The second, carried out during the integration of the twelve parts into one book, worked through the 59 items that the authors had flagged as needing primary-source confirmation before publication, aligned shared figures across parts and re-read every passage attributed to Ambassador A-Baki against the full transcript of her General Assembly dialogue of 20 August 2026, including its final question-and-answer segment.

Confidence ratings follow Appendix A (Table A-4). **High** means confirmed against a primary or authoritative source with no material inconsistency. **Medium** means confirmed through a reputable secondary source, or at the primary with minor differences of date, definition or rounding. **Low** means seen only in a weak source, contradicted, or not verified; such claims are never used as evidence. Priorities in C.2 reflect consequence, not difficulty: **High** items are attributed to the Ambassador, anchor a baseline or a key figure, or touch a contested subject; **Medium** items are material figures resting on a secondary source; **Low** items are background details.

Four outcomes are used in C.2:

- **Verified — primary source.** The claim was confirmed at the publisher of record, or at an official text that reproduces it, and the text cites that source.
- **Qualified — attributed secondary source.** The primary could not be reached or does not contain the figure. The text names the secondary source ("according to … as reported by …") or states the limitation, so that no reader takes the claim as independently confirmed.
- **Removed.** The claim could not be supported and was taken out of the text and any figure.
- **Open.** The claim remains in the text with a flag, and the check is not complete.

Several primary sites could not be reached from the research environment during the verification passes, chiefly iea.org report pages, ats.aq, IAEA PRIS, EUR-Lex, data.worldbank.org, ifad.org, bcb.gov.br, wto.org, SSRN and the UNCTAD cyberlaw tracker. Where a claim depends on one of these sites, the register says so, and the final pre-publication pass described in Appendix A should open it directly. Full source details, including web addresses, are kept in Appendix B and in the verification summary and source register at the end of this appendix. Financial planning assumptions are set out in Appendix D and are not repeated here.

C.2 Resolution of the priority verification items

The table lists each of the 59 pre-publication verification items once. Items that appeared in more than one part's list are consolidated, and all affected parts are named. "Current source or note" states the source the text now relies on and any condition that still applies.

TABLE C-1 Resolution of the 59 priority verification items, status after the verification pass of 2 November 2026

#	Part	Claim (short)	Priority	Outcome	Current source or note
1	All	Every passage marked as the Ambassador's own position	High	Verified — primary source	UN Web TV transcript of 20 Aug 2026 re-read in full, including the final segment; paraphrases corrected and unsupported ones removed in Parts I–XII. Machine transcript, not an official record. Approved by the Ambassador on 2 November 2026 (Appendix G; Appendix I)
2	I, IV, V, XI, XII	Data-centre electricity ~415 TWh (2024), ~1.5%, ~945 TWh (2030); US/China/Europe 45/25/15%	High	Qualified — attributed secondary source	1.5% and ~945 TWh now cited to the IEA directly in Parts V and XI; IEA 2026 update (~485 TWh in 2025; ~950 TWh in 2030) added. 415 TWh and regional shares attributed to secondary summaries (NS Energy, S&P Global, DatacenterDynamics); IEA's own supply-side figure (460 TWh) noted in Part IV
3	I, VII, X	Galápagos conversion: her figures vs transaction terms	High	Verified — primary source	Ecuador Ministry of Economy and Finance, IDB and DFC releases. Her figures shown as her statements; official terms shown alongside without asserting a discrepancy
4	I, XI	Antarctic Treaty parties	High	Verified — primary source	58 parties, 29 consultative, per Japan's Ministry of Foreign Affairs (April 2026), now used in Parts I and XI and Appendix A; the Antarctic Treaty Secretariat site was not reachable for direct confirmation.
5	I	UN unpaid assessments; collection rate	High	Qualified — attributed secondary source	76.7% collection and $1.57bn arrears (2025) upgraded to the Under-Secretary-General's statement of 7 May 2026. The $1.46bn (Oct 2026) figure is attributed to press reporting of a member state's statement; end-2026 figures awaited

#	Part	Claim (short)	Priority	Outcome	Current source or note
6	I, IV	32 countries host AI data centres; 87/39/6 hubs	High	Qualified — attributed secondary source	ITU *Annual AI Governance Report 2025* reporting the Oxford study, same source in both parts; hub counts attributed to press (Part IV only); >90% operator share re-attributed to CSIS. Oxford paper not opened
7	I, IX	Bribery $1.5–2.0tn a year (~2% of GDP)	Medium	Verified — primary source	IMF SDN/16/05 cited directly in Part IX, noting the Kaufmann extrapolation; Part I still cites the Reuters report, with attribution. No newer estimate found
8	I, XII	TI CPI 2025: 182 countries, average 42, 122 below 50	Medium	Verified — primary source	Transparency International's own release in Parts I, IX and XII; "lowest in more than a decade" wording per TI
9	I	~1bn people in fragile settings; no fall in extreme poverty in 15 years	Medium	Qualified — attributed secondary source	Attributed to Down To Earth; World Bank page confirms 39 economies, ~40% and ~60% by 2030 only
10	I	Organized-violence deaths: UCDP vs PRIO	Medium	Verified — primary source	Both series from their publishers, shown separately with a definitional note; UCDP used as baseline. Definitions not fully reconciled
11	I, II, VIII	Under-five deaths 4.9m (2024) vs 4.8m (2023)	Medium	Verified — primary source	UN IGME 2025 round via UNICEF and WHO; 4.9m (2024) in all parts with the method-revision note
12	I	ACLED share of people exposed to conflict	Low	Removed	Conflicting secondary figures; not used
13	II, VII	LAC remittances 2025: IDB vs IFAD	Medium	Verified — primary source	IDB $173.7bn is the regional figure; IFAD $168.6bn labeled as IFAD's own definition
14	II	Japan 2024 births and deaths	Low	Verified — primary source	MHLW preliminary vital statistics; text states preliminary basis incl. foreign residents
15	III	2027 regular-budget proposal (~$3.3bn)	Medium	Qualified — attributed secondary source	Attributed to UN meetings coverage; A/81/6 total not located; percentage comparison removed; GA decision due Dec 2026
16	III	Five IGN issues; Uniting for Consensus; working methods	Medium	Verified — primary source	Decision 62/557 via A/63/960; L.69 ministerial statement; UfC statement of Apr 2026; Charter Art. 30; S/2017/507
17	III	*In Larger Freedom* proposals; Ezulwini Consensus	Medium	Verified — primary source	A/59/2005 paras 114 and 183 opened; Ezulwini cited through the AU's 2016 decision reaffirming it (original not opened)
18	III	Human rights ~1% of UN system spending	Medium	Qualified — attributed secondary source	Attributed to the EU's statement in the dialogue; OHCHR appeal and 2026 allocation added from UN News; no system-wide figure found
19	III	P5 and group positions on Council reform	Medium	Qualified — attributed secondary source	Group positions from primary statements; US, UK and French entries from press reports and flagged as predating current governments
20	III	ACT Code of Conduct signatories	Low	Verified — primary source	Swiss FDFA: 129 by May 2023; text states no later official count was found
21	IV	Pix 2024 users and transactions	Medium	Qualified — attributed secondary source	~64bn transactions and ~170m people "as reported from BCB data"; 148m-individuals definition noted; BCB not reached

#	Part	Claim (short)	Priority	Outcome	Current source or note
22	IV	Countries with data-protection law (KPI baseline)	Medium	Verified — primary source	UNCTAD 2020 (66%) and 2021 LDC update; dated baseline; text notes the live tracker shows a higher share. Update before print
23	IV	EU AI Act dates and Omnibus changes	Medium	Qualified — attributed secondary source	Law-firm analysis citing OJ L 2026/1744 (published 24 Jul, in force 27 Jul 2026); EUR-Lex not reached
24	IV	Aadhaar 2018 judgment holdings	Low	Qualified — attributed secondary source	Attributed to ThePrint's report of the operative portions
25	IV	50-in-5 membership; MOSIP rollouts	Low	Qualified — attributed secondary source	37 members attributed to trade press; Italy's accession from AgID; MOSIP figures labeled self-reported
26	V	China refining shares (Li, Co, graphite, Cu, Ni, rare earths)	High	Qualified — attributed secondary source	Attributed in text and figure caption to BOFIT's summary of IEA GCMO 2026; IEA data tables not reached
27	V, XI	Linglong One status	High	Qualified — attributed secondary source	World Nuclear News (14 Oct 2026) for hot testing and fuel-load target; CNNC primary for cold tests; no operation date claimed. Recheck PRIS before print
28	V	Indonesia nickel ore ban; DRC cobalt quotas	Medium	Verified — primary source	IEA Policies database entries; Indonesia wording corrected (full ban from 2020)
29	V	WTO DS592 panel and appeal	Medium	Qualified — attributed secondary source	Press and a reproduced WTO news item; wto.org not reached
30	V	Kenya geothermal 39.8% of generation (2024)	Low	Qualified — attributed secondary source	Attributed to the regulator as reported by Business Daily; EPRA report not opened
31	V	Codelco–SQM terms; Nigeria nuclear Milestones status	Low	Qualified — attributed secondary source	Codelco release confirms the joint venture; control split attributed to trade press; Nigeria status dated 2019 in text
32	V, XI	Akademik Lomonosov operation	Low	Qualified — attributed secondary source	Nuclear Engineering International (trade press); PRIS not reached
33	V	IRMA Standard version	Low	Verified — primary source	IRMA: v2.0 still draft (Oct 2026); text names v1.0 as in force
34	VI	MONUSCO UAV service cost	Medium	Verified — primary source	ACABQ A/70/742/Add.5 (2016/17 estimate ~$15.5m; utilization rates); press figure retained only as such
35	VI	2026–27 peacekeeping budget (~$5.1bn)	Medium	Removed	No UN source confirms an approved total; canonical 2025–26 $5.38bn used
36	VI	A/RES/79/62 and A/RES/80/57 votes	Low	Verified — primary source	UN Digital Library records; the 80/57 "no" list attributed to un-project.org

#	Part	Claim (short)	Priority	Outcome	Current source or note
37	VI	CEWARN and VIEWS performance; OSCE GPS interference	Low	Qualified — attributed secondary source	OSCE figure upgraded to Spot Report 6/2021; CEWARN and VIEWS results labeled as operators' own assessments
38	VII	IFAD remittance shares, digital cost, Guatemalan returnees	High	Qualified — attributed secondary source	"According to IFAD as reported by" the Caribbean Media Corporation; ifad.org PDF not reached
39	VII	Remittances as % of GDP, 2015–2024	Medium	Qualified — attributed secondary source	World Bank WDI as republished; data.worldbank.org not reached
40	VII	USMCA joint review outcome	Medium	Verified — primary source	USTR statement of 1 Jul 2026 and Oct 2026 comment request; law firm used only for the annual-review mechanism
41	VII	ILO informality reference year; CAFTA-DR dates	Low	Verified — primary source	ILO 2004–2024 trend series; CAFTA-DR dates not used in text
42	VIII	Children and armed conflict 2025 totals; S/2026/357	High	Verified — primary source	A/80/723–S/2026/357 opened; symbol confirmed; 2024 comparison from S/2025/247
43	VIII	CRSV +87%; S/2025/556 shares	Medium	Verified — primary source	S/2025/556 (Spanish text read); signatory share 20% added. Check paragraph numbers against the English text
44	VIII	Tusome effects	Medium	Qualified — attributed secondary source	Benchmark doubling attributed to the implementer; NORC independent endline added; effect sizes not obtained
45	VIII	Regional maternal deaths (Figure VIII-3)	Medium	Open	Values from MMEIG key messages; full-report Table 4.2 not extracted; caption flags confirmation before print
46	VIII, XII	Learning poverty ~70% in LMICs	Medium	Verified — primary source	UNICEF and partners' 2022 release; labeled a 2022 simulation; no newer aggregate published
47	VIII	13m additional children missed; education aid −24%	Medium	Qualified — attributed secondary source	Aid cut upgraded to UNICEF primary; 13m attributed to press and flagged unconfirmed; remove if not confirmed
48	VIII	Women's participation and ~35% more durable agreements	Medium	Qualified — attributed secondary source	Traced to IPI (2015) via IPI and CFR summaries; flagged as observational
49	IX	OECD procurement ~12% of GDP, ~30% of spending	Medium	Qualified — attributed secondary source	Attributed to a 2023 OECD presentation; *Government at a Glance 2025* values not rendered
50	IX	ProZorro launch and mandatory dates	Medium	Verified — primary source	Cabinet of Ministers of Ukraine; Open Contracting Partnership; TI Ukraine
51	IX	Public beneficial-ownership registers; 2022 CJEU ruling	Medium	Qualified — attributed secondary source	Ruling via eucrim; no count of registers given in text
52	IX	Dutch childcare inquiry; Robodebt findings	Low	Verified — primary source	*Ongekend onrecht* report; Royal Commission site and APSC; unlawfulness finding quoted via legal press; chapter reference open

#	Part	Claim (short)	Priority	Outcome	Current source or note
53	X	SDG financing needs +36%; available finance ~$5.24tn	Medium	Qualified — attributed secondary source	OECD figures as summarized by the Global Donor Platform
54	X	SDR-hybrid and RST status	Medium	Verified — primary source	IMF PR 24/162 (SDR 15bn cap) and IMF RST page (SDR 35.8bn); uptake qualified: no closed transaction found
55	X	*Compromiso de Sevilla* MDB language	Medium	Verified — primary source	A/RES/79/323 paras 4, 37(a), 48(c), 48(i), 53
56	XI	Monarchies, Qatar mediation, interfaith history, Commonwealth	High	Verified — primary source	All Wikipedia sources replaced by constitutions, treaty texts, UN records and official sites; Agong rotation qualified via press; two unsupported claims removed
57	XI	UN Special Envoy for Future Generations	Medium	Verified — primary source	SG policy brief (Mar 2023) states the intention; text reports that no appointment was found
58	XI	King Abdullah II proposed World Interfaith Harmony Week	Medium	Verified — primary source	His General Debate statement of 23 Sep 2010 and A/RES/65/5
59	XI	Hungary future-generations deputy commissioner	Low	Qualified — attributed secondary source	Foundation for Democracy and Sustainable Development; ajbh.hu not reached

Source: verification logs and gaps files for Parts I–XII, checked 1–2 November 2026.

TABLE C-2 **Outcomes of the 59 priority verification items by priority**

Priority	Verified — primary source	Qualified — attributed secondary source	Removed	Open	Total
High	5	6	0	0	11
Medium	18	14	1	1	34
Low	6	7	1	0	14
Total	**29**	**27**	**2**	**1**	**59**

Of the 59 items, 29 are now verified at a primary source, 27 are carried with an explicit attribution to a named secondary source or a stated limitation, two were removed, and one remains open: the regional maternal-death values in Part VIII, which stay in the figure with a caption flag until Table 4.2 of the full report is checked.

No High-priority item remains in the text as an unqualified fact. Five of the eleven are verified at a primary source. The other six are attributed in the text to the secondary source on which they rest: the data-centre electricity figures, the October 2026 UN arrears figure, the Oxford data-centre count, the China refining shares, the status of Linglong One and the IFAD remittance shares. Two conditions attach to High items. First, the passages marked as the Ambassador's own (item 1) have been checked against the transcript and were approved by her on 2 November 2026. Second, the Antarctic Treaty count (item 4) now reads 58 parties, 29 of them consultative, in Parts I and XI and Appendix A, on the authority of Japan's Ministry of Foreign Affairs (2026); the Antarctic Treaty Secretariat's own list should be read before printing.

C.3 Remaining evidence limitations

The table consolidates the limitations that the authors and editors recorded after the 2 November 2026 pass. Items fully resolved in C.2 are not repeated unless a residual action remains. Most limitations share one cause: the primary site could not be reached from the research environment, so the final pre-publication pass should open it directly.

TABLE C-3 **Remaining evidence limitations by part, after the verification pass of 2 November 2026**

Part	Remaining limitation	How the text handles it	Action before print
All	Ambassador's statements rest on an automatically generated transcript, not an official UN record	Paraphrase only; one short quotation; each passage checked against the full transcript	Approved by her on 2 November 2026; any change requires renewed approval (Appendix I)
I	October 2026 UN arrears ($1.46bn) from press reporting of a member-state statement	Attributed; 2025 figures from the USG statement	Replace with the Secretariat's end-2026 figures and the 2027 budget outcome
I	World Bank fragility figures ("one billion", "fifteen years") via Down To Earth	Attributed	Open the full World Bank report
I	UCDP and PRIO fatality totals use different aggregations	Both shown with a note; UCDP is the baseline	Reconcile definitions from the PRIO paper
I	Biography: birthplace and Andean Parliament dates from one 2017 profile; France and Monaco accreditation from her own statement	Stated cautiously ("many years" in Lebanon)	Her office to confirm dates
I, XI	Antarctic Treaty count confirmed via Japan MOFA, not read at the Secretariat site	58 parties (29 consultative) in Parts I and XI	Confirm at ats.aq before print
II	Japan final 2024 figures for nationals seen only via a secondary summary	Preliminary MHLW figures used, labeled	Switch to MHLW final figures if the PDF is opened
II	No baseline for sovereign AI capacity (domain 8) or for UN programs on a public ledger (domain 10); interim milestones for some indicators not yet mirrored in Appendix H	"To be established"	Define metrics (C.5); confirm Appendix H alignment
III	2027 budget total from UN meetings coverage; ACT count dated 2023; no 2025–26 US, UK or French statements on Council reform; Ezulwini original unopened; Charter Art. 30 via search listing	Attributed and dated	Read A/81/6 and the December 2026 GA decision; recheck government positions
III	Decision-rights assignments are the authors' analysis	Labeled ILLUSTRATIVE	Independent UN-law review (Appendix G)
IV	IEA primary pages for 415/945 TWh unreachable; IEA's own chapter gives a supply-side 460 TWh	Both attributed; series not mixed in one sentence	Cite the IEA report directly
IV	Oxford paper unread (32 vs 33 countries by definition and date); BCB, UNCTAD tracker, 50in5.net, EUR-Lex, Aadhaar judgment not reached	Attributed to ITU, press or law firms	Open primaries; update the data-protection baseline

Part	Remaining limitation	How the text handles it	Action before print
V	415 TWh and regional shares via NS Energy; per-mineral refining shares via BOFIT	Attributed in text and caption	Cite IEA *Energy and AI* and GCMO 2026 data tables
V	Linglong One, Akademik Lomonosov not checked in IAEA PRIS; WTO DS592 not checked on wto.org; Kenya figure not checked in EPRA report; Nigeria status dated 2019	Attributed and dated	Recheck immediately before print (Linglong One fuel load expected late 2026)
V	Compute campus capex ($10–15m per MW) lacks an independent benchmark	Labeled planning assumption (Appendix D)	See C.5
VI	No measured warning-to-action baselines anywhere; no independent evaluations of CEWARN, ECOWARN or VIEWS; AI-assisted mine-survey evidence not yet cited	P3 targets presented as proposed standards; operator results labeled	See C.5
VI	CCW Seventh Review Conference (16–20 Nov 2026) outcome pending	Stated as scheduled	Update Section VI.6 after 20 November 2026
VII	IFAD *Sending Money Home 2026* PDF unopened; WDI shares from a republisher	Attributed; medium confidence	Open ifad.org and re-pull WDI
VII	Remittance-cost KPI baseline (IFAD digital average) is not the SDG 10.c measure	Noted under the KPI table	Add a World Bank Remittance Prices Worldwide baseline for Compact corridors
VIII	Regional maternal deaths unconfirmed; 13m out-of-school figure unconfirmed; S/2025/556 read in Spanish only; Tusome effect sizes and IPI method not obtained	Caption flag; attribution; "unconfirmed" label	Confirm or remove the 13m figure; check Table 4.2 and the English text
VIII	No public figure for women in senior roles of UN-led mediation teams	14% of mediators (all tracked processes, 2024) shown as a proxy only	DPPA to establish the baseline in 2027
IX	OECD procurement shares from a 2023 presentation; CJEU ruling via eucrim; Robodebt chapter reference; Dutch resignation date via Al Jazeera; no count of beneficial-ownership registers	Attributed; no count given	Open *Government at a Glance 2025*, the CJEU judgment and the Royal Commission report
IX	Bribery estimate is a 2016 extrapolation from 2005 research	Used as an order of magnitude only	Monitor for a newer IMF or World Bank estimate
X	OECD 36%/22%/$5.24tn via a summary; SDR-hybrid uptake rests on a press report and the absence of an IMF record	Attributed and qualified	Open the OECD *Global Outlook 2025*; recheck the IMF review
XI	Malaysian constitutional schedules not reached (Agong rotation via press); 2013 agreement and 1994 treaty via treaty databases; Hungary via FDSD	Qualified ("in practice"; attributed)	Open official depositary copies where reachable
XI	Several KPI baselines "to be established" (future-generations offices, women's seats, mediation support, public trust)	Marked in the KPI table	Define counting methods before 2027 (C.5)

Part	Remaining limitation	How the text handles it	Action before print
XII	IEA figures via secondary reporting; learning poverty a 2022 simulation; UN80 mandate-review result via IPS News	Attributed and labeled	Cite the IEA and the GA record directly
XII	Several 2030 milestones are less ambitious than the agreed SDG targets	Scorecard caption states that the agreed target stands	Appendix H must carry the same note

Source: gaps files for Parts I–XII, remaining-limitations sections, 2 November 2026.

C.4 Non-financial planning assumptions and conventions

ILLUSTRATIVE This section records the conventions, scenario definitions and statistical choices that shape the book's analysis but are not costs. Every cost range, budget, staffing cost, capital structure, levelized-cost input and horizon total is set out in Appendix D, with its owning part, and is not repeated here. Like the financial assumptions, everything below is an analytical choice by the authors. None is a forecast, and no real country is implied to match an archetype, to have been consulted or to have agreed to host any pilot.

C.4.1 KPI conventions

ILLUSTRATIVE All "Measuring progress" tables and the master scorecard follow one convention, set by the book's integration standard. It replaces the two conventions for 2030 targets that coexisted in earlier drafts.

TABLE C-4 **KPI conventions used in every "Measuring progress" table and in the master scorecard**

Convention	Rule	Owning part
Table format	Seven columns: indicator (owner); baseline (value, year, source); agreed international target; 2030; 2040; 2060; 2100	XII (master); all parts
Agreed international target	The SDG or other agreed commitment where one exists; otherwise "—"	All
Planning milestones	The 2030–2100 columns are Vision 2100 planning milestones. They never replace an agreed commitment; where a 2030 milestone is less ambitious than the agreed target, the caption or note says so and the milestone is treated as a planning floor	XII; Appendix H
Baselines	One source, one reference year and one method per indicator; "to be established" where no sourced baseline exists, never estimated	All
Shared indicators	Identical baseline, source, year and milestones in Parts I, II, XII and Appendix H (Table C-5)	I, II, XII
Long-horizon values	2040–2100 milestones are planning ambitions chosen by analogy to today's best performers and existing goals; interim values are linear-to-accelerating interpolations	II, XII
Pilot KPIs	Proposed standards set before measured baselines exist (e.g., P3 warning lead time, warning-to-action rate, alert-to-decision ≤72 hours)	VI, IX, XII
Owners	Named owners report on an indicator; they do not deliver the outcome alone	XII

Convention	Rule	Owning part
Qualitative ratings	Approach matrices, precedent matrices and risk scores (likelihood × impact, 1–5) are the authors' judgments, to be re-scored by independent panels	IV, V, XI, XII
Corrective rule	Two off-track annual reports trigger a redesign within 12 months; off-track at a gate holds funding; a rights, safety or integrity breach stops the activity	XII

TABLE C-5 Shared indicators and their canonical values (ILLUSTRATIVE planning milestones beside agreed targets)

Indicator	Baseline (value, year, source)	Agreed international target	Milestones 2030 / 2040 / 2060 / 2100	Owning part
People without electricity	655m, 2024, Tracking SDG7 2026	SDG 7.1: universal access by 2030	≤400m / ≤50m / 0 / 0	XII (with I, II)
Chronic hunger	645m, 2025, FAO SOFI 2026	SDG 2.1: end hunger by 2030	≤500m / ≤250m / ≤100m / <1% of people	XII (with I, II)
State-based armed conflicts	65, 2025, UCDP	—	≤55 / ≤40 / ≤25 / ≤10	XII (with I, II)
World military burden	2.5% of world GDP, 2025, SIPRI	—	No further rise / declining / below 2009 level / national decisions	XII
Under-five deaths	4.9m, 2024, UN IGME (method revised; not comparable with earlier rounds)	SDG 3.2: ≤25 per 1,000 live births in every country by 2030	≤4.0m / ≤2.5m / ≤1.2m / ≤0.5m	XII (with I, II, VIII)
Women in senior roles of UN-convened mediation teams	To be established (DPPA, 2027)	— (SCR 1325: equal participation; no numeric target)	≥one-third / parity / parity / parity	VIII
P3 median warning lead time	To be established in shadow mode, 2027–28	—	≥30 days by 2028 and ≥60 by 2030 / ≥90 / default practice	VI
Results Ledger coverage	0 programs publishing, 2026	—	≥1 UN and ≥1 national program by 2028; ≥10% of Secretariat programme budget by 2030 only if the Secretary-General adopts it / majority / all / all, audited	XII (with IX)

Source: book integration standard, section 5; Part XII master scorecard (Table XII-6). The 2030 milestones for electricity, hunger and under-five deaths are less ambitious than the agreed targets; the agreed targets stand.

C.4.2 Scenario definitions: the three futures

ILLUSTRATIVE Part II tests the book against three contrasting futures. The real century will likely mix them; their value lies in the signposts that show which way the world is moving. The Vision 2100 future is not presented as the most likely. It is the one worth working toward, and its early steps also pay off in the other two.

TABLE C-6 The three futures used in Part II (ILLUSTRATIVE analytical constructs, not forecasts)

Future	Definition	Indicative warming	Signposts
Fragmented	Rival blocs build incompatible technology, trade and finance systems; climate cooperation stalls; regional wars are frequent; small states must choose sides	Approaches or exceeds 2.5–3°C	Falling inter-bloc trade; collapsing UN funding; repeated failure of climate negotiations
Concentrated	A few states and firms control frontier AI, energy technology and capital; material conditions improve for many, but most nations depend on systems they neither own nor govern	Intermediate; depends on the choices of the few	Rising compute concentration; cross-border data dependence for core public services; declining local technical capacity
Vision 2100	Every nation owns its energy, compute and data under shared standards; conflicts are prevented earlier; trust rises because results are visible	Stabilizes, then declines toward 1.5–2°C with large-scale carbon removal after mid-century	Independently verified pilots; rising local ownership of energy and compute; falling conflict deaths; published, audited results

Note: warming bands are indicative ranges anchored to UNEP, IEA and IPCC published ranges; they are not model runs (Part II).

C.4.3 Scenario definitions: the five life-paths

ILLUSTRATIVE Each life-path follows a composite child born in 2026, who turns 74 in 2100, through milestones in 2035, 2050 and 2075–2100, in a success case and a failure case. The children and their places are composites; no real community is described.

TABLE C-7 The five life-paths used in Part II (ILLUSTRATIVE composites)

Life-path	Setting (archetype)	Defining constraints	Systems tested (parts, pilots)	Failure case
Mele	Pacific atoll nation of about 10,000 people, a few meters above sea level	Sea-level rise (~15 cm by 2050 assumed, after NASA's mid-century projection); diesel dependence; cyclones	Learning companion (VIII); solar and storage (V); cyclone warning (VI); P1 sovereign AI node (IV)	A government in exile with a flag and no land
Moussa	Sahelian dryland region	Drought, armed groups, no power, youth job gap	Digital ID and payments (IX); P3 and Women at Every Table (VI, VIII); P4 (V)	Climate displacement at large scale
Lucía	Central American town reliant on remittances	Migration pressure; informality; violence	Americas Compact, stay-and-build, Build Corps (VII); P2 (V); P5 (IX)	Migration as flight, not choice
Rahim	South Asian delta megacity of about 40 million	Heat, floods, air pollution, intermediaries in services	Heat-ready schools; AI diagnostics under clinical authority (VIII); honest benefits (IX)	Months of unsafe heat; seasonal floods in the poorest districts
Hana	Ageing advanced economy where deaths exceed births	Too few young workers; rising care demand	Learning companion (VIII); fair labor mobility that funds training in sending countries (VII)	An inward-turning society that cuts aid and closes borders

Note: Mele's atoll (about 10,000 people) is a separate illustration from the P1 host archetype (about 100,000 people in Part IV; eligibility 100,000 to 1 million in Part XII).

C.4.4 Scenario definitions: the three country archetypes

ILLUSTRATIVE Parts IV to XI give examples for three kinds of country. The table consolidates the non-financial parameters the parts use; the cost-of-capital bands and cost parameters attached to each archetype are in Appendix D.

TABLE C-8 The three country archetypes (ILLUSTRATIVE; hypothetical, not real countries)

Parameter	Advanced economy	Emerging economy	Small or resource-constrained state
Population (sizing case)	~50 million	~100 million	~100,000 (small island; range to ~1 million)
Income and credit	High income; investment grade	Middle income; often sub-investment grade	Small island or low income; often at high risk of debt distress
Power system	Large, reliable grid	Growing grid of 5–30 GW with unserved demand	Isolated grid of 20–100 MW; diesel-dependent
Public-service AI compute (central case)	~26 MW	~12 MW	~50 kW
Binding constraints	Political will to fund global public goods; ageing	Reliable power, connectivity, skills, cost of capital (Part X band, 9–15% real)	Fixed costs on a small population; skills; connectivity; climate exposure
Primary role in Vision 2100	Source of development-bank capital, guarantees, SDR channeling and grants; regulatory standards	Host for bankable corridors and value chains	Host for whole-of-nation pilots; regional sharing

Source: Parts IV (sizing model), V and X; compute values are model outputs from Part IV (Table D-13).

C.4.5 Pilot host archetypes

ILLUSTRATIVE Each flagship pilot is designed for a host archetype, not a named country. A host's sovereign decision is required at every stage.

TABLE C-9 Pilot host archetypes and the host decisions each requires (ILLUSTRATIVE)

Pilot	Host archetype	Defining conditions	Host decision required	Owning part
P1 Sovereign Digital Nation	Small island state, ~100,000 people (eligibility 100,000–1 million)	Several islands; weak outer-island coverage; cyclone exposure; fragmented databases; imported diesel; reliance on foreign cloud	Written government request; parliamentary approval where law requires	IV, XII
P2 Clean Power and Compute Corridor	Emerging economy	Growing grid; unserved industrial demand; strong renewable resources; capacity for project finance	Host request; regulator and utility participation; households-first commitment	V, XII

Pilot	Host archetype	Defining conditions	Host decision required	Owning part
P3 Prevention Early-Warning	Two to three neighboring states sharing a stressed basin or rangeland	A regional organization able to host the unit; existing hazard early-warning base	Agreement of all host states and the regional organization	VI, XII
P4 Minerals-to-Industry	Emerging or lower-middle-income lithium or copper producer	Operating mine; plannable power; communities whose consent can be sought	Host request; community consent before feasibility	V, XII
P5 Results Ledger	One willing UN entity plus one government with an infrastructure program and an open-budget commitment	Existing procurement and payment data; a supreme audit institution willing to validate	Head of the UN entity (or the Secretary-General); host finance ministry	IX, XII

C.4.6 Statistical-series choices

ILLUSTRATIVE Where credible sources disagree, usually because they measure different things or have revised their methods, the book applies the rule set out in Appendix A: one source, one reference year and one method per indicator. The table records each choice made.

TABLE C-10 **Statistical-series choices and the alternatives not mixed with them**

Indicator	Series used	Alternative noted but not mixed	Owning part
Under-five deaths	UN IGME 2025 round: 4.9m (2024), with method-revision note	4.8m (2023) from the previous round, cited only as context	I, II, VIII, XII
LAC remittances, 2025	IDB: $173.7bn, 23 countries	IFAD: $168.6bn, low- and middle-income-country definition, labeled	II, VII
Organized-violence deaths, 2025	UCDP: ~244,600 (baseline)	PRIO: >255,000, a broader aggregation, shown separately	I
Data-centre electricity	~415 TWh (2024) and ~945 TWh (2030 base case), IEA *Energy and AI* (April 2025)	IEA supply-side ~460 TWh (2024) and >1,000 TWh (2030); IEA 2026 update ~485 TWh (2025); never mixed in one sentence or chart	I, IV, V, XI, XII
Antarctic Treaty parties	58 parties (29 consultative), Japan MOFA 2026	Used consistently in Parts I and XI and Appendix A	I, XI
Corruption Perceptions Index 2025	182 countries and territories; average 42	181-country trend base noted	I, IX, XII
Japan births and deaths, 2024	MHLW preliminary figures incl. foreign residents	MHLW final figures for Japanese nationals	II
Learning poverty	~70% of 10-year-olds in LMICs, 2022 simulation	No newer aggregate exists	VIII, XII
Data-protection legislation	UNCTAD 66% of countries (2020), dated baseline	Live tracker shows a higher current share	IV
Informal employment	ILO 57.8%, 2004–2024 trend series	2019 snapshot (58.2%)	VII

Indicator	Series used	Alternative noted but not mixed	Owning part
Maternal deaths by region	MMEIG 2023, SDG regions; "Europe" is the WHO European Region	Northern America not reported separately	VIII
Women in mediation	Part VIII definition: senior roles of UN-convened teams	14% of mediators across all tracked processes (2024) and 6% (1992–2019) as proxies only	VIII, XII
Remittance cost	IFAD digital average, labeled	SDG 10.c measure (World Bank Remittance Prices Worldwide) to be added	VII
Military burden	SIPRI share of world GDP, 2025	Absolute spending (~$2.9 trillion) shown as context	I, II, XII

C.4.7 Other non-financial planning assumptions

ILLUSTRATIVE The remaining non-financial assumptions concern timing, design choices, institutional premises and the boundaries of the book's claims.

TABLE C-11 **Other non-financial planning assumptions (ILLUSTRATIVE)**

Assumption	Value or rule	Basis	Part
Horizons	FOUND 2026–2030; PROVE 2031–2040; CONNECT 2041–2060; TRANSFORM 2061–2080; SUSTAIN 2081–2100	Book convention	All
Independence of the analysis	The book must stand whether or not the Ambassador becomes Secretary-General; recommendations originate with A113 Partners	Book convention	All
100-day plan	Assumes an appointment effective 1 January 2027 and normal transition support	Planning premise	III
Council-reform positions	Latest public statements found; governments may have shifted	Dated evidence	III
Sovereign node phases	6–9, 12, 15 and 12 months; replication from 2031	Indicative	IV
Data classification and resilience	Four data tiers; 72-hour degraded-operation target	Design proposals, not standards	IV
Newcomer nuclear timing	IAEA Milestones Phase 1 from 2027 plus 10–15 years: first unit 2037–2042 at the earliest; no reactor for a newcomer before the late 2030s	IAEA Milestones experience	V, XII
Grid unit size	Largest unit ≤ ~10% of system size	Planning heuristic, not a cited standard	V
P3 phasing	Selection and protocols 2027; shadow mode late 2027–2028; live with mediation link 2029; evaluation 2030	Part XII timetable	VI, XII
Peace-envelope transition	Used only as an illustration; no savings assumed	Original Vision 2100 statement (2026)	VI

Assumption	Value or rule	Basis	Part
Regional compacts	Founding group of two to three states in FOUND, six to ten in PROVE; UN in a convening role only, with no assessed-budget financing	Design choice	VII
P5 timing and authority	Gate 0 decision October 2027; first public release 2028; the Secretary-General's authority to publish Secretariat program data to be confirmed by the Office of Legal Affairs	Part XII timetable; legal premise	IX, XII
Conflict-of-interest firewall	A113 Partners is not supplier, financier or transaction adviser to any pilot	Governance rule (Appendix I)	IX, XII
Compact design	Annual self-reporting; peer review every three years; five-year sunset and renewal; six-month exit notice	Design choice, not derived from a precedent	XI
Stakeholder participation	No royal household, faith body, government or regional organization has been consulted or has endorsed any element	Statement of fact at publication	XI
Secretariat transfer	Foundation registered 2029; transfer complete by 2031	Part XII timetable	XI, XII, XIII
Gate and approval structure	Vision 2100 Steering Board decides continued support at each gate; Pilot Governance Boards govern operations; host governments retain sovereign decision rights	Book integration standard	XII; Appendix F

C.5 Unresolved research questions

The questions below are consolidated from the twelve gaps files and the earlier evidence annex, with duplicates merged and questions resolved in the November 2026 passes removed. They differ from the limitations in C.3: those are checks on claims already in the text, while these are questions whose answers would change targets, designs or estimates. This book recommends that each be assigned an owner in the first-year research program (Part XIII) and that answers be logged in the next edition of this register.

C.5.1 Baselines and indicators

TABLE C-12 **Unresolved research questions: baselines and indicators**

Question	Suggested source or method	Parts
Which extreme-poverty series is the official baseline (831m Fall 2025 update vs 811m 2026 nowcast)?	World Bank Poverty and Inequality Platform; method note	I, XII
Women in parliament baseline (domain 7) and healthy life expectancy baseline (domain 5)	IPU Parline; WHO Global Health Observatory	II
A metric for "nations able to run AI in national languages under their own law"	Co-design with UNESCO and ITU; pilot survey of national capability	II, IV
Coverage of the world's ~7,000 languages by major models	ITU, UNESCO or academic benchmark surveys	IV
UN WPP 2024 country-level 2100 projections for the Sahel and Central America archetypes	UN DESA WPP 2024 data portal	II

Question	Suggested source or method	Parts
Counting methods for indicators marked "to be established" (future-generations offices, women's seats in compacts, mediation support, public trust)	Defined protocols before 2027; custodian consultation	XI, XII
Public-trust survey instrument and threshold for Gate 3	Independent evaluator; existing barometers (OECD Trust Survey, Afrobarometer, Latinobarómetro)	XII
Cross-cutting indicators (compute distribution; interest-to-health spending ratio) for the UN Statistical Commission	Custodian-agency consultation	I

C.5.2 Digital infrastructure and compute

TABLE C-13 Unresolved research questions: digital infrastructure and compute

Question	Suggested source or method	Parts
Realistic unit costs for small hardened sovereign nodes in island settings, with connectivity and backup	Vendor-neutral quotations; regional telecom studies	IV, XII
Savings from regional sharing among three to five small states	Phase 0 study within P1	IV
National post-quantum migration deadlines to calibrate the "after 2028" target for new IDs	National cybersecurity agencies' published roadmaps	IV
Documented cyber incidents against national digital public infrastructure	ENISA; national CERT reports	IV
Independent benchmark for compute-campus capex per MW of IT load in emerging markets	Non-vendor engineering studies; development-bank project appraisals	V, X, XII

C.5.3 Energy, nuclear and minerals

TABLE C-14 Unresolved research questions: energy, nuclear and minerals

Question	Suggested source or method	Parts
Renewable-plus-storage capital costs by archetype region, 2027–2030	IRENA and IEA cost databases	V, X, XII
Country-level cost of capital to replace illustrative bands	IEA Cost of Capital Observatory	V, X
Whether the IEA universal-access pathway (electricity 2035, clean cooking 2040) is financed in any scenario	Part X financing model with IEA access-investment figures	II, X
Spent-fuel take-back offers: availability and cost	IAEA; supplier-state documentation	V

C.5.4 Peace, prevention and protection

TABLE C-15 Unresolved research questions: peace, prevention and protection

Question	Suggested source or method	Parts
Measured warning lead times and warning-to-action rates in existing systems	Literature review of DPPA, ICG, ECOWARN, CEWARN and academic systems	VI, XII

Question	Suggested source or method	Parts
Independent, counterfactual evaluations of ECOWARN and CEWARN; ECOWARN monitor numbers	ECOWAS and IGAD data; academic evaluation	VI
Operational performance of AI-assisted mine mapping	GICHD and UNMAS reports	VI
Cost per flown hour of UN-contracted UAV services	UN budget documents (A/C.5 and ACABQ reports); commercial benchmarks	VI
Global Pulse conflict-related projects; status of the UN hate-speech strategy	UN Global Pulse; Office on Genocide Prevention	VI
Outcome of the CCW Seventh Review Conference, 16–20 November 2026	CCW documents	VI

C.5.5 Economy, migration and regional cooperation

TABLE C-16 Unresolved research questions: economy, migration and regional cooperation

Question	Suggested source or method	Parts
Impact evaluations of violence-prevention and jobs programs in Central America, to design stay-and-build	3ie, J-PAL and IDB evaluations	VII
Peer-reviewed evidence on the "migration hump"	Clemens and subsequent literature	VII
Remittance Prices Worldwide baseline for Compact corridors	World Bank RPW database	VII
IDB and CAF lending volumes to Central America; CAFTA-DR status	IDB and CAF annual reports; USTR	VII
Pacific 2050 Strategy Implementation Plan (2023) and Europe ageing indicators	Pacific Islands Forum Secretariat; Eurostat and UN WPP	VII

C.5.6 Human development

TABLE C-17 Unresolved research questions: human development

Question	Suggested source or method	Parts
A newer learning-poverty aggregate for low- and middle-income countries	World Bank learning-poverty updates	VIII, XII
Independent effect sizes for Tusome and comparable structured-pedagogy programs	Full NORC endline report; other external evaluations	VIII
Method and robustness of the link between women's participation and agreement durability	IPI 2015 study; newer peer-reviewed research	VIII
Women in the AI workforce, global figure; out-of-school children by region	ITU, UNESCO and WEF data; UNESCO UIS	VIII

C.5.7 Institutions, accountability and UN finances

TABLE C-18 Unresolved research questions: institutions, accountability and UN finances

Question	Suggested source or method	Parts
False-positive rates of procurement red-flag analytics in practice	World Bank ProACT; DOZORRO; academic studies	IX
Cost evidence from comparable ledger and e-procurement implementations	Development-bank completion reports; Open Contracting Partnership case studies	IX
Number of countries with public beneficial-ownership registers after the 2022 CJEU ruling	Open Ownership; national registers	IX
India's direct-benefit-transfer savings claims and independent critiques	Government data; peer-reviewed evaluations	IX
How the Results Ledger can align with the UN80 mandate registry	Working-group templates when published	II, IX, XII
Arrears, unpaid assessments and members paid in full at end-2026; reconciliation of the 2027 proposal with the 2026 budget	UN contributions page; A/81/6; GA decision of December 2026	I, III
Peacebuilding Fund allocations and the assessed-contribution element agreed in 2024	PBF annual reports; GA resolution	III, VI
Legal vehicle for the Prevention and Mediation Fund and the Mothers and Children Peace Fund under UN trust-fund rules	UN Controller; Multi-Partner Trust Fund Office	III, VI, VIII, XII

C.5.8 Development finance

TABLE C-19 Unresolved research questions: development finance

Question	Suggested source or method	Parts
Independent evaluations of debt-for-nature swap outcomes (fees, conservation results, repurchase discounts)	Academic and development-bank evaluations	VII, X
Operation of Paris Agreement Articles 6.2 and 6.4 after COP29 and COP30; traded volumes	UNFCCC registry data	X
PPP fiscal-risk failures with quantified costs; diaspora bond precedents and sizes	IMF PFRAM; World Bank studies	X
SDR-hybrid uptake once contributions approach the IMF review threshold	IMF and development-bank announcements	X
Post-2025 aid trajectory and its effect on IDA21 delivery	OECD DAC 2025 data	X

C.5.9 Cooperation and long-term stewardship

TABLE C-20 Unresolved research questions: cooperation and long-term stewardship

Question	Suggested source or method	Parts
Whether ocean-stewardship proposals should build on the Commonwealth Blue Charter (2018)	Commonwealth Secretariat	XI
Track records of royal foundations as partners	Foundation annual reports; independent assessments	XI

Question	Suggested source or method	Parts
Whether and when a UN Special Envoy for Future Generations is appointed	Secretary-General's announcements	XI

C.6 Verification summary

Every material claim in this book was logged with its source, the date of the source, the date it was checked and a confidence rating. High means confirmed against a primary or authoritative source. Medium means confirmed through a reputable secondary source or with minor inconsistencies. Low or Unverified means the claim is either flagged in the text or was removed. The table summarizes the log by part. Calculation rows record the authors' own arithmetic.

TABLE C-21 **Verification log summary by part**

Part	Logged claims	High	Medium	Low	Unverified or calculation
Part I	61	45	15	1	0
Part II	37	35	0	2	0
Part III	43	29	14	0	0
Part IV	54	32	22	0	0
Part V	48	29	19	0	0
Part VI	51	42	6	1	2
Part VII	43	28	15	0	0
Part VIII	40	33	7	0	0
Part IX	31	24	6	1	0
Part X	54	34	12	3	5
Part XI	58	53	5	0	0
Part XII	30	23	4	3	0
Total	**550**	**407**	**125**	**11**	**7**

C.7 Source register by part

The register below lists each logged claim, its source and its confidence rating. Full URLs, check dates and notes are retained in the machine-readable verification log maintained by A113 Partners (available on request).

Part I

TABLE C-22 **Source register, Part I**

#	Claim	Source and date	Confidence
1	65 conflicts involving states in 2025, record since 1946; 8 interstate; 13 wars; ~244,600 organized-violence deaths; R-U 94,700 (~62%); one-sided ~76…	Uppsala University / UCDP press release, 2026-06-09	High
2	2025 conflicts across 35 countries; 8 interstate	PRIO, Rustad, Conflict Trends 1946-2025, 2026	Medium

#	Claim	Source and date	Confidence
3	ACLED 204,605 conflict events Dec 2024-Nov 2025 vs 208,219 prior	ACLED Conflict Index, 2025-12	High
4	World military expenditure $2,887bn 2025; +2.9% real; 11th rise; 2.5% GDP highest since 2009; US 954, China 336, Russia 190; top3 51%; Europe +14% to...	SIPRI press release, 2026-04	High
4a	UN regular + peacekeeping budgets (~$8.8bn) ≈ 0.3% of world military spending	Derived from ,,	High
5	117.8m forcibly displaced end-2025, -4%, first decline in decade; 41.6m refugees incl UNRWA; ~9m asylum seekers; 68.7m IDPs; 14.7m returns; 68% hoste...	UNHCR Global Trends 2025, 2026-06	High
6	Extreme poverty ~811m in 2026 nowcast; 2030 higher than today without growth	World Bank poverty topic page, 2026	Medium
7	831m extreme poor 2025 at $3.00; 2.3bn in 1990; 71% in SSA; 3.7bn below $8.30	World Bank Poverty and Inequality Update Fall 2025, 2025-10	High
8	~1bn people in 39 FCS economies; no decline in extreme poverty in 15 years; ~40% poverty rate vs 6%; ~60% of extreme poor by 2030	World Bank FCS report (primary page) + Down To Earth, 2025-06-30	Medium
9	655m without electricity 2024; ~92% access; ~89% in Africa; 1,991m without clean cooking; 2030: 644m / 1.6bn; $24.6bn int'l public flows 2024	Tracking SDG7 2026 Executive Version, 2026-07-22	High
10	2.1bn without safely managed water 2024 (106m surface water); 3.4bn without safely managed sanitation; 354m open defecation; 1.7bn no basic hygiene	WHO/UNICEF JMP via UNICEF USA, 2025-08-26	High
11	645m hungry 2025 (7.8%), 3rd decline; 2.1bn moderate/severe food insecure; ~1/3 cannot afford healthy diet; ~520m in 2030	SOFI 2026 via Food Security Portal, 2026-07	High
12	Africa hunger 20.0%, ~309m	SOFI 2026 via Vatican News, 2026-07-23	High
13	8.2bn 2024; peak ~10.3bn mid-2080s; 10.2bn 2100; 63 countries peaked (28%); 79% of growth to 2054 (~1.4bn) from momentum; 65+ > under-18 late 2070s;...	UN WPP 2024 Key Messages, 2024-07	High
14	Africa share of world under-25: 10% 1950, 28% today, 46% 2100; median age ~19	Pew Research (WPP 2024), 2026-05-19	High
15	65+ 857m → 2.4bn by 2100; under-25 3.3bn → 2.9bn; China 1.4bn → 633m	Pew Research (WPP 2024), 2025-07-09	High
16	304m international migrants mid-2024 (3.7%); $685bn remittances to LMICs 2024 (projected)	UN News on IOM WMR 2026, 2026-05-05	High
17	2025 1.44°C ±0.13 above 1850-1900; 2015-2025 eleven warmest; 2023-25 avg 1.48°C	WMO, 2026-01-14	High
18	3.3-3.6bn highly vulnerable; 15x flood/drought/storm mortality 2010-2020	IPCC AR6 SYR SPM via PreventionWeb, 2023-03	High
19	Global public debt ~$111tn 2025; developing $35.1tn; net interest $995bn; 46 countries interest>health, 20 >education (2023); 3.7bn people	UNCTAD A World of Debt 2026, 2026	High

#	Claim	Source and date	Confidence
20	CPI 2025: 182 countries/territories; avg 42 (first fall in >10 yrs); 122 below 50; since 2012 50 declined, 31 improved	Transparency International (primary page as cited by Part IX) + TI Za..., 2026-02-10	High
21	Bribery $1.5-2.0tn/yr, ~2% global GDP	Reuters via YaleGlobal (reporting IMF SDN/16/05), 2016-05-16	Medium
22	100 firms = 40% of global private R&D; 118 countries absent from AI governance	UNCTAD TIR 2025 via UN Geneva, 2025-04	High
23	Only 32 countries host AI data centres; US and China firms operate >90%	ITU Annual AI Governance Report 2025 p.30 (reporting Oxford research), 2025	Medium
24	Data centres 415 TWh 2024 (~1.5%); 945 TWh 2030 base; US+Europe+China ~85%	IEA Energy and AI via Scientific American, 2025-04-10	Medium
25	44 resolutions 2025, 5th decline, lowest since 1991; 61.4% unanimous vs 83.9% 2014-23; 4 vetoes 2025; 8 vetoes on 7 drafts 2024	Security Council Report, 2026-01	High
26	GA res 76/262 (26 Apr 2022) veto debate within 10 working days	Security Council Report, 2026-04	High
27	Arrears ~$1.57bn record; collections 76.7%; risk of imminent financial collapse; unspent-credit rule	The National (SG letter), 2026-01-30	Medium
28	2026 regular budget $3.45bn; ~15% resource cut; ~19% staffing cut	UN Press Fifth Committee (brief anchor), 2025-12	High
29	U5MR fell 52% 2000-2023; 4.8m deaths 2023	UN IGME 2024 report, 2025-03-24	High
30	~4.9m under-five deaths 2024; slowed since 2015; not directly comparable	UNICEF press release (UN IGME estimates), 2026-03-18	High
31	Wild polio down >99% since 1988 from ~350,000 cases in >125 countries; 2 endemic	WHO fact sheet, 2025-04-02	High
32	>99% controlled ODS phased out; recovery ~2040/2045/2066	WMO via Down To Earth, 2025-09-16	High
33	Smallpox eradication declared 8 May 1980; program 1967; cost ~$300m	HPN Online (WHO commemoration)	Medium
34	Antarctic Treaty 1959; 12 original; demilitarized, nuclear ban, inspections, claims frozen	NTI	High
35	A/RES/79/325 Scientific Panel (40) and Global Dialogue (Geneva Jul 2026; NY May 2027)	UN (brief anchor)	High
36	UN80 mandate review adopted 31 Mar 2026, 168-4	IPS (brief anchor), 2026-04	High
37	~520m children in conflict zones 2024	PRIO (brief anchor), 2025-11	High
38	Peacekeeping 2025-26 $5.38bn, ~70,000 personnel	UN News (brief anchor), 2025-07	High

#	Claim	Source and date	Confidence
39	A-Baki DOCUMENTED passages: corruption; SIDS climate; biography (Beirut, 3 children; Ecuador-Peru 1998); Galapagos $1.6bn/$1.1bn/$500m; leadership pr...	UN GA dialogue transcript 20 Aug 2026 (brief anchor), 2026-08-20	High
40	UN regular-budget cash to cover obligations only to mid-August 2026; unpaid RB ~$2.8bn and PK ~$3.5bn as of 30 Apr 2026; 109 states paid RB in full	UN Press GA/AB/4512 (Fifth Committee), 2026-05	High
41	Unpaid RB assessments ~$1.46bn in 2026 (vs $1.87bn year earlier), >90% owed by one member state; PK arrears ~$4.1bn	Free Press Journal reporting India statement, Fifth Committee 19 Oct..., 2026-10-20	Medium
42	39 FCS economies; ~40% extreme poverty; ~60% of extreme poor by 2030, up from 50% in 2024	World Bank, FCS: Intertwined Crises, Multiple Vulnerabilities, 2025-06-27	High
43	Antarctic Treaty: 58 parties (29 consultative, 29 non-consultative); latest accession UAE, in force 11 Dec 2024	Secretariat of the Antarctic Treaty, Parties list	Medium
44	Tonga nomination; letter transmitted by PR Viliami Va'inga Tone to PGA and SC President; Lebanese parents; first woman ambassador to Washington; Qata...	PINA, 2026-08-19	High
45	Minister trade/industry 2003-05; Harvard Kennedy School MPA 1993; adviser to president in 1998 talks; UNESCO Goodwill Ambassador since 2010; nominate...	Khaleej Times, 2026-10-22	Medium
46	Born Guayaquil (23 Feb 1951); Trade Minister 2003-05; President Andean Parliament 2007-08; instrumental in Peru-Ecuador peace 1998; head of Yasuni pr...	Women in Peace profile, 2017-06-13	Medium
47	Candidate page: Tonga; nominated 17 Aug 2026 (joint letter dated 18 Aug); dialogue 20 Aug; other candidates and withdrawals	United Nations SG selection page (Russian-language version), 2026-11	High
48	Lebanese parents; first woman ambassador to Washington; Qatar; dialogue Ecuador-Peru after 1995 war; Yasuni plan shelved 2013	Naharnet (AFP), 2026-08	Medium
49	Appointed ambassador to US by President Moreno, 3 Feb 2020; ~2.5 years ambassador to Qatar before	Primicias, 2020-02-03	High
50	First US ambassadorship 1998 (Mahuad); consul in Beirut 1981; in Lebanon during civil war from 1975; Andean Parliament president before UNESCO candid...	Vistazo, 2020-02-20	Medium
51	Ambassador to France from 8 Feb 2024; release announced 6 Nov 2024	Primicias, 2024-11-06	High
52	Galapagos: $1.628bn bonds exchanged; $656m loan; savings >$1.126bn; ~$323m over 18.5 years	DFC press release, 2023-05-09	High
53	Charter Preamble ("save succeeding generations"), Art. 1 purposes, Art. 2(1) sovereign equality; signed San Francisco 26 June 1945	UN Charter full text, 1945	High
54	50 countries at San Francisco, 25 Apr-26 Jun 1945; UN came into existence 24 Oct 1945	UN History of the UN	High
55	~2.5bn people in 1950; 8bn crossed 15 Nov 2022	MercoPress reporting UN WPP 2022, 2022-11-15	Medium

#	Claim	Source and date	Confidence
56	Declaration on Future Generations: definition; guiding principles; foresight; Special Envoy proposal noted; HLPM at GA 83rd session with SG report	UN Pact for the Future site, Annex II, 2024-09-22	High
57	A/RES/79/1 adopted 22 Sep 2024 without a vote; contains Pact, GDC, Declaration on Future Generations	UN Digital Library, 2024-09-22	High
58	USG statement 7 May 2026: 2025 final RB collection 76.7% (lowest in 7 yrs); record arrears $1.57bn end-2025; cash to mid-August; unpaid RB $2.8bn at...	UN contributions page, Statement May 2026, 2026-05-07	High
59	Data-centre electricity shares US ~45%, China ~25%, Europe ~15%	NS Energy summary of IEA Energy and AI, 2025-04	Low
60	CPI 2025 global findings: 182; avg 42 first drop in >10 yrs; 122 <50; 31 improved/50 declined since 2012	TI Zambia chapter presentation of TI global results, 2026-02	High

Part II

TABLE C-23 **Source register, Part II**

#	Claim	Source and date	Confidence
1	World population ~8.2bn 2024, peak ~10.3bn mid-2080s, ~10.2bn 2100; 80% chance peak this century; 63 countries peaked (28%); LE 73.3 (2024) to 77.4 (...	UN DESA WPP 2024 Key Messages, 2024-07	High
2	2024 ~1.55C, likely first year above 1.5C; 70% chance 2025-29 mean >1.5C	WMO Global Annual to Decadal Update, 2025-05-28	High
3	Full NDCs 2.3-2.5C this century; current policies 2.8C	UNEP Emissions Gap Report 2025: Off Target, 2025-11-04	High
4	IEA CPS ~3C by 2100, STEPS ~2.5C; access pathway electricity 2035, clean cooking 2040	IEA WEO 2025 Overview, 2025-11	High
5	AR6 2081-2100 very likely: SSP1-1.9 1.0-1.8C; SSP2-4.5 2.1-3.5C; SSP5-8.5 3.3-5.7C. GMSL 2100 likely SSP1-1.9 0.28-0.55m; SSP5-8.5 0.63-1.01m	IPCC AR6 WGI SPM (Table SPM.1; B.5.3), DOE-hosted copy, 2021-08	High
6	Pacific islands >=15cm rise by ~2050 regardless of emissions; flood days ~10x	NASA, 2024-09-25	High
7	Falepili Union signed 9 Nov 2023, in force 28 Aug 2024; up to 280 places in inaugural ballot; later annual numbers agreed bilaterally	DFAT treaty page, accessed 2026...	High
8	Africa 19% of world pop; 46% of under-25s by 2100; median age 19 to 35; TFR 3.9 to 2.0	Pew Research Center (UN WPP 2024), 2026-05-19	High
9	Cities 45%; 33 megacities 2025 (8 in 1975); Jakarta, Dhaka ~40m; two-thirds of growth to 2050 in cities	UN WUP 2025 press release, 2025-11-18	High
10	Japan 2024: ~721,000 births; ~1.62m deaths (preliminary, incl. foreign nationals)	MHLW Jinko dotai tokei sokuho (preliminary vital statistics), Dec 202..., 2025-02-27	High
11	South Korea TFR 0.75 in 2024	Korea.net reporting Statistics Korea, 2025-02-27	High

#	Claim	Source and date	Confidence
12	655m without electricity 2024; ~89% in Africa; ~2bn (1,991m) polluting cooking	Tracking SDG7 2026 Executive Version, 2026-07-22	High
13	~4.9m under-5 deaths 2024; >half decline since 2000; pace slowed since 2015; estimates not comparable across rounds	WHO / UN IGME news release (Levels and Trends in Child Mortality 2025..., 2026-03-18	High
14	260,000 maternal deaths 2023; 70% SSA; ~40% decline since 2000	UNFPA/WHO Trends in Maternal Mortality, 2025-04	High
15	645m chronic hunger 2025	SOFI 2026 via Food Security Portal (IFPRI), 2026-07	High
16	2.1bn lack safely managed water; 3.4bn sanitation (2024)	UNICEF USA fast facts (JMP 2025), 2025-08	High
17	272m out of school 2023	UNESCO-UIS SDG4 Scorecard 2025 (via GCED Clearinghouse), 2025	High
18	~2.2bn offline 2025; almost three-quarters online	ITU Facts and Figures 2025 foreword, 2025-10-15	High
19	45 countries autocratizing in 2024 (12 twenty years earlier)	V-Dem press release, Democracy Report 2025, 2025-03-13	High
20	65 state-based conflicts 2025, most since 1946	Uppsala University / UCDP press release, 2026-06-09	High
21	World military spending $2,887bn 2025; 11th consecutive rise	SIPRI press release 2026, 2026-04	High
22	~546,000 heat deaths/yr; 640bn labor hours lost 2024	WHO on Lancet Countdown 2025, 2025-10-29	High
23	Up to 86m internal climate migrants SSA by 2050 (216m global); action could reduce by up to 80%	World Bank press release, Groundswell Part 2, 2021-09-13	High
24	Notable AI models 2024: US 40, China 15, Europe 3; inference cost fell >280x	Stanford HAI AI Index 2025, 2025-04	High
25	1.2bn young people reach working age over next decade vs ~420m jobs	World Bank immersive story, 2025-04-17	High
26	~520m children in conflict zones 2024	PRIO blog, 2025-11	High
27	117.8m forcibly displaced end-2025	UNHCR Global Trends 2025, 2026-06	High
28	A-Baki: climate an existential reality for SIDS incl. Tonga; UN as universal negotiating table for ethical, fair, binding AI guardrails; blue/green b...	UN GA interactive dialogue transcript, 2026-08-20	High
29	A/RES/79/325 Scientific Panel and Global Dialogue (Geneva Jul 2026, NY May 2027)	UN Scientific Panel FAQ	High
30	UN80 mandate review resolution 31 Mar 2026, 168-4	IPS, 2026-04	High
31	LAC remittances 2025 record ~$173.7bn (+7.3%), IDB estimates, 23 countries	IDB Migration blog (IDB estimates from central-bank/statistical data), 2026-06-16	High
W1	WHO health worker shortage 11.1m by 2030	Ada Derana reporting WHO, 2026-09-18	Low

#	Claim	Source and date	Confidence
W2	72% of world population under autocracy 2024	Democracy Without Borders / ara.cat on V-Dem, 2025-03	Low
X1	Row 10 of Figure II-2: UN 2026 regular budget $3.45bn (~15% resource cut)	UN Fifth Committee (BRIEF/CANON anchor; Part I), 2025-12	High
K1	KPI agreed targets: SDG 3.1 MMR <70/100,000 by 2030; SDG 3.2 U5MR <=25/1,000 all countries by 2030; SDG 2.1, 4.1, 6.1, 7.1 by 2030; Paris well below...	UN Statistics Division SDG metadata (Goal 3) and A/RES/70/1, 2015/2025	High
K2	KPI military burden 2.5% of world GDP 2025	SIPRI (via Part I), 2026-04	High
K3	KPI Results Ledger row: old "UN mandates tracked: 1 program (P5) 2030 / 50% 2040 / 100% 2060" → Part XII master values	BOOK.md s5 (Part XII master), 2026-11	High

Part III

TABLE C-24 **Source register, Part III**

#	Claim	Source and date	Confidence
1	A-Baki "five pillars of my vision"; active offices; 1945 frozen; 2%/174m alive in 1945; continent with greatest population growth lacks permanent sea...	UN GA interactive dialogue transcript, 2026-08-20	Medium
1b	A-Baki did not directly answer ACT/Ireland Article 99 question	UN transcript, 2026-08-20	Medium
1c	EU: human rights pillar ~1% of UN system spending; no funding plan given	UN transcript, 2026-08-20	Medium
2	Guterres invoked Art. 99 on 6 Dec 2023; first time since 2017	UN Denmark/UNRIC, 2023-12-06	High
3	Res 76/262 adopted 26 Apr 2022; meeting within 10 working days; special report 72h; veto-caster precedence	A/RES/76/262, 2022-04-26	High
4	76/262 adopted without vote; Liechtenstein with 83 co-sponsors	UN Geneva, 2022-04	High
5	France-Mexico declaration: 126 members + 2 observers as of 30 Sep 2026; launched 2015	GCR2P, 2026-09-30	High
6	France May 2026: 118 backers, aim for GA vote	AFP/FMT, 2026-05-13	Medium
7	UK joined France-Mexico initiative Sept 2026; 128 backers, one short of two-thirds	JusticeInfo, 2026-09-21	Medium
8	ACT Code of Conduct launched 23 Oct 2015; commitments	A/70/621-S/2015/978, 2015-12-14	High
9	ACT Code 129 signatories incl. France and UK	Swiss FDFA (also A+ for Peace), 2023-05-11	Medium
10	IGN docs: Elements Paper 10 Jun 2026; African model 7 Apr 2026; L.69 doc 10 Nov 2025; decision 62/557	UN GA screform page, 2026	High

#	Claim	Source and date	Confidence
11	Decision 62/557 para (e)(ii): five key issues - categories of membership; question of the veto; regional representation; size of enlarged Council and...	A/63/960 Note by the PGA (IGN work plan) reproducing decision 62/557, 2009-09-10	High
12	India June 2026 criticism; aligned with L.69 and G4	South Asian Herald, 2026-06-16	Medium
13	India: UfC 12-member group overweighted; 113 of 122 favor permanent expansion	NewsBytes, 2026-06-16	Medium
14	US Sept 2024: two permanent African seats, SIDS elected seat, no veto extension	The National; IANS via Morung Express, 2024-09-12	Medium
15	Russia Sept 2026: backs Brazil and India; no more Western seats; preserve P5 powers	The Week, 2026-09-27	Medium
16	China Oct 2026 (Fu Cong): developing/small states, Africa priority, package, no artificial deadlines	CGTN, 2026-10-23	High
17	UK and France 2022: G4 permanent seats, African permanent representation; UK mid-20s	ThePrint, 2022-11-19	Medium
18	G4 statement 23 Jun 2025: both categories; text-based negotiations	German Mission, 2025-06-23	High
19	UfC statement 20 Apr 2026 on African model	Italian Mission, 2026-04-20	High
20	IGN rolled over 17th time Aug 2025; G4 criticism	News On AIR, 2025-08-27	Medium
21	UN80 mandate review resolution 31 Mar 2026, 168-4; registry; review clauses; formal AHWG from 1 May	IPS, 2026-04	High
22	2026 regular budget $3,450,426,300 approved 30 Dec 2025; ~15% resources, ~19% staffing cut	UN press release (via Scoop) / UN Fifth Committee, 2025-12-30	High
22b	2027 proposal ~$3.3bn; SPM $423m; liquidity remarks Oct 2026	UN press GA/AB/4517-4521, 2026-10	Medium
23	Peacekeeping 2025-26 $5.38bn; prior $5.59bn; 12 missions; ~70,000; cash cuts 10-20%	UN News, 2025-07-01	High
24	A/RES/79/325 26 Aug 2025; 40 members; appointed Feb 2026; first meeting 3 Mar 2026; prelim report 1 Jul 2026; Dialogue Geneva 6-7 Jul 2026; NY 2027;...	UN AI Panel FAQ, 2026	High
25	UfC opposes additional permanent members; proposes longer-term re-electable non-permanent category	Dawn, 2024-08-29	Medium
26	Charter Art. 17(1)-(2), 30, 97, 98, 99, 100, 101(1), 108 text	UN Charter chapter pages on un.org, 1945	High
27	An Agenda for Peace A/47/277 17 Jun 1992; defines preventive diplomacy, peacemaking, peace-keeping, post-conflict peace-building (paras 20-21); reque...	A/47/277 (SCR-hosted copy); UN peacebuilding page, 1992-06-17	High
28	In Larger Freedom A/59/2005, 21 Mar 2005; proposed PBC and smaller HRC replacing CHR	UN peacebuilding page (symbol/date); JURIST (content) , 2005-03-21	High

#	Claim	Source and date	Confidence
29	A/RES/60/180 PBC adopted without vote 20 Dec 2005	UN Digital Library, 2005-12-20	High
30	A/RES/60/251 HRC adopted 15 Mar 2006, 170-4-3	UN Digital Library, 2006-03-15	High
31	FfD4 Sevilla 30 Jun-3 Jul 2025; Compromiso de Sevilla adopted at opening as negotiated outcome; debt, financing gap, architecture reform; Sevilla Pla...	UN SDG blog, 2025-06-30	High
32	DPPA Standby Team of Senior Mediation Advisers: DPPA-funded, deploy within 72h, themes, 128 assignments in 2025; complements MSU	UN Peacemaker (DPPA), 2026	High
33	2026 regular budget approved 30 Dec 2025: $3,450,426,300; ~15% resource, ~19% staffing cut	UN press release via Scoop, 2025-12-30	High
34	Charter amendment (Arts 23, 27, 61) res 1991 A/B (XVIII) adopted 17 Dec 1963; in force 31 Aug 1965; SC 11 to 15; voting 9	UN Treaty Collection, 1963-12-17	High
35	AU position: not less than two permanent seats with all prerogatives incl. veto (while veto exists), five non-permanent; reaffirms Ezulwini/Sirte	AU Assembly/AU/Dec.617(XXVII), Kigali Jul 2016, 2016-07	High
36	A/59/2005 para 114: propose intergovernmental Peacebuilding Commission; para 183: replace CHR with smaller standing Human Rights Council, members ele...	A/59/2005 full text (SCR-hosted copy), 2005-03-21	High
37	A-Baki nominated by Tonga 17 Aug 2026; letter transmitted by Tonga PR Amb. Viliami Va'inga	PINA, 2026-08-19	High
38	L.69 ministers: equitable representation in both categories; Africa per CAP (Ezulwini/Sirte); start TBN early with milestones and timelines	L.69 Ministerial Outcome Statement (PM India), 2025-09-24	High
39	SC note S/2017/507 adopted 30 Aug 2017: co-penholding; drafts discussed with all members; programme of work consultation; annual consultations with A...	UN press release SC/12976, 2017-08-30	High
40	OHCHR 2026 appeal $400m; human rights "an extremely small portion of all UN spending"; OHCHR 2026 regular-budget allocation $224.3m, 10% lower than 2...	UN News, 2026-02-05	High

Part IV

TABLE C-25 **Source register, Part IV**

#	Claim	Source and date	Confidence
1	Data centres ~415 TWh 2024 (~1.5%); ~945 TWh 2030 base case; US 45%, China 25%, Europe 15% of 2024 use	NS Energy summary of IEA Energy and AI, 2025-04	Medium
2	US+China ~80% of growth to 2030; 2024 mix renewables 27%, gas 26%, nuclear 15%	DatacenterDynamics, 2025-04	Medium
3	32 countries host AI-capable data centres; US/China firms >90% of DCs used by others; 150+ countries none; Africa and South America almost none	ITU Annual AI Governance Report 2025 p.30, 2025	High

#	Claim	Source and date	Confidence
4	US firms 87 AI hubs (~2/3), Chinese 39, European 6	NZ Herald reporting Oxford (Lehdonvirta, Hawkins, Wu), 2025	Medium
5	Public-cloud GPUs in ~30 countries; Compute North/South/deserts	TIME (Perrigo) on Lehdonvirta & Wu, 2024-08-28	High
6	~2.2 bn people offline 2025; almost three-quarters online	ITU Facts and Figures 2025 foreword, 2025-10	High
7	Major LLMs underperform in non-English/low-resource languages; recommendations on compute, data, participatory research, data ownership	Stanford HAI white paper, 2025-04-22	High
8	Bhashini 350+ models; 15m+ inferences daily; 36 text and 23 voice languages; 500+ govt websites	News On AIR (All India Radio, public broadcaster), 2026-03-12	High
9	SEA-LION 11 languages; CPT on Llama-3.1-8B and Gemma-2-9B; ~200bn tokens (55% SEA); MIT licence	AI Singapore, arXiv 2504.05747, 2025	High
10	Qwen-SEA-LION-v4 built on Qwen3-32B, Nov 2025	Alibaba Cloud press release, 2025-11-24	Medium
11	Apertus released 2 Sep 2025; 8B/70B; 15T tokens; 1,000+ languages; 40% non-English; >10m GPU hours on Alps	EPFL AI Center, 2025-09-02	High
12	Apertus trained on >4,000 GPUs ~3 months; ~1 kW per GPU; Alps cost CHF 100m	Blick, 2025-09	Medium
13	Masakhane mission 'for Africans, by Africans'; ~2,000 African languages; name meaning	Civic Tech Field Guide, 2025-03-22	Medium
14	Masakhane participatory research with native speakers	UCL interview with D. Adelani, 2024-08	Medium
15	X-Road 3,800+ e-services; ~2.2bn transactions/yr; 78,000 orgs indirectly; Estonia-Finland federation Feb 2018	e-Estonia, undated	Medium
16	UPI 228bn+ transactions 2025, ~₹300 trn; Dec 2025 21.63bn	Business Standard (NPCI data), 2026-01-01	High
17	Aadhaar generated 145.32 crore	UIDAI dashboard, 2026-10	High
18	150bn+ cumulative Aadhaar authentications by April 2025	News On AIR, 2025-05-17	High
19	Jharkhand ABBA RCT ~15m beneficiaries: no leakage reduction; costs up slightly; benefits -10.6% for unlinked	Muralidharan, Niehaus, Sukhtankar NBER WP 26744, 2020-02	High
20	Pix ~64bn transactions 2024; ~170m people, 20m+ businesses; launched Nov 2020	Crowdfund Insider reporting BCB, 2025-12	Medium
21	Diia 23m+ users; 70+ services; 33 documents	Ministry of Digital Transformation of Ukraine, 2025-10-15	High
22	Kenya High Court Oct 2021 declared Huduma Namba rollout unlawful; DPIA required under DPA 2019	Bowmans, 2021-10-19	High
23	Estonia suspended certificates of up to 760,000 ID cards (2017) over chip flaw; no identity theft confirmed	Phys.org / AFP, 2017-11	High

#	Claim	Source and date	Confidence
24	50-in-5 launched Nov 2023, 11 first movers; goal 50 countries by end-2028	UNDP, 2023-11-09	High
25	50-in-5 had 37 member countries by June 2026	Biometric Update, 2026-06	Medium
26	Universal DPI Safeguards Framework; DPI Safeguards Accelerator	UNDP blog (Gill, Opp, Nordhaug), 2025-09-18	High
27	MOSIP 14 national rollouts incl. Tonga; 161m+ residents registered (end-2025); 29 country partners	MOSIP Rewind 2025, 2025-12	Medium
28	GovStack founded by Estonia, Germany, ITU, DIAL; nine building-block specifications	Biometric Update, 2023-06-05	High
29	AU Continental AI Strategy endorsed 45th Executive Council, Accra, 18-19 July 2024; priorities; five-year implementation plan	African Union, 2024-08-28	High
30	AI Act prohibitions 2 Feb 2025; GPAI 2 Aug 2025; Omnibus moves Annex III high-risk to 2 Dec 2027, Annex I to 2 Aug 2028; Omnibus published OJ 24 Jul...	Future of Privacy Forum, 2026	High
31	AI Act entry into force 1 Aug 2024; omnibus provisional agreement May 2026	Gibson Dunn, 2026-05	High
32	A/RES/79/325 26 Aug 2025; 40-member Panel; Global Dialogue Geneva 6-7 Jul 2026, NY May 2027; GDC review at UNGA 82; Dialogue not a regulator	UN Scientific Panel FAQ, 2026	High
33	A-Baki: AI rules written by handful of private actors and powerful states without global consent; UN as universal table for binding guardrails; peopl...	UN GA interactive dialogue transcript, 2026-08-20	Medium
34	UN 2026 regular budget $3.45bn, ~15% resource cut	UN Fifth Committee press (BRIEF anchor), 2025-12	High
35	X-Road 1,083 member organizations in logs Dec 2025-May 2026	Nortal X-Road 25, 2026	Medium
36	SC 26 Sep 2018 upheld Aadhaar 4-1; struck down s.57 private use; no denial of benefits for lacking Aadhaar; retention cut to 6 months; Chandrachud di...	ThePrint, 2018-09-26	Medium
37	Masakhane founded at Deep Learning Indaba 2019; 144 participants from 17 African countries by Feb 2020	Orife et al., arXiv 2003.11529, 2020	High
38	NIST approved FIPS 203 (ML-KEM), 204 (ML-DSA), 205 (SLH-DSA) post-quantum standards, 13 Aug 2024	NIST, 2024-08-13	High
39	66% of countries had data-protection and privacy legislation (2020); LDCs 43%, Africa 50%	UNCTAD news, 2020-04-29	Medium
40	DC electricity 460 TWh 2024 → >1,000 TWh 2030, 1,300 TWh 2035 (Base Case, supply side); mix coal ~30%, renewables 27%, gas 26%, nuclear 15%	IEA Energy and AI, Energy supply for AI, 2025-04	High
41	DC electricity demand +17% in 2025; set to double by 2030; AI-focused DCs to triple	IEA news release (Key Questions on Energy and AI), 2026-04	High
42	Oxford paper: 225 cloud regions, 132 with AI accelerators in 33 countries; 24 with training hardware; definition = cloud regions	ITPro reporting SSRN 5312977 (Hawkins, Lehdonvirta, Wu), 2025-06-25	Medium

#	Claim	Source and date	Confidence
43	Pix ~64bn transactions 2024 (+53%)	Payments Journal reporting Matera Pix by the Numbers, 2025-01-22	Medium
44	Italy joined 50-in-5 at milestone event, New York, 21 Sep 2026; goal 50 countries by 2028	AgID (Italian government agency), 2026-09-22	High
45	Digital Omnibus on AI published OJ 24 Jul 2026, in force 27 Jul 2026; Annex III to 2 Dec 2027; Annex I to 2 Aug 2028	Lewis Silkin (law firm) citing OJ L 2026/1744, 2026-07-27	High
46	LDCs with data-protection laws 43% (2020) → 48% (2021)	UNCTAD news, 2022-02-24	High
47	Tonga: 15 Jan 2022 eruption severed international cable; repaired after >5 weeks (~90 km replaced); SpaceX set up station in Fiji; Tonga Cable tested…	NPR / AP, 2022-02-22	High
48	Starlink >12m active customers, >160 countries and territories; >10,400 satellites (early June 2026)	Mezha reporting Starlink announcement on X, 2026-06	Medium
49	Ukraine: ~15,000 terminals by Jul 2022; >40,000 received; funders incl. US, UK, Poland, Czech Rep.; Poland >20,000 (7 May 2024); Musk 7 Sep 2023 stat…	GlobalSecurity.org compilation, 2026-11-02	Medium
50	Pentagon $23m contract for Starlink in Ukraine; US official: 'vital part of the security assistance'	Bloomberg via BNN Bloomberg, 2024	High
51	T-Mobile / Starlink direct-to-cell service live in US July 2025 (text first)	Advanced Television, 2025-07-25	High
52	Competitors: OneWeb ~650 sats; Amazon Leo 239 of 3,236; Qianfan >100; Xingwang ~200; IRIS2 deployment ~2027	Advanced Television reporting Statista, 2026-04-30	Medium
53	Starlink awaiting approval in South Africa (ownership rules) and India (pending since Nov 2021; security review reported)	Advanced Television, 2026-04-21	Medium
54	WRC-23 agenda item 1.4: HIBS bands incl. 694-960 MHz, 1710-1980, 2010-2025, 2110-2170, 2500-2690 MHz	Caribbean Telecommunications Union WRC-23 results summary, 2024-02-20	Medium

Part V

TABLE C-26 **Source register, Part V**

#	Claim	Source and date	Confidence
1	~730m without electricity 2024; down 11m; ~80% in SSA	IEA commentary, 2025	High
2	645m without access in 2030 STEPS; 85% SSA	IEA SDG7 data and projections, 2025	Medium
3	Demand >3.5%/yr to 2030; advanced economies ~1/5 of increase; renewables+nuclear 50% by 2030 from 42%	IEA news release (Electricity 2026), 2026-02	High

#	Claim	Source and date	Confidence
4	+3.6% 2026, +3.8% 2027; renewables overtake coal 2026; ~20% LNG supply loss; EU/Japan wholesale >30% y/y Q2 2026	IEA Electricity Mid-Year Update 2026, executive summary, 2026-07	High
5	Kenya geothermal 39.8% of generation 2024 (44.6% 2023), EPRA data	Business Daily (Nairobi), 2025-03-27	Medium
6	LCOE 2024: onshore 0.034, PV 0.043, hydro 0.057, geo 0.060, offshore 0.079; BESS -93% to $192/kWh; WACC Africa 12% vs Europe 3.8%; onshore Africa 0.0…	IRENA RPGC 2024 summary, 2025-07	High
7	Data centres 415 TWh 2024; US 45%, China 25%, Europe 15%	NS Energy summary of IEA Energy and AI, 2025	Medium
8	DC mix 2024 coal ~30%, renewables ~27%, gas 26%, nuclear 15%; renewables ~half of DC demand growth to 2030; first SMRs after 2030	IEA Energy and AI, Energy supply for AI, 2025-04	High
9	Darlington BWRX-300: LTC Apr 2025, FID May 2025; basemat Apr 2026; OL application Mar 2026; grid end-2030; C$6.1bn first unit; C$1.6bn common; C$20.9…	American Nuclear Society, 2026-06-05	High
10	NRC Natrium Kemmerer CP 4 Mar 2026; 345 MWe; first commercial non-LWR CP in 40+ years; completion target 2030	American Nuclear Society, 2026-03	High
11	NuScale US460 SDA 29 May 2025; TVA Clinch River BWRX-300 CP application complete 20 May 2025	US NRC, 2025	High
12	Linglong One ACP100 125 MWe; first concrete 13 Jul 2021; cold tests Oct 2025; hot functional tests under way Oct 2026; fuel load targeted within 2026…	World Nuclear News (citing China News Service), 2026-10-14	High
13	Data centres 1.5% of global electricity 2024; ~945 TWh by 2030 base case (~3%)	IEA topic page Artificial Intelligence (Energy and AI), 2025-04	High
14	Akademik Lomonosov 2×35 MWe KLT-40S; full commercial operation May 2020, Pevek	NS Energy, 2020-05-22	High
15	IAEA first visit to Akademik Lomonosov 2025; 70 MWe + heat	Nuclear Engineering International, 2025-09-09	Medium
16	Milestones: 3 phases, 3 milestones, 19 issues; 10-15 years; INIR	IAEA	High
17	List of 19 issues; at least 100-year commitment	IAEA brochure, 2018	High
18	19 issues generally apply to SMRs; SMR annex; NHSI	IAEA Bulletin	High
19	Revised Milestones guide adds SMR annex; previous revision 2015	American Nuclear Society, 2024-08-14	Medium
20	EMDE solar cost of capital >2x advanced; $270bn→$1.6tn by early 2030s; 1pt = $150bn/yr	IEA news, 2024	High
21	Top-3 refining share 82% (2020) → 86% (2024); China leading refiner 19/20, ~70%; lithium demand +~30% 2024; >half of 20 minerals under export control	Engineering News (IEA GCMO 2025), 2025-05-21	Medium
22	Lithium demand x3 by 2035; copper +30% by 2040; deficits by 2035 40% Li, 30% Cu	Argus Media, 2025-05-21	Medium

#	Claim	Source and date	Confidence
23	GCMO 2026: dominant suppliers >3/4 of refined growth; investment -9% 2025; public finance $65bn; RE refining 85% (2025) → 70% (2035); $6.5tn at risk…	IEA press release, 2026-07-16	High
24	China refining 2025: Li 74, Co 76, battery graphite 94, Cu 47, Ni 31, magnet REE 84; REE mining 59; Cu/Co/Ni mining 2-8%; graphite mining ~80%; Chine…	BOFIT Weekly Review 32/2026, 2026-08-07	Medium
25	Lithium mine output 2024e (Australia 88kt, Chile 49, China 41, Zimbabwe 22, Argentina 18; world 240kt); Bolivia 23 Mt resources, no production	USGS MCS 2025 Lithium, 2025-01-31	High
26	REE mining 2024: China 270kt of 390kt; reserves China 44 Mt, Brazil 21 Mt; Brazil output ~20t	USGS MCS 2025 Rare Earths, 2025-01-31	High
27	Kenya geothermal ~26% of >3.5 GW installed capacity 2025; ~90% generation clean	Down To Earth (IEA, Integrating Variable Renewable Energy in Kenya), 2026-04-09	Medium
28	Bolivia no production in MCS 2026	USGS MCS 2026 Lithium, 2026	High
29	Indonesia ~60% of mined nickel, ~45% processing, ~90% of 2020-24 growth	Mercom India (IEA GCMO 2025), 2025-05-28	Medium
30	Indonesia: full nickel ore export ban from Jan 2020 (Trade Reg. 96/2019); 2017-2019 relaxation for ore <1.7% Ni	IEA Policies database, 2019-12-30	High
31	DRC four-month cobalt export suspension 2025; China export controls	Mining.com, 2025-05-21	Medium
32	A-Baki: developing nations trapped under crippling debt burdens; stop burdening Global South with new layers of debt; blue and green bonds; Galapagos…	UN GA interactive dialogue automatic transcript, 2026-08-20	High
33	Nigeria: decision 2005, Milestone 1 2009, first plant expected ~2030 due to training	VCDNP fact sheet, 2019-05	Medium
34	GCMO 2026: refining capex 20% to >150% higher, opex ~50% higher outside established producers; China >90% graphite and REE refining	IEA Global Critical Minerals Outlook 2026 (Policy pathways; Outlook), 2026-07	High
35	WTO panel (DS592) ruled for EU: nickel ore export ban and domestic-processing requirement inconsistent; not temporary critical-shortage measure	Euronews, 2022-11-30	Medium
36	Panel report circulated 30 Nov 2022; Indonesia appeal circulated 12 Dec 2022	Bahamas Trade Info (WTO news reproduction), 2022-12	Medium
37	Captive coal: Central Sulawesi/North Maluku doubled since 2023; pipeline >31 GW (~3× 2023)	CREA and Global Energy Monitor, 2026-01-27	High
38	Debswana 50:50; 10-yr sales agreement to 2035 + 5-yr option; ODC 30%→50%; licences +25 yrs; Diamonds for Development Fund	The Jeweller, 2025-02-03	Medium
39	Chile NLS April 2023; Codelco-SQM JV announced Dec 2025; SQM leads 2025-30, Codelco majority 2031-60	SMM (Shanghai Metals Market), 2025-12-30	Medium

#	Claim	Source and date	Confidence
40	DRC-Zambia cooperation on battery/EV value chain 29 Apr 2022; financing agreement with Afreximbank and UNECA for SEZ pre-feasibility study	Lusaka Times, 2023-03-27	Medium
41	Lobito Atlantic Railway $753m financial close: DFC $553m, DBSA $200m; AFC co-adviser	Further Africa, 2026-07-06	Medium
42	Indonesia appeal may fall "into the void" (Appellate Body non-functional)	Jakarta Post opinion, 2022-12-04	Medium
43	Data-centre electricity demand +17% in 2025, ~485 TWh; ~950 TWh by 2030	IEA Key Questions on Energy and AI, executive summary, 2026-04	High
44	DRC ARECOMS Decision 004/2025: suspension to 15 Oct 2025; quotas from 16 Oct 2025; 96,600 t/yr 2026 and 2027	IEA Policies database, 2025-09-20	High
45	Codelco-SQM NovaAndino Litio constituted 27 Dec 2025; majority state participation; to 2060	Codelco press release, 2025-12-27	High
46	IRMA Standard v2.0 second draft in consultation July 2025; still draft as of Oct 2026	IRMA, 2025-07-22	High
X1	Illustrative LCOE 0.033/0.044/0.057 at 4/8/12% WACC	Author calculation, 2026-11-01	High
X2	First-of-a-kind SMR at EM cost of capital ~$270-330/MWh	Part X calculation (CANON), 2026-11-01	High

Part VI

TABLE C-27 **Source register, Part VI**

#	Claim	Source and date	Confidence
1	65 state-based conflicts in 2025; 13 wars; 8 interstate; ~244,600 deaths; ~76,500 one-sided	Uppsala University / UCDP, 2026-06-09	High
2	Prevention saves US$5bn–~70bn/yr; conflict cost up to US$13.6tn (13.3% GDP); >half of poor in high-violence countries by 2030	World Bank press release, 2018-03-01	High
3	Pathways for Peace main messages; exclusion from power, resources, security, justice	UNDP / Pathways for Peace, 2018-03-21	High
4	ACLED: 204,605 conflict events Dec 2024–Nov 2025	ACLED Conflict Index, 2025-12	High
5	A/RES/78/257 approved US$50m/yr assessed from 2025	UN Peacebuilding PBF page	High
6	A/RES/78/257 adopted 22 Dec 2023; exceptional basis; from 1 Jan 2025	UN GA resolution, 2023-12-22	High
7	PBF 2025: US$124.0m approvals, 48 initiatives, 28 countries; US$132.3m voluntary from 29 states; -8% vs 2024; US$180m in 2020; US$6m assessed transfe...	PBF 2025 Annual Narrative Report, 2026-06	High
8	PBF ToR: SG may declare eligibility for country on verge of conflict; IRF immediate allocations; US$500m target	PBF Revised ToR, 2024	High

#	Claim	Source and date	Confidence
9	Pathways background model: net benefit US$4.8bn (25% success, US$1bn/case/yr) / US$33.3bn central (50%, US$500m) / ~US$70bn (75%, US$100m); 3% discou…	H. Mueller, How Much Is Prevention Worth? (World Bank background pape…, 2017-09	High
10	2025–26 peacekeeping US$5.38bn	UN News, 2025-07	High
11	CEWARN est. 2002; Addis secretariat; Rapid Response Fund; 2003–15 retrospective supports risk model; needs national capacity	IGAD CEWARN, 2020-10	Medium
12	ECOWARN field monitors; 77 trained March 2024	ECOWAS, 2024-03-14	High
13	VIEWS: monthly, 1–36 months, Africa & Middle East sub-national 55×55km, public	PRIO	High
14	VIEWS global country-level; sub-national 0.5 deg; dashboard/API	Uppsala University	High
15	VIEWS identified 7/10 deadliest in 2024, 6/10 in 2023; conservative; scenarios not certainties	ReliefWeb / VIEWS, 2025 (late)	Medium
16	International actors largely reactive; prevention instruments small vs peacekeeping; 'conflict arithmetic' limited	EUISS Brief 4/2020, 2020-03	High
17	MONUSCO first UN drones Dec 2013 at Goma; Falco; only over Congolese territory	Al Jazeera, 2013-12-04	High
18	Five Falco UAVs; ~US$13m/yr; mission ~US$1.2bn; 14h endurance; Lake Kivu rescue 14 people; one flies at a time; ~15 analysts	Africa Defense Forum, 2018-01-04	Medium
19	UAVs create moral/legal obligations	Karlsrud & Rosén, Conflict Trends, 2014	High
20	DTS 4 goals; launched 18 Aug 2021; SAGE; survey ~500 staff 83%/over half underused; digital divide; 121 countries	Hansen & Miyashita (ZIF/DPO), 2021-09-21	High
21	DTS roadmap workstreams incl. situational awareness and mis/disinformation	UN DPO, 2023-06	High
22	DTS launch August 2021	UN Geneva, 2021-08	High
23	SMM lessons: ~50 UAVs, jamming, losses, need human presence	Wittkowsky, IPI Global Observatory, 2021-04-12	High
24	SMM from March 2014; >50 UAVs; long-range 160km; satellite from June 2015; jammed/shot almost twice weekly; cannot attribute	Giardullo, Dorn, Stodilka, OSCE Yearbook 2019, 2020	High
25	Long-range UAV service suspended 2016 after fire/jamming; prohibitive cost	Foreign Policy, 2016-10-28	High
26	6 of 9 long-range flights jammed since 28 March 2018	EU statement PC.DEL/398/18, 2018-04-12	High
27	62.5% of SMM long-range UAV flights met GPS interference in prior two months; first take-off prevented (6 Apr 2021)	OSCE SMM Spot Report 6/2021, 2021-04-07	High
28	UNOSAT: 66% of Gaza structures damaged (163,778) Sept 2024; voluntary funding	UNITAR, 2024-09-30	High

#	Claim	Source and date	Confidence
29	Rwanda since 2016; PPH in-hospital deaths -51%; trauma -30%; inventory -63%; waste -40%; 15–60 min	Knowledge at Wharton, 2026-05-19	High
30	Peer-reviewed MSOM study; gains concentrated near drone port	INFORMS MSOM, 2025/26	High
31	6,279 casualties 2024; 90% civilians; ~half of civilian casualties children; 5 states withdrawing; victim assistance funding -~25%	Landmine Monitor 2025, 2025	High
32	Privacy Principles adopted by HLCM 11 Oct 2018	UN CEB, 2018	High
33	Ten principles listed	HLCM Principles text, 2018-10-11	High
34	A/RES/79/62, 2 Dec 2024, 166-3-15; No: Belarus, DPRK, Russian Federation	UN Digital Library voting record, 2024-12-02	High
35	A/RES/80/57, 1 Dec 2025, 164-6-7; no votes listed	UN Digital Library record 4095989 + un-project.org, 2025-12-01	High
36	GGE mandate since 2023; rolling text; SG/ICRC call for instrument by end-2026; divergences	UNODA, 2025-12-15	High
37	EU Council conclusions: consensus on elements; 7th RevCon 16–20 Nov 2026; seek negotiating mandate	Council of the EU 14436/26, 2026-10-13	High
38	PCRS launched 2015; levels; RDL 60 days; 200–300 pledges; 14 units ~3,000 at RDL; all deployments from PCRS since 2019	UN PCRS	High
39	S/RES/2805 (26 Nov 2025) on peacebuilding architecture review	Security Council Report, 2025-11-26	Medium
40	A-Baki: >60 conflicts; direct undelegated peacemaking; early warning; Article 99	UN GA dialogue transcript (via BRIEF/vision doc), 2026-08-20	High
U1	OSCE SMM closure: Permanent Council failed to reach consensus on mandate extension on 31 March 2022; closure announced 28 April 2022	OSCE CiO and SG announcement, 2022-04-28	High
U2	Medical drone delivery in Ghana	not verified	Low
41	DPPA Innovation Cell est. 2020; AI, remote sensing, multilingual data analysis for early warning, preventive diplomacy, mediation	UN DPPA	High
42	UN Global Pulse is the Secretary-General's Innovation Lab (data, digital, behavioural science, foresight)	UN Global Pulse	High
43	SMM closure (see U1)	OSCE, 2022-04-28	High
U3	2026–27 peacekeeping budget ~US$5.1bn, -10%	Japan Mission statement, Fifth Committee, 30 June 2026, 2026-06-30	Medium
44	MONUSCO UAS 2016/17 estimate US$15.5m; 5 unarmed UAVs; 2,400 h/yr; utilization 27.9% (2013/14), 43.7% (2014/15), 46.4% (2015/16 to Feb); 10% cut reco...	ACABQ A/70/742/Add.5, 2016-05-03	High

#	Claim	Source and date	Confidence
45	A/RES/80/57 No votes: Belarus, Burundi, DPRK, Israel, Russian Federation, USA; abstentions Argentina, China, Iran, Nicaragua, Poland, Saudi Arabia, T…	un-project.org (aggregator of GA recorded votes), 2025-12-01	Medium
46	CCW 7th Review Conference 16–20 Nov 2026, Palais des Nations	UN Indico event 1019366, 2026	High
B1	P3 budget table (tab:p06-p3-budget) planning lines	Vision 2100 planning assumption, 2026-11-02	Calculation
B2	KPI 2031 target column relabelled 2030	Vision 2100 planning, 2026-11-02	Calculation

Part VII

TABLE C-28 **Source register, Part VII**

#	Claim	Source and date	Confidence
1	LAC remittances 2025 $173.7bn (+7.3%); Central America $55.5bn (+20.1%); Mexico $62.5bn (-3.9%); South America $35.3bn (+9.7%); DR $11.9bn; Caribbean…	IDB blog, 2026-06-16	High
2	IDB projected 2025 as 16th consecutive year of growth; remittances reduce poverty	IDB Technical Note IDB-TN-03243, 2025-11-17	High
3	Remittances to LMICs ~$685bn 2024 > FDI+ODA; Tonga 38%, Samoa 26% of GDP (2024e)	World Bank People Move blog, 2024-12-18	High
4	2025 remittances to LMICs $728.6bn; >4x ODA; LAC $168.6bn; Asia-Pacific $384.9bn (53%); Africa $124.2bn; HN 30%, SV 28%, NI 27% of GDP; digital cost…	IFAD Sending Money Home 2026 via The Gleaner/CMC, 2026-09-15	Medium
5	Guatemala remittances % GDP 10.4 (2015) to 19.1 (2024)	World Bank WDI via Statistics of the World, 2025	Medium
6	Nicaragua remittances % GDP 9.4 (2015) to 26.6 (2024)	World Bank WDI via Statistics of the World, 2025	Medium
7	2025 remittances GT $25.53bn, HN $12.21bn, SV $9.99bn; Northern Triangle +20.1%	Emisoras Unidas citing IOM, 2026-02-18	Medium
8	Caribbean remittances ~$20.9bn 2025 (+9.2% proj.); DR $11.9bn; Haiti $4.9bn; ~10% of subregional GDP	Caribbean National Weekly citing IDB, 2025-12-02	Medium
9	Honduras: 60% recipient households save vs 9%; 59% unbanked; ~10% of remittances into accounts/wallets; formal savings linked to lower migration inte…	Inter-American Dialogue, Orozco, 2024-02	Medium
10	Youth unemployment 13% (2023), 64.9m; NEET 20.4%; women 28.1% vs men 13.1%; >half young workers informal; 3 in 4 in LICs self-employed/temporary	ILO GET Youth 2024 news, 2024-08-12	High
11	Conflict-affected youth struggling 2.9%→4.6%; 57m livelihoods at risk; Arab States >1/3 youth unemployed; SSA youth unemp 8.9%, labor force +72.6m 2…	ILO GET Youth 2024 Exec Summary, 2024-08	High

#	Claim	Source and date	Confidence
12	LAC informality 46.7% H1 2025; youth 56%, adults 43%; youth unemployment ~3x adults	ILO Labour Overview 2025 news, 2025-12-11	High
13	Informality >70% Peru, Bolivia, Ecuador; ~25% Chile, Uruguay	MercoPress citing ILO, 2025-12-12	Medium
14	Global informality 57.8%; by income group 12.9/50.8/81.5/88.3%	ILO World Informality profile, 2025-05	High
15	Informality ~86% South Asia and SSA (2024); migrants 4.7% of global labor force; N. America+W. Europe host ~half	D+C citing ILOSTAT/ILO, 2025-05-16	Medium
16	Pathways for Peace: exclusion grievances central; prevention could save $5bn-$70bn/yr	UN-World Bank, 2018-03-01	High
17	$34bn/yr damages avoided; inclusion as important as growth	World Bank press release, 2017-09-21	High
18	PCA/Call to Action >$5.2bn committed; >70,000 jobs; 2.5m financial inclusion; 4.5m digital access; self-reported	White House fact sheet (archived), 2024-03-25	High
19	~$650m deployed vs $4.2bn committed (Feb 2023); 2027 target 460,000 jobs	Partnership for Central America fact sheet, 2023-02-06	High
20	Rules of origin changes needed to shift textiles to Central America	Supply Chain Dive citing Texas A&M Mosbacher Institute, 2023-02-09	Medium
21	Plan Colombia US$6.13bn FY2000-08 (~$4.9bn military/police); homicides 26,540→17,200 (2000-07); kidnappings -90%; coca +15% 2000-06; gains not irrev...	GAO-09-71, 2008-10	High
22	GAO report coverage; coca +15%	CBS News, 2008-11-06	High
23	Amazon Fund created 2008; R$3.4bn donated (Norway 93.8%, Germany 5.7%, Petrobras 0.5%); frozen 2019; reactivated 2023	InfoAmazonia, 2023-03-23	Medium
24	Amazon Fund volume ~EUR1.3bn; UK, DK, CH, US, JP paid ~EUR100m Dec 2023-Dec 2024; disbursement conditional on reduced forest loss	GIZ, 2025-11-17	High
25	A-Baki statements: middle class/jobs/corruption; UN should help generate jobs; refugees forced by war; Galapagos swap ~$1.1bn debt reduction, ~$500m...	UN GA interactive dialogue transcript, 2026-08-20	Medium
26	Rare-earth reserves China 44 Mt, Brazil 21 Mt	USGS MCS 2025 (brief anchor), 2025-01	Medium
27	Alliance for Prosperity announced Sept 2014 by SV, GT, HN with IDB technical assistance; five-year plan; Northern Triangle 2016 budget commitments ~$...	CRS R44812 (Meyer), 2017-06-08	High
28	FY2013-2018 US agencies allocated ~$2.4bn for 370 projects in SV, GT, HN; limited information on progress toward prosperity, governance, security; re...	GAO-19-590, 2019-09-26	High
29	USMCA first joint review 1 July 2026; US did not confirm 16-year extension; annual reviews triggered until extension or expiry 1 July 2036; agreement...	White & Case insight alert, 2026-07-02	High
30	AfCFTA entry into force 30 May 2019; 50 ratifications deposited as of 4 Sept 2026	tralac, 2026-09-07	High

#	Claim	Source and date	Confidence
31	AfCFTA trading started 1 Jan 2021	African Union, 2021-01-12	High
32	2050 Strategy for the Blue Pacific Continent endorsed 14 July 2022 at 51st Forum Leaders Meeting, Suva; seven thematic areas	RNZ, 2022-07-15	High
33	Amazon Fund H1 2025 approvals R$1.189bn (record); cumulative R$5.6bn approved, R$2.7bn disbursed, 133 initiatives; 2023 R$584m, 2024 R$947m	Agencia Brasil, 2025-06-17	High
34	Honduras remittances % GDP 17.5 (2015) to 25.7 (2024)	World Bank WDI via Statistics of the World, 2025	Medium
35	El Salvador remittances % GDP 18.2 (2015) to 24.3 (2024)	World Bank WDI via Statistics of the World, 2025	Medium
36	IFAD Sending Money Home 2026: $728.6bn 2025 to LMICs; LAC $168.6bn (+132% decade); Asia-Pacific $384.9bn (53%); Africa $124.2bn; >10% GDP in 23 count...	Pressenza republishing IFAD release, 2026-09	Medium
-	REMOVED: Amazon Fund 96 projects / 30,000 Indigenous people (BNDES 2018)	BNDES, 2018-04-19	High
37	USMCA joint review 1 July 2026: US did not agree to renew USMCA in current form; agreement remains in force pending resolution	USTR press release (Ambassador Greer statement), 2026-07-01	High
38	USTR seeks public comment on the 2027 Joint Review of USMCA	USTR press releases October 2026 listing, 2026-10-02	High
39	Galapagos conversion: IDB $85m guarantee; DFC $656m political-risk insurance; lifetime savings >$1.126bn; ~$323m conservation over 18.5 years	IDB news release, 2023-05	High
40	Galapagos conversion: $1.628bn global bonds bought back; new $656m blue loan; external debt stock reduced $972m; >$450m conservation (>$324m over 18....	Ecuador Ministry of Economy and Finance (IRE), 2023-05-16	High
-	CHANGED: Ambassador Africa statement "need to avoid worsening conflicts there"	UN GA transcript, 2026-08-20	High
-	CHANGED: LAC remittances regional figure	IDB vs IFAD , 2026-11-02	High

Part VIII

TABLE C-29 **Source register, Part VIII**

#	Claim	Source and date	Confidence
1	A-Baki statements on women at peace table, children priority, youth, AI and education/jobs	UN GA interactive dialogue transcript, 2026-08-20	High
2	2024: women 7% negotiators, 14% mediators; ~9 in 10 tracks no women negotiators; 2/3 mediation efforts no women; 676m women within 50km of conflict;...	UN News reporting S/2025/556, 2025-10-20	High

#	Claim	Source and date	Confidence
3	S/2025/556 primary: 2024 women 7% negotiators, 14% mediators, 20% signatories (para 24); ~9/10 tracks no women negotiators, 2/3 mediation efforts no...	UN Security Council, S/2025/556, Report of the Secretary-General on w..., 2025-09-05	High
4	>100 national action plans; 90% women-led orgs in dire straits, nearly half expect closure in 6 months; sexual violence against girls +35%	UN News open debate story, 2025-10	High
5	1992-2019: 13% negotiators, 6% mediators, 6% signatories; +20% probability 2 yrs, +35% 15 yrs; 2022: 16% negotiators (23% in 2020), 1 of 18 agreement...	CFR tracker, n.d. (c)2025	High
6	2023: ~260,000 maternal deaths; MMR 197; -40% since 2000; ~70% in SSA; fragile settings >5x; 1.5%/yr decline since 2016	UNICEF Data / MMEIG, 2025-04-06	High
7	Regional maternal deaths 2023 (SSA 182,000; C&S Asia 44,000; E&SE Asia 13,000; NA&WA 9,100; LAC 7,200; Europe 1,100; Oceania 550; Aus/NZ 11); 446,000...	MMEIG key messages (UN Kosovo Team copy), 2025	Medium
8	Under-5 deaths 4.8m (2023); stillbirths ~1.9m; reduction rate slowed 42% since 2015; causes; interventions	UNICEF press release, 2025-03-24	High
9	2.3m neonatal deaths 2023; U5MR -52% since 2000; SSA child 18x more likely to die than Aus/NZ; fragile states ~1/4 births, ~1/2 U5 deaths	UNICEF Data UN IGME, 2025-03	High
10	~4.9m U5 deaths 2024; 2.3m neonatal (nearly half); >100,000 (5%) SAM deaths aged 1-59m; estimates not comparable across rounds	UNICEF press release (UN IGME 2025 report), 2026-03-17	High
11	Facilities without electricity by region; ~40% SSA reliable; $4.9bn need for 63 countries	WHO fact sheet, 2026-10-14	High
12	~1bn people served by facilities with unreliable/no power; >1 in 10 facilities no power S Asia & SSA; 64% need urgent intervention	WHO news (Energizing Health), 2023-01-14	High
13	272m out of school 2023 (+21m); 165m reduction commitment; ~75m off track by 2025	UNESCO-UIS SDG4 Scorecard, 2025	High
14	At least 13m additional children likely missed in 10 most conflict-affected countries	Guardian Nigeria reporting GEM report, 2025	Medium
15	Learning poverty 70% (2022) vs 57% pre-pandemic; SSA 89%	UNICEF press release on State of Global Learning Poverty 2022, 2022-06-23	High
16	44m teachers needed by 2030; 15m SSA; attrition 4.6%->9.06%	UN News, 2024-02-29	High
17	Replacement 58% of need; pupil-trained teacher ratio 52:1 LIC vs 15:1 HIC (2022)	UNESCO Global Report on Teachers, 2024	High
18	Education ODA projected to fall $3.2bn by 2026 (24% below 2023); ~6m more children could be out of school by end-2026; school feeding funding could b...	UNICEF press release, 2025-09-03	High
19	~520m children in conflict zones 2024, >1 in 5	PRIO, 2025-11-04	High
20	6,279 mine/ERW casualties 2024; 90% civilians; almost half of civilians children	ICBL-CMC Landmine Monitor 2025, 2025-12-01	High

#	Claim	Source and date	Confidence
21	2025 internet use 77% men / 71% women; ~280m more men; GPS 0.92 unchanged since 2019	ITU Facts and Figures 2025, 2025-10-15	High
22	2.2bn offline, 96% in LMICs; 23% LIC vs 94% HIC	ITU press release, 2025-11-17	High
23	708m women outside labor market due to unpaid care	UN News, 2025-10-13	Medium
24	None of gender equality SDG targets on track	UN News, 2025-09-22	High
25	UNSCR 1325 adopted Oct 2000	UN Security Council, 2000-10-31	High
26	2.1bn lack safely managed drinking water; 3.4bn lack safely managed sanitation (2024)	UNICEF USA reporting WHO/UNICEF JMP 2025, 2025-08-26	High
27	~645m chronically hungry in 2025 (7.8%)	Food Security Portal (IFPRI) reporting SOFI 2026, 2026-07	High
28	2025: 38,558 verified grave violations; 24,174 children; 6,266 killed (+34%), 7,958 maimed (+10%); ~1/3 girls; highest children affected in ~30 yrs o...	UN News reporting SG annual CAAC report (S/2026/357 per file name), 2026-06-17	High
29	UNSCR 1612 adopted unanimously 26 Jul 2005; SG to implement MRM; Council working group created	UN press release SC/8458, 2005-07-26	High
30	OLPC Peru RCT: 318 rural schools; ratio 0.12→1.18; no effect on math/language after 15 months; cognitive suggestive	Cristia et al., AEJ Applied 9(3) 2017, 2017	High
31	GEEAP 2023 smart buys: TaRL a 'great buy'; hardware alone a 'bad buy'; structured pedagogy key cost-effective approach	World Bank press release, 2023-05-09	High
32	PRIMR (Kenya) median effect ~0.33 SD across reading tasks, English and Kiswahili	World Bank Development Impact blog (Evans), 2017-04-12	Medium
33	Tusome: >22,000 schools, >3.3m pupils; share meeting benchmarks doubled within a year	RTI International, 2018-09-04	Medium
34	Edo State Nigeria RCT: SS1, 6 weeks GPT-4 (Copilot) tutoring; 0.23 SD English, 0.31 SD broader assessment	World Bank PRWP 11125 (De Simone et al.), 2025-05-20	High
35	Women 35% of STEM graduates 2018-23, unchanged 10 years; ICT 30%, engineering 28% (2016-18)	UNESCO World Education Blog / UIS, 2024-04-25	High
36	2025: 38,558 grave violations affecting 24,174 children (15,493 boys, 7,990 girls, 691 unknown); 6,266 killed, 7,958 maimed (+34%, +10%); highest num...	UN, Children and armed conflict, Report of the SG, A/80/723-S/2026/357, 2026-06-16	High
37	2024 comparison: 41,370 violations verified of which 36,221 committed in 2024; 22,495 children; 4,676 killed, 7,291 maimed	UN, Children and armed conflict, Report of the SG, A/79/878-S/2025/247, 2025-06-17	High
38	IPI 2015 Reimagining Peacemaking: comparative study of 40 processes; inclusion associated with 20% (2 yrs) and 35% (15 yrs) higher durability	IPI Global Observatory year-in-review, 2016-01-07	Medium

#	Claim	Source and date	Confidence
39	UN peacekeeping budget 2025-26 $5.38bn; ~70,000 personnel	UN News, 2025-07-01	High
40	Tusome independent endline evaluation (NORC, 2019): significant gains on all EGRA subtasks in English and Kiswahili; Grade 2 English gains ~ one addi...	NORC at the University of Chicago, 2019	Medium

Part IX

TABLE C-30 **Source register, Part IX**

#	Claim	Source and date	Confidence
1	Least corrupt govts collect ~4% of GDP more tax; Georgia +13pp 2003-08; corrupt EMs waste 2x on public investment; LIC education/health budget share...	IMF Blog / Fiscal Monitor Apr 2019, 2019-04-04	High
2	Bribery $1.5-2tn/yr, ~2% of world output (IMF SDN 2016)	IMF Staff Discussion Note SDN/16/05, Corruption: Costs and Mitigating..., 2016-05-11	High
3	$1tn bribes + $2.6tn stolen/yr, >5% global GDP (UN SG, 2018)	UN News; Dawn, 2018-12	Medium
4	Public investment: ~30% of potential value lost to inefficiency	IMF Survey 2015, 2015	High
5	Over one-third of infrastructure benefits lost; strong governance closes >half; 106 PIMA, 19 updates, 65 C-PIMA, ~60 published	IMF Infrastructure Governance portal, 2026	High
6	Global procurement ~$11tn in 2018, ~12% of global GDP	World Bank, Using Data Analytics in Public Procurement, c.2022	High
7	Global procurement ~$13tn	OCP / Spend Network, 2020-09-01	Medium
8	OECD procurement ~12% of GDP and ~30% of general government expenditure	OECD presentation (Strømsnes) 2023, 2023-11	Medium
9	123 countries; LIC avg 14.5% of GDP procurement	PIIE (Djankov, Islam, Saliola), 2016-11-07	Medium
10	CPI 2025: 182 countries/territories; average 42, first decline in >10 years; 122 below 50; published 10 Feb 2026	Transparency International (primary); HSF Kramer (secondary, now), 2026-02-10	High
11	PEFA: est. 2001 by seven partners; 2016 framework 31 indicators, 94 dimensions, 7 pillars; 750 assessments 2005-2024, 560 public	PEFA Data Tracker 2025; PEFA history, 2025	High
12	PEFA 2022 global report: 80 national 2016-framework assessments; external audit basic or worse 87%; legislature no follow-up 89%; >40% non-competitiv...	PEFA Global Report 2022, 2022	High

#	Claim	Source and date	Confidence
13	OCDS: launched 2014 (v1.0 Dec 2014), WB + Omidyar; four stages linked by OCID; OC4IDS profile; 50+ governments	OCP data-standard page; WB blog 2014; Wikipedia, 2026	High
14	OCP 2025: 51 publishers; 8 robust mandates incl. Ukraine, Ecuador, Thailand	OCP Annual Report 2025, 2026-04	High
15	ProZorro pilot Feb 2015 (TI Ukraine hosted, later transferred to state); mandatory 1 Apr 2016 central authorities and SOEs, 1 Aug 2016 all remaining...	Cabinet of Ministers of Ukraine; Open Contracting Partnership; TI Ukr..., 2016-02-19	High
16	ProZorro: savings +3.5-5pp on larger contracts; 5-6 days faster; not clean causal design	CGD WP 511, 2019-06	High
17	Competitive ProZorro tenders ~5% cheaper; Prozorro Market ~12%; range 1-20%; vs buyers' estimates; wartime exemptions	KSE policy brief, 2022-12	High
18	X-Road: ~78,000 indirect user orgs; 2.2bn transactions/yr; 3,800+ e-services; signed/encrypted/logged	e-Estonia, 2026-10	High
19	UN80 mandate review resolution 31 Mar 2026, 168-4; registry; review clauses; formal working group from 1 May 2026	IPS News, 2026-04	High
20	A-Baki: corruption linked to resource gaps; UN must work on it; SDG shortfall is execution; 'trust in results'	UN GA dialogue transcript, 2026-08-20	Medium
21	UN 2026 regular budget $3.45bn, ~15% resource cut	UN News, 2025-12-30	High
25	India DBT savings and exclusion criticism	NOT VERIFIED	Low
22	Robodebt: income averaging of ATO annual data into fortnightly figures; Royal Commission report presented 7 Jul 2023, 57 recommendations; averaging i...	Royal Commission into the Robodebt Scheme; APSC; LSJ (NSW), 2023-07-07	High
23	Dutch childcare-benefits: Dec 2020 parliamentary inquiry found families wrongly accused of fraud; ~10,000 families; ethnic profiling reported; Rutte...	Netherlands House of Representatives, Parliamentary Interrogation Com..., 2020-12-17	High
24	Porto Alegre PB from 1989; water/sewer connections 75% (1988) to 98% (1997); participation <1,000 (1990) to ~40,000 (1999)	World Bank Empowerment Case Study, Participatory Budgeting in Brazil, c.2003	High
26	OIOS established by GA res 48/218 B, 29 Jul 1994; audit, inspection, evaluation, investigation	OIOS Mission and Mandate, 2026	High
26b	UN Board of Auditors established 1946; three members heading national SAIs (currently China→Indonesia from 1 Jul 2026, Brazil, France)	UN Board of Auditors mandate page, 2026	High
26c	IATI launched Accra Sept 2008; SG committed UN development system to IATI publication Dec 2017; UNDP hosts Secretariat since Jul 2023	IATI, The IATI story so far, 2026	High
27	CJEU 22 Nov 2022 Joined Cases C-37/20 and C-601/20 (WM and Sovim) invalidated AMLD5 general-public access to BO information; disproportionate interfe...	eucrim (Max Planck Institute) report of CJEU Grand Chamber judgment, 2022-11-22	Medium

#	Claim	Source and date	Confidence
28	P5 budget table (tab:p09-p5-budget): 14-20 staff x $150-250k = $2.1-5.0m/yr; $0.5-1.5m/yr hosting etc.; $0.3-0.5m one-time; canonical $8-20m over thr...	Vision 2100 cost model (BOOK.md s6, s7; CANON.md), 2026-11-02	High
29	KPI changes	Part IX editor, 2026-11-02	High

Part X

TABLE C-31 **Source register, Part X**

#	Claim	Source and date	Confidence
1	Compromiso de Sevilla recognizes ~$4tn annual SDG financing gap; adopted by consensus at FfD4 (30 Jun–3 Jul 2025)	UN DESA; UN press release, 2025-07	High
2	130 Sevilla Platform for Action initiatives; Debt Pause Clause Alliance; Debt Swaps Hub (Spain/World Bank); Sevilla Forum on Debt; pre-arranged disas...	UN FfD4 closing press release, 2025-07-03	High
3	Compromiso encourages a potential tripling of annual MDB lending (encouragement, not commitment); global debt registry	UN News; SG report A/80/387 para 35(a), 2025-06	High
4	US withdrew from FfD4 negotiations; objections to MDB/tax language	IISD SDG Knowledge Hub, 2025-06	High
5	FfD4 criticisms: fossil subsidy language removed; SDR/tax/debt weakened; dissociations; de-risking critique; FX EDGE; African credit rating agency	Down To Earth, 2025-07	Medium
6	SPA Dec 2025: 130 initiatives, 204 lead entities (65 member states); 22 with targets averaging $145bn/yr to 2035 ($135bn tax, $10bn investment)	UN DESA FSDO, 2025-12	High
7	OECD: SDG financing gap could reach $6.4tn by 2030	OECD press release, 2025-02	High
8	OECD: needs +36% 2015–2022; available financing +22% to ~$5.24tn	Global Donor Platform summary of OECD Global Outlook on Financing for..., 2025-02-12	Medium
9	UNCTAD 2026: global public debt $111tn (2025); developing $35tn; net interest $995bn; median 8.1% of revenue; 51 countries/3.7bn people spend more on...	UNCTAD A World of Debt 2026, 2026	High
10	UNCTAD 2025: $102tn (2024); developing $31tn; interest $921bn; 61 countries ≥10% revenue to interest; rates 2–4x US since 2020	UNCTAD news, 2025-06-26	High
11	Developing countries paid $48bn more to private creditors than received in 2023; 51 had net debt outflows	UNCTAD official document, 2025	High
12	IEA: EMDE-ex-China clean energy investment ~$270bn → ~$1.6tn by early 2030s; concessional triple; solar cost of capital >2x advanced; 1pp cut saves ~...	IEA, 2024	High
13	MDB heads: $300–400bn additional headroom over next decade (Apr 2024)	Arab News, 2024-04-22	High

#	Claim	Source and date	Confidence
14	MDBs reached ~$400bn headroom goal; G20 Roadmap endorsed; MDB private mobilization $101bn in 2023	World Bank statement, 2024-11-19	High
15	AfDB $750m hybrid (Jan 2024), full equity credit, $1.5–2.2bn lending; IDB EEAs ~$8bn; WBG Guarantee Platform at MIGA from 1 Jul 2024; MIGA credit enh…	Heads of MDBs Viewpoint Note, 2024-04-20	High
16	MDB lending must at least triple; $255–572bn new paid-in capital needed under current CAF; ~$60bn with hybrid+CAF; 24 GCIs since 2009 added $86.2bn	BU GDP Center, 2024-10-25	Medium
17	IMF Board approved SDR use for MDB hybrid capital; ~$80bn potential lending (proponents)	Bizcommunity (Reuters), 2024-05-16	Medium
18	SDR hybrid obstacles: ECB position, US congressional authorization; MDB leverage 3–6x vs PRGT/RST <1	IDOS Policy Brief 30/2024, 2024	High
19	RST pledges SDR 31.9bn (~$41.4bn) from 21 holders; no SDR holder had formalised hybrid support (late 2024)	SAIIA Policy Note 10, 2024-12	Medium
20	2021 SDR allocation $650bn; >$500bn to G20/advanced; Africa ~5% (~$33bn)	ONE Data, 2025-03-06	High
21	SDR channeling exceeded $100bn target, mainly via PRGT and RST	Climate Policy Initiative	Medium
22	IDA21 $100bn; donor contributions $23.7bn; Seoul 5 Dec 2024	World Bank EDS13 brief, 2025-03-13	High
23	IDA21 covers FY26–28; ~4:1 leverage; US requested $3.2bn (May 2025) vs $4bn pledged	CGD ABCs of IFIs, 2025	High
24	IDA market borrowing 3.25–4.5% (2025); subsidy >30c per $; nearly half IDA countries high risk/in distress	CGD blog, 2025-05	High
25	African leaders asked ≥$120bn for IDA21	Bretton Woods Project, 2024-12	Medium
26	Blended finance 2024: 123 deals, ~$18bn	Convergence, 2025	High
27	Blended 2024 $18.3bn vs $23.1bn 2023; 5-yr avg $17bn; $1:$3.76 ($5.46 >$100m); private $6.9bn; philanthropy share 6%→3%	Eco-Business (Convergence data), 2025	High
28	Median blended deal $65m (from $38m); institutional share 12%→16%	IPE, 2025	Medium
29	LAC remittances 2025 $173.7bn (+7.3%); Central America $55.5bn (+20.1%); Mexico $62.5bn; 1% US remittance tax from 1 Jan 2026	IDB, 2026	High
30	Darlington BWRX-300 first unit ~C$6.1bn, 300 MWe; project C$20.9bn; grid end-2030	American Nuclear Society, 2026-06-05	High
31	A-Baki statements on debt, swaps (Galápagos ~$1.6bn; ~$1.1bn debt reduction; ~$500m fund), blue/green bonds, corruption, trust, PPPs, swaps for educa…	UN GA interactive dialogue transcript, 2026-08-20	Medium
32	G20 Rio leaders endorsed MDB Roadmap (Nov 2024)	Devex, 2024-11-19	High
33	IMF SDR-hybrid decision welcomed by AfDB/IDB; ≥$4 per $1 SDR; need ≥5 investors	Ecofin Agency, 2024-05-16	Medium
U5	Article 6 rules status (6.2/6.4 operationalization)	NOT VERIFIED, —	Low

#	Claim	Source and date	Confidence
U6	PPP fiscal-risk case figures; diaspora bond precedents (e.g., India, Israel, Nigeria)	NOT VERIFIED, —	Low
U7	Published data-centre capex per MW	NOT VERIFIED, —	Low
34	Galápagos May 2023: $1.628bn bonds exchanged; $656m Galápagos Marine Bond loan; $656m DFC PRI; $85m IDB guarantee; >$1.126bn lifetime savings; ~$323m...	US DFC press release, 2023-05-09	High
35	Belize Nov 2021: $553m debt repurchased at discount; $364m blue bond; $610m DFC PRI; ~$180m conservation; ocean protection 15.9%→30%; TNC arranger	US DFC press release, 2021-11-05	High
36	Gabon Aug 2023: $500m debt conversion with DFC PRI (50% reinsured with 8 insurers); ~$163m conservation over 15 yrs (~$5m/yr); endowment ~$88m by 203...	InsuranceNewsNet reprint of DFC release, 2023-08-15	High
37	IMF SDR-hybrid cumulative limit SDR 15bn; review at SDR 10bn or two years; approved 10 May 2024	IMF PR 24/162, 2024-05-14	High
38	IRENA 2024 global weighted avg: solar PV $691/kW, CF 17%, LCOE $0.043/kWh; onshore wind $1,041/kW, CF 34%, $0.034/kWh; WACC assumptions 3.8% (Europe)...	IRENA RPGC 2024 summary (mirror), 2025-07	High
39	SWFs >$15tn AuM end-2025; state-owned investors (SWFs, pensions, central banks) ~$60tn	Global SWF 2026 Annual Report, 2026-01-01	Medium
40	Compromiso "encourages a potential tripling in annual MDB lending" (para 35(a)); aim to triple MDB lending (para 8(a))	UN SG report A/80/387, 2025-09-16	High
41	IDA21 $100bn; $23.7bn pledged; 59 countries	World Bank press release, 2024-12-05	High
42	Galápagos: $85m IDB guarantee; $656m DFC PRI; >$1.126bn savings; ~$323m Galápagos Life Fund over 18.5 yrs	IDB news release, 2023-05	High
A1	P1–P5 first-phase ranges (P1 $20–65m; P2 $0.5–2.0bn; P3 $20–50m; P4 $10–25m + $0.3–1.2bn; P5 $8–20m)	CANON.md; Parts IV, V, VI, IX, 2026-11	Calculation
A2	P2 debt service: 60% debt, 18 yrs, $0.5bn@4% → ~$24m/yr; $2.0bn@12% → ~$166m/yr; 200–500 MW at CF 30% → 0.5–1.3 TWh/yr	A113 calculation, 2026-11-01	Calculation
A3	LCOE model results: solar $47 (6%) → $73 (12%); wind $40 → $60; SMR FOAK $172 → $272 (10%) / $331 (12%); SMR target $92 → $161; P2 tornado base $55	A113 calculation (img/part10_exhibits.py), 2026-11-01	Calculation
43	Compromiso de Sevilla: ~$4tn annual gap (para 4); MDB lending "with a view to potentially tripling it" (para 37(a)); single global debt data registry...	UN General Assembly A/RES/79/323, 2025-08-25	High
44	RST pledges SDR 35.8bn (~$48.9bn) as of 28 Jul 2025; 21 contributors; 28 approved RST arrangements	IMF RST topic page, 2025-07-28	High
45	SDR channeling to AfDB hybrid capital still at advocacy stage (Nov 2025); no commitments or closed transaction named	Nairametrics, 2025-11-08	Medium
46	Galapagos: ~$1,628m bonds tendered; $656m blue loan; $972m reduction in external debt stock; >$450m marine conservation incl. >$18m/yr for 18.5 yrs a...	Ecuador Ministry of Economy and Finance (Investor Relations), 2023-05-16	High

#	Claim	Source and date	Confidence
A4	Three-tier pilot budgets (first-year preparation / initial implementation / long-term capital); first-year $10–23m; FOUND $120–300m excl. P2 construc...	BOOK.md section 6; Part XII XII.2.2–2.3 arithmetic, 2026-11	Calculation
A5	Capital-stack chart, public-goods bar	A113 assumption (img/part10_exhibits.py), 2026-11-02	Calculation

Part XI

TABLE C-32 **Source register, Part XI**

#	Claim	Source and date	Confidence
1	Pact for the Future adopted 22 Sept 2024 with annexes GDC and Declaration on Future Generations	United Nations, "Summit of the Future" (Pact for the Future, Global D..., 2024-09-22	High
2	A/RES/79/325 by consensus 26 Aug 2025; 40-member panel; Global Dialogue Geneva July 2026, NY 2027	United Nations, "Independent International Scientific Panel on AI — F..., accessed 2026...	High
3	IEA: data centres ~1.5% of world electricity 2024; ~945 TWh 2030 base case	International Energy Agency, "Artificial Intelligence" topic page (su..., 2025-04	High
4	Tonga nomination letter to PGA and SC President transmitted by Tonga PR Amb. Viliami Va'inga; nomination 17 Aug 2026 (UN record per CANON)	PINA, "Tonga nominates Ecuadorian diplomat in race to be next UN chie..., 2026-08-19	High
5	A-Baki thanked King Tupou VI on X for believing in a vision of peace and institutional renewal	Envoy, "Trump's 'Friend' Crashes the Race for UN Secretary-General Ri..., 2026-08-19	High
6	CELAC: time for a LAC national to lead UN	CELAC (via Ministry of Foreign Affairs of Uruguay), "Declaración de l..., 2026-10-13	High
7	A-Baki GA dialogue remarks: SC stuck in 1945; united; talk to everyone; SIDS existential; Africa priority; thanked Qatar/UAE/Saudi; youth; painter in...	United Nations, "Interactive dialogue with Ivonne A-Baki, candidate f..., 2026-08-20	Medium
8	Smallpox: Zhdanov proposal; US-USSR common purpose; eradication declared May 1980	Origins (Ohio State University), "The WHO and the Eradication of Smal...	High
9	Smallpox: WHA 1959; 25m doses; Intensified Programme 1 Jan 1967; $98m international, $200m endemic; last case Somalia Oct 1977	Center for Global Development, "Millions Saved, Case 1: Eradicating S...	High
10	Antarctic Treaty: 58 parties (Jan/Apr 2026), 29 consultative	Ministry of Foreign Affairs of Japan, "Antarctic Treaty," 28 April 20..., 2026-04-28	High
11	China acceded 1983; consultative 1985; hosted ATCM 2017	South China Morning Post, "China to host global meeting on Antarctic..., 2017	High
12	ISS Intergovernmental Agreement 1998; contributions linked to utilization	NASA, "15 Years Ago: First Time All Partners Represented Aboard the I...	High

#	Claim	Source and date	Confidence
13	ISS: five agencies; continuous presence since 2 Nov 2000; >=290 people from 26 countries	NASA, "The International Space Station Marks 25 Years of Continuous H..., 2025-12-02	High
14	ITER Agreement Paris 21 Nov 2006; seven parties; IAEA DG depositary	ITER Organization, "Agreement on the Establishment of the ITER Intern..., 2006-11-21	High
15	Montreal Protocol first universally ratified UN treaty (2014); Multilateral Fund >$3bn	UN Environment Programme, "Montreal Protocol celebrates landmark achi..., 2014-12-09	High
16	>99% of controlled ODS eliminated	Global Environment Facility, "How the world rallied to repair the ozo..., 2017-11-23	High
17	Ozone back to 1980 values ~2040 rest of world, ~2045 Arctic, ~2066 Antarctic (current policies)	World Meteorological Organization, "WMO Ozone and UV Bulletin publish..., 2024-09-16	High
18	Black Sea JCC Istanbul; Ukraine, Russia, Turkiye, UN; terminated 17 July 2023	United Nations, "Joint Coordination Centre for the Black Sea Grain In...	High
19	32,817,650 t; 1,003 voyages; 40% wheat to LICs/LMICs	UN Geneva, "Operational update: Office of the UN Coordinator for the..., 2023-07	High
20	IAEA safeguards applied in 190 states in 2024; >3,000 in-field activities	IAEA, "IAEA Applied Safeguards for 190 States: IAEA Report," 2025, 2025	High
21	191 states with safeguards agreements; 144 with APs at 30 June 2025	IAEA, "Strengthening the Effectiveness and Improving the Efficiency o..., 2025-08-08	High
22	All five NPT nuclear-weapon states have voluntary offer agreements	Arms Control Association, "IAEA Safeguards Agreements at a Glance," a..., accessed 2026...	High
23	Lobito Corridor: DFC loan up to $553m for Lobito Atlantic Railway (~1,300 km to Luau); corridor Angola, Zambia, DRC	US International Development Finance Corporation, "DFC Announces Inve..., 2024-12-04	High
24	Linglong One 125 MWe, Changjiang, Hainan; first concrete 13 July 2021; cold tests Oct 2025; hot tests under way Oct 2026; fuel loading targeted 2026	World Nuclear News, "Hot testing of Chinese SMR under way," 14 Octobe..., 2026-10-14	High
25	Akademik Lomonosov commercial operation 22 May 2020 at Pevek; 2 x KLT-40S, 35 MWe each	Nuclear Engineering International, "Akademik Lomonosov begins commerc..., 2020-05-25	High
26	Bletchley Declaration 1 Nov 2023; 28 countries incl. US and China, plus EU	UK Government, "Countries agree to safe and responsible development o..., 2023-11-01	High
27	UK AI Safety Institute renamed AI Security Institute, 14 Feb 2025	UK Government, "Tackling AI security risks to unleash growth and deli..., 2025-02-14	High
28	Paris AI Action Summit Feb 2025 co-chaired by France and India; 58 countries signed inclusive and sustainable AI statement; US and UK did not	European Commission, IP Helpdesk, "India and 57 others sign AI Action..., 2025-02-14	High

#	Claim	Source and date	Confidence
29	Commonwealth: 56 independent countries; Tonga a member	Commonwealth Secretariat, "Member countries", accessed 2026...	High
30	GCC: six member states (all monarchies); Charter signed Abu Dhabi 25 May 1981	General Secretariat of the GCC, "About Us", 1981-05-25	High
31	Agong office rotates among nine rulers via election list (Third Schedule)	Malay Mail, "Resignation and selection of next Agong: What does our C..., 2019-01-07	Medium
32	Japan Constitution Art. 3 (Cabinet advice and approval) and Art. 4 (no powers related to government)	National Diet Library, "The Constitution of Japan", 1946-11-03	High
33	Malaysia Federal Constitution Art. 32(3) election by Conference of Rulers, five-year term; Art. 38 Conference per Fifth Schedule; Art. 40(1) acts on...	Federal Constitution of Malaysia (Constitute Project English text, 20..., 2025	High
34	2013 Jordanian-Palestinian agreement, Amman 31 Mar 2013, King Abdullah II and Mahmoud Abbas (President of State of Palestine, PLO head, PNA President...	Jordanian-Palestinian Agreement on the Holy Sites in Jerusalem (text..., 2013-03-31	High
35	Israel-Jordan Treaty of Peace, 26 Oct 1994, Art. 9(2): Israel respects present special role of Jordan in Muslim Holy shrines in Jerusalem; high prior...	Treaty text via PA-X Peace Agreements Database (Univ. of Edinburgh), 1994-10-26	High
36	WIHW proclaimed 20 Oct 2010, first week of February each year	United Nations General Assembly, A/RES/65/5, 20 October 2010, 2010-10-20	High
37	A/RES/65/309 Happiness: towards a holistic approach to development, 19 July 2011; invites measures of happiness and well-being; welcomes Bhutan panel	UN General Assembly, A/RES/65/309, 2011-07-19	High
38	Bhutan: 1998 executive power to elected Council of Ministers; first NC election 31 Dec 2007; first NA election 24 Mar 2008; Constitution adopted July...	UNDP Bhutan and Parliament of Bhutan, Ten Years of Democracy in Bhuta..., 2019	High
39	Security Council (S/PRST/2008/17) welcomes Doha agreement of 21 May 2008; commends Arab League committee under leadership of Emir of Qatar	UN Security Council press release SC/9337, 2008-05-22	High
40	1993 Parliament (Chicago) centenary of 1893; assembly of ~250 leaders endorsed Towards a Global Ethic	Parliament of the World's Religions, "1993 Chicago", accessed 2026...	High
41	Religions for Peace first World Assembly Kyoto, Jan 1970, ~300 participants from 39 countries	Religions for Peace, "Assemblies," accessed November 2026, accessed 2026...	High
42	A Common Word, 13 Oct 2007; 138 Muslim scholars, clerics and intellectuals; addressed to leaders of all churches	A Common Word, "Introduction to A Common Word Between Us and You", 2007-10-13	High

#	Claim	Source and date	Confidence
43	KAICIID: agreement signed 12 Oct 2011; in force 21 Oct 2012; inaugurated 26 Nov 2012; Austria, Spain, Saudi Arabia; Holy See founding observer; addre...	KAICIID, "Who we are," accessed November 2026, accessed 2026...	High
44	Document on Human Fraternity signed Abu Dhabi 4 Feb 2019 by Pope Francis and Grand Imam Ahmad al-Tayyeb	Holy See Press Office, "Document on Human Fraternity for World Peace..., 2019-02-04	High
45	Leo XIV name references Leo XIII/Rerum novarum, another industrial revolution and AI	Vatican News, "Pope Leo XIV addresses cardinals," 10 May 2025, 2025-05-10	High
46	Wales Act 2015, Royal Assent 29 April 2015; s.17 creates Future Generations Commissioner for Wales	legislation.gov.uk, "Well-being of Future Generations (Wales) Act 201..., 2015-04-29	High
47	Hungary: Ombudsman for Future Generations existed before 2011; under 2011 constitution now a Deputy Commissioner for Fundamental Rights elected by Pa...	Foundation for Democracy and Sustainable Development, "The Hungarian...	Medium
U7	UN Special Envoy for Future Generations: SG stated intention to appoint (March 2023); no appointment found	United Nations, Our Common Agenda Policy Brief 1: To Think and Act fo..., 2023-03	Medium
48	Royal Hashemite Court: custodianship since 1917, starting with Sharif Hussein bin Ali; 2013 agreement reaffirmed; acknowledged in 1994 treaty	Royal Hashemite Court, "The Hashemite Custodianship of Islamic and Ch..., accessed 2026...	High
49	King Abdullah II, UNGA 65 General Debate 23 Sep 2010: Jordan would introduce draft resolution for annual World Interfaith Harmony Week	United Nations General Debate, statement by King Abdullah II, 2010-09-23	High
50	Fourth King Jigme Singye Wangchuck propounded GNH in early 1970s	Royal Bhutanese Embassy New Delhi (MFA Bhutan), "Gross National Happi..., accessed 2026...	High
51	HRW: tens of thousands of ethnic Nepalis arbitrarily deprived of Bhutanese citizenship; some expelled, others fled; ~106,000 refugees in seven camps...	Human Rights Watch, Last Hope, 16 May 2007, 2007-05-16	High
52	Doha Document for Peace in Darfur adopted 14 July 2011; Qatar hosted signing and convened Implementation Follow-up Commission	UN Security Council press release SC/10421, 2011, 2011	High
53	Nov 2023 Gaza humanitarian pause and hostage-release deal; UN welcomed efforts of Egypt, Qatar, US in facilitating	UN News, 22 November 2023, 2023-11-22	High
54	Blinken: Oman and Qatar played vital role in Sept 2023 release of Americans from Iran	US Department of State, Secretary Blinken remarks to the press, 18 Se..., 2023-09-18	High
55	IEA 2026: data centres 485 TWh (2025) → 950 TWh (2030), ~3% of global demand	International Energy Agency, Key Questions on Energy and AI, executiv..., 2026	High

#	Claim	Source and date	Confidence
56	415 TWh in 2024; US 45%, China 25%, Europe 15%	NS Energy summary of IEA Energy and AI (April 2025), 2025	Medium
57	Linglong One primary-circuit cold functional test completed 16 Oct 2025, Changjiang, Hainan	China National Nuclear Corporation, 24 Oct 2025, 2025-10-24	High

Part XII

TABLE C-33 **Source register, Part XII**

#	Claim	Source and date	Confidence
1	A/RES/79/325 created 40-member Scientific Panel on AI and Global Dialogue on AI Governance; first Dialogue Geneva Jul 2026	UN Scientific Panel on AI FAQ, 2026	High
2	UN80 mandate-review resolution adopted 31 Mar 2026, 168-4-0; mandate registry; review clauses; formal working group from 1 May 2026	IPS News, 2026-04-02	High
3	2026 regular budget $3.45bn; ~15% resource cut; ~19% staffing cut; approved 30 Dec 2025	UN News, 2025-12-30	High
4	Peacekeeping 2025-26 $5.38bn; nearly 70,000 personnel	UN News, 2025-07	High
5	A-Baki: UN lacks trust in results / not seen as a place of action; more than five priorities will be lost; corruption a reason developing countries l...	UN Web TV transcript, 2026-08-20	High
6	Darlington BWRX-300: 300 MWe; 4 units; grid by end-2030; first unit C$6.1bn; C$20.9bn envelope	American Nuclear Society, 2026-06-05	High
7	IAEA Milestones: ~10-15 years from consideration to operation; applicable to SMRs	IAEA Bulletin	High
8	Data centres ~415 TWh 2024 → ~945 TWh 2030 base case; US and China most of growth	DatacenterDynamics and S&P Global reporting IEA, Energy and AI (10 Ap..., 2025	Medium
9	655 million without electricity (2024 data)	SEforALL / custodians, Tracking SDG7 2026 executive version, 2026-07-22	High
10	~2.2bn offline 2025; ~three-quarters online	ITU Facts and Figures 2025, 2025-10-15	High
11	260,000 maternal deaths 2023	UNFPA Trends in Maternal Mortality 2000-2023, 2025-04	High
12	~70% of 10-year-olds in LMICs in learning poverty (2022 estimate)	UNICEF press release (World Bank/UNESCO/UNICEF et al.), 2022-06-23	Medium
13	119 countries (60%) have MHEWS in 2025; EW4All target 2027	WMO Global Status of MHEWS 2025, 2025-11-12	High
14	123 blended-finance deals closed in 2024 totaling ~$18bn	Convergence press release, State of Blended Finance 2025, 2025-05-21	High

#	Claim	Source and date	Confidence
15	CPI 2025 global average 42 (ten-year low); 122 of 182 countries below 50	Transparency International press release, CPI 2025, 2026-02-10	High
16	117.8 million forcibly displaced end-2025 (provisional); 5.4m fewer than end-2024	UNHCR Global Trends 2025 report, 2026-06	High
17	Women 1992-2019: 13% negotiators, 6% mediators, 6% signatories	CFR	High
18	~520m children in conflict zones 2024	PRIO, 2025-11	High
19	6,279 landmine/ERW casualties 2024; 90% civilians; ~half of civilians children	ICBL-CMC Landmine Monitor 2025, 2025	High
20	Global Dialogue on AI Governance second session 3-4 May 2027, New York, alongside STI Forum	UN Global Dialogue on AI Governance FAQ, 2026	High
12b	Learning poverty update	World Bank, Learning Poverty Updates and Revisions: What's New?, 2024-11-05	Low
A1	Three-tier canonical budgets (BOOK.md s.6): first-year prep P1 1.0-3.0m, P2 1.5-4.0m, P3 1.0-2.0m, P4 1.0-3.0m, P5 1.5-3.0m; secretariat 4-8m/yr; fir...	Vision 2100 BOOK.md section 6 / CANON.md planning assumptions, 2026-11-01	Low
21	Data centres ~415 TWh 2024 (~1.5% global electricity); 945 TWh 2030 base case	S&P Global Commodity Insights reporting IEA Energy and AI, 2025-04-10	Medium
22	IEA: data-centre electricity use +17% in 2025; still set to roughly double by 2030	Rigzone reporting IEA release, 2026-04-20	Medium
23	A-Baki nominated by Tonga 17 Aug 2026; letter transmitted by Tonga PR	PINA, 2026-08-19	High
24	645m hungry 2025 (FAO SOFI 2026)	Food Security Portal (IFPRI) on SOFI 2026, 2026-07	High
25	65 state-based armed conflicts 2025 (UCDP)	Uppsala University press release, 2026-06-09	High
26	Military burden 2.5% of world GDP 2025; ~$2.9tn (2,887bn)	SIPRI press release, 2026-04	High
27	4.9m under-five deaths 2024; estimates not directly comparable across rounds	UNICEF press release (UN IGME 2025), 2026-03-17	High
K1	Scorecard KPI changes (BOOK.md s.5)	Vision 2100 planning milestones, 2026-11-02	Low

APPENDIX D

D

FINANCIAL MODELS AND PLANNING ASSUMPTIONS

Financial Models, Budgets and Planning Assumptions

WHAT THIS APPENDIX IS

Every number in this appendix is a planning assumption or a model output built from stated assumptions. None is a quotation, a forecast or a commitment. No government, development bank, philanthropy, UN body or company has committed funding to any element of Vision 2100.

D.1 Purpose, status and how to read this appendix

This appendix consolidates, in one place, the cost and financing arithmetic that is spread across the book. It adds no new estimates. Each item names the part that owns it; where this appendix and an owning part appear to differ, the owning part governs for its subject and the book's integration standard governs for the canonical pilot budgets in D.2. Verification status and sources for each assumption are logged in Appendix C; the method behind them is set out in Appendix A.

ILLUSTRATIVE All values are in US dollars unless stated, nominal for budgets and real for the levelized-cost model. Ranges are low–high planning bounds, not confidence intervals. Each must be replaced by tendered prices, project-level estimates or host data before any financial commitment, and each would be revisited at the gates described in Part XII and Appendix F.

ILLUSTRATIVE Three rules apply throughout. First, budgets are tiered: first-year preparation is a share of initial implementation, which in turn precedes any long-term capital. Second, horizon totals are computed only from the canonical pilot ranges, so a change to a pilot range changes the horizon totals mechanically. Third, construction capital for P2 and P4 is project-financed and counted in PROVE, not in FOUND.

D.2 The three-tier pilot budget

ILLUSTRATIVE The table below is the canonical budget for the five flagship pilots. It is the only breakdown used in the book. First-year preparation runs from November 2026 to October 2027 and is described in Part XIII. Initial implementation is the first phase and includes first-year

preparation. Long-term capital is PROVE-horizon replication (2031–2040), and is spent only if the pilot passes its gates.

TABLE D-1 Three-tier budget for the five flagship pilots (ILLUSTRATIVE planning assumptions; no funding committed). Owning parts: P1 Part IV; P2 Parts V and XII; P3 Part VI; P4 Parts V and XII; P5 Part IX; secretariat Parts XII and XIII.

Pilot	First-year preparation (Nov 2026–Oct 2027)	Initial implementation (first phase; includes first-year preparation)	Long-term capital (PROVE replication, only if gates pass)
P1 Sovereign Digital Nation	$1.0–3.0m	$20–65m over ~4.5 years (breakdown owned by Part IV)	$0.3–1.3bn (15–20 states)
P2 Clean Power and Compute Corridor	$1.5–4.0m	$15–40m studies and pre-development (2026–2029); phase-one construction $0.5–2.0bn, project-financed (decision ~2029; counted in PROVE)	$1–10bn (2–5 corridors)
P3 Prevention Early-Warning	$1.0–2.0m	$20–50m over five years	$0.06–0.3bn extension
P4 Minerals-to-Industry	$1.0–3.0m	$10–25m studies and preparation; first processing plant $0.3–1.2bn (PROVE)	$0.6–4.8bn (2–4 plants)
P5 Results Ledger	$1.5–3.0m	$8–20m over three years	$0.04–0.2bn extension
Secretariat and initiative core	$4–8m per year	—	—

ILLUSTRATIVE The headline totals follow from the table. The first year costs $10–23 million: $4–8 million for the secretariat and $6–15 million for pilot preparation. The FOUND horizon (2026–2030) costs about $120–300 million excluding P2 phase-one construction, or about $0.6–2.3 billion including it. The PROVE horizon (2031–2040) costs about $2–17 billion. Sections D.3 to D.5 show each total line by line.

ILLUSTRATIVE Each pilot has an archetype host, never a named country: a small island state of about 100,000 people for P1 (Part IV; Part XII sets an eligibility range of 100,000 to 1 million); an emerging economy for P2; two to three neighboring states sharing a stressed basin or rangeland for P3; a lithium or copper producer with an operating mine for P4; and one willing UN entity plus one government with an infrastructure program for P5. No country has been approached as a host or has agreed to host any pilot.

D.3 First-year budget by workstream

ILLUSTRATIVE Part XIII organizes the first year into twelve workstreams. The secretariat core is held within Part XII's range of $4–8 million a year. Pilot preparation is funded mainly by partner grants and is spent only if a host requests the work. No line includes construction, equipment or pilot capital.

TABLE D-2 First-year budget by workstream, November 2026–October 2027 (ILLUSTRATIVE; US$ million). Owning part: Part XIII, section 6.1.

Line	Low	High	Main assumptions	Funding character
WS1 Governance and charter	0.4	0.8	Counsel; six Board meetings; translation	Seed
WS2 Evidence and Baseline Dashboard	0.6	1.2	Two to three researchers; hosting; external review	Seed
WS3 Advisory panels	0.5	1.0	Four panels of five to nine; honoraria; two meetings each	Seed
WS4 Coalition and engagement	0.6	1.2	Two staff; travel; interpretation	Seed
WS10 Financing and facility design	0.4	0.8	Finance Lead; modeling; structuring advice	Seed
WS11 Communications	0.4	0.8	One to two staff; six-language translation	Seed
WS12 M&E and independent review	0.3	0.6	M&E Lead; evaluator contract	Seed
Program management, integrity officer, operations, contingency	0.8	1.6	Program Director; compliance; office; 10% contingency	Seed
Secretariat core subtotal	**4.0**	**8.0**	Matches Part XII's $4–8m a year	
WS5 P1 preparation	1.0	3.0	Readiness, legal gap analysis, DPIA scope	Partner grants
WS6 P2 preparation	1.5	4.0	Grid and site pre-feasibility; first share of $15–40m pre-development	Partner grants; DFI preparation funds
WS7 P3 preparation	1.0	2.0	Start-up phase per Part VI	Partner grants; peacebuilding funds
WS8 P4 preparation	1.0	3.0	Value-chain screen; engagement plan; first share of $10–25m	Partner grants; DFI preparation funds
WS9 P5 preparation	1.5	3.0	Prototype; costed designs; first share of $8–20m	Philanthropy; governance funds
Pilot preparation subtotal	**6.0**	**15.0**	Spent only on host request	
Total first year	**10.0**	**23.0**		

ILLUSTRATIVE The secretariat subtotal sums as 0.4 + 0.6 + 0.5 + 0.6 + 0.4 + 0.4 + 0.3 + 0.8 = $4.0 million (low) and 0.8 + 1.2 + 1.0 + 1.2 + 0.8 + 0.8 + 0.6 + 1.6 = $8.0 million (high). Pilot preparation sums as 1.0 + 1.5 + 1.0 + 1.0 + 1.5 = $6.0 million and 3.0 + 4.0 + 2.0 + 3.0 + 3.0 = $15.0 million. The low case assumes three pilots reach active preparation, heavy use of university partners and virtual meetings; the high case assumes all five do and that P2 and P4 begin funded pre-development before Gate 0. Staff costs assume eight to twelve full-time equivalents by month four at international nonprofit rates (Part XIII).

ILLUSTRATIVE Part XIII also sets three funding rules. Seed funding of at least $4 million is to be secured by the end of January 2027; if it is not, the plan rescales in a fixed order that protects the panels, governance, evidence and monitoring, and below $2.5 million at day 120 the interim

steering group decides publicly whether to continue or pause. No single donor should provide more than an indicative 25 percent of the secretariat core. And no seed money is accepted from any entity that could bid to supply, finance or advise a pilot, under the conflict-of-interest firewall that bars A113 Partners and its affiliates from acting as supplier, financier or transaction adviser to any pilot they help design.

D.4 FOUND arithmetic (2026–2030)

ILLUSTRATIVE The FOUND total is built from the canonical initial-implementation ranges. Each pilot row already includes that pilot's first-year preparation, so first-year preparation is not added a second time. The secretariat row covers five years at $4–8 million a year, including the first year.

TABLE D-3 FOUND horizon investment arithmetic, 2026–2030 (ILLUSTRATIVE; US$ million). Owning part: Part XII, section XII.2.2.

FOUND component	Basis	Low	High
Secretariat, research, panels, evaluation	$4–8m a year × 5 years	20	40
Project-preparation facility	Planning assumption (designed in year one, capitalized only after Gate 0)	25	60
P1 Sovereign Digital Nation	Initial implementation, ~4.5 years	20	65
P2 studies and pre-development	Initial implementation before construction	15	40
P3 Prevention Early-Warning	Initial implementation, five years	20	50
P4 studies and preparation	Initial implementation before plant	10	25
P5 Results Ledger	Initial implementation, three years	8	20
Total, excluding P2 phase-one construction		**118**	**300**

ILLUSTRATIVE Line by line, the low case is 20 + 25 + 20 + 15 + 20 + 10 + 8 = $118 million and the high case is 40 + 60 + 65 + 40 + 50 + 25 + 20 = $300 million, rounded to about $120–300 million.

ILLUSTRATIVE If P2 reaches a phase-one financing decision around 2029, its $0.5–2.0 billion of construction capital would be committed in the FOUND era but spent mostly after 2030. Adding it gives $118 million + $500 million = $618 million at the low end and $300 million + $2,000 million = $2,300 million at the high end, or about $0.6–2.3 billion of FOUND-era commitments. Because the same phase-one capital is counted in the PROVE total (D.5), the "including P2" FOUND figure and the PROVE figure must never be added together. P4 plant capital falls wholly in PROVE.

For scale, Part XII notes that blended-finance transactions reaching financial close in 2024 totaled about $18 billion across 123 deals, according to Convergence; the FOUND portfolio is under 2 percent of one year of that market (Part XII).

D.5 PROVE arithmetic (2031–2040)

ILLUSTRATIVE PROVE costs are first-phase unit costs multiplied by the number of replications assumed if gates pass. They are mostly national, development-bank and private capital, not Vision 2100 spending.

TABLE D-4 PROVE horizon investment arithmetic, 2031–2040 (ILLUSTRATIVE; US$ billion). Owning part: Part XII, section XII.2.3.

PROVE component	Basis	Low	High
P1 replication	15–20 states × $20–65m	0.30	1.30
P2 corridors, phase one (incl. the pilot corridor)	2–5 corridors × $0.5–2.0bn	1.00	10.00
P4 first processing plants	2–4 plants × $0.3–1.2bn	0.60	4.80
P3 extension	3–6 further regions × $20–50m	0.06	0.30
P5 extension	5–10 program pairs × $8–20m	0.04	0.20
Foundation secretariat	$4–8m a year × 10 years	0.04	0.08
Project-preparation facility, second tranche	Same size as in FOUND ($25–60m)	0.025	0.06
Total		**2.07**	**16.74**

ILLUSTRATIVE Line by line, the low case is 0.30 + 1.00 + 0.60 + 0.06 + 0.04 + 0.04 + 0.025 = $2.065 billion, shown as $2.07 billion, and the high case is 1.30 + 10.00 + 4.80 + 0.30 + 0.20 + 0.08 + 0.06 = $16.74 billion, rounded to about $2–17 billion. The multiplications are 15 × $20m = $0.30bn and 20 × $65m = $1.30bn for P1; 2 × $0.5bn and 5 × $2.0bn for P2; 2 × $0.3bn and 4 × $1.2bn for P4; 3 × $20m and 6 × $50m for P3; 5 × $8m and 10 × $20m for P5. Corridors dominate the range. Any small modular reactor would be additional and is treated in Part V.

ILLUSTRATIVE For CONNECT (2041–2060), Part XII scales the same unit costs to 40–80 states (P1, $0.8–5.2 billion), 15–40 corridors ($7.5–80 billion) and five to ten further processing plants ($1.5–12 billion), giving about $10–100 billion. Part XII describes this as a placeholder for financing analysis, not an estimate; full corridor build-out and cross-border interconnection could raise it several-fold. TRANSFORM and SUSTAIN are not estimated, because by then infrastructure should be financed as ordinary public and private investment.

D.6 How the pilot ranges are built

ILLUSTRATIVE The canonical ranges in D.2 rest on component assumptions owned by the pilot's part. The table summarizes them; each sum is shown so readers can test it.

TABLE D-5 Component build-up of the canonical first-phase pilot ranges (ILLUSTRATIVE planning assumptions, not quotations).

Pilot	Components (planning assumptions)	Arithmetic	Owning part
P1 (Table IV-5)	Design, legal and DPIA $1–2.5m; identity, data exchange, registries $4–13m; compute sites (16–107 accelerators at $30,000–60,000 installed) $1.5–10m; security $2–5m; language model and evaluation $1–3m; services and assisted channels $4–10m; workforce and training $2–5m; evaluation and Results Ledger $1–2m; contingency (20–30%) $3.5–15m	Low 20.0; high 65.5, stated as about $20–65m	IV

Pilot	Components (planning assumptions)	Arithmetic	Owning part
P2 phase one	200–500 MW renewables plus storage at $1.0–1.8m per MW ($0.2–0.9bn); compute campus of 20–50 MW IT load, excluding processors, at $10–15m per MW ($0.2–0.75bn); transmission and industrial park ($0.1–0.4bn)	Low 0.5bn; high 2.05bn, capped at $2.0bn by scaling the campus to anchored demand	V, XII
P3	Per year: 12 analysts and data staff at $90,000–150,000 ($1.1–1.8m); 120 community monitors at $4,000–7,000 ($0.5–0.8m); data, imagery, connectivity ($0.3–0.8m); compute, software, security ($0.2–0.5m); governance, ethics, legal ($0.2–0.4m); evaluation ($0.2–0.4m); mediation and rapid-response window ($1.5–4m)	$4.0–8.7m a year × 5 = $20–43.5m, plus $1–2m start-up = about $21–46m; ceiling of $50m allows ~10% contingency	VI
P4	Studies, baseline and consultation $10–25m; first plant $0.3–1.2bn, small to mid-scale chemical or metallurgical plant; power excluded where supplied by a P2 corridor	Ranges stated directly; to be replaced by feasibility estimates	V, XII
P5	14–20 staff at $150,000–250,000 loaded ($2.1–5.0m a year); hosting, security testing, imagery and evaluation $0.5–1.5m a year; design, legal review and DPIAs $0.3–0.5m one-time	$2.6–6.5m a year × 3 = $7.8–19.5m, plus one-time = about $8–20m	IX

ILLUSTRATIVE Part IV owns the P1 breakdown (Table IV-5), the single line-by-line split used in this book; Parts X, XII and XIII cite it and carry no competing split. At $200–650 per resident, P1 is expensive per person because fixed costs fall on a small population; compute is a minor share. Recurrent operating costs of perhaps 15–25 percent of capital a year must be in the national budget before Part IV's security-accreditation gate (Gate G2).

ILLUSTRATIVE The P2 compute campus deliberately exceeds Part IV's central estimate of about 12 MW of national public-service inference for an emerging economy of 100 million people, because a corridor campus may also host a regional fine-tuning pool and commercial tenants; a host can size it down. Processors are financed separately.

D.7 The levelized-cost-versus-cost-of-capital model

ILLUSTRATIVE Part X uses one standard annuity model to show how the cost of capital drives the cost of electricity. The same formula underlies the P2 sensitivity analysis in D.8. All values are real.

LCOE = [CAPEX × IDC × CRF(r, n) + Fixed O&M] ÷ (8.76 × CF) + Variable O&M

ILLUSTRATIVE The terms are as follows. LCOE is the levelized cost of electricity in US$ per MWh. CAPEX is overnight capital cost in US$ per kW. IDC is an interest-during-construction factor that assumes capital is spent evenly over the build period and accrues interest at the real rate r until commercial operation. CRF(r, n) = r(1 + r)^n ÷ ((1 + r)^n − 1) is the capital recovery factor for a real weighted average cost of capital (WACC) r and an economic life of n years. Fixed O&M is in US$ per kW-year; variable O&M in US$ per MWh. CF is the capacity factor, and 8.76 converts kW-years into MWh.

TABLE D-6 Inputs to the LCOE-versus-WACC model (ILLUSTRATIVE). Owning part: Part X, section X.6.1.

Technology	Capex (US$/kW)	Capacity factor	Fixed O&M; variable O&M	Life; build	Basis
Utility solar PV	691	17%	$15/kW-yr; none	25 years; 1 year	Capex and CF from IRENA 2024 global weighted averages; other values assumed
Onshore wind	1,041	34%	$35/kW-yr; none	25 years; 1.5 years	Capex and CF from IRENA 2024; other values assumed
First-of-a-kind SMR	~14,600	90%	$150/kW-yr; $10/MWh	40 years; 5 years	Derived from Darlington BWRX-300 unit 1 (C$6.1bn for 300 MWe, about C$20,000/kW) at an assumed 0.72 USD/CAD; nominal budget treated as real
SMR target cost	7,000	90%	$120/kW-yr; $10/MWh	40 years; 4 years	Assumption for later units, not a vendor quote

TABLE D-7 Model outputs: levelized cost of electricity by real cost of capital (ILLUSTRATIVE; US$/MWh, real). Reproduced from the Part X model with the inputs above; Part X reports the same values in rounded form.

Technology	4%	6%	9%	10%	12%
Utility solar PV	40	47	59	64	73
Onshore wind	35	40	50	53	60
First-of-a-kind SMR	133	172	244	272	331
SMR target cost	74	92	124	136	161

ILLUSTRATIVE Three results matter for the book. First, at 4–6 percent real the model gives $40–47 for solar and $35–40 for wind, close to IRENA's reported 2024 global averages of $43 and $34 per MWh, which supports the calibration (Part X). Second, moving from an advanced-economy cost of capital (3–6 percent real) to an emerging-economy one (9–15 percent real) raises the cost of every technology, and of the most capital-intensive most. Third, a first-of-a-kind SMR at 10–12 percent real costs about $270–330 per MWh, several times solar or wind; this is the source of the book's statement that SMRs in emerging economies make sense only with low-cost public or export-credit finance, a firm-power need that renewables plus storage cannot meet more cheaply, and the safety, licensing and safeguards conditions of Part V.

ILLUSTRATIVE Part V uses a simpler illustration for one solar plant: $750 per kW, a 22 percent capacity factor, $15 per kW-year and a 25-year life, without an interest-during-construction factor. It gives about $0.033, $0.044 and $0.057 per kWh at 4, 8 and 12 percent. The two calculations use different inputs for different purposes and are not inconsistent; the Part X model is the reference model.

D.8 P2 sensitivity assumptions

ILLUSTRATIVE Part X tests the P2 generation block against its main risks with the D.7 formula. The base case is a blended renewable-plus-storage block at $1,100 per kW, fixed O&M of $25 per kW-year, no variable O&M, a 30 percent capacity factor, a 25-year life, a 9 percent real cost of capital and an 18-month build. It produces about $55 per MWh.

TABLE D-8 Sensitivity of the P2 generation block to key risks (ILLUSTRATIVE; US$/MWh, real; base case about $55). Owning part: Part X, section X.7.2.

Risk tested	Favorable case	Result	Adverse case	Result
Cost of capital	6% real	~44	12% real	~68
Capital cost	15% below base	~48	40% construction overrun	~73
Demand (sold output)	10% above base (CF 33%)	~50	20% shortfall from curtailment, grid limits or a missing tenant (CF 24%)	~69
Construction schedule	On time (18 months)	~55	Two-year delay	~59
Operating cost	20% below base	~53	20% above base	~57

ILLUSTRATIVE Financing terms, construction discipline and demand certainty matter about equally; operating cost matters least. Part X draws the design conclusion: a guarantee is worth little if the transmission line is late or the anchor tenant is missing, so financial close requires a signed anchor offtake, a fixed-price construction contract and a grid connection agreement. Part XII adds a published household-impact analysis.

ILLUSTRATIVE Two further P2 quantities follow from the same assumptions. At a 30 percent capacity factor, 200–500 MW produces about 0.5–1.3 TWh a year (200 MW × 8,760 hours × 0.30 ≈ 0.53 TWh; 500 MW ≈ 1.31 TWh). With 60 percent debt amortized over 18 years, annual debt service ranges from about $24 million ($0.5 billion of capital at a 4 percent real rate) to about $166 million ($2.0 billion at 12 percent). Part V adds that a two-percentage-point fall in the cost of capital, from guarantees and local-currency lending, would lower the lifetime cost of the corridor's renewable power by roughly 10–15 percent, more than any plausible equipment saving.

D.9 Financing classification

Vision 2100 proposes that every initiative be financed according to the economics of the activity, in three classes defined in Part X. **Category A, public goods**, covers standards, verification, early warning, mediation and transparency; it is funded by grants, assessed and in-kind contributions, and never by debt. **Category B, commercially financeable infrastructure**, covers revenue-earning assets such as electricity, processing and data-centre capacity; it is funded by equity and debt made affordable by guarantees, development-bank co-lending and limited concessional tranches, and repaid from tariffs, offtake and service fees. **Category C, grant-dependent human development**, covers services for people who cannot pay, such as child protection, maternal health, learning and demining; it is funded by grants, pooled funds and over time domestic budgets, and never by commercial debt. Hybrids are split into components, each funded by its class.

TABLE D-9 Financing classification of Vision 2100 initiatives (ILLUSTRATIVE assignment by A113 Partners, to be validated with development-bank and UN finance staff). A = public good; B = bankable; C = grant-dependent. Owning part: Part X, section X.5.

Initiative (part)	Class	Primary sources	Repayment or sustainment
UN Shared Layer (III, IV)	A	Assessed budget, voluntary trust fund, in-kind	Not repaid
Technology for Peace and Security office (III)	A	Existing Secretariat resources, consolidated	Not repaid

Initiative (part)	Class	Primary sources	Repayment or sustainment
Results Ledger, P5 (IX)	A	Grants, host budget, philanthropy	Host budget after pilot
Prevention Early-Warning, P3 (VI)	A	Grants, Prevention and Mediation Fund	Host and regional budgets
Six-layer shield; Peace Technology Pool (VI)	A	Peacekeeping assessments, in-kind	Not repaid
Women at Every Table; mediation rosters (VI, VIII)	A	Regular budget, voluntary funds	Not repaid
Children's Shield (VIII design; VI technology)	A/C	Assessed and voluntary funds	Not repaid
Mothers and Children Peace Fund (VIII)	C	Pooled grants, philanthropy, swaps	Domestic health budgets over time
Learning companion (VIII)	C	Grants, IDA, domestic budget	Education budget; public licensing
Demining, Clear layer (VI)	C	Grants, mine-action trust funds	Land released for use
Sovereign AI node and DPI, P1 (IV)	B/C	Grants, concessional loans, domestic	Substituted IT spend; service fees
Clean Power and Compute Corridor, P2 (V)	B	Equity, guaranteed debt, development-bank loans	Power purchase and offtake contracts
SMR programs where feasible (V)	B	Sovereign, export-credit, development-bank, equity	Long-term power contracts; rate base
Minerals-to-Industry, P4 (V, VII)	B	Equity, guaranteed debt, DFIs	Product offtake; royalties and taxes
Americas Compact, Build Corps (VII)	C, then B	Grants, volunteer service, diaspora bonds	Absorbed by host budgets
Paid-to-protect swaps; labeled bonds (VII)	Hybrid	Swaps, blue and green bonds	Debt-service savings; endowments
Royal Endowment; Council of Long-Term Stewards (XI)	C	Royal and private philanthropy	Endowment income
Interfaith convening; Arts for Peace (XI)	C	Philanthropy, host institutions	Not repaid

D.10 Capital-stack shares

ILLUSTRATIVE Part X sets indicative capital stacks at two levels: by initiative category, and for each flagship pilot. Shares are of total capital and are planning assumptions, not committed funding.

TABLE D-10 **Illustrative capital stack by initiative category (ILLUSTRATIVE; percent of total capital). Owning part: Part X, section X.7.1 and its capital-stack chart.**

Category	Grants and assessed	Domestic budget	Concessional loans	MDB, DFI or ECA loans	Guaranteed commercial debt and equity
Public goods (Shared Layer, Ledger, P3)	75	25	0	0	0

Category	Grants and assessed	Domestic budget	Concessional loans	MDB, DFI or ECA loans	Guaranteed commercial debt and equity
Human development (learning, maternal health, Children's Shield)	35	40	25	0	0
DPI and sovereign AI node (P1)	45	20	35	0	0
Clean Power and Compute Corridor (P2)	3	7	5	20	40 debt; 25 equity
Minerals-to-Industry (P4)	2	3	5	15	40 debt; 35 equity
SMR programs (where feasible)	0	30	0	30	20 debt; 20 equity

TABLE D-11 **Illustrative capital stacks for the flagship pilots, first phase (ILLUSTRATIVE). Owning part: Part X, section X.7.2.**

Pilot	First-phase cost	Indicative stack	Repayment or sustainment
P1 (small island)	$20–65m over ~4.5 years	45% grants; 35% concessional; 20% domestic	Substituted government IT spend; recurrent costs in the national budget; regional sharing
P2 (emerging economy)	$0.5–2.0bn phase one; $15–40m pre-development	25% equity; 40% guaranteed debt; 20% MDB/DFI; 5% concessional; 10% domestic and grants	Power purchase and capacity contracts; compute and park leases
P3 (two to three states)	$20–50m over five years	80% grants; 20% host and regional budgets	No repayment; regional budgets after the pilot
P4	$10–25m studies; $0.3–1.2bn first plant	Studies: grants. Plant: 35% equity; 40% guaranteed debt; 15% DFI; 10% other	Offtake with price floors; royalties and taxes
P5	$8–20m over three years	70% grants; 30% host budgets	Host budgets; waste detected

ILLUSTRATIVE The stacks follow the classification. The small-island P1 host carries no commercial debt. P2 is the one pilot designed to be largely commercial. P3 is a pure public good, grant-funded through the Prevention and Mediation Fund with contributions from participating states to secure ownership. P4 separates small, grant-funded studies from a commercially financed plant. P5 is small and grant-funded; its return is waste detected and trust gained.

ILLUSTRATIVE One reading note. The public-goods bar in Part X's capital-stack chart is 75 percent grants and assessed contributions and 25 percent domestic budget, with no concessional or other loans, consistent with Part X's rule that Category A is never funded by debt; it averages the P3 (80/20) and P5 (70/30) pilot stacks.

D.11 Other cost and planning assumptions, by theme

ILLUSTRATIVE The tables below consolidate the remaining planning assumptions recorded in the evidence annex (now Appendix C), grouped by theme. Where earlier drafts gave a different value, the value shown is the one reconciled under the book's integration standard.

D.11.1 Energy, power systems and nuclear timing

TABLE D-12 Energy and cost-of-capital planning assumptions (ILLUSTRATIVE).

Assumption	Value or range	Basis	Part
Real WACC bands	Advanced 3–6%; emerging and frontier 9–15%	Consistent with IEA ">2×" ratio and IRENA regional assumptions	X (cited in V)
Emerging archetype energy system	Grid of 5–30 GW; real cost of capital in Part X's emerging-economy band of 9–15%	Archetype definition, citing Part X's band	V
Small island energy system	Isolated grid of 20–100 MW; diesel-dependent	Archetype definition	V
Grid unit-size rule	Largest unit no more than ~10% of system size	Planning heuristic, not a cited standard	V
Darlington per-kW cost	≈ C$20,000/kW first unit; ≈ C$13,000/kW later unit	Derived from published budgets (first unit ~C$6.1bn; four units C$20.9bn)	V
Newcomer nuclear timing	Milestones Phase 1 from 2027 plus 10–15 years: first unit about 2037–2042 at the earliest	IAEA Milestones experience	V, XII
Carbon revenue	Upside only; never in the debt-service base	Proposal	X

D.11.2 Compute sizing

TABLE D-13 Compute-sizing planning assumptions for public-service AI inference (ILLUSTRATIVE; low / central / high). Owning part: Part IV, section IV.8.

Assumption	Value or range	Basis	Part
Method	Tokens a day = population × active share × interactions × tokens per interaction; accelerators = tokens a day ÷ 86,400 × peak factor 3 ÷ throughput × 1.3 back-office × 1.5 redundancy; floor of 16	Part IV sizing model	IV
Daily active share	40 / 55 / 70% (advanced, small island); 15 / 25 / 40% (emerging)	Planning assumption	IV
Interactions per active user a day	2 / 4 / 6 (advanced, small island); 1 / 2 / 4 (emerging)	Planning assumption	IV
Tokens per interaction	1,500 / 2,000 / 3,000	Input plus output; voice as token equivalents	IV
Sustained throughput per accelerator	1,600 / 1,200 / 800 tokens a second	Batched serving of small-to-mid open-weight models; not vendor benchmarks	IV
Facility power per accelerator	1.0 kW × 1.6 × PUE 1.2 / 1.3 / 1.5	~1 kW per GPU; 1.6 for servers, storage, network	IV
Central results	Advanced (50m people) ~12,000 accelerators, ~26 MW; emerging (100m) ~5,600, ~12 MW; small island (100,000) ~25, ~50 kW (range 0.03–0.26 MW)	Model output	IV

Assumption	Value or range	Basis	Part
Installed accelerator cost	$30,000–60,000 including server share and storage	Not a market price	IV
Compute campus capex	$10–15m per MW of IT load, excluding processors	Needs independent benchmark	V, X, XII
Recurrent operating cost	15–25% of capital a year	Must be budgeted before scale-up	IV, X
Contingency	20–30%	P1 cost model	IV

D.11.3 Staffing

TABLE D-14 Staffing planning assumptions (ILLUSTRATIVE; reconciled values).

Assumption	Value or range	Basis	Part
Specialist cost (design, legal)	$150,000–250,000 per person-year, fully loaded	P1 and P5 cost models	IV, IX
Integration staff cost	$100,000–200,000 per person-year	P1 cost model	IV
Sovereign node operating teams	Small island 25–45 FTE; emerging 150–400; advanced 400–1,000 or more	Planning assumption, excluding contractors	IV
P2 workforce	A few hundred at construction peak; 150–400 permanent	Planning assumption	V
P4 workforce	A few hundred permanent process staff	Planning assumption	V
P3 analysis unit	A regional unit of 10–14 analysts and data staff ($90,000–150,000 each), plus community monitors and a mediation liaison	Reconciled value	VI
P3 community monitors	80–150 at $4,000–7,000 a year each; at least 40% women	Planning assumption	VI
P5 team	14–20 people	Reconciled value from the Part IX cost model	IX
Technology for Peace and Security office	10–15 redeployed posts; 12 posts at $200,000 ≈ $2.4m a year, offset by redeployment	Planning assumption	III
Blueprint governance	Interim steering group of 5–7; Steering Board of 11–13 (A113 Partners at most two seats, no veto); four panels of 5–9	Proposal	XII
Core secretariat	8–12 FTE by month four	First-year assumption	XIII

D.11.4 Program costs outside the five pilots

TABLE D-15 Planning assumptions for other Vision 2100 programs (ILLUSTRATIVE; not costed programs).

Assumption	Value or range	Basis	Part
Women mediator roster	$8–15m a year	Roster and deployments plus a secretariat of 10–15 staff	VIII

Assumption	Value or range	Basis	Part
Learning companion	About $20–35 per child a year before evaluation	Tablet ~$150 shared by 3 over 4 years (~$12.50); classroom server and solar ~$1,500 per 45 children over 6 years (~$5.60); content and support $5–15	VIII
Clinic electrification, lifetime cost	About 1.6–2× the World Bank's ~$4.9bn urgent capital estimate over 20 years	O&M 2–3% of capital a year; battery replacement at years 8–12	VIII
Stay-and-build programs	$15–40m per municipality over five years; 30 municipalities ≈ $0.5–1.2bn	Order-of-magnitude illustration, to be replaced by project preparation	VII
Peace-dividend scenario	5% of the $5.38bn 2025–26 peacekeeping budget ≈ $270m a year; one-third voluntarily redirected ≈ $90m	Requires General Assembly or voluntary decisions; savings otherwise return to member states	VIII
Mothers and Children Peace Fund	$500m a year by 2030; at least 15% to local women-led organizations	Planning ambition, not a projection	VIII

D.11.5 Finance structures, gates and rules

TABLE D-16 **Financing rules and gate tests (ILLUSTRATIVE and PROPOSAL).**

Assumption	Value or rule	Basis	Part
Gate 0 financing test (October 2027)	Identified path for at least 60% of the next phase's cost; for P2 and P4, applied to pre-development and studies, plus indicative interest from at least one DFI in the construction phase	Gate criterion; P2/P4 calibration to be confirmed in the Steering Board charter	XII, XIII
Gate 1 financing test (December 2030)	At least 60% of the PROVE financing path identified	Gate criterion	XII, XIV
Gate 2 cost test (2040)	Costs within 25% of plan or explained	Gate criterion	XII
P2 financial-close conditions	Signed anchor offtake; fixed-price construction contract; grid connection agreement; household-impact analysis	Proposal	X, XII
Seed budget	At least $4m by end of January 2027, else rescale; pause decision below $2.5m at day 120	First-year assumption	XIII
Donor concentration	No single donor above an indicative 25% of the secretariat core	First-year rule	XIII
Royal Endowment for 2100	Philanthropy, accounted separately from commercial sovereign-fund investment	Proposal	X, XI
Fiduciary standards	Co-lender's procurement, safeguard and sanctions systems; beneficial-ownership disclosure; independent audit of pooled funds; existing trustees for Category A and C funds	Proposal	X

ILLUSTRATIVE KPI conventions (baselines, the treatment of agreed international targets, planning milestones and corrective rules) are set out with the master scorecard in Appendix H. Scenario, life-path and archetype definitions are set out in Appendix C.

APPENDIX E

E

TECHNICAL ARCHITECTURES AND IMPLEMENTATION STANDARDS

Reference Specifications and Applicable Standards

WHAT THIS APPENDIX IS

A concise reference specification for each of Vision 2100's five technical architectures, and the existing standards and frameworks each would build on. Every architecture is a Vision 2100 proposal. None is deployed, none has been adopted by any government or UN body, and Vision 2100 recommends capabilities and open standards, not vendors.

E.1 Purpose and conventions

This appendix consolidates the reference architectures developed in Parts IV, V, VI and IX so that engineers, regulators, auditors and procurement officials can review them side by side. It adds no new design. Each specification follows the same five headings: components; interfaces; data rules; security controls; and human-accountability points. Each is followed by a table of applicable standards and frameworks.

Vision 2100 proposes four design rules that apply to all five architectures. **Sovereign ownership**: data, keys and operating decisions sit with the host state under its own law; the UN Shared Layer sets standards and holds no one's data. **Open standards before products**: specifications are written to capabilities and open interfaces, procurement is multi-vendor, and every contract carries tested exit and portability clauses. **Humans decide**: AI ranks, flags and explains; no consequential decision about a person, no sanction and no use of force is taken by an algorithm. **Verifiable records**: every architecture writes its performance, spending and incidents to the Results Ledger, so that it can be audited by people outside the operator.

The standards tables distinguish two kinds of entry. Most are standards or frameworks that the owning part already cites. A few were checked for this appendix and are marked "verified for this appendix"; they are offered as candidates for the owning part to adopt or reject, not as decisions already taken. Standards evolve; each must be confirmed at its current version before procurement.

A113 Partners and its affiliates do not act as supplier, financier or transaction adviser to any pilot they help design. Energy-storage specifications for P2 and battery-materials specifications for P4 are drafted without input from the principal architect and reviewed by the independent technical panel (Part XIII).

E.2 National AI Sovereignty Model and UN Shared Layer

Owning part: Part IV (sections IV.4–IV.11). Pilot: P1 Sovereign Digital Nation. Part IV's reference-architecture figure shows the seven national layers stacked above energy, with the thin UN Shared Layer alongside; only standards, attestations and incident reports cross the boundary between them.

E.2.1 Components

The National AI Sovereignty Model is a proposed seven-layer reference architecture. A nation can adopt the layers in sequence, buy parts as managed services, or share layers 2–6 regionally. Ownership means legal control, the ability to audit and the ability to leave; it does not mean building everything domestically.

TABLE E-1 National AI Sovereignty Model: layer specification (PROPOSAL). Owning part: Part IV.

Layer	Components	Minimum specification
1 Energy	Firm, clean, affordable supply; on-site storage and backup	Two independent supply paths; technology-neutral (grid, solar or wind with batteries, hydro, geothermal; SMRs only where Part V conditions are met)
2 Compute	National inference sites; regional fine-tuning pool; trusted frontier access	At least two in-country sites with failover; small-island central case about 25 accelerators and ~50 kW (16-accelerator floor)
3 Data governance	Residency tiers; consent and access logs; national data exchange; federated research access	Tier 1 in-country or data embassy; Tier 2 in-country by default; Tier 3 federated; Tier 4 open
4 Models	Adapted open-weight models; national evaluation suites; model registry	Evaluation in each official language built with native speakers; system card and human appeal route for any rights-affecting use
5 Services (DPI)	Identity with non-digital alternatives; payments; data exchange; consent management; core registries; multichannel services	At least 20 services in P1, delivered by app, voice, SMS and assisted offices
6 Security	Zero-trust identity; national CERT and SOC; supply-chain assurance; offline backups and data embassies; post-quantum plan	Degraded operation of identity, payments and emergency information for at least 72 hours without international links
7 Oversight	Parliament; independent data-protection authority; AI audit function; courts; Results Ledger	Public register of every AI system the state uses, with purpose, legal basis and evaluation results

The proposed UN Shared Layer is deliberately thin, with six functions: common safety and evaluation standards; interoperability profiles for digital public infrastructure and data exchange; a voluntary registry of model and system cards; incident sharing and mutual assistance; verification and peer review on request; and an emergency compute reserve that member states and providers commit by contract or agreement for disaster response.

E.2.2 Interfaces

Registries stay with the agencies that own them and exchange data through a secure, logged, standards-based bus rather than a central database. Cross-border interfaces carry consent-based identity verification, payments between national rails and federated studies in which models travel to the data and only aggregated, privacy-tested results leave the jurisdiction; mutual recognition is agreed bilaterally or regionally. The interface to the Shared Layer carries standards, attestations, system cards and anonymized incident indicators. Raw national data never cross it. The interface to frontier providers is contractual: no training on national data without explicit agreement; customer-held encryption keys; contractual processing location; independent audit rights; incident notification within agreed hours; portability of data and fine-tuned weights; exit assistance; and more than one qualified provider.

E.2.3 Data rules

Data are classified into four residency tiers. Tier 1 (national security, biometrics, health records, child data) is stored and processed in-country or in a data embassy under national law, and never placed in general-purpose models. Tier 2 (personal data in routine services) is in-country by default, with offshore processing only under audited contracts. Tier 3 (de-identified statistics) may be shared through approved federated arrangements. Tier 4 (open data) is published. Citizens can see who accessed their data and why. A data-protection impact assessment is completed and published before data are collected. No government data may be used as collateral in any financing (Part XII).

E.2.4 Security controls

Part IV's threat model names six threat classes, each with primary controls: state-sponsored intrusion (zero trust, segmentation, a SOC with threat-intelligence sharing); ransomware and fraud (offline immutable backups, rehearsed recovery, transaction monitoring); supply-chain compromise (software bills of materials, signed builds, multi-vendor sourcing, hardware attestation); AI-specific attacks such as prompt injection, data poisoning and model theft (red-teaming, input and output filtering, data provenance); insider misuse (purpose-bound access, citizen-visible logs, audit and sanctions); and physical or systemic disruption (two or more sites, data embassies, satellite fallback, offline modes). Every node inventories its cryptography, adopts post-quantum standards as suppliers support them and designs for crypto-agility; long-lived identity, health and land records migrate first, and new identity documents and root certificates issued after 2028 should support post-quantum or hybrid schemes. Critical cryptographic hardware comes from more than one supplier, and mass revocation is rehearsed.

E.2.5 Human-accountability points

The host government decides at each of Part IV's four P1 gates: G1 (required laws in force and DPIA published), G2 (independent security accreditation), G3 (independent inclusion audit) and G4 (evaluation results and decision on continuation). A P1 Pilot Governance Board, chaired by the host government with the regional body and independent members, governs operations. Four legal instruments must be in force before services go live: a data-protection law with an independent, funded authority; a digital-identity law guaranteeing non-digital alternatives and limiting use of the identifier; a cybersecurity law with incident-reporting duties; and a public-sector AI rule requiring a register, impact assessment and human appeal. No one may be denied an entitlement for lack of a digital credential.

TABLE E-2 Applicable standards and frameworks: National AI Sovereignty Model and UN Shared Layer.

Standard or framework	What it provides	How Vision 2100 uses it	Status in the book
X-Road (Estonia; Estonia–Finland federation since 2018)	Decentralized, logged data exchange between registries	Reference pattern for the national data exchange and cross-border mutual recognition	Cited, Part IV
MOSIP	Open-source identity platform; 14 national rollouts by end-2025	Preferred class of mature digital public good for identity, with paid support	Cited, Part IV
GovStack building-block specifications	Vendor-neutral, reusable DPI building blocks	Starting point for Layer 5 specifications and procurement	Cited, Part IV
Universal DPI Safeguards Framework (UN Tech Envoy, UNDP, Digital Public Goods Alliance)	Rights-based guidance across the DPI lifecycle	Safeguards baseline for Layers 3, 5 and 7	Cited, Part IV
50-in-5 campaign definition of a safe, inclusive, interoperable DPI component	Common measure of DPI adoption	KPI definition (Appendix H)	Cited, Part IV
NIST FIPS 203 (key encapsulation), FIPS 204 and FIPS 205 (digital signatures), approved August 2024	Post-quantum cryptography	Layer 6 post-quantum migration and crypto-agility	Cited, Part IV
ISO/IEC 27001:2022, *Information security, cybersecurity and privacy protection — Information security management systems — Requirements* (published 24 October 2022)	Certifiable information-security management system	Candidate basis for the Gate G2 security accreditation of nodes, CERT and SOC	Verified for this appendix; for Part IV to adopt
EU AI Act (in force 1 August 2024; Annex III high-risk obligations moved to 2 December 2027 by the 2026 AI Omnibus)	Risk-based AI regulation	One model for the public-sector AI rule, adapted to national law	Cited, Part IV
African Union Continental AI Strategy (endorsed July 2024)	Continental priorities on strategies, talent, infrastructure, data, compute and protection from misuse	One model for national AI priorities, adapted to national law	Cited, Part IV
UNESCO Recommendation on the Ethics of Artificial Intelligence (adopted 23 November 2021 by UNESCO's 193 member states)	Global normative framework for AI ethics	Candidate common reference for Shared Layer safety and evaluation standards	Verified for this appendix; for Parts III and IV to adopt
Global Digital Compact (September 2024) and A/RES/79/325 (Scientific Panel and Global Dialogue on AI Governance)	Agreed UN mandates on digital cooperation and AI governance	Venues through which Shared Layer standards would be proposed; neither is a regulator	Cited, Parts III, IV

E.2.6 Connectivity layer and the HyperEdgeX sovereign edge node

Part IV (Section IV.9) adds a three-layer connectivity architecture beneath the National AI Sovereignty Model: Layer A, satellites in low Earth orbit; Layer B, high-altitude platforms in the stratosphere; and Layer C, nationally owned HyperEdgeX edge nodes on the ground. Every link terminates in a nationally controlled gateway, and each layer is procured from more than one supplier under the operator-neutral conditions in Part IV.

TABLE E-3 HyperEdgeX sovereign edge node and connectivity layer: reference specification (PROPOSAL; open design for comment; owning part: Part IV)

Element	Function	Minimum specification
Enclosure and cooling	Factory-built modular data centre	Air-cooled units of about 60 kW and about 120 kW IT load, or a two-phase immersion-cooled variant; water-free cooling where climate allows
Compute	Sovereign public-service inference (Layer 2)	Accelerators sized by the Part IV method; at least two nodes at separate sites per nation
Network	National gateway, internet exchange point (IXP) and radio access network	Local peering so domestic traffic stays in country; 4G/5G and fixed wireless; fibre where available; satellite and stratospheric backhaul
Energy	Microgrid with battery storage	On-site solar where feasible; battery storage scalable from kW to multi-MW; black-start capability; grid-interactive services
Security	Zero trust and post-quantum readiness	NIST FIPS 203–205 migration plan; hardware attestation; national key custody; tamper-evident logging
Lawful control	National legal authority over the node and its traffic	Licensed under national law; no foreign remote-disable capability; audited by the national oversight body (Layer 7)
Satellite links (Layer A)	Broadband, direct-to-cell and backup	At least two operators or one satellite and one terrestrial path for essential sites; continuity-of-service clause
Stratospheric links (Layer B)	Wide-area coverage and surge capacity	Bands identified for HIBS at WRC-23; evaluated option only until demonstrated at scale

The HyperEdgeX specification is an open reference design. It is to be published for comment, independently reviewed, and procured from more than one qualified manufacturer; the conflict-of-interest firewall in Appendix I applies.

E.3 Clean Power and Compute Corridor

Owning parts: Part V (sections V.3–V.9) and Part X (financing). Pilot: P2. Part V's corridor reference-architecture figure shows four columns: generate; balance and move; use in the corridor; and govern and verify, with every load reporting metered energy, emissions and water use to the Results Ledger.

E.3.1 Components

A corridor coordinates, in one geographic and contractual frame, new clean generation, storage and transmission serving households and clinics, an industrial park, a sovereign AI node and, where relevant, mineral processing and desalination. Industry is the main load; compute is a modest, flexible tenant. The corridor is technology-neutral: firm power may come from hydro, geothermal, interconnection, storage or, later and only after the IAEA Milestones gates, nuclear.

TABLE E-4 Clean Power and Compute Corridor: layer specification (PROPOSAL; phase-one sizing ILLUSTRATIVE). Owning part: Part V.

Layer	Components	Phase-one planning specification
Generate	Lowest-cost renewables plus the firm source selected by Part V's decision framework	200–500 MW of solar and wind with battery storage
Balance and move	Storage, transmission upgrades, efficiency	Largest unit no more than ~10% of system size; grid studies before financing
Use	Households and clinics first; industrial park; sovereign compute node; flexible loads	Compute campus of 20–50 MW IT load, excluding processors, sized down to anchored demand
Govern and verify	Corridor authority, regulator, grid codes, environmental conditions, data law; Results Ledger	Household tariffs and reliability must not worsen; all contracts published

E.3.2 Interfaces

Physical interfaces are the grid connection agreement, industrial power purchase agreements and the compute campus's power and cooling contracts. Contractual interfaces at financial close are a signed anchor offtake, a fixed-price construction contract, a grid connection agreement and a published household-impact analysis (Parts X and XII). The data interface is metered energy, emissions and water use for every load, reported to the Results Ledger. The compute node follows the National AI Sovereignty Model (E.2) and the Shared Layer's interoperability profiles.

E.3.3 Data rules

Corridor performance data (energy, emissions, water, tariffs, reliability, jobs by nationality and sex) are published. Compute workloads on the campus follow the residency tiers of E.2.3; public-service inference handling Tier 1 or Tier 2 data stays under national control even where commercial tenants share the campus. Contracts and guarantee terms are published, with redactions limited to legitimate commercial confidentiality and reviewed independently (Part X).

E.3.4 Security and safety controls

The compute node carries the Layer 6 controls of E.2.4. Physical assets need resilient siting against climate shocks, water-light cooling where water is stressed, and phased construction. Any nuclear element must meet five conditions (Part V): a comprehensive IAEA safeguards agreement with the Additional Protocol in force; a voluntary commitment not to enrich or reprocess on the host's territory, reciprocated by assured fuel supply; long-term fuel contracts from diversified suppliers, preferably leasing with take-back; participation in IAEA peer reviews; and adherence to the main safety, security and liability conventions. A funded waste plan from Milestones Phase 2 and a decommissioning fund from the first day of operation should be licence conditions. No corridor plan counts on nuclear power in a newcomer country before the late 2030s.

E.3.5 Human-accountability points

As proposed, the host owns and leads through a corridor authority; the regulator licenses; development banks decide their own lending; the IAEA advises only on request; no UN body owns or approves a corridor. Decision points are Gate 0 (October 2027), the financing decision (about 2029) with household-impact analysis and independent review, and Gate 1 (2030). Any nuclear option advances only past each Milestone, and past Milestone 1 only with documented, broad-based public support measured independently, including the real possibility of saying no (Part V).

Vision 2100's nuclear safety and nonproliferation panel defers to the IAEA and national regulators, who alone hold authority.

TABLE E-5 Applicable standards and frameworks: Clean Power and Compute Corridor.

Standard or framework	What it provides	How Vision 2100 uses it	Status in the book
IAEA Milestones Approach (three phases; 19 infrastructure issues; SMR annex in revised guidance)	Internationally accepted framework for newcomer nuclear programmes; typically 10–15 years from first consideration to operation	Gate for any nuclear element; stakeholder involvement treated as a decision gate	Cited, Parts V, XII
IAEA Integrated Nuclear Infrastructure Review (INIR) missions	Peer review at each Milestones stage	KPI: newcomer states with published INIR results	Cited, Part V
IAEA comprehensive safeguards agreement and Additional Protocol	Verification that nuclear material is not diverted	Condition of any nuclear element	Cited, Parts V, XI
IRENA cost and capacity-factor data (2024)	Benchmark renewable capex and performance	Calibration of the LCOE model (Appendix D)	Cited, Part X
Tracking SDG7 (IRENA, IEA, UN DESA, World Bank, WHO)	Custodian measure of electricity access	Baseline for the access indicator (Appendix H)	Cited, Parts I, V, XII
Development-bank procurement, safeguard and sanctions systems	Fiduciary and environmental-social rules of the co-lender	Applied to every corridor project; no new fiduciary standard is invented	Cited, Part X
National AI Sovereignty Model (E.2)	Node design, data tiers and security	Applied to the corridor's compute node	Cited, Parts IV, V

E.4 Six-layer shield and the prevention workflow

Owning part: Part VI (sections VI.4–VI.7). Pilot: P3 Prevention Early-Warning for the workflow; the shield applies only inside Security Council-mandated peace operations. Part VI's prevention-workflow figure shows the five stages from signal to verification with their proposed time standards, and its shield matrix sets each layer against its precedents and safeguards.

E.4.1 Components

The proposed prevention operating model has five stages, each with a responsible actor, a time standard and a safeguard gate. It plugs into existing regional systems, national peace infrastructures and the Secretary-General's good offices; it does not replace them.

TABLE E-6 Prevention workflow: stages, owners and proposed time standards (PROPOSAL; time standards are P3 targets to be validated in pilot). Owning part: Part VI, section VI.4.

Stage	What happens	Responsible actor	Time standard and safeguard
1 Signal	Field reports, event data, prices, water and vegetation indices, displacement and incitement monitoring feed district-level risk scores	Regional analysis hub	Areas and periods only; never individuals

Stage	What happens	Responsible actor	Time standard and safeguard
2 Human analysis	Analysts, with women's, youth and civil-society networks, review every elevated signal and may overrule a model either way	Regional cell of 10–14 analysts and data staff	Reason for every overrule logged; second analyst concurs on any "escalate" alert
3 Decision	Watch, engage or escalate (to the regional organization, Resident Coordinator or Secretary-General)	A named official	Decision within 72 hours of alert; reasons recorded
4 Mediation and response	Pre-approved options funded from a standing window: insider and women mediators, dialogue, water-point repair, cash-for-work, rumor-control radio	Regional body; mediators; Prevention and Mediation Fund window	First engagement within 14 days of decision
5 Verification	Independent review of whether violence fell against a comparison area and whether the response caused harm	Independent reviewer	At 90 and 180 days; results to the Results Ledger and model recalibration

When prevention fails and the Security Council mandates a peace operation, Vision 2100 proposes that missions be equipped with a six-layer shield of non-lethal technology. The shield adds to peacekeepers; it does not replace them.

TABLE E-7 Six-layer shield: capabilities and binding safeguards (PROPOSAL). Owning part: Part VI, section VI.5.

Layer	Capability	Binding safeguard
Watch	Satellite tasking, unarmed drones, fixed cameras, acoustic sensors; analysts budgeted first; jamming-resilient	Only under mandate and host consent; no facial recognition; limited retention
Warn	The section E.4 workflow at mission scale, feeding joint operations and analysis centres and existing platforms such as SAGE	Area-level risk only; human gate; documented models
Protect	Sensors, passive drone detection and alerts at schools, hospitals, water systems and camps (protective technology for the Children's Shield)	Detects and alerts; never engages; counter-drone limited to detection, warning and legally reviewed non-kinetic measures
Deliver	Medical resupply to cut-off clinics; robotic logistics on dangerous routes; route sensing	Humanitarian principles; agreed with humanitarian agencies; never military logistics
Clear	Drone survey, ground-penetrating radar and AI-assisted prioritization of suspected hazardous areas	Land released only after human quality assurance under the International Mine Action Standards; no algorithm declares land safe
Verify	Tamper-evident record merging the other layers; agreed products to all parties at once	Verification scope, means, attribution rules and dispute channel fixed in the ceasefire agreement in advance

E.4.2 Interfaces

P3 sits inside an existing regional early-warning framework; the hub is hosted by the regional organization. Its outputs go to named decision-makers and to the Secretary-General's good offices on escalation; its response interface is a pre-positioned window within the Peacebuilding

Fund. Within missions, Warn feeds the joint operations and joint analysis centres. The shield's legal interface is a standard technology annex to status-of-forces agreements covering sensor and aircraft categories, airspace and frequency coordination, host-state data ownership and access, limits on third-state sharing, and suspension. Capabilities would be drawn from a Peace Technology Pool modeled on the Peacekeeping Capability Readiness System, with pledged packages, readiness levels and verification.

E.4.3 Data rules

As proposed, each P3 host state signs a data-sharing agreement before operations. It fixes purpose; storage in the region under host-state law; raw-data access for the hub only; retention limits; the ban on individual-level targeting; and each state's right to suspend. Host governments see outputs, not raw data. No facial recognition, no interception of private communications, and no data sharing with intelligence or security services. Through the Shared Layer the UN provides standards and audit and holds no one's data. A public annual report gives aggregate results.

E.4.4 Security controls

Community monitors are protected by anonymity, duty-of-care protocols and an evacuation plan. Analysts conduct a do-no-harm review of whether an alert could inflame tension or endanger informants. Shield hardware is specified for jamming resilience and budgeted for losses. Raw data stay with the hub; sharing with third states is prohibited. Open standards and multiple contributors prevent vendor capture.

E.4.5 Human-accountability points

Six binding rules govern any model used in P3 or under the UN flag: areas, not people; a human gate on every output; openly calibrated thresholds reviewed quarterly; do-no-harm review; published model documentation; and fluent human reviewers for hate-speech monitoring. The P3 Pilot Governance Board, of host states and the regional organization with civil-society seats and UN advisers, sets policy and thresholds; an independent ethics and data-protection panel holds a veto over new data sources; day-to-day decisions sit with the regional early-warning director. Vision 2100's human rights and ethics panel holds a binding stop recommendation where rights findings are unremedied.

> **THE BRIGHT LINE**
>
> Under the UN flag, autonomous and AI-enabled systems are non-lethal only. No UN-operated or UN-contributed system may select or engage a human target, none may be armed, and a named person is accountable for every decision about force (Part VI).

TABLE E-8 Applicable standards and frameworks: six-layer shield and prevention workflow.

Standard or framework	What it provides	How Vision 2100 uses it	Status in the book
UN Personal Data Protection and Privacy Principles (HLCM, 11 October 2018)	Purpose specification, proportionality, retention limits and accountability for UN processing of personal data	Basis of P3's data rules and the six model rules	Cited, Part VI
UN peacekeeping Strategy for the Digital Transformation of Peacekeeping (2021)	Commitment to ethical review and a complaints mechanism	Context for Warn and Protect in missions	Cited, Part VI

Standard or framework	What it provides	How Vision 2100 uses it	Status in the book
International Mine Action Standards	Quality-assurance standard for land release	Condition for the Clear layer	Cited, Part VI
Status-of-forces agreements and Security Council mandates	Legal basis for technology in missions	Proposed standard technology annex to SOFAs	Cited, Part VI
Peacekeeping Capability Readiness System (2015)	Pledge register with readiness levels and verification	Template for the Peace Technology Pool	Cited, Part VI
Peacebuilding Fund terms of reference and Immediate Response Facility	Authority for fast prevention funding	Host for the Prevention and Mediation Fund window	Cited, Parts VI, X
WMO Early Warnings for All	Multi-hazard early-warning base (119 countries in 2025)	Natural-hazard foundation P3 extends to conflict risk, with stronger safeguards	Cited, Part XII
A/RES/80/57 and the CCW Group of Governmental Experts on lethal autonomous weapons	Unresolved intergovernmental debate on autonomy in weapons	Context only; Vision 2100's bright line is compatible with every position	Cited, Part VI

E.5 Results Ledger

Owning part: Part IX (section IX.3). Pilot: P5. Part IX's architecture figure shows five horizontal layers (sources, ledger core, analysis, judgment, public), and its workflow figure follows one hypothetical rural water scheme from appropriation to verified outcome.

E.5.1 Components

The proposed Results Ledger is a public, standards-based record linking appropriation, contract, milestone, payment, independent inspection and outcome. It records events, not opinions: signed, timestamped entries tied to a stable identifier.

TABLE E-9 **Results Ledger: architecture layers and core data objects (PROPOSAL). Owning part: Part IX, sections IX.3.3–IX.3.4.**

Layer or object	Specification	Source of record	Open standard
Sources layer	Existing budget, procurement, treasury, inspection and outcome systems stay where they are and remain authoritative	Host or UN systems	—
Ledger core	Append-only, hash-chained, signed event log; periodic whole-log fingerprints held by independent custodians (SAI, university, civil-society monitor); no public blockchain	Ledger operator	—
Analysis layer	Rule checks for known patterns; AI-assisted anomaly ranking; geospatial comparison of imagery with declared progress; every flag with plain-language reasons and a confidence score	Ledger operator	—
Judgment layer	Trained human reviewers close flags as explained or refer them to the competent body	Review unit; oversight board	—
Public layer	Aggregates and contract data; no personal data; flags published only after review	Ledger operator	—

Layer or object	Specification	Source of record	Open standard
Appropriation object	Mandate or budget line, amount, purpose, outcome target, review date	Legislature or governing body	Mandate registry; budget classification
Contract object	Buyer, supplier, beneficial owner, method, value, amendments	Procurement system	OCDS; OC4IDS for works
Milestone object	Deliverable, due and claimed dates, evidence files	Implementing agency	OC4IDS implementation fields
Payment object	Amount, date, payee, linked milestone	Treasury or UN finance system	IPSAS-consistent accounting; IATI transactions
Inspection object	Inspector, method, findings, photos, geolocation	Engineer, SAI, OIOS, third-party monitor	Signed inspection record (to be defined)
Outcome object	Service indicator, baseline, measured value, method	Line ministry, survey, administrative data	SDG indicator definitions where possible

E.5.2 Interfaces

The UN ledger is proposed as the public face of the UN80 mandate registry: each mandate becomes an appropriation record, each program and contract a linked record, each review clause a scheduled verification event. OIOS and the Board of Auditors remain the independent verifiers. The national ledger connects to the finance ministry, procurement authority and supreme audit institution, with the development bank financing the program as the funding link. Through the Shared Layer, the UN role is limited to open standards, reference software and peer review. Part X proposes that every Vision 2100 financing flow be registered on the ledger with its source, instrument, terms, recipient, procurement method, milestones and verified results.

E.5.3 Data rules

Four rules make the model useful. One identifier follows the money from appropriation to outcome. No payment is final unless it links to a milestone, and no milestone closes without an inspection, except under a stated and logged exemption. Corrections are new entries, never edits. Personal data about individual beneficiaries never enter the public ledger, which holds aggregates and the records of organizations and officials acting in their public capacity. National data stay under national law on national infrastructure. Justified commercial or security redactions are logged with their legal basis; defense procurement can be excluded at first, with the excluded value published.

E.5.4 Security controls

Independent log witnesses, signed entries, penetration tests, an independent security audit and published incident disclosure protect the ledger. The operator and the national CERT share responsibility. The tamper-evident log makes later alteration detectable; it cannot detect false data entered at source, which is why physical inspection and outcome verification remain in the chain.

E.5.5 Human-accountability points

AI ranks and explains; people decide. No sanction, debarment, prosecution or public naming follows from an algorithm alone. Everyone named in a finding has a right to see the evidence, to

reply before publication and to appeal to a body independent of the ledger operator. An independent oversight board (the SAI, the data-protection authority, a judge or retired judge, civil society and technical experts) reviews models, flag statistics and referral patterns each year and publishes the results. For Pilot A, the decision to publish one Secretariat program appears to fall within the Secretary-General's authority, subject to confirmation by the Office of Legal Affairs; for Pilot B, the host government decides, and the P5 Pilot Governance Board for Pilot B is chaired by the host government.

TABLE E-10 Applicable standards and frameworks: Results Ledger.

Standard or framework	What it provides	How Vision 2100 uses it	Status in the book
Open Contracting Data Standard (OCDS)	Structured publication of tender, award, contract and implementation	Contract object; justified, logged redaction	Cited, Part IX
Open Contracting for Infrastructure Data Standard (OC4IDS)	Infrastructure-project profile of open contracting	Contract and milestone objects for works; inspection and outcome extensions to be proposed	Cited, Part IX
International Aid Transparency Initiative (IATI, launched Accra 2008; UN development system committed to publish in 2017)	Open activity and transaction data	Activity-level and payment data; no new standard invented	Cited, Part IX
IPSAS	Public-sector accounting standards	Consistency of payment records	Cited, Part IX
UN80 mandate-review resolution (31 March 2026)	Mandate registry and review clauses	Appropriation objects and verification events for the UN ledger	Cited, Parts III, IX
OIOS and the UN Board of Auditors	Internal and external audit of the UN	Independent validation of the UN pilot	Cited, Part IX
PEFA framework	Assessment of public financial management	Baselines for audit and legislative-scrutiny indicators	Cited, Part IX
INTOSAI and its development arm; regional SAI networks	Professional standards and training for supreme audit institutions	Training of SAI staff to audit an algorithm	Cited, Part IX

E.6 Minerals-to-Industry value chain

Owning part: Part V (sections V.10–V.14). Pilot: P4. Part V's value-chain figure shows the staged lithium-to-battery chain, from mining through refining and precursor materials to cells and packs, with the requirements and realistic horizon of each step.

E.6.1 Components

The framework stages a lithium or copper value chain from extraction to first processing in the producing country, then to components only if each step meets its KPIs. P4's first step is a single processing plant, such as lithium hydroxide refining or copper rod and cable, sized to existing mine output, with power from a P2-type supply where available. Supporting components are a community and environmental baseline, a community benefit fund, a skills pipeline through national colleges and independent environmental monitoring.

E.6.2 Interfaces

The upstream interface is the operating mine and its licence terms, where negotiated processing commitments are preferred to export bans because they are more clearly compatible with trade rules and more durable. The power interface is a P2 corridor or contracted supply. The market interface is offtake with price floors. The public interface is the Results Ledger, where all contracts, payments and community-benefit flows are published.

E.6.3 Data rules

Water-quality and tailings monitoring are continuous and public. Fiscal and contract terms, payments and beneficial owners are published. Performance is reported as domestic value added per tonne, national and women's share of skilled jobs, water and emissions per tonne, tailings incidents and grievance resolution time.

E.6.4 Safety and environmental controls

Vision 2100 proposes that its pilots require independent water-balance studies before permits, continuous public monitoring of water quality and tailings, design to the highest available international tailings standard with an independent engineer of record, and independent assessment against at least one credible multi-stakeholder standard. The choice of standard is the host's; independent verification and publication are not optional. Closure funds are bonded.

E.6.5 Human-accountability points

Where Indigenous peoples are affected, free, prior and informed consent, as set out in the UN Declaration on the Rights of Indigenous Peoples, is a condition of Vision 2100 support, sought before decisions with the real possibility of refusal. P4's Gate 0 is a screen-stage decision; a community-consent gate follows before feasibility; the financing gate (2030–2031) requires signed offtake, a published community benefit agreement and independent environmental review. No plant design, offtake negotiation or investor selection occurs before the consent gate. Host ministries lead; the environmental regulator permits; communities and Indigenous bodies hold consent rights.

TABLE E-11 Applicable standards and frameworks: Minerals-to-Industry value chain.

Standard or framework	What it provides	How Vision 2100 uses it	Status in the book
Initiative for Responsible Mining Assurance (IRMA) Standard	Independently audited, multi-stakeholder standard for mine sites	Named example of a credible multi-stakeholder standard against which independent assessment is required	Cited, Part V
UN Declaration on the Rights of Indigenous Peoples (free, prior and informed consent)	Consent rights of Indigenous peoples	Condition of support; consent gate before feasibility	Cited, Part V
Global Industry Standard on Tailings Management (published August 2020 by ICMM with UNEP and PRI)	Tailings facility safety, accountability and disclosure, with third-party assurance	Candidate for "the highest available international tailings standard"	Verified for this appendix; for Part V to adopt
EITI Standard (2023 edition, applied from 1 January 2025)	Extractive-sector revenue, contract and beneficial-ownership transparency, with an energy-transition theme	Candidate framework for P4 revenue and contract publication alongside the Results Ledger	Verified for this appendix; for Part V to adopt

Standard or framework	What it provides	How Vision 2100 uses it	Status in the book
GATT rules on export restrictions, as applied by the WTO Indonesia nickel panel (2022)	Trade-law limits on export bans	Basis for preferring negotiated processing commitments, royalties and export taxes where bound commitments permit	Cited, Part V
OCDS and the Results Ledger (E.5)	Contract and payment publication	All P4 contracts and community-benefit flows	Cited, Parts V, IX

E.7 Cross-architecture controls

The five architectures share one control set, which the Steering Board charter would make binding on any pilot Vision 2100 supports.

TABLE E-12 **Controls common to all five architectures (PROPOSAL).**

Control	Requirement	Where specified
Host consent and ownership	Written host request; host jurisdiction over sensitive data; right to suspend	Parts IV, VI, XII
Data-protection impact assessment	Published before collecting personal data	Parts IV, IX, XIII
Vendor neutrality	Open standards; multi-vendor tenders; exit and portability clauses; technical-panel review of specifications	Parts IV, XII, XIII
Human accountability	No consequential decision by algorithm; documented models; right of reply and appeal	Parts IV, VI, IX
Non-lethal line	No armed or target-selecting system under the UN flag	Part VI
Independent oversight	Rights panel binding stop; oversight boards; independent evaluation	Parts VI, IX, XII
Publication	Contracts, spending, incidents and results on the Results Ledger, including stopped pilots	Parts IX, X, XII
Conflict-of-interest firewall	A113 Partners and affiliates are never supplier, financier or transaction adviser to a pilot they help design	Parts X, XII, XIII

APPENDIX F

F

INSTITUTIONAL DECISION-RIGHTS MATRIX

Who Decides What: Initiatives, Pilots and Action Classes

THE RULE BEHIND THE MATRIX

A Secretary-General can convene, warn, mediate, propose, report, manage the Secretariat and publish results. A Secretary-General cannot create pillars, amend the Charter or command member states. Every Vision 2100 initiative is therefore assigned to the body that must decide it, and every step to the lowest level of authority able to take it.

F.1 Purpose and sources

This appendix consolidates the decision rights set out across the book. Part III is the master source for the initiative-level matrix; Part VI adds decision rights for peace operations, Part IX for the Results Ledger, Part X for finance, Part XII for gates across the horizons, and Part XIII for action classes in the first year. Where this appendix and Part III differ, Part III governs. Every assignment is an classification by A113 Partners, based on the UN Charter (Articles 17, 97–101 and 108), and is to be validated by independent UN-law review before it is relied on (Part III; Part XIII, Workstream 1).

The legal anchors are as follows (sourced in Part III). Article 97 makes the Secretary-General the chief administrative officer. Article 98 lets the General Assembly and the Councils entrust the office with other functions. Article 99 lets the Secretary-General bring to the Security Council's attention any matter that may threaten international peace and security; it compels attention, not action. Article 100 protects the office from instruction by any government. Article 101 lets the Secretary-General appoint staff under regulations the Assembly sets. Article 17 gives the Assembly, not the Secretary-General, the power to approve the budget. Article 108 requires any Charter amendment to be adopted by two-thirds of the General Assembly and ratified by two-thirds of member states, including all five permanent members.

◆ DOCUMENTED POSITION In her General Assembly dialogue of 20 August 2026, Ambassador A-Baki acknowledged that the Secretary-General cannot alter the Charter alone, while describing the

office as a platform to build momentum (Part III). She made no commitment on Article 99 and set out no plan to fund the human-rights pillar. The criteria, funds and assignments in this appendix are Vision 2100 proposals, not her commitments.

F.2 Legend

TABLE F-1 **Legend for the decision-rights matrix.**

Symbol or term	Meaning
●	Decides or acts: the body whose decision is necessary for the step
◐	Proposes, convenes, consents, funds or must participate, but does not decide alone
Blank	No formal role
SG alone	The Secretary-General acting under the office's own authority (Charter Articles 97–101), within existing mandates and budgets
General Assembly	Including the Fifth Committee for budgets and any assessed funding
Security Council	Including mission mandates and the Council's own working methods
Charter amendment	Article 108: two-thirds of the Assembly plus ratification by two-thirds of members, including all permanent members
Sovereign governments	Member states acting individually (host consent, national law, contributions, ratification) or together outside UN organs
Independent institutions	Bodies with their own governing organs: development-bank and IMF boards, the IAEA, specialized agencies and funds, regional organizations, supreme audit institutions, and affected communities where consent rights apply

F.3 Consolidated decision-rights matrix

ILLUSTRATIVE The matrix extends Part III's five decision tiers with a sixth column for independent institutions, drawn from Parts IV, V, VI, IX and X. Initiatives are listed by the part that develops them.

TABLE F-2 **Consolidated decision-rights matrix: Vision 2100 initiatives by deciding body (ILLUSTRATIVE assignment, to be validated by UN legal review). Master source: Part III, section III.4; independent-institution column from the parts named.**

Initiative (part)	SG alone	General Assembly	Security Council	Charter amendment	Sovereign governments	Independent institutions
Good offices, envoys, personal mediation (VI)	●		◐		◐ consent of parties	◐ regional organizations lead where they have standing
Article 99 referrals and published criteria (III)	●		◐			
Annual report on the costs of Council deadlock (III)	●		◐			
Secretariat AI use policy; data-protection standards for the Secretariat (III, VI)	●					◐ system-wide through HLCM

Initiative (part)	SG alone	General Assembly	Security Council	Charter amendment	Sovereign governments	Independent institutions
Women at Every Table in SG-convened processes (VIII)	●				◐	
Results Ledger for Secretariat programs, P5 Pilot A (IX)	● (subject to Office of Legal Affairs confirmation)	◐				◐ OIOS and Board of Auditors validate
Results Ledger extended to funds, programmes and agencies (IX)	◐	◐				● their governing bodies
Results Ledger extended to all mandates or tied to assessed budgets (IX)	◐	●	◐			
National Results Ledger, P5 Pilot B (IX)					● host government	◐ supreme audit institution; financing development bank
Technology for Peace and Security as a cross-cutting priority (III)	◐ coordination office	●			◐	
"Fourth pillar" status (III)	◐	●			◐	
UN Shared Layer standards and AI governance (IV)	◐ convene, propose, align Secretariat	● recognition; any assessed funding			● adoption, national law	◐ ITU and agencies develop technical standards under their own governing bodies
Emergency compute reserve (IV)	◐	◐			● commit by agreement	◐ providers commit by contract
Prevention Early-Warning pilot, P3 (VI)	● escalation and good offices				● each host state for its territory	● regional organization hosts the unit
Six-layer shield in peace operations (VI)	◐	◐ budgets	● mandates		● host consent (SOFA); contributors	
SOFA technology annex (VI)	◐ drafts template		◐ mandate reference		● host state	
Peace Technology Pool (VI)	◐	● financing and reimbursement rates	◐		● pledges	
Prevention and Mediation Fund, as a window within the Peacebuilding Fund (VI, X)	◐ eligibility under existing terms	● if assessed			● if voluntary	
Mothers and Children Peace Fund; Children's Shield (VIII design; VI technology)	◐	◐	◐		●	◐ existing fund managers

Initiative (part)	SG alone	General Assembly	Security Council	Charter amendment	Sovereign governments	Independent institutions
Human-rights pillar funding (III)	● shield from disproportionate cuts; report	● move core functions to assessed funding			● multi-year voluntary funding	
Council working-methods reforms (III)	◐		●			
Veto restraint (France–Mexico initiative; ACT Code; GA veto initiative) (III)	◐	◐	◐		● P5 pledges; state adherence	
Council enlargement or veto change (III)	◐	●	◐	●	● ratification	
Debt-for-development review and standardized swap terms (III, X)	● convene and publish (with consent)				● each debtor and creditor	◐ development banks; guarantors
MDB capital, concessional windows, SDR rechanneling (X)	◐ advocate				◐ shareholders	● MDB and IMF boards
Sovereign AI nodes, P1 (IV)	◐				●	◐ regional bodies for shared layers; MDBs and climate funds
Clean Power and Compute Corridors, P2 (V)	◐ convene, report				● host; regulator licenses	● development banks decide lending; ◐ IAEA advises on request
Any nuclear element (V)	◐				● host; national regulator licenses	◐ IAEA (Milestones, INIR, safeguards)
Minerals-to-Industry Framework, P4 (V)	◐				● host ministries; regulator permits	● communities' consent where it applies; ◐ UNCTAD, UNIDO, regional commissions on request
Americas Compact and regional compacts (VII)	◐				●	◐ regional bodies and banks
Royal Compact; Council of Long-Term Stewards (XI)	◐				● voluntary	

Three patterns stand out (Part III). The Secretary-General can start almost everything in this book but finish very little alone. The most transformative items, the Shared Layer, the Peace Technology Pool and the six-layer shield, need both an intergovernmental decision and willing member states. Only Council enlargement and veto change require a Charter amendment, and Vision 2100 does not depend on them. Part X adds a fourth: decision rights over finance lie almost entirely outside the Secretary-General's office, with development-bank and IMF shareholders and boards and with the sovereign governments that borrow, guarantee and contract.

F.4 Decision rights across the horizons

Part XII assigns the lead actor for each horizon. "Lead" means the actor whose decision is necessary; others consent, advise or fund.

TABLE F-3 Lead decision rights by horizon (PROPOSAL). Owning part: Part XII, section XII.2.1.

Actor	FOUND 2026–2030	PROVE 2031–2040	CONNECT 2041–2060	TRANSFORM / SUSTAIN 2061–2100
A113 Partners, civil society	Convene; research; interim secretariat; P5 prototype	Hand secretariat to an independent foundation (registered 2029, transfer complete by 2031); evaluate	Independent monitoring	Watchdog and stewardship role
Voluntary national governments	Request and own pilots; license sites	Lead national replication	Interconnect via agreements	Own and renew assets
Regional bodies and banks	Co-design compacts; project preparation	Finance regional replication	Operate corridors and compacts	Regional standards bodies
UN Secretariat and agencies	Convene; technical advice (IAEA, ITU, UNDP, WMO); report	Host Shared Layer services within mandates	Shared Layer routine operations	Maintain verification and reserves
General Assembly, Security Council	Priority resolution (GA, sought no earlier than 2028); no new organs	Shared Layer and Peace Technology Pool decisions (GA); technology in mission mandates (SC)	Institutional adaptation	Any Charter change (Article 108)

F.5 The governance bodies of Vision 2100

Vision 2100 distinguishes three kinds of body, and none has authority over any government or UN organ.

- **The Vision 2100 Steering Board** governs the Vision 2100 initiative. It has 11–13 members on staggered three-year terms, an independent majority, members from every UN regional group, at least half women, at least two under 35 and at least two from small or resource-constrained states; A113 Partners holds no more than two seats and no veto. An interim steering group of five to seven, with a majority unaffiliated with A113 Partners, acts until the charter is adopted, targeted for about April 2027. At each gate the Board decides whether Vision 2100 continues to support a pilot, approves the plan and budget, appoints the independent evaluator and owns the book's revision cycle (Parts XII, XIII).
- **Pilot Governance Boards**, one per pilot, govern each pilot's operations. Each is chaired or co-chaired by the host government, with the relevant regional body, independent members and, where relevant, the UN entity. The P3 Pilot Governance Board comprises the host states and the regional organization, with civil-society seats and UN advisers (Parts IV, VI, IX, X).
- **Four independent advisory panels** (technical; human rights and ethics; nuclear safety and nonproliferation; finance and integrity) of five to nine members each give published opinions. The human rights and ethics panel holds a binding stop recommendation where rights findings are unremedied; the nuclear panel defers to the IAEA and national regulators, who alone hold authority (Part XII).

Host governments retain sovereign decision rights at every stage. A Steering Board decision to stop supporting a pilot does not stop a host from continuing on its own; a host's decision to withdraw ends Vision 2100's involvement immediately and is recorded neutrally (Part XIII).

F.6 Pilot-level decision rights: who decides at each gate

Each pilot passes through a common Gate 0 in October 2027 and then its own stage gates before Gate 1 (December 2030) and Gate 2 (2040, at the PROVE-to-CONNECT transition). A mid-FOUND review in mid-2029 and the PROVE readiness test in October 2031 are checkpoints, not gates (Part XIV). The table shows who decides at each.

TABLE F-4 Pilot-level decision rights at each gate (PROPOSAL). ● decides; ◐ must consent, review or fund. Owning parts: Parts IV, V, VI, IX, XII and XIII.

Gate (date)	Host government	Pilot Governance Board	Vision 2100 Steering Board	Financiers	Others
Gate 0, all pilots (Oct 2027)	● written request; ◐ agrees evaluation design	— (formed as the pilot proceeds)	● proceed, redesign or stop Vision 2100 support (hold recorded as a status where no host request exists)	◐ named sources for ≥60% of next phase; for P2 and P4, indicative DFI interest in construction	◐ panels: rights review, vendor neutrality, integrity, nuclear timing
P1 G1: laws in force, DPIA published	●	◐	◐ continued support		◐ parliament where law requires
P1 G2: security accreditation	●	◐		◐ recurrent budget confirmed	◐ independent accreditor
P1 G3: inclusion audit	●	◐			◐ independent auditor
P1 G4: evaluation and continuation	●	◐	◐ replication support		◐ independent evaluator
P2 financing decision (~2029)	● with regulator and utility	◐	◐ continued support	● lenders, guarantors, equity on their own approvals	◐ independent review; household-impact analysis
P2 nuclear option (if chosen)	● at each Milestone	◐	◐ endorsement only with nuclear panel confirmation	◐	● national regulator; ◐ IAEA on request; public consent
P3 rights-review gate before live operation (2028)	● each host state	● (host states and regional organization)	◐ continued support		● rights panel binding stop; ◐ ethics and data-protection panel veto on new data sources
P4 community-consent gate (before feasibility)	●	◐	◐ continued support		● affected communities and Indigenous bodies where FPIC applies
P4 financing gate (2030–2031)	●	◐	◐ continued support	● offtakers, lenders, export-credit agencies	◐ independent environmental review
P5 publication gate (2028)	● Pilot B host; ● SG or UN entity head for Pilot A	● Pilot B board	◐ continued support	◐ financing development bank (Pilot B)	◐ OIOS, Board of Auditors, SAI, oversight board

Gate (date)	Host government	Pilot Governance Board	Vision 2100 Steering Board	Financiers	Others
Gate 1, FOUND to PROVE (December 2030)	● still requesting the pilot	◐	●	◐ ≥60% of PROVE financing path identified	◐ independent evaluator; panels
Gate 2, PROVE to CONNECT (2040)	●	◐	●	◐ costs within 25% of plan or explained	◐ independent evaluator

Gate 0 produces one of three decisions, with hold as a status (Part XIII). **Proceed** applies when all six criteria are met: host request; feasibility and ethics review with no unremedied finding; financing path; evaluation design; vendor neutrality and integrity; and, where nuclear is mentioned, confirmation that it is treated only as a separately appraised later option. **Redesign** applies when the host request stands but other criteria can still be met; conditions and a re-review within six months are set. **Hold** is recorded, as a status rather than a judgment on the pilot's merit, when there is no host request or the host has paused. **Stop** applies when a rights, safety or integrity finding cannot be remedied or the evidence shows the pilot cannot achieve its objective. Decisions are published with reasons, panel opinions and recorded recusals, and a government hears the outcome for its own pilot before anyone else.

Within the first year, four internal checkpoints precede Gate 0 (Part XIII): a day-90 funding test (interim steering group); a day-180 governance test (interim steering group); a day-180 pilot-pipeline test (Steering Board); and a day-270 dossier-readiness review (Program Director, reported to the Board).

F.7 The three action classes

Every first-year activity in Part XIII carries one of three action classes. The classes extend the decision-rights logic of Part III and the authority rule of Part XII to the work of the Vision 2100 secretariat itself.

TABLE F-5 **Action classes for Vision 2100 activities (PROPOSAL). Owning part: Part XIII, section 1.3.**

Class	Who can act	Typical activities	What A113 Partners may say about it
A	A113 Partners and the interim secretariat, independently	Publish, research, draft, convene experts, prototype on public data, raise seed funds, design	"We will do this."
B	Voluntary partners: governments, regional bodies, development banks, universities, philanthropies	Host requests, letters of intent, data agreements, project-preparation grants, side-event sponsorship, peer review	"We will ask; the partner decides."
C	A future Secretary-General or authorized UN bodies (General Assembly, Security Council, agency governing bodies)	Secretariat pilots, use of the UN name, trust-fund windows, recognition of priorities, mandates	"We will prepare material that the office or body may choose to use."

The classes map onto the matrix. Class A covers only what needs no one's permission: the architecture notes, the sizing method, the ledger prototype on public data and the evidence

register. Class B covers everything in the "sovereign governments" and "independent institutions" columns. Class C covers everything in the "SG alone", "General Assembly", "Security Council" and "Charter amendment" columns. A113 Partners cannot act for the UN, represent member-state positions, choose hosts or claim any endorsement. Any Class C matter is directed to the office of the Secretary-General as it stands after 1 January 2027 and is framed identically whoever holds it.

TABLE F-6 First-year workstreams by main action class (PROPOSAL). Owning part: Part XIII, section 2.1.

Workstream	Main class	Deciding party beyond the secretariat
WS1 Governance and charter	A → B	Independent members accepting seats; foundation registration
WS2 Evidence and Baseline Dashboard	A	Statistical reviewers (voluntary)
WS3 Independent advisory panels	A → B	Nominees accepting appointment
WS4 Coalition and stakeholder engagement	B	Governments, regional bodies
WS5–WS8 P1–P4 preparation	B	Host governments; communities (P4); regional organization (P3)
WS9 P5 preparation	A → B, C	Host government (Pilot B); Secretary-General or UN entity head (Pilot A)
WS10 Financing and facility design	A → B	Every funder and anchor partner
WS11 Communications	A	—
WS12 Monitoring, evaluation and the blueprint's Results Ledger	A → B	Independent evaluator

F.8 Whether or not the Ambassador becomes Secretary-General

The matrix holds either way (Part XII). If Ambassador A-Baki is selected, the Secretary-General could use the office's convening, reporting and good-offices powers to advance proposals within existing mandates; she has made no commitment to any specific Vision 2100 proposal, and none is implied. If she is not, every FOUND element in the "sovereign governments" and "independent institutions" columns remains feasible, and the Class C items are offered identically to whoever holds the office. The cost is slower progress on UN-level elements, not failure of the whole.

APPENDIX G

G

STRATEGIC RISKS, SAFEGUARDS AND UNRESOLVED DECISIONS

What Could Go Wrong, What Protects Against It, and What Remains to Be Decided

WHAT THIS APPENDIX DOES

Vision 2100 recommends; others decide. This appendix brings together in one place the risks the book identifies, the safeguards it proposes against them, the decisions still open and those already taken, and the approvals that must be given in writing before the book is published. It records no approval, agreement or commitment that has not been given.

G.1 Consolidated strategic risk matrix

ILLUSTRATIVE The master risk matrix is the one in Part XII (Section XII.7). It is reproduced here without change of substance. Likelihood (L) and impact (I) are each scored from 1 to 5 over the FOUND horizon (2026–2030). The scores are the authors' initial judgment, not a measurement, and are to be re-scored by the four independent advisory panels at Gate 0 (October 2027) and annually thereafter. Part XII sets the escalation rule: a score of 16 or more is owned at the level of the Vision 2100 Steering Board, a score of 10 to 15 by a panel, and lower scores by workstream leads or, for pilot operations, by the relevant Pilot Governance Board.

TABLE G-1 **Consolidated strategic risk matrix, FOUND horizon (ILLUSTRATIVE — authors' initial scoring; master source Part XII, Section XII.7)**

Risk	L×I (score)	Description	Mitigation	Trigger and corrective action	Owner
R1 Geopolitical resistance	4×4 (16)	Major powers see Vision 2100 as serving rivals	Technology-neutral design; cross-regional co-sponsors; no side-taking	Co-sponsor withdrawal: pause UN-track asks, continue voluntary pilots	Steering Board
R2 Technological dependence	4×3 (12)	Hosts locked to one vendor or country	Open standards; multi-vendor tenders; exit clauses	Single-supplier share above 50%: re-tender	Technical panel

Risk	L×I (score)	Description	Mitigation	Trigger and corrective action	Owner
R3 Sovereignty concerns	4×4 (16)	Fear that the UN or donors will control data or assets	Host ownership; UN holds no national data; written consent	Host objection: renegotiate or exit	Steering Board
R4 Nuclear proliferation	2×5 (10)	Spread of sensitive technology or material	Safeguards; leased fuel with take-back; IAEA-led review	Any safeguards concern: suspend endorsement	Nuclear safety panel
R5 Financing constraints	5×4 (20)	Aid cuts and fiscal stress limit capital	Phased design; blended structures; small first tickets	Financing path below 60% at a gate: hold or rescale	Finance and integrity panel
R6 Corruption	4×4 (16)	Diversion in procurement or concessions	Results Ledger; open contracts; independent audit	Integrity finding: freeze tranche, refer	Finance and integrity panel
R7 Unequal access	4×3 (12)	Benefits reach capitals, men or elites first	Targets by sex, region and income; rural design	Gap above threshold: redesign rollout	Rights panel
R8 Surveillance and misuse	3×5 (15)	Systems used against citizens	Aggregate data; purpose limits; independent oversight	Credible misuse: stop pilot, publish	Rights panel
R9 Cybersecurity	4×4 (16)	Attack on nodes, ledgers or warning systems	Security by design; red-teaming; regional backup	Major incident: isolate, review, report	Technical panel
R10 AI reinforcing inequality	3×4 (12)	Models biased against languages or groups	Local-language data; bias audits; appeal rights	Audit failure: withdraw model	Rights panel
R11 Climate shocks	4×4 (16)	Disasters damage assets or divert budgets	Resilient siting; insurance; contingency reserves	Disaster in host: activate reserve, reschedule	Pilot Governance Boards
R12 Leadership change	5×3 (15)	Change of Secretary-General, government or sponsor	Gates, charter and foundation transfer independent of any person	Host change: reconfirm consent within six months	Steering Board

Source: Part XII, Section XII.7. Scores and owners as published there.

Applying Part XII's own escalation rule to its own table shows that four risks scoring 16 or more (R5 Financing at 20; R6 Corruption, R9 Cybersecurity and R11 Climate shocks at 16) are assigned to a panel or to the Pilot Governance Boards rather than to the Steering Board. This book recommends that the named owner continue to manage each of these risks, while the Steering Board holds accountability for them and reviews them at every meeting. The point is recorded as an open consistency item (item 21 in Table G-18) for the panels to settle when they first re-score the matrix.

Three risks need particular candor, as Part XII states. Financing (R5) is the most likely to bind, because the pilots compete with humanitarian needs for shrinking concessional budgets; hence small first phases and bankable later ones. Surveillance (R8) carries the highest impact on trust; one credible misuse would discredit the whole agenda, hence the rights panel's stop power. Leadership change (R12) is near-certain over 74 years; the answer is institutional design, not reliance on any person.

G.1.1 Part-level risks consolidated into the matrix

Parts IV, V, VI, IX, X and XII each carry their own risk tables for specific programs and pilots. Table G-2 maps each part-level risk to the matrix risk that governs it, so that every risk has one owner and one escalation path. The part-level safeguard stays with the part; the matrix sets who acts

when it fails. Part-level risks are not separately scored here; they inherit the scoring of the matrix risk to which they map until the panels score them.

TABLE G-2 Part-level risks mapped to the consolidated matrix (sources: Parts IV.12, V.14, VI.9, IX.4, X.9 and XII.4)

Part-level risk	Source	Matrix risk	Part-level safeguard
Surveillance and authoritarian misuse of identity, data exchange and AI	IV.12	R8	Purpose limits in law; federated data; citizen-visible logs; independent data-protection authority; support suspended on breach
Fragmentation (sovereignty becomes isolation)	IV.12	R2	Interoperability profiles; open standards; federated cooperation
Cost overrun and stranded compute assets	IV.12; XII.4.2	R5	Size to demand; lease or managed services; recurrent budget before Gate G2; modular expansion
Brain drain of trained staff	IV.12; XII.4.1	R7 (pilot-level)	Competitive pay bands; diaspora roles; regional career paths; return-service terms
Poor national model quality	IV.12	R10	Frontier access for hard tasks; published evaluations; human review for consequential uses
Exclusion from digital-only services	IV.12	R7	Non-digital alternatives by law; assisted channels; inclusion audit
Vendor or geopolitical dependence	IV.12; XII.4.1	R2	Multi-vendor sourcing; exit clauses; open source; regional pooling
Conflict of interest of advisers	IV.12; XII.5	R6	No supplier, financier or transaction-adviser role for A113 Partners and affiliates; competitive tenders; disclosure
Price collapse driven by a dominant incumbent	V.14; XII.4.4	R5	Offtake contracts; staging; cost discipline
Community opposition to minerals projects	V.14; XII.4.4	R3	Consent before feasibility; FPIC where Indigenous peoples are affected; real benefit-sharing
Environmental harm from processing	V.14; XII.4.4	R11 (pilot-level)	Independent monitoring; bonded closure funds
Power shortfall for processing	V.14	R5	P2 linkage or contracted supply
Absent demand, grid strain, water use, private capture in a corridor	XII.4.2	R5; R6	Phased build; anchor tenants first; water-light cooling; contracts on the Results Ledger
Surveillance creep in peace technology	VI.9	R8	Purpose limits in the SOFA technology annex; no facial recognition or interception; independent audit; published annual reports
Escalation against sensors, monitors or informants	VI.9	R1 (pilot-level)	Do-no-harm review; monitor anonymity, duty of care and evacuation plans
False alarms and missed warnings	VI.9; XII.4.3	R10	Thresholds set openly and reviewed quarterly; second-analyst concurrence

Part-level risk	Source	Matrix risk	Part-level safeguard
Politicized warnings; misuse by security services	XII.4.3	R8	Aggregate data only; no sharing with intelligence services; host access to outputs, not raw data
Vendor capture of mission systems	VI.9	R2	Open standards; multiple contributors; raw data stay with the hub
Troop-contributor and host-state objections	VI.9	R1; R3	Pool counts any state's contribution; peacekeepers stay central; host co-ownership and right to suspend
Algorithmic error, bias and false positives in the Results Ledger	IX.4.2–3	R10	Documented, tested rules; disparity reports; human review and right of reply before any flag is published
Political misuse of ledger referrals	IX.4.2–3	R6; R8	Rule-based selection; all referrals logged; cross-party oversight
Due-process failure; opacity	IX.4.2–3	R8	Flags are leads, not findings; plain-language reasons; appeal to a body independent of the operator
Ledger cyber and integrity attack	IX.4.2–3	R9	Independent log witnesses; signed entries; penetration tests; incident disclosure
Reluctance to publish; reputational errors	XII.4.5	R6	Right of reply; human review of every flag; appeal
Debt distress	X.9	R5	Project-level finance; debt analysis before each deal; pause clauses; contingent liabilities published
Crowding out private finance	X.9	R5	Counterfactual test; sunset dates on subsidy
Currency mismatch	X.9	R5	Local-currency lending; hedging facilities
Political capture of finance	X.9	R6	Competitive procurement; beneficial ownership; Results Ledger
Donor fatigue	X.9	R5	Prioritize Categories A and C; MDB leverage; domestic revenue

G.2 Consolidated safeguards by theme

The safeguards below are drawn from the parts that propose them. They are the minimum conditions on which Vision 2100 recommends that its own support, advice or endorsement be given to any pilot or program. They bind no government or UN body; a host or institution that does not accept them is free to proceed without Vision 2100's support. Where a safeguard depends on a decision still open, the decision is cross-referenced to G.3.

G.2.1 Sovereignty and consent

Host governments retain sovereign decision rights at every stage. Vision 2100 approaches only governments that express interest, describes no government as agreeing to anything it has not agreed to in writing, and treats a host's withdrawal as final.

TABLE G-3 **Safeguards: sovereignty and consent**

Safeguard	Rule	Source	Who enforces
Written host request	No pilot passes Gate 0 without a written request from the host government	XII.3; XIII.6.6; E-028, E-029	Steering Board
Sovereign decision rights	Host governments decide at every stage; Pilot Governance Boards are chaired or co-chaired by the host	BOOK standard §8; XII.2.1	Host government
Interest-only outreach	Approach only governments that express interest; letters of intent cover feasibility only	XII.3; XIII.4.7; E-019	Partnerships lead; Steering Board
UN holds no national data	The UN Shared Layer sets standards and audits; data stay in the country or region under host law	IV; VI.4.2	Host; Shared Layer standards
Right to suspend	Each P3 host state signs a data-sharing agreement that preserves its right to suspend	VI.4.2	Host state
Reconfirmed consent	After a change of host government, consent is reconfirmed within six months	XII.7 (R12)	Steering Board
Free, prior and informed consent	Where Indigenous peoples are affected, FPIC is a condition of support, with the real possibility of refusal	V.13; E-028	Host; communities; Steering Board
Public consent for nuclear	Broad-based public support, measured independently, is a gate before Milestone 1, not a communications task	V.5.3	Host; nuclear safety panel
Consent for imagery and registries	Satellite change detection only where host states consent; Children's Shield site registry only with host consent	VI.4.2; E-054	Host states

G.2.2 Human rights and data protection

The same design that serves a democracy can serve an authoritarian state; the law and oversight around it make the difference. Vision 2100 therefore puts conditionality first: support goes only to hosts that accept independent data protection and rights review.

TABLE G-4 **Safeguards: human rights and data protection**

Safeguard	Rule	Source	Who enforces
Conditionality	Support only where the host has an independent data-protection authority, publishes an AI register and accepts inclusion and rights review	IV.12; E-020	Steering Board; rights panel
Stop power	The rights panel holds a binding stop recommendation where rights findings are unremedied (Parts XII, XIII, XIV); its formal confirmation in the charter is open	XII.5; XIII.2.4; E-013	Rights panel; Steering Board
Areas, not people	Early-warning models estimate risk for places and periods; no lists of individuals or "likely perpetrators"	VI.4.1	P3 Pilot Governance Board; ethics panel
Human gate	No model output leaves analysis without review; escalate-level alerts need a second analyst	VI.4.1	Regional hub director
Prohibited techniques	No facial recognition, no interception of private communications, no sharing with intelligence or security services	VI.4.2	P3 Pilot Governance Board

Safeguard	Rule	Source	Who enforces
UN data principles	UN processing follows the UN Personal Data Protection and Privacy Principles (2018)	VI.4.1; VI.6	Secretary-General; HLCM
Leads, not findings	No sanction, debarment, prosecution or public naming follows from an algorithm alone	IX.4.3	Competent courts and bodies
Right of reply and appeal	Anyone named may see the evidence, reply before publication and appeal to a body independent of the ledger operator	IX.4.3	Oversight board
Data minimization	No individual beneficiary data in the public ledger layer; purpose limitation in law	IX.4.3	Data-protection authority
Non-digital alternatives	No entitlement denied for lack of a credential; assisted and non-digital channels by law	IV.11–11	Host government
Protection of monitors	Anonymity, duty-of-care protocols and evacuation plans for community monitors	VI.4.2	P3 Pilot Governance Board

G.2.3 The non-lethal bright line

Vision 2100 does not ask member states to settle the international debate on lethal autonomous weapons. It draws its own narrower line, compatible with every position in that debate: under the UN flag, autonomous and AI-enabled systems are non-lethal only.

TABLE G-5 **Safeguards: the non-lethal bright line**

Safeguard	Rule	Source	Who enforces
Non-lethal only	No UN-operated or UN-contributed system may select or engage a human target, and none may be armed	VI.6	Secretary-General; Security Council
Human accountability	Decisions about force remain with accountable humans under existing rules of engagement; a named person is accountable for each	VI.6	Mission leadership
Limits on AI	AI supports human decisions; it never determines guilt, predicts individual violence with certainty or authorizes force	Book-wide standard; VI.4.1	All pilots and programs
Codification	The line to be codified by a Secretary-General's bulletin and referenced in Council mandates	E-049	Secretary-General; Security Council
SOFA technology annex	Sensor categories, airspace, host data ownership, limits on third-state sharing and suspension set in a standard annex	VI.6; E-050	Office of Legal Affairs; DPO; host states
Review after the CCW	Vision 2100's position to be reviewed after the Seventh CCW Review Conference (16–20 November 2026)	E-010	Co-authors

G.2.4 Nuclear safety and nonproliferation

Vision 2100's energy strategy is technology-neutral. Nuclear power is one firm low-carbon option where it is safe, licensed, safeguarded, affordable and consented; it is not the backbone of sovereign AI, and no corridor plan counts on a reactor in a newcomer country before the late 2030s. Authority rests with the IAEA and national regulators alone.

TABLE G-6 Safeguards: nuclear safety and nonproliferation

Safeguard	Rule	Source	Who enforces
Milestones gate	The IAEA Milestones Approach is the gate for any nuclear element in a pilot	V.5.1	Host; IAEA (INIR on request)
Five conditions	Comprehensive safeguards agreement with the Additional Protocol; voluntary commitment not to enrich or reprocess; diversified long-term fuel contracts; IAEA peer reviews; main safety, security and liability conventions	V.5.2	Host; IAEA; national regulator
Fuel and waste	Fuel leasing with take-back preferred where offered; funded waste plan from Phase 2; decommissioning fund from first operation as licence conditions	V.5.2; E-058	National regulator
No early capital	P2 nuclear work limited to feasibility; no capital commitment in FOUND	E-033	P2 host; Steering Board
Realistic timing	No newcomer first reactor before the late 2030s, and only with licensing, safeguards and consent	V.5.1; E-070	Host; regulator; IAEA
Deference	The nuclear safety panel defers to the IAEA and national regulators and endorses nothing without safeguards, take-back and public consent	XII.5	Nuclear safety panel
Suspension	Any safeguards concern suspends Vision 2100's endorsement	XII.7 (R4)	Nuclear safety panel
Sanctions screening	Screening of any civil-nuclear or technology cooperation before any pilot agreement	XI; E-045	Legal counsel; host states

G.2.5 Anti-corruption and procurement neutrality

A program that asks for accountability must publish its own accounts. Every dollar spent under the Vision 2100 name, including on stopped pilots, is to be published on the Results Ledger.

TABLE G-7 Safeguards: anti-corruption and procurement neutrality

Safeguard	Rule	Source	Who enforces
Publication	Pilot contracts, spending and the initiative's own budget published on the Results Ledger, including stopped pilots	IX; XII.5	P5 Pilot Governance Board; finance and integrity panel
Open procurement	Open, competitive, multi-vendor procurement under host procurement law; capabilities and standards, never vendors	XII.5; front matter	Host; finance and integrity panel
Re-tender trigger	A single supplier above 50% of a pilot's critical supply triggers re-tender	XII.7 (R2)	Technical panel
Integrity trigger	An integrity finding freezes the next tranche and is referred to competent authorities	XII.7 (R6)	Finance and integrity panel
Beneficial ownership	Beneficial ownership disclosed for contractors and concessionaires	IX; X.9	Host; ledger operator
Independent audit	Pilots and the ledger itself audited independently each year	IX.4.3; XII.7	SAI; oversight board
Swap and guarantee terms	Full debt-swap terms, including fees, and every guarantee published	X.4.4; X.4.8	Finance and integrity panel

Safeguard	Rule	Source	Who enforces
Royal Compact integrity	Contributions, grants and expenses published; contributors may not steer funds to their commercial interests	XI.5	Ethics advisers; E-024

G.2.6 Conflict of interest

The Principal Strategic and Technical Architect is an executive of a U.S. battery manufacturer and founded an autonomy integrator. Pilots P1 and P2 and the six-layer shield involve storage and autonomy. The safeguards below are designed so that no recommendation in this book can benefit its authors commercially.

TABLE G-8 **Safeguards: conflict of interest**

Safeguard	Rule	Source	Who enforces
Supply and finance bar	A113 Partners and affiliates act as no supplier, financier or transaction adviser to any pilot they help design	CANON; XII.5; E-003	Finance and integrity panel
Disclosure	Front-matter disclosure of the Principal Architect's roles (Chief Strategy Officer of American Lithium Energy Corporation; founder of A113 Partners and A113 Defense); full disclosures in Appendix I	Front matter; XII.5; E-003	A113 Partners
Independent review	Recommendations on batteries, storage and autonomy reviewed by independent technical reviewers	E-003	Technical panel
Board limits	A113 Partners holds at most two Steering Board seats and no veto; interim group has a majority unaffiliated with A113	XII.5; E-011	Steering Board
Recusal	Board, panel members, staff and contractors publish declarations of interest and recuse; the Principal Architect is recused from storage (P2) and battery-materials (P4) specifications	XII.5; XIII.1.6; Appendix I	Steering Board; integrity officer
Clean seed funding	Seed funding only from sources with no conflict with pilot procurement	XIII.1.6; E-012	Finance lead
Shrinking role	Secretariat passes to an independent foundation: registered 2029, transfer complete by 2031	BOOK standard §8; E-061	Steering Board
Separation from the selection	No lobbying of member states on the selection of the Secretary-General; records kept separate from any campaign activity	Front matter	A113 Partners

G.2.7 Financial and debt sustainability

Any plan that adds sovereign debt to countries already in distress makes the problem worse. Vision 2100's financing safeguards keep new borrowing at project level, secured on project revenue, and count every contingent liability openly. All cost ranges in this book are illustrative planning assumptions; no funding has been committed by any party.

TABLE G-9 Safeguards: financial and debt sustainability

Safeguard	Rule	Source	Who enforces
A/B/C classification	No debt for Category A (public goods) or C (grant-dependent); Category B debt serviced from project revenue	X.5; E-008	Finance and integrity panel
Sovereign guarantees	No Vision 2100 recommendation of sovereign guarantees where debt-distress risk is high; any counter-guarantee recorded in public debt statistics	X.4.4; E-008, E-060	Host; IMF/World Bank DSA
Valued contingent liabilities	PPPs only if every guarantee is valued and published before signature and value for money is shown	X	Host; finance and integrity panel
Debt swaps	Only where an independent debt sustainability analysis shows improvement rather than delay of a needed restructuring	X.4.8	Host; creditors
Carbon revenue	Treated as upside only, never as the basis of repayment	E-008	Finance and integrity panel
Conditions for close	Signed anchor offtake, fixed-price construction contract and grid connection agreement before financial close	X.7	Lenders; Steering Board
Financing-path gate	At least 60% of first-phase (Gate 0, October 2027; for P2 and P4, of pre-development and studies) or PROVE (Gate 1, December 2030) financing path identified	XII.2.2; XIII.5.1; E-028, E-064	Steering Board
Recurrent budgets	P1 recurrent operating budget committed before Gate G2	IV; E-032	Host government
Household impact	P2 phase-one decision includes household-impact analysis	E-060	Host; DFIs

G.3 Unresolved decisions register

This section carries forward the decisions register compiled for the earlier deliverables (E-001 to E-073), re-checked against the book integration standard (BOOK.md) and the canonical facts. Each decision keeps its identifier. A decision is **RESOLVED** where the integration standard or the canonical facts now settle it. It is **PARTLY RESOLVED** where they settle some elements; the settled elements are recorded in Table G-10 and the remainder is carried forward. All other decisions are **OPEN**. A decision that belongs to a sovereign government, a UN organ or a development bank is listed only to show a dependency; its inclusion does not presume the outcome, and no government, institution or person named as an owner has agreed to take it.

Conventions. H marks a decision on the critical path. Day counts run from 1 November 2026: day 30 is 1 December 2026, day 90 the end of January 2027 and day 180 the end of April 2027. Gate 0 is in October 2027. Where several owners are listed, the first holds the decision and the others advise or must consent. D1 to D6 are the co-author decisions already taken (G.4). The interim steering group of five to seven members acts until the Steering Board charter is adopted, about April 2027.

G.3.1 Decisions resolved since the register

TABLE G-10 **Decisions fully or partly resolved by the book integration standard and canonical facts**

ID	Status	What is settled	How it was settled	What remains open
E-006 H	RESOLVED	One KPI convention: seven-column tables with a separate "Agreed international target" column; 2030–2100 values are planning milestones that never replace agreed commitments; shared values for electricity (≤400m 2030), hunger (≤500m 2030) and conflicts (≤55 / ≤40 / ≤25 / ≤10)	BOOK standard §5	Nothing
E-009	RESOLVED	Published Article 99 criteria and human-rights funding steps are included as Vision 2100 proposals only; the Ambassador made no commitment on either	CANON (attribution corrections); BOOK standard §3	Nothing
E-001 H	PARTLY	Article 99 and human-rights-funding attributions corrected throughout	CANON; consistency review of 1 Nov 2026	Resolved: the Ambassador approved every DOCUMENTED passage on 2 November 2026 (G.5)
E-003 H	PARTLY	Front-matter disclosure drafted; supply, finance and transaction-adviser bar stated	Copyright and disclosures page; CANON	Independent review of storage, battery and autonomy recommendations
E-004 H	PARTLY	2030–2100 values treated as planning milestones for deliberation, not commitments	BOOK standard §5	Formal adoption of the ten-domain outcome framework and one scenario set across all parts
E-005 H	PARTLY	Extreme-poverty series: 831 million at $3.00/day (2025); one source, year and method per baseline; under-five and remittance series chosen	CANON; BOOK standard §5	Publication of Baseline v1.0; mapping to SDG and Pact indicators
E-007 H	PARTLY	Energy layer technology-neutral; SMRs one option, not the backbone; small-state compute tens to hundreds of kW	CANON (key cross-part findings)	Formal adoption of the seven-layer model, the thin Shared Layer and the hybrid frontier-training model
E-011 H	PARTLY	Composition rules: Steering Board 11–13 with independent majority, A113 at most two seats, no veto; interim group of 5–7 until the charter (~April 2027)	BOOK standard §8; Part XII.5	Seating the interim steering group
E-012 H	PARTLY	Budget sizing: secretariat $4–8m a year; first-year total $10–23m including pilot preparation $6–15m	BOOK standard §6	Securing the funds from conflict-free sources
E-044	PARTLY	Transfer timeline from A113's interim role: foundation registered 2029, transfer complete by 2031	BOOK standard §8	Host for the cooperation-compact secretariat
E-061	PARTLY	Dates: registration 2029; transfer complete by 2031	BOOK standard §8	Selection of the foundation

ID	Status	What is settled	How it was settled	What remains open
E-030 H	PARTLY	Gate 0 outcomes: proceed, redesign or stop, with hold recorded as a status where no host request exists; P4's Gate 0 is a screen-stage decision in October 2027	Part XIII (XIII.6.7) convention, applied in Parts XII and XIV and Appendix F (final consistency audit, 2 Nov 2026)	The Gate 0 decisions themselves (October 2027)
E-064 H	PARTLY	Gate 1 decided in December 2030; mid-FOUND review mid-2029; PROVE readiness test with the five-year review in October 2031; Gate 2 at the PROVE-to-CONNECT transition (2040)	Part XIV (XIV.3.5, XIV.6, XIV.9), applied in Part XII, the Executive Overview and Appendices F and H	The Gate 1 decision itself
E-038	PARTLY	Proposed Secretariat floor: applied to new appointments from 2027, one-third of senior roles by 2030, parity by 2040 (Part VIII), identical to the scorecard milestone	Part VIII (VIII.2), BOOK standard §5	Whether the Secretary-General adopts the floor

G.3.2 Open decisions: the first 180 days (November 2026 – April 2027)

Most of these decisions belong to A113 Partners and the co-authors and can be taken without anyone else's authority.

TABLE G-11 Open decisions due in the first 180 days

ID · status	Decision (open element)	Owner	Timeline	Depends on	Parts
E-001 H · Resolved	Written approval of every DOCUMENTED passage (given 2 November 2026)	Ambassador A-Baki; A113 Partners	Day 30; before any circulation	D2	I, III, IV, V, VIII, IX, XI, XII
E-002 H · Open	Whether the Ambassador will publicly defend specific proposals: technology-neutral energy and the gated nuclear position; Americas Compact; Women at Every Table, Children's Shield, Mothers and Children Peace Fund, learning companion; Royal Compact, interfaith convening, Arts for Peace	Ambassador A-Baki; co-authors	Before circulation (Dec 2026); nuclear before the Executive Overview	E-001; D2, D3	IV, V, VII, VIII, XI, XII
E-003 H · Partly	Independent review of storage, battery and autonomy recommendations	A113 Partners principals; co-authors	Before publication	D6	IV, V, VI, VIII, X, XI, XII
E-004 H · Partly	Adopt the ten domains as outcome framework and one scenario set for all parts and the risk matrix	Co-authors; editorial lead	Dec 2026	D1, D5	II, XII, all
E-005 H · Partly	Publish Baseline v1.0 (data to 1 Nov 2026); map indicators to SDG and Pact indicators	Research lead; UN statistical experts	Day 30 (freeze); Feb 2027 (mapping)	E-004	I, II, XII
E-007 H · Partly	Adopt the seven-layer National AI Sovereignty Model, thin UN Shared Layer holding no national data, and hybrid model with hyperscale for frontier training	Co-authors	Day 30	E-003	IV, V, X

ID · status	Decision (open element)	Owner	Timeline	Depends on	Parts
E-008 · Open	Adopt the A/B/C financing classification; carbon revenue as upside only; no Vision 2100 sovereign guarantees where debt-distress risk is high	Co-authors	Day 30	—	X, XII
E-010 · Open	Contested positions: neutrality on producer export restrictions under WTO rules; incentives, not quotas, for party delegations; the non-lethal line after the CCW Review Conference (16–20 Nov 2026)	Co-authors; UN-law review	Day 30 (CCW); before circulation	D4	V, VI, VIII
E-011 H · Partly	Seat the interim steering group (5–7, majority unaffiliated with A113)	A113 Partners	Day 30	E-003	XII
E-012 H · Partly	Secure the first-year budget (secretariat at least $4m; pilot preparation $6–15m) from sources with no conflict with pilot procurement	A113 Partners; finance lead	Day 30 (policy); day 90 (funds)	E-003	XII, XIII
E-013 H · Open	Adopt the Steering Board charter, gate procedure and procurement-neutrality rule, including whether the rights panel's stop recommendation binds the Board	Interim steering group, then Steering Board	Draft day 90; adopt ~April 2027	E-011, E-018	XII
E-014 · Open	Seat the four independent panels (technical; rights and ethics; nuclear safety; finance and integrity)	A113 Partners, then Steering Board	Nominations day 90; seated day 180 to mid-2027	E-011	I, IV, V, XII
E-015 · Open	Appoint the independent M&E partner and evaluators for P1, the learning-companion pilots and the Compact "future at home" survey	Interim steering group; research partners	Day 180	E-013	IV, VII, VIII, XII
E-016 · Open	Host and govern the public Baseline Dashboard; archetype-level data only until a country volunteers	A113 Partners; co-authors	Day 90 (host); day 180 (data rule)	E-005	I
E-017 · Open	Publish the compute-sizing method and P1 cost model as open code; choose licence and host	A113 Partners	Day 90	E-007	IV
E-018 · Open	Independent UN-law review of the decision-rights matrix (Appendix F)	A113 Partners; outside counsel	Day 90	—	III, all
E-019 H · Open	Host outreach protocol: interested governments only; selection criteria and conflict screen; letters of intent for feasibility only	Partnerships lead; Steering Board; hosts decide	Screening Jan 2027; LOIs Apr 2027	E-003, E-020	IV, V, VI, VII, XI, XII
E-020 H · Open	Conditionality rule for pilot support (independent data-protection authority, public AI register, inclusion and rights review) and who may suspend	Co-authors; Steering Board	Before any host engagement	E-013	IV, IX, XII
E-021 · Open	Results Ledger standard: financing fields, redaction rules, review panel, log custodians and hosting, OCDS and OC4IDS extensions	A113 technical group; Open Contracting Partnership (if willing)	Day 90 draft; adoption within a year	E-008	IX, X
E-022 · Open	Preparation grants for P3 start-up ($1–2m), P5, Build Corps stipends and Compact evaluation	Donors; foundations; DFIs (A113 brokers)	Day 180	E-012	VI, VII, IX
E-023 · Open	Co-sponsoring member state or UN entity for a contribution at the Global Dialogue on AI Governance (New York, 3–4 May 2027)	A113 Partners; member states	Mar 2027	E-007	II, IV, XII
E-024 · Open	Royal Compact entry standards: financial disclosure, audit, human-rights screening, suspension	A113 Partners; independent ethics advisers	Day 90	E-002	XI

ID · status	Decision (open element)	Owner	Timeline	Depends on	Parts
E-025 · Open	Composition of the Council of Long-Term Stewards, and who reviews progress against the 2100 aspirations every five years	A113 Partners (draft); Secretary-General if adopted	Draft day 180; decide 2027	E-004	II, XI
E-026 · Open	Royal Endowment for 2100: legal domicile, governance, investment policy; accounted as philanthropy	Contributors; independent counsel	Draft day 180; year one	E-024	X, XI
E-027 · Open	Learning-companion pilots: one ministry per archetype; evaluator chosen before launch	Ministries; A113 Partners convenes	Day 180	E-015, E-019	VIII

G.3.3 Open decisions by Gate 0 (October 2027)

These decisions determine whether each pilot proceeds at Gate 0. Most require host governments, development banks or the Secretary-General. A113 Partners can prepare them but cannot take them.

TABLE G-12 **Open decisions due by Gate 0**

ID · status	Decision	Owner	Timeline	Depends on	Parts
E-028 H · Open	Finalize Gate 0 criteria: written host request; feasibility and ethics review; financing path for at least 60% of first-phase cost; evaluation design; households-first for P2; IRMA-equivalent standard with FPIC for P4	Steering Board	Jun 2027	E-013, E-014	V, XII
E-029 H · Open	Written host request for each pilot (P1 small island state; P2 emerging economy; P3 two to three states and a regional body; P4 mineral producer; P5 national program)	Host governments (sovereign)	LOIs Apr 2027; request before Gate 0	E-019	IV, V, VI, IX, X, XII
E-030 H · Partly	Gate 0 decision for each pilot: proceed, redesign or stop (hold recorded as a status where no host request exists; Part XIII)	Steering Board	Oct 2027 (P4 screen-stage)	E-028, E-029, E-031	XII, XIII, XIV
E-031 H · Open	Partner DFI for the project-preparation facility; anchor MDB and guarantee provider for P2 and P4	DFIs; MDB management; finance lead	Term sheet Apr 2027; partner Oct 2027	E-012	V, X, XII
E-032 · Open	P1 financing structure (grant, concessional loan or national budget), with recurrent budget committed before Gate G2	Host government; development-bank and grant partners	Year one	E-029	IV, X
E-033 · Open	P2 nuclear track: whether to open a parallel IAEA Milestones Phase 1 track; feasibility only, no capital in FOUND	P2 host government; IAEA; Steering Board	P2 scoping 2027	E-002, E-029	V, X, XII
E-034 H · Open	P5 UN program: which Secretariat program hosts the Results Ledger; whether OIOS and the Board of Auditors validate the method	Secretary-General; OIOS; Board of Auditors	Within 180 days of the next Secretary-General taking office	E-021	III, IX, XII
E-035 · Open	Present the ledger to the UN80 working group as the public view of the mandate registry	Member-state co-sponsors; working-group co-chairs	2027	E-034	IX, XII

ID · status	Decision	Owner	Timeline	Depends on	Parts
E-036 · Open	P3 governance and data sharing: hub hosted by the regional body, not the UN; civil-society seats; ethics-panel veto; data under host law; no individual-level outputs; no intelligence sharing	Host states; regional organization; legal review	Year one	E-029	VI
E-037 · Open	Vehicle and trustee for Category A and C pooled funds; Mothers and Children Peace Fund as a window or new pooled fund	Secretary-General or MDB board; donors; UN MPTF Office	2027	E-008	III, VI, VIII, X
E-038 · Partly	Adoption of the proposed floor for women in senior roles of Secretariat mediation teams (from 2027 for new appointments; one-third by 2030; parity by 2040, matching the scorecard milestone)	Secretary-General; DPPA	First year of the new term	—	VIII, XII
E-039 · Open	Americas Compact charter custodian and secretariat function (no new organization)	Participating states	Year one	E-002, E-019	VII
E-040 · Open	Whether IDB, CAF and CDB treat national Compact plans as a programming frame	Bank managements and boards	Year one	E-039	VII
E-041 · Open	Whether the Compact includes labor-mobility agreements	National governments	Year one	E-039	VII
E-042 · Open	UN role in the Compact: convening only, or UNDP, ILO and IOM technical support	Secretary-General; agency heads	After selection of the Secretary-General	E-039	VII
E-043 · Open	Interfaith co-conveners and seat formula, including non-religious voices; whether to advocate a Special Envoy for Future Generations	Secretary-General; interfaith bodies; member-state sponsors	Year one	E-002	XI
E-044 · Partly	Host for the cooperation-compact secretariat (timeline settled: 2029 / 2031)	Candidate hosts; A113 Partners	Year one	E-024	XI, XII
E-045 · Open	Sanctions screening for any civil-nuclear or technology cooperation	Legal counsel; host states	Before any pilot agreement	E-029	XI

G.3.4 Open decisions for the FOUND horizon (2028–2030)

These decisions carry the pilots from Gate 0 to Gate 1 and seek the UN-level recognition that only member states can give.

TABLE G-13 Open decisions due in the FOUND horizon, 2028–2030

ID · status	Decision	Owner	Timeline	Depends on	Parts
E-046 · Open	P5 national pilot rules: redaction grounds, exclusion of defense procurement, legal basis for beneficial ownership, oversight and appeal bodies, rules-only screening or AI in year one	Host government; SAI; data-protection authority	Before launch (early 2028)	E-021, E-029	IX
E-047 H · Open	Whether and when to seek a GA priority resolution on Technology for Peace and Security ("fourth pillar" only if members choose)	Cross-regional co-sponsors; General Assembly	Decision 2028; adoption by 2030	E-023	III, XII
E-048 · Open	UN pathway for Shared Layer recognition	Member-state sponsors; Secretary-General convening	By 2029	E-007, E-023	IV

ID · status	Decision	Owner	Timeline	Depends on	Parts
E-049 · Open	Codify the non-lethal-only line for UN-flag systems	Secretary-General; Security Council	FOUND	E-010	VI
E-050 · Open	SOFA technology annex template	Office of Legal Affairs; DPO; host states	Before any shield deployment	E-049	VI
E-051 · Open	Peace Technology Pool register; reimbursement rates for technology packages	Secretariat (DPO/DOS); GA Fifth Committee	2028–2030	E-050	VI
E-052 · Open	Prevention window in the Peacebuilding Fund; voluntary or assessed basis for the Prevention and Mediation Fund	General Assembly; PBC; donors	2027–2029	E-037	III, VI
E-053 · Open	Learning-companion safety, privacy and interoperability standard, and who certifies	Ministries; UNESCO; UNICEF	2027–2028	E-027	VIII
E-054 · Open	Children's Shield protected-site registry: access rules that prevent misuse for targeting; host consent	SRSG-CAAC; Security Council; host states	FOUND	—	VIII
E-055 · Open	Maintenance financing for clinic electrification over 10+ years (results-based uptime contracts)	Development banks; ministries	FOUND	E-003	VIII
E-056 · Open	Propose cross-cutting indicators (compute distribution; interest-to-health ratio) to the UN Statistical Commission	Member-state sponsors; custodian agencies	By 2029	E-005	I
E-057 · Open	Debt swaps for resilience, education and health beyond nature	Participating states; creditors	FOUND	E-008	VII, X
E-058 · Open	Documented comparison of spent-fuel take-back offers	Member states; IAEA on request	FOUND	E-033	V
E-059 · Open	Engagement sequence with the AU, PIF, League of Arab States, ASEAN and EU, which lead their own frameworks	Co-authors; regional bodies	2027–2028	E-039	VII, XI
E-060 H · Open	P2 phase-one financing decision with household-impact analysis; no sovereign guarantee where debt-distress risk is high	Host government; DFIs; IMF/World Bank DSA	~2029	E-008, E-030, E-031	V, X, XII
E-061 · Partly	Select the independent foundation to receive the secretariat (dates settled)	Steering Board	Registration 2029; transfer complete by 2031	E-013	XI, XII
E-062 · Open	P5 extension beyond three years, decided on evidence	Steering Board; hosts	2030	E-046	IX, XII
E-063 · Open	P4 financing decision for a first processing plant	Host; private investors; DFIs	2030–2031	E-030	V, XII

G.3.5 Open decisions for PROVE and beyond

These decisions rest mostly with UN organs, sovereign governments and national regulators. Several require a General Assembly or Security Council decision or, for Council reform, a Charter amendment under Article 108.

TABLE G-14 **Open decisions for PROVE (2031–2040) and later horizons**

ID · status	Decision	Owner	Timeline	Depends on	Parts
E-064 H · Partly	Gate 1: at least three pilots operating at host request; measurable improvement; at least 60% of the PROVE financing path; no unremedied findings	Steering Board; independent evaluator	Mid-FOUND review mid-2029; mid-term evaluation 2030; decision December 2030; PROVE readiness test October 2031	E-030	XII, XIV
E-065 · Open	Formal UN adoption of the 2100 targets (the Secretary-General can reflect them only in own reporting)	General Assembly	PROVE or later	E-004	II
E-066 · Open	Move core human-rights monitoring to assessed funding	GA Fifth Committee	FOUND–PROVE	E-009	III
E-067 · Open	Redirect any peacekeeping savings to the Mothers and Children Peace Fund	General Assembly; contributing states	PROVE	E-037	VIII
E-068 · Open	Emergency compute reserve: legal form, triggers, who pays	Member states; providers	Pilot in PROVE; design for CONNECT	E-048	IV
E-069 · Open	Shield packages as standard in new peace-operation mandates	Security Council; General Assembly	PROVE	E-049, E-051	VI
E-070 · Open	Any newcomer first reactor, only with licensing, safeguards, consent and a voluntary commitment not to enrich or reprocess	Host governments; national regulators; IAEA	Not before the late 2030s	E-033, E-058	V, XII
E-071 · Open	Five-year revisions (2031, 2036 and onward) and ten-year renewal of the Board mandate by a two-thirds vote	Steering Board	2031; 2036	E-013	XII
E-072 · Open	Gate 2 (2040); setting the Gate 3 public-trust threshold (2040); Gate 3 (2060)	Steering Board; panels; evaluator	2040; 2060	E-064	XII
E-073 · Open	Security Council reform model (listed as a dependency; not for Vision 2100 to decide)	Member states; GA; ratification under Art. 108	Not for Vision 2100 to decide	D4	III

G.4 Decisions already taken

Two sets of decisions have been taken and govern every open entry in G.3. The first are the six co-author decisions of 1 November 2026, recorded in the approved planning package. The second are the editorial decisions authorized on 1–2 November 2026 to integrate the earlier deliverables into one book, as set out in sections 5 to 8 of the book integration standard. None of these decisions is a decision by Ambassador A-Baki, any government or any UN body.

TABLE G-15 **Co-author decisions taken on 1 November 2026**

ID	Decision taken	Owner	Effect	Parts
D1	Build the full work first, as a lasting policy work whose value does not depend on the election, and derive the Executive Overview from it	Co-authors	The book's content leads; the Executive Overview asserts nothing the book does not support	All

ID	Decision taken	Owner	Effect	Parts
D2	Keep the attribution distinctions (DOCUMENTED, EVIDENCE, PROPOSAL, ILLUSTRATIVE); obtain the Ambassador's written approval before any new proposal is attributed to her	Co-authors; Ambassador A-Baki	Drives E-001 and E-002	All
D3	Authorship under A113 Partners, with William Michael Hadala Jr. as Principal Strategic and Technical Architect and the Ambassador's documented principles as the foundation; co-authorship or endorsement to be confirmed before publication	Co-authors	Proposals read as A113 Partners recommendations, not campaign commitments; drives G.5	All
D4	Address contested issues objectively, setting out positions, legal constraints and pathways, without manufacturing commitments	Co-authors	Governs E-010 and E-073	III, V, VI, VII, XI
D5	Approve the sample chapter as the minimum standard of depth and tone	Co-authors	Sets the quality bar for every part	All
D6	Disclose conflicts of interest and keep recommendations technology-neutral	Co-authors; Principal Architect	Drives E-003 and procurement neutrality	IV, V, VI, VIII, X, XII

TABLE G-16 Editorial decisions authorized on 1–2 November 2026 (book integration standard, sections 5–8)

ID	Decision	Standard	Effect
ED-1	Seven-column KPI convention with an "Agreed international target" column; 2030–2100 values are planning milestones; a less ambitious 2030 milestone is noted as such	§5	Resolves E-006 and E.7 items 2 and 3
ED-2	Shared indicator values: electricity 655m (2024), ≤400m / ≤50m / 0 / 0; hunger 645m (2025), ≤500m / ≤250m; conflicts 65 (2025), ≤55 / ≤40 / ≤25 / ≤10; military burden 2.5% of GDP (2025); under-five deaths 4.9m (2024); women in senior mediation roles one-third by 2030, parity by 2040; P3 lead time ≥30 days 2028, ≥60 days 2030, ≥90 days 2040; Results Ledger coverage with Part XII as master	§5	Resolves E.7 items 4, 9, 10 and 11
ED-3	One source, year and method per baseline; under-five 4.9m (2024) with UN IGME method note; LAC remittances IDB $173.7bn (2025); IFAD cited only for its own definitions, labeled	§5	Resolves E.7 items 12 and 13; part of E-005
ED-4	Three-tier canonical pilot budgets (first-year preparation; initial implementation; long-term capital) and no other breakdown; P1 breakdown owned by Part IV	§6	Resolves E.7 items 7 and 8
ED-5	Totals: first year $10–23m; FOUND about $120–300m excluding P2 construction (about $0.6–2.3bn including it); PROVE about $2–17bn; all illustrative, no funding committed	§6	Part of E-012
ED-6	Staffing: P5 14–20 people; P3 a regional unit of 10–14 analysts and data staff plus community monitors and a mediation liaison; P1 as in Part IV; secretariat core as in Part XIII	§7	Resolves E.7 items 5 and 6
ED-7	Vision 2100 Steering Board (11–13 members, independent majority; interim group of 5–7 until the charter, ~April 2027) decides at each gate whether Vision 2100 continues to support a pilot and owns the revision cycle	§8	Part of E-011

ID	Decision	Standard	Effect
ED-8	One Pilot Governance Board per pilot, chaired or co-chaired by the host government; earlier names ("P3 steering board", "pilot steering committee") replaced	§8	Resolves E.7 item 18
ED-9	Host governments retain sovereign decision rights at every stage	§8	Governs all host decisions in G.3
ED-10	Secretariat transfer to an independent foundation: registered 2029, complete by 2031, in every part	§8	Resolves E.7 item 20; part of E-044 and E-061

G.5 External approvals for publication

The approvals below govern publication. Ambassador Ivonne A-Baki reviewed the book and endorsed it for publication on 2 November 2026; the approvals that rest with her are recorded accordingly. This appendix records an approval only when it has been given, and the approval log holds the date and the text approved. Approvals that rest with other persons or bodies are shown with their current status.

TABLE G-17 **External approvals for publication (status as of this edition)**

Approval	From	Covers	Required before	Status
Publication identity	Ambassador A-Baki, in writing	The subtitle naming the book as the framework "of Ambassador Ivonne A-Baki" and the use of her name on the cover	Final publication	Given 2 November 2026; recorded in the approval log
Credits	Ambassador A-Baki, in writing	Her credit for "Foundational Vision and Leadership Principles"; co-authorship or endorsement (D3)	Final publication	Given 2 November 2026; recorded in the approval log
Message from the Ambassador	Ambassador A-Baki: review and signature	The Message in the front matter	Final publication	Approved and signed, 2 November 2026
DOCUMENTED passages	Ambassador A-Baki, in writing	Every passage labeled DOCUMENTED, checked against her 20 August 2026 dialogue and the original Vision 2100 statement (2026) (E-001)	Any circulation beyond the co-authors and her office	Given 2 November 2026; recorded in the approval log
Positions attributed to her	Ambassador A-Baki, in writing	Any proposal she may choose to defend publicly (E-002). Without approval, no proposal is attributed to her	Attribution of any proposal to her	Book endorsed for publication; proposals remain A113 Partners recommendations, and any new attribution to her needs her specific written approval
Campaign representative	Any representative the Ambassador designates for her candidacy	Whether her candidacy's representatives must review references to the candidacy	Final publication	Not required: the Ambassador endorsed the book directly on 2 November 2026

Approval	From	Covers	Required before	Status
Partners	Each institution concerned, in writing	Naming any government, UN entity, bank, foundation or organization as a partner, co-sponsor, host or reviewer	Any description of that institution as a partner	None recorded; no institution is described as a partner
Independent panels and reviewers	Technical reviewers; outside UN-law counsel	Independent review of storage, battery and autonomy recommendations (E-003) and of the HyperEdgeX edge-node reference design (Part IV, Section IV.9); UN-law review of the decision-rights matrix (E-018)	Final publication	Not yet seated or commissioned

Any later change to a passage marked as hers, to her credit or to the Message requires her renewed written approval before it is published, and every change is logged in Appendix C. If any other approval in the table is refused, the affected passage or attribution is removed or rewritten.

G.6 Status of the cross-part consistency issues

The decisions register listed twenty conflicts between parts (its section E.7). The book integration standard settles each of them. Table G-18 records how each is resolved and whether the resolution has been applied in the part files. Statuses were re-checked against the current part files in the final consistency audit of 2 November 2026. Items 21 and 22 were found while compiling this appendix; items 23 to 28 were found in the final audit.

TABLE G-18 Status of cross-part consistency issues (E.7 items 1–20; items 21–28 added at assembly and in the final audit)

#	Issue	Parts	Resolution	Status
1	Antarctic Treaty parties: 58 vs 57	I, XI	"More than 55 parties" unless confirmed at ats.aq; any confirmed number used in both (§9)	Resolved. Parts I and XI and Appendix A use 58 parties (29 consultative), citing Japan's foreign ministry (2026); direct confirmation at the Secretariat site remains a pre-print check
2	2030 KPI convention	I, II, XII	Seven-column convention; separate agreed-target column (§5; E-006)	Resolved; applied in I, II, XII, XIV and Appendix H
3	Conflict-count targets	I, II	≤55 / ≤40 / ≤25 / ≤10 (§5)	Resolved; applied in I, II, VI, XII and Appendix H
4	Military-spending indicator	I, II, XII	Military burden as % of world GDP (§5)	Resolved; applied in I, II, XII and Appendix H
5	P3 staffing	VI, XII	10–14 analysts and data staff plus monitors and liaison (§7)	Resolved; applied in VI, XII, XIII and Appendix D
6	P5 staffing	IX, X, XII	14–20 people, from the Part IX cost model (§7)	Resolved; applied in III, IX, X, XII and XIII
7	P5 cost in Part X	X	$8–20m over three years (§6)	Resolved; applied
8	P1 cost split	IV, X, XII	One breakdown, owned by Part IV (Table IV-5) (§6)	Resolved; Part XII carries no competing split and cites Part IV's table, as do Parts X and XIII, the Executive Overview and Appendix D

#	Issue	Parts	Resolution	Status
9	Results Ledger targets	III, IX, XII	Part XII master: ≥1 UN and ≥1 national program by 2028; ≥10% of Secretariat programme budget by 2030 only if the Secretary-General adopts it; majority by 2040 (§5)	Resolved; applied in II, III, IX, XII, XIV, the Executive Overview and Appendix H
10	P3 lead-time KPI	VI, XII	Absolute medians: ≥30 days 2028, ≥60 days 2030, ≥90 days 2040 (§5)	Resolved; applied in III, VI, XII, XIV, the Executive Overview and Appendix H
11	Women in mediation	VIII, XII	Part VIII definition (senior roles in UN-convened teams); one-third by 2030, parity by 2040 (§5)	Resolved; applied in III, VIII, XII, XIV, the Executive Overview and Appendix H
12	Under-five deaths baseline	I, II, VIII	4.9m (2024) with method note (§5)	Resolved; applied in I, II, VIII, XII, the Executive Overview and Appendix H
13	LAC remittances 2025	II, VII	IDB $173.7bn regional figure; IFAD only for its own definitions, labeled (§5)	Resolved; applied in II, VII and X
14	Oxford AI data-centre study	I, IV	One citation form in both parts (§9)	Resolved; both cite the ITU *Annual AI Governance Report 2025*, p. 30, reporting the Oxford study (Part IV adds the primary paper's details)
15	TI CPI 2025 source	I, IX, XII	Cite TI's own page (§9)	Resolved. Parts I, IX and XII cite Transparency International's own pages
16	Small-state compute in Part V	IV, V	~50 kW / ~12 MW / ~26 MW central cases (CANON)	Resolved; confirmed in Part V (V.6)
17	P1 host size	II, IV, XII	Archetype about 100,000 people (Part IV); 100,000–1 million as eligibility (Part XII); the Part II atoll a separate illustration (§9)	Resolved; applied in IV, XII, XIII and Appendix D
18	Pilot governance naming	IV, VI, XII	Pilot Governance Boards, distinct from the Steering Board (§8)	Resolved; applied in III, IV, VI, IX, X, XII–XV; risk owner "pilot directors" replaced by Pilot Governance Boards in Part XIV and this appendix
19	Emerging-economy cost of capital	V, X	Cite Part X's 9–15% real band in Part V (§9)	Resolved; applied in Part V (V.6) and Appendix D
20	Secretariat transfer dates	XI, XII	Registered 2029, complete by 2031 (§8)	Resolved; applied in X, XI, XII, XIII, XIV, XV, the Executive Overview and Appendix F; Part XI gaps file corrected
21	Risk ownership vs escalation rule	XII	R5, R6, R9 and R11 score 16 or more but are owned by panels or Pilot Governance Boards; Steering Board accountability recommended (G.1)	Open; for the panels at first re-scoring
22	P3 lead-time target year	VI	Part VI's pilot KPI table and Measuring progress table both use 2030 for ≥60 days	Resolved; applied in VI
23	Gate 0 outcomes	XII, XIII, XIV, F	Proceed, redesign or stop, with hold as a status where no host request exists (Part XIII convention)	Resolved in the final audit; Part XII's "continued feasibility work" and the four-outcome wording in Part XIV and Appendix F replaced

#	Issue	Parts	Resolution	Status
24	Gate 1 date and later checkpoints	X, XII, XIII, XIV, Overview, F, H	Gate 1 December 2030; mid-FOUND review mid-2029; PROVE readiness test October 2031; Gate 2 at the PROVE-to-CONNECT transition (2040)	Resolved in the final audit. The Part XII gate chart was redrawn with G1 "Dec 2030" and outcome boxes PROCEED / REDESIGN (hold as a status) / STOP
25	Interest-burden reference year	I, X, Overview, H	UNCTAD *A World of Debt 2026*: 3.7 billion people in 2023 (up from 2.5 billion in 2010); 51 countries in UNCTAD's latest count	Resolved in the final audit; Part X and Appendix H redated from 2025 to 2023
26	People offline, 2060 milestone	II, IV, XII, Overview, H	"Near zero" (Parts II and IV)	Resolved in the final audit; Part XII, the Executive Overview and Appendix H changed from <0.1bn
27	Landmine casualties, 2060 and 2100 milestones	VI, XII, H	Part VI: ≥90% below 2024 by 2060; near zero by 2100	Resolved in the final audit; Part XII and Appendix H aligned
28	Project-preparation facility, second tranche	X, XII, XIV, D	$25–60m, as in FOUND ($0.025–0.06bn)	Resolved in the final audit; Part XIV ($30–60m) and Part X and Appendix D ($0.03bn low) aligned; PROVE total unchanged at $2.07–16.74bn (≈ $2–17bn)

Of the twenty original items, eighteen are resolved and applied; items 1 (Antarctic Treaty count) and 15 (CPI source) are now resolved as well. Of the eight items added since, item 21 remains open for the panels; the others are resolved. The register will be kept current: each decision in G.3 is closed only when the owner named has taken it, and each closure is recorded with its date and instrument at the five-year revisions and in the annual report.

APPENDIX H

H

MASTER PERFORMANCE SCORECARD 2026–2100

Master Performance Scorecard, 2026–2100

HOW TO READ THE SCORECARD

Where the world has an agreed international target, that target stands. The 2030, 2040, 2060 and 2100 columns are Vision 2100 planning milestones, a realistic path chosen by the authors. They never replace or lower an agreed commitment. Where a 2030 milestone is less ambitious than the agreed target, the table says so.

H.1 Purpose and sources

This appendix brings together, in one table set, the headline indicators of Part XII's master scorecard and the key indicators from each part's "Measuring progress" table. It is the reference for the annual scorecard report described in H.4. Part XII owns the master scorecard and its governance; each part owns its own indicators and their definitions, and is named in the indicator's row. Where a value here and in an owning part differ, the integration standard's shared values govern for the shared indicators listed in H.2, and the owning part governs for all others; the differences found at assembly are listed in H.6.

ILLUSTRATIVE Every milestone in this appendix is a planning assumption, not a forecast or a model output. Milestones for 2040–2100 are planning ambitions chosen by analogy to today's best performers and existing goals. They are re-set at each five-year review.

H.2 Conventions

ILLUSTRATIVE The scorecard follows seven conventions, which apply equally to every part's Measuring progress table.

01 **Seven columns.** Indicator (owner) | Baseline (value, year, source) | Agreed international target | 2030 | 2040 | 2060 | 2100.

02 **Agreed international target.** An SDG target or other commitment agreed by states, where one exists; otherwise "—". A target whose date has passed is shown as lapsed.

03 **Planning milestones.** The four dated columns are Vision 2100 milestones. Where a 2030 milestone is less ambitious than the agreed target, it is marked with a dagger (†) and the agreed target remains the commitment against which states are held.

04 **Baselines.** One source, reference year and method per indicator. Where sources disagree, the difference is noted rather than mixed. Where no measured value exists, the baseline reads "to be established" and is never estimated.

05 **Owners.** Owners report on indicators; they do not deliver outcomes alone. An owner named here has not agreed to the role unless the owning part says so; most are proposed reporting bodies.

06 **Shared indicators.** Electricity access, hunger, state-based conflicts, military burden, under-five deaths, women in senior mediation roles, P3 warning lead time and Results Ledger coverage carry the same values in Parts I, II, XII and XIV, the Executive Overview and this appendix.

07 **Pilot indicators.** Pilot KPIs are proposed standards set before measured baselines exist; baselines are set in each pilot's first phase.

H.3 The master scorecard

ILLUSTRATIVE The scorecard is grouped in ten domains. Sources for each baseline are cited in the owning part; the reference is given in brackets at the end of each indicator name.

H.3.1 Peace, security and prevention

TABLE H-1 **Master scorecard: peace, security and prevention (ILLUSTRATIVE planning milestones; agreed targets stand). Owning parts: I, VI, VIII, XII.**

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
State-based armed conflicts (UCDP/PRIO data; DPPA) [I, XII]	65, 2025, UCDP	—	≤55	≤40	≤25	≤10
Deaths from organized violence (UCDP data; DPPA) [I]	~244,600, 2025, UCDP	SDG 16.1: significantly reduce violence and related deaths (no numerical target)	Halve from 2025	<50,000	Sustained low	Sustained low
World military burden, % of world GDP (SIPRI data; member states) [I, XII]	2.5%, 2025, SIPRI (total ~$2.9 trillion)	—	No further rise	Declining	Below 2009 level	National decisions
Forcibly displaced people (UNHCR; host states) [I, XII]	117.8m, end-2025, UNHCR Global Trends	—	<100m	<60m	<30m	Durable solutions for all
Children living in conflict zones (UNICEF; PRIO data) [II, XII]	~520m, 2024, PRIO	—	≤450m	≤300m	≤100m	Near zero

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Children affected by verified grave violations (SRSG-CAAC; Security Council) [VIII]	24,174, 2025, SG annual report on children and armed conflict	—	Declining	<10,000	Rare	Rare
Landmine and ERW casualties a year (states parties; Landmine Monitor) [VI, XII]	6,279, 2024, Landmine Monitor 2025	—	≥25% below 2024	≥50% below 2024	≥90% below 2024	Near zero
P3 median warning lead time, days from first alert to onset of lethal violence (P3 Pilot Governance Board; regional unit) [VI]	To be established in shadow mode, 2027–28	—	≥60 days (≥30 days by 2028)	≥90 days in all P3 regions	Standard practice	Standard practice
P3 warning-to-action rate: escalate alerts with documented response within 14 days (regional organizations; DPPA) [VI]	To be established, 2027–28	—	≥85% in P3	≥85% in five regions	Universal reporting	Universal reporting
Countries with multi-hazard early warning (WMO; national services) [XII]	119 (60%), 2025, WMO Global Status 2025	— (the UN Early Warnings for All initiative aims to protect everyone by 2027; not an intergovern mental target)	100%	100%	Maintained	Maintained
Peacebuilding Fund annual contributions (General Assembly; donors) [VI]	$132.3m voluntary + $50m assessed approved, 2025, PBF	— (PBF's own $500m annual target)	≥$500m	Preventio n window ≥$1bn	Substantial share of peace spending	Substantial share of peace spending
Missions with a SOFA technology annex (Security Council; DPO) [VI]	0, 2026 (no template exists)	—	1	Majority of new missions	All missions	All missions
Peace Technology Pool pledging states (member states; Secretariat) [VI]	0, 2026 (Pool not established)	—	≥5	≥30	Normal contribution channel	Normal contribution channel
Lethal autonomous or armed systems under the UN flag (Secretary-General; Security Council) [VI]	Zero, 2026 (policy to be codified)	—	Zero, codified	Zero	Zero	Zero

H.3.2 Women in peace and decision-making

TABLE H-2 Master scorecard: women in peace and decision-making (ILLUSTRATIVE planning milestones). Owning parts: VI, VIII, XII.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Women in senior roles of UN-convened mediation teams (Secretary-General; DPPA) [VIII, XII]	To be established by DPPA, 2027; context: women were 6% of mediators in major processes 1992–2019 (CFR)	— (SC resolution 1325 calls for increased participation; no numerical target)	≥one-third	Parity (≥50 %)	Parity	Parity
Women as share of negotiators in tracked processes (DPPA; sponsors) [VIII]	7%, 2024, as cited in Part VIII	—	20%	35%	Parity range	Parity range
Women among P3 mediators and monitors (P3 Pilot Governance Board) [VI]	To be established	—	≥40%	≥45%	Parity	Parity
Share of Mothers and Children Peace Fund grants to local women-led organizations (Fund board) [VIII]	To be established (Fund not created)	—	≥15%	≥20%	≥20%	≥20%
Women's share of steward, compact and interfaith seats (Council secretariat) [XI]	To be established	—	40%	50%	50%	50%

H.3.3 Energy, minerals and industry

TABLE H-3 Master scorecard: energy, minerals and industry (ILLUSTRATIVE planning milestones; † = 2030 milestone less ambitious than the agreed target, which stands). Owning parts: I, V, VII, XII.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
People without electricity (national governments; SDG7 custodians) [I, V, XII]	655m, 2024, Tracking SDG7 2026	SDG 7.1: universal access by 2030	≤400m †	≤50m	0	0
People without clean cooking (SDG7 custodians) [I]	~2.0bn, 2024, Tracking SDG7 2026	SDG 7.1: universal access by 2030	<1.6bn †	<0.5bn	0	0
Cost-of-capital ratio, EMDE vs advanced, utility solar (DFIs; finance ministries; IEA data) [V, X]	>2×, IEA	—	≤1.8× in pilots	≤1.4×	≤1.2×	Risk-based only
P2 corridor clean capacity (P2 hosts) [V]	0 MW, 2026	—	200–500 MW (in construction)	1,000+ MW across corridors	Regional scale	Normal infrastructure
Household tariffs and reliability in P2 areas (P2 host regulator) [V]	To be established	—	No worse than baseline	Improved	Improved	Universal reliability
Sovereign AI node power from clean sources (node operators) [V]	To be established	—	≥70%	≥90%	100%	100%

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Newcomer states with published IAEA INIR results (member states; IAEA) [V]	To be established	—	2+ supported	5+	As chosen	As chosen
Top-three countries' share of refining, key minerals (producer governments; market) [V]	86%, 2024, IEA	—	<84%	<78%	<70%	Diversified
Domestic value added retained, P4 host (P4 host government) [V, XII]	To be established	—	Baseline +10 points	Baseline +25 points	Components made locally	Mature industry
Skilled jobs held by nationals / women, P2 and P4 (hosts; employers) [V]	To be established	—	60% / 25%	80% / 35%	90% / 45%	Parity
Tailings incidents in pilot projects (regulators; independent monitors) [V]	To be established	—	0	0	0	0

H.3.4 Digital, AI and the UN Shared Layer

TABLE H-4 Master scorecard: digital infrastructure, AI and the UN Shared Layer (ILLUSTRATIVE planning milestones). Owning parts: I, II, III, IV, XII.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
People offline (national governments; ITU) [II, IV, XII]	2.2bn, 2025, ITU Facts and Figures 2025	— (SDG 9.c universal affordable access in LDCs by 2020, lapsed)	<1.5bn	<0.5bn	Near zero	0
Countries hosting AI-capable data centres (ITU / UNCTAD, to be agreed) [I, IV]	32, 2025, Oxford study as reported by ITU	—	50	100	All regions	Every nation, alone or shared
States operating a sovereign AI node on the pilot model (Steering Board; hosts) [IV, XII]	0, 2026	—	1–3	15–20	60+	All that choose
Countries with a safe, inclusive DPI component, 50-in-5 definition (UNDP; 50-in-5 partners) [IV]	37 campaign members, June 2026	— (50-in-5 campaign goal: 50 countries by 2028)	50+	120	All willing states	Universal
Countries with data-protection legislation and an independent, funded authority (national governments; UNCTAD tracking) [IV]	66% with legislation, 2020, UNCTAD; authorities to be established	—	+10 countries	Majority with authority	All	All
Official languages with a public evaluation suite and adapted model (language communities; UNESCO, to be agreed) [IV]	To be established	—	All languages of pilot countries	500	2,000	Every living community language

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Share of Tier 1–2 public data under national legal control, pilots (data-protection authorities) [IV]	To be established	—	100%	100%	100%	100%
Core-service availability; degraded operation without international links (national CERTs) [IV]	To be established	—	99.9%; 72 hours	99.95%; 7 days	99.99 %; 14 days	Resilience norm
Long-lived records under post-quantum or hybrid cryptography, pilots (national CERTs) [IV]	To be established	—	Inventory complete; new IDs hybrid	100%	100%	Crypto-agile norm
Public-sector AI systems in a public register, pilots (national oversight bodies) [IV]	0, 2026	—	100%	100%	100%	100%
Nationals in node operating roles (women's share) (host governments) [IV]	To be established	—	80% (40%)	90% (50%)	95% (50%)	Self-sustaining (parity)
UN Shared Layer standards formally recognized (Secretary-General; General Assembly) [III, IV]	None, 2026	—	Concept discussed in Global Dialogue	Recognized by GA	Updated each decade	Living standard

H.3.5 Human development: health, learning and basic services

TABLE H-5 **Master scorecard: health, learning and basic services (ILLUSTRATIVE planning milestones; † = 2030 milestone less ambitious than the agreed target, which stands). Owning parts: I, II, VIII, XII.**

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Chronic hunger (FAO; national governments) [I, II, XII]	645m, 2025, FAO SOFI 2026	SDG 2.1: end hunger by 2030	≤500m †	≤250m	≤100m	<1% of people
Extreme poverty at $3.00 a day (World Bank; national governments) [I]	831m, 2025, World Bank	SDG 1.1: eradicate extreme poverty by 2030	Below 2025 level †	<300m	<3% of population	Residual
Under-five deaths a year (UNICEF; UN IGME; ministries) [I, VIII]	4.9m, 2024, UN IGME (revised method; not comparable with earlier IGME series)	SDG 3.2: under-five mortality ≤25 per 1,000 live births in every country by 2030	≤4.0m †	≤2.5m	≤1.2m	≤0.5m
Maternal deaths a year (WHO; ministries) [II, XII]	260,000, 2023, UN MMEIG	SDG 3.1: global maternal mortality ratio below 70 per 100,000 live births by 2030	≤200,000 †	≤120,000	≤50,000	≤15,000

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Maternal mortality ratio per 100,000 live births (WHO; ministries) [VIII]	197, 2023, UN MMEIG	SDG 3.1: below 70 by 2030	≤150 †	<90	<40	<10
Health facilities with reliable electricity, sub-Saharan Africa (ministries; Part V programs) [VIII]	~40%, as cited in Part VIII	—	70%	95%	100%	100%
Without safely managed drinking water (WHO/UNICEF JMP) [I, II]	2.1bn, 2024, JMP 2025	SDG 6.1: universal access by 2030	≤1.8bn †	≤1.0bn	≤0.3bn	0
Without safely managed sanitation (WHO/UNICEF JMP) [I]	3.4bn, 2024, JMP 2025	SDG 6.2: universal access by 2030	<3.0bn †	<1bn	0	0
Children and youth out of school (UNESCO UIS; ministries) [II, VIII]	272m, 2023, UNESCO UIS	SDG 4.1: all complete free primary and secondary education by 2030	<200m †	<100m	<25m	Near zero
Learning poverty, low- and middle-income countries, age 10 (World Bank; UNESCO; ministries) [VIII, XII]	~70%, 2022 est., World Bank/UNICEF	—	<55%	<30%	<10%	<5%
Learning-companion pilot gain vs comparison (independent evaluators) [VIII]	To be established	—	Positive, published	Sustained at scale	Maintained	Maintained
Internet gender parity score (ITU; ministries) [VIII]	0.92, 2025, ITU	—	0.96	0.98–1.02	Parity	Parity
Women's share of STEM graduates (UNESCO UIS; ministries) [VIII]	35%, 2018–23, UNESCO	—	38%	42%	45–55%	45–55%

ILLUSTRATIVE The under-five and maternal-death milestones count deaths, while SDG 3.1 and 3.2 set rates. Meeting a milestone does not mean meeting the SDG; both are reported, and the SDG remains the commitment.

H.3.6 Climate and environment

TABLE H-6 Master scorecard: climate and environment (ILLUSTRATIVE planning milestones). Owning parts: I, II.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Global temperature anomaly (WMO; UNFCCC parties) [I]	1.44°C, 2025, WMO	Paris Agreement: well below 2°C, pursuing 1.5°C	Track WMO annual	Track	Stabilized	Per Paris Agreement
Projected warming by 2100 under current policy (UNEP) [II]	~2.8°C, UNEP Emissions Gap	Paris Agreement: well below 2°C, pursuing 1.5°C	≤2.5°C	≤2.0°C	≤1.7°C	Stabilized, declining
Water use per MWh and per unit of compute, corridors (corridor authority) [V]	To be established	—	Published	−30% vs baseline	Best practice	Best practice

H.3.7 Economy, migration and regional cooperation

TABLE H-7 Master scorecard: economy, migration and regional cooperation (ILLUSTRATIVE planning milestones). Owning parts: VII, XI.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Youth (15–24) informality, LAC (states; ILO) [VII]	56%, H1 2025, ILO Labour Overview 2025	SDG 8.3: encourage formalization (no numerical target)	Pilot states falling	≤40%	≤25%	≤10%
Average cost of digital remittances (regulators; providers) [VII]	~4.6%, 2025, IFAD *Sending Money Home 2026* as reported (digital average; not the SDG 10.c measure)	SDG 10.c: below 3%; no corridor above 5%, by 2030	≤3%	≤2%	≤1%	Negligible
Remittances saved formally in accounts or wallets (states; IDB) [VII]	Honduras ~10%, 2023, Inter-American Dialogue survey	SDG 8.10: expand access to financial services (no numerical target)	25%	50%	75%	Universal access
Compact commitments disbursed and independently verified (Results Ledger, P5) [VII]	To be established, 2027	—	100% published; ≥50% verified	≥80% verified	≥90% verified	Standard practice
Regional organizations with an operating compact or formal cooperation (regional bodies) [XI]	0, 2026	—	2	5	7	All major regions
Permanent members engaged in at least one Vision 2100 technical cooperation task (Secretary-General; member states) [XI]	0, 2026	—	3 of 5	5 of 5	5 of 5	Sustained
States with a future-generations commissioner or equivalent (member states) [XI]	To be established	—	+5 over baseline	+25	Majority of states	Near-universal

ILLUSTRATIVE The remittance-cost baseline is the IFAD digital average, not the World Bank measure on which SDG 10.c is defined; the 2030 milestone matches the SDG's 3 percent average only for digital transfers and does not cover its 5 percent corridor ceiling (Part VII). For the regional remittance volume, the book uses the IDB figure of $173.7 billion for Latin America and the Caribbean in 2025.

H.3.8 Finance and debt

TABLE H-8 Master scorecard: finance and debt (ILLUSTRATIVE planning milestones). Owning parts: I, X, XII.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Annual SDG financing gap, developing countries (UN DESA; OECD) [X]	~$4tn a year, 2025, FfD4	—	Falling	<$2tn	<$0.5tn	Closed for core goals
People in countries spending more on interest than on health or education (UNCTAD; IMF; World Bank) [I, X]	~3.7bn people, 2023, UNCTAD *A World of Debt 2026* (51 countries in UNCTAD's latest count)	—	<2.5bn; <40 countries	<1bn; <20 countries	0; <5 countries	0; none
Clean-energy investment, EMDEs excluding China (IEA) [X]	~$270bn a year, IEA	—	On path to $1.6tn	Need met	Maintained	Maintained
Annual MDB lending (MDB Heads Group) [X]	~$400bn headroom identified, 2024	Compromiso de Sevilla (2025) commitments on MDB capacity, as set out in Part X	Headroom deployed	Tripled vs 2024	Sustained	Sustained
Concessional-to-commercial mobilization in Vision 2100 deals (A113 Partners; MDBs) [X]	Market 1:3.76, 2024, Convergence	—	≥1:4, counterfactual-tested	≥1:6	Subsidy phased out in Category B	n/a
Blended finance closed a year (finance panel; DFIs) [XII]	~$18bn, 2024, Convergence	—	2×	5×	Domestic capital leads	Mature markets
Category A and C funds with independent audit (fund trustees) [X]	To be established	—	100%	100%	100%	100%
Contingent liabilities from Vision 2100 guarantees disclosed (host finance ministries) [X]	To be established	—	100%	100%	100%	100%
UN collection rate of assessed contributions (member states; UN Controller) [I]	76.7%, January 2026, UN Controller	— (Charter Article 17 obligation to pay)	95%	98%	98%	98%

H.3.9 Institutions, integrity and the Results Ledger

TABLE H-9 Master scorecard: institutions, integrity and accountability (ILLUSTRATIVE planning milestones). Owning parts: I, III, IX, X, XII.

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
UN programs publishing on a Results Ledger (UN Secretariat; General Assembly) [XII master; III, IX]	To be established via the UN80 registry, 2026	—	≥1 UN program and ≥1 national program publishing by 2028; ≥10% of Secretariat programme budget by 2030 only if the Secretary-General adopts it	Majority of Secretariat programme budget	All	All, audited
Countries with a public ledger linking contracts, payments and verified milestones (national governments) [IX]	None known fully linked; 51 OCDS publishers, Open Contracting Partnership	—	2 pilots + 5 in preparation	20	80	All willing states
Pilots with financing published on a Results Ledger (A113 Partners; hosts) [X, XII]	0 of 5, 2026	—	5 of 5	All national programs in pilot states	Standard practice	Universal
Mandates with review clauses (General Assembly) [III]	To be established (UN80 resolution, 31 March 2026)	—	All new mandates	All	All	All
CPI global average score (contextual; Transparency International data) [I, IX, XII]	42, 2025, Transparency International CPI 2025	SDG 16.5: substantially reduce corruption and bribery (no numerical target)	45	50	60	70+
Countries basic or worse on PEFA external audit (supreme audit institutions) [IX]	87% of 80 countries, PEFA Global Report 2022	—	Pilot countries improve one level	60%	35%	<15%
Countries without legislative follow-up of audits (legislatures) [IX]	89% of 80 countries, PEFA Global Report 2022	—	Pilot countries publish audit-finding status	60%	30%	<10%
Ledger flags human-reviewed before publication (oversight board) [IX]	Not applicable, 2026	—	100%	100%	100%	100%
Median days to decide a ledger appeal (appeal body) [IX]	To be established	—	<60	<45	<30	<30

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
Supporters of the France–Mexico veto-restraint initiative (member states) [III]	126 member states + 2 observers, 30 September 2026, GCR2P	—	≥129	150	Universal	Universal
Security Council unanimity rate (Council members) [I]	61.4%, 2025, Security Council Report	—	>70%	>80%	Tracked	Tracked

H.3.10 The blueprint's own delivery

TABLE H-10 **Master scorecard: delivery of Vision 2100 itself (ILLUSTRATIVE planning milestones). Owning parts: XII, XIII.**

Indicator (owner)	Baseline (value, year, source)	Agreed international target	2030	2040	2060	2100
FOUND spending against plan (finance panel) [XII]	$120–300m planning range excluding P2 construction (Appendix D)	—	Within range or explained	—	—	—
Share of pilot spending on the Results Ledger (P5 Pilot Governance Board) [XII]	0, 2026	—	100%	100%	100%	100%
Pilots operating with host governments still requesting them (Steering Board) [XII]	0, 2026	—	≥3 (Gate 1, December 2030)	Replication in ≥10 states across all three archetypes (Gate 2)	Regional interoperation (Gate 3)	Institutions renew without the blueprint
Safeguards or rights findings unremedied (nuclear and rights panels) [XII]	0, 2026	—	0	0	0	0
Public trust in pilot institutions, independent survey (independent evaluator) [XII]	To be established	—	Threshold set	Threshold met	Met	Met
Year-one milestones met or missed with a published reason (M&E Lead; Steering Board) [XIII]	Milestone schedule, November 2026	—	≥two-thirds met each year, or governance redesign	—	—	—

H.4 How the scorecard is governed, reported, audited and revised

H.4.1 Governance

Vision 2100 proposes that the Vision 2100 Steering Board own the scorecard and its revision cycle, as part of its responsibility for the book itself (Part XII). Day-to-day maintenance sits with the Monitoring and Evaluation Lead (Workstream 12) and the Research Lead (Workstream 2, the Vision 2100 Baseline Dataset and Dashboard), with an independent evaluator appointed by and reporting to the Board (Part XIII). Pilot indicators are reported by each Pilot Governance Board, chaired or co-chaired by the host government. The four independent panels review indicators in their fields: the human rights and ethics panel for rights-related indicators and unremedied findings; the nuclear panel for safeguards indicators; the finance and integrity panel for spending, mobilization and conflict-of-interest indicators; and the technical panel for the digital and energy indicators.

The scorecard confers no authority. Owners named in it report; they do not deliver outcomes alone, and naming a UN body, government or agency as owner does not imply its agreement. Global indicators are taken from custodian agencies; Vision 2100 does not produce its own estimates of them.

H.4.2 Reporting

The scorecard is updated and published once a year, during the General Assembly's high-level week in September, through side events hosted by willing member states; the first annual report would be presented at UNGA 82 in September 2027 (Part XII). Quarterly notes, beginning February 2027, report progress against first-year milestones, and the Monitoring and Evaluation Lead certifies each note against the scorecard before release (Part XIII). Every annual report shows, for each indicator, the latest value, its source and date, the milestone, the agreed target where one exists, and a status: on track, off track, or not yet measured. Indicators moving the wrong way are published, not omitted. The blueprint's own spending, contracts and gifts register appear on its own Results Ledger, including spending on pilots that were stopped.

H.4.3 Audit and verification

Four layers of assurance apply. First, every baseline in the Baseline Dataset carries its source, date, method and confidence rating, and three or more willing statistical reviewers check it; a methodological review is published at month 12 and any corrections are logged before the annual report (Parts I and XIII). Second, the independent evaluator assesses pilot outcomes against baselines and comparison areas, and produces the year-one review, the 2030 mid-term evaluation and the evaluations behind each gate. Third, pilot-level oversight bodies (the P5 oversight board, the P3 ethics and data-protection panel, supreme audit institutions) validate the data their pilots report. Fourth, the year-one review tests the secretariat itself: if more than a third of milestones were missed without a published reason, the Board commissions a governance redesign before approving the year-two budget (Part XIII).

H.4.4 Corrective action

The corrective rule is the same for every indicator (Part XII). Two consecutive off-track annual reports trigger a published redesign plan within twelve months. An indicator off track at a gate holds related funding. A rights, safety or integrity breach stops the activity, and the reasons are published. The owning parts add specific triggers, for example: if the P3 warning-to-action rate stays below 60 percent after two years, thresholds or response windows change before expansion (Part VI); if Results Ledger false positives exceed the oversight board's threshold, the model is withdrawn and rules-only screening continues (Part IX); and if fewer than three permanent members engage by 2030, cooperation tasks are narrowed and routed through existing bodies (Part XI).

H.4.5 Revision

Milestones are revised only at the five-year reviews in 2031, 2036, 2041 and every five years to 2096, after public consultation, independent evaluation and panel opinions (Part XII). Every change is logged with its reason. An unrealistic milestone is revised openly, not quietly abandoned (Part II). A milestone may be raised at any review; it may be lowered only with a published explanation, and never below an agreed international target that remains in force. When states agree a new international target, for example a successor to the SDGs after 2030, the agreed-target column is updated at the next annual report and milestones are re-examined against it at the next five-year review. The scorecard ends with the blueprint's final sunset on 31 December 2100, unless renewed.

H.5 Indicator definitions requiring confirmation

ILLUSTRATIVE Several indicators are proposed before their definitions are settled. Each owner confirms the definition when the baseline is established: women in senior roles of UN-convened mediation teams (Part VIII definition of "senior role"); P3 lead time and warning-to-action rate (Part VI definitions, validated in shadow mode); Results Ledger coverage (unit of "programme budget" to be agreed with the UN80 mandate registry); domestic value added in P4 (method to be set at the value-chain screen); and public trust (survey instrument and threshold to be set by the independent evaluator).

H.6 Differences between parts found at assembly

ILLUSTRATIVE The following differences were found while consolidating this appendix and re-checked against the part files in the final consistency audit of 2 November 2026. The scorecard above uses the value the integration standard sets or, where it is silent, the owning part's value.

- **Under-five deaths baseline.** Resolved. Parts I, II and VIII, Part XII, the Executive Overview and this appendix all use 4.9 million (2024) with the UN IGME method note.
- **Women in mediation.** Resolved. Part XII's scorecard, Parts III, VIII and XIV, the Executive Overview and this appendix use Part VIII's indicator, women in senior roles of UN-convened mediation teams: at least one-third by 2030 and parity by 2040, baseline to be established by DPPA in 2027. Baseline context differs by part and is labeled as context only: Part XII, Part III and this appendix cite women as 6 percent of mediators in major processes, 1992–2019 (CFR); Part VIII uses a 2024 proxy of 14 percent of mediators (S/2025/556). Part III's separate target of women in 100 percent of UN-convened mediation teams is a different, compatible indicator.
- **P3 lead time.** Resolved. Parts III, VI, XII and XIV, the Executive Overview and this appendix use Part VI's absolute medians: at least 30 days by 2028, 60 days by 2030 and 90 days by 2040. Part VI's pilot KPI table now also gives 2030.
- **Results Ledger coverage.** Resolved. Parts II, III, IX, XII and XIV, the Executive Overview and this appendix use Part XII's master values: at least one UN and one national program publishing by 2028; at least 10 percent of the Secretariat's programme budget by 2030 only if the Secretary-General adopts it; a majority by 2040.
- **Pilot governance naming.** Resolved. Part VI and the other parts use "the P3 Pilot Governance Board"; remaining "pilot directors" risk owners have been replaced by Pilot Governance Boards.
- **Landmine casualties.** Resolved. Part XII and this appendix now use Part VI's milestones: at least 25 percent below 2024 by 2030, 50 percent below by 2040, 90 percent below by 2060 and near zero by 2100.

- **Interest burden.** Resolved. UNCTAD's *A World of Debt 2026* dates the 3.7 billion figure to 2023 (up from 2.5 billion in 2010); Parts I and X, the Executive Overview and this appendix now use 2023. The count of 51 countries is UNCTAD's latest headline count and is shown without a reference year.
- **People offline.** Resolved. Part XII, the Executive Overview and this appendix now use "near zero" for 2060, as in Parts II and IV.
- **Early-warning coverage target.** Resolved. Part XII and this appendix treat the UN Early Warnings for All aim of protecting everyone by 2027 as an initiative goal, not an intergovernmental target.
- **Part III indicators.** Resolved in format. Part III's table now uses the seven-column format. Its indicators on budget collected by 31 March, the human-rights share of spending and countries using Shared Layer standards are owned by Part III and are not reproduced here; collection is tracked in H.3.8 on Part I's full-year basis.
- **Baseline context for women in mediation, 2024 proxy.** Open, minor. Parts VIII (14 percent, 2024) and XII (6 percent, 1992–2019) cite different context figures for a baseline that is still to be established; both are labeled as context and neither is a baseline value.

APPENDIX I

GOVERNANCE AND CONFLICT-OF-INTEREST DISCLOSURES

Who Stands Behind This Book, and How Its Independence Is Protected

WHAT THIS APPENDIX DOES

It states who wrote this book and in what capacity, what the Ambassador has and has not approved, what interests the principal architect holds, and the firewall, governance bodies, panels, funding rules and complaint channels that Vision 2100 proposes to keep its recommendations independent of those interests. A book that asks governments to publish their contracts must first publish its own.

I.1 Why this appendix exists

Vision 2100 recommends energy systems, digital infrastructure, peace technology and financing structures that could, in time, involve large public and private expenditure. Readers are entitled to know who designed those recommendations, what interests the designers hold, and what stops those interests from shaping the advice. This appendix sets that out in one place. It consolidates the disclosure in the front matter, the conflict-of-interest firewall in Part XIII, the governance of the book in Part XII, and the authors' decisions of 1 November 2026 recorded in Appendix G.

Most of what follows is a set of proposals: governance bodies and rules that Vision 2100 proposes to establish. Where an arrangement is already in force, such as the disclosures themselves and the authors' decisions on authorship, the text says so. Where an arrangement depends on a body that does not yet exist, such as the Vision 2100 Steering Board, the text gives its target date and the interim arrangement.

I.2 Authorship and roles

TABLE I-1 **Authorship and roles in Vision 2100**

Contributor	Role	What the role covers	What it does not cover
Ambassador Ivonne A-Baki	Foundational Vision and Leadership Principles (book endorsed for publication, 2 November 2026)	Her public statements on peace, prevention, development finance, human dignity and institutional renewal, marked in the book as hers	Any technical, economic, geopolitical or implementation recommendation; any program, pilot, cost range or governance mechanism
William Michael Hadala Jr.	Principal Strategic and Technical Architect	Direction of the book's architecture, systems design and technical coherence; accountable for design	Gate decisions, spending approvals and appointments, which rest with the Steering Board; storage and battery specifications, from which he is recused
A113 Partners	Strategic Research, Architecture and Publication Development	Research, drafting, verification, publication; convening the interim secretariat	Speaking for any government, UN body or the Ambassador; acting as supplier, financier or transaction adviser to any pilot

All technical, economic, geopolitical and implementation recommendations in this book originate with A113 Partners under the direction of the principal architect. Where the book says "Vision 2100 proposes" or "this book recommends", it speaks for A113 Partners. It does not speak for Ambassador A-Baki, for the United Nations or any of its organs, or for any government, institution or royal household.

On 1 November 2026 the authors took three decisions that govern authorship and are recorded in Appendix G: to keep the four evidence categories and obtain the Ambassador's written approval before any new proposal is attributed to her (decision D2); to publish under A113 Partners, with William Michael Hadala Jr. as principal strategic and technical architect and her documented principles as the foundation, any co-authorship or endorsement to be confirmed before publication (D3); and to disclose conflicts of interest and keep recommendations technology-neutral (D6).

I.3 The Ambassador's approval and endorsement

Ambassador Ivonne A-Baki reviewed this book and endorsed it for publication on 2 November 2026. Her endorsement covers four things.

01 **Publication identity and credit.** The title, the subtitle naming the book as the framework of Ambassador Ivonne A-Baki, and her credit as source of the foundational vision and leadership principles.

02 **Every passage marked as hers.** Each passage marked as her statement paraphrases her 20 August 2026 dialogue with the General Assembly or the original Vision 2100 statement (2026). Appendix A, section A.8, explains the record and its limits.

03 **The Message from the Ambassador.** The Message in the front matter is hers and bears her name.

04 **Publication of the book as a whole.** She endorsed the book for publication.

Her endorsement does not make her the author of the book's technical, economic, geopolitical or implementation recommendations, which originate with A113 Partners, and it is not a commitment by her to implement any specific proposal. No new proposal may be attributed to her in later editions without her written approval of that specific attribution, and any change to a passage marked as hers requires her renewed approval. The book is designed to stand whether or not she becomes Secretary-General (Part XII). An approval log, held by the secretariat and open to the Steering Board and the integrity officer, records each approval with its date and the exact text approved.

I.4 The principal architect's affiliations

> **CONFLICT-OF-INTEREST DISCLOSURE**
>
> William Michael Hadala Jr., the Principal Strategic and Technical Architect, serves as Chief Strategy Officer of American Lithium Energy Corporation, a U.S. battery manufacturer. He founded A113 Partners, the publisher of this book, and A113 Defense, which work on federal technology intelligence and autonomous systems integration.

These affiliations touch the book's subject matter directly. In addition, the name and design concept of the HyperEdgeX sovereign edge node (Part IV, Section IV.9; Appendix E) originate in commercial work associated with the principal architect; in this book HyperEdgeX is an open reference design that any qualified manufacturer may build to. Pilot P1 (Sovereign Digital Nation) and Pilot P2 (Clean Power and Compute Corridor) involve energy storage. Pilot P4 (Minerals-to-Industry) concerns lithium or copper value chains, which supply battery materials. The six-layer shield for peace operations involves autonomous and remotely operated systems. Federal technology intelligence overlaps with the book's analysis of public budgets and procurement.

For that reason, recommendations in this book touching batteries, energy storage, autonomy and peace technology are written to be technology-neutral and independently justified. The book recommends capabilities and open standards, not vendors or products. Where it names companies or products, it does so only as documented precedents, balanced with alternatives. The energy analysis is technology-neutral: Part V and Part X compare renewables, storage, grids, hydropower, geothermal and nuclear on cost, safety and suitability, and Part IV concludes that sovereign AI for public services needs modest power. Readers should still weigh the recommendations on storage and autonomy with these interests in mind, and the safeguards below are designed to make that weighing unnecessary in practice.

The principal architect files a declaration of interests with the integrity officer when the interest register opens and updates it within thirty days of any material change, including new directorships, equity holdings, advisory roles, contracts or funding relationships of A113 Partners, A113 Defense, American Lithium Energy Corporation or any entity he controls. A summary is published.

I.5 The conflict-of-interest firewall

The firewall applies from the start of the first year and is to be written into the Steering Board charter. It is a precondition for seating the Board, not a later deliverable. One credible conflict-of-interest finding in the first year would discredit every pilot that follows.

TABLE I-2 **The conflict-of-interest firewall**

Rule	What it requires	Who verifies
1. No supplier, financier or transaction-adviser role	A113 Partners and its affiliates do not act as supplier, financier or transaction adviser to any pilot they help design	Finance and integrity panel; integrity officer
2. Recusal on storage and battery specifications	The principal architect does not draft or review energy-storage specifications for P2 or battery-materials specifications for P4; the pilot's preparation lead drafts them	Technical panel; recorded in the responsibility matrix (Part XIII)
3. Independent technical review	Energy, storage and peace-technology recommendations are assessed by independent technical reviewers before implementation	Technical panel
4. Vendor-neutral specifications	Specifications are written to capabilities and open standards, not products	Technical panel, at Gate 0 and later gates
5. Clean seed funding	No funds from any entity that could bid to supply, finance or advise a pilot; in-kind support from A113 Partners disclosed at value	Finance and integrity panel
6. Disclosure and recusal	Board members, panel members, staff and contractors file published declarations of interest and recuse, on the record, from related decisions	Integrity officer
7. Independent integrity officer	Reports to the chair of the finance and integrity panel, not to A113 Partners; maintains the interest register; receives complaints	Steering Board (appointment); panel chair (line of report)
9. HyperEdgeX independence	The HyperEdgeX specification used by any pilot is finalized by an independent reviewer; the principal architect does not evaluate bids or select suppliers for HyperEdgeX nodes; procurement is open to every qualified manufacturer	Technical panel; integrity officer
8. Publication	The secretariat's own spending, contracts and gifts register appear on the initiative's Results Ledger	Independent evaluator

The firewall extends to people. Any person who has worked on the design of a pilot, including the principal architect, may not, for three years after leaving that work, act for a bidder, financier or adviser on that pilot, unless the finance and integrity panel publishes a finding that no conflict arises. Employees and contractors of A113 Partners are bound by the same rule.

Breach of the firewall is handled as an integrity finding. The integrity officer investigates, the finance and integrity panel issues an opinion, and the Steering Board decides on the remedy, which may include suspending the pilot activity concerned. The finding and the remedy are published.

I.6 Procurement neutrality

Pilot procurement belongs to host governments, under their own procurement law and, where a development bank finances the work, under that bank's procurement rules. Vision 2100 does not procure on behalf of any host. It proposes five conditions for any procurement in a pilot it supports.

01 **Open and competitive.** Procurement is open, competitive and multi-vendor. Single-source awards require a published justification.

02 **Specification by capability.** Tender specifications state required capabilities, performance, safety and interoperability, using open standards where they exist, and never a brand or proprietary format.

03 **Independent review.** The finance and integrity panel reviews procurement plans and every financing structure before financial close; the technical panel confirms vendor neutrality of specifications.

04 **Open contracting.** Award, contract and amendment data are published in line with the Open Contracting Data Standard and recorded on the pilot's Results Ledger.

05 **Market sounding under the firewall.** Before tender, market sounding is carried out only through the finance lead, with no pre-selection and a record of every contact.

These conditions apply to the secretariat's own purchases as well. Gate 0 criterion 5, set out in Part XIII, requires the technical panel to confirm vendor neutrality and the finance and integrity panel to confirm that no conflict of interest is unresolved before any pilot proceeds.

I.7 Two kinds of governance body

Vision 2100 proposes two distinct kinds of governance body. They are easily confused, and the distinction matters: one governs the initiative, the other governs a pilot inside a sovereign country.

TABLE I-3 **The Vision 2100 Steering Board and the Pilot Governance Boards compared**

Feature	Vision 2100 Steering Board	Pilot Governance Boards
What it governs	The Vision 2100 initiative: its plan, budget, endorsements and the book's revision cycle	One pilot's operations, in the host country or region
Number	One	One per pilot
Chair	Elected by members	Host government, alone or as co-chair
Membership	11–13 members on staggered three-year terms, renewable once; independent majority; members from every UN regional group; at least half women; at least two under 35; at least two from small or resource-constrained states; A113 Partners holds no more than two seats and no veto	Host government; the relevant regional body; independent members; and, where relevant, the UN entity involved
Key decisions	At each gate, whether Vision 2100 continues to support a pilot; appointment of panels and the independent evaluator; approval of the plan, budget and every amendment	Operational decisions within the pilot: work plans, procurement under host law, data-protection measures, community engagement
Limits	No authority over any government, UN body or host; only over the initiative's own resources and endorsements	Cannot bind the Steering Board's support decision; subject to host law
Interim arrangement	Interim steering group of 5–7 people, with a majority not affiliated with A113 Partners, until the charter is adopted (target April 2027)	Formed when a host requests implementation after Gate 0

The relationship between the two is simple. A host government decides whether its pilot exists and how it runs, through its Pilot Governance Board. The Steering Board decides whether Vision 2100 continues to support that pilot. Host governments retain sovereign decision rights at every stage, and any host may withdraw at any time without cost; the withdrawal is recorded neutrally. For P3, which spans two or three states, the P3 Pilot Governance Board is co-chaired by the participating governments with the regional organization that hosts the analysis unit. For P5, the UN entity that takes part governs its own ledger pilot under its own rules.

Within the initiative, the principal architect is accountable for design and technical coherence, and a Program Director, appointed through an open process, is accountable for delivery. Gate decisions and spending approvals rest with the Steering Board, not with either role. Part XIII sets out the full responsibility matrix.

I.8 Independent advisory panels

Vision 2100 proposes four independent advisory panels to advise the Steering Board. Each has five to nine members chosen by open nomination, with balance across regions and gender; panels that are not balanced are not seated, and named interim reviewers act until they are. Members file declarations of interest and recuse from related matters. Panel opinions are published unedited, including dissent.

TABLE I-4 **The four independent advisory panels**

Panel	Remit	Special powers
Technical	AI, compute, digital infrastructure, energy, storage and cybersecurity; reviews architectures, specifications and procurement neutrality; conducts the independent technical review of energy, storage and peace-technology recommendations	Confirms vendor neutrality before Gate 0 and later gates
Human rights and ethics	Privacy, surveillance, child protection, gender, Indigenous rights and community consent	Binding stop recommendation on any pilot with unremedied rights findings
Nuclear safety and nonproliferation	Any nuclear element of any pilot or recommendation	Defers to the IAEA and national regulators, who alone hold authority; requires safeguards, fuel take-back and public consent before any nuclear element is endorsed; confirms that no dossier assumes nuclear power earlier than a newcomer's realistic timeline
Finance and integrity	Cost realism, debt sustainability, procurement, conflicts of interest and funding sources	Reviews every financing structure before close; supervises the integrity officer; confirms no unresolved conflict before Gate 0

The panels are to be seated within 180 days of the start of the first year, by 30 April 2027 (Part XIII). Until then, interim reviewers named in the published record carry out their functions. The panels also re-score the qualitative ratings in the book, including the risk matrices in Part XII and Appendix G.

I.9 Funding transparency

No funding has been committed to Vision 2100 by any party. The book's cost figures are illustrative planning assumptions (Appendix A, section A.7). When funding is sought, Vision 2100 proposes the following rules.

- **Eligible donors.** Philanthropic foundations, bilateral governance funds, development-bank preparation facilities, climate and peacebuilding funds through their own procedures, and universities and research councils. No funds from any entity that could bid to supply, finance or advise a pilot.
- **Concentration limit.** No single donor provides more than an indicative 25 percent of the secretariat core budget.
- **Publication.** Every contribution, including in-kind support from A113 Partners at stated value, is published with the donor's name, amount, date and any conditions. Anonymous funding is not accepted.
- **No conditional influence.** No contribution may carry a right to influence a specification, host selection, gate decision or publication. Any such condition is refused and the refusal recorded.
- **Own spending in public.** The secretariat's spending, contracts and gifts register are published on the initiative's Results Ledger, built from the P5 data model, monthly from the fourth month of operation and including spending on pilots that are stopped.

The initiative is kept separate from any campaign. The secretariat does not lobby Security Council members or other member states on the selection of the Secretary-General, does not use the United Nations name or emblem, and keeps its engagement records separate from any campaign activity. Funds raised for Vision 2100 are not used for any campaign purpose, and no campaign funds are used for Vision 2100.

I.10 Complaints and whistleblowing

Vision 2100 proposes a single channel for complaints and protected disclosures, operated by the integrity officer and open to anyone: staff, contractors, panel and board members, host-government officials, community members in pilot areas, and the public.

TABLE I-5 **Complaints and whistleblowing channel**

Element	Proposal
What may be raised	Conflicts of interest; breach of the firewall; misuse of funds; misattribution to the Ambassador or any government; procurement irregularities; rights, safety or data-protection concerns in a pilot; retaliation
How	A confidential channel online, by post to the publisher's address marked for the integrity officer, and in pilot areas through community monitors and local partners in the local language
Confidentiality	The complainant's identity is protected; anonymous reports are accepted and investigated where they contain enough detail
Protection	No retaliation against anyone who reports in good faith; any retaliation is itself an integrity finding
Handling	Acknowledged within five working days; assessed within thirty days; investigated by the integrity officer or, where the integrity officer or A113 Partners is implicated, by an investigator appointed by the finance and integrity panel chair

Element	Proposal
Escalation	Rights concerns go to the human rights and ethics panel; matters within a host country's jurisdiction are referred, with the complainant's consent, to the competent national authority
Reporting	An anonymized summary of complaints, findings and remedies in every quarterly note

A complaint about A113 Partners or the principal architect never passes through either of them. It goes to the integrity officer, who reports to the chair of the finance and integrity panel, and the panel chair decides who investigates.

I.11 Transfer to an independent foundation

A113 Partners convenes the secretariat during FOUND, but its role is designed to shrink. The secretariat is to pass to an independent foundation, registered in 2029, with transfer complete by 2031. These dates apply throughout the book.

TABLE I-6 **Steps to the independent foundation**

Step	Target date	Decider
Interim steering group and conflict-of-interest code in place	First 30 days (by 1 December 2026)	Principal architect, then interim steering group
Steering Board constituted under its charter, with independent majority	By 30 April 2027	Interim steering group
Foundation form, jurisdiction and statutes chosen after consultation	2028	Steering Board
Foundation registered	2029	Steering Board
Secretariat staff, data, registers, Results Ledger and archive transferred; A113 Partners' convening role ends	Complete by 2031, with the first five-year review	Steering Board; foundation board

After transfer, A113 Partners holds no more than two seats on any governing body of the foundation and no veto, as on the Steering Board. Intellectual property in the book's frameworks, data models and registers passes to the foundation under an open license so that anyone may use them. In the PROVE horizon, A113 Partners and civil society move to an evaluation and independent-monitoring role.

I.12 Sunset and renewal

Vision 2100 is designed to end when it is no longer useful. Four rules apply.

01 **Ten-year mandate.** The Steering Board's mandate expires every ten years unless renewed by a two-thirds vote after public consultation.

02 **Five-year revisions.** The book is revised in 2031, 2036, 2041 and every five years to 2096, after public consultation, independent evaluation and panel opinions; changes are logged with reasons (Appendix A, section A.11).

03 **Early ending.** If the initiative stops serving its purpose, it ends, and its archive passes to a public university or a UN archive.

04 **Final sunset.** The initiative ends on 31 December 2100.

Sunset is a strength, not a failure. A later horizon gate, Gate 4 in 2080, asks whether institutions renew themselves without the book. If they do, the initiative has done its work.

I.13 What remains to be done before publication

The following governance items are open at the date of this edition and are tracked in Appendix G.

- Adoption of the conflict-of-interest code and opening of the interest register, with the principal architect's declaration published.
- Appointment of an interim integrity officer and opening of the complaints channel.
- Formation of the interim steering group with a majority not affiliated with A113 Partners.
- Independent legal review of the charter, the decision-rights matrix (Appendix F) and the foundation options.

APPENDIX J

J

DEFINITIONS, ACRONYMS AND TERMINOLOGY

The Language of Vision 2100

WHAT THIS APPENDIX DOES

It defines the names Vision 2100 gives to its programs, pilots, horizons, decision gates and evidence categories, and spells out every acronym used in the book. One name is used for each thing throughout the book; where a term is a Vision 2100 proposal rather than an existing institution, the definition says so.

J.1 How to use this appendix

Section J.2 defines the terms Vision 2100 uses for its own structure, programs and methods. Section J.3 lists acronyms and abbreviations. Two conventions apply to both.

First, a name in this appendix is not evidence that the thing exists. Most Vision 2100 terms — the UN Shared Layer, the Peace Technology Pool, the Children's Shield, the Royal Compact for 2100 and others — name **proposals** developed by A113 Partners. They exist only if the governments, institutions or UN bodies with authority to create them choose to do so. None is a commitment by Ambassador Ivonne A-Baki, by any government or by any UN body. Existing institutions, programs and instruments are named as such.

Second, the book uses these names consistently. A reader who meets a different name for the same thing in an earlier Vision 2100 document should treat the name here as current. Earlier names for the book's own components are listed in section J.2.9.

J.2 Vision 2100 terms

J.2.1 The book's structure and method

TABLE J-1 Terms for the book's structure, evidence and method

Term	Definition	Where developed
Vision 2100	The long-term framework for sovereign nations, shared prosperity, technological advancement and lasting peace set out in this book, built on the documented principles of Ambassador Ivonne A-Baki and developed by A113 Partners	Throughout
Original Vision 2100 statement (2026)	The earlier Vision 2100 paper from which this book's themes and names derive	Part I
The integrated system (systems thread)	The chain on which every part is built: reliable clean energy → compute and digital infrastructure → education, health and accountable government → productive industry and jobs → social stability and dignity → conditions in which diplomacy and peace succeed → peace protects the investments that sustain energy and industry	Front matter; every part
Five questions	The questions every part answers: where we are today; what the world should look like in 2100; how we get there; what we must do immediately; how we measure progress	Every part
Evidence category	One of four classes into which every claim falls: evidence, proposal, documented, illustrative	Appendix A
Evidence	An independently sourced fact, shown by a numbered citation to the consolidated bibliography in Appendix B	Appendix A
Proposal	A recommendation of Vision 2100, developed by A113 Partners and written explicitly as a proposal ("Vision 2100 proposes..."); it binds no one	Appendix A
Documented	A public statement by Ambassador A-Baki, drawn from her 20 August 2026 General Assembly dialogue or the original Vision 2100 statement, marked with a gold label and approved by her on 2 November 2026	Appendix A; Appendix I
Illustrative	A scenario, archetype, life-path, cost range or planning assumption, marked with a grey label; not a forecast or commitment	Appendix A
Source hierarchy	The ranking of sources into primary, authoritative secondary, and tertiary or interested, which caps the confidence a claim can receive	Appendix A
Confidence rating	High, Medium or Low, recorded for each logged claim according to the quality and consistency of its support	Appendix A; Appendix C
Verification pass	A structured re-check of claims against their sources; the book has an initial research stage, two verification passes and a final pre-publication verification	Appendix A
Planning assumption	A stated input (unit cost, cost of capital, scale, schedule) used to build an illustrative range; to be replaced by tendered prices or host data before any commitment	Appendix A; Appendices C and D
Canonical figures	The fixed set of shared baselines, pilot ranges, staffing and governance terms that every part must match	Appendix A
Agreed international target	In performance tables, the Sustainable Development Goal or other commitment adopted by member states for an indicator, where one exists	Appendix H

Term	Definition	Where developed
Planning milestone	A Vision 2100 value for 2030, 2040, 2060 or 2100 in a performance table; never a substitute for an agreed target	Appendix H
Challenge register; correction log	The public record of challenges to claims in the book and of the corrections made in response	Appendix A; Appendix C

J.2.2 Horizons

TABLE J-2 **The five horizons**

Horizon	Years	Purpose
FOUND	2026–2030	Governance, partnerships, research, pilots, funding mechanisms and initial infrastructure
PROVE	2031–2040	Demonstrate national and regional implementation, measure independently, refine
CONNECT	2041–2060	Scale proven systems through interoperable infrastructure and voluntary cooperation
TRANSFORM	2061–2080	Substantial institutional, economic, environmental and technological transformation
SUSTAIN	2081–2100	Preserve gains, adapt institutions, maintain accountability and resilience

J.2.3 The five flagship pilots

TABLE J-3 **The five flagship pilots**

Pilot	Definition	Host archetype
P1 Sovereign Digital Nation	National AI and digital public infrastructure: identity, data exchange, payments, a sovereign AI node and public services, owned and governed by the host	Small island state of about 100,000 people (eligibility 100,000 to 1 million)
P2 Clean Power and Compute Corridor	An energy, industrial and compute corridor with a technology-neutral clean power mix, households served first	Emerging economy
P3 Prevention Early-Warning	Human-led early warning in a water- or climate-stressed region, tied to mediation and community monitors	Two or three neighboring states sharing a basin or rangeland
P4 Minerals-to-Industry	A staged lithium or copper value chain, from refining toward components, with community consent	Lithium or copper producer
P5 Results Ledger	Public accountability for one UN program and one national infrastructure program, from appropriation to verified outcome	One willing UN entity and one government

J.2.4 Action classes, gates and governance

TABLE J-4 Terms for action classes, decision gates and governance

Term	Definition	Where developed
Action class A	Activities A113 Partners and the interim secretariat can carry out independently: publish, research, draft, convene experts, prototype on public data, raise seed funds	Part XIII
Action class B	Activities that depend on voluntary partners — governments, regional bodies, development banks, universities, philanthropies — who decide for themselves	Part XIII
Action class C	Activities that only a Secretary-General or an authorized UN body (General Assembly, Security Council, agency governing bodies) can undertake	Part XIII
Gate	A published decision point at which an initiative or pilot proceeds, is redesigned, is held or stops, against criteria set in advance	Part XII; Part XIII
Gate 0	October 2027: the Steering Board decides, pilot by pilot, whether Vision 2100 supports each pilot to proceed, against six criteria (host request, feasibility and ethics, financing path, evaluation design, neutrality and integrity, safety)	Part XIII
Gate 1	2030, FOUND to PROVE: at least three pilots operating with host governments still requesting them, measurable improvement, Results Ledger publishing, no unremedied findings, at least 60 percent of PROVE financing identified	Part XII
Gate 2	2040, PROVE to CONNECT: independently evaluated outcomes beat baselines; replication in at least ten states across all three archetypes; costs within 25 percent of plan or explained	Part XII
Gate 3	2060, CONNECT to TRANSFORM: regional interoperability; domestic and private capital leads; public-trust threshold met	Part XII
Gate 4	2080, TRANSFORM to SUSTAIN: institutions renew themselves without the book; asset renewal funded; gains held for ten years	Part XII
Gates G1–G4 (P1)	Stage gates within P1, held by the host: G1 laws in force and data-protection impact assessment published; G2 independent security accreditation; G3 independent inclusion audit; G4 evaluation and decision on continuation	Part IV
Pilot stage gates	Gates specific to other pilots: P2 financial close (2029); P3 rights review before live operation (2028); P4 community consent before feasibility; P5 publication (2028)	Part XII; Part XIII
Gate outcomes	Proceed, redesign, hold or stop; every decision is published with reasons, panel opinions and recorded recusals	Part XIII
Vision 2100 Steering Board	The body that governs the Vision 2100 initiative: 11–13 members, independent majority, A113 Partners no more than two seats and no veto; decides at each gate whether Vision 2100 continues to support a pilot; owns the revision cycle	Part XII; Appendix I
Interim steering group	Five to seven people, majority not affiliated with A113 Partners, who govern the initiative until the Steering Board charter is adopted (target April 2027)	Part XIII
Pilot Governance Board	One per pilot, chaired or co-chaired by the host government with the regional body, independent members and, where relevant, the UN entity; governs the pilot's operations	Appendix I

Term	Definition	Where developed
Independent advisory panels	Four panels of five to nine members — technical; human rights and ethics; nuclear safety and nonproliferation; finance and integrity — whose opinions are published unedited	Part XII; Appendix I
Conflict-of-interest firewall	The rules that bar A113 Partners and affiliates from acting as supplier, financier or transaction adviser to any pilot they help design, with recusal, independent review and publication	Part XIII; Appendix I
Integrity officer	Officer who keeps the interest register and runs the complaints channel, reporting to the chair of the finance and integrity panel rather than to A113 Partners	Part XIII; Appendix I
Principal Architect	William Michael Hadala Jr., accountable for the design and technical coherence of Vision 2100	Appendix I
Program Director	Officer appointed through an open process, accountable for delivery of the first-year plan	Part XIII
Interim secretariat	The team convened by A113 Partners to run the initiative during FOUND, to pass to an independent foundation (registered 2029, transfer complete by 2031)	Part XII; Appendix I
Workstreams (WS1–WS12)	The twelve lines of work in the first-year plan, from governance and charter (WS1) to monitoring, evaluation and the initiative's own Results Ledger (WS12)	Part XIII
Project-preparation facility	A proposed facility of about $25–60 million over FOUND to carry pilots from Gate 0 to financing decisions; designed, not capitalized, in the first year	Part X; Part XIII
Decision-rights matrix	The map of each initiative to the body that must decide it: the Secretary-General alone, the General Assembly, the Security Council, a Charter amendment, or sovereign governments	Part III; Appendix F

J.2.5 Programs and institutions proposed by Vision 2100

TABLE J-5 **Named programs and institutions (all are Vision 2100 proposals unless stated)**

Term	Definition	Where developed
Technology for Peace and Security	A proposed cross-cutting priority that member states could recognize by General Assembly resolution; described as a "fourth pillar" only as an aspiration member states could adopt, since the Secretary-General cannot create pillars	Part III
National AI Sovereignty Model	A seven-layer reference architecture through which each nation owns its data, models and digital public services: energy → compute → sovereign AI → services	Part IV
Sovereign AI node	A nationally owned and governed facility running AI for public services in national languages and law; sized for public services at about 50 kW for a small island state and about 12–26 MW for large economies	Part IV
Three-layer connectivity architecture	A proposed national connectivity design combining satellites in low Earth orbit, high-altitude platforms and nationally owned edge nodes, with every link ending in a nationally controlled gateway and each layer procured from more than one supplier	Part IV

Term	Definition	Where developed
HyperEdgeX sovereign edge node	An open reference design for a modular, nationally owned edge data centre (about 60–120 kW air-cooled, or immersion-cooled) combining national gateway, internet exchange, radio access, sovereign inference, security and a microgrid with storage; the name and concept originate in commercial work associated with the principal architect (Appendix I)	Part IV; Appendix E
UN Shared Layer	A thin layer of common safety-evaluation standards, interoperability profiles, verification methods and an emergency compute reserve for disasters; the UN holds no one's data	Part IV
Digital public infrastructure	Shared national systems for identity, data exchange and payments on which public and private services can build	Part IV
Clean Power and Compute Corridors	Technology-neutral clean power systems — renewables, storage, grids, hydropower, geothermal and, where safe and economic, nuclear including SMRs — serving industry, households, services and compute	Part V
Minerals-to-Industry Framework	Staged value chains through which resource-rich nations capture value, skills and jobs, with community consent and environmental standards	Part V
Six-layer shield	Non-lethal technology for mandated peace operations in six layers: Watch, Warn, Protect, Deliver, Clear and Verify; it supports, never replaces, peacekeepers	Part VI
Peace Technology Pool	A proposed pool of technology and expertise contributed by member states to peace operations, modeled on existing capability-pledging systems	Part VI; Part X
Prevention and Mediation Fund	A fund, built first from voluntary contributions and later, if members agree, from savings in peace operations, giving mediators and envoys multi-year resources	Part VI; Part X
Americas Compact	A voluntary hemispheric framework to build opportunity where people live, so that migration becomes a choice; a proof of concept for regional compacts elsewhere	Part VII
Americas Build Corps	Multi-year professional tours by engineers, nurses, teachers and technicians under host-country direction, with a mandate to train national successors	Part VII
Stay-and-build programs	Place-based packages of training, small-business finance, community security and services in municipalities with high youth out-migration	Part VII
Regional compacts	Comparable voluntary frameworks for other regions, adapted to their institutions	Part VII; Part XI
Women at Every Table	An operating standard for women's participation in mediation and peace processes: one-third of senior mediation roles by 2030 and parity by 2040	Part VIII
Children's Shield	Strengthened protection of children in conflict, building on the existing UN monitoring and reporting mechanism rather than creating a parallel one; protective technology from the six-layer shield	Part VIII; Part VI
Mothers and Children Peace Fund	Proposed multi-year funding for maternal and child health and protection in fragile settings and for women's organizations in affected communities	Part VIII
Learning companion	An AI-supported tutor that works inside a teacher-led classroom and supports, never replaces, teachers	Part VIII

Term	Definition	Where developed
Results Ledger	Public accountability for UN and national programs: money followed from appropriation to verified outcome, with AI-assisted checks and human accountability; also the name of pilot P5 and of the initiative's own spending record	Part IX
Council of Long-Term Stewards	Advisory patrons — heads of royal households and non-royal elders — who meet the Secretary-General yearly, publish a long-view letter and review the 2100 aspirations every five years	Part XI
Royal Compact for 2100	A voluntary compact through which willing royal households channel their continuity into long-term public service, with a Royal Endowment for 2100, integrity by example and good offices on request	Part XI
Interfaith peace convening	A standing convening invited jointly by the Secretary-General and existing interfaith bodies, not a new UN entity	Part XI
Arts for Peace	Exhibitions, music, film and food from every member state at UN headquarters and at venues where peace is negotiated, with a youth program	Part XI
Vision 2100 Baseline Dataset and Dashboard	A versioned public record of each indicator with source, date, method and confidence, showing only figures a custodian agency has published	Part I; Part XIII

J.2.6 Scenarios and archetypes

TABLE J-6 Scenario and archetype terms (all illustrative)

Term	Definition	Where developed
Three futures	Fragmented, concentrated and Vision 2100 futures against which the book is tested; not forecasts	Part II
Life-paths	Five composite children born in 2026 — Mele, Moussa, Lucía, Rahim and Hana — followed to age 74 in 2100 in success and failure cases	Part II
Country archetypes	Advanced economy, emerging economy, and small or resource-constrained state, each with stated parameters; hypothetical, not real countries	Parts IV–XI; Appendix C
Host archetype	The defining conditions of a suitable host for each pilot; no country has been approached for, or agreed to, any pilot	Part XII; Part XIII

J.2.7 Measurement terms

TABLE J-7 Measurement and reporting terms

Term	Definition
Baseline	The value of an indicator at a stated reference year from one stated source and method; "to be established" where not yet measured
Owner	The body that reports on an indicator; owners report, they do not deliver outcomes alone
Master scorecard	The consolidated performance table for 2026–2100, Appendix H

Term	Definition
Corrective rule	Two off-track annual reports trigger a redesign within 12 months; off-track at a gate holds funding; a rights, safety or integrity breach stops the activity
Warning lead time (P3)	Median days from first alert to onset of lethal violence, for events that occur: at least 30 days by 2028, 60 days by 2030 and 90 days by 2040

J.2.8 Finance terms

TABLE J-8 **Finance terms used in the book**

Term	Definition
First-year preparation	The first budget tier: pilot preparation from November 2026 to October 2027
Initial implementation	The second budget tier: a pilot's first phase, including first-year preparation
Long-term capital	The third budget tier: replication capital in PROVE, spent only if gates are passed
Blended finance	The use of concessional or public funds to lower the risk or cost of private investment
Concessional finance	Grants or loans on terms more favorable than the market
Debt-for-nature conversion (swap)	Refinancing of sovereign debt on better terms, with part of the savings committed to conservation
Levelized cost of electricity	The average cost per unit of electricity over a plant's life, including capital, financing, operation and fuel
Cost of capital	The return investors require; in this book the real weighted average cost of capital, 3–6 percent in the advanced archetype and 9–15 percent in the emerging archetype
First-of-a-kind	The first unit of a new design, typically more costly than later units

J.2.9 Earlier names for the book's components

TABLE J-9 **Earlier names and their current equivalents**

Earlier name	Current name
Executive Strategic Brief; Deliverable B	The Executive Overview
First-Year Implementation Plan; Deliverable C	Part XIII
Research and Evidence Annex; Deliverable D	Appendix A (method) and Appendix C (verification and assumptions)
Strategic Gaps and Decisions Register; Deliverable E	Appendix G
The 33-page vision; original Vision 2100 paper	The original Vision 2100 statement (2026)
P3 steering board; pilot steering committee	The P3 (or relevant) Pilot Governance Board
Exhibit	Figure or table

J.3 Acronyms and abbreviations

The tables below list acronyms used in the parts, the front matter and the appendices. Acronyms that appear only inside a bibliographic reference — a document symbol, a data-series code or a

publisher's name in a source entry — are spelled out in Appendix B where needed and are not repeated here.

J.3.1 United Nations bodies and processes

TABLE J-10 Acronyms: United Nations system

Acronym	Meaning
ACT	Accountability, Coherence and Transparency group (of member states)
DESA	UN Department of Economic and Social Affairs
DPO	UN Department of Peace Operations
DPPA	UN Department of Political and Peacebuilding Affairs
ECW	Education Cannot Wait (global fund for education in emergencies)
FAO	Food and Agriculture Organization of the United Nations
FfD4	Fourth International Conference on Financing for Development (Sevilla, 2025)
GA	General Assembly
GGE	Group of Governmental Experts
HLCM	High-Level Committee on Management (UN system)
IAEA	International Atomic Energy Agency
IFAD	International Fund for Agricultural Development
IGME	UN Inter-agency Group for Child Mortality Estimation
IGN	Intergovernmental Negotiations on Security Council reform
ILO	International Labour Organization
IMF	International Monetary Fund
INIR	Integrated Nuclear Infrastructure Review (IAEA mission)
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
ITU	International Telecommunication Union
JMP	WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
MMEIG	Maternal Mortality Estimation Inter-agency Group
MONUSCO	UN Organization Stabilization Mission in the Democratic Republic of the Congo
MPTF	Multi-Partner Trust Fund Office
OIOS	Office of Internal Oversight Services
PBC	Peacebuilding Commission
PBF	Peacebuilding Fund
SAGE	Situational Awareness Geospatial Enterprise (UN peacekeeping incident database)
SC; UNSC	Security Council
SDG	Sustainable Development Goal (SDG 7 on energy; SDG 4 on education)
SEforALL	Sustainable Energy for All

Acronym	Meaning
SG	Secretary-General
SOFI	*The State of Food Security and Nutrition in the World* (FAO and partners)
SRSG; SRSG-CAAC	Special Representative of the Secretary-General; for Children and Armed Conflict
UIS	UNESCO Institute for Statistics
UN	United Nations
UN80	The UN80 initiative and mandate-review resolution (2026)
UNCTAD	UN Trade and Development (formerly UN Conference on Trade and Development)
UNDP	UN Development Programme
UNECA	UN Economic Commission for Africa
UNEP	UN Environment Programme
UNESCO	UN Educational, Scientific and Cultural Organization
UNFCCC	UN Framework Convention on Climate Change
UNFPA	UN Population Fund
UNGA	UN General Assembly (UNGA 82: its 82nd session, 2027–28)
UNHCR	Office of the UN High Commissioner for Refugees
UNICEF	UN Children's Fund
UNIDO	UN Industrial Development Organization
UNITAR	UN Institute for Training and Research
UNMAS	UN Mine Action Service
UNODA	UN Office for Disarmament Affairs
UNOSAT	UNITAR Operational Satellite Applications Programme
UNRWA	UN Relief and Works Agency for Palestine Refugees in the Near East
UNSD	UN Statistics Division
WHO	World Health Organization
WMO	World Meteorological Organization
WPHF	Women's Peace and Humanitarian Fund
WPP	*World Population Prospects* (UN DESA)
WPS	Women, Peace and Security agenda (Security Council resolution 1325 and successors)
WRC	World Radiocommunication Conference (ITU)
WTO	World Trade Organization

J.3.2 Development finance institutions and financial terms

TABLE J-11 **Acronyms: development finance and economics**

Acronym	Meaning
ADB	Asian Development Bank
AfDB	African Development Bank
AIIB	Asian Infrastructure Investment Bank
BNDES	Brazilian Development Bank
CAF	CAF–Development Bank of Latin America and the Caribbean
CAPEX	Capital expenditure (overnight construction cost)
CDB	Caribbean Development Bank
CF	Capacity factor
CRF	Capital recovery factor
DFC	U.S. International Development Finance Corporation
DFI	Development finance institution
EBRD	European Bank for Reconstruction and Development
ECA	Export credit agency
EIB	European Investment Bank
EMDE	Emerging market and developing economies
FOAK	First-of-a-kind
FX	Foreign exchange
GDP	Gross domestic product
GFF	Global Financing Facility (for women, children and adolescents)
IDA; IDA21	International Development Association (World Bank); its 21st replenishment, fiscal years 2026–2028
IDB	Inter-American Development Bank
IDC	Interest during construction
IsDB	Islamic Development Bank
LCOE	Levelized cost of electricity
MDB	Multilateral development bank
MIGA	Multilateral Investment Guarantee Agency (World Bank Group)
O&M	Operation and maintenance
PEFA	Public Expenditure and Financial Accountability (assessment framework)
PFM	Public financial management
PIMA	Public Investment Management Assessment (IMF)
PPP	Public-private partnership
PRGT	Poverty Reduction and Growth Trust (IMF)

Acronym	Meaning
RST	Resilience and Sustainability Trust (IMF)
SDR	Special Drawing Right (IMF reserve asset)
SWF	Sovereign wealth fund
WACC	Weighted average cost of capital

J.3.3 Regional organizations and country groupings

TABLE J-12 **Acronyms: regional organizations and groupings**

Acronym	Meaning
AfCFTA	African Continental Free Trade Area
AOSIS	Alliance of Small Island States
ASEAN	Association of Southeast Asian Nations
AU	African Union
CAFTA-DR	Dominican Republic–Central America Free Trade Agreement
CARICOM	Caribbean Community
CELAC	Community of Latin American and Caribbean States
ECOWAS	Economic Community of West African States
EU	European Union
G4	Brazil, Germany, India and Japan (Security Council reform group)
G7; G20; G77	Group of Seven; Group of Twenty; Group of 77 developing countries
GCC	Gulf Cooperation Council
IGAD	Intergovernmental Authority on Development (Horn of Africa)
LAC	Latin America and the Caribbean
LDC	Least developed country
LMICs	Low- and middle-income countries
OAS	Organization of American States
OECD	Organisation for Economic Co-operation and Development
OSCE	Organization for Security and Co-operation in Europe
PIF	Pacific Islands Forum
SICA	Central American Integration System
SIDS	Small island developing states
USMCA	United States–Mexico–Canada Agreement

J.3.4 Peace, security and arms control

TABLE J-13 Acronyms: peace, security and arms control

Acronym	Meaning
ACLED	Armed Conflict Location and Event Data project
CCW	Convention on Certain Conventional Weapons
CEWARN	Conflict Early Warning and Response Mechanism (IGAD)
ECOWARN	ECOWAS Early Warning and Response Network
ERW	Explosive remnants of war
GICHD	Geneva International Centre for Humanitarian Demining
ICBL-CMC	International Campaign to Ban Landmines – Cluster Munition Coalition (publisher of the Landmine Monitor)
ICRC	International Committee of the Red Cross
LAWS	Lethal autonomous weapons systems
PCRS	Peacekeeping Capability Readiness System
PRIO	Peace Research Institute Oslo
SIPRI	Stockholm International Peace Research Institute
SMM	OSCE Special Monitoring Mission to Ukraine
SOFA	Status-of-forces agreement
UCDP	Uppsala Conflict Data Program
VIEWS	Violence and Impacts Early-Warning System (PRIO and Uppsala University)

J.3.5 Energy, nuclear and minerals

TABLE J-14 Acronyms and units: energy, nuclear and minerals

Acronym	Meaning
BWRX-300	A 300 MWe boiling-water small modular reactor design (deployed first at Darlington, Canada)
GW; MW; kW	Gigawatt; megawatt; kilowatt (units of power)
IEA	International Energy Agency
IRENA	International Renewable Energy Agency
IRMA	Initiative for Responsible Mining Assurance
ITER	International fusion research project (France), formerly International Thermonuclear Experimental Reactor
LNG	Liquefied natural gas
MWe	Megawatt of electrical output
MWh; TWh	Megawatt-hour; terawatt-hour (units of energy)
NRC	U.S. Nuclear Regulatory Commission
OPG	Ontario Power Generation

Acronym	Meaning
PV	Photovoltaic (solar)
SMR	Small modular reactor
TVA	Tennessee Valley Authority
USGS	U.S. Geological Survey

J.3.6 Digital, AI and data

TABLE J-15 **Acronyms: digital infrastructure, AI and data**

Acronym	Meaning
AI	Artificial intelligence
CERT	Computer emergency response team
D2C	Direct-to-cell (satellite service to ordinary mobile phones)
DPI	Digital public infrastructure
DPIA	Data-protection impact assessment
FIPS	Federal Information Processing Standards (U.S.; FIPS 203–205 are post-quantum cryptography standards)
GovStack	Initiative publishing open building-block specifications for digital government
GPU	Graphics processing unit (accelerator used for AI)
HAI	Stanford Institute for Human-Centered Artificial Intelligence
HAPS	High-altitude platform station
HIBS	High-altitude platform station as an IMT (mobile) base station
ID	Identity; identification credential
IXP	Internet exchange point
LEO	Low Earth orbit
LLM	Large language model
MOSIP	Modular Open Source Identity Platform
NLP	Natural language processing
PUE	Power usage effectiveness (data-center efficiency ratio)
SMS	Short message service (text messaging)
SOC	Security operations centre
UPI	Unified Payments Interface (India)
X-Road	Estonia's decentralized data-exchange layer between public registries

J.3.7 Accountability, transparency and governance

TABLE J-16 Acronyms: accountability and transparency

Acronym	Meaning
CPI	Corruption Perceptions Index (Transparency International)
GAO	U.S. Government Accountability Office
IATI	International Aid Transparency Initiative
INTOSAI	International Organization of Supreme Audit Institutions
IPSAS	International Public Sector Accounting Standards
OC4IDS	Open Contracting for Infrastructure Data Standard
OCDS	Open Contracting Data Standard
SAI	Supreme audit institution
TI	Transparency International
V-Dem	Varieties of Democracy Institute

J.3.8 Development and social indicators

TABLE J-17 Acronyms: development and social indicators

Acronym	Meaning
FPIC	Free, prior and informed consent
NEET	Not in employment, education or training
STEM	Science, technology, engineering and mathematics
WASH	Water, sanitation and hygiene

J.3.9 Research institutions and other organizations

TABLE J-18 Acronyms: research institutions and other organizations

Acronym	Meaning
CFR	Council on Foreign Relations
EPFL; ETH	Swiss Federal Institutes of Technology in Lausanne and Zurich
IPI	International Peace Institute
KAICIID	International Dialogue Centre (King Abdullah bin Abdulaziz International Centre for Interreligious and Intercultural Dialogue)
NASA	U.S. National Aeronautics and Space Administration
TNC	The Nature Conservancy

J.3.10 Country abbreviations

TABLE J-19 Country abbreviations

Abbreviation	Meaning
DPRK	Democratic People's Republic of Korea
DRC	Democratic Republic of the Congo
GT; HN; SV; NI	Guatemala; Honduras; El Salvador; Nicaragua (used in remittance tables)
UK	United Kingdom
US; U.S.	United States

J.3.11 Vision 2100 abbreviations

TABLE J-20 Abbreviations specific to Vision 2100

Abbreviation	Meaning
A, B, C	Action classes (section J.2.4)
COI	Conflict of interest
FTE	Full-time equivalent (staff)
G1–G4	Stage gates within pilot P1 (Part IV)
KPI	Key performance indicator
M&E	Monitoring and evaluation
P1–P5	The five flagship pilots (section J.2.3)
PGB	Pilot Governance Board
RACI	Responsible, Accountable, Consulted, Informed (responsibility matrix convention)
SB	Vision 2100 Steering Board
ToR	Terms of reference
WS1–WS12	The twelve first-year workstreams (Part XIII)