

No One Is Expendable

A practical roadmap to the Bright Commons

A gate-by-gate journey toward universal essentials, durable expansion, shock resilience, and rights—under known physics.

OPERATING PRINCIPLE

**Build capacity.
Convert it into
freedom.**

**Preserve the right
to stop.**

The essentials are solved. The future is open.

A layoff does not cost medicine or shelter.

Caregiving does not cause destitution.

Dissent does not cost power, identity, or connection.

A person can learn, create, explore, leave, and begin again without first proving economic usefulness.

Material security expands the freedom to explore, care, create, dissent, and begin again.

Cheap capacity is not the Bright Commons

SURPLUS POWER

households cannot afford

NOT YET

FREE SERVICE

fails when needed

NOT YET

CLEAN AT HOME

exports pollution

NOT YET

UNIVERSAL APP

conditions access on obedience

NOT YET

Capacity becomes abundance only when delivery, access, rights, sustainability, and resilience survive together.

Abundance is an AND condition

CAPACITY

Sustainable supply + reserve

DELIVERY

Reliable service + recovery

ACCESS

No exclusion by price, place, identity, disability, or digital barrier

ENTITLEMENT

Claim, notice, appeal, remedy

SUSTAINABILITY + SAFETY Full lifecycle budgets, restoration, privacy, and security

All five must pass.

Technical capacity coexists with enormous access gaps

91%

of new utility-scale renewables beat new fossil alternatives on generation cost in 2024

2,500+
GW

of renewable, storage, and large-load projects in indicative 2025 queues, reported in 2026; mixed stages, not all viable

2.2B

people remained offline in 2025

4.6B

people lacked full essential-health-service coverage in 2023

Capability is not connection.

IRENA 2025 · IEA 2026 · ITU 2025 · WHO/World Bank 2025

No miracle sits on the critical path

BUILD NOW

Power, grids, water reuse, heat pumps, broadband, modular infrastructure, bounded automation

SCALE WITH PROOF

Regenerative industry, advanced automation, nuclear, biotechnology

OPTIONAL FRONTIER

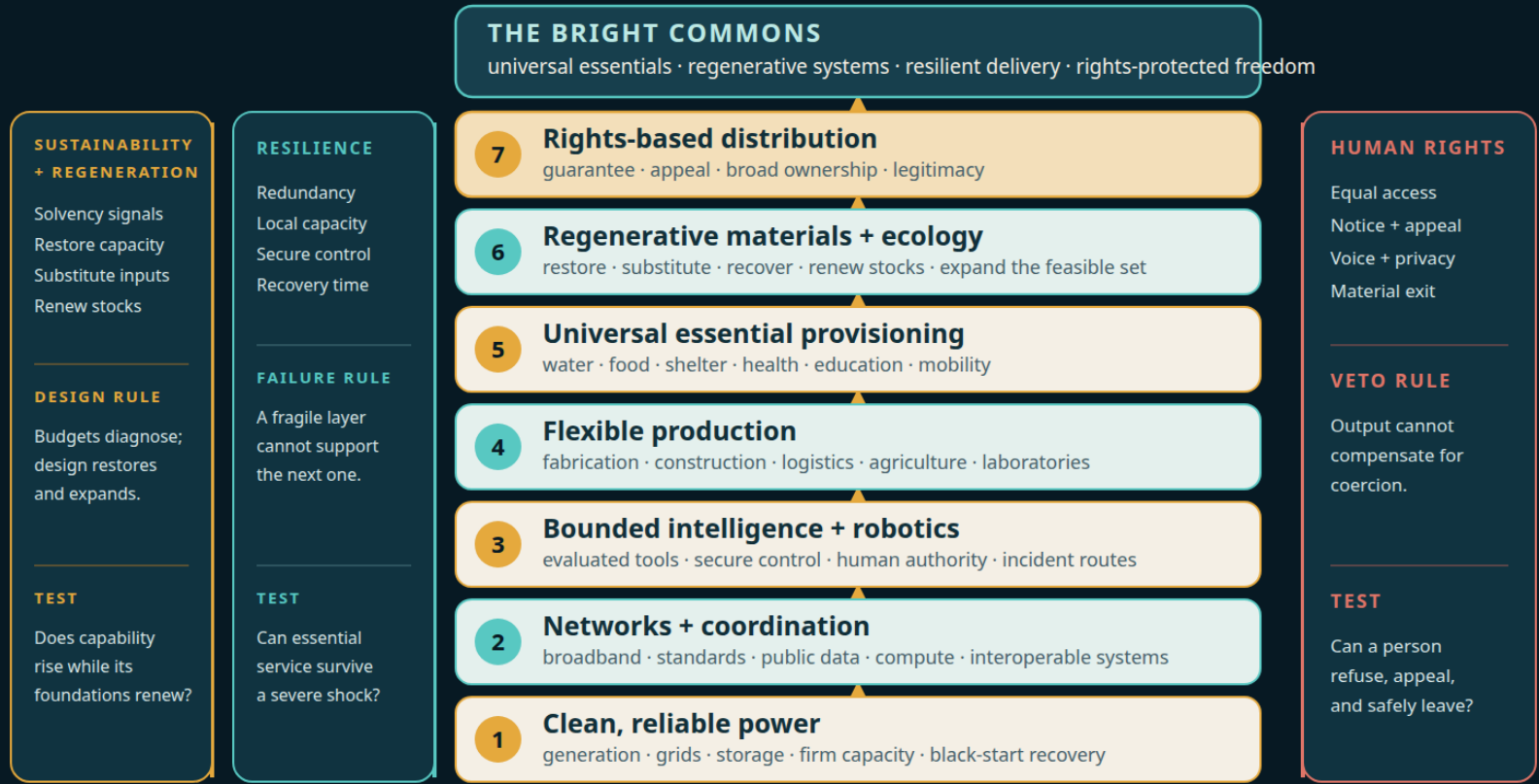
Fusion, general robots, evidence-gated off-world energy and materials

The roadmap survives if optional bets fail.

Evidence boundaries: demonstrated · engineering extension · optional frontier

The Abundance Stack

Build upward. The Bright Commons appears only when capability and all three cross-cutting conditions hold together.



BUILD ORDER ↑ Lower layers expand capability but cannot guarantee freedom. Higher promises fail when their foundations break.

BUILD

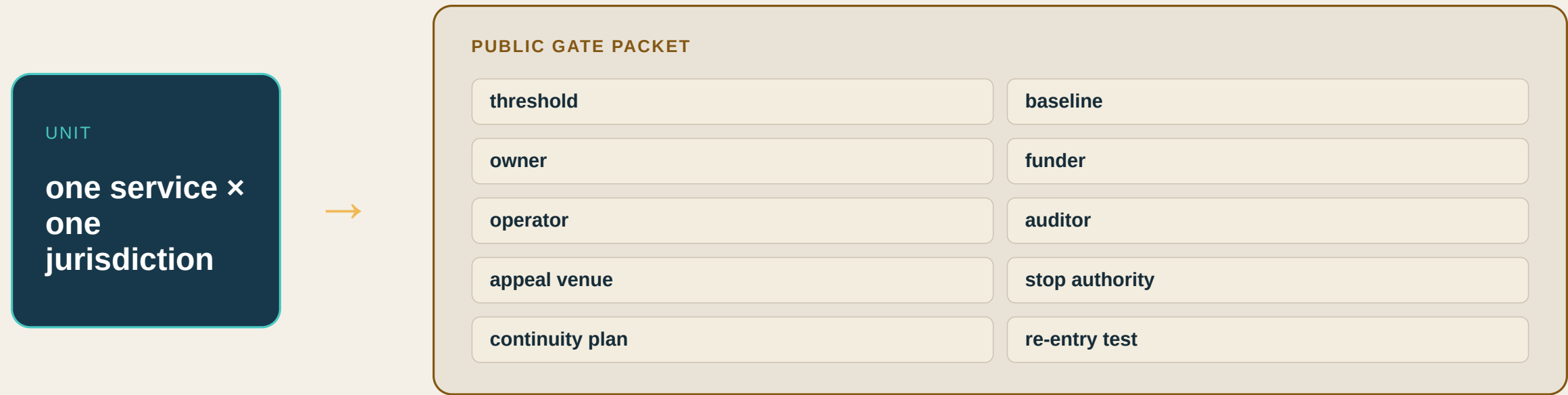
Freedom has seven dependencies

Technology creates capacity. Sustainability, resilience, and rights convert it into durable freedom.

No One Is Expendable · Figure 1

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The calendar does not authorize progress. Evidence does.



Unknown never means pass. Dates are illustrative horizons—not forecasts.

The path to the Bright Commons

Illustrative horizons—not forecasts. Evidence, not year, opens each gate.
Sustainability + regeneration · resilience · human rights govern the whole path.



BUILD

The gate-based path

ILLUSTRATIVE
HORIZONS ·
EVIDENCE, NOT YEAR,
OPENS EACH GATE

No One Is Expendable · Figure 2

No One Is Expendable · Figure 2

First: make the floor real

Illustrative overlapping horizon · 2026–2040 · Gates 0–1

MEASURE

Baselines, rights, lifecycle budgets, hazards, recovery, and ownership

BUILD

Power, grids, water, sanitation, housing, care, education, broadband, and redundancy

PASS WHEN

Access is affordable, sustainable, resilient, rights-protected, and financeable—not merely announced

Then: automate bottlenecks and share the gain

Illustrative overlapping horizon · 2032–2060 · Gates 2–3

AUTOMATE

Structured tasks with field evidence, worker power, safe fallback, and full-life-cycle gates

SHARE

Universal services, cash floor, portable protection, shorter hours, broad ownership

PASS WHEN

Nobody is denied essentials for lack of work or income

Make abundance durable—and keep the frontier open

Illustrative horizon · 2045+ · Gates 4–6

REGENERATE

Clean supply, repair,
recovery, restoration,
expanding headroom

HARDEN

Redundancy, inventories,
manual fallback, practiced
recovery

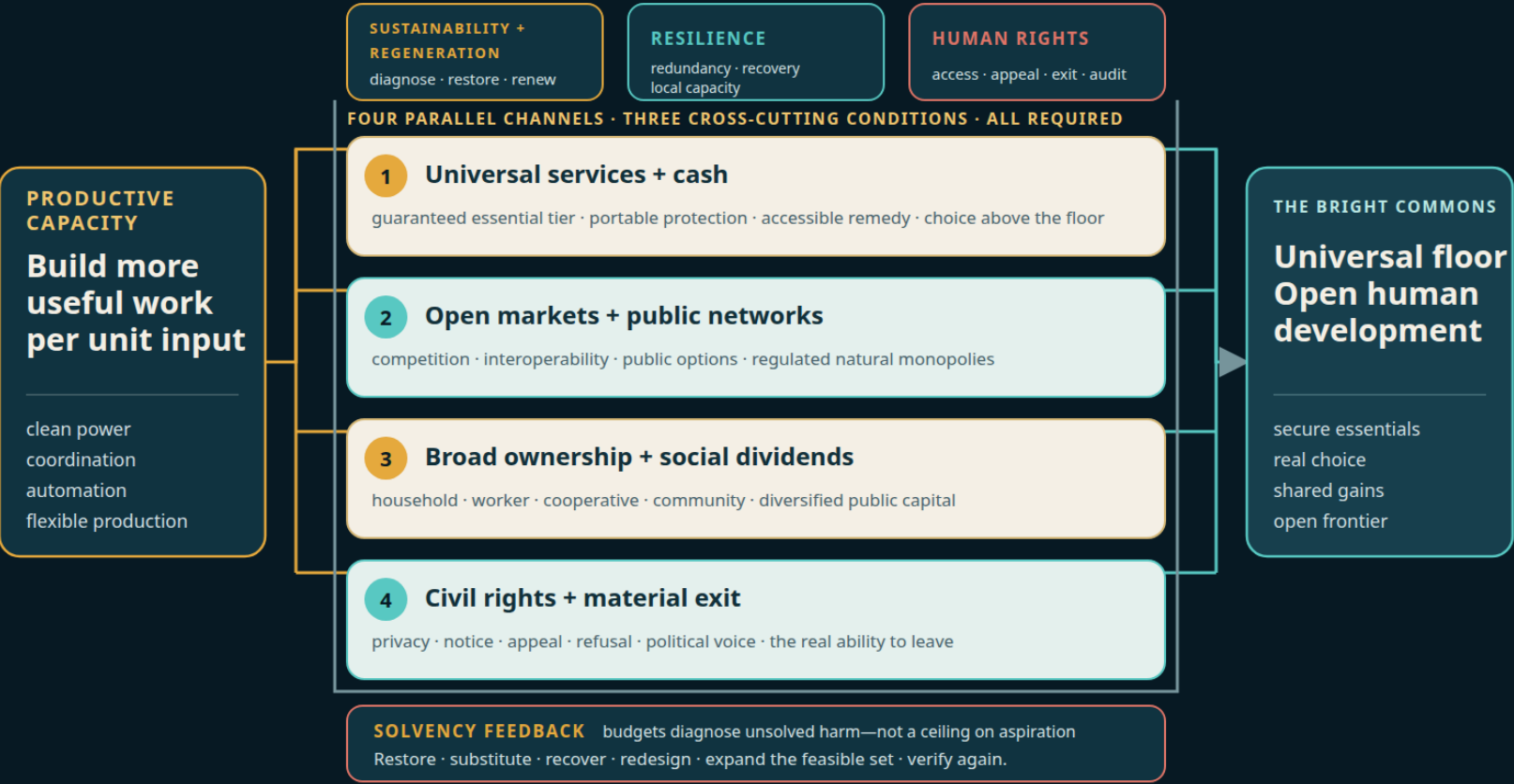
EXPAND

Off-world resources only
with lifecycle advantage,
rights, governance, and
rescue

Earth's floor comes first.

The Abundance Compact

Capacity becomes the Bright Commons only through four channels and three cross-cutting conditions.



CONVERSION TEST If capacity rises while exclusion, coercion, fragility, or ecological insolvency worsen, the Compact has failed.

GOVERN

Capacity becomes freedom through four parallel channels

Services, markets, ownership, and rights solve different failures. None replaces the others.

No One Is Expendable · Figure 3

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Three policy implications follow

1 · BUILD SUPPLY

Pair purchasing power with homes, clinicians, transformers, water systems, and competitive capacity.

2 · MATCH THE INSTITUTION

Use markets, regulated networks, public services, or commons according to the asset and failure.

3 · SHARE OWNERSHIP

Preserve material exit before automation scales dependence.

Rights protect every person. Ecological solvency keeps every path durable and expandable.

Finance the asset—and the promise

Networks → debt and regulated rates

Universal services → recurring taxes

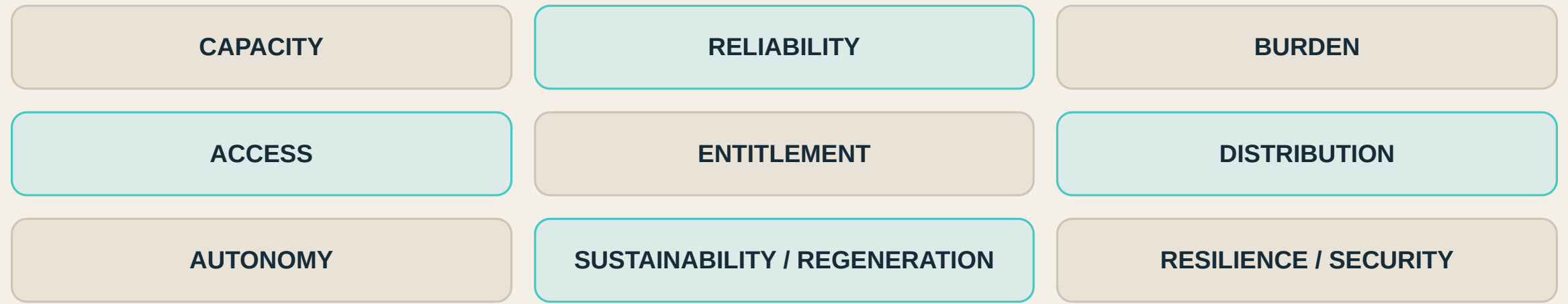
Public risk → equity, warrants, royalties

Poor or fragile regions → grants and concessional finance

Permanent guarantees → reserves and recession tests

Never pre-spend an imagined AI dividend.

Measure what averages hide

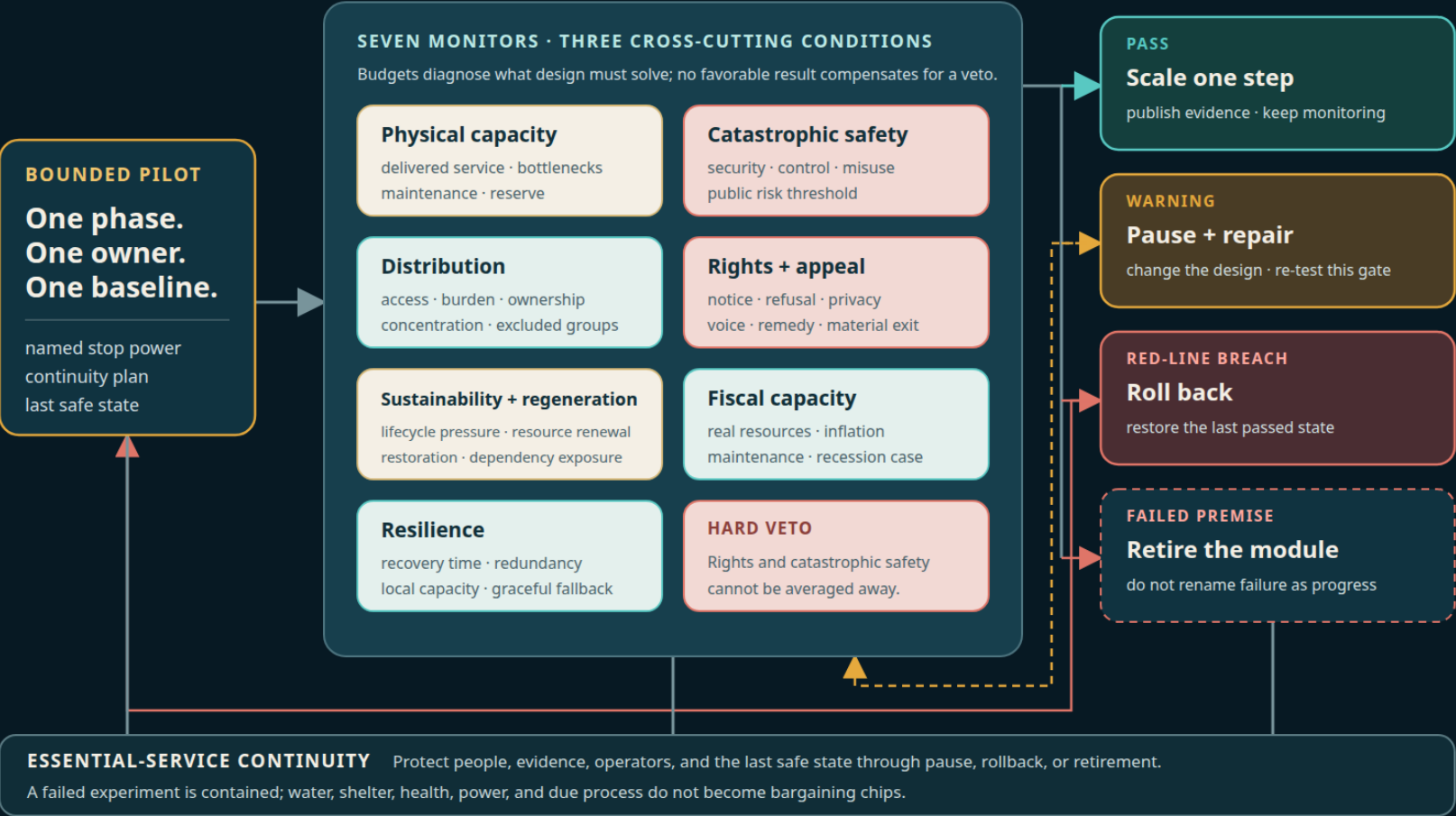


Track each by service, place, group, and time. Use subgroup floors. Publish uncertainty.

Rights and catastrophic safety are vetoes. Unknown ≠ pass.

The rollback architecture

Sustainability + regeneration, resilience, and human rights remain independent at every gate.



PROTECT

A failed experiment must be allowed to stop

Reversibility separates disciplined experimentation from civilizational gambling.

No One Is Expendable · Figure 4

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Mass death is not a shortcut

The thought experiment prompting this paper asked whether revolution—and even billions of deaths—could be justified if abundance required it.

MORALLY

No. People are the purpose. No future average restores deliberately erased lives.

PRACTICALLY

Mass violence destroys expertise, infrastructure, truthful feedback, finance, trust, and legitimacy: the foundations abundance needs.

Open-ended development—not unlimited consumption

THE FLOOR

Universal essentials · dependable systems ·
material exit · shock recovery · restored
headroom

THE OPEN FUTURE

Science · art · medicine · construction ·
mobility · exploration · plural ways of life

Ecological budgets constrain destructive methods and locations—not human aspiration.

Build the road to the Bright Commons

- 1 Choose one service × jurisdiction.
- 2 Publish its baseline.
- 3 Name owner, auditor, appeal, and stop authority.
- 4 Pair infrastructure with rights and recurring finance.
- 5 Pre-register the gate and recovery branch.
- 6 Scale only after evidence.

ABUNDANCE SECURES. SUSTAINABILITY ENDURES. RESILIENCE RECOVERS. RIGHTS INCLUDE. NO ONE IS EXPENDABLE.