

The Hidden Life-Ground of Artificial Intelligence

Governing the carbon, water, land, and material reality beneath the interface.



The myth of immaterial intelligence



Generate an answer...

The Experience

AI is encountered as an immaterial event. A prompt is entered; a result appears. In the interface, it appears as pure symbolic power.

The Reality

Artificial intelligence is not just code. It is a material infrastructure embedded in data centers, power grids, water systems, and mineral supply chains.

Every generated sentence, image, and prediction depends on an underlying life-ground.

The true footprint is multidimensional

Single-metric sustainability conceals burden shifting. A low-carbon pathway may still drain local watersheds or occupy fragile land.

Carbon Footprint

Global data centers could reach ~945 TWh by 2030 (approaching 3% of global electricity). AI workloads are growing to 20-40% of this demand.

Water Footprint

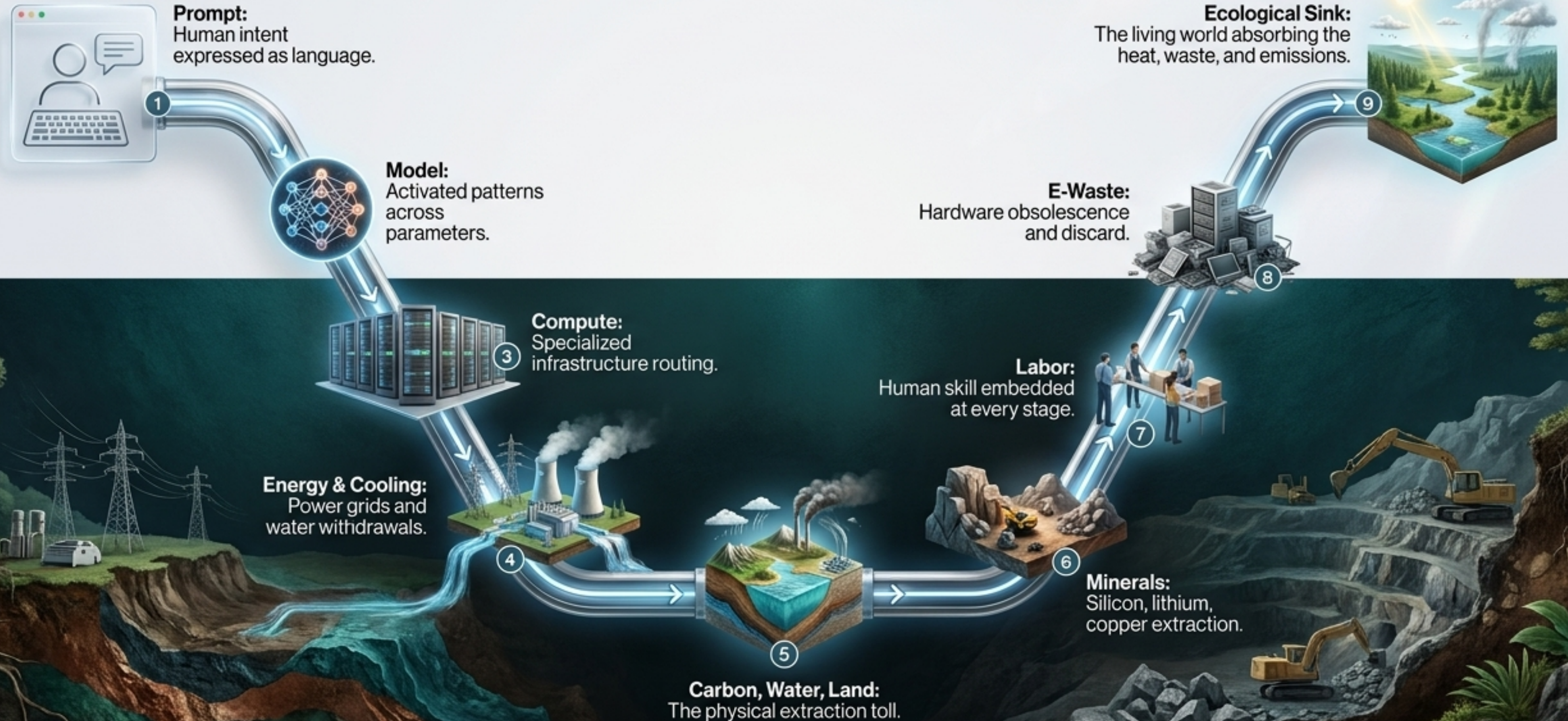
Low-carbon electricity can still be highly water-intensive, withdrawing massive volumes for cooling and competing with local aquifers.

Land Footprint

Energy infrastructure, transmission corridors, and massive data centers occupy and transform physical habitat.

The hidden metabolism of a prompt

AI converts material life-support into digital output through an invisible metabolic chain.



The spectacle vs. the cumulative burden

Training



Episodic. Concentrated. Developer-controlled.
The visible milestone of the AI arms race,
requiring 50-70 GWh for a frontier model.

Inference



Continuous. Distributed. Normalized.
Accounts for the vast majority (80-90%)
of operational energy once deployed.

Governance cannot only scrutinize the spectacular training runs.
It must govern the cumulative burden of everyday use at scale.

The principle of minimum sufficient form

If classification is enough,
do not generate text.
If text is enough, do not
generate images.

1 Classification

Spam filtering, basic
sorting.
Bounded task use.
Low Resource.

2 Short Text

Concise answers,
summaries.
Moderate
operational burden.

3 Long Text

Verbose generation,
drafting. Higher
cumulative burden
when routine.

4 Image Generation

Creative visual
synthesis.
Substantially higher
compute and
environmental
demand than text.

5 Video Generation

Cinematic,
multi-frame output.
Extreme symbolic
intensity carrying
the heaviest
ecological burden.

Takeaway: High-intensity forms
of AI should be justified by real
life-value, not normalized
as default convenience.

The justice asymmetry: Local costs, distant benefits

Concentrated Burdens

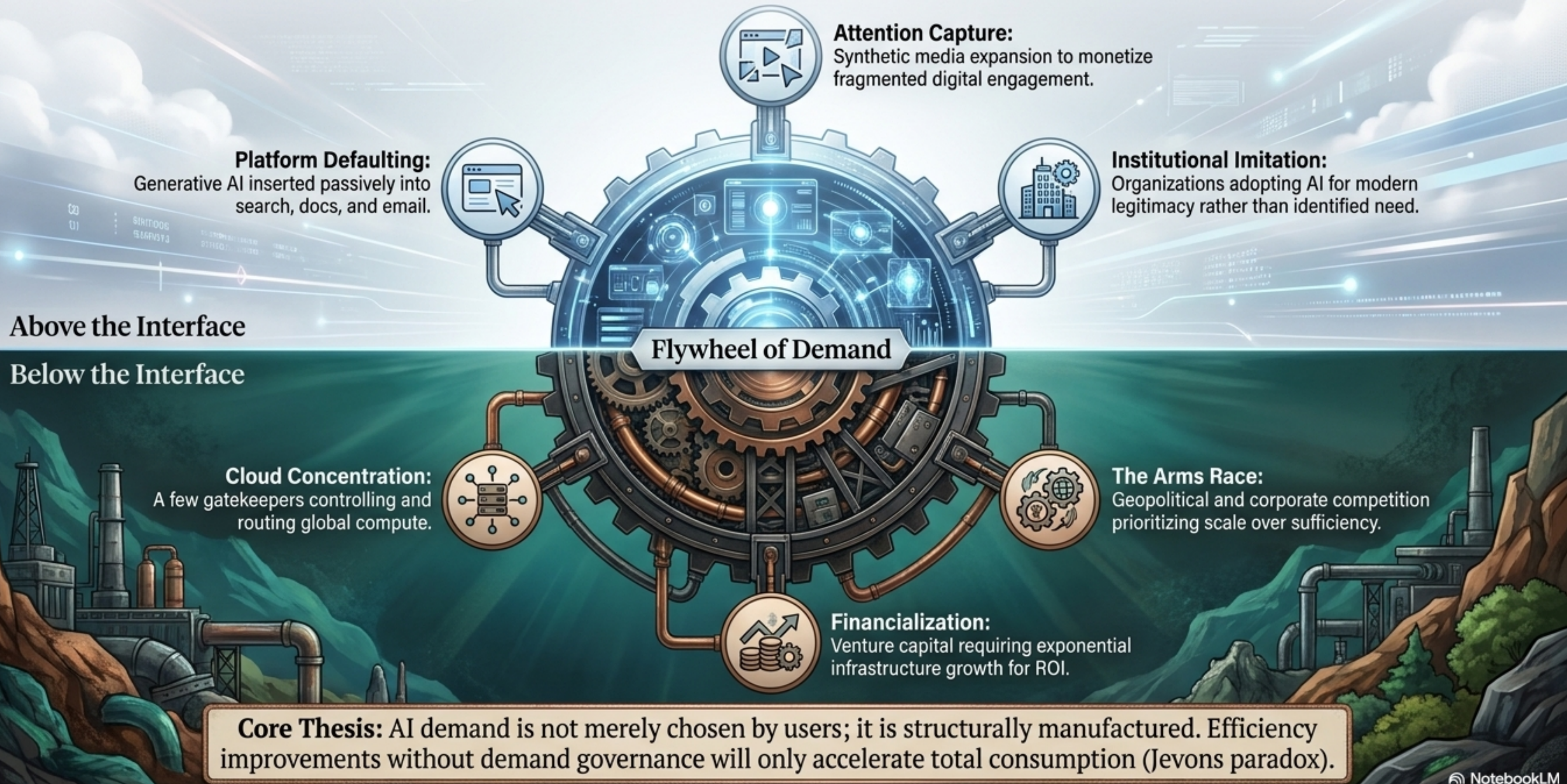
Data centers and infrastructure impose intense local pressures on watersheds, land ecosystems, and public grids.

Mobile Benefits

The economic and strategic value generated often flows to distant cloud providers, enterprise users, and platform owners. (Productivity, digital services, revenue).

A life-coherent system requires that consequences return to decision-makers.
We cannot build digital sacrifice zones to power the cloud.

The demand engine: Rebound effects and artificial scale



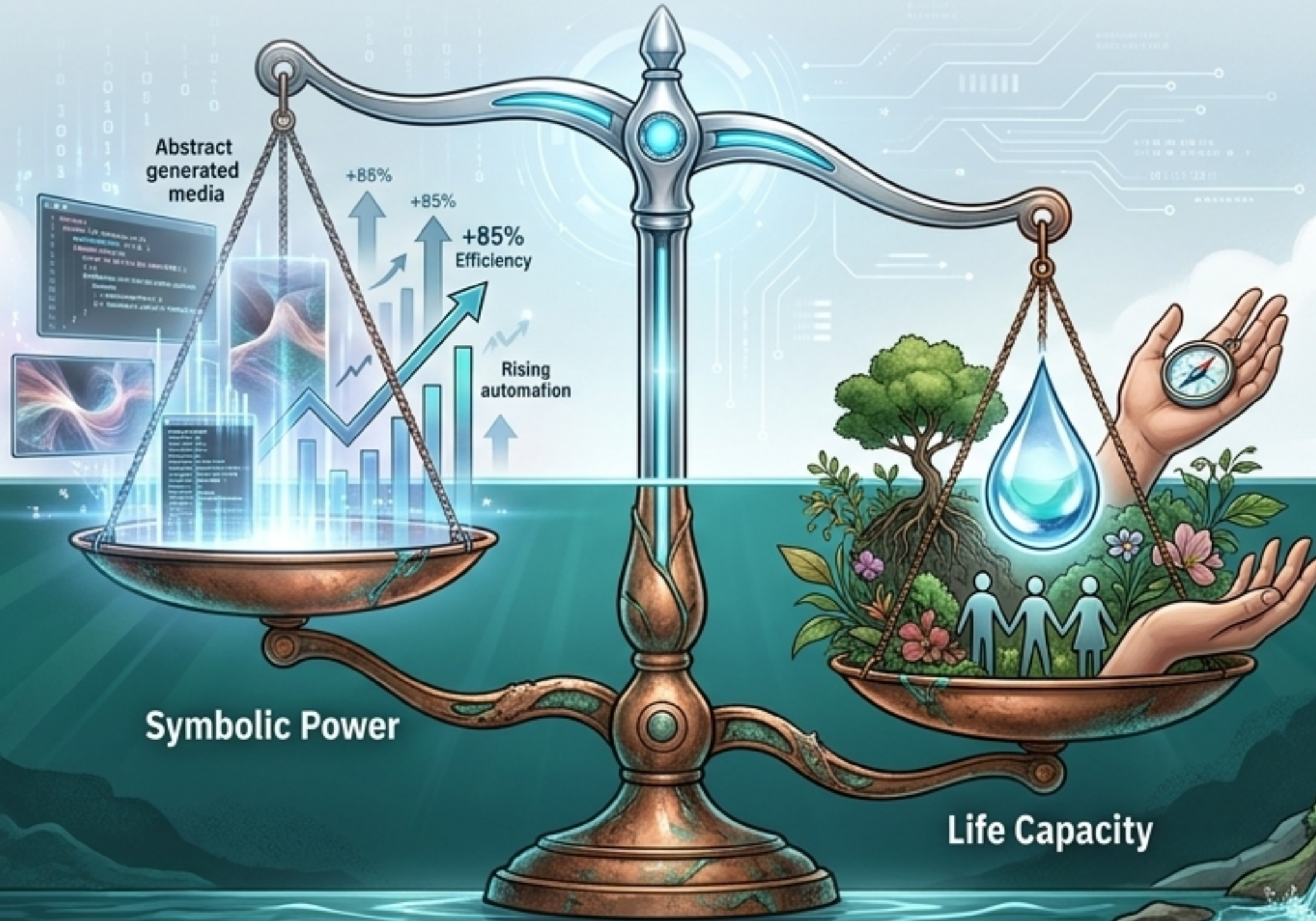
Diagnosis: What is AI becoming in the life of society?



The philosophy of life-coherence

Concept 1: Efficiency vs. Sufficiency.

Efficiency asks how to reduce the footprint per task. Sufficiency asks how many tasks are actually needed. Efficiency without sufficiency is acceleration.



Concept 2: Proportionality.

High-intensity outputs must be justified by corresponding life-value (health, education, ecological repair), not normalized for trivial tasks.

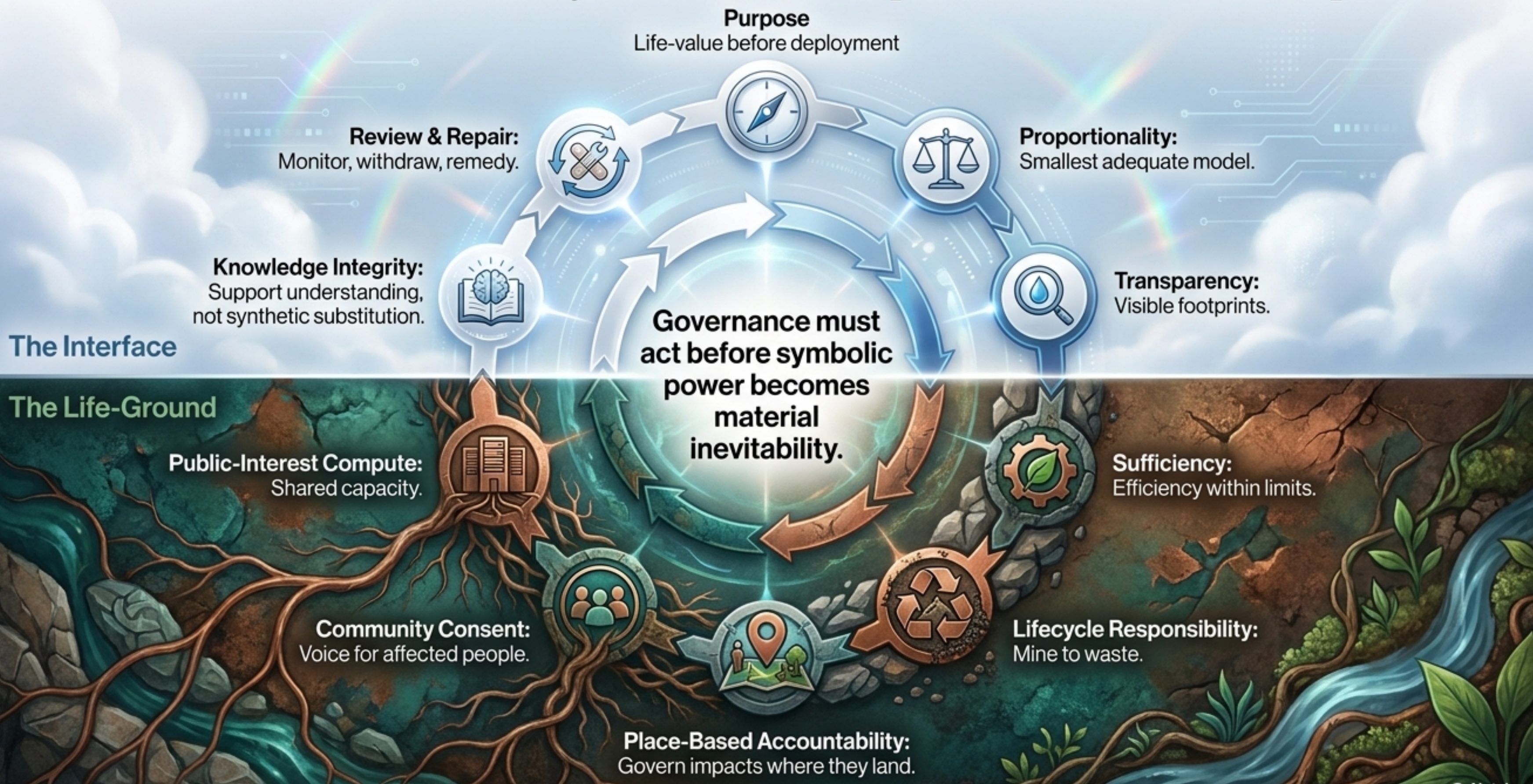
Below the Interface

Symbolic Power

Life Capacity

Does this AI system expand shared life-capacity within ecological limits, or does it convert life-support into symbolic excess?

The Governance Cycle: From compliance to stewardship



The SIDS vulnerability: The AI dependency trap

For Small Island Developing States, electricity and water are not market commodities; they are fragile life-support systems.

The Interface

Cloud white
Interface blue
Sleek silver



The Life-Ground

Path A: The Dependency Trap



! Fragile Energy Systems
(grid stress)



! Water Stress
(cooling competing with agriculture)



! External Platform Dependency (loss of digital sovereignty and value leakage)

Path B: The Resilient Alternative



Regional AI Commons



Water-Sensitive Infrastructure



Local Knowledge Protection

The Risk: Adopting AI rapidly without governance capacity leads to imported dependency, capturing institutional memory while externalizing environmental costs onto fragile island grids.

The Alternative: A Regional AI Commons

The most important digital sovereignty is not the ability to build frontier models, but the ability to govern what a society depends on. Do not scale AI faster than the capacity to govern its life-ground.

The Interface

The Life-Ground



Public-Interest Compute
Shared regional data centers governed with open standards and renewable energy.



Climate & Disaster Resilience
Prioritizing AI for early warning, ecosystem monitoring, and adaptation.

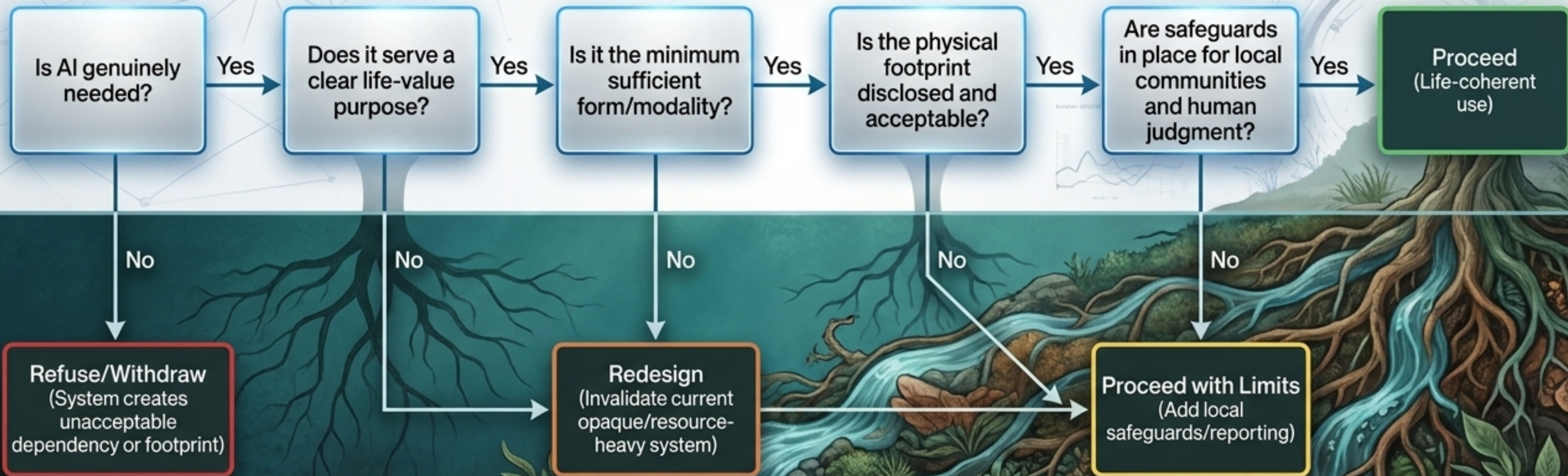


Digital Sovereignty
Retaining the capacity to govern, audit, and refuse systems that do not serve local life-value.

The Life-Coherent Use Protocol

A decision matrix for institutional procurement and deployment

The Interface



The Life-Ground



Responsible Intelligence

A life-coherent society does not ask whether a machine can generate more. It asks whether more generation serves life.

“There is no intelligence outside life. The measure of artificial intelligence is not only what it can produce, but what it helps preserve, repair, and bring forth.”