Pathways to the Hope Attractor:

From Modelling to Mobilization

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Challenges facing humanity in 2026:

- We’re surrounded by, and deeply dependent upon, entangled economic, political, and environmental systems.
- These systems’ behaviours are increasingly opaque.
- These systems are also generating more frequent, severe, and unexpected shocks—the “polycrisis.”
- We can’t see clearly the dangers and opportunities ahead of us, or a reason for **honest hope**.

The Polycrisis Core Model addresses these challenges.

Using the best available scientific evidence, it identifies the world's most *plausible states* in coming decades.

By design, it's a highly aggregated, coarse-grained "crude look at the whole."

It represents our entire human civilization as an integrated, global system of systems.

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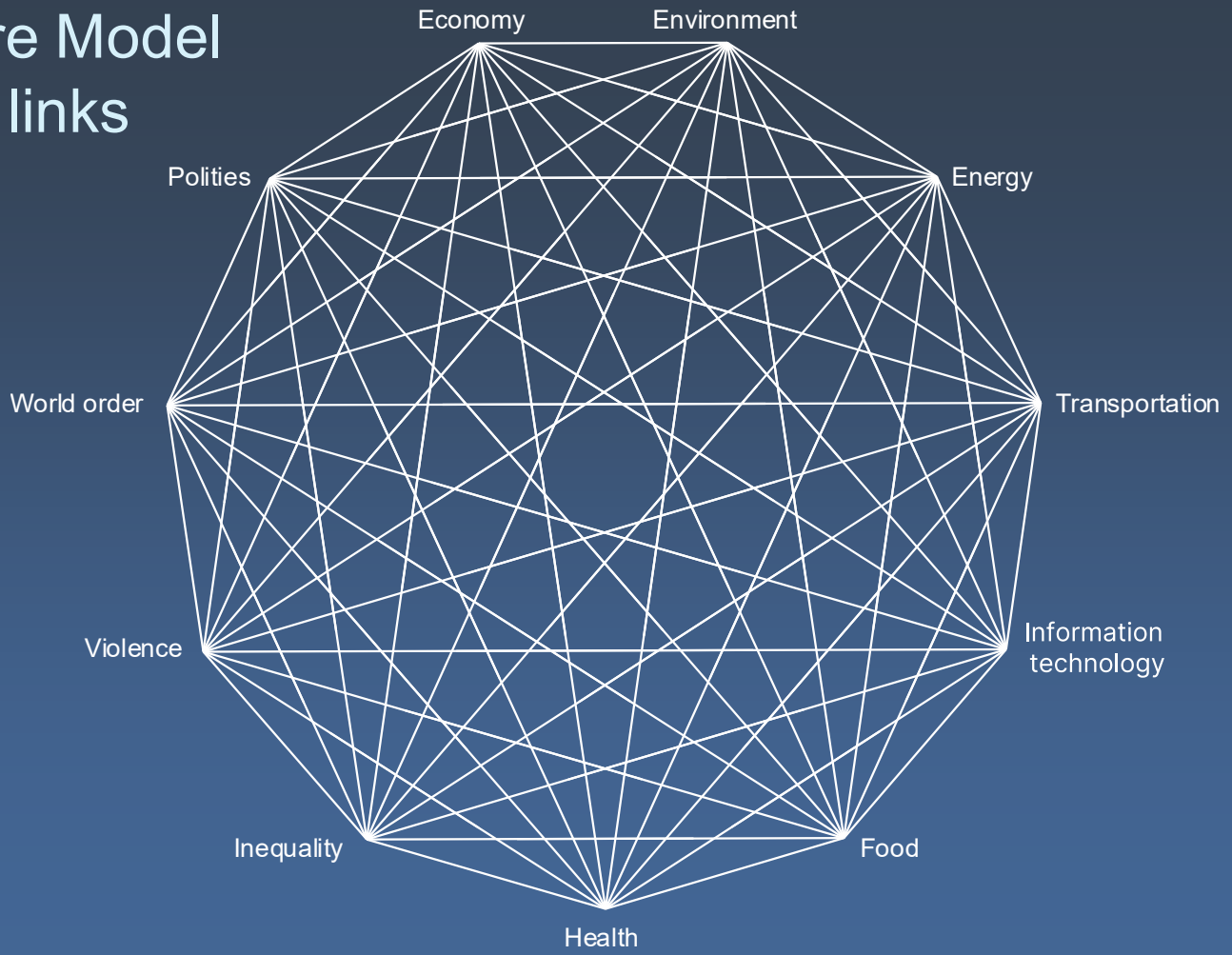
The Polycrisis Core Model represents causal links between 11 global systems, called “descriptors.”



Each descriptor can take one of several possible states between now and 2100.

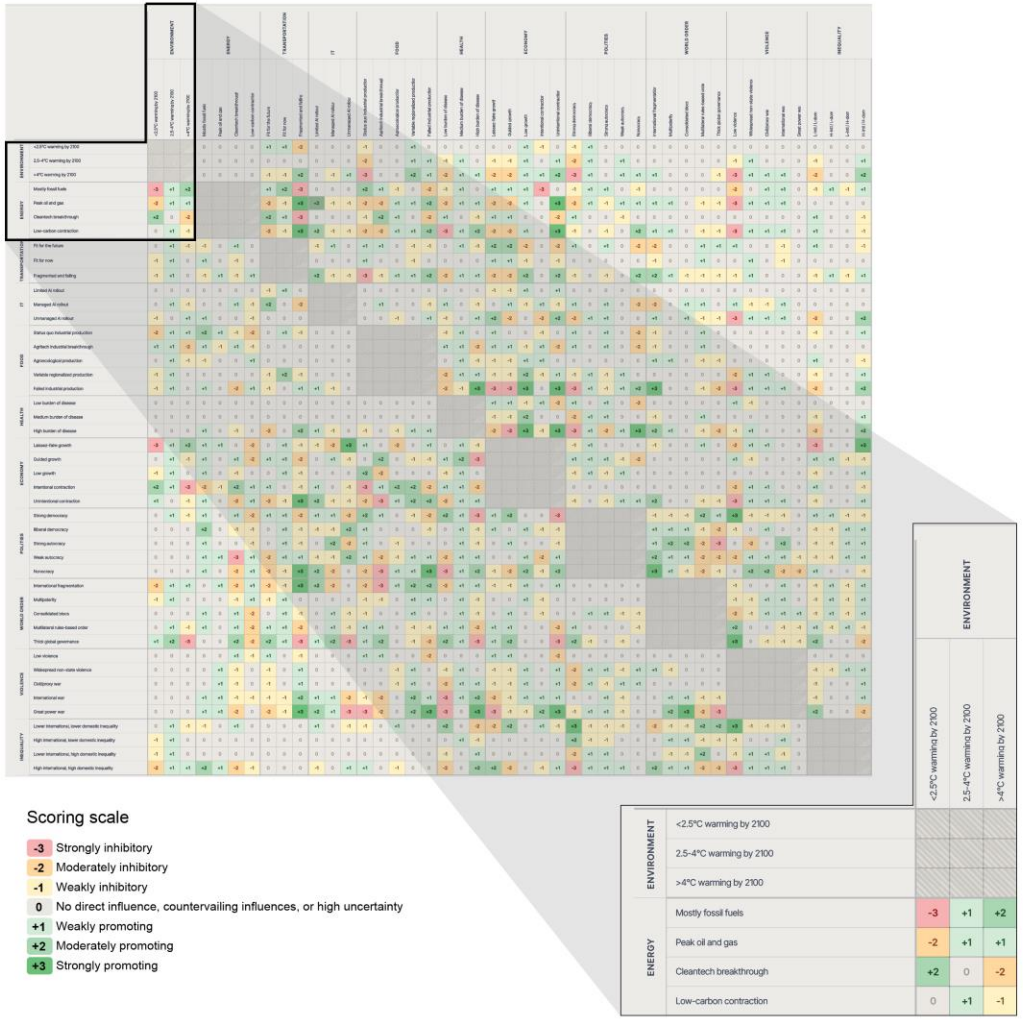
(At right, examples of the states of two **material** descriptors and of two **social** descriptors.)

ENVIRONMENT	<2.5°C warming by 2100
	2.5-4°C warming by 2100
	>4°C warming by 2100
ENERGY	Mostly fossil fuels
	Peak oil and gas
	Cleantech breakthrough
	Low-carbon contraction

ECONOMY	Laissez-faire growth
	Guided growth
	Low growth
	Intentional contraction
	Unintentional contraction
POLITIES	Strong democracy
	Illiberal democracy
	Strong autocracy
	Weak autocracy
	Nonocracy

A large matrix records the estimated impact in 2040 of every descriptor state on every other descriptor state.

It includes 1,832 empirically grounded causal judgments.



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Using this matrix, the model's mathematics (cross-impact balance analysis) generates 4.05 million possible futures (called "scenarios") for the world in the middle of this century.

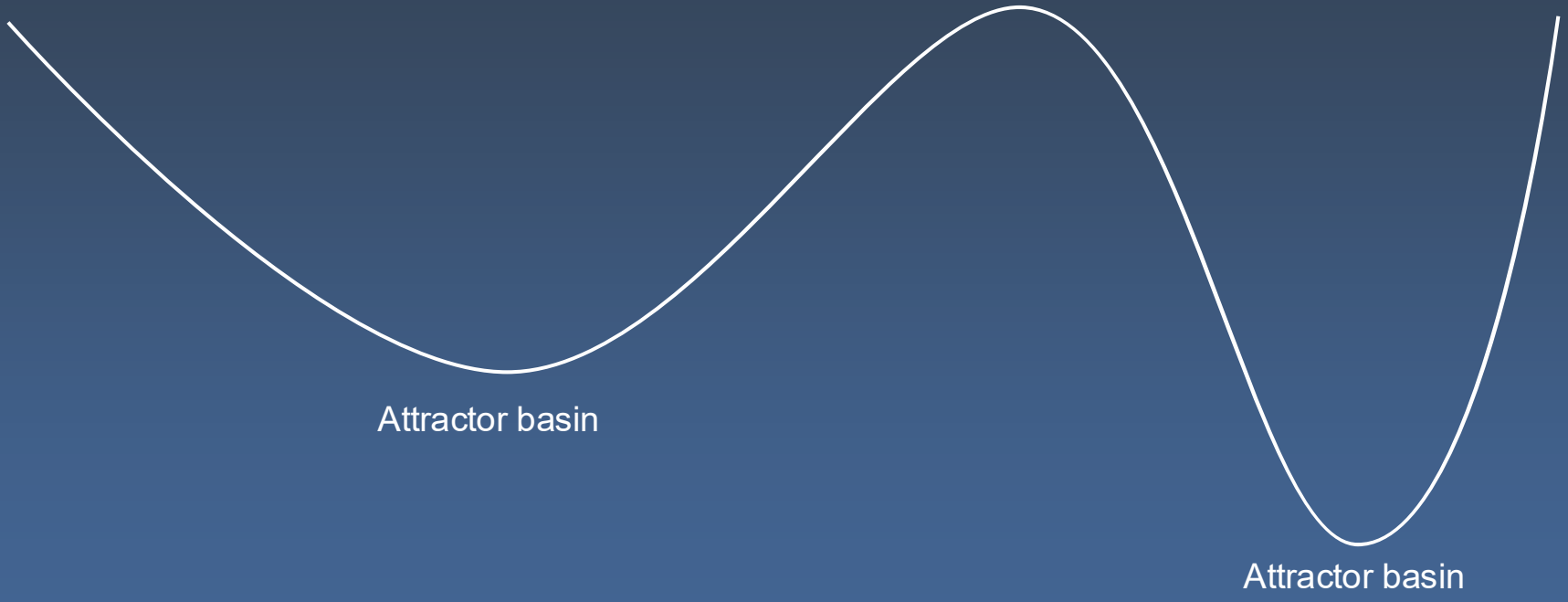
Just 10 of these scenarios are "attractors."

Each *attractor* is a configuration of the global system of systems that's in equilibrium, because the matrix's causal relations reinforce its stability.

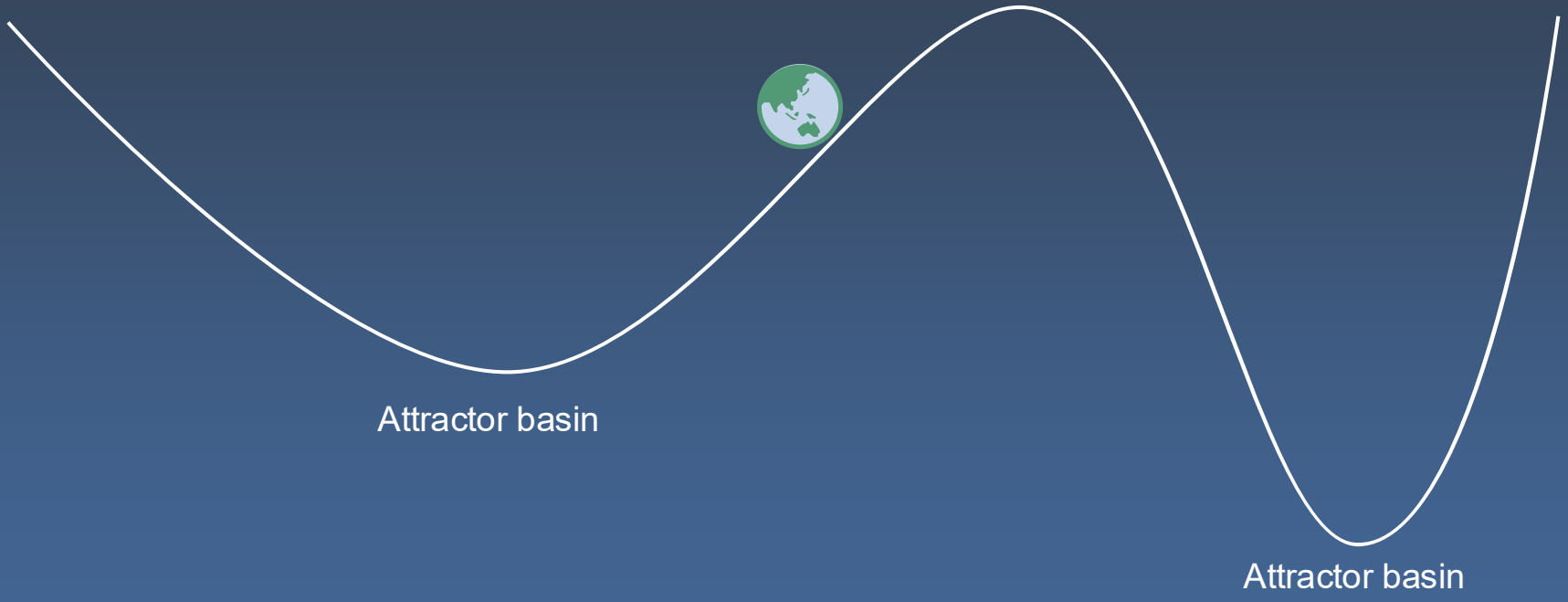
The model's mathematics then "migrates" all the remaining unstable scenarios to one of the 10 attractors.

To represent attractors, complexity scientists use the metaphor of a “stability landscape,” in which the state of a system is portrayed as a ball on a terrain that has ridges and valleys.

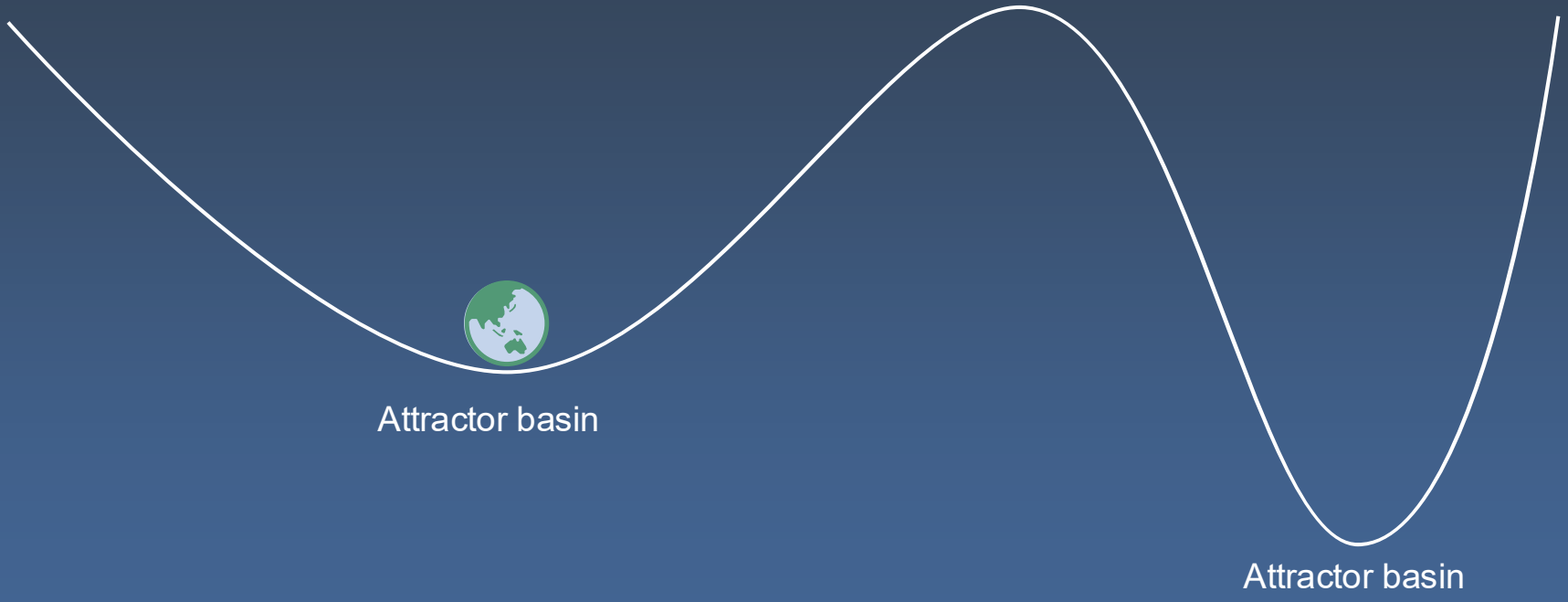
Stability landscape



Stability landscape

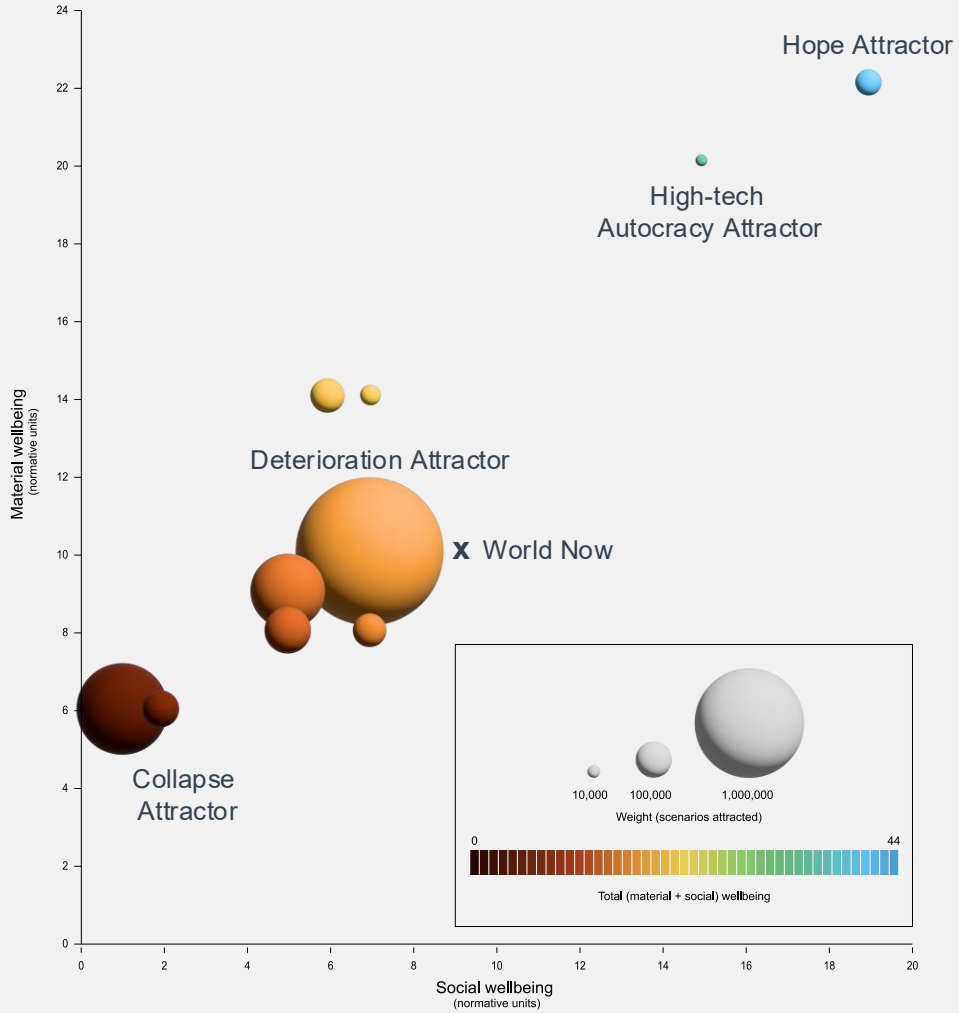


Stability landscape



The Polycrisis Core Model identifies 10 attractors.

Each is a stable, and therefore plausible, world outcome in the middle of the 21st century.

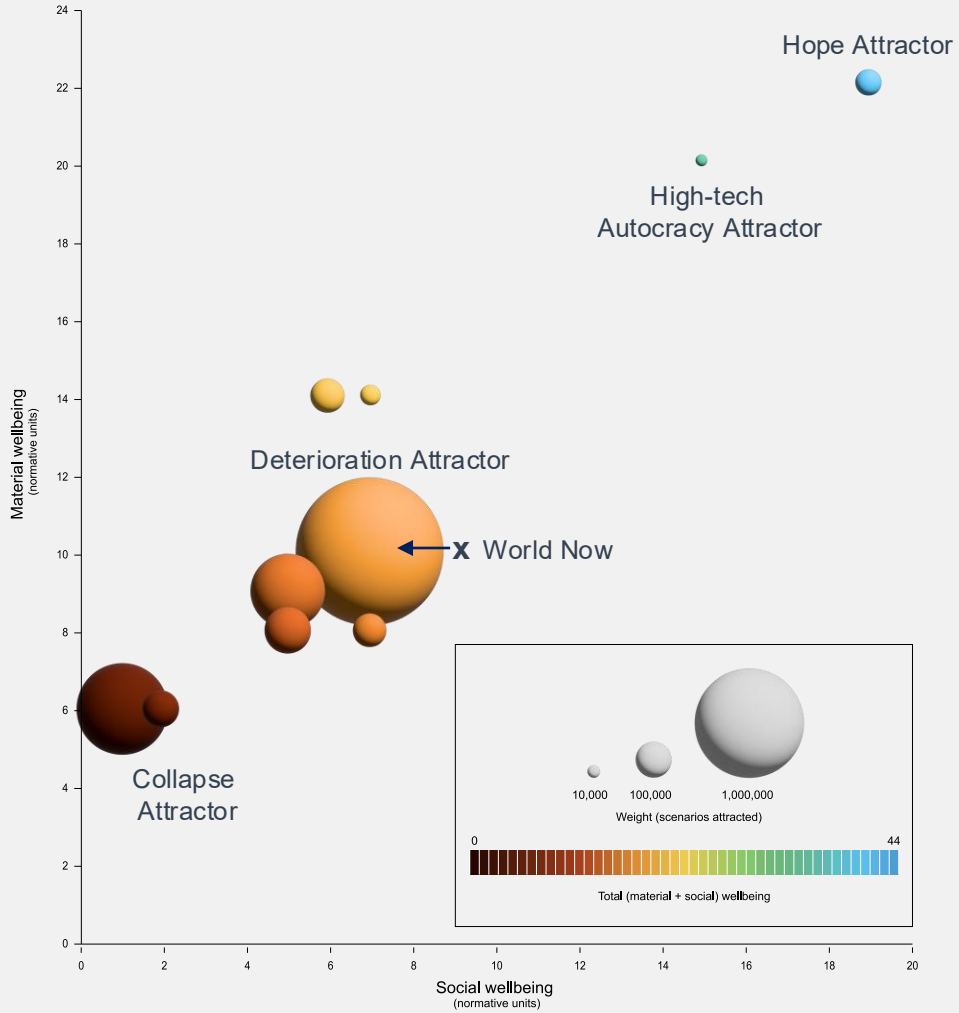


Descriptor states of World Now and four key attractors

Normative wellbeing score[e]: 0 1 2 3 4

Descriptors	World Now	Collapse Attractor	Deterioration Attractor	High-tech Autocracy Attractor	Hope Attractor
Environment	2.5-4°C warming by 2100	2.5-4°C warming by 2100	2.5-4°C warming by 2100	2.5-4°C warming by 2100	2.5-4°C warming by 2100
Energy	Mostly fossil fuels	Mostly fossil fuels	Mostly fossil fuels	Cleantech breakthrough	Cleantech breakthrough
Transportation	Fit for now	Fragmented and failing	Fit for now	Fit for the future	Fit for the future
Information technology	Unmanaged AI rollout	Limited AI rollout	Unmanaged AI rollout	Managed AI rollout	Managed AI rollout
Food	Status quo industrial production	Failed industrial production	Status quo industrial production	Agritech industrial breakthrough	Agritech industrial breakthrough
Health	Medium burden of disease	High burden of disease	Medium burden of disease	Medium burden of disease	Low burden of disease
Economy	Laissez-faire growth	Unintentional contraction	Low growth	Guided growth	Guided growth
Polities	Illiberal democracy	Nonocracy	Illiberal democracy	Strong autocracy	Strong democracy
World order	Multilateral rules-based order	International fragmentation	Consolidated blocs	Multilateral rules-based order	Multilateral rules-based order
Violence	International war	Widespread nonstate violence	Civil/proxy war	Low violence	Low violence
Inequality	High international, high domestic inequality	High international, high domestic inequality	High international, high domestic inequality	Lower international, high domestic inequality	Lower international, lower domestic inequality

If humanity doesn't intervene, World Now migrates to the Deterioration Attractor.



An AI aside:

We trained Anthropic's Claude to understand the Polycrisis Core Model's structure and mathematics.

We then asked it to generate its own matrix and score justifications. After eight hours, it returned with its results.

40 percent of the matrix scores were identical to ours; 86 percent were within one point difference.

It generated six attractors. Five were bad.
One was nearly identical to the Hope Attractor.

How do we get to the Hope Attractor?

Of the model's ~4 million unstable scenarios, 677,000 migrate to the Collapse Attractor. About 1.8 million (including World Now) migrate to the Deterioration Attractor.

Roughly 67,000 migrate to the Hope Attractor.

Each of these 67,000 scenarios represents a possible "policy" target for the world in 2040.

If humanity can get to one of these points by then, the world's self-reinforcing causal processes should propel us towards the Hope Attractor.

Polycrisis Core Model: Two stages to the Hope Attractor

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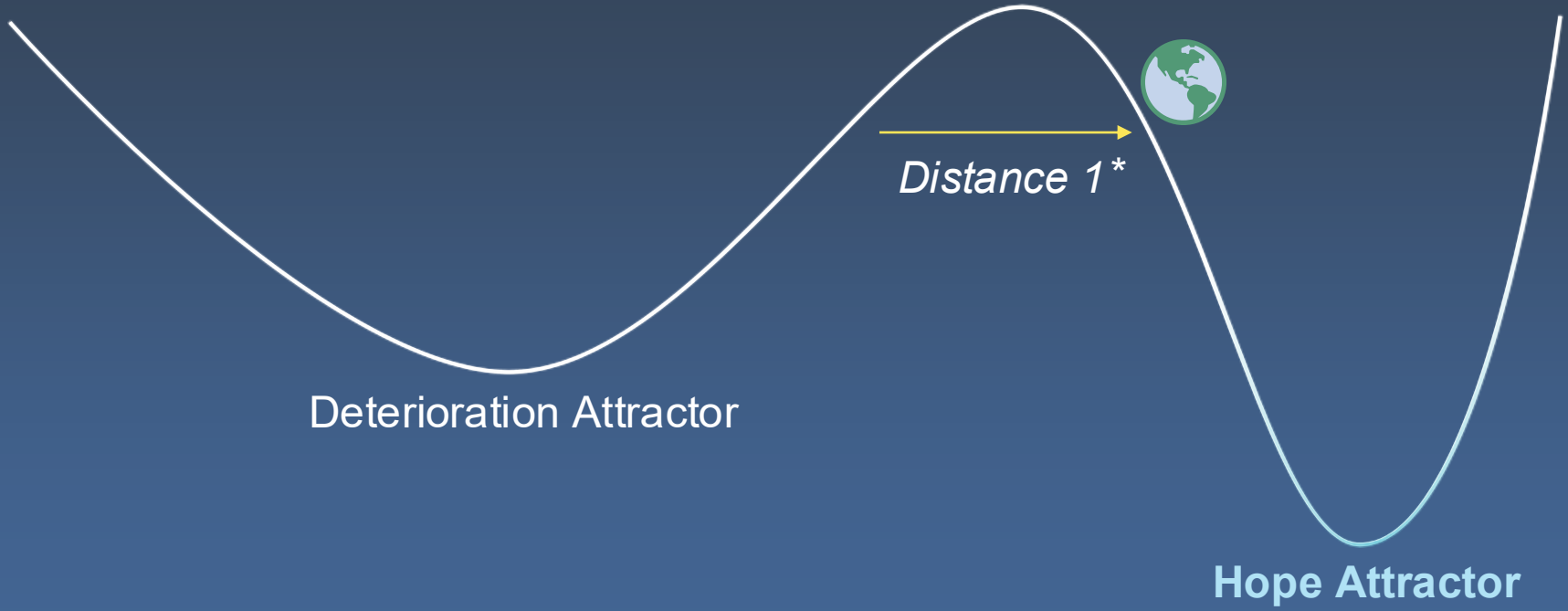
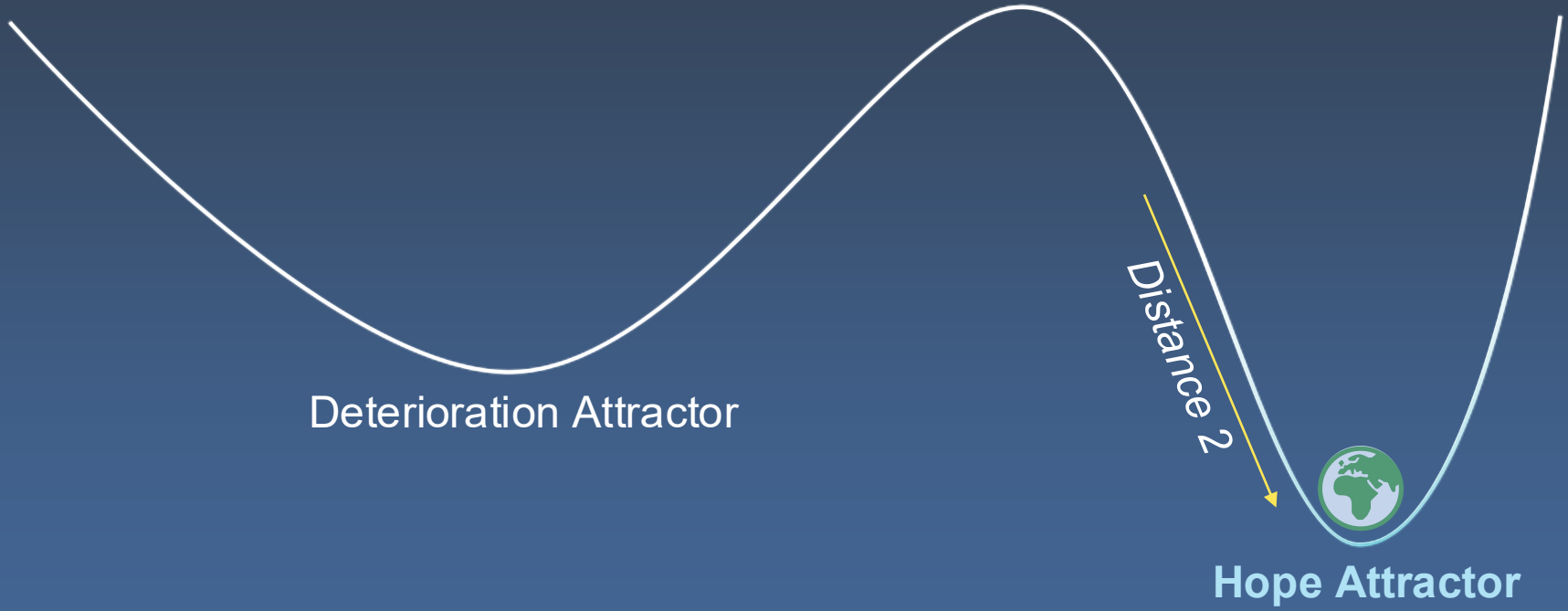


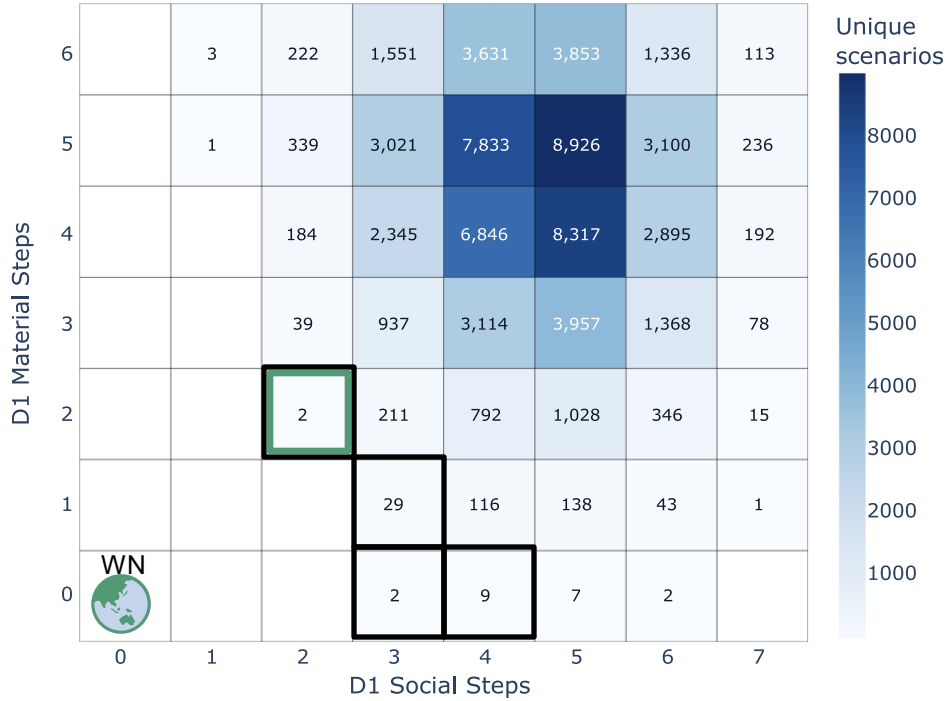
*__Distance:__ The number of steps between descriptor states.

Polycrisis Core Model: Two stages to the Hope Attractor

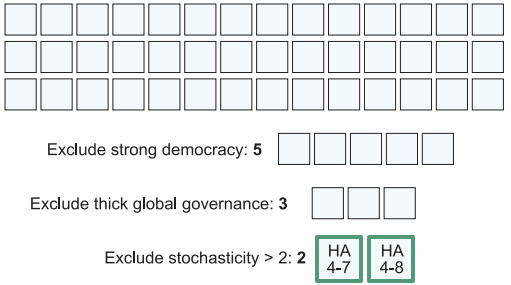


Illustrative, staged PCM pathway analysis

a **All unique Hope Attractor basin scenarios (67,178)**



b **42 scenarios with distance ≤ 4 steps**



c **Scenarios' non-World Now states**

Descriptor	HA4-7	HA4-8	Totals
Energy	Cleantech breakthrough	Cleantech breakthrough	2
Transportation		Fit for the future	1
Information Technology	Managed AI rollout		1
Economy	Guided growth	Guided growth	2
Inequality	Lower international domestic inequality	Lower international domestic inequality	2

The HA4-7 scenario points to an integrated set of action priorities between now and 2040.

Material step Social step

	Descriptor	Class	Order	From	→ To
DISTANCE 1: Necessary changes from World Now	Energy	Material	-	Mostly fossil fuels	→ Cleantech breakthrough
	Information technology	Material	-	Unmanaged AI rollout	→ Managed AI rollout
	Economy	Social	-	Laissez-faire growth	→ Guided growth
	Inequality	Social	-	High international, high domestic inequality	→ Lower international, lower domestic, inequality
DISTANCE 2: Succession steps to Hope Attractor	Violence	Social	1	International war	→ Low violence[a]
	Food	Material	2	Status quo industrial production	→ Agritech industrial breakthrough
	Transportation	Material	3	Fit for now	→ Fit for the future
	Polities	Social	4	Illiberal democracy	→ Strong democracy
	Health	Material	5	Medium burden of disease	→ Low burden of disease

Take aways:

- The Polycrisis Core Model makes the future less opaque; it helps us see through the fog.
- It shows that most of humanity's likely futures are bad.
- But one is very good. The Hope Attractor is neither speculative nor aspirational; it's a scientifically grounded basis for honest hope.
- *Sequencing* and *synergies* are keys to getting there.
- This modeling approach can *democratize* our decision making about our complex challenges.

Coming soon:


Cascade Institute — Polycrisis Core Model
Version 2.9
CASCADE INSTITUTE
Welcome & Read me
Matrix
Scenario Explorer
Hope Attractor
Succession Analysis
Matrix Editor
Redesign the Model
CASCADE INSTITUTE
POLYCRISIS CORE MODEL
Our analysis shows hope about the future is still structurally possible.
Not every desirable future is reachable from where we stand. The Polycrisis Core Model applies cross-impact balance analysis to more than 1,000 structured expert judgements — each rooted in the literature and defended in writing — about how eleven coupled global systems would shape one another in 2040, identifying which hopeful configurations the world can actually hold together, and what paths could carry us there.

More information:

Polycrisis Core Model:

Planetary health and wellbeing economy. “Put yourself on the map”: