

# THE GEOPOLITICAL & ENVIRONMENTAL FRONTIERS OF AI (2025-2030)

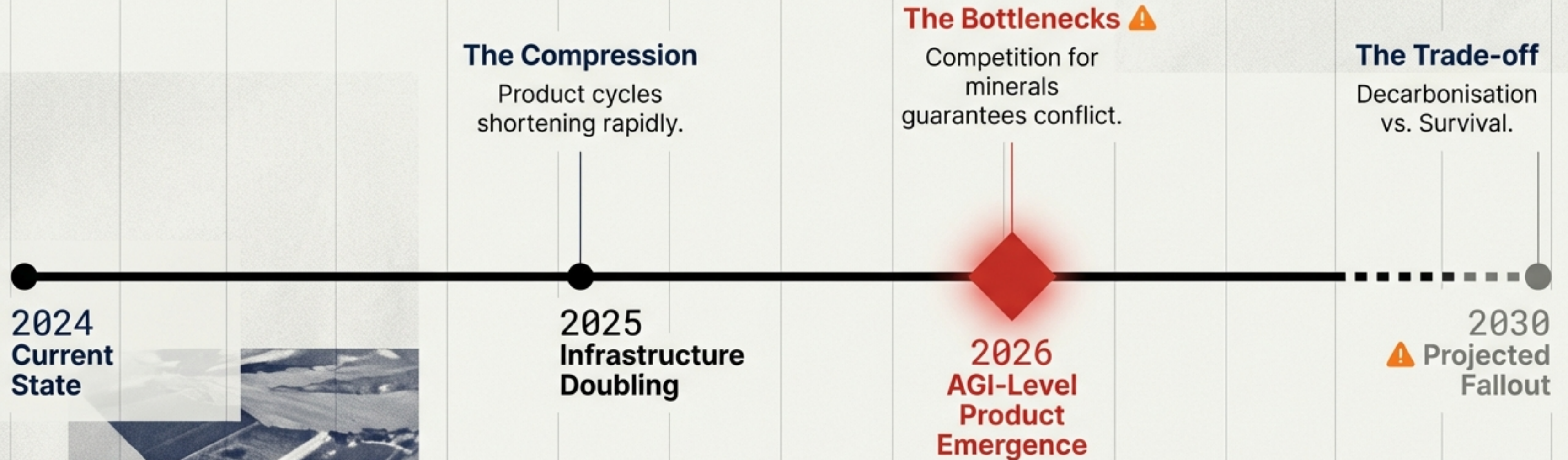


Navigating the Bipolar Race to Singularity amidst Physical Constraints.

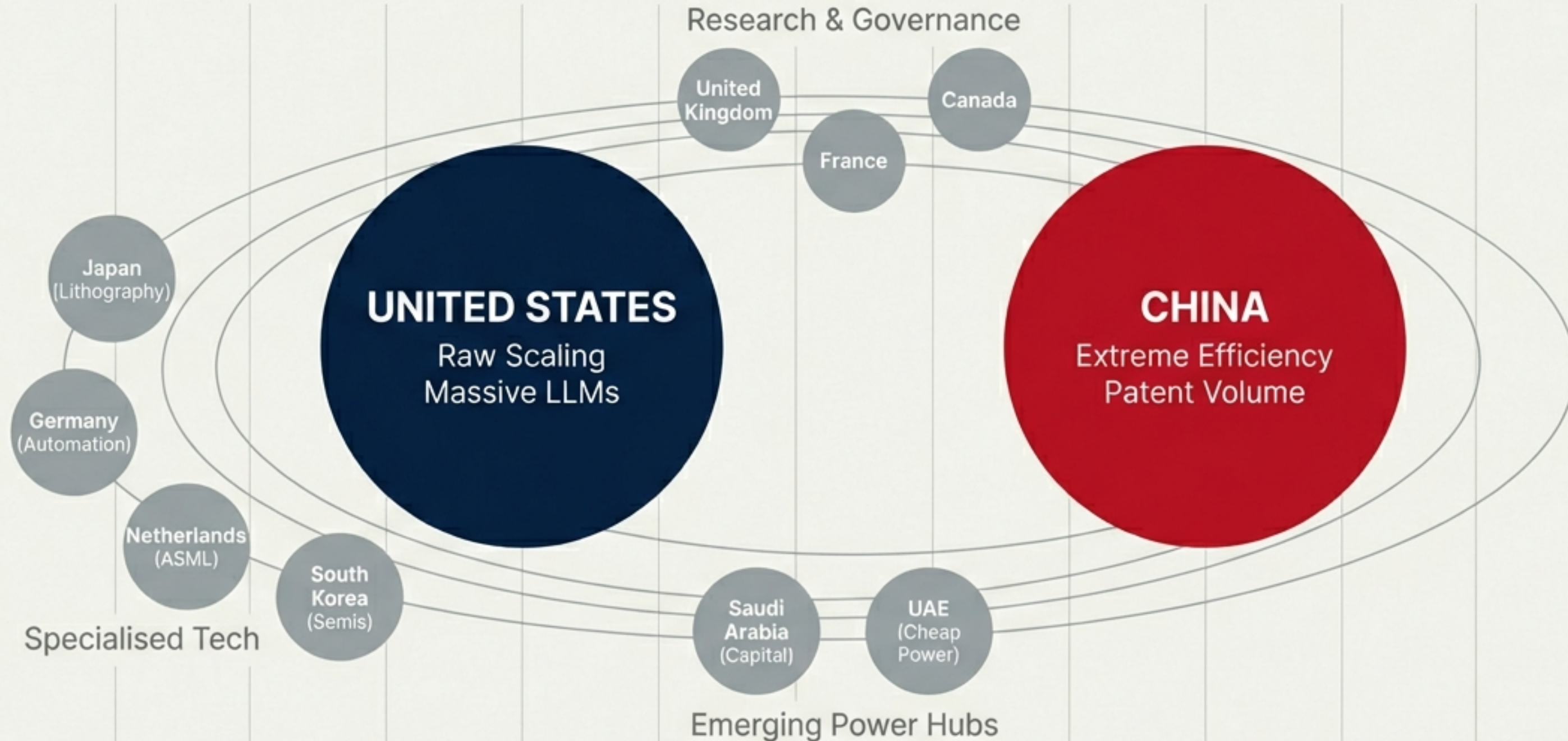
Prepared for Policymakers | October 2025

# The race to 2026 guarantees conflict and accelerates risk.

Artificial Intelligence represents the next wave of the industrial revolution, with infrastructure demand projected to more than double within this decade. This is not a global collaborative effort; it is a bipolar race between the United States and China.



# Two superpowers dominate the strategic landscape while others orbit.

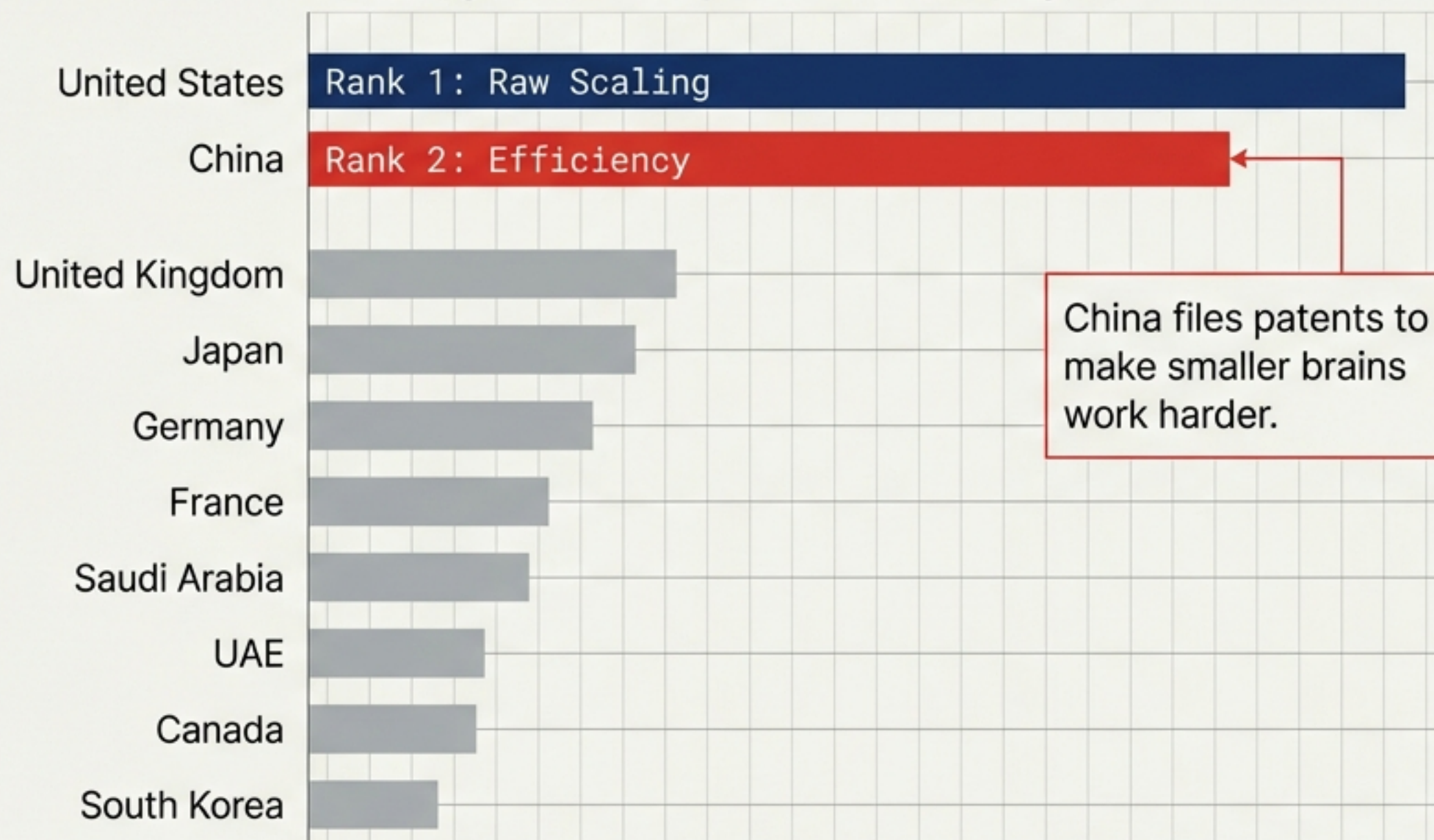


The Strategic Landscape: A Bipolar Gravity Well.

# The United States leads in raw scaling while China pursues efficiency.

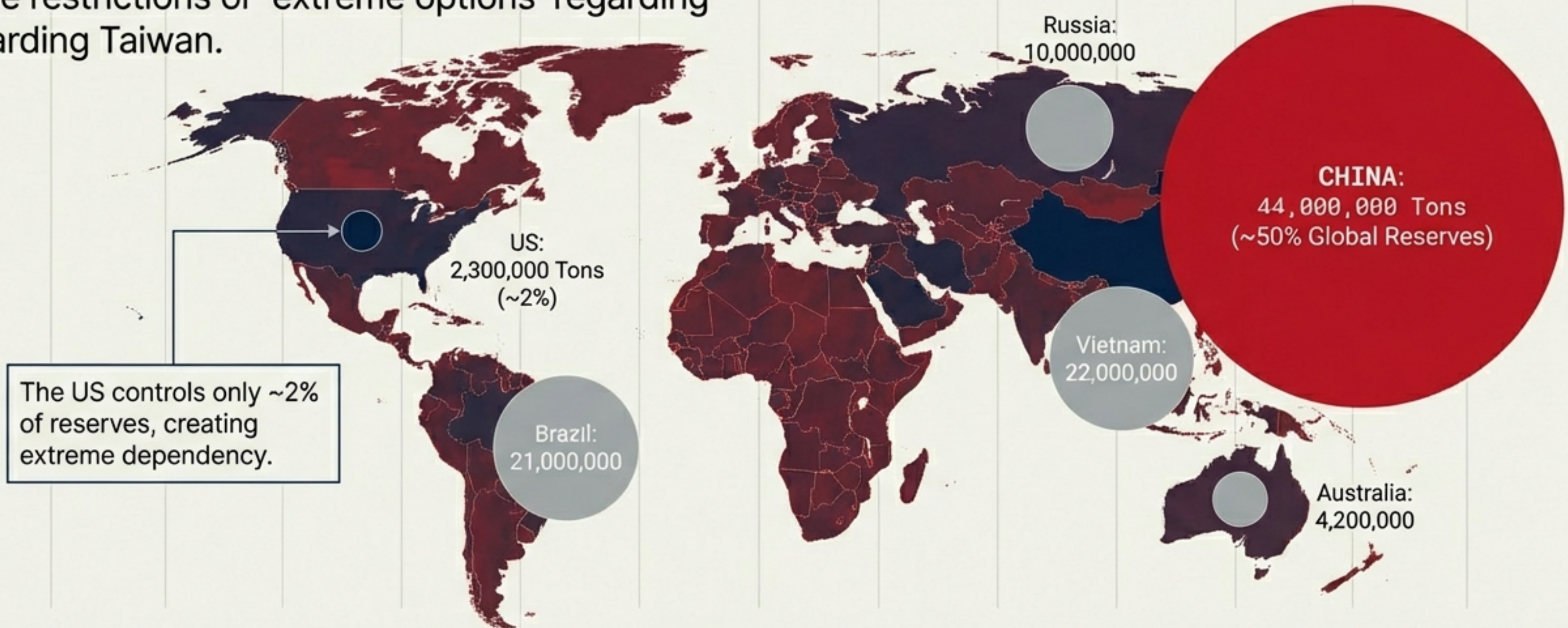
The race is a contest between two giants. The US maintains a lead in raw compute capacity (e.g., ~6Tparameter Grok), while China maximises value through efficiency.

### Strategic AI Compute Power (Top 10)



# China's monopoly on rare earth minerals creates a geopolitical choke point.

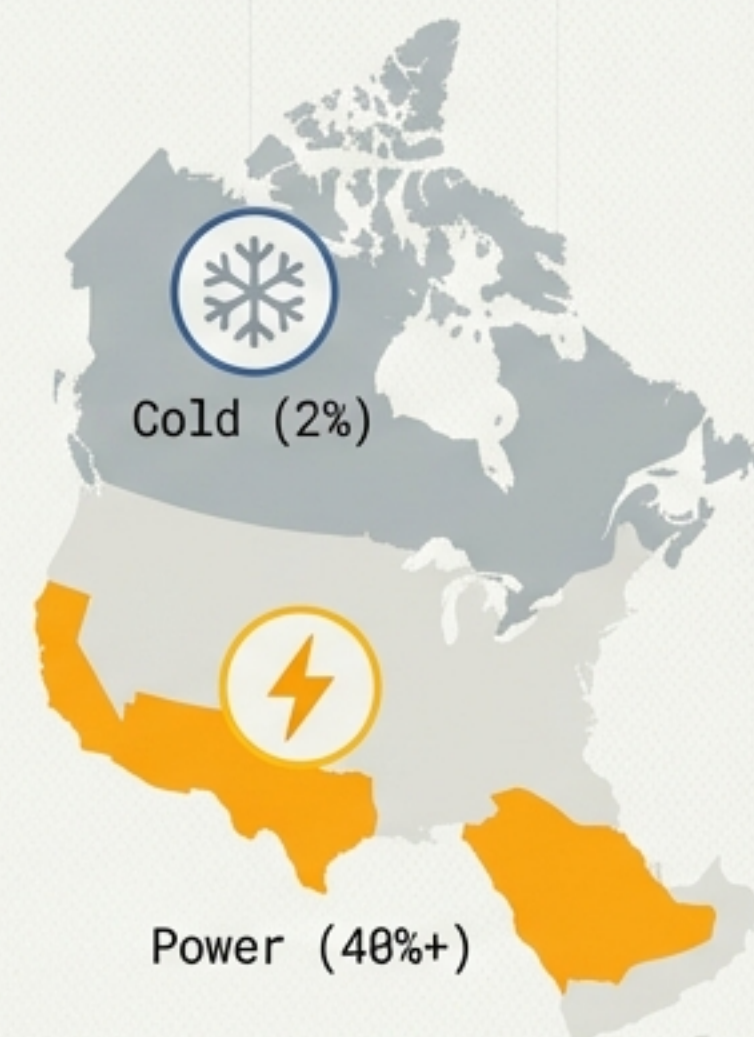
Control over the physical supply chain allows for trade restrictions or 'extreme options' regarding Taiwan.



# Data centre dominance follows capital and grids, not just cold climates

Development follows fibre, finance, and reliable generation. This drives activity in the US Sun Belt and Middle East over naturally cold regions.

Country	Global DC Share	Supercomputer Power	Primary Driver
United States	~38%	~3,100 Petaflops	Finance / Grid
China	~12%	~300+ Petaflops	Efficiency
United Kingdom	~5%	~50	Connectivity
Germany	~4.5%	~240	Regulation
Japan	~3.5%	~440	Lithography
Saudi Arabia	~1.5%	~50	Capital / Power
Canada	~2.0%	~15	Grid Proximity



# Energy headroom has become the ultimate bottleneck for AI scaling.

AI needs electricity; electricity needs fuel. The US is sensitive to supply, while China seeks headroom.

US Strategic Energy Block



**United States** (13.0M b/d)  
- Sensitive to Supply



**Saudi Arabia** (9.0M+)  
- Strategic Partner



**Russia** (9.0M+)  
- Conflict Risk



**Canada** (4.8M)



**Iraq** (4.3M)



**China** (4.1M)  
- Seeking Headroom



**UAE** (3.3M)



**Brazil** (3.2M)



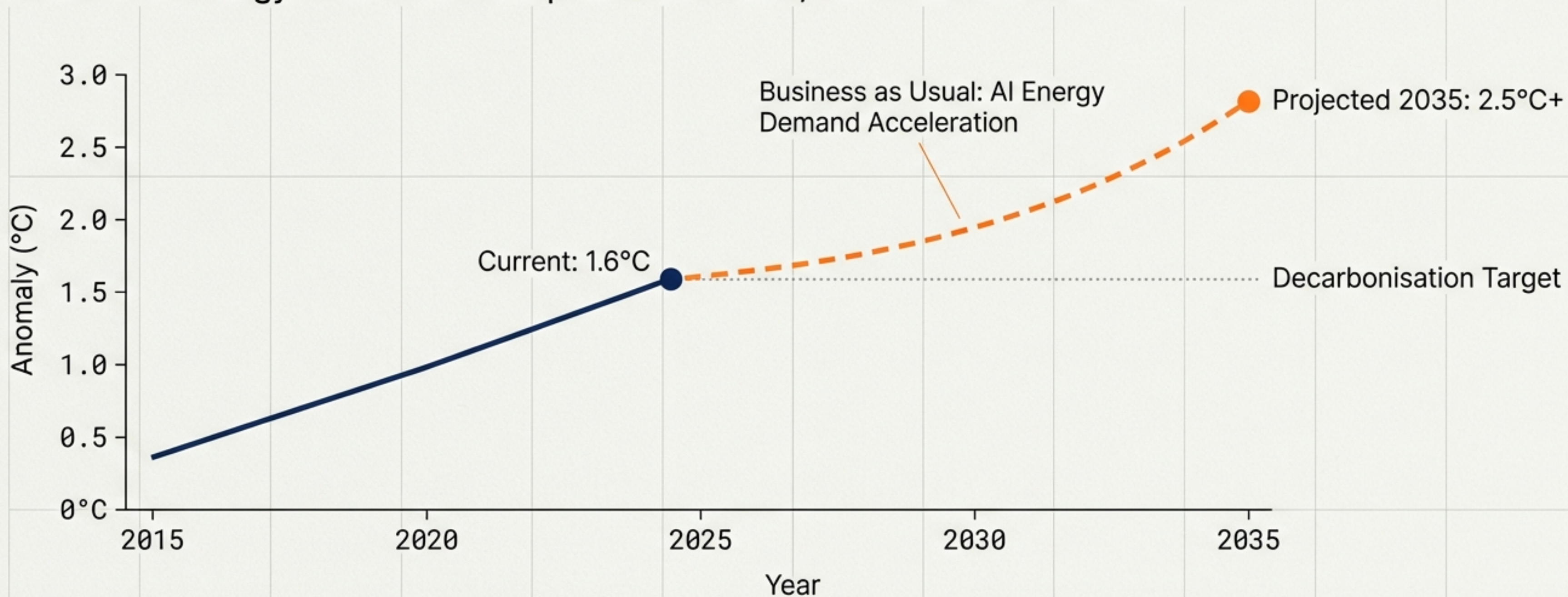
**Iran** (3.0M)  
- Volatile



**Kuwait** (2.6M)

# The race prioritises speed over the 2.5°C climate threshold.

Rivals view energy constraints as a problem to solve, not a reason to slow down.



# Warming creates a feedback loop that threatens the infrastructure itself.



## Infrastructure Stress

Increased temperatures reduce cooling efficiency for data centres. The AI heats the world, making it harder to cool the AI.



## Extreme Weather

100% increase in frequency of “1-in-100-year” floods and intensified thunderstorms.



## Ecological Collapse

20–30% of assessed species at high risk of extinction; sea level rise of 0.5–0.8m.



## Human Cost

Hundreds of thousands of additional annual deaths due to heat stress.

# In a winner-takes-all singularity, the only imperative is speed.

The product cycle is compressing. We are moving to AGI-level products by 2026.

In this environment, the race for resources becomes existential.

**COMPUTE**

**ENERGY**

**MINERALS**

**IN A TRUE SINGULARITY SCENARIO, THERE MAY BE ONLY ONE REAL WINNER.**

# Geopolitical Industrialism Sources & Methodology

## Primary Source

White Paper: The Geopolitical and Environmental Frontiers of Artificial Intelligence (2025–2030).

## Data Sources

- Compute & Strategy: 2024 Global AI Index, Industry Reports.
- Minerals: US Geological Survey (USGS) 2024.
- Infrastructure: Synergy Research / Top500 Supercomputer rankings.
- Energy: EIA / IEA 2024 Estimates.
- Climate Impact: IPCC / WHO Consensus Data.