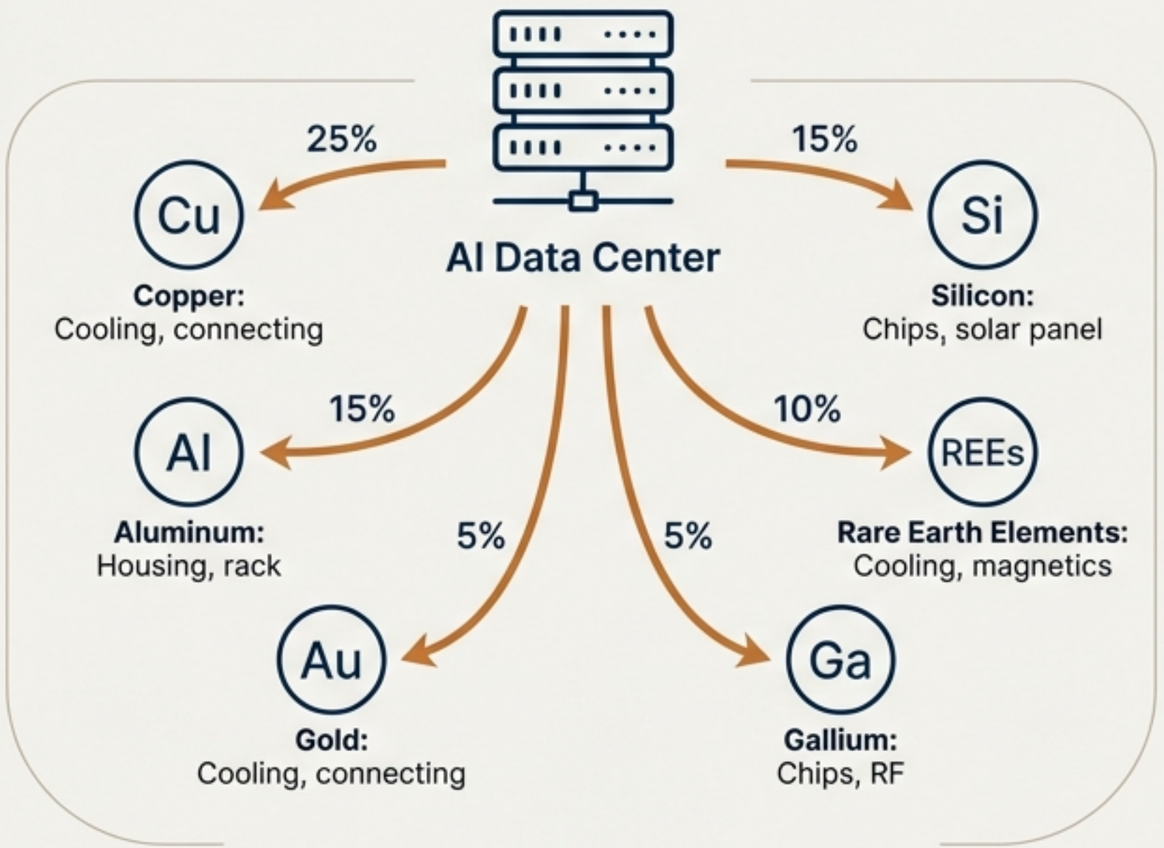
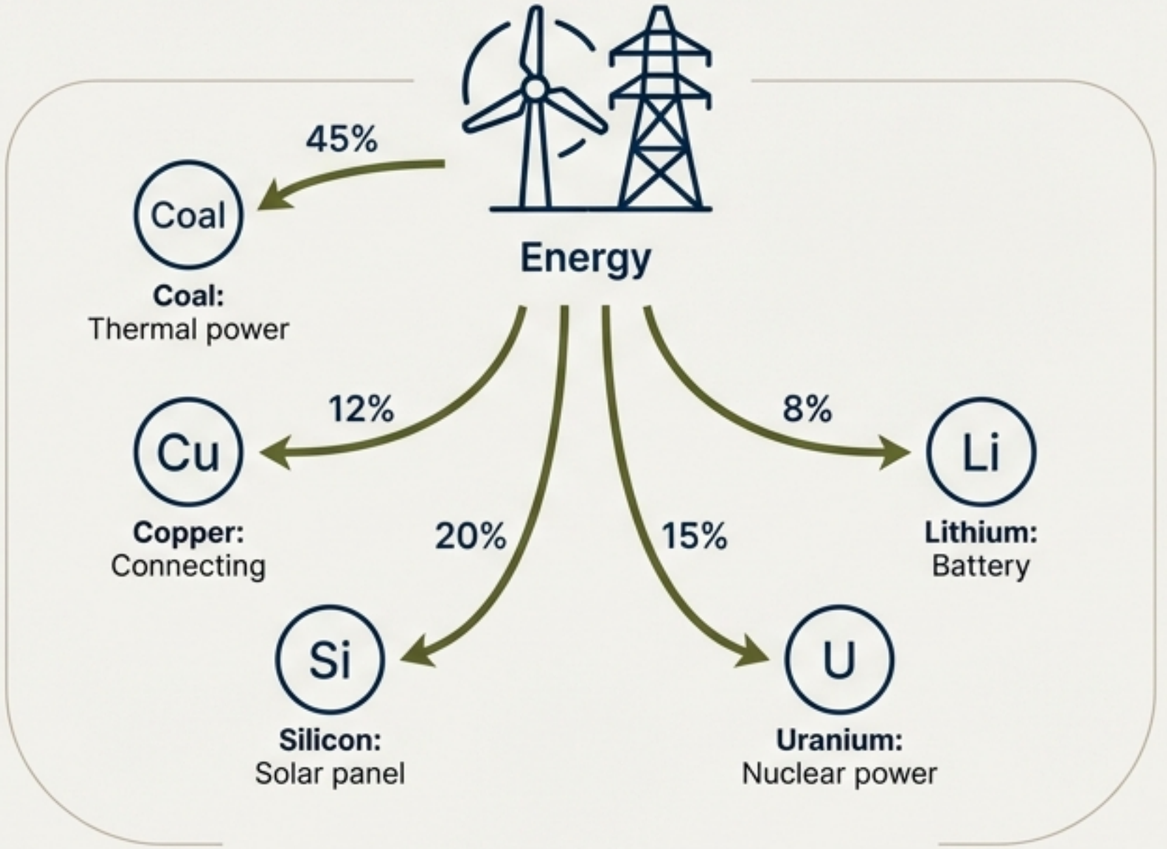
Powering the AI Revolution

Australia's Pivotal Role in the Global Mineral Supply Chain

Chung-Hao Lee | November 2025

The AI boom is fueling unprecedented demand for a specific set of critical minerals for data centers and energy.





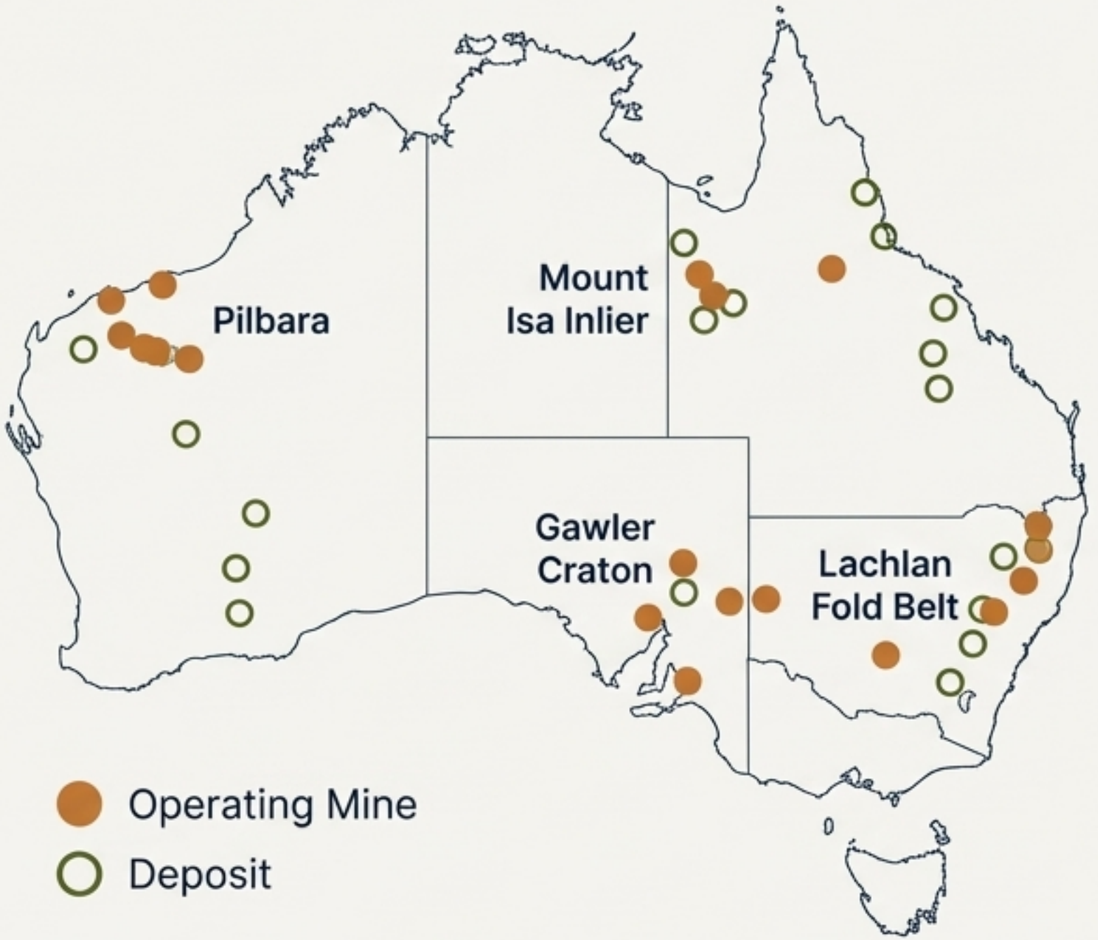
Source: Critical Minerals in Artificial Intelligence

Australia is a globally significant producer of the very minerals critical for AI infrastructure.

With world-class deposits of copper, lithium, iron ore, and rare earth elements, Australia is uniquely positioned to supply the foundational materials for the AI era.

The following case study on copper illustrates the scale and strategic importance of this capacity.

Case Study: Australia's copper sector is a cornerstone of the global AI supply chain.

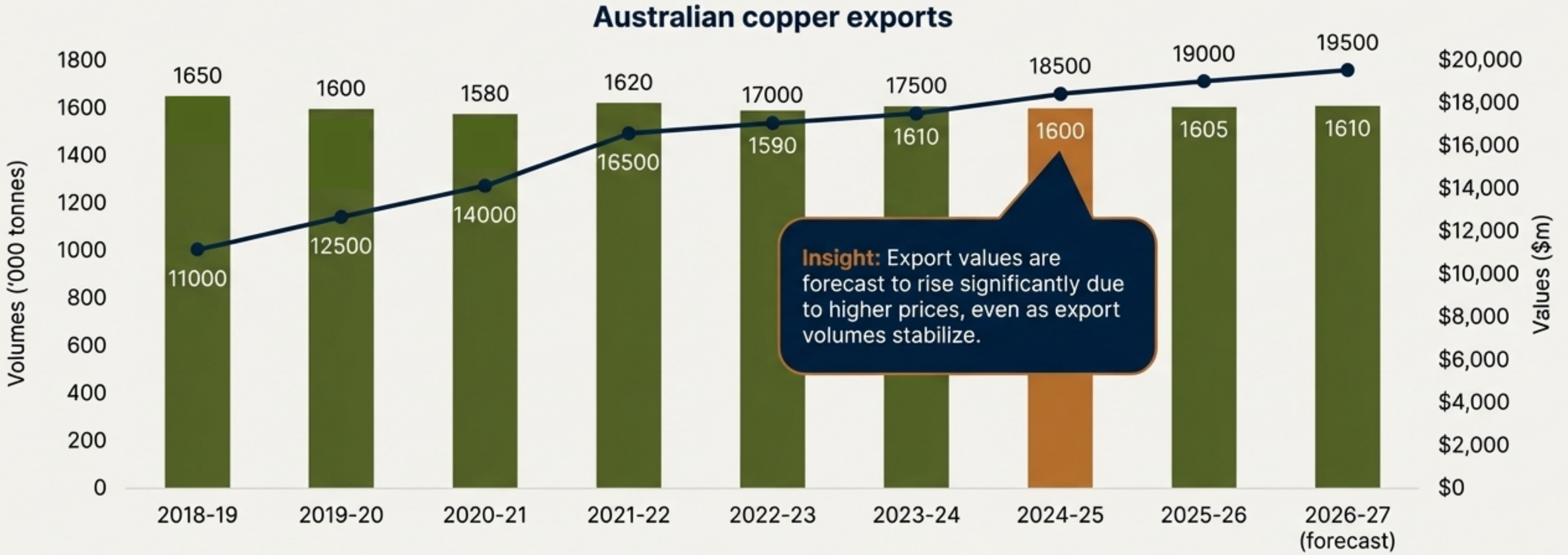


World No. 2
for copper resources.

5th Largest
refined exporter globally in 2024.

210,000 tonnes
produced in a year at Australia's largest mine in 2024.

Despite supply challenges, rising prices and exploration signal copper's growing strategic importance.



Supply: Copper supply struggling to keep up with demand in the medium term.

Production: Production to continue rising.

Export Earnings: Expected to rise from strong demand and higher prices.

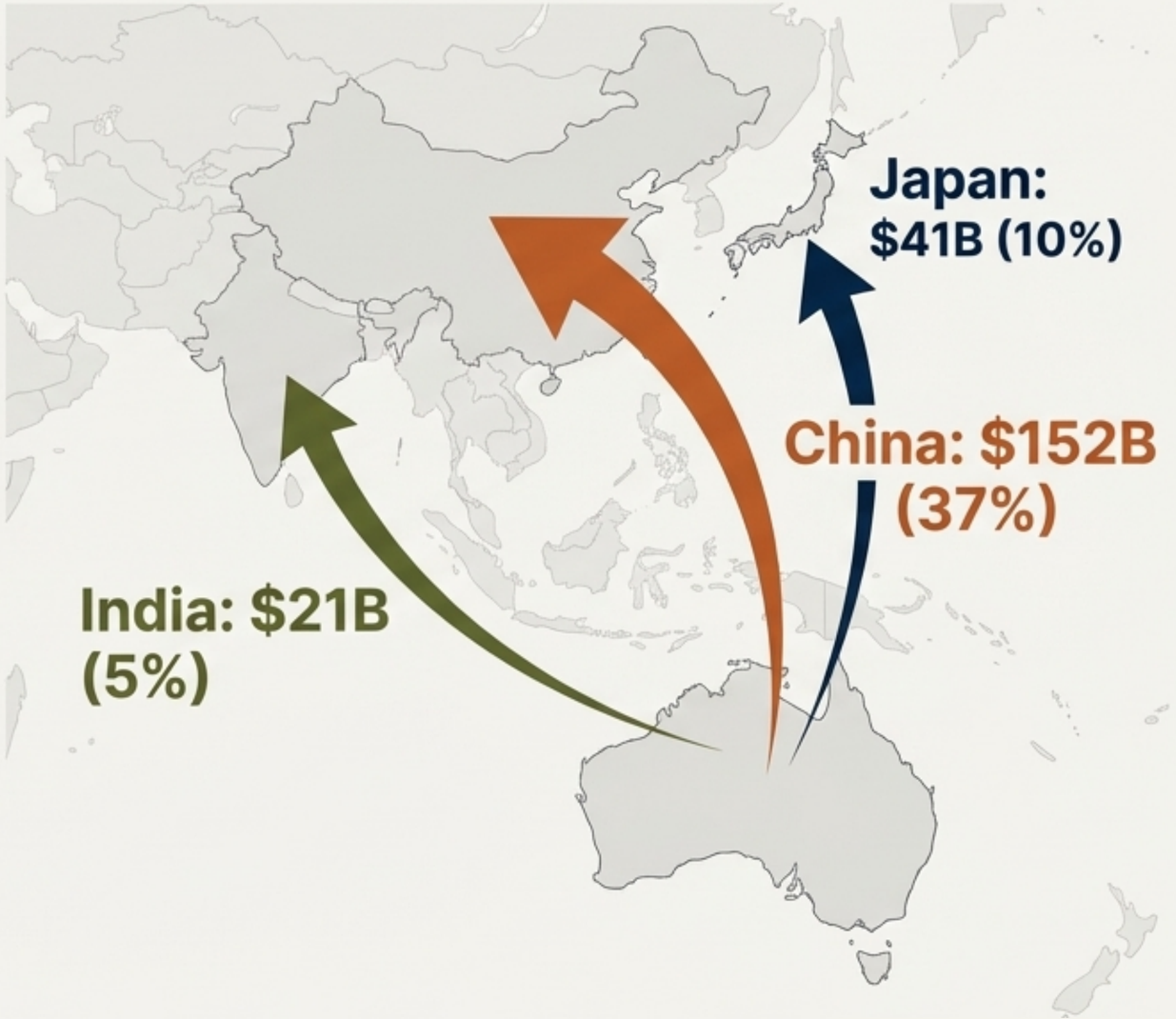
Exploration: Exploration expenditure expected to rise.

China: The Anchor Market Sustaining Australia's Resource Export Dominance

Total Resource Exports (2023–2024):

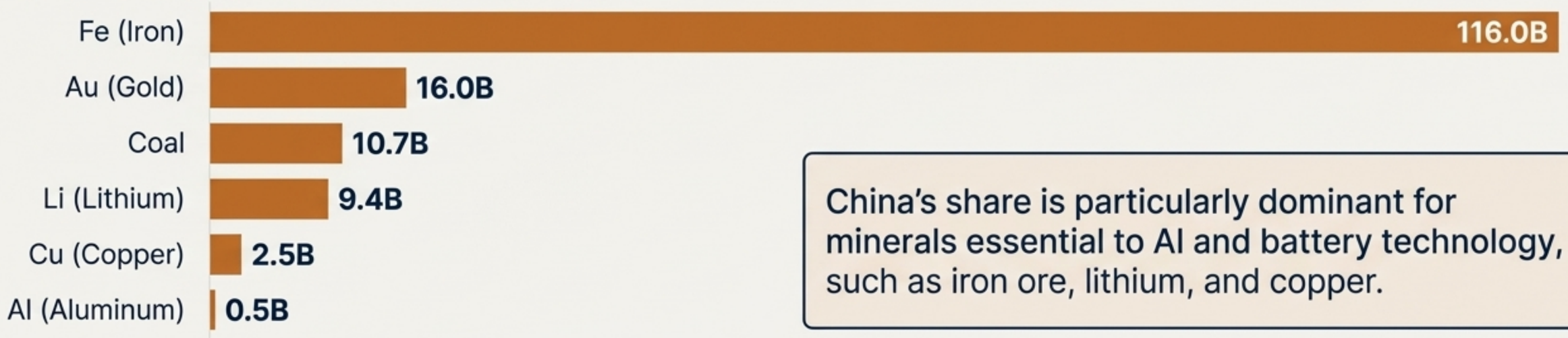
$410 Billion

In the field of AI-critical resources, China, Japan, and India are Australia's three major export destinations. Together, they account for **52% of the nation's** total resource exports.



China is the dominant destination, receiving 37% of Australia's resource exports, including the majority of key AI minerals.

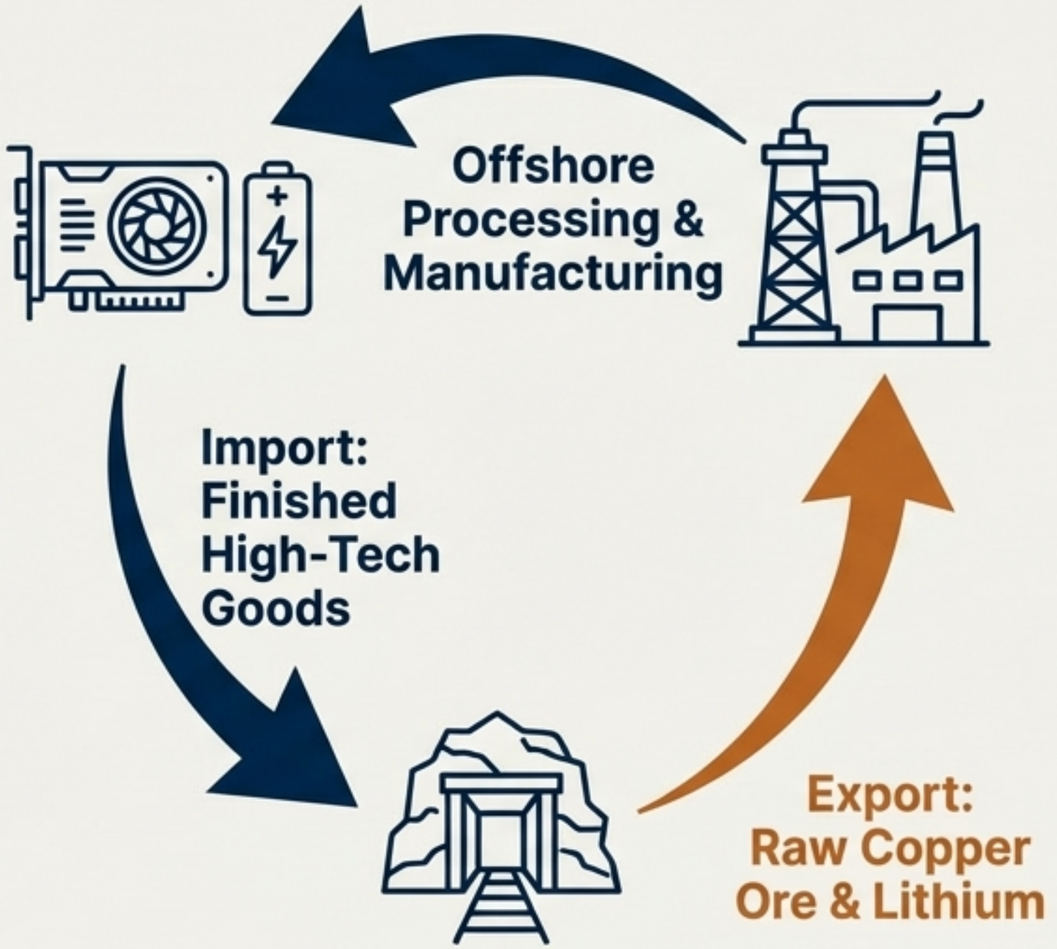
Breakdown of Exports to China ($B):



China's share is particularly dominant for minerals essential to AI and battery technology, such as iron ore, lithium, and copper.

Bilateral Synergy: Navigating the Strategic Interdependence in the Value Chain.

Australia's economy is powered by the export of foundational raw materials. This creates a powerful synergy with its largest trade partner, China, which possesses world-leading processing and manufacturing capabilities.



This dynamic positions each nation as a critical link in the global AI value chain. Sustained collaboration is necessary to transform resource wealth into technological advancement and ensure mutual economic benefit.

Australia’s mineral resources are a strategic asset for a shared technological future.

Indispensable Foundation

The global AI build-out is fundamentally dependent on a consistent supply of critical minerals, placing resource-rich nations like Australia at the center of the new economy.

The Synergy Engine

The deep trade relationship with China provides the essential engine for transforming these raw materials into the technology powering the AI revolution, creating a powerful and mutually beneficial economic interdependence.

Strategic Horizon

The key to future prosperity lies not in viewing this interdependence as a challenge, but in strategically managing it as a shared opportunity to lead the next wave of global technological advancement.