

#### Powering the Future: Inside the Al Supply Chain

Realizing the transformative potential of AI hinges not just on innovation, but also on navigating the complex realities of the AI supply chain. This infographic examines the journey of AI, from the ethical sourcing of critical minerals to the environmental impact of its production and the well-being of workers across the globe.

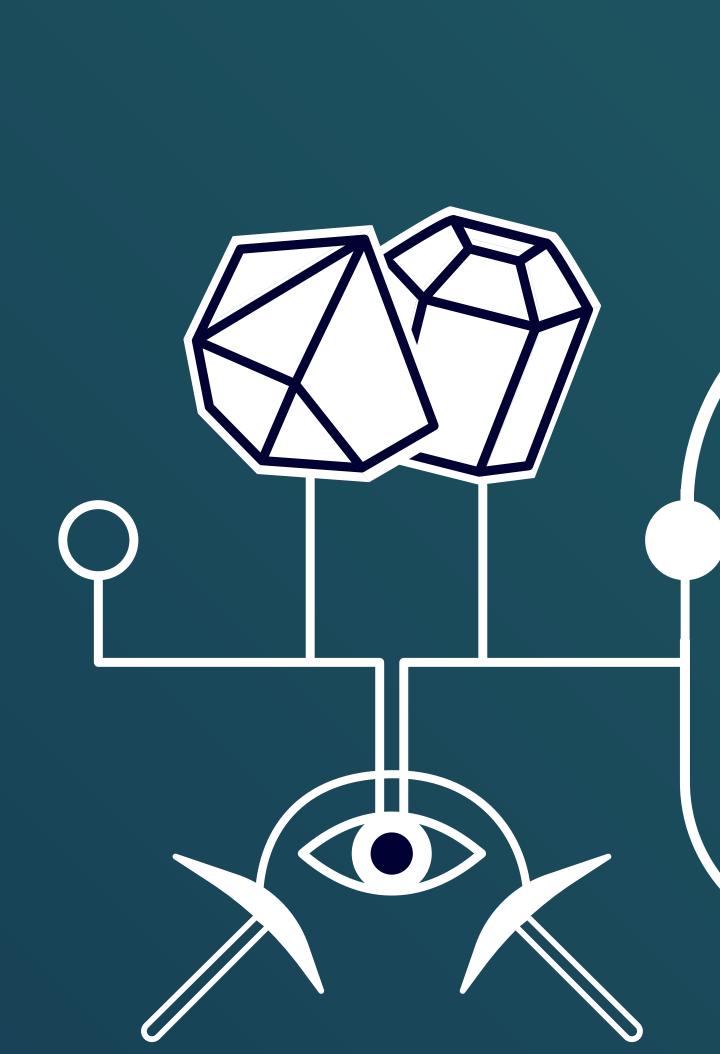


## The Multi-Trillion Dollar Potential

The transformative potential of AI is staggering, with estimates suggesting it could contribute up to \$15.7 trillion to the global economy by 2030—exceeding the combined GDP of China and India.<sup>1</sup>

## From Mine to Market: The Odyssey of an Al Chip

The journey of a single high-performance AI chip can span **over 25,000 miles**, encompassing a complex supply chain from raw material extraction to final product delivery.

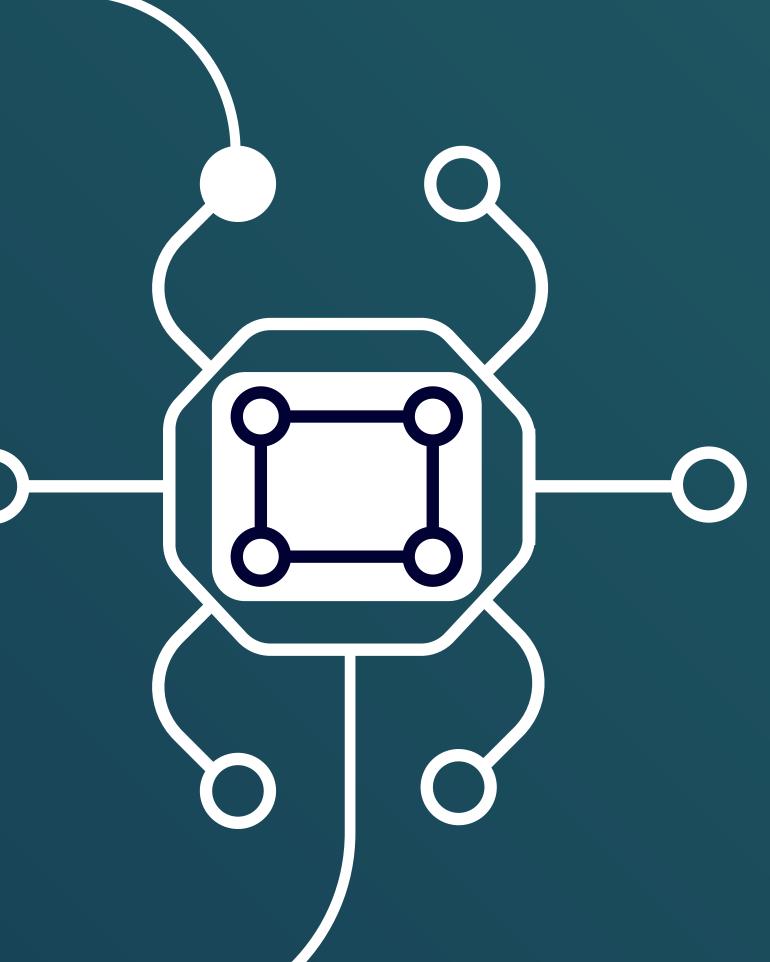


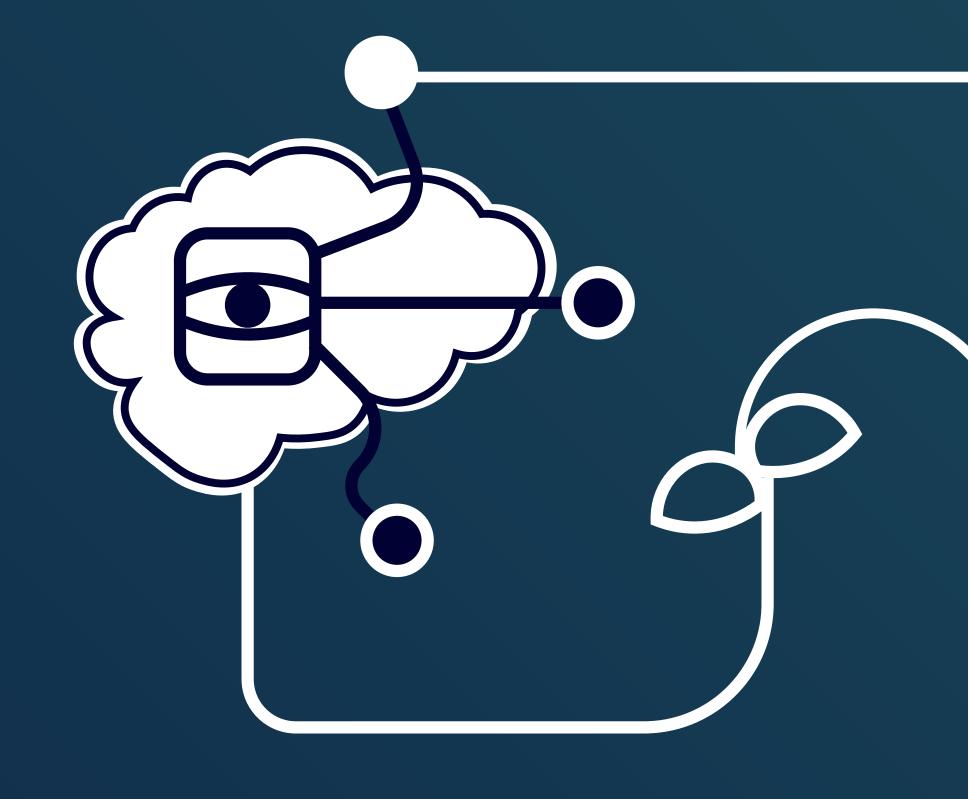
# China's Rare Earth Metal Monopoly

China currently dominates the market for rare earth metals, supplying approximately **90%** of the materials used in high-tech industries, including AI hardware, creating a **critical dependency** in the global supply chain.

# The Global Race for Al Hardware

The explosive growth of AI has turned AI chips into one of the most sought-after commodities, resulting in **soaring demand**, **increased supply chain complexity**, and **prolonged lead times** that contribute to a global shortage and skyrocketing prices.<sup>2</sup>





#### The Energy Cost of GenAl

requires almost **10 times** more energy than a Google search.<sup>3</sup>

According to Goldman Sachs, processing a ChatGPT query

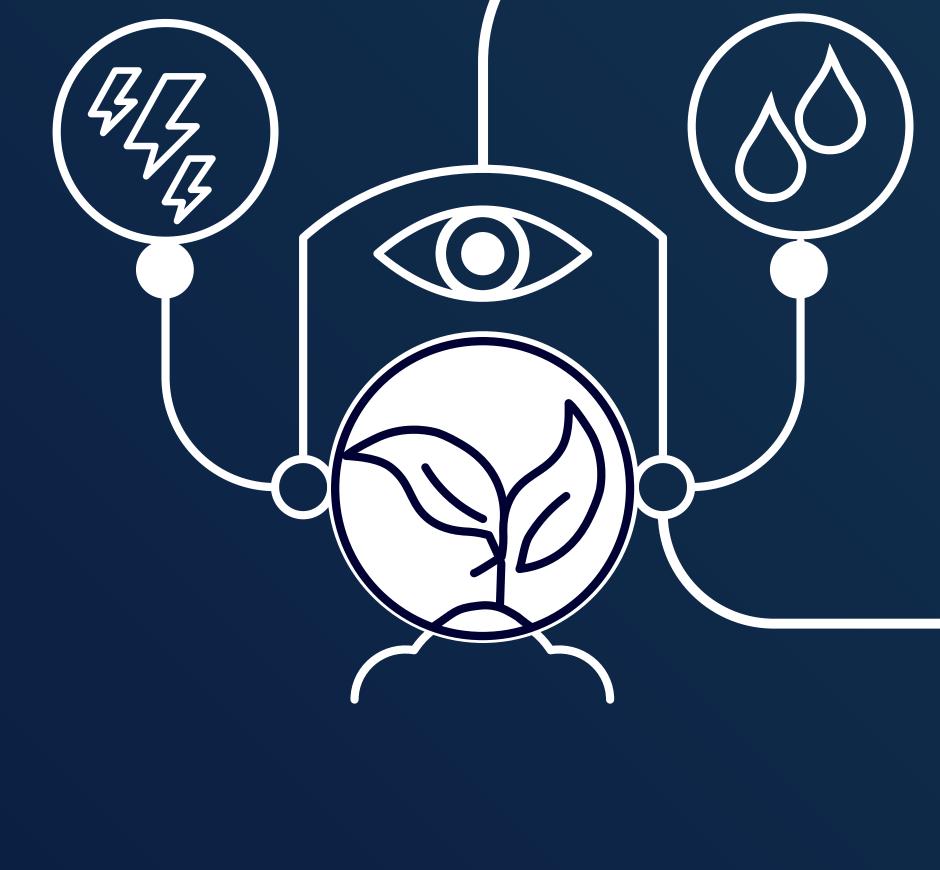
## Rare Earth Mining Mining for rare earth metals can generate 2,000 tons

The Dark Side of

produced, highlighting the significant environmental challenges associated with Al's raw materials.4

of toxic waste for every ton of rare earth elements

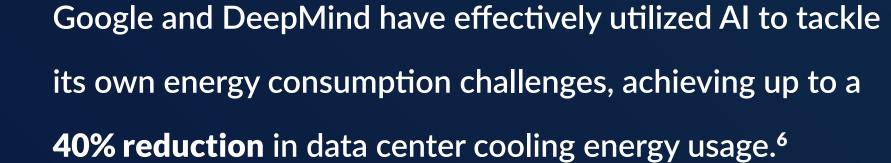




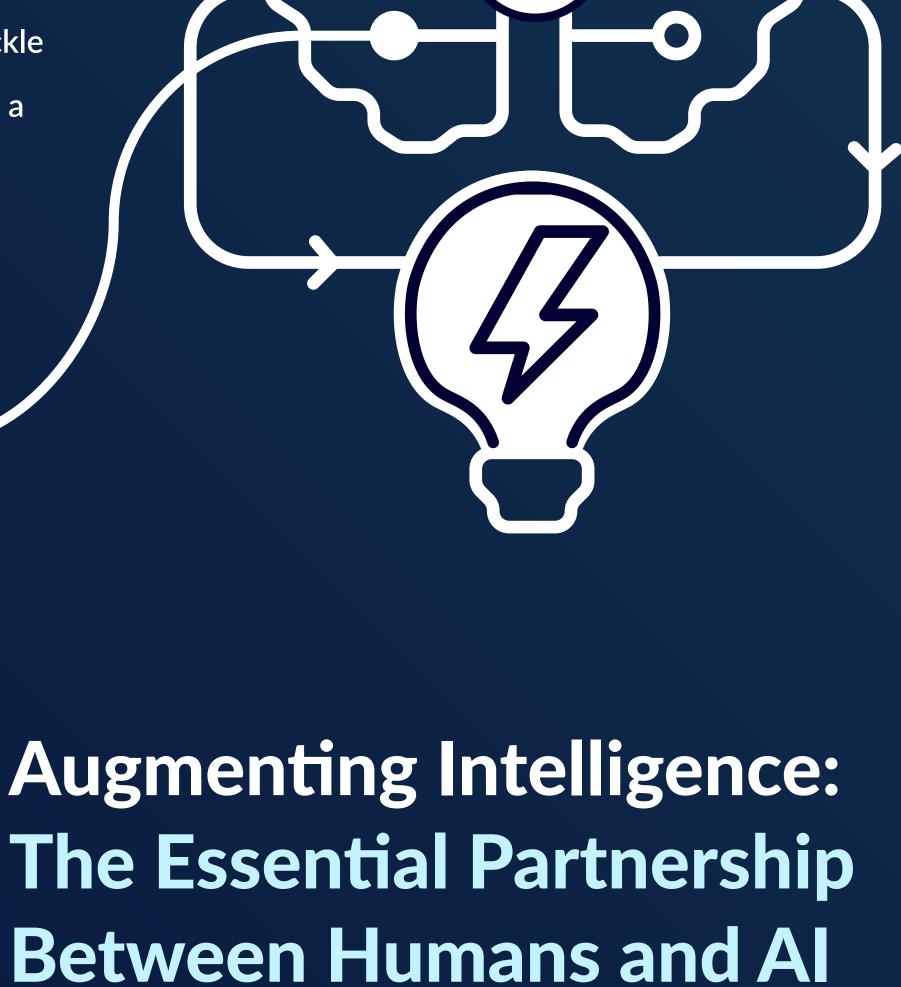
### Sustainability An innovative underwater data center in China is

save **122 million kilowatt-hours of electricity**, and preserve **105,000 tons** of freshwater annually.<sup>5</sup>

projected to conserve 68,000 square meters of land,



Al's Self-Healing Power





# While fears about AI displacing human jobs persist, it is essential to recognize that AI is designed to augment human capabilities, and without human input, AI technologies would not exist.

**Behind the Screens:** 

# The Human Cost of the Al Boom Despite the rapid growth of the Al industry, many workers face challenges such as low pay, job insecurity, and monotonous tasks.

conditions, and job security for these essential workers.

Companies must prioritize fair compensation, humane working

Al's story is still being written. By understanding its complexities and addressing its challenges, we can shape a future where AI empowers humanity and safeguards our planet.

Al's future depends on resilient, responsible supply chains. Discover the strategies

Learn more

6: DeepMind AI Reduces Google Data Centre Cooling Bill by 40% - Google DeepMind

shaping high-tech supply chains in the age of Al.