

When electricity first arrived, the world built the necessary infrastructure – power plants, transmission lines – before the real transformation could take hold.

A similar process is happening with artificial intelligence (AI). Today's massive investment in chips, data centres, and power grids is laying the foundation for a potential expansion in AI application that could take years to develop. In our view, the discussion is increasingly shifting from whether AI adoption will continue to how the enabling infrastructure is being built. Asia appears to be playing an important role in that development.

## AI innovation: Asia helps build many of the world's technologies behind it

### Key points:

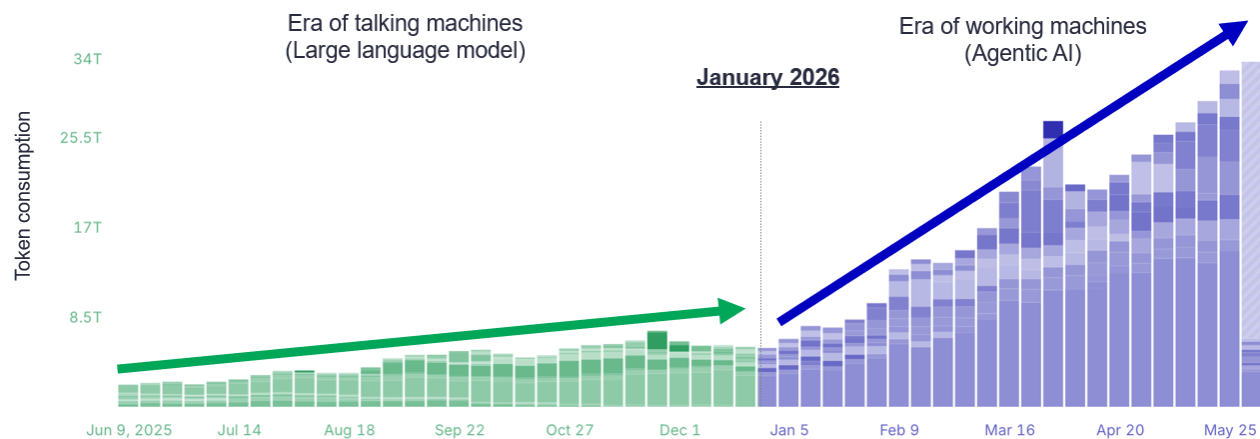
- AI has evolved from machine learning, to a talking chatbot, to an autonomous agent that works.
- Many Asia-based AI suppliers operate behind global brands and may receive less attention than the end-product companies they support.
- Asia's opportunity spans both breadth and depth, with applications that could support a broad range of end markets globally.
- Asia's manufacturing experience and capacity may position it well to participate in the next phase of innovation.

### The evolution of AI

Intelligence is defined as the ability to sense, analyse, and react to information. Within the context of AI, machine learning does exactly this, using graphics processing units (GPUs) to process information and memory to store and transfer it. Then came generative AI, widely associated with the launch of ChatGPT in 2022, when machines started providing intelligent responses to questions. By 2026, agentic AI had arrived: machines could now carry out tasks, such as sending emails, making reservations, and writing software code.

Each stage of this evolution has demanded a bigger "computer", requiring more GPUs and more memory. And as AI advanced from talking to working, demand accelerated with it. The advent of agentic AI in 2026 marked a notable increase in token consumption, a measure of how much AI is being used.

AI used to answer, now it acts  
AI demand growth trajectory has been accelerated



Source: OpenRouter AI. Manulife Investment Management, July 2026.

Hidden engines of the supply chain are in Asia

Meeting the rapid rise in demand for AI requires more than just clever algorithms – it requires physically building the infrastructure to support it at a significant scale.

When we talk about AI companies, big household names are often the first to come to mind. However,

beyond the surface lies a broad network of less visible manufacturers, equipment makers, and materials suppliers. From precision manufacturing to fabrication and testing equipment, advanced materials, and heavy industrial tools, only a handful of companies in the world possess the capability to deliver. Most of these companies are based in Asia.

Entire value chain opportunity



Source: Manulife Investment Management, July 2026.

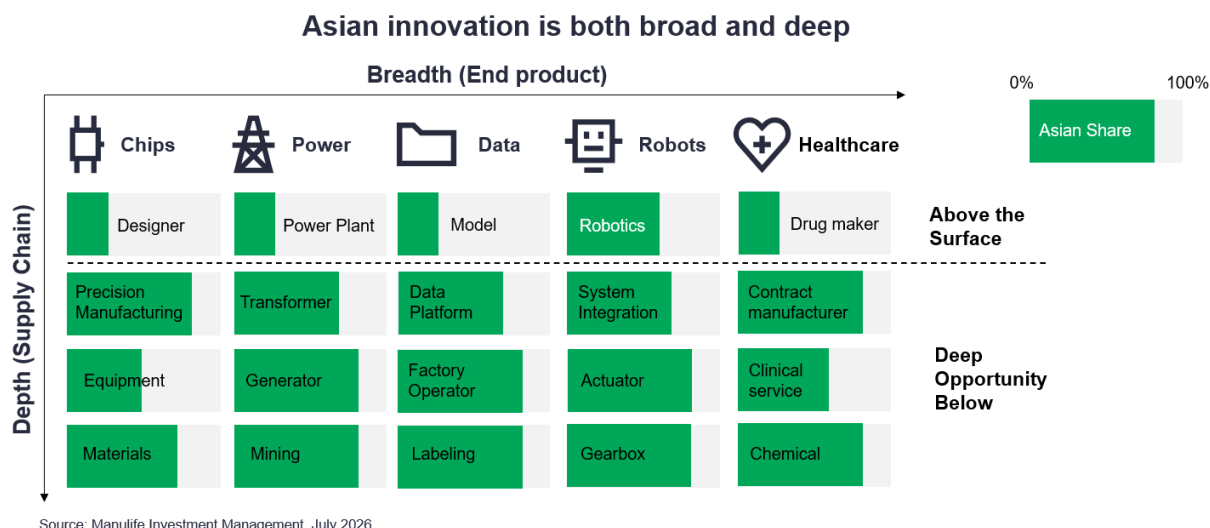
## Asia's opportunity appears both broad and deep

Asia's footprint spans a wide range of AI verticals, including chips, power, data, robotics, and healthcare.

Across each of these, the same engine pattern repeats itself. For instance, in robotics, a chain of system integrators, actuator makers, and gearbox manufacturers operate mostly unnoticed beneath it, we believe some of them appear to be in competitive

positions from fundamentals and valuation perspectives.

Asia's market share looks to increase further down the AI value chain. These areas may present a differentiated opportunity set.



## Asia may be well positioned in the next innovation cycle

Innovation has long depended on proximity to manufacturing, and Asia has long been considered a major manufacturing hub, supported by established production ecosystems and capacity in several industries.

- Asia accounted for 45% of global research and development (R&D) spend in 2024, up from 23% in 2000, and 71% of global patent grants were awarded in Asia in 2024.
- 92% of leading-edge chip capacity is in Taiwan region
- About 70% of global memory chips are made in Korea
- China accounts for around 70% of global electric vehicle (EV) and battery production, and 80% of global solar module production.

may bring greater volume through the region's factories, feeding a virtuous cycle that may compound over time.

With Asia's manufacturing scale and supply chain strength, we believe the region appears well positioned to participate in the next phase of industrial and technology transformation.

From the chips that power AI to the applications that may define its future, Asia is helping build many of the technologies that the world runs on.

Source: WIPO Global Innovation Index 2025; UNESCO; TrendForce; SNE Research; Manulife Investment Management estimates, as of July 2026.

Solid manufacturing know-how and skill enable better quality products at competitive prices, which in turn may drive more consumer demand. Greater demand

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