

When robots start earning their keep



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Chinese robotics company Unitree completed its Shanghai STAR Market listing this month, and the market's reaction was extraordinary. The retail tranche of the offering was oversubscribed more than 8,000

times, and the shares closed their first day of trading up around 460%, valuing the company at roughly \$50 billion — more than five times the approximately \$9 billion valuation set when the deal was priced two weeks earlier.¹ For a sector investors have so far mostly evaluated through funding rounds, concept videos and technology demonstrations, that gives the market a disclosed, publicly priced picture of how a specialist humanoid-robot manufacturer generates revenue, allocates capital and plans for growth

Humanoid robots have emerged as one of the most closely watched themes in technology, attracting attention from companies including Tesla, Nvidia, Google DeepMind and a growing number of Chinese competitors. Yet despite rapid advances in hardware, the industry's biggest challenge remains largely unchanged: turning impressive machines into productive workers.

Manufacturing robots is becoming easier

Unitree's success demonstrates how far the industry has progressed. The

company has expanded revenue rapidly, achieved profitability and is planning significant increases in manufacturing capacity. Revenue rose from RMB 159 million in 2023 to almost RMB 1.7 billion in 2025, when reported net profit reached approximately RMB 278 million; the company shipped more than 5,500 humanoids over the year². Its fundraising ambitions underline the growing confidence that humanoid robots can be produced at scale, rather than as experimental prototypes. The listing itself raised roughly RMB 6.1 billion, with almost half of the proceeds earmarked for robot-model development with a manufacturing base designed for annual capacity of 75,000 humanoids and 115,000 quadruped robots.³ Yet production capacity alone does not create commercial success. The more important question is whether enough customers can find economically valuable tasks for these machines to perform.

Current sales patterns highlight this distinction. Much of today's demand comes from research institutions, universities, and software developers using humanoids as development



platforms. These customers are helping advance the technology and build ecosystems around robotic hardware, but they are not yet proof of widespread commercial adoption.

The challenge facing the industry resembles a classic chicken-and-egg problem. Robots need real-world experience to become more capable, but businesses will only deploy them at scale when they are already reliable and economically attractive. The companies that create the fastest feedback loop between deployment, operating data and software improvement may ultimately develop the strongest competitive advantages.

From bodies to brains

Recent years have produced remarkable advances in robotic hardware. Humanoids can increasingly walk, balance, carry objects, and perform complex

movements. However, physical capability alone does not make a robot useful in a workplace. Commercial value depends on whether a machine can understand its environment, adapt to changing circumstances and complete tasks safely and consistently.

This is why competition is increasingly moving from hardware to software.

Robots operate in environments where reality rarely follows a script. Objects may be misplaced, tools may move unexpectedly and people may interrupt workflows. A machine that performs perfectly under controlled conditions can struggle when confronted with these variations. In industrial settings, such failures can create costly downtime or safety risks.

While the stylised humanoid intelligence stack can be broken down in 4 main areas, leading

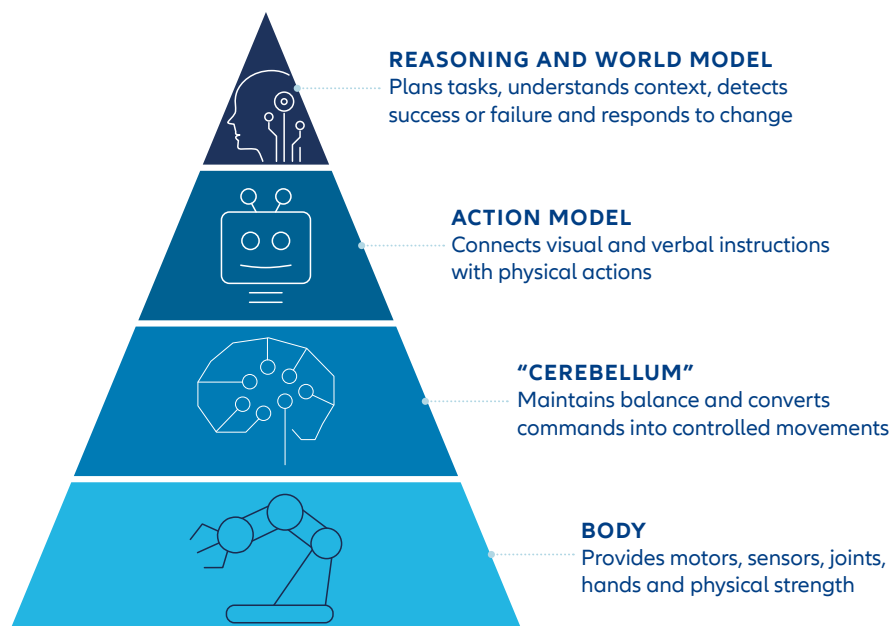
technology companies are now pursuing different approaches to solving this problem. Some are developing tightly integrated systems that combine perception, reasoning and movement within a single platform. Others are creating AI models and software layers intended to work across multiple robot manufacturers. Regardless of which approach succeeds, the industry's future may depend as much on intelligence and learning capabilities as on the physical machines themselves.

Data could be China's hidden advantage

While large language models learn from the vast quantities of digital information available online, robots require something very different: examples of how physical objects, tools and environments interact in the real world. They need to understand movement, force, friction, timing, failures and recovery actions. Collecting this data is considerably more difficult and expensive than gathering text or images.

China is attempting to turn this challenge into a competitive advantage. Policymakers are encouraging factories, service organisations and state-owned enterprises to open real-world environments for robot testing and training. The objective is to accelerate learning by exposing robots to practical applications rather than limiting development to laboratory settings. Meanwhile, regional governments are also supporting data creation, software development and early deployment

The humanoid intelligence stack



programmes. These initiatives reflect a broader strategy: using China's manufacturing base to generate the operating experience required to improve robotic intelligence.

Forget the household, think factories

Popular visions of humanoids often focus on versatile household assistants. In practice, the first large-scale deployments are likely to be far more specialised. Factories and warehouses offer attractive environments because workflows are relatively structured, tasks are measurable and human supervisors can intervene when necessary. These settings provide opportunities for robots to perform repetitive, physically demanding or difficult-to-staff jobs while generating valuable operating data.

This means investors should focus less on headline-grabbing demonstrations and more on measurable operating performance. Indicators such as uptime, task-completion rates, intervention frequency, maintenance costs and repeat orders may provide a clearer view of commercial progress than videos of robots performing acrobatic movements.

One potential catalyst could be robotics-as-a-service business models. Rather than purchasing expensive machines upfront, customers would pay for work completed. Such arrangements could reduce adoption barriers while placing greater responsibility on

developers to demonstrate real-world value and reliability.

The next test

The humanoid-robot industry appears to be entering a new phase. The ability to manufacture robots at scale is no longer the central question. Increasingly, attention is shifting towards whether machines can deliver useful work reliably, safely and at an economic cost that makes sense for customers.

Progress will become more visible when pilot projects evolve into repeat deployments, when robots can learn additional tasks without extensive reprogramming and when installations expand from isolated trials to broader commercial use.

These milestones will offer stronger evidence of long-term adoption than production targets alone. When that transition occurs, the opportunity could extend well beyond robot manufacturers to include semiconductors, sensors, software platforms, simulation tools, systems integrators and other parts of the broader robotics ecosystem.

For now, Unitree's IPO offers a useful snapshot of where the industry stands. Humanoid robots can increasingly be manufactured, financed and deployed at meaningful scale. The remaining challenge is proving that they can deliver something even more valuable: reliable units of productive work.



- 1 IPO-outcome figures: South China Morning Post, 19 Aug 2026 (629% intraday peak, 460% close, ¥342bn / ~\$50bn closing valuation); Reuters, via Yahoo Finance, 19 Aug 2026 (460% close, ~\$50bn valuation, RMB 6.1bn / ~\$905m raised, 8,000x retail oversubscription); Fortune, 19 Aug 2026 (~\$9bn IPO valuation, ~\$66bn intraday peak). Corroborated across independent outlets — reasonably high reliability on the headline figures. Some trade press also frames the close in P/E terms (~850–1,300x); that framing is more contestable and is left out here.
- 2 Unitree Robotics STAR Market prospectus, as reported via Shanghai Stock Exchange / China Daily, 11 Aug 2026, and corroborated by Reuters via Yahoo Finance, 19 Aug 2026. Prospectus-sourced and cross-confirmed by independent financial press — high reliability. Note: RMB 278m is net profit attributable to shareholders under the prospectus's statutory presentation. A separate non-GAAP measure excluding non-recurring items (mainly share-based compensation) is reported at roughly RMB 590–600m — don't be thrown if you see that larger number cited elsewhere; it isn't a contradiction, it's a different line.
- 3 Actual proceeds: Reuters via Yahoo Finance and Bloomberg, 19 Aug 2026 (RMB 6.1bn / ~\$904–905m). Original RMB 4.2bn target and use-of-proceeds categories: Shanghai Stock Exchange notice, 26 May 2026, and CNBC, 6 Aug 2026 pricing report. Both primary/regulatory-adjacent, high reliability. The breakdown of how the incremental proceeds (raised above the original target) are allocated hasn't been separately disclosed, so no updated split is assumed here.

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