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Investor Presentation | Asia Pacific

Asia Summer School: Asia Robotics and Humanoids

Humanoids represent the largest embodied AI opportunity, with a projected global TAM of US\$7.5 but we believe small-scale commercialization will start this year.

Recent reports:

- [2026 Outlook – Humanoids: Commercialization](#)
- [China Humanoids Survey: High Willingness to Adopt Meets Premature Products](#)
- [Humanoid Horizons: Humanoids Coming to Your Bloomberg Screen](#)
- [Humanoids and Robots – The Next Chapter in China’s Dominance in Global Manufacturing](#)

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CHINA INDUSTRIALS
Asia Pacific
Industry View
S. KOREA AUTOS & SHARED MOBILITY
Asia Pacific

investors should be aware that the firm may have a conflict of

Research as only a single factor in making their investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

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Industry View

In-Line

Asia Summer School 2026



June 16, 2026

INVESTOR PRESENTATION

Asia Summer School: Asia Robotics and Humanoid

Humanoids represent the largest embodied AI opportunity, with a projected global TAM of

The industry remains at an early stage, but we believe small-scale commercialization will start this year.

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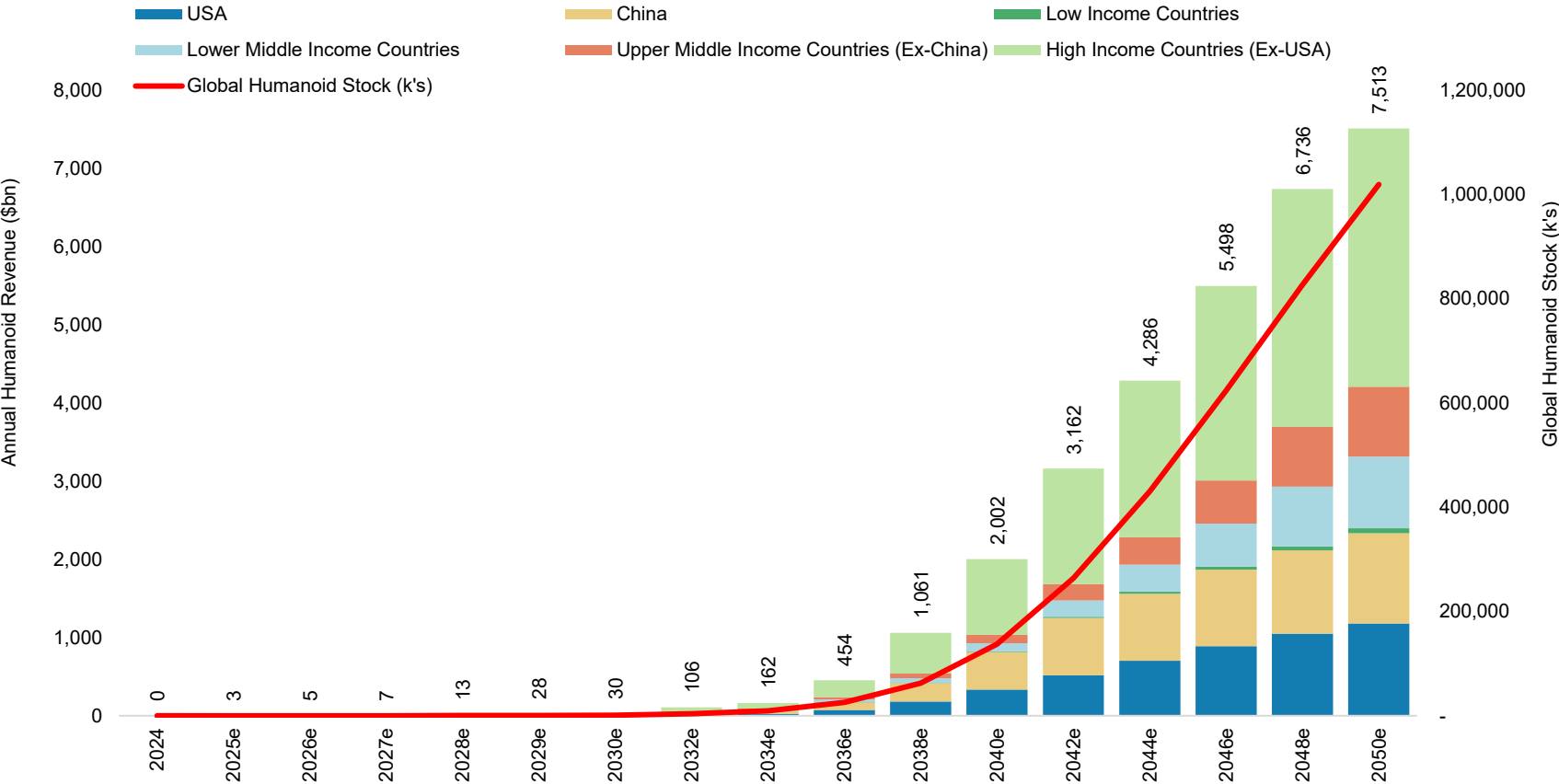
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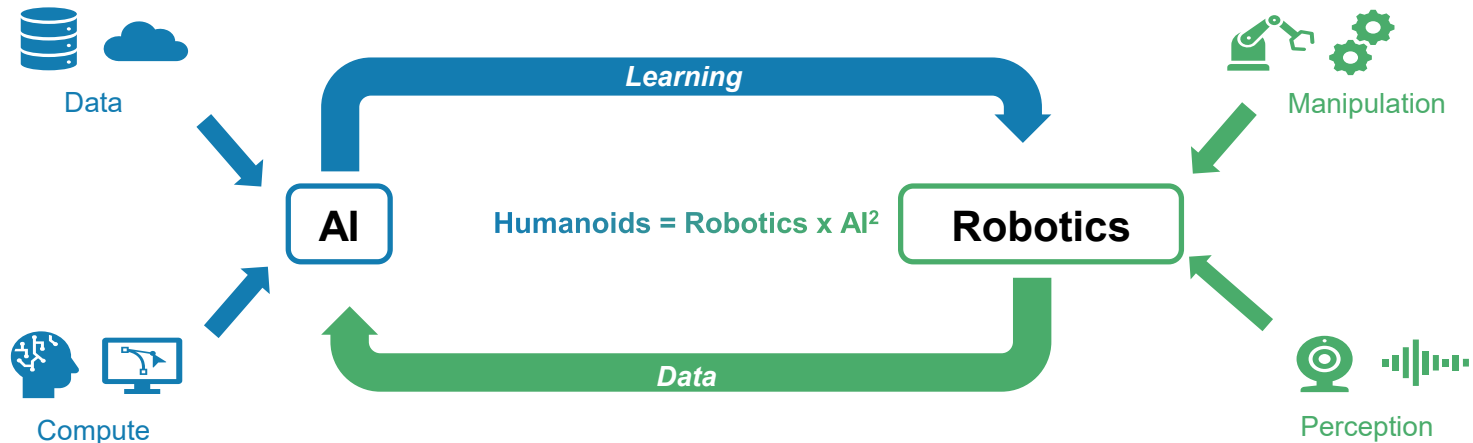
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Humanoid Robotics – The Largest Embodied AI Opportunity; 1bn Stock and US\$7.5tn TAM by 2050e

Global humanoid market size and stock



Why Humanoid Robots?

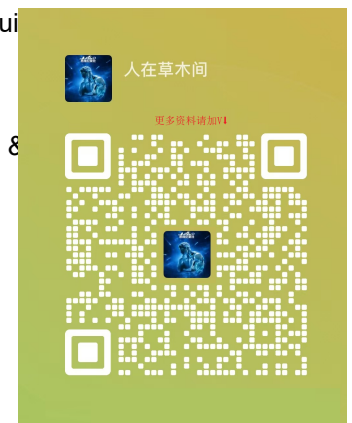


Specialized Robotics

- + Technology readily available; Less mechanically and computationally complex
- + Highly effective at simple, repetitive tasks that require limited dexterity
- Ineffective at tasks that require advanced dexterity and/or intelligence
- May require significant modifications to the workplace to accommodate

Humanoids

- + Capable of accomplishing complex tasks that require advanced dexterity and/or intelligence
- + Limited need to modify existing workplace or methods; Interchangeable with humans.
- Technology still in development; requires AI and mechanical engineering
- May require significant training / trial & error



What Can Humanoids Do?

Industrials



**Pick and place tasks
(material/box carrying)**



Logistic line sorting

Quality inspection/testing
(auto, battery, 3C production)
Plug-in assembly

Commercial/Entertainment



Unmanned retail/pharma store



Entertainment – dancing

Reception/shopping guidance
Patrol (police/property management)
Food/grocery delivery

Household



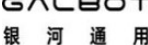
Companion robot



Helping on household chores

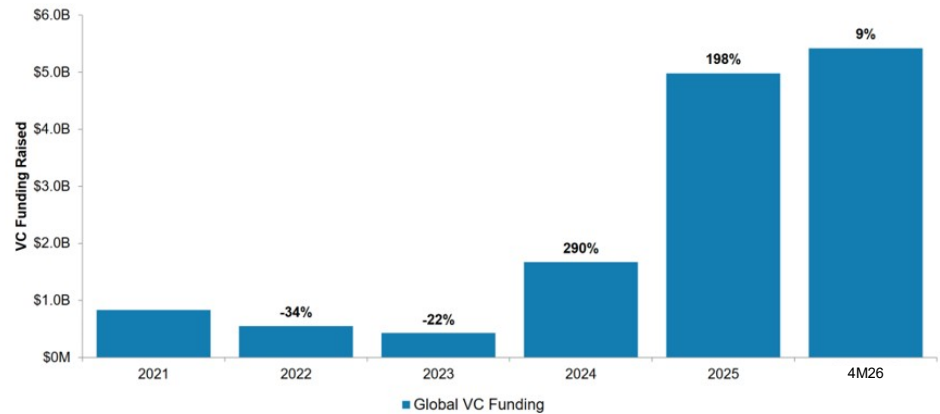
Elderly/assistive care
Health monitoring
Eldercare rehabilitation

Numerous Companies Across Diverse Backgrounds Have Announced Initiatives in the Humanoid Robotics Business

Robot makers and new startups				Technology companies			
							
							
							
							
Auto companies				Manufacturers/component suppliers			
							
							
							
							

Capital Markets Activity is Accelerating – From VC/PE to IPO Preparation

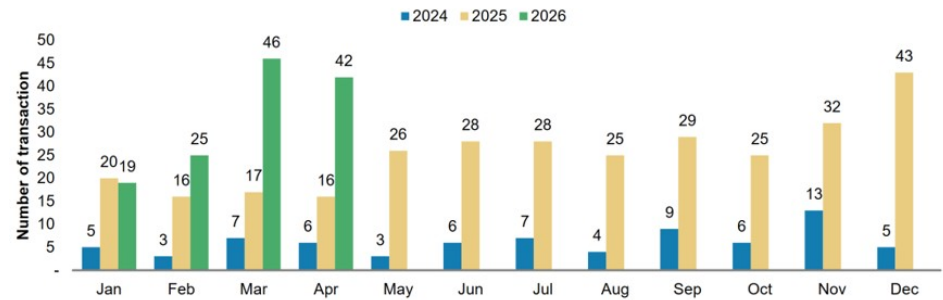
4M2026 global venture funding for humanoid robots has already exceeded the full-year total for 2025...



...resulting in multiple unicorns globally

Country	Date	Company	Valuation (US\$'bn)
US	Sep-25	Figure	39.0
	Feb-26	Apptronik	5.3
Germany	Jun-26	Neura Robotics	7.0
China	Jun-25	Unitree	1.9
	Feb-26	AI^2 Robotics	1.5
	Mar-26	Galbot	3.0
	Apr-26	EngineAI	1.5
	Apr-26	Spirit AI	1.5
	Apr-26	Galaxea	3.0

A similar VC/PE financing trend is happening in China



Companies that have filed for IPO to date

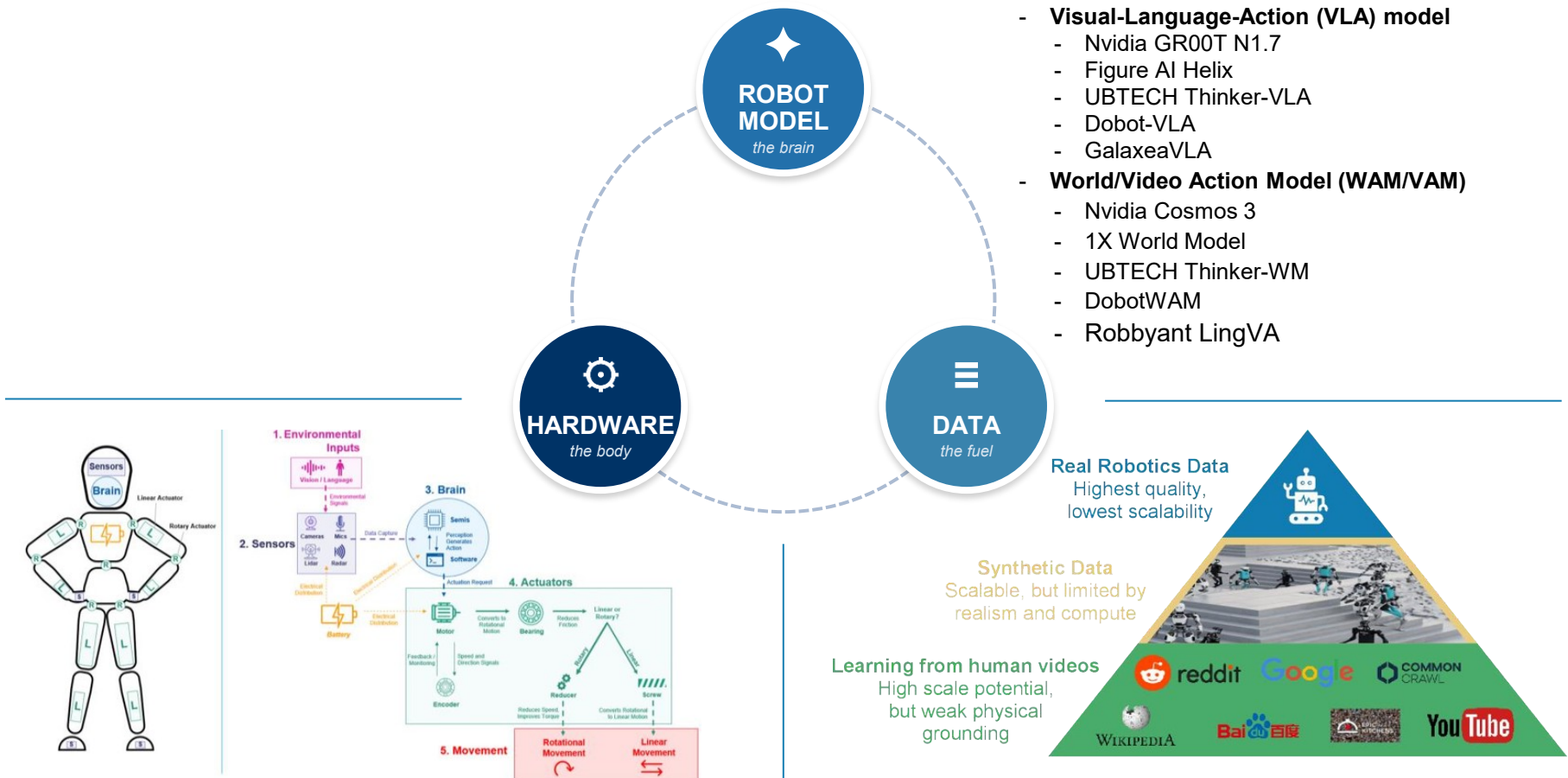


some transactions may not be captured.

What Makes a Humanoid?

For example:

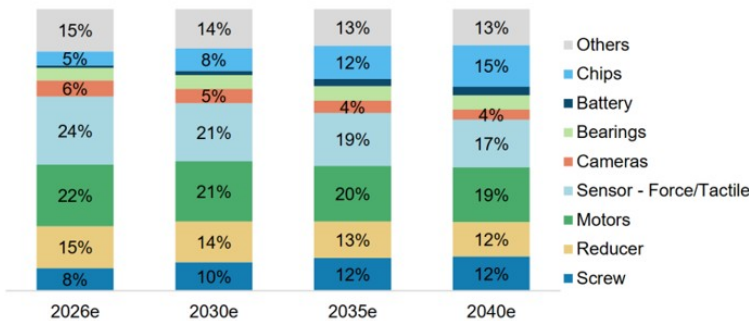
- **Visual-Language-Action (VLA) model**
 - Nvidia GR00T N1.7
 - Figure AI Helix
 - UBTECH Thinker-VLA
 - Dobot-VLA
 - GalaxeaVLA
- **World/Video Action Model (WAM/VAM)**
 - Nvidia Cosmos 3
 - 1X World Model
 - UBTECH Thinker-WM
 - DobotWAM
 - Robbyant LingVA



Hardware BoM Breakdown

Key components include screws, reducers, motors, and sensors

BoM Cost Breakdown

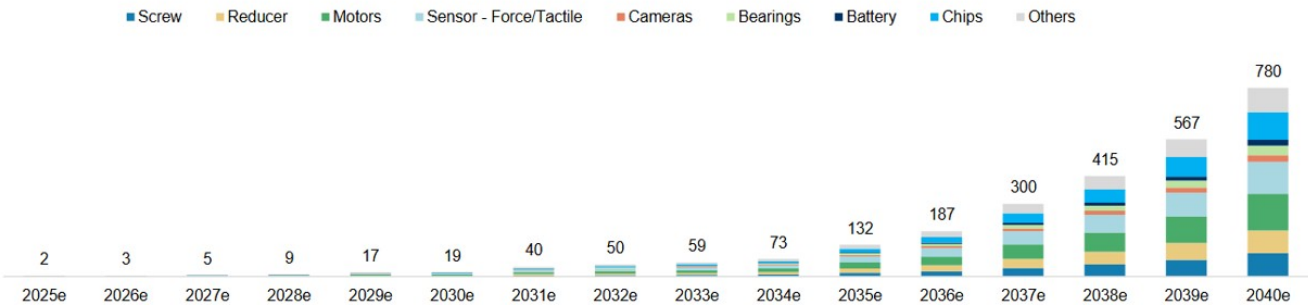


Combining demand from other robots, components are set for exponential growth



The component market is projected to have a global TAM of US\$780bn by 2040

Component TAM Market (US\$'bn)



market size.

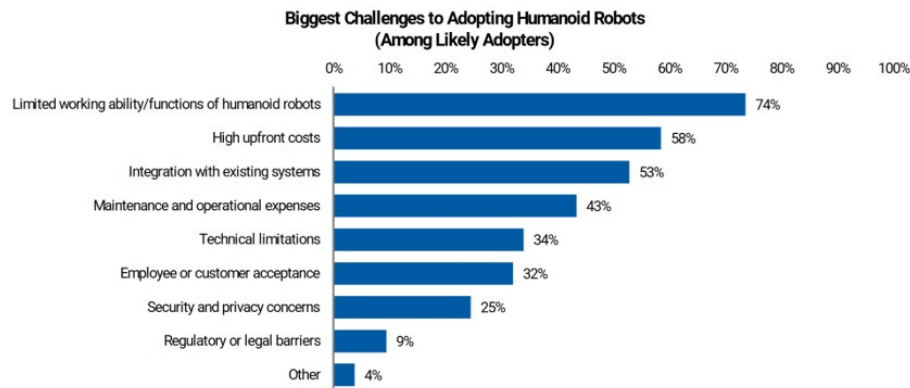
An Industry at an Early Stage

All three pillars of humanoid robotics have room for further improvement.

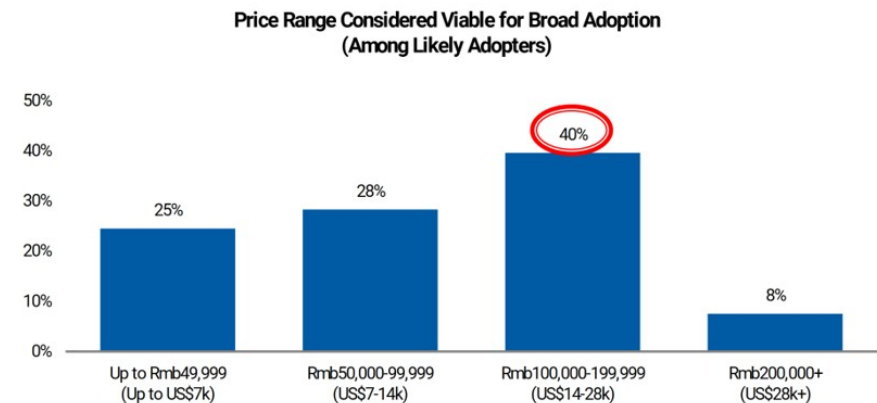
- **Model** – the path has not converged yet (VLA or World Model). The functionality and generalization capability are still limited. Commercial value to be proven (ROI and synergy with existing systems);
- **Data** – Rare and expensive, unlike LLM's internet-scale of text/video data.
- **Hardware** – Cost, performance (accuracy, efficiency, and reliability).

Furthermore, as volumes ramp up, considerations extend to data/cybersecurity, government regulation/standards, and geopolitical constraints across both hardware and software.

According to AlphaWise Survey, key adoption barriers are limited functionalities, costs, and integration with existing systems

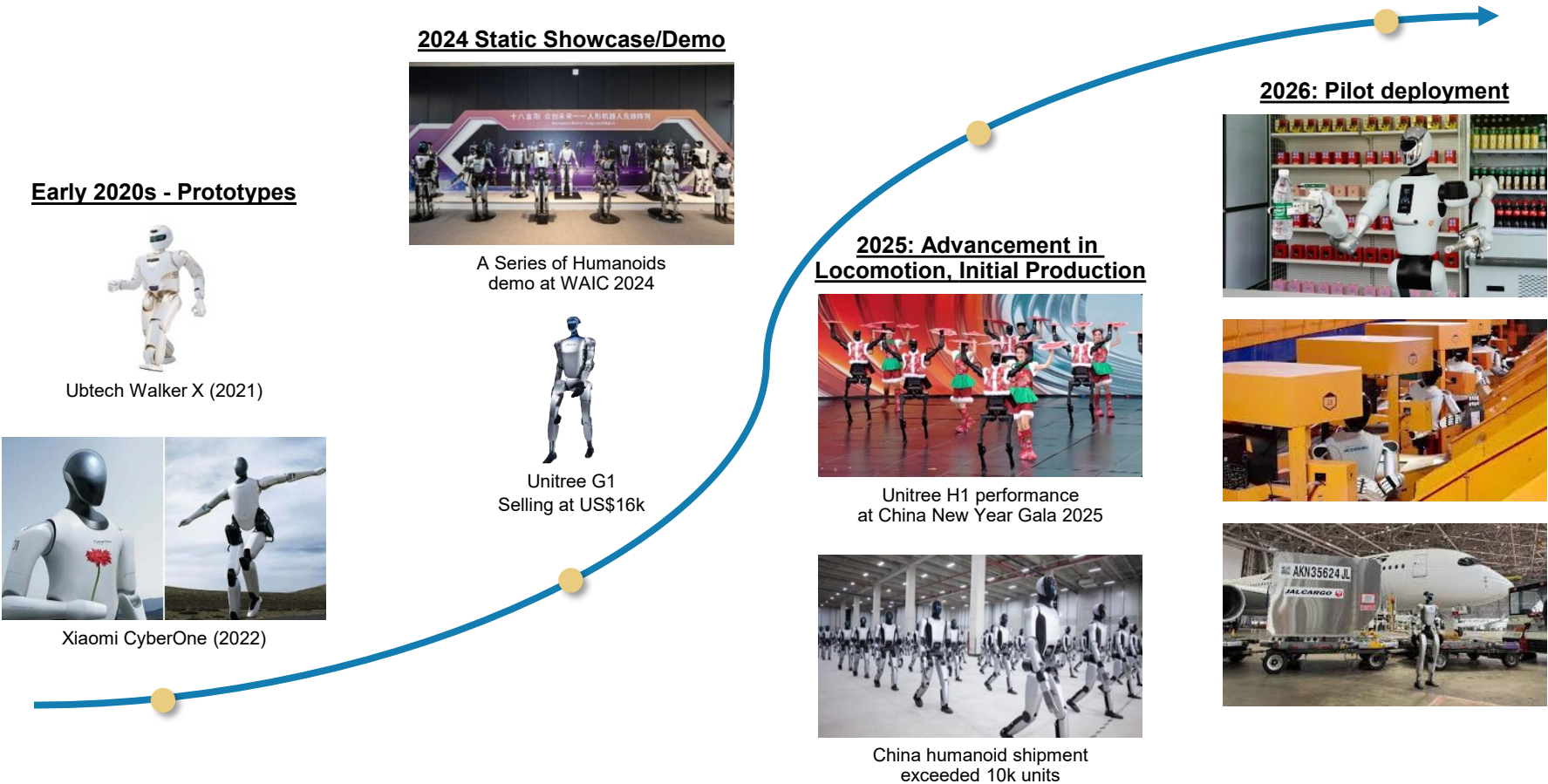


Companies expect Rmb100,000-199,999 (US\$14-28k) per unit of robots to be the sweet spot for broader adoption



[China Humanoids Survey: High Willingness to Adopt Meets Premature Products](#)

Zooming in to China: 2026, an Initial Small-scale Commercialization



More Adoption Examples

Spirit AI's humanoids in CATL battery packing line



Midea Robot Ultra, a wheel-based 6-arm humanoid, working in washing machine production line



Collaboration of humanoid robot, cobot arm, and quadruped robot



Galbot's unmanned retail kiosk



DOBOT's Atom humanoid operating a popcorn counter autonomously



Robotera's L7 working in SF Express sorting line

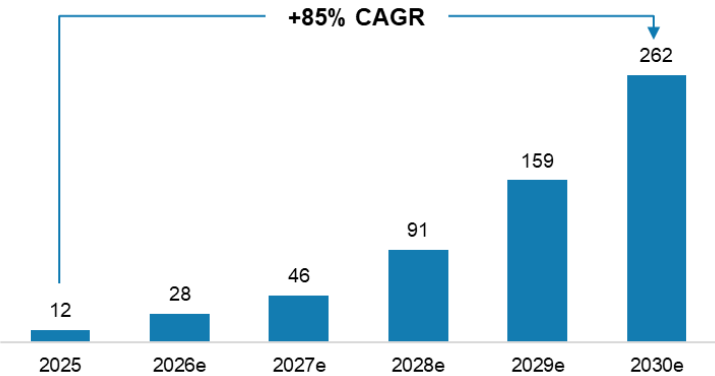


Humanoid Robots’ Shipment Volume by 2030 to be ~9x That in 2026

...supported by a series of government policy.

We currently forecast China’s humanoid shipments to rise at an 85% CAGR over 2025-30e...

China Humanoid Volume ('k unit)



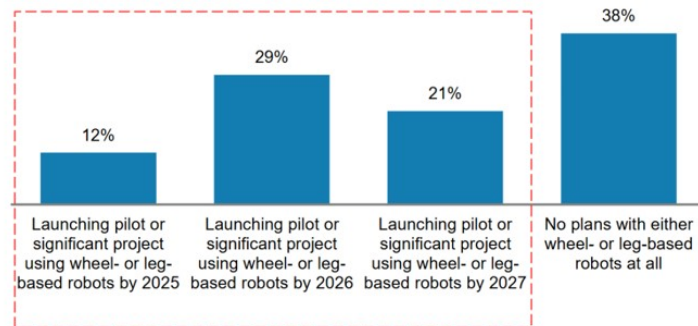
National Level Policy	
The 15th Five-Year Plan	Named robotics as a strategic emerging industry for the first time
Local Government Target	
Zhangjiang	Production to reach 20k units in 2027 , with core value chain reaching Rmb20bn
Shenzhen	To develop 10 core companies with annual revenue exceeding Rmb10bn, with total industry size reaching Rmb100bn by 2027
Shanghai	To scale the industry to Rmb50bn by 2027 , with subsidies of 30% for model R&D, 20% for adoption projects, and 50% for ecosystem projects
Beijing	To reach annual production capacity of 10k units by 2027 , with subsidies across the entire value chain
Hangzhou	To scale the embodied robotics industry above Rmb20bn and related industries above Rmb30bn by 2027

and use.

Strong Government Support and Enterprises' High Willingness to Adopt

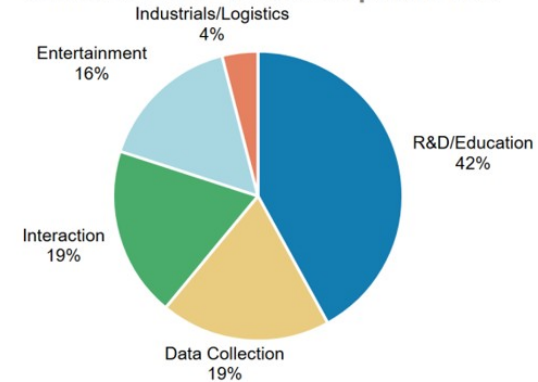
Our AlphaWise survey indicates a strong adoption willingness amid the industry's early stage, supporting the rapid use case verification process and initial adoption

% Share of Organizations Launching Projects with Wheel- or Leg-Based Humanoid Robots (Among Total Sample)



Government and SoE support is a big part of early commercialization

China 2025 Humanoid Shipment Mix



Date	Project	Value (Rmb'mn)
14-Jul-2025	China Mobile (Hangzhou)	124
20-Oct-2025	Guangxi Data Collection Center	126
5-Nov-2025	Sichuan Zigong Data Collection Center	159
25-Nov-2025	Guangxi Fangchenggang Data Collection Center	264
28-Nov-2025	Jiangxi Jiujiang Data Collection Center	143
22-Dec-2025	Huizhou Huiyang Data Collection Center	60
29-Dec-2025	Hohhot City Embodied Intelligence Tech Center	78
24-Apr-2026	State Grid	6,800

See the full report - [China Humanoids Survey: High Willingness to Adopt Meets Premature Products](#)

China is Leading in Robotics

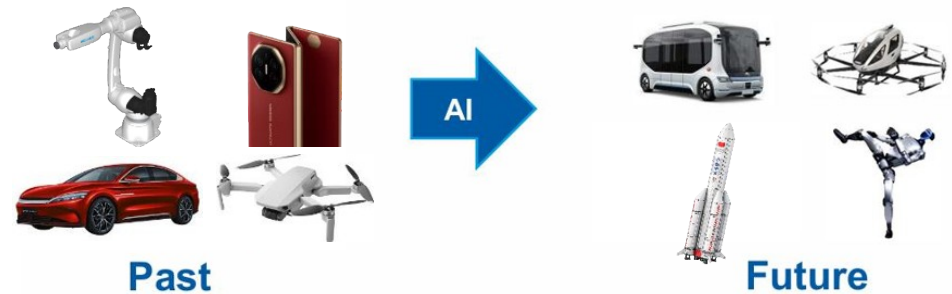
Government leadership

- Mentioned as “**A Strategic Emerging Sector**” in the 15th FYP.
- **Local governments are building their own “data early orders collection centre”**, providing accounting for 19% of total shipments in 2025.
- **Over Rmb187bn (~US\$27bn) government guidance funds** was established for robotics industry.
- **Established a National Standard** for humanoids.

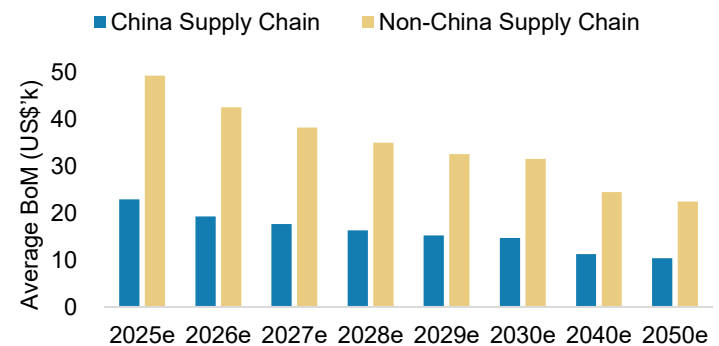
Ecosystem – Support from upstream to downstream

- **Supply chain:** Our checks indicate integrators use mostly local components, except for chips.
- **Rich data:** China’s diverse manufacturing scenarios provide fuel for robot model fast iteration.
- **Applications:**
 - Beyond government support, enterprises across various industries are also eager to adopt frontier technology, providing a testing environment for humanoids

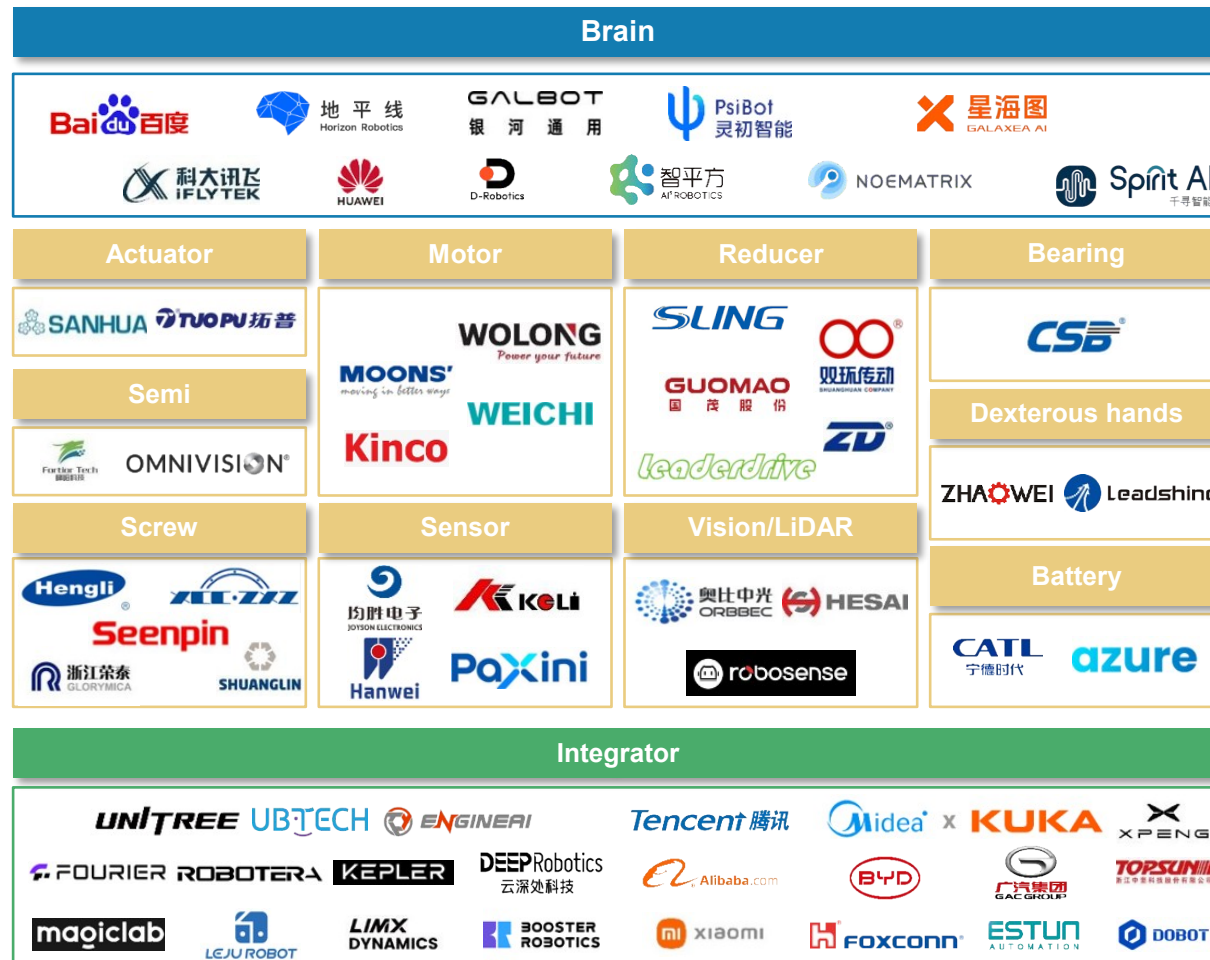
Manufacturing know-how is being converted to robots



Significant cost advantage vs. non-China supply chain



China Humanoid Value Chain List (Both Private And Public Companies)



Hyundai Motor Group: Leveraging Synergies to Build a Moat



Leveraging Synergies to Build a Moat

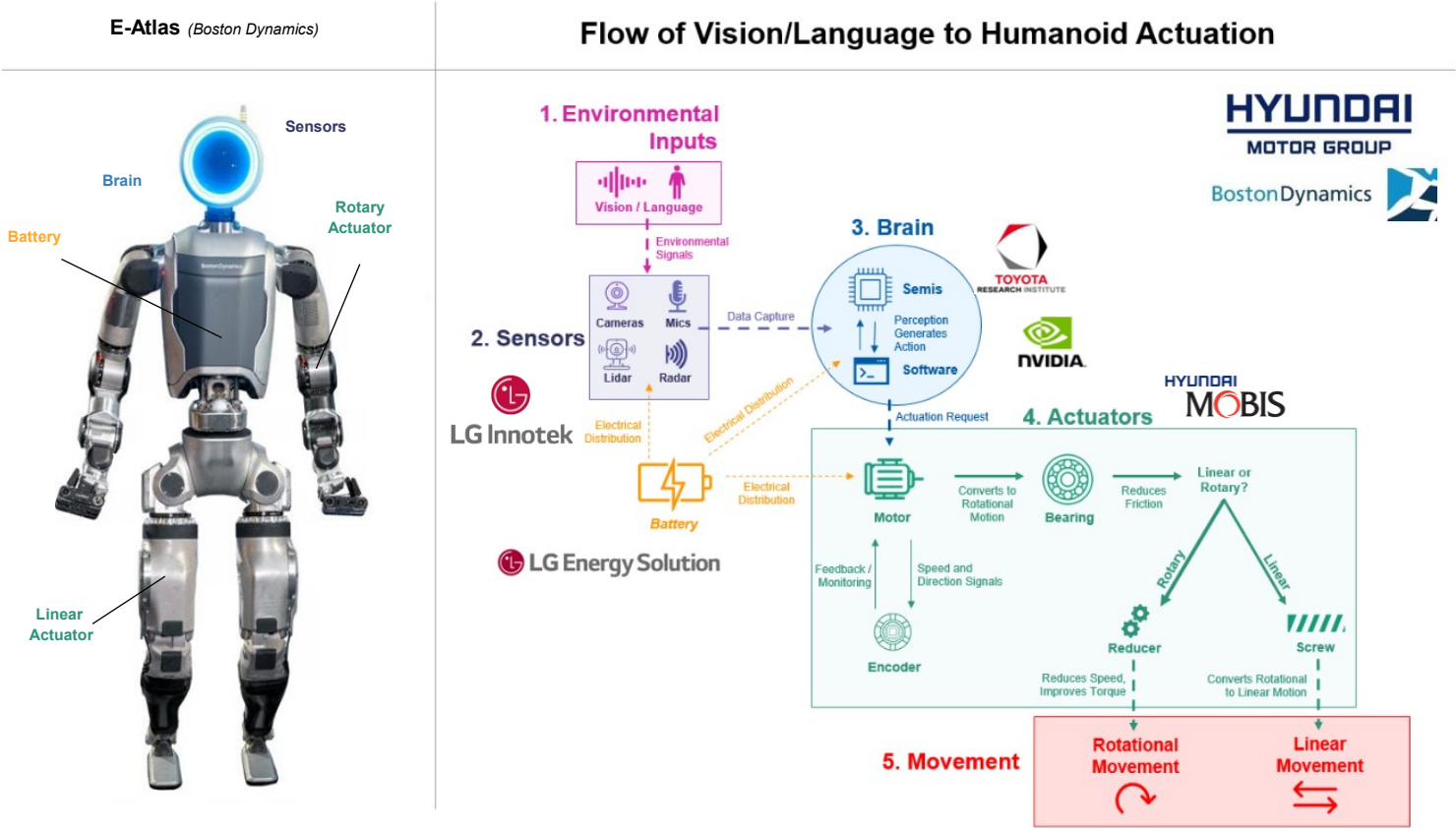
Strengths & Synergies

- Brand equity enhanced under Hyundai Motor Group
- Leverage of HMG's manufacturing expertise and component supply chain
- HMG's push for internal deployment across its global operations
- Potential for continued/additional financial support from the group

Weakness & Challenges

- More research-focused traditionally, with limited commercial deployment to date
- Lagging in certain AI and vision-based perception technologies
- Cost competitiveness versus global peers

Collaborating Across Each Layer of the Humanoid Value Chain



Humanoid Landscape in Korea

