RCSV RESEARCH

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UNITED STATES · THE 2026 ANNUAL REPORT

State of Robotics 2026: United States

Hardware, data, and foundation models — how the United States is leveraging software leadership, capital depth, and enterprise demand to compete in a Chinese-dominated hardware market.

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CONTENTS

Inside this report

00 Executive Summary Software supremacy meets hardware catch-up

01 The USA Market

02 National Champions

03 Deployment by Vertical

04 Strengths & Challenges

05 Capital & Investment

06 What to Watch in 2027

EXECUTIVE SUMMARY · USA

Software supremacy meets hardware catch-up

> The United States enters 2026 with the world's most advanced robot learning research, the deepest capital pool in embodied AI, and the largest enterprise demand base — but shipping roughly 1/36th the humanoid unit volume of China's leading OEMs.

The US robotics market reached **$11.4B in 2026**, up 29% year-over-year. Yet headline growth obscures a widening structural gap: in 2025, US humanoid leaders Figure AI, Agility Robotics, and Tesla each shipped roughly 150 units. Chinese competitors Unitree and AgiBot shipped 5,500 and 5,168 respectively. The United States leads the world in where robotics is *heading* — foundation models, OpenAI-style scaling laws applied to action, autonomous vehicles — while losing the race on where robotics is *shipping* today.

Three forces define the American position. First, **capital is unmatched**: Figure AI's $39B valuation, Apptronik's $520M February 2026 raise (led by Google and Mercedes-Benz), and cumulative humanoid funding past $9.8B all originate here. Second, **enterprise demand is activating**: BMW-Figure at Spartanburg, Mercedes-Apptronik for tote delivery, GXO-Agility's 100,000-tote milestone, Toyota-Digit at RAV4 — American factories are becoming the world's most visible humanoid proving grounds. Third, **hardware supply chain is the vulnerability**: per Goldman Sachs, China controls roughly 26% of the global actuator market versus ~5% for the US, and 60% of rare-earth production.

MARKET SIZE
$11.4B
US robotics market in 2026, up 29% YoY.

HUMANOID UNITS SHIPPED
~450
Combined 2025 shipments from Figure, Agility, and Tesla.

FIGURE AI VALUATION
$39B
Highest private humanoid valuation globally, Sept 2025.

APPTRONIK RAISE
$520M
Feb 2026 round at $5B valuation (Google, Mercedes-Benz).

ACTUATOR SHARE
~5%
US share of global actuator supply — a strategic vulnerability.

VC SHARE OF GLOBAL
52%
US share of global robotics venture capital in 2025.

THE AMERICAN PARADOX

The United States simultaneously holds the world's best robotics research, highest private valuations, and lowest unit shipment volumes among leading nations. Closing the gap requires **domestic actuator manufacturing**, **reshored teleoperation supply chains**, and **enterprise deployment pipelines** that convert Series-C hype into floor-hour throughput.

CHAPTER 01

The USA Market

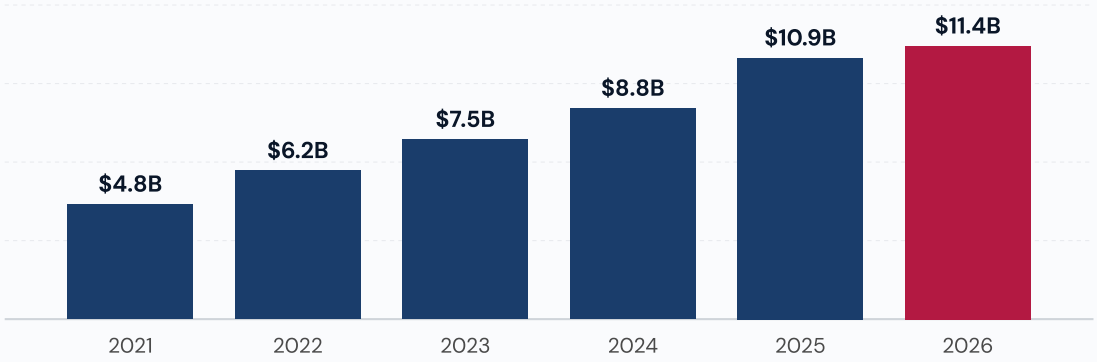
Software sophistication, foundation models, and frontier R&D — the architect of the modern robot learning stack.

Market size and trajectory

The United States robotics market reached **$11.4B in 2026**, growing **+29%** year-over-year. This trajectory reflects the confluence of labor-market dynamics, policy incentives, and foundation-model-enabled deployment velocity discussed throughout this report.

Exhibit 1.1 — USA Robotics Market Size, 2021–2026

USD billions · total addressable robotics spend (hardware + software + services)



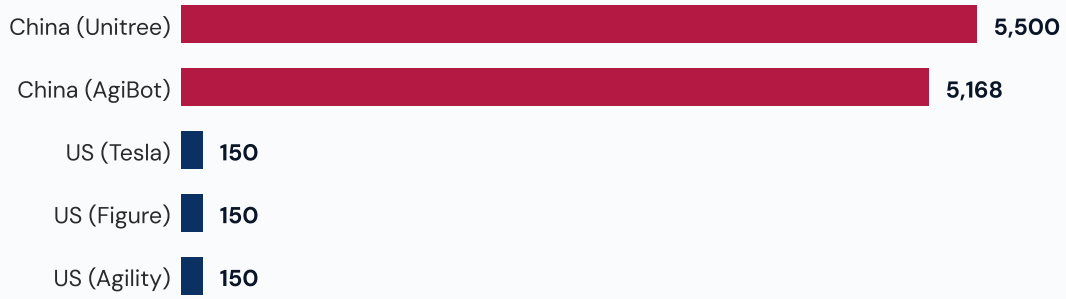
Source: RCSV Research, IFR, Statista, country associations · Estimates for 2026

Shipment landscape

Unit shipments tell a more revealing story than market dollars. Below, Robotics Center's view of the 2025 competitive landscape for humanoid and leading-category robotics in United States, shown alongside relevant global comparisons where instructive.

Exhibit 1.2 — 2025 Shipment Comparison

Units shipped or deployed in 2025 · leading category players



Source: RCSV Research, company disclosures, Omdia, Counterpoint

CHAPTER 02

National Champions

Every robotics market has its flagship firms — the companies whose trajectory shapes the country's narrative and around which an ecosystem of suppliers, talent, and capital clusters.

Figure AI

Menlo Park, CA

Figure 03 launched October 2025 as a general-purpose home humanoid. BMW Spartanburg pilot — Figure 02 inserting sheet metal parts. BotQ factory targeting 12,000 units/year. $39B valuation, Sept 2025.

Agility Robotics

Salem, OR

Digit is the only humanoid currently generating revenue from productive commercial work — 100,000+ totes moved at GXO, contracts with Toyota, Mercado Libre. RoboFab capacity: 10,000 units/year. $641M raised.

Apptronik

Austin, TX

Apollo targeting sub-$50K pricing. Mercedes-Benz intralogistics pilots. Google DeepMind partnership for AI. Jabil contract manufacturing. $520M Feb 2026 round.

Tesla (Optimus)

Fremont, CA

Converting Fremont factory to Optimus manufacturing. Cortex 2.0 supercomputer at Giga Texas (250 MW). Shipped ~150 units in 2025, targeting 100,000 by 2026 (ambitious). Vertical integration at an extreme degree.

Boston Dynamics

Waltham, MA

Atlas redesigned for factory environments. Hyundai partnership targeting 30,000 units/year by 2028. Spot quadruped remains the industry workhorse for inspection.

1X Technologies

(Norwegian HQ, US-ops)

NEO opened consumer preorders October 2025 — the first dedicated home humanoid with real pricing. OpenAI-backed, acquired Kind Humanoid in Jan 2025.

CHAPTER 03

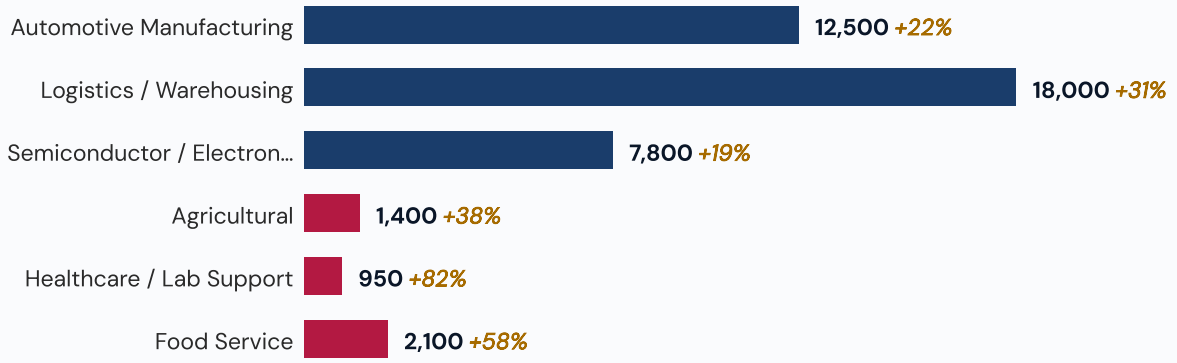
Deployment by Vertical

Where robots are actually working in United States today — and where growth is accelerating fastest. Robotics Center's estimates reflect operational stock, not cumulative installations.

VERTICAL	DEPLOYED UNITS (2025E)	YOY GROWTH	LEADING FORM FACTOR
Automotive Manufacturing	12,500	+22%	Precision arm + humanoid pilot
Logistics / Warehousing	18,000	+31%	Mobile manipulator
Semiconductor / Electronics	7,800	+19%	Precision 6-DoF arm
Agricultural	1,400	**+38%**	Outdoor mobile arm
Healthcare / Lab Support	950	**+82%**	Mobile base + arm
Food Service	2,100	**+58%**	Fixed arm / humanoid torso

Exhibit 3.1 — Deployed Units by Vertical, 2025 Estimate

Units deployed in commercial / production environments · highlighted bars exceed 35% YoY growth



Source: RCSV Research, IFR, industry associations

CHAPTER 04

Strengths & Challenges

A candid assessment of what United States does best in global robotics — and where structural vulnerabilities require attention.

Strengths

- **Research leadership** — CMU, Stanford, MIT, Berkeley produce disproportionate share of state-of-the-art robot learning papers. Open-source releases (OpenVLA, Pi0) originate here.
- **Capital depth** — Figure at $39B, Apptronik at $5B, Skild at $4B — private valuations that no other country approaches. Strategic capital from Google, Microsoft, NVIDIA is ubiquitous.
- **Enterprise demand** — Fortune 500 manufacturers running multi-site pilots create visible commercial gravity. BMW, Ford, GM, Amazon, Walmart, GXO all have live programs.
- **Compute infrastructure** — Tesla's Cortex 2.0 (250 MW), NVIDIA-scale GPU supply, and hyperscaler partnerships give US teams a training-compute advantage without international peer.

Challenges

- **Actuator dependency** — ~5% of global actuator supply. Series elastic actuators, quasi-direct-drive motors, and precision reducers overwhelmingly sourced from Japan, Germany, and China.
- **Manufacturing velocity** — Figure's BotQ targets 12K/year by 2026. Unitree already ships at that rate. Iteration speed from prototype to production is 3–5× slower than Chinese peers.
- **Rare-earth exposure** — China controls ~60% of global rare-earth production. Neodymium for motors, samarium-cobalt for high-temp applications — alternative sourcing is nascent.
- **Data collection cost** — $65–$120/hour for US-based teleoperators with domain expertise. Competitive with domestic labor but 3–5× higher than Indian or Filipino operator markets.

CHAPTER 05

Capital & Investment

The flow of venture capital, strategic corporate investment, and public funding that shapes robotics competitiveness in United States.

The US hosts the world's most concentrated humanoid venture market. Of the $9.4B deployed globally in 2025, 52% ($4.9B) went to US-headquartered companies. Unique to the US is the **strategic corporate investor**: Google, Microsoft, NVIDIA, Mercedes-Benz, and BMW have taken direct equity positions alongside traditional VCs, and Qatar Investment Authority anchored Apptronik's Feb 2026 round.

> **The Data Moat Thesis in USA Context**
>
> Globally, investors increasingly cite proprietary data collection infrastructure as the primary defensibility argument in robotics. The question for United States specifically: do its robotics companies generate **deployment-specific data** at a rate that compounds faster than foundation model improvements erode it? This is the question that 2026–2027 will answer.

CHAPTER 06

What to Watch in 2027

Four themes Robotics Center's research team believes will define United States's robotics trajectory over the next 18 months.

01 · Foundation model lead extends

VLA architectures remain US-originated and US-dominated. Expect OpenAI, Google DeepMind, and NVIDIA to ship robotics-specific foundation models in 2026–2027 that compress the data advantage currently held by Chinese operators.

02 · Manufacturing reshore begins

CHIPS Act and Inflation Reduction Act precedents suggest robotics-specific industrial policy is a 2027 question, not 2026. Expect state-level pilots (Texas, Michigan, Arizona) before federal coordination.

03 · Enterprise pilots convert

2026 is the year 'pilot' becomes 'contract.' Agility's Toyota deal is the template; expect 5–10 similar conversions at BMW, Mercedes, Amazon, and GXO by end of year.

04 · Consumer humanoid arrives

1X NEO and Figure 03 represent the first credible consumer-humanoid attempts with real pricing. 2027 will clarify whether this market exists or whether premature consumer ambition burns capital.

> RCSV PERSPECTIVE ON USA
>
> United States's robotics trajectory in 2026–2027 will be defined less by hardware breakthroughs than by **whether the country can convert its distinctive advantages into repeatable deployment outcomes** — at the speed that Chinese and US competitors are setting. The window for structural positioning is narrowing.