RCSV RESEARCH

Robotics Center · Annual Report Series

THE 2026 ANNUAL REPORT

State of Robotics 2026

Hardware, data, and foundation models — a definitive view of the global robotics industry across twelve verticals and four regions.

PUBLISHED
March 2026

AUTHOR
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FORMAT
Free · Web & PDF

roboticscenter.ai/state-of-robotics-2026

CONTENTS

Inside this report

00 Executive Summary

01 The Hardware Landscape arms, humanoids, compute

02 Data Collection at Scale cost curves, operator markets

03 The Rise of Foundation Models VLAs, IL, simulation

04 Deployment by Vertical logistics, food, fabs, health

4B Special Focus — China the strategic opportunity

05 Investment & M&A capital flows, valuations

06 What to Watch in 2027 six themes shaping next year

EXECUTIVE SUMMARY

An industry moves from hardware to infrastructure

> In 2026, the robotics industry is no longer defined by the novelty of a new form factor. It is defined by whether an operator can collect data, train a policy, and redeploy it — repeatedly, economically, at scale.

The global robotics market reached **$38B in 2026**, a 34% year-over-year increase and the fastest growth rate the sector has seen in a decade. But headline growth alone understates the structural shifts underneath: hardware is being commoditized faster than the software and data layer; foundation models have crossed from research curiosity to production infrastructure; and the economics of teleoperation data collection have fallen to a level where enterprise pilots are financially viable for the first time.

Three forces reorganize the stack this year. First, **hardware commoditization** — fourteen manufacturers now produce sub-$10K robotic arms, and twelve commercial humanoid platforms are available for purchase or lease. Second, **data economics have inverted**: what cost $340/hour to collect in 2024 now costs $118/hour, putting a $50K–$150K pilot data budget within reach for most enterprises. Third, **Vision-Language-Action (VLA) models** — absent from production 18 months ago — now back 40% of new deployments.

MARKET SIZE
$38B
Global robotics market in 2026, up 34% YoY — fastest growth in a decade.

VLA ADOPTION
3×
Vision-Language-Action adoption tripled, now in 40% of new deployments.

DATA COST
-60%
Teleoperation data cost/hour fell 60% versus 2024 baseline.

HUMANOID PLATFORMS
12
Commercial humanoids for purchase or lease — up from 3 in 2024.

MARKET CONCENTRATION
58%
Japan and US combined share of global deployments by unit volume.

TRAINING SHIFT
IL>RL
Imitation learning overtook RL as the primary manipulation training method.

RCSV PERSPECTIVE

The companies that will look back at 2026 as a pivotal year are those that used it to build **repeatable data collection workflows**, **rigorous policy evaluation systems**, and **genuine vertical depth** — not the ones that chased the latest hardware launch. The defensibility layer has moved up-stack.

CHAPTER 01

The Hardware Landscape

The robotics hardware market entered 2026 in a state of productive fragmentation. Manufacturers have converged on a set of design principles that prioritize *data friendliness* over raw capability — backdrivable joints, onboard IMU stacks, and low-latency tethering built from the ground up for teleoperation.

Arm proliferation and commoditization

Six-DoF and seven-DoF robotic arms priced under $10,000 are now available from at least fourteen manufacturers across five countries. The OpenArm platform — originally a research derivative of ACT — has become the de facto baseline for academic and early-enterprise pilots, with more than **2,400 units shipped in 2025** alone. Its open-source URDF and ROS 2 compatibility mean researchers can port policies trained on one arm to another in hours rather than weeks.

Chinese manufacturers account for **eight of the fourteen** sub-$10K arms on the market. Lead times from Chinese OEMs have compressed from 14 weeks to as few as 3 weeks for standard configurations, applying significant price pressure on US and European suppliers. In response, US suppliers have competed on support density, software integration, and certification (CE, UL) rather than component cost.

> KEY INSIGHT
>
> The arm hardware market is being commoditized faster than the software and data market. Companies that built competitive advantage on hardware exclusivity are repositioning toward **training pipelines, policy libraries, and support contracts**.

Humanoids cross the commercial threshold

Twelve commercial humanoid platforms became available for purchase or structured lease in 2026. This is not merely a headline number — it represents a genuine market formation event. In 2024, only three platforms had reached that threshold; in early 2025, five. The jump to twelve reflects both the maturation of actuation technology (series elastic and quasi-direct-drive have both proven manufacturable at scale) and the capital deployed by strategic investors seeking to seed the data collection layer.

Of the twelve platforms, four are bipedal full-humanoids, three are upper-body-only torsos, and five are humanoid-adjacent mobile bases with two or more dexterous arms. Average selling prices range from **$28,000 for the lightest torso-only systems to $245,000 for full bipeds** with onboard compute. Several manufacturers are offering lease-first programs at $3,500–$8,000/month, recognizing that enterprise buyers are not yet ready to commit to purchase before demonstrating a workflow.

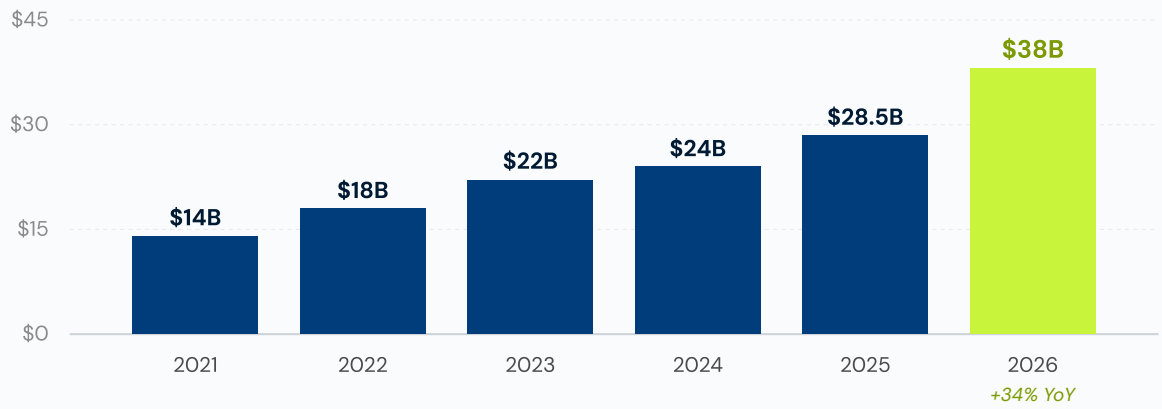
4	3	5	$3.5K
BIPEDAL FULL HUMANOIDS	UPPER-BODY TORSO SYSTEMS	HUMANOID-ADJACENT MOBILE	MONTHLY LEASE, ENTRY TIER

Sensor and compute integration

The integration of depth cameras, wrist-mounted force-torque sensors, and onboard compute into the robot itself — rather than hanging off a host PC — was a consistent theme across 2025 hardware launches. NVIDIA Jetson Orin and Thor modules now ship pre-integrated in at least seven commercial platforms. (See our robot comparison tool for a side-by-side spec breakdown.) This shift shortens the "hardware to first inference" timeline from days to under two hours for developers already familiar with standard robot learning stacks.

Exhibit 1.1 — Global Robotics Market Size, 2021–2026

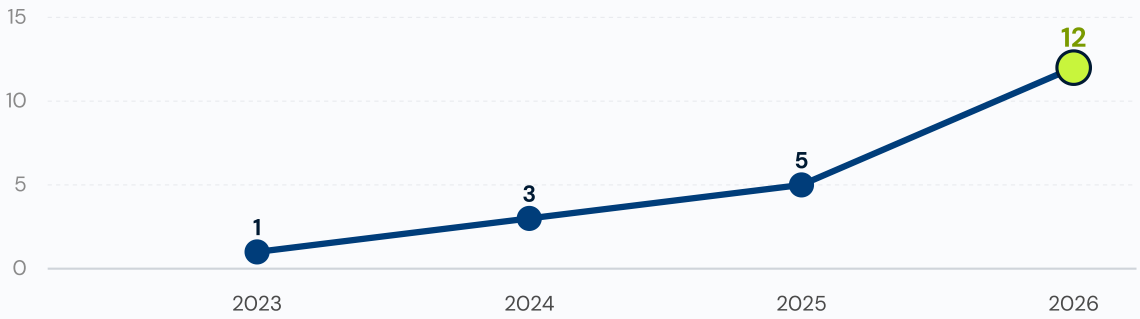
USD billions



Source: RCSV Research, IFR, PitchBook · Estimates where 2026 exceeds reporting period

Exhibit 1.2 — Commercial Humanoid Platforms Available

Platforms available for purchase or structured lease, end-of-year



Source: RCSV Research, manufacturer surveys

Form factor economics

FORM FACTOR	UNITS SHIPPED (2025E)	PRICE RANGE (USD)	PRIMARY USE CASE
6-DoF Arm (<$10K)	18,400	$2,800 – $9,500	Research, data collection
Bimanual Arm System	3,100	$14,000 – $38,000	Manipulation research, pilots
Mobile Manipulator	2,200	$28,000 – $95,000	Logistics, inspection
Full Humanoid	410	$85,000 – $245,000	Factory pilots, media / demo

CHAPTER 02

Data Collection at Scale

If hardware was the story of 2024, data infrastructure is the defining story of 2026. The underlying economics of robot training data have shifted more than any other segment of the stack.

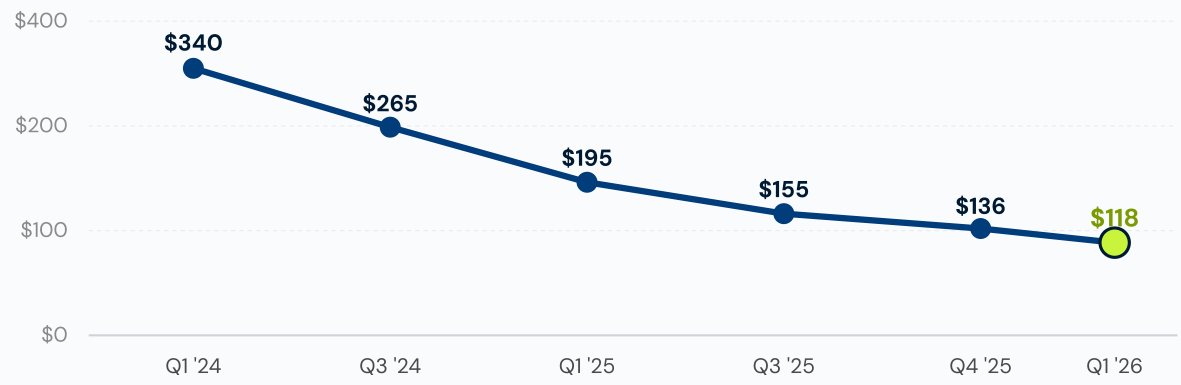
The average cost per hour of high-quality teleoperation data — captured, labeled, and packaged into a standardized dataset format — fell from **approximately $340/hour in early 2024 to $136/hour by Q4 2025**. The RCSV benchmark dataset puts the fully loaded cost at $118/hour as of March 2026 for a standard pick-and-place task with wrist camera and external RGBD.

What drove the cost drop

Three forces drove this compression in parallel. First, teleoperation hardware itself became cheaper and more ergonomic — the emergence of leader-follower systems priced under $2,000 made it economically viable to deploy teleoperators at scale without bespoke hardware per site. Second, replay-and-annotation pipelines matured dramatically; tools like DROID, LeRobot, and commercial equivalents can now ingest raw operator streams and produce RLDS-formatted episodes with semi-automated quality scoring, cutting annotation labor by **40–60%** compared to 2024 workflows. Third, the community standardized around a small set of episode formats (RLDS, HDF5 with LeRobot schema), reducing the integration tax for each new hardware platform.

Exhibit 2.1 — Teleoperation Data Collection Cost per Hour

Fully-loaded USD per hour of labeled, RLDS-formatted manipulation data



Source: RCSV Research, operator marketplace pricing data

THE SCALE THRESHOLD

Our analysis suggests most manipulation tasks require **300 to 1,200 high-quality demonstrations** to train a policy that generalizes across 80% of in-distribution variations. This puts a **$50K–$150K data budget** within reach for enterprise pilots — a threshold that was out of reach for most organizations two years ago. Learn about Robotics Center's data collection services.

Teleoperation operator markets

A secondary market for trained teleoperation operators has materialized. Marketplaces now connect enterprises that need data collection coverage with operators certified on specific hardware platforms. Rates range from **$22–$55/hour** for operators in India, the Philippines, and Eastern Europe, to **$65–$120/hour** for US-based operators with domain expertise (surgical simulation, food service, laboratory settings). Leading platforms require 8–40 hours of platform certification before operators are eligible for production tasks.

Dataset quality and contamination

The commoditization of data collection has introduced new quality challenges. As collection costs fall and supply increases, buyers face a growing problem distinguishing high-quality datasets from noisy, auto-labeled, or contaminated collections. Reproducibility failures — where a published policy does not generalize to the buyer's hardware — have driven interest in standardized dataset quality scores. The Open-X Embodiment quality rubric, extended by RCSV and several academic partners, has become the most widely cited framework, covering trajectory smoothness, demonstration diversity, and labeling confidence.

Proprietary vs. open data

The tension between open datasets and proprietary curation is now acute. The Open-X ecosystem has grown to **over 1 million annotated robot demonstrations** across 22 robot types. But enterprise customers increasingly recognize that deployment-specific data — collected on their hardware, in their environments, with their task distribution — is a durable competitive asset. The smart money in 2026 is building proprietary datasets that *complement*, rather than substitute for, open foundation datasets.

CHAPTER 03

The Rise of Foundation Models

Vision-Language-Action models represent the most significant architectural shift in robot learning since the emergence of end-to-end imitation learning in 2022 — and they crossed from research artifact to production infrastructure this year.

VLAs integrate vision encoders (typically ViT variants), language models (usually in the 7B–13B parameter range), and action decoders into a single end-to-end trainable stack. The key capability unlocked is **natural-language task specification**: an operator can describe a task in plain text, and the model grounds that instruction directly into action sequences without task-specific engineering.

From research curiosity to production infrastructure

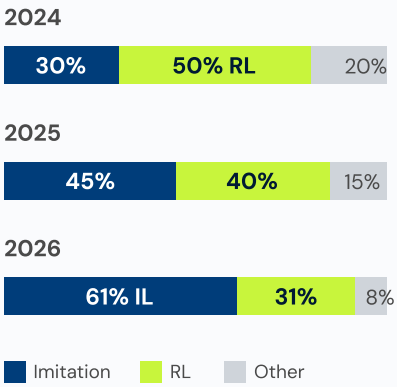
In 2024, VLAs were primarily research artifacts — impressive in demos, brittle in deployment. By Q2 2025, three major robotics software companies had shipped VLA-based products to enterprise customers. By Q1 2026, at least **eleven commercial deployments** are using VLA models as the primary policy backbone. The turning point was inference optimization: quantized VLA models now run at 10–25Hz on consumer-grade GPUs, making them compatible with real-time manipulation loops.

The leading open-weight VLA model families — OpenVLA, Pi0, and RDT-1B — have each exceeded 1,000 citations in 12 months, a measure of how rapidly the research community has built on these foundations. Fine-tuning a base VLA on 200–500 task-specific demonstrations now consistently outperforms training a task-specific policy from scratch on 1,000+ demonstrations, a result that changes the economic calculus for enterprise deployment.

> THE IMITATION LEARNING INFLECTION
>
> For the first time in Robotics Center's annual survey, more respondents (**61%**) cited imitation learning as their primary training method than reinforcement learning (**31%**). Two years ago, that ratio was reversed. This is not a rejection of RL — it is an acknowledgment that **IL is now the more practical on-ramp** for most real-world tasks.

Exhibit 3.1 — Training Method Adoption

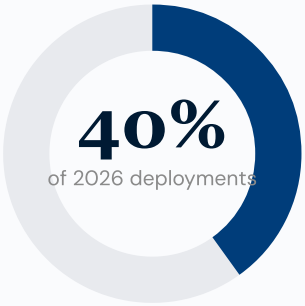
% primary method · RCSV survey n=1,240



RCSV Annual Developer Survey

Exhibit 3.2 — VLA Adoption in New Deployments

% of new deployments using a VLA backbone



2024: **<5%** 2025: **14%** **3x YoY**

RCSV enterprise deployment tracker

Simulation and synthetic data

Physics simulation — long the domain of RL researchers — has become relevant to IL practitioners through two channels. First, synthetic data augmentation allows teams to supplement 200 real demonstrations with thousands of simulated variants, improving generalization without proportionally increasing real-world collection costs. Second, sim-to-real transfer for VLAs has improved dramatically as photorealistic rendering (via NVIDIA Cosmos and Isaac Lab) has narrowed the visual domain gap. Teams at CMU and Stanford independently reported 2026 results where VLAs trained on **40% synthetic data matched policies trained on 100% real data** on held-out tasks.

Model size and efficiency

Contrary to the scaling narrative in language modeling, the empirical consensus for robotics foundation models in 2026 is that **efficiency matters more than scale beyond ~7B parameters**. A well-curated 500-demo fine-tune of a 7B VLA outperforms a poorly curated fine-tune of a 70B model on most manipulation benchmarks. This has driven significant interest in dataset curation tools, episode quality scoring, and demonstration filtering — the "data flywheel" layer of the stack.

CHAPTER 04

Deployment by Vertical

Three verticals — logistics, food service, and semiconductor manufacturing — account for 64% of all commercial robot deployments by unit volume. But the most interesting story is in the long tail, where healthcare, retail, and agriculture are crossing 1,000 units for the first time.

Logistics and warehousing

Logistics remains the single largest deployment vertical, driven by continued e-commerce growth and persistent labor pressure in fulfillment centers. The dominant form factor is the mobile manipulator — a wheeled base with one or two arms capable of picking and placing in semi-structured environments. Key 2026 developments: the emergence of **heterogeneous fleets** (orchestrated combinations of AMRs, arms, and humanoids), and a transition from fixed-task to flexible-task deployments enabled by VLA models.

Food service — the surprise vertical of 2026

More than **340 QSR locations** across the US, Japan, and South Korea now operate at least one robot in a customer-facing or kitchen-facing capacity. The economics are compelling: a burger-flipping or fry-dispensing robot amortizes over 3–4 years at labor costs north of $18/hour. The primary technical challenge — handling variability of food items and hygiene requirements of commercial kitchens — has been substantially addressed by VLA models trained on kitchen-specific datasets.

Semiconductor and electronics manufacturing

High-precision manufacturing has been robot-dense for decades, but 2026 marks a shift from fixed industrial automation to **flexible, reprogrammable manipulation systems**. Semiconductor fab operators report that the ability to retask a robot arm in hours (versus weeks for traditional reprogramming) is unlocking entirely new use cases in wafer handling, PCB inspection, and component placement. The demand for ultra-high-precision force control has driven a parallel hardware market in sub-Newton torque sensing and sub-millimeter position accuracy.

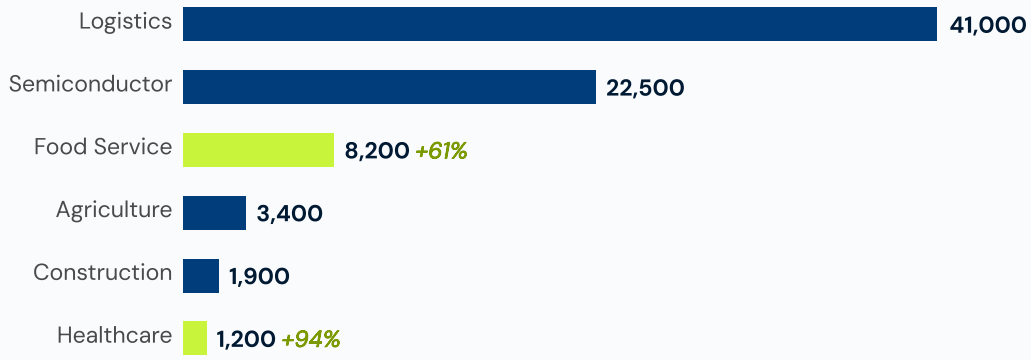
Healthcare and laboratory support

Healthcare-adjacent robotics — covering sample transport, pharmacy dispensing, and instrument cleaning — crossed 1,200 deployed units in 2025 and is projected to reach **3,500 by end of 2026**. The regulatory pathway for non-patient-contact automation has proven more tractable than many expected, with FDA and EU MDR guidance updated in 2025 to provide clearer frameworks for software-controlled manipulation devices.

VERTICAL	DEPLOYED UNITS (2025E)	YOY GROWTH	LEADING FORM FACTOR
Logistics / Warehousing	41,000	+28%	Mobile Manipulator
Semiconductor / Electronics	22,500	+18%	Precision 6-DoF Arm
Food Service	8,200	**+61%**	Fixed Arm / Humanoid Torso
Agricultural Harvesting	3,400	+47%	Outdoor Mobile Arm
Construction / Inspection	1,900	+33%	Quadruped / Drone Hybrid
Healthcare / Lab Support	1,200	**+94%**	Mobile Base + Arm

Exhibit 4.1 — Deployed Units by Vertical, 2025 Estimate

Units deployed, commercial / production environments only



Source: RCSV Research, IFR · lime bars indicate fastest-growing verticals

SPECIAL FOCUS · CHAPTER 4B

China: The World's Robotics Manufacturing Engine

Why China is not merely a participant in the global robotics industry — it is the gravitational center — and what that means for partnerships, sourcing, and data collection strategy.

According to the IFR, China accounted for more than **70% of global industrial robot installations in 2025**, a share that has grown steadily from 52% in 2020. No other country comes close. This dominance in deployment volume is now being compounded by an equally significant advantage in hardware manufacturing, humanoid development, and national policy coordination.

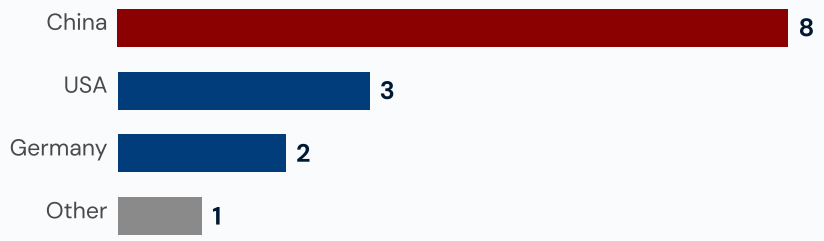
The sub-$10K arm manufacturing powerhouse

Of the fourteen manufacturers globally producing robotic arms priced under $10,000, **eight are Chinese companies**: Unitree, AgileX, Elephant Robotics, LEBAI, Flexiv, WeLab (AgileX's education division), BrainCo, and several emerging Shenzhen-based OEMs. These companies benefit from the same hardware supply chain density that made Shenzhen the world's consumer electronics capital. A prototype that takes 12 weeks to produce in the US or Germany can be turned around in **10–14 days in Shenzhen**, at a fraction of the cost.

This manufacturing advantage extends beyond arms. Chinese companies are producing commodity-grade leader-follower teleoperation systems for under $2,000 — hardware that enables the large-scale data collection campaigns that VLA models require. The implications for the global data collection cost curve are significant: as Chinese hardware drives collection costs down, the barrier to entry for training competitive manipulation policies falls with it.

Exhibit 4B.1 — Sub-$10K Robot Arm Manufacturers by Country

Of 14 global manufacturers producing sub-$10K six- and seven-DoF arms



Source: RCSV Research, manufacturer surveys

The humanoid race

China's humanoid ambitions are backed by explicit national policy. The 2025 Humanoid Robot Action Plan — issued jointly by MIIT and five other ministries — set a national target of **100,000 humanoid robots deployed by 2027**, a figure that would exceed the rest of the world's combined humanoid installed base by a wide margin. Key programs:

- **Tiangong** (Beijing Humanoid Robot Innovation Center) — a full-size bipedal humanoid with 42 degrees of freedom, demonstrating walking, manipulation, and stair climbing. A consortium effort backed by municipal and central government funding.
- **AgiBot** — a Shanghai-based company developing humanoid robots for manufacturing and logistics; among the first Chinese humanoid companies to begin structured enterprise pilot programs.
- **Unitree H1 / G1** — Unitree's humanoid lineup has attracted global attention for aggressive pricing and rapid iteration cycles, benefiting from Unitree's established quadruped manufacturing base.

> **The Competitive Dynamic**
>
> US humanoid companies (Figure, Agility, Apptronik) compete on **software sophistication and enterprise integration**. Chinese companies compete on **manufacturing cost and iteration speed**. Both approaches have merit, and the market is large enough that regional champions will likely emerge on both sides.

Manufacturing demand: BYD, CATL, and Foxconn

The demand side of China's robotics equation is equally compelling. BYD — the world's largest EV manufacturer — operates factories with hundreds of thousands of workers and has publicly committed to aggressive automation targets. CATL, the dominant battery manufacturer, faces similar labor pressure and has begun piloting robotic manipulation in cell assembly and quality inspection. Foxconn, which manufactures electronics for Apple and others, is now investing specifically in flexible, AI-driven manipulation systems retaskable across product lines.

These three companies alone represent a potential demand pool of **tens of thousands of robotic systems** — and, critically, the training data generated from their deployments. A single BYD factory operating 50 robotic arms for 12 months generates more task-specific demonstration data than most academic datasets contain in total.

Robotics Center's China cooperation strategy

RCSV views China not as a competitive threat but as the single most important partnership opportunity in global robotics. Our China cooperation strategy focuses on three pillars:

- **Data collection partnerships** — Joint programs to collect, curate, and standardize robot demonstration data across Chinese manufacturing environments, using both Chinese and international hardware platforms.
- **Hardware sourcing** — Direct procurement relationships with Chinese arm and teleoperation hardware manufacturers, passing cost savings through to RCSV enterprise customers and research partners.
- **Joint research** — Collaborative research programs with Chinese universities and robotics labs on VLA fine-tuning, sim-to-real transfer, and dataset quality standards.

CALL TO ACTION

We are actively seeking Chinese manufacturing partners, research institutions, and data collection operators. If you are building robots in China, we want to work with you. Contact us at **contact@roboticscenter.ai** or visit roboticscenter.ai/contact.

CHAPTER 05

Investment & M&A

Venture investment in robotics reached $9.4B globally in 2025 — a 41% increase over 2024. But the top ten rounds alone accounted for 58% of capital deployed, a concentration that signals a bifurcating market.

The platform bet

Several companies have raised at valuations above $1B on the premise that the "picks and shovels" of the robotics AI wave — training infrastructure, policy evaluation, data pipelines — will be more valuable than any single robot application. The analogy to cloud computing circa 2008 is imprecise but directionally useful: the infrastructure layer is attracting capital that earlier would have gone exclusively to end-application companies. Companies in this category received a combined **$2.1B in 2025**.

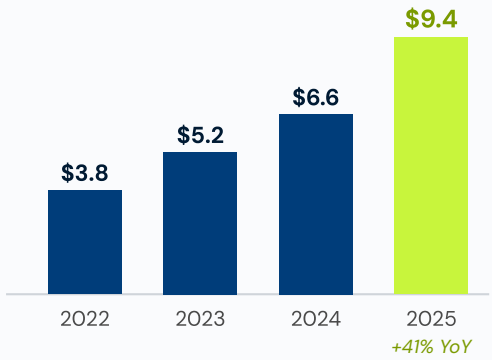
Strategic acquirers accelerate

Corporate M&A in robotics accelerated sharply in 2025. **Eleven acquisitions above $50M** were recorded, compared to four in 2024 and three in 2023. Notable acquirers include automotive OEMs, defense primes, and large technology companies acquiring both talent and proprietary dataset libraries. The data asset in these acquisitions is increasingly valued explicitly — several term sheets in 2025 included specific line items for "annotated demonstration library" valuations.

> **The Data Moat Thesis**
>
> Investors who backed robotics companies in 2024–2026 frequently cited proprietary data collection infrastructure as the primary defensibility argument. The reasoning: a robot deployed in a real environment generating real task data **compounds in value over time** in a way that software alone does not. This thesis is now being tested as foundation model fine-tuning compresses the data advantage of incumbents.

Exhibit 5.1 — VC Investment in Robotics

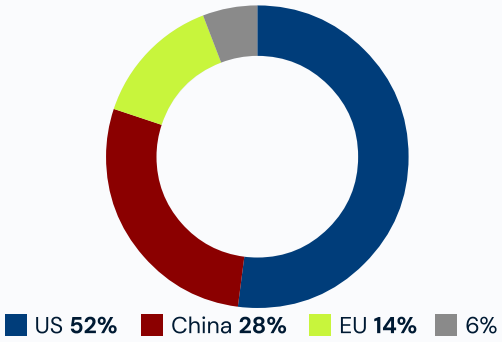
USD billions, announced rounds



RCSV Research, PitchBook, Crunchbase

Exhibit 5.2 — 2025 Investment by Geography

% of global venture capital deployed



RCSV Research, PitchBook

Geographic capital distribution

US-headquartered companies received 52% of global robotics venture capital in 2025, down from 61% in 2023. Chinese companies received 28%, a slight increase from 24% in 2023, despite continued restrictions on cross-border investment for some categories. European companies — particularly in Germany, France, and the UK — received 14%, with the remaining 6% distributed across Japan, South Korea, and Israel. Government-backed programs in France (France 2030), South Korea (K-Robotics Initiative), and Japan (Moonshot R&D) are increasingly material co-investors in early-stage rounds.

Valuation benchmarks

Median pre-money valuations for robotics companies at Series A reached **$42M in 2025**, up from $28M in 2023. Companies with proprietary data collection capability command a **1.4–1.8× premium** over companies with equivalent revenue but no data moat. Companies with demonstrated vertical-specific deployment (more than 10 paying customers in a defined use case) command a further 1.3× premium over companies still in pilot phase.

CHAPTER 06

What to Watch in 2027

Predicting robotics is humbling work. The 2024 edition of this report underestimated VLA adoption by a factor of three and missed the food service deployment surge entirely. With that caveat offered honestly, here are six themes the RCSV research team believes will define 2027.

01 · Dexterous manipulation breaks through

Dexterous hand manipulation — grasping non-rigid objects, operating tools designed for humans, manipulating small components — remains the most significant unsolved problem in practical robotics. In 2027, we expect at least two commercially viable dexterous hand systems to reach pricing below **$25,000**, and the first VLA models specifically fine-tuned for dexterous manipulation to reach production quality. The enabling conditions are in place: adequate hand hardware, large-enough demonstration datasets, and VLA architectures capable of the fine-grained action resolution required.

02 · Policy evaluation becomes a product category

The question "does my robot policy actually work?" is deceptively hard to answer without extensive real-world testing. In 2027, we expect policy evaluation to emerge as a standalone product category — combining simulation, standardized benchmark tasks, and automated regression testing. The analogy is software QA: it became a distinct profession and tooling market as software complexity grew. Robot policy QA will follow the same trajectory.

03 · Regulatory frameworks solidify for commercial humanoids

The EU's AI Act and updated Machinery Regulation will force the first wave of commercial humanoid operators to demonstrate systematic safety cases by **Q3 2027**. US OSHA guidance on autonomous robot co-workers is expected in H1 2027. This will be a headwind for companies selling into unregulated environments, but a tailwind for those that invested early in safety engineering and compliance infrastructure.

04 · World models become a standard component

World models — learned simulators allowing a robot to plan and evaluate action sequences in imagination before executing them physically — have made significant research progress in 2025–2026. NVIDIA Cosmos, Google Genie 2, and several academic models demonstrated that physical dynamics can be learned from video at sufficient fidelity to be useful for planning. In 2027, expect the first commercial robot systems to ship with integrated world model components as a **standard feature** rather than an experimental option.

05 · The data aggregation race

As foundation model training requires ever-larger robot demonstration datasets, the competition to aggregate training data across organizations will intensify. Expect new consortium structures — modeled on academic data-sharing agreements but with commercial terms — that allow multiple operators to pool task-specific data in exchange for shared access to the resulting foundation model.

06 · Energy and sustainability enter the design conversation

Robot energy consumption has been largely ignored as a design constraint while the industry focused on capability. In 2027, with manufacturing deployments at scale and energy cost pressure from both operators and regulators, power efficiency will become a **first-class design consideration**. Battery life for mobile platforms, thermal management for onboard compute, and per-task energy cost benchmarking will appear in vendor procurement requirements for the first time.

OUR OVERARCHING VIEW FOR 2027

The robotics industry in 2027 will be characterized less by hardware breakthroughs than by software and data infrastructure maturation. The companies that will look back at 2027 as a good year are those that **used 2026 to build repeatable data collection workflows, rigorous policy evaluation systems, and genuine vertical depth** — not those that chased the latest hardware launch.

FREQUENTLY ASKED QUESTIONS

Report FAQ

How big is the global robotics market in 2026?

The global robotics market reached $38 billion in 2026, representing a 34% year-over-year increase — the fastest growth rate in a decade. Venture investment in robotics reached $9.4B globally in 2025, a 41% increase over 2024. The US and China together account for 80% of venture capital deployed in the sector.

How many commercial humanoid robots are available in 2026?

Twelve commercial humanoid platforms are now available for purchase or structured lease, up from just 3 in 2024. Four are bipedal full-humanoids, three are upper-body torsos, and five are humanoid-adjacent mobile bases with dexterous arms. Prices range from $28,000 for torso-only systems to $245,000 for full bipeds. Several manufacturers also offer lease programs at $3,500–$8,000/month.

What are VLA models and how widely are they adopted?

Vision-Language-Action (VLA) models integrate vision encoders, language models, and action decoders into a single trainable stack, allowing robots to follow natural-language instructions. VLA adoption tripled in 2025–2026 and is now present in 40% of all new robot deployments. Quantized VLA models run at 10–25Hz on consumer-grade GPUs, making them viable for real-time manipulation.

How much does robot data collection cost in 2026?

The average cost per hour of high-quality teleoperation data fell from $340/hour in early 2024 to $118/hour as of March 2026 — a 60% decrease. Most manipulation tasks require 300–1,200 demonstrations, putting a $50K–$150K data collection budget within reach for enterprise pilots.

Which industries deploy the most robots?

Logistics/warehousing (41,000 units), semiconductor manufacturing (22,500 units), and food service (8,200 units) account for 64% of all commercial deployments. Food service is the surprise growth sector at +61% YoY, with 340+ quick-service restaurant locations now operating robots.

Cite This Report

Robotics Center. (2026). *State of Robotics 2026: Annual Report on the Global Robotics Industry*. RCSV Research. https://www.roboticscenter.ai/state-of-robotics-2026