PitchBook

EMERGING TECH RESEARCH

Vertical Snapshot: Robotics

VC trends, industry overview, and market landscape

2025

REPORT PREVIEW
The full report is available through the PitchBook Platform.

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Contents

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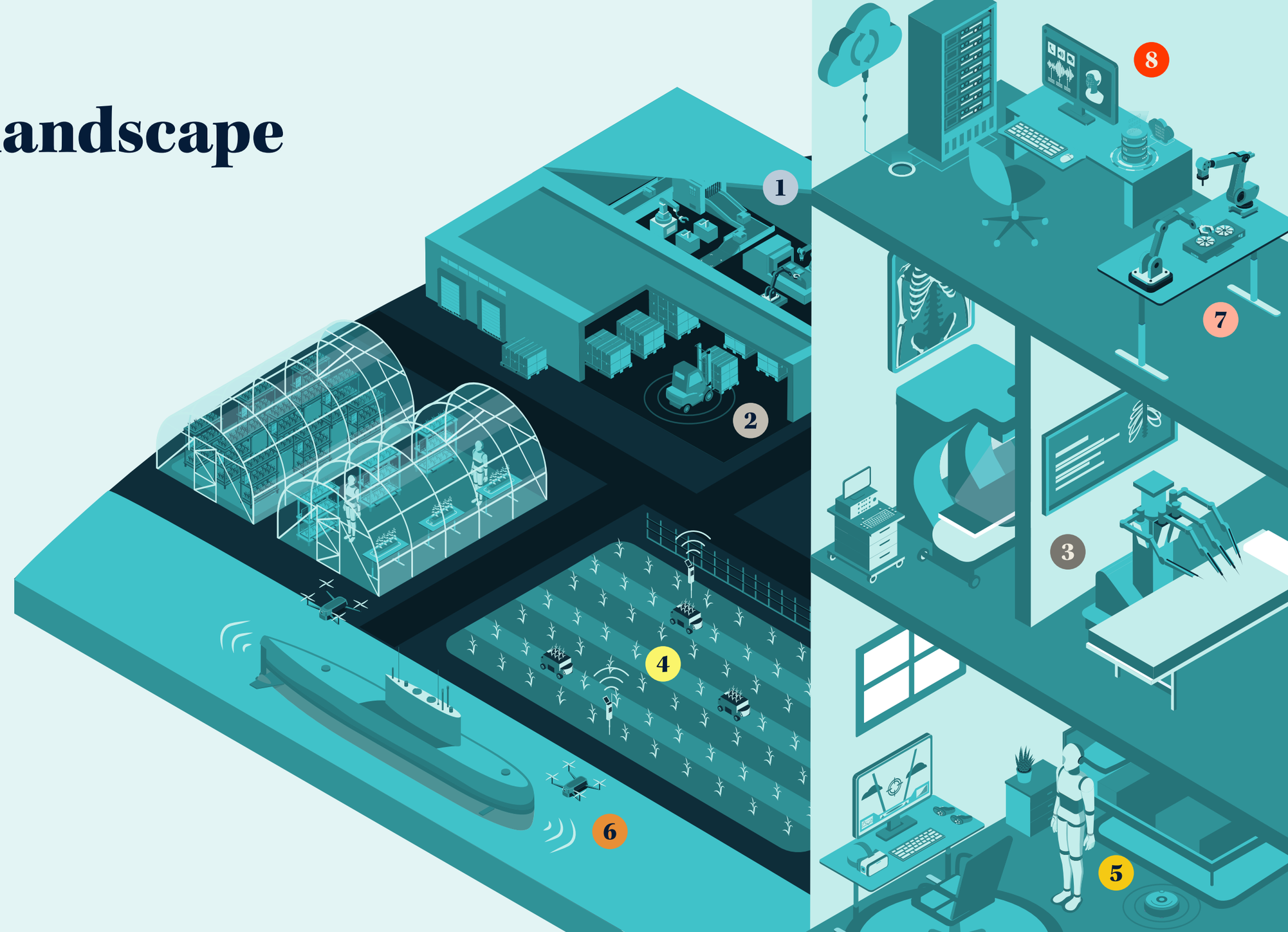
Executive summary

- **Robotics investment is rebounding in 2025.** Deal value surged in Q2 2025 to $8.8 billion, up 170.5% QoQ and 263.2% in the trailing 12 months (TTM) across 221 deals, highlighting the return of mega-rounds and investor confidence in late-stage startups.
- **The market is set to grow.** The global robotics market is projected to expand from $357 billion in 2025 to between $1.2 trillion and $1.5 trillion by 2030.
- **Defense robotics and autonomy software are the primary growth engines.** Defense robotics has attracted $6.7 billion across 138 deals in the TTM, while AI & autonomy platforms raised $1.3 billion across 51 deals (up 64% by value in the TTM).
- **Industrial robotics funding is consolidating.** The segment drew in $4.9 billion across 145 deals in the TTM, up 92.3% by value and down 5.2% in terms of volume. This shows that investors are backing scale leaders in assembly, inspection, and material handling rather than new entrants.
- **Consumer and healthcare robotics show selective momentum.** Companion & social robots (up 25.8% by deal value in the TTM) and rehabilitation systems (up 421.1% by deal value) are gaining traction, while entertainment robotics and hospital logistics robots remain weak.
- **Agricultural robotics deal activity is muted.** Only the food processing & packaging subsegment has shown growth (up 257% by value in the TTM), while deal activity for crop monitoring robotics continues to contract.
- **Structural growth drivers are accelerating adoption.** Aging workforces in Japan, South Korea, and Europe are driving industrial and healthcare automation. Sovereignty initiatives have channeled billions into domestic sensors, actuators, and motion systems. Reshoring and labor shortages are driving record robot density, which is currently at 162 robots per 10,000 workers globally.[1] That number is as high as 470 in China and 295 in the US. Robotics-as-a-service offerings have expanded adoption from small and medium-size businesses via subscription models.
- **Technology shifts are redefining capabilities.** Advances in tactile sensing, mobile manipulation, and AI-driven integration reduce costs and enable robots to operate in dynamic, unstructured environments.
- **Key risks remain.** High integration and retrofitting costs limit robotics adoption beyond core industries. Additionally, the robotics talent pipeline is shrinking due to declining enrollment in STEM programs. Safety standards are outdated, though an expansion of the ISO 10218 safety framework is underway. Cybersecurity vulnerabilities are a risk to mobile and cloud-connected systems, and pushback from labor organizations and unions could slow manufacturing and logistics.
- **The outlook is asymmetric.** Capital is consolidating among late-stage platforms. Defense and autonomy software remain magnets for investment, and sovereign demand is creating structural tailwinds. Early-stage creation is constrained, but selective bets in underpenetrated verticals could yield asymmetric upside.

1: "Global Robot Density in Factories Doubled in Seven Years," International Federation of Robotics, November 20, 2024.

Robotics landscape

1. Industrial robotics
2. Logistics & warehousing
3. Medicine & healthcare
4. Agriculture & food
5. Consumer robotics
6. Defense & security
7. Hardware & components
8. Software & AI



Robotics VC ecosystem market map

This market map is an overview of venture-backed or growth-stage companies that have received venture capital or other notable private investments. Click to view the full map on the PitchBook Platform.

1 Industrial robotics

- Assembly & manufacturing robots
- Inspection & quality control robots
- Material handling & palletizing
- Hazardous environment robots

2 Logistics & warehousing

- Autonomous mobile robots
- Automated guided vehicles
- Sorting & packaging robots
- Last-mile delivery robots & drones

3 Medicine & healthcare

- Surgical robotics
- Rehabilitation & assistive robots
- Hospital logistics robots
- Diagnostic & imaging robotics

4 Agriculture & food

- Autonomous farming vehicles & drones
- Crop monitoring & analysis robots
- Food processing & packaging robots
- Food service robots

5 Consumer robotics

- Domestic service robots
- Companion & social robots
- Entertainment & hobby robotics

6 Defense & security

- Unmanned aerial systems
- Unmanned ground vehicles
- Unmanned maritime systems
- Security & patrol robots

7 Hardware & components

- Actuators & motion systems
- Sensors & vision systems
- End effectors & tooling
- Power & energy systems

8 Software & AI

- Robot operating systems & middleware
- Computer vision & perception
- Path planning & navigation
- AI & autonomy platforms

VC activity

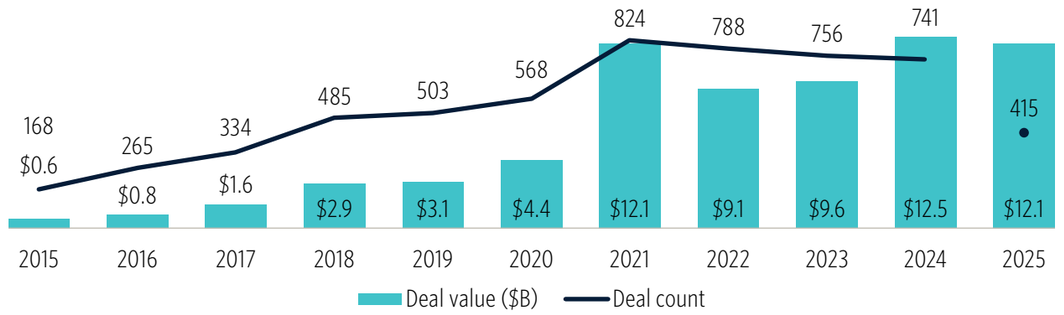
Venture capital activity in robotics has accelerated sharply so far in 2025, with deal values surging even as deal counts rise only modestly—evidence of larger financings and renewed investor confidence in late-stage startups. This pattern underscores the sector's maturation as investors concentrate capital into scaling companies and proven technologies rather than spreading bets broadly across early-stage entrants.

Quarterly and annual trends

The breakout quarter was Q2 2025, when robotics startups raised $8.8 billion across 221 deals, a 170.5% increase in value QoQ and a 13.9% QoQ increase in deal count. Compared with the same quarter in 2024, deal value jumped 263.2% while deal count rose 22.1%, highlighting how mega-rounds are driving activity. On a trailing 12-month (TTM) basis, deal value increased 104.6%, while deal count grew just 4.5%, confirming that the current recovery is fueled by bigger checks rather than more companies entering the pipeline.

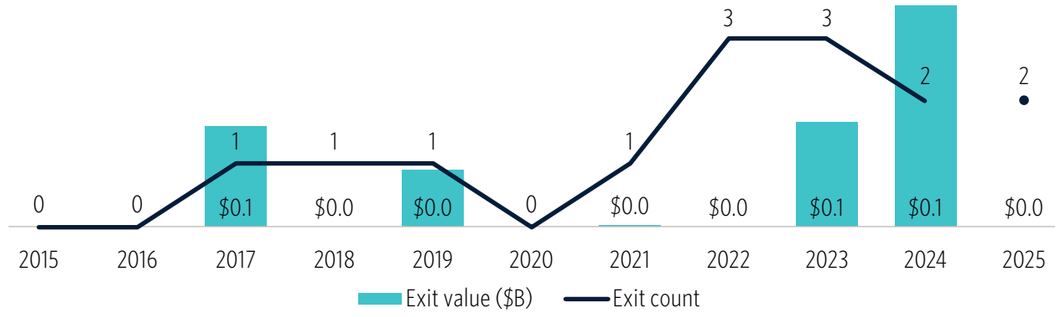
Annual data shows the cyclical arc of the sector. Robotics investment rose in 2021 to $12.1 billion across 824 deals. It then contracted in 2022 ($9.1 billion across 788 deals) and 2023 ($9.6 billion across 756 deals), before reaccelerating in 2024 to $12.5 billion invested across 741 deals. Already, as of mid-2025, the sector has recorded $12.1 billion and 415 deals, putting the year on pace to surpass 2024 totals. The numbers illustrate a rebound phase: a pandemic-era surge, followed by a two-year contraction, and then a new wave of capital deployment led by the defense and software categories.

Robotics VC deal activity



Source: PitchBook • Geography: Global • As of June 30, 2025

Robotics VC exit activity



Source: PitchBook • Geography: Global • As of June 30, 2025

Stage dynamics

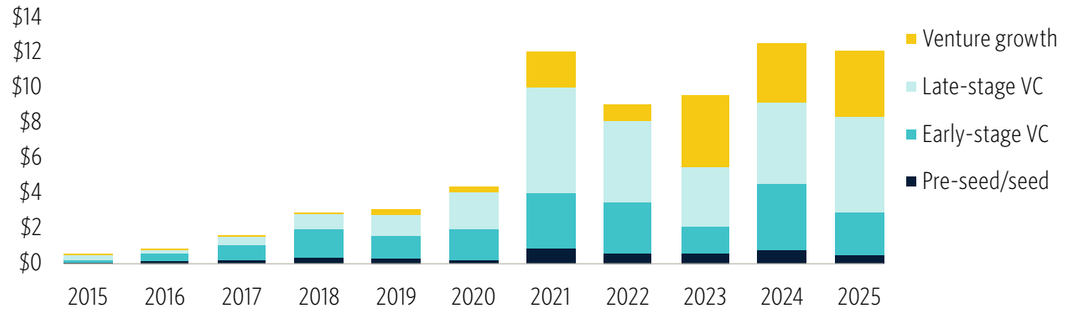
Looking at deal counts by stage over the past three years reveals how this rebound is playing out. Later-stage VC rounds remain the anchor of the market, consistently producing 70-85 deals per quarter and registering 81 deals in Q2 2025. This stability reflects the capital consolidation trend in industrial and defense robotics, where investors prefer to scale existing winners rather than chase new entrants.

Venture-growth financings—typically mega-rounds approaching IPO scale—have returned in force. After muted activity of only 12-20 deals per quarter in 2023-2024, venture-growth rounds surged to 34 by count in Q2 2025, the highest level in years. This aligns directly with the quarterly breakout by deal value, suggesting multiple transactions over a billion dollars spent to scale robotics companies.

Early-stage VC rounds have remained steady in the range of 55-75 per quarter, with 67 deals recorded in Q2 2025. While stable in volume, the segment has not expanded, underscoring how investors are becoming more selective in backing robotics startups at the seed and Series A stages. These selective bets are concentrated in enabling technologies such as autonomy software and defense robotics.

In contrast, pre-seed/seed activity is structurally lower, declining from roughly 40 deals per quarter in 2022 to 29-39 deals in 2025. This points to fewer net-new robotics startups entering the venture pipeline, consistent with the higher technical and capital barriers to entry. The decline in seed rounds parallels weakness in agricultural and hospital logistics robotics, where new company formation is particularly constrained.

Robotics VC deal value ($B) by stage



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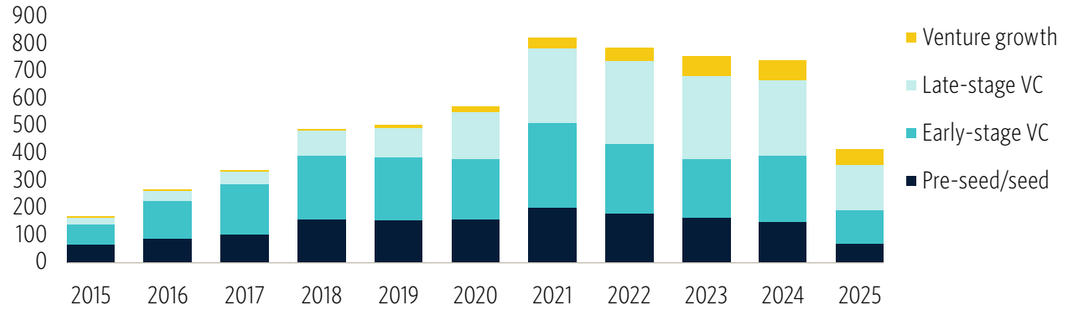
Robotics VC deal count by stage



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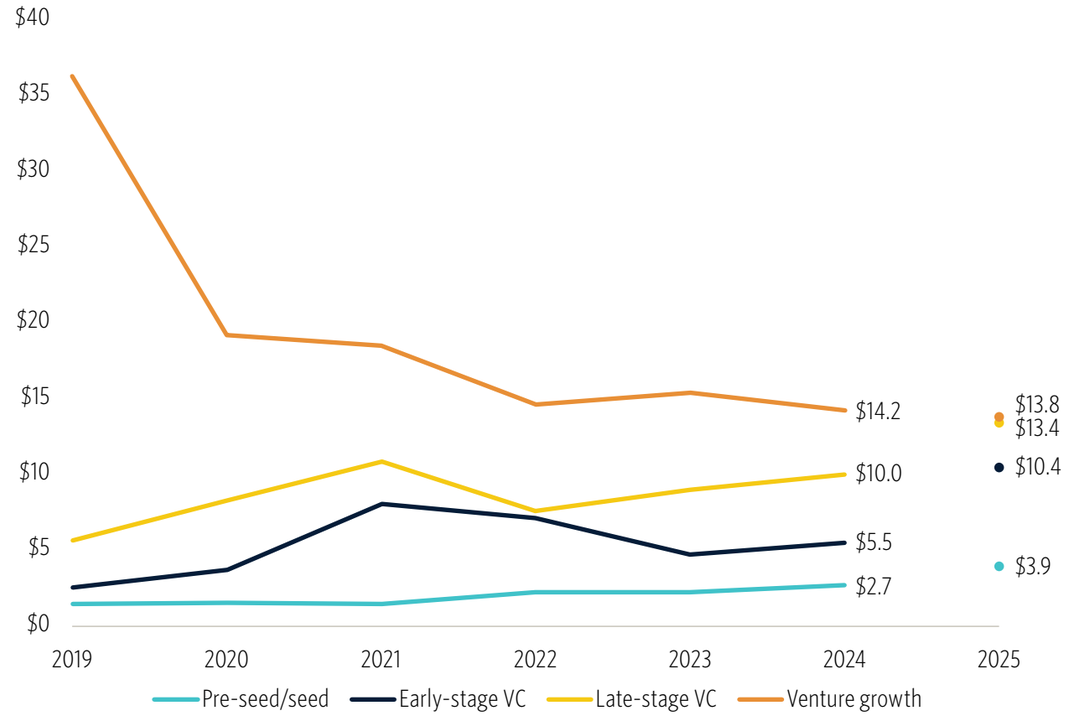
Median robotics VC deal value ($M) by stage



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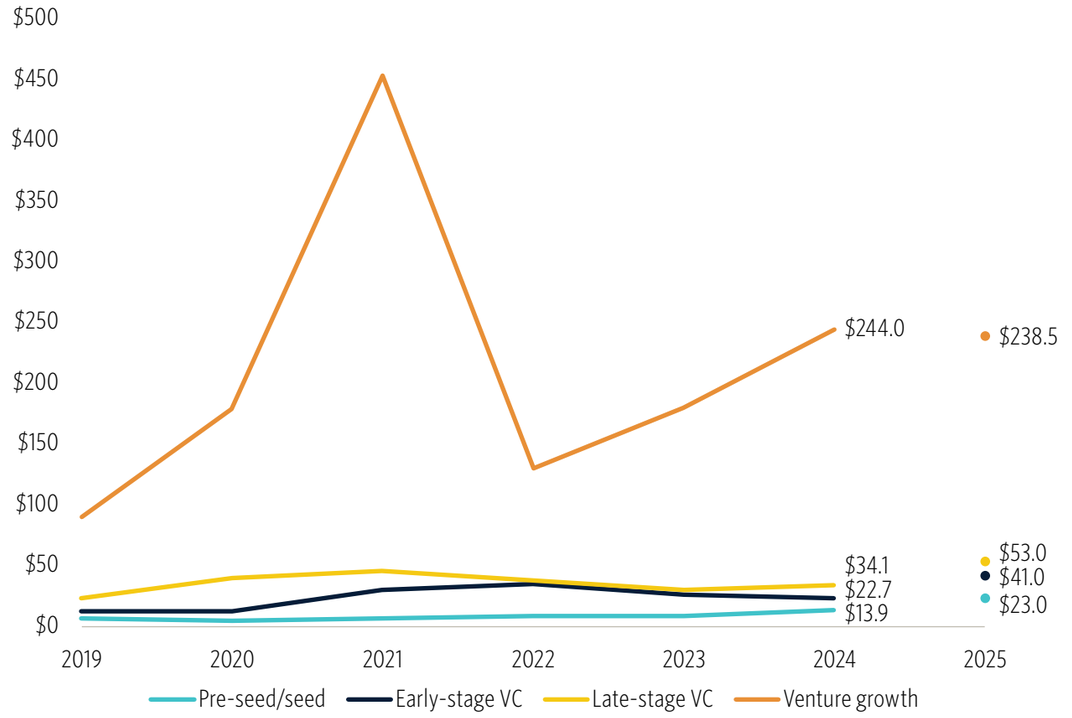
Median robotics VC pre-money valuation ($M) by stage



Source: PitchBook • Geography: Global • As of June 30, 2025

High-level themes

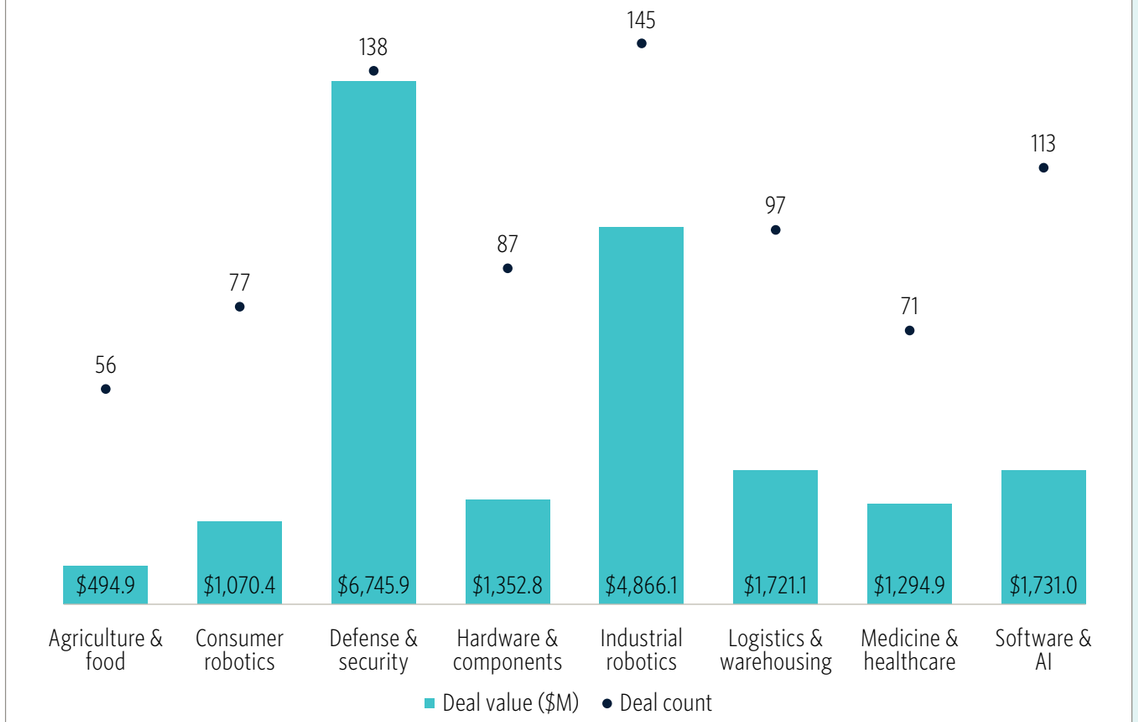
Four overarching themes emerge from the deal activity:

1. **Defense robotics is the core growth engine:** Multibillion-dollar inflows into unmanned aerial, ground, and maritime systems reflect geopolitical tailwinds and growing defense budgets.
2. **Software is eating robotics:** Autonomy platforms, computer vision, and navigation tools are scaling rapidly as capital-light, cross-platform plays.
3. **Capital is consolidating:** Industrial and logistics robotics continue to attract funding, but deal counts are flat or declining, signaling a shift toward larger late-stage rounds rather than broad experimentation.
4. **Divergence is evident across the consumer, healthcare, and agriculture segments.** Companion and domestic robots are gaining traction while entertainment robotics shrinks. Surgical and rehabilitation systems are growing while hospital logistics struggles. Meanwhile, agricultural robotics remains flat aside from food processing & packaging gains.

Segment activity

At the segment level, defense & security robotics led the market with $6.7 billion across 138 deals, representing 321.6% growth in value and a 29% increase in deal count YoY. Industrial robotics followed with $4.9 billion invested across 145 deals, up 92.3% in value but down 5.2% by volume YoY, again showing consolidation among bigger rounds. Robotics software & AI secured $1.7 billion across 113 deals, up 47.2% in value and 14.1% in count YoY, making it one of the faster-growing areas of the ecosystem.

TTM robotics VC deal activity by segment



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Other categories displayed mixed results. Consumer robotics raised $1.1 billion across 77 deals, up sharply in value, rising 59.2% YoY, and moderately in volume, up 28.3% YoY. Logistics & warehousing robotics attracted $1.7 billion across 97 deals, with value up 17.2% and deal count up 16.9% YoY, signaling modest momentum. Medical & healthcare robotics raised $1.3 billion across 71 deals, up 24.9% in value but down 17.4% in deal count YoY, while agricultural & food robotics consolidated at $0.5 billion across 56 deals, with value up 15.9% and count down 21.1% YoY. Hardware & components saw $1.4 billion across 87 deals, a 123.2% increase in value but a 10.3% decline in count YoY, reflecting larger tickets for established suppliers.

Subsegment highlights

The subsegment view shows where capital is concentrating. In defense, UASs dominated with $6.1 billion across 91 deals, up 316.2% in value and 26.4% in count YoY. UGVs grew to $0.1 billion across nine deals, a 193.3% value increase YoY, while unmanned maritime systems raised $0.2 billion across 28 deals, up 279.5% in value and 86.7% in count YoY.

In industrial robotics, assembly & manufacturing robots raised $2.9 billion across 73 deals (up 51.5% by value and down 11% by count YoY). Inspection & quality control robots grew to $1.3 billion across 42 deals (up 609.6% by value YoY), and material handling & palletizing reached $0.4 billion across eight deals (up 65.4% by value YoY).

Software categories surged. AI & autonomy platforms raised $1.3 billion across 51 deals, up 64% by value and 21.4% by count YoY. Computer vision & perception brought in $0.2 billion across 21 deals, up 111.8% by deal value YoY, while path planning & navigation reached $0.2 billion across 30 deals, down 48.7% YoY in terms of deal value.

Consumer robotics rebounded in practical areas: Companion & social robots recorded $0.6 billion across 38 deals, marking a 25.8% increase by value and a 46.2% increase in deal count YoY. Domestic service robots raised $0.5 billion across 33 deals (up 137.4% by value YoY). By contrast, entertainment & hobby robots contracted to just $17.1 million across six deals.

Healthcare trends were uneven. Surgical robotics raised $0.8 billion across 35 deals (up 11.9% by value, with count down YoY), while rehabilitation & assistive robots rose to $0.4 billion across 22 deals (up 421.1% by value YoY). Hospital logistics robots contracted to $0.1 billion across four deals, down 52.6% in value and 63.6% in count YoY.

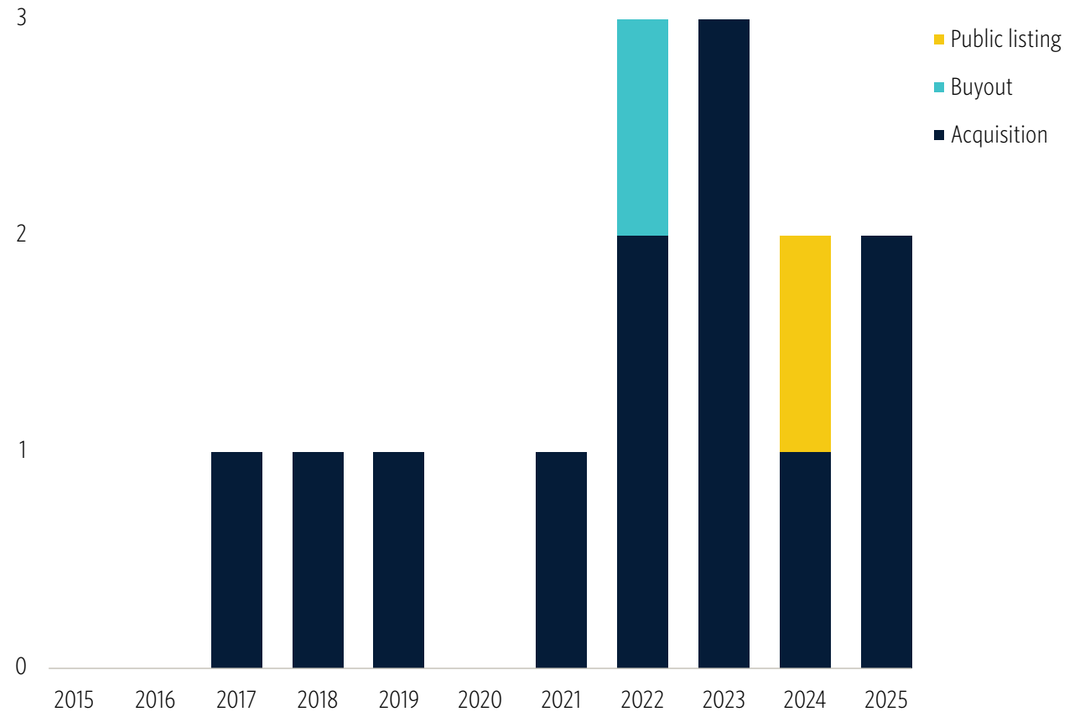
Agricultural robotics remained muted overall. Food processing & packaging robots stood out, attracting $81.9 million across four deals, a 257% increase in value YoY despite low volume. Food service robots posted $150.6 million across 18 deals, recording a 9.9% YoY value gain even as deal count declined. Crop monitoring continued to lag, slipping to $21.9 million across seven deals, down 3.2% in value YoY.

Outlook

The robotics venture market is increasingly shaped by large financings at later stages. Defense robotics and autonomy software are expected to remain magnets for capital, while industrial and logistics financing will stay selective and favor scale leaders. Early-stage creation is constrained, with seed activity unlikely to rebound without corporate venture or government dual-use catalysts. Near-term risks include the timing of defense procurement, burn rates for hardware startups, and the broader macroeconomic environment. Nonetheless, the Q2 2025 surge signals that robotics is re-entering a growth phase and regaining the attention of investors seeking exposure to both industrial automation and defense-driven autonomy.

VC ACTIVITY

Robotics VC exit count by type



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