



PEAKZONE



# Robotics REPORT | VENTURE TRENDS

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September, 2023 | © PEAKZONE GmbH



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# ROBOTICS

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# INTRO

- Market Definition
- Market Sizes & Growth
- Revenue Shares
- Evolution Timeline
- Technology Readiness Levels
- Technology Trends

# The global Robotics market is split into industrial vs service applications and the underlying technology enablers

## ROBOTICS MARKET TAXONOMY

Machines carrying out a series of complex actions automatically, based on a computer program. A crucial element of robots are sensors to adapt their action to their environment.

### INDUSTRIAL ROBOTS

Automatically controlled, reprogrammable multipurpose manipulator, programmable in three or more axes, which can be either fixed in place or mobile for use in industrial applications.

### SERVICE ROBOTS

Robots that perform useful tasks for humans or equipment excluding industrial automation applications.

#### PROFESSIONAL SERVICE ROBOTS

Robots used for a commercial task, usually operated by a properly trained operator.

#### DOMESTIC SERVICE ROBOTS

Robots used for a non-commercial task, usually by inexperienced persons.

### ROBOT SOFTWARE

### TECHNOLOGY ENABLER

# The overall Robotics market is expected to grow at high growth rates in the coming years



The global robotics technology market is expected to grow from **\$78.8B** in 2022 to reach **\$250B** by 2030.



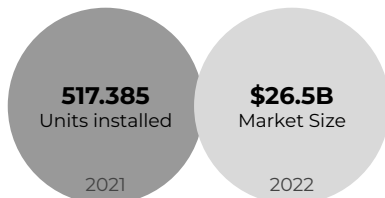
The global robotics market is expected to grow at a **CAGR of 13.7%** (2022-2030).

- The global robotics market is facing **significant growth** due to a **growing demand** for complex **automation & safety** solutions, availability of **affordable & energy efficient robots** and the stable increase in **labor & energy costs**
- The **COVID-19** pandemic **accelerated growth** in a variety of markets like healthcare, supply chain & manufacturing caused by a substitution of human workers by robots to reduce the virus' impact
- **Highest growth** in the coming years is expected in the **robotic software market (45.7% CAGR until 2026)** and **collaborative robots market (45.7% CAGR until 2030)**
- **30% of robots** in the overall robotics technology market **will be collaborative robots (cobots)** by 2027

# Domestic service robots represent the highest number of installations, but with the smallest sales volume

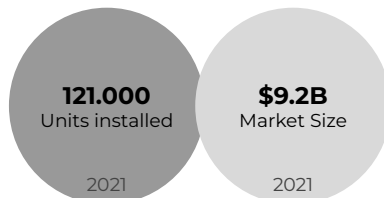


## INDUSTRIAL ROBOTS



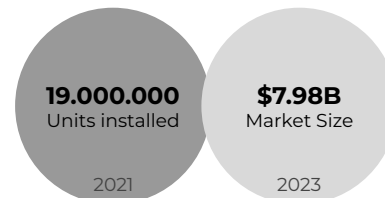
Welding Robots, Handling Robots,  
Grinding Robots

## PROFESSIONAL SERVICE ROBOTS



Warehousing Robots, Medical Robots,  
Professional Cleaning Robots

## DOMESTIC SERVICE ROBOTS

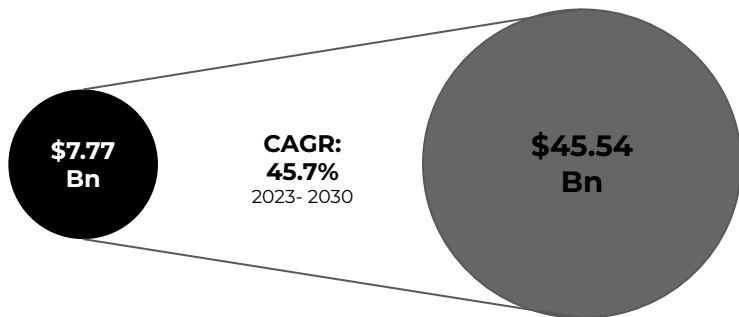


Vacuuming Robots, Cleaning Robots,  
Lawn Mower Robots

# The Robotics Software market is one of the fastest growing technology markets observed by our analysts

## Robotics Software Market Size

2023 - 2030

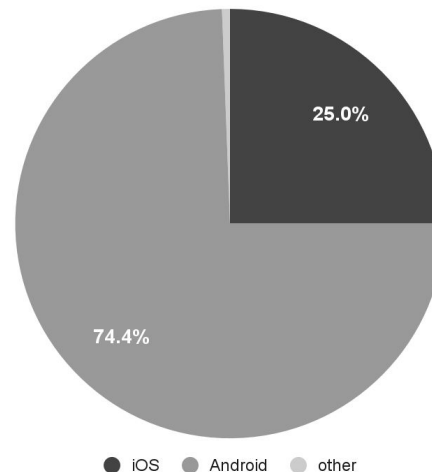


### Take-away

- Drivers of the market are growing demand in **cost-efficiency, error reduction, endurance, speed** & assurance
- A **huge opportunity** lies in **open source business models**

## Closed vs Open Software Approach

How will the market be divided?



### Take-away

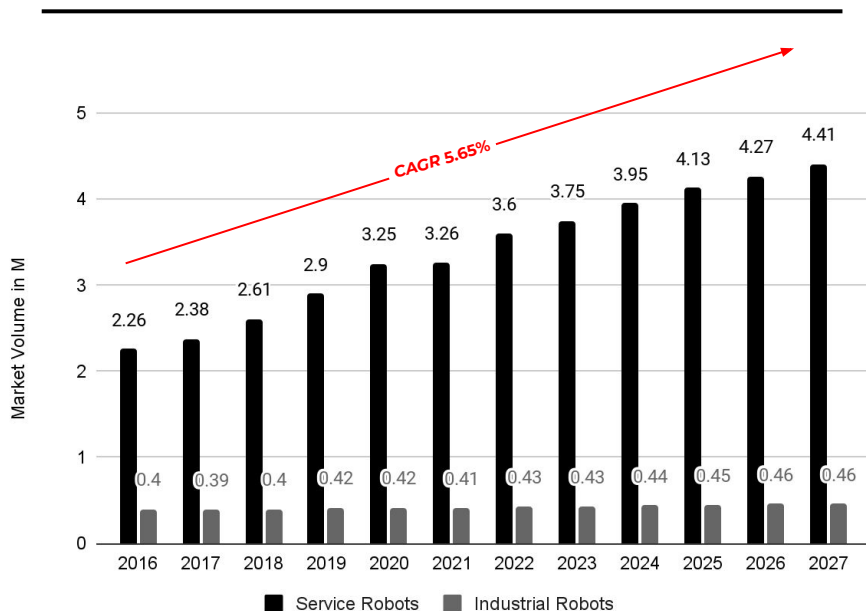
- **Similarities** in the development of the robot software market and the **smartphone operating system market**
- **Open Source** approach (Android) will represent the major market share with about **75%**, **closed software** approach (iOS) is able to reach **25%** share



# Global operational stock of robots with steady growth over the next years

## Global Market Volume of Robots

from 2016- 2027



### Global Market Volume

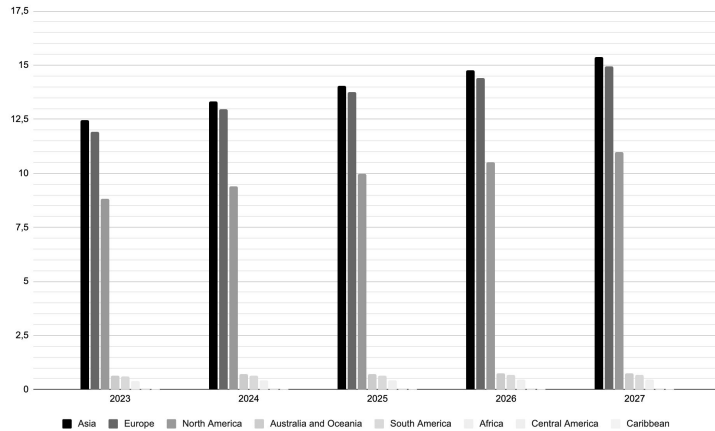
- The global robotics market has witnessed **steady growth, with continuing momentum over the coming years**
- Service Robots growing at a CAGR of approximately 5.65% and Industrial Robots at a CAGR of approximately 1.27%
- The increasing adoption of robots is **driving technological advancements across various industries**

### Market Dynamics

- **Sales of service robots** have **exceeded those of industrial robots** from 2019 on
- The **fastest-growing subsegment** of industrial robotics is **cobots**
- **Improvements in AI** have paved the way for this development
- The **COVID-19 pandemic** has had a **negative impact on industrial robotics** but more **positive** on its counterpart, **service robotics**

# South Korea, Japan and China dominate the Industrial robotics segment

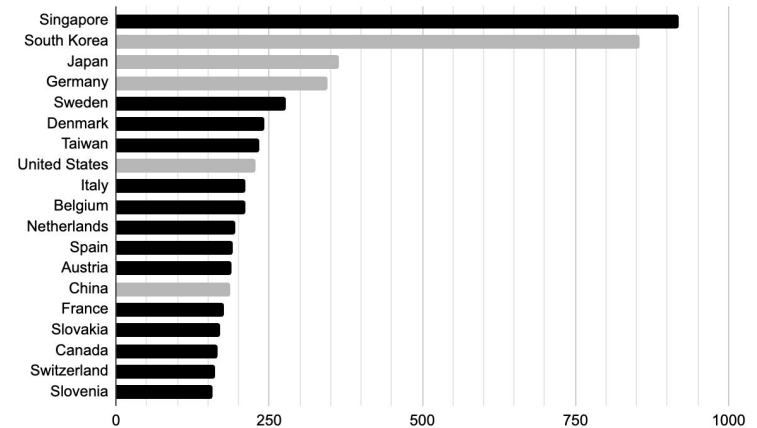
## Global Robotics Revenue by region in billion USD



### Take-away

- Adoption of **robots in Asia**, especially in **Chinese factories**, is leading to **significant revenues in the region**
- **Europe holds a close second position** with most revenue coming from Western European countries

## Robot density in the manufacturing sector by selected countries, per 10.000 employees (2019)

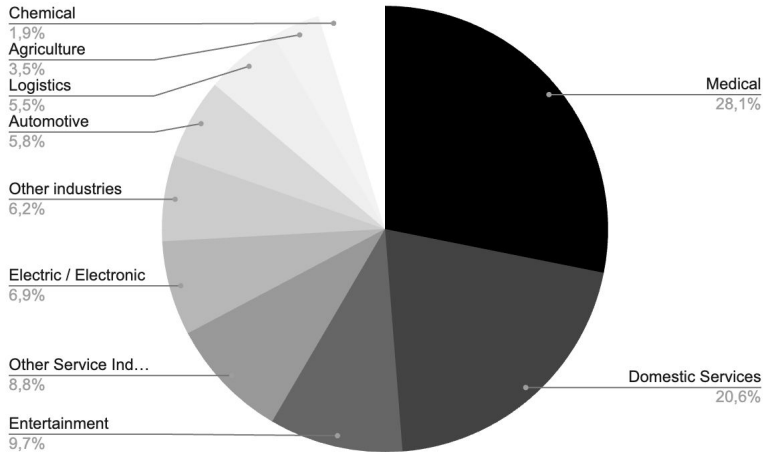


### Take-away

- **South Korea** has the **highest density** as a result of a **smaller labor force** and a **more specialized economy**
- Of the highlighted countries, **China** has the **lowest robot density**, but is **expected to invest most heavily** in new installations

# Industrial Robots Revenue have experienced a downfall in 2022 and are expected to grow at 3.78% annually

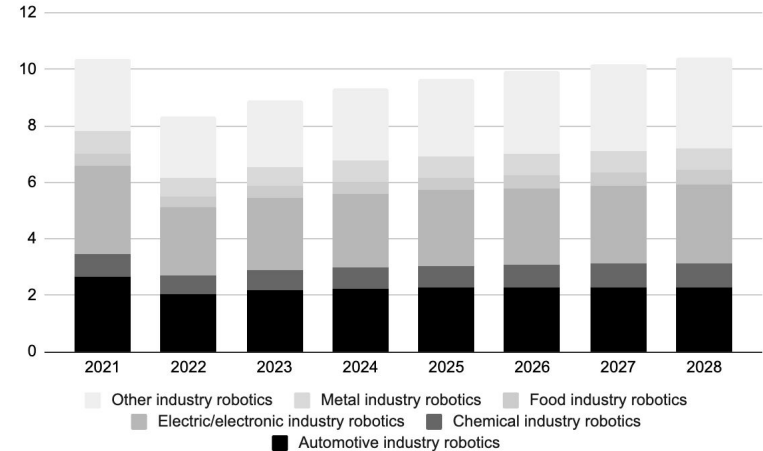
## Total Global Revenue Share by industry



### Take-away

- The **increasing use in surgeries** and an ageing population lead to **high revenue shares** in the **medical industry**
- **Domestic Service Robots** is another major industry with an expected **48.6 million robots deployed globally in 2023**

## Industrial Robots Revenue Share by industry, in billion USD, 2021 - 2028



### Take-away

- The **Automotive & Electronic Industries** are expected to hold the **largest revenue shares** over the coming years
- **Specialized economies** such as **South Korea and Japan** are largely **contributing to this development**

# Robotics Industry is shifting to the 3<sup>rd</sup> Revolution enabling first stage of Human-Robot interactions & collaboration

## 1. Revolution



ca. 1980

Robot-based automation solution

### Intention

“How to complete tasks as fast as possible?”

### Tech Driver

- Progress in micro-electronics
- Raise of information technology

### Application

Used mainly in automotive industry: high accuracy and speed  
Robots were fast, efficient, high accuracy but also very big and dangerous.

## 2. Revolution



ca. 2015 - 2020

Sensitive & safe robot-based automation solution

### Intention

“Make work safer & ergonomic and relieve workers as much as possible.”

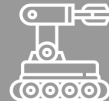
### Tech Driver

- Progress in sensor technology
- Algorithms of control systems
- Rise of Data Analytics, AI, ML

### Application

Robots can “feel” and can be taught easily. More sensitive work can be done and cobots start to gain market share e.g. due to collision detection.

## 3. Revolution



ca. 2025 - 2030

Mobile, sensitive & safe robot-based automation solution

### Intention

“Make robots mobile to come to their workpiece and not the workpiece comes to the robot”

### Tech Driver

- Rise of Data Analytics, AI, ML
- Creation of vision & navigation systems

### Application

Service robots: Robots can come to the human or workpiece and are flexible in working area. First multi purpose robots will emerge.

## 4. Revolution



ca. 2030 - 2040

Perceptive & cognitive, mobile, sensitive & safe robot-based automation solution

### Intention

“Self-learning & -deciding robots to adapt decision on information provided.”

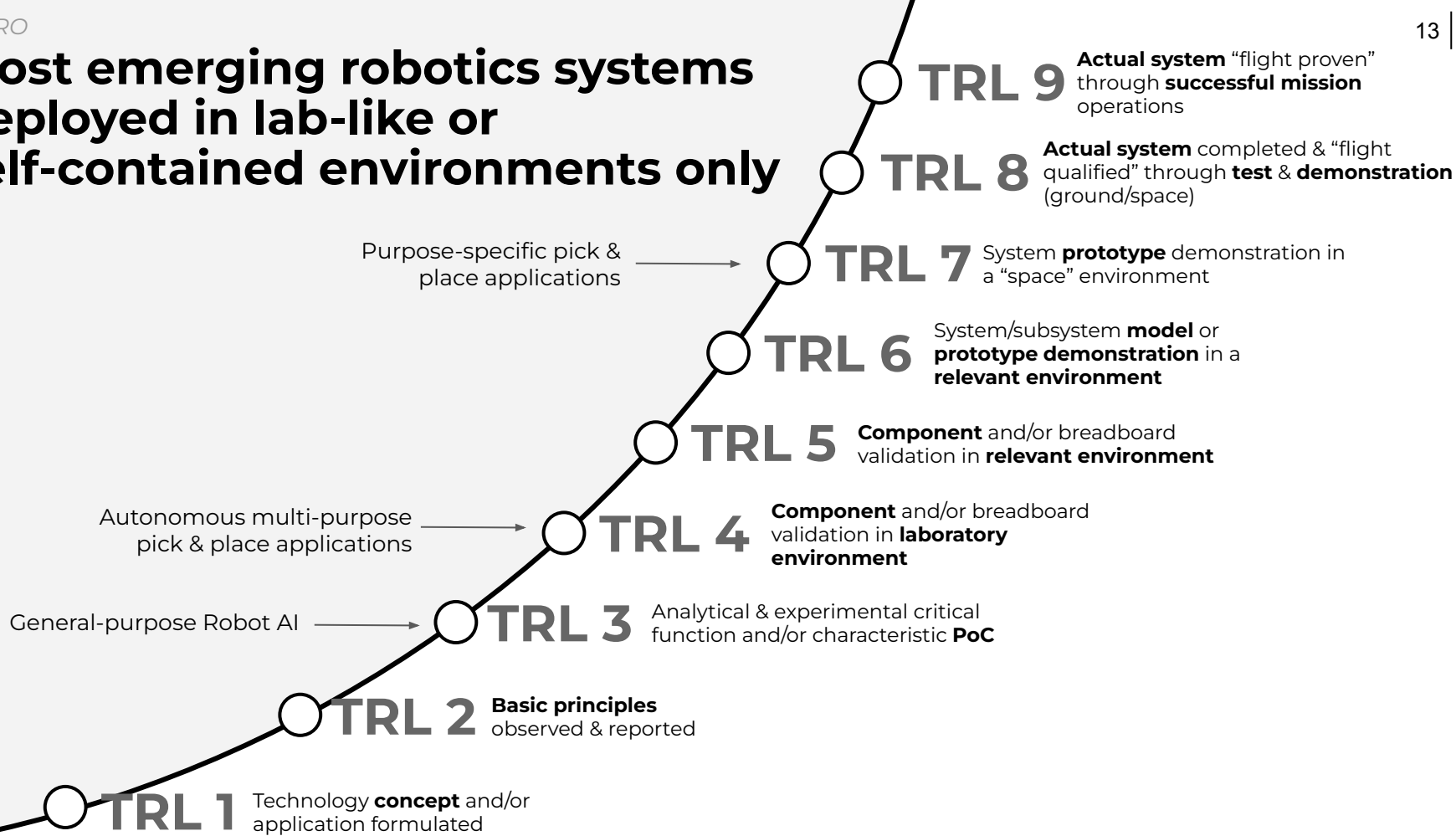
### Tech Driver

- Stronger algorithms in AI, ML
- Complex object recognition
- Adaptive decision making

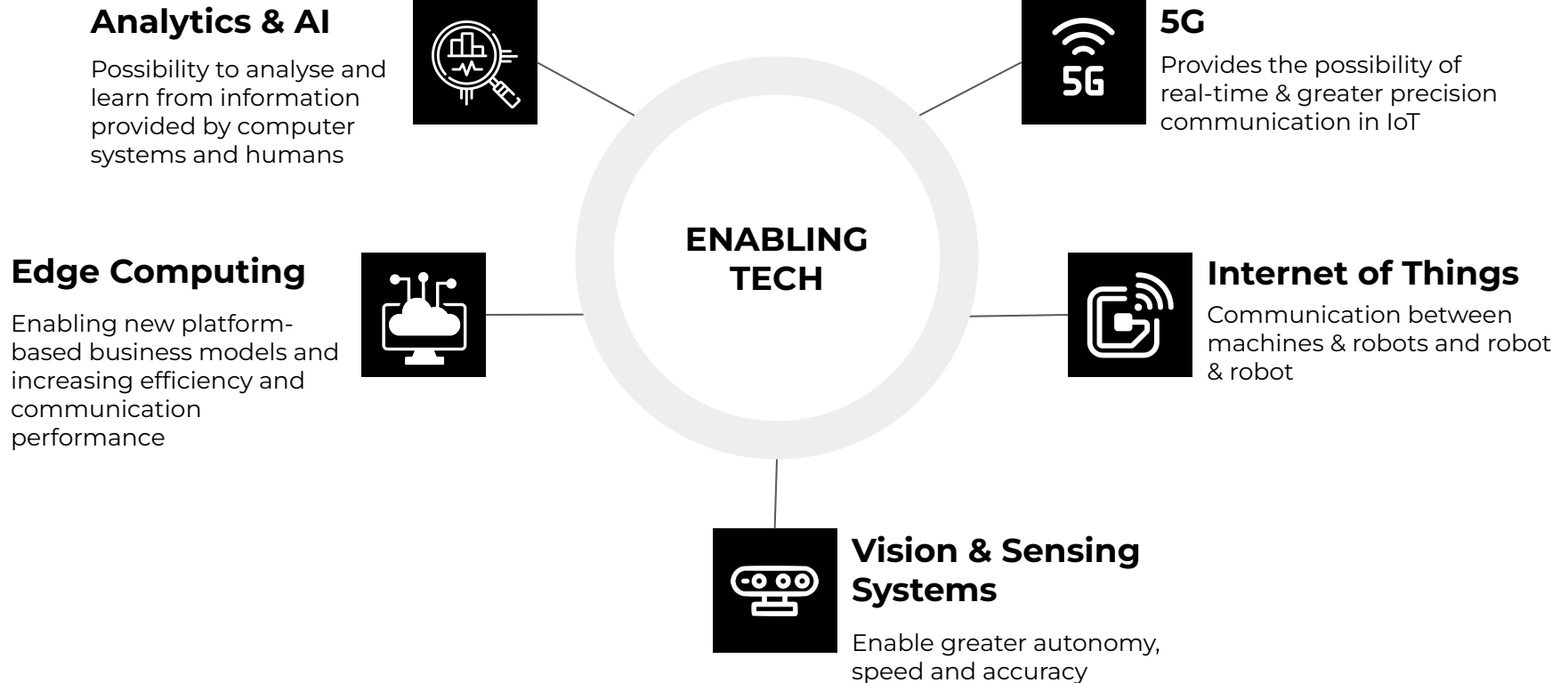
### Application

Direct interaction, where the robot does not need the human for programming.  
Robot can be treated like a human worker.

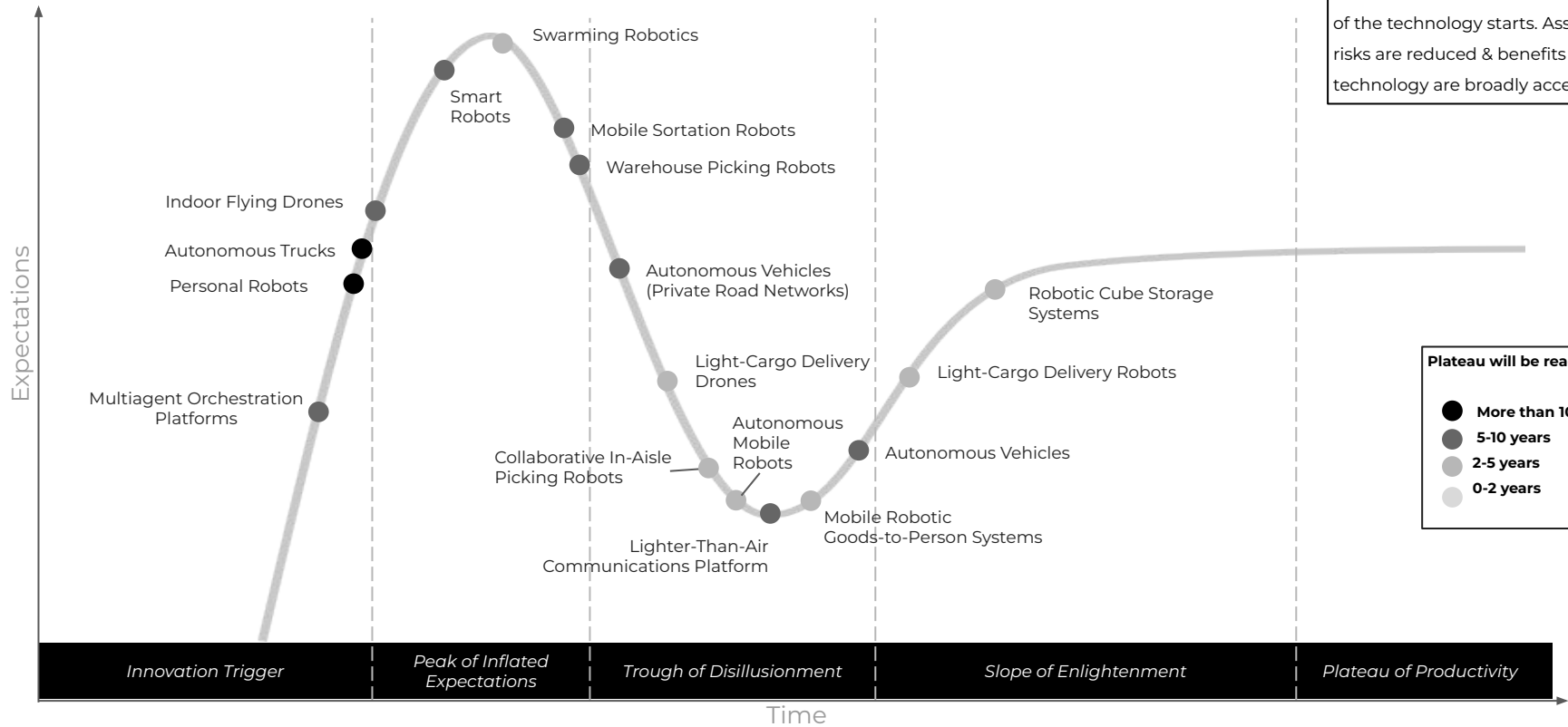
# Most emerging robotics systems deployed in lab-like or self-contained environments only



# Technologies driving the Robotic Market



# The current State of Innovations: Robotics Solutions in the Gartner Hype Cycle 2023



# SECTOR ANALYSIS

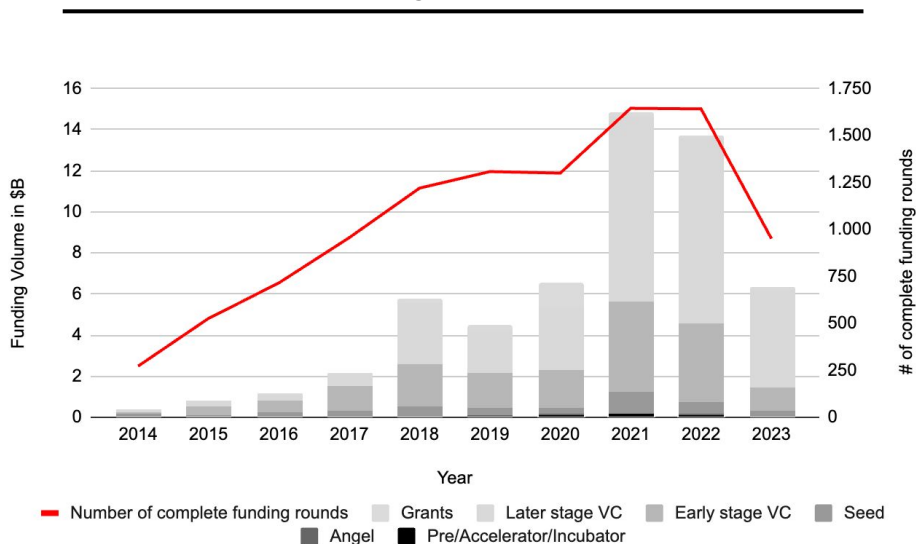
Venture Funding  
Funding Distribution  
Mergers & Acquisitions  
Unicorns  
Key Technology Fields



# Everything around you will become a robot - Autonomous Vehicles have marked a shift in the robotics sector in 2018

## Total funding Robotics

Total funding & deals, 2014-2023



### Take-aways

- Over **\$55 billion** were **invested in** the Robotics sector in **10,500 deals** over the **last 10 years**
- The **number of deals** are currently sitting at **2017 levels** with 950 rounds, **but funding** has stay elevated reaching **over \$6 bn**
- Compared to many other sectors, **venture activity in Robotics** has fared **quite well** **only dropping 57%** from its peak in 2021

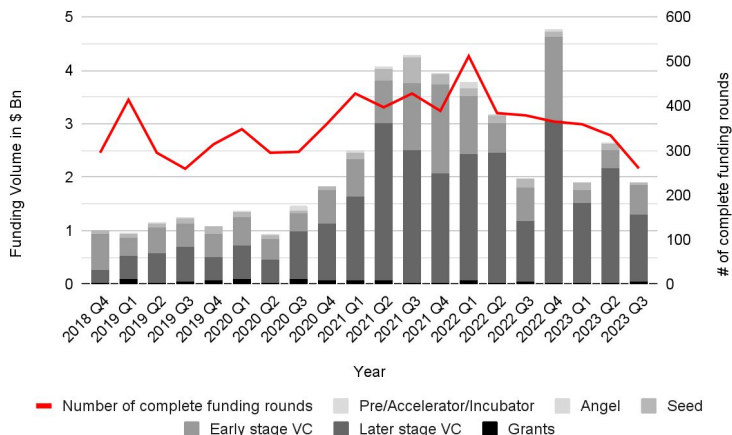
### Notable Investors

- **Corporates:** Lenovo Capital, Baidu, Toyota, GV, Intel Capital, ABB, Airbus, Qualcomm, Xiaomi
- **VC-Funds:** Plug & Play Tech Center, SOSV, Alumni Ventures, a16z, Founders Fund, HTGF
- **Government Investors:** National Science Foundation, Innovate UK, US DoD, ESA

# Robotics Venture Funding has been quite resilient throughout the current market turbulence

## Quarterly Funding

Total funding & deals, 2018 - 2023

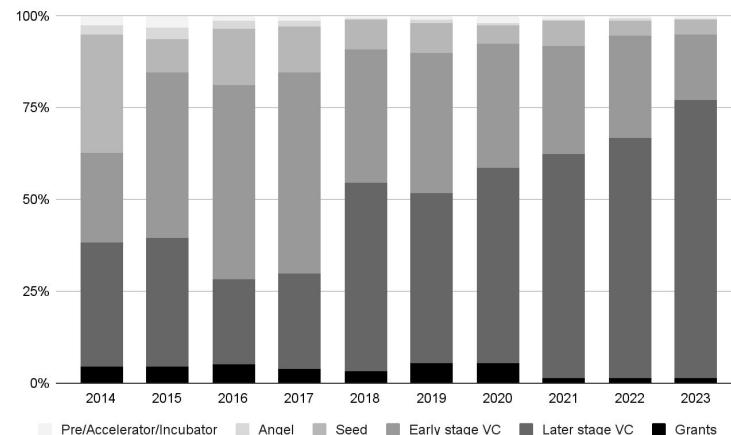


### Take-away

- **Funding** in the robotics sector has **historically** been **concentrated in Q4**, therefore we expect an **influx of funding** over the next 3 months
- **Anduril's \$1.48 billion Series E** funding round in **December 2022** makes up a third of the funding volume in that quarter

## Total Funding Volume

by Deal Type in %, 2014 - 2023



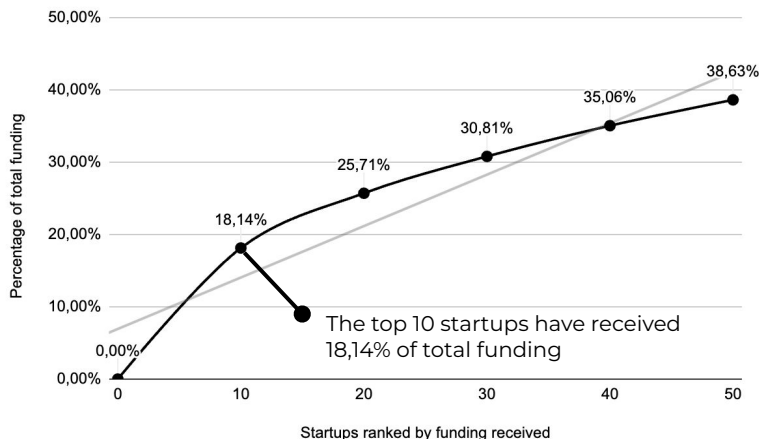
### Take-away

- The graph above clearly shows the **maturity of the Robotics** market
- While a majority of **funding had been focussed on early stage and seed investments** from **2014 to 2017**, the trend has **clearly shifted** with **later stage funding** making up over **75%** of funding volume

# The Robotics sector is less concentrated than several other industries and mostly exceeds overall VC funding growth

## Cumulative funding

Percentage of total funding

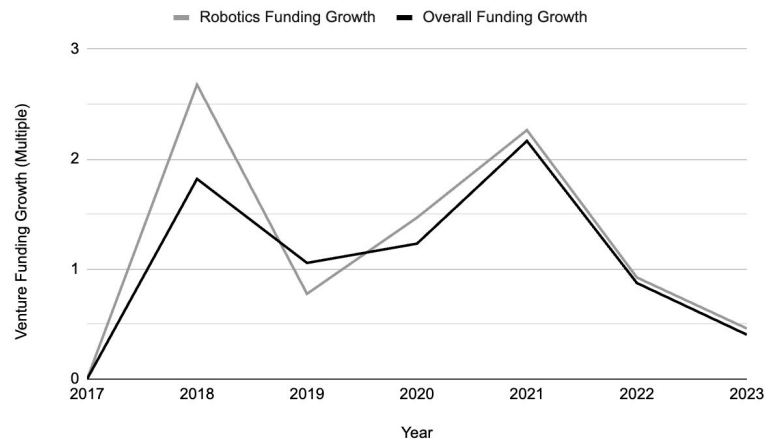


### Take-away

The top funded **20 startups** in the sector have **received 25% of the entire funding** in the sector over the last 10 years.

## Venture funding growth in Robotics

Indexed growth, funding in 2017 indexed to 1x



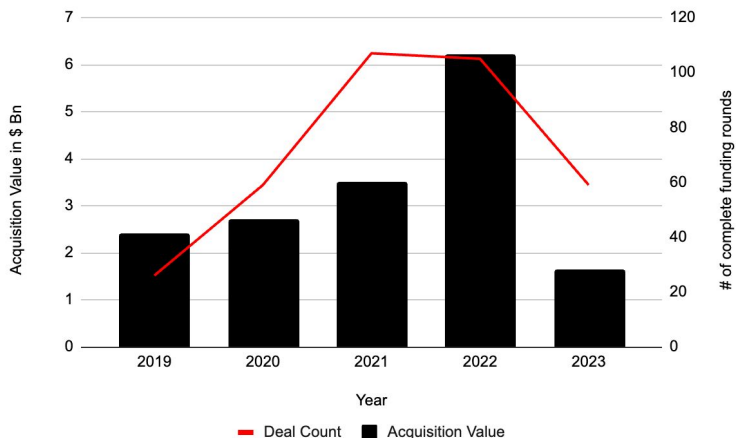
### Take-away

In the last 5 years **funding growth** has been **closely tracking** the **overall VC market** exceeding it in 4 out of 5 years.

# Acquisition volume rose exponentially until 2022

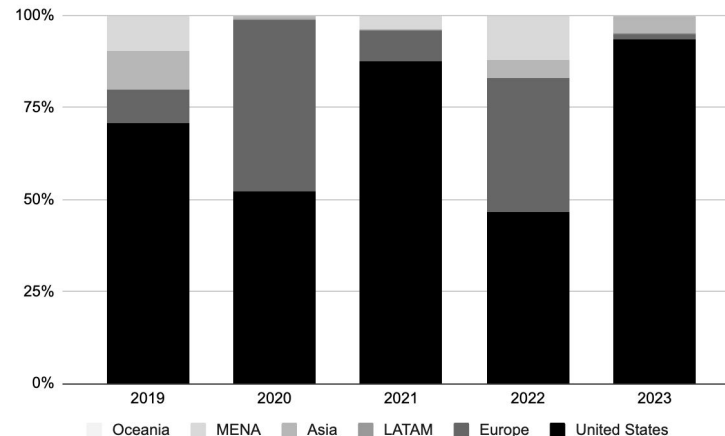
## Total Acquisition Volume

Acquisition Value & number of rounds, 2019 - 2023



## Total Acquisition Volume

by Global Regions in %



### Take-away

- **\$16.5 billion in total acquisition volume** was invested in the Robotics market over the past 5 years
- Untypically, **acquisition volumes peaked in 2022**, but have been muted since then

### Take-away

- **\$10.6 billion** in acquisition volume have been **invested in US-based startups** with **European startups** in second place **with \$4 billion**
- In recent years, **exit volume in Asia** has **grown by 10x** compared as we see a **maturing market** there

# \$14.1 billion in deal value was invested over the past 4 years

Company	Acquisition Value	Date	Acquirer	Segment
	\$1,700.00 million	In Progress		Home Appliances
ZOOX	\$1,300.00 million	June, 2020		Mobility
	\$1,132.00 million	June, 2022		Industrial
	\$880.00 million	June, 2021		Engineering
	\$700.00 million	September, 2022		Enabling System
	\$422.63 million	February, 2021		Defense
	\$406.93 million	September, 2022		Marine Defense
	\$400.00 million	November, 2022		Logistics
	\$375.00 million	July, 2023		Logistics
	\$301.00 million	August, 2021		Logistics

# 2021 saw a peak in inflated valuations in the Robotics sector

## Logistics and Defense applications stand out especially



22 unicorns

representing \$44B+ in market value

# Technology enablers are driving the overall robotic technology market

## Technologies

### Robot Software



DEXTERITY



### End Effectors



### Cameras, Imaging & Visioning



ZIVID



### Controllers



FORT  
Robotics

sereact  
AI Robot Automation

### Simulation & Programming



UNIVERSAL  
ROBOTS

### Sensors



CEPTON



### Microprocessors & SOCs

ACCELERATION ROBOTICS

HAILO



### Motion Control

Kollmorgen



micropsi  
industries















# Industry Application Deep Dive

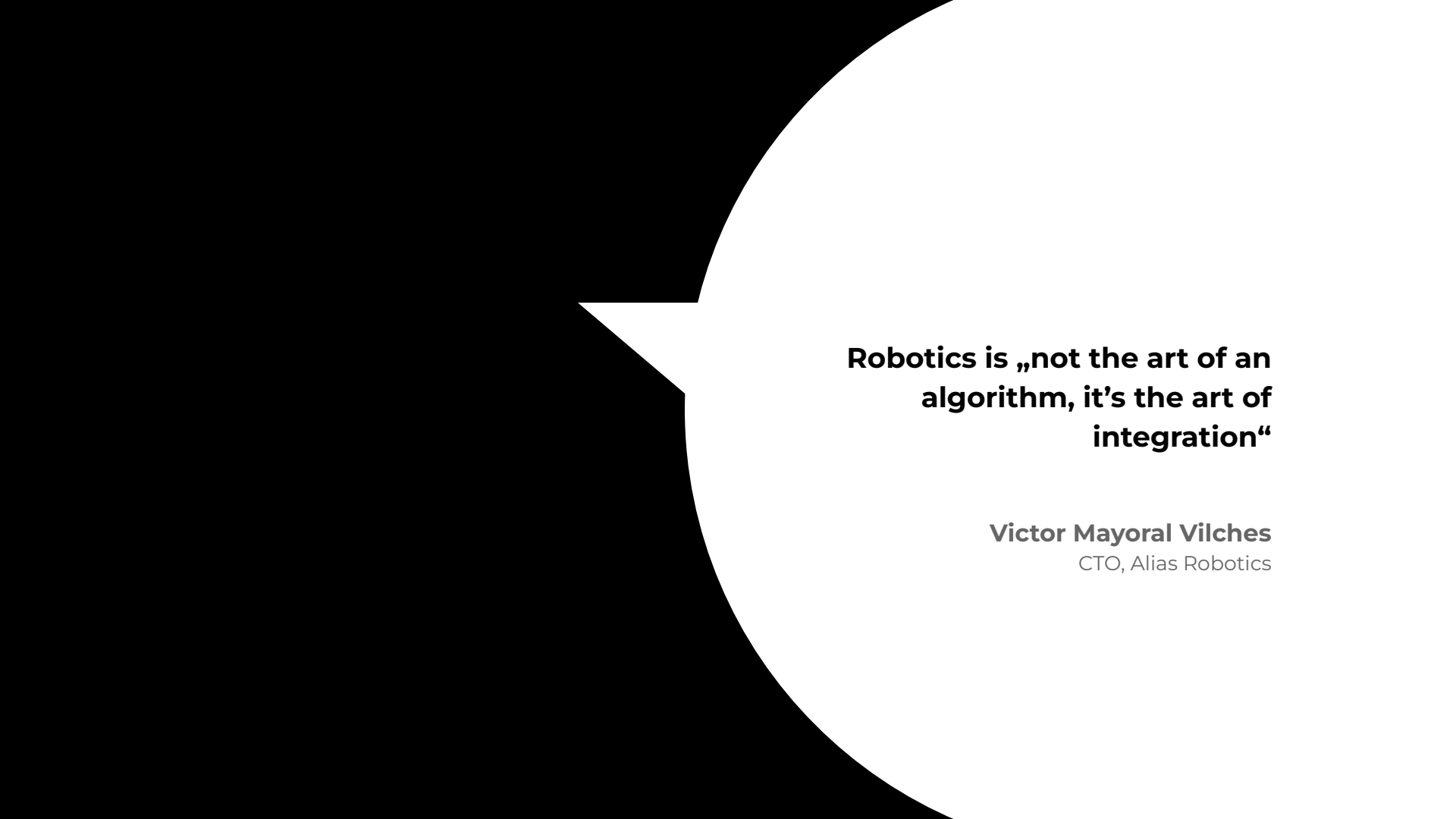




# Startups develop robots to target specific problems in key industries

## Industry-Specific Applications

Logistics	Healthcare	Agriculture	Advanced Manufacturing	Mining	Defense	Mobility
 <p>Autonomous Intralogistics Systems</p>	 <p>Medical Robots</p>	 <p>(Indoor) Farming Monitoring System</p>	 <p>AI-Controlled Robots for working alongside Humans</p>	 <p>AI-Controlled Robots for harsh environments</p>	 <p>Autonomous unmanned systems and sensors</p>	 <p>Autonomous Delivery Robots</p>
 <p>Semi-autonomous Delivery Robots</p>	 <p>Neurosurgical Robot</p>	 <p>Indoor Farming Provider</p>	 <p>Automated Welding</p>	 <p>DeepSea Mining Robots</p>	 <p>Terrestrial Robots</p>	 <p>Computer Vision for AVs</p>

A large white speech bubble is centered on a black background. The bubble has a tail pointing towards the bottom-left corner. Inside the bubble, there is a quote in bold black text and the name and title of the speaker below it.

**Robotics is „not the art of an  
algorithm, it’s the art of  
integration“**

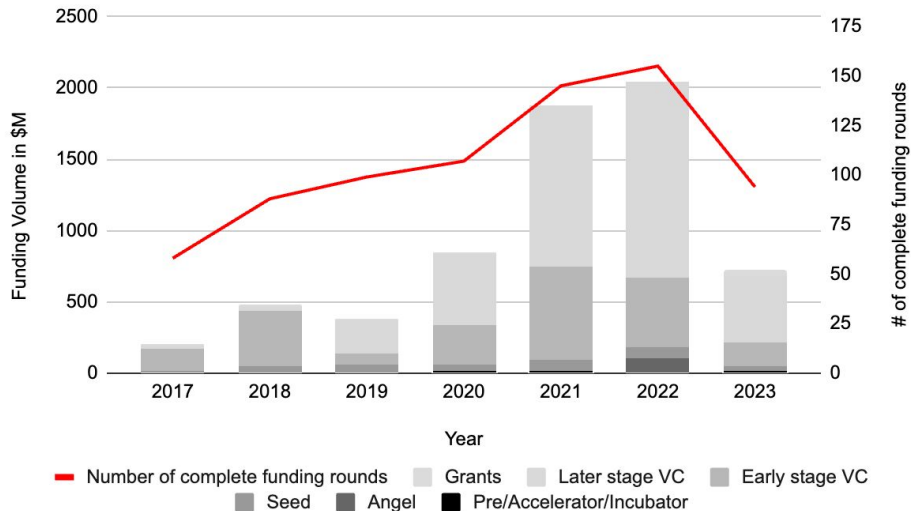
**Victor Mayoral Vilches**

CTO, Alias Robotics

# Logistics

How will robots reshape the future of supply chain management and efficient product delivery?

# Logistics applications have been an investing bright spot over recent years with the most unicorns in this sector



# of Companies  
total / funded

**475 / 332**

# of Exits  
IPOs / M&As / Buyouts

**15 / 39 / 8**

# out of business

**20**

Investment Volume  
Funding in 2023

**\$724.02M**

**Notable Corporates:**

**Notable Exits:**

**\$375M**  
SoftBank

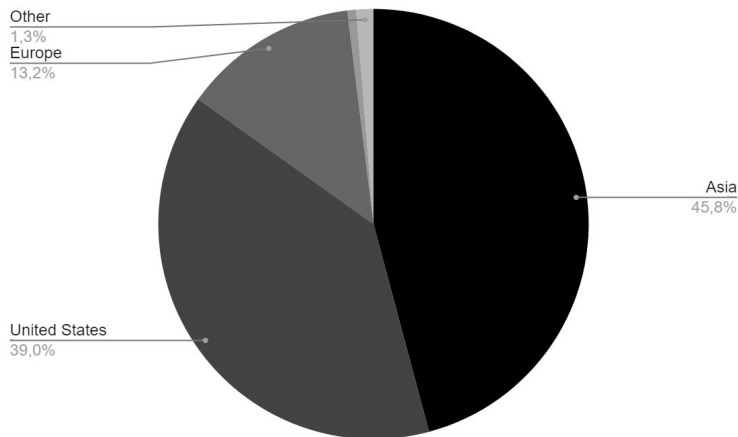
**\$301M**  
Zebra Technologies

**Notable Investors:**

# A majority of logistics robotics startups are located in Asia and receive the majority of funding

## Capital Invested by Global Region

by region in %

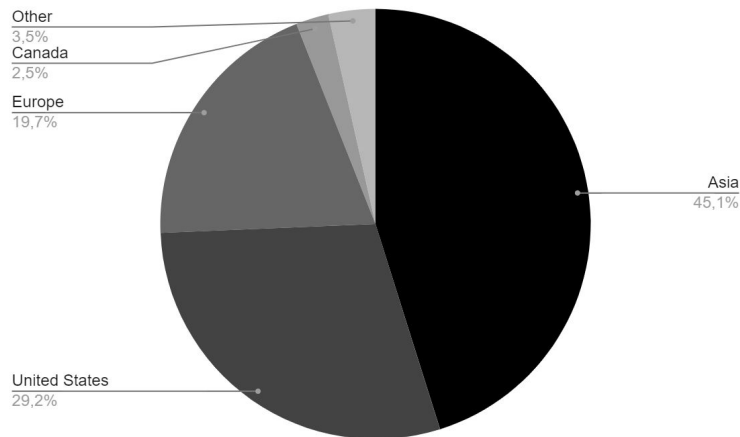


### Take-away

**50% of VC-backed startups** in the segment are located in Asia. The **largest funding rounds** also go to **Asian startups**.

## Deal Count by Global Region






by region in %












### Take-away

While **European startups** receive **almost 20% of deals** the **ticket sizes are much smaller** compared to US investments.

# Major Investments in the Logistic Robotics segment

	Business Model	Investors	Investment Stage
	Exotec develops <b>order preparation tech</b> using a <b>fleet of collaborative mobile robots</b> that <b>work alongside humans to optimize warehouse logistics</b> , reducing travel distances and boosting productivity.	Bpifrance, Goldman Sachs Growth Equity, iris Capital, Breega, Dell Technologies Capital and others	\$333.01M Series D
 海柔创新	HaiRobotics specialises in <b>developing robots and artificial intelligence algorithms</b> to <b>improve and optimise warehouse operations</b> , such as automating warehouse functions and streamlining processes.	Capital Today, 5Y Capital Sequoia Capital China, Source Code Capital and others	\$169.00M Series D
	Intelligent <b>warehouse logistics system</b> and AI robots for <b>automating manual labor in warehouses and factories</b> . The AI-based system communicates with warehouse robots for tasks like <b>selecting, transporting, and sorting goods, optimizing warehouse management</b> .	NewMargin Capital, Jiangxi Cultural Industry Investment and others	\$189.33M Later Stage
	Agile Robotics develops <b>bipedal walking robots with human-like capabilities for versatile real-world applications</b> , offering automation solutions that can <b>work alongside people</b> without the need for extensive programming or modifications to environments.	Amazon Industrial Innovation Fund, Playgroup Global, DCVC, Sony Innovation Fund & others	\$150.00M Series B
	Developer of <b>robotics technology for enhancing logistics and warehouse automation</b> , realizing high-flexibility and intelligent solutions with reliable, <b>one-stop, enterprise-level services</b> with a strong technological foundation, customer focus, and quality after-sales support.	Morgan Stanley Tactical Value, GGV Capital, D1 Capital Partners, Intel Capital and others	\$150.00M Series C

# Top 10 Investors by Deal Count

Investor Name	Deal Count	HQ Location	Notable Portfolio Companies
	32	USA	Dexterity, Seegrid, PlusOne Robotics
	18	USA	Farcast, Airspace Link, F-Drones
	17	USA	Astrobotic, New Frontier Aerospace, Parallel Flight Technologies
	13	China	VisionNav Robotics, Elite Robot, Sirius Robotics
	12	USA	Diligent Robotics, Righthand Robotics, Roboligent
	12	USA	Apex.AI, Third Wave Automations, Pickle Robotics
	9	Japan	SkyDrive, Matternet, Lexxpluss
	9	China	Hai Robotics, Sirius Robotics, Agile X Robots
<b>Sony Innovation Fund</b>	9	Japan	Agility Robots, Verity, Matternet
	8	USA	Diligent Robots, Kewazo, Dextrous Robotics

## Filics GmbH

<b>Search Field</b>	Intralogistics Pallet Handling
<b>Location</b>	Munich, DE
<b>Year Founded</b>	2019
<b>Funding in \$ Mn.</b>	Undisclosed
<b>Last Round</b>	Seed (07/2023)
<b>Investors</b>	Capnamic, 10XFounders, Bayern Kapital, Business Angels
<b>Website</b>	<a href="https://filics.eu">Filics.eu</a>

### Business Overview

- New generation of **autonomous mobile robots** (AMR) for **intralogistics**
- Improves multiple processes significantly
- Fast scaling through **modular approach** & **HaaS** business model

### Use case & customers

- Every company that produces or moves physical products is a pot. customer
- All horizontal pallet movements incl.:
- **Block-storage densification** (up to 70 %)
- 100% **auton. truck (un)loading** (12x faster)

### Similar Companies

- **Agilox** (2017, PE (Undisclosed) Raiffeisen OÖ Invest, Carlyle)
- **Kiva Systems** (2012, Acquired (\$678M), Amazon)

## Business Overview

- Provide **semi-autonomous**, human monitored **delivery robots as a service** for on-demand urban logistics
- The **trike sized robots** are electrically powered and can **carry a 100 kg payload**, go **up to 20 km/h** and have a **range of 135 km**

### Use case & customers

- The company is actively **looking for pilot projects** and customers and has **already deployed** their **robots** on various **campuses in Berlin** for last mile deliveries
- The robots can also be **used for same-day deliveries**

### Similar Companies

- **Alpha Asimov Robots** (2021, Grant (Undisclosed), Qualcomm, Touchstone Partners)
- **Nuro** (2016, Secondary Transaction (\$2.13B), GV, Softbank, Greylock Partners and others)

## Theo

<b>Search Field</b>	Urban Logistics, Contactless Delivery, Bot-as-a-Service
<b>Location</b>	Berlin, DE
<b>Year Founded</b>	2021
<b>Funding</b>	\$0.11M (Accelerator/Incubator)
<b>Last Round</b>	\$5.95K (04/2021)
<b>Investor</b>	Entrepreneur First, EIT KIC Urban Mobility
<b>Website</b>	<a href="https://heytheo.co">heytheo.co</a>



Logistics

Logistics

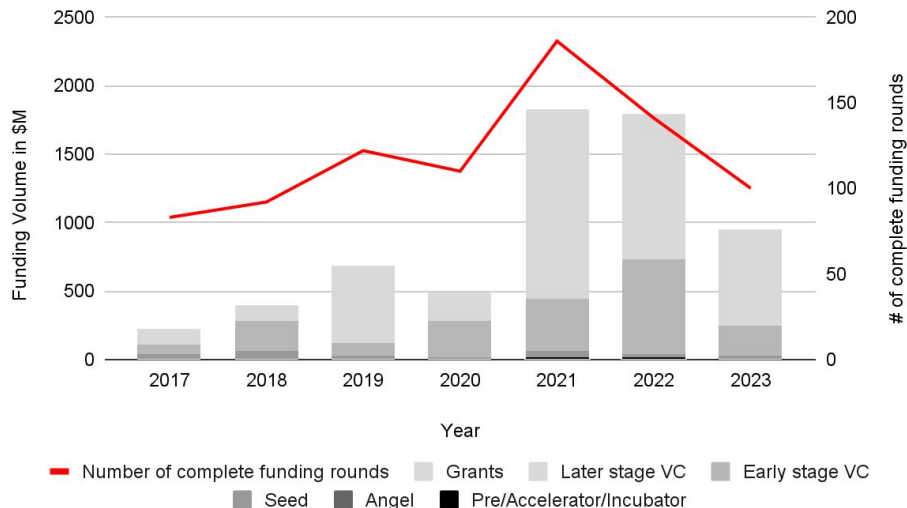
*THEO*



# Healthcare

Will robots play a pivotal role in revolutionizing medical treatments and enhancing patient care?

# Funding in Healthcare Robotics took off during the pandemic to decrease human labor in healthcare facilities



# of Companies total / funded

**506 / 345**

# of Exits IPOs / M&As / Buyouts

**23 / 58 / 13**

# out of business

**20**

Investment Volume Funding in 2023

**\$947.39M**

**Notable Corporates:**

**Notable Exits:**

**\$1.6B** Medtronic

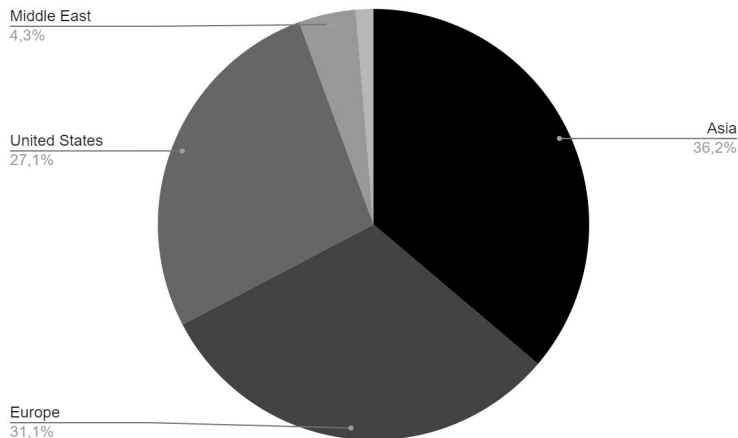
**\$5.75B** Johnson & Johnson

**Notable Investors:**

# Funding is evenly distributed among the three major geographies with the Middle East on the rise

## Capital Invested by Global Region

by region in %

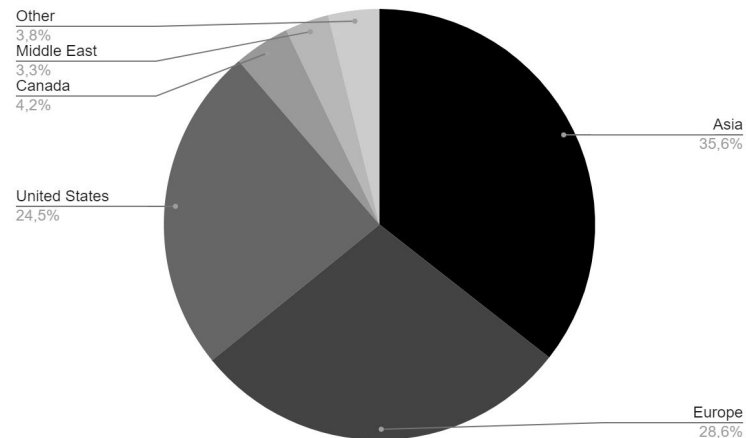


### Take-away

Funding is **equally split** between **Asia**, **Europe** and the **US**. **Major deals** can be **found across all three regions**.

## Deal Count by Global Region






by region in %













### Take-away

The **Middle East**, especially **Israel**, is becoming a **prominent region for investments** in healthcare robots.

# Major Investments in the Healthcare Robotics segment

	Business Model	Investors	Investment Stage
	Developing and providing <b>affordable surgical robotic systems that expand the scope of minimally invasive surgeries</b> , aiming to make advanced healthcare accessible to a broader patient population while generating revenue primarily from system sales and associated services.	Ally Bridge Group, SoftBank, Investment Advisers	\$607.22M Series D
	<b>Developing and supplying adaptable collaborative robots tailored for life science research automation</b> , with a focus on enhancing research efficiency and providing flexible laboratory automation solutions to clients in the sector.	Asia Investment Capital, GGV Capital, Goldman Sachs Asset Management and other	\$300.00M Series C
	Offering a <b>soft tissue surgery robot platform that leverages advanced robotics and digital solutions to optimize surgical specialties</b> , improve patient outcomes, and disrupt the field of surgical care in China, ultimately enhancing surgery efficiency and precision.	LongRiver Investments, Lilly Asia Ventures, GGV Capital and other	\$300.00M Series B
 <b>Distalmotion</b>	Distalmotion manufactures Dexter, a <b>surgical device that simplifies robotic surgery, enhancing surgeons' capabilities in minimally invasive procedures</b> within the abdominal cavity and improving patient care and access to advanced surgical techniques.	Revival Healthcare Capital, 415 CAPITAL	\$154.99M Series F
 <b>Noah Medical</b>	Developing <b>medical robotic devices aimed at enabling early diagnosis and treatment across various medical indications</b> , ultimately improving patient outcomes and reducing scarring while revolutionizing healthcare.	SoftBank Group, Prosperity7 Ventures, Olympus and other	\$150.00M Series B

# Top 10 Investors by Deal Count

Investor Name	Deal Count	HQ Location	Notable Portfolio Companies
	17	France	Barrett Capital, SpringActive, Diligent Robotics
	15	USA	eCential Robotics, Quantum Surgical, Wandercraft
	10	China	Noah Medical, Yuanhua Technology, Benyao Technology
	10	China	Cornerstone Robotics, Abrobo, HOZ Medical
	9	Israel	Momentis Surgical, Bionaut, Tamar Robotics
	9	Belgium	Deneb, BaseCamp Vascular, Medical Microinstruments
	8	China	Cornerstone Robotics, Agilis Robotics, Cladogram Technology
	8	China	Ronovo Surgical, Cornerstone Robotics, Pinnacles Medical
	8	USA	Endoquest Robotics, Necois, ForSight Robotics
	8	Switzerland	AOT, Emovo, Distalmotion

## Ophthorobotics

<b>Search Field</b>	Medical Robot, Iris Scanner, Drugs Injecting Robot
<b>Location</b>	Zurich, CH
<b>Year Founded</b>	2014
<b>Funding</b>	\$0.03M (Accelerator)
<b>Last Round</b>	\$0.03 (02/2017)
<b>Investor</b>	Novartis, Venture Kick
<b>Website</b>	<a href="http://ophthorobotics.com">ophthorobotics.com</a>

### Business Overview

- Developing **medical robotics for administering high-precision eye injections**, offering **treatment for chronic ophthalmic diseases, incorporating iris scanning technology** for patient identification and continuous eye tracking
- Spin-out of **ETH Zurich Foundation**

### Use case & customers

- Ophthorobotics robot assists in administering eye injections, particularly for patients with **age-related retinal diseases such as macular degeneration, reducing the reliance on specially trained doctors**

### Similar Companies

- **Preceyes** (2011, Acquired (Undisclosed), ZEISS)
- **Keranova** (2015, Series B (\$26,59), Financière Arbevel, Mérieux Equity Partners and other)

## Business Overview

- Developing a **portable MRI-compatible surgical robot** that enhances precision and efficiency in **neurosurgery**, improving patient outcomes for functional brain disorders
- Spin-out of the **PracticePoint R&D Center** at Worcester Polytechnic Institute in Boston

### Use case & customers

- AiM's robots bring a **high level of precision in surgical procedures** around brain tumors
- Last year **announced their prototype** and have already **begun preclinical trials**

### Similar Companies

- **Stella Medical** (2019, Accelerator (Undisclosed), Xpreneurs)
- **Virtuoso Surgical** (2016, Later Stage VC (\$28.56M) Johns Hopkins Technology Ventures)

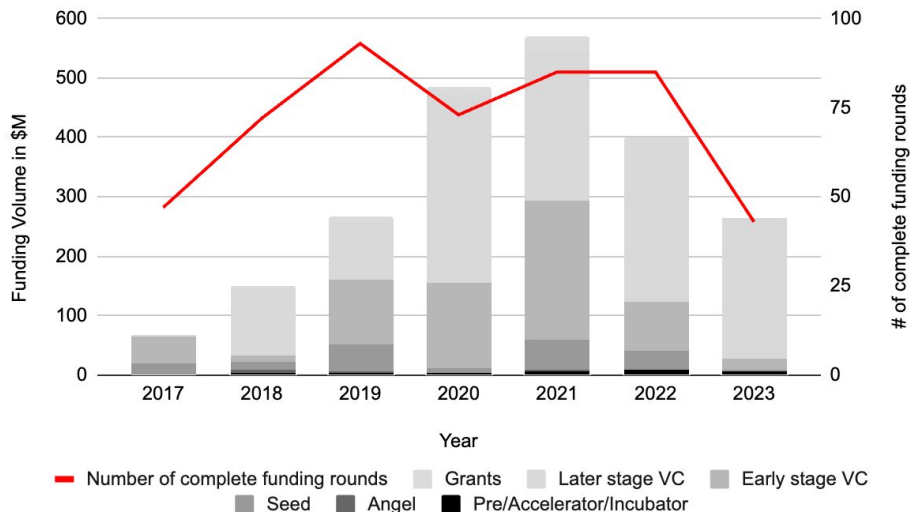
## AiM Medical Robotics

<b>Search Field</b>	Neurosurgical Robots, MRI Scanner, Medical Robots
<b>Location</b>	Worcester, USA
<b>Year Founded</b>	2018
<b>Funding</b>	\$4.10M (Later Stage VC)
<b>Last Round</b>	\$0.70M (06/2023)
<b>Investor</b>	IQ Capital Partners, Sontag Innovation Fund and others
<b>Website</b>	<a href="http://aimmedicalrobotics.com">aimmedicalrobotics.com</a>

# Agriculture

Can robots transform the farming industry and address global food production challenges?

# Funding in the Agriculture Robotics segment has been focussed on early stage investments in recent years



# of Companies total / funded

**272 / 176**

# of Exits  
IPOs / M&As / Buyouts

**3 / 22 / 2**

# out of business

**24**

Investment Volume  
Funding in 2023

**\$263.26M**

**Notable Corporates:**

**Notable Exits:**

**\$284M**  
John Deere

**\$250M**  
John Deere

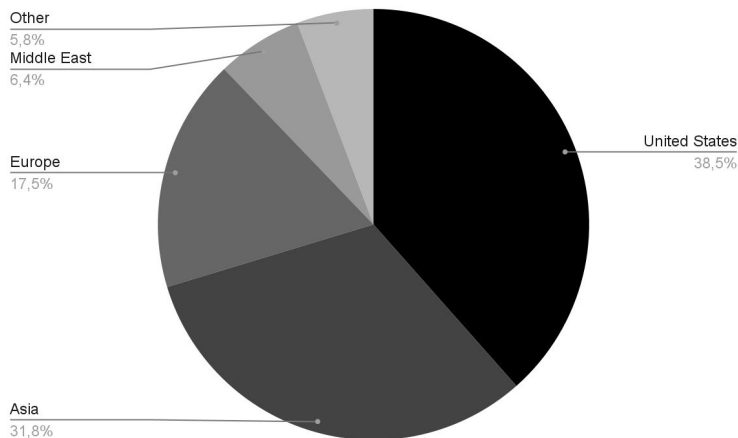
**Notable Investors:**



# Europe holds the most number of startups in agriculture robots but receives strikingly little funding

## Capital Invested by Global Region

by region in %

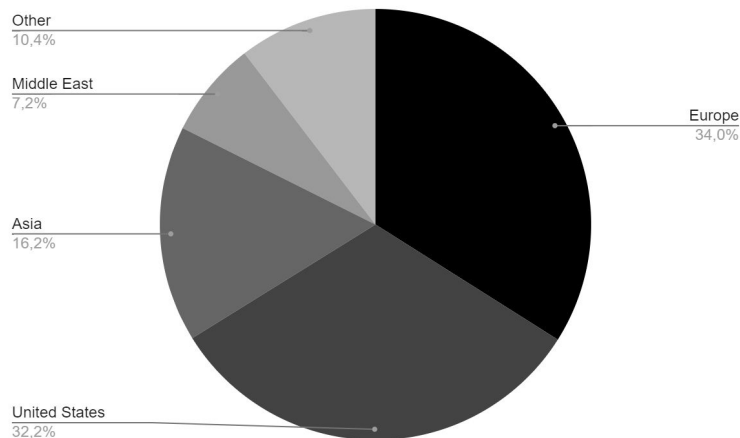


### Take-away

Asia shows **high investment volumes** due to **increasing demand for automation** in food production.

## Deal Count by Global Region






by region in %













### Take-away

**Vertical Farming startups** have mostly **relocated to the Middle East** mainly due to lower energy costs.

# Major Investments in the Agriculture Robotics segment

	Business Model	Investors	Investment Stage
	Bowery operates <b>smart indoor farms near cities, leveraging robotics and advanced technology</b> to grow organic, pesticide-free products and reduce waste. Serving consumers and businesses.	Fidelity Management & Research, Monogram Capital Partners, Lewis Hamilton and others	\$320.73M Series C
	Automated <b>vertical farming platform using robotics, AI, and cultivation technology to grow sustainable, nutrient-rich foods and medicines</b> , generating revenue through platform sales and produce sales.	Fortistar, Santa Clara Ventures	\$83.50M Series A
	Offers an <b>automated vertical farming platform using robotics, AI, and cultivation technology to grow sustainable, nutrient-rich foods and medicines</b> , generating revenue through platform sales and produce sales.	Insight Partners, Meitav Dash Investments, Israel Innovation Authority and others	\$80.00M Series C
	Developing <b>logistics robots for agriculture, incorporating technologies like big data, IoT, deep learning, unmanned driving, and machine vision</b> . These robots enhance productivity and efficiency in the agricultural industry, potentially generating revenue through robot sales.	Tencent, Shenzhen Capital Group, Alpha Win Capital, ISVI and others	\$70.00M Series B
	Iron Ox <b>employs robotics and plant science to sustainably grow fresh produce, reducing environmental impact</b> and resource reliance, with revenue generated from produce sales and farming solutions.	Breakthrough Energy Ventures, Pathbreaker Ventures and others	\$53.00M Series C

# Top 10 Investors by Deal Count

Investor Name	Deal Count	HQ Location	Notable Portfolio Companies
 <b>THRIVE</b> by SVG VENTURES	24	USA	Farmwise, Tortura AgTech, EcoRobotix
 <b>Innovate UK</b>	15	UK	Muddy Machines, Small Robot Company, Xihelm
 <b>PLUGANDPLAY</b>	9	USA	Soft Robotics, SwarmFarm Robotics, Agointelli
 <b>NSF</b>	8	USA	Soft Robotics, Tortuga AgTech, Harvest CROO Robotics
 <b>artesian</b>	7	Australia	Swarm Farm Robotics, Lyro Robotics, Agrolabs
 <b>רשות החדשנות Israel Innovation Authority</b>	7	Israel	Beewise, Edete Precision Technologies for Agriculture, Automata Robotics
 <b>SUSV</b>	7	USA	Things Robotics, Tensorfield Agriculture, Forward Robotics
 <b>SUSTAINABLE DEVELOPMENT TECHNOLOGY CANADA TECHNOLOGIES DU DÉVELOPPEMENT DURABLE CANADA</b>	7	Canada	Precision AI, Ecoation, Nexus Robotics
 <b>eit Food</b>	6	Belgium	Fieldwork Robotics, Crover, Terra Robotics
 <b>ENTRÉE CAPITAL</b>	6	Israel	Blue White Robotics, Harvest Automation, Blue White Robotics

## Vertum Technologies

<b>Search Field</b>	Agriculture Technology
<b>Location</b>	Boston, USA
<b>Year Founded</b>	2021
<b>Funding</b>	\$0.10M (Accelerator)
<b>Last Round</b>	\$0.10M (09/2022)
<b>Investor</b>	THRIVE by SVG Ventures, MassChallenge, Harvard Innovation Labs
<b>Website</b>	<a href="https://vertum.tech">Vertum.tech</a>

### Business Overview

- Accelerated by **Harvard Innovation Labs**
- Engineers **assistant robots for agriculture** to improve the profitability and sustainability of **indoor and vertical farms**
- They have also **built an outdoor farming system** to **monitor crop health**, water usage and fertilization

### Use case & customers

- Indoor farmers can boost revenue by over 25% while **reducing emissions, water usage, and mineral waste** in fertilization by **detecting plant diseases**, minimizing crop losses, and **optimizing fertilization**

### Similar Companies

- **Biointelligenza** (2016, Accelerator (Undisclosed), Cycle Momentum)
- **Squarefruit** (2013, Accelerator (undisclosed), IDEA Labs)

## Business Overview

- Operates in **controlled environment agriculture, using plant science, machine learning, and robotics** to grow sustainable vegetables

### Use case & customers

- **Amazon** is selling leafy greens from Hippo Harvest, to their **Amazon Fresh online customers** and in **selected markets in San Francisco**

### Similar Companies

- **Eden Towers** (2019, Angel (\$1.10M), Tara Management and other)
- **Fieldless** (2017, Series A (\$19.73M), Forage Capital Partners and other)

## Hippo Harvest

<b>Search Field</b>	AgTech, Climate Tech, CleanTech
<b>Location</b>	Half Moon Bay, USA
<b>Year Founded</b>	2019
<b>Funding</b>	\$13.00M (Series A)
<b>Last Round</b>	\$11.00M (02/2021)
<b>Investor</b>	Amazon, Climate Pledge and Energy Impact Partners
<b>Website</b>	<a href="https://hippoharvest.com">hippoharvest.com</a>



AgTech



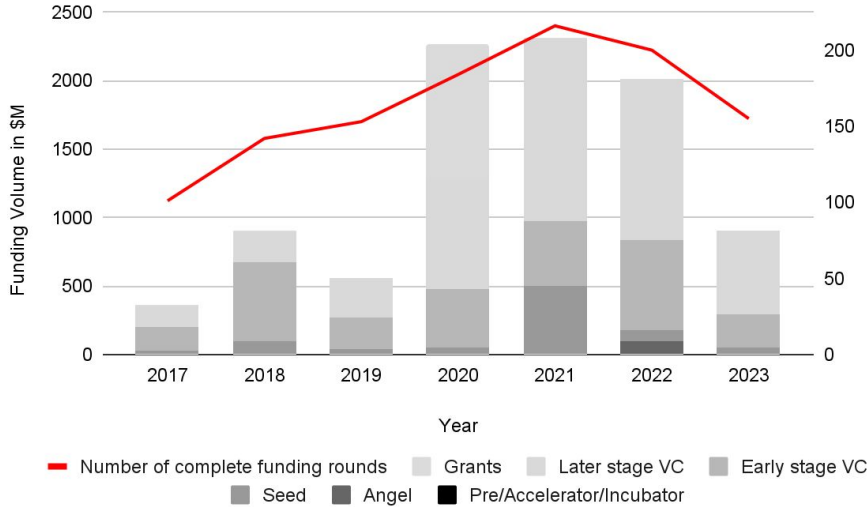
AgTech



# Advanced Manufacturing

How will Robots enable us to  
manufacture goods more efficiently?

# Steep increase in investment in manufacturing robotics in 2020 and 2021, now facing slight decline



# of Companies  
total / funded

**647 / 514**

# of Exits  
IPOs / M&As / Buyouts

**26 / 32 / 9**

# out of business

**14**

Investment Volume  
Funding in 2023

**\$905.24M**

**Notable Corporates:**

**Notable Exits:**

**\$132.94M**  
SSE

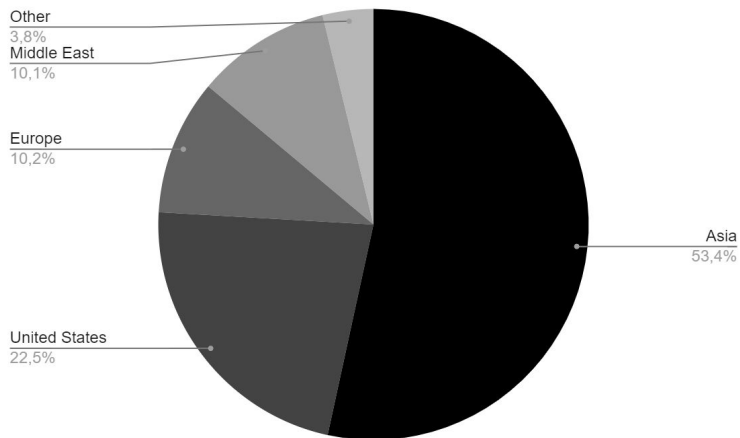
**\$194.62M**  
Cognex

**Notable Investors:**

# Asia clearly dominates the Advanced Manufacturing segment receiving over half the investment volume

## Capital Invested by Global Region

by region in %

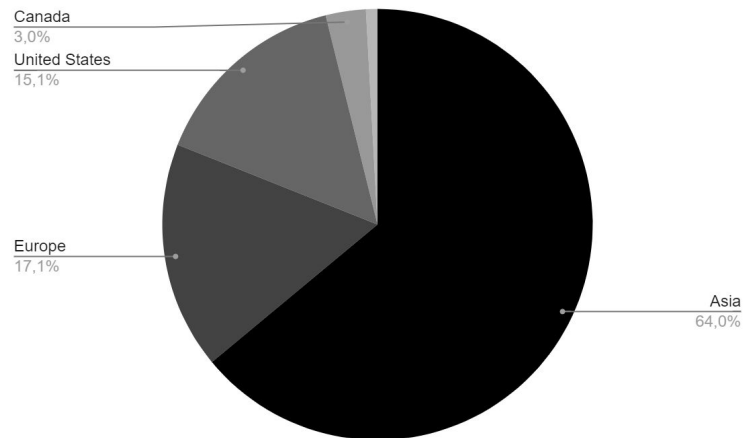


### Take-away

**APAC region** with the **highest investments** as it accounts for nearly **48.5% of the worldwide manufacturing output**.

## Deal Count by Global Region

by region in %








### Take-away

In manufacturing, **disruptive technologies** could **increase profit margins** and **lower costs**, creating up to **\$45 billion** of annual economic impact in ASEAN **by 2030**.













# Major Investments in the Manufacturing robotics segment

	Business Model	Investors	Investment Stage
	<p>Bright Machines <b>develops automation software that assists businesses in meeting manufacturing demands.</b> Their software utilizes AI, machine learning, and production data to <b>create adaptable, sensor-rich robots with computer vision.</b></p>	<p>Eclipse Ventures, Silicon Valley Bank, Hercules Capital BDC and other</p>	<p>\$132.00M Series B</p>
	<p>Creates an <b>AI-based software for the robotics industry, supporting the development, deployment, and maintenance of autonomous machines</b> in various commercial applications, facilitating the creation of robots that navigate safely and efficiently in indoor public spaces.</p>	<p>SoftBank Investment Advisers, Qualcomm Ventures, Herkules Capital and other</p>	<p>\$114.00M Series C</p>
	<p>Develops <b>robotic systems for industrial automation</b>, utilizing embedded computer vision to handle complex, unstructured environments and perform a variety of tasks while ensuring safe collaboration with humans, thereby <b>enhancing industrial process automation</b> and efficiency.</p>	<p>Meituan, New Hope Group, and Zizhu Xiaomiao PE, Yunfeng Capital and other</p>	<p>\$100.00M Series B</p>
	<p><b>AI-based machine vision solutions for intelligent manufacturing</b>, manufactures advanced materials for semiconductor production and drug development, and <b>provides manufacturing robots.</b> They <b>address technical gaps in the domestic semiconductor industrial robot field.</b></p>	<p>Cowin Capital, CMB International Capital, Tianma Bearing Group Company and other</p>	<p>\$92.53M Later Stage</p>
	<p><b>Autonomous mobile robots for manufacturing, warehousing, logistics, and material handling.</b> Seegrid offers smart robotics solutions, including autonomous industrial vehicles and enterprise software, to <b>enhance throughput, safety, and labor cost efficiency for clients.</b></p>	<p>Giant Eagle, Leaders Fund, Plug &amp; Play, Carnegie Mellon</p>	<p>\$149.03M PE Growth</p>



# Top 10 Investors by Deal Count

Investor Name	Deal Count	HQ Location	Notable Portfolio Companies
	29	USA	Flexiv, Seegrid, Grabit
	22	USA	Surface RoboPilot
	21	UK	Rivelin Robotics, Insphere, Q-Bot
	16	China	Elite Robot, Atomrobot, Direct Drive Tech
	16	China	FAIR Intelligent, Han
	15	China	Golytec Automation, Youibot Robots
	14	China	Surface RoboPilot
	13	China	Mech-Mind, Unitree, We-i-Build Technology
	13	USA	Soft Robotics, AMBOTS, Love Park Robotics
	12	China	Lv Zhou Technology, Matrixtime, Xinehebot

## ARE23

<b>Search Field</b>	Advanced Manufacturing, Artificial Intelligence & Machine Learning, Robotics and Drones
<b>Location</b>	Gilching, DE
<b>Year Founded</b>	2022
<b>Funding</b>	\$0.06M (Accelerator)
<b>Last Round</b>	\$0.06M (02/2022)
<b>Investor</b>	ESA Business Incubation Centre Bavaria
<b>Website</b>	<a href="http://are23.com">are23.com</a>

### Business Overview

- Technology developer which **uses AI, ML and robotics to improve human skills. Enables skilled workers to work alongside robots**, initially for **industrial-scale interior surface coating, with potential for other applications** that offer increased efficiency, improved user experience and cost savings for customers.

### Use case & customers

- Their Robot **NOVA-S** is an affordable and user-friendly **Spraybot designed to automate painting processes, streamlining daily tasks with ease.**

### Similar Companies

- **ANYbotics** (2016, Series B (\$71.90M), Walden Catalyst, NGP Capital and others)
- **Sensyn Robotics** (2015, Later Stage (\$32.88M), Eneos Innovation Partners & others)

## Business Overview

- Creates **automated welding machines** that **cut metal faster and more efficiently**. Their technology is designed for **straight-cut pipes**, flanges, collars, and bends, **reducing welding** time and safeguarding workers from back pain and toxic welding smoke.

### Use case & customers

- Their WeldingDroid X2, an efficient **4-axis welding robot** for pipes and tanks, has **revolutionized pipe welding** by simplifying the process for welders, enhancing efficiency, quality, and **cost savings** with each weld.

### Similar Companies

- **S-T Intelligence** (2021, Series A (Undisclosed), TFTR Investment)
- **Fynbo Technology** (2020, Early Stage (\$0.12M), Undisclosed)

## WeldingDroid

<b>Search Field</b>	Automated Welding, Advanced Manufacturing, Robotics and Drones
<b>Location</b>	Vejen, DK
<b>Year Founded</b>	2019
<b>Funding</b>	\$0.91M (Early Stage)
<b>Last Round</b>	\$0.31M (12/2021)
<b>Investor</b>	Thomas Jensen, Jacob Risgaard, Guerilla capital
<b>Website</b>	<a href="http://weldingdroid.com">weldingdroid.com</a>

ARE 23

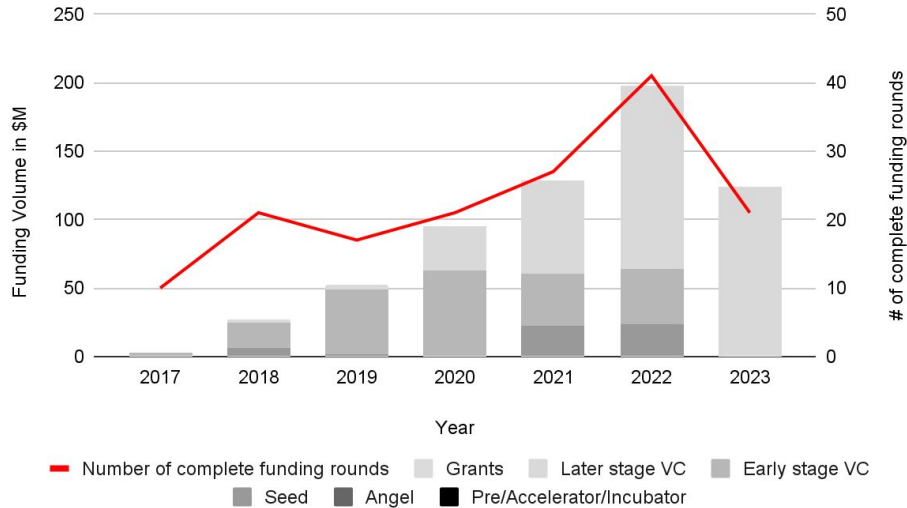
Manufacturing

Automated  
Welding

# Mining

How will Robots be used in the mining industry?

# Steady increase in Mining Robotics investments with highest investment peak to date in 2022



# of Companies  
total / funded

**149 / 87**

# of Exits  
IPOs / M&As / Buyouts

**2 / 24 / 3**

# out of business

**12**

Investment Volume  
Funding in 2023

**\$123.62M**

**Notable Corporates:**

**Notable Exits:**

ENGINEERING EXCELLENCE UNDERWATER






**\$175.08M**  
Zhuzhou CSR Times

A Boeing Company

**\$300.00M**  
Boeing

**Notable Investors:**

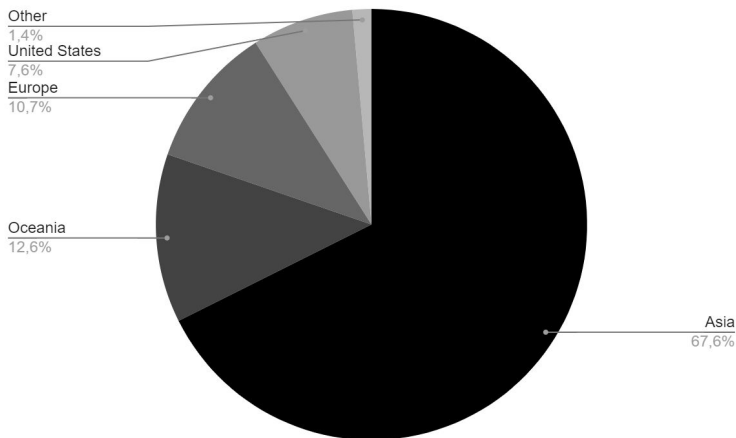
# Major Investments in the Mining Robotics segment

	Business Model	Investors	Investment Stage
	<p>Develops <b>intelligent automated vehicles using cloud-connected automation technology, machine learning, and machine vision</b> to enhance raw material transportation and <b>prevent accidents</b>, offering cost reduction and process automation solutions for the mining industry.</p>	<p>CHN Energy, Hefei Industry Investment Group and other</p>	<p>\$58.02M Series C2</p>
	<p>Specializes in <b>cloud-based intelligent autonomous driving technology</b> for <b>mining and construction</b>, with a <b>focus on creating a robust training data and R&amp;D ecosystem</b> to enhance the quality of autonomous car systems and establish a cloud-based autonomous driving ecosystem.</p>	<p>CICC Capital, Yuexiu Financial Holdings, BOC International</p>	<p>\$47.04M Series C</p>
 TERRA DRONE	<p><b>Industrial drone services for civil engineering and mine surveying</b>, facility inspections, aerial photography, data analysis, and operation management, to both domestic and international markets, <b>facilitating efficient infrastructure project collation, analysis, and interpretation.</b></p>	<p>Tokyu Land, Kyushu Electric Power, Seika, Mitsui &amp; Company, SBI Investment and other</p>	<p>\$45.74M Series B</p>
	<p><b>Drone technology, including the Hovermap platform</b>, for <b>mapping and inspecting underground assets like mines</b>, using LiDAR and autonomous flight capabilities to <b>provide valuable operational insights and safety assessments to the mining industry.</b></p>	<p>Perennial Partners (Funds and Trusts) , TELLUS Ventures, Archangel Ventures and other</p>	<p>\$25.58M Series A</p>
	<p>Develops <b>intelligent industrial drone and UAV systems for low-altitude and ground-level mining</b>, offering sustainable UAVs with advanced analytics capabilities for applications in <b>urban mapping, security, oil and gas, port operations, and logistics</b>, serving various industries.</p>	<p>SIP Joinne MingYuan Venture Capital, Hongtai Capital Holdings, Oriental Fortune Capital and other</p>	<p>\$25.32 Series B</p>

# Asian and Oceanian regions, led by China, spearhead investments in Mining Robotics

## Capital Invested by Global Region

by region in %

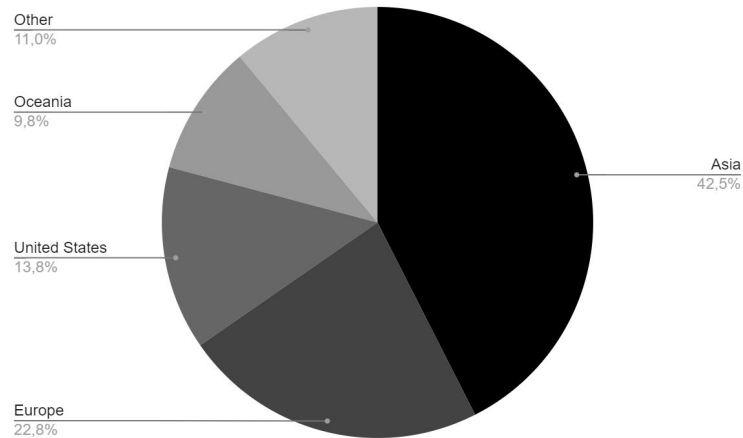


### Take-away

Global Mining **corporate Rio Tinto** and a **vast amount of minerals** and **resources** is driving capital towards Oceania.

## Deal Count by Global Region

by region in %



### Take-away

**European university spin outs** and **early stage robotics companies** are raising several smaller rounds.

# Top 10 Investors by Deal Count

Investor Name	Deal Count	HQ Location	Notable Portfolio Companies
<b>BLACKBIRD</b>	5	USA	Propeller
	5	USA	Carnegie Robotics
 Costanoa Ventures	4	USA	Propeller
	4	USA	CONSTRA, Tumi Robotics
	4	China	Scage, Tsingsens, Waytous
 Combinator	4	USA	Impossible Metals, TransAstra
	3	USA	Propeller, MightFly
	3	USA	Propeller
 Alumni Ventures	3	USA	Kodama Systems, Ghost Robotics
 Baidu.venture 百度风投	3	China	Airlook

## ANT61 Robotics

<b>Search Field</b>	Artificial Intelligence & Machine Learning, Robotics and Drones
<b>Location</b>	Sydney, AUS
<b>Year Founded</b>	2021
<b>Funding</b>	\$0.03M (Accelerator)
<b>Last Round</b>	\$0.03M (10/2022)
<b>Investor</b>	QuantumTX
<b>Website</b>	<a href="http://ant61.com">ant61.com</a>

### Business Overview

- Develops **AI-controlled robots for performing complex tasks in harsh and unpredictable environments**, including deserts, deep mines, oceans, and moon craters, ensuring safety and efficiency while **enabling innovative research and industrialization on Earth and beyond..**

### Use case & customers

- Can be used for space applications that use AI-based control systems to **perform tasks in unpredictable environments where remote control is not possible..**

### Similar Companies

- **OffWorld** (2016, Seed (\$4.00M), Starbridge Venture Capital and others)
- **Space Tango** (2014, Secondary Transaction (\$0.77M), Scalable Ventures and others)

## Business Overview

- Develops **underwater robotic vehicles that collect battery metals from the seabed**, using multiple high-speed manipulators to gather nodules individually and remaining buoyant above the seafloor, facilitating sustainable **seabed harvesting** without habitat destruction.

### Use case & customers

- "Pick and place" manipulator technology for **environmentally friendly deep-sea polymetallic nodule harvesting**
- **Minimizing disturbance to sediment and seafloor ecosystems** while offering scalability and cost-effectiveness..

### Similar Companies

- **Meitai Marine** (2015, Later Stage VC (\$2.77M), Royalpower Investment)
- **Global Sea Mineral Resources** (2012, Corporate (Undisclosed), Transocean)

## Impossible Metals

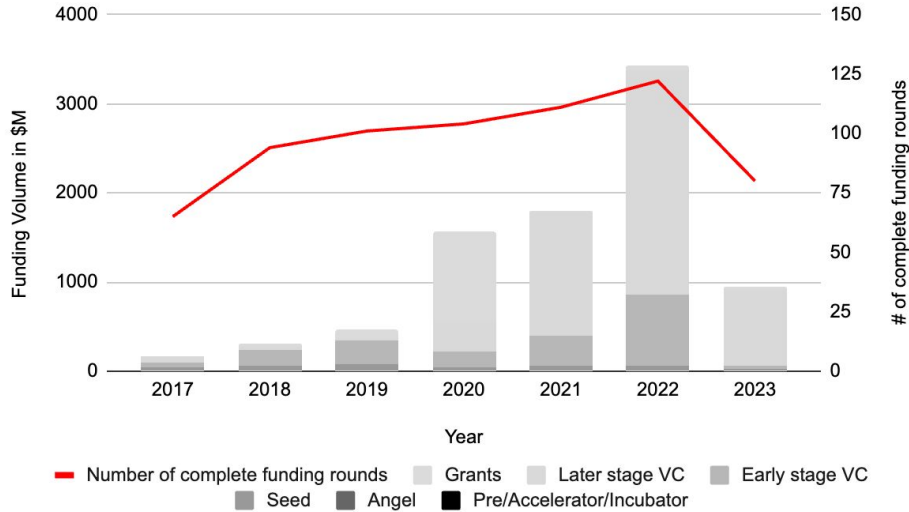
<b>Search Field</b>	CleanTech, Robotics and Drones
<b>Location</b>	Pasadena, CA
<b>Year Founded</b>	2020
<b>Funding</b>	\$10.60M (Seed)
<b>Last Round</b>	\$10.10M (05/2022)
<b>Investor</b>	Y Combinator, Soma Capital Fund, Chalet.vc, and others
<b>Website</b>	<a href="http://impossiblemetals.com">impossiblemetals.com</a>



# Aerospace & Defense

Will Robots help defend  
democracies?

# Investments in Robotics for Aerospace & Defense peaked in 2022 though mega round invested in Anduril



# of Companies  
total / funded

**791 / 373**

# of Exits  
IPOs / M&As / Buyouts

**68 / 143 / 38**

# out of business

**73**

Investment Volume  
Funding in 2023

**\$948.09M**

**Notable Corporates:**

**Notable Exits:**






**\$385.90M**  
FLIR Systems

**\$422.63M**  
AeroVironment

**Notable Investors:**



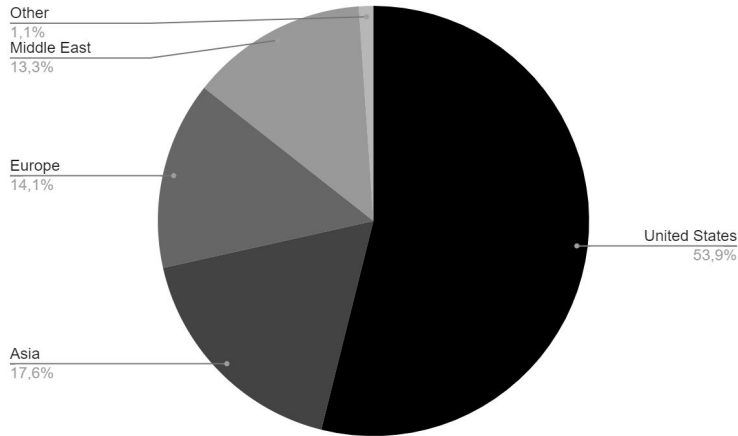
# Major Investments in the Aerospace & Defense segment

	Business Model	Investors	Investment Stage
	<p>Defense technology company that uses virtual and augmented reality algorithms, computer vision, sensors, optics, and automation to address critical challenges in the national security sector, helping clients enhance surveillance and defense capabilities to effectively tackle security issues.</p>	<p>Valor Equity Partners, Spur Capital Partners and others</p>	<p>\$1.48B Series E</p>
	<p>Developer of a first response application that augments reality on high-speed platforms such as drones and cars, enhancing military and emergency operations by overlaying immersive three-dimensional visuals on live videos from fast-moving cameras.</p>	<p>United States Air Force</p>	<p>\$950.00M Grant</p>
	<p>Intelligent Unmanned Drone, Precision Guided Weapons and Unmanned Defence Systems company. Focusing on unmanned aerial vehicles (UAVs) to expand unmanned combat systems and promote the integration and development of unmanned equipment within the military.</p>	<p>Aero Engine Corporation of China, Shangqi Capital China Poly Group and others</p>	<p>\$537.53M Series A</p>
	<p>Company which develops specialised drones for air transport, including unmanned military helicopters and general aviation engines, to support national defence, combat smuggling by customs, inspect the power grid and monitor disasters to improve aviation support in various industries.</p>	<p>Sen Gong Investment Corp, Heilongjiang New industry Investment group, Keli Capital and others</p>	<p>\$290.26M Series D</p>
	<p>Developer of an AI-based drone technology for autonomous systems that enhance mission capabilities, from room clearance to air defense penetration, using integrated AI frameworks and data management, speeding up product development workflows.</p>	<p>Snowpoint Ventures and US Innovative Technology Fund, SVB Capital and others</p>	<p>\$225.00M Series E</p>

# USA and Asia lead Defense Robotics investments with major funding in Anduril

## Capital Invested by Global Region

by region in %

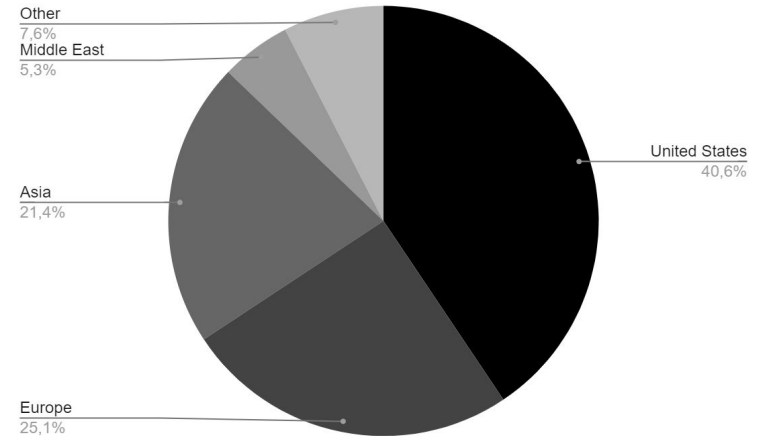


### Take-away

**Anduril's \$1.48 billion** round largely **distorts the funding distribution** so that US is in first place at over 50% of invested capital.

## Deal Count by Global Region












by region in %



### Take-away

**Government entities**, including NASA and the US Department of Defense, play a **pivotal role** in funding aerospace and defense technology sectors.

# Top 10 Investors by Deal Count

Investor Name	Deal Count	HQ Location	Notable Portfolio Companies
	50	USA	Velontra, Drone Express, ResCon Technologies
	27	USA	TransAstra, Astrobotic, Veelo Technologies
	23	USA	ConeLabs, F-Drones, SicDrone
	16	Japan	AVSS, Liberaware, FaroStar
	12	USA	Epirus, Anduril, Edgybees
	12	USA	Anduril, ShieldAI, SkySafe
  European Commission   Horizon 2020 European Union Funding for Research & Innovation	12	Belgium	Defuor Airspace, Palur, Sky-Watch
	12	USA	F-Drones, RED 6
	12	USA	Skyways, TransAstra, Iris Automation
 Innovate UK	11	UK	Barnard Microsystems, Vizgard

## ARX Landysteme

<b>Search Field</b>	Aerospace and Defense
<b>Location</b>	Munich, DE
<b>Year Founded</b>	2021
<b>Funding</b>	\$1.24M (Seed)
<b>Last Round</b>	\$1.24M (09/2023)
<b>Investor</b>	Project A Ventures
<b>Website</b>	<a href="http://arx-landysteme.de">arx-landysteme.de</a>

## Business Overview

- Develops **terrestrial robots, specializing in Atrax**, an EOD robot designed to enhance safety and prevent loss of life for military and security forces by **accessing tight spots, defusing IEDs, and demining areas**

## Use case & customers

- The **robots can be used in versatile fire-fighting**, for high-risk areas, facilitating efficient firefighting through multi-mission capabilities, electric power, and remote control via digital tablets

## Similar Companies

- **Aerodrive Engineering Services** (2017, Early Stage (Undisclosed), UM6P Ventures)
- **Aereo** (2013, Later Stage (\$2.17M), Navam Capital and others)



Defense

## Business Overview

- **Defense technology systems** manufacturer specialized in creating **autonomous unmanned systems and sensors for the European defense sector, to support NATO armies and civilian first responders** in addressing critical challenges

## Use case & customers

- ARX's robotics solutions find **applications in military and civilian sectors**, enhancing safety, productivity, and mission efficiency for Western democracies.

## Similar Companies

- **Rovenso** (2013, Bankrupt (\$3.08M), Hax, SOSV, Venture Kick, Nivalis Group and others)
- **Boston Dynamics** (1992, Acquired (\$880M), Hyundai)

## Shark Robotics

<b>Search Field</b>	Aerospace and Defense
<b>Location</b>	La Rochelle, FR
<b>Year Founded</b>	2016
<b>Funding in \$ Mn.</b>	\$12.08M (Later Stage)
<b>Last Round</b>	\$10.49M (12/2022)
<b>Investor</b>	Move Capital, Ocean Participations
<b>Website</b>	<a href="http://shark-robotics.com">shark-robotics.com</a>

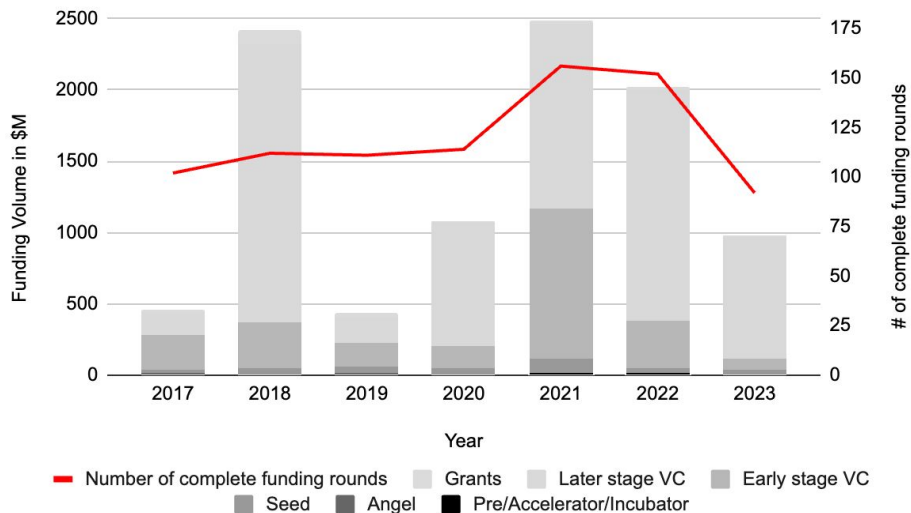
Defense

SHARK robotics

# Mobility

Will robots revolutionize transportation  
and redefine the way of delivery services?

# Mobility: Leading the Funding Race with a Peak of \$2.49B in 2021



# of Companies  
total / funded

**703 / 429**

# of Exits  
IPOs / M&As / Buyouts

**19 / 114 / 38**

# out of business

**0**

Investment Volume  
Funding in 2023

**\$979.18M**

**Notable Corporates:**

Uber Alphabet

**Notable Exits:**






**cruise**   
\$581.00M General Motors      \$454.00M Delphi Automotives

**Notable Investors:**

PLUGANDPLAY



# Major Investments in the Mobility robotics segment

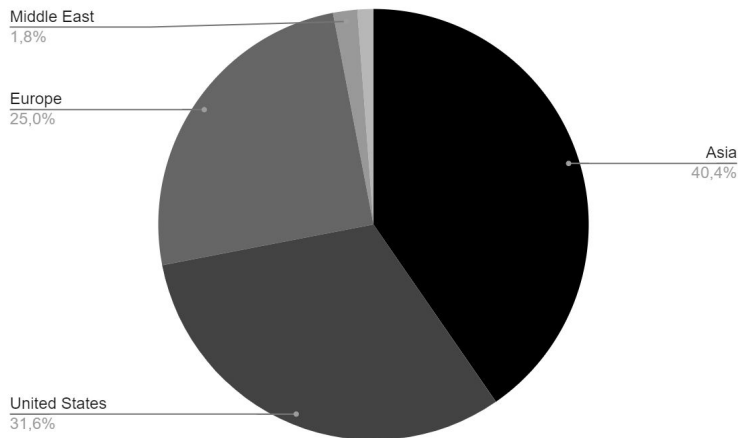
	Business Model	Investors	Investment Stage
	Developer of self-driving technology for on-demand rides, employing integrated sensors and AI to detect pedestrians, cyclists, vehicles, and road conditions, ensuring a safe and enjoyable autonomous travel experience.	Mubadala Capital-Ventures, Silver Lake and CPP Investments, Alphabet and others	\$5.50B Series B
	Developer of a fully autonomous, on-road vehicle designed to transform local commerce through autonomous delivery. The company develops and operates a fleet of electric and fully autonomous vehicles.	Alphabet, GV, Kroger, Softbank, Greylock Partners, and others	\$2.13B Secondary Transaction
	Horizon Robotics focuses on energy-efficient computing solutions for advanced driver assistance systems (ADAS) and autonomous driving (AD), working with partners to develop low-power hardware and open software tools, fostering a smart vehicle ecosystem.	EQT, Chery Automobile, Alpha Win Capital, Eastern Epic Capitals and others	\$1.90B Series D
	Developer of autonomous driving technology that uses AI and algorithms to perceive a vehicle's surroundings, predict driver actions, and enhance vehicle functionality and safety for manufacturers.	Toyota Motor, Teachers' Venture Growth, Plug & Play Tech Center, Sequoia Capital China and others	\$1.09B Series D
	Developer of advanced driver assistance and autonomous driving applications that employ AI and computer vision algorithms to generate precise 3D environment models for safe navigation.	Fidelity Investments Canada, Go Capital, UI Investissement, BDC Capital and others	364.31M PIPE



# Regional Dynamics in Mobility Robotics Investments: EU and Asia Lead in Deal Count, Asia and USA in Capital Investments

## Capital Invested by Global Region

by region in %

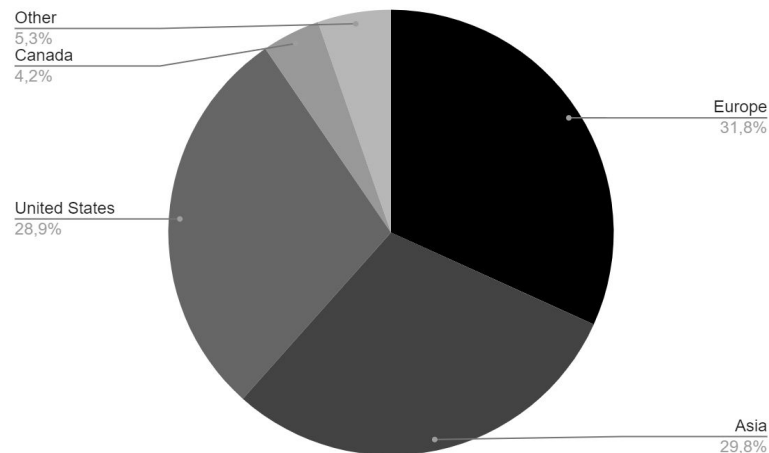


### Take-away

**Asia with 40.4%** and the **United States with 31.6%** dominate capital investments in mobility robotics, reflecting significant financial support and innovation in these regions.

## Deal Count by Global Region











by region in %



### Take-away

**Europe, holding 31.8%** emerges amongst **Asia, holding 29.8%**, as the **two largest investor regions in terms of deal count**, signalling substantial investments and interest in **mobility robotics**

# Top 10 Investors by Deal Count

Investor Name	Deal Count	HQ Location	Notable Portfolio Companies
	29	USA	TOM Robotics, Imperium Drive, Ottonomy
	25	USA	Fortem Technologies, Near Earth Autonomy
	21	USA	Atom Limbs, Aura Intelligent Systems,
	20	UK	DMTech, Urban-Air Port, Volant Autonomy
	18	USA	Vertiq
	16	USA	Alba Robot, sees.ai, Airspace Link
	13	China	MakeBlock, YouiBot Robotics
	11	France	Tesseract Solution, Exote, Wyca Robotics
	11	Japan	Eight Knot, SORA Technology, FaroStar
	10	China	Vertiq

## Hypr

<b>Search Field</b>	AI & ML, Mobility Tech, Robotics and Drones
<b>Location</b>	San Francisco, USA
<b>Year Founded</b>	2021
<b>Funding</b>	\$15.55M (08/2022)
<b>Last Round</b>	\$5.55M (Seed)
<b>Investor</b>	Blackbird Ventures, R7, Andrew Forrest
<b>Website</b>	<a href="https://hypr.ai">hypr.ai</a>

### Business Overview

- Hypr is **developing autonomous mobility systems** that **utilize artificial intelligence robotic systems** to master their environments in real-time without the need for human instruction or supervision, ultimately **facilitating the development of autonomous mobility products**

### Use case & customers

- AVs** can use Hypr's robotic systems with **artificial intelligence to learn and adapt to their environment in real time**, allowing them to **navigate safely and efficiently without constant human intervention**

### Similar Companies

- RoboTech Vision** (2013, Unfunded)
- Spiri Robotics** (2013, Seed (\$1.00M), Undisclosed Investor)

## Business Overview

- Ottonomy offers **contactless delivery services through autonomous robots** with **advanced navigation, sensor integration, and cloud-based monitoring**, benefiting retailers and restaurants by **automating safe and efficient deliveries**

### Use case & customers

- Partnership** with **Goggo Network** and **Posten Norge**
- Improves intra-logistics for city center postal services** and **performs first-mile pick-ups and deliveries**

### Similar Companies

- Starship** (2014, Series B (\$128.20M), 10X Capital, EIB & others)
- Clearpath Robotics** (2009, Acquired (Undisclosed), Rockwell Automation)

## Ottonomy

<b>Search Field</b>	Mobility Tech, Robotics and Drones, SaaS
<b>Location</b>	New York, USA
<b>Year Founded</b>	2019
<b>Funding</b>	\$4.62M (04/2023)
<b>Last Round</b>	\$3.34M (Seed)
<b>Investor</b>	Plug and Play Tech Center, ADR Ventures, Inventus Law
<b>Website</b>	<a href="https://ottonomy.io">ottonomy.io</a>

**HYPR**

Mobility

Mobility

 OTTONOMY.IO™

# SUMMARY

**1.**

**Programming of robots by non-technical staff through low-code programming applications and demonstration learning.**

**2.**

**Startups concentrate more and more on self-contained industry applications, e.g. robots developed specifically for warehouses, medical procedures, agriculture & construction sites.**

**3.**

**Robot-as-a-Service business models are promising for early-stage, but require large upfront investments as they are asset intensive.**

## **SUMMARY**

**4.**

**Development of the operating & software system market not yet decided. Expected to develop similar like mobile operating system market.**

**5.**

**M&A dominant exit strategy compared to IPO, because of needs for solution integration, alignment with key distributors and integrators, sales and (after-sales) services (for hardware).**

**6.**

**Collaborative robots and generally intelligent robots require enhanced vision, perception and reasoning systems as well as cognitive AI.**

## **SUMMARY**

# CONTACT DETAILS



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