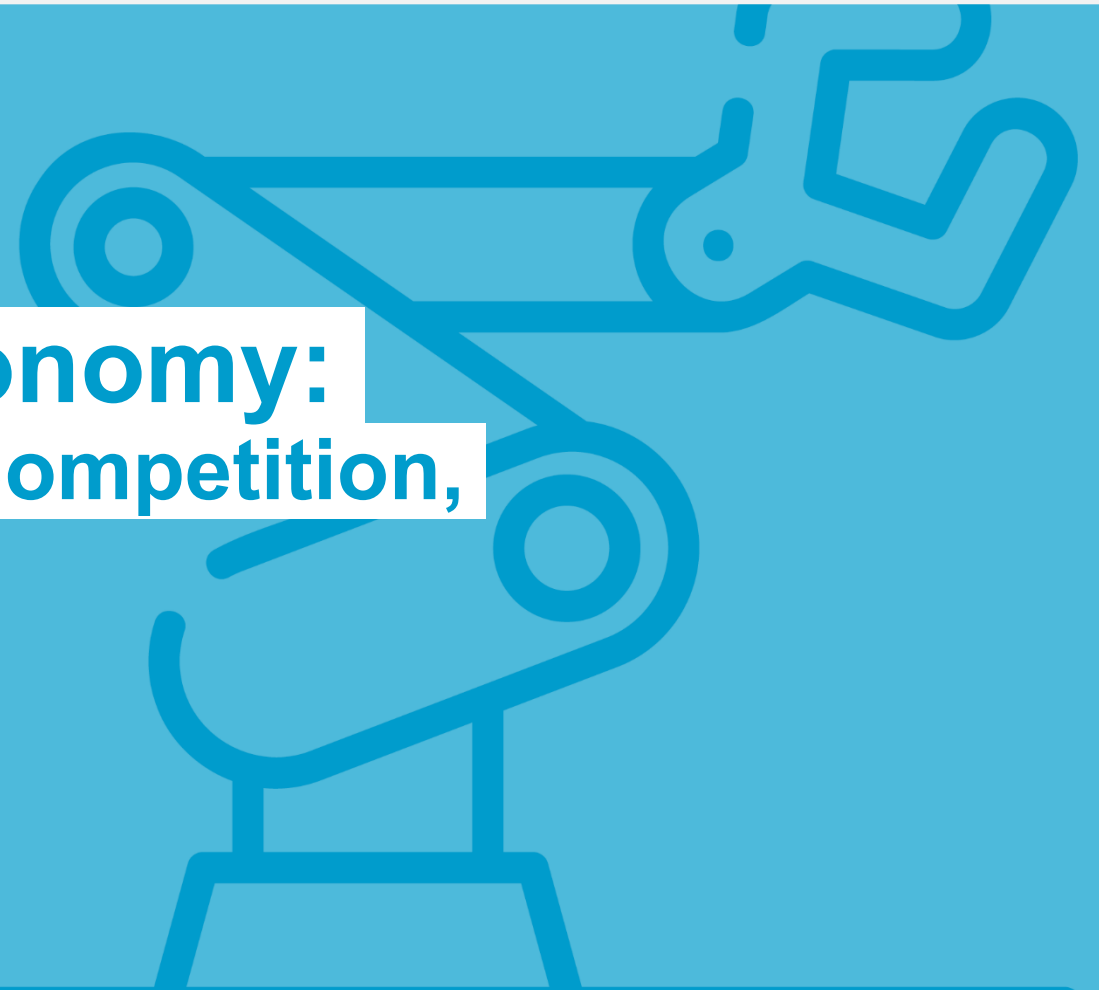


Future Pulse 2026 – 16 September 2026 - Eindhoven

The New Robotics Economy: Global Trends, Regional Competition, and Europe's Opportunity

Dr. Susanne Bieller
General Secretary of the IFR
International Federation of Robotics



Why Robotics Matters Now



Industry 4.0

- Automotive drives robotics scale
- Rise of smart factories
- China begins automation surge



AI + Logistics

- E-commerce transforms robotics
- Mobile robots become mainstream
- ROS and AI perception mature



Post-COVID Automation

- Labor shortages accelerate adoption
- Supply-chain resilience becomes strategic
- Service robotics scales globally



Embodied AI Era

- Foundation models meet robotics
- Physical AI becomes investment focus
- Towards General-purpose robots

2010

2015

2020

2025

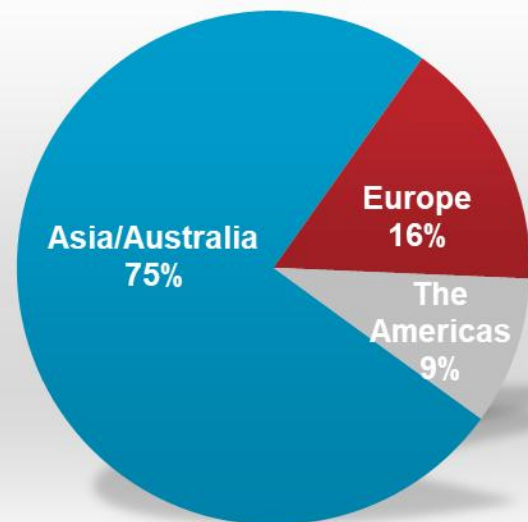
Global robotics industry is booming



More than half a million industrial robots are newly installed each year

Uneven distribution into the regions

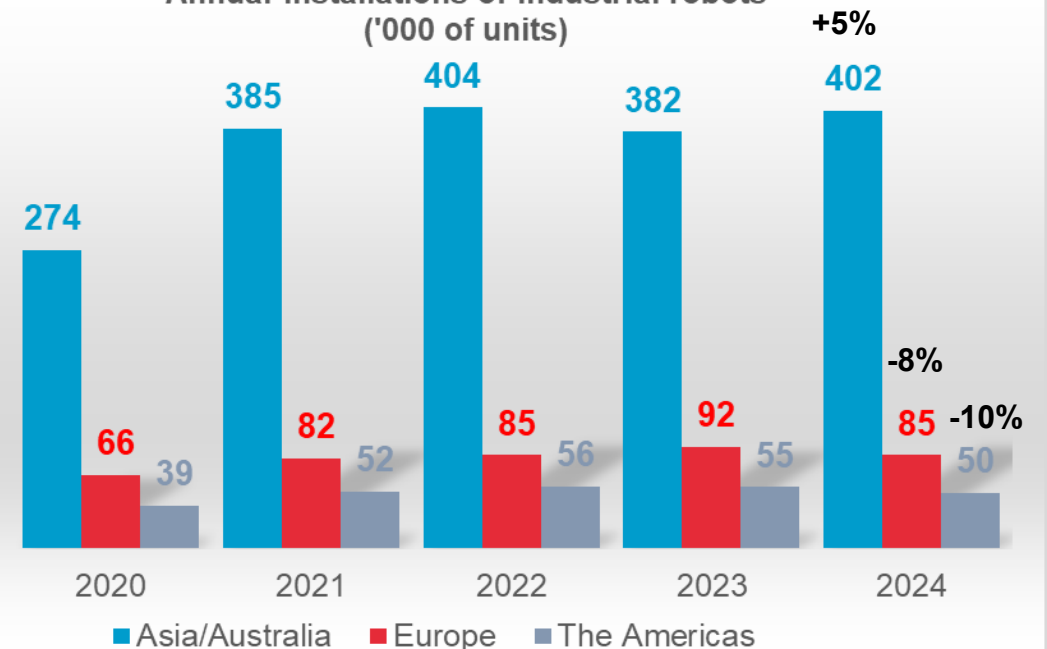
Shares in annual installations of industrial robots - 2024
(% of grand total)



Source: International Federation of Robotics

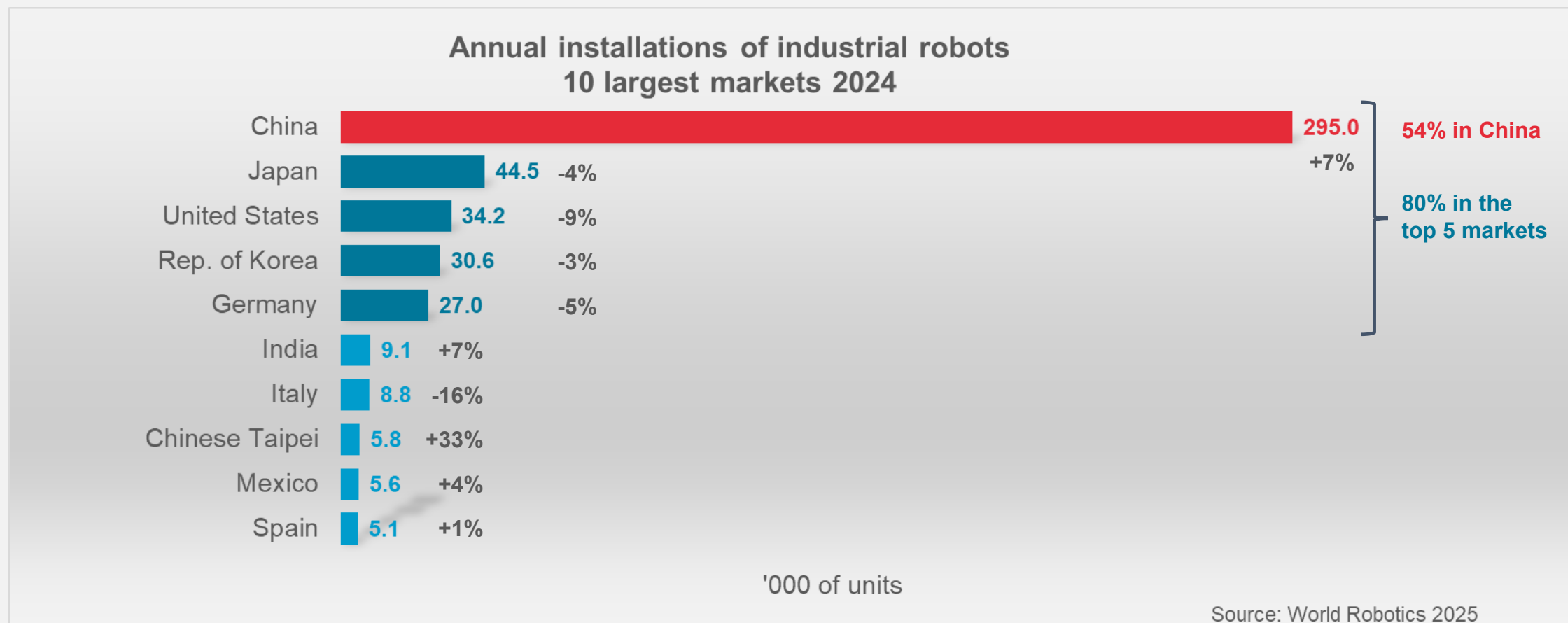
Global growth driven by Asia

Annual installations of industrial robots
('000 of units)



Every other robot is installed in China

Installations in Top 5 markets remain flat



Relative market sizes need to be taken into account



Regional average:
(CAGR 2019-24):

- **Europe: 148 (+7%)**
- **Americas: 131 (+6%)**
- **Asia: 131 (+12%)**
- 15 out of top 22 countries are European



Global service robots sector shows continuous growth



New **professional service robots** (incl. AMRs) in 2024

- 199,000 units (+9%)

New **medical robots**

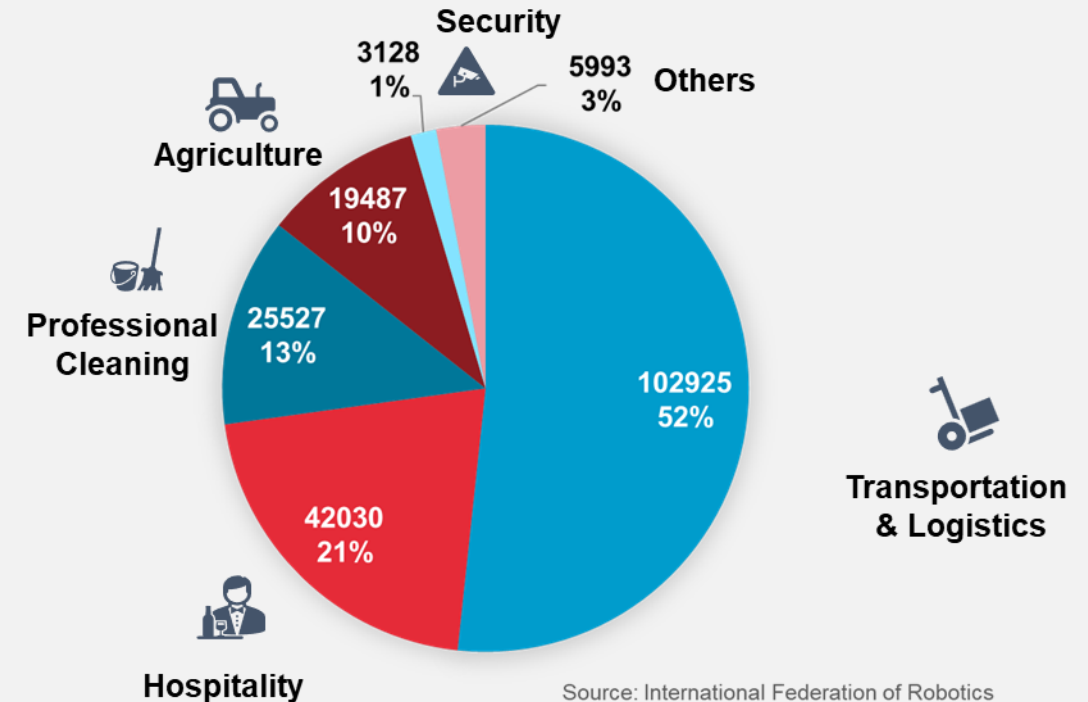
- 16,700 units (+91%)

New **consumer service robots**

- 20.1 million units (+11%)

*All numbers based on a sample of 293 producers of total 944 manufacturers.
Data is not projected to the whole industry.
Sample composition varies each year.
Compiling or comparing data from different survey waves is strongly discouraged.

Unit installations and shares for profes. use

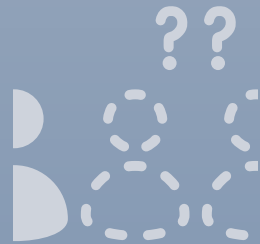


Trends and drivers impacting growth



(Physical) AI

- AI becomes more capable and accessible
- Autonomously generate intent-based actions
- Adapt to new environments



Demographics

- Declining working-age population
- Lifelong employability of workers
- Skilling and upskilling programs
- Employee involvement



Sustainability

- Longevity, maintenance
- Waste reduction, Circular economy
- Higher energy-efficiency
- Enabling green transformation



Resilience & Reshoring

- Geopolitical tensions
- Reconsideration of supply chains and closeness to customers
- Reshoring policies



Investment

- Huge investments into humanoids
- State-backed venture capital in China
- US Big Tech & VC heavily invest
- Investments fast-track innovation

Humanoids Emerge as Robotics' Newest Market

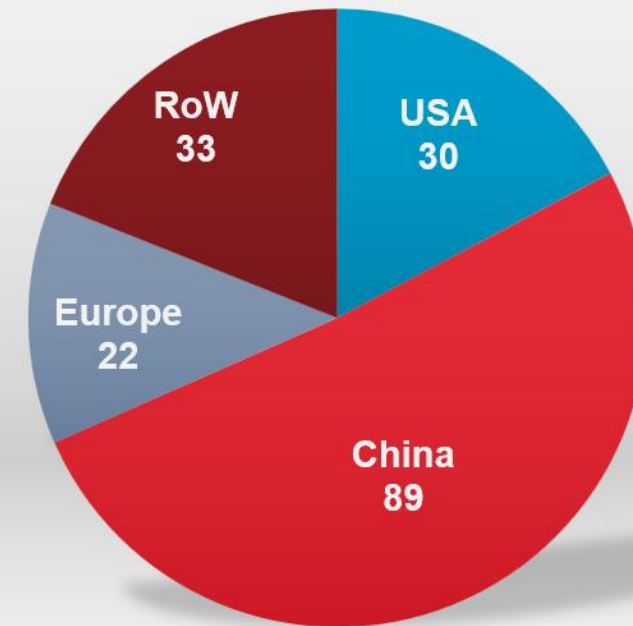


- **First IFR statistics on humanoids:**
 - **World Robotics Service Robots 2026 will be released 24 September 2026**
- **IFR has identified 174 humanoid robot manufacturers globally.**
 - More than 50% in China
 - Many manufacturers founded only in recent years.
 - A notable wave of new company creation coincides with breakthroughs in Gen AI
 - Large number demonstrates substantial investment and innovation in the field.



<http://worldrobotics.org/>

Humanoid robot suppliers by origin



Source: International Federation of Robotics

Europe's position in the world

USA

Data driven SR start-ups
Strong VC support

Leadership in AI platforms
and software

Strong venture capital and
start-up ecosystem

Rapid commercialization
and scaling

**Challenge: manufacturing
depth**

Europe

**Trust &
Industrial Excellence**

Strong automation and
engineering base

Global leadership in
industrial machinery and
robotics integration

Human-centric AI, safety,
and regulatory leadership

**Challenge: scaling
innovations globally**

China

**Speed &
Deployment Scale**

Large-scale manufacturing
ecosystems

Strong government support
and industrial policy

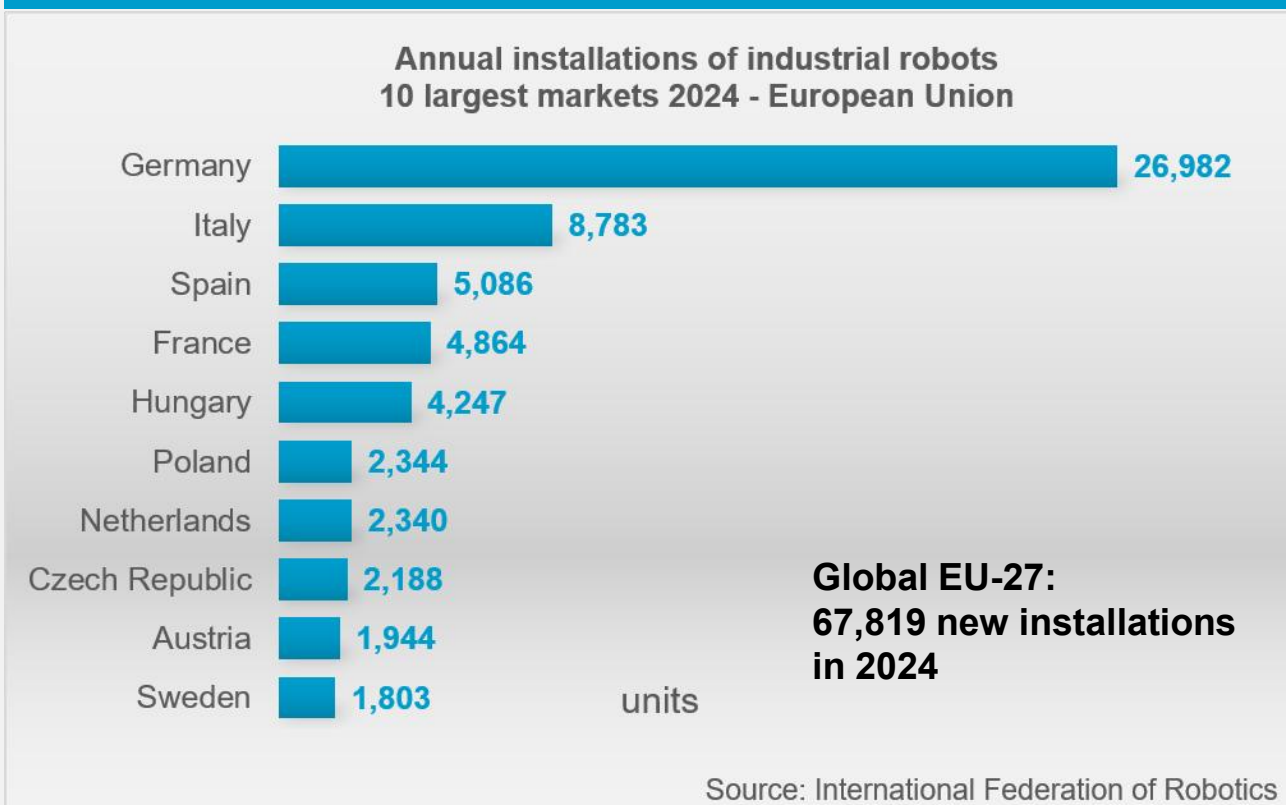
Fast adoption and market
deployment

**Challenge: balancing
speed with governance**

Europe's strong manufacturing base



Annual new installations of industrial robots in 2024



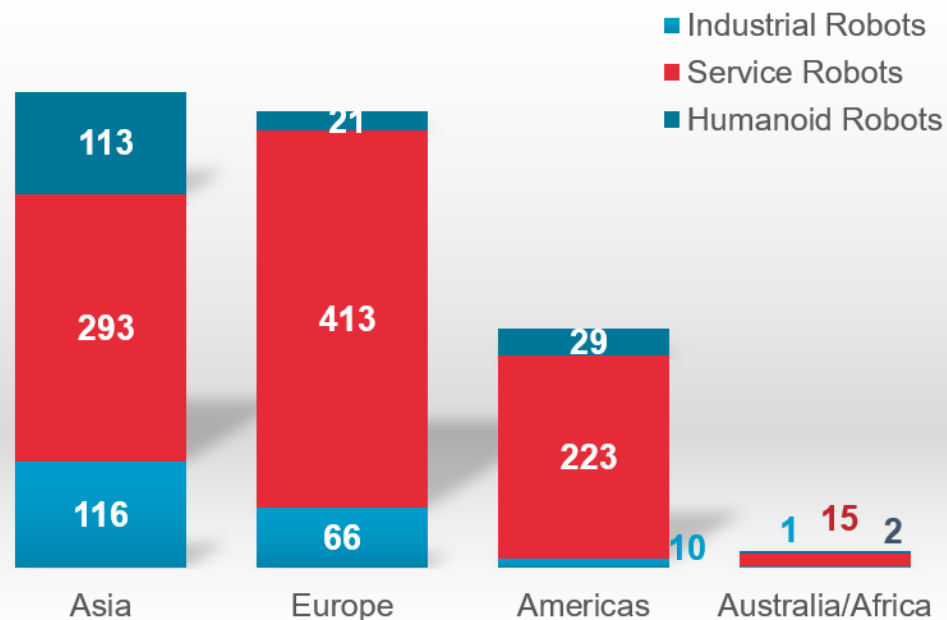
- 85,000 new industrial robots have been installed in Europe in 2024
17% share of global
- 820,000 industrial robots were in operation (+6 %)
18% share of global
- Main customer industries' shares:
automotive 27%
metal industry 22%
plastic and chemical products 11%

How is Europe positioned in the world: Supplier landscape



Asia is home of most robot suppliers but: Europe ahead in service robotics

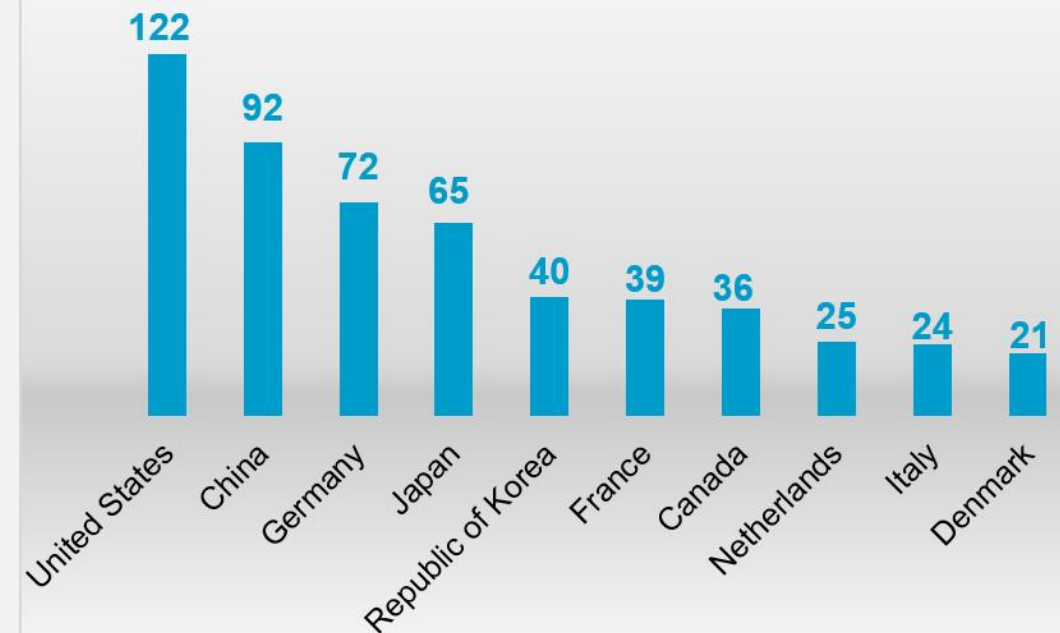
No. of robot suppliers by region



Source. International Federation of Robotics

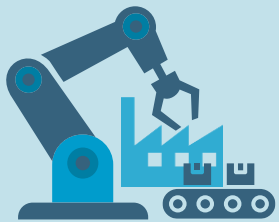
Europe well represented among the top 10 SR suppliers

Service robot manufacturers by country
professional applications



Source. International

The Netherlands Robotics Industry Overview



New Industrial Robot Installations

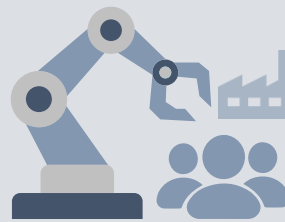
2,473
units



Growth
+5%
YoY 24/25



Global Rank
#18



Robot Density (robots per 10,000 employees)

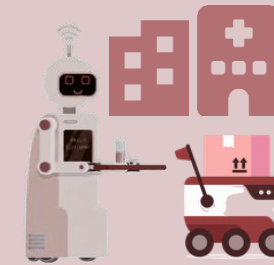
310



Growth
+6%
YoY 24/25



Global Rank
#9



Service Robot Companies

30
companies



Global Rank
#9

Strong manufacturing industry

- 96% general industries
- Stable despite weak European economy
- Further acceleration expected 2026+

Very broad and diverse

- Agriculture
- Inspection
- Logistics

Vienna Statement

- **Published in June 2026 by euRobotics**
- Europe must set its **own robotics agenda**.
- Addressing **Europe's urgent challenges** and core questions:
 - *Where are robots mission-critical for European sovereignty and resilience?*
 - *How should AI contribute to these systems, and where should it not?*
 - *And what must we do next to convert European strengths into a strategic global position?*
- Three principles:
 - Robots should work with and for people,
 - Economic viability and sustainability are design requirements, not an afterthought;
 - The robotics community bears responsibility for the societal and environmental consequences of its work

Barcelona Declaration of Robotics and Automation



IFR
International
Federation of
Robotics

Building a resilient, competitive, sustainable and human-centered economy

- **Global initiative**
- brings together leading robotics and automation organizations around a shared vision:
- to **accelerate the responsible adoption** of these technologies and strengthen their contribution to **economic competitiveness, industrial resilience, sustainability, and human well-being**.
- The initiative provides a **common framework** for **engaging with governments**, policymakers, industry, research institutions, labor organizations, and civil society.
- Its purpose is to **turn shared ambitions into practical recommendations** that can be adapted to different national and regional contexts.



Barcelona Declaration of Robotics and Automation



Key Drivers

- Strengthen industrial competitiveness and resilience
- Address demographic change and skilled labor shortages
- Improve workplace safety, ergonomics, and productivity
- Accelerate sustainability and resource efficiency
- Enhance human well-being and autonomy

Why Action Is Urgent

- Global robot adoption continues to accelerate
- AI is moving into the physical world through robotics
- Aging populations and labor shortages increase automation needs
- Nations are competing to lead in next-generation technologies

Framework in progress: open to expand to further associations and clusters & endorsing entities

Outlook for the Next Decade

- **Demographic change** and **workforce shortages** will make automation a necessity rather than an option.
- **Leading regions** are combining innovation, talent, capital, policy, and market adoption to accelerate robotics deployment.
- **Global competition** will intensify as major economies treat robotics as a strategic technology and countries are developing policies to **protect their own businesses & ecosystems**.
- Success will be determined by the ability to translate innovation into **large-scale adoption** and **economic impact** – backed by the most **effective robotics ecosystems**.
- **Europe** has strong industrial, scientific, and automation foundations, but must improve scaling, investment, and commercialization – and develop its **own robotics strategy**.
- **The Netherlands** is well-positioned to leverage strengths in high-tech systems, logistics, healthcare, research, and advanced manufacturing.
- **Europe and the Netherlands have the opportunity to lead if they act with ambition, coordination (strategy), and speed.**

Thank you for your attention.

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<https://ifr.org/>



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