

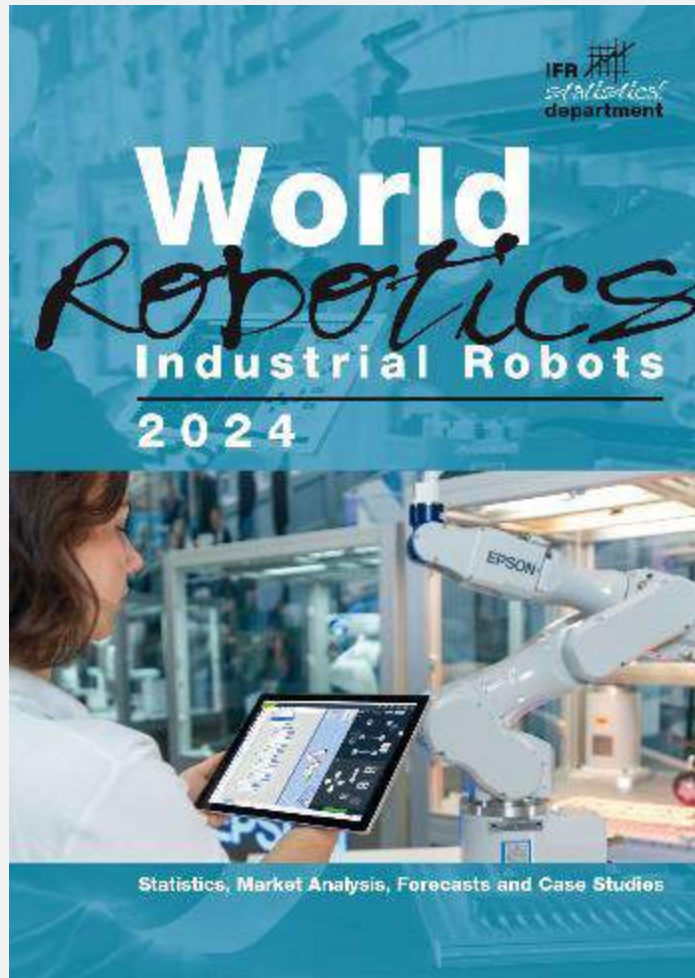
# Machine Vision – Key technology in the global automation race

17 October 2024



- » **Global Industrial Robotics market**
  
- » **VDMA market survey Machine Vision in Europe**
  - Turnover development over the years
  - Customer markets & industries
  
- » **Outlook**

# World Robotics 2024 – some figures



## 2023: Second highest installation count in history

- Annual installations exceeded 500,000 units for the third consecutive year.

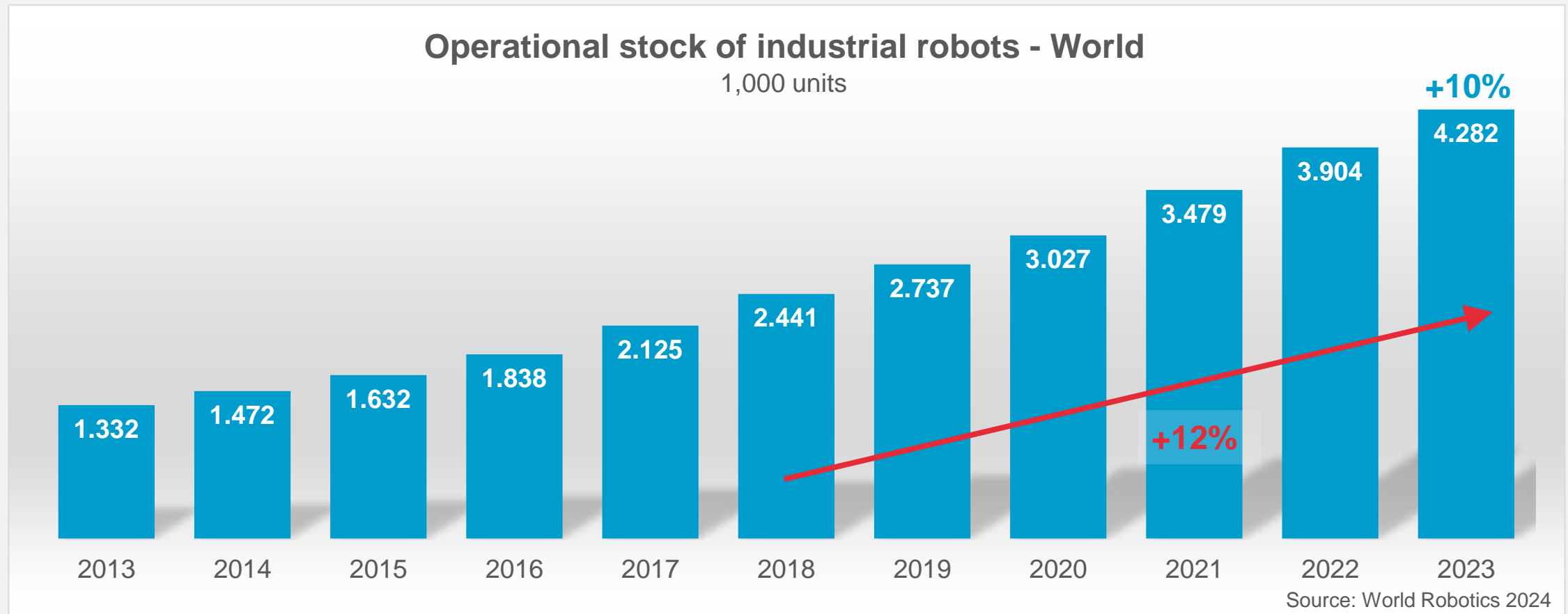
## New robots

- 541,000 units (-2%)
- CAGR 2018-2023: +5%

## Robot stock

- 4.3 million units (+10%)
- CAGR 2018-2023: +12%

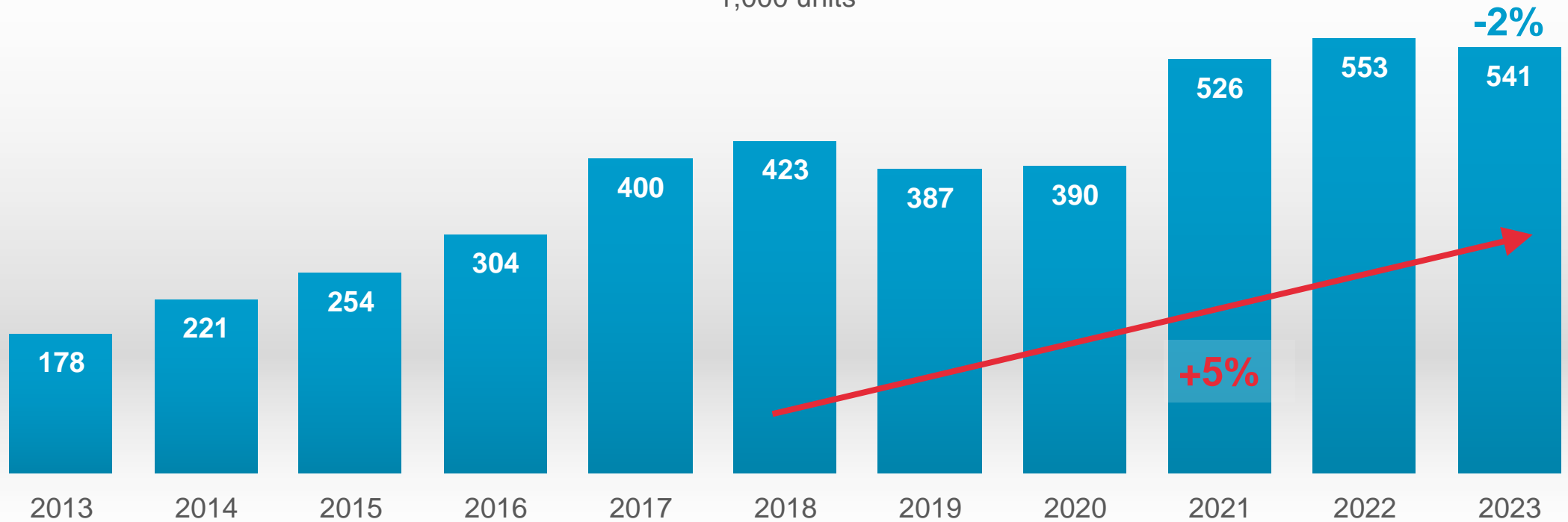
# More than 4 million industrial robots operating around the world



# Annual installations exceeded 500,000 units for the third consecutive year

## Annual installations of industrial robots - World

1,000 units

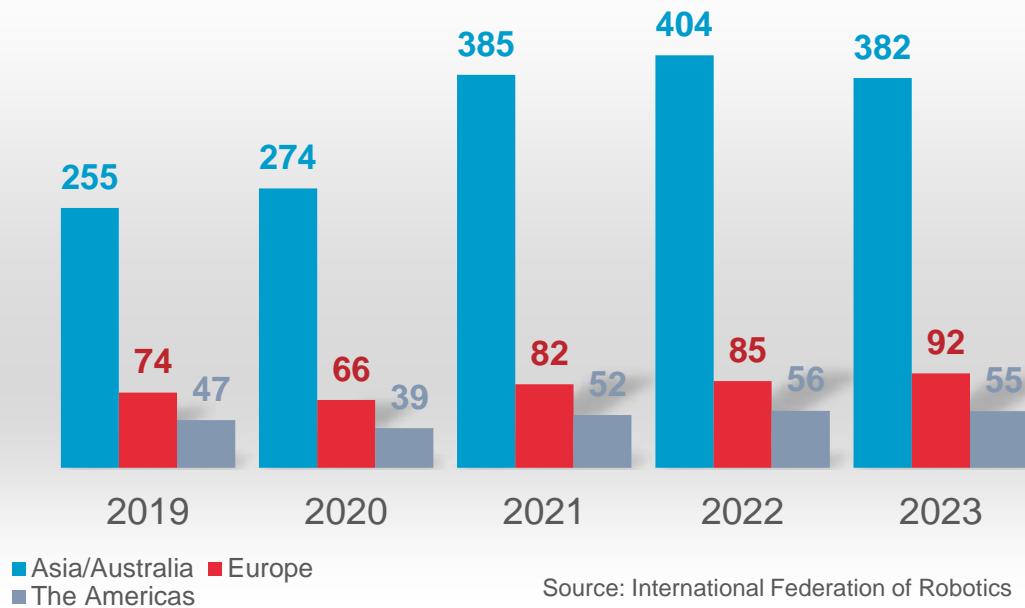


Source: World Robotics 2024

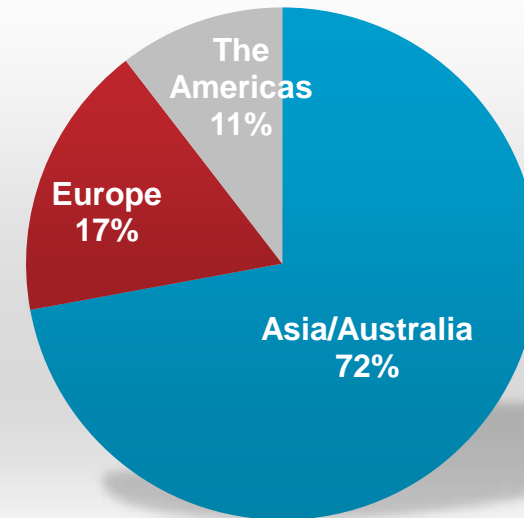
# Growth in Europe

## Annual installations per region

Annual installations of industrial robots  
('000 of units)



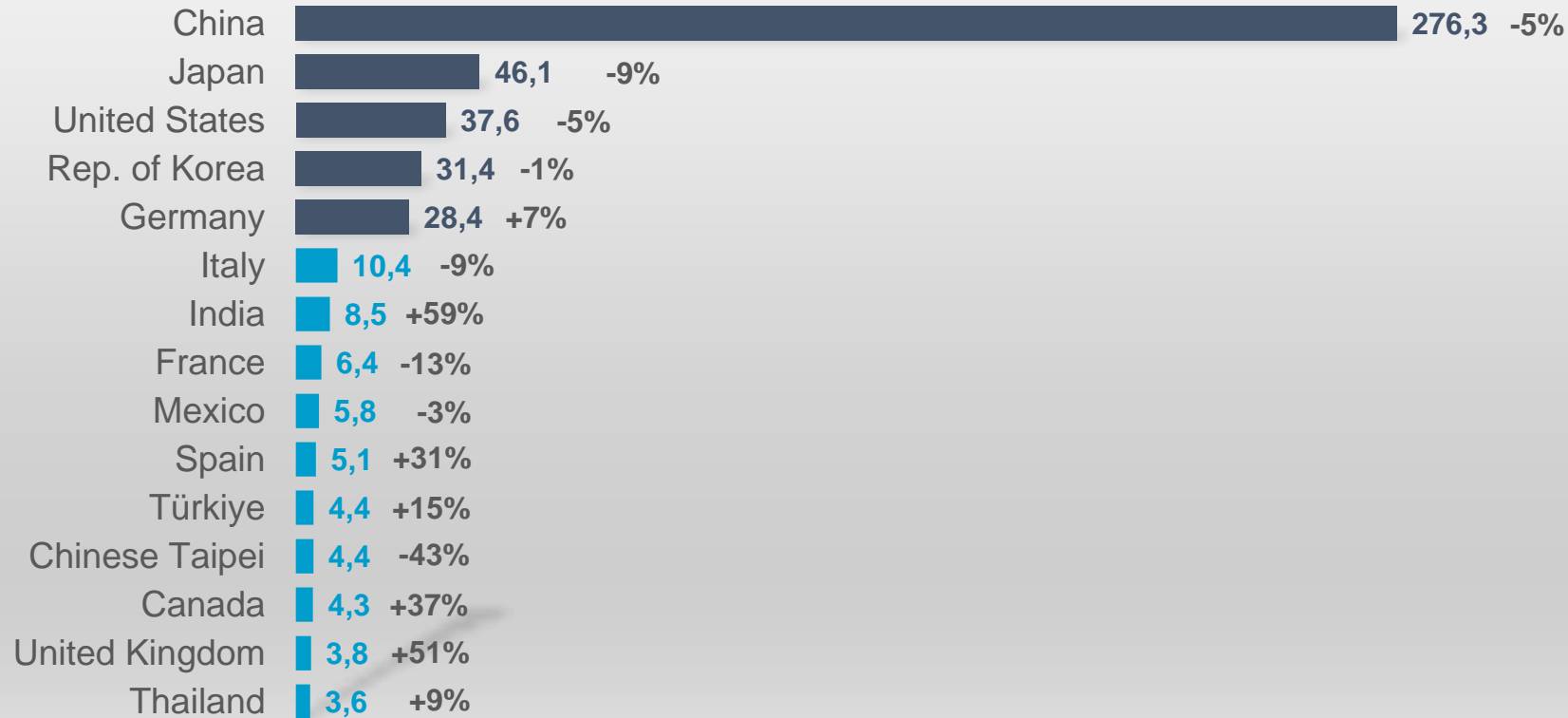
Annual installations of industrial robots - 2023  
('000 of units)



Source: International Federation of Robotics

## China installs every other robot

### Annual installations of industrial robots 15 largest markets 2023



51% in China

79% in the  
top 5 markets

'000 of units

Source: World Robotics 2024

# My talk

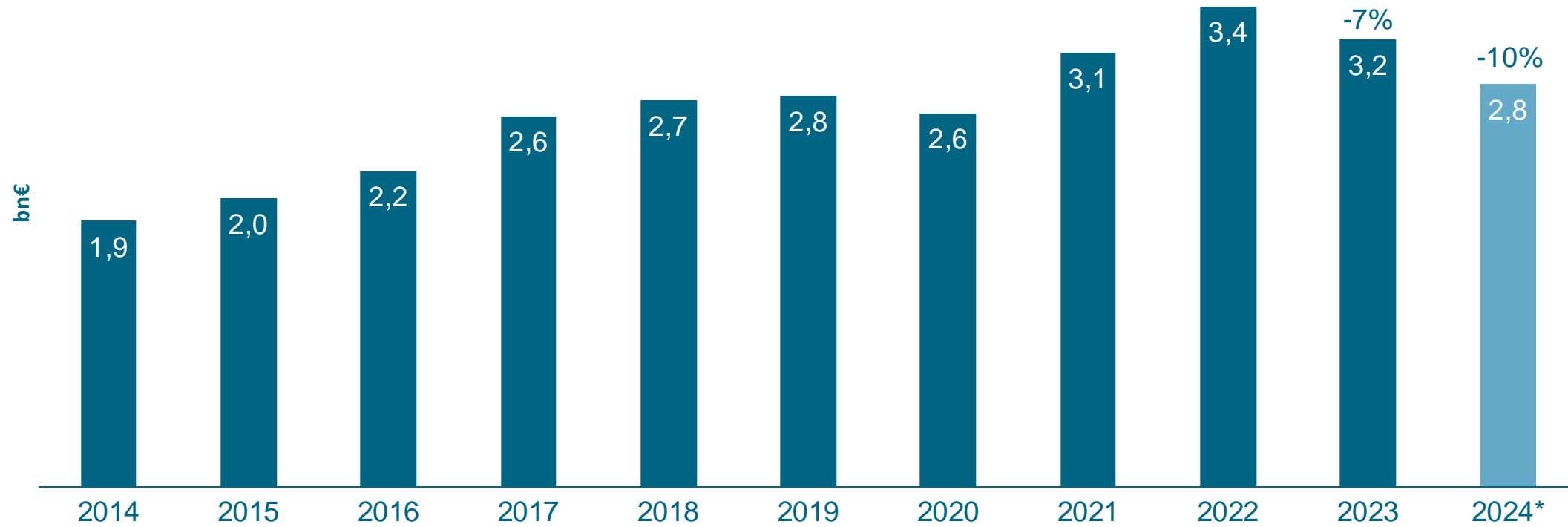


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# German Machine Vision industry



German Machine Vision global turnover (in billions of Euro) 2014 - 2024\*



\*forecast

Source: VDMA Robotics + Automation

# Machine Vision in Europe: long-term growth history



	14/13	15/14	16/15	17/16	18/17	19/18	20/19	21/20	22/21	23/22	24/23
<b>Germany</b>	8%	9%	+9%	+17%	+4%	+1%	-4%	+16%	+11%	-7%	-10%
<b>Europe</b>	17%	9,5%	+11%	+16%	+4%	+2%	-4%	+17%	+11%	-7%	-10%

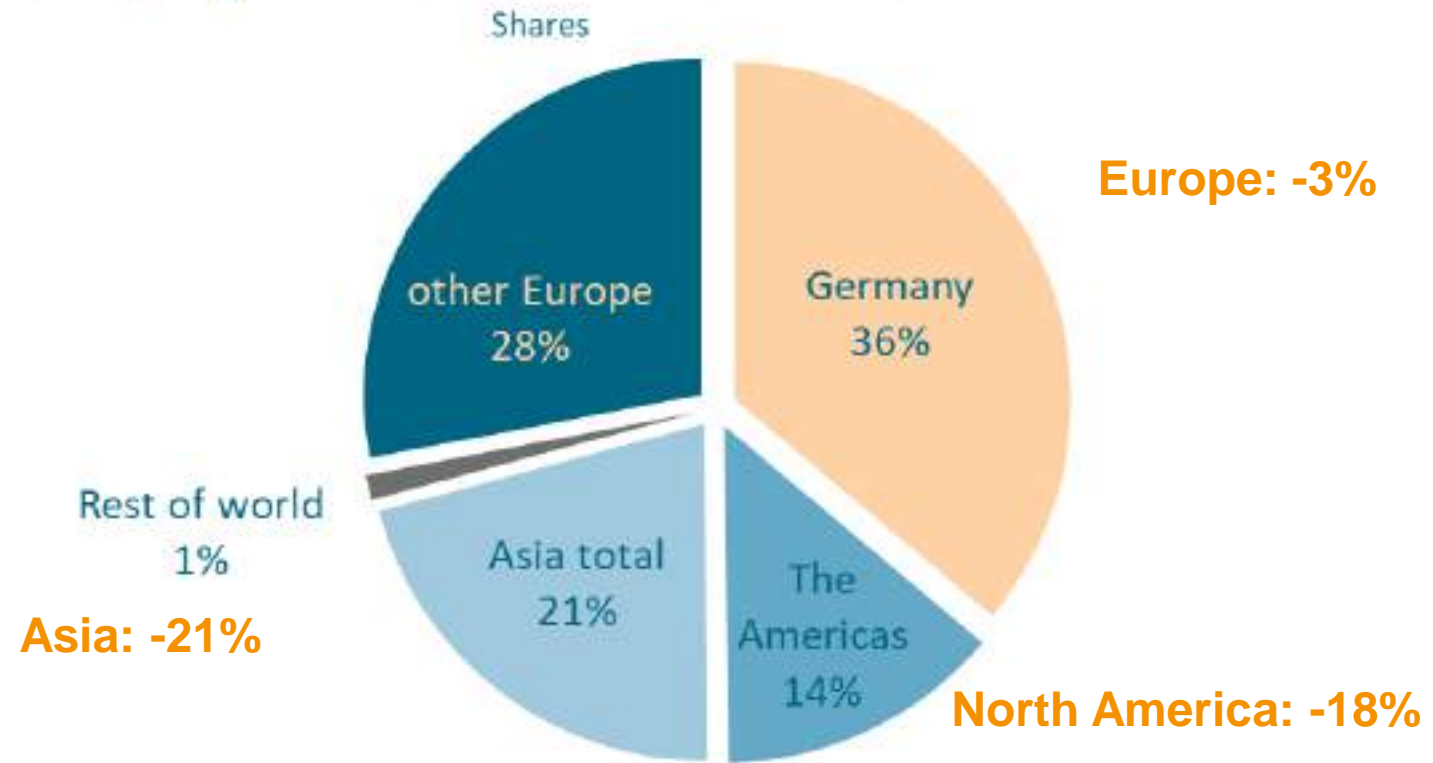
**CAGR 2013 – 2023: +9%**

⇒ **What a success story!**

# Europe - strong base



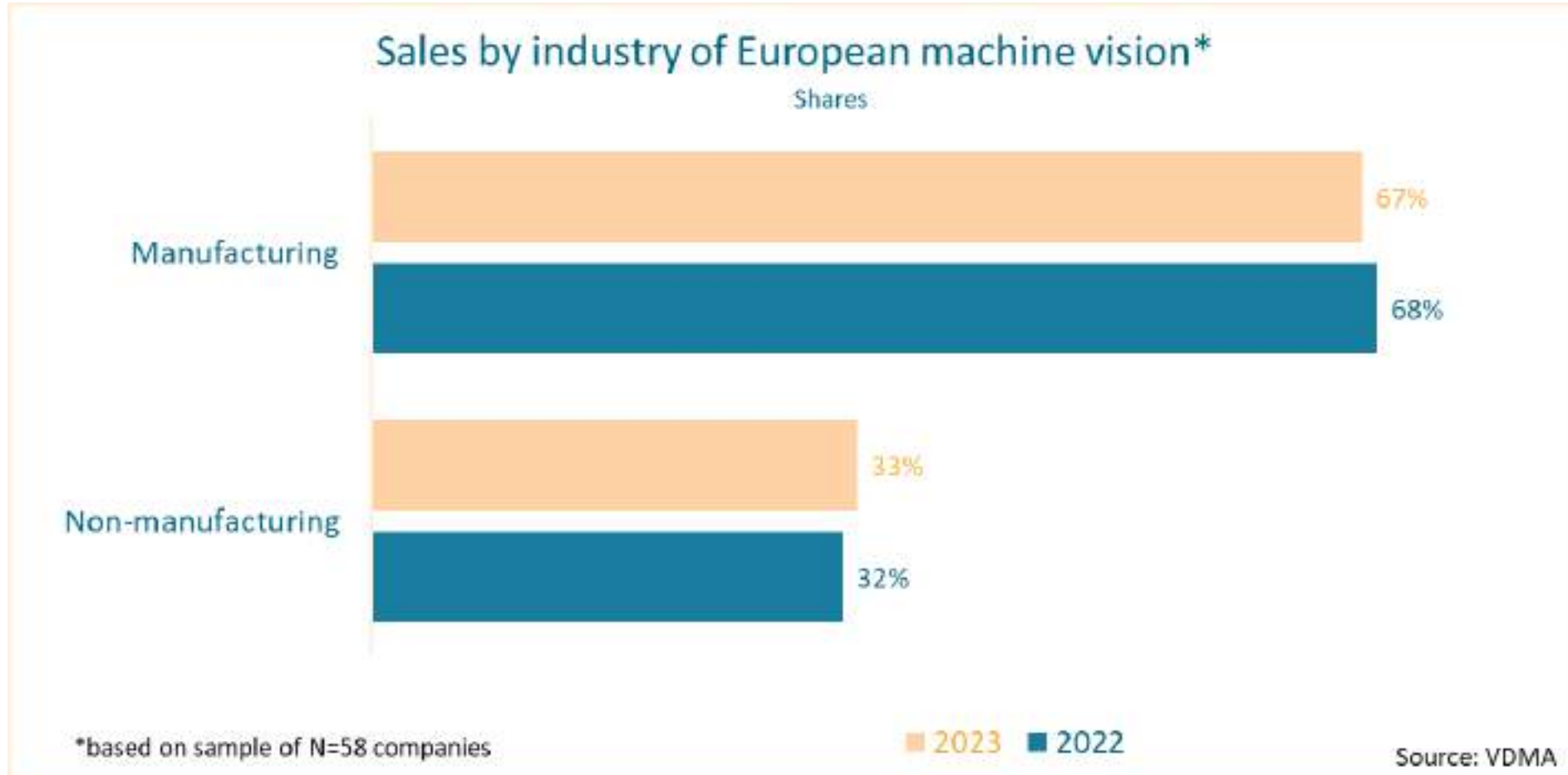
Sales by region of European machine vision\*



\*based on a sample of N=58 companies

Source: VDMA

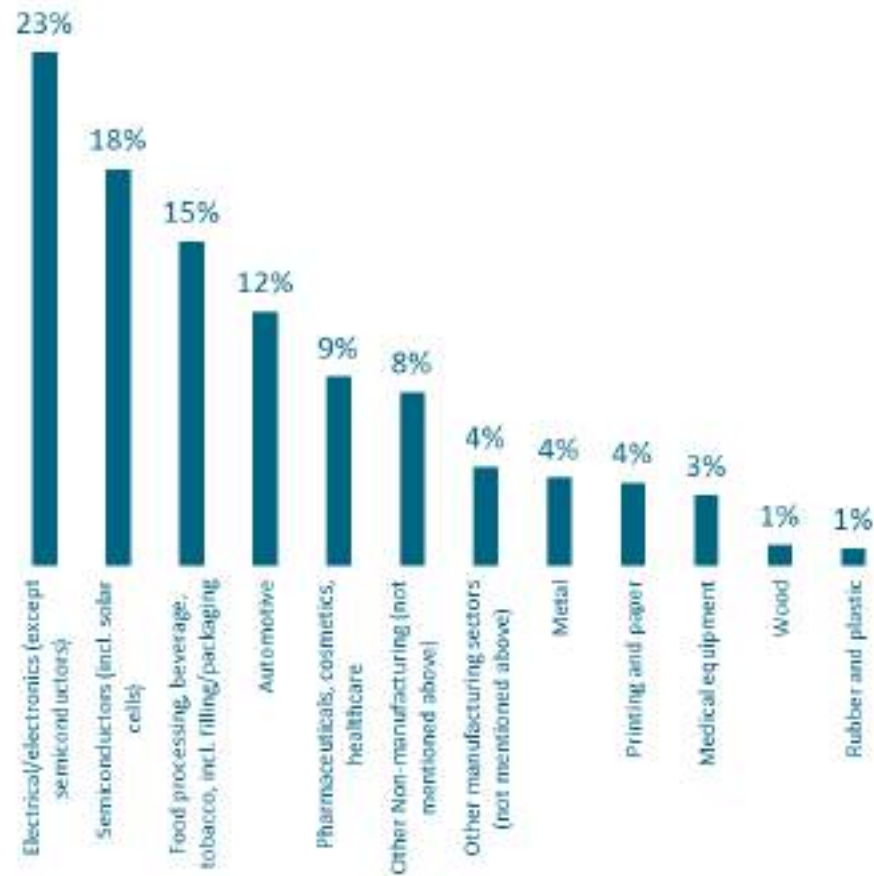
# Manufacturing industry – largest customer industry for machine vision



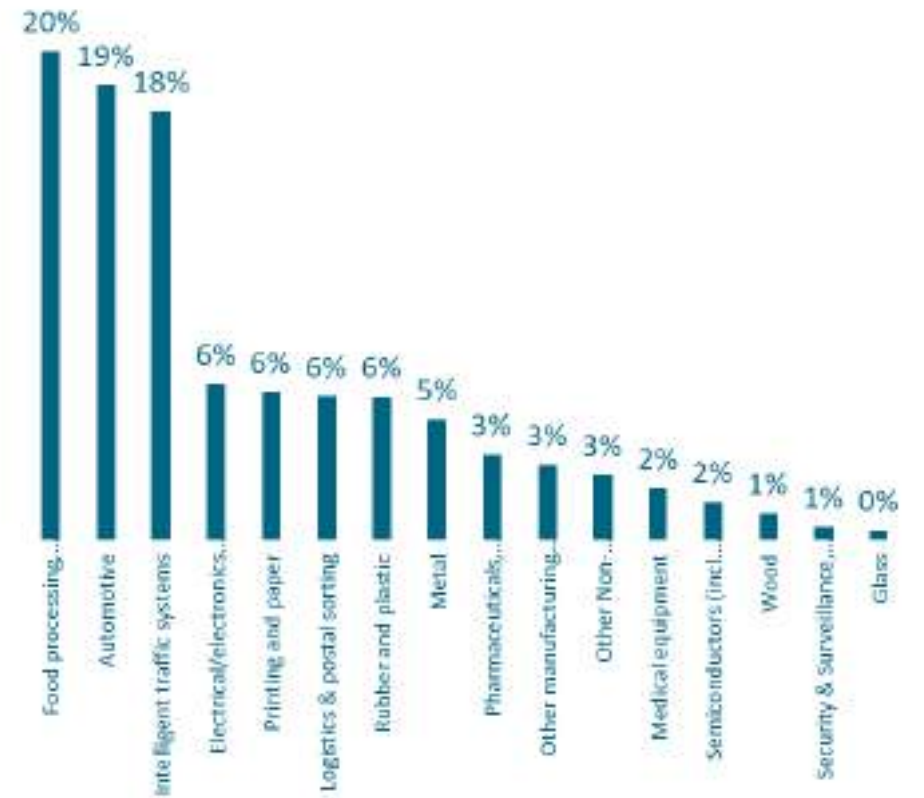
# Customer industries



Strongest-selling customers of Machine Vision Components



Strongest-selling customers of Machine Vision Systems



# My talk



- » Robotics sales – worldwide
  
- » VDMA market survey Machine Vision in Europe
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# Machine Vision: Key technology!

## **The global automation race continues!**

- » Labor scarcity in many developed economies is driving the demand for automation
- » Reconsideration of supply chains and closeness to customers

## **Many industries rely on machine vision**

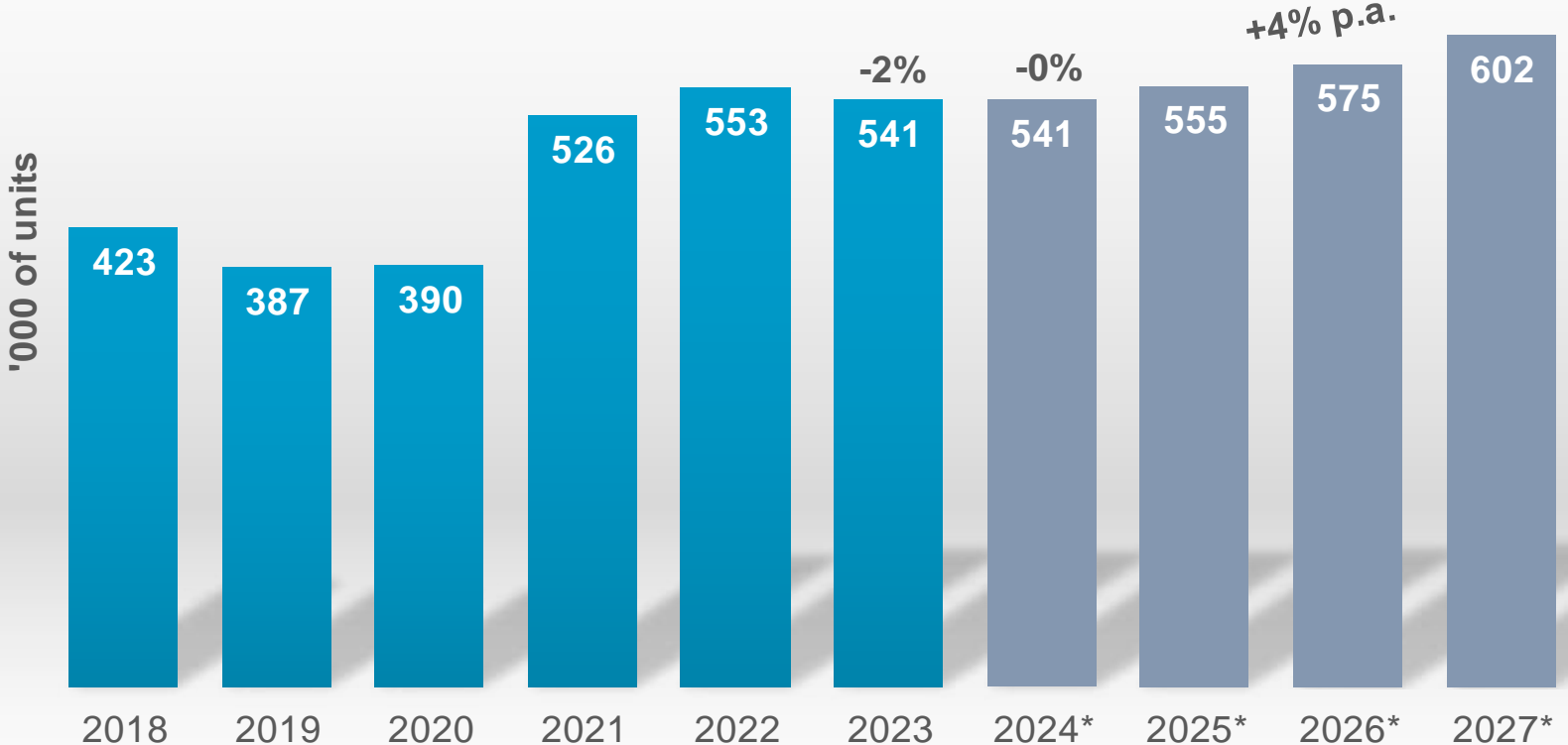
## **New applications (in and beyond factory environment)**

## **AI technology is an important sales driver**

## **Embedded Vision | Hyperspectral Imaging | 3D Vision will continue to open up new application fields**

Sideways movement for 2024 expected

Annual installations of industrial robots 2018 -2023 and 2024\*-2027\*

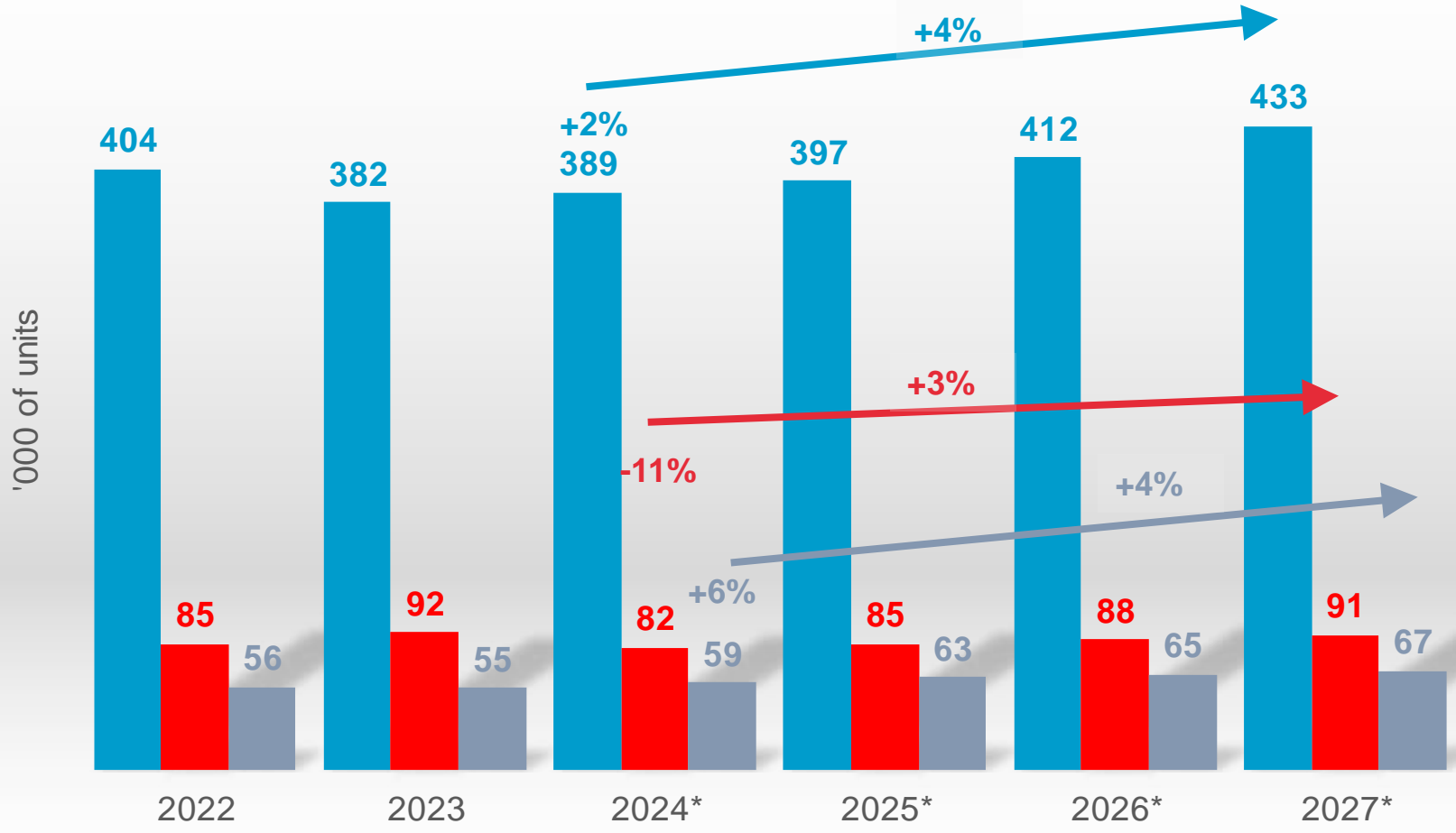


\*forecast

Source: World Robotics 2024

Forecast

Annual installations of industrial robots 2022 -2023 and 2024\*-2027\*



\*forecast

■ Asia/Australia ■ Europe ■ The Americas

Source: World Robotics 2024

Thank you  
Thank you  
for your attention!

[www.vdma.org/machine-vision](http://www.vdma.org/machine-vision)

