



Dimitris Siapatis – Logistic Systems Director

MORE **DIGITALIZATION
AND
CONNECTIVITY**



Jungheinrich AG at a glance

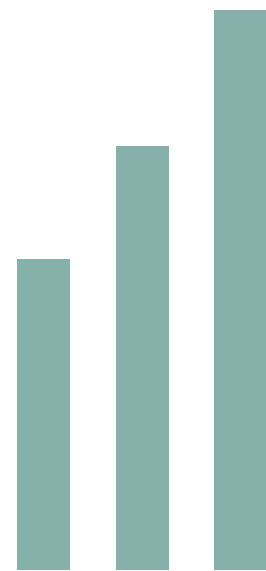
Highlights

EUR

3.8

BLN

REVENUE 2018



121.000

PRODUCED INDUSTRIAL TRUCKS 2018

12.000

WITH LITHIUM-ION TECHNOLOGY



18,000

EMPLOYEES WORLDWIDE

40

OWN DIRECT
SALES COMPANIES

In Europe we are

No. 2



in the industry.

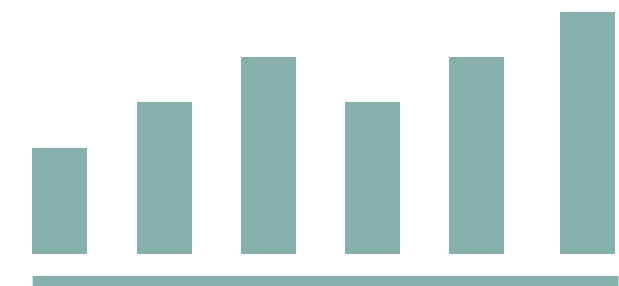
>5,300

after-sales service technicians



We are a
listed

stock corporation with
the characteristics of a
family-owned company.





Connectivity 4.0 - Megacities

Megacities



CURRENT AND FUTURE MEGACITIES

2015
2030



Source: World Urbanization Prospects: The 2014 Revision

Connectivity 4.0 – e-Commerce

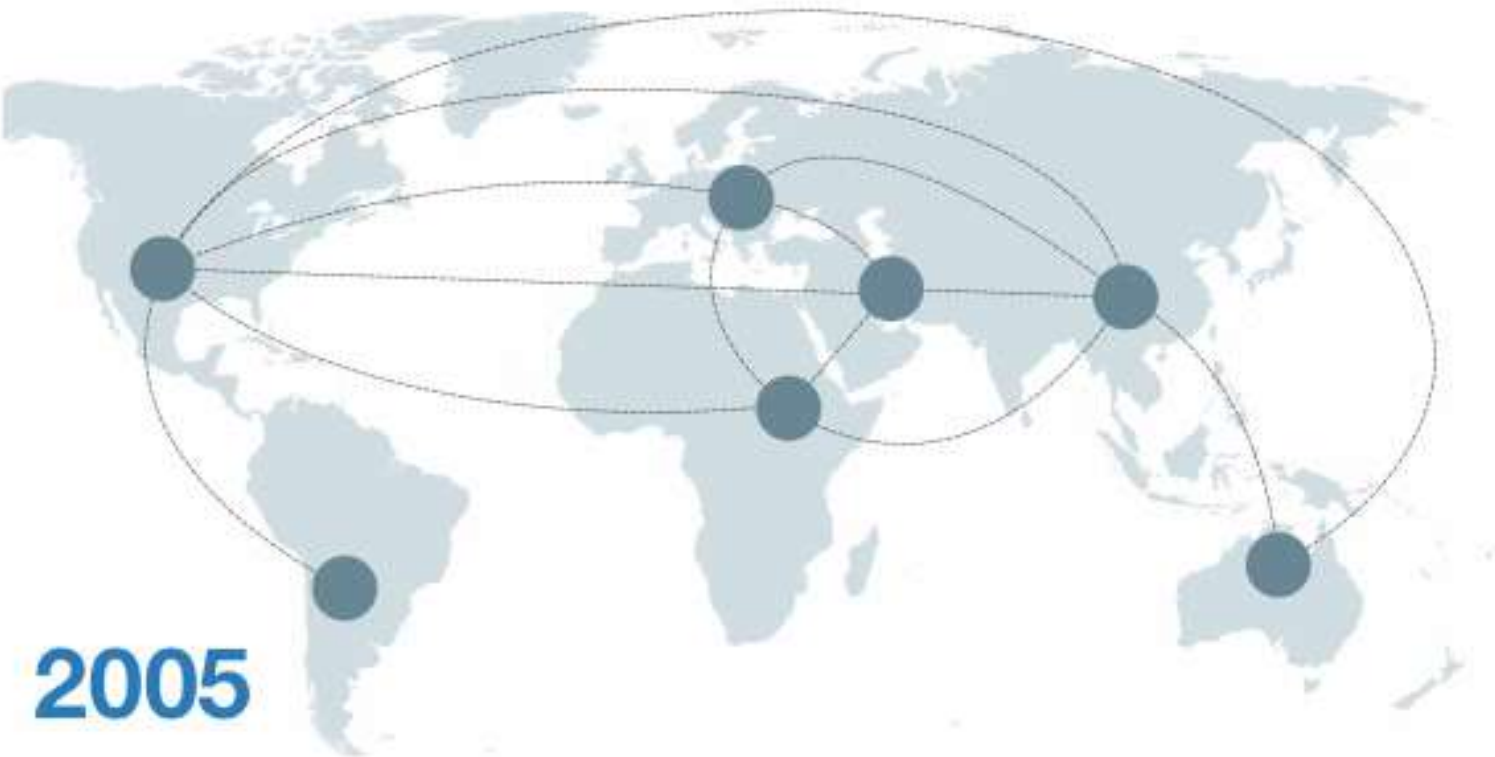


e-Commerce



Global flow of data and communication

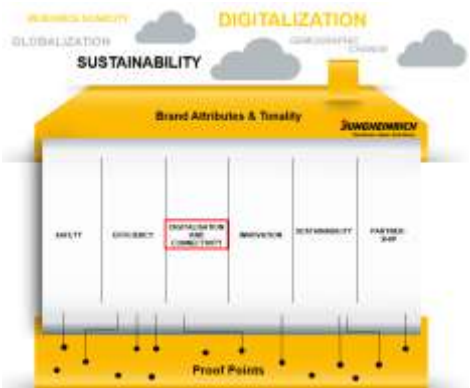
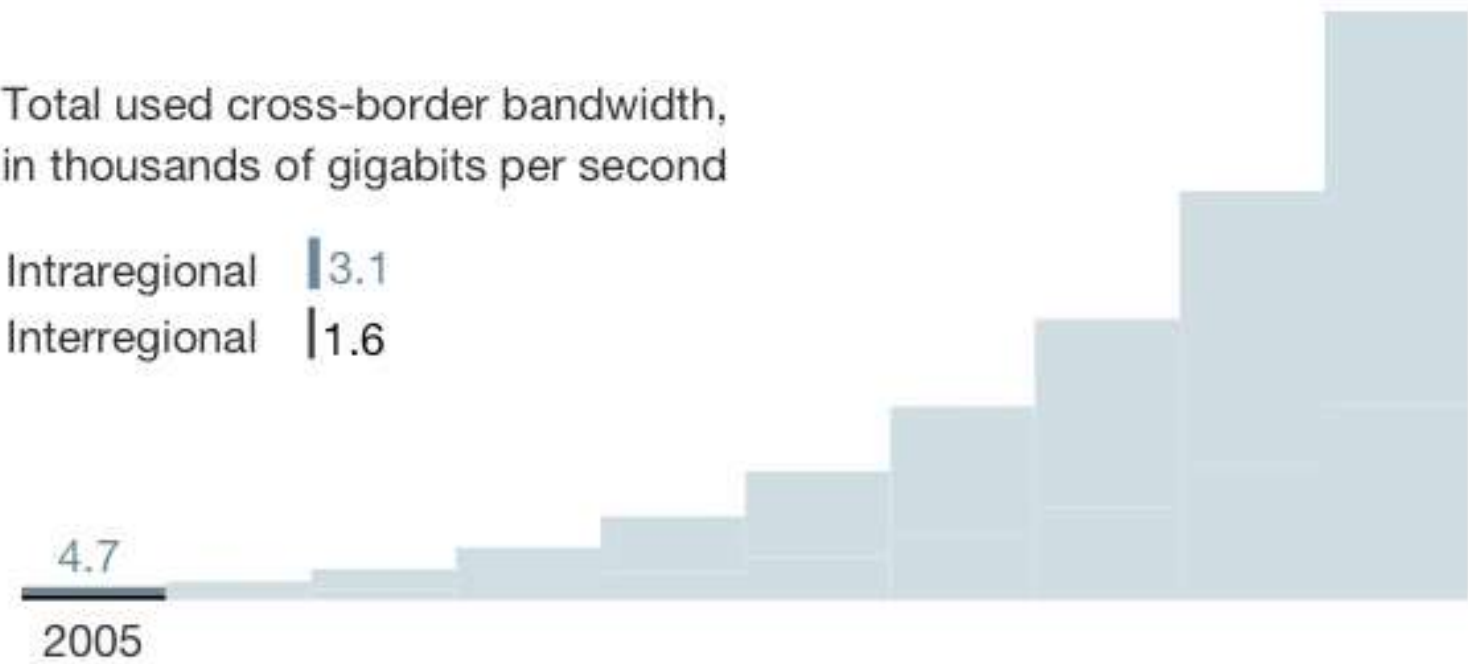
Used cross-border interregional bandwidth, in gigabits per second



2005

Total used cross-border bandwidth, in thousands of gigabits per second

Intraregional | 3.1
Interregional | 1.6

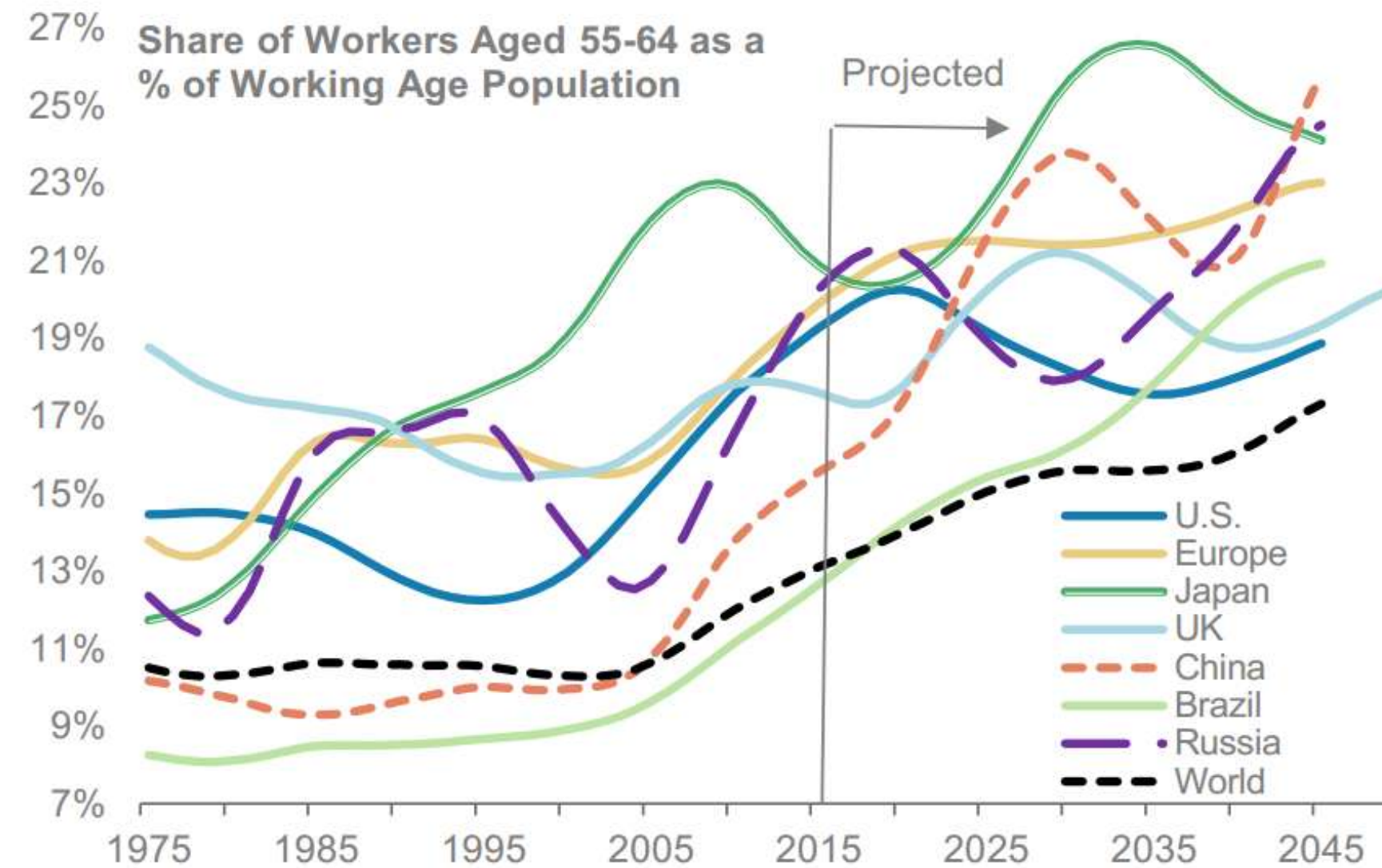


The image features a large, dense crowd of people in a yellow-tinted landscape. The crowd is composed of many small, colorful figures, creating a textured, almost abstract appearance. A diagonal cutout in the upper right corner reveals a white background with several smaller, more distinct figures, including a person walking, a person on a bicycle, and a group of people. The overall composition suggests a vast population and its movement.

World population prospects

World population prospects.

Exhibit 4: Global Labor Force Ageing Rapidly



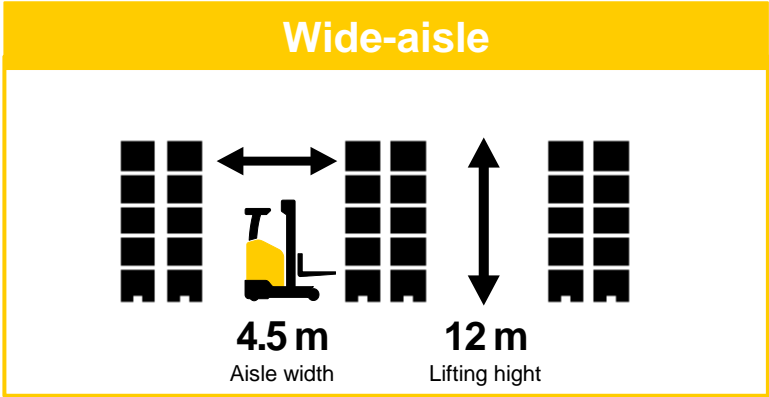
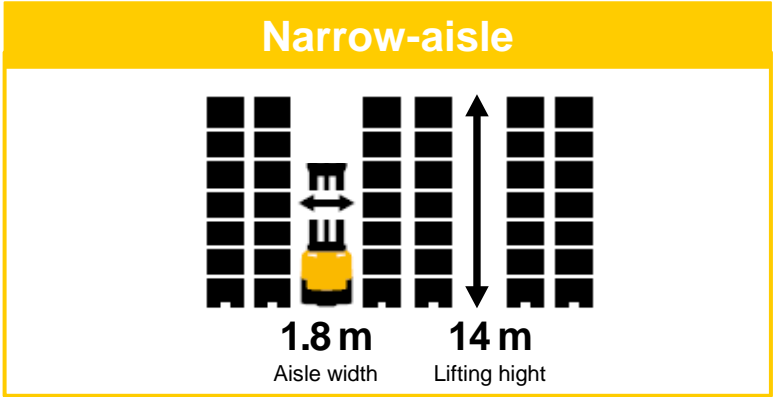
United Nations World Population Prospects, Morgan Stanley Research. Projections refer to UN projections.

Market Trends



Going Higher.

Differentiation between narrow-aisle and wide-aisle warehouses.



Driveless systems.

Intelligent system integration with warehouseNAVIGATION and RFID technology.



**+ 25%
more
throughput**

Jungheinrich warehouseNAVIGATION

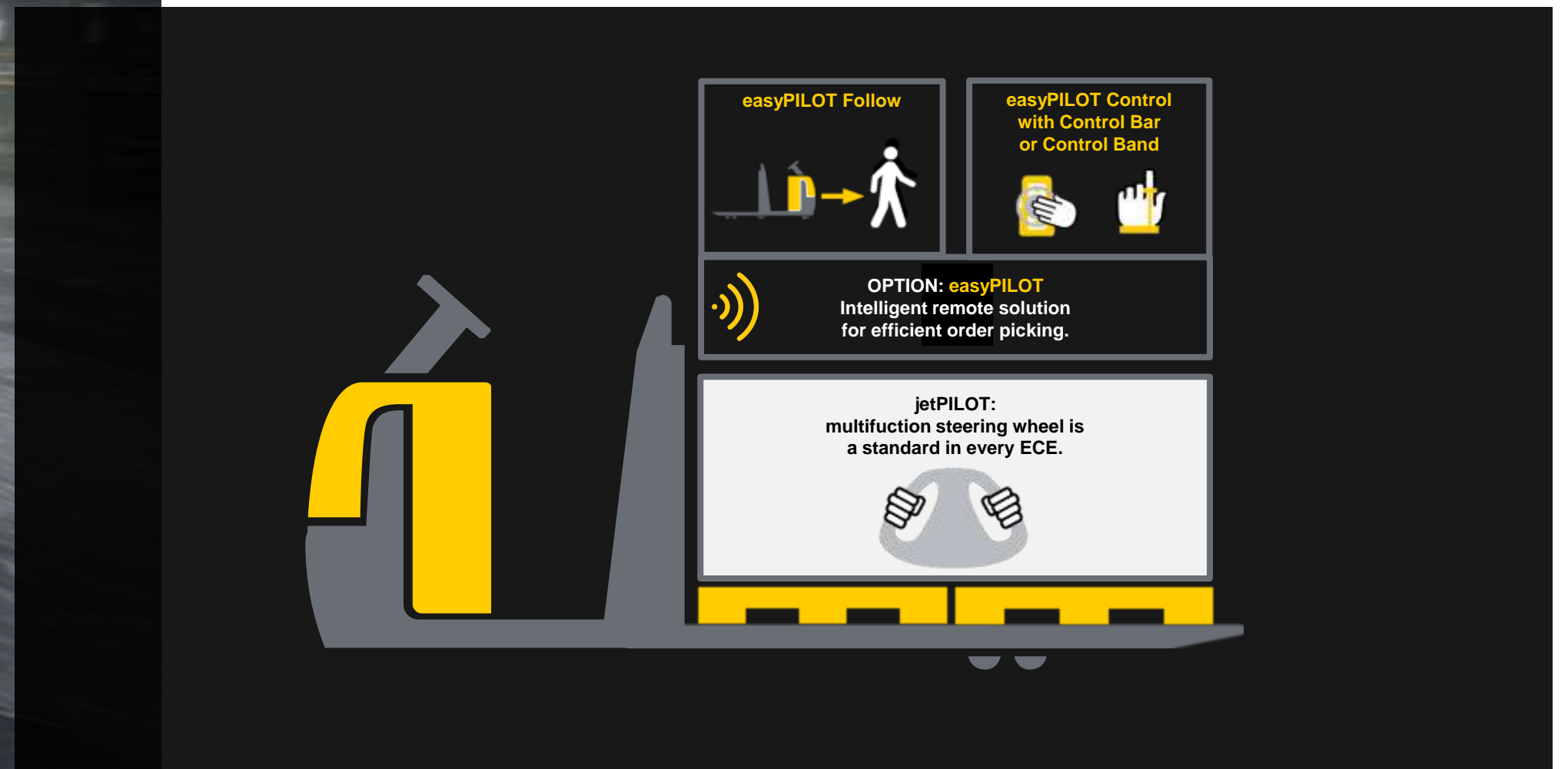
- Simple connection to any warehouse management system.
- Orders are sent directly to the truck.
- EKS heads for the destination by the shortest route.





Best ergonomics.

EasyPILOT Control – Everything under control thanks to the No. 1.



Automation: Efficiency in motion.



Automation can take the efficiency and performance
of your warehouse to a whole new level.



The BMW case



System provider with experience.

Intelligent intralogistics is the best possible interaction of man, machine, software and individual storage environment.

We optimise the flow of goods for you – for highly efficient warehousing processes.

The BMW example

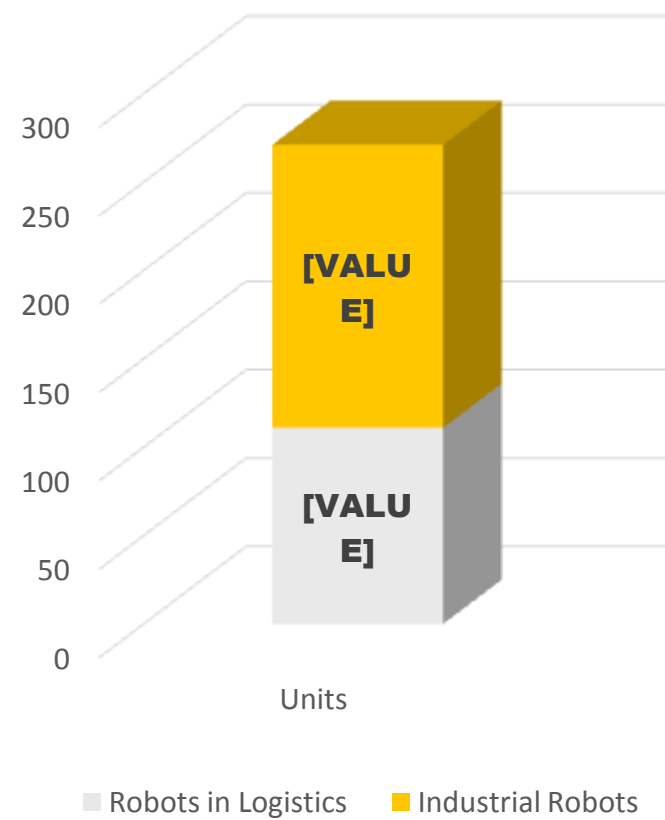




Market Growth

World Robotics Industrial Robots

The new World Robotics report shows an annual global sales value of 16.5 billion USD in 2018 – a new record. **422,000** units were shipped globally in 2018 - an increase of 6 percent compared to the previous year. IFR forecasts shipments in 2019 will recede from the record level in 2018, but expects an average growth of **12 percent** per year from 2020 to 2022. **111,000** Units referred to logistics (**60% increase from 2017**)





AGVs

AGVs.



**Free-ranging
AGV**

- Max. car. capacity 1500 kg
- Max. lifting height 6000 mm

Advantage:

- Flexibility



High-lift AGV

- Max. car. capacity 1500 kg
- Max. lifting height 4000 mm

Advantage:

- Compact and maneuverable



Low-lift AGV

- Max. car. capacity: 2500 kg
- Max lifting height: 122mm

Advantage:

- Multi-pallet transportation possible



Tow truck AGV

- Max towing capacity 5000 kg
- Different types of couplings for several trailer types

Advantage:

- Dual use – automatic and manual – possible

