



**Mobile Robots: Plug & Play**

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# Customer requirements

## Factors that determine customer requirements

### New factors: E-Commerce / Omni-Channeling



Higher expectations  
(same day/free delivery)



Improved compliance  
(full traceability)



Higher number of  
orders, fewer items

### Market factors: job market



Increased shortage of  
manpower



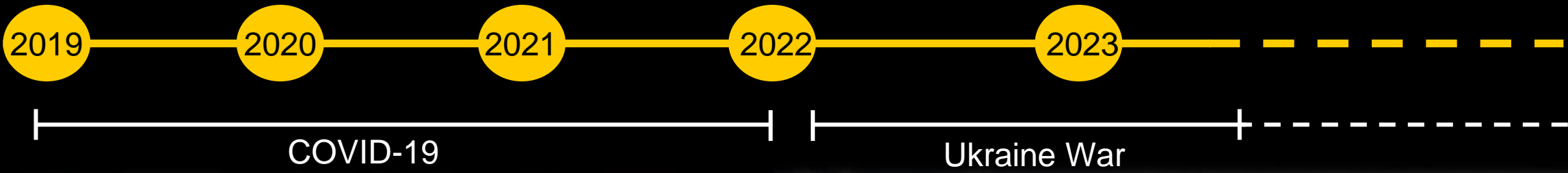
Stricter health and  
safety regulations

### Goods:



Increased adaptability,  
shorter life cycles







# Mobile Robots. Portfolio.

AMR - Autonomous Mobile Robot (SOTO)



AMR - Autonomous Mobile Robot (arculee)

AGVs based on  
automated VNA  
trucks  
(EKXa/ETXa)

Typ II

AGVs based on automated  
serial trucks  
(EREa/ERCa/EZSa) / on serial  
components (EKSa)

Typ I

# Customer Reference – Jungheinrich Automation solution at Gyermelyi





# Logistics Interface for easy integration into customer system



**WMS**



# Customer Reference – Jungheinrich Automation solution at Kärcher





# AMR arculee – Jungheinrich Autonomous Mobile Robots





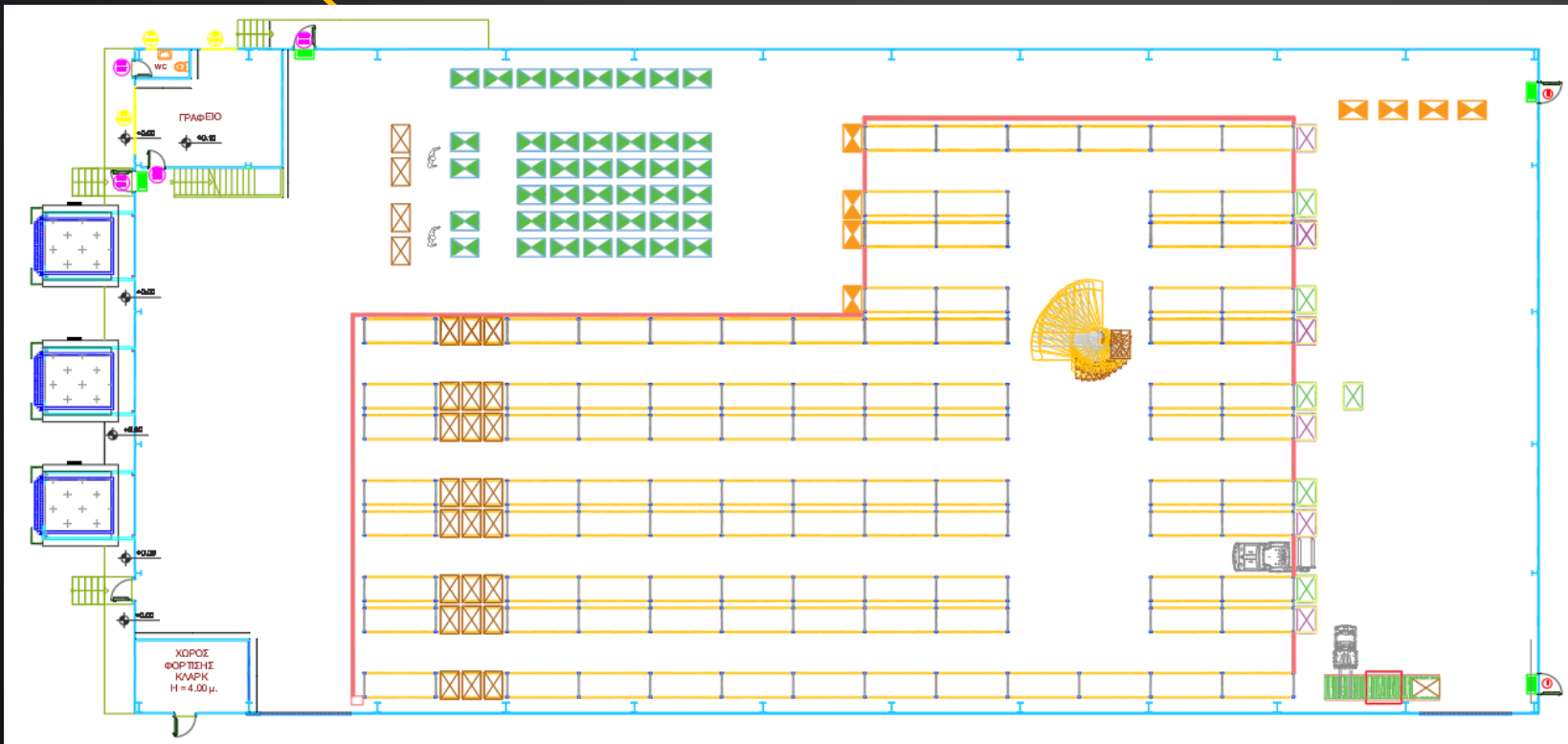
# Transport with more safety



# Auto Warehouse with MR



- Transport from Production
- Contour control
- VNA Storage
- Pallets for Picking Selection
- Transport to picking stations
- Swarm technology for picking process





# Everything safely under control.

**A warehouse is not a playground.  
But it should be just as safe.**



**Protecting goods:** Your stored goods are a precious commodity. A range of assistance systems help you protect them professionally while saving time and money. This not only secures your goods and employees in the warehouse, but also improves productivity and delivery reliability.



**Protecting machinery:** With a vast range of features and regular maintenance, we help you to minimise accidents involving industrial trucks and to ensure their long-term availability. This not only protects your personnel, but also reduces the cost of repair and maintenance. This also means lower costs.



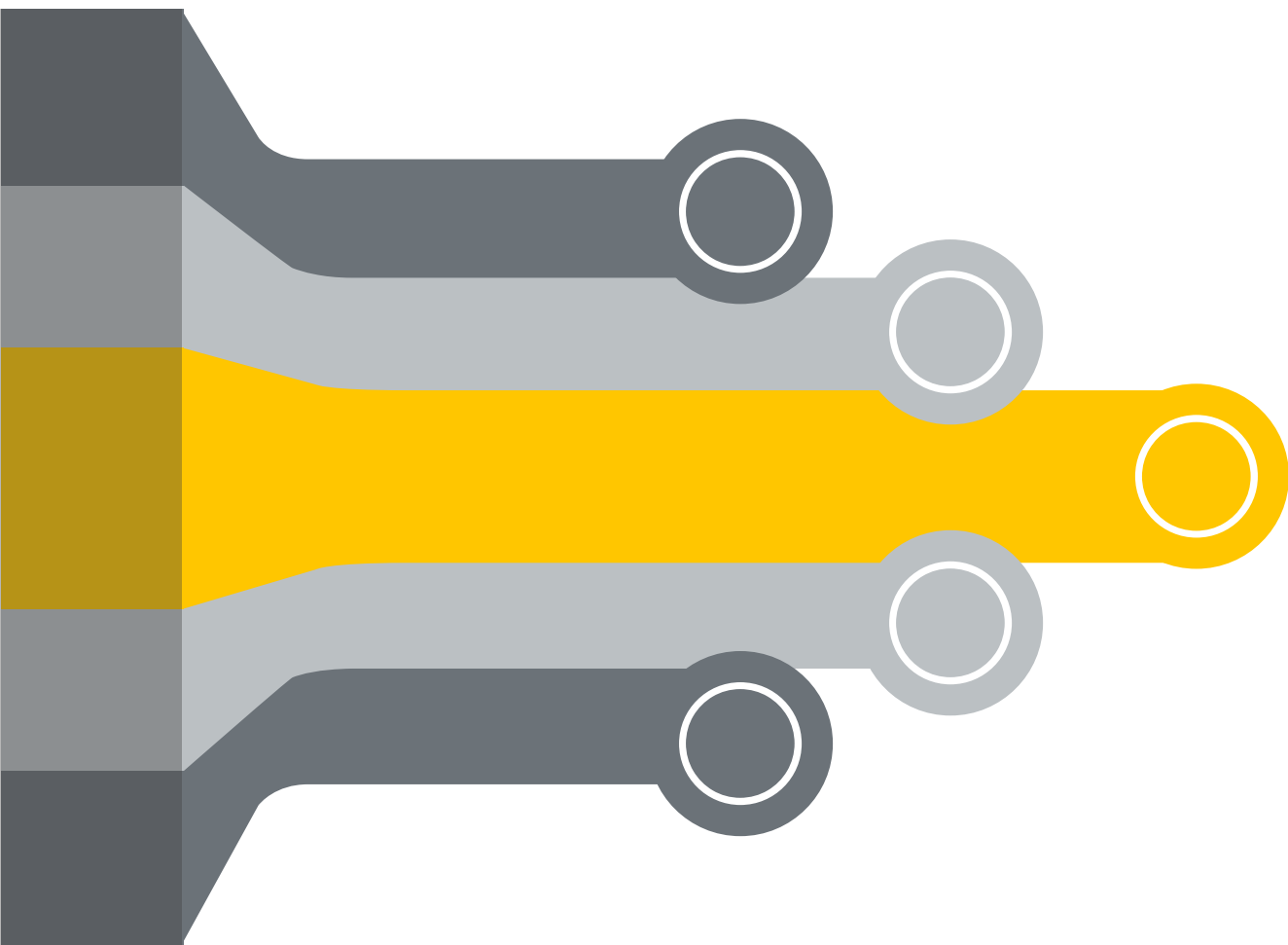
**Protecting people:** To protect your employees in the warehouse from collisions with industrial trucks or other accidents, we offer a variety of truck options. And because the health of your employees is important to us, we ensure that the workplace is ergonomically designed, enabling your operators to always work safely, ergonomically and efficiently.



**Protecting warehouses and storage facilities:** Our preventative services help to prevent dangers caused by damaged storage facilities. This keeps your processes safe and your valuable goods protected.



**Protecting data:** In times of increasing digitisation and networking, solutions for outage and data security are part of every safety concept. We attach great importance to ensuring that our digital solutions meet the highest security standards. So that hackers have no chance, we have our software and web applications certified by independent experts. This effectively protects your valuable company data and information.



**Thank you.  
Any questions?**

 ***JUNGHEINRICH***