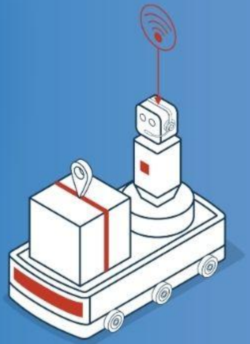


IL ROBOT PROTAGONISTA DELLA LOGISTICA

35 bimu UCIMU
fieramilano
13-16/10/2026

Magazzini intelligenti: AMR e cobot per un picking ultra-efficiente

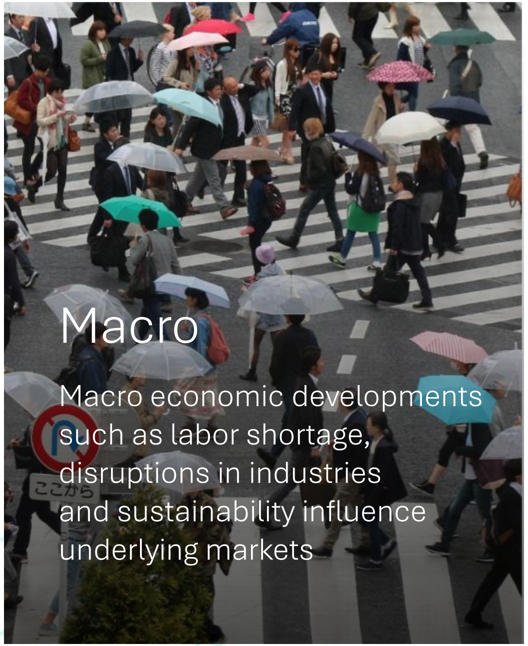
Lucrezia Morabito – Comau

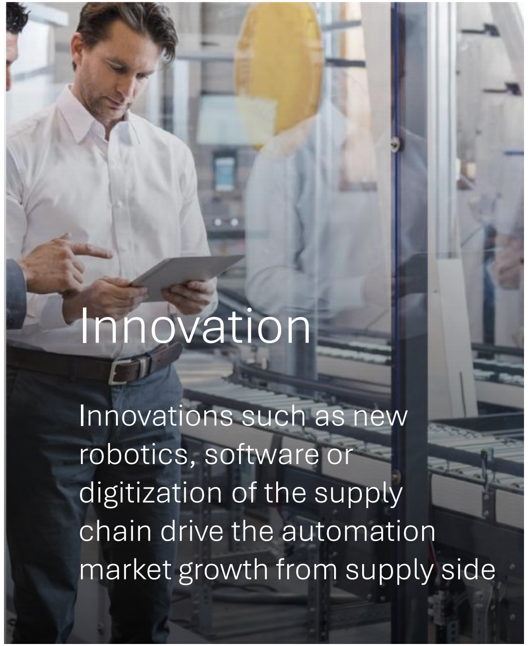
COMAU | AUTOMHA

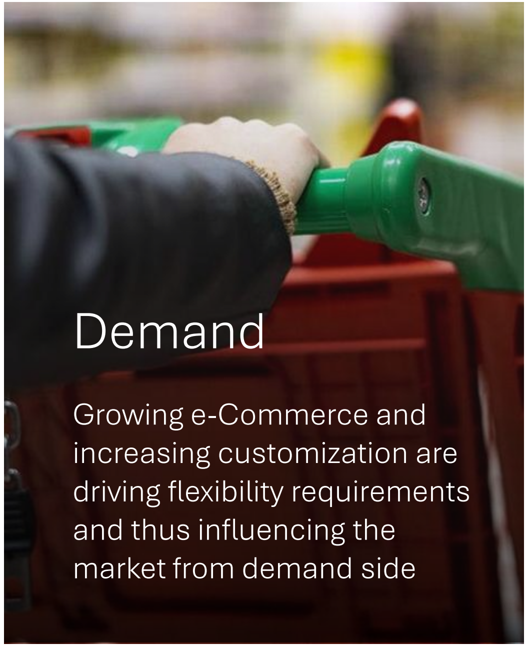
VOLANDIA

bimu.it

Introduction & Context

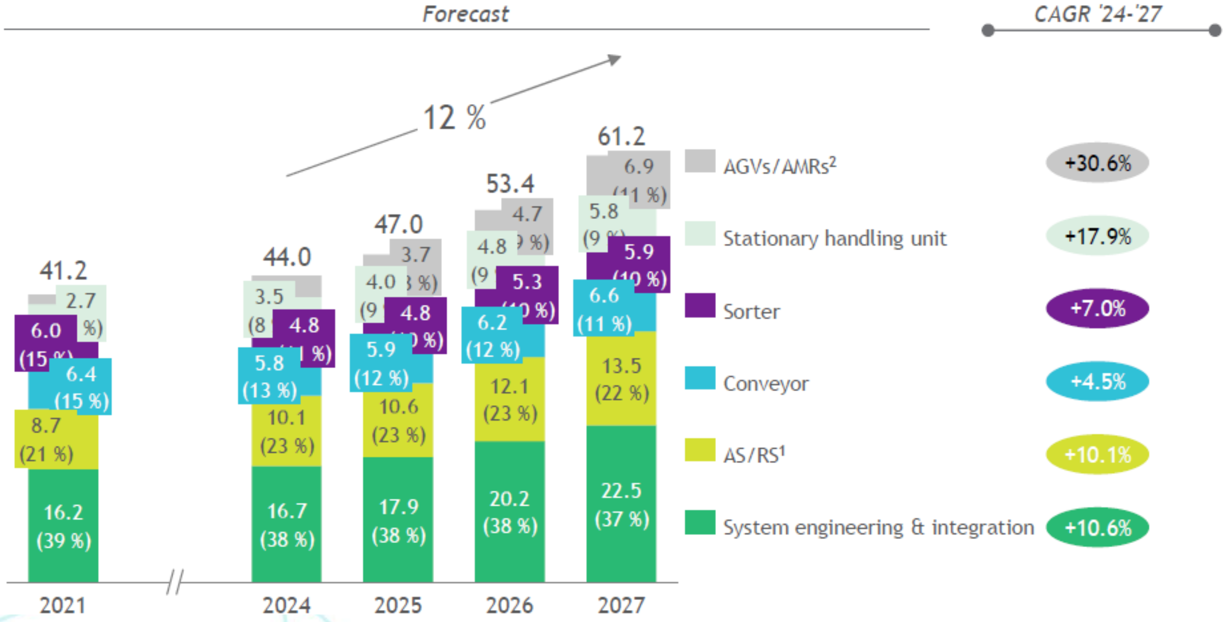






Automation in Logistics

Market evolution by product (B$; 2024-2027)



Note: Mini/Unit Loads, Mobile AS/RS, Shuttles and Storage included in AS/RS; Mobile Automation in AGVs/ AMRs; Line/ Loop/ Pouch Sorters in Sorting; Palletizing/ De-Palletizing and Robot Picking in Stationary handling units
1. Automated storage and retrieval systems 2. Autonomous mobile robots
Source: Interact, IMF, BCG analysis

In many modern warehouses, especially where order profiles are fragmented and customized, **picking** has become one of the most critical and cost-intensive steps. That's why optimizing it with smart automation, through **AMRs and cobots**, can unlock efficiency across the entire intralogistics flow.

From Automation to Intelligence

AMRs and Cobots bring complementary strengths, together to make intralogistics more adaptive and efficient.

Autonomous Mobile Robots (AMRs): mobility and adaptability
- Navigate using sensors, SLAM & AI for dynamic path planning
- Transport totes, pallets, or shelving between warehouse zones
- Coordinate as a fleet to reduce idle time

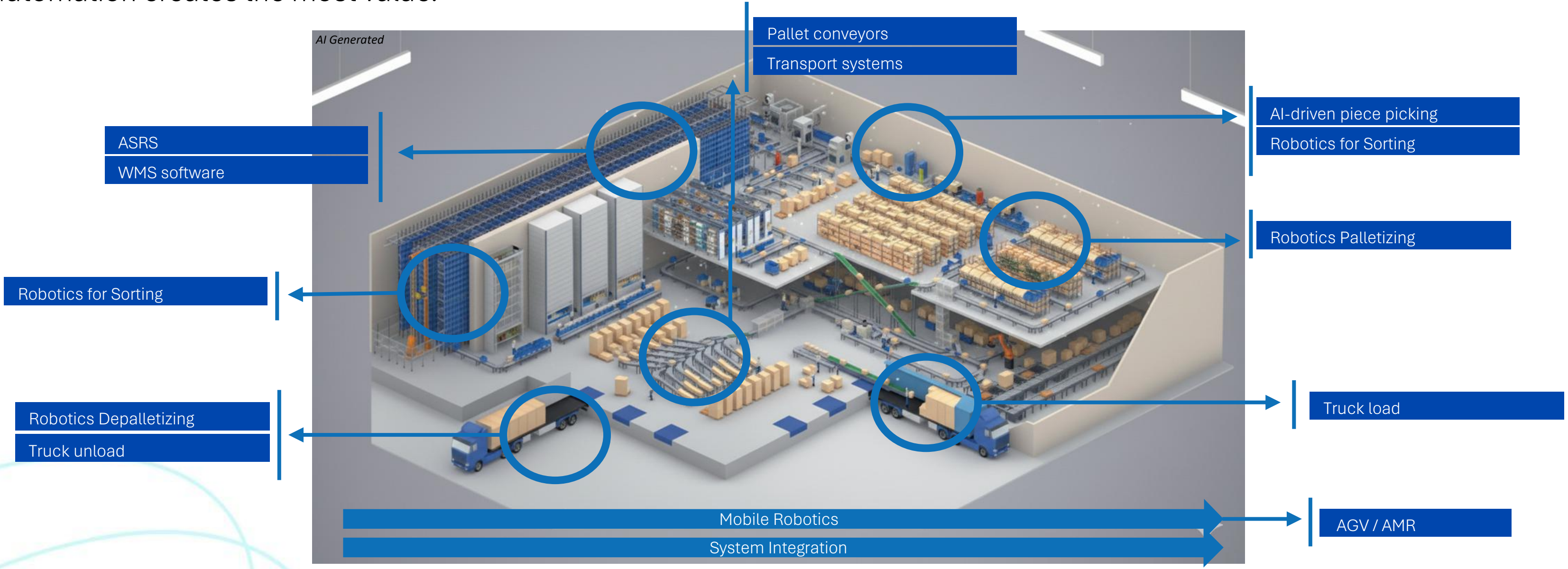
Collaborative Robots (Cobots): collaboration and safety
- Work safely alongside humans at pick and pack stations
- Handle repetitive grasping, lifting, and placement tasks
- Ergonomic support: reduce operator fatigue and errors

Key Advantages
- Flexible deployment and easy reconfiguration for new layouts
- Scalable for seasonal peaks without major infrastructure change
- Integrate with WMS/ERP for task assignment and data sharing

Designing the Flow: Data-Driven Logistics

Integration of AMRs, Cobots, and WMS/ERP within a unified intralogistics flow

Designing the flow means mapping how materials, robots, and people interact across the warehouse to identify where automation creates the most value.



AMR e cobot per un picking ultra-efficiente

Reduced Walking and Travel Time

- AMRs bring goods directly to the operator, eliminating long walking distances and idle movements, cutting up to 60–70% of non-productive time.

Higher Throughput and Productivity

- Combining AMRs and Cobots enables up to three times faster picking cycles compared to manual operations, ensuring consistent performance even during peak demand.

Safety and Ergonomics

- Cobots handle repetitive or heavy tasks, improving workplace ergonomics and safety while maintaining close human–robot collaboration.

Scalability and Flexibility

- Robot fleets can be easily scaled or reconfigured as demand or layout changes, ensuring long-term adaptability without major infrastructure work.

Cost Efficiency and ROI

- Lower operating costs through reduced labor intensity, fewer errors, and optimized cycle times, delivering a fast and measurable return on investment.

Conclusioni

🧠 1. Data First
Every successful automation project starts with accurate data, from flow analysis to digital simulation.
Designing with data ensures the right technology, layout, and fleet sizing.

🤝 2. People + Robots Synergy
Cobots and AMRs don’t replace humans, they enhance safety, ergonomics, and efficiency through smart collaboration.

🚀 3. Scale Smart
Scalability and integration with WMS/ERP are key to sustainable ROI and operational resilience. Start small, prove value, then expand intelligently.

35 bimu UCIMU
fieramilano
13-16/10/2026

GRAZIE