



Efficient Integration of Autonomous Mobile Robots into Intralogistics Processes platbricks® Warehouse Execution System

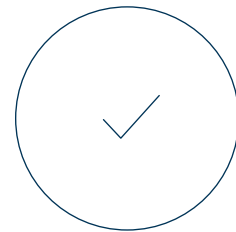
Initial Situation and Challenges

In intralogistics, there is potential for optimization to increase efficiency along the value chain to the end customer. Long and unnecessary walking distances complement many manual, repetitive processes. These processes offer little potential for increasing efficiency, but the key to disruption. This is where Autonomous Mobile Robots (AMR) come into play. AMR are untethered, autonomous driving vehicles used in various industries, including warehousing, e-commerce, manufacturing, and healthcare. They can transport goods, replenish shelves, perform inventories and picking, and handle complex tasks using sensors and artificial intelligence.

Innovation drivers from various industries have already recognized the benefits of implementation. With an annual growth rate of over 15 percent, a clear trend can be seen in how logistics processes can be transformed cost-effectively through AMR. In Germany, 400 robots already work for every 10,000 employees in the production processing industry - with the numbers tripling over the past ten years. They are an investment in the future of automation and help companies to be more competitive and reduce their costs.

But which robot is the right one? How do you connect the robots with your warehouse and ERP system to realize the greatest possible added value? platbricks® offers the solution with a system for implementation along the entire process chain.

Your Advantages



- Significant reduction in labor and wage costs
- Doubling the throughput in order picking
- High flexibility
- Reduction of downtime
- 24/7 in use
- Higher accuracy
- Long-term assurance of cross-software and cross-hardware compatibility
- High scalability
- Increased safety





platbricks® Warehouse Execution System (WES)

With platbricks®, we have developed a cloud-based software solution with which processes can be planned, controlled, digitally executed, and intelligently evaluated within the company - including in logistics and production - and across companies along the supply chain.

Our Warehouse Execution System (WES) solution in platbricks® seamlessly integrates all standard AMR systems and associated applications through a high level of interface expertise - including for all common SAP ERP systems. Further, it can handle and control the assignment of tasks, coordination, and synchronization of AMR and real-time warehouse management.

Warehouse Robotics Use Cases in Order Picking

- Coverage of different picking strategies (zone picking, batch picking, wave picking, piece picking, cluster picking)
- Goods-to-Person: Includes the automated planning, coordination, and execution of transporting goods to the respective workstations or the shipping area, thereby increasing process efficiency and relieving employees.
- Order picking: Automated order picking by automatically navigating AMR to the storage locations of the required items and loading them into their gripping systems.
- Replenishment picking: Automatic provision of the required items from the warehouse to the corresponding workstations.

You have questions, need information or a contact?
Get in touch with us.

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Global IT specialist Arvato Systems supports major companies in Digital Transformation. About 3,100 staff in over 25 locations stand for in-depth technology expertise, industry knowledge, and focus on customer requirements. Working as a team, we develop innovative IT solutions, transition our clients into the Cloud, integrate digital processes, and take on IT systems operation and support. As a part of the Bertelsmann-owned Arvato network, we have the unique capability to work across the entire value chain. Through our strong strategic partner network with global top players such as AWS, Google, Microsoft, and SAP, we continuously strengthen our know-how and leverage the most advanced technology. We Empower Digital Leaders.

Core Functions

- **SAP ERP Interface Integration:** We connect your ERP system with the platbricks® Warehouse Execution System to ensure data exchange and material flow.
- **WMS Integration to platbricks®:** Due to its modular design, our platbricks® Warehouse Management System solution can be flexibly added to your existing platbricks® WES.
- **Order Management for manual and automatic tasks:** Our WES does not hand over any task randomly but distributes orders according to the highest efficiency by using AI.
- **Picking:** The robots arrive at the goods and the employees only have to scan the goods and place them in the assigned boxes. The robot then moves on to the next station.
- **Resource management:** The platbricks® WES plans and forecasts order fulfillment, reordering of materials, as well as employee requirements for the warehouse.
- **Reporting and analysis dashboard:** All important KPIs of the warehouse are displayed here graphically and can be customized individually. sensors, dash buttons.
- **ROI calculation for the use of robots:** We advise you with an exact calculation about the application possibilities, fleet size and costs for your warehouse, so that you are on the safe side.

