TRAPO

Automated Intralogistics



AMR SYSTEM INTEGRATION FOR CONSISTENT THROUGHPUT WITHOUT INTERFACE CHAOS

TRAPO | AMR-SYSTEMINTEGRATION

SUCCESS FACTOR AMR: AUTOMATION THAT WORKS
MASTERING OPERATIONAL CHALLENGES WITH TRAPO

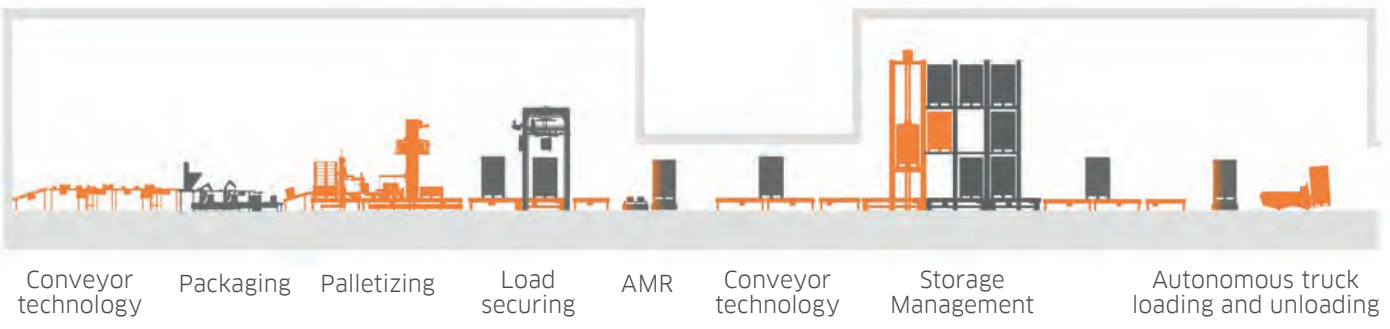
Autonomous Mobile Robots (AMRs) can be equipped with accessories such as conveyor units, carts, lifts, and handover modules. This allows them to pick up, position, and deliver goods reliably–enabling seamless transport between production areas and the warehouse.

Typical Pitfalls in Production & Logistics:

- **Handovers as the bottleneck:**
  AMRs ↔ Conveyor systems or stations blocked → Production delays and cycle-time losses
- **Safety reducing throughput:**
  Zones and interlocks are configured too conservatively → “it runs safely, but far too "slowly.”
- **Operations without root-cause visibility:**
  Issues are felt instead of actively managed → High MTTR and reduced overall availability.

TRAPO therefore does not integrate AMRs merely on a “technical” level, but in a way that is **process-stable and operationally reliable** – including handovers, safety, IT/OT integration, and performance transparency.

Common workflows:
Inbound → Production → Packaging → Outbound



- Production supply/line feeding
- Pallet and load-carrier transport between zones
- Handovers between AMRs and conveyor systems, stations, or robot cells
- Transport to/from the warehouse, buffering, and sequencing

AMR SYSTEM INTEGRATION FOR MAXIMUM FLOW
HARMONIZED INTERFACES

TRAPO integrates AMRs as part of a seamless material-flow automation, extending from production all the way to the warehouse – from inbound receiving through to outbound shipping.

As material flows expand, friction points naturally emerge: waiting times at handover stations, congestion in safety zones, manual workarounds, and unclear root causes of disruptions.

TRAPO does not deliver an 'AMR pilot project', but a reliable end-to-end system consisting of an AMR fleet, depalletizing/palletizing, conveyor technology, transfer stations, autonomous truck loading and unloading, and clean IT/OT integration – with clear responsibility for results.

One point of contact. One system. One reliable material flow.

What you gain

Availability in daily operation, not just in testing

Handovers, safety, traffic logic and restart procedures are designed so the fleet runs reliably in a three-shift system – with predictable performance and a clean ramp-up.

1

Scalability without re-engineering

From pilot to full fleet: expand, optimize, and roll out – without having to start from scratch each time, thanks to a system-based architecture instead of isolated one-off solutions.

2

Transparency & KPIs with TIM

TIM (TRAPO Intelligent Management System) makes performance and losses visible: status, throughput, disruptions, availability – as a basis for better decisions in operations.

3

Partners & Responsibility

Compatible AMR platforms:
Including, among others, **KUKA** and **OMRON** – are integrated into TRAPO's seamless, end-to-end system design.

KUKA
OMRON

TRAPO serves as your single point of contact:
We handle **planning, integration, commissioning and the operating concept** – you get **one unified system**, not a coordination project.

AMR SYSTEM INTEGRATION FOR STABLE INTRALOGISTICS
FROM CONCEPT TO AFTER-SALES SUPPORT

Material-Flow Concept

Layout, capacity, throughput logic, bottleneck and handover analysis, and exception handling.

1

Safety & Operational Logic

Zones, traffic rules, interlocks, and secure handovers – ensuring smooth, disruption-free daily operation.

2

AMR Integration (a.o. KUKA/OMRON)

Routes, charging and energy planning, fleet operations, incident-response strategies, and restart procedures.

3

Periphery & Stationary Automation

Conveyor systems, handover stations, buffers, roller and lift tables, and interface mechanics.

4

TIM – TRAPO Intelligent Management System

Monitoring/status, fault and root-cause patterns, KPIs (throughput/availability/trends), reporting (shift/day/week).

5

Commissioning, Ramp-up & After Sales Service

Structured go-live, training, and support models – with a clear focus on system stabilization and long-term availability.

6

Industry Expertise

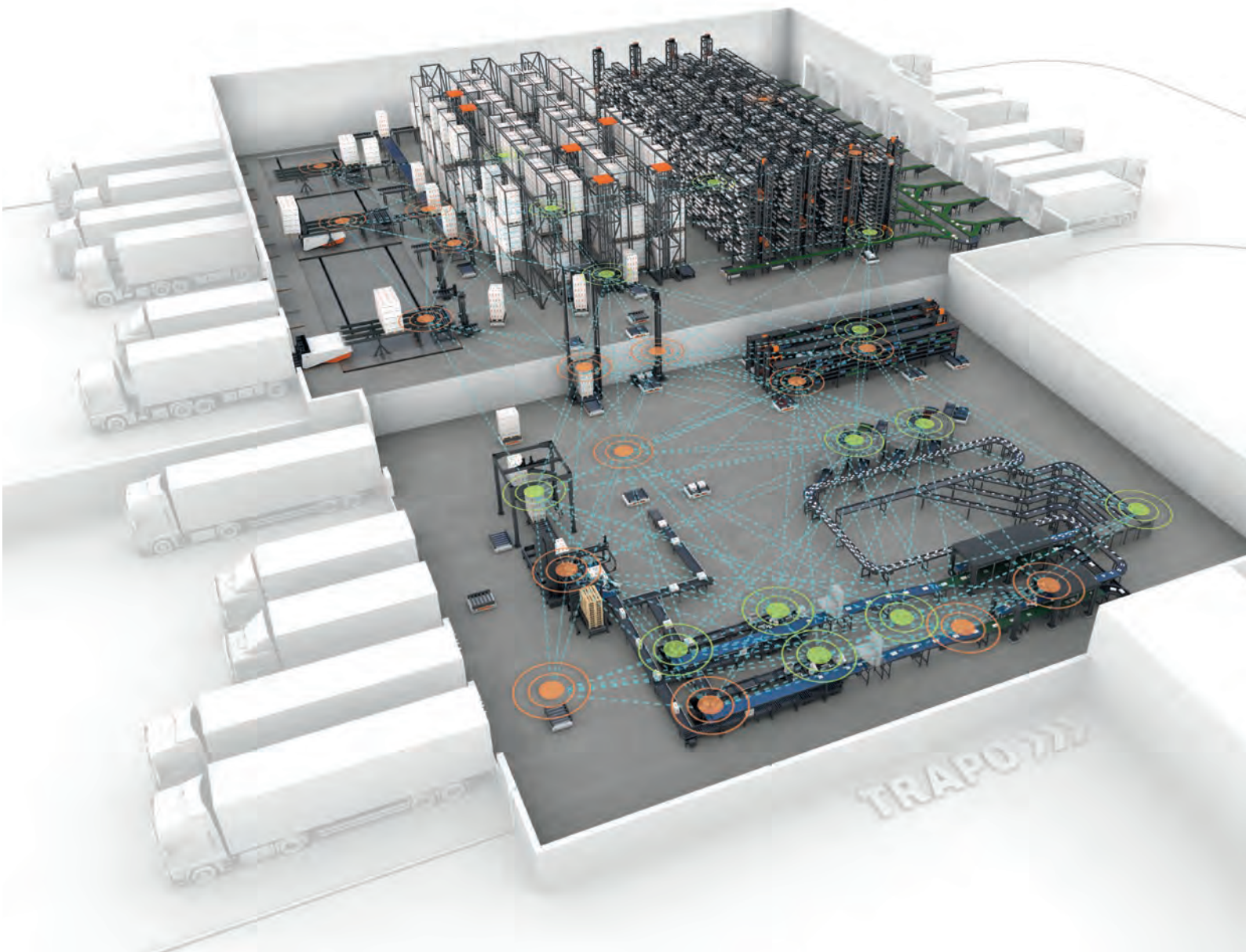


WHY TRAPO IS YOUR AMR SYSTEM INTEGRATOR
TURNING AMRS INTO ONE INTEGRATED SOLUTION

- **Best Fit for Every Task**
  The right AMR platform for each transport application – without manufacturer bias.
- **Accountability instead of interface debates**
  TRAPO unifies equipment, handover points, and IT/OT into one coherent system.
- **Measurably better through transparency**
  With TIM, performance and losses become fully visible – providing the foundation for continuous optimization.



TIM)))



Let's talk about your material-flow challenge.

TRAPO
Automated Intralogistics

TRAPO GmbH
Industriestraße 1
48712 Gescher-Hochmoor | Germany

Fon +49 2863 2005-0

info@trapo.de
www.trapo.de



TRAPO
Automated Intralogistics