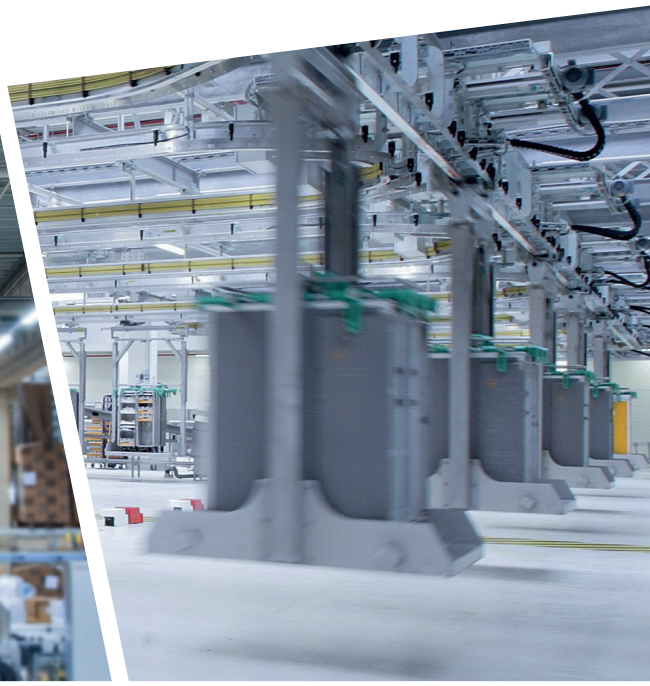
WHITEPAPER

Modern IT and automation concepts for Logistics 4.0



NETWORKING BEYOND THE WAREHOUSE

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PERFECTION AUTOMATED.

Content

1 Introduction

Market requirements and consumer behavior have changed greatly with the advent of digitization. Almost every product is just a mouse-click away and is delivered just-in-time free-of-charge. Individual customer requests, such as different types of surfaces and colors also add to product variance. Industry's answer to these challenges is: Industry 4.0, the networking of all elements of the value-add chain, the internet of things. What does this mean, specifically for logistics? As the interface between consumers and producers, it has a major impact on the processes of the digital economy. With the help of state-of-the-art IT and automation concepts , companies now ramp up production and their logistics centers optimally for the demands of digitization, networks and autonomous systems.

Quo vadis intralogistics? Vendors of software and automation solutions can point the way to Logistics 4.0.
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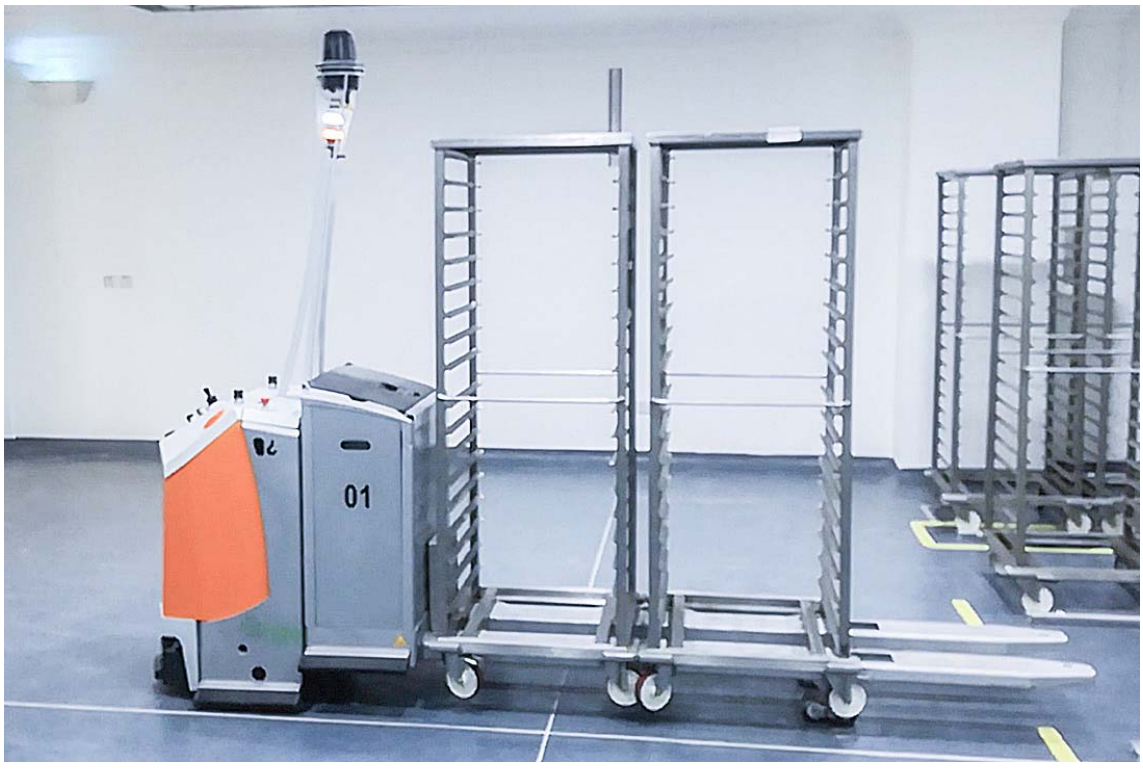
Automatic units will dominate the logistics center of the future. Self-driving systems maneuver freely, interact with other objects, give way to other systems and determine the best route to a destination on their own. This demands greater autonomy from all units involved. It is necessary to equip them with technology to recognize images, navigate, etc., they must be networked and able to be controlled via the internet, even remotely, at any time - and all of this while combating the constantly growing threat of attacks on IT. Logistics 4.0 accordingly takes effect principally on the side of the acquisition and processing of information. This means in fact that providers of software and automation solutions are the first point of contact for companies wishing to design a Logistics 4.0 solution they can actually use. Independent system integrators have a good handle on the market and are able to put together an optimum overall

solution from the variety of products offered. This is an enormous advantage specifically for the digital factory because new, innovative providers of navigation, digitization or mobile solutions can also be factored in. The system integrator also ensures that the necessary interfaces are implemented.

2 The logistics of the future is autonomous and networked

The influence of Logistics 4.0 has an effect on all levels of system architecture. The lower control levels are given more intelligence and thus greater autonomy. In addition, the flow of information and data is networked across all corporate divisions and beyond. Logistics 4.0 is the broader perspective beyond the logistics center to the entire added value - from planning and order processing to manufacturing, intralogistics and dispatch, but also along the supply chain - from raw material to intermediate products to assembly and use on the customer's premises. New value-added chains are evolving in which every production unit, every supplier and ever consumer is part of the overall logistics system. To achieve this paradigm shift in a logistics infrastructure, companies have to set the right course. This applies in the warehouse to the areas

1. **Intralogistics software**
2. **Plant visualization**
3. **Data transfer**
4. **Control technology**
5. **Actuators and sensors**



Self-driving systems such as automatic guided transport systems are of increasing importance to the logistics center of the future ©Unitechnik