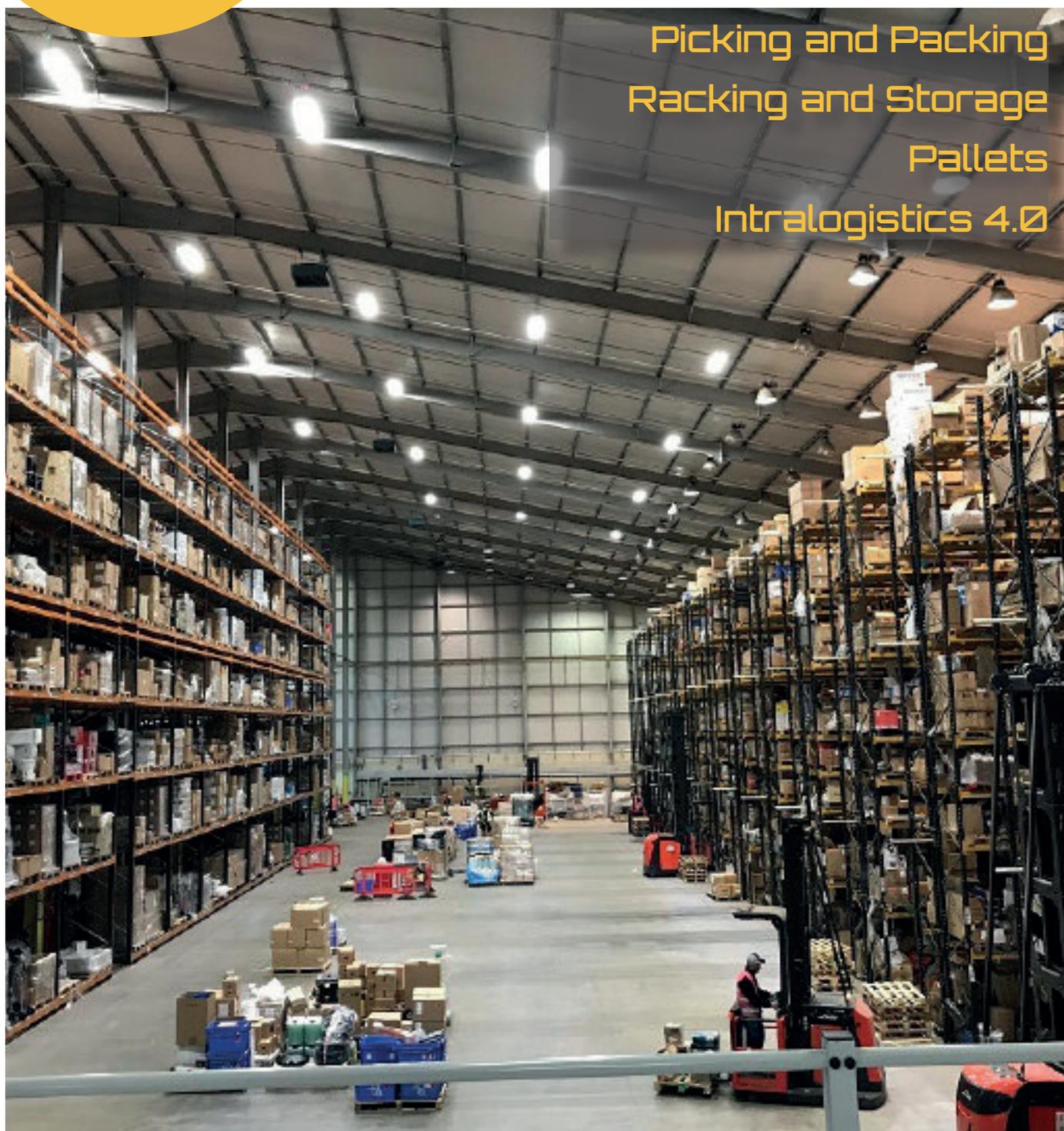




INTRALOGISTICS Magazine

Knowledge and Excellence in Intralogistics

Picking and Packing Racking and Storage Pallets Intralogistics 4.0



UPALL

Lifespan of Wooden Pallets

DEMATIC

Warehouse-Friendly Automation

CABKA

Intelligent Load Carriers



Harnessing data for the digital supply chain

In this month's article from the Automated Material Handling Systems Association (AMHSA), Gerhard Bär, Chief Operating Officer of VITRONIC GmbH, explains why logistics automation requires end-to-end data solutions.

Current developments in logistics can be described using a variety of catchphrases. We hear words such as big data, digitization and smart supply chain every day. But perhaps no word describes these developments better than transformation. As is often the case, logistics is taking a leading role as the trendsetter for the entire economy. Markets converge and global supply chains and their related data flow increase – a trend that continues to solidify, especially in the rapidly growing online retail sector. It is not only our purchasing behaviour that is changing, but also our entire way of life. Orders can be placed with ease with mobile devices, anytime and anywhere. Same-day delivery, shipment tracking in real time and deliveries on demand are already a reality today.



Data quality

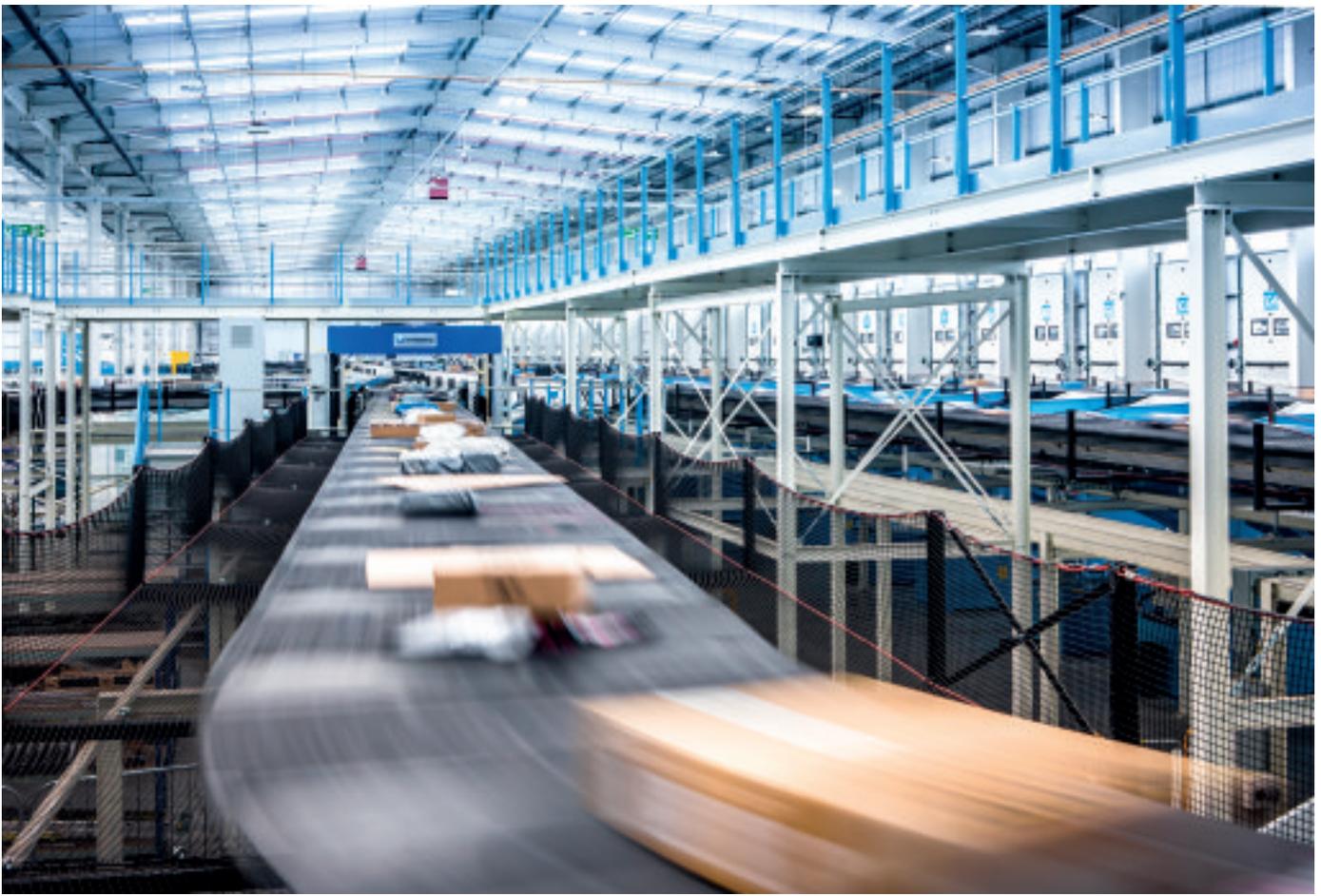
This is all made possible by a streamlined and agile logistics chain. An important foundation for this is data, or more specifically, the quality of this data. The only way to simplify complex processes and make them more transparent is if the data is captured in its entirety, and organized and used in a way that is meaningful. Let's look at the logistical feat parcel service providers must master. During peak times, a service provider processes over 10 million shipments per day and delivers them to several million recipients worldwide. To do this, barcodes and

2D codes are read, and customer-specific data, such as an address and other relevant information, is captured. Even object-related data, such as the volume and weight of the individual shipment, is stored.

According to forecasts, the global volume of data will double every two years. Automated solutions for identifying and capturing shipments will be key in this area; they not only increase throughput, but will also serve as the intelligent components of the digital supply chain. For example, DWS (dimensioning, weighing, scanning) systems are used around the globe. Even the name itself implies added value – as complete solutions they combine multiple process steps. The evaluation of different codes and the measurement of volume, in particular, rank among the key components of modern Auto-ID systems.

Digital fingerprint

Speed is an important competitive factor, which is why automated systems continue to replace the manual capturing of data (a process that is time- and labour-intensive) with scanners. Targeted evaluation of captured data opens the door to the potential for optimization and the implementation



of uniform standards. The biggest advantage of camera technology is the generation of 2D and 3D object images. By globally archiving all object data, including these images, it is possible to thoroughly analyse the data online and reconcile it offline anytime and anywhere in the world. The data is the digital fingerprint of the shipment, used to automatically detect variances such as damage or manipulation and for important – even safety-related – tasks. This is why automated identification systems are already forming the backbone for big data. And what's more, user-friendly software packages enable these systems to contribute greatly to transparency along the entire value chain.

Smart supply chain

As logistics continues to increase in complexity, solutions that not only map big data, but also successfully manage it are required. The smart supply chain is made possible only by bundling information and linking it to its related processes. The automated capturing of data is the starting point – it provides the entire data set of each individual shipment, including 2D and 3D image, length, width, height, volume and weight. Auto-focus line scan cameras produce high-resolution images of the packages (even on pallets) and read the barcodes, 2D codes and characters (via OCR) printed on them. Almost simultaneously, the systems transfer all data to the connected

ERP systems. The captured volume and weight data is certified according to a standard that prevents post-manipulation, making automatic invoicing possible. Furthermore, the data forms an important basis for accurate transport planning. Improved utilization of the available data means fewer costs, resulting in efficient logistics processes that are ready for the challenges of the future.

www.amhsa.co.uk

