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Press release

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Logistics 4.0 is already reality

Secure data transfer to the cloud lays foundation for advanced analytics

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The cloud offers an infinite amount of storage space and computing power – but it first needs the right concepts and applications before it can become a genuine added value. As Lenze is demonstrating at the Hannover Messe (Hall 14, Stand H22) with a storage and retrieval unit, Logistics 4.0 is no longer a future dream, it is already reality. Data from the control, the drives and the sensors can already be transferred securely to the cloud with little effort.

Lenze is demonstrating the cloud's possibilities for the intralogistics sector at the Hannover Messe at Stand H22 in Hall 14. They show a storage and retrieval unit in operation and it is constantly receiving new commands: drive to the bin location, for example, or deposit and retrieve specific goods. The cloud gateways from Lenze's cooperation partner ei^3 are used to transfer all the relevant machine data to the cloud, securely and easily. This data can be accessed via a web interface, but service employees can also see and analyse it anywhere via mobile applications on a tablet and then initiate prompt responses.

Data security takes top priority in ei^3's own regional data centres. There are three of these: one in the USA, one in Europe, and one in Asia. A fourth one is currently being created in Germany so that the customers' local data never leaves the country. The data specialist from New York employs strong encryption systems for the data transfer, comparable with the kind of encryption that is used by banks.
The commands from the storage and retrieval unit's control, saying which bin locations to go to and when, are only a part of the available data. Other information comes from the Lenze drive control, about the motor current, for example, or the temperature of the drive. Also, ei^3 can send measurement data from the sensors of third-party manufacturers into the cloud via its gateways. Lenze advises against the indiscriminate collection of as much measurement data as possible and recommends collecting only the relevant data – smart data instead of big data.

From simple to complex

The data in the cloud can be analysed with different applications. The simplest case would be when a warning is generated because a specific critical value has been exceeded, such as the ambient temperature (condition monitoring), for example, or because it might be exceeded in the near future (predictive maintenance). This enables the maintenance department to plan the maintenance window in advance, combining different upcoming tasks into one maintenance job and thus reducing the system downtimes, which has a positive effect on OEE and ROI.
The analyses of big data, however, offer a more varied range of possibilities. One of these advanced analytics techniques is called pattern matching. This can, for example, provide answers for questions such as "Why does this storage and retrieval unit break down in Aisle 5 more frequently than the others?" The data stored by ei^3 provides the foundation for using such problem analyses.
Warehouse management is already optimising travel paths and times by relocating frequently transported goods to bins where they can be stored and retrieved as quickly as possible. Advanced analytics will open up new possibilities here, too, for example by not optimising according to speed alone, but finding a middle way, for example, between fast access times and energy consumption. System benchmarking and cross-location benchmarking reveal where some processes run better and where some still have to be optimised.

Effects on the business model

Logistics 4.0 not only means a better control of intralogistics and the optimisation of processes for the user. The OEM, too, profits from the additional information. He can optimise his service on the basis of the machine data and reduce the number of guarantee-based call-outs. The analysis of the usage data shows what the machines'

real operating conditions look like – they often diverge consideraby from what the customer previously reported. Accordingly, the machines can be precisely adapted to the actual operating conditions, and weaknesses that emerge can be eliminated. The machine manufacturer can also strengthen cutomer ties significantly with custom-made solutions and even with individual service offers..

Ready for the digital transformation

It is already possible today to create a storage and retrieval unit as part of a digital solution. Lenze offers all of the necessary modules to make this possible, from the automation and drive technology to the necessary development tools and software tools and the cloud connection. In addition, Lenze can share with OEMs and users the expertise needed in connection with digital services and the further development of the business models.

Meet us from 23.04 – 27.04.2018 at the Hannover Messe in Hall 14 at Stand H22.

Characters

app. 4.900 (with spaces)

Photographic material

Photo and text are available for download under “News” on the Lenze SE website (www.Lenze.com). We would also be happy for you to publish them on your website, free of charge.

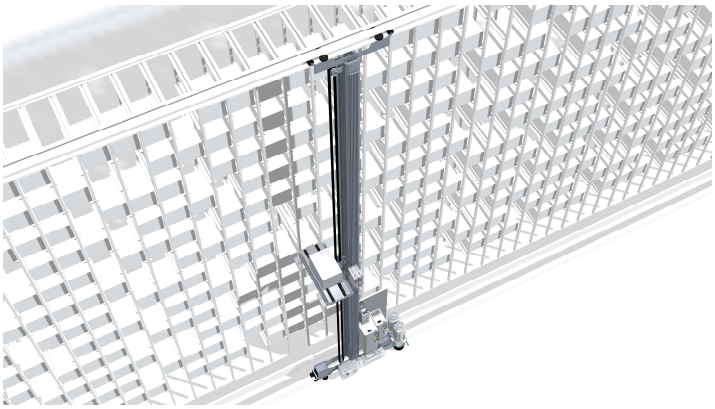

Photo: Lenze SE

About Lenze

Lenze is a leading automation company for the machine-building industry and a specialist in Motion Centric Automation. As a systems supplier with solutions competence, Lenze works for and with its customers to create high-quality mechatronic products and packages, powerful systems consisting of hardware and software for machine automation, as well as digitalisation services in areas such as big data management, cloud or mobile solutions, and software for the Internet of Things (IoT).

Lenze employs around 3,500 employees worldwide and is represented in 60 countries. Lenze's growth strategy will see the company continuing to invest strongly in the areas relating to Industry 4.0 in the coming years – with the aim of increasing sales revenue and profitability.