WarehouseFacts

EHRHARDT+PARTNER GROUP

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NEWS

Survey of logistics companies from all industries

Study: Logistics 4.0 in the warehouse

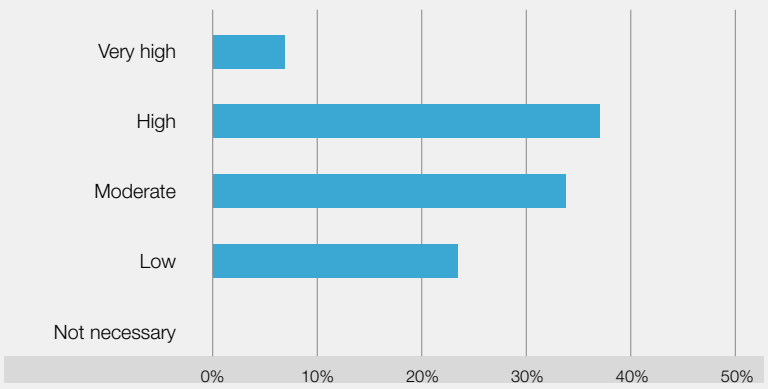
Many companies have not yet recognized the potential of logistics 4.0: that is the result of a study commissioned by Ehrhardt + Partner Consulting (EPC).

The survey of 200 logistics companies from all sectors highlights the tensions that companies currently face. On the one hand, there is real willingness to invest in new technologies in order to drive forward networking in warehouses. On the other hand, the specific economic benefit is still unclear for most companies. How can companies successfully take the first step towards Logistics 4.0? EPC presents potential solutions and provides an overview of future-proof applications in its new whitepaper.

The status quo in warehouse logistics

- Use of Logistics 4.0 systems -

Assessment of the need for Logistics 4.0 systems



Industry 4.0, the Internet of Things and networking were the current top issues that motivated EPC, the independent consultancy firm and subsidiary of the Ehrhardt + Partner Group (EPG), to take a closer look at the status quo at logistics companies.

"The aim of the study was to investigate the general understanding of Logistics 4.0 thereby the current developments with reference to the degree of connectivity in warehouse logistics," explains Marcel Wilhelms, Managing Director of Ehrhardt + Partner Consulting. "The result is clear. Many companies are in principle willing to invest in Logistics 4.0-capable technologies, but they are not doing it because the apparent risks outweigh the opportunities. Opinions are also divided when it comes to what Logistics 4.0 actually means. This creates uncertainty about which systems make the most economic sense and deliver maximum benefit. This is where we need to start and highlight potential solutions that are ready for the future."

Companies recognize need for connectivity

Another finding of the study was that a degree of understanding of Logistics 4.0 is associated with existing connectivity in a company. Companies may, for example, have a suitable IT infrastructure, which is an essential basis for implementing other systems. "The majority of respondents are generally willing to adopt new solutions and have recognized the need to act now to stay connected to the market," says Marcel Wilhelms. "This is the first step towards full networking of the supply chain. We need to continue exploiting the potential and generating a clear understanding in order to establish Logistics 4.0 structures."

Based on the results of the study, EPC in its most recent whitepaper shows how Logistics 4.0 can be implemented successfully in companies and which technologies are the right choice for the future in this context.

Download the whitepaper at
www.epg.com/gb/logistics-expertise/whitepaper/

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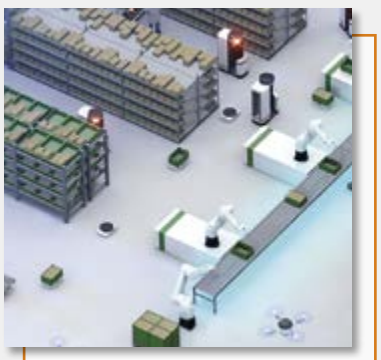
Ready for the future with LFS.V8

How the ROSSMANN drugstore chain changes their warehouse management to the latest version of the LFS.wms warehouse management system...

... read more on page 3



SES – the ERP for logistics

What determines the future of logistics...

... read more on page 4

Warehouse planning 4.0 with the HOLODECK

How the Ehrhardt + Partner Group uses the world's first virtual reality cave system for logistics to trigger the next stage of warehouse planning and consulting...

... read more on page 4

NEWS

Start into the cognitive era

The next development stage in logistics

Digitization and networking of logistics processes are not new topics. And developments are continuing: Cognitive systems are capable of learning, recognizing patterns and deriving recommended actions from these. This means they can support warehouse employees with decision-making or provide advance notification of events likely to occur. These are capabilities which will be of benefit especially to the logistics industry in the future. But there is still a long way to go until self-learning systems can be deployed in warehouses. Many companies have recognized the necessity of linking processes and technologies to remain competitive and ready for the future. The implementation, however, is progressing very slowly.

The ordered items are not delivered on the next day at the latest. The desired item is not in stock. And order tracking is not available. In these cases, it is very likely that customers will be dissatisfied. Consumer behavior has also changed as a result of digitization. Expectations are rising, especially in e-commerce: Customers have come to expect same day or next day delivery, 100 percent product availability and continuous status updates as a standard. And these expectations are no longer limited to the private sector. Customers in B2B also demand these services.

High performance IT as the basis

To meet the continuously growing requirements, companies have to rely on the linking of all systems along the supply chain. This requires a powerful system which handles not only the linking of the individual participants but also the control. A modern supply chain execution system (SES) as a smart control center transparently provides all data relevant to the entire supply chain and links them. A comprehensive overview and a more efficient design of the underlying original processes become possible only if the different data can be made visible and transparent. This allows the value and delivery chain to develop into a value and supply network. Supply chain execution systems are already used as tools for productivity increase and for preventing errors today. But there is even more potential in this. What is more, an SES is used as a platform for the next development phase of logistics – cognition.

The Internet of Things becomes Logistics of Things

Parallel to the “Internet of Things”, the term of “Logistics of Things” has become established in the logistics industry. Previously, a manageable number of hardware components were used in warehouses. Now, an abundance of digital gadgets has taken over this field. The use of tablets, smartphones, scanners, cameras, headsets and even drones has become common in warehouses. But the increasing number of technologies also produces more data. The challenge lies in drawing efficient benefit from this data. Which options are available for filtering this flood of information for the relevant elements?

Quality, not quantity

Until now, process optimizations were based on past findings. This view is changing in the era of cognitive logistics. The focus is on the question: “What will happen and are we prepared for it?” The predictive analysis which turns big data into smart data provides the answer. It is no longer the quantity of data, but rather their quality that counts. The filtered, categorized data and additional external material, such as weather or traffic information, allows predictions about situations which are likely to occur. Predictive analytics increase planning reliability because the method identifies repeating patterns. This enables companies to prepare for probable scenarios early on. If, for example, the system detects trend articles at a certain point, it is practical to align the product assignment in the warehouse to this in order to accelerate order picking. Upcoming maintenance or improvement potential in the material flow can also be identified in this way. This constitutes an important step towards cognitive logistics.

Cognitive logistics: trend or dream?

It is conceivable that, in the future, smart systems will make decisions based on predictive analytics without any human intervention. A sophisticated cognitive – i.e. learning – system can communicate with human beings in natural language, making it a smart “colleague”. It is also capable of actively thinking, supporting employees with decisions, issuing warnings in case of impending supply bottlenecks and giving advice. This artificial intelligence allows the system to use the deep learning method, where artificial neural networks teach machines to think. The required computing power is provided by a new generation of computers and algorithms. Nevertheless, cognitive logistics is still in its infancy. Many companies have either not yet completed the digitization and connectivity phase or have not even started the implementation. But companies must climb to this level in order to open the way for cognitive logistics and to not be left behind in the future.

NEWS

Ehrhardt + Partner Consulting: Big data becomes smart data:

LFS.analytics for more planning reliability

Forecast trends, optimize location occupancy in the warehouse and discover hidden potential – LFS.analytics from Ehrhardt + Partner (E+P) turns the high data volumes in logistics into efficient and useful information. The new solution bundles all relevant information and creates forecasts for future potential development on the basis of historical data and external data sources. This allows hidden potential to be identified easily, enabling, for example, planning of budgets and resources. LFS.analytics works with the LFS supply chain execution system or as a stand-alone solution.

LFS.analytics creates logistics forecasts for the future. In contrast to other solutions, the module uses external data sources in addition to historical data. External sources include, for example, weather forecasts, traffic information and information on current events. Consumer data are also included in the analysis. LFS.analytics uses this combination of data to determine which scenarios are likely to occur. Customers can then use this as a basis for making the relevant decisions. If, for example, the system detects trend articles at a certain point, it is practical to re-align the product assignment in the warehouse to this in order to accelerate order picking. LFS.analytics also identifies correlations between articles in this context. If products are often shipped together, it pays off to also store them together. Another advantage: the system continuously conducts analyses, providing users with daily updated results on request for answering their individual questions.

On the path to cognitive logistics

If LFS.analytics is used as part of the supply chain execution system LFS, the function automatically accesses all necessary data from the software.

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“Comprehensive logistics systems help to keep an overview amidst the seemingly unmanageable flood of data in logistics. Potential for optimization can easily be identified and does not remain unused. In the end, this of course clearly improves productivity as the analyses can then be integrated directly into the processes,” says Marcel Wilhelms, Managing Director of Ehrhardt + Partner Consulting (EPC). “Predictive analytics are becoming increasingly important in this regard. In the future, it will even be possible to implement decisions based on the analyses without human intervention. LFS.analytics turns big data into smart data. This is a first step in this direction.”

CASE STUDY

Drugstore chain relies on LFS.wms

LFS.V8: a software update for ROSSMANN logistics

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Customer for 20 years: ROSSMANN is converting its warehouse management to the latest version of the LFS.wms warehouse management system. Regional ROSSMANN warehouses in Cologne and Wustermark, Germany, with 30,000 m² (approx. 325,000 sq. ft.) and 24,000 m² (approx. 260,000 sq. ft.), respectively, have already completed the switch to the new release. Updates for additional sites are scheduled for this year. All regional warehouses in Germany are scheduled to run on software version 8 (V8) by 2019.

From mascara to chocolate, from cleaning supplies to sandwich toasters: ROSSMANN carries a wide range of over 20,000 items. The vast product range is housed on a total of 240,000 m² (approx. 2.5 million sq. ft.) of storage area, distributed across seven German logistics sites. Each day, approximately 400 tours leave regional warehouses of the drugstore chain to supply the 2,100 stores throughout the country. Customized software support is crucial here in order to precisely coordinate this enormous logistics volume. This is why, in a total of four European countries, ROSSMANN relies on the LFS.wms warehouse management system from E+P. The version update offers many functional and technological enhancements for the V8 software version, preparing the drugstore chain for a digitized future. The warehouse management system supports all commonly used operating systems and is particularly optimized for use on Android and iOS devices. This new software version is also ideal for the ever increasing demands placed on logistics technologies.

One of the essential requirements of the complex logistics operations at ROSSMANN are seamless and transparent processes at all times, due to the daily deliveries made to the various branch stores. If a regional warehouse does not carry a certain product, ROSSMANN employs what they call a shuttle service. In these cases, LFS orders the missing items from the main warehouse in Landsberg, Germany. Before shipping to the respective store, orders are then consolidated at the regional warehouse.

Pick-by-voice improves time management

With approximately 90,000 daily handled items in Wustermark and 130,000 daily handled items at the regional warehouse in Cologne, every second counts: with Lydia® Voice from topsystem, warehouse staff always have both hands free for the picking process. This increases efficiency and significantly speeds up the processes. The voice recognition software is speaker-independent, allowing ROSSMANN a high level of flexibility when using temporary staff and seasonal workers. New staff members do not require extensive training and can get started right away, simply by listening to the instructions through the headset. Integrating the pick-by-voice solution from topsystem into V8 offers additional development potential for the future, giving ROSSMANN the option of also using smart devices such as smartphones or smart watches.

Regular quality checks are of particular importance to ROSSMANN to ensure that items arrive at branch stores in perfect condition. Medical and food products in particular have to be checked and inspected before they can go on sale. The Value Added Services (VAS) module of LFS.wms therefore requests quality checks of goods to be carried out at regular intervals. This checks the items for product defects and other problems.

The future is automated

With LFS.V8, ROSSMANN is well-equipped for the future. Other automation projects are planned, such as an intelligent pallet warehouse in Burgwedel, Germany. In other words, switching to LFS.V8 is only a first step in a wide-ranging process optimization project. Once all workflows are fully reflected by the new software version, the drugstore chain has plans to introduce a resource management system, with the goal of handling as many logistics processes as possible with a single system.

Background: Dirk Rossmann GmbH

The Dirk Rossmann GmbH is Germany's second largest drugstore chain and – by turnover – one of the 10 most important food retailers in Germany. Worldwide, ROSSMANN is in position 111 of the 250 largest retailers. Dirk Rossmann opened his first store in Hanover in 1972. The Dirk Rossmann GmbH is still an owner-run company with the majority stake held by the Rossmann family. The company headquarters are in Burgwedel near Hanover.

The ROSSMANN drugstores had a turnover of 9 million euros with 3,770 sales points in Germany and five other European countries in the financial year 2017. This constituted an increase in the turnover of the group of 6.8 percent compared to the previous year (8.4 billion euros).

In Germany, ROSSMANN achieved a plus of 4.5 percent to 6.4 billion euros (previous year: 6.12 billion euros) and currently operates 2,100 drugstores.

Internationally, ROSSMANN runs five foreign companies: in Poland, Czech Republic, Hungary, Albania and Turkey. In 2017, the growth continued for ROSSMANN internationally.

With over 1,670 drugstores abroad, ROSSMANN has over 22,500 employees. (Source: www.www.rossmann.de/unternehmen)

NEWS

SES – the ERP system for logistics

Interview with Marco Ehrhardt, President of EPG

Founded in 1987, Ehrhardt + Partner as an owner-run company is active with the LFS software suite at 14 locations and with more than 500 employees. Originally developed for the AS/400 system, the LFS – previously programmed in Cobol – now runs on a variety of different server platforms. This is a requirement for modern software, including for warehouse management.

Company president Marco Ehrhardt is also very proud of the fact that the continuous further development of the solution was focused on becoming a supply chain execution system (SES) early on. This allows targeted use of LFS in addition to the central ERP system. For Ehrhardt, this makes sense particularly "where logistics requirements are complex, like for distributors". In addition to this, Ehrhardt explains that software-as-a-service or cloud models are becoming increasingly popular: "In contrast to on-premises solutions, they offer the advantage of an infrastructure that grows along with the business. Depending on how the requirements change over the course of time, the infrastructure can be adapted quickly and flexibly following to the 'pay-as-you-go' concept."

According to the Bitkom Digital Office Index, 82 percent of companies have already outsourced certain aspects of their IT. External IT service providers are most commonly used by the transport and logistics industry (82 %) and in retail and trade (83 %). These numbers show that logistics companies in Germany have been rethinking their strategies – something that would have been inconceivable only a few years ago. Due to the relentless pressure on the logistics industry to optimize, companies are constantly developing new solutions to make their supply chain even more efficient. "Each step in the value chain has to be smart and communicating," highlights Ehrhardt. "The data generated during this process can only be managed by IT infrastructures that are always up-to-date." This becomes difficult when logistics companies run their own IT systems, especially if they lack the resources for establishing or maintaining a functioning IT infrastructure. Small or medium-sized companies struggle with this the most.

The subsidiary Ehrhardt + Partner Xtended therefore employs outsourcing experts who ensure the running of the software and the required IT systems for the customer. "Our 'Private Partner Cloud' LFS.cloud grows with the requirements," promises Ehrhardt. "Customers are investing in a customized infrastructure as well as in a highly available, secure and highly performing solution for their logistics data."

In early December, the Ehrhardt + Partner group of companies in Boppard, which specializes in logistics software, celebrated its 30th anniversary. Over the course of the years, first the warehouse management system LFS itself was developed into a comprehensive supply chain execution system (SES), on which more than 1,000 customers from all industries rely today. Against this background, we interviewed the head of the company, Marco Ehrhardt, on the trends in logistics.

Mr. Ehrhardt, you celebrated a company anniversary in early December. Looking back, what were the key factors for E+P reaching this age, which is quite impressive for the IT industry?

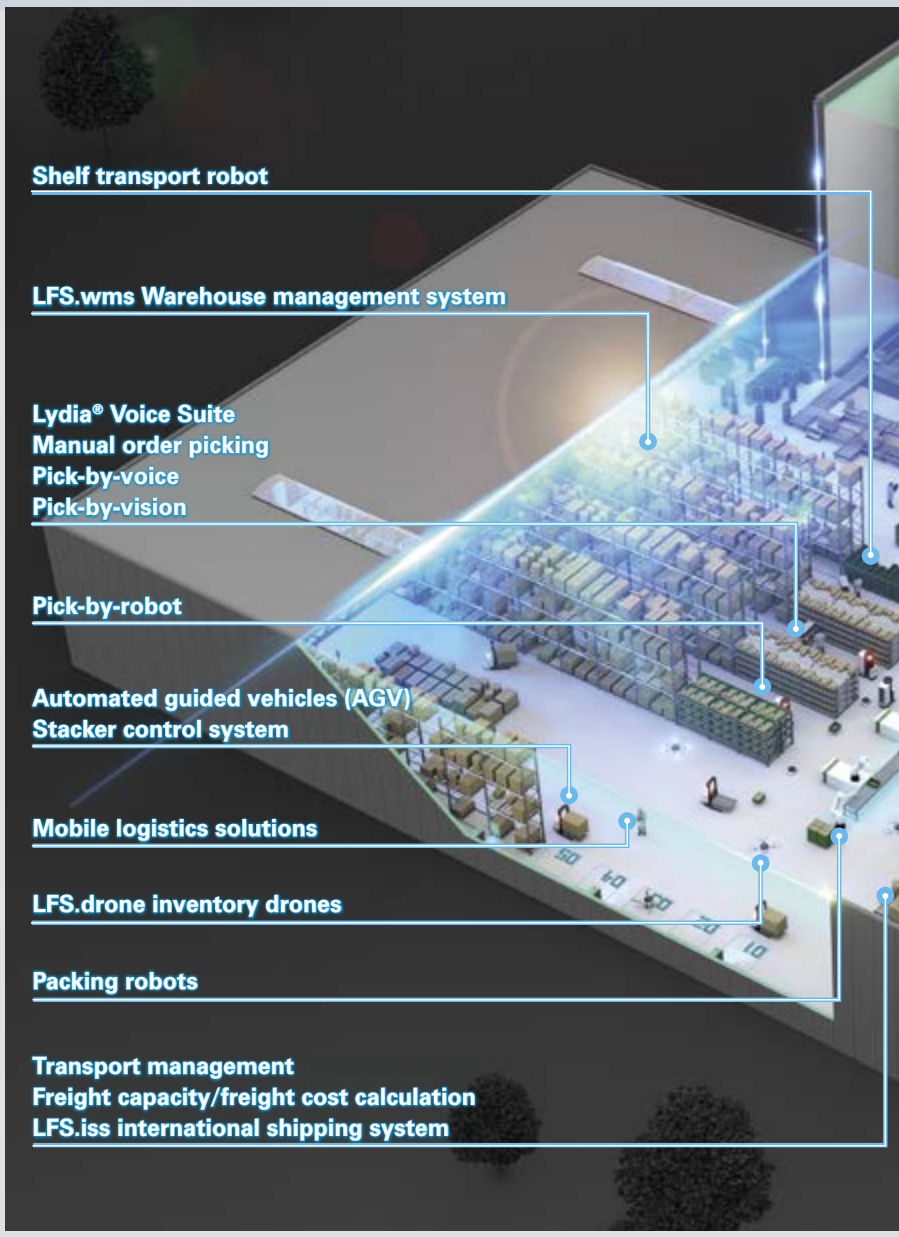
Marco Ehrhardt: We think ahead, develop visions and take a bold approach to implementing them with innovative solutions: These principles have defined our company development from the outset. Our focus has always been on finding comprehensive solutions. This is still our recipe for success today and enables us to meet the consistently increasing demands of our customers. The Ehrhardt + Partner Group has seen strong international growth in the past 30 years.

Today, EPG is a globally active group that knows the sometimes very different requirements placed on efficient logistics all around the globe. To ensure that this remains the case in the future, we are constantly working on new innovations and designing new ideas, which we then implement together.

Efficient logistics is not a magic trick, but hard work and lots of brainpower. From an IT point of view, what is crucial for ensuring that things keep moving?

Ehrhardt: In a time of ever increasing pressure on company logistics, it is no longer enough to selectively consider the processes within logistics. Even traditional warehouse management systems often reach their limits when it comes to networking and digitization of logistics. Modern IT solutions therefore have to approach the processes as a whole.

An SES consequently considers more than just the supply chain itself. It controls and optimizes the entire logistics and networks all involved instances of the supply chain. Such an SES is specially designed for the processes in logistics and therefore works with a focus on movement, in contrast to classic ERP systems. An SES captures the physical processes and documents the movements of goods, ensuring smooth processes.



These differences are essential when it comes to the evaluation of SES and ERP solutions. Logistics are a pillar of success for the company and too important to be viewed as an attachment to an ERP. Of course ERP systems are still important in their own right – just not in logistics, where an SES is already indispensable.

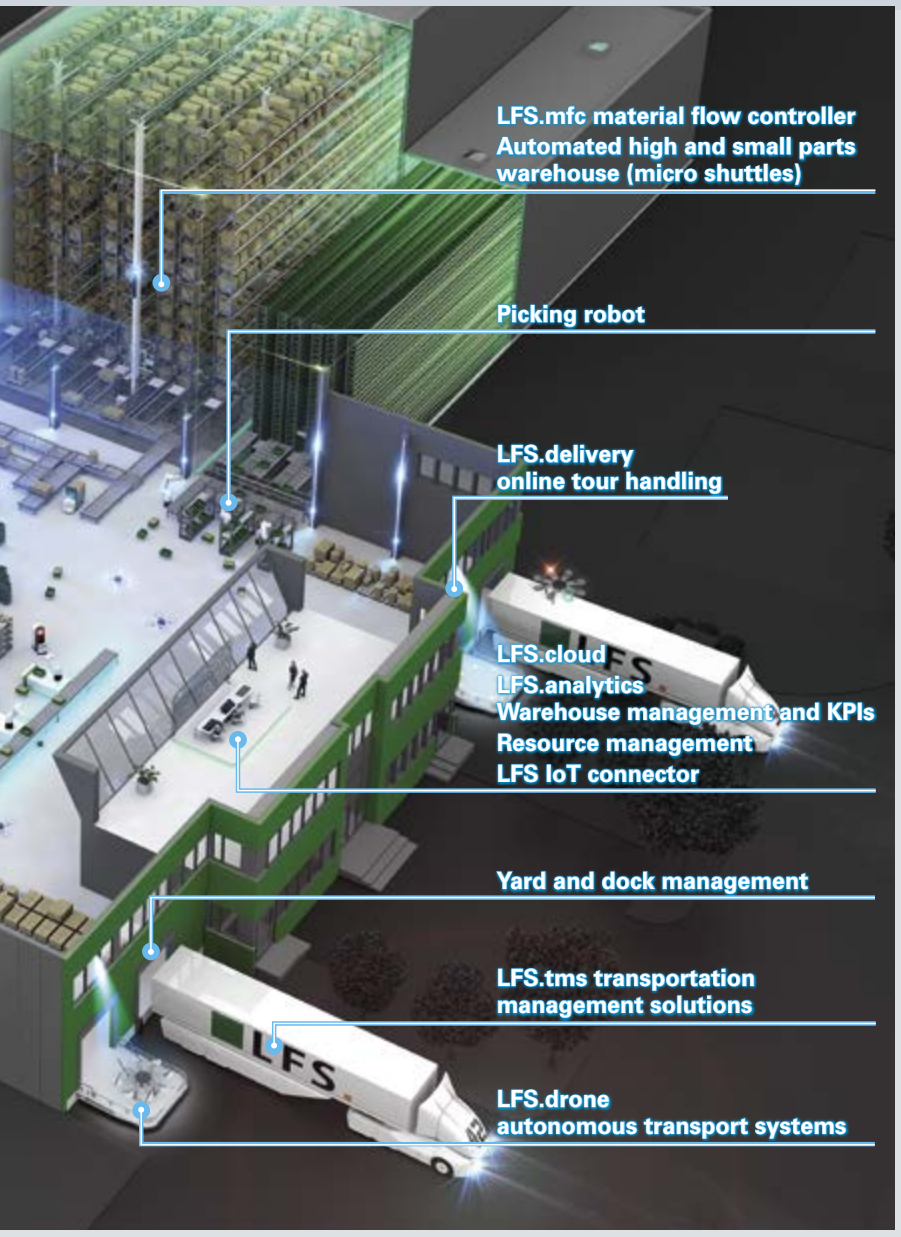
So you are no longer talking about warehouse management systems, but rather about SES. What exactly is the difference, and what does that mean in practical application?

Ehrhardt: An SES supports more than the warehouse management itself. It rather maps the entire delivery chain all the way to the end customer. So we are looking beyond the four walls of the warehouse and also include the monitoring and steering of the goods transport, among other things.

Another crucial benefit is that SES suppliers have in-depth expertise in the field of logistics as well as vast industry experience. Their systems are therefore set up so that many functions and processes can be parameterized independently by the users. After the installation of an SES, companies can generally work for a long time without expensive customizing and set up processes based wholly on their own requirements. This also applies when other sites have to be connected. An SES grows with the company, contributing to its international expansion in the long term. This in turn ensures investment reliability.

An SES also differs substantially from an ERP system in its structure. Due to their core tasks, classic ERPs always operate based on document-flows. In logistics, however, the decisive factor is the capturing of movement data. An SES is therefore specially designed for the processes in logistics and works movement-based. That means it captures the physical processes and documents the movements of goods.

But the reverse conclusion is also that an SES is the ERP system for logistics. From ordering through production and distribution of goods to their delivery – all relevant data from the entire supply



chain are available transparently on one single system and are networked with each other.

Another crucial difference to the ERP system is that the SES acts as a data collector. In our solution, for example, LFS takes on this function – collecting, analyzing and evaluating all data produced in the warehouse. This means any potential for optimization can be identified and implemented more easily. Using an SES as a comprehensive system also makes it easier to link software and hardware. The system is designed from the outset to quickly bring warehouse IT solutions and warehouse hardware together.

When is a warehouse module sufficient as an add-on for a classic ERP system?

Ehrhardt: Whether logistics can be controlled from the ERP or materials management system significantly depends on the level of complexity of the logistics processes. Companies need to determine the importance they place on item availability and reliable delivery. Since warehouse management is closely linked to client expectations, these also play an important role.

If the ERP system used has a low complexity, a logistics module can be added to it. For more complex requirements, software solutions from logistics specialists are often the better choice. Increased requirements in terms of logistics arise especially in distribution companies. The complexity increases with goods throughput and item variety. At the same time, companies need to react to client requirements in a flexible manner and realize that logistics is much more than an add-on to their ERP universe. Although ERP systems are the standard when it comes to the cross-functional support and organization of all company business processes, this is not the case for logistics. Supply chain execution systems are often the better choice here.

“Logistics are a pillar of success for the company and too important to be viewed as an attachment to an ERP!”

Marco Ehrhardt

Many warehouses are probably outdated with regard to Logistics 4.0. What should modernization focus on: hardware, software or the network?

Ehrhardt: It is important to consider the processes in their entirety. Hardware and software have to work together efficiently and be optimally networked. This is only possible, though, if everything meshes together perfectly.

LFS, for example, allows simple connection of a variety of hardware components. Modern solutions, such as our LFS IoT Connector, serve as a central communication interface, connect all technologies used in the warehouse and ensure the intelligent interaction of all systems involved – from the smallest sensors and printers used to complex conveyor technology and pioneering technologies such as drones and robotics.

How do you rate the practical relevance of innovative hardware that is currently being hotly debated – e.g. autonomous guided vehicles, drones and virtual or augmented reality?

Ehrhardt: There are some conceivable applications for drones, such as for express transport, for supporting remote service or inventory and for parcel delivery (parcel drones). But there are also obstacles, such as legal regulations and directives for using drones outside, e.g. for delivering parcels.

The greatest obstacle is currently the outdated or insufficient IT equipment in many warehouses. Many warehouse management systems are not yet capable of connecting to modern hardware components, such as drones or robotics solutions. In the future however, precisely this will be an important feature of modern and efficient warehouse management software, especially under the aspect of cognitive logistics.

By further developing the LFS from a warehouse management system into an SES, we paved the way for the future early on. Today, LFS is used as a cognitive control platform, integrating established warehouse technologies, such as barcode solutions, as well as e.g. inventory drones or automated guided vehicles (AGVs).

An intelligent software system like that is what makes connectivity possible in the first place. We have also understood the significance of virtual reality technologies for logistics early on. Among other things, we offer our customers the opportunity to take a virtual tour of the warehouse during the planning phase already. With the “HOLODECK” at our company headquarters in Boppard-Buchholz, we already offer the next evolution stage of VR planning. We would be pleased to present this to any interested readers.

What is important to note for future automation of order picking, e.g. with pick-by-light, pick-by-voice, etc.?

Ehrhardt: Humans will never fully disappear from warehouses and production, despite automation. Machines can do some things better than people, for example when it comes to handling loads. On the other hand, human beings make intuitive decisions and are much more efficient at solving highly complex problems. Ultimately it is also a cost-benefit question.

Our task for the future is therefore to optimize the man/machine interaction so that both systems can collaborate in the best possible way. Because there is still huge potential to be explored for voice applications. Picking with voice-enabled smartphones and tablets, visual support through smartwatches and smartglasses is only the beginning of the path towards Voice 4.0 – for all industry sectors.

Over the years and with the increasing requirements for process quality and the efficiency of the logistics chain, voice control has developed into an important cornerstone of process digitization. This is highlighted by the fact that voice systems have no longer been confined to order picking for some time now. Pick-by-voice links all processes within the warehouse.

Considering the ever shorter reaction times and therefore the higher process requirements in logistics as well as the networking of the entire supply chain, logistics managers have long been thinking about other applications for voice technologies. The system can be the starting point for the networked supply chain because it can be used to link virtually all processes of the value chain.

In how far do cognitive logistics, predictive analytics and big data already play a role in practical application today? And how should IT managers prepare for these visions becoming reality?

Ehrhardt: The predictive analytics method is already being applied today and will becoming increasingly important in the future.

Our LFS.analytics solutions can be used to illustrate the principle: The software turns the high volume of data created in logistics into efficient and useful information. That means that big data becomes smart data. Typical values and external data material can be used to predict trends, optimize location occupancy in the warehouse and identify hidden potential.

In the future, it will even be possible to implement decisions based on the analyses without human intervention. This is the foundation for cognitive logistics – but it is still in its infancy.

Interviewer: Berthold Wesseler,

NEWS

Warehouse planning with Star Trek atmosphere

HOLODECK: a look at warehouse planning 4.0

With the development of the world's first virtual reality (VR) CAVE system for logistics, EPG as reached the next level of logistics planning and consulting. The unique 5-sided CAVE with active stereo projection provides an immersive experience in a virtual environment. Up to twelve visitors can experience the three-dimensional simulation, emulation and visualization of logistics processes in the HOLODECK – without using VR glasses. The unique immersive experience of this technology allows a better understanding of logistics processes. According to the principle: don't just watch, get involved!

The science fiction series Star Trek introduced us to a technology from the distant future: the HOLODECK. In Boppard-Buchholz, it has already become reality. EPG's most advanced visualization software offers real-time modular logistics planning. In the VR CAVE, a virtual space is created by projecting the content onto four walls and a table. This virtual space can be used to realistically display various scenarios. The possible applications of the HOLODECK are virtually unlimited. Warehouse planning no longer has to be based on statistical models. Visitors experience a multi-sensual combination of acoustics and visual immersion into a virtual environment. This makes it easier to imagine the logistics processes, such as controlling material flow. As logistics planning can be carried out in the HOLODECK with maximum flexibility and scalability, users benefit from planning and investment reliability, risk minimization and cost reduction during project planning and commissioning. In addition to this, the technology is ideal for customer pitches. The special form of presenting enables interactive pitches with an immersive experience.

At a glance

- **World's first VR CAVE system (HOLODECK) for logistics**
- **Maximum flexibility and scalability of logistics planning in a virtual environment**
- **Simulation, emulation and visualization of logistics processes, such as control of the material flow and mapping of automatic storage units**

CASE STUDY

LFS.wms for Springer Auto Parts & Industrial Supplies

Just-in-time deliveries of vehicle spare parts

From an entire fender to minuscule electrical engine components: Springer Auto Parts & Industrial Supplies provides authorized repair shops and branch stores in the northwest of Germany with spare parts for all types of vehicles. When provisioning parts, flexibility and speed are always key, as many components are needed for repair work in a time-sensitive manner. With LFS.wms, this is no longer a problem: The system ensures improved path management in the area of storage and retrieval as well as far more efficient picking processes.

In its main warehouse in Stuhr near Bremen, Germany, Springer Auto Parts & Industrial Supplies stores thousands of different vehicle spare parts, which the wholesaler then delivers to authorized repair shops throughout the northwest of Germany. Up to 4,500 items leave the main warehouse every single day. Typically, these are small-parts orders that are required by repair shops just-in-time. Using its own fleet of vehicles, Springer supplies customers several times a day. With the comprehensive basic features of LFS.wms alone, E+P was able to introduce a warehouse strategy that met the needs of the customer's process complexity while also supporting the car parts dealer with maintaining its high level of service. As a result, the system ensures efficient inventory management and faster internal workflows. Up to 15 simultaneous orders can be handled by a single picker, following the multi-order picking method. In addition, LFS.wms guides staff through the warehouse in a path-optimized way as they pick and put away items. Furthermore, the data provided by the warehouse management system allows for a continuous analysis and verification of all current orders: Several screens with monitoring features, for example, ensure that urgent orders are labeled accordingly and are handled by staff as a priority. The precise number and exact bin location of each individual item is permanently recorded in the system. These meticulous details regarding current inventory provide Springer Auto Parts & Industrial Supplies, with their wide range of different items, with a high level of added value. With LFS.wms, the auto parts dealer has another solution on hand that it can expand on at any time and even use to meet its growing need for warehousing space. E+P, with many years of experience in the area of vehicle spare parts logistics, supports Springer Auto Parts & Industrial Supplies in its strategy for growth: The logistics expert has been working successfully with many of the leading car parts dealers for many years.

CASE STUDY

Warehouse management system for Frigosuisse

Ice-cold efficiency with LFS.wms

From its site in Möhlin (Switzerland), Frigosuisse AG provides its customers with a full service package, delivering end-to-end temperature-controlled logistics processing for food – from goods receipt to picking and fulfillment. LFS.wms **ensures efficient processes throughout the entire supply chain, in manual and in automated warehouse areas.**

Frigosuisse AG supplies the whole of Switzerland with refrigerated and frozen products from its site in Möhlin. The company provides temperature-controlled logistics services in automated high-bay warehouses with stacks of more than 30,000 pallets filled with baked goods, ice cream, meat, vegetables, seafood and other products – at a constant freezing temperature of -26° C. The company aims to be a one-stop shop for its customers. Whether a small butcher's shop or a large corporation, Frigosuisse manages all logistics from goods customs clearance to shipping whole pallets or single boxes. The solution used by the company was no longer able to manage the large number of different customers or the complexity of the logistics processes. The refrigerated logistics provider therefore decided to introduce the LFS.wms warehouse management system.

LFS.wms provides smart control of all the manual and automated warehouse areas at Frigosuisse. This includes two automated high-bay warehouses with integrated walkways for picking. The goods are directed straight from the high-bay warehouse to the sorting facility by a conveyor. The sorting system then scans the barcodes to assign the boxes to the right customers, using the order data saved in LFS.wms. A particular challenge was the large number of specific customer processes that had to be mapped by LFS.wms. The specific processes range from multi-level cross-docking, reseller processing and special weight handling to recording, managing and determining the net, tare and gross weight of boxes. Thanks to the integrated temperature zone management, LFS.wms also ensures that the refrigeration chain is unbroken. Batch combination of orders to create picking waves is another benefit. This allows Frigosuisse to increase efficiency by around five to ten percent when planning picking. LFS.wms can also communicate with the customs software, tour management system and accounting program used by Frigosuisse. As Frigosuisse is also a transport provider, ASTAG GU – a Swiss table of tariffs and distances for calculating freight costs – also had to be integrated into LFS.wms.

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Now it has introduced LFS.wms, Frigosuisse can forge ahead with its customers and meet the growing challenges faced by the food industry. Frigosuisse sees compliance with food regulations as a top priority and works together with customers to implement these. Being able to track goods is therefore essential and must be ensured at all times. As specific customer requirements are a major consideration for Frigosuisse, the high degree of customization offered by the software is also very attractive, as it allows the refrigeration logistics provider to offer each customer a tailor-made solution.

TECHNOLOGY

Hello, I am Gini.

Gini – another building block in the context of Logistics 4.0.

Flexible, intuitive operation and smart: the Gini button is another innovation in the solutions portfolio of EPG. Inspired by existing products from the consumer sector, such as the Amazon button, the company has developed a similar product for logistics and made it usable.

The Gini button is a flexible, freely configurable Kanban system. Independent of LFS.wms, but ideally in interaction with the warehouse management system, it can be seamlessly integrated into an existing process chain. Where many activities used to be executed on call, the Gini button optimizes the manual process.

Gini is simply integrated into an existing IT infrastructure via W-LAN. The battery-operated power supply, which lasts for up to 13,000 clicks, has no wires or cables at all. Its mobility is a very convincing feature. Gini can be used in the warehouse wherever it is required for the corresponding process. When conditions change, it is simply placed in a different location. In the end, the button verifiably increases efficiency and speeds up warehouse processes by connecting employees with the control center and digitizing the reporting process. Particularly in the area of replenishment management, Gini – as a Kanban system – ensures that all process are interlinked.

How it works

When required, users simply actuate Gini to trigger the previously defined process in the LFS.wms warehouse management system. The customer can individually define what this process looks like – whether replenishment management for consumables, managing gates, quality management in the area of temperature-controlled goods or an action in connection with automated guided vehicles.

There are no limits for the application. This creates maximum flexibility, while also being cost-efficient, saving time and allowing intuitive operation.

Which areas of application in logistics are conceivable? (Examples)

REPLENISHMENT MANAGEMENT

Availability of a certain product is coming to an end? Where employees used to have to actively walk to a computer, open the on-screen dialogs in the corresponding system and trigger a process for ordering replenishments, this can now be done directly at the storage or shelf location – with Gini. The button is simply attached to the shelf location within easy reach. That saves time for covering long distances in the logistics center. The user simply uses the button to send an automated message which the control center receives in real time. Reordering takes place as usual – but in good time, before things get tight. One example: when the labels in the label printer come to an end, Gini can be used to order more labels early on. This process can also be used in production. The same applies to consumables of any kind – especially those which are not managed in the system.

Quality management

Another area of application for the dash button is quality management in the field of temperature-controlled products. A possible scenario: By pressing the button located directly at goods receipt, the truck driver confirms that the sensitive goods are being transferred into the warehouse. The button is pressed again once the task has been completed. This makes it easy to measure how long the cold chain has actually been interrupted. This means that Gini ensures maximum quality of the sensitive products.

Gate management

The Gini button can also be used to make complex yard management and gate management more efficient and, most importantly, more economical. Once a truck driver has fully unloaded the goods and deposited them at the logistics center, they confirm this by pressing the button directly at the gate. The gate is released for the next driver automatically and in real time.

CASE STUDY

Investing in the future

LFS.wms for the Galliker Logistics Academy

At Galliker Transport AG, with headquarters in Altishofen, Switzerland, more than 250 specialists use the LFS.wms warehouse management system every day in logistics centers throughout Europe.

Galliker has launched the Logistics Academy to provide employees with training for the many functions of the modern logistics solution. E+P provides the innovative family-run business with the LFS.education training program for this purpose, including a full version of LFS.wms. Galliker Logistics Academy wants to provide employees with hands-on training while testing new processes and technologies in practical application.

LFS.wms has been an integral part of the process flows at the transport and logistics company for more than 20 years. Galliker is preparing for the future with the Logistics Academy: “Our employees are a key factor in the success of our business. Investing in further training is essential for future growth,” says Thomas Ettlin, Head of the Galliker Logistics Academy. “We can use the full version of LFS.wms to provide our employees with practical training and for various aspects of logistics. At the same time, we can test new processes in real-time operation, implement optimizations and explore potentials for further development – all without interfering with day-to-day business.”

Galliker is preparing for the future with an eye on current developments on the logistics market and on digitization, networking and logistics 4.0. “Particularly on the very competitive market for logistics service providers, it is important to constantly question and further develop process efficiency in order to remain competitive,” says Thomas Ettlin. “We want to drive this with the Logistics Academy.”

The private cloud hosting solution for LFS.wms from Ehrhardt + Partner provides Galliker with a secure working environment for training and development purposes.

In addition, all training documents are available on an e-learning platform of the LFS.academy. The concept also includes participation in other qualification options. The EPG team provides constant support for the trainers.

NEWS

Cloud-based shipping logistics

LFS.iss from Ehrhardt + Partner

EPG expands its logistics software suite with another standalone solution – the LFS.iss (international shipping system). LFS.iss handles the entire shipping logistics from a single system, independently of the warehouse management system (WMS) used.

LFS.iss is the solution for achieving maximum efficiency for outgoing goods. The integrated shipping system starts planning shipment soon after the order is received. All relevant information for the order is used to generate a routing code for optimum routing, which is reported back to the WMS. After the goods are picked and packed, LFS.iss selects one of the available shipping service providers based on the relevant routing information. A shipping label with a barcode is then created with all relevant data, such as address, weight, number of packages, routing code or shipping unit number – always taking into account the specific requirements of each CEP provider. LFS.iss generates and prints a proof of delivery for the consignment for the specific parcel delivery service. The system also records and provides all information, such as the name of the collecting agent and the license plate of the vehicle.

All data is transferred quickly and securely to the service provider via EDI. When it comes to service providers, the new product is exceptionally flexible. More national or international transport service providers can easily be added, as well as additional shipping methods and services, such as COD, same-day delivery or express delivery – an absolute must as online retail continues to flourish.

High performance and maximum availability

LFS.iss is provided as a private cloud solution, E+P provides the necessary infrastructure at the data center of its subsidiary EPX, Ehrhardt + Partner Xtended, and sets up the links to the various CEP providers. Managed service is also available. This includes standardized services, such as administration, operation of the server and comprehensive support for the software according to mutually defined criteria. Automatic system updates provide customers with a solution that is always up-to-date.

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