

Driving the digital change



Digital transformation. New opportunities.

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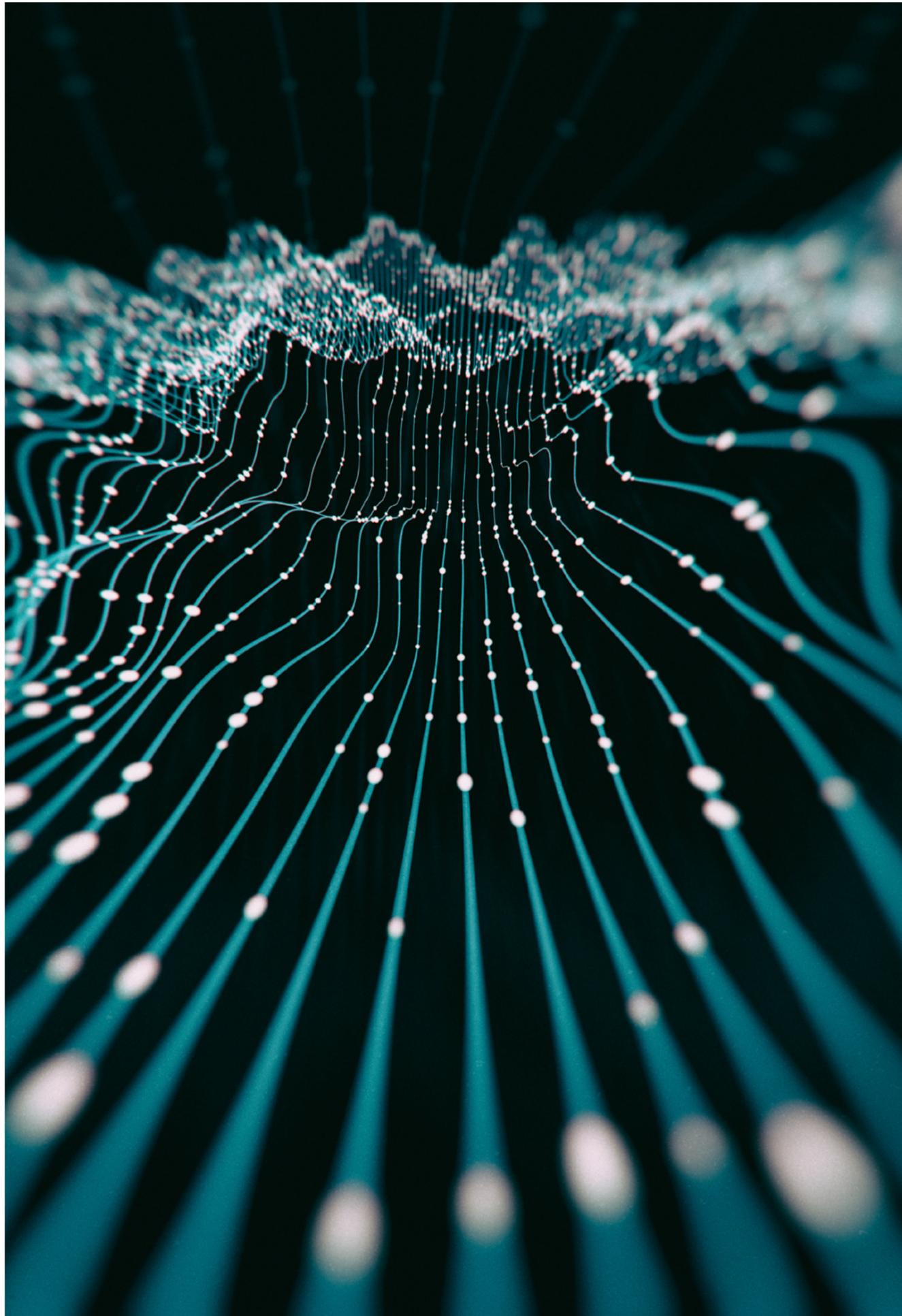
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**Ladies and gentlemen,
valued business partners,**

In this day and age, logistics concepts such as processes, process optimization, personnel assignment planning and efficiency are all part of the world of software. This makes mastering the management and optimization of entire logistics systems across multiple steps of a value chain one of the most demanding challenges.

Here at KNAPP, we have always aimed to utilize technological opportunities to their fullest to secure our customers' success, no matter the year. We have always striven to be a pioneer in the field, whether before the turn of the millennium, when we first started working on WMS, or all the way back in the 1980s, when we created our first WCS. We are especially honored to have customers and installations from back then who we continue to serve today.

The old software hierarchies in logistics have served us well, but they are now changing. There used to be clear boundaries between the ERP and supply chain levels, whether in WMS or WCS, machine control systems, transport management or track and trace systems. Increasing integration, higher-performing systems and, above all, cloud computing have allowed the boundaries between systems to overlap more and more. This development creates exciting new opportunities for process design along your value chain because data

is generated every step of the way – data that can be integrated in real time and made available in different systems. The intelligent solutions in our software suite provide you with more insight than ever before into the processes taking place in your value chain.

Another topic that is transforming logistics is artificial intelligence and robotics, two technologies that are now developed enough to be used in industry and have the potential to change the world of logistics forever, especially considering issues regarding the skilled worker shortage and increasing costs. Using artificial intelligence allows for continuing optimization and reserves labor-intensive tasks, such as maintaining master data for robots.

Although there is no one-size-fits-all solution for creating the perfect value chain, using intelligently integrated solutions makes optimizing and reviewing processes across multiple levels – from the manufacturer to the end customer – significantly easier. As a strong and reliable partner, we focus on understanding the challenges you face, helping you harness the power of digitalization and supporting your success.

We hope you enjoy reading this issue and warmly invite you to dive into the world of software with us!

Peter Puchwein
Vice President, Innovation
KNAPP

Bernd Stöger
Executive Product Manager,
Software, KNAPP

Software Makes the World Go Round

Top 5 uses for your logistics operations

Intelligent solutions for software and digitalization are key elements of today's value chains. Our software solutions integrate all steps of the value chain by connecting processes, automation technologies and people in the warehouse. Here are the top five uses for our cutting-edge software programs and the advantages they bring to your logistics operations.

★★★★★

Intelligent software reduces logistics costs

Using intelligent software provides plenty of opportunities for saving money. Want some examples?

- + Calculating optimal personnel allocation
- + Increasing efficiency by going paperless in the warehouse
- + Keeping the error rate low thanks to computer-assisted workflows
- + Eliminating the need for inventory
- + Increasing efficiency through automation
- + Reducing shipping costs by packaging according to need
- + Saving time with goods-to-person picking

★★★★★

Data analysis as a road map for daily operations

By continuously collecting and combining data from different systems – from ERP, WMS and WCS to machine control systems, IoT devices and transport management – our logistics software KiSoft Analytics provides a clear overview of the complex processes taking place within systems and along the entire value chain.

Based on this, important trends and forecasts can then be determined. The redPILOT Operational Excellence Solution also suggests alternative courses of action, making it even easier to make the right tactical and strategic decisions.

Read more about redPILOT on page 9 and KiSoft on page 14.

★★★★★

Maintained master data is key to success

There is one important prerequisite for a properly functioning automation solution: perfectly maintained master data. Well-maintained, high-quality master data is the only way to ensure efficient and error-free item handling. Our software KiSoft Genomix is the perfect solution for this. It automatically collects, distributes and maintains relevant item attributes, such as weight, measurements and center of gravity. This means each technology knows the right way to handle each item, making sure the automated system runs optimally.

★★★★★

Maintenance management is now a job for software

Providing maximum availability while using resources efficiently: KiSoft CMMS, short for Computerized Maintenance Management System, makes sound, data-driven maintenance decisions while striking a balance between operation and maintenance. The software program simplifies processes, prioritizes tasks and centralizes maintenance information.

Read more about KiSoft CMMS on page 32.

★★★★★

Software for reducing CO₂ emissions

The environment also benefits from smart software use. Creating a digital twin in the system's design phase can help to ensure the right parts are manufactured. During operation, KiSoft WMS calculates custom carton sizes to save packaging material and dunnage while transporting as little air as possible. KiSoft WCS also determines the ideal sequence of items, making retrieval as energy-efficient as possible.



Schedule shifts automatically and optimally

SHIFT SUPERVISORS To make sure the warehouse runs at its best, shifts must be scheduled so that there are always qualified personnel available for all the tasks at hand. Scheduling is especially challenging in times of unforeseeable influences, fluctuating demand and personnel shortages. Fortunately, redPILOT Operational ExcellencePLANNER is here to help. It consolidates all relevant information such as order volumes, employee availability and performance targets in one system, making scheduling much more flexible and effective. Shift schedules can be created at the press of a button. Additionally, shift leads receive valuable information on employee and process performance, time and costs. Smart machine learning calculates prognoses to provide more accurate estimates of how many employees will be required for future tasks.

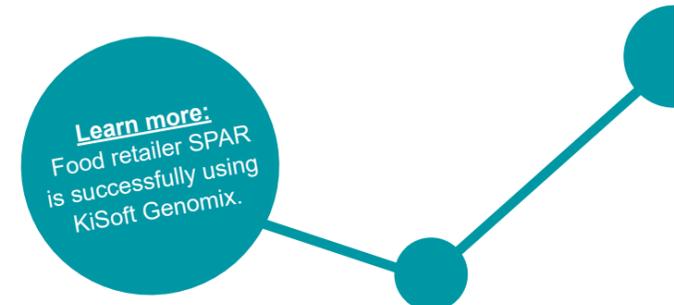
Higher satisfaction, higher performance with teamAPP

PERSONNEL In today's fiercely contested job market, employers need effective strategies for hiring, training and retaining employees. Employees value flexibility when it comes to their shifts. The teamAPP smartphone app offers a way for logistics companies to offer their employees this highly valued flexibility. Employees can use the simple and intuitive app to put in vacation requests, swap shifts and enter preferred working hours or additional availability. Since it is directly connected with the scheduling tool, teamAPP makes sure the scheduling manager has immediate access to all information. Supervisors and site managers can better cater to employees' needs, reduce their own administrative workload and create efficient shift schedules while increasing employee satisfaction.

You can find more information on smart scheduling and the teamAPP [here](#).

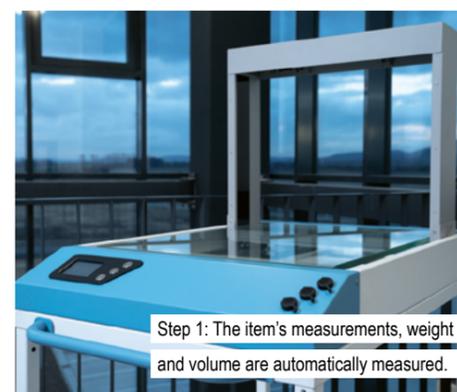
Recording high-quality master data

PERSONNEL Master data forms the basis of error-free warehouse operation. However, recording and maintaining master data requires a lot of time and effort. The intelligent complete solution KiSoft Genomix supports employees and simplifies the process of recording master data while improving its quality, making sure downstream automation technology works at its best.

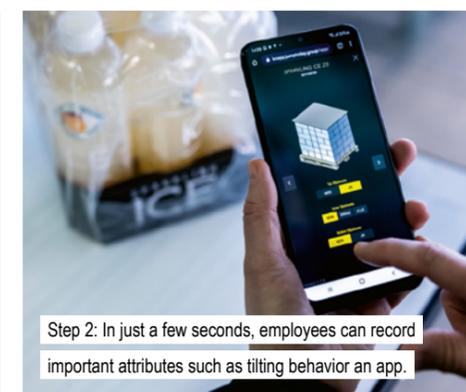


Learn more: Food retailer SPAR is successfully using KiSoft Genomix.

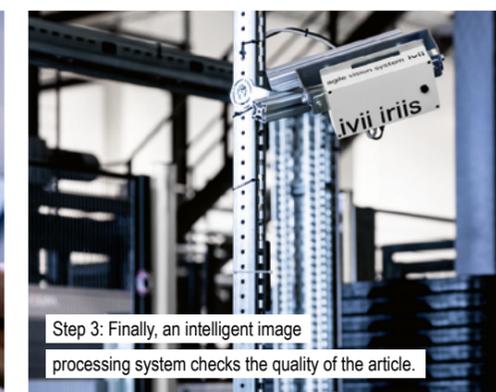
How recording master data with KiSoft Genomix works:



Step 1: The item's measurements, weight and volume are automatically measured.



Step 2: In just a few seconds, employees can record important attributes such as tilting behavior an app.



Step 3: Finally, an intelligent image processing system checks the quality of the article.

Intelligent Networks

How software solutions assist people working in logistics

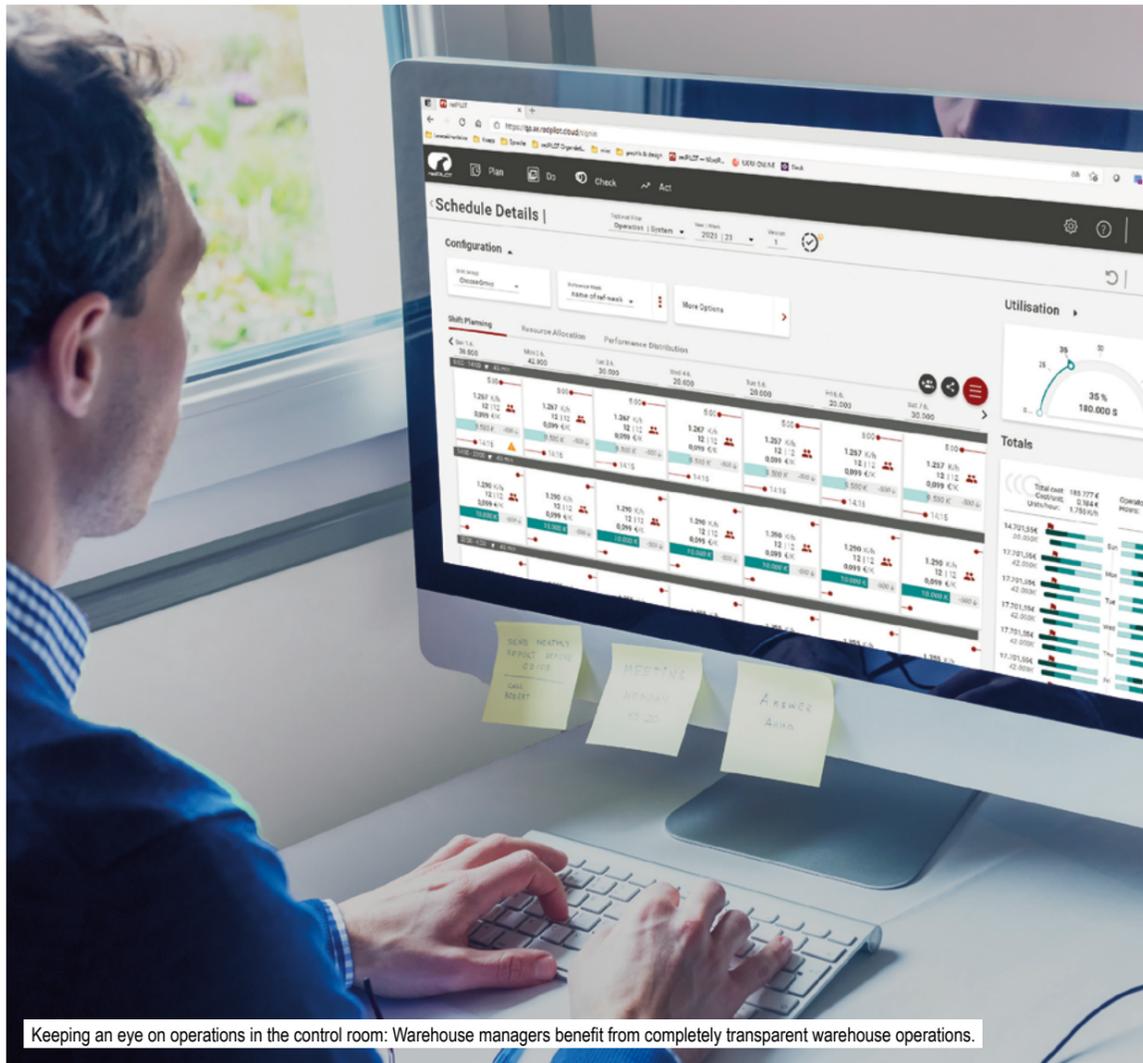
A logistics operation is like a microcosm, in which different elements interact: people, technologies, data, software. Only by working together can they rise to the challenges that crop up along the value chain. Above all, businesses can profit hugely from data and the insights it provides. This is where our software applications come into play. As complexity grows, our software offers different employees in logistics operations desperately needed flexibility. In this article, we'll take a closer look at some tasks in warehouse operations and management and at the software tools that can help.



Keeping everything running smoothly: The smart app KiSoft CMMS supports service technicians.



Qualification as a Service: ivii.smartdesk unterstützt bei Pankl High Performance Systems beim fehlerfreien Zusammenbau von Motorradgetrieben.



Keeping an eye on operations in the control room: Warehouse managers benefit from completely transparent warehouse operations.

More flexible recruiting

The shortage of skilled workers combined with high numbers of people going into retirement, high quality standards and rising costs place manufacturers under tremendous pressure. On top of that, there's the growing trend of customization. More and more products – from cars to pocket knives – are being produced according to individual customers' requests. That's where the intelligent ivii.smartdesk comes in. With the help of state-of-the-art technology, employees can assemble parts without any prior knowledge, keeping the process efficient and the end product error-free. The system guides employees through the process step by step and automatically checks the quality at every work step, allowing employees who are less qualified or are new to the industry to work error-free as well. This makes allocating personnel a cinch and makes recruiting more flexible since not every task will require qualified personnel.

TEAM LEADERS

Fully focused on the system

Service technicians are vital for smooth warehouse operation. Their mission: keeping the automated system running. Service technicians have a powerful ally for maintenance, spare parts management and troubleshooting in the form of the smart app KiSoft CMMS. The app notifies technicians about incidents and provides them with important information such as repair instructions. It also gives them the option to document the repairs digitally. However, the app goes beyond effective incident management. KiSoft CMMS automatically plans time slots for regular preventive maintenance in a way so as to not affect warehouse operation. Additionally, the app can be used for spare parts management and can automatically re-order parts as needed, allowing service technicians to concentrate on the system without being distracted by extra administrative work.

SERVICE TECHNICIANS

Interconnected data for optimal warehouse management

The control room is the heart of the logistics operation. All relevant information for the warehouse manager, such as resource utilization, excess capacity, warehouse data, workload and maintenance, is retrieved from different tools and displayed here on user-friendly dashboards and used to calculate important KPIs. Having all the important information available at a glance makes it easy to make the right decisions.

The smart apps we've introduced here are components of our comprehensive software portfolio, which cover all levels of software from warehouse management to warehouse control, machine control and analytics. Contact your KNAPP representative for more information about our world of software. Alternatively, drop us a line at sales@knapp.com.

WAREHOUSE MANAGEMENT

Forging Ahead with New Business Models

Data opens up new opportunities

Today's consumers want their shopping to be low-effort, ideally 24/7 and a great user experience. As a result, new business models have developed. But where does software come into play? How does data add digital value? Our logistics concepts support our customers as they implement their new, up-to-date business models. Our software plays a central role in these concepts and creates added value along the entire value chain. Let's have a look behind the scenes of some of our solutions.

E-commerce with micro fulfillment

In Lyon and Paris, our partner Intermarché handles 1,000 orders every day with two micro fulfillment centers (MFCs). A single order can comprise up to 40 different food items from four temperature zones. The software calculates which items can be processed automatically and where the best storage location for each item is. It also makes sure that all items end up in the correct shopping bag.

Intermarché works with our software solution for MFCs, the Multi-Site Control Center (MSCC). The service

solution supports round-the-clock operation for food retailers with MFC concepts. Continuous system checks detect any incidents early, before they impact the operation at all. In one overview, the MSCC displays all our systems and all logistical and technical processes. We check the software as well as the hardware of the system. Specially developed index numbers show the MSCC team the system's status. This is one of the special advantages of the MSCC: The service solution can combine and analyze key figures from multiple locations.

Intelligence at the point of sale

Our in-store solution RetailCX lets end customers shop around the clock with ease. They can order a wide range of goods, such as cosmetics, cleaning products, groceries, electronics, tools and DIY supplies, jewelry or shoes with a few taps in their smartphone app or at the terminal in the store. Their order is dispensed fully automatically. The end customers can choose to see targeted offers and news in their apps based on the data collected. The perfect user experience is just a few clicks away: The user interfaces on the terminal

can easily be updated to show new dynamic content. Another advantage is that RetailCX employees at the point of sale spend less time at the checkout counter and restocking shelves, leaving more time to create an outstanding experience for customers. The store can also operate efficiently with fewer employees, a bonus in times of high personnel costs and labor shortages.

24/7 pharmacy service

Another solution that adds digital value is our Apostore, a smart dispensing robot designed specially for pharmacies. In the Netherlands, a pharmacy uses Apostore to serve their patients remotely, around the clock. The pharmacy is located in Eindhoven, while the 24/7 terminal is a few miles away in Veldhoven.

This is how it works:

- The patient uses their health insurance card to identify themselves at the terminal. The pharmacist and the patient can then talk using video cameras connected through the web. The pharmacist checks the prescription.

- Then the built-in robot retrieves the medicine and applies a sticker with information on how and when to take it.
- Before dispensing the medication, the system transmits a photo to the pharmacist who double checks and documents the medication. If everything is correct, the medicine is dispensed to the patient.
- If there are any questions, the patient can ask them using the video link.

Apostore makes it possible for patients to receive medicine and competent consultation round the clock.

As you can see, combining digital solutions and innovative automation technology has great potential for more efficiency, better service and reduced costs at the point of sale and on the last mile.

More Insight than Ever Before

Making the right decisions with KiSoft Analytics

Today, information is one of the most valuable assets a business can have. Why do we call it information and not data? Well, data does not necessarily provide everything it takes to make the right decisions. What's much more important is how easy to understand data is and how it is contextualized. That's why we here at KNAPP and plenty of our customers swear by our business intelligence tool KiSoft Analytics.

“The automatic aggregation of data enables instant detailed reporting, focus on the highest priority areas and dynamic control of our material handling systems with the overall goal of automation system optimization and efficiency.”

Neil Saxby
Head of Logistics Engineering
for Zalando

Smooth warehouse operation with all information at a glance

KiSoft Analytics continuously collects data from all areas of the system and records all flows of each individual item from goods-in to dispatch. It then transforms this abundance of data into intelligent and structured streams of information that serve as a solid basis for decision-making. All information is visualized on user-friendly dashboards that are available either on the desktop or in the mobile app, making it easier to make both short-term tactical decisions and long-term strategic ones. It also facilitates drawing conclusions about warehouse strategies, use of personnel and resources, energy use and maintenance requirements. KiSoft Analytics provides fulfillment managers with important details to keep warehouses running at top efficiency all year round.

Decisions based on data, not gut feelings

KiSoft Analytics makes all warehouse processes more transparent than ever before, helping our service experts provide our customers the best support and advice possible: *“The key figures provided by KiSoft Analytics are a clear, fact-based language, not one based on subjective impressions,”* says Stephan Schwabl, Head of Digital Services at KNAPP Customer Service. *“The information KiSoft Analytics provides lets us constantly improve and check the progress a warehouse is making, whether in regard to picking performance, the efficiency of our processes or assessing technical errors,”* he adds. However, KiSoft Analytics doesn't just allow you to visualize your own system's performance. It also provides answers to questions such as *“What is happening in the industry?”* or *“How do I stand in comparison to the competition?”*, making KiSoft Analytics a powerful and valuable tool for mastering the challenges of digitalized value chains.

Solid structure and planning during peaks

KiSoft Analytics doesn't just turn heads when it comes to business as usual. The smart software also navigates fulfillment operations teams through stressful peaks such as Black Friday with ease. During peak periods, it's especially important that live data from the system is available at all times. KiSoft Analytics delivers this data directly to the operations team's smartphones, allowing team members to react quickly and accurately to changes in demand, keeping the warehouse running as efficiently and successfully as possible and meeting customers' expectations. What's more, KiSoft Analytics makes it possible to follow each item through the entire warehouse, from goods-in to goods-out. Each step of the way, it makes performance data available, such as how quickly goods are received and stored, how reliably the automation technology is working or how the picking stations are performing. Additionally, it can analyze customers' purchasing behavior and integrate all information. With its smart eye for analysis, KiSoft Analytics makes navigating peaks easier and more efficient while giving on-site teams more details and opportunities for action than ever before.

AI Robotics in Logistics

What makes our robots tick

They work the night shift, do the heavy lifting, sort, create sequences, calculate packing patterns and know how to stack sensitive items gently and precisely. Today's robots are highly intelligent, high-precision tools that come in a variety of forms. How do they do it all? It's simple: with the help of smart software. The software creates a network among the robots while their artificial intelligence (AI) has them learning from each other or getting the data they need on items. Below are three ways that robots and their software can be used in a warehouse to improve efficiency.



KiSoft



Software plays Tetris

Delivery to grocery stores made easy. KiSoft Pack Master calculates the optimal packing pattern for the load carrier as soon as an order is started. This information is then provided to RUNPICK, our Robotic Universal Picker. RUNPICK processes and palletizes the entire range of food items fully automatically for delivery to stores. This technology is capable of multiple picks and building mixed layers on the load carrier, which results in an improved performance in the warehouse. All the "blocks" fit neatly into the pre-calculated space. The employee at the store has also been considered – the software provides everything necessary for a *store-friendly delivery*.



[Further information](#)
on full automation in
food retail.

Intelligent AMR fleet

Warehouse-internal transport and supply with smart robots. Universally applicable, the fleet control system KiSoft FCS efficiently manages our Open Shuttles as well as manually operated vehicles or the AMRs of other manufacturers. What's more, a simulation environment that the customer can operate themselves allows them to immediately determine whether an AMR can be given tasks, what the size of the fleet should be and make adaptations to processes.



[Discover more](#) about
KiSoft FCS
for easy fleet control.

AI for robots

Goods-to-robot picking: how to make fully automatic bin picking work. The KiSoft Artificial Intelligence software program helps our Pick-it-Easy Robot to collect and securely save data from live operation, train neural networks, as well as validate, manage, and roll out generated models to robot cells in the customers' systems. Open interfaces as well as IT and data security solutions make many applications possible. Quality assurance and demand forecasting are other successfully established applications of KiSoft Artificial Intelligence.



[Find out more](#)
about the advantages
of the Pick-it-Easy Robot.

KiSoft Suite for Luxottica

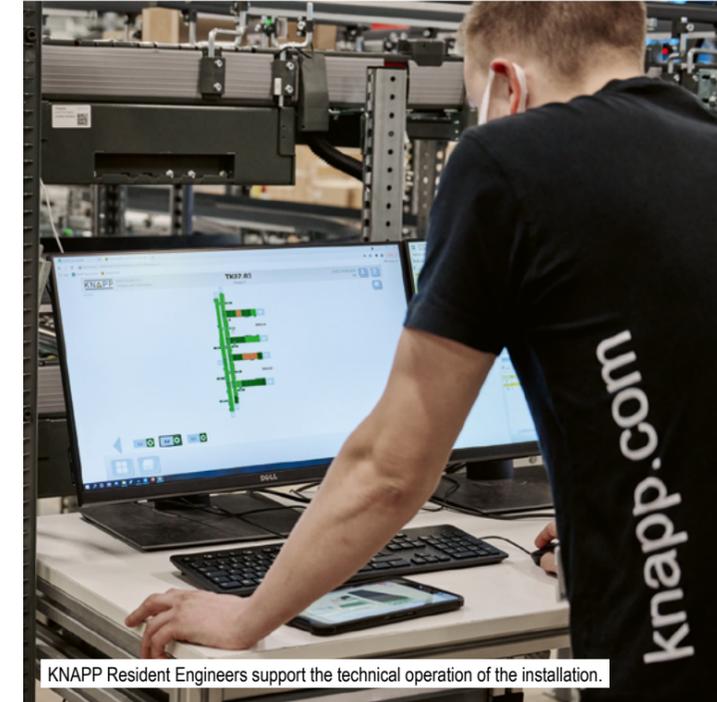
The champion of digital process solutions

Luxottica and KNAPP have a lot in common. Both family-run companies utilize a business model with an all-in-one approach to provide for their customers across the entire value chain. As a technology partner, KNAPP has been supporting the world market leader in design, manufacturing and sale of luxury and sports eyewear along their entire value chain for over 15 years. In the course of this collaboration, Luxottica constructed their new central distribution platform for the integrated management of logistics processes and worldwide shipment in Sedico, Italy. Our KiSoft software is the mastermind behind omnichannel fulfillment in this all-in-one solution. Come take a look with us at the software solutions and the digital solution design for Luxottica.

Optimized omni-channel fulfillment

33.000 PACKAGES PER DAY The new distribution platform in Sedico has been in operation since 2021. From here, Luxottica supplies regional distribution centers, stores and end customers around the world.

Implementing such an enormous project requires experience, an understanding of the business model and, of course, sound forward thinking to successfully integrate all the complex processes in the distribution center and accommodate all the specific requirements. The mastermind at work behind the DC's sophisticated process map is KiSoft. The smart all-in-one logistics software connects the processes, automation technologies and people in the warehouse, integrating several levels of the value chain. At Luxottica, 33,000 shipments leave the warehouse on an average day, which roughly corresponds to 205,000 items per 7.5 hour shift. Shipment sizes also vary greatly because Luxottica's DC ships to other distribution centers, stores (B2B) and end customers (B2C).



KNAPP Resident Engineers support the technical operation of the installation.

Highlights of the KiSoft solution

- Shorter lead times and transparency in all steps
- Flexibility and scalability for omnichannel fulfillment
- Comprehensive data provides a solid foundation for decision-making
- Reduced material requirements and carbon footprint due to adaptable packaging
- Highly efficient order management thanks to efficient calculation of the time needed between picking and dispatch
- Software is continuously developed
- Tailored life-cycle support for long-term investment security



Luxottica benefits from KiSoft



Data analysis with KiSoft Analytics

Key figures, data analyses, dashboards and reporting help Luxottica make the right decisions based on their own data. The cloud-based software, KiSoft Analytics, collects and analyzes all process data, such as personnel workload, storage capacity or picking performance from the WMS and packages it in comprehensive, user-friendly reports. Luxottica derives trends and prognoses for tactical and strategic decisions from the data, making distribution even more efficient.

Error-free operation thanks to KiSoft

A team of KNAPP Resident Engineers provides the technical support for the warehouse, keeping it operating at its best. In turn, the software KiSoft SCADA provides these experts the technical support they need for their work. For example, service technicians are provided with a real-time overview of the current mechatronics status of the installation. Through a direct interface to KiSoft CMMS, which stands for Computerized Maintenance Management System, tasks are assigned a priority based on operational requirements, ensuring the best possible system operation. Error messages, for example, are handled by priority. The Resident Engineers can record and document the resolution process directly in the mobile application. KiSoft CMMS is also used to save costs and reduce the risk of unplanned downtimes. Preventative maintenance measures are planned with the customer in advance in such a way so as to not cause any negative influence on the ongoing system operation.

Complete warehouse management

The warehouse management system records the goods received, allocates the perfect storage location, provides real-time information about the stock and location of all items and calculates when items need reordering. This fully automated system helps to keep warehouse stock at a minimum while also ensuring that highly requested items are in stock for the following day. This slotting strategy determines the optimal storage locations in the DC on a daily basis, increasing both picking productivity and warehouse efficiency.

Our KiSoft portfolio



Optimal warehouse management

The combination of industry expertise, innovative technology and KiSoft creates an optimal solution that covers all levels of software and makes efficient warehouse management simple, from warehouse management to controlling individual optical sensors. Smart analysis and optimization tools keep track of everything and ensure that logistics systems perform at their best.

Transparent warehouse management with KiSoft WMS

The warehouse management software KiSoft WMS plans, monitors and optimizes all processes from goods-in to goods-out, including all internal warehouse processes. KiSoft WMS makes it possible to achieve the flexibility and transparency needed to satisfy the demands in various sectors.

Smart KiSoft add-ons provide additional benefits

Our KiSoft add-ons put the finishing touches on the complete solution. KiSoft Pack Master, for example, is a useful software for calculating the best possible packing patterns. KiSoft Sandbox provides a test and emulation environment. KiSoft Pickup and Delivery offers integrated transport management with shipment tracking from the warehouse to the recipient.

Precise warehouse control with KiSoft WCS

The warehouse control system KiSoft WCS controls and coordinates the flow of goods in automated areas in real time. KiSoft WCS also controls and monitors processes while handling the integration of subsystems.

Optimal performance and complete warehouse visualization with KiSoft SCADA and KiSoft CMMS

End-to-end software solutions down to the machine level ensure the maximum performance of your system. KiSoft SCADA clearly visualizes the technical condition of the warehouse, from the entire system down to the smallest detail. KiSoft CMMS structures processes and makes maintenance management more efficient.

Making data-based decisions with KiSoft Analytics

KiSoft Analytics provides the solid information needed for making decisions that affect both the installation and the supply chain at the right time. The software program transforms vast pools of disorganized data into comprehensible, coherent streams of information. It provides our customers with an overview of their system around the clock, allowing them to react appropriately and stay on top of changes and trends.

From Pallet to Pill

Traceability and patient safety along the entire healthcare value chain

Whether medicines are picked up in the pharmacy or delivered to the patient's home, the most important factors of the healthcare supply chain remain the same: punctuality, traceability, cost and no errors. Fulfilling these demands requires flexible, economical and error-free logistics. We call it our *zero defect* policy. Behind the name are different solutions made up of innovative technologies and intelligent software that make it possible to keep all processes along the supply chain transparent, all while making them run at their best. In this article, we'll introduce our software solutions that run in the background to make our *zero defect* approach a reality.

End-to-end tracking with KiSoft

The integrated KiSoft WMS/WCS solution connects directly to any inventory control system or ERP system and to the automation technology in the warehouse. Our end-to-end process model, known as KNAPP Business Process Modelling, supports us and our customers as we work closely together to successfully implement KiSoft. Comprehensive recording of article master data and guided picking and replenishment processes ensure end-

to-end traceability of lots through the entire warehouse. If required, a track & trace system makes it possible to track orders from the warehouse to the patient. *"Since the supply chain is currently facing tremendous challenges, we decided to invest in a high-quality solution. By selecting KNAPP, we bet on the right horse,"* says Dimitar Dimitrov, CEO Sopharma Trading Group.

Serialization in SAP® EWM

We have what it takes to implement the SAP® warehouse management system for anyone pursuing an SAP® IT strategy. The SAP® EWM standard version has a serial number management function, which allows all items to be tracked and traced seamlessly along the entire supply chain. Though this version provides a good basis for ensuring the end-to-end traceability of serial numbers, the industry requirements on serialization go beyond this. That's why we offer additional expansions with our SAP® EWM by KNAPP software program. The

software expansions are our KNAPP Building Blocks and are fully based on SAP® coding. They are the result of our years of experience in pharma logistics. Each one is customized and optimized for the processes it serves. *"Thanks to their years of experience in pharmaceutical logistics, KNAPP is the ideal partner for implementing SAP® EWM. They have the perfect combination of process-oriented thinking and IT know-how,"* says Thomas Brosch, Director of Kwizda Pharmahandel.

Checks every step of the way

With its range of image recognition and processing technologies, KiSoft Vision integrates automated checks into every step of the process without affecting throughput. For instance, Vision Item Check is the perfect solution for increasing efficiency at goods-in or in special check areas. The solution automatically records and processes lot information, date marks and other features of items. Vision Central Belt, on the other hand, records 2D codes on medicine packs in the course of fully automatic picking, making it possible to track lot information and date marks, as well as perform other quality checks.

Legal conformity and patient protection

Our zero defect solutions form the basis for compliance with regulations aimed at improving patient protection and for observing official requirements from the manufacture of a medicine to its acceptance by the patient. Combining innovative technologies with our KiSoft software portfolio and SAP® EWM by KNAPP results in a zero defect warehouse where optimal safety meets optimal efficiency.



AI improves safety and performance

Our fully automatic goods-to-robot solution, the Pick-it-Easy Robot, boasts artificial intelligence that was developed in collaboration with covariant.ai. The robot is ideal for the healthcare industry because it reliably works around the clock. The Pick-it-Easy Robot can recognize different packages and attributes on the medicines. Orders are processed fully automatically, while fulfilling all the legal requirements. The Pick-it-

Easy Robot's object recognition software determines the perfect grip point and the correct speed for article picking. The Pick-it-Easy Robot ensures optimal safety and high performance in medication distribution and can automatically pick a high percentage of stock units in the warehouse. It's also reliable when it comes to handling bottles and cans.



"We use the Pick-it-Easy Robot to take repetitive tasks off our employees, allowing them to concentrate on more complex aspects of the distribution process."

Todd Kleinow
Vice President Strategic Distribution and Operations
McKesson



[Check out the 24/7 pharmacy service](#)

Reliable medicine supply with a 24/7 pharmacy

Safety is also a priority in the last step of the way. Attention to detail is paramount in the pharmacy itself, which is usually the last stop in a pharmaceutical product's journey to the customer. In the goods-in area, the items are checked and authenticated. The OCR recognition system iScan 3.0 reads the pharmaceutical register number, the Data Matrix code and printed

date marks and lot numbers. As an alternative to the traditional pharmacy, customers can pick up medicine outside of opening hours at a 24/7 terminal that is part of the system. In both cases, the Apostore pharmacy automated picking system is responsible for dispensing medicine, ensuring both a secure supply and constant availability of healthcare products.

Cloud vs On-Premises in Logistics

Which strategy leads to success?

Cloud computing has spurred a revolution in business applications over the past decade. Today, data and software programs can be saved or run in any data processing center in the world. What does this mean for logistics processes? What advantages are there and what is important to watch out for? We asked two of our software experts about it.

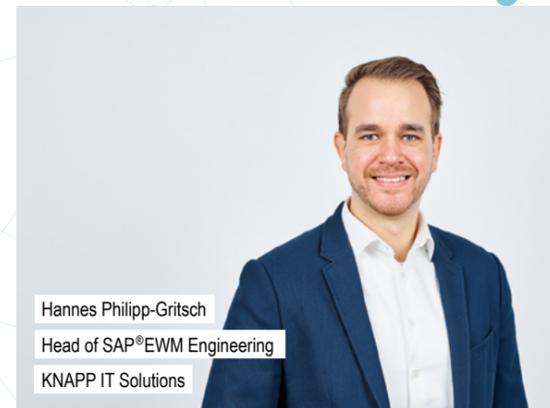
Cloud or on-premises solution, what do you tell customers?

Hannes Philipp-Gritsch: Cloud computing is on the rise in many areas of logistics. Numerous software companies are following the straightforward strategy of implementing their solutions in the cloud. Naturally, we here at KNAPP, we are also focused on this subject. Due to current technological limits, we currently see a hybrid strategy as ideal for logistics. Real-time critical decisions and control systems should be handled on-premises, while aspects that are critical for business are in good hands in the cloud. In a real situation, this might mean that machine control systems like the PLC run on-premises and the warehouse management system (WMS) and warehouse control system (WCS) are managed in the cloud. If the solution is in a highly automated environment, however, both WMS and WCS must be installed on site. In short, the ideal solution for any particular customer depends on the scope of the automation project.

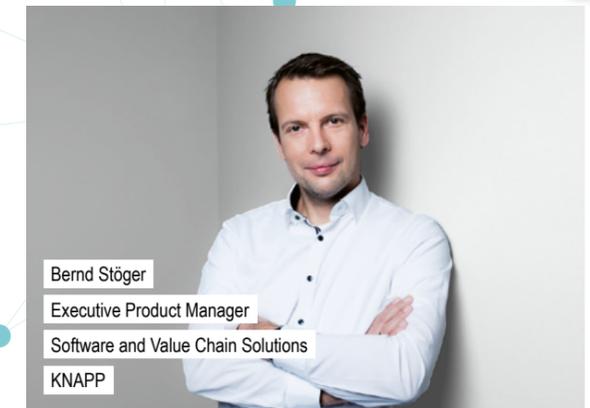
Bernd Stöger: The way I see it, hybrid IT infrastructures combining cloud services with local IT solutions are very appealing. They combine the best of both worlds and lay a solid foundation for future-oriented value chains. We accompany our customers during the design of the software solution, and work with them to determine which software parts should run locally, and which can run in the cloud. Our comprehensive portfolio has two tracks, one KiSoft and the other SAP® EWM by KNAPP. We have a large selection, and naturally, we can develop a solution for our customers that fits their goals, their IT strategy as well as their business cases.

Which services are currently available as cloud services?

Bernd Stöger: Services such as data storage, supply chain tools for analysis and optimization of the logistics operation and the processes along the value chain are predestined for the cloud. Our top cloud services include KiSoft Analytics for data analysis, redPILOT for resource



Hannes Philipp-Gritsch
Head of SAP®EWM Engineering
KNAPP IT Solutions



Bernd Stöger
Executive Product Manager
Software and Value Chain Solutions
KNAPP

management, CMMS for modern maintenance and servicing, KiSoft Genomix for master data acquisition and intelligent fleet management of the AMRs.

Hannes Philipp-Gritsch: For implementation projects using SAP® EWM by KNAPP, SAP® itself provides the necessary infrastructure in the form of the SAP® cloud platform or platforms from other hyperscalers¹, such as Microsoft Azure, Google Cloud or Amazon Web Services. Together, we analyze which option is best for each customer based off their requirements, degree of automation and complexity of their logistics processes.

You can't talk about cloud technology without mentioning security...

Bernd Stöger: Absolutely! All our cloud applications fulfill the highest security standards. Security from the cloud perspective can be viewed from several angles. Requirements for cybersecurity include the selection of the cloud provider, the design of the network infrastructure and encryption for data transmission. Another critical aspect is system stability with regards to connection failures, delayed response times and backup and restoration concepts in case of data loss. Legal requirements for data security must also be kept in mind depending on which country the data is saved in – that is, which country the cloud provider's data processing center is located in. All these aspects flowed into the design of the KiSoft Cloud solutions. The

results demonstrated their success during an external hardening².

How can our customers profit from cloud computing?

Hannes Philipp-Gritsch: For our customers following an SAP® IT strategy, implementing solutions in the cloud means they have one single contractual partner in SAP® for software, services and licensing. That's a great advantage. Cloud solutions also offer flexibility in terms of scale. Another great plus is that we can also integrate services from our KiSoft portfolio.

Bernd Stöger: It's all about flexibility. Our cloud services allow our customers to choose from a wide range of SaaS³ and subscription models. Standard services to optimize in-house logistics can be rapidly activated with almost no initial costs. The pay-as-you-grow principle allows companies to easily expand their use of services as they grow. In many cases, this also includes updates or upgrade projects. In short, cloud computing has many advantages to offer logistics applications. However, they are best used with solutions featuring a high degree of automation together with the necessary on-premises installation.

[Read more about our Cloud solutions:](#)

¹ Hyperscaler: Supplier of IT resources based on cloud computing, whose resources can be scaled to a great degree horizontally.

² Hardening: Increasing the security of a software system by introducing multiple levels of security, for example on the host level, user level, hardware level etc. A system that has been hardened is more secure.

³ SaaS (Software as a Service): Use of software based on a licensing or subscription basis.



Onboarding: Software

Great methods and training for success

A new logistics software system is never just a plug and play system. Its introduction must be well planned for it to optimally fulfill all requirements. It is also essential to get employees actively involved from the beginning. At KNAPP we use various methods and tools to ensure a good start and successful operation of a new software system and rely on the active transfer of knowledge when working with our customers.

From the process model to successful system operation

Did you know that in the operation of a logistics solution, the software system is responsible for 90 percent of the effectiveness and profitability? Our experts get you started on the right foot, so everything runs exactly as it should: *“Our method requires no previous knowledge of software. We start with the customer’s familiar processes. In a workshop with the customer, we then*

Software is responsible for **90 percent** of the operation’s success.

work through the requirements, the advantages they want to achieve and the business cases that should be covered in the software. The results are documented in a BPMN model and serve as the basis for the KiSoft solution,” explains Hansjürgen Walter, Head of Software Consulting.

The advantages of this method are obvious: Early on, the customer can see how the solution works and gauge its performance. A demo system gives the customer a first impression of the look and feel of the KiSoft Software. Using tools that simulate and emulate warehouse processes, the functions and throughput can be tested to see how various scenarios play out. What’s more, key users receive the thorough training they need. This process greatly reduces the investment risk for our customers and forms the foundation for profitable warehouse operation.

¹ BPMN = Business Process Model and Notation: Method and graphical representation of the individual steps of a planned business model

Digital twin ensures rapid startup

After installing the mechanics and electrics of an automated system, it’s time for the software commissioning. Our PLC commissioning team has been using a digital twin for a few years now, which is a virtual form of the customer’s system. Our PLC technicians test the functions and processes in advance and are therefore optimally prepared when they arrive at the installation site. A digital twin offers many advantages:

Our customers benefit from a faster startup of their system in a reduced risk environment. Furthermore, all the processes are documented, preserving valuable knowledge. Another advantage is that technicians can finish their on-site work much faster: *“With the digital twin, we were*

4,000 hours of work saved in 22 projects with the digital twin.

able to get our customers’ systems up and running on time during the coronavirus pandemic and at the same time reduce the amount of time technicians spent on site, which helped with social distancing,” says Domokos Kovacs, Team Leader PLC Commissioning at KNAPP. The digital twin will be used for all new projects starting in the fall of 2022.

Joint team approach is ideal for transferring knowledge

Gallons of coffee and tea enjoyed during the team meetings.

One important aspect when rolling out a new software is the acceptance of the new software by the employees. For smooth sailing at the start of the new system, we use a joint team approach within the framework of SAP® EWM introductions. Selected customer employees work with the KNAPP project team for a certain period and are trained to become SAP® EWM module experts. Additional workshops and courses provide practical know-how during the implementation phase through hands-on work and on-the-job training. Once the go-live has successfully passed, these in-house experts go on to do things such as creating specifications, carrying out tests and training other key users. This is how expertise in our customer’s organization is retained and expanded. *“KNAPP provided tip top training to our SAP® in-house module experts, enabling them to independently maintain the modules in the future,”* emphasizes Peter Lechner, Head of IT at EGLO Leuchten.

Higher system availability thanks to short resolution times

About 99 percent of errors occurring in our systems are remotely resolved or prevented before they even occur. How does this work? By monitoring the entire installation in a targeted manner. Our customers benefit from higher system availability and our employees and the environment both benefit from less travelling. *“Our Service Desk is available 24/7 in 9 languages,”* explains Erik Gutmann, Vice President, Customer Service at KNAPP. *“As a competent service partner, the transfer of knowledge to our customer’s team of technicians is important to us. Here, we use live training, for example, during repairs,”* he continues. This is how the local technician learns the skills necessary to resolve many problems quickly and independently, which of course saves time and costs. For the best learning experience and success, we make use of high-tech augmented support devices such as smart glasses: Important information, instructions or drawings can be directly displayed in the technician’s visual field.

70 percent of all calls to our Service Desk are answered within 30 seconds.



Methodical Servicing

New maintenance tool provides transparency and efficiency

Order your groceries in the morning, find them on your doorstep in the evening: REWE offers this service to their customers in and around German metropolises. Throughout the country, 14 specialized warehouse locations support REWE's delivery service. One of them is the highly automated Food Fulfillment Center (FFC) Scarlet ONE, whose technology supports the supply of food to the Cologne area. A 13-member KNAPP Resident Engineering team is on site to ensure the availability of the automation solution. And the maintenance management tool that helps them out is KiSoft CMMS.

Easy and simple servicing

Groceries can quickly and easily be ordered on REWE.de. The website also features a recipe function for consumers looking for recipe suggestions. After the customer answers a few short questions by swiping or clicking, REWE offers a selection of recipes and allows the user to immediately add the necessary ingredients to their shopping cart. A great service – easy and simple, which is also what a tool that supports maintenance and servicing technicians in their daily work should be like. This is why *making complexity simple* is the principle that

guided the development of our maintenance management tool KiSoft CMMS. Resident Site Manager Ali Guelcenli explains the importance of simple and intuitive operation: *“We started out using a tool provided by a British supplier. Its usability, however, was not convincing. Planning maintenance windows and generating maintenance orders were both complicated and time-consuming. Plus, customer support for the old tool was not located in Europe, which made communication difficult and direct contact to the British developers impossible.”*

Focus on tasks

Since the introduction of KiSoft CMMS in January 2022, many things have changed for the Resident Site Team: *“In the past, administrative tasks took up a lot of our time. Today, we are free to focus on our actual work,”* says Ali Guelcenli. He and his team of KNAPP Resident Engineers stationed at the customer's site ensure that all of the system's mechanical and electrical components

run smoothly. *“We also monitor systems, search for opportunities for improvement and always try to provide the best for our customer,”* says Ali Guelcenli, explaining his team's responsibilities. The Resident Engineers work in several shifts from Monday to Saturday. As Site Manager, he schedules shifts and assigns different tasks.

Transparency on all levels

Armed with a tool box and a tablet with the KiSoft CMMS app, Resident Engineers stay informed with a single click on where their next task in the 16,000 square meter (170,000 square foot) warehouse is. *“With KiSoft CMMS, we are no longer a black box for our customers. We can display our activities by the minute and can also categorize them,”* says Ali Guelcenli, who sees the transparency as a major advantage. Moreover, KiSoft CMMS collects data that forms a valuable basis for different analyses. *“Booking tasks makes shift planning efficient. It ensures we are neither overstaffed nor understaffed,”* states the Resident Site Manager. Furthermore, KiSoft CMMS makes it possible to create a log of resolved tasks. If a shuttle repeatedly reports errors over several days, KiSoft CMMS helps us answer

the following questions: Is the error always the same or are different errors occurring? Is the problem related to the software? Or is it a mechanical/electrical issue? *“We base our troubleshooting on this information. The same applies to operating errors. If these are occurring more frequently, we can make sure we hold specific training courses,”* says Ali Guelcenli. *“This level of detail is very important for our collaboration with REWE. One year ago, we were not working nearly as efficiently and transparently as we are today. We have been able to achieve this thanks to KiSoft CMMS.”*



[Watch this video](#) for more details on the Food Fulfillment Center Scarlet ONE.

Software and sustainability

Our intelligent software solutions, centered on KiSoft and SAP® EWM by KNAPP, make an important contribution to lasting value chains. Here are some examples:

Less energy consumption

through targeted monitoring. Reduction of connected loads, minimization of energy consumption, energy recuperation, including depicting the energy consumption for each order in an integrated approach.

Intelligent software and sustainable logistics solutions

Reduce wasted space in transport

through intelligent volume calculations and packaging solutions. KiSoft selects the most suitable load carrier, thereby minimizing shipping volumes and emitting less CO₂.

Smaller facilities

thanks to optimized goods flow strategies. Reduce stock by making items immediately available upon receipt at goods-in or increase the storage density by storing more items in a small space.

More employee satisfaction

A team of qualified, motivated and capable employees is the backbone of any successful company. Great software makes work easier for the employees, helping them to perform well at their jobs and feel satisfied.

Fewer spare parts

and unnecessary maintenance call-outs using predictive maintenance tools: Components are only changed when necessary and maintenance call-outs are avoided – without compromising availability.



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At KNAPP, we place great value in human equality. Simultaneously, we live by our motto **making complexity simple**. As a reflection of this, we try to use gender-neutral language where possible in all our texts. Where this is not possible, it is nevertheless meant to include all genders without discrimination.
Thank you for your understanding in this matter.



making complexity simple

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