

KNAPP

making complexity simple

Partnership



making complexity simple

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Come join us on a journey to see how our technologies look when matched to your value chain.



Dear ladies and gentlemen, valued business partners,

To accomplish your company's objectives and fulfill the business agreements with your customers, you are relying on a logistics system. This system plays an important, probably even key, role in your success. For all parties involved, it is important that they understand the underlying business models, what warehouse processes are required and what factors are a major influence. At KNAPP, we see ourselves as a partner for every step of your value chain.

Ensuring high system availability, increased throughput, optimum use of your warehouse and best shipping quality is only possible if you, as the system operator, and we, as the system manufacturer, work together as a team. For this reason, as your **value chain tech partner**, we are at your service not only during your day-to-day operation of the system but also over the course of its entire life cycle, expansion and renewal projects included. Our tailored service products and trained service team that is up to speed on the state of the art support your warehouse personnel in every operational situation.

Using cutting-edge digital tools, which have been specifically developed for use in logistics operation support, we can monitor, analyze and evaluate every state of your system together with you. This way, any required actions for solving technical and logistical issues can be taken precisely, at the right time and while saving resources. By connecting your expertise in your business area with the years of experience we have gained in operation support for logistics systems, we can together optimize the efficiency and effectiveness of your system and all production processes.

On behalf of our service team, we hope you enjoy reading this issue of World of Solutions and that it provides many interesting insights. We are looking forward to being at your side, supporting the operation of your logistics system, for many years to come.

Manfred Fuchs
Vice President International Customer Service
KNAPP AG

Voices from the Industry

Thanks to our diverse range of technology solutions and comprehensive software portfolio, our partners around the globe have rewarded us with their trust and loyalty for many years. What characterizes our partnership and what makes us a value chain tech partner? Find out what our customers from different sectors have to say:



Open Shuttle supplies production

“The shuttle perfectly fulfilled our requirements regarding travel paths and flexibility. KNAPP is a dynamic and competent partner with whom we were able to quickly make our ideas a reality.”

Stefan Schneider
CEO
Digimesa AG



Full commitment during the pandemic

“We were looking for a highly flexible all-in-one solution that would help us ideally respond to tomorrow’s market. The flexibility that KNAPP’s new system approach, the OSR Shuttle™ Evo, offers was exactly what we were looking for.”

Georg Schukat
Managing Director
Schukat electronic



Top performance and gentle handling

“KNAPP understood our special requirements and complex processes, and translated them into a highly efficient automation solution.”

Olivier Sorbe
Head of Logistics (EMEA)
Parfums Christian Dior



Peak performance during peak periods

“We chose the OSR Shuttle™ Evo because it allows us to complete our orders a lot faster and makes processing more flexible.”

Olivier Dominguez
Plant Manager
ASICS



Focus on online food retail

“We wanted to make sure that we partner with a company that understands what automation in food retail means and that is able to implement the technology.”

Zvika Fishaimer
Vice President HR & IT
Shufersal



Successful partnership since 1999

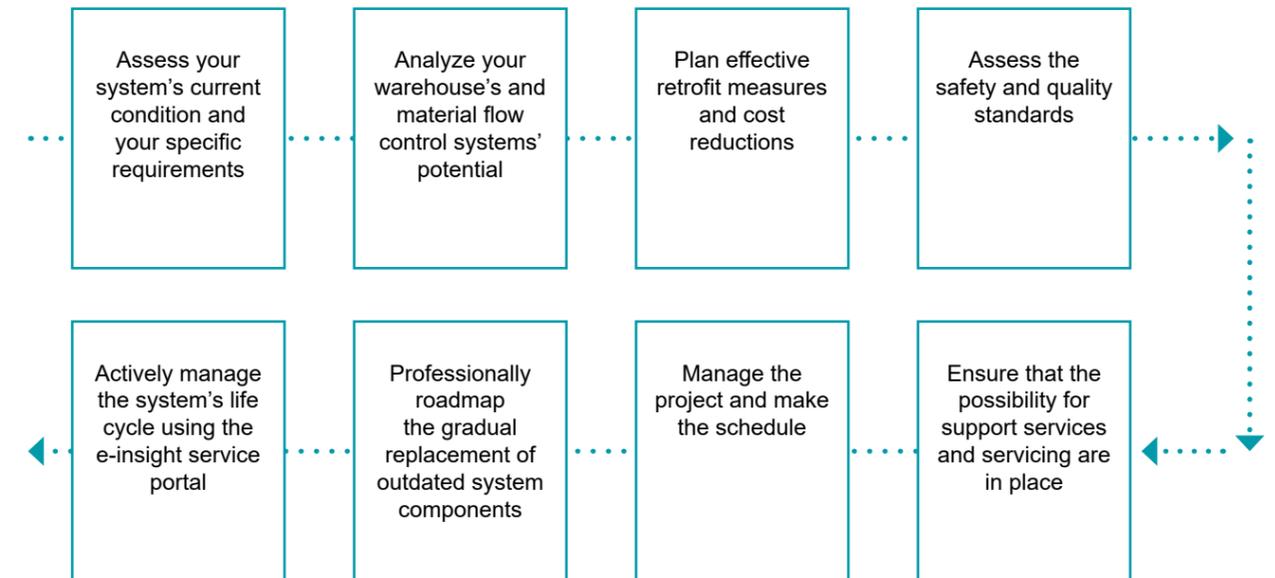
“Our recipe for success? Quite simply, the close collaboration between both our companies in developing solutions that fulfill our customers’ demands for service and quality.”

Fernando Castillo
CEO
Novaltia





To determine your modernization requirements, we:



Mission Retrofit

How to successfully retrofit a shuttle system

These days, there is a trend towards renewing products instead of making new ones. This development is not only taking place in society in general but also in the world of automated systems. Many of our customers opt for modernizing, expanding or modifying their existing systems instead of acquiring new ones. This often proves to be much more economical and sustainable. As a strong partner, we offer our customers sophisticated modernization solutions that restore old systems' ability to perform at their maximum, making them fit for current and future challenges. Read on to find out how we retrofit our OSR Shuttle™ storage and picking systems.

From old to gold: restoring shuttle technology to full performance

The introduction of our shuttle technology to the market in the early 2000s revolutionized the logistics industry. Today, shuttle systems are at the heart of modern warehouse processes. The first shuttles we sold are about 20 years old now. You might think that they have fulfilled their purpose and that it's time for something new – but is that really the case? We at KNAPP say “No”. Thanks to our approach, these systems actually have a great future ahead of them. As a reliable business partner, it is important to us to continue providing support for our systems even when their product life cycle has come to an end. That's why we have decided to launch a retrofit program for shuttle systems. *“With this program, we make shuttle technologies fit for current and future*

demands. Replacing old components and adding innovative system technology extends the lifetime of the system, and increases efficiency and availability in the warehouse,” explains Manfred Fuchs, Vice President of Customer Service. This way, our customers are prepared for the challenges of their sector and benefit from higher operational reliability and unlimited spare parts supply.

Customers who want to modernize and expand their logistics center without fundamentally changing the conditions of their warehouse should ask themselves: Do I continue working with my old system in the knowledge that there is a risk my spare parts won't be supplied any longer or support services will be discontinued, or do I invest in the retrofitting of my shuttle system? A sound retrofit project requires making thorough inventory of the customer's system.

Retrofit features

Economical

- Investment significantly lower compared to purchasing a new installation
- Reduced operational costs, such as for maintenance and repair

Sustainable

- Reduced energy consumption and emissions during implementation
- Normal operation continues, only planned system standstills

Safe

- Implementation of the latest upgrades for software and mechatronic components
- State-of-the-art safety system: the KNAPP Lock

Future-proof

- Continued KNAPP Customer Service support for another 10 years
- Supply of original spare parts ensured

“We are very satisfied with how we implement retrofit projects with KNAPP. Everything always runs smoothly – from project planning to installation to startup. The results of the implemented measures often exceed our expectations.”

Dirk Bleck
Technical Manager for Empties
t-log trinklogistik GmbH



How do shuttle system retrofits work?

A shuttle retrofit is more than just upgrading the hardware and software or replacing old parts. In close collaboration with you, we thoroughly check the system processes and components and design a new solution that fits your current requirements. Our retrofit team analyzes any changes in the business case and, based on these, makes tailored optimizations.

Very often, it's not necessary to completely renew the infrastructure to reach your goals. For the retrofit, we make use of the available resources such as space and existing steel constructions. This saves energy and reduces emissions, which has a positive impact on your carbon footprint and allows us to retrofit your system during on-going operation. This ensures the system's required throughput even during the retrofit project.

Modernization that ensures business continuity

Our service technicians follow a carefully thought-out retrofit process to minimize any potential disruption to ongoing operation. The aisles are brought to a standstill only one by one so that the remaining system can keep running. New technologies and features are implemented on two servicing levels in each aisle, while the remaining shuttle levels keep operating as usual. From a technical point of view, it is not necessary to retrieve or relocate any load carriers. Another important aspect of the retrofit process is the fact that you gain at least another 10 years of KNAPP customer service, which includes the supply of original spare parts and the latest software updates. *“Together with our customers, we keep an eye on the developments on the market as well as on the efficiency and productivity of the existing system. We further develop the existing solution and create one that perfectly meets the customer's current requirements,”* says Tino Menzel, Customer Care Manager at KNAPP Systemintegration.

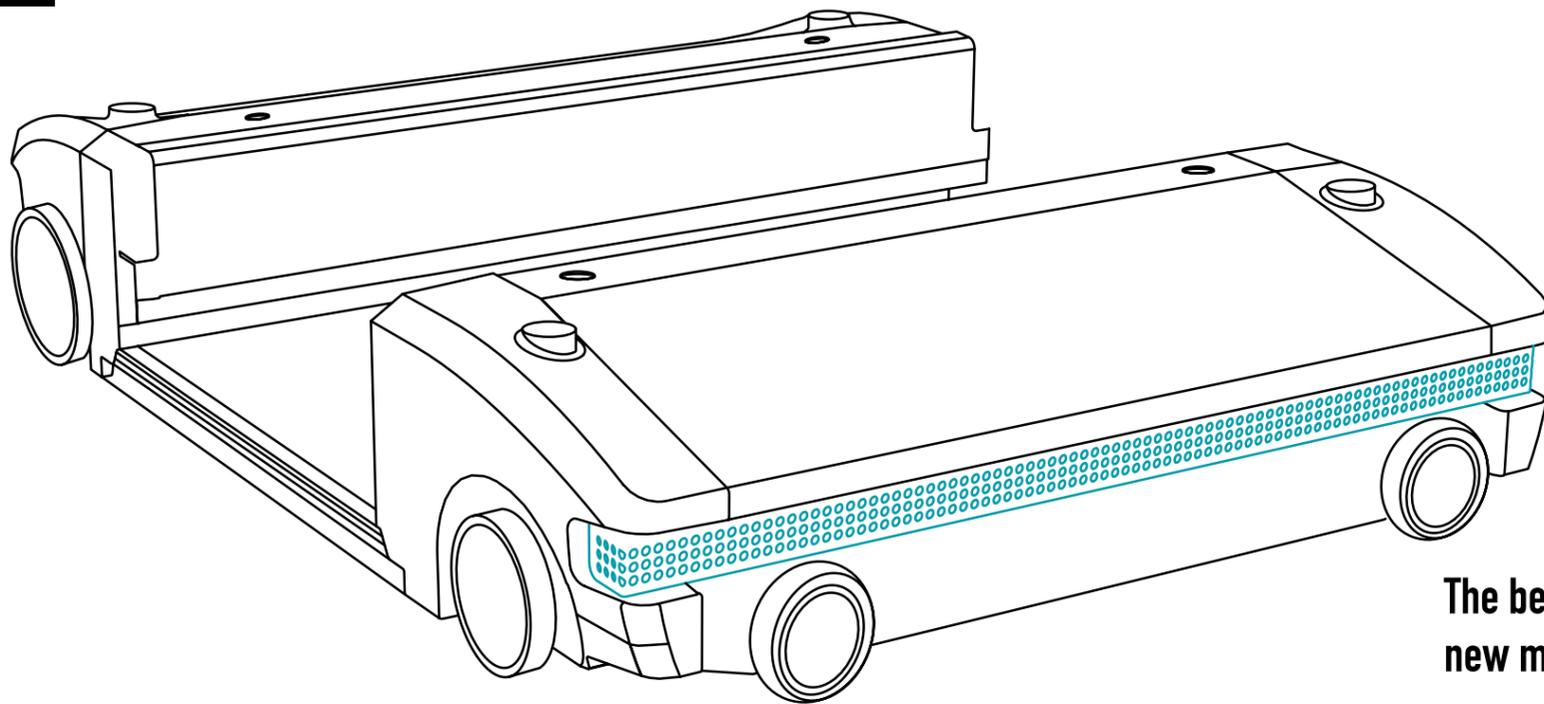
Stepping into a new era together

Using our software solutions, you can take your newly retrofitted shuttle system to a whole new level in warehouse logistics. Based on current and future business requirements, our *digital services* provide full transparency on key figures and efficiency of the control system. The services include the optimization of logistics processes as well as the monitoring of automation technology and control system components. This safe, effective and economical modernization solution benefits system management in its entirety.

As a reliable service partner, we are there for our customers on their way to success throughout the entire retrofit process and beyond.

Advantages

- Productivity ensured for the long term
- Increased system availability
- Increased efficiency
- Reduced overall operating costs
- Shorter servicing times and intervals
- Optimized safety and software
- Full support for 5 more years (extension of guarantee and maintenance periods)
- Minimal standstill periods during the modification process



An All-Purpose Shuttle

20 years of enhanced efficiency with shuttle technology

Ideas have the power to change the world. Around 20 years ago, a pioneering idea was conceived at KNAPP that would have a lasting impact on the world of logistics: shuttle technology. Compared to the stacker cranes that were commonly used at the time, shuttles – small, speedy warehouse robots – could store and retrieve items from racks faster, not only making the processing of orders a whole lot more efficient but also more flexible. Today, our shuttle technology is the benchmark for fast and efficient order fulfillment. To show how our shuttle technology has marked the world of logistics and our organization, we rewind back to how the technology came to be, take a look at best practice examples and provide insight into the most recent developments.

The beginnings: a new solution for new market demands

At the beginning of the 21st century, stacker crane systems used to be the state of the art in warehouse automation. However, a new approach to automation was required as the number of medicines that needed to be processed grew, causing the pharmaceutical wholesale industry to expand. As innovators and shapers of the future, we were ready to accept this challenge. KNAPP COO Franz Mathi witnessed the development of the shuttle systems and recalls: *“To optimally support the business model in pharmaceutical wholesale, the new technology had to be faster, more flexible and more reliable than the stacker crane systems. The solution was to separate the vertical and horizontal movements of the stacker crane by using lifts as well as shuttles.”*

Shuttle technology sets new standards

In the spring of 2003, the first OSR Shuttle™ went into operation at the Austrian pharmaceuticals company Richter Pharma. At first, many doubted the effectiveness of our new system solution, but soon the benefits became clear to everyone. From space-saving and safe item storage and perfectly timed order processing to highest system stability – our shuttle technology could do it all. *“At the time, it wasn’t quite clear yet how much the technology would influence the sector,”* says Franz Mathi thinking back. The shuttle technology set new standards, becoming the most advanced high-performance automation system.

Consistent improvement according to market needs

Today, our shuttle systems are operating in customer warehouses on all inhabited continents, ensuring efficient order fulfillment in a range of applications – from automotive to online retail and food retail. Worldwide, there are more than 450 systems with over 40,000 shuttles in operation. The smallest shuttle system consists of one aisle and ten shuttles, while the largest system comprises 60 aisles and over 2,000 shuttles.

Over the years, we have consistently developed our shuttle technology in accordance with market requirements. The introduction of the OSR Shuttle™ Evo, for instance, was a significant milestone. As a new generation of shuttle system, it provides boosted flexibility and performance. *“We want to be the best tech partner for our customers and our shuttle technology plays an essential role in keeping that promise. We continuously invest in the development of our shuttle portfolio and are going to introduce a number of innovations into the market this year and in the next. This allows us to even better meet our customers’ requirements, adding a whole new dimension to fulfillment,”* reveals Franz Mathi.

The latest innovations will include shuttles for deep-freeze applications, allowing them to be used in temperature zones of -28°C (-18.4°F), a new, extra-high lift system, as well as a highly standardized, off-the-shelf system version with very short development and implementation times.

As fit as a fiddle even after 20 years

Innovations aside, what actually happened to the shuttles of the first generation? In actual fact, many systems are still in operation today. However, after 20 years, their life cycle has come to an end – or has it? *“To us, partnership means supporting our customers over the long term. We strive to offer the best, most efficient and sustainable solutions for their business and systems. For this reason, we introduced a broad retrofit program to be able to completely renew systems of the first generation and prolong their life cycle by another 15 years,”* says a delighted Franz Mathi.

Would you like to learn more about our retrofit program for shuttle systems? Get in touch with your personal service contact or drop us a line at sales@knapp.com

“In the past years, numerous technologies for food retail have been introduced into the market. None of them hold a candle to the OSR Shuttle™ Evo. The technology is simply unrivalled.”

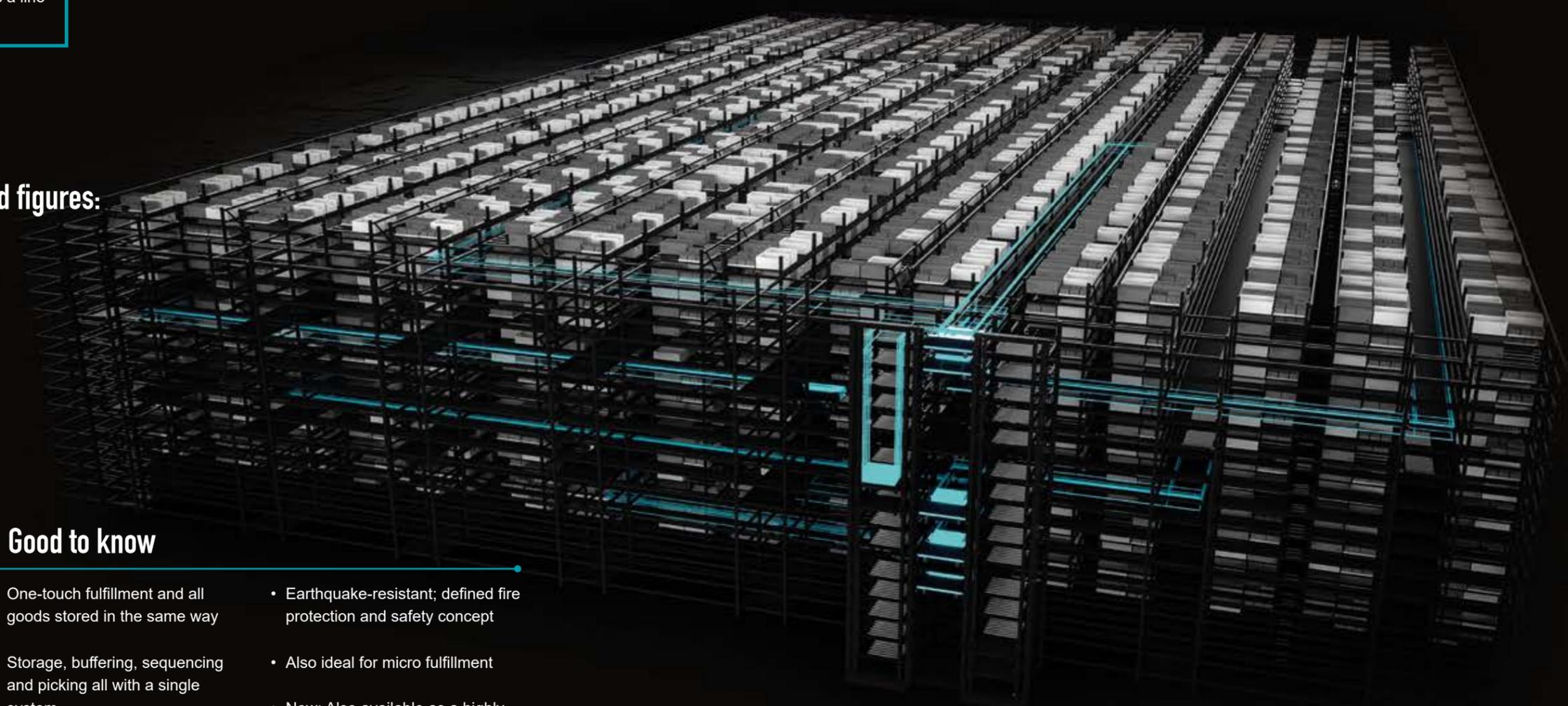
Zvika Fishaimer
Vice President HR & IT
Shufersal

Record-breaking facts and figures:

- >450 shuttle systems implemented worldwide
- >40,000 shuttles running worldwide
- 20 years of proven technology
- Height: >30 meters (98.43 ft), length and width scalable as needed
- Largest shuttle system: 60 aisles, 2,000 shuttles
- Smallest shuttle system: 1 aisle, 10 shuttles
- Highest altitude shuttle system: >3,000 meters (9,842 ft) above sea level
- Lowest altitude shuttle system: 0 meters (0 ft) above sea level
- Coldest shuttle system: -28°C (-18.4°F)

Good to know

- One-touch fulfillment and all goods stored in the same way
- Earthquake-resistant; defined fire protection and safety concept
- Storage, buffering, sequencing and picking all with a single system
- Also ideal for micro fulfillment
- Handles containers, cartons and trays with goods of up to 50 kg (110 lb); container fill level of ~80 %, multiple-deep storage, direct storage of cartons
- New: Also available as a highly standardized system with a development time of under 6 months



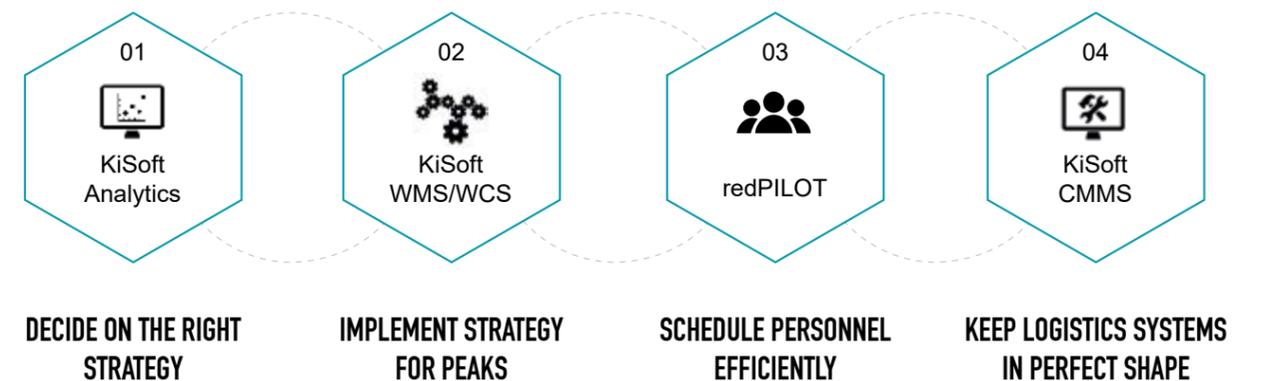
Learn more about our shuttle technology

A Strong Partner for Every Peak

Superior logistics performance with our intelligent KiSoft logistics software

Who hasn't been in this situation? At specific times of the year, the sales volumes for certain products go through the roof – during what is known as peak periods. For instance, in some regions, the demand for sunscreens and mineral water skyrockets every summer. Since these seasonal peaks happen every year at the same time, it makes it easier to plan for them. Days like Black Friday or Cyber Monday, however, make supply chain and warehouse managers break out in a cold sweat. These peak days stretch the limits of warehouse processes and employees, as it is difficult to determine which goods will be high in demand and which sales volumes will be reached. This is where KiSoft, our intelligent logistics software, comes into play. Read on to find out how this powerful tool helps you master these challenges.

Ready for each peak in only 4 steps thanks to the intelligent KiSoft modules



How can you successfully process the enormous workload during peak periods?

KiSoft lays the groundwork for success during peaks

The real challenge: balancing the workload

Imagine a warehouse operating around the clock, 365 days a year. The warehouse runs at its optimum with fixed capital in the form of inventory that is perfectly balanced with sales and purchasing strategies, and all the items are perfectly distributed to the various storage areas of the warehouse. The warehouse technologies for manual, semi- or fully automatic solutions are perfectly tuned to each other, with all processes running smoothly. Suddenly, the situation changes, whether because of a new company strategy, ever-present retail dynamics or possibly due to a completely new influencing factor. During periods of normal business, the warehouse needs to perform at its highest level for a short period of time. This means that significant changes will have to be made for the warehouse to continue to run at its optimum.

An important indicator showing how successfully you deal with a peak is the time it takes to process an order from start to finish. The sooner an order is ready to go, the more orders can be processed. For this reason, all the necessary preparations must be made before the peak takes place in order to keep transit times as short as possible. This is the only way the increased demand in the warehouse can be processed efficiently. With the intelligent KiSoft logistics modules, it's as easy as ABC:

1. Determine the right strategy using KiSoft Analytics
2. Implement your peak strategy using KiSoft WMS/WCS
3. Create shift plans using redPILOT
4. Get your logistics system into top gear with KiSoft CMMS

“KiSoft Analytics is like an in-car navigation system. When you type in information, the system tells you which route to take and what you might encounter on the way.”

Nathan Seaburn
Head of Fulfillment Operations
The Very Group



KiSoft modules help you master peak periods in your logistics operations with ease.

The right strategy using KiSoft Analytics

Both predictive and retrospective data analyses are key in making fundamental decisions and defining logistics strategies. KiSoft Analytics enables you to evaluate facts and figures from previous peak periods, providing you with a solid foundation for future planning. The software analyzes the events that occurred during a peak period. What would have otherwise remained unknown is visible at a glance: for example, an unplanned replenishment task in the picking area or the failure of a mechanical component. These analyses allow conclusions to be made about what happened in the past, helping you take appropriate action for the next peak.

What's more, KiSoft Analytics collects the data to calculate precise forecasts. Based on the results, you can make important decisions: Which goods fall into which category: A, B or C? When do which machines have to be serviced? How many and which employees are needed for which shift?

Get to know our complete software portfolio



KiSoft WMS/WCS to implement the peak strategy

Once the strategy has been defined, KiSoft Warehouse Management (WMS) implements it in connection with KiSoft Warehouse Control (WCS). Each process required

in the warehouse – from goods-in to quality control intervals to replenishment – is then finely adjusted by the software through configurations. An unplanned replenishment task from overstock in the picking area would cost time, for instance, and should therefore be avoided. The benefits of the fine adjustment are clear: All the goods are in the right place where they can be optimally picked. At the same time, the flow of goods not involved in the peak should not be affected. With KiSoft Analytics, you can essentially build an additional logistic high-speed line through your warehouse for a specific period of time. In doing so, KiSoft WMS and KiSoft WCS ensure that everything keeps running smoothly in the warehouse. *“We have found a provider in KNAPP who has developed the software and processes involved together with us. This approach allows us to provide our customers with the best service and optimum quality in all process steps,”* explains Tim Geißen, Head of WMS Management at REWE.

Optimal personnel assignment planning with redPILOT

Optimal staffing is just as important as maintaining that all-important stock. For peak periods, this means that the redPILOT software helps warehouse managers create ideal shift plans and ensures that the employees work in areas that correspond to their qualifications.

This way, employees can effectively make use of their skills and experience so that orders are processed efficiently. KiSoft WMS and KiSoft WCS also indicate which processes are active in which work stations. This data can be used to determine the right employees for the tasks at hand. Here is an example: Three quality check stations are active in the morning, which means three employees with quality check skills are required for the first shift. *“redPILOT also determines the right time for hiring additional personnel so that the hiring process doesn't start too early, which would mean additional costs without any real benefit – but also not too late,”* explains Siegfried Zwing, Managing Director at redPILOT.

Navigate to operational excellence with redPILOT



KiSoft CMMS gets your logistics system into top gear

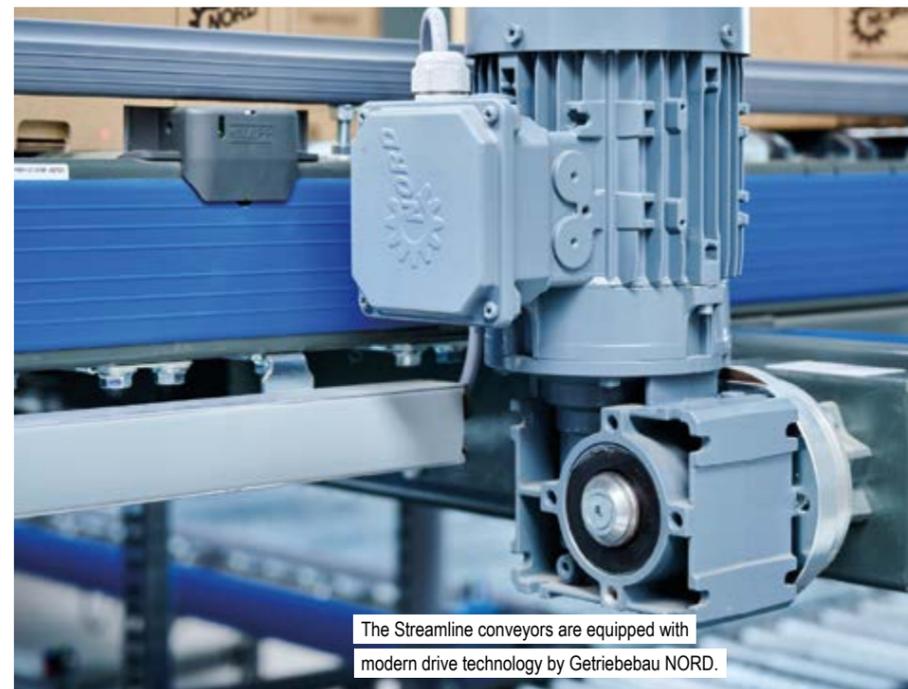
As with every car, regular servicing is also a must for warehouse installations. Thanks to CMMS, which is short for *Computerized Maintenance Management System*, data analyses determine exactly when each piece of equipment must be inspected. The system helps answer the following questions: Which piece of equipment needs to be serviced next? For how many hours has the motor been running? When was the

printer last checked? Using intelligent data, KiSoft CMMS always keeps an eye on the machinery to avoid unpleasant surprises. This is absolutely necessary for peak periods. Any machine that suddenly fails, even the smallest component such as a printer, can lead to delays in the high-speed line during a seasonal surge. As an intelligent tool, KiSoft CMMS prevents these kinds of problems. *“Scheduling servicing helps us save a lot of time. With the tool, you can compare real-time data and historical data. This way, you can detect weak points sooner,”* says Michael Höbling, Product Manager at KNAPP AG.

In short: KiSoft gets you through every peak

Transparent data from KiSoft Analytics help you find the strategies that are necessary for mastering your peak periods. Past experiences are used in addition to what the forecast says about the volumes that are expected to come in for processing. KiSoft WMS and KiSoft WCS implement the derived strategies in the form of system configurations and system parameters. In addition, personnel is scheduled as required using redPILOT. Once the right employees are ready to go, KiSoft CMMS checks if any machine requires inspection or servicing to keep everything running smoothly.

Thanks to all the possibilities provided by the KiSoft logistics software, you can now perfectly prepare yourself for the next peak period and exploit the full potential of your warehouse.



The Streamline conveyors are equipped with modern drive technology by Getriebebau NORD.

“An analysis of the necessary movements showed that KNAPP’s shuttle system was the best fit for our requirements. The effective use of space as well as the scalability of the KNAPP solution convinced us.”

Jörg Niermann
Head of Marketing
NORD DRIVESYSTEMS

Getriebebau NORD

Development Partner Becomes Customer

For quite some time, we have been working with Getriebebau NORD as a development partner for technological components. When it was time to equip a new logistics hub with automated warehouse technology, Getriebebau NORD naturally selected a solution by KNAPP. That’s how a development partner became a customer. What’s unique is that the automated small-parts warehouse for Getriebebau NORD was equipped with their own technology.

Drive system specialist

Getriebebau NORD has been developing, producing and distributing drive systems since 1965 and is the leading provider of complete solutions in their sector worldwide. In addition to standard drive technologies, the company supplies concepts for specific applications as well as for special requirements and offers a broad range of products for many sectors, including drive solutions, electric and gear motors, and frequency converters. The family business owes its success in part to their employees, around 4,700 in total, working in 48 subsidiaries as well as additional sales partners. The NORD DRIVESYSTEMS Group is headquartered in Bargteheide, Germany, and is home to the company’s development, production and worldwide logistics. The site in Bargteheide mainly ships components to the worldwide subsidiaries and assembles products that arrive from the various production plants.

The challenge: central supply for the worldwide subsidiaries

The Bargteheide location is the hub for the company’s worldwide logistics, providing materials to the international subsidiaries. Over the past years, the

company has been steadily improving the supply of materials from internal and external suppliers. The benefits generated by these improvements have led to a much higher workload for the existing storage solutions. The existing systems are designed primarily for pallet storage. Rising volumes in small parts and the increased demand on the picking lines will be covered by an automated small-parts warehouse (ASRS). Analysis of the level of performance needed lay somewhere between a stacker crane system and a fully automated shuttle system.

Requirements

- Covers the required picking performance
- Uses space effectively
- Scalable system
- Ergonomic work station and efficient work steps
- Different storage heights



The software KiSoft is the brain behind the scenes and controls all the processes. The warehouse visualization KiSoft SCADA on the control station provides an overview of the entire warehouse.

The new logistics hub

The shuttle system handles three basic processes at Getriebebau NORD: It supplies the different assembly areas and the onsite storage facilities in Bargtheide with small parts. The automated small parts warehouse handles the international supply of material using the pack stations. The parts for packing arrive by conveyor for the employees to pack. The KiSoft software, connected to NORD's SAP® WM, keeps an eye on the whole process.

A partnership with a future

Partnership and mutual trust make shared projects a success. As manufacturer of drive technology, Getriebebau NORD also supplies KNAPP with drive units for their Streamline conveyors. At this installation in particular, the teams from KNAPP and NORD worked well together in every phase from the start of planning all the way to installation. KNAPP delivered the desired performance in the automated small parts warehouse and after the final project acceptance, the project was transferred to Customer Service for ongoing support. *"With respect to logistics, in KNAPP, we see a flexible and international partner, with whom we can imagine working with on a long-term basis on projects designed to raise the logistics at our other locations to a whole new level,"* says Jörg Niermann, Head of Marketing at NORD DRIVESYSTEMS.

At a glance



Space-effective storage

OSR Shuttle™ Evo for double-deep storage, 2 lifts, 3 storage aisles, 44 levels and 44 shuttles; ~ 72,000 storage locations for containers and trays



Efficient transport

Streamline conveyor system connects goods-in, the shuttle system, picking and goods-out.



Monitor, control, optimize

KiSoft web service interface to NORD's SAP® WM, KiSoft SCADA visualization



Error-free picking and packing

8 Pick-it-Easy Flex work stations for goods-in and picking areas;
8 work stations for picking and packing shipping orders



"The different heights for storage in the OSR Shuttle™ Evo allowed the space to be used much more efficiently at the site. The supply of small parts and their distribution at the site has been raised to a whole new level."

Jörg Niermann
Head of Marketing
NORD DRIVESYSTEMS

Würth in All Their Facets

Two decades of joint innovations

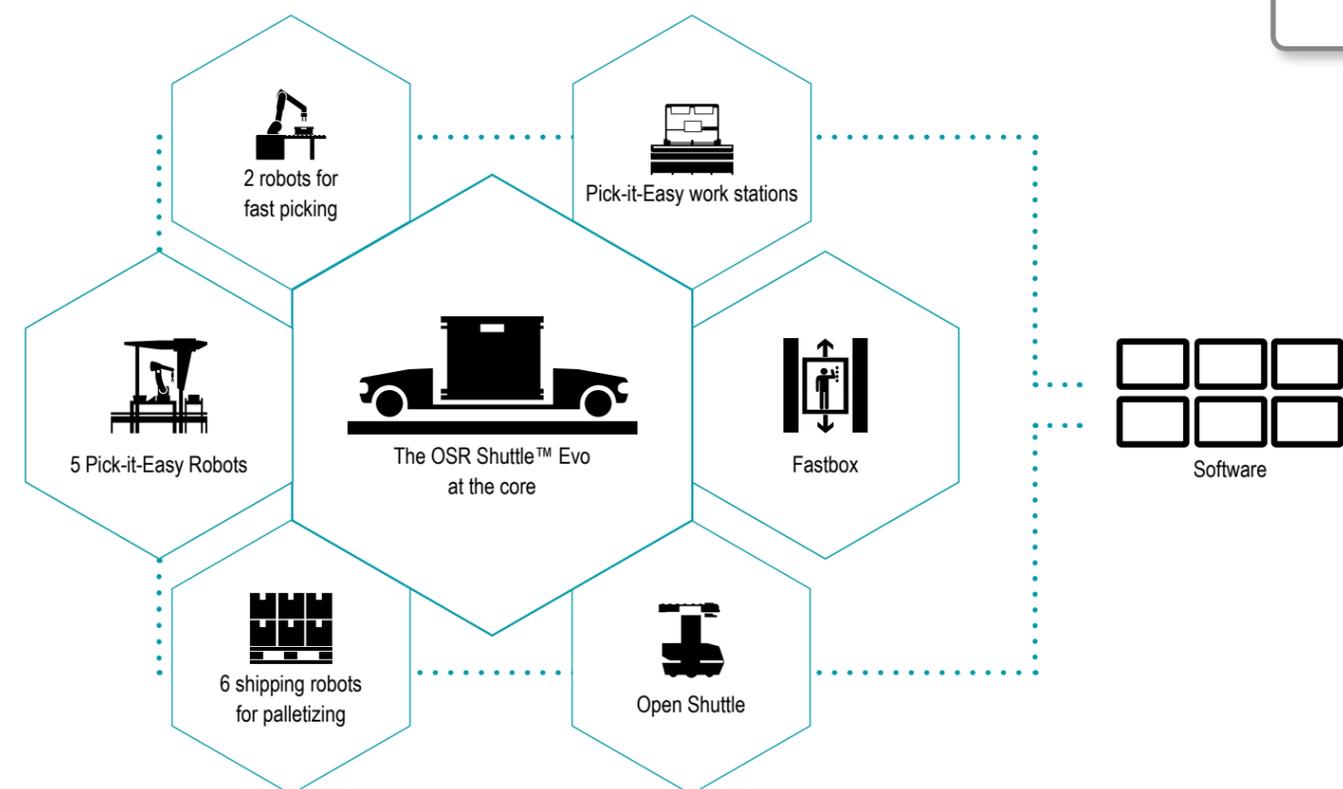
16 logistics centers in 9 countries across 3 continents – the Würth group's logistics network extends across the globe, the aim being the successful implementation of their innovation strategy. Ever since 2004, when our partnership with Würth began, we have supported their endeavours with our state-of-the-art technologies and intelligent software packages. Not only across all sales channels but also while staying in tune with the times. From helping Würth supply wholesale customers and small manufacturers to providing advanced in-store solutions directly at the point of sale.

We look back on 18 years of partnership marked by openness, mutual trust and appreciation. Our joint projects can be found in all corners of the world: in Italy, Austria, Portugal, Denmark, Norway, Germany, Brazil, Canada and the US. It is our shared passion for innovation that provides the best foundation for developing flexible and sophisticated solutions together.

The right mix of technologies and software creates a central intelligence that ensures an optimized flow of goods. Together with Würth, this approach allows us to keep setting new standards for industrial applications along the entire value chain.



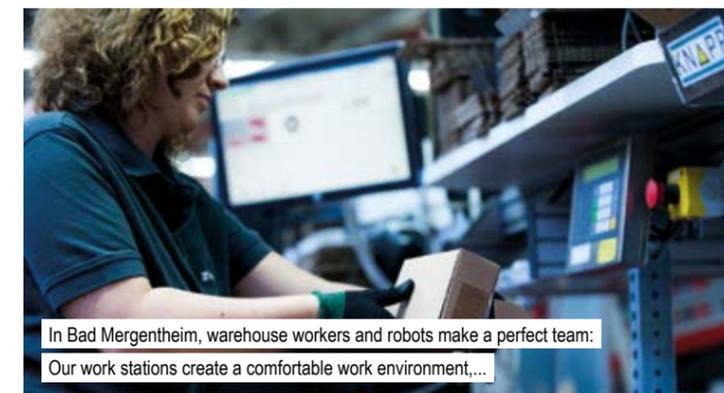
Our solution at Würth Industrie Service in Bad Mergentheim, Germany



Robot technology for Würth Industrie Service

Together with Würth Industrie Service in Bad Mergentheim, Germany, the largest sole proprietor of the Würth group, we have implemented multiple solutions over the years. The latest improvements focussed on increasing quality and productivity as well as *delivery according to manufacturer*.

Boasting five Pick-it-Easy Robots, two robots for fast picking and six shipping robots for palletizing, Würth's central warehouse for industrial customers in Europe has become one of the company's most advanced logistics centers. At the heart of the center is the OSR Shuttle™ Evo system, which is perfectly complemented by Fastbox, a rapid storage and buffer tower. Fastbox also takes care of order sequencing for the connected work stations. The dispatch area is equipped with a total of six palletizing robots. Various different software modules make sure the warehouse runs smoothly. This includes everything from distributing orders depending on the workload to calculating the optimal packing pattern. Thanks to these improvements made at Würth Industrie Service, roughly 25 percent of all orders are now palletized fully automatically.





In Bitburg, screws and fasteners are offered directly from a self-service terminal.

“The process of receiving goods has been greatly simplified, which is why individual items are now stored in a fraction of the time it had previously taken.”

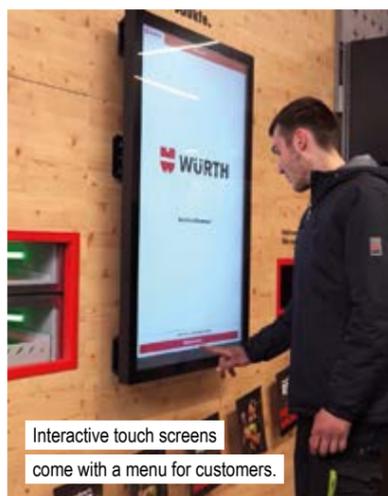
Pierre Maurer
Sales representative
Bitburg subsidiary



Two robots in the shipping area palletize orders fully automatically.

“For many years, KNAPP has been our go-to partner when it comes to new logistics solutions. Together, we were able to develop a future-proof solution.”

Stefan Gugerell
Procurator and member of the management responsible for logistics and internal operations at Würth Handelsges.m.b.H



Interactive touch screens come with a menu for customers.



This is where customers select the goods they want to purchase.



Another screen shows how the order is being assembled in the background.

In-store solution for screws at the point of sale

RetailCX is another innovative solution in the form of a self-servicing terminal right at the store, which was recently implemented in Bitburg, Germany. A straightforward search function helps craftsmen and women select the items desired on two digital touch screens. The items are issued through a vending compartment and can be paid for conveniently at the checkout. The automated picking system provides space for roughly 14,500 packs of screws and other fasteners. It is a stockroom and issuing point all in one. A robot arm on the inside takes the items and places them in a free position inside of the picking system.

A solution for future growth at Würth Austria

The latest modernization project at Würth Austria in Böheimkirchen also focussed on matters relating to sustainability. As soon as a customer order is started, fully automatic carton erectors produce shipping cartons in two different sizes. Foldable reusable containers are available to customers within the Würth group. Maximum efficiency and productivity in the picking process are achieved through the combination of our OSR Shuttle™ Evo and the ergonomically designed work stations. Our software sends the containers and cartons towards the picking and shipping areas in the right sequence. Innovative image recognition technologies check the packing pattern inside of the shipping carton. Any unused space is filled up with 100 percent biodegradable material. Fully automatic folding and lidding machines reduce the height of cartons by folding them individually. This reduces the transport volume by 20 percent, which in turn saves the need for four vehicles per day delivering orders. After that, two fully automatic shipping robots palletize the cartons and reusable containers, placing them on the pallet in the most space-efficient way possible. With the new, modernized system, orders are

Maximum automation and flexibility

The largest modernization project to date was implemented at Adolf Würth GmbH & Co. KG in Künzelsau-Gaisbach, Germany, which is the founding company of the Würth group, in 2011. The goal was to build an adaptable all-in-one system. The highest degree of flexibility between automated and manual processes is ensured in all areas. The hub for all these processes are two OSR Shuttle™ systems with a total of 15 ergonomically designed Pick-it-Easy work stations as well as four fully automatic robot cells handling the shipping process.

“This project focussed on raising the overall performance of the warehouse, which was made possible by using an efficient and innovative shuttle system. We decided on a collaboration with KNAPP because of the high level of competence in the field of shuttles that the KNAPP AG has,” says Jörg Becker, Head of Corporate Logistics Projects and Development at Adolf Würth GmbH & Co. KG.

processed more efficiently and productively and are delivered directly to the customers within a day.

Our solution at Würth Austria in Böheimkirchen



Our solution at Würth Germany in Künzelsau

Innovation Partner Herba

An interview

At Herba Chemosan Apotheker-AG, Maximilian von Künsberg Sarre, who is a co-owner and member of the Managing Board, is responsible for the areas of finance and logistics. In an interview, we asked him what makes up the success of our partnership.

“When it comes to the processes in our warehouse, I trust our automation partner’s core competence. In the best case, my partner already has a solution even before I start thinking about how to solve a problem.”

Maximilian von Künsberg Sarre
Managing Board Member
Herba Chemosan Apotheker-AG



What makes Herba so successful?

Herba is active in pharmaceutical wholesale. Supported by high-performance logistics, we supply pharmacies three to five times a day. We also offer our customers different marketing services to help them ensure their success in their business area. Our services range from pharmacy software to different marketing tools. As a full service provider, we provide our customers with everything they need to run a successful business.

How is your collaboration with KNAPP?

The values at Herba are integrity, responsibility, operational excellence and respect. I know that appreciation is a key value of KNAPP’s. From my perspective, appreciation and respect are two sides of the same coin. As the teams work together, I believe that it’s very important that we treat each other with respect and appreciation. Excellence is another value that connects us deeply. For us to create value for the customer, we both aspire to excel in everything we do. That’s the right approach for success and innovation.

Can you give us an example of such a joint innovation?

The Itemizer, for instance. We said to KNAPP that we’re looking for an automated solution for the final check process. KNAPP responded: *“We have something for you. It’s still in the test phase, but it’s very promising.”* And so we got together and we are proud to be the first company to have a KNAPP Itemizer in operation. The prototype was developed with a great deal of innovative spirit, courage and the right touch of customer focus. It is being tested at our Vienna location and will be a huge help to us in

terms of final checks. The legal framework that applies to us has become much stricter because of the Falsified Medicines Directive of the EU. With the KNAPP Itemizer, we can fulfill the new requirements using automation. This is a major breakthrough. The Itemizer is the project that’s close to my heart, as it is a fantastic example of the culture that the two companies share.

Human and machine – how are they compatible?

To me, it is important that technologization does not exclude

humans. What changes is the job profile. As digital transformation is speeding up, we need people who understand the technology and can operate the machines. All this requires quite a different set of skills from the ones needed in the past. For me, the future will always involve people who work with the technology.

What drives a partnership over the long term?

Our partnership is characterized by innovation and operational excellence. In my view, the

companies that are successful are the ones with a solid digital core. They are ready for future developments. Companies without a solid base of technology won’t succeed on the market. Continuous investment in the technologization of our business, for example, allowed us to assume responsibility even in times of the pandemic. That’s why we are proud that we are well equipped, both with software and technology from KNAPP, making us fit for the future.



Watch the video here!



Worth celebrating:

10 years

of SAP® EWM competence

at the KNAPP AG



Growing together

Customer orientation and striving for innovation is what connects Herba Chemosan Apotheker-AG and KNAPP AG. The shared history began in the 1960s when the pharmaceutical wholesaler Herba commissioned KNAPP in Hart bei Graz, a new company starting to gain ground in warehouse automation, to supply belt conveyors. Gradually, further Herba locations in Austria and the location in Vienna were equipped with vertical rotating racks and conveyor systems.

This partnership is still going strong today. After numerous successful single projects, Herba started the first comprehensive modernization project with KNAPP in 2014. In 2019, Herba took another step towards the future. All Austrian Herba locations were modernized and expanded with innovative KNAPP technologies as part of a complete reorganization of Herba's distribution.

Modernization highlights

- Increase in degree of fully automatic picking from 40 to 80 percent
- Decrease in degree of manual picking from 55 to 17 percent
- Significant increase in storage capacity
- Entire item range processed in a single goods-in area

Core technologies

- Central Belt System with SDA ejectors
- OSR Shuttle™ with 25,000 storage locations
- Pick-it-Easy Health work stations
- KNAPP-Store with automatic storage and retrieval of returns
- Itemizer for automated final checks
- SAP® EWM software solution



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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.