



Smart Software



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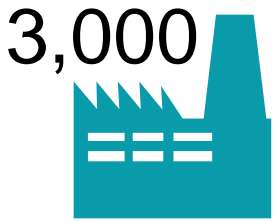
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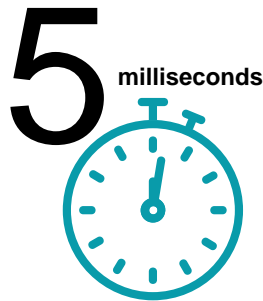
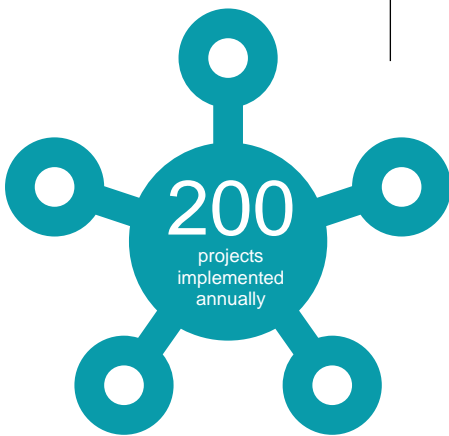


3,000
installations
worldwide

2 startups
per week



1,000
users
in the system at the
same time



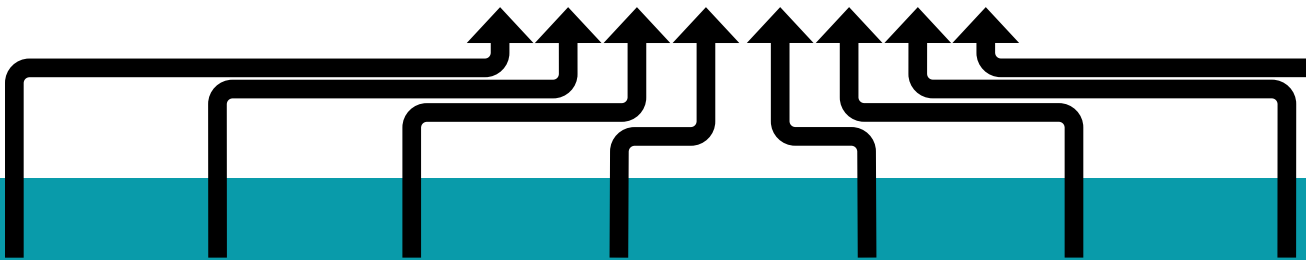
5 milliseconds
real-time processing
for transactions



1 Mio.
storage locations
1 second to
choose the best

60,000 lines
picking performance in 1 hour

KiSoft-profile



Best-practice
processes for
highly specialized
sectors



High level of
standardization



Scalable
solutions



Easy installation
and expandability



Complete control
and transparency



Roll-out solutions
for more than one
site



24/7 support
in 12 languages



KiSoft

Smart software solutions

Flexibility trumps all

Intelligent interconnection, scalability, high flexibility and performance, as well as transparency in every process – these are the requirements for smart warehouses and smart logistics both today and in the future. Software is an invisible force in the warehouse. It connects and mobilizes warehouse technology and machines, and is a tool that ensures that optimized, individual and transparent processes in warehouse management are fully available at all times. Software is the digital gateway to future opportunities.

With over 6,000 employees, including **1,800 software experts** and 53 sites, KNAPP is one of the world's market leaders and provides intralogistics all-in-one solutions from a single source as solution provider. With its smart software solutions, KNAPP covers all software levels, from warehouse management to controlling individual optical sensors, thereby guaranteeing performance, productivity and transparency along the entire supply chain. Our product line **KiSoft**, short for **KNAPP Intelligent Software**, and **SAP®EWM** by

KNAPP, are tried and tested products that offer our customers the best of both software worlds. Decades of experience in automation, in-depth process and industry expertise, as well as current market demands and future trends have all shaped the development of the KiSoft portfolio and form the foundation of your software solutions.

From manual to fully-automatic processes – the comprehensive KiSoft features fulfill all requirements in the management and control of flows of goods and information. KNAPP brings modern and user-friendly **man and machine communication** into warehouse logistics by applying its innovative **easyUse interface** across all software levels. With the help of **KiSoft Analytics**, KNAPP is setting new benchmarks when it comes to digitalization and absolute optimization in the warehouse. Data analysis and applications, together with cutting-edge technologies such as **Artificial Intelligence** provide multi-warehouse and comparable performance measurements, including **condition monitoring** and **predictive maintenance**.



Investment
security

KiSoft

all-in-one
logistic software

WMS

Warehouse Management System

Goods-in processes

- Inbound delivery planning
- Goods-in processing
- Storage

Processes in the warehouse

- Internal transport
- Replenishment
- Stock rebooking
- Inventory
- Repacking

Goods-out processes

- Outbound delivery planning
- Picking
- Packing and dispatch preparation
- Dispatch staging and loading

Additional processes

- Quality checks
- Supplier returns
- Customer returns
- Cross-docking
- Value-added services

Main functions

- Warehouse model
- Stock management
- Article master data
- Load unit management
- Packing instructions for load carriers

Additional functions

- Multi-client capability
- Managing several warehouses
- Performance tracking
- Personnel allocation planning
- Slotting
- Stock reorganization
- Route management and shipment tracking
- Serial numbers, lot numbers and date marks
- Empties management
- Dangerous goods management
- Customs management

WCS

Warehouse Control System

Performance of logistical processes

Logistical functions

- Material flow control
- Order release
- Order start
- Weighing
- Checking
- Document insertion
- Recording and controlling lots, date marks and serial numbers

Man-machine interaction

- Control center
- Work stations
- RF mobile terminals
- Voice-guided terminals

Machine control connections

- KNAPP warehouse technology
- Warehouse technology from third-party suppliers

Statistics and reports

- Data base for full transparency

Maintenance and system monitoring

- Flexibility, efficiency and agility by intelligent services

Machine control

Storage systems

Work stations

Picking systems

Conveying and sorting systems

Handling and printing systems

**Machine control with KiSoft
SCADA visualization**

KiSoft CMMS

FSM

KiSoft Analytics

easyUse operating concept

Uniform operating concept with a unique user experience

Intuitive man and machine communication

Consistent look and feel

Reduced to the essentials

User-orientated depiction on the perfect terminal for the task

Analytics

Big data solution for analyzing and optimizing the entire logistics system

Central collection of all logistical and mechatronic data

Big data becomes smart data – standardization of information

Flexible and individual analyses of complex systemic relationships

Data mining and predictive analytics for continual optimizations

Add-ons

KiSoft Pack Master – software for calculating the best possible stacking patterns

KiSoft Sandbox – test and emulation environment

KiSoft Pick-up & Delivery – shipment tracking between the warehouse and the end customer

redPILOT

flexible as your business

**Markets and
business areas
are changing
rapidly**

Digitalization is taking the world by storm. Markets are changing and new business models are emerging. Innovative software solutions for efficient management of logistics processes pave the way to a smart warehouse and provide the required agility and performance, today and in the future.

The KiSoft portfolio is based upon the know-how and experience gained from over 3,000 installations in diverse sectors. Flexibility and scalability are two of the essential attributes needed to juggle the array of demands. The focus is always on cost-effective systems and the KNAPP philosophy **making complexity simple**.



Healthcare

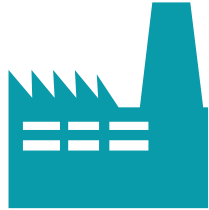
The extra mile in quality and efficiency: KNAPP supports the entire pharmaceutical supply chain, from production to direct-to-patient delivery and online mail-order pharmacies with its KiSoft product portfolio and core technologies like the KNAPP-Store and a range of further solutions.



Fashion

High-end logistics: Wide article ranges, several different collections per year and the rapid growth of online retail are characteristic of fashion logistics. KiSoft is the link between business processes and warehouse technology such as the OSR Shuttle™ storage system, overhead conveyor systems or Pick-it-Easy work stations.





Industry

Smart production: Flexible response to different lot sizes and changes in production – KNAPP's automated shuttle system is connected directly to the production process and ensures that the assembly work stations are supplied at exactly the right time. Intelligent Vision technology checks every assembly step in real time. The integrated KNAPP software solution KiSoft optimizes and controls all processes.



Retail

Maximum performance: At KNAPP, innovative automation and software solutions come from a single source and fulfil all customer demands for efficiency, ergonomics and flexibility. Intelligent omni-channel solutions serve all distribution models and ensure maximum availability of goods in both stores and with the end customers.



Food Retail

Highly flexible: In highly automated distribution centers, e-commerce orders are processed using KNAPP's E-Grocer system solution. KiSoft efficiently controls and coordinates the flow of goods, optimizing and monitoring all of the processes. A complete overview and transparency are provided by visualizing all the warehouse components.



Understanding our customers is crucial. Only then can we develop the right solutions that meet expectations and help in refining the individual profile.

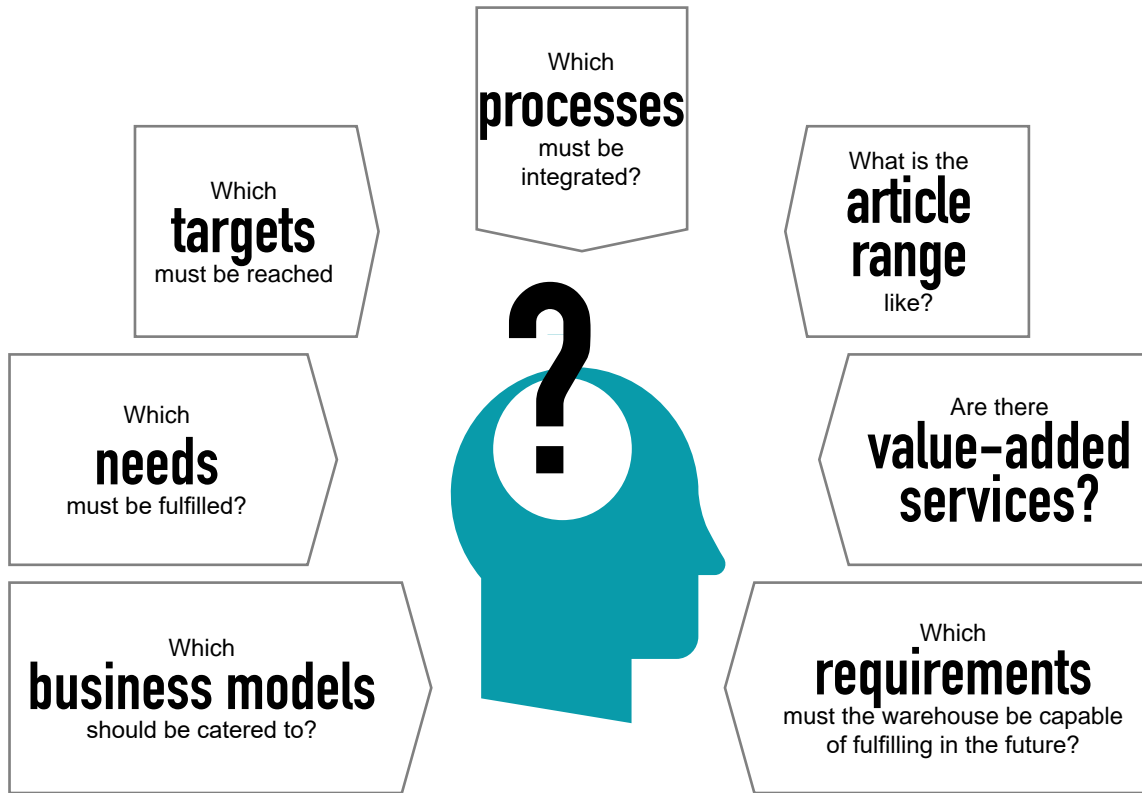
Hansjürgen Walter,
Head of Software Consulting, KNAPP AG

Standards with room for customization – the perfect solution

Listen and visualize

The concepts of logistics processes and procedures are especially vague in the initial phase of a project. That's why we ask questions. We take the time to listen, find common ground and get to know the customer and their business, identifying what makes them so special. The goal is to interpret the requirements correctly, make them transparent and then create a tailor-made system solution that provides the customer with the ideal support for their business, while also leaving them with room for individuality and future growth.

We accompany our customers on the journey from the initial designs to the finished concept that forms the foundation of the real solution – and this has visible results.



Our industry and software experts completely immerse themselves in the world of our customer and go more and more into detail as the project progresses. Bit by bit, a picture forms of a proposal for possible investment. It shows where the criteria for success lie and how our solution can be embedded in the customer's supply chain. With this as a basis, the necessary logistical processes and functions are developed and documented in a way that is easily comprehensible. The completion of this stage marks an important milestone in developing the customized system of the future.

Design and implementation: How can processes and functions within a complex warehouse be validated in terms of customer requirements? And before any components are even installed?

The KNAPP method for **analysing and modeling business processes** allows our experts to shape the essential framework for your individual solution and make the necessary software configuration transparent and easily grasped. This approach minimizes the risks and therefore the costs over the course of the entire project.

Virtual startup: We use simulation and emulation models to immerse ourselves in virtual software worlds, and build 2D or 3D models with a detailed representation of the system. The warehouse comes alive before installation work has even begun, revealing the system's capacity. This course of action considerably increases efficiency over the course of the project and that fits KNAPP's **zero defect philosophy**.

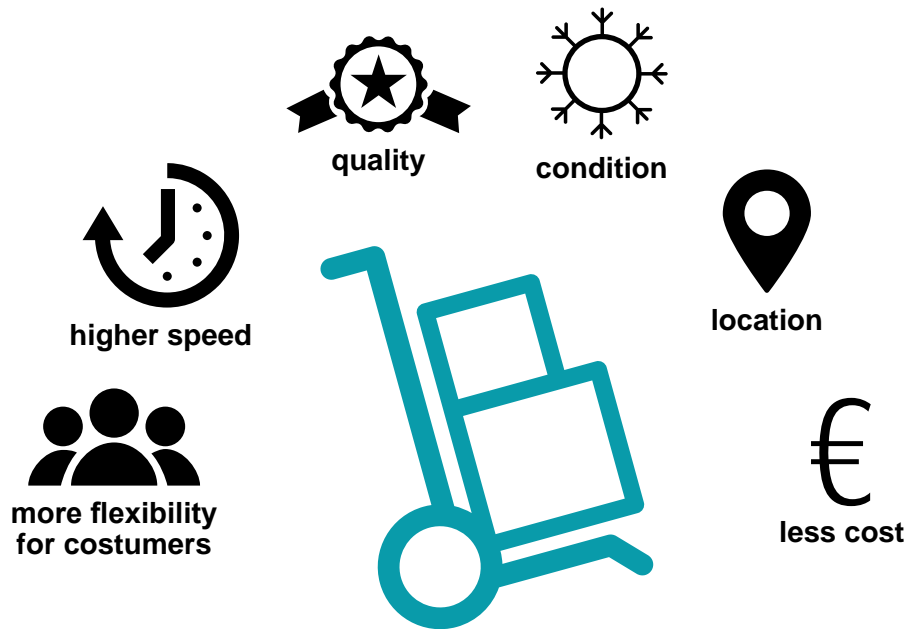
We call upon our wealth of experience and always strive to ensure that our customers' logistics solutions put them one step ahead of the market. Long-term partnerships with our existing customers and the success of new customers affirm our corporate culture and strategy.

Bernd Stöger,
Executive Product Manager at KNAPP AG

KiSoft WMS Warehouse Management at its best

Software is key.

High flexibility, performance and speed, economical and geared towards the future – a warehouse has to meet the widest possible requirements. Software is an essential factor in achieving success in the long term. We use the warehouse management software **KiSoft WMS** with our customers around the world. **Plan, control, monitor and optimize** – KiSoft manages and connects all processes from goods-in to goods-out and provides all of the necessary functions with their combined strengths in manual and highly-automated warehouses. KiSoft WMS allows solutions to be tailor-made. To do so, the design of the processes must be right. During the design phase, we form the best solution, tailored to your requirements and expectations, and then define the requirements for the processes and functions in the



warehouse.

High level of standardization

Selecting the right software supplier is a decisive, determining factor. The comprehensive KiSoft portfolio has proven itself in thousands of applications; it combines experience with innovation and brings maximum performance, availability and state-of-the-art communication to warehouse logistics. Such evolutionary software solutions mean that KNAPP has entered a new dimension in logistics. KNAPP continues to develop its software portfolio calling on its years of experience, industry know-how and expertise.

Modular system architecture

Its clearly sub-divided, modular system architecture guarantees the highest degree of flexibility and scalability. On average, the wide scope of functions of KiSoft's standard package covers 90 percent of requirements. Generic concepts provide our customers with plenty of room for customization. A software solution tailored to individual requirements makes up a relatively small proportion of the investment volume of a logistics system, but makes a disproportionately large contribution to business success, often decisively differentiating customers from the competition.

KNAPP has combined swift and efficient implementation with simple integration in diverse Host systems with the all-in-one KiSoft software solution. Individual lifecycle support ensures maximum investment security.

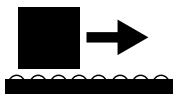
Software solutions for controlling machines allow the following:

Checking and monitoring of the entire warehouse operation

Visualizing the operational state down to I/O level

Testing individual functions

Support with maintenance and troubleshooting



Conveying and sorting systems

Streamline | Powerline
Overhead conveyor system | OSR Shuttle™
Sorter | Pocket sorter system | Open Shuttles



Automatic picking systems

Central Belt System | Pick-it-Easy Robot
KNAPP Medication Dispenser



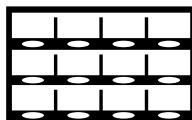
Storage systems

OSR Shuttle™ Evo | KNAPP-Store
INDU-Store | Fastbox



Handling systems for

Containers | cartons | trays | pallets
paper | measurement and checks
packing and transport



Guided Applications: Manual systems

Voice | RF | Pick-to-Light
Vision manual picking



Work stations

Pick-it-Easy Shop | Pick-it-Easy Multi
Pick-it-Easy Flex | Pick-it-Easy Case
Pick-it-Easy Evo | Pick-it-Easy Pocket & Pack

KiSoft WCS and machine control

Selection of
operating
parameters and
operation mode

Manual control
of individual
components

Complete transparency maximum availability

The **warehouse control system KiSoft WCS** controls, monitors and coordinates **in real time** the execution of all processes within the automated warehouse areas down to machine level. KiSoft WCS optimizes the use of resources taking the performance of personnel and the machines into consideration, prevents bottlenecks and guarantees the required delivery quality.

KiSoft WCS integrates subsystems such as the OSR Shuttle™ Evo storage system, the Pick-it-Easy Robot or the freely navigating Open Shuttles as well as interfaces to the machine control systems and transfers individual tasks for processing. Even manual picking processes such as RF or Voice technology, as well as head-mounted displays can be integrated in KiSoft WCS. Another important advantage is that the WCS also comes as a retrofit solution for the modernization of logistics solutions and is often integrated in the warehouse technology of third-party suppliers.

**Control,
monitor,
coordinate and
optimize flows
of goods**



Innovative and intuitive operating concept



User-orientated presentation of information and data



Graphical user interface



Modern man-machine communication



Flexible dashboards for mobile terminals



easyUse

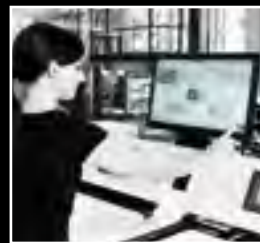
easyUse stands for intuitive operation, high performance, user-orientated display of information and a short training period for new personnel.



Maximum flexibility using apps for smartphone and tablet. The easyUse operating concept provides the greatest possible overview, control and transparency for managing the entire system – at any time and in any place.



Used with KiSoft, the innovative operating concept easyUse provides the warehouse manager with all important information and data required for efficient logistics in a clear-cut format.



A touchscreen decked in the easyUse design guides the warehouse worker intuitively through the work processes in the warehouse. Its user-orientated depiction of the work processes guarantees an ergonomic, efficient way of working that accomplishes both high quality and performance.



Reduced to the essentials: The easyUse user interface is easy to operate and depicts data not only in a compact form, but in a way that is adapted to the terminal in use, ensuring high performance and quality

Ever increasing digitalization represents both an opportunity and a challenge. Tremendous amounts of data need to be processed and made available to the user at exactly the right time and in the best possible form to assist them with their work. With easyUse, KNAPP is bringing the **latest in man-machine communication** with a unique **user experience** to all levels of the software hierarchy in warehouse logistics – from the WMS to machine control.

easyUse

modern
man and machine communication

easyUse is making complexity simple

The easyUse design is impressive in its consistent look and feel and in its ability to reduce information to the essentials within an **intuitive operating concept**. The user interfaces are clearly structured. The use of icons and colors facilitates intuitive interaction and fast navigation through the individual work steps.

Whether service technician, warehouse manager, warehouse worker or a member of top management, information is displayed for the user in a way that is right for them and adapted to the terminal in use, facilitating an efficient and accurate way of working.

Visualization with KiSoft SCADA

The **enduring availability** and **productiveness of a system** is one of the most important requirements for economical warehouse operation. KiSoft SCADA **provides a complete overview of the technical state of the entire warehouse**, displays all system components such as the Streamline conveyor system, and indicates their **operational state**, thereby achieving **complete transparency**. KiSoft assists in providing punctual, preventative maintenance and efficient deployment of service technicians, in **acquiring production data** and in facilitating **swift incident resolution**. KiSoft SCADA can be used flexibly on the multi-screen KiSoft i-Point or on mobile terminals such as tablets or smart phones.

KiSoft SCADA not only supports operationally but also provides data for further services and tools such as KiSoft CMMS.



KiSoft SCADA, combined with the easyUse operating concepts, provides the service technician with a clear overview of the technical state of the entire system and thereby guarantees the availability, productivity and stability of the logistics system



KiSoft
analytics

Smart logistics

logistics of information

Glean information from data to generate knowledge – this is the objective of big data management. Even in the digital age of the Internet of things, humans are the most important factor in the success of a company. The ability to make the right decisions based on the ever-increasing abundance of data today requires intelligent systems and tools. They form the basis of concrete measures and point to alternative solutions.

Flexibility and the ability to quickly adjust are key to modern logistics. A special cloud software solution helps redPILOT to operate logistics systems around the clock and at their very best – ecologically, socially and economically

Siegfried Zwing
Managing Director of redPILOT

From big data to smart data

KiSoft Analytics offers you a tool for the continual optimization of your logistics system. KiSoft collects data from all the different systems – whether that be systems belonging to the customer, systems from third-party providers or systems spanning several warehouse sites. Intelligent tools and a big data platform take an enormous and unstructured volume of data and generate **intelligent data tailored to individual requirements** that can be used to make the right decisions, which establishes sufficient transparency and allows for optimization measures to be taken. This leads to data mining, which aims to draw conclusions and identify correlations from intrinsic information. Logistical and mechatronic data can be called up from the smallest detail to aggregated data, on any terminal and at any time. An important advantage: KiSoft Analytics also allows **multi-warehouse and comparable analyses and optimization** to be undertaken.

Optimization – today, tomorrow and in the future

Based on **condition monitoring**, a logistics system can decide independently **when it requires servicing** and which services it requires – taking use and workload into account. In the future, the performance and availability of a system will be optimized throughout its entire life cycle through **proactive action and machine learning**.

Tools for comprehensive optimization of operation provided by redPILOT, a member of the KNAPP group, also provide the right answer to various system optimization questions. These tools now make it possible to optimize the entire operation of the warehouse for the pursuit of the right goals. The workload involved is taken into account, including quality requirements, capacities of both man and machine, required space, as well as environmental factors such as energy consumption and optimized so that they are as cost-efficient as possible.

With SAP® EWM by KNAPP,
we offer our customers
the best logistics solutions
fully integrated on an SAP IT
platform. These solutions are
based around our philosophy
making complexity simple,
our many years of experience
in warehouse automation and
the successful approach to
project management we have
developed.

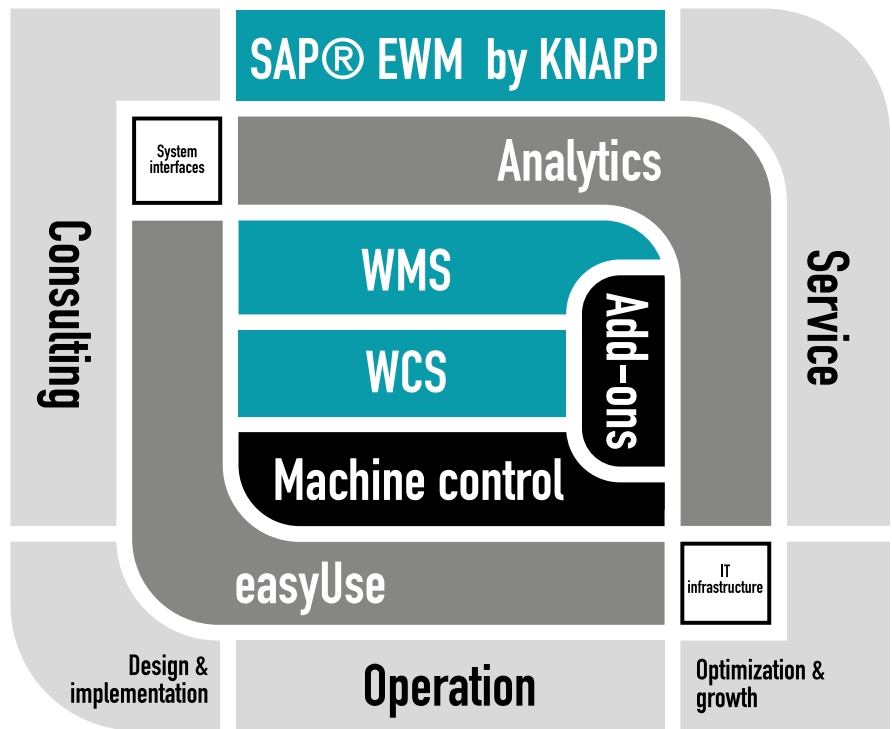
Gerald Lassau
Managing Director of KNAPP IT Solutions GmbH

SAP® EWM

by KNAPP

Solutions for all levels of automation

SAP EWM (Extended Warehouse Management) is a comprehensive, end-to-end solution that facilitates integrated planning along the entire supply chain. With SAP EWM by KNAPP, we not only offer you transparent processes, but also the possibility to undertake modifications and programming yourself. SAP EWM by KNAPP is the right solution for anyone wanting to implement an SAP IT strategy and looking for an outstanding logistics solution based on the **expertise of the KNAPP group**.



High standard with room for individuality

With SAP EWM by KNAPP, real-time control and system visualization (KiSoft SCADA), we offer our customers the best of both software worlds, as well as experience and cumulative expertise from over 3,000 installations worldwide. Over 80 percent of the warehouse processes are identical within the same sector; that's why SAP EWM by KNAPP is already pre-configured for best practice solutions. The focus of a project is developing and implementing processes that are specific to the customer. A basic installation of SAP EWM by KNAPP is ready quickly, with crucial core processes such as goods-in, storage, replenishment, picking and dispatch ready to go. Our customers benefit from our know-how in warehouse management and the possibilities that SAP EWM offers. Involving the customer early on with the help of the business release as well as key user tests, assisted by emulation and simulation of the system has proven to be incredibly successful.

Best in class

SAP EWM by KNAPP is the solution for all levels of automation. SAP EWM by KNAPP can be connected directly to the control system thanks to the integrated MFS (Material Flow System). What's more, we offer compatible drivers that provide a real-time control system. This enables the SAP EWM MFS to control the Streamline and Powerline conveyor systems, for example, or high-performance storage and picking systems such as the OSR Shuttle™, the Central Belt System or the innovative Vision technology. Even the usability of the user interfaces in SAP EWM by KNAPP has been made even friendlier in accordance with our easyUse concept.

Transparent supply chain execution

SAP EWM by KNAPP is the solution for transparent and efficient supply chain execution and is already included in the SAP ERP (S/4HANA). The integration of the transport management tool SAP TM and the event management tool SAP EM optimizes processes beyond the warehouse, such as inbound and outbound flows of goods, carrier and freight cost management, track and trace, and more.

Digital Services

Long-term strategic partnership

Service: personal and digital

Ideal maintenance and guidance along the entire service value chain are an integral part of running your logistics solution successfully. Our International Customer Service provides support for over 3,000 logistics systems around the globe, around the clock, in a range of different sectors. Based on our follow-the-sun concept, our Service Desk is available in a total of nine languages, offering the support you need and connecting you with our experts wherever you are.

Whatever the issue, your personal point of contact ensures that you are in good hands. Our services also include customer-centered support using sophisticated tools. More than 90 percent of our service call-outs are solved remotely.

Exploiting potential through targeted use of data

Would you like to know today what tomorrow has in store, and what has to be done the day after that? Our innovative analysis tools help you create the conditions to boost your whole business.

Increase your system's efficiency and make decisions based on smart data through professional monitoring and system analysis. Together with you, our experts keep an eye on all the services along your value chain, helping you to evaluate the logistical data and figure out just what needs doing, and coordinating the necessary measures.

Discover our service modules for the agile operation of your logistics solutions. Configurable, efficient, and flexible – perfectly tailored to your needs and your business model. With our new dimensions in service in the game, you've got the winning formula for the enduring success of your business.

Intelligent Service Networks

Flexibility | Efficiency | Agility

Reactive

All-round support for ideal system operation. Fast, solution-oriented and reliable services – essential for your success.

Preventive

Optimizing operating hours and preventing downtimes – proactive and professional monitoring of your system for excellent performance and flexibility.

Predictive

Always one step ahead with smart services. Maximize performance and boost efficiency – continuous support for your logistics solution on the basis of smart data analysis.



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