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1,800 installations worldwide

2 startups per week

1,000 users in the system at the same time

5 milliseconds real-time processing for transactions

1Mio. storage locations

1Mio. storage locations

200 projects implemented annually

1,000 startups per week

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

1,800 projects implemented annually
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 3,700 employees, including 1,000 software experts and 35 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 Integrated 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 fulfil 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 augmented reality provide multi-warehouse and comparable performance measurements, including condition monitoring and predictive maintenance.
# 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

## 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
- Maintenance and system monitoring

## WCS
### Warehouse Control System

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**KiSoft**

*all-in-one logistic software*

**WMS**

*Warehouse Management System*

**WCS**

*Warehouse Control System*
Machine control

Add-ons
- KiSoft Pack Master – software for calculating the best possible stacking patterns
- KiSoft Sandbox – test and emulation environment
- KiSoft Track & Trace – shipment tracking between the warehouse and the end customer
- Other sector-specific modules

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

Storage systems
Work stations
Picking systems
Conveying and sorting systems
Handling and printing systems

Machine control with KiSoft
SCADA visualization for:
  - Selecting the operation mode and operation parameters
  - Visualizing the operational state down to I/O level
  - Controlling and monitoring operation
  - Support with maintenance and troubleshooting

KiSoft Pack Master – software for calculating the best possible stacking patterns
KiSoft Sandbox – test and emulation environment
KiSoft Track & Trace – shipment tracking between the warehouse and the end customer
Other sector-specific modules
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 1,800 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.
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.

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.
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, Managing 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™ | KNAPP-Store
- Industore | 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 Health | Pick-it-Easy Tray
- Pick-it-Easy Move | Pick-it-Easy View
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™ 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.
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 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 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 of 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.

Furthermore, KiSoft SCADA is the ideal addition to the KNAPP group’s service solutions. It forms a particularly strong portfolio of solutions together with wearable services and Service 4.0™.
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.
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 1,800 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 new 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.
Smart services
long-term strategic partnership
The plus factor in service

Flexible, adaptable, supportable

KNAPP provides comprehensive and innovative services that flexibly adapt to business developments, as well as guarantee availability and stability, sustainable success and investment security. Our primary aim is to achieve maximum customer satisfaction and not only offer a service. We want our services to impress! Business operation partnership: As part of our zero defect warehouse philosophy, our service experts stand side by side with our customers 24/7, from delivering the system to operation across the entire life cycle of the system, providing them with customized service solutions that form part of our System Support 360°+ portfolio.

You can view the technical state of your system, current and historical data any time and place via the Service Portal and e-insight app. This ensures that you always remain in the know when it comes to the lifecycle of your system.

Service 4.0™

Smart warehouse logistics requires completely new approaches to service, as well as tools and solutions. The Service 4.0™ strategy ensures that every customer receives their own optimal service package. All important information and data is made available in real time through data capture, analysis and visualization from ongoing system operation with KiSoft SCADA and KiSoft Analytics, in order to evaluate the performance and the condition of the system or proactively identify measures and areas of optimization.

The mission: Combined with self-learning software programs, the available services can be correctly selected, interconnected and used efficiently. Every warehouse decides for itself which services it needs: when to perform service, at which location and the scope of service required. All services are available, without restrictions, to every customer at all times. Centrally intelligent software links the services of the future with each other and coordinates all processes.
The future is now

When others only start to think about something, we’re already doing it:

**Warehouse operation support:**  
We provide your management with a complete system and performance overview for optimized warehouse operation that can also be accessed on mobile devices.

**Managed services:**  
Errors and altered framework conditions for predictive services can be derived automatically from data patterns, to organize spare parts orders, for example, or prepare campaigns for the retail sector.

**Transport index:**  
Our transport index offers our customers a complete overview of the entire system — a unique added value in the sector.

**Service relation management:**  
We put personnel first and provide your employees with training on how to use new technologies.

**Customer satisfaction through the KNAPP Promoter Score:**  
We regularly evaluate the satisfaction of our customers using the international evaluation tool.
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