



SynQTM
SYNCHRONIZED INTELLIGENCE

MATERIAL HANDLING SOFTWARE ARCHITECTED FOR DYNAMIC, DATA-DRIVEN SUPPLY CHAINS

Automation and robotics, connectivity and increased use of data are all driving changes in intralogistics and are paving the way for Industry 4.0. Software is at the heart of that evolution.

SynQ represents a new approach to warehouse management software that delivers all of the functionality, intelligence and services required to optimize warehouse operations in an integrated, modular platform.

WHAT IS SynQ?

SynQ, a combination of Synchronization and Intelligence Quotient, builds on our proven warehouse management software by expanding its capabilities beyond the scope of traditional WMS systems—without leaving current users behind.

SynQ encompasses warehouse management, material flow and automation control system functionality, along with an array of business intelligence tools, in a single platform.

With SynQ you have the flexibility to deploy only the modules you need when you need them while intelligently synchronizing automation equipment, robotics, people and processes for peak performance.

That allows you to deliver on your promise to your customers in the smartest way possible—today and in the future.

SynQ BENEFITS:

- **Orchestration:**
Efficiently manage peak demands in your operation through our unique Single Point of Control (SPOC) user interface featuring the powerful 3D Visualizer
- **Insight:**
Transform information into intelligence to gain insight into your operation
- **Agility:**
Make your operation future-proof with our modern, cloud-enabled platform, backed by our worldwide community of engineers and business experts

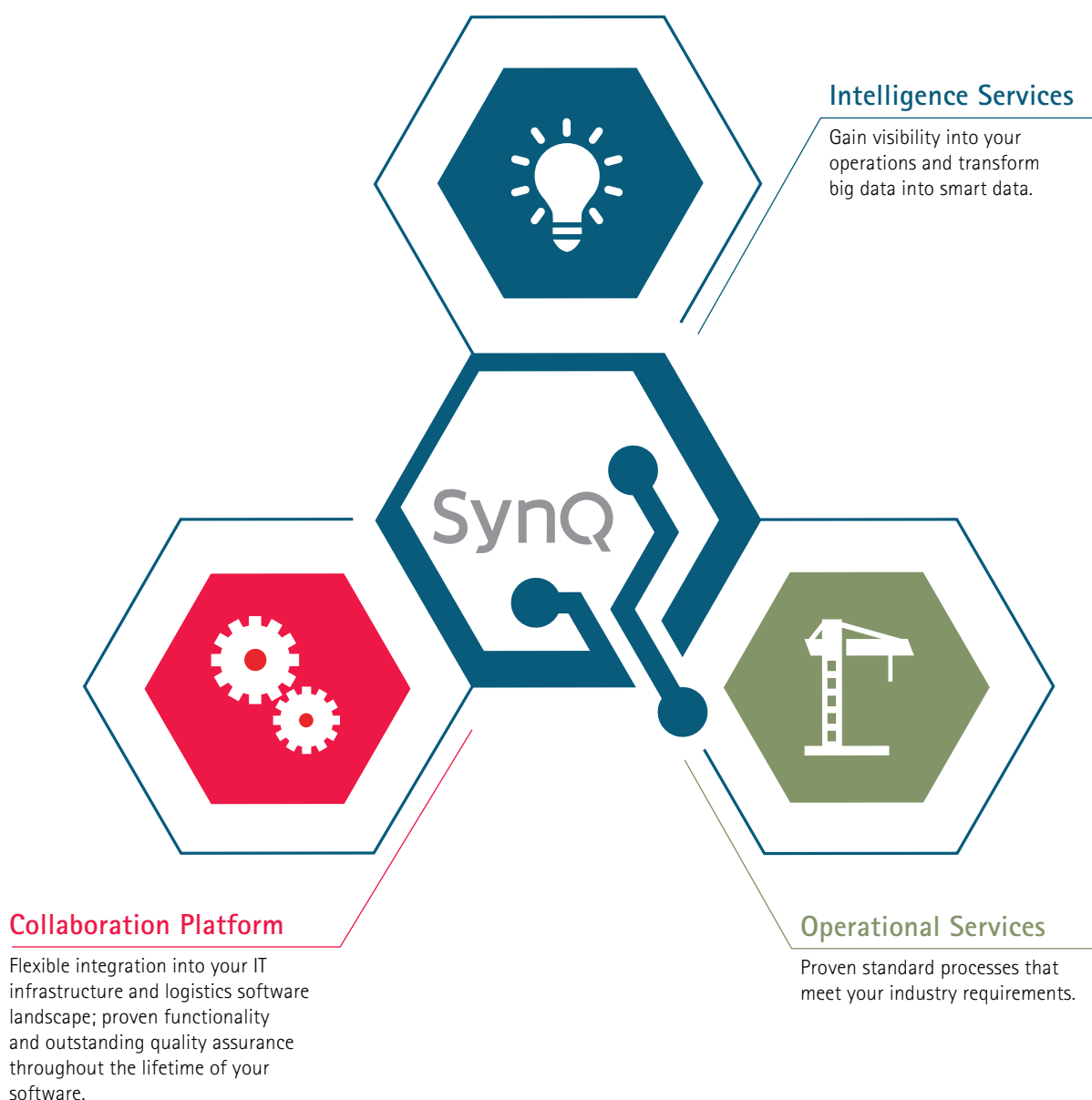


THE SynQ INTELLIGENCE NETWORK

SynQ is based on modern Java Enterprise technology and is consequentially developed further. Backwards compatibility is ensured through migration tools shipped with each new release.

SynQ functionality, services and crucial supporting processes are organized around three pillars: Collaboration, Operations and Intelligence.

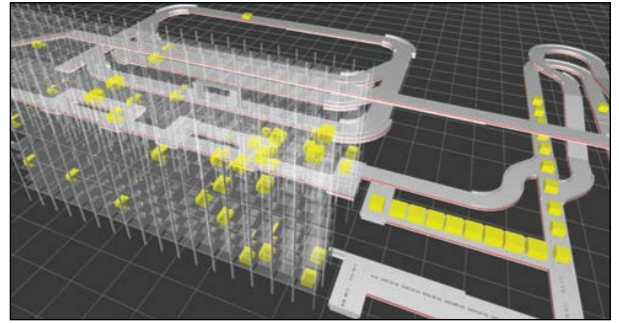
Collaboration Platform modules provide continuity no matter the level of automation your business has installed, while Operational Services deliver industry-standard processes and high-speed automation for maximum performance. Finally, Intelligent Services allow smart growth in a dynamically changing market.





COLLABORATION

The Collaboration Platform is the heart of our software platform that makes integration possible. It includes all base software modules, such as those required for managing inventory or connecting to a host system. Additionally, all our testing processes and quality standards are part of this pillar.



The Collaboration Platform includes real-time 3-D visualization to manage and control automation through the SPOC interface.

WMS/WES/WCS/MES

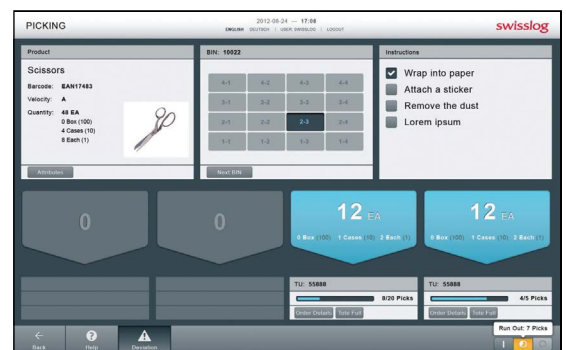
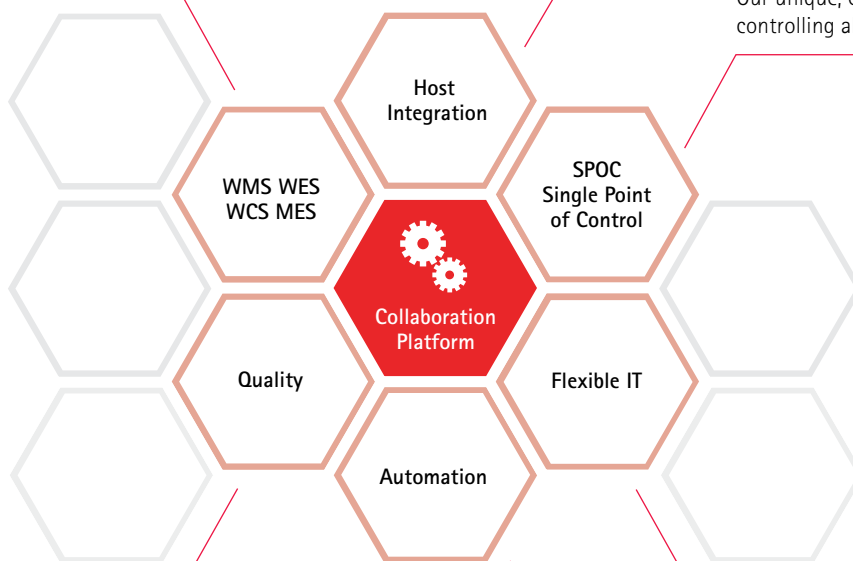
Full-spectrum, yet modular, software with basic functionality for warehouse management, warehouse execution, warehouse control, manufacturing execution system, material flow, and automation control systems.

Host Integration

Proven standard interface to connect to any ERP, including SAP, and WMS systems.

Single Point Of Control (SPOC)

Our unique, easy-to-use, user interface for visualizing and controlling all warehouse operations and machines.



Quality

The entire SynQ intelligence network follows an outstanding quality management standard for coding, testing, upgrading, migration and education—worldwide.

Flexible IT

SynQ can be installed on existing infrastructure or anywhere in the cloud. It is deployable on Windows or Linux operating systems and supports multiple database systems.

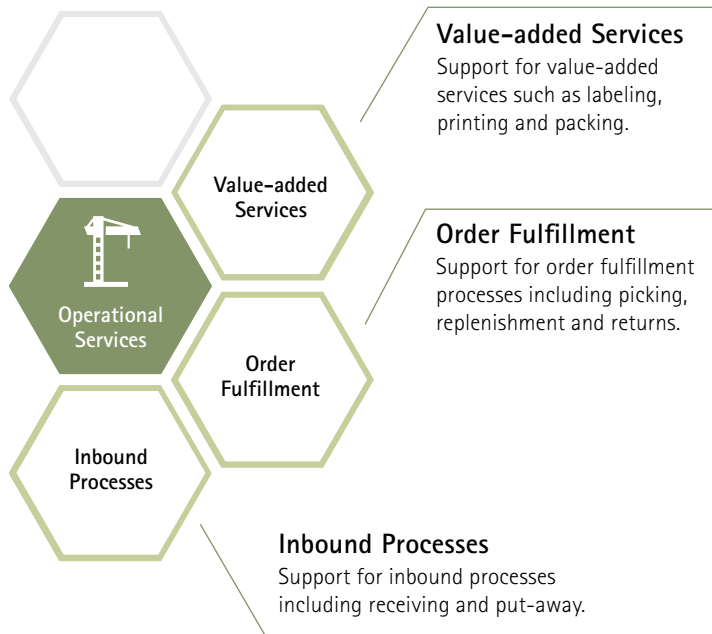
Automation Concept

Interface protocols and architectural guidelines to ensure our own and third-party subsystems collaborate with SynQ for maximum performance.



OPERATIONS

Operational Services provide the actual shop floor processes in the warehouse, such as manual receiving or shipping, AutoStore cluster picking, and returns handling in CarryPick, to name a few.



Easy-to-use mobile terminal screens provide mobile access to data through the familiar user-interface.

INDUSTRY-SPECIFIC CAPABILITIES

In addition to the common functionality for warehousing and material flow control, the SynQ platform offers operational processes specific to our focus segments.

E-commerce/Retail:

Fast order fulfillment including picking, replenishment or returns handling.



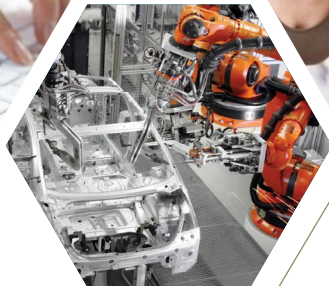
Pharmaceutical:

Inbound and outbound processes, tracking and monitoring, inspection/quality assurance processes based on GMP/GDP and validation.



Automotive:

Inventory management and material flow control between the warehouse and the production lines through work order picking or production receiving.



Food and Beverage:

Receiving and picking processes for omni-channel distribution warehouses with shelf life and batch/lot controlling.





INTELLIGENCE

Intelligent Services provide add-on services within the world of analytics and business intelligence. This spans our growing number of Manager apps, like Cockpit Manager, that can be deployed independently or as part of an integrated system.

Intelligent Services also include services provided by our Data Scientists. Beyond the tools, these highly skilled experts provide the insights required to optimize your business processes. These experts, not the tools alone, make the difference.

- **Business Intelligence**
The growing number of Manager apps allows the creation of custom KPIs. Alternately, optional pre-configured plug-ins are available, providing an easy entry point into the world of analytics.
- **Data Scientists**
Skilled data scientists who can visualize the performance of your warehouse and transform big data into intelligence, allowing you to make smart business decisions.
- **24/7 Customer Service and Consultancy**
Migration strategies and upgrade services linked to our "Forever Young" software offering.

Event Manager

Enables mobile notifications and triggering of automated corrective actions.

Cockpit Manager

Provides a clear and concise overview of warehouse operations with plug-ins for Inventory Statistics, Labor Performance, Condition Monitoring and more.

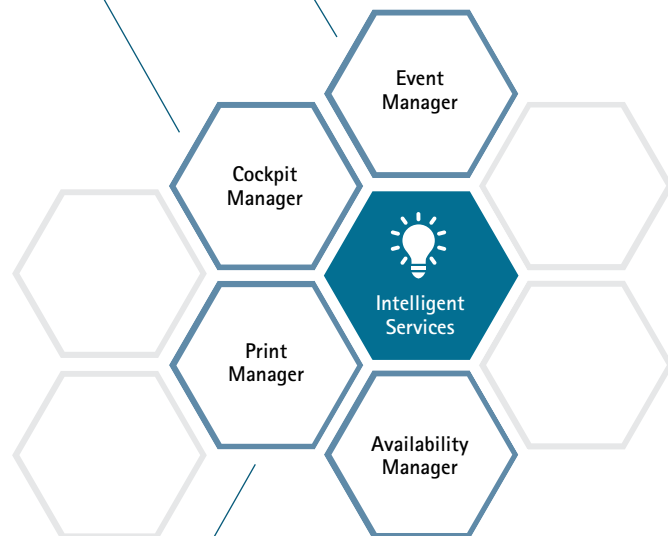


Print Manager

Tools for managing and scheduling reports and labels.

Availability Manager

Allows you to define and measure availability of material flows.



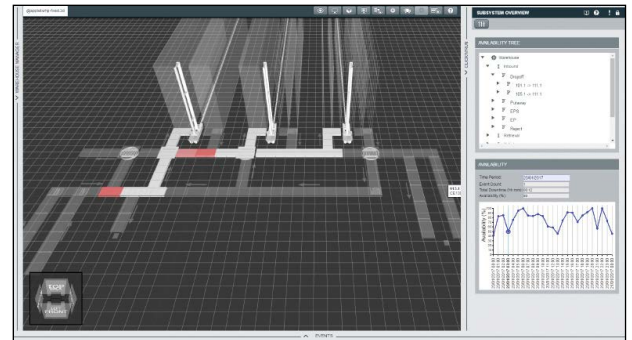
MODULES PRECONFIGURED TO YOUR NEEDS

SynQ includes WMS, WCS, WES and automation control system functionality through modular building blocks. Selections of components for common integration scenarios are packaged as Directors, Managers, and Boxes.

SynQ DIRECTORS

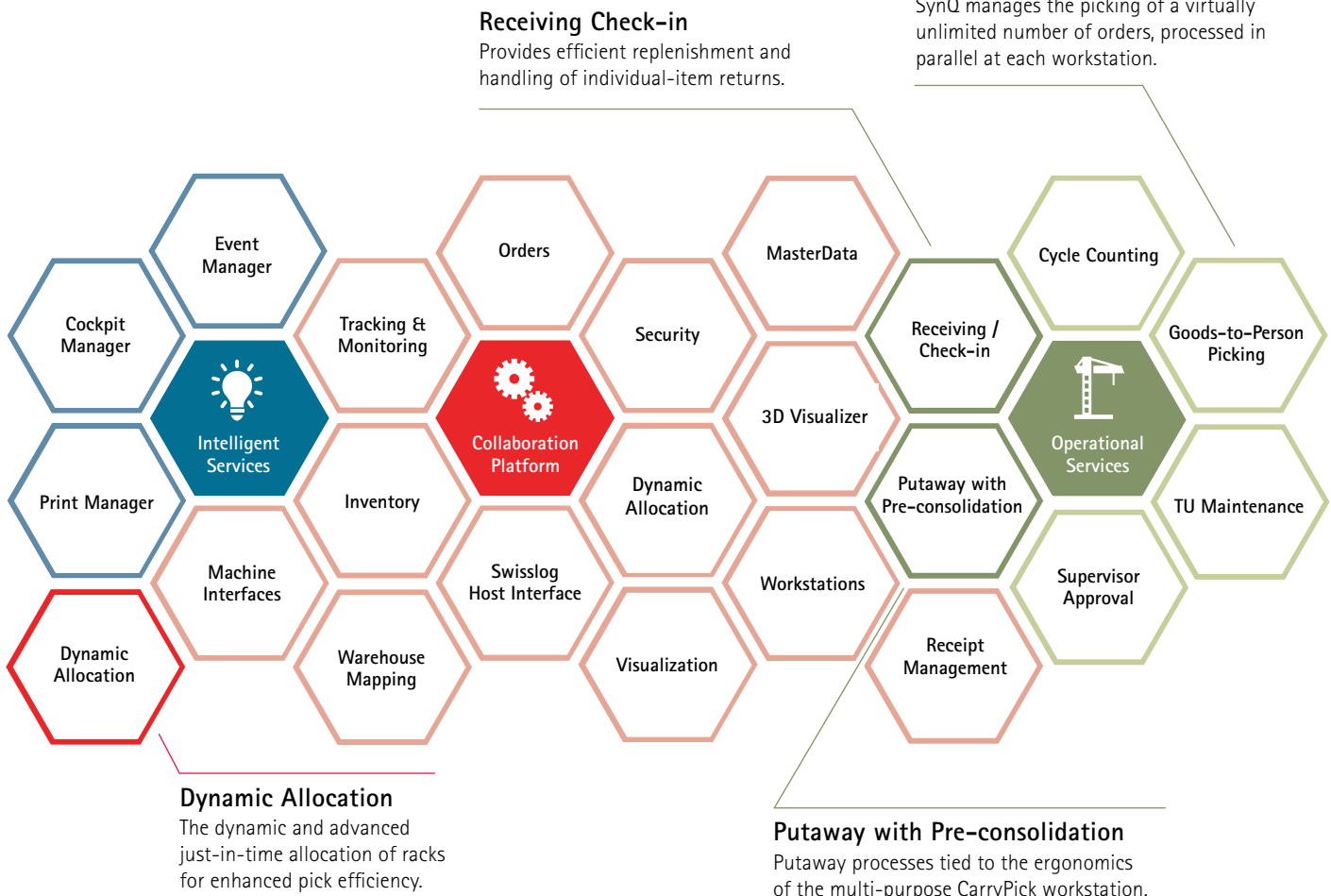
Directors provide preconfigured and pre-tested groupings of SynQ features to speed up delivery in a cost effective way with low risk. SynQ Directors include:

- AutoStore Director
- CarryPick Director
- Pallet Director
- CaddyPick Director
- Person-to-Goods Director



The SynQ Availability Manager helps you eliminate downtime by visualizing mission-critical elements.

CarryPick Director (example):



The CarryPick Director, shown as an example, is preconfigured to support our CarryPick system, a mobile, scalable automation solution for efficient storage and order picking. CarryPick includes mobile robots, customizable racks, and Goods-to-Person picking stations to enable goods-to-person picking. Our smart resource optimizer software Carry Manager for managing the fleet of mobile robots and for route planning in real-time is part of the offering.

SynQ MANAGER PLUG-INS

Managers refer to our smart add-ons that can be integrated, or plugged in, to any SynQ deployment. They can also be installed as a stand-alone, WMS-independent module to provide precise business intelligence functionality as needed. Examples include Cockpit Manager and Event Manager.

Managers are supported by easy-to-deploy plug-ins, such as Inventory Statistics and Condition Monitoring. Plug-ins provide quick visibility into your operations through smart data aggregations and appropriate visualization, all without the need for IT experts or custom programming. They include pre-defined data series (KPIs) and/or pre-configured pages and charts.



The Condition Monitoring plug-in for the SynQ Cockpit Manager helps you manage to KPIs.

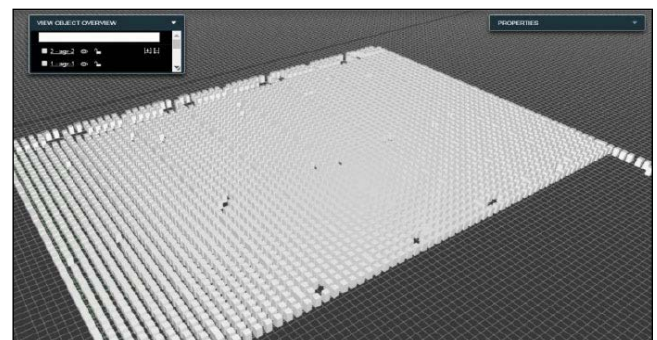
Example: Condition Monitoring

- Elements above Maximum Temperature
- Error Frames on Fieldbus
- Rotational Distance Traveled by Crane
- Total Distance Traveled by Element
- Total Driving Time by Element
- Energy Consumption by Element
- Energy Consumption Warehouse
- Scanner No-read Rate
- TU Reject Reasons
- I-point performance report



SynQ BOXES

Boxes describe our family of automation control products, which continue to adhere to our automation strategy. For example, CarryBox, the CarryPick fleet manager, executes the transports that were issued by the business processes of the CarryPick Director. In addition, CarryBox provides real-time visualization of these transports through SPOC plug-in components.



SPOC visualization of CarryBox.



EASY INTEGRATION AND INTELLIGENT SYNCHRONIZATION

SynQ provides a full spectrum of features while remaining flexible enough to adapt to your hardware and software. SynQ features an automation-centric design that simplifies and speeds the deployment of new automation technologies. Its intuitive user interface, SPOC, provides a common interface across hardware and software to enhance visualization and control of warehouse operations and machines. Finally, our business intelligence tools, supported by a team of highly skilled data scientists, give you the tools and expertise to transform big data into smart data.

WITH SynQ, YOU CAN:

- **Manage Peak Demands**

Our holistic automation concept ensures optimizations are done at the appropriate level to enable material handling equipment and people to perform at their maximum level.

- **Transform Insight Into Intelligence**

SynQ intelligence tools give you quick visibility into your operations through standardized data aggregations and appropriate visualization, all without the need for IT experts or custom programming. Our team of data scientists can help you transform your data into actionable intelligence to help you analyze and optimize warehouse performance.

- **Future-Proof Your Operation**

The convergence of connectivity, low-cost sensors, big data and advanced robotics is creating the cyber-physical production systems that will be the hallmark of Industry 4.0. With its modular architecture and intelligent, automation-centric design, SynQ helps you adapt to these changes—and capitalize on the opportunities—that are emerging as Industry 4.0 evolves.

To learn more, talk to your Swisslog representative about what SynQ can do for your business.

ABOUT SWISSLOG

In today's competitive world, companies must be able to deliver the right orders to the right customers at the right time. Errors and delays in order fulfillment can have lasting negative impacts on a brand while maintaining high stock levels ties up capital and reduces flexibility.

As a full-service provider of automated intralogistics systems, Swisslog delivers everything companies need to optimize logistics from planning through implementation. We are shaping the future of intralogistics through a new era of flexible, robotic and data-driven automated solutions that create exceptional customer value.

Our order fulfillment and inventory solutions enable companies to achieve the highest throughput at the lowest cost, efficiently handle large catalogs of SKUs, and accurately meet delivery demands and requirements.

DESIGN



Consult



Analyze



Plan Solution



Choose Solution

DEVELOP



Engineering



Integration



Installation



Ramp Up

DELIVER



Preventive Maintenance



24/7-Support



Optimization Et Spare Parts



Modernization Et Expansion