





"STILL provided a logistics concept that allows us to respond in a more flexible way, both for major tasks and for smaller online orders. With the commissioning of our new logistics centre, we have achieved a highly positive performance result in a short space of time"

Mario Hammer, Operations Manager logistics centre New Wave GmbH, Geiselwind

## STILL PARTNERPLAN

**Your intralogistics is our passion!** With the STILL PartnerPlan as navigator, we guide you through STILL's comprehensive portfolio of intralogistics solutions.



Combine new and used vehicles from the field of **Material Handling Equipment** including appropriate accessories

with our **Advanced Applications solutions** for automation,
software applications, racking systems and efficient
intralogistics consultancy. Find out with STILL **Product Services** how to utilise impressive expert knowledge of our
service technicians for maintenance and repair and how to

benefit from perfectly-matched service agreements. Between our fleet management programmes and individually-designed financing and leasing concepts from our **Business Services**, we have the tools to resolve your intralogistics challenges, simply efficiently.



#### Companionship creates added value

Independent of the size of your company or the sector in which you operate – we can provide a smart design for your intralogistics.

This applies both to the optimisation of existing processes and to the establishment of a complete warehouse system. From target-oriented consultation all the way to implementation, we stand by your side as a partner who understands your requirements down to the last detail. With a wide range of user-friendly and future-proof solutions, we enable the optimal interaction of employees, vehicles, software and infrastructure in your warehouse. We place the emphasis on cooperation and develop an accurate logistics concept for you by consulting with the relevant departments in your company. Transparent and comprehensible for you in every step of the way, it forms the basis of an intralogistics system that pays off.

**Specialist solutions based on experience.** We provide solutions based on the experience and knowledge of 100 years of successfully implemented intralogistics concepts.

**Innovations inspired by our customers.** We work with you to develop new products and concepts to find the best possible solution to logistical challenges.

**Reliability based on the spirit of partnership.** We pull the strings for you and provide transparent information on the project's status at all times.

**Effectiveness through customer focus.** Your requirements form the heart of our business.

Proficiency thanks to company size. We assist you throughout your logistics project with a strong, globally-focused team of sales, consulting and project specialists along with highly competent service technicians.

#### CONNECTED AT EYE LEVEL

# YOUR REQUIREMENTS



#### What do I have to do in order to remain competitive?

You know that both your business processes and those of your customers are constantly changing. There is an expectation that you will rapidly respond to these changes and the associated logistical challenges by providing efficient innovative logistics concepts. However, what is the best solution for coping with these challenges? What happens if conception and planning of intralogistics do not form integral parts of your own core business? How can you choose the optimal one from the multitude of intralogistic instruments?

#### What do you do, for example

- when you have to compensate for the lack of skilled workers so that efficient logistics concepts can be developed?

- when capacity and efficiency challenges have to be attuned in order to maintain an overview of the complex intralogistics

#### Who is the right partner?

Once your own logistics experts have conceptualised the complete supply chain along with the required logistics solution, it depends on procuring the right partner for the implementation. The supplier of your future logistics solution should not only offer the right products of the highest quality, but also implement them reliably and provide a corresponding service. With the aim of realising efficient and networked intralogistics, automated solutions are increasingly favoured. However, putting these solutions in place requires a high level of expertise and technological competence.

#### Who is the right supplier, for example, for

- providing comprehensively-designed and scalable product portfolios?
- developing transparent, easily comprehensible offers?

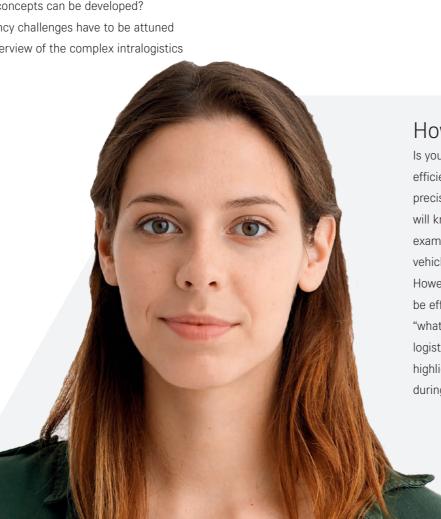
#### How does the right solution look like in detail?

Is your company already benefiting from experts for developing efficient logistics concepts? If so, they will already have a very precise idea of which intralogistics tools are best suited. They will know all about the functionality and capabilities of, for example, automated transport systems or manually-guided

However, the question still remains: How can these solutions be efficiently integrated into our existing infrastructure? If the "what" is clear, but not the "how", advice from experienced logistics specialists can show you the way. Their expertise highlights your options, identifies potential stumbling blocks during implementation and protects against wrong decisions.

#### We provide clarity, for example, by

- using an extensive overview of the material flow by means of corresponding visualisations to form a basis for achieving
- jointly developing individual solution and implementation approaches in professionally-led workshops.



#### Your challenge

- Using innovative, scalable logistics concepts to respond quickly to changing business processes.
- Developing process, warehouse and transport layouts.
- Drawing up requirement specifications, tender documents and functional specifications.
- Evaluating, selecting and implementing technically viable and cost-effective logistics systems.
- Determining capacity and efficiency requirements.

#### Your solution

#### Consulting, planning and implementation competence.

More than 100 years of experience in intralogistics and electric vehicles, as well as 30 years of automation and countless implemented industry solutions.

#### A comprehensive, scalable product portfolio.

From warehouse planning via smart vehicle or rack solutions to the perfect automation solution.

**In constant dialogue.** We develop your solution concept together, in a spirit of partnership and trust.

**Fast implementation.** We focus on easy-to-implement concepts, standardised components and process flows. **Individual responsibility.** A strong team made up of experts

**Individual responsibility.** A strong team made up of experts for every stage of your logistics project.

**A solid foundation.** The KION corporate group offers economic safety and an addition to the STILL portfolio, e.g. with stationary automation solutions by Dematic.

#### THIS IS HOW WE DEVELOP YOUR SOLUTION

# **OUR PROJECT PROCESS**

#### What does our project process look like?

We want to get to know you and your team on a personal level. Typically, a project will start off with an initial consultation, during which our system consultant discusses the issue, the goal and your challenges with you on-site.

We want to understand your working methods. To help evaluate your requirements, we start by collecting data in order to work out a tailor-made concept, from a classic vehicle and racking solution, all the way to a complete warehouse concept. Depending on the maturity level of the project, we also offer extended services through our intralogistics consultants.

We involve you in the planning process. In joint workshops, our sales engineers specify and plan the desired solution in detail. Adjustments to the concept we propose will be developed in close collaboration with you.

We provide you with a transparent introduction for your project. We create a detailed calculation in order to prepare a transparent, comprehensible offer for you. Once the contract has been finalised, our operations manager begins implementing your solution.

#### Our team

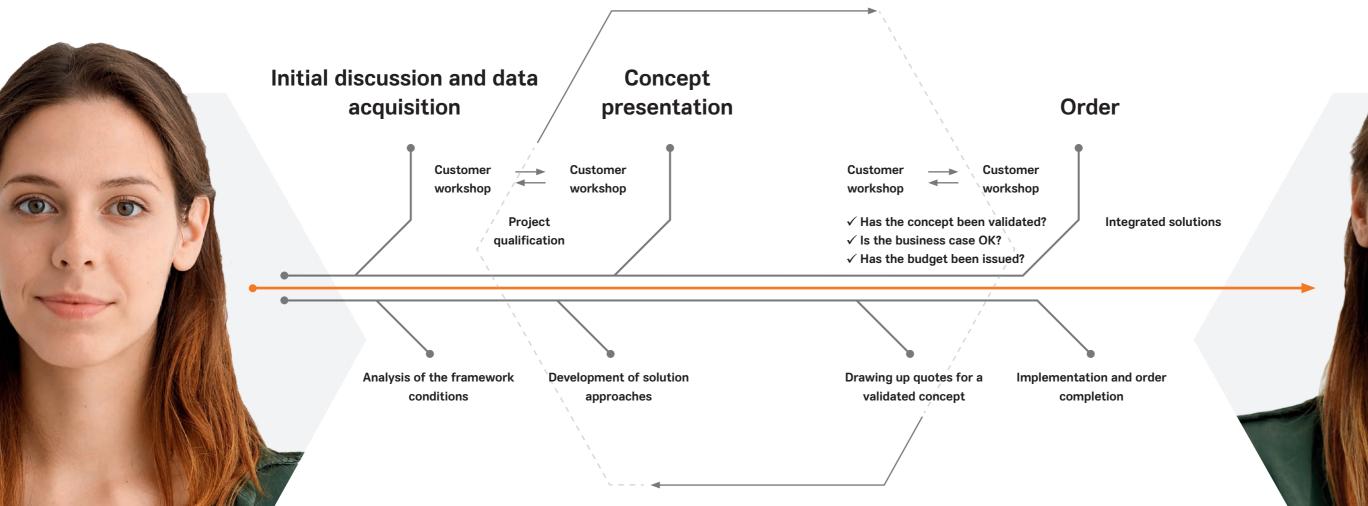
Our competent experts are available to answer any questions you may have.



#### Individual answers

The question of **WHAT**, i.e. of the correct solution, is answered by our **intralogistics consultants**, who develop our future-proof and efficient solution concepts. The question of **HOW** the solution looks in detail is answered comprehensively by our technically experienced **sales engineers**. **WHO** is the right partner for implementing a logistics solution is answered during a dialogue with one of our **Advanced Applications System Consultants**.

They are your personal contact for an initial consultation all the way to the final implementation. Once all these questions have been clarified, the time has come for the **operations manager**. They turn concepts into action and coordinate and supervise the implementation of your intralogistics solution. Subsequently, perfectly-attuned service concepts, a comprehensive service network and the expert knowledge of our **service technicians** ensure the availability of your vehicle and system solutions.



#### **GOAL-ORIENTED FUTURE PLANNING - TOGETHER**

## INTRALOGISTICS CONSULTING



#### In short

The intralogistics of many companies in production, trade and logistics is determined by an immense time and delivery pressure. Cost-effective action therefore requires perfectlystructured logistics processes. There may be a need for optimisation if, for example, you discover that in your warehouse,

- lead times do not meet your logistical requirements.
- warehouse capacities are not being effectively utilised.
- there is no overview of the quality of all the processes and
- the interplay of vehicles, racking systems and IT systems is taking up too many resources.
- there are more up-to-date technologies available to resolve transport tasks.

#### How we deliver effective consultation

Data acquisition. Collecting and preparing consistent process data by observing the logistics processes on location.

Optimisation. Developing improvement suggestions for redesigning or amending existing processes using specialist software for material flow planning, drawing on methodical expertise.

Analysis. Creating a valid planning basis by using a range of techniques and graphic methods.

Conception. We come up with the most suitable solution for you by jointly developing various solution approaches and then examining them for feasibility and cost-effectiveness. With this recommendation for action, you will receive a tailor-made, economically efficient logistics concept from us.

#### What we can do

The STILL intralogistics consultancy works in close collaboration with you to develop an integrated concept for optimal material and information flows in your warehouse. As a result, you receive suggestions for implementing realistically feasible and future-proof solutions.

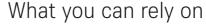
#### What you can depend on

#### Warehouse planning - for existing and new warehouse projects

- Definition of warehouse and transport requirements, based on item and order structure.
- Designing the warehouse in terms of capacity and handling capacity.
- Creating the optimal material flow concept, visualised in clear process layouts.
- Optimum combination of suitable racking systems, suitable industrial trucks, conveyor technology and automation solutions.
- project solution if desired.

#### Process optimisation - your warehouse can do much more than you think

- By analysing the current conditions on site, our consultants can reveal any weak points and potential.
- Developing possible solutions and evaluating their feasibility, e.g. the implementation of tugger trains.
- Clear documentation and simulation of processes with standardised modelling languages.
- Based on the findings of the analysis of current conditions and the evaluation of proposed measures, we guide you towards a target concept that optimises your logistics processes in a future-proof way.
- On request, we can transfer defined processes into an actual catalogue of requirements for your IT systems.



Clarity. Our consultants are experts, use clear language, and act in a way that is transparent and comprehensible.

Competency. Equipped with the knowledge of more than 100 years of successfully-implemented customer projects and the knowledge of the latest logistics technologies, we provide advice that is to the point.

Drive. What we say will be put into action.

Reliability. We stand by our word and only propose solutions if we are certain of their efficiency.



#### PERFECTLY MATCHED

# **VNA TRUCKS**

#### The upgrade for your warehouse

The pace of demand from your customers is high. This means you have to keep a high quantity of materials and goods at close hand. Narrow aisle racking systems create space for this. With great height and narrow width, they make optimum use of the available space. Moreover, storage and retrieval requires a high degree of precision and concentration. A high handling efficiency can therefore only be achieved if the operator is supported by vehicles that allow safe, fast and ergonomically comfortable work.

#### Individual solutions based on a system

STILL VNA (Very Narrow Aisle) vehicles is characterised by a high degree of variety. Thanks to their modular design, the perfect vehicle can be configured for every conceivable application. Our expert system consultants support you here with specially developed software tools.

#### Reliant work environment

Safe. Reliable systems help to protect machinery, goods and people and to adapt vehicle speed to the working situation at hand.

**Ergonomic.** Spacious cabin concepts with individual control panels along with optimised visibility and access to racks and load

Powerful. Individually customised equipment and innovative assistance systems such as Active Floor Compensation (AFC) or iGo pilot optimise driving behaviour, guarantee error-free navigation and warn in case of hazards.

#### Intelligent extras

Networked. The ability to integrate the equipment into a warehouse management system significantly increases the transparency and speed of the processes.

Automatic. STILL VNA (Very Narrow Aisle) vehicles are also available with iGo systems in a fully automated configuration, without losing their manual operability.



#### Storage and order picking in restricted spaces

up to 18 metres with minimum aisle widths. The compact swivel traverse or telescopic fork carries loads of 500 kg up to 1500 kg.

Maximum efficiency thanks to a speed of up to 14 km/h. Uneven floors can be compensated by Active Floor Compensation (AFC).

Maximum speed for storage and retrieval with compact swivel or telescopic forks. Mast vibrations are reduced by Active Load Stabilisation (ALS).

Man-down operation with the NXV vehicle type for lifting heights of up to 13.8 metres.

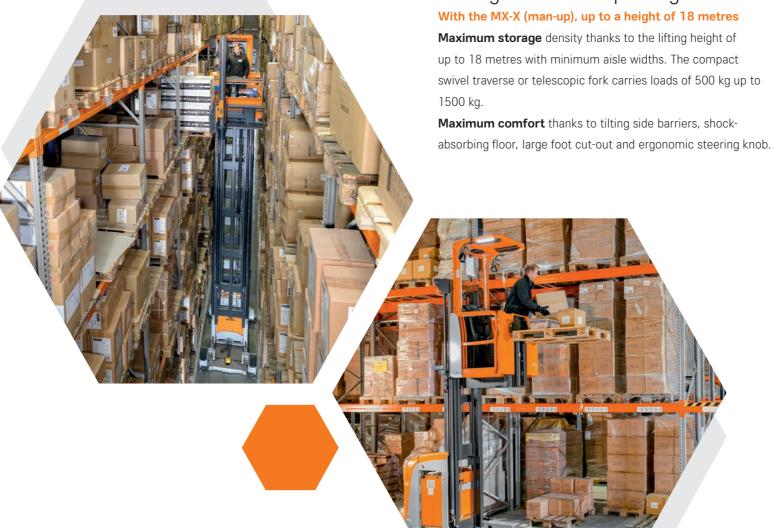


**Maximum storage** density thanks to a reach height of up to 12 metres. For loads up to 1200 kg.

Maximum comfort thanks to tilting side barriers, shockabsorbing floor, large foot cut-out and ergonomic steering knob.

Maximum efficiency thanks to a vehicle speed of up to

13 km/h and lifting speed of 0.4 m/s.



#### INTELLIGENCE IN TOW

# **TUGGER TRAINS**

#### On the track to success

The decisive success factor for proficient production is the rapid, reliable supply and disposal of materials at individual sites (e. g. assembly stations). If this task is solved with forklifts or pallet trucks, then the quantity and variety of the required components will increase alongside the quantity and frequency of use of these vehicles. This is why, as part of LEAN production, tugger trains are used for this needs-based supply. They simultaneously transport a high quantity of different goods on defined routes to their destinations at precisely timed intervals. The result: increased production capacity in the same area with reduced traffic volume.

# The right frame for every job – LiftRunner®

The innovative **LiftRunner**® system offers a wide selection of frames (trailers) and trolleys, which significantly simplify the movement of load carriers and thereby relieve the ergonomic burden on the operator. The principle of the **LiftRunner**® is that trolleys are inserted into frames, automatically secured and then lifted for transport when the towing vehicle is entered. Once at the destination, the frames are lowered when leaving the towing vehicle and the trolley can simply be removed. Different **LiftRunner**® frames can be combined in one train with the LTX 50 tractor, up to a total weight of 5000 kg.



Your path to benefit from the potential of STILL tugger trains: **We analyse** your current production processes.

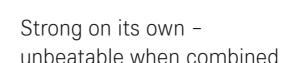
**We work** with you to draw up a material flow concept for cyclical transport processes, including warehouse management systems.

**We recommend** a tailor-made combination of tugger train features

**We check** the potential for automation. We use **iGo systems** to provide an interplay of automated tractors, transfer stations and trailers.

#### Towing you can trust

The STILL **LiftRunner® tugger train system** is the ideal system for intra-company materials supply. With its patented transport and removal system for trolleys (rolling frames), it combines the highest possible flexibility with unique operating comfort and the lowest rolling resistance in the sector. From the towing vehicles to the frames (trailers) to the trolleys, all the components are compatible with one another and can therefore be configured in any combination. This makes it easy to configure the most suitable tugger train for your individual needs.



**E-Frame up to 1000 kg load.** Goods are loaded and unloaded on one side. Especially manoeuvrable thanks to the 1-axis concept.

**B-Frame up to 1000 kg load.** Goods can be loaded and unloaded on either side.

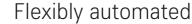
**C-Frame up to 1600 kg load.** Variable adjustable forks for a range of trolley sizes. Can be utilised flexibly for indoor and outdoor use.



#### With the corresponding tractor

**Quite a draw.** Utilise the compact nature and agility of the STILL electric tow tractors and transporters.

**Can withstand extremely heavy loads.** The STILL LXT 350 can withstand loads of up to 35,000 kg in a secure, energy-efficient way.



The load handling. The automated LiftRoller® frame with conveyor technology for collecting and delivering pallets expands the transport capacity to 1.5 tonnes per trailer.

The load transporter. The automated iGo system LTX 50 tractor navigates without a driver on a predefined route, therefore ensuring an uninterrupted supply to the places required.





#### WE DRIVE AUTOMATED VEHICLES

## **AUTOMATION**

#### Your requirements - our solution

**More complex. Faster. Better value.** Do you also see yourself confronted with challenges like these every day when competing for satisfied customers?

- Delivery delays due to rising order intake.
- Warehouse capacities reach their limits.
- Warehouse employees are exposed to high physical stress.
- Inefficient processes are caused by errors, empty runs and transport damage.

You should consider automating your intralogistics processes – an extremely productive way in which to solve these and similar problems with high efficiency.

With **STILL iGo**, we offer you a range of vehicle-based expansion stages to automate your processes, which can be individually adapted to the complexity of your requirements – and will pay off in any case.

iGo pilot - driver assistance system

iGo neo - autonomous assistant to the operator

iGo systems - fully automated series trucks





#### Navigating through Industry 4.0

Not every technological innovation is financially feasible for your task. We ensure that you do not lose your way amid the many digital solutions on offer within industry 4.0. As your partner, we guide you:

- through every stage of your automation project.
- economically with your return on investment in mind at all times.
- with a combination of technical solutions that are perfectly suited to your intralogistics needs.

To implement a fully automated supply chain, we complement the **iGo systems** portfolio with autonomous mobile robots such as the STILL ACH and solutions from our group sister Dematic, the world's leading provider of integrated automation technology.

This allows you to benefit from the perfect combination of automated STILL series trucks with stationary Dematic automation solutions, for example, conveyor, distribution and sorting systems, stacker cranes or AutoStore systems.

Our **Autonomous Mobile Robots (AMR)** of the AXH and ACH series are the smart addition to your automated warehouse organisation. The agile small under rides act proactively and autonomously in complex warehouse structures and are a cost-effective, flexible and efficient solution for your optimised horizontal material flow.

#### Our advise - your decision

The level of automation is based on your processes. Our consultants and experts will work closely with you to find the right level of automation and support you every step of the way: Manual. Semi-automatic. Fully automatic.

#### Four steps to achieving an automation concept

Our comprehensive intralogistics consultation service makes the decision easy for you:

**Data acquisition.** Once the warehouse has been inspected, we receive a transparent overview of the existing material flow. **Analysis.** Automation potentials are determined based on process and transport data, as is the technical and economic feasibility of different automation variants.

**Guidance.** You will be provided with individual guidance based on our years of expertise in the sector and on your financial key figures.

**Concept and requirements.** We develop a concept that gives you a clear indication of the added value you can expect. We establish a functional requirement as the basis for implementing your individual solution.

# AUTOMATED AND AUTONOMOUS SYSTEMS

#### iGo neo - the autonomous partner

With the **iGo neo technology**, STILL is the first company to succeed in turning series-produced trucks into autonomous assistants for your operator. This allows an order picking vehicle such as the **OPX iGo neo** to follow its operator every step of the way.

#### OPX iGo neo

**Productive.** The truck follows its operator and always stops right at the optimal picking position. Artificial intelligence intuitively adjusts to the route and speed of the task in question. **Less strain.** 75% reduction in instances of strenuous and time-consuming mounting and dismounting, with considerable reduction in walking distances.

**Safe.** A multi-stage safety concept protects people, warehouse equipment and goods. Special sensors record all dynamic and static objects in the warehouse. The vehicle stops ahead of critical obstacles or steers around them.

**Reliable.** The vehicle utilises the Hybrid Tracking System to identify the individual operator at any time and to follow him – even with Z-pick pattern.

**Efficient.** Clear productivity increase compared with conventional order picking.

# iGo pilot - the assistance system for narrow aisles

#### iGo pilot navigation

**Productive.** The vehicle is guided semi-automatically to the defined pallet position via the best possible route.

**Simple.** The destination is entered via scanner, terminal or online through the warehouse management system. As soon as the drive lever is operated, the approach begins automatically. **Precise.** Navigation is performed by comparing the 3D storage.

**Precise.** Navigation is performed by comparing the 3D storage plan stored in the vehicle and referencing via barcodes or RFID transponders. The forks are moved horizontally and vertically to precisely the right position.

#### iGo pilot safety

**Safe.** The special features of the warehouse environment can be defined with up to 15 safety configurations, e.g. height and speed limits, obstacles or braking distances.

**Reliable.** The vehicle responds automatically to hazardous areas. This prevents damage to goods and racks.









#### iGo systems - the fully automated logistics process

**iGo systems** implements the automated interaction of one or multiple different industrial trucks in order to perform transport tasks in the warehouse without a driver. A suitable STILL standard truck is therefore automated for each transport task.

**Complete.** Material flow with automated STILL series trucks – from goods receipt to storage, buffering, order picking, production supply and disposal to outgoing goods.

**Intelligent.** The iGo software regulates vehicle control and traffic regulation, achieves effective fleet utilisation and monitors all battery charges.

**Organised.** Effective cooperation from manually-driven vehicles with semi and fully-automated transport systems.

**Goal-oriented.** Modern navigation technologies for secure, independent moving of vehicles in the warehouse.

**Safe.** Personal protection systems guarantee the utmost safety. Appropriate sensor technology ensures precise pallet detection. **Flexible.** Automated production vehicles, which in special cases can also be operated manually.

**Needs-based.** Standardised, scalable solutions for every automation requirement.

**Predictable.** Short response times, both during conception and quotation and also during project implementation.

#### Autonomous Mobile Robots (AMR)

For efficient warehouse organisation and optimised internal material flow, autonomous mobile robots such as our AXH and ACH series are a smart and innovative addition to hybrid vehicles or automated guided vehicles (AGVs).

**Autonomous and proactive:** The small manoeuvrable under rides move completely autonomously, proactively and flexibly through the warehouse thanks to intelligent control.

**Flexible use:** AMR can be used as a stand-alone solution or in mixed operation and can be easily integrated into existing warehouse management and control systems.

**Compact and cost-efficient:** The compact robots guarantee a high throughput with a small footprint. In addition, they can be cost-effectively integrated into existing systems and their operating and maintenance costs are comparatively low.

**ACH 06-15:** Small. Manoeuvrable. Powerful. **AXH 10:** Robust. Flexible. Intelligent.



#### **PIONEERING SOFTWARE**

# MATERIAL FLOW MANAGEMENT SYSTEM

#### On the best track

For modern intralogistics, warehouse management systems are an indispensable tool for efficiently controlling the material flow. With a material flow management system, we offer a powerful tool with which you can efficiently control, map and analyse all goods and information flows along the entire intralogistics chain.

# Information exchange in every direction

**Networked.** Standardised interfaces allow data communication with all common HOST and ERP systems.

**Connected.** All STILL driver assistance systems and automation solutions can be connected in the material flow management system. The data transferred can be used to flexibly direct and evaluate processes.

#### Software modules for every need

The warehouse management system. Organising material flows, from goods receipt and order picking to route provision and loading. The vehicle guidance system. Distributes and optimises transport tasks, taking into account connecting journeys, order priorities and transport order types. This can be manual or semi- or fully automated.

**The information system.** Records all order data in real time and provides clearly-arranged, relevant logistics key figures for extensive analysis options.

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#### SMART DATA ANALYTICS FOR AUTOMATED VEHICLES

## **iGo INSIGHTS**

#### Predictive improvement

Automated vehicles are used 24 hours a day, 365 days a year. The AGVs\* are controlled and monitored by an AGV control system, which generates a high volume of valuable data that allows for a thorough analysis of your system and processes from a higher-level perspective.

With **iGo insights**, STILL offers a cloud-based evaluation tool that filters correlations from all the process information collected, and recommends specific measures to optimise the availability and efficiency of your system.

#### Machine learning delivers

**iGo insights** uses the principles of machine learning to improve the proficiency of its system. All of the data that the AGV control system has collected over an extended period of time is uploaded to the cloud for evaluation and can be accessed online via the encrypted web portal.

The software recognises structures in this data flow, calculates probabilities and allows you to act in a proactive way – for example when scheduling maintenance or repairs.

\*Automated Guided Vehicle



# Gain a clear advantage with iGo insights

**Analytical.** Graphic representation of all vehicle movements in heat maps, for identifying and optimising efficiency bottlenecks.

**Problem-solving.** Playback function allows precise fault determination by looking back over vehicle and system

**Monitoring.** Key figures for response times, traffic density, capacity utilisation and downtimes.

**Forward-thinking.** Daily information on trends and anomalies. **Responsive.** Web surface for desktop and all mobile end devices.

**Time-saving.** Maintenance or repair measures are proactively initiated.

#### WHERE PRODUCT DIVERSITY COMES INTO EFFECT

## **RACKING SYSTEMS**

#### The foundation of the warehouse

Your intralogistics can only be as good as the individual components in your warehouse. This is why the selection of suitable racking systems is especially important – after all, they are the foundation of any warehouse. Regardless of the specific requirements of your industry, you are always faced with the challenge of safely storing a range of goods, making optimum use of space within your warehouse, and ensuring quick storage and retrieval processes.

#### True professionals

As a full-service provider, STILL boasts an extensive range of safe and solid racking systems. However, the decisive factor for your economic success can be found in the selection of the appropriate system. With comprehensive advice from our specialists, we guide you from planning all the way to setting up your individual racking systems.

#### How we like to store

**Pallet racking.** Universally adaptable for all wide aisle, narrow aisle and high racking systems.

**Drive in and drive through racking.** Compact channel storage for multiple pallets containing one type of product.

Cantilever racking. Ideal for bulky material and long goods.

**Flow and push-back racking.** Dynamically space-saving in line with the FiFo or LiFo principle, thanks to automatic goods replenishment.

**Mobile racking.** Maximum compression thanks to electrically driven racking.

**Platform systems.** Wide range of potential uses for storage, work or production areas.

**Shelving.** The flexible solution for storing boxes and small parts.







In high-density racking systems, the turnover speed can be increased considerably by using the **pallet shuttle**. This intelligent system enables semi-automatic storage and retrieval of load carriers. First, a forklift delivers the pallet to the racking level. There, the radio-controlled shuttle automatically lifts the pallet, moves it into the depth of the rack and gently sets it down at the end of the channel.

#### Better together

We advise on the selection of a suitable racking system.

**We plan** according to your warehouse conditions, the item structure and order picking processes.

**We combine** racking with the right vehicle and automation solutions.

**We take** regional standards and safety regulations into account in our planning.

We use specially-trained assembly teams.

**We check** the safety of your racking systems annually with the legally required rack inspection (DIN EN 15635).



#### YOUR SATISFACTION IS

## THE MEASURE OF ALL THINGS

Our task is to successfully design your intralogistics. The mission statement of our brand is based on the belief that the success of our business is reliant upon you being satisfied. This is why we are certain that we can also be of benefit to you: because we listen carefully, we recognise your logistical challenges and make them our own and we make every effort to find the best possible solution.

Here at STILL, we are all about solidarity. We work together as a community to develop and implement the best solutions for you. At STILL, every single one of us identifies significantly with this mission statement and works towards it with passion and dedication. It is this sense of solidarity which also underpins our collaboration with our partner companies.



"We want to be a benefit to everyone who is associated with us."

"A customer satisfaction of 97% is confirmation for us and incentive at the same time!"



#### SIMPLY ECONOMICALLY SUCCESSFUL

## SIMPLY EFFICIENT

Just like any STILL product, the Advanced Applications portfolio is marked by five key features that serve as a benchmark of economic efficiency. Our solutions are:

**Simply easy.** Thanks to intuitive operating concepts and smooth integration into existing structures.

**Simply flexible.** Thanks to scalability of concepts such as the modular, individually-configurable product portfolio.

**Simply powerful.** Thanks to the largest portfolio of intralogistical transport systems along with many years of project experience.

**Simply safe.** Thanks to future-proof concepts, skilled expert teams and reliability in project management and commissioning.

**Simply connected.** With intelligent interface architecture, all solutions can communicate both with one another and with external systems.



26 STILL CASE STUDY



**AUDI** 

## PROGRESS THROUGH TEAMWORK

In this era of smart factories, efficient and autonomous processes are becoming more and more important. These can often be highly complex. STILL and its sister company Dematic (KION Group) have taken up this challenge at the logistics centre at Audi in Ingolstadt. In the course of a pilot project, they achieved a stable, efficient logistics process with automated STILL reach trucks.

The automated **iGo systems** reach trucks independently take over incoming containers. High racks and heavy loads are no issue. They effortlessly lift the containers to heights of up to five metres and set them down carefully. Safety measures such as sensors and acoustic signals prevent collisions with manual vehicles. At the charging station, an employee replaces the empty battery with a charged battery every 10 hours in the space of 5 minutes. Afterwards, the forklifts return to the 24 manual packing stations and resume their speed.

Sector: Car manufacturer

**Company:** The Audi company is present in over 100 markets worldwide and employs around 90,000 people.

**Challenge:** Establishing efficient, autonomous and stable logistics processes for the global transport of automotive parts with a wide variety of containers, plus integration into Audi internal IT systems.

**Solution:** Ensuring that the automated reach trucks are able to identify all containers and the IT interfaces permanently supply them with transport orders.

**STILL products:** FM-X reach trucks with **iGo systems**, including automation technology and vehicle control.

"The STILL company was the only provider to offer a solution for our complex requirements with which we were fully satisfied."



Adam Molnar, Head of International Logistics, Audi



### PERFECT LOGISTICS OUTFIT

New Wave GmbH opened a modern logistics centre in Germany in 2019. The goal of the warehouse planning was to optimise the use of storage and transport resources while minimising the costs of warehouse management.

A team made up of local experts and intralogistics specialists in Hamburg developed a range of warehouse solutions based on material flow and vehicle analyses. In addition to the planning and organisation of the shelving and transport technology as well as the layout design, STILL provided all the intralogistics for the new logistics centre. One of the major challenges in this project was adapting the components of the previous warehouse to the world of high shelving. Thanks to the transparent organisation of the storage locations, with clear classification according to turnover, the overall warehouse layout and clarity was improved. Together with scalable industrial trucks including innovative assistance systems, the entire material flow was optimised and shipments within 24 hours are now secured.

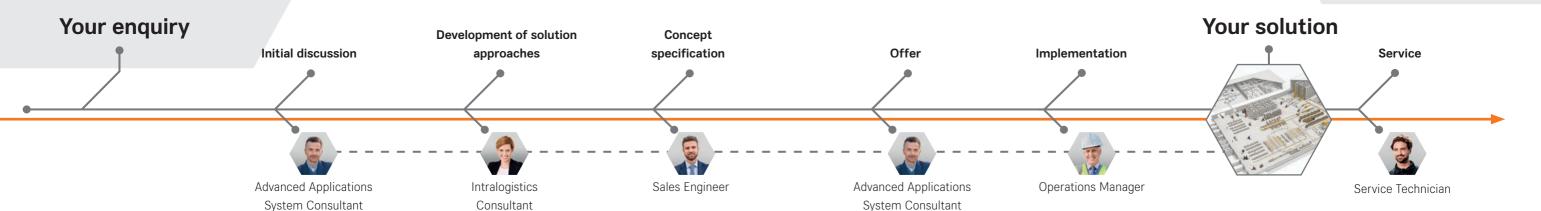
Sector: Textile industry

**Company:** 2500 employees, revenue of over EUR 500 million, active in 20 countries.

**Challenge:** Optimum utilisation of storage and transport facilities, selection of trucks and racking systems.

**Solution:** Analysis, warehouse layout and fleet planning. 10,500 m<sup>2</sup> of storage space, five rack and floor levels, 33,000 order picking stations and 8500 pallet bays. The Active Floor Compensation (AFC) assistance system enables maximum efficiency even with uneven floors

STILL products: Intralogistics consulting, 10-aisle narrow aisle warehouse, 8-aisle wide aisle warehouse, platform system, MX-X narrow aisle truck with AFC, FM-X reach truck, EK-X vertical order picker.





STILL GmbH

Berzeliusstr. 10

22113 Hamburg

Germany

Tel.: +49 40 73 39 20 00

Fax: +49 40 73 39 20 01

info@still.de

For further information please visit

www.still.eu

STILL is certified in the following areas: Quality management, occupational safety, environmental protection and energy management.

