TRANSCAR
THE AUTOMATED GUIDED VEHICLE SYSTEM WITH INDEPENDENT NAVIGATION FOR HOSPITALS AND INDUSTRIAL FACILITIES

AUTOMATED GUIDED VEHICLE SYSTEM

swisslog TELELIFT

DRIVERLESS FOR AN OPTIMISED SUPPLY CHAIN

SWISSLOG-TELELIFT TRANSCAR - THE RELIABLE LINK IN THE SUPPLY CHAIN FOR HOSPITALS, INDUSTRY AND WAREHOUSES.

Whether in hospital, nursing home or production facility, optimum productivity is the basic requirement for efficiency and competitiveness. This means that all processes need to mesh smoothly with one another, without stoppages or downtime. The key to success in this is high performance logistics which can handle both planned and unplanned transport operations. In both areas the quality of the transport is vital, because delivering the wrong goods and incorrect handling of goods can have serious effects on other internal processes or persons such as patients, employees or visitors.

OPTIMISING INHOUSE LOGISTICS WITH TRANSCAR

TransCar implements daily transport operations and forms an essential part of the supply chain.
Its ease of operation and reliable technology facilitate the flow of materials in hospitals and industrial facilities without restriction user flexibility. Thanks to its high-performance control system TransCar automatically optimises the tasks to be implemented. This enables the transport system with its independent navigation to make sure that your goods reach the right place at the right time, enabling you to keep control over your entire transport flows at all times.

In short: the process of delivering goods is implemented with high efficiency and low cost.

EXACTLY TO PLAN: TRANSCAR IN THE HOSPITAL

Regularly repeated tasks offer enormous potential for rationalisation.
All you need to do is fix the time of transport, the goods and the container in advance. TransCar does the rest – for example in the hospital. Here TransCar transports containers with an overall weight of up to 500 kg fully automatically along a pre-programmed route along corridors and in lifts. A unique laser navigation system enables the vehicles to identify obstacles and to scan the contours of the building for reference.

SPONTANEOUS OR CYCLICAL: TRANSCAR IN INDUSTRY

In the industrial environment massive loads often have to be transported. Depending on requirements TransCar can be applied here as a tractor vehicle or with a superstructure. The options range from normal transport containers via scissors lifts to roller conveyors for moving heavy loads.

Heavy goods can be transported more flexibly and reliably, processes are optimized and staff work loads are reduced. In addition to planned trips, both spontaneous and cyclical transport operations can be initiated. The dynamic instruction entry means that empty travel is for the most part avoided, creating optimized utilization of system capacities. Even with a few vehicles TransCar increases productivity in warehouses, order-picking, production and shipping.

CUSTOMIZED SOLUTIONS FOR SPECIFIC INDUSTRIES

TRANSCAR – THE TRANSPORT GENIUS FOR THE MOST DIVERSE TASKS

The Swisslog-Telelift TransCar family has been developed to implement a wide range of transport operations in hospitals and in industrial facilities with maximum efficiency. Various models are available, depending on application.

LTC2-LC

TransCar with roller conveyor

HOSPITAL
In hospitals TransCar transports meals to the wards, ensures a dependable supply of sterile equipment and removes waste and dirty laundry. Dedicated routes and high-performance job management ensure reliable transport of goods and materials within the hospital.

PRODUCTION
From the parts store to the production line. From quality control to shipping. Within the production area TransCar carries out whatever transport tasks are required – in precise sequence and timed to fit your operating processes to perfection.

ORDER PICKING
TransCar is an invaluable aid to order picking in stores and warehouses.
The stores personnel can concentrate fully on their order-picking operations while the europallet or container, into which the goods are transferred, accompanies them fully automatically through the aisles of racks.

PHARMACEUTICALS
The validation of automated logistics processes is an essential component of quality assurance, especially in the pharmaceuticals industry. TransCar can be smoothly and fully integrated into the necessary process-controlled task sequences, ensuring the traceability of all transport operations.

HAZARDOUS AREAS
In environments that are hazardous to health, for example in toxic or highly radiated atmospheres, TransCar takes over all the transport operations and protects your workforce from exposure. Even complex routes with long exposure times are no problem.

TRANSCAR'S BENEFITS

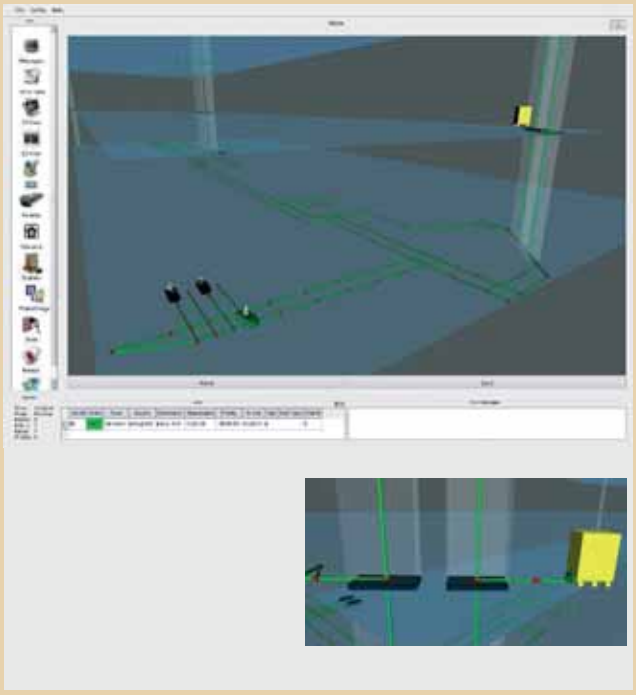
TRANSCAR - THE HIGH-PERFORMANCE SYSTEM

The core of the TransCar system is its TCMS (TransCar Management System) controls. These constantly optimize its transport operations and task management. Advance job allocation and peripheral administration enable a high utilization level for all resources in the system.
A user-friendly 2D/3D screen offers a fast overview of all logistics processes. Communication with the vehicles is via a standard WLAN/LAN connection. If a suitable network is already in place this can be integrated, which in most cases eliminates any interference and unnecessary costs.

TransCar isn't an isolated stand-alone solution, but can be coupled via interfaces with many other systems such as goods management systems or external transport and conveyor equipment.

TRANSCAR - THE THINKING TRANSPORTER

The TransCar transport vehicle contains cutting-edge, space-saving laser technology which implements two tasks simultaneously: navigation and safety. Even with compact dimensions the efficient design enables loads of up to 500 kg, transporting them at speeds of up to 2m/s. The bottom line is high efficiency and low investment costs.



TransCar TCMS controls

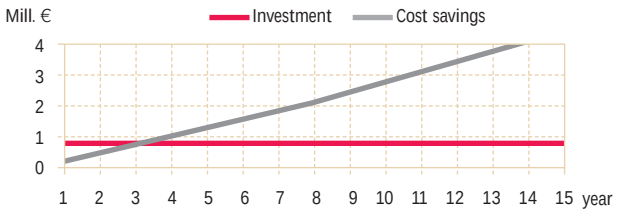
THE BENEFITS TO YOU

SAFETY
The TransCar technology ensures a high degree of safety for people and machinery. The laser scanner used for navigation simultaneously identifies obstacles. Warning fields and safety zones can be freely defined. If the scanner identifies an employee or a different moving object within a warning field the speed of travel is initially slowed down. As soon as the obstacle moves into the safety zone the vehicle stops.
When the obstacle leaves the safety zone again the vehicle automatically resumes movement. This technology enables safe reactions in areas where personnel and machines meet.

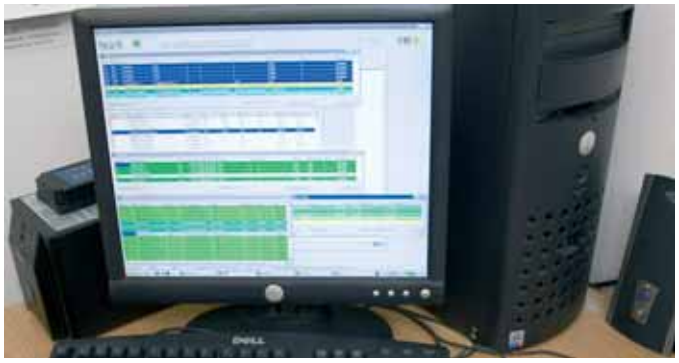
QUALITY
Your delivery costs are transparent and can therefore be precisely calculated, while damage arising from manual transport is eliminated. Transport errors and the resulting business losses are minimized.
And as empty travel is for the most part avoided by the control system, you can significantly increase your transport logistics flows.

ECONOMY
Compared to labor-intensive manual transport operations, the automated TransCar technology offers considerable cost savings. In clinic operations your TransCar investment is amortized in only 3 – 5 years on average.
The benefit to you: cost transparency and long-term financial planning security.

AMORTIZATION



INTELLIGENCE
The advance planning of the TransCar's controls optimizes transport operations continuously. The administration and placing of transport orders is monitored dynamically. If the situation results in a more favorable route the impending order is withdrawn from the individual TransCar and then re-allocated. Empty travel is avoided, through-flow increases and the investment requirement for transport vehicles remains manageable. In addition the battery management system ensures a high level of operational readiness for the vehicles.

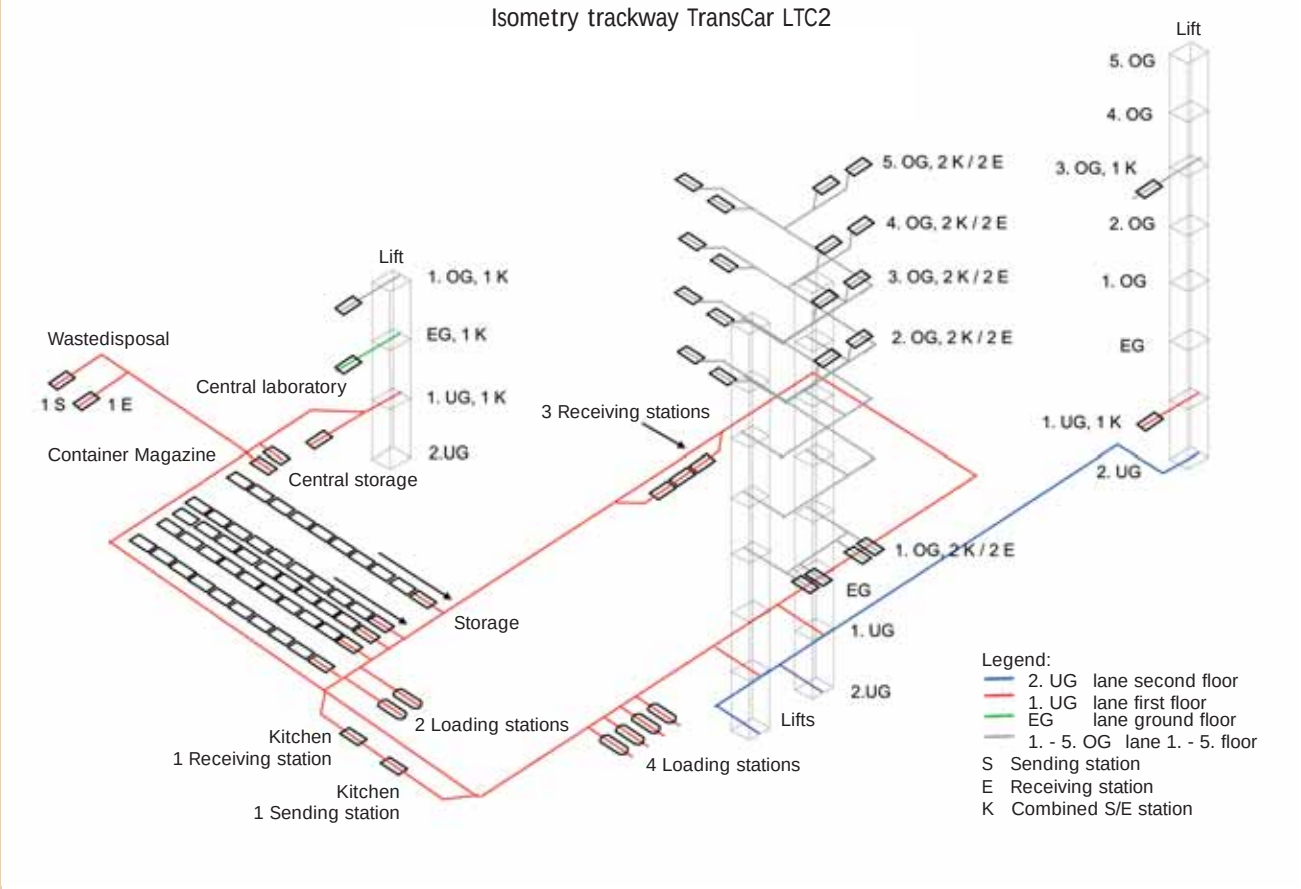


SERVICE
The system has been designed for low maintenance and maximum utility value. In addition Swisslog-Telelift backs up its tried and tested products with world-wide service facilities.

AT A GLANCE: TRANSCAR IN OPERATION

TRANSCAR – PROCESSES IN THE HOSPITAL

In hospitals the TransCar vehicle transports wheeled containers with an overall weight of up to 500 kg from supply areas such as kitchen, laundry, pharmacy or stores to the wards and back again.



Isometry of a TransCar system within the hospital

The following photo sequence shows an optimized supply and removal TransCar trip within the hospital:

The food container is picked up from the dispatch area of the kitchen.

01→

On the way to its destination the system automatically selects a suitable lift and activates it by radio communication. Along the route doors are opened automatically.

02→

After the container has been delivered to the ward the meals are distributed to patients by the ward staff.

03→

On the return trip from the ward the TransCar picks up an available empty container, which enables optimum capacity utilization.

04→

After the container has been delivered and offloaded it can if necessary be removed for cleaning.

05→

The vehicle is now available for the next order or is parked in the charging station so that the batteries can be re-charged.

06

MATERIAL FLOWS IN INDUSTRY

LOGISTICAL PROCESS WITH GOODS-FLOW MONITORING AND AN INTERFACE WITH A GOODS MANAGEMENT SYSTEM

TransCar is not an isolated stand-alone solution and can be coupled via interfaces with many other systems such as goods management systems.

In a production facility without automation transport operations are generated spontaneously and integrated into the process. Each processing location receives an order from the ERP system or even indirectly using a routing slip. The material to be transported is collected by the operator and then manually conveyed on a transport vehicle to the next location (processing station, dispatch section).

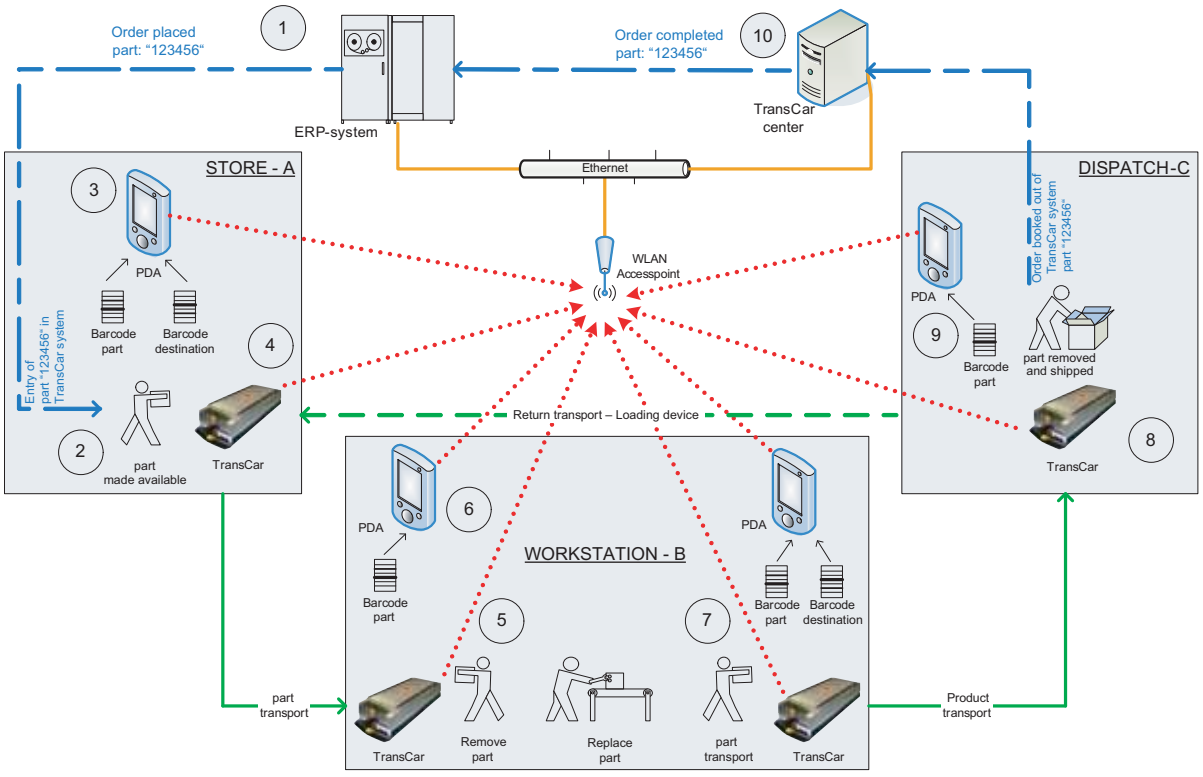
THE INTEGRATED SOLUTION

Automated logistics provides you with transparency in the goods flows within your company. It connects up your company's entire material flows. The ERP system is not disconnected but communicates with the TransCar logistics system about the current status of your orders.

Flow times can be planned in a predefined system inbound and outbound schedule. The automatic return of the transport vehicle creates order in the storage of loading equipment, minimizing space requirements.

TransCar forms a transparent bridge between the incoming order and the outbound goods.

The following example shows the sequence for a production order in an integrated and automated system.
The route of the individual part from the stores A via work station B to the dispatch section C is shown in simplified form.



01→
An order to manufacture a product is entered via the ERP system. In order to begin production a specific part is required from the stores. The stores staff are informed about this part via a PDA.

02→
The stores employee then takes the part from the store and places it in a container or directly onto the transport wagon for the TransCar vehicle. If required a number of parts can also be made available for transport.

03→
When the part is transferred to the TransCar vehicle it is read into the TransCar system via a barcode reader. Via a barcode table the operator now enters the destination for the part. In this case it is work station B. The information about the part number and destination address is now passed on by the PDA to the TransCar center via WLAN. This information is entered into the TransCar data base as an order 'to B', together with the relevant part number. The ERP system receives the message that the part has been entered in the TransCar logistics system and that it has been made available in the container or is already on the transport wagon.

04→
The TransCar center sends a part transport order to the nearest available TransCar vehicle. TransCar drives to the store, picks up the transport wagon with the part and transports it to destination B.

05→
After it arrives at work station B TransCar deposits the transport wagon with the part. The operator is informed about this by an acoustic signal. At the same time the information is automatically transmitted to the TransCar center.

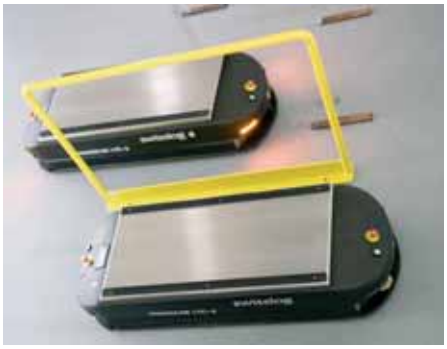
06→
The operator removes the part and scans in its barcode. The information about the part number and work station B is transmitted to the TransCar center. The operator now begins production, while TransCar is ready for the next transport order.

07→
At the end of the production process the part is made available for transport again. The operator scans the barcode and destination C (dispatch) via a barcode table. The information about work station B, destination C and the part number are communicated to the central data base. The TransCar center then allocates the transport order to the nearest available TransCar vehicle. TransCar then drives to the work station, picks up the transport wagon and transports it to the dispatch department C.

08→
When it arrives at dispatch C TransCar deposits the transport wagon with the finished product. The operator there receives a signal to indicates its arrival, while the information is automatically transmitted to the TransCar center. TransCar is now free and returns an empty transport wagon to the stores.

09→
The dispatch operator removes the finished product and prepares it for shipping. For this purpose he scans the part in once more and releases it for shipment. The information is also transmitted to the TransCar center.

10
The part is now classed as booked out. This information is sent by the TransCar center to the ERP system. The ERP system can now book the part as having been shipped.



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