

SYNCROSUPPLY



Always at the Pulse of Processing

SYNCROSUPPLY – the IT Solution for Optimized
Delivery Logistics in Manufacturing and Retail



 **INFORM**

Decision Intelligence in Truck Delivery

THE CHALLENGE OF MATERIAL SUPPLY

The logistics of incoming and outgoing material deliveries confront industrial companies with complex challenges. Uncoordinated peak times lead to truck waiting times, traffic jams, production bottlenecks and unnecessary costs. Additionally, they also lead to a lack of overview of plant traffic and uneven utilization of employees, transportation vehicles and loading points.

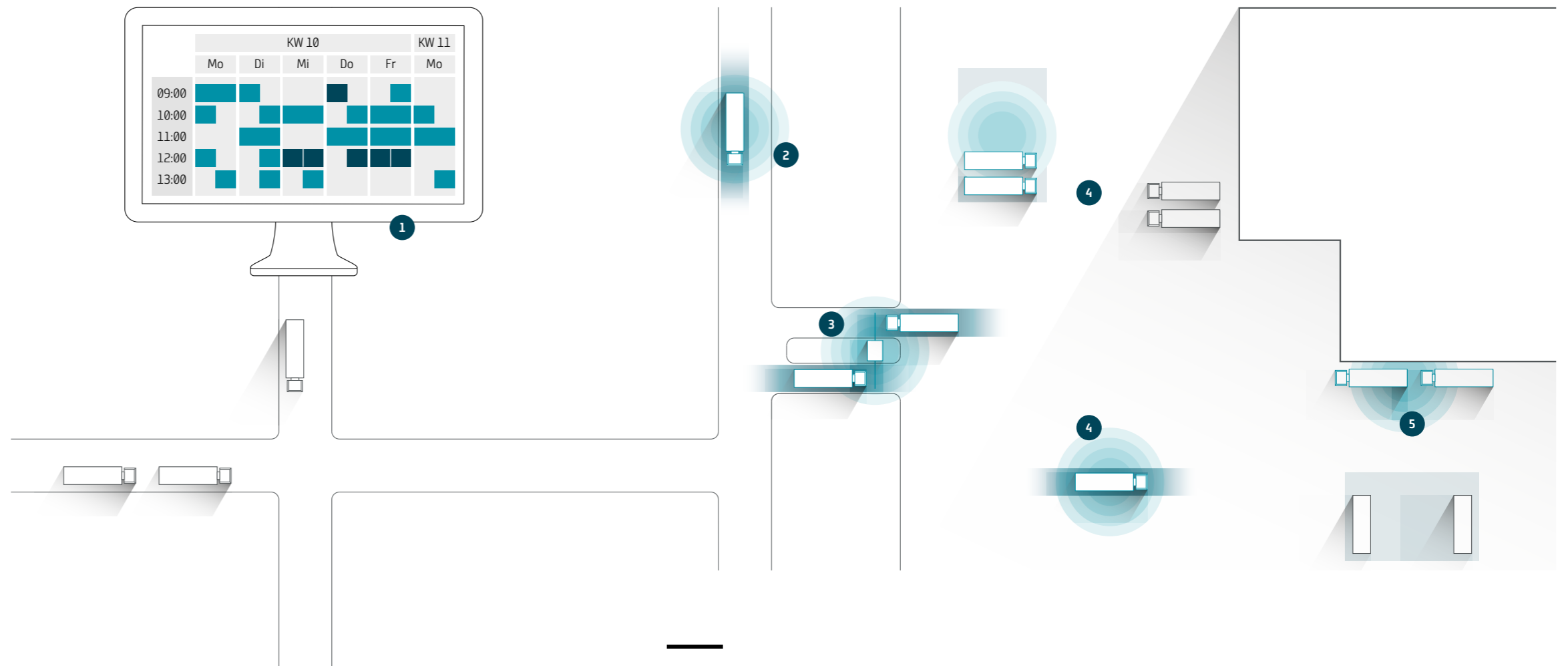
UTILIZE OPTIMIZATION POTENTIAL

SYNCROSUPPLY enables industrial companies to plan the flow of goods in incoming and outgoing deliveries according to their requirements. The system not only generates a time slot booking plan, but also manages the internal control of truck traffic from arrival at the plant or – if the technical requirements are met – even before then. In addition to all external and internal information, SYNCROSUPPLY also includes everyone involved – truck drivers, forwarding agents, loading point employees – in the control system. In this way, companies supply their production according to demand and implement a fully automated and transparent supply chain.



Advantages of SYNCROSUPPLY:

- Transparency in the supply chain
- Smoothing of peak times
- Reduction of waiting and throughput times
- Efficient resource planning
- Ensuring a seamless production supply



The Process Steps with SYNCROSUPPLY

- 1 Time Slot Management:** The time slot booking takes place in a web portal with flexible options for time slot allocation.
- 2 Arrival:** On arrival the truck can be accompanied by GPS tracking. SYNCROSUPPLY registers any delays and reschedules the planned process in the plant.
- 3 Gate:** The software decides on arrival of the truck immediately upon its clearance: directly to the loading point or waiting at buffer zones.
- 4 Throughput sequence:** SYNCROSUPPLY determines the optimal throughput sequence of all trucks based on the status of all vehicles and the utilization of the loading point resources. Communication with the driver is carried out via the App.
- 5 Loading point:** The truck moves to the loading point assigned by the system. After the loading or unloading process, the truck is instructed to drive to another loading point or leave the plant.

Time Slot Management for Transparency in Planning

FLEXIBLE ALLOCATION OF DELIVERY TIMES

SYNCROSUPPLY provides time slots for forwarding agents, customers and suppliers for each delivery day.

Companies can offer

- > regular time slots with fixed delivery dates for certain forwarding agents or
- > Pool time slots with delivery times that can be booked dynamically.

With the help of time slot planning and notification, companies can significantly smooth out the usual peaks in truck arrivals. In addition, the freight forwarder receives a reliable basis for transport processing in the plant, so that he can better plan his trucks for follow-up orders.

OPTIMIZED TIME SLOT ALLOCATION

Pool time slots can be booked by all forwarding agents, allowing them to request the desired delivery times in the web portal. Via an interface SYNCROSUPPLY takes over the relevant data on the trucks and their loads. If the requested slots are not available, the software provides up to five alternative times, taking into consideration all the main constraints: when is the cargo required, how many trucks are to be unloaded, how many trucks can move around the plant without holdups, and which resources – including personnel – are available. The software plans everything right down to the level of a single loading point and includes the readiness, opening and break times applicable there. In this way, the needs of all parties can be coordinated, and more unloading options offered at suitable times.

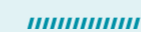
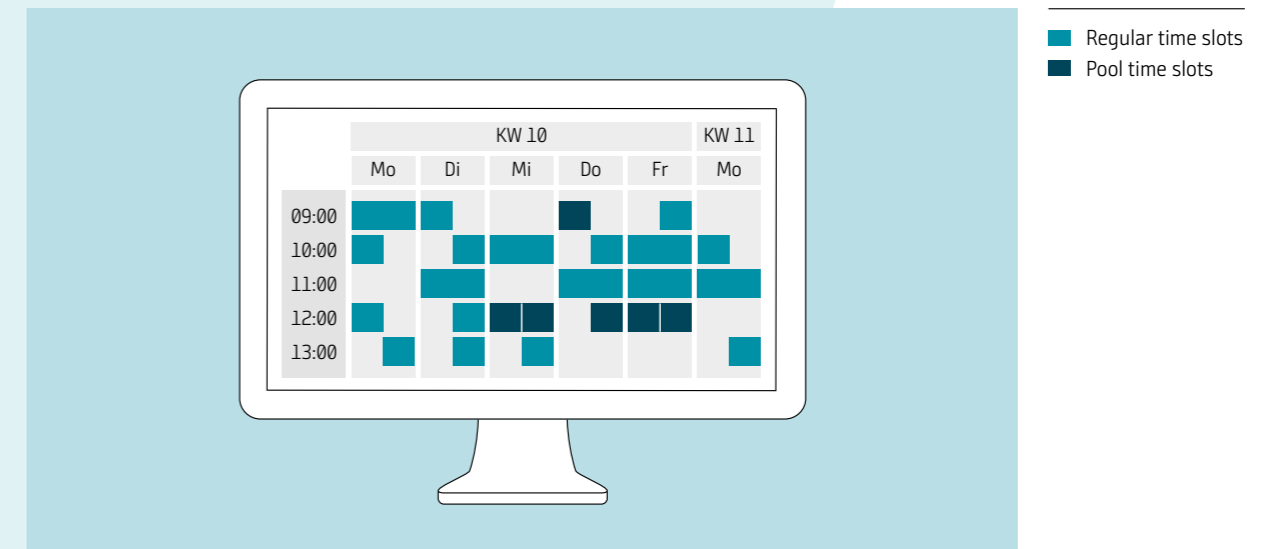
SPEEDY HANDLING AT THE GATE

Time slot management with SYNCROSUPPLY also speeds up truck handling at the gate. There, the system logs the arrival and departure of the trucks. Depending on requirements, self-check-in terminals or a smartphone app can be connected in the same way as check-in at the airport. In addition, communication terminals, traffic lights, barriers, RFID technology, magnetic card readers etc. can be connected to the truck supply control. This eliminates tedious paper and inspection work. Instead, the truck driver uses a mobile communication device that provides them with all the information they need for their stay at the plant.

The organisation of the delivery and dispatch logistics begins with the planning of the delivery times. Here it is already decided whether the subsequent manufacturing processes are efficient or already start with a cost deficit. SYNCROSUPPLY offers flexible options for time slot allocation that go far beyond rigid booking systems.

The time slot management of SYNCROSUPPLY enables the allocation of binding regular time slots or pool time slots via a web portal.

If the requested slots are not available, the software automatically provides up to five alternative times, considering all specifications and rules, and indicating the possible throughput time.



Benefits of Intelligent Time Slot Management:

- Better planning of supplies
- More efficient capacity utilization
- Faster handling times at the gate
- Reliable balancing of load peaks at loading points
- Foresighted planning of resources at the loading points
- Permanent prevention of congestion
- Considerable reduction of stallage payments
- Transparency for dispatcher and forwarding agent

Real-time Optimization in Day-to-day Operations

KEEPING EVERYTHING IN VIEW

Scheduling delivery times is just the first step on the way to efficient yard management. What really counts is that this scheduling works in day-to-day operations. Often, unforeseen events, such as traffic holdups or breakdowns, disrupt the delivery schedule and this affects the day's operations. That is why SYNCROSUPPLY also controls day-to-day operations and, thanks to intelligent optimization algorithms, always finds solutions for the following situations:

- > The truck is too early, too late, or arrives unannounced,
- > The truck brings material for other loading points or more material than planned,
- > The truck brings urgently needed bottleneck material.

OPTIMAL TRUCK THROUGHPUT

SYNCROSUPPLY tracks the trucks as they approach the plant and provides information on the expected time of arrival via an ETA calculation. Upon arrival at the plant, the software compares the arrival time against the time slot allocation. SYNCROSUPPLY determines the optimal throughput sequence of all trucks based on the status of all vehicles and the utilization of the loading points. The system's messages to truck drivers are transmitted via an app or a telematics solution to a mobile device (pager, cell phone or smart phone). In addition to the scheduled delivery time, the system always tracks the status of all resources and the trucks by considering arrival and departure times or the start and end of unloading operations. The decisive factor is the flow sequence, which is calculated dynamically in real time. If trucks do not arrive on time, the software reschedules within a few seconds. Logistics coordinators can intervene manually in automatic scheduling at any time and can override decisions made by the system at their own discretion.

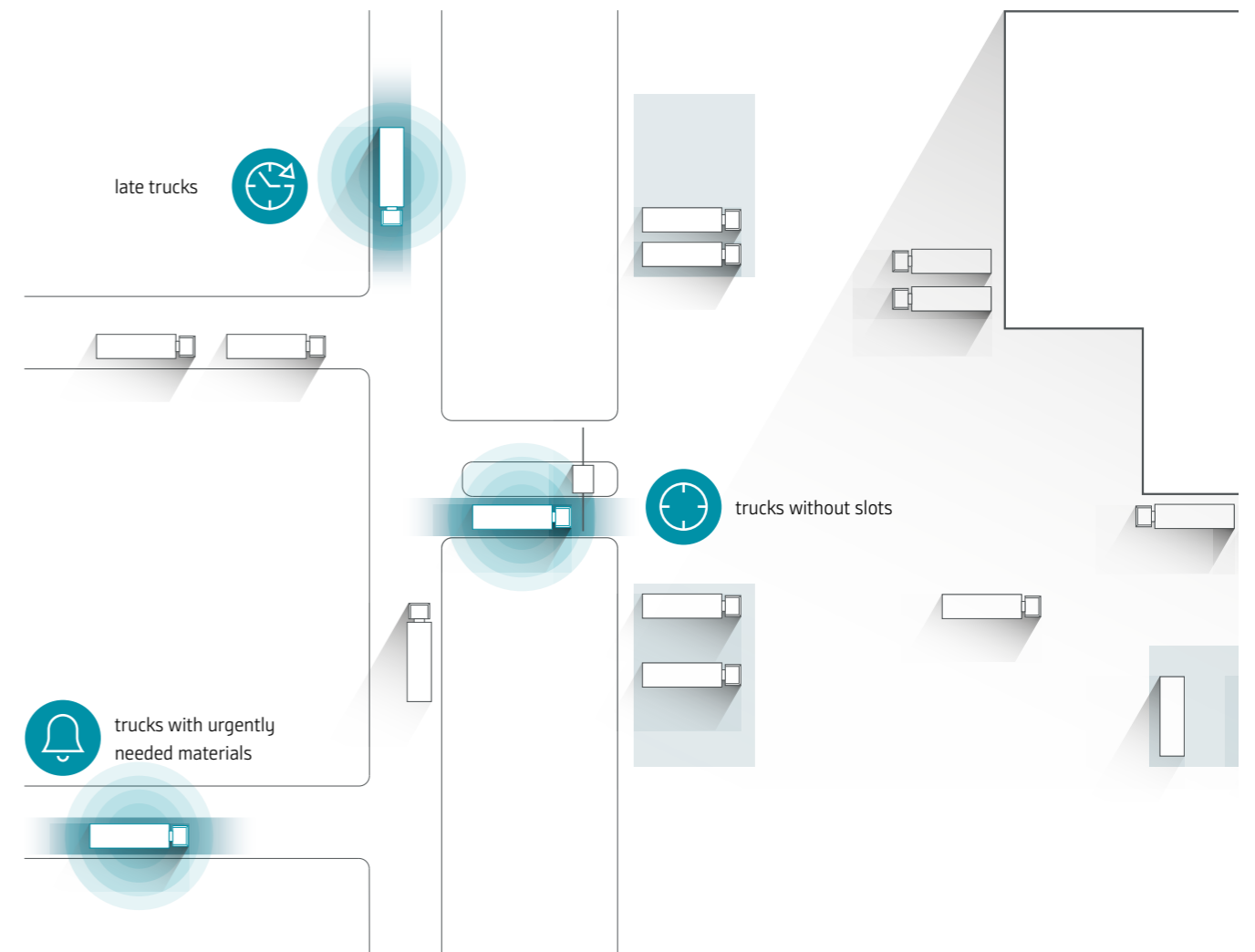


Benefits of Intelligent Truck Supply Control:

- Real time reaction to new events
- Reduction of throughput times
- Increased customer satisfaction through high planning reliability
- Reduction of the manual entry and processing effort
- Speed up the exchange of information between goods receipt, dispatch and gate

With SYNCROSUPPLY, companies control their supply logistics as an integrated process, from the truck supply control to the arrival of the trucks and even the loading point. This enables companies to optimize the truck supply always with a view to the real logistical situation and to react quickly to unforeseen events.

Due to unforeseen events such as unannounced or delayed trucks or urgent spontaneous deliveries, the best plan is quickly made obsolete. The intelligent optimization algorithms of SYNCROSUPPLY calculate for the changed situation within seconds a new truck handling schedule. All parameters – status of all resources, trucks and loading operations, priority of loads, parking spaces and loading points etc. – are considered.



Synchronize Instead of Organize

INFORM AS AN EXPERT IN LOGISTICS

With our software, we were one of the first companies that implemented the idea of synchronizing logistics processes. Today, in more than 100 applications across all industries, our systems optimize logistics processes. During time, standard interfaces for all common technologies (XML, SOAP, MQS, etc.) and IT systems (e.g. SAP, VDA standard messages, etc.) have been developed and implemented.

SYNCROSUPPLY is connected to the transport control system SYNCROTESS for internal logistics. The external and the internal logistics can also be synchronized. The required forklifts are coordinated with the truck time slots. Optimization, instruction, and execution of the orders as well as the necessary status feedback is communicated between the systems.

This enables our customers to view the current situation in its entirety simultaneously and to react immediately to any short-term changes with the help of real-time optimization.

SUSTAINABLE YARD MANAGEMENT

The use of a yard management system offers both economic and ecological advantages. By digitizing the planning processes, a time slot management system prevents delivery peaks and ensures better utilization of the loading point resources and employees. On the day of delivery yard logistics management helps to minimize throughput times and unnecessary re-parking and shunting.

A yard management system saves time. A saving of only 10 minutes of waiting time per truck arrival in idle mode has a remarkable climate effect. The CO₂ savings of approx. 8,300 t/year achieved by the 25,000 truck arrivals controlled by INFORM systems every day alone correspond to the annual CO₂ emissions of 1050 citizens in Germany. In practice, the waiting and throughput time savings achieved by intelligent truck supply control systems are considerably higher.

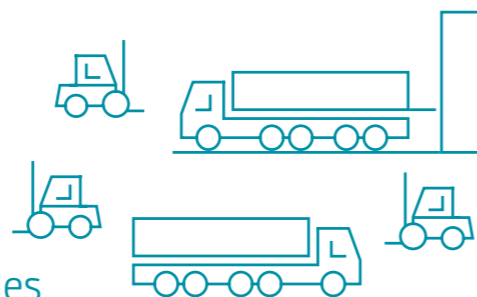
FOCUS: OPTIMIZED PROCESSES WITHIN THE TRAILER YARD

Many companies use a trailer yard to streamline their delivery logistics processes. SYNCROSUPPLY can also be used here to optimally control the processes in the yard. The system coordinates the internal movements of the trailers or chassis. Depending on the destination loading point, SYNCROSUPPLY decides where a container, swap body or trailer is to be parked, organizes the trailer call-off to the destination loading point according to the rules stored in the system, e.g. trailer must be available again after 24 hours and assigns a transport order to the most suitable internal shunter vehicle with the trailer call-off.



INFORM optimizes daily:

- more than 300,000 internal transports
- more than 1,000 controlled forklifts/trucks
- over 25,000 truck arrivals at industrial companies



References

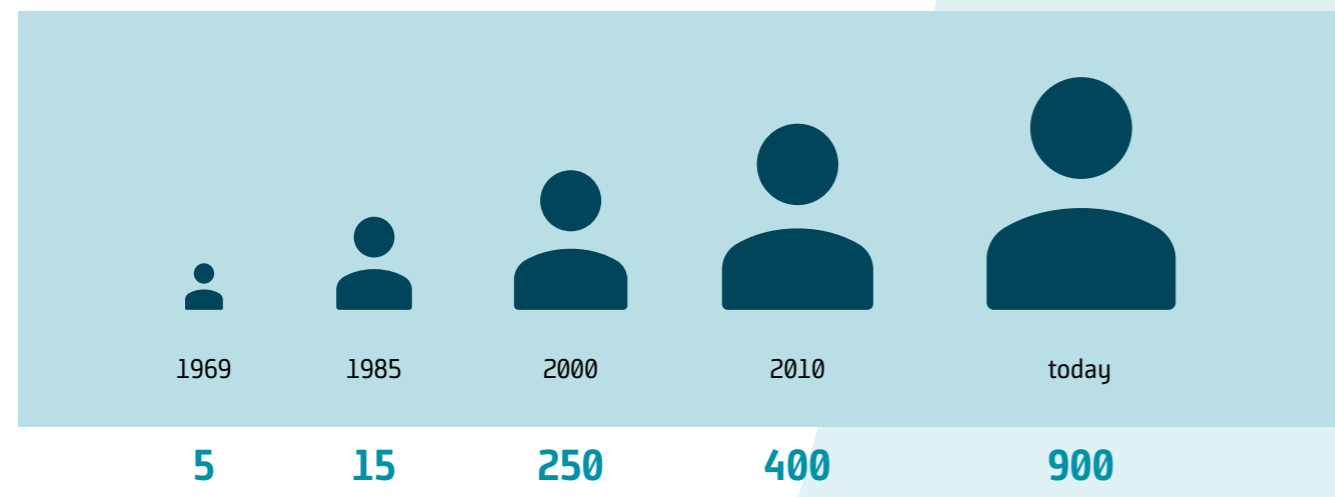
Extract



Why INFORM?

INFORM develops software for the optimization of business processes using Digital Decision Making based on Artificial Intelligence and Operations Research. The company supplements classic IT systems and increases the profitability and resilience of many companies. While data management software only provides information, INFORM systems can analyze large amounts of data in a matter of seconds, calculate numerous decision variants, and suggest the best possible solution to the user for implementation. Today, more than 900 software engineers, data analysts, and consultants support more than 1,000 customers worldwide in manufacturing, trade, airports, ports, logistics, banks, and insurance companies. Processes, including sales planning, production planning, personnel deployment, logistics and transport, inventories, supply chain management, as well as fraud prevention in insurance, and payment transactions are optimized.

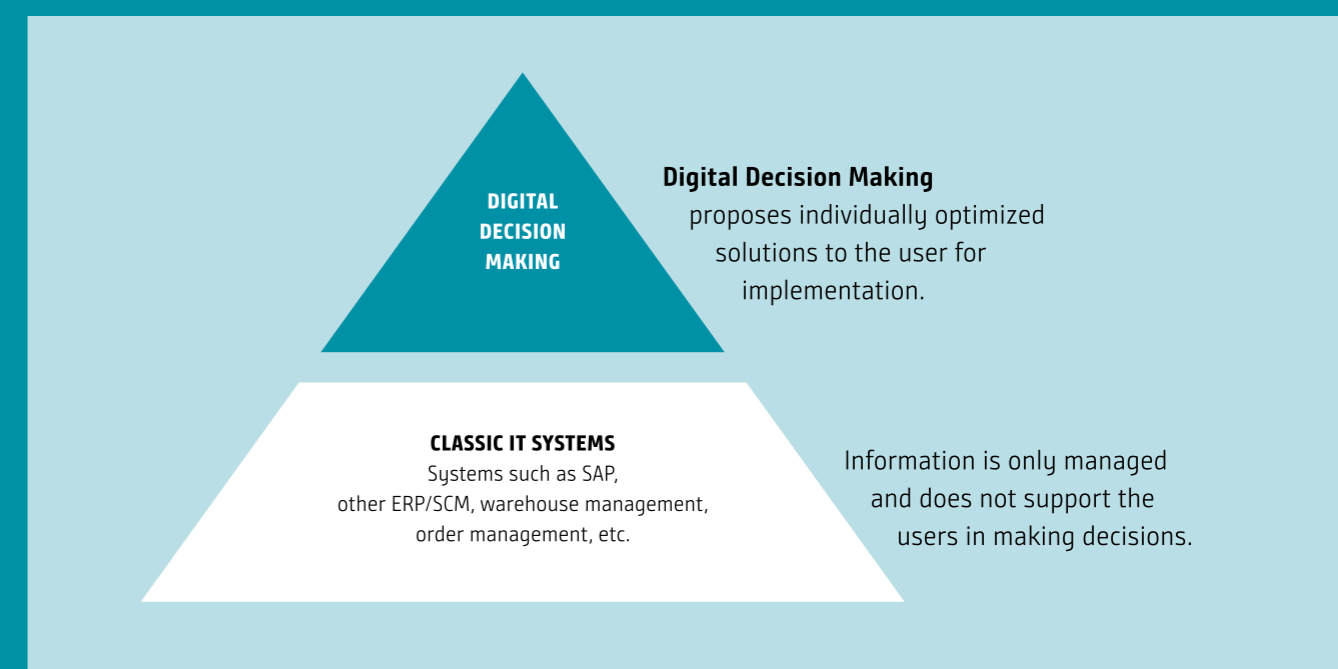
Staff Development



PROJECTS IN MEDIUM-SIZED COMPANIES AND CORPORATIONS – WORLDWIDE

Every day, our systems manage tens of thousands of employees at airports, move millions of new vehicles from plant to dealer on schedule, ensure punctual delivery of food to supermarkets and restaurants, and monitor over 250 million fund transfers for fraud prevention in payment transactions. Our employees are experts in their specific fields because, in order to optimize operational workflows through software, we need to understand them. Ultimately, our customers expect time and cost savings in highly-complex, decision-making situations – in a container port, where a container has to be moved every three seconds, for example, or in plant construction, where a machine is assembled in 30,000 processes using 5,000 parts, all which must arrive in the assembly hall in the correct sequence at the right time.

Long before terms such as “artificial intelligence” and “machine learning” were on everyone’s lips, INFORM was already developing intelligent algorithms for its software products. To this day, these algorithms complement classic IT systems by analyzing large amounts of data in a matter of seconds, calculating numerous decision variants, and suggesting the best possible solution to the user for implementation.



INFORM supplements your existing ERP systems with mathematical algorithms based on Operations Research.
With our optimization software, you act:



Intelligently

With a high planning quality appropriate to the complexity!



Quickly

With short computing times and fast adaptability of the algorithms!



Interactively

In collaboration with people who keep control at all times!

