

Solutions For Intralogistics
and System Integration

HARMONY IN MOTION



Perfect Solutions without Compromise

A passion for details

Independence helps us focus
on what's important

The challenge of each assignment in intralogistics and the associated system integration does not lie in procurement or the installation of the necessary technical equipment. The crucial, demanding task is creating a smoothly functioning overall system that is capable of harmonizing the interaction of all components, reliably and for maximum efficiency. In the interests of our customers, this is our focus, which we are able to implement for each individual assignment without compromise, thanks to our independence in the mechanical manufacturing industry.

Our ability to quickly ascertain the technical possibilities as well as our competence, know-how and decades of experience in intralogistics enable us to concentrate on the essentials: Solutions that deploy the most modern components available on the market to develop high-performance, up-to-date systems. In every detail – from design to implementation.



Competence built
on a strong background

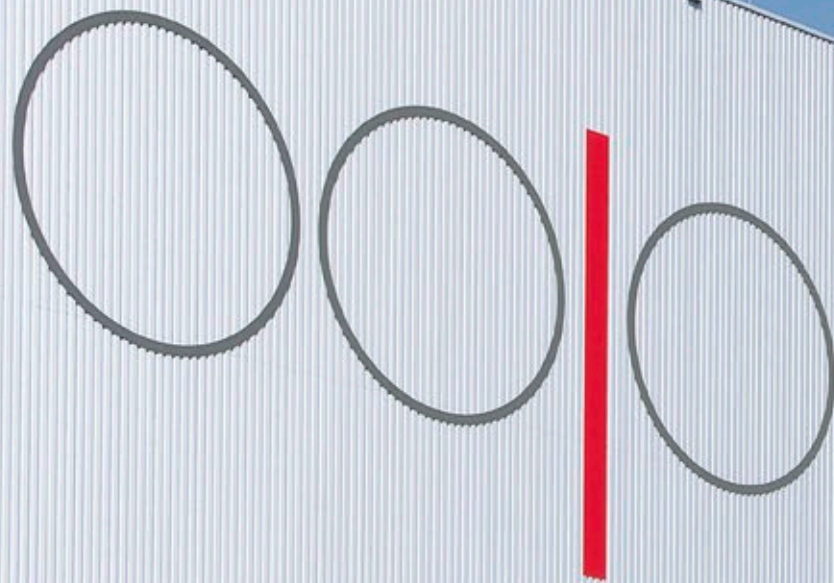
Aberle GmbH is a company in the Business Area Logistics Systems of the international technology Group Körber AG, and operates as general contractor as well as system integrator. We plan and realize automated intralogistics systems for our customers in highly complex automation and modernization projects of all sizes.

The Group encompasses approximately 100 technologically leading companies in the Business Units Automation, Logistics Systems, Machine Tools, Pharma Systems, Tissue, and Tobacco. With locations around the world, Körber AG combines the advantages of being a Group that has a global presence with the benefits of a highly specialize and flexible medium-sized company.

Economic success means
social commitment

In his will, Kurt Körber stipulated that the Körber Foundation maintain sole ownership of the Körber Group. With the Foundation, the company has a reliable shareholder that places great emphasis on a long-term strategy and sustainable business practices. From Group earnings, the Foundation receives regular dividends for its non-profit activities.

Founded in 1959 by entrepreneur Kurt Körber, the Foundation is currently nationally and internationally active in its own projects, collaborations and events. The Foundation has an annual sum of around 17 million euros at its disposal for its non-profit activities. With its strategic projects, networks and cooperation partners, the Körber Foundation rises to meet today's societal challenges – and exercises its sustainable social engagement through numerous activities. Dialog with Asia, Remembering for the future, More STEM!, Reinventing old age, and Enthusiasm for music are the five topics that comprise the focus of its current activities.



P-WELL
Unternehmensgruppe



General Contractor and System Integrator

New system expansion or modernization:
Future-oriented investments receive
future-oriented solutions

Manufacturer-neutral intralogistics concepts

As general contractor, we develop and realize innovative, holistic concepts for our customers. With competence, long-standing experience and the highest quality and service standards, we offer customized solutions for future-oriented products and manufacturing, as well as cost-effective internal logistics, which, for our customers active in many different industries, translates into more sustainable success.

Characteristic for our customer orientation is the high degree of individualization of the implemented technology, which is flexibly tailored to the specific requirements of the warehouse goods and the operational structure of our customers. Our extensive experience with projects of all sizes in nearly all industries makes us a competent and reliable partner for every assignment.

Range of services:

- General contractor and system integrator for automated intralogistics
- Planning and consulting
- Software (SAP based and proprietary) and Automation systems
- Warehouse management and transport management systems, logistics network control
- Modular palette and palette transport systems
- Modernization
- Service and maintenance

We provide our customers with these advantages:

- Industry-spanning consulting, planning, software and Automation systems, SAP solutions, service and maintenance – all from a single source
- Manufacturer-independent
- Increase in productivity
- Reduction of energy consumption
- Optimization of manufacturing quality

System integration with a high degree of individualization of the implemented technology

Cost-effective system integration

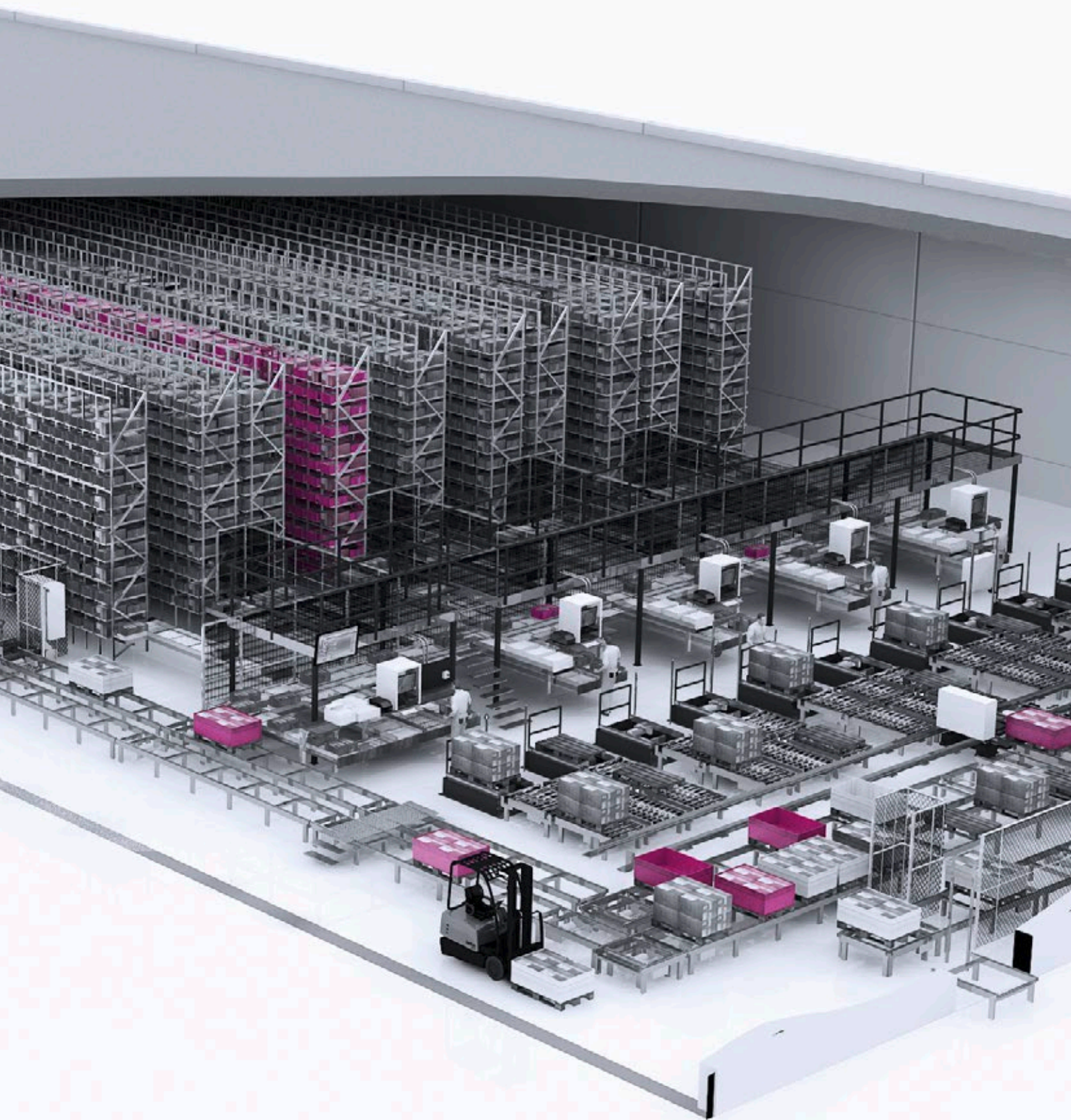
We are specialists for individual solutions in system integration. At the same time, we offer own industry solutions. For our customers, we assume the planning, installation, project management, configuration and maintenance of complex IT systems. Within the context of an analysis, we develop recommendations to optimize our customers' systems.

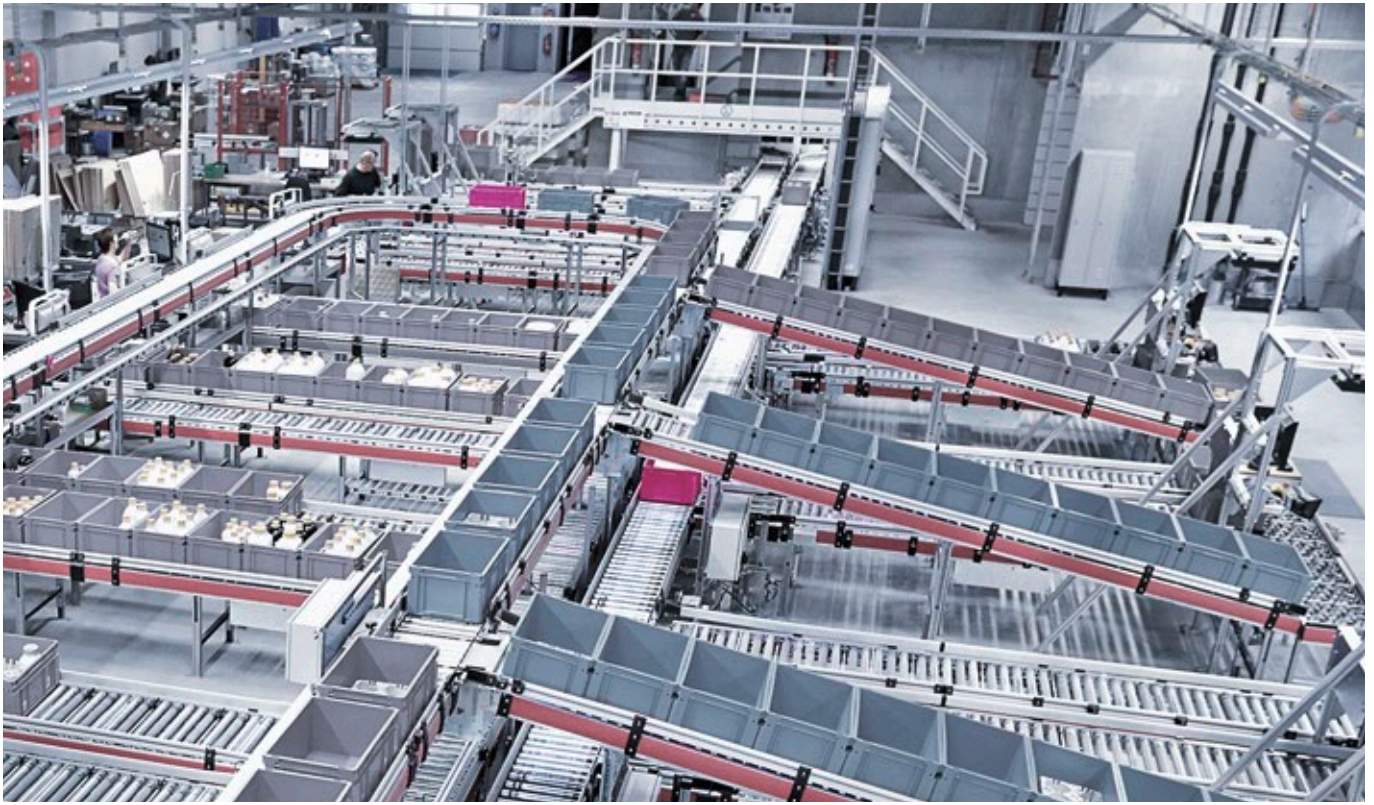
Range of services:

- Planning and realization of straightforward to highly complex Automation projects
- Development of technically and economically optimal, customized system concepts in collaboration with the customer
- Complete execution from a single source for smooth workflow
- Own value added in control and IT Automation

The advantages for our customers at a glance:

- Process optimization
- Uniform user interfaces
- Minimal training effort
- Swift implementation and system completion





Automation in all Sizes

We accelerate automation with customized software and automation technology

More than the sum of individual parts:

We automate efficient quality

We use automation concepts to solve process assignments of all sizes for our customers – from straightforward to highly complex requirements of extremely dynamic applications. We develop individual customer solutions with state-of-the-art, technical components. In doing so, we implement, as needed and according to the requirements, storage and retrieval machines, conveyor technology for the transport of light, medium and heavy loads (small cylinders, cardboard, containers, trays, racks, palettes, baggage, up to whole metal coils), picking systems, handling equipment, and robots as well as sorters of all types or shuttle solutions: Our long-standing experience in nearly every industry and the fact that we are manufacturer-independent mean that we can provide our customers with the optimal solution for their requirements, without compromises.

Our know-how and our competence in aspects ranging from development and project support to accelerated, simulation-based commissioning make us a reliable partner for efficient, up-to-date automation projects. The integration of future developments with additional potential succeeds in this process with the optional, energy-saving PMS-E control system.

Competence among equals:

Under one roof and from a single source:

- Control technology for all drive and conveyor components, RGB, as well as manual or robot-based picking systems and modules.
- Hardware projects and circuit diagram creation
- SPS software creation and commissioning
- Networks
- Visualization with PMS-V and VirtualPlant
- In-house manufacture of control cabinets

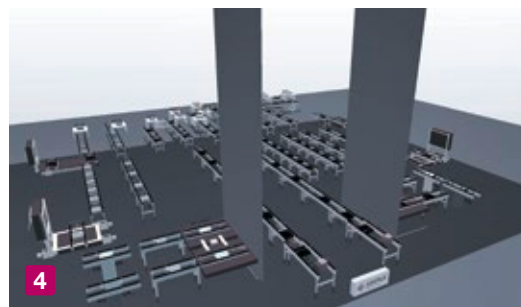
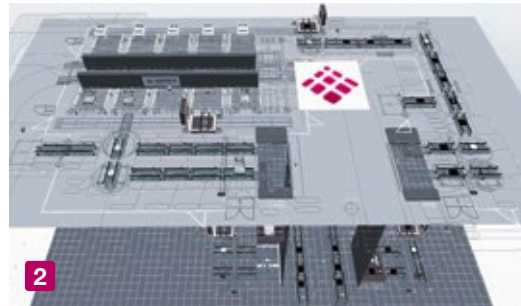
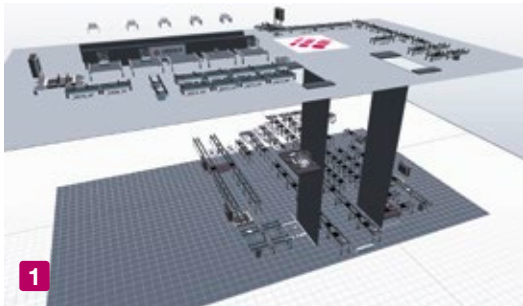
Aberle VirtualPlant: We shorten commissioning time through real-time emulation

The commissioning of any automation solution is a sensitive process, in which the perfect interaction of all involved components and control functions is tested – and possibly important optimization potential becomes apparent.

The real-time emulation we have developed with VirtualPlant significantly speeds up the commissioning procedure. Because VirtualPlant offers the possibility to test the overall process, including all components and the actual response behavior of the real system. The best possible conveyor technology layout is designed using this innovative tool, with real-time inclusion of the existing and involved IT and control units, already before commissioning. This minimizes time and costs.

VirtualPlant offers the following to our customers:

- Connection via the I/O signals of the real automation system
- Connection via the actual field bus system – or via comparable systems
- Real-time execution shows the actual response behavior (real-time communication)
- Transmission of the automation software without modification from the virtual system to the real system
- Reproduction of movement sequences in the behavior visualization
- Cost savings through significantly reduced commissioning time



Advantages of our real-time emulation:

- Import of customer data (e.g. Excel) during the emulation process (simulation of the data storage)
- Communicates with the SPS control unit and emulates the SPS inputs and outputs (sensors & actuators)
- Emulation of complete material flow of the system (tracking packages/pallettes)

1 System emulation with vertical conveyors upwards

2 System emulation over two levels

3 Emulation upper level

4 Emulation ground level 1

5 Emulation ground level 2



Customized supply from a single source: From the in-house manufacture of control cabinets to a complete SAP application



Future-oriented performance strength in existing systems through Retrofit

We can update your currently operating system to state-of-the-art

Modernization from conception to commissioning

As experts in modernization of existing systems, we increase the performance of currently implemented intralogistics structures and realize our concepts in short conversion times, without significant impairment of the logistics processes of our customers.

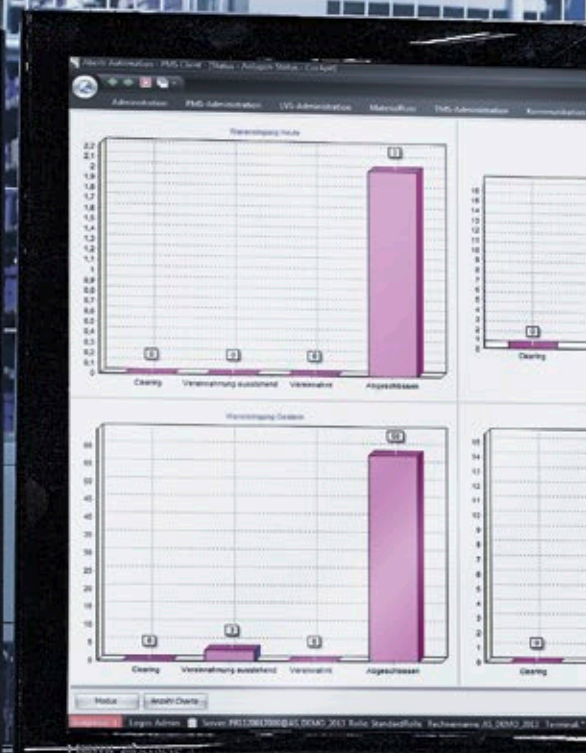
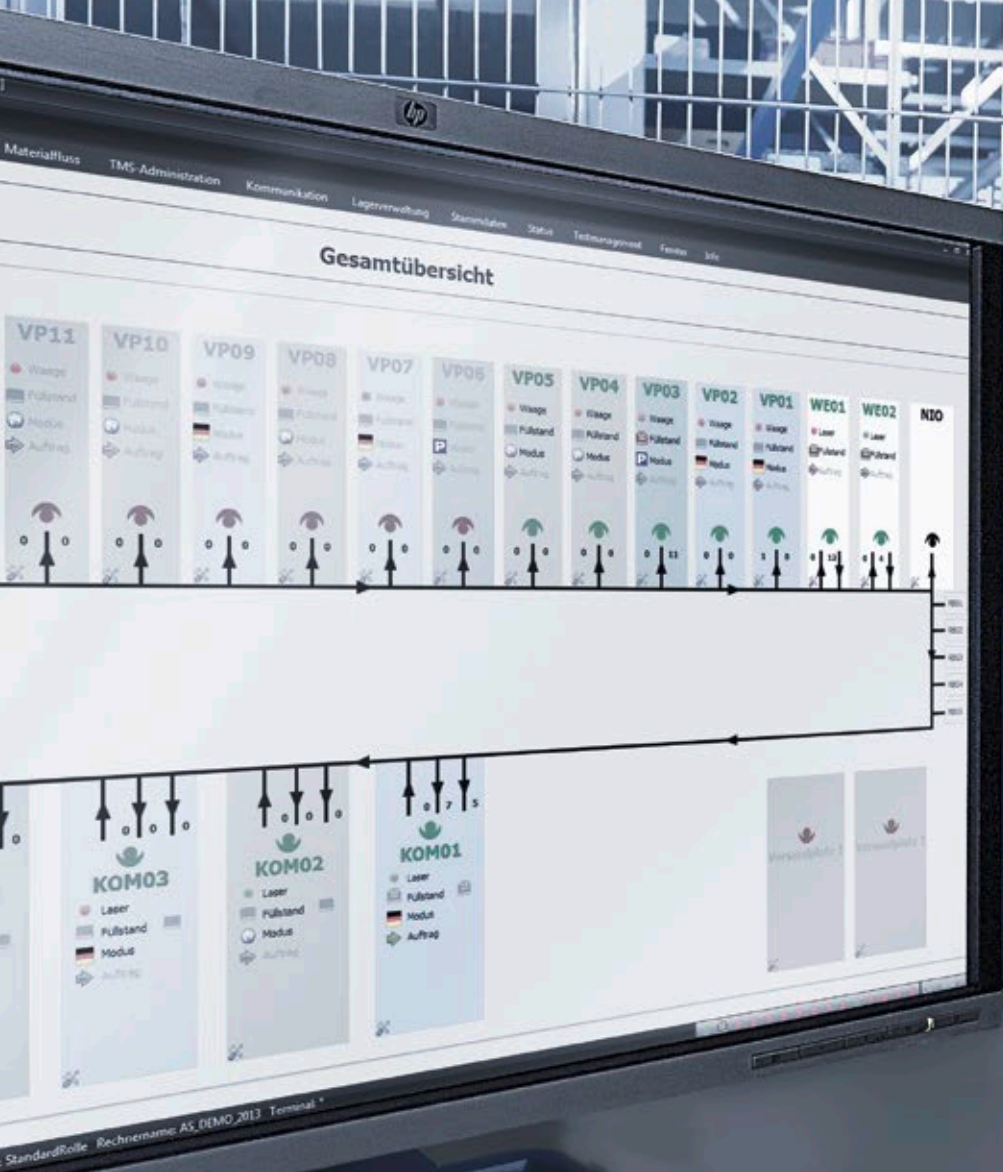
In close cooperation with our customers, our experts develop technically and economically optimized, custom-made system concepts. The following implementation can also take place in phases during operation. We support our customers with our modernization efforts by designing their manufacturing and intralogistics in a more transparent manner. At the same time, our customers can use our expertise to lower system costs and uncover additional savings potential.

We meet our customers' objectives:

- Capacity expansion
- Rationalization measures
- Increase profitability and productivity
- Energy savings & increase in efficiency through energy management
- Unit and process cost optimization
- Replacement of obsolete technology
- Increasing or securing availability
- Reduction of maintenance costs
- Multi-client capability of the warehouse systems
- Improvement of material flow control, the warehouse management system, and the organization
- Improved communication between the systems such as ERP and warehouse management system of material flow control
- Updating documentation

The advantages for our customers at a glance:

- Seamless execution from a single source
- Option of realization in phases
- Installation/implementation during operation
- Migration to SAP



Increase Efficiency with Aberle-PMS

Efficient Automation needs intelligent communication. We supply intelligent software for this purpose.





Process Management Warehouse PMS-W

PMS-W generates the orders not only for the storage and retrieval of goods, but also for the picking of these orders. In addition, it has functions for order processing, stock management and inventory, as well as functions for the administration of items, warehouse storage places, and loading devices and their master data.

PMS-W supports automated high-bay warehouses and automated small parts warehouses, as well as manual warehouses by means of a stacker control system (PMS-Forklift), or hand picking via wireless scanner (by means of PMS-Mobile). It is suitable for small warehouses and large distribution centers as well as dispatch, spare parts, and production warehouses. With the PMS-Freight module, shipping labels can be printed and the data automatically transmitted to the respective freight forwarder. For quick, mobile queries of warehouse-relevant order numbers, the PMS-App (iOS for iPad) can be integrated.

Areas of application:

- Retail/distribution and production companies
- JIT and JIS supply
- Production supply with tugger trains

PMS-W offers various functionalities, beginning with order management, master data and user administration, to route and trip management, as well as the integration of modules for special customer wishes.

Additional modules

- PMS-Mobile (mobile data collection by means of MDE)
- PMS-Forklift (stacker control system)
- PMS-App (cockpit overview for the iPad)
- PMS-Freight (freight modules for creating shipping labels, etc.)

Process Management Material Flow PMS-M and PMS-S

PMS-M assumes transport orders of a super-ordinated system and automatically converts them into individual orders for the different system components. In doing so, **PMS-M** monitors the flow of material in the system and flexibly coordinates route-optimized control of storage and retrieval machines, automatic cranes, and crossways transfer cars.

Areas of application:


- Rapid container and carton conveyor technology
- Palette and tray conveyor technology
- Automated storage and retrieval machines and automatic cranes
- Crossways transfer cars and electric monorail conveyor
- Storage position management
- System monitoring and control

PMS-M was developed for modern server systems. It runs under Microsoft Windows Server, the client under Windows client system. A high-performance database by Oracle or MS-SQL Server works in the background.

PMS-M is adapted to the individual requirements of our customers and controls all forms of conveyor technology and automated storage and retrieval machines, etc.

PMS-S is a module to control highly dynamic shuttle systems.





Less
is
more

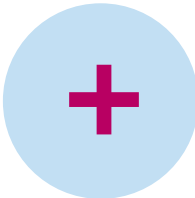
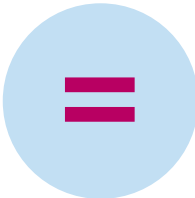
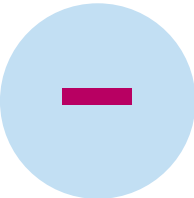
Value Added Through Energy-Efficient Warehousing PMS-E

Energy-optimized system control – increase efficiency and lower energy consumption

Less

is

more



With PMS-E, customers save energy in:

- Conveyor technology
- Lighting
- Standby times
- Building services (heating, ventilation, climate control technology)
- Media supply

... and simultaneously maintain the high level of performance of their systems:

- Logistics
- Production security
- Benchmarking
- Installation of CIP processes

Furthermore, we help our customers harness additional potential:

- Cost savings
- Energy savings
- Carbon dioxide emission reduction
- Freeing up investment resources
- Supporting company philosophies

Considerable energy savings without a loss in performance

The **PMS-E** system solution uncovers significant energy savings potential in highly automated logistics centers that have complex warehouse and control technology. Performance, reaction speed, and reliability of operations are not impaired in the process.

Energy efficiency improvements are achieved not only by structural or equipment-based optimizations: PMS-E, as intelligent control technology, ensures holistically efficient logistics processes while these are simultaneously being optimized, controlled, and documented for lower energy consumption.

tn. bestätigen

Warenempfänger

8520 - B24

Stückgewicht

72,100 KG

Anzahl offene TA-Pos.

1



KP

Beh.

Werk 0001

TA 602

1

N-Typ 914

N-Pl. 0000004697

Acceleration with Lean SAP solutions

CUSTOMER-OPTIMIZED
SOLUTIONS WITH SAP

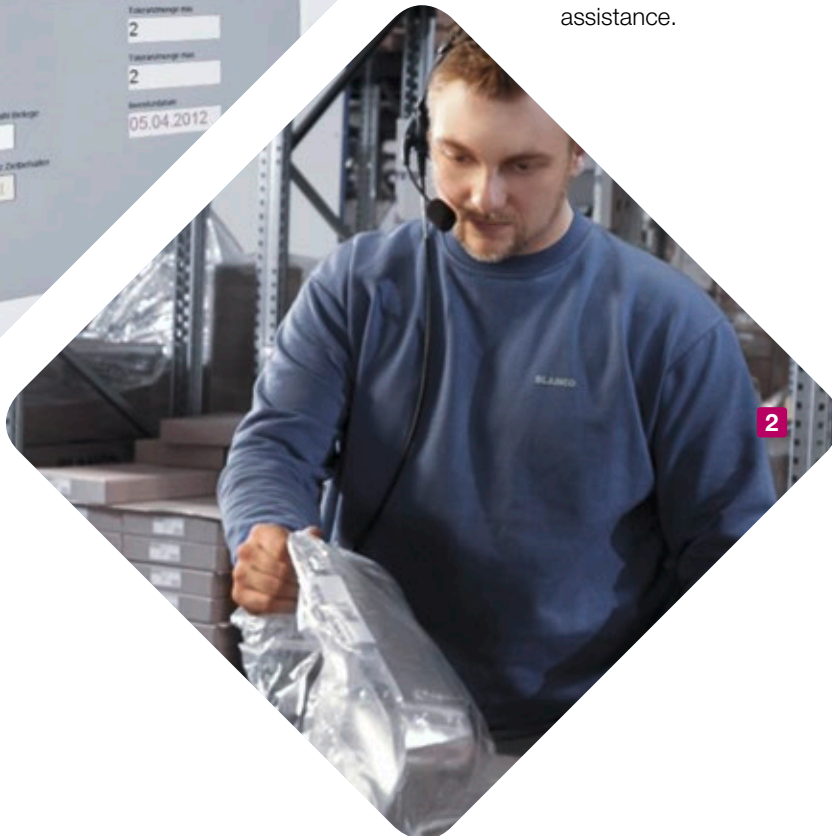
Manage, Control and Optimize in SAP Environments

1 SAP work center dialogs adapted to the respective processes enable efficient execution.

When designing the dialog boxes, graphic elements such as colors, fonts, and images are implemented in a way ensuring safe and intuitive user operation.

2 Hands free concentration on the execution.

With Pick-by-Voice, the SAP application speaks with the user so that they can fully concentrate on their work. In addition, the order picker can be shown product images at the terminal for visual assistance.



SAP EWM and SAP LES

Aberle Software is the specialist for implementing customer-optimized solutions within an existing SAP environment. For this, we use SAP standard products for warehouse management and control (SAP EWM and SAP LES / SAP WM) and augment these with own enhancements and own products for a customer-optimized IT solution. As SAP Service Partner, we possess extensive knowledge and long-standing experience in the implementation of business processes in operational logistics. In SAP environments, our motto is: As much standard SAP as is sensible and necessary.

Our services for our customers:

- Warehouse management with SAP EWM and SAP LES
- Control of automated warehouses with SAP EWM-MFS, directWACOS or WAROS
- Paperless processing in manual warehouse with wireless data transmission based on SAP ITSmobile
- Pick-by-Voice with directVOICE
- Modernization of logistics systems
- Replacement of non-SAP with SAP SAP EWM / SAP LES solutions
- Master plan / feasibility studies / IT visions with SAP EWM and SAP LES



SAP® Recognized Expertise
in Supply Chain Management

100 % SAP integration with material flow control and voice order picking

With the SAP solutions EWM-MFS, directWACOS and directVOICE, complex systems for material flow control and voice order picking can be implemented in the customer's SAP system. Through the omission of interfaces, the TCO (total cost of ownership) and complexity are reduced and operations are simplified. Our solutions are based on SAP standards (e.g. tables, structures, receipts, records, record flow) and supplement these to achieve an optimal and highly intelligent SAP solution for our customers.

WAROS

Optimization of resource utilization in warehouse operations

WAROS is designed for companies with manual or automated warehouses that deploy warehouse management (e.g. SAP EWM or SAP LES / SAP WM) for their warehouse operations: Achieving the daily delivery service level can be very challenging for a conventional warehouse activity monitor. This complex task is automated in WAROS by means of a permanently running optimization process. The current order situation, base load and plan load are used as the entry point for optimization in WAROS. This enables a smoothing of the order / work load as it varies over the day in warehouse operations.

The advantages for our customers at a glance:

- Fluctuations in warehouse operation load curves are efficiently smoothed
- Simple integration of the software in existing IT structure leads to a quick ROI
- Intelligent working plan templates enable the creation of working steps via mapping, without the necessity of complex master data maintenance
- Transparent work-flows through real-time visualization



Security Gain with ABERLE Life Cycle Service

High level of availability, safety
and profitability over the entire
service life of the system



Securing the ongoing production of our customers is our commitment.

As a qualified partner, we provide our customers with the security, through proactive measures and quick help in the case of disruptions, of obtaining a high level of availability and maximum productivity of their system over the entire system service life. With transparent services and a reasonable cost framework, we support the value preservation and competitive advantage of our customers.

The advantages for our customers at a glance:

- Maximum system availability
- Early detection of wear and tear
- Assistance from our highly qualified technical staff
- Calculable investment of maintenance costs
- Support of the service and maintenance staff of our customers
- Consulting concerning the optimization of systems
- Full service provision also with existing systems
- Individual services for any requirement

We offer:



Hotline & on-call service

- 24h / 365 days on-call service
- Shortest reaction times
- Diagnosis via remote maintenance
- Swift error rectification by means of direct contact with our specialists
- Individual hotline agreements



Spare parts

- Individual spare parts packages
- Quick spare parts supply
- Assistance in the purchase and exchange of components



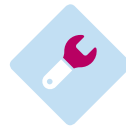
Production assistance & on-site service

- Secured transfer of know-how
- Quick reaction to changed project/order situations
- Project proximity through on-site service



Maintenance & inspection

- System-oriented maintenance plans and agreements
- Secured high level of availability of our customers' systems
- Cost reduction through early error detection
- Value preservation of our customers' systems



Repairs

- Planning and execution of repair measures
- Prevention of damage-related system failure
- Minimized downtime



Software support

- Regular software updates



Training

- Practical introductory training by experienced specialists on the system or at Aberle
- Optimal system management
- On-going employee training
- Little downtime



Safety review

- Annual review of, among others, storage and retrieval machines pursuant to EN standards for safety and health protection – e.g. UVV inspection
- Rack inspections DIN EN 15635
- Performance of measurements pursuant to BGV A3

We make sure you have Harmony in Motion. Worldwide.

We have been carrying out projects of all sizes for leading companies in all industries worldwide for more than 30 years. From prompt service provision, to modernization measures on existing systems, up to holistic planning and realization of complex intralogistics projects. In this way, we have been able to repeatedly delight current customers and win new ones. At the same time, we are continuously developing new approaches.

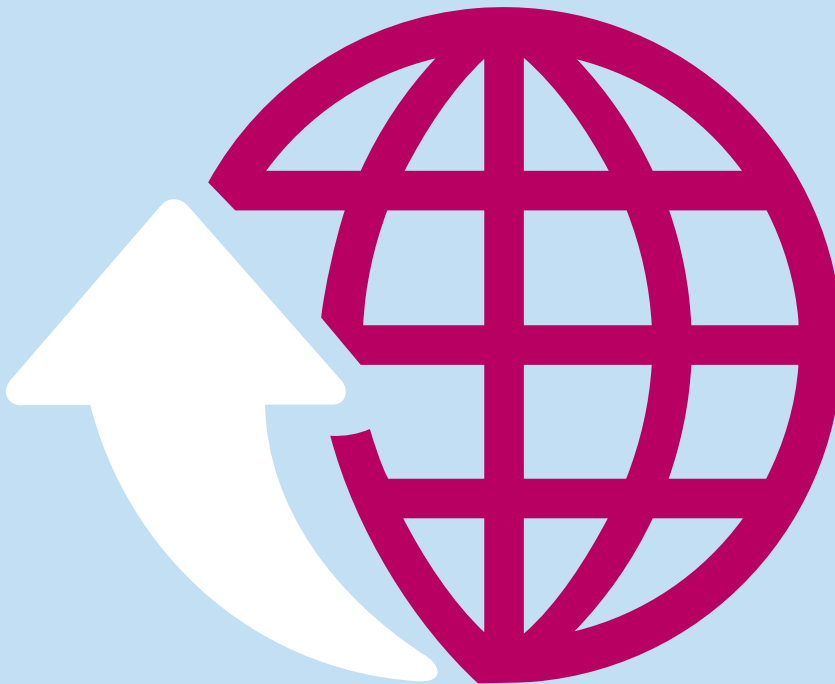


Our services speak for themselves:
You can find an overview of international references
for new and modernization projects at
www.aberle-automation.com



Experience Harmony in Motion
on our YouTube channel at
www.youtube.com/AberleAutomation

Australia
Belgium
China
Denmark
Germany
France
Italy
Canada
The Netherlands
Austria
Poland
Russia
Sweden
Switzerland
Spain
Turkey
USA
UAE

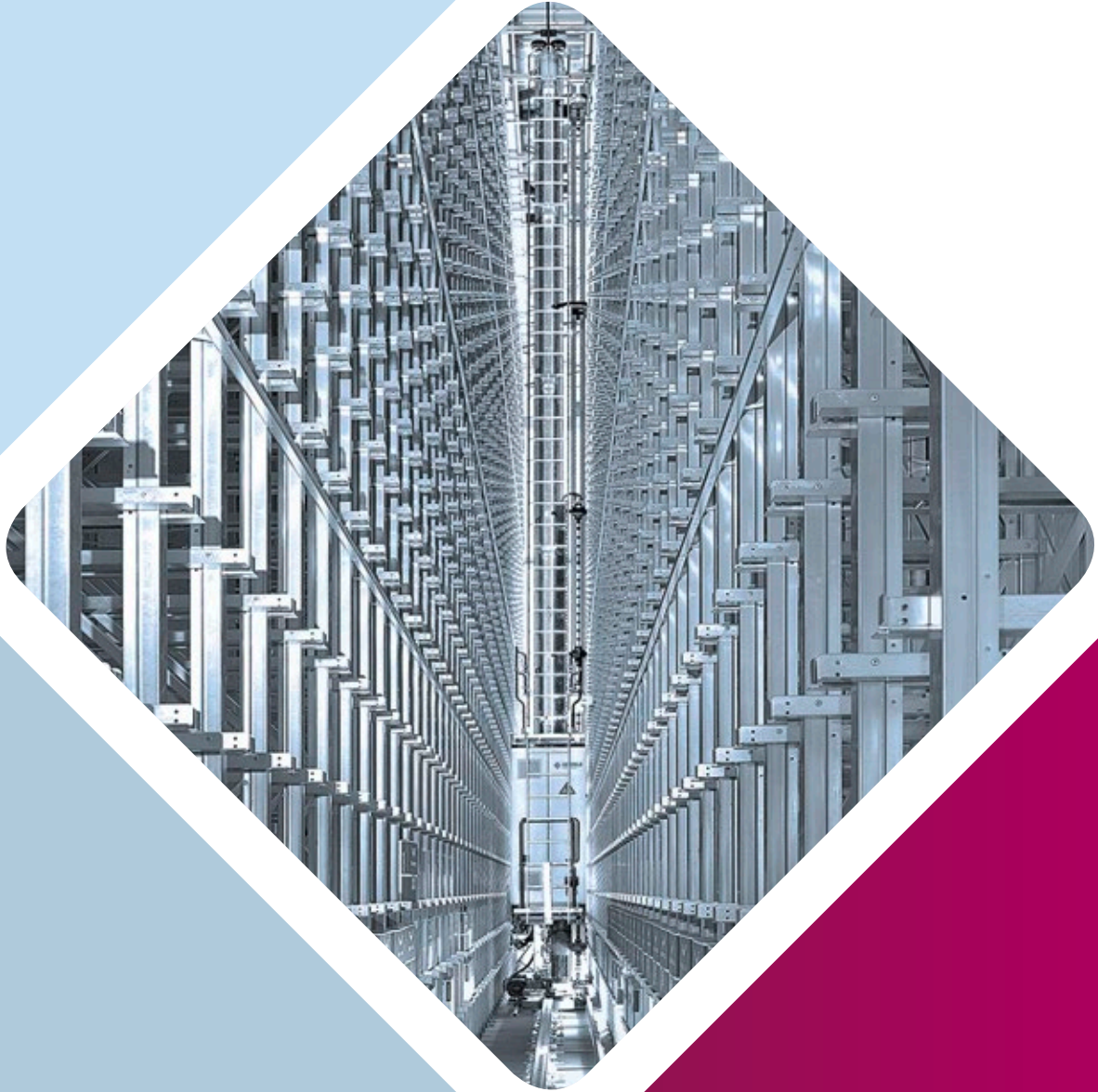


Aluminum industry
Automotive industry
and suppliers
Printing/paper industry
Beverage logistics
Retail / distribution logistics
Logistics service providers
Engineering
Pharmaceuticals/drugstores
Frozen food logistics

We look forward to hearing about
your requirements and to developing
solutions for you!

Our contact information:

+49 7131 9059-0



Aberle GmbH

Daimlerstraße 40

74211 Leingarten · Germany

Phone +49 7131 9059-0

Fax +49 7131 9059-59

www.aberle-automation.com

info@aberle-automation.com

