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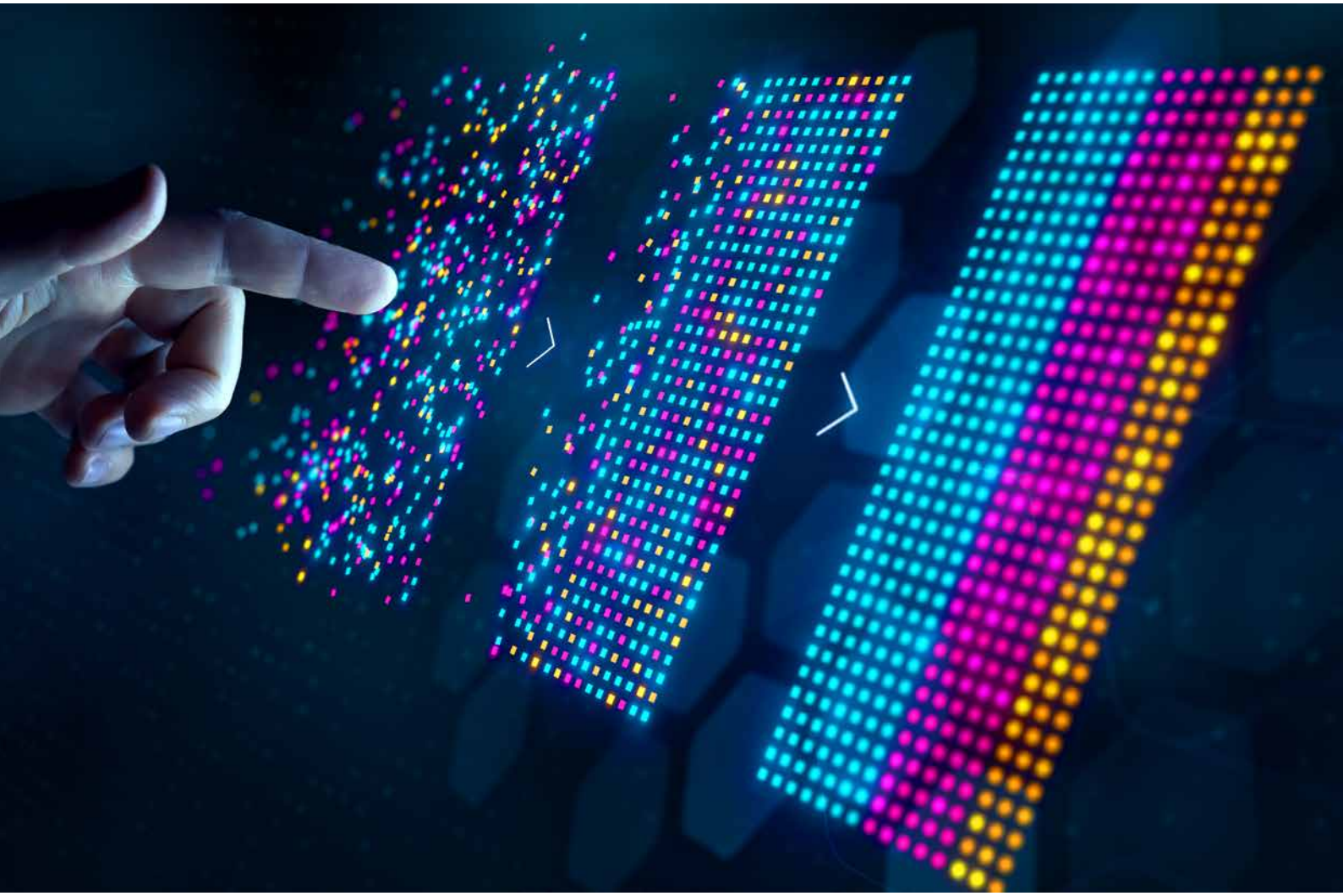
PRODUCTION manager

Magazine for production & logistics



In 3 steps to AI-based business process optimization with the Qualicision AI Framework

Label. Recognize. Optimize.

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PSI

EDITORIAL

Dear readers,

With our core message „Industrial Software with Built-in Qualicision AI“, we are expressing the fact that the Qualicision AI technology is already productively used in industrial applications in a range of PSI software products in various sectors. With Industrial Artificial Intelligence, the PSI Group is focusing on the important combination of AI methods with learning processes to optimize industrial processes. This is where business process data becomes information and the raw material of the future.

In this issue, we would like to inform you in the lead article about how you can create value-adding AI-based business process optimization with the Qualicision AI Framework in three steps and prepare your business process data for all user groups involved in the process in an understandable form using Qualitative Labeling, recognize conflicting interactions such as bottlenecks and delays at an early stage, optimize them using machine learning and derive measures for improving your business processes.

We also report on current developments in the various business units of PSI‘s Production segment. For example, you can find out what opportunities digitalization offers for aluminum production in terms of operating a highly efficient smart factory. Other articles from the manufacturing, logistics and metal industries report on current exciting customer experiences and associated new trends.

I hope you enjoy reading this issue and look forward to your feedback.

Yours sincerely,

Dr. Rudolf Felix
Managing Director
PSI FLS
Fuzzy Logik & Neuro Systeme GmbH

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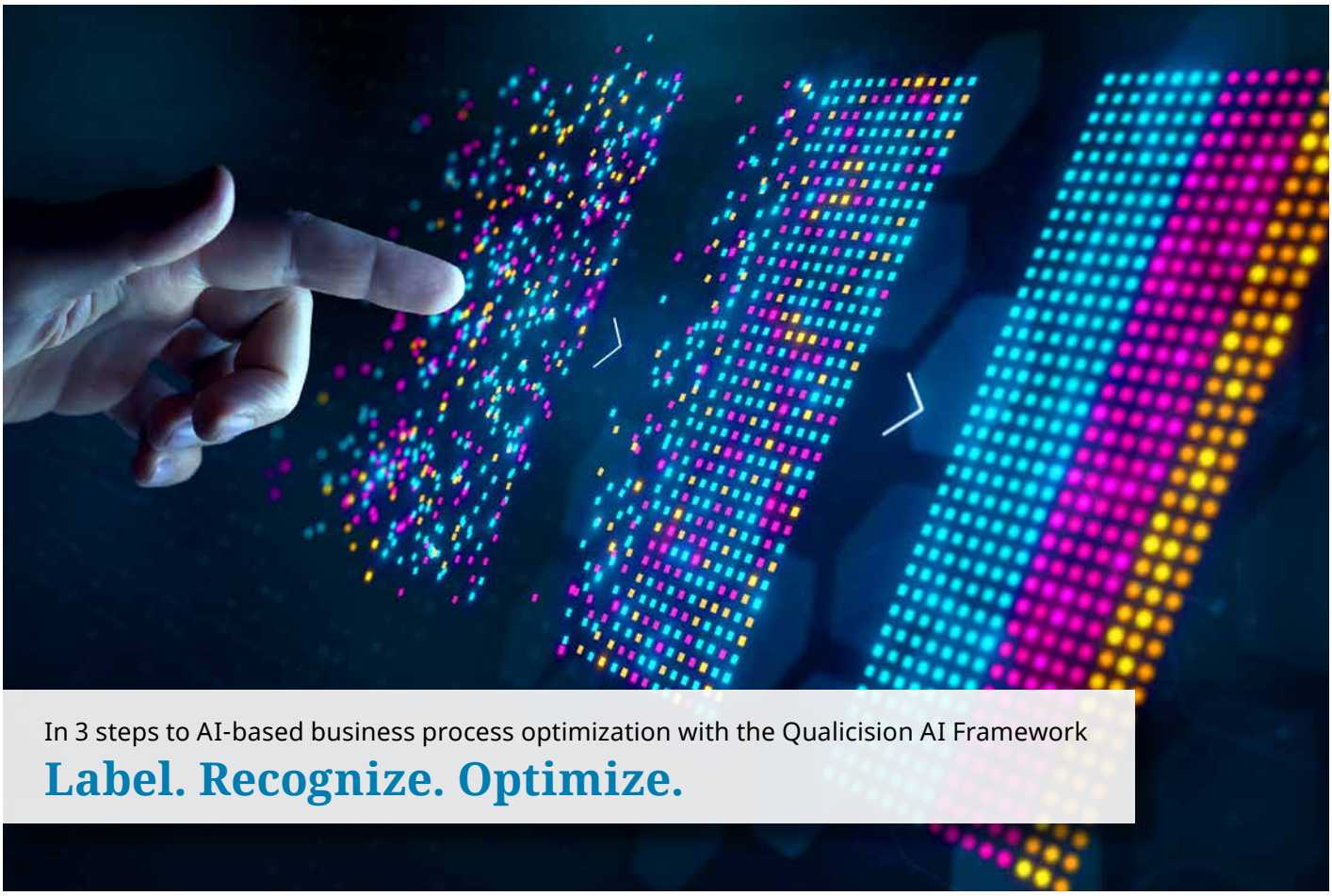

In 3 steps to AI-based business process optimization with the Qualicision AI Framework

Label. Recognize. Optimize.

As part of the PSI Framework for Industrial Artificial Intelligence, the Qualitative Labeling in the Qualicision AI Framework prepares raw business process data in an understandable form for all user groups participating in the process. This is done by qualitatively evaluating directly measurable data in the business processes with KPIs and learning their interactions automatically. With this approach, insights are automatically generated from the raw data, through which the organizational measures of the business processes can be optimized, and key performance indicators (KPIs) can be achieved in the best possible way. In addition, the use of Qualicision A2 (Qualicision Ask & Answer is the context-related conversational documentation used in the software modules) enables the explainability and comprehensibility of AI decisions and ensures sovereignty over the company's own business process data.

The Qualicision AI Framework is both cloud- and web-enabled and includes a machine learning and decision-making process based on the automated detection of KPI goal conflicts. It works with both input data and business process data generated by machine learning. This makes it very easy for companies, even small and medium-sized ones, to get started in the world of AI methods.

The KPI interaction analysis automatically supports the classification of business process data in such a way that interactions are derived from raw data which enable the further use of business process data by AI methods in a way that can be explained and understood by humans, right through to business process optimization. In just three steps, the Qualicision AI Framework makes it possible to go from raw business process data to a value-adding and comprehensible optimization of business processes.

Key figure-oriented Qualitative Labeling of business process data

First and foremost is the Qualitative Labeling of business process data with KPI evaluations. The input for the software essentially consists of two main components: Firstly, data streams of the business process to be analyzed are recorded and automatically converted into time series with the help of time stamps. Secondly, key performance indicators (KPIs) are agreed with the process

owner and used to analyze the relevant business process.

In addition, the value ranges of the KPIs are divided into favored and unfavored value ranges. If, for example, the capacity utilization of the plant and the set-up times are considered as KPIs for a plant in a manufacturing company, a percentage value greater than 85 percent can be defined as favorable and positive for capacity utilization. Values below 85 percent, on the other hand, are negative and the further downwards from this minimum target value are considered increasingly unfavorable. Similarly, the proportion of set-up time below 10 percent can be regarded as positive and above 10 percent as not worth pursuing and therefore negative (see info box). A process owner can carry out this evaluation of positive and not desirable areas even without in-depth AI knowledge, as this corresponds to their everyday evaluation of the process sequences (see Figure 1).

Automatic data mining and recognition of interactions and optimizations

If data streams and the associated KPIs are now time-stamped and continuously stored along the business process value chain, time series are created that are evaluated directly by the Qualicision AI Framework in such a way that positive and negative interactions in terms of the KPIs are recognized and learned. These can be made available to the process owner in a form that is directly understandable for humans. Examples of positive interactions can be characteristics of orders that are particularly well suited to the capabilities of the production process. Conflicting interactions can be, for example, the reasons for delays compared to planned deadlines or classes of order characteristics that increasingly lead to bottlenecks in the business process. Insights of this kind can be directly considered and used by the process owner to initiate organizational measures, for example (see Figure 2 left).

Figure 1: Qualicision AI Framework—Web GUI with Qualicision AI labeling function and impact matrix.

If, for example, deadline violations accumulate for certain variant combinations of order characteristics or if the capacity utilization of the systems decreases, orders with these characteristics can be handled differently in a targeted manner. At the same time, the KPIs can be used to precisely assess the improvement potential that the measures to be introduced will entail in monetary terms. The security that accompanies the introduction of the measures is immediate, as the measures are derived directly from the business process data using the Qualicision AI Framework (see Figure 2, right).

Machine-learning optimization

The automated derivation of qualitative insights is enriched by learning interactions from the raw business process data with information about KPIs of the business process. The resulting insights are not only useful for the respective business process. Rather, the method prepares companies for the subsequent application of further AI methods to optimize their business processes. Each newly acquired in-

Qualitative Labeling of business process data with Qualicision AI

Learning AI methods for the optimization of business processes and real-time decision support require automatically processed data. This means that it must be assigned a meaning before the learning process. This is because, unlike speech recognition or image recognition, new data patterns are constantly being created that need to be continuously relearned. This can only be done automatically by software.

Qualitative Labeling is one such method. It can be used to automatically identify interactions in historicized and current data by means of goal conflict analysis—in the form of self-calculated classes of data patterns. These are presented to users for confirmation or correction. Qualitatively labeled data thus builds a bridge between data patterns in the raw data and their meaning in the real world of the relevant process. In this way, they create the conditions for continuous process improvement in combination with qualitative, optimization-based AI methods (Qualicision AI).

Figure 2: Qualicision AI Framework—Sequencing with order property distribution and scheduling with 3D KPI relationship matrix, KPI viewer, KPI preference settings.

teraction is potentially the basis for a further key figure that can be incorporated as a KPI in the Qualicision AI analysis as feedback. In this way, companies can not only control their business processes in a targeted manner but also gradually transform them into self-optimizing control loops. Based on the business process data, this makes it much easier to cope with the increasing process dynamics.

Figure 3: Qualicision AI Framework—Generative AI with Qualicision A2 ask-answer dialog.

With Qualicision A2 (see Figure 3), the Qualicision AI Framework also includes a generative component that, when switched on, adds any information available in text form, such as product manuals or other documents, to an existing application in a learning manner. This creates the requirements for equipping software tools and applications with an explanatory component that enables a context-based ask-and-answer dialog with software modules or the associated PSI software tool. The learning analysis process described above can be initiated again and again on a rolling basis.

KPI-oriented labeling, recognition, optimization

Due to the general validity of the software, any existing PSI software based on the handling of KPIs can be used as a KPI analysis engine. This means that a PSI application can be expanded to include self-learning analysis and text-based ask-answer dialog capabilities that systematically prepare the introduction of further AI functionalities.

The Qualicision AI Framework is connected to the PSI Framework for Industrial Intelligence (CII Framework) via the Java-based PSIbus technology, among other things. In this way, an AI-based architecture of an analysis and usage logic is gradually being created which, starting with the raw business process data, provides the recognition of process interactions through the Qualitative Labeling of data using KPIs and machine learning. In this way, the machine-learning optimization of your own business processes is made possible in a value-adding, comprehensible and resource-saving manner.

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Interview: Karl Tröger talks about digitalization hurdles for SMEs

Trend Towards Low-Code and No-Code Platforms

Small and medium-sized enterprises still have difficulties with implementing digitalization projects. We spoke to our Business Development Manager Karl Tröger about why a low-code or even no-code platform can be a suitable vehicle for being able to act quickly on one hand, and what pitfalls need to be considered on the other.

Mr Tröger, while Artificial Intelligence complements a wide variety of systems in large companies, for small and medium-sized enterprises (SMEs) even the smallest digitalization projects are challenging and difficult to implement. What do you think are the main reasons for this situation?

Karl Tröger in talk.

Karl Tröger: It is the constraints of small and medium-sized enterprises which make it difficult for them to push ahead with digitalization. This is mainly due to the fact that, unlike larger companies or corporations, they do not have dedicated IT departments. The few employees who have the necessary expertise are the most demanded ones in nearly all projects as they are working at full capacity. In turn, companies that are economically in a position to hire new specialists are not successful in their search. In this context, shortage of skilled workers is the well-known keyword.

SMEs are therefore lacking resources. Low-code or no-code platforms are increasingly being put forward as a possible solution. You have also written and spoken about this technology. Why is this approach being so hyped?

Karl Tröger: I would no longer describe this technology as hype. The point is that SMEs need to become resilient, i.e. resistant to the conditions of their markets. Above all, they need to create end-to-end processes that integrate customers, suppliers and all the systems and people involved. To some extent, this involves many small integration projects. And this is precisely where low/no-code platforms (LC/NC) offer completely new possibilities. This is because new applications and workflows can be created without programming knowledge! This means that specialist know-how can be quickly and easily poured into code.

That sounds like do-it-yourself digitalization and is almost too good to be true. Is this approach feasible for all areas of the company or are there limits?

Karl Tröger: Of course they do exist, and it is also very important that companies are aware not only of the opportunities but also of the limits of this technology. For example, the aim cannot and must not be to replace systems that contain decades of condensed industry knowledge or to develop system-relevant components. However, LC/NC enables users to change or supplement these systems quickly and easily, e.g. processes in the sales and service environment. At the same time, everyone must be aware that, despite the simplicity, this is software development and uncontrolled growth must be systematically avoided.

Does this mean that the processes must also be closely monitored for LC/NC solutions?

Karl Tröger: Exactly. It requires good application lifecycle management. In particular because this technology allows manageable sub-projects to be implemented, it is important not to lose sight of the big picture. In this respect, the risk of shadow IT should not be underestimated. That would be absolutely counterproductive. Finally, we should not forget that, despite everything, we are talking about software with a life cycle. Therefore, processes that were implemented quickly with LC/NC can become obsolete just as quickly and must then be easily identifiable.

So allow us to look a little further into the future. Where do you see further potential for LC/NC—especially with the inclusion of Artificial Intelligence (AI)?

Karl Tröger: To say it straight away, I am convinced that the future possibilities are immense. We know how challenging the integration of AI applications is, even though AI is already suitable for engineering. LC/NC will also be able to help connect these with local solutions. I think that we are fundamentally facing a paradigm shift where modular, adaptable software systems no longer integrate everything in the interface. Thus, the path is: from "feature-rich" to "feature-focused". Low-code/no-code platforms will be a conceivable and rewarding testing ground for this.

About Karl Tröger

Karl Tröger has been working as an ERP expert at PSI Automotive & Industry for more than 20 years. During this time, he has dealt with all aspects of ERP software and has held leading positions in development, consulting and marketing. Today, he sees himself as a link between customers, the market, science, software development and marketing. The graduate engineer in electronics and communications engineering is involved in the Industry 4.0 platform initiated by the German government and regularly publishes highly regarded publications on the future of production-related software.

Finally, Mr. Tröger, a small challenge. Formulate the greatest benefit of low-code/no-code technology for SMEs in one sentence.

Karl Tröger: Challenge accepted: Low-code or no-code platforms enable companies to use the knowledge of their best specialists and drive forward digitalization in a practical and future-proof way.

Thank you very much for the interview and this great closing sentence!

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INDUSTRIAL AI BASED SOFTWARE

PSI will be presenting bundled software intelligence for optimized and sustainable production and energy supply at the Hanover Fair from 22 to 26 April 2024.

We are looking forward to your visit.

HANNOVER MESSE

User report: PSImetals in use 24/7 at the ultra-modern Smart Factory of AMAG Rolling GmbH

Digitalization: Opportunity for Aluminum Production

Digitalization offers unlimited possibilities for aluminum production. This is also the case at the AMAG Rolling GmbH site, where a highly efficient Smart Factory is operated with comprehensive PSImetals Production, Logistics, Planning and Integrated Level 2 and 4 systems. The Smart Factory tests up to 500000 material samples per year and meets new standards in line with the Industry 4.0.

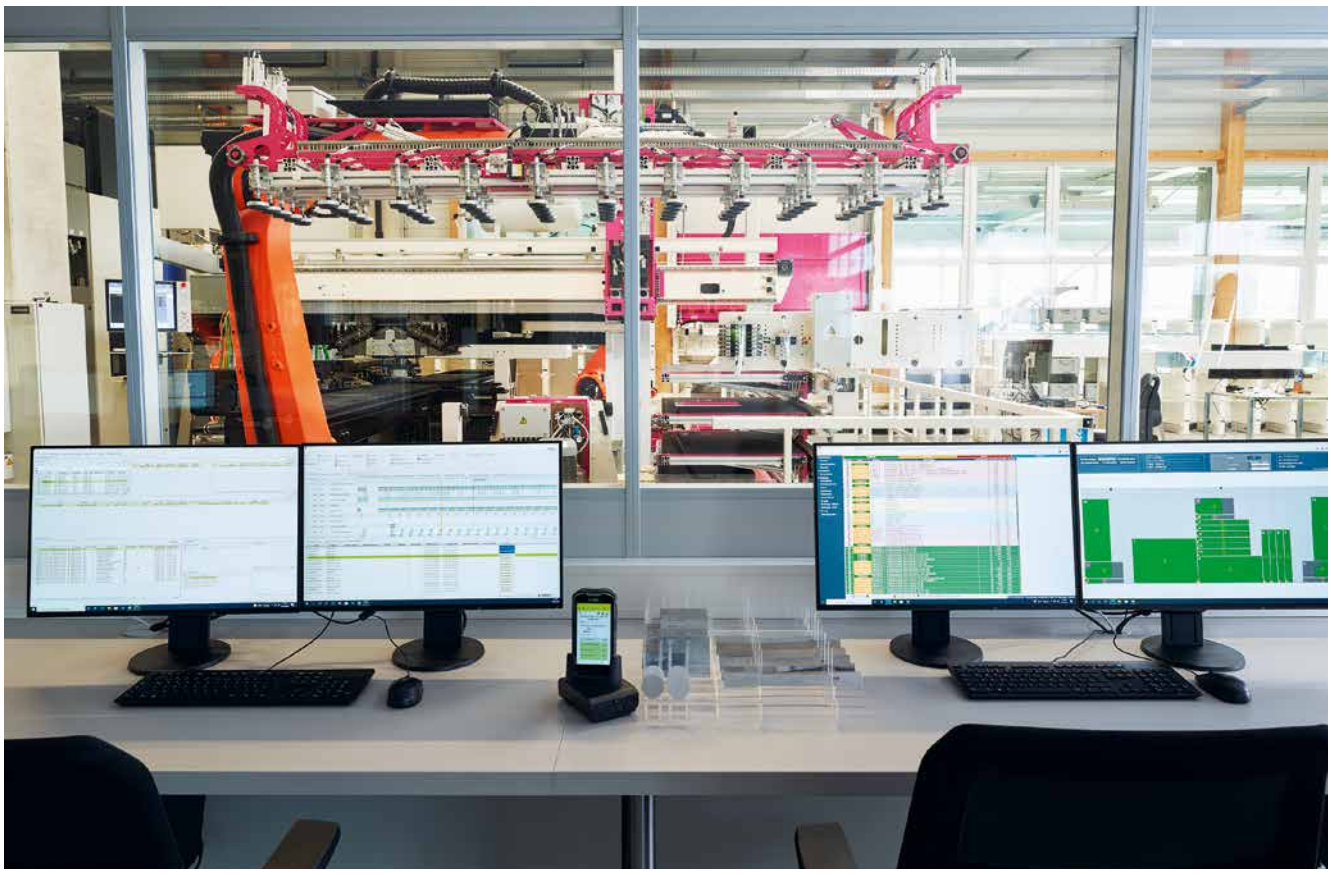
AMAG is a leading premium supplier of high-quality cast and flat-rolled aluminum products for a wide range of industrial applications. Increasing production volumes (442000 tons of aluminum in 2022 alone) and higher customer requirements for quality control mean that AMAG has to ramp up its production. With the newly established Smart Factory, AMAG will increase its material testing from 250000 to 500000 test specimens per year and thus be able to handle the planned increase in production more efficiently.

Dr. Werner Aumayr, Chief Information Officer at AMAG says: "AMAG has built this innovative facility from scratch. It is the first of its kind in aluminum production. We are setting new standards in terms of planning, quality, reproducibility, processing speed and flexibility."

The Smart Factory is a production system that uses the intelligent production environment to control and execute test orders so that the orders can be identified and localized at any time. Robots efficiently cut the sample sections of plates, sheets and coils and prepare them for testing.

Most of AMAG's rolled products have to undergo a quality inspection before they are delivered to the customer. This quality inspection is part of the entire process chain and takes up a significant proportion of the total throughput time.

Dr. Ramona Tosone, Head of R&D at AMAG Rolling, adds: "This system enables us to run our sample production and tensile testing lab for sheet products 7x24 round the



PSImetals in use as a planning and control system for the Smart Factory.

clock without adding more human resources."

How the new IT landscape works with PSImetals

Sample production and testing are part of AMAG's value chain and serves to guarantee product quality. In order to simplify the planning of delivery dates and production processes, fixed time sequences are defined for products. In the past, test orders were assigned according to the "first in, first out" principle and required considerable human resources for short-term adjustments. Now, the Smart Factory uses intelligent software systems to meticulously plan the sample production and testing process. The Smart Factory uses intelligent software systems to meticulously map out the sample production and testing process, turning various systems into cyber-physical production systems networked via the Internet of Things for autonomous and real-time monitoring.

Automation of routine and changing production processes

The planning and control systems optimize automation for routine and changing production processes and adapt dynamically to new and changed orders. It allocates resources based on capacity and availability, taking into account factors such as operating times, shift schedules and planned downtimes.

In addition to meeting deadlines and throughput times, KPIs also play a decisive role in planning. The system uses PSIqualicision to intelligently plan a consistently coordinated sequence of work steps for all orders in order to make the best possible use of available resources and improve planning and delivery reliability.

In summary, the Smart Factory's innovative planning and control system enables a range of functions to be implemented:

- Intelligent planning of all work steps in sample production and testing for material approval with a short-term time horizon
- Medium and long-term capacity planning for the entire available infrastructure for material testing
- Monitoring and analysis of planning outputs
- Simulation of production/testing scenarios without interrupting ongoing operations
- Independent organization of work steps within the automated sample production system
- Management of master data and data acquisition for the entire sample production and testing system
- Multilateral connections to various production planning systems, including quality data management

Smart Factory of AMAG Rolling GmbH.

Despite processing large volumes of data, the Smart Factory planning system effectively monitors and evaluates the capacity utilization of production units and identifies bottlenecks and delays in order to adjust resource management. A simulation tool predicts the effects of rescheduling and resource reallocation, enabling reliable process planning for the future. This approach enables the Smart Factory to adapt flexibly and proactively to changed or new orders and ensures that the necessary resources are available.

A strong and reliable partner for metals producers

AMAG's Smart Factory is a novel example of the possibilities of digitalization in the process industry with PSI Metals as a strong partner. Dr. Aumayr sums this up: "PSI Metals has successfully implemented the software solution in line with our digital strategy and is therefore the right partner for digitalization."

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Investment-Proof Warehouse Management System

The Weiss Chemie + Technik group has optimized the entire material flows between purchasing, production and shipping at the Haiger site with PSIwms warehouse management system and integrated additional warehouses into the logistics processes. Continuous upgrades keep the software up-to-date with the latest technology. The increased process efficiency enables throughput increases in the double-digit percentage range.

One of the guiding principles of the Weiss Chemie + Technik GmbH & Co. group's corporate philosophy is to offer customers clear benefits through cost-effectiveness, availability and high technological standards.

Founded in 1815, the traditional company operates two production plants in Germany and is internationally active in the industrial market. At the 27000 square meter production and logistics site in Haiger, Weiss Chemie produces adhesives as well as sandwich and facade elements in two production units. With around 34500 pallet spaces and coordinated processes, the intralogistics system serves as a raw materials warehouse for production supply and as a distribution center for finished products.

Top view of the Haiger site.

Investment decision justified

With the company's continuous growth and high quality standards, Weiss Chemie invested in automated warehouse technology. The coordinated process control of intralogistics and production supply has been handled by the PSIwms warehouse management system for 16 years. The flexibility of the system and efficiency gains in intralogistics processes and production supply have since justified the investment decision several times over.

Initially, PSIwms was only implemented for the sandwich element division—and quickly proved its worth. Therefore, in 2008, the intralogistics of the Adhesives division was also integrated into the WMS. Both divisions are allowed to manage, shut down and change their own process landscapes.

High transparency

Furthermore, the upgrade and release capability ensures that the system is future-proof and investment-proof. The functional scope was updated and expanded with an initial upgrade in 2016. Five years later, Weiss Chemie commissioned a second upgrade, which went live in mid-2022. "We made a hardware change in intralogistics and therefore opted for a current release of PSIwms," explains IT Manager Andreas Pieck.

"The new version provides extensive management tools for KPI analyses and new modules." New functionalities such as activity tracking protocol process times so that activities and KPIs in the warehouse can be analyzed and optimized in depth. With PSI Click Design, there is more flexibility in the individual design of the user interfaces. The dashboard improves ergonomics on mobile touch devices. "Overall, there is a high level of transparency in inventory and storage location management as well as the mapping of multi-level processes," summarizes Pieck. And he adds: "Apart from consumables, all product components, raw materials, semi-finished and finished products are recorded in PSIwms."

Management of load carriers and hazardous substances

Different storage areas are set up for the storage of an average of 3500 stock keeping units (SKUs). An automated mobile racking warehouse offers 750 pallet spaces in 14 mobile rack rows, each for up to four pallets on top of each other.

Block storage and floor storage provide a further 350 pallet spaces for the sandwich panel division.

Furthermore, it also includes a flow-through warehouse, a cantilever warehouse, a manual container small parts warehouse and a manual rack warehouse. In addition to the operational inventories, including batch and HD management, PSIwms manages the load carriers and transport units such as big bags, metal sheets, drums, containers and cartons, pallets and mesh boxes, as well as hazardous materials and dangerous goods management.

Top view of the Haiger site.

Route-optimized transport orders

For goods deliveries, the WMS generates the optimum storage location from storage location specifications and restrictions and assigns route-optimized transport orders to the forklift terminals. The storages are scanned at the storage location and reported by PSIwms as stock to the ERP system. Production orders are used to call off production supplies.

After the transmission, the WMS checks the stock requirements, reserves the materials and triggers picking. If necessary, replenishment and stock transfers from the external warehouse are initiated automatically. This eliminates the need for Weiss Chemie to manage any shortages. Pickings are carried out manually, taking into account the FiFo strategy with 25 WLAN terminals such as forklift terminals and handhelds. The required articles are put together on load carriers.

Consistently coordinated processes

Once picking is complete, the integrated forklift control system assigns the transport orders for delivery to the machine stations. After completion, PSIwms reports all processes to the ERP system. Disposal of the production stations is also carried out via drive commands from the SLS. “Picking, delivery to the machines, production and the finished products back to the warehouse—all of this takes place in a process coordinated by the WMS,” summarizes the IT manager.

> *“A modern IT solution that grows with us and whose diverse functionalities have a lasting impact on the efficiency of our processes.*
>
> **Andreas Pieck, IT Manager at Weiss Chemie + Technik**

Investment quickly amortized

For outgoing goods, up to 320 delivery note items are picked and dispatched on a daily basis at Weiss Chemie in Haiger. The WMS forms the basis for coordinated order production. “A modern IT solution that grows with us and whose diverse functionalities have a lasting impact on the efficiency of our processes,” summarizes Pieck. “If you transfer this to the increase in throughput as a result of more efficient processes, we can argue with double-digit percentage increases since the first introduction of PSIwms. This has confirmed the investment decision and the investment has also quickly paid for itself.”

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Operational Data Collection via App

Wherever paper is still to be found in production, often great potential lies dormant. This is particularly true of production data acquisition. PSIpenta customers are closing this digital gap with a suitable app. The main keywords: stamps, feedback, overview.

The more accurately and quickly production data can be acquired and processed, the better. That is why companies have been handling central processes digitally for a long time. However, manual forms can still be found in many places for smaller tasks, such as confirming work processes—which is to the disadvantage of companies. This is because paper-based work processes lengthen information paths, impair flexibility when process adjustments are required and the subsequent manual transfer of data to the ERP-MES solution is prone to errors.

Production data can be accessed via smartphone and tablet PC.

For a long time, there was a lack of simple solutions that made digitalization really worthwhile for companies. Today, these digital gaps can be efficiently closed by using suitable apps.

Modern technology basis

PSIpenta/BDE-PZ customers rely on the BDE-Terminal industrial app, for example. It is designed to record all types of operating data quickly and precisely. This is ensured above all by lean processes and a simple, intuitive user interface. The technological basis is provided by the web-based, hybrid technologies HTML5, CSS3 and Java Script. They also enable the PDA terminal to retain the look and feel of the PSIpenta application and integrate seamlessly into the existing IT landscape.

Reduced information paths

The most popular functions include the clear visualization of the worklist, the so-called stamping area and the dashboard. This allows employees in production to view the worklist directly at their workstation at any time and with just a few clicks, or to filter it quickly and precisely according to specific criteria. It also allows information such as the production order number, operation or status of the operation to be viewed. Users can quickly and easily add stamps such as “AG finished” or “additional operation” to orders from the worklist.

All feedback is sent directly to the system without delay. The dashboard also provides information at the touch of a button, e.g. order data, parts list items and work processes. Last but not least, the respective processor can view the stamps placed and the number of good quantities and rejects within an order at the PDA terminal. This also helps to reduce paperwork and shorten or speed up information paths.

Support for production staff

In addition to the improved process quality, companies particularly appreciate the relief for their production staff. In addition, thanks to the user-friendly interface and simple processes, there are no introduction or training times, which means that the digitalization of the relevant processes pays off particularly quickly.

Mobile industrial apps increase efficiency

Many industrial companies use PSI's industrial apps not only in the field, but also in their own factories and workshops. The software solutions for smartphones and tablets are designed in such a way that the core tasks of ERP and MES processes can be accessed and processed with just a few clicks. The web-based tools can be controlled both online and offline and enable access regardless of time and place—which also makes work easier for colleagues who are not out in the field but are still not sitting at their desks.

Customer benefits

- ✓ Simple recording of feedback from production
- ✓ Capture data in real time
- ✓ Efficient support for employees in production
- ✓ Improved process quality
- ✓ Reduction of errors in the production process
- ✓ User-friendly user interface

Data capture and processing without media discontinuity is a matter of course. Whether data is entered via mobile app or desktop computer in the office, both solutions access the same data record, eliminating the need for duplicate data maintenance. All this saves resources and ensures extra (data) security.

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News: PSI delivers ERP System to technology innovator Trailer Dynamics

Mapping all Relevant Processes in the Standard

PSI Automotive & Industry has been awarded by the technology innovator for the decarbonization of heavy goods transport Trailer Dynamics GmbH with the implementation of the ERP system PSIpenta 9.4. The delivery includes the modules cost accounting, sales planning, industrial apps and a financial accounting interface for the ERP users in order management.

Trailer Dynamics opted for PSIpenta due to the positive experiences from earlier ERP projects and the existing references in trailer vehicle construction. In addition, the flexible system maps all relevant processes as standard and offers intuitive user interfaces as well as independent process modeling using workflow tools. It can also be seamlessly integrated into existing system landscapes. The planned project duration is three months.

Furthermore, as part of the company's expansion, the multi-site capability of the PSIpenta ERP system was a decisive factor in being able to manage additional plants worldwide in the future.

Trailer Dynamics founded in 2018, and based in Eschweiler, sees itself as a technology innovator for heavy commercial vehicles, especially trailers. The company's vision is to make an important contribution to the decarbonization of the economy and to sustainable, environmentally friendly logistics for long-haul trucks with the eTrailer.

As part of the overall semi-trailer system, the electrified drivetrain of the eTrailer uses the available electrical energy intelligently and optimally to significantly reduce diesel and CO_2 emissions in the logistics of trade, industry and freight forwarders or to double or even triple the range of battery-electric tractor units.

Employees of PSI and Trailer Dynamics after signing the contract in Eschweiler.

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Time to Act—for Our Customers and for Us

There have been several trends in the metals industry. But none have as much at stake as green steel production and digitalization. This is because the goal to produce green steel and reduce CO_2 emission from our atmosphere does not only impact our businesses but also our environment. And digitalization is an enabler of decarbonization. When there is so much at stake, you never stop asking how you can get better.

The new PSImetals Release 5.26 offers new functions for the continuous decarbonization and energy management of our customers. It supports the management of hybrid steel plants in the transition from blast furnace to direct reduced iron-based production. The software also improves the precise forecasting of energy and raw material requirements across all time horizons. An interface of the PSIqualicision Smart Day Trader enables energy to be bought and sold on the intraday market at the best prices.

An important milestone achieved

This latest Release signals an important milestone in our migration to the Service Platform (SP): a technology that supports efficient metals production. The Release includes the SP-based support for the Demand & Sales Planning process while providing improved forecast scenario management, workflow modelling by PSIbpm, data analytics based on our Embedded Business Intelligence framework and full support of all common database products, including MS SQL-Server and PostgreSQL.

No more Oracle dependencies

In PSImetals Quality, we have taken an important step by fully implementing our Process Quality Decision in the Service Platform. Like all new SP-based functions, all related functions are now fully web-based.

We have also replaced the Oracle dependencies just as we did with the Demand and Sales Planning modules. As promised, the new SP functions run smoothly integrated with the remaining Oracle-based components, enabling a smooth migration during maintenance.

Jörg Hackman, Managing Director at PSI Metals.

Looking to the future, the importance of introducing innovative solutions cannot be overstated. With PSImetals 5.26, you are not only equipped for the challenges of today, but also for a more sustainable and prosperous future.

Please, scan the QR code to find out more about PSImetals Release 5.26.

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Sustainable Exchange of Experience

Under the motto "Supporting your Decarbonization Journey", about 500 customers, partners and PSI employees worldwide took part in this year's Release Days and UserGroup. The event included expert speeches, panel discussions, presentations and innovation awards.

In his opening speech, Jörg Hackmann, Managing Director of PSI Metals, explains: "We have a clear vision on how we want to develop our products to support our customers along their decarbonization process to become more sustainable. We are pursuing three main approaches. First, schedule production while considering production targets and energy demand simultaneously based on green KPIs. Manage trade-offs between production energy costs and CO_2 emissions. Secondly manage energy consumption and intraday trading through the help of PSIqualicision AI-based buy/sell decision. Finally, track energy footprint of metals products to create transparency in the decarbonization journey of producers."

Panel discussions with experts

The highlights of the event included four panel discussions on the topics of decarbonization and sustainability, industrial artificial intelligence, digital services and core features of the PSI Service Platform.

For example, PSI Project Manager, Lota Limareva, emphasized PSI Metals' goal of becoming CO_2-neutral by 2030 in the panel discussion on "Decarbonization and Sustainability": "We not only want to support metals manufacturers in significantly reducing their emissions, but we also want to be CO_2-neutral for Scope 1 and Scope 2 emissions by 2026 and for Scope 3 emissions by 2030."

About 500 guests took part.

Innovation Awards and winners

The PSI Metals Innovation Award 2023 was presented during the evening boat trip. Four of the eighteen nominees were presented with awards. The winner was the entry "Global-Local Order Dressing as a Competitive Advantage for Customers" by Andrew Betzold, Carlos Olmos, Gagandeep Sehgal, Heinz Zechner, Jiri Blazek and Sean Baker.

Get-together with view to the Düsseldorf Skyline.

Focus on networking

In addition to the latest information, the participants focused in particular on exchanging experiences with other customers at the PSImetals UserGroup in Düsseldorf. When asked what the PSImetals UserGroup means to him, Erik Hermans, Program Lead Smart Steel Factory at Tata Steel Netherlands, replies: "The UserGroup offers us the opportunity to network, exchange experiences and learn from other users."

Harald Henning, Managing Director of PSI Metals, summarizes in his farewell speech: "We don't just hide behind computers. Rather, we love to interact with our customers and partners in order to provide them with the best possible support. As a stable and reliable software company with a global presence and local support, we accompany our customers on the challenging path towards successful decarbonization and digitalization."

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PSIwms Optimizes Warehouse and Logistics Processes

DEICHMANN SE has commissioned PSI Logistics GmbH with the implementation of the warehouse management system PSIwms 2023. This is intended to further optimize warehouse and logistics processes in the future and make them even more transparent and efficient.

The shoe retailer DEICHMANN decided in favor of the flexible warehouse management system PSIwms, among other things, due to the comprehensive range of functions, which covers most of the demanding requirements in warehouse management already in the standard.

Configure user interfaces easily on your own

In addition, the modern integrated PSI Click Design allows the user interfaces to be easily configured and individually adapted to the needs of the company.

Agile project development enables forecasts in terms of time and budget

Furthermore, the existing industry expertise as well as PSI's references in comparable project sizes, also with automation manufacturers, were decisive for the selection. Likewise, the agile project development was already significant in the selection process, as it enables forecasts with regard to time and budget for all partners.

Continuous and closely linked exchange

The focus of the strategic collaboration is on a continuous, closely interlinked exchange. For this purpose, a collaborative environment for knowledge transfer and cooperation has been created, with which experiences can be exchanged and change processes can be worked on together.

The project will be launched at Dosenbach-Ochsner AG in Switzerland, which is part of the DEICHMANN Group. Further distribution centers for DEICHMANN and Snipes, also part of the DEICHMANN Group, are to follow by 2026.

DEICHMANN

DEICHMANN SE, headquartered in Essen, Germany, was founded in 1913 and is 100 percent family-owned. The group is the market leader in European shoe retailing. The company employs around 16400 people in Germany in 1400 stores as well as in administration and several distribution centers. In total, the company has 4600 stores in 31 countries.

DEICHMANN distribution center.

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Higher Transparency and More Sustainability

PSI Logistics GmbH has delivered the software for analysis, planning and optimization of supply chains PSIglobal 2.7 to the bilstein group. Based on a digital twin, an improved level of service can be achieved in addition to higher transparency and sustainability in the supply chain.

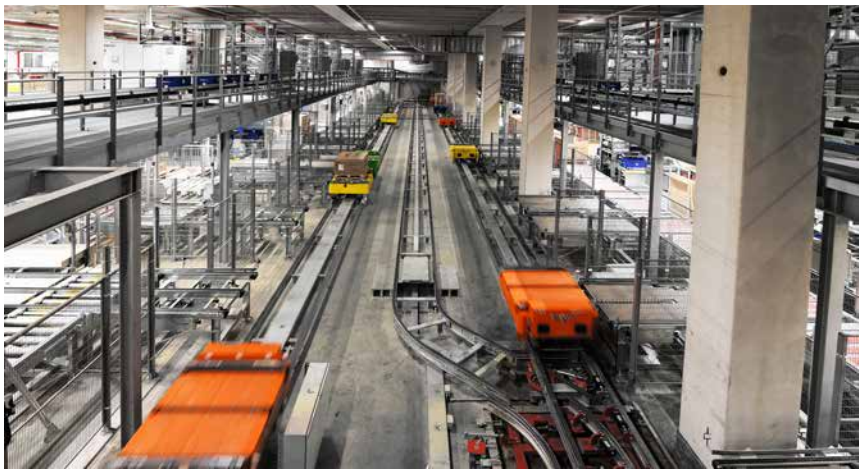
As a supplier and manufacturer of cars and commercial vehicle spare parts, the bilstein group opted for PSIglobal in particular because of the powerful algorithms for handling large volumes of data. In addition, the high flexibility and possibilities for modeling the logistics network were decisive factors.

Optimization of the flow of goods across the entire supply chain

Furthermore, the logistics network routing integrated in PSIglobal can be used to optimize the flow of goods across the entire supply chain and thus across all transport stages. Service-optimized and emission-efficient deliveries to the target markets can be determined based on a multi-level warehouse structure, taking into account various product groups and shipment types via a digital twin. PSIglobal enables the reduction of the CO_2 footprint through integrated calculation functions and supports the development of a sustainable supply chain management.

bilsteingroup®

Under the umbrella of the bilstein group, Ferdinand Bilstein unites the well-known product brands febi, SWAG and Blue Print. In total, the bilstein group offers more than 70000 different technical wear parts for professional vehicle repair. The internationally active group of companies supplies its products to over 170 countries.



The bilstein group warehouse.

Calculation functions reduce the CO_2 footprint

Initially, PSIglobal was used to set up a logistics network routing in France and Germany. This concept is now being rolled out step-by-step to other sales and procurement markets.

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PSI Logistics will be presenting software for internal material flow and IT control at the LogiMAT 2024 in Stuttgart from March 19 to 21.

LogiMAT

We are looking forward to your visit in hall 8, booth D41.

News: New ERP system for RAHLMEYER Maschinenbau

PSIpenta for Special Plant Construction

PSI Automotive & Industry has been awarded by RAHLMEYER Maschinenbau GmbH & Co. KG with the implementation of the ERP system PSIpenta 9.4. The delivery includes MES modules of the Smart Production for production control and Industrial Apps for materials management.

In addition to the well-known reference companies already successfully using PSIpenta, the specific functions in version 9.4 for make-to-order production in special plant engineering were particularly decisive in the selection process. Also, the presentation of the complex processes from design to procurement to production was convincing.

Cutting the "Welcome to PSI" cake at the signing of the contract.

It was also important to be able to map the commercial and logistical processes with PSI Click Design precisely, without programming knowledge, in order to obtain a structured and simplified view of the business processes. In addition, parts of materials management can be effectively managed using mobile applications with the PSI Industrial Apps.

With over 80 employees, RAHLMEYER Maschinenbau, a family-owned company located in Bad Oeynhausen, has been a contact partner for its customers in matters of intralogistics solutions since 1974. The systems are used in the furniture manufacturing, metal processing, beverage filling, packaging production and sheet metal handling industries, among others. From the idea to the implementation, this is what RAHLMEYER stands for. www.rahlmeyer.de

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Event: This year's 37th IPA Annual Conference in Stuttgart was a great success

Understanding Processes. Shaping the Future.

Even before the conference began, the location of Stuttgart gave an indication of the focus of the social program: mobility, especially cars—and sports cars at that.

In the home town of Mercedes and Porsche, conference participants were treated to a keynote speech by racing legend Walter Röhrl. The two-time rally world champion received a standing ovation at the end of his presentation and signed autographs for many of the attendees.

Another highlight followed in the evening, when guests were invited to the Porsche Museum. After dinner, an extraordinary light show took place in

Impressions of the 37th IPA Annual Conference in Stuttgart.

the restaurant on the top floor, after which the exhibition was opened exclusively for the IPA guests.

The 37th edition of the IPA also had a lot to offer in terms of technical topics. In addition to the tech talks by PSI's ERP and MES specialists and the presentation of PSIpenta version 10, there were a total of three workshop phases in which lively discussions and shop talk took place. The five conference rooms were always well attended, as was the partner exhibition, which was particularly busy during the breaks. Finally, things got exciting when the new CEO of PSI, Robert Klaffus, introduced himself with a presentation.

Walter Röhrl during his speech.

Conclusion

With more than 200 satisfied visitors and numerous positive feedbacks, the IPA Board is extremely satisfied with this year's conference. However, the peaceful moment is short-lived: preparations are already underway for IPA 2024, which will once again take place in Berlin.

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EVENTS

On our website you will find all current trade fair participations and conference offers.
www.psi.de/en/psi-pressevents/psi-events/

The PSI blog features more interesting and in-depth articles on production, logistics, AI, energy and mobility.

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