AUTOMOTIVE



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FOREWORD





f.l.: Peter Grendel, Holger Pralle

Dear Reader,

Hardly any other branch of industry needs to be evolving as constantly as the automotive industry. Manufacturers and suppliers are constantly looking for new solutions to provide intelligent answers to current and future challenges. They are operating in increasingly complex supply chains that extend around the globe. Markets and customer needs change dynamically and fundamentally. New requirements and technologies place every increasing demands on development and production.

In light of this, car manufacturers and service providers all around the world are seeking ways to actively shape change and thereby gain opportunities for themselves. The modernisation of IT systems based on SAP provides a starting point. For example, Daimler AG has reorganised its material logistics at the Mercedes-Benz site in Bremen. The manufacturer is using the AmSupply template to optimise its processes with the help of abat, as is also the case in other plants. The car manufacturer is creating the conditions for a dynamic future with the modern, integrated solution that replaces various old systems. An important goal is to effectively pave the way for a greater diversity of models and variants with the highest quality standards.

abat is optimising the processes in development and production for VW through the use of BOMs (bill of materials) in SAP to realise increasingly diverse customer requirements economically. Manufacturers like Audi are also using standard software options in other areas. For example, the Ingolstadt-based company is using the KOMPASS solution to make its press shops viable for the future. The close involvement of employees and agile processes for the development and realisation of software is essential for a quick and smooth implementation.

Some time ago, Daimler AG took a major step towards standardising production and Industry 4.0 with networked and self-learning IT systems that use the PLUS production control system for the production of all Mercedes-Benz and Smart vehicles worldwide. The Chinese company Qoros has relied on the SAP-based standard product from abat+ since 2013. The industry newcomer is managing its main processes with only three software providers and is relying on SAP in the key areas. For production control, the company uses the PLUS solution that was also introduced by the manufacturer abat+ in no time at all. As a result, the Chinese car manufacturer achieves a high level of quality and supply reliability and it was rated the safest car in Europe in 2013 by NCAP.

Many car manufacturers show how they can optimise their own production control processes and the corresponding SAP solutions in different areas with abat. They provide answers to current questions with regard to improved efficiency with increasingly complex requirements at the same time.

Peter Grendel, Holger Pralle

AM SUPPLY

MODERNISING MATERIAL LOGISTICS WITH SAP



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Daimler is optimising its material logistics together with abat. The car manufacturer is also changing the processes in this area in the Mercedes-Benz plant in Bremen. The company is achieving more efficient processes that are viable for the future thanks to the introduction of the AmSupply SAP solution.

Daimler decided to modernise its material logistics, among other things, to make the plant in the Hanseatic city viable for the future. The aim was to optimise processes such as demand planning, material scheduling, warehouse management, suppy chain as well as parts shipment and goods receipt. The AmSupply SAP template, which enables old systems to be replaced efficiently and effectively, was offered as a solution. As the IT service provider, abat provided support in changing key processes over to the future-orientated system. Before the start of the project, a joint team of consultants from the SAP solutions provider and employees of the car manufacturer checked the feasibility and conditions for the Bremen plant. The preliminary project identified that the site would give rise to a high degree of implementation complexity. This was perhaps because of the infrastructure that had become established over seven decades, the large number of jobs and the high annual production volume. It was important, for example, to implement the demand planning through to the individual production line conveyors due to the large capacities.

Core team with extensive support

A project team was set up based on the complex tasks with a total of over 200 employees. This essentially included 50 consultants from abat and IT employees from Daimler. The SAP solutions provider took over the realisation, elements of the consulting services, as well as the ongoing application management. Many members of the core group were already responsible for the introduction of the AmSupply template in two other plants. Other employees from technical departments in the Bremen automotive plant joined this group on a fulltime basis. As process experts, they provided knowledge about the processes, for example, inventory control or return and consignment stock shipments.

At the same time, they gained a deep insight into the system during the project and became key users. Other employees from technical departments supported the core team depending on the schedule of tasks. The project structure was supplemented by a group of experts and a steering group. A cut-over manager and around



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AM SUPPLY

MODERNISING MATERIAL LOGISTICS WITH SAP

60 specially trained start-up mentors were available for the Go-Live project phase.

Standard and in-house development

The focus of the project was to manage as many of the on-site processes in the standard AmSupply template. Additional developments were required like being able to manage forklift routes. Another area were the scheduling processes, such as with a staggered change of suppliers. abat contributed their special know-how in this area and implemented the Dispo-Cockpit as a simple user interface for the employees. The functions of standard programs and transactions run in the background. Several transactions for the pre-planning phase of changing a supplier can therefore be completed in a user-friendly manner with just a few clicks in the Cockpit. This step helped to facilitate the training process.

Experts pass on their know-how

In addition to adapting the SAP solution to the conditions in production, two factors were crucial for the smooth implementation in the plant: an extensive information and training programme as well as comprehensive start-up support. The project, background and progress were communicated in the plant from the outset. The

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training of employees was also started a few months before going live.

The key users from the core team acted as trainers and disseminated information. The content and form of the many employee training sessions were geared to the specific tasks and ranged from one-day workshops to onthe-job training for employees whose work processes have changed significantly as a result of AmSupply.

Special start-up help

The project team focused on comprehensive on-site support for employees during the startup phase, abat trained around 60 students of business information systems to ensure that this would run efficiently given the size of the plant and the shift work operation. Within three months they were trained as start-up mentors ready for the first few weeks after the Go-Live. They were introduced to the basics of AmSupply and trained in the work processes. They were subsequently the first point of contact for employees as the face of the project in the production halls. If they were unable to answers questions and solve problems within five minutes, they passed them into the back office, where SAP consultants and experts from Daimler's IT team took care of them. These clear rules meant that many questions were resolved on-site. At the same time, the back office specialists focused on handling the larger and more important questions. The AmSupply template started to run smoothly very quickly after going live. As a result, the plant in Bremen gained material logistics that are among the most modern of its kind.

VOLKSWAGEN GROUP DSL

CONSISTENTLY EFFICIENT AND SIMPLE



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The diversity of models and variants are crucial factors for the success of Volkswagen AG. The Group is focusing on optimising processes from design through to production, among others, to enable the provision of the required selection and extras to customers efficiently. Together with the abat, VW is creating, for example, consistent BOMs (Volkswagen Group DSL) with the TI-Syncro IT solution based on SAP for the automotive industry. Oliver Koslowski-Schäfer, Volkswagen AG Group IT, Head of K-SIPE-6, talks about the background and opportunities created by the solution.

What are the reasons behind VW AG focusing on consistent BOMs (Volkswagen Group DSL)?

Oliver Koslowski-Schäfer:

The automotive industry has changed fundamentally over the last 20 years. We are now competing with many more manufacturers in a larger number of markets. As well as the competition, customers' requirements have also increased. Vehicle classes have diversified substantially and there are considerably more derivatives. As a group, we must also manage steadily increasing vehicle production. Volkswagen is therefore developing a modular strategy from its platform strategy. We are creating an important basis for this with our consistent BOMs from design through to production. This

is providing an effective group-wide response to the challenges that we face.

What does the DSL project involve?

Oliver Koslowski-Schäfer:

We are further optimising existing and well-functioning processes related to our BOMs with the implementation of the solution. These lists contain tens of thousands of individual parts including all variants for different vehicle models. They are used as a source of data for the processes in design and service. With TI-Syncro we are creating group-wide uniform BOM management, enabling information to be consistent. We can therefore manage the information for different departments in one system. For example, we are providing BOMs for technical development, logistics and individual plants in the solution, quasi from different perspectives.

How is VW implementing DSL?

Oliver Koslowski-Schäfer:

Together with abat we are proceeding in four individual but partially parallel phases. First, we have integrated the technical development BOMs into TI-Syncro in the initial phase.

We completed this process by the middle of



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VOLKSWAGEN GROUP DSL

"THANKS TO THIS SOLUTION, WE ARE ALSO OPTIMISING THE COMMUNICATION BETWEEN THE DIFFERENT TECHNICAL DEPARTMENTS."

Oliver Koslowski-Schäfer

2013 so that the development BOMs for all vehicles are now completely available in the system. Back in 2008 we started with the second phase: ensuring the consistency of BOMs from design through to production. We have currently implemented this process for six vehicles across the Group. The objective over the next few years is to implement phase 2 for all models in the Group. In parallel, we are starting with phase 3 and rolling out the solution to all 100 plants and companies. This process will be completed in four to six years and we can begin to shut down the old systems in phase 4.

In which departments is abat supporting the project?

Oliver Koslowski-Schäfer:

We have the support of a long-standing and experienced IT service provider with the abat. The company is working with us in all project activities. Consultants from abat are supporting the technical departments to analyse processes and adopt them in the system. With their expertise, they cover all areas, from technical development and colours through to logistics fulfilment and the validation of parts. We also have the support of abat specialists in the implementation and development. Employees and companies demonstrate a high level of identification with the project. The working re-

lationship is professional, reliable and based on a high degree of trust and is therefore extremely successful.

What are the advantages of the consistent BOMs?

Oliver Koslowski-Schäfer:

In terms of IT, the solution greatly simplifies the system landscape. As a result, we are replacing six systems with one solution based on the latest technological standards. We can therefore also optimise the communication between the different technical departments. There are no longer any system failures, and everyone gets their information from just one system. This means that everyone is talking about the same thing. This creates streamlined processes that also avoid friction in production and in the correction of BOMs. In TI-Syncro everyone can see at a glance the interdependencies between production steps, configurations and components. For example, the consistent BOMs show the connections between braking systems and motorisation. If adjustments need to be made to the BOMs, these can also be implemented uniformly for all departments at a central point. This not only facilitates corrections but also ensures reliability across all processes.



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AUDI KOMPASS

SAP AS A DEFINED ENTITY IN THE MANUFACTURE OF COMPONENTS



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Audi is making greater use of SAP solutions to optimise processes in increasingly complex supply chains. For example, the company has implemented the component production, planning, data acquisition and control system (KOMPASS) for its press shops together with IT specialist abat. As a result, the premium manufacturer is navigating more efficiently through a globalised production landscape.

Audi sold nearly 1.5 million cars worldwide in 2013 alone. Its high diversity of models and variants is a basis for that success. This should be further developed as part of the 2020 strategy. A wide variety of models and special editions increases the complexity for production. All departments - from planning and logistics though to control and IT systems - are affected by this. Audi is therefore optimising processes along the supply chain, such as processes in the manufacture of components. The car manufacturer has replaced the PRESS control program that it previously used in its press shops in Ingolstadt and Neckarsulm with the standard KOMPASS SAP solution. The objectives are to ensure the long-term process capability as well as to achieve greater efficiency with the implementation of a high diversity of models and variants.

Creating new and efficient solutions

"A key challenge was to replace a proven inhouse development," explains André Ziemke, Head of Production IT at Audi, as he looks back on the joint project with the SAP solutions provider abat. The company had previously used the PRESS software for 30 years for the planning of production in the press shops. This was closely integrated into the car manufacturer's system environment through a variety of interfaces. Audi decided to use a largely standardised solution based on SAP to achieve harmonised and sustainable processes for its press shops. "As we had little experience of SAP so far, it was important for us to closely involve not only the IT department but also the technical departments in the implementation from the outset," explains André Ziemke.

A development for the users

Audi and abat opted for an implementation in a SCRUM process to introduce KOMPASS quickly and smoothly. All parties involved are closely involved in a step-by-step development and implementation. The project team therefore included employees from logistics, production, operating resources and quality management from Ingolstadt and Neckarsulm.



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AUDI KOMPASS

"WE HAVE ACHIEVED KEY MILESTONES ON THE WAY TOWARDS OUR 2020 STRATEGY WITH THIS PROJECT"

Wilhelm Straub

The core members of the team were representatives from the company's IT department and abat employees for project management, process design and implementation. From the outset, the users were therefore the focus of the implementation that naturally started with a business blueprint. "We initially developed a product backlog describing the requirements from a user's point of view," explains Joachim Mannherz, Project Manager at abat. At the same time, the team prioritised the specifications based on the benefits and necessity. User stories that define the functions for individual user groups formed the basis for this. "These technical descriptions from the users' perspective allow precise customising of the standard software as well as appropriate supplementary developments", emphasises Joachim Mannherz.

Step by step to success

The development and implementation with SCRUM are divided into individual packages (sprints) that are processed in four to six weeks. A permanent exchange takes place between team members and users concerning progress and pending tasks. "A deliverable partial result is available at the end of each sprint that is discussed with the technical departments in reviews", explains the abat Project Mana-



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ger. Over 50 employees on average from both plants were involved in the reviews via video conferencing. Production, maintenance, quality assurance and scheduling personnel therefore gained an early insight into the new solution. The Audi Academy provided specific know-how and information on handling the system during the ongoing project. Wilhelm Straub, Head of the Press Shop Division at AUDI, sees the close exchange and timely training to be the key factors for the smooth implementation of KOM-PASS: "Over 600 colleagues from Ingolstadt and Neckarsulm were trained in this way".

A model for all sites

Project milestones could be agreed promptly and directly with the users using the SCRUM approach. "Solutions can therefore be developed for users instead of bypassing them", states Joachim Mannherz. This avoids necessary adaptation costs and speeds up the implementation process. As a result, Audi and abat jointly created efficient production control as well as a nearly complete ERP system for the centralised processes in the press shops. Both sites went live simultaneously in May 2012 with 30 presses, seven conventional and eight laser cutting machines as well as one hot forming line. "KOMPASS offers a basis for the further optimisation of processes and procedures in the press shops", confirms Wilhelm Straub. "The sites in Neckarsulm and Ingolstadt are a master solution in the manufacture of components". The roll-out has already started for other plants to be able to efficiently support a high diversity of models and variants. "This has helped us to achieve key milestones on the way towards our 2020 strategy", explains Wilhelm Straub.

MERCEDES-BENZ

BEIJING PLANT USES STANDARD MES FROM ABAT+ FOR PRODUCTION CONTROL



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China is the automotive industry's great hope. China promises great growth and potential success for new technologies. German manufacturers, such as Daimler AG, are therefore also investing in the developing Asian market. Besides assembly plants, the company is also setting up local supply businesses. The manufacturer is relying on the manufacturing execution system PLUS from abat+ in the ultra-modern Mercedes-Benz site for engine production in Beijing. The solution demonstrates within the manufacturing facility that suppliers' processes can also be efficiently controlled through this system.

Daimler AG has invested substantial amounts in the Mercedes-Benz engine plant in Beijing. It is the first of its kind outside of Germany. The plant supplies the nearby production facilities, in which the E- and C-Class are assembled. The company is therefore relying on high-quality production and the globally established quality standards and procedures of Mercedes-Benz. The IT solution for production control plays a key role in the process. As in its car production facilities, the car manufacturer is also using the management execution system PLUS from abat+ in this area.

Good experience

"We have been using PLUS for the production control of all Mercedes-Benz cars worldwide for more than 15 years", confirms Johann Hess, responsible for IT in the vehicle plants of Daimler AG, giving information about the background. As a result, we have increased flexibility, achieved stability and improved production efficiency", he confirms, summarising the achievements to date. Based on this positive experience, the company in Beijing has also decided to use PLUS for a supply process, such as engine production. The processes can be implemented in a very streamlined and efficient manner with just a few PLUS modules thanks to the modular design of MES. At the same time, we were able to implement a solution that is highly compatible with production control in vehicle manufacturing", emphasises Manfred Mang, responsible Project Manager at abat+ in Beijing.

Automated processes

PLUS sits at the level between production planning and the lower-level control of workstations and production lines. "The solution controls assembly from the time that component parts arrive at the engine production", explains Manfred Mang. The system therefore processes information from RFID tags – for example,



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MERCEDES-BENZ

"THE ENGINE PLANT IN BEIJING DEMONSTRATES THAT PLUS IS AN EFFICIENT SOLUTIONS FOR SUPPLIERS"

Rainer Schrapel

identification and specification data for production on approximately 300 individual pieces of equipment. "The system records all the relevant data for production via the RFID tags", explains Michael Fleder, Project Manager of PLUS@BBAC at Daimler AG. "Then the necessary shop floor equipment is activated and all process steps can be processed according to the specifications of the equipment or employees". For example, PLUS automatically supplies individual screwdrivers with appropriate work programs for specific production steps. All actual data from the production is transferred to the solution in real time and the finished engines are automatically released section by section.

Streamlined solution for a high level of quality

The standard MES PLUS is a complete solution for production control in vehicle manufacturing. It is a modular concept and consists of 30 components that cover all processes in car production – from the shell construction, sort management, paint spraying and assembly through delivery to the dealership. "We have only realised a handful of modules in Beijing", reports Michael Fleder. "We only implemented the necessary functions for engine production so that we could create a very streamlined solution". The modules used include the ma-



© Daimler AG

nagement of work processes, with which the specifications for the individual production steps are conveyed to employees or workstations. In addition, there is the management of variable identifiers, through which individual parts, such as the engines, are processed in the system. Integrated quality assurance, through which quality data is recorded and processed at every station, is key to the high level of quality in Beijing. Supplemented by action management, missing parts can therefore be effectively reworked or rejected if necessary in the ongoing process. PLUS realises the typically transparent and highly available production processes for both variant and contract manufacturing. At the same time, the system enables the comprehensive documentation and traceability of order and process data, even after delivery of the complete vehicle. "The plant thereby achieves the high Mercedes-Benz quality standards through the extensive quality assurance functions", explains Michael Fleder.

A PLUS for suppliers

"The engine plant in Beijing demonstrates that PLUS is an efficient solution for suppliers", emphasises Rainer Schrapel, Senior Manager for Production Control at Daimler AG. "They can manage their production using a streamlined standard solution with the MES". The system allows the production of an individual component to be controlled or it can be used in complex production environments with stationary and mobile front ends. Only the required modules need to be implemented thanks to its modular principle. PLUS also enables a variety of subordinate plant controls to be connected easily and transparently. Another advantage - the solution allows the generation of Just-intime and Just-in-sequence calls. "As a result, suppliers can optimise their production and synchronise with the specifications of their customer", explains Rainer Schrapel.

QOROS

A POWERFUL VOICE WITH PLUS



© Qoros

Qoros is a new voice in the "choir" of established car manufacturers. The Chinese brand relies on Western know-how and success in Europe. The company aspires to achieve European quality standards with efficient production based on PLUS and a standard MES product from abat+ GmbH.

Qoros, a credible Chinese car manufacturer, entered the market last year. The newcomer with the catchy name, which was only founded in 2007 and means choir in English, relies on Western design, know-how and intelligent IT solutions. Following the launch of its first vehicle in 2013, the company is also planning to set up a successful sales operation in Western Europe by 2015. An attractive design and competitive quality should make this possible. "We are manufacturing a Chinese car that looks European and complies with European quality standards", states Dr. Wolfgang Grottke, CIO at Qoros Automotive. "We offer a good design and advanced infotainment" - with a consistently high level of safety: the Qoros Sedan 3 was rated the safest car in Europe in 2013 by the Euro NCAP consortium in 2013. The manufacturer is creating the appropriate production processes with the PLUS production management and control system. This is supplied by the German IT provider abat+ GmbH.

"Qoros is a company that relies heavily on SAP solutions in its IT strategy", explains Dr. Grottke. Qoros uses the ERP system to manage scheduling, demand planning and material management, among other things. "Ultimately we were faced with the question of how to control production", confirms the CIO. "We were looking for a manufacturing execution system with an optimum connection to SAP". We opted for PLUS, a unique standard solution from abat+. From the CIO's perspective, there were two reasons for the choice besides the standardisation: Among other things, Daimler is using the solution from abat+ all around the world. In addition, many employees from abat+ come from SAP. These were not only important selection criteria for the IT Manager but also integral elements to achieve the ambitious goals and keep to the tight schedule. This meant a particularly fast pace for the set-up of production and the construction of a site in the Chinese city of Changshu. The company began the preparations for the use of an integrated production control system based on SAP whilst the production was still in the planning stage. Qoros and abat+ started with the blueprint for the implementation of PLUS in March 2012.



© Qoros

QOROS

"WE HAVE THE COMPLETE PRODUCTION HISTORY OF A VEHICLE AVAILABLE AT ANY TIME WITH PLUS"

Dr. Wolfgang Grottke

The IT service provider focused on a comparison between the planned processes and the options available with the standard program in the fit-gap analysis. Daimler has been using PLUS as a solution for over 15 years. The software has a comprehensive pool of functions and processes. At the same time, it includes many best-practice functions for all areas of production. These include car body construction, buffer stock, paint spraying and final assembly with comprehensive quality management. In total, 92 percent of the processes at Qoros could be implemented with functions from the standard solution.

"We were therefore able to start building vehicles in no time at all", emphasises Dr. Grottke. Production at Qoros has been running for a year now with PLUS without any disruptions and with a high level of quality. "The start-up generally went to plan. Our plant is up and running. The recruitment and qualification of our employees is going very well", adds Alexander Wortberg, Production Manager at Qoros. The manufacturer is using comprehensive quality and track and trace options from the abath solution to meet European requirements. "We have the complete production history of a vehicle available at any time with PLUS", confirms the CIO, Dr. Grottke. The integrated quality





© Qoros

management program in the control system records all the relevant data during production. This can be done in various ways: via stationary or mobile systems or using completely automated laser and camera systems. PLUS links the information to every vehicle and order. At the end, PLUS provides an information base for a "genetic fingerprint" of the vehicle. Almost anything relating to the vehicle can be traced with the data.

Errors are detected quickly and their causes are identified and remedied thanks to the comprehensive online checks and documentation. The system also decides how to deal with defects. Should they be remedied on the spot or corrected at a later station? The solution uses all the available information, for instance on usage rates and free capacity, to achieve an optimum process. PLUS gives Qoros the opportunity to achieve the desired high level of quality efficiently and reliably. The company is thus laying an important foundation to play a major role in the "choir" of established manufacturers not "just" in China but also throughout the world.

ABAT

THE AUTOMOTIVE SPECIALIST FROM VEHICLE DEVELOPMENT TO THE SHOP FLOOR



abat AG employee, Bremen

abat has been a successful symbiosis of IT and process knowledge for many years. We realise successful projects for international car manufacturers and suppliers with the latest project control methods, efficient SAP process flows, customer-specific add-ons as well as the unique PLUS MES software solution. Our extensive industry knowledge across the entire supply chain helps our customers to realise new potential and to diversify more and more in international competition.

As a development partner of SAP AG with recognised expertise for automotive as well as travel and transportation abat is one of the leading IT companies in the automotive industry. We regular occupy the top spots in the rankings of key analysts and the trade media. We realise efficient IT solutions with optimum processes for vehicle manufacturers, such as Audi, BMW, Daimler, MAN, Qoros and VW. Our excellent understanding of the industry and technology in combination with our SAP know-how and our ground-breaking solution already enable manufacturers and suppliers to pave the way towards Industry 4.0.

The advantage for our customers is the extensive experience of our automotive experts in supply chain management, distribution, production and procurement logistics as well as in project control and maintenance and repair. Manufacturers and suppliers also benefit from abat's know-how in accounting, financial controlling and business information. Another advantage of our solution: We close the gap with the PLUS software solution in areas where other SAP automotive specialists stop at the production stage. This product is based on SAP technology and is the only standard product worldwide for controlling the entire production process. A particular highlight is the integrated quality management program that records, controls and covers all production processes. PLUS has been used as a standard software solution worldwide in the entire Mercedes-Benz passenger car division and at Smart and Qoros for production control in assembly plants and is now even used for a component plant. The Chinese car manufacturer Qoros also relies on our company's software for controlling its entire production.

IT performance for improved business performance

abat advises automotive companies and realises efficient total solutions for them. As an SAP solutions provider, we optimise processes along the entire supply chain from product



abat+ GmbH employee, St. Ingbert



THE ABAT CORPORATE CULTURE GUARANTEES SUCCESSFUL PROJECTS – IN THE LONG RUN.

development through to logistics and production. For the realisation, our experts take charge of the conception of process designs as well as the software implementation and integration into company and IT structures.

An excerpt from abat's range of services:

- Project management (e.g. SCRUM, ASAP, etc.)
- Process design and implementation from the product development process through to production
- Production planning and control with MES PLUS
- Specialists in SAP product life-cycle management, incl. iPPE and PVS
- Management of the logistical supply system of plants
- Warehouse management with SAP WM and SAP EWM
- Transport management with SAP TM
- Configuration, monitoring and roll-out of international templates
- On-site and/or nearshore custom development according to the latest technologies
- System management and optimisation
- Application management services for international systems
- Performance optimisation and quality management of SAP systems and customerspecific SAP developments
- Integration of SAP solutions into complex, heterogeneous IT environments

Well-positioned worldwide thanks to our experience

Intelligent IT solutions in the automotive industry have been the focus of abat's business activities since 1998. Today we are working as an SAP solutions provider for large and small companies in the automotive and logistics industry with over 450 employees worldwide. Our customers include a number of well-known logistics specialists besides leading car manufacturers and suppliers. We have also been supporting our customers with nearshoring models and application management services for many years through our subsidiaries BELabat (Belarus) and MEXabat (Mexico). In addition, our companies in the USA (abatUS) and Mexico implement complete SAP products for Germany and local OEMs and suppliers. The company abat+ GmbH, based in St. Ingbert in Saarland, has been part of the abat family since 2009 and has expanded our solutions portfolio with its PLUS software, offering unique IT building blocks for the production of discrete industries.

Our experts have extensive experience in national and international IT projects. We optimise processes and realise the supporting IT solutions. We use PLUS and SAP standard functions or program customer-specific add-ons as required. Our communication is open and geared to our customers' needs. We provide absolute transparency with our proposals, costs and project management, thereby creating a comprehensive overview of projects and implementing them with a high level of quality and within time and budget planning.

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