



SAP S/4HANA

Transform

Automotive with
SAP S/4HANA®

AGENDA

SAP S/4HANA: Automotive Overview	3
Sustainable Product Innovation Deep Dive	7
Manufacturing and Logistics Deep Dive	8
Marketing, Sales, and Aftersales Deep Dive	9
Portfolio of Solutions for Automotive from SAP	10
SAP S/4HANA: Value Proposition of for Automotive Companies	12
Customers Are Achieving Value from SAPS/4HANA	13



SAP S/4HANA: AUTOMOTIVE OVERVIEW

Transform Your Companies Digital Core with SAP S/4HANA®

The automotive world is driven by strong customer demand for hyperconnected products and services. The interconnectedness of people, places, and things is creating new and bigger business models as digital technology permeates not only the driving experience but also creates unique ways to engage customers.

Connected manufacturing is extremely relevant for automotive companies. Sensors, robotics, 3D printing, and artificial intelligence are becoming the new normal. Being connected helps to manufacture, monitor, and repair vehicles remotely. Critical components will be made on demand at the location, and predictive models will optimize the digital automotive network.

Leading automotive OEMs and suppliers prepare to use technologies to find new answers to such questions as:

- What are the changes that shift consumer demand?
- What are new business models and the associated services relevant for fleet customers and consumers?
- Which trends and technologies from adjacent industries are influencing the automotive market; for example, cybersecurity, embedded software, hybrid technology, and travel-related, value-added services?
- Who are the potential partners in the digital automotive network?

In working with leading companies across the globe, we see investments and energy around five strategic priorities:

- Digital smart products
- Digital supply chain and connected manufacturing
- Customer centricity
- Engaging a changing workforce
- Connected car and mobility services

To execute on these priorities, companies will have to evaluate if they have the right technology platform that can support these priorities.

This right platform requires a bi-modal IT architecture that provides *scalability and reliability* for core enterprise processes with agility to adapt to changes.

The **digital core** provides uninterrupted, real-time transactions and analytics, and the ability to work with Big Data and connectivity to line-of-business extensions enabling supporting processes, such as transforming supply chains into demand networks or delivering outcomes instead of just products.

SAP S/4HANA® provides automotive companies with a proven framework to adopt industry best practices while attaining operational excellence – focusing on **collaborative product innovation, manufacturing and logistics, and sales** to enable the five strategic priorities.

Bosch

“digitalization, for us, means to exploit the possibilities of services in the area of connected products, and to offer a meaningful service to people – the end customers. This is why digitalization is so important for Bosch. And here, SAP S/4HANA comes into play. All of a sudden, I can use information right at the time its been processed. That really creates value for the company.”

Dr. René Deist, Executive Vice President Applications, Robert Bosch GmbH

Faurecia

“Time is critical in our business...With previous technology, it took us between 21 and 22 hours to perform MRP runs. With SAP HANA, we can now run our MRP in less than an hour, covering thousands of complex variants and product combinations. SAP HANA is a game-changing innovation, allowing us to potentially save millions of euros in stock reduction.”

Bertrand Eteneau, CIO, Faurecia

SAP S/4HANA: AUTOMOTIVE OVERVIEW

SAP S/4HANA: Sources of Value

SAP S/4HANA: sources of value

The value from SAP S/4HANA comes through simplification and acceleration of the user experience, architecture, and processes.

Simplified user experience: across all devices

SAP S/4HANA empowers frontline users with an end-user-centric, consumer-grade experience – because for automotive companies, it's the frontline employees that add value to clients. SAP is driving simplification and innovation in how business users work with a consistent, role-based user experience available on any device.

Simplified architecture: no aggregates – no redundancies

SAP S/4HANA has a simplified data model that provides an advanced digital data architecture, which, in turn, provides, in real time, a single source of the truth for both transactions and analytics. This enables extensive flexibility to adapt to changing business models, such as simulating the impact of business reorganizations in minutes rather than days.

Simplified processes: key industry capabilities provided by SAP S/4HANA*

Sustainable product innovation



- Product and portfolio management
- Engineering control center
- Enterprise product engineering
- Environmental health and safety
- Embedded software

Manufacturing and logistics

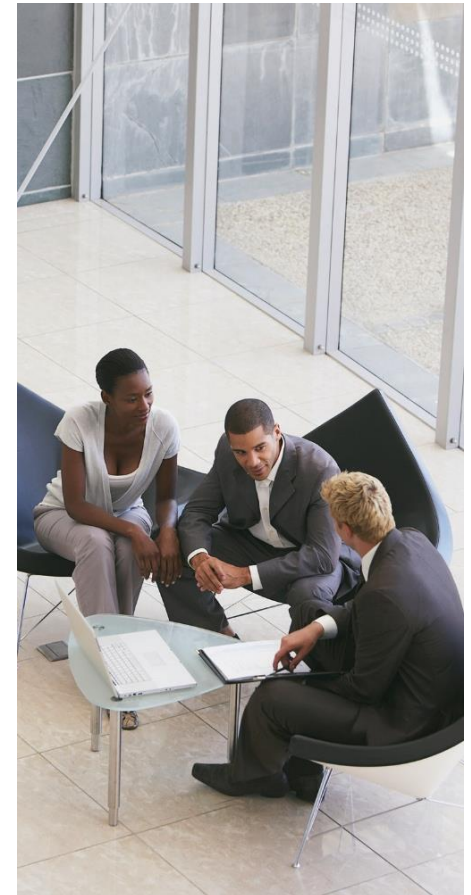


- Production planning and scheduling
- Advanced available to promise (ATP)
- Embedded extended warehouse management
- Integrated business planning
- Optimized MRP
- Real-time inventory management

Marketing, sales, and aftersales



- Sales order fulfillment monitor
- Order to cash performance monitor
- Advanced ATP
- Flexible settlement management



* This is a subset of the complete industry portfolio shown later in the “Portfolio of Solutions for Automotive from SAP” section.

SAP S/4HANA: AUTOMOTIVE OVERVIEW

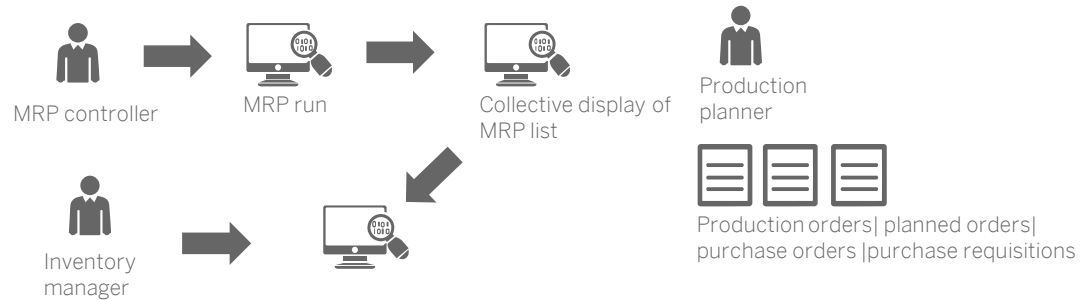
Example: user experience simplification

SAP S/4HANA enables an anywhere, any-device, mobile-first, role-based user experience that simplifies and enhances employee engagement and productivity, transforming the way work gets done.

SAP S/4HANA for use in manufacturing and logistics: streamlined material requirements planning (MRP) allows new working model

Traditional ERP

- Batch run might not reflect the actual inventory situation at the plant
- Need for complete picture necessitates navigating into several transactions or systems
- Challenging to resolve issues identified by material planning process in a streamlined and user-friendly manner



SAP S/4HANA

- Graphical simulations of inventory situations help to identify supply at risk
- Single cockpit provides better insights to all process owners for issue resolution
- The MRP controller can react in real time to the situation in the plant to resolve issues



MRP controllers anticipate material shortages and simulate multiple scenarios of how to best resolve those shortages

More than smarter and faster . . . reimagining work

SAP S/4HANA: AUTOMOTIVE OVERVIEW

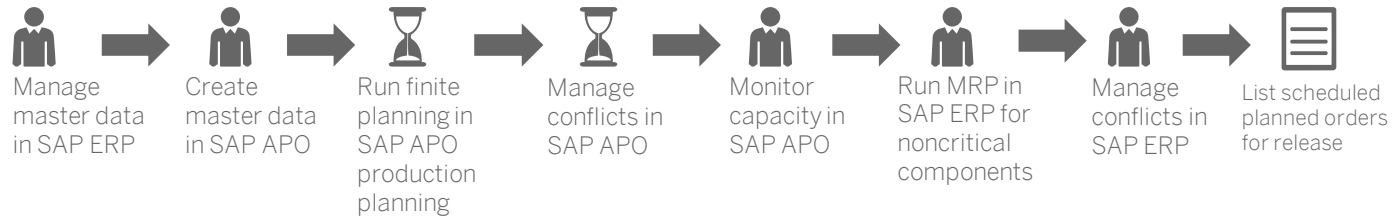
Example: process simplification

SAP S/4HANA provides the next generation production planning (MRP live) optimized on the SAP HANA® platform for faster planning cycles and synchronization to demand changes resulting in fewer material shortages, delays and safety stock

SAP S/4HANA for finite planning based on embedded manufacturing planning and scheduling

Traditional SAP ERP and SAP Advanced Planning and Optimization (SAP APO)

- Multiple batch processes and cross-system navigation and interaction
- Separation of finite and infinite material planning

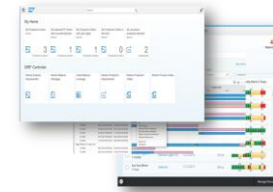


SAP S/4HANA

One MRP run for finite and infinite material planning with harmonized master data and one SAP Fiori launchpad for material flow and capacity



Carry out finite and infinite material planning



SAP Fiori launchpad for material flow and capacity

Maximized capacity utilization
 Optimally scheduled planned orders
 Real-time inventory management
 Appropriate purchase orders created

More than smarter and faster . . . a reimagined process

Increase

user productivity and efficiency by harmonized master data and one process for finite and infinite material planning

Increase

order-to-delivery and production cycle times

Reduce

inventory and planning cost

SUSTAINABLE PRODUCT INNOVATION DEEP DIVE



Typical challenges	Traditional ERP	SAP S/4HANA® enhancements	Benefits*
<p>Inability to bring consumer-driven product offerings to market in a timely manner leads to low brand equity and stagnant growth</p> <p>Inability to identify reasons for or reduce unsuccessful product initiatives</p>	<p>Product-related documents managed and linked to ERP master data throughout the end-to-end process</p> <p>Context-sensitive analytics</p> <p>Ability to release engineering changes for a unique lot number and release date</p>	<p>Searchable development history to increase reuse or decrease time and investment in development efforts that go nowhere</p> <p>Increased profitability results from executing engineering changes with full knowledge of downstream costs. The new product lifecycle costing (PLC) tool enables the weeding out of unprofitable products configurations.</p>	<ul style="list-style-type: none"> • 0.3%–0.4% increase in revenue from new products or services • Reduce time to market for new products • Improve gross margin • 2.9%–3.6% optimization in research and development expense
<p>Inefficiencies and accuracies creep in due to heterogeneous platforms for engineering and manufacturing builds. Redundancies occur as there is no single source of truth</p>	<p>Bill of material (BOM) and routing management</p> <p>Visual handover to manufacturing supporting BOM, routing, and visual work instructions</p>	<p>Enterprise product engineering with SAP Fiori® UI for new roles (design, system, and BOM engineer). Direct integration to authoring tools increases efficiency in BOM and document maintenance process</p> <p>SAP Fiori app to maintain multiple BOMs in an intuitive, personalized UI with enhanced analytics</p>	<ul style="list-style-type: none"> • 1.8%–2.3% reduction in engineering change costs
<p>Handling configuration models is complex and costly</p> <p>Support of configurations involving multidiscipline definition for individualized products is challenging, labor-intensive, and erroneous</p>	<p>Variant configuration can be handled through the complete business process (engineering, sales and distribution, planning, and so on)</p>	<p>SAP HANA®-optimized low-level configuration in context of material requirements planning (MRP) simplifies variant management</p>	
<p>Unable to manage the software component of vehicle/product during the development process</p>	<p>Basic integration possible through a document management system</p>	<p>Support engineering of software (SW) items, including version management, simulations</p> <p>New SAP Fiori app to maintain SW release-specific constraints. 360-degree product view, including mechanics, electronics, software, simulation, and so on</p>	

Benefits are based on early adopters of SAP S/4HANA or conservative outside-in benefits due to moving from a traditional ERP to enhanced SAP S/4HANA and LoB/cloud capabilities. As each enterprise is at a different level of maturity, we recommend working with you to determine the value proposition for your enterprise.

MANUFACTURING AND LOGISTICS DEEP DIVE



Typical challenges	Traditional ERP	SAP S/4HANA® enhancements	Benefits*
<p>Long and overnight batch runs result in planning inefficiencies</p> <p>Inflexibility to include real-time, changing demands in the planning run leads to outdated and inaccurate planning</p>	<p>Planning runs at a predefined times with data that first must be consolidated from various systems</p> <p>Separate manufacturing planning processes available in planning systems and ERP systems</p>	<p>Live MRP available</p> <p>Improved effectiveness of planning with more frequent and faster MRP runs – multiple times a day and 10 times faster</p> <p>New MRP cockpit supports exception-based working model accompanied by simulation features and decision support with easy-to-use SAP Fiori® apps</p>	<ul style="list-style-type: none"> • 4.5%–5.6% reduction in manufacturing cycle time • Improve manufacturing planning function efficiency • 6.8%–8.5% reduction in days in inventory • Reduce order lead times
<p>Delayed material postings caused by system locking behaviors</p> <p>Distributed systems or preaggregated data leads to inaccurate stock reporting</p>	<p>Inventory status is calculated overnight</p> <p>Live inventory updates are not available; inventory status is reflected in the system with time offset</p>	<p>Real-time inventory management and material valuation, simplified data model, “principle of one” valuation, SAP Fiori apps for inventory managers and warehouse clerks</p>	<ul style="list-style-type: none"> • Reduce safety stock inventory • Reduce revenue loss due to fulfillment issues
<p>Higher cost of ownership for available-to-promise functionality in ERP, which requires the use of supplemental software products</p> <p>Difficult to fulfill customer orders on time with the proper quantity in near-term horizon</p>	<p>Sophisticated available-to-promise (ATP) requirements, like global ATP, require system integration with additional products, like the SAP® Advanced Planning and Optimization component</p>	<p>In the digital core of SAP S/4HANA®, ERP and planning functions are available in the same system and on the same database</p> <p>Mass product availability check enabled by the SAP HANA® database for sales, planned, and production orders</p>	<ul style="list-style-type: none"> • Reduce orders lost • Increase order fill rate • Reduce manufacturing technology cost • Reduce manufacturing overhead cost
<p>Overhead in managing a disparate set of shop floor systems across multiple plants that are not integrated into enterprise planning and business</p>	<p>The SAP Manufacturing Execution application integrates shop floor with traditional ERP and reporting systems</p>	<p>In combination with SAP S/4HANA, SAP Manufacturing Execution and SAP Manufacturing Integration and Intelligence (SAP MII) allow for end-to-end process integration</p>	<ul style="list-style-type: none"> • 1.1%–1.4% reduction in total manufacturing costs

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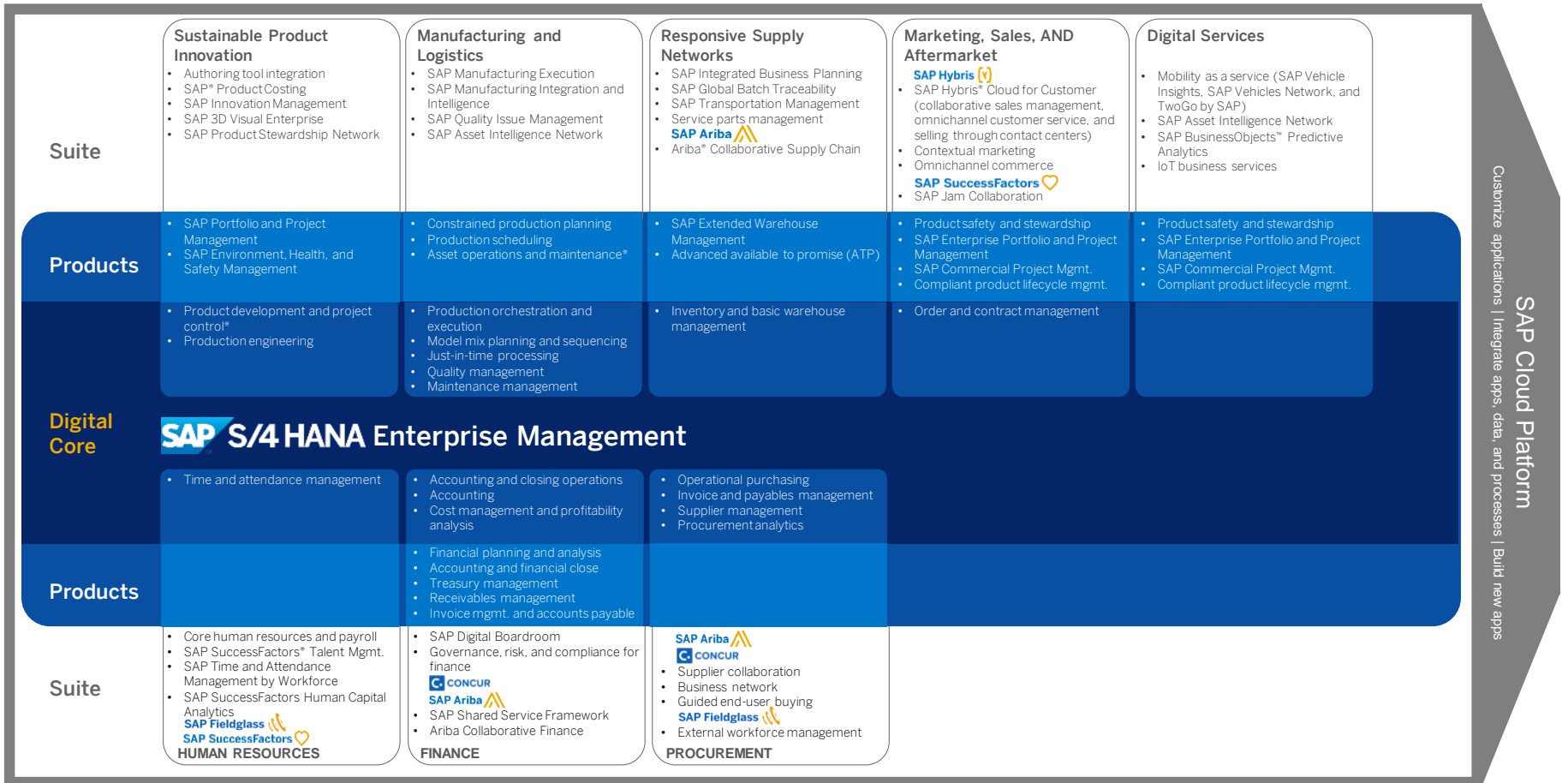
MARKETING, SALES, AND AFTERSALES DEEP DIVE



Typical challenges	Traditional ERP	SAP S/4HANA® enhancements	Benefits*
<p>Slow resolution of order fulfillment issues with the risk of delayed delivery due to a lack of visibility into the order management process</p>	<ul style="list-style-type: none"> Employee has to check multiple reports to get a holistic view of all process-related issues (and typically requiring batch processing) Previous communications and decisions have not been tracked in the system 	<ul style="list-style-type: none"> The new sales order fulfillment monitor provides a prioritized list with key characteristics of outstanding sales orders based on real-time information SAP S/4HANA® Enterprise Management provides relevant insights and collaboration features for internal sales professionals 	<ul style="list-style-type: none"> Increase on-time delivery performance Reduce sales costs: 3.8%–4.7% Increase order management FTE productivity: 1.8%–2.2% <p>Source: SAP® Value Assurance data for automotive</p>
<p>Difficulties to monitor order-to-cash process performance, which results in a lack of immediate transparency in order-to-cash process performance</p>	<p>Traditional ERP systems do not provide embedded analytics to monitor sales process performance. Monitoring order-to-cash process performance requires a separate BI system, replication of operational data (with long lead times), and setup of a front-end reporting tool.</p>	<ul style="list-style-type: none"> The embedded order-to-cash process performance monitor provides predefined performance KPI overviews, based on (real-time) transactional data SAP S/4HANA Enterprise Management provides a flexible analytics framework for embedded analytics, which allows sales managers to quickly identify performance trends 	<ul style="list-style-type: none"> Reduce order-to-cash costs Increase performance efficiency, for example, through easy identification of bottlenecks and areas for improvement using a comparison of aggregated views of current and past processes
<p>Casual users struggle with the complexity of UIs for comprehensive processes and also miss simplified search capabilities, which also leads to a long up-skilling time</p>	<ul style="list-style-type: none"> Traditional ERP systems do not leverage modern UI technologies to provide simple UIs Traditional ERP systems do not provide modern search technologies 	<ul style="list-style-type: none"> SAP Fiori® UIs based on modern UI technologies for simplified screens SAP HANA® enterprise search allows end-users to do full-text searches for business objects and documents and provides results ranking along business criteria 	<ul style="list-style-type: none"> Increase sales quotation productivity Reduce sales training costs Reduce revenue loss by faster onboarding (field sales representatives)
<p>Difficulty for user to manage the selling of low-availability products</p>	<ul style="list-style-type: none"> Traditional ERP systems support simple available-to-promise (ATP) capabilities and require an additional global ATP solution for comprehensive ATP capabilities Comprehensive ATP capabilities are complex to manage by the user and require deep skills 	<ul style="list-style-type: none"> Advanced ATP simplified for the user with new strategies for backorder processing, support for high volume, and confirmation on business priority SAP Fiori app "Release for Delivery" to efficiently adjust confirmations of critical orders to short-term supply and demand changes and improve fulfillment transparency 	<ul style="list-style-type: none"> Increase number of sales transactions Reduce sales order lead times by intuitive, intelligent demand classification of backorders
<p>Complex handling of rebate processing</p>	<p>Lack of flexibility in rebate management</p>	<p>Flexible settlement management with condition contract settlement</p> <ul style="list-style-type: none"> New business models based on flexible condition contracts Central contract administration through a single point of entry for contract data and contract-related conditions 	<ul style="list-style-type: none"> Increase productivity of rebates receivables/claims processing FTEs Reduce sales rebate overpayments

PORTFOLIO OF SOLUTIONS FOR AUTOMOTIVE FROM SAP

In addition to core financial, sales, and manufacturing processes benefits provided by SAP S/4HANA, the digital core also provides native, prebuilt integration to allow firms to leverage the complete portfolio of SAP solutions to comprehensively address their needs demanded by today's digitaleconomy. Processes are designed from the outset to flow end to end across the portfolio of cloud-based solution extensions that are each fully integrated to SAP S/4HANA. Processes are designed from the outset to flow end to end across the cloud based solution extensions, listed in the white bands, and are fully integrated to S/4 HANA Enterprise Management and are optionally deployed to address business needs. The solution capabilities in the dark blue band, the digital core, are delivered as part of S/4HANA Enterprise Management. The lighter blue band, also in the digital core, are part of S/4HANA Enterprise Management, but added on as needed.

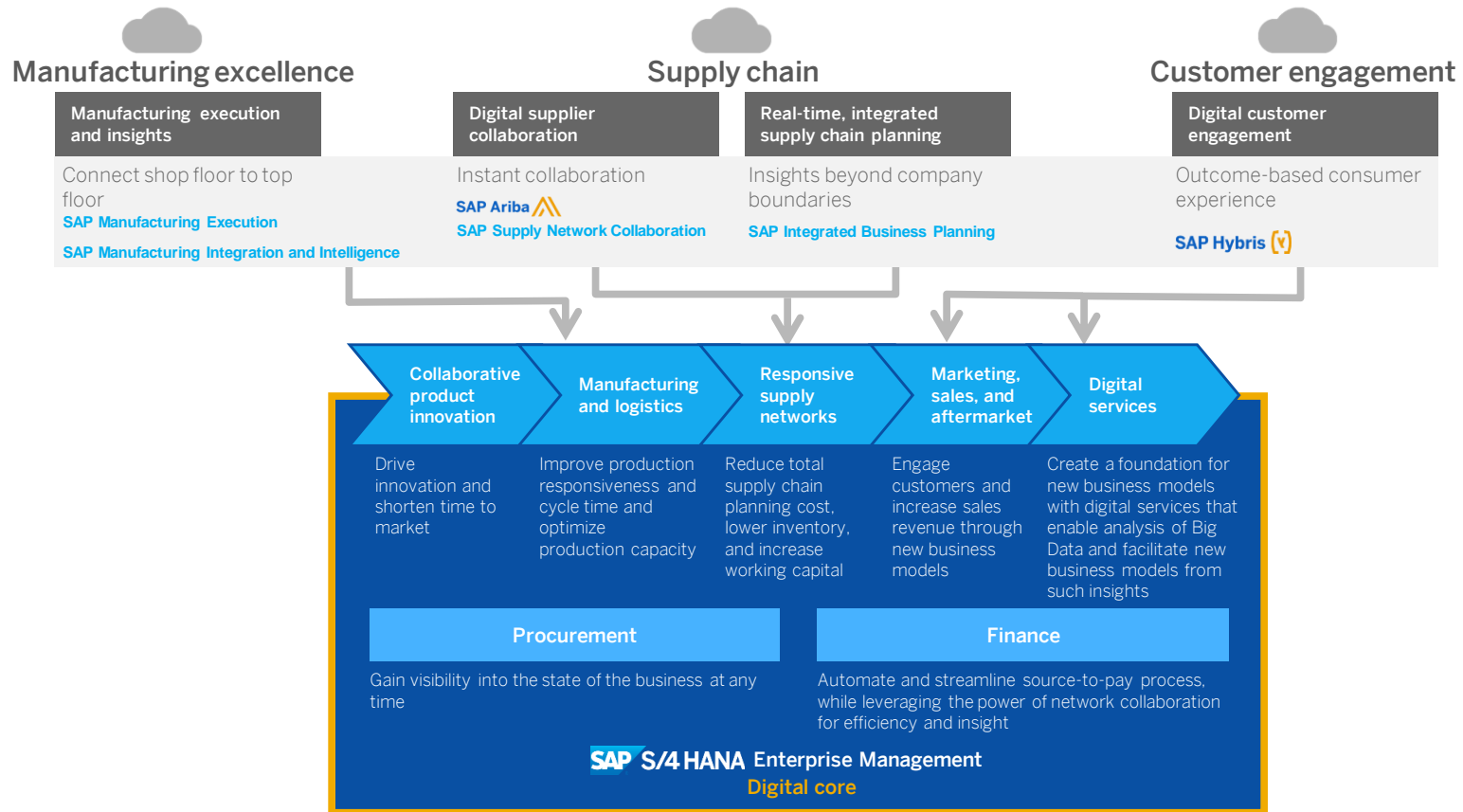


SAP Cloud Platform
Customize applications | Integrate apps, data, and processes | Build new apps

PORTFOLIO OF SOLUTIONS FOR AUTOMOTIVE FROM SAP

An end-to-end solution for automotive companies

Automotive companies need to constantly innovate across their company value chain to drive profitable growth and adapt to how customers want to acquire, use, and pay for their products and services. The capabilities delivered with SAP S/4HANA and the prebuilt native integration with the line-of-business (LoB) solutions help ensure processes run smoothly and efficiently across the entire end-to-end engagement lifecycle, allowing companies to balance supply and demand and drive sustainable revenue growth and maintain margins.



SAP S/4HANA: VALUE PROPOSITION OF FOR AUTOMOTIVE COMPANIES

SAP S/4HANA provides automotive companies a proven framework to adopt industry best practices while attaining operational excellence across their end-to-end processes.



Strategy Enablement

- Run Simple (master complexity) – simplified and efficient production planning and execution processes, transfer of production results, and real-time updates on performance
- Run Live (SAP Digital Boardroom)
- Adapt to market opportunities and develop new channels
- Accelerate creation of new business models



Business Benefits*

- Reduction in order fulfillment lead time 10%–15%
- Reduction in revenue loss due to stock-outs up to 15%
- Reduction in inventory levels from 25%–30%
- Reduction in total manufacturing costs up to 10%
- Increased material posting throughput from 5x–25x
- Increase in on-time delivery 10%–30%
- Increase in customer satisfaction 10%–20%



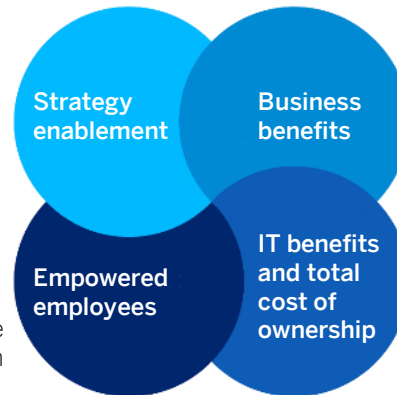
Empowered Employees*

- Actionable insights on unified, real-time data and processes with built-in system suggestions for decision support
- Role-driven, user-centric processes and self-service business intelligence for user empowerment
- Increase in productivity with a new role-based way of working with responsive, intuitive SAP Fiori® user experience (UX) on all devices
- 10%–15% improvement in internal sales productivity



IT benefits and TCO*

- Drive TCO reduction (reduce system complexity and data footprint, consolidate LoB or industry)
- Merge online analytical and transaction processing (OLAP and OLTP)
- Standardize systems and processes
- Connect to business partners, workforce, and the Internet of Things
- Deploy a central, scalable platform that grows with needs



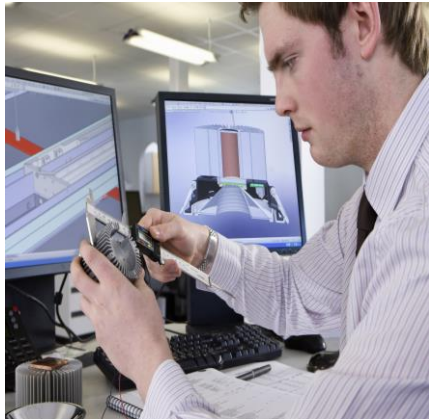
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CUSTOMERS ARE ACHIEVING VALUE FROM SAPS/4HANA

Bosch

“digitalization, for us, means to exploit the possibilities of services in the area of connected products, and to offer a meaningful service to people – the end customers. This is why digitalization is so important for Bosch. And here, SAP S/4HANA comes into play. All of a sudden, I can use information right at the time it's been processed. That really creates value for the company.”

Dr. René Deist, Executive Vice President Applications, Robert Bosch GmbH



Company

Robert Bosch GmbH

Industry

Automotive

SAP solutions

SAP S/4HANA Enterprise Management

Customer Web site

www.Bosch.com

Click [here](#) for the source reference

Faurecia

Forecasting millions of euros in savings with real-time MRP using SAP HANA®

Manufacturing is a 24x7 process with real-time insight and decisions necessary for planning inside and outside the enterprise. In some plants, a large variety of products have to be managed under strict time constraints on production and procurement. Faurecia transformed work by eliminating manual processes and accelerating manufacturing resource planning (MRP) and delivering planning insight in real time with the SAP HANA® platform.

“Time is critical in our business...With previous technology, it took us between 21 and 22 hours to perform MRP runs. With SAP HANA, we can now run our MRP in less than an hour, covering thousands of complex variants and product combinations. SAP HANA is a game-changing innovation, allowing us to potentially save millions of euros in stock reduction.”

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Company

Faurecia

Industry

Automotive

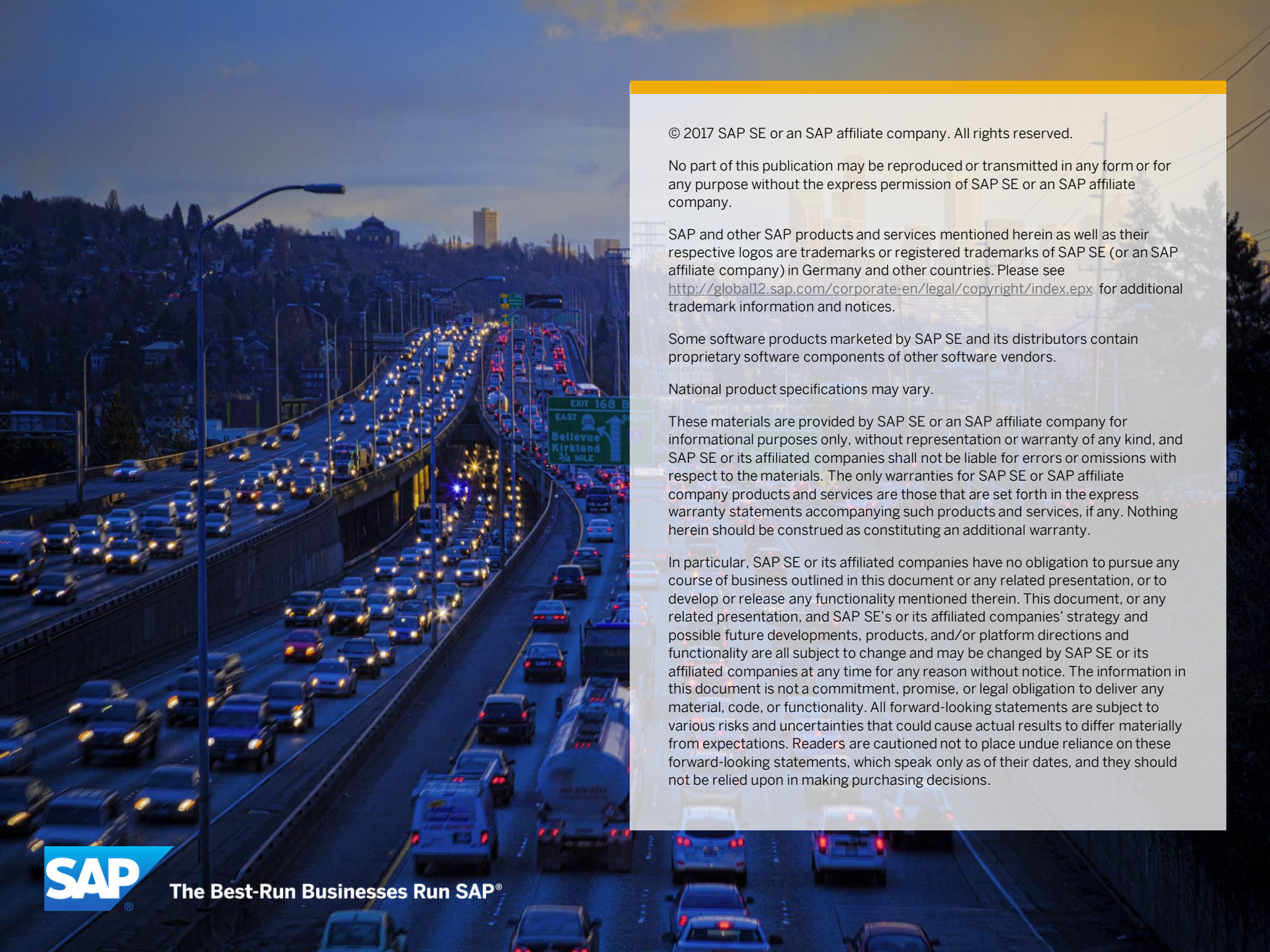
SAP solutions

SAP HANA platform

Customer Web site

<http://www.bosch.com/>

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The Best-Run Businesses Run SAP®