Transform Your Automotive Organization into an Intelligent Enterprise

Achieve Value with Intelligent ERP
The Power of Intelligent ERP

Support next practices with Intelligent ERP

The automotive industry is set to change more in the next 5 years than in the past 50. Disruptions in propulsion technology and infrastructure, the advent of new mobility business models, innovative manufacturing techniques, and connected ecosystems are fundamentally reshaping the needs and demands of customers. To successfully turn these seismic changes into competitive advantages, organizations – both established and startup – need to become intelligent enterprises. More important, companies need to unlock new revenue opportunities using the power of data-driven insights.

Personalized Mobility
The combination of autonomous driving, connected vehicles, ride sharing, and electrification is reshaping the mobility experience. Many automotive manufacturers realize that they need to find new and different ways to generate revenue using the connected nature of the autonomous vehicle. Intelligent technologies such as machine learning and the Internet of Things (IoT) are essential in interpreting the vast quantities of data consumers produce to optimize interactions and ensure the delivery of personalized mobility experiences.

Customer Centricity
An intelligent enterprise places the needs of its customers at the heart of all strategic decisions. Transformation – not only of the automotive buying experience but also of the customer experience throughout the entire lifecycle of the relationship – strengthens brand loyalty, promotes customer retention, and provides key insights into the market’s next move.

Hungry New Entrants
The scope of disruption in the automotive sector is unprecedented. New entrants, looking to leapfrog incumbents, are aggressively competing for market share around the world. At the same time, established players are investing heavily to stay competitive. Both kinds of organizations need to harness the power of data, the IoT, and machine learning to gain complete visibility and optimize their processes to compete effectively in this marketplace.

Intelligent Manufacturing
Intelligent technologies transform the ways mobility hardware supply chains and manufacturing happen. Automotive companies must be enabled to respond to new market expectations with real-time supply chain planning features that help them meet demand profitably. For example, using service parts software that uses the power of Industry 4.0 technologies, companies can share demand signals more easily and transparently across the entire supply network.

Enhance and Extend Next-Generation Processes with Intelligent ERP
Embedding intelligent technologies into SAP S/4HANA® is a key value contributor to enable the intelligent automotive enterprise. The principle of an intelligent enterprise is to automate, extend business processes, or even transform the entire business model. Intelligent technologies such as collaborative artificial intelligence, robotic process automation, and machine learning are the foundation to an insight-to-action-driven enterprise. Leading automotive companies have already begun the journey toward becoming an intelligent enterprise.
Drive Business Value with Intelligent ERP: SAP S/4HANA Customer Stories

Daimler

“Breakthrough business value in business processes must be applied across the entire value chain versus just embedding intelligence in siloed line-of-business applications. This is the basis for innovation and speed.”

Dr. Marco Spohn, Daimler AG

6 days to 4 hours
For a new order forecast

8 weeks to 4 weeks
For program planning

SAP S/4HANA
As the foundation for digital growth and the basis for the next generation of a global supply solution
Drive Business Value with Intelligent ERP: SAP S/4HANA Customer Stories

Magna International

“We are in the stage that we can, together with SAP, really influence the future of automotive. . . . It was a perfect match.”

Christoph Burgmayr-Posseth, Magna International

1 platform
For a single version of the truth

25%
Lower overhead costs

SAP S/4HANA
As the trusted real-time provider of vital business data that reflects business realities
Strategic Priorities in a Digital Age

This digital age is disruptive. Automotive companies need strategic priorities that drive transformation. SAP supports a reimagined set of end-to-end (E2E) business scenarios to support the strategic priorities of the digital economy.

Be customer centric
As the market is constantly shifting, putting your customers (and their customers) at the center of your business is an imperative. Transformation not only of the buying experience but also of the customer’s experience throughout the entire lifecycle of the relationship strengthens brand loyalty, promotes customer retention, and gives you key insights into the market’s next move.

E2E scenario: Lead to cash – Contextualize the customer’s individual needs and provide a smooth, frictionless experience.

Deliver mobility services
Due to market trends, an increasing amount of automotive-related revenue will be derived from shared mobility, transportation as a service, and other digital services related to automotive. Therefore, OEMs, suppliers, dealers, and retailers are exploiting new, connected technologies to open up new business models and explore new possibilities for monetizing and offering innovative services.

E2E scenario: Subscription model – Redefine traditional vehicle ownership models to meet changing customer expectations.

Design connected cars
Throughout the value chain, companies are designing and developing new innovations that combine physical products with embedded sensors and software. By so doing, they can introduce capabilities and value beyond traditional components, vehicle systems, and all types of vehicles – and develop the capabilities to support the lifecycle of the products while in service.

E2E scenario: Individualized product offerings – Provide individualized products to end consumers to increase customer satisfaction.

Implement the digital supply chain and smart manufacturing
Digital technology on the shop floor and in the supply chain is not new. What is new is the way the entire value chain is intelligently connected to the rest of the business and can leverage predictive analytics to provide a more precise forecast of customer demand. With near-real-time insight into demand signals, managers can effectively adapt to short-term changes. Furthermore, they can position the company and supply chains to fulfill future customer needs.

E2E scenario: Increase production with interactive demand and capacity management – Improve productivity and reduce inventory.

Engage with a changing workforce
Two trends are dramatically reshaping the automotive workforce. First, the demographic shift from boomers to millennials requires new approaches to attract, retain, and develop the skills of a younger workforce. Checking the pulse of your workforce in real time ensures that your company can align experience with expectation. Workers have different experience and skill levels and new expectations for technology in the workplace. Second, the shift in focus from physical to smart products requires a new type of automotive worker. Software developers, data scientists, and artificial intelligence (AI) experts are needed, forcing companies to compete for talent with the likes of Google, Apple, and Facebook.

E2E scenario: Attract, acquire, and develop the right talent – Improve the effectiveness of talent acquisition, compensation, and retention processes.
Be Customer Centric

Lead to Cash

Understanding and putting the end customer’s point of view at the center of every decision is a key prerequisite for success in the digital age. This does not stop in the sales department but also applies to which products are built and what services are offered. Enabling real-time, 360-degree insight into customers and vehicles – and the ability to adapt and automate the lead-to-cash process with a real-time integrated and automated multichannel system – is essential.

Traditional scenario

- Leads have low visibility, combined with slow routing and categorization, which results in spending time on the wrong opportunities.
- Discovery and evaluation offer incomplete insight into customers and vehicles, which makes responding to customers difficult.
- Quote and order is a complex and time-consuming manual process. Decisions and communications are not tracked. Upselling and cross-selling are limited.
- Uncertain availability checks introduce doubts as to whether enough stock is available or can be produced or purchased on time.
- Billing and revenue systems are inflexible, making compliance and monetization difficult.

A new world with SAP

- Immediate visibility of leads along with a 360-degree view of customers and vehicles to accelerate the time to hand off leads and close.
- AI-powered discovery and evaluation.
- Integrated and collaborative. Consistent, accessible, and reliable insight, making it easier to respond quickly to customers.
- Quote and order: Simpler quote and order system with bundled offers. Constant monitoring of sales order status. Relevant insights and collaboration features for internal sales to maximize opportunities.
- Seamless delivery. Robust integration into ERP. Live available-to-promise (ATP) checks, with ATP requirements transferred to production or purchasing.
- Consolidated invoicing for a complete view of consumption.

Top value drivers*

- Improve Customer satisfaction
- Reduce Sales and service cost
- Increase Revenue growth

*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, line-of-business or cloud capabilities, and intelligent enterprise technologies. As each enterprise is at a different level of maturity, we recommend working with you to determine the value proposition for your enterprise.
Deliver Mobility Services

**Subscription Model**

Emerging business models focus on providing complementary and alternative solutions to vehicle purchasing and leasing. The new business models are intended to attract new customers who value flexible and convenient choices for buying and leasing automobiles. Offerings need to be configured and priced based on new service business models and monetized based on value delivered to the customer. As automotive companies move from product-centric to customer- and service-centric offerings, they must implement these new business models. SAP® Customer Experience solutions and SAP S/4HANA provide capabilities that help companies pursue subscription or pay-per-use business models.

**Top value drivers**

- **Improve**
  - Customer centricity of sales engagements
- **Increase**
  - Customer satisfaction and retention
  - Service revenue from new business models

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Design Connected Cars

**Individualized Product Offerings**

Differentiation and flexibility for vehicle options are more important than ever. As design complexity and collaboration between different groups become more important, the ability of engineering, procurement, and manufacturing to collaborate becomes more important. Automotive companies need the ability to provide their customers with individualized products faster and at a lower cost.

**A new world with SAP**

- Solutions from SAP, including SAP S/4HANA and the cloud-based SAP Intelligent Product Design solution, provide a bill of materials (BOM) for configurable materials.
  - BOMs contain all the components, dependencies, and routings needed to design, source, sell, and manufacture personalized vehicles.

- Integration with SAP Ariba® solutions, enabling supplier collaboration for lead times and accelerating time to market.

- Improved efficiency through automatic updates of BOM and routing after engineering changes.

- Personalized vehicles delivered quickly at the same price as an off-the-lot vehicle
  - High customer satisfaction

**Top value drivers**

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<th>Faster</th>
<th>Lower</th>
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Implement the Digital Supply Chain and Smart Manufacturing

Increase Production with Interactive Demand and Capacity Management

Automotive companies face highly variable demand. The companies that can forecast demand effectively and shift resources optimally will be the most profitable. With near-real-time insight into demand signals, automotive leaders can have complete confidence in their strategy as they can dynamically adapt their organization to manage demand, supply, and capacity.

Traditional scenario

- Finite capacity production planning
- Limited options for alternative scenarios
- No interactive capacity adjustment
- No interactive simulation of long-term planning (batch runs)
- Operative material requirements planning (MRP) run for noncritical components
- MRP runs scheduled and periodic, resulting in out-of-date information
- Different applications for different planning activities
- Manual approach to managing conflicts
- Delay in identifying critical issues and bottlenecks
- Difficult for mid- and long-term planning

Increased safety buffers to make up for the lack of inventory visibility, locking up capital

Multiple local warehouses, driving complexity and cost

Delivery, transportation, and dispatch processes in disparate systems with inefficient business partner collaboration

No "out-of-the-box" event-tracking capabilities for in-transit goods

A new world with SAP

Capture mid- and long-term demand with alternative versions

- Use predictive MRP to check feasibility of demand versions considering availability of capacity and supply
- Provide recommendations and interactive planning to support capacity adjustment, sourcing decisions, and demand leveling

Release an optimized mid- and long-term planning version for operative MRP

- Run MRP live multiple times a day, instantly identifying short-term material shortages
- Increase on-time delivery by applying demand-driven MRP, avoiding a bullwhip effect in the internal supply chain (consider planning data for dynamic buffer calculation)

Rely on a single warehousing platform for all warehousing operations

- Utilize a single platform for delivery, transportation, and dispatch management with real-time embedded analytics

Analyze vehicle and sensor data in real time, optimizing logistics and improving service

Top value drivers*

**Improvement**
In on-time delivery

**Lower**
Inventory levels due to appropriately sized buffer levels and capacities

**Reduction**
In revenue loss due to stock-outs

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Engage with a Changing Workforce

**Attract, Acquire, and Develop the Right Talent**

Candidates today can present themselves or are targeted through an unlimited number of sources and channels. Often some of the best candidates are not even actively looking for job opportunities. Whether a “ready to switch” job seeker or a targeted top prospect, today’s talent won’t tolerate a painful recruiting process. This reality demands focusing on the candidate and thinking about new ways to attract and acquire the best talent. Companies can achieve faster onboarding of new employees or contingent workers thanks to automated user and role provisioning, while simplified integration setup and minimized replication errors further smooth HR processes. Real-time pulse checks of your workforce help ensure that your people are motivated and engaged.

**Top value drivers**

- **Reduce** Time to hire
- **Reduce** Cost per hire
- **Faster** Time to contribution

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Intelligent ERP Is the Foundation of an Intelligent Enterprise

Intelligent enterprises run agile, integrated business processes and use advanced technologies such as artificial intelligence, machine learning, and the Internet of Things.

They apply leading-edge industry best practices and work together to build flexible value chains. They evaluate and act on customer, partner, and employee sentiment, and they understand and manage their environmental impact. This makes them resilient, successful, and sustainable.
SAP Strategy – Deliver the Intelligent Enterprise

**Business network** – helps customers digitalize cross-company business processes. The network builds on our procurement, travel, and contingent workforce solutions. It helps our customers work together to build flexible value chains.

**Industry cloud** – allows customers to discover and deploy vertical solutions from SAP and partners. These help customers apply leading-edge industry best practices and extend current business processes.

**Experience management** – helps organizations evaluate and act on customer, partner, and employee sentiment. Understanding what your stakeholders want and how they feel is critical to making the right decisions.

**Sustainability management** – helps customers understand and manage their impact on people and the environment. Climate 21 is the name of our initiative behind our new crop of sustainability management solutions. These solutions help businesses understand and manage greenhouse gas emissions.

**Intelligent suite** – helps to run agile, integrated business processes. We help manage every part of the organization – employees, customers, products, spend, finance, and IT. With embedded analytics, we offer a 360-degree view of the business.

**Business Technology Platform** – provides data management and analytics and supports application development and integration. It also allows our customers to use intelligent technologies – such as artificial intelligence, machine learning, and the Internet of Things – to drive innovation.
SAP S/4HANA Provides **New Capabilities** to Enable the Strategic Priorities of Automotive Companies

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Overview Strategic Priorities E2E Scenarios SAP Strategy SAP Value Proposition References

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SAP’s Value Proposition for Automotive Companies

SAP S/4HANA provides automotive companies with a proven framework to adopt industry next practices while attaining operational excellence across the full value chain.

Strategy enablement
- Accelerate creation of new business models
- Enter new markets and industries
- Accelerate synergy for mergers and acquisitions
- Run live (SAP Digital Boardroom)
- Reorganize on the fly
- Achieve greater speed and agility
- Run simply (master complexity)
- Manage risk and enable compliance

Empowered employees
- Higher productivity with a new, role-based way of working enabled by a responsive, intuitive SAP Fiori® user experience on all devices
- Role-driven, user-centric processes and self-service business intelligence for user empowerment
- Actionable insights on unified, real-time data and processes with built-in system suggestions for decision support

Business benefits*
- 5%–8% increase in service revenue from new business models
- 10%–20% increase in customer satisfaction
- 10%–15% reduction in order-fulfillment lead time
- Up to 15% reduction in revenue loss due to stock-outs
- 10%–15% reduction in inventory levels
- Up to 5% reduction in total manufacturing costs
- 10%–20% increase in after-sales service revenue due to predictive maintenance
- 10%–20% reduction in employee attrition

IT benefits and total cost of ownership (TCO)
- Reduced data footprint
- Merging of OLAP and OLTP
- Elimination of many desktop clients
- Lower testing costs
- Simplified landscapes
- Native integration

*Benefits are based on results from early adopters of SAP S/4HANA or are conservative outside-in estimates of the benefits of moving from a traditional ERP system to enhanced SAP S/4HANA with line-of-business and cloud capabilities. As each enterprise is at a different level of maturity, our recommendation is that you work with SAP to determine the value proposition for your enterprise.
Customers Are **Achieving Value** with SAP Solutions

Lead the market with the latest innovations while creating a sustainable, flexible, and agile IT environment. Look at how Daimler AG is deploying a next-generation global order and supply solution with SAP S/4HANA to remain competitive and deliver key capabilities successfully to its business and its valued customers.

> Breakthrough business value in business processes must be applied across the entire value chain versus just embedding intelligence in siloed line-of-business applications. This is the **basis for innovation and speed**.

Dr. Marco Spohn, Daimler AG
Magna International

Industry
Automotive

SAP solution
SAP S/4HANA

Customer Web site
www.magna.com

Click here to watch the customer testimonial video.

Magna International is a leading global automotive supplier with 92 product development, engineering, and sales centers in 28 countries. With the help of SAP S/4HANA Cloud, Magna International has a centralized view of its business operations with accurate, real-time data and process simplification.

"For the first time in the history of Magna, we can be up to date every 90 days."

Christoph Burgmayr-Posseth, Magna International
Customers Are Achieving Value with SAP Solutions

OSRAM Continental

Industry
Automotive

SAP solution
SAP S/4HANA

Customer Web site
www.osram-continental.com
Click here to read the business transformation study.

OSRAM Continental GmbH employs approximately 1,500 employees at 16 locations worldwide to develop innovative lighting solutions that take automotive lighting to a new level – enabling the more connected, safe, individualized, and sustainable mobility of the future. To facilitate this innovation, the company needed expert support to help it create new business systems quickly and hit the ground running.

"[SAP] helped us build strong roots using SAP S/4HANA and SAP Model Company services, along with tools and processes to speed implementation. This has allowed us to create a new company that will rethink the future of automotive lighting and play a decisive role in the market."

Harald Renner, Chief Financial Officer, OSRAM Continental GmbH
Customers Are Achieving Value with SAP Solutions

NAVECO

Industry
Automotive

SAP solution
SAP S/4HANA

Nanjing Iveco Automobile Co. Ltd. (NAVECO) produces and sells buses, trucks, and off-road vehicles. As manufacturing volume increased, its legacy ERP system began to struggle under the additional workload. With its partner Deloitte, NAVECO built a new back office that transformed production planning, sales and distribution, finance, and procurement operations to keep pace with its booming business.

SAP S/4HANA has helped us make our manufacturing operations significantly leaner and more productive so that we can improve customer service and sharpen our competitive edge.

Min Xie, Head of IT, Nanjing Iveco Automobile Co. Ltd.
Customers Are Achieving Value with SAP Solutions

ERGO Mobility Solutions

Industry
Automotive

SAP solution
SAP S/4HANA

Customer Web site
www.ergo.com

Click here to read the business transformation study.

The connected vehicle allows established companies such as ERGO Mobility Solutions GmbH to keep ahead of competitors by deploying new business models with the help of SAP S/4HANA. Enabled by SAP’s scalable and flexible platform, ERGO was able to introduce profitable on-demand and usage-based insurance products. The company saw efficiencies across the entire value chain, thereby providing the end user with a near-seamless, high-quality experience.

Our core objective is to develop digital services that help secure risks arising from what we call ‘new mobility.’

Karsten Crede, Chairman, ERGO Mobility Solutions GmbH
Customers Are **Achieving Value** with SAP Solutions

**UNO MINDA**

- **Industry**: Automotive
- **SAP solution**: SAP S/4HANA

**Customer Web site**

[www.unominda.com](http://www.unominda.com)

Click here to read the business transformation study.

Driven by automakers’ desire to make their vehicles safer, UNO MINDA, an automotive supplier, sought to integrate more sophisticated telematics and advanced driver assistance systems into its product portfolio. However, it needed to modernize its supply chain and improve its collaboration with suppliers to meet customer demand. After migrating to SAP S/4HANA, UNO MINDA dramatically sped up processing time and refined business processes.

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*We have been successful in improving transparency across the entire value chain of the business. Changes like material valuation in multiple currencies enable **seamless transactions with suppliers**.*

Nirmal K. Minda, Chairman and Managing Director, Minda Industries Ltd.