

SAP Value Paper | PUBLIC

# Transform the Intelligent IM&C Enterprise with SAP® Solutions

## Business Value with Intelligent ERP

THE BEST RUN 



# The Need of an Intelligent ERP System

## Support “Next-Practices” with Intelligent ERP

### Leading industrial manufacturers use market dynamics to create and capture new business opportunities.

The digitalization of businesses across all industries is happening rapidly, and there is no turning back. Companies are looking for new ways to deliver value to their customers using digital channels and creating personalized, digitally enabled products across all sectors, from consumer products to heavy equipment and machinery.

The industrial machinery and components (IM&C) industry is at the heart of this shift, providing the intelligent machines and equipment needed for this transformation, as well as spearheading innovative processes such as connected manufacturing and predictive maintenance and service.

#### Demanding customers

Customers are better informed than ever and demand products that fit their exact needs at competitive prices.



Manufacturing customers demand the consumerization of business-to-business (B2B) sales with an omnichannel customer experience. The ability to understand customers' buying journeys and to capture customer requirements effectively is key.

#### New competitors in the market

As industry boundaries are blurring, industrial manufacturers are getting boxed in by suppliers that are moving up the value chain, as well as customers moving down the value chain.



Industrial manufacturers must redefine their core strengths and capabilities and learn to create value in industry value networks.

#### Globalization and right-shoring

With shifting world orders and formerly low-cost labor regions on the rise, questions such as “what to make where” and “how to globalize a business” have reached a new level of relevance.



Companies shift resources, production, and financial funds around the globe in a flexible way to make the best use of the regulations and location advantages.

#### Digitalization is the new norm

The digitalization of products, processes, and services is a way to react to the increased customer demand but poses a number of challenges.



Industrial manufacturers use digital technologies to create new value for their customers, run efficient and resilient processes, and create more value for their shareholders.

## Enhance and extend next-generation processes with intelligent ERP

Bringing SAP S/4HANA® and SAP® Leonardo technologies together as a digital core results in a more flexible and intelligent enterprise. To achieve next-generation business processes, companies need an intelligent ERP solution that can be continuously enhanced and extended with innovative business services and applications built on emerging technologies, including machine learning, blockchain, and the Internet of Things (IoT). IM&C organizations that have big innovation appetites or prefer to be early adopters have already begun this journey.

## Carl Stahl GmbH

- **Lifting** corporate processes to the **next level** with **SAP S/4HANA**
- **100%** of core processes ready and live in **6 months**
- **50%** reduction in inspection time

“SAP S/4HANA has enabled us to optimize processes by business unit within one IT landscape, and we were still able to reduce costs. And we now have the foundation to launch innovations, such as IoT scenarios.”

Stefan Aubele, CIO, [Carl Stahl GmbH](#)

## Vectus Industries

- **15%** reduction in operational costs with the **SAP S/4HANA Enterprise Management solution**
- **50%** faster access to and visibility of real-time data
- **Real-time** financial close (down from a few months)

“SAP S/4HANA Enterprise Management has made our operations more efficient by standardizing controls and reducing risk. Our decisions are better, faster, and information driven, giving us a definite competitive edge.”

Manish Sinha, Head of IT, [Vectus Industries Limited](#)

# Strategic Priorities in a Digital Economy

In this situation, where the opportunity is huge but at the same time new market entrants are threatening traditional IM&C companies, it is essential to focus on the right strategic priorities to drive digitalization across the business



## Customer centricity

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 what products are built and what services are offered.

**End-to-end (E2E) scenario: Focusing on the most valuable customers** – Grow your business winning the right customers for the solutions you serve best



## Serving the “segment of one”

Providing solutions that precisely fit the needs of one single customer has been commonplace in traditional engineer-to-order environments. Now, the ability to capture customer requirements effectively and drive mass customization is the key to giving customers exactly what they want.

**E2E scenario: “Lot size of one” orders** – Honor your customers with the perfect-fit solution for what they need – at the right margin for you



## Digital smart products

Differentiation and specificity in products stems from digital capabilities and value-added services that are bundled with the physical products. Using digital capabilities such as self-awareness of technical health and operational status or business system connectivity helps industrial manufacturers differentiate.

**E2E scenario: Managing embedded software within the engineering process** – Lead in your market by fully making the most of your engineering strength



## Digital supply chain and smart factory

Digital technology on the shop floor and in the supply chain is not new. What is new is the way production and logistics are intelligently connected to the rest of the business and are able to deal with external impulses such as short-term demand and supply fluctuations or changes in the configuration of a customer order that require different materials, parts, and machining operations.

**E2E scenario: Process simplification in material requirements planning (MRP)** – Enable efficiency that your customers will reward



## Servitization and new business models

As traditional products are commoditized, IM&C companies are shifting from selling physical products to providing complete solutions. Generating more than 50% of revenue from services is a common goal for manufacturers who are looking for higher profit margins and increased customer intimacy. The “digital twin for business” is a key requirement, representing the physical product over the entire lifecycle, including changing data points during manufacturing and installation as well as operational performance issues, financial value created, and costs incurred up until the final phase of decommissioning.

**E2E scenario: Performance-based contracts** – Outpace your competition with what makes your product unique: commercial performance

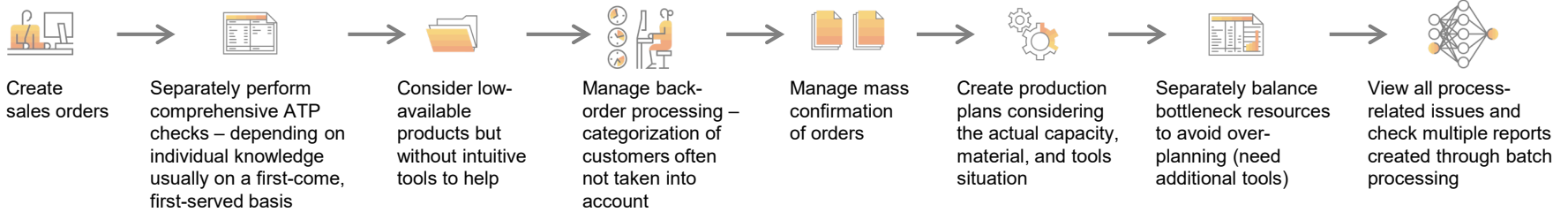


## Customer Centricity

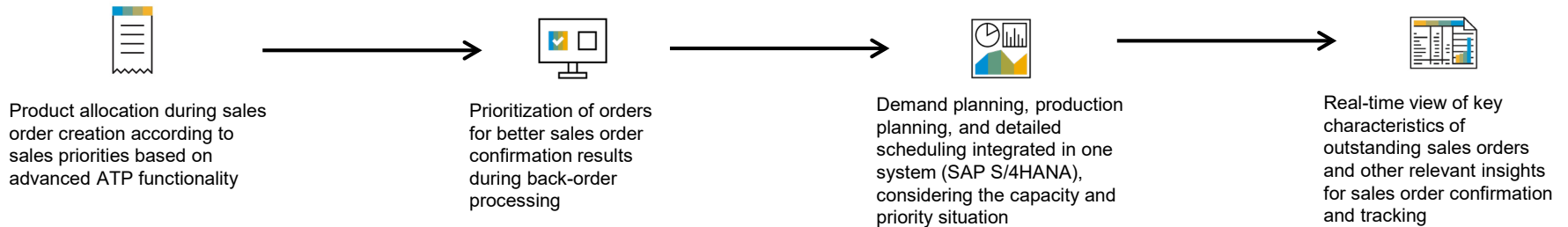
# Focusing on the Most-Valuable Customers

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 offered. IM&C companies want to become customer-centric enterprises, and the ability to focus on their most valuable customers is one of their key priorities. Since short and reliable delivery times are important for their customers, IM&C companies want to prioritize the production of their products based on the individual importance of each customer. SAP S/4HANA enables IM&C companies to prioritize customer orders more reliably and efficiently while providing valuable insights into the order management process to avoid delayed deliveries and to help ensure on-time delivery performance.

### Traditional scenario



### A new world with SAP



### Top value drivers\*

**10% to 20% increase** in revenue from new products

**10% to 20% increase** in customer satisfaction

\*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 SAP Leonardo technologies. As each enterprise is at a different level of maturity, we recommend working with you to determine the value proposition for your enterprise.

## Serving the Segment of One

# “Lot Size of One” Orders

Providing solutions that precisely fit the needs of one single customer has been commonplace in traditional engineer-to-order environments. Now, the ability to capture customer requirements effectively and drive mass customization is the key to giving customers exactly what they want.

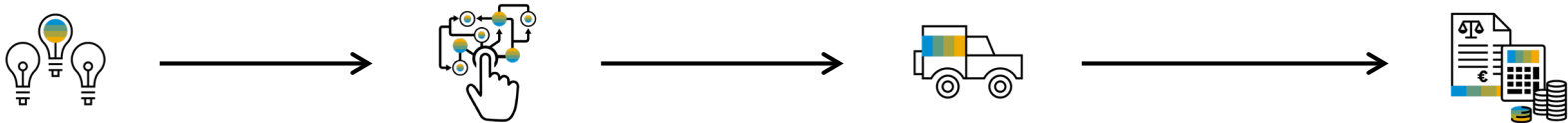
Critical for this transformation is the ability to manage the specifics of each order in every aspect of the industrial value chain in a consistent way nearly at the cost of a standard order. To do this, all product and process information must be kept in a single place, and all business processes – from initial engineering through after-sales service – must be effectively executed and closely monitored.

### Traditional scenario



- Manage ideas and requirements and created designs
- Create design results and bills of materials in a product lifecycle management (PLM) system
- Set up and maintain manufacturing master data, including variants in the separate ERP system and shop floor systems
- Make sure engineering and manufacturing information is in sync
- Hand over customer specifications to manufacturing – decoupled processes
- Ensure reliability of delivery dates, which requires consulting multiple systems or waiting for MRP batch runs
- Move order through the manufacturing process using multiple systems and transactions – no integration of information or consistent UIs
- View all process-related issues and check multiple reports created through batch processing

### A new world with SAP



- Management of a supplier- and customer-integrated product design process from early-idea phase to released design and product-variant definitions
- Handover of bills of materials to manufacturing and creation of work instructions in one integrated process including closed-loop change management
- Live MRP, enabling insight to action in real time in one consistent UI
- Role-specific screens to speed up the management and execution of orders, from order management, manufacturing to delivery in an integrated process
- Profitability reporting and analysis done on actual data at full detail in real time to understand all profitability aspects of the customer order

### Top value drivers\*

**10% to 12% reduction**  
in total logistics cost

**10% to 20% increase**  
in on-time delivery

**Up to 10% reduction**  
in total manufacturing costs

\*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.

## Digital Smart Products

# Managing Embedded Software Within the Engineering Process

Differentiation and specificity in products stem from digital capabilities and value-add services that are bundled with the physical products. Using digital capabilities such as self-awareness of technical health and operational status or business-system connectivity helps IM&C manufacturers differentiate.

Digital and smart products are invented and born in IM&C companies. This leads to a stronger “system thinking” in the R&D or engineering context. Whereas in the past, the mechanical design was the main engineering step, today’s products and solutions contain a vast array of electronics and many different pieces of software. SAP S/4HANA enables IM&C companies to manage software versions in an integrated way along the complete value chain and product or solution lifecycle.

### Traditional scenario



Isolated creation and maintenance of product structures and bills of materials (BOMs)

Isolated change record creation and maintenance view – leading to fragmented navigation

Project- and/or customer-based integration of software executables – no out-of-the-box capabilities to support the end-to-end product lifecycle

Constraints management of hardware and software versioning dependencies that is typically spreadsheet-driven, leading to a lack of transparency of where and which kind of software version is installed

### A new world with SAP



- Integrated single view of change timeline and BOMs
- Future support of configuration of BOMs, including software item as a category

Embedded software management capabilities enhanced by constraints management of hardware and software components as part of SAP S/4HANA

Handover of BOM spare parts positions and software items, including software installation instruction to SAP Asset Intelligent Network

### Top value drivers\*

**20% to 30% reduction** in R&D cost

**Up to 10% reduction** in total manufacturing cost

**10% to 20% reduction** in manual rework through better product configurations

\*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.

## Digital Supply Chain and Smart Factory

# Process Simplification in MRP

Digital technology on the shop floor and in the supply chain is not new. What is new is the way production and logistics are intelligently connected to the rest of the business and are able to deal with external impulses, such as short-term demand, and supply fluctuations or changes in the configuration of a customer order that require different materials, parts, and machining operations.

SAP S/4HANA supports an order-to-delivery process that provides significant improvements in sales order confirmation, material shortage identification, and managing inventory through exceptions, helping ensure on-time delivery and shipment tracking.

### Traditional scenario



- Sales order capture
- Sales order confirmation and delivery commitments based on outdated data, resulting in canceled or delayed orders
- MRP is scheduled so material shortages not known instantly, delaying production
- Inability to respond to production or supply issues on time
- Increased safety buffers to make up for the lack of inventory visibility, locking up capital
- 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



- Sales order capture through any device
- Real-time inventory information resulting in realistic fulfillment commitments for online order confirmation
  - Rule-based product allocations
- Live MRP – capable of running multiple times a day
  - Instantly identified material shortages
- Automated decision recommendations and integration into Ariba® Network, helping to quickly locate the best supplier for purchase requisitioning to keep production moving
- Single warehousing platform for all warehousing operations
- Single platform for delivery, transportation, and dispatch management with real-time embedded analytics
- Analysis of vehicle and sensor data in real time, optimizing logistics and improving service

### Top value drivers\*

**10% reduction** in manufacturing cycle time

**8% to 10% reduction** in revenue loss due to stock-outs

\*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.

Servitization and New Business Models

# Performance-Based Contracts

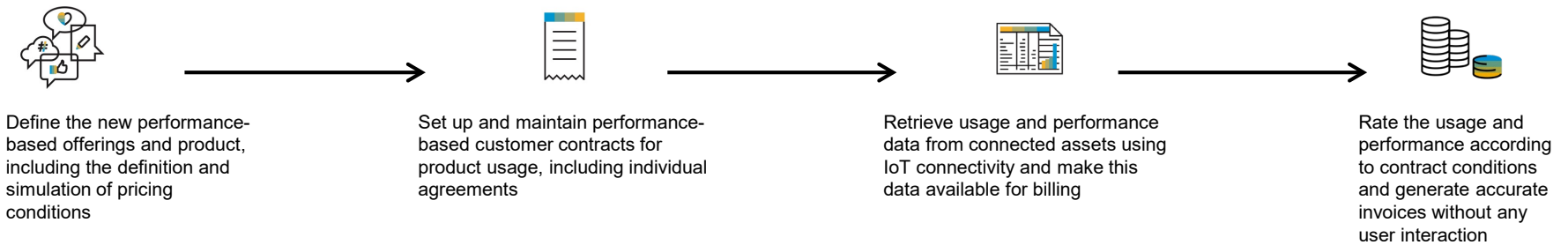
As traditional products are commoditized, IM&C companies are shifting from selling physical products to providing complete solutions. Generating more than 50% of revenue from services is a common goal for manufacturers who are looking for higher profit margins and increased customer intimacy.

IM&C companies are moving from product-centric offerings to service-centric offerings, thereby implementing new business models. These models include products as a service or managed services. Performance-based contracts allow customers to use products without the need to buy them: they just pay for the effective usage or output. SAP S/4HANA enables IM&C companies to run this new business model efficiently and in an integrated manner.

**Traditional scenario**



**A new world with SAP**



**Top value drivers\***

**3% to 10%** improvement in service profit margin

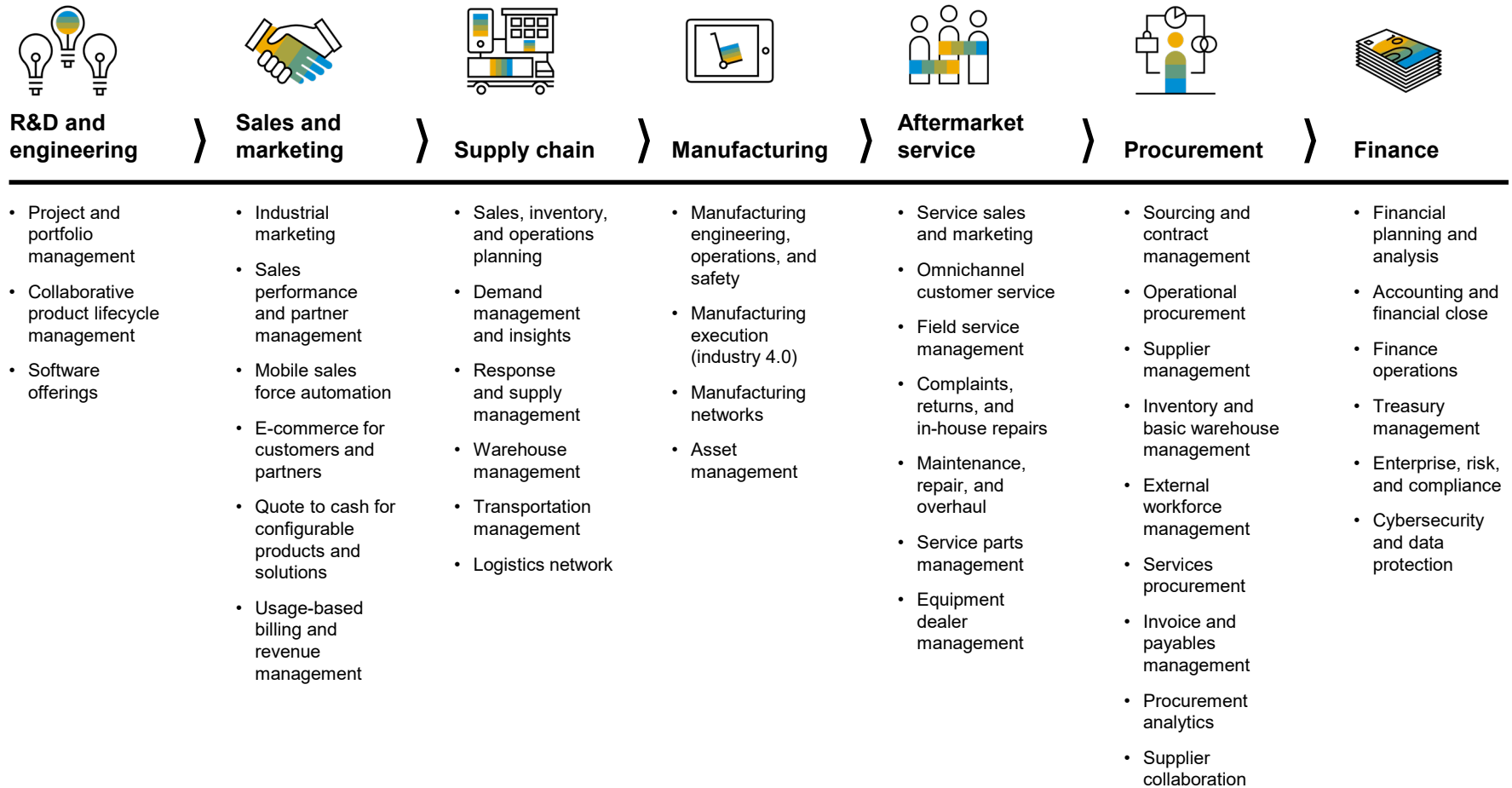
**25% to 30%** improvement in subscription invoice processing time

\*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.



# Deep Dives Along the IM&C Value Chain

This section examines primary capabilities where value can be achieved through SAP S/4HANA, line-of-business (LoB) solutions, and SAP Leonardo.



# R&D and Engineering

## Typical challenges

- Inability to prioritize project portfolio and product development decisions in alignment with corporate strategy
- Lack of transparency into project-resource demands and allocation, leading to project delays as well as low resource utilization for IM&C companies
- Slow access to project and task details, reducing productivity of IM&C project management resources
- Inability to report project costs and procurement data accurately, increasing the risk of uncontrolled deviations and waste
- Inability to plan and manage engineering change, leading to high downstream costs
- Lack of a complete, integrated view of cyberphysical products (full view with smart product aspects such as software versions)

## Current state with ERP

- Visibility into complete project portfolio, profitability, and investment structure
- Batch runs for planning, progress, roll-up, analysis, and simulation
- One application for capacity planning, detailed project role planning, and project staffing
- Sometimes inaccurate project financial and logistic information due to batch load process; inability to perform drill downs
- Integration of mechanical and electrical disciplines in an end-to-end design process
- Variant configuration that can be handled through the complete business process (engineering, sales and distribution, planning, and so on)

## Capabilities of SAP S/4HANA

- Live tracking of financial project KPIs using the in-memory technology of the SAP HANA® business data platform
- Real-time access to resource availability, skill sets, and organizational assignment during project staffing process
- Direct and accurate access to project financial and logistic information
- Ability to drill into details for project costs, resource usage, and progress
- Increased profitability from executing engineering changes with full knowledge of downstream costs
- Single and simplified multidiscipline product definition across the enterprise, reducing development errors
- Low-level configuration in context of material requirements planning (MRP), optimized with SAP HANA to help simplify variant management

## Capabilities of cloud-based LoBs and SAP Leonardo

- Aggregation and visualization of portfolio performance using intelligent cloud analytics
- Live tracking of financial project KPIs using the in-memory technology of the SAP HANA business data platform
- Efficient definition, structuring, and management of customer requirements in a requirements-driven product development environment, with the SAP S/4HANA Cloud solution for intelligent product design
- Requirements-driven engineering and IoT-driven live cockpit through SAP S/4HANA Cloud for intelligent product design
- Detailed data collection of issues for analysis by designers with SAP Leonardo IoT Edge
- Control and management of entitlement for the software business



## Business Benefits

- Increased revenue from new products and services
- More new products meeting revenue and margin targets
- Reduced R&D expenses
- Increased portfolio and project management resource productivity
- Reduced engineering change cost
- Faster time to market
- Reduced revenue loss resulting from compliance and recall issues

# Sales and Marketing



Typical challenges	Current state with ERP	Capabilities of SAP S/4HANA	Capabilities of cloud-based LoBs and SAP Leonardo
<ul style="list-style-type: none"> <li>• Poor customer experience due to inconsistent master data and siloed solutions across customer touch points</li> <li>• Slow resolution of order fulfillment issues and delayed delivery due to a lack of visibility into the order management process</li> <li>• Difficulties monitoring the order-to-cash process performance, resulting in a lack of immediate transparency in the order-to-cash process</li> <li>• Complex UI and difficult search capabilities resulting in lengthy up-skilling times for casual users</li> <li>• Difficulty for users to manage the selling of low-availability products and sales priority considerations</li> <li>• Complex handling of rebate processing</li> </ul>	<ul style="list-style-type: none"> <li>• Siloed solutions for different customer-interaction channels</li> <li>• Need for employees to check multiple reports to get a holistic view of all process-related issues (typically requiring batch processing)</li> <li>• No tracking of previous communications and decisions in the system</li> <li>• Monitoring of order-to-cash process performance that requires a separate business intelligence (BI) system and replication of operational data as well as the initial setup of a front-end reporting tool</li> <li>• Traditional ERP systems that do not provide modern search technologies nor use modern user interface technologies to provide simple screens</li> <li>• Traditional ERP systems requiring deep skills and an additional global ATP solution to obtain comprehensive ATP capabilities</li> <li>• Lack of flexibility in rebate management</li> </ul>	<ul style="list-style-type: none"> <li>• Omnichannel customer experience with SAP S/4HANA</li> <li>• New sales order fulfillment monitor, offering a prioritized list with key characteristics of outstanding sales orders based on real-time data</li> <li>• Relevant insights and collaboration features for sales professionals</li> <li>• Embedded order-to-cash process performance monitor, providing predefined KPI overviews based on real-time transactional data</li> <li>• Flexible framework for embedded analytics, enabling quick identification of performance trends</li> <li>• Modern UI technologies for simplified screens with the SAP Fiori® user experience (UX)</li> <li>• Full-text search for business objects and documents</li> <li>• Advanced ATP for comprehensive ATP capabilities, with simplified screens, supporting product allocation according to sales priorities</li> </ul>	<ul style="list-style-type: none"> <li>• SAP C/4HANA suite comprising five cloud solution portfolios</li> <li>• SAP Customer Data Cloud portfolio helping ensure compliance and consistent customer data across all customer touch points</li> <li>• SAP Marketing Cloud portfolio enabling event-driven, contextual, and relevant customer messaging</li> <li>• SAP Sales Cloud portfolio providing transparency to sales professionals considering all relevant customer information</li> <li>• SAP Commerce Cloud portfolio providing a consumer-grade customer experience through one-stop-shop capabilities</li> <li>• SAP Leonardo helping automate sales and marketing processes for increased productivity and customer satisfaction</li> </ul>

## Business Benefits

- Increased on-time delivery performance
- Exception-based processing
- Improved internal sales productivity and increased transparency for end-to-end order management
- Real-time insight into order-to-cash performance
- Increased efficiency in performance optimization
- Greater productivity and smoother business process execution
- Faster up-skilling time and training efforts
- Efficient selling of low-availability products based on market and customer priorities
- Less back-order processing effort with intuitive, intelligent demand classification, and faster mass confirmation of orders
- Reduced support costs through faster claim and settlement processes
- Full transparency of relevant documents, with a detailed settlement overview

# Supply Chain



## Typical challenges

- Inability to include the real-time changes in demand, and changes in the planning run and analysis, leading to outdated and inaccurate planning decisions
- Too much working capital in the supply chain, leading to low inventory turnover
- Difficulty in predicting demand and then meeting supply without increasing stock
- Complexity in valuating inventories in multiple currencies and for different valuation methods (such as for legal, profit center, or reporting purposes)
- Difficulty in managing increasingly complex, multimodal, global transportation needs in a single platform
- Inability to promise accurate and reliable order dates, leading to customer dissatisfaction and revenue loss

## Current state with ERP

- MRP lists working with snapshots of the planning situation during the planning run
- Challenge to determine optimal inventory targets across the supply chain
- Available material ledger activation along with functionality of actual costing, but inventory valuation data existing in multiple aggregated tables, leading to slow processes (actual costing, redistribution, and revaluation) and slow and inefficient reporting
- Limited optimization possibilities, with no planning combining inbound and outbound movements; planning based on deliveries; and no transportation capacity planning
- Global ATP checks performed in a different planning system
- Support for low-volume back-order processing

## Capabilities of SAP S/4HANA

- Real-time insights into material availability with MRP cockpit
- One single harmonized MRP process for all materials, both unconstrained and those requiring advanced constraint-based planning
- Personalized and dynamic planning of replenishment with demand-driven MRP, fully integrated into the existing ERP concept
- Material ledger as a default option; inventory valuation data existing in material ledger, removing redundancies and aggregates
- Single platform with basic and advanced shipping, with the SAP Transportation Management application embedded in SAP S/4HANA
- Multichannel allocation management using demand characteristics to allocate and reserve short supply
- Real-time order confirmation considering allocation constraints

## Capabilities of cloud-based LoBs and SAP Leonardo

- Optimal inventory targets determined across multiple echelons of raw material, work in process, and finished goods inventory, enabling the supply chain to operate with less working capital while maintaining target service levels (with the SAP Integrated Business Planning solution)
- Insights into transportation execution, timely execution of critical business processes, and tracking goods and assets in transit
- Response planning capability for midterm allocation planning and short-term order confirmation to automate allocation procedures, take effective corrective action, and respond rapidly (SAP Integrated Business Planning)

## Business Benefits

- Lower inventory levels
- Fewer stock-outs
- Higher customer service levels
- Reduced revenue loss due to fulfillment issues
- Higher asset utilization
- Shorter production lead time
- Higher customer order fulfillment rate
- Reduced lead time for make-to-order fulfillment
- Higher customer service levels
- Higher customer order accuracy
- Increased on-time delivery performance
- Better inventory transparency
- Less effort creating reports

# Manufacturing

## Typical challenges

- Lengthy and overnight batch runs resulting in planning inefficiencies
- Inability to manage lot size of one in a cost-effective manner
- Inefficient or ad hoc hand-over from engineering to manufacturing
- Inability to handle engineering change on manufacturing master data and production orders efficiently and consistently
- Complex and expensive system landscapes with multiple shop floor systems in distributed plants, resulting in high total cost of ownership (TCO)
- Lack of visibility into processes, status, and performance in IT systems, leading to inaccurate decision-making

## Current state with ERP

- Planning runs at predefined times with data that first must be consolidated from various systems
- SAP Business Suite software providing solutions for variant configuration and make-to-order and assemble-to-order scenarios
- Visual manufacturing planner for leveraging 3D CAD information, thereby simplifying the handover process
- Manual process to access the list of production orders and run multiple reports
- SAP Business Suite providing an integrated solution from enterprise planning to shop-floor execution
- Manufacturing insights with support from IT department, using analytical tools

## Capabilities of SAP S/4HANA

- Single run supporting both detailed scheduling and MRP; no coordination of runs required between finite and infinite planning
- Change-impact analysis and change-record apps, allowing for more-efficient integration between engineering and manufacturing
- New user experience to create master data and efficiently handle handover from engineering to manufacturing
- Fundamentally new data models and functions to reduce the number of systems required
- Real-time alerts based on bottlenecks in production, such as time or component delays, and in resources

## Capabilities of cloud-based LoBs and SAP Leonardo

- SAP Distributed Manufacturing application (functionality now found in the SAP Digital Manufacturing Cloud solution for insights) – cloud-based collaborative software that connects customers with additive manufacturing service providers – for example, suppliers of 3D printing services, material providers, original equipment manufacturers, and technical certification companies
- Management of the product lifecycle as a “digital twin,” from as-designed to as-built to as-maintained in SAP Asset Intelligence Network
- SAP Digital Manufacturing Insights solution – a centralized, cloud-based, data-driven manufacturing performance management solution that enables key stakeholders of manufacturing operations to take tactical and strategic decisions



## Business Benefits

- Increased material posting throughput
- Reduced total manufacturing costs
- Reduced manufacturing cycle times
- Increased production throughput
- Reduced production costs
- Faster order lead times
- Better product quality
- Reduced revenue loss from quality and compliance issues
- Improved on-time delivery performance
- More streamlined and efficient handover process from engineering
- Improved process agility
- Increased ability to drive manufacturing performance according to organizational goals with the possibility of intracompany benchmarking
- Higher visibility into asset use

# Aftermarket Service

Typical challenges	Current state with ERP	Capabilities of SAP S/4HANA	Capabilities of cloud-based LoBs and SAP Leonardo
<ul style="list-style-type: none"> <li>• Inconsistent maintenance of service master data and agreements and running of end-to-end service processes, resulting in more effort for users</li> <li>• Poor integration between applications for back-office and front-office, causing disconnected processes</li> <li>• Inaccurate service invoices, resulting in lost revenues, frequent invoice disputes, and dissatisfied customers</li> <li>• Inefficient service parts warehousing, fulfillment processes, and tools, resulting in poor service levels and high inventory costs</li> <li>• Inability to support new business models such as performance-based services and equipment as a service</li> </ul>	<ul style="list-style-type: none"> <li>• Service capabilities focusing on reactive service with no support for the active selling of services</li> <li>• High effort to integrate ERP back-office capabilities with front-office solutions</li> <li>• Service billing processes lacking adequate operational and analytical tools for billing administrators, resulting in inefficient generation, review, and analysis of service invoices</li> <li>• Limited inventory analysis and transparency; integration to additional systems required for advanced warehouse management</li> <li>• Running of new business models possible only with high manual effort and the integration of external solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Completely renewed back-office capabilities helping service employees to better serve their customers</li> <li>• Lean processing of end-to-end service processes across back-office capabilities and integrated to front-office solutions</li> <li>• SAP Fiori apps helping to simplify and optimize the services billing process</li> <li>• Optimized inventory management through improved live transparency</li> <li>• SAP Fiori apps helping inventory managers and warehouse clerks</li> <li>• Embedded extended warehouse management (EWM) for service parts warehousing</li> <li>• Fully integrated capabilities covering the complete end-to-end process for performance-based services, from business model design through contract management, usage metering, and billing</li> </ul>	<ul style="list-style-type: none"> <li>• SAP Service Cloud portfolio offering front-office solutions for aftermarket service that tightly integrate with SAP S/4HANA</li> <li>• Optimization of omnichannel support and field service execution, with a mobile app for field service technicians</li> <li>• SAP Service Ticket Intelligence application using machine learning to automate and optimize service ticket processing</li> <li>• SAP Asset Intelligence Network enabling asset manufacturers to collaboratively manage the “digital twin” of assets</li> <li>• SAP Leonardo IoT capabilities and the SAP Predictive Maintenance and Service solution allowing companies to use IoT to optimize service and maintenance processes</li> </ul>



## Business Benefits

- Ability to make service a driver for revenue and profitability
- Higher customer satisfaction
- Increased revenues from service parts business
- Improved service-level compliance
- Greater accuracy in services invoicing
- Less warehousing effort and cost
- Increased competitive advantage and response to customer needs for new consumption models
- Efficient operational execution of new business models

# Procurement

## Typical challenges

- Lack of supply chain visibility and collaboration, leading to stock-outs, missed shipments, and inflated inventory
- Inconsistent information flow across the supply chain, creating fulfillment inefficiencies
- Inconsistent application of contract compliance
- Time-consuming and complex process for buyers and suppliers to collaborate on purchase orders
- Inaccurate, incomplete, and unqualified supplier data
- Cumbersome and time-consuming process for analyzing procurement information
- Delayed invoice updates due to paper-based supplier invoices, leading to limited visibility of in-transit material in back-end planning system

## Current state with ERP

- No system captures for all the procurement documents and data needed for collaboration
- Inventory management data model consisting of multiple document tables for document header and item data
- Limited granular analysis, with stock-quantity data aggregated and stored in several tables
- Separate manual checks of existing sources of supply, info record, and agreements performed by users
- No external data enrichments for supplier master
- Spend analysis requiring data extraction into business warehouse with no insight-to-action capabilities
- Inefficient identification of erroneous invoices requiring user to go back and forth to change search parameters

## Capabilities of SAP S/4HANA

- Availability of good receipts, including stock-in-transit and blocked stock
- On-the-fly calculation of actual stock quantity data, enabling simple and fast reporting
- Ability to change lot size to one, capturing the lowest level of granularity with as-needed aggregation of inventory data
- SAP Fiori apps to manage all purchasing documents and automatically propose available sources of supply with dynamic search and filtering capabilities
- Integration with Ariba Network for sending purchase orders and other confirmation and standard output documents
- Live calculation of KPIs to analyze managed and non-managed spend, and instant insight-to-action capabilities
- Integration with Ariba Network for viewing, creating, and correcting invoices
- Standard integration to SAP Fieldglass® solutions for receiving invoices and sending invoice status updates back

## Capabilities of cloud-based LoBs and SAP Leonardo

- Real-time status on orders, shipments, and commits with the SAP Ariba Supply Chain mobile app
- Network intelligence, data, and insights associated with demand aggregation and compliance check against contracts and hosted catalogs
- Spend visibility powered by SAP HANA with integration to Dun & Bradstreet for data enrichment
- Matrix-based supplier qualification and segmentation
- 360-degree visibility into spending, suppliers, and related market information
- Portal for consumer-grade buying experience with single interface for all spend
- Native integration with Ariba Network for supplier invoices, status, and payments
- Invoice monitoring and exception handling based on machine learning



## Business Benefits

- Enhanced supply chain planning productivity and risk mitigation
- Improved transactional procurement, FTE productivity, and cycle times
- Increased sourcing savings with better unit price reduction
- Improved supplier compliance with spend management
- Continuous improvement in spend under e-procurement
- Greater procurement efficiency
- Better supplier performance
- More-efficient supplier rationalization process
- Increased collaborative sourcing savings and lower services spend
- Improved days payable outstanding
- Better-informed business decisions with live analytics and real-time reporting and monitoring

# Finance



## Typical challenges

- Inability to directly tie board strategy to line manager execution
- Difficulty in modelling and simulating business innovation, costs, and structural changes to assess financial impact
- Separate processes for close and consolidation
- Lack of flexibility or agility to respond to regulatory changes
- Error-prone, manual process, increasing risk with separate handling of payment orders or bank statements for each bank
- Manual, disparate, and reactive payables management
- Difficulty creating a single interconnected process for invoice processing, fulfillment, and vendor management
- Difficulty analyzing a high volume of data to identify, investigate, and prevent potential fraud

## Current state with ERP

- Separate planning tools and processes disconnected from everyday operations
- Static budget allocations
- Modeling and simulation for cost, M&A, and other structural changes done outside of the ERP system
- Closing process within ERP, but consolidation residing in other systems
- Additional configurations and add-ons required
- Manual basic bank account management, requiring add-ons
- Multiple solutions for receivables management
- Hard-to-manage clearing processes when data comes from other systems
- Manual extraction and analysis of data samples from multiple systems to detect potential fraud

## Capabilities of SAP S/4HANA

- Planning processes and functions integrated into transactional system, for closed-loop planning and execution at any level
- Central finance deployment, for faster integration during restructuring and M&A
- SAP Business Planning and Consolidation application enabling flexible planning and alternate views
- Embedded real-time consolidation, enabling “continuous accounting” from entity to group close
- Advanced compliance reporting, providing a new framework for meeting critical compliance reporting requirements
- Central finance solution, simplifying integration of third-party data for shared services, and supporting shared services with central processes in accounts payable and receivable

## Capabilities of cloud-based LoBs and SAP Leonardo

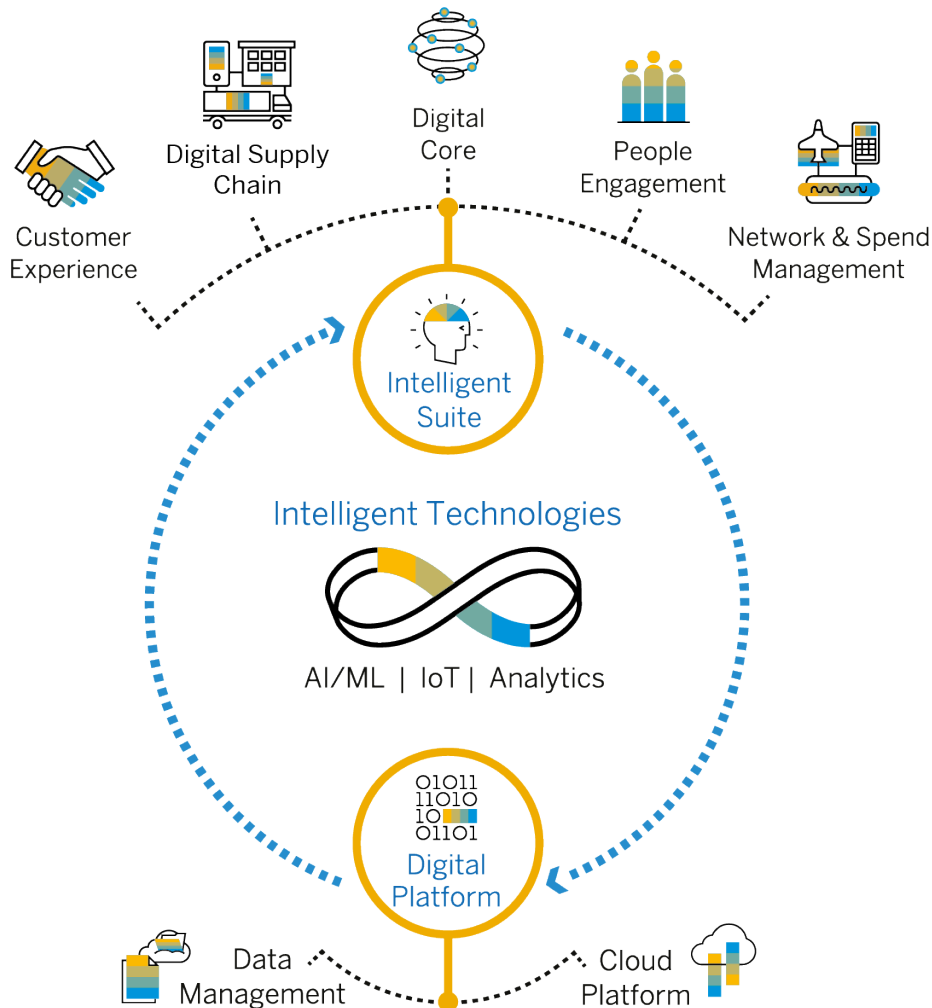
- Enterprise analytics in SAP Digital Boardroom, enabling detailed analysis of board-level strategies and plans at any level of transaction detail and any version plan
- Predictive analytics capabilities in the SAP Analytics Cloud solution, combining actuals, forecasts, and simulation to predict market trends and run what-if analyses
- SAP Cash Application software enabling intelligent invoice-matching powered by machine learning
- SAP Ariba solutions enabling end-to-end automated invoice, vendor, and supplier relationship management
- SAP Business Integrity Screening application enabling fraud identification and prevention with customized predictive detection methods, and predictive algorithms to identify potential cases

## Business Benefits

- Increased speed, agility, and accuracy of forecasting
- Fewer silos across business units
- Reduced financial forecasting error rate
- Lower audit cost
- Reduction in days to close annual books
- Reduction in general ledger and financial closing costs
- Lower costs for business and operations analysis and reporting
- Reduction in bank fees
- Reduction in days sales outstanding
- Reduction in AR write-offs and management costs
- Improvement in invoice processing productivity
- Optimized days payable outstanding



# SAP Strategy – Deliver the Intelligent Enterprise



## Intelligent ERP is the Digital Core of an Intelligent Enterprise

An intelligent enterprise can be continuously enhanced and extended with business services and applications built on a digital platform to create transformative business value.

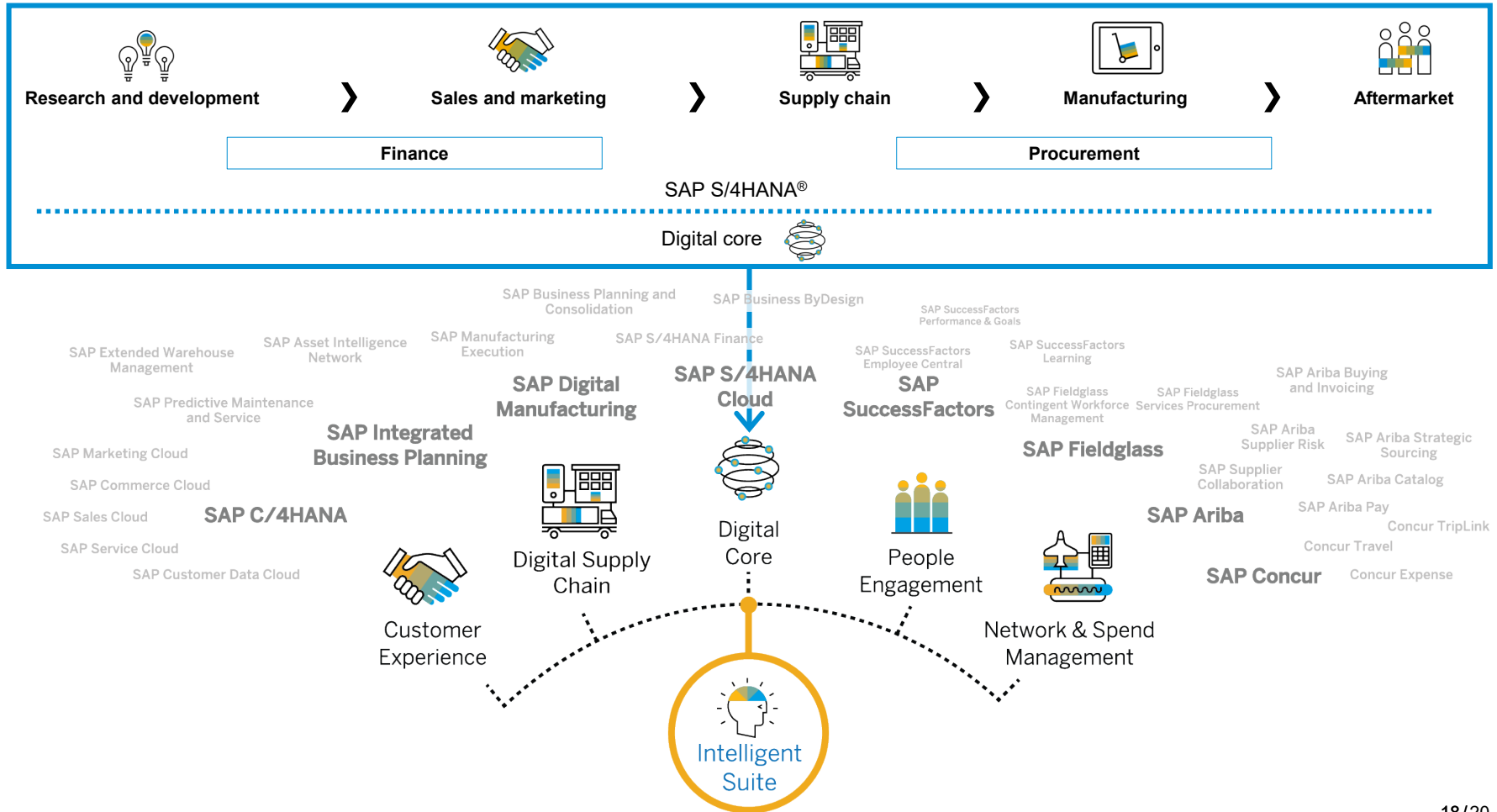
IM&C organizations that have big innovation appetites or prefer to be early adopters have already begun this journey.



# SAP Portfolio of Solutions for IM&C

## An E2E intelligent enterprise for IM&C

To achieve an intelligent enterprise, employees must be enabled to focus on higher-value outcomes and to invent new business models and revenue streams. IM&C companies must apply intelligent technologies – such as IoT, artificial intelligence (AI), machine learning, and advanced analytics – to help them transform into event-driven businesses. Event-driven businesses automate repetitive tasks, monetize data-driven capabilities, and apply core competencies in new ways. SAP S/4HANA provides the digital core for successfully running an IM&C business along the entire value chain.



# The Value of SAP S/4HANA for IM&C Companies

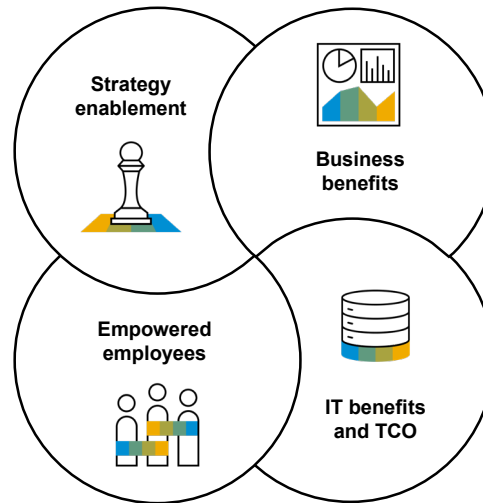
SAP S/4HANA provides IM&C companies with a proven framework to adopt industry next practices while attaining operational excellence across the entire value chain.

## Strategy enablement

- Provide greater customer centricity
- Serve the segment of one
- Build smart digital products
- Digitalize core processes such as supply chain and manufacturing
- Drive servitization and new business models

## Empowered employees

- Enable immediate decision-making based on current data
- Increase productivity and accelerate user adoption for front-line professionals through tailored UIs enabled by SAP Fiori UX



## Business benefits\*

- 10% to 20% improvement on new product and service revenue
- 20% to 30% reduced R&D cost
- 10% to 20% increase in on-time delivery
- 10% to 20% higher customer satisfaction
- 10% to 15% lower cost due to stock-outs
- 10% to 15% reduced order lead time
- 40% to 50% reduction in days to close annual books
- 20% to 40% reduction in audit cost

## IT benefits and 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 from SAP Solutions

## Vectus Industries

**Industry**  
Industrial machinery and components

**SAP Solution**  
SAP S/4HANA Enterprise Management

**Customer Web site**  
[www.vectus.in](http://www.vectus.in)

Click [here](#) to read the business transformation study.

Click [here](#) to watch the video.

Vectus Industries Limited deployed the SAP S/4HANA Enterprise Management solution and started experiencing total ease in managing business operations. It has decreased its days sales outstanding and can deliver accurate, instantaneous customer invoices. Customers now experience excellent service and on-time delivery, which will continue on during rapid expansion and growth at Vectus.

Additional benefits include:

- Real-time year-end financial close (down from a few months)
- 15% reduction in operations cost
- 50% faster access to and visibility of real-time data
- 60% increase in operational efficiency



“SAP S/4HANA Enterprise Management has made our operations more efficient by standardizing controls and reducing risk. Our decisions are better, faster, and information driven, giving us a definite competitive edge. We look forward to expanding our SAP portfolio.”

Manish Sinha, Head of IT, Vectus Industries Limited

## HOERBIGER

**Industry**  
Industrial machinery and components

**SAP Solution**  
SAP S/4HANA Enterprise Management

**Customer Web site**  
[www.hoerbiger.com](http://www.hoerbiger.com)

Click [here](#) to view the customer’s digitalization blog.

Click [here](#) for a video testimonial on innovating with the SAP Cloud Platform.

With US\$1.2 billion in business revenue across 53 countries, HOERBIGER Holding AG decided not only to globally simplify and standardize its business processes. It actually became an intelligent enterprise that leverages SAP S/4HANA beyond the understanding of ERP. For example, it significantly improved its asset utilization for its customers by using SAP Leonardo technologies to enable connectivity into the business processes of its “lease fleet wellhead compressor” business. This resulted in reduced downtime by predicting failures, and reduced labor cost by eliminating non-value-add service efforts. With this linked to SAP S/4HANA, the company had better data from its assets, which it could use to automate the usage-based invoicing process.



“90% of the implementation was fulfilled by our own people.”

Teja Ullrich, Head of Corporate IT, HOERBIGER Holding AG

“We want intuitive. We want future oriented. We want fast. We want the modern system, the modern IT landscape. So we very quickly came to the SAP S/4HANA solution.”

Thomas Kriechbaum, Chief Process Officer, HOERBIGER Holding AG

Follow us



[www.sap.com/contactsap](http://www.sap.com/contactsap)

Studio SAP | 49060enUS (18/11)

© 2018 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company.

The information contained herein may be changed without prior notice. Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platforms, directions, and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, and they should not be relied upon in making purchasing decisions.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies.

See [www.sap.com/copyright](http://www.sap.com/copyright) for additional trademark information and notices.

**THE BEST RUN** 