Accelerating innovation and growth in industrial manufacturing with KPMG and SAP S/4HANA

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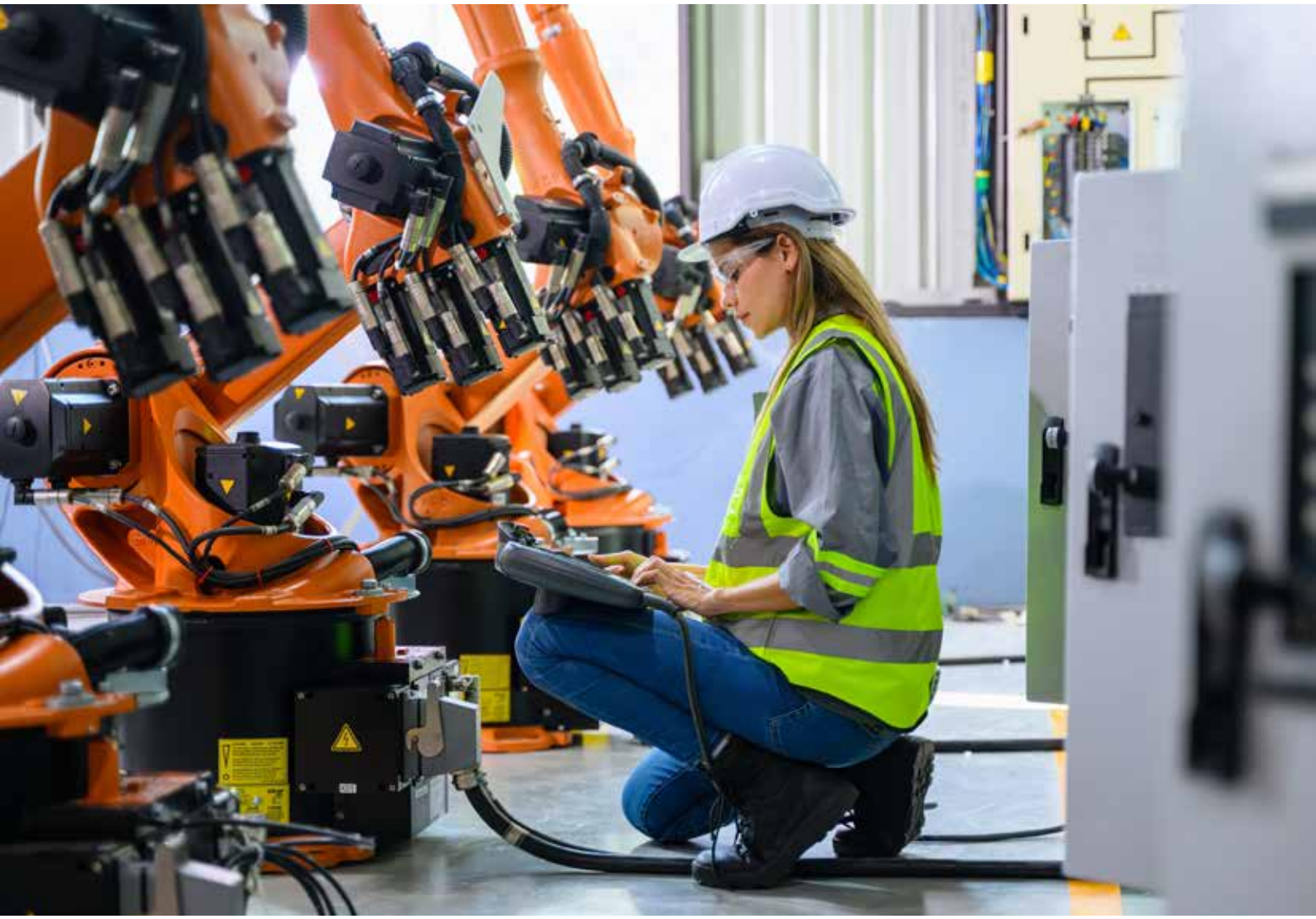


The manufacturing industry is facing some difficult decisions. There are significant opportunities for growth across global markets, with emerging technologies such as artificial intelligence (AI) and the Internet of Things (IoT) driving automation, efficiency and agility. However, major challenges exist, including rising labor and material costs, supply chain disruptions and geopolitical uncertainty.

At KPMG, we recognize that a strategic focus aligned with future demands is essential to success. To capitalize on emerging opportunities and effectively tackle challenges, organizations must invest in technology and digital transformation.

A pivotal aspect of this journey is the transition to SAP S/4HANA, which stands as one of the most significant undertakings for companies across various sectors in recent years. This system overhaul is complex and can impact the entire organization, and it is important to maintain seamless day-to-day operations throughout the transformation process. While this presents challenges across all industries, it is particularly pronounced in the manufacturing sector, where operational continuity is vital.

Maximizing the potential of technologies such as AI and the IoT is important for companies seeking a competitive edge. The effectiveness of these technologies heavily relies on high-quality, well-organized and timely data, which is essential for delivering value and driving efficiencies through insights and automation. In this context, SAP S/4HANA offers a significant opportunity for industrial manufacturers to overcome data deficiencies and foster growth.

This whitepaper discusses key drivers and essential components of a SAP S/4HANA transformation and shows how a well-informed, KPMG-tailored approach can help organizations mitigate risks, enhance efficiency and unlock value within their operations.

“Geopolitics, the energy transition and the demands of digital transformation are putting global manufacturers under pressure. From these challenges come real commercial opportunities. Organizations should have an open mind and focus on a renewed strategic vision.”

— Antonio Ziliani
Partner and Global Sector Alliances Lead, Industrial Manufacturing
KPMG in Italy

The KPMG view on the SAP S/4HANA transition

Seizing the opportunity for change

Support for the SAP enterprise resource planning (ERP) Central Component (ECC) system will be discontinued at the end of 2027. Switching to the successor system, SAP S/4HANA, is a significant and transformative step. In industrial manufacturing in particular, SAP S/4HANA transformation projects provide companies with a wide range of opportunities for change – from cost savings and improved process efficiency through to the development of new business models.

SAP S/4HANA provides innovative tools and approaches for use cases in the manufacturing industry. For many companies, it makes the use of real-time data a practical reality for the first time, enabling new solutions relating to the smart factory. The resulting transparency not only forms the basis for better decision making, but also allows companies to adopt a systematic focus on their customers.

Legacy landscapes in the manufacturing industry

Complex IT landscapes that have developed over many years are commonplace in manufacturing. Changing this architecture is like performing open-heart surgery on a business. This is why companies frequently pursue an internal operating model rather than outsourcing this central function to the cloud.

When it comes to a SAP S/4HANA transition, these companies find themselves facing the critical question of whether they want to continue operating their own data centers or opt for a hyperscaler, i.e., the purchase of highly scalable IT resources from the cloud as part of an infrastructure as a service (IaaS) model. They now have the option of going one step further and purchasing the SAP system as a service from SAP in the form of the SAP S/4HANA Public or Private Cloud Edition.

Brownfield vs Greenfield

The transition to SAP S/4HANA begins with the question of which approach to take when updating IT systems to the latest version: Brownfield or Greenfield? In the latter case, a new system is built from the ground up on a metaphorical ‘Greenfield’. By contrast, the 'Brownfield' approach essentially involves updating and modernizing existing infrastructure while largely avoiding process changes.

Although neither approach tends to occur in its purest form in practice, the choice of approach dictates the project’s overarching tone. Is the focus on harmonization and standardization? Or is it a ‘pure’ IT transition, which may appear quicker and more affordable at first glance? Many companies find it more beneficial to combine these approaches, with a greater weighting towards ‘green’ or ‘brown’ aspects depending on their starting point and objectives.

The approach ultimately selected has a huge impact on the company’s processes. In the longer term, it can also impact its strategic orientation, market positioning, and, ultimately, future viability.

> **“Greenfield implementations can be delivered in phases. For manufacturers, this can help with issues such as supply chain disruption. There will never be a ‘one-size fits all’ approach.”**
>
> — Bhanu Mittal, Advisory Managing Director KPMG in the US

Three reasons why manufacturers are moving to SAP S/4HANA

Many manufacturing organizations have made significant investments in internally developed solutions. These may map processes that are not available in SAP or address specific requirements arising from their products and processes. Adopting SAP S/4HANA would involve a move away from many of these bespoke solutions.

Three key factors should be considered when evaluating the benefits of retaining current systems and processes:

1. There is a generational change among software developers. The people who wrote bespoke software 30 years ago will soon retire. This impacts maintenance and support with serious implications for security and resilience. The more standardized the solution, the easier and more reliable any future support and maintenance is likely to be.

2. Companies should question the need for special solutions, as standards for many applications have been developed in recent years. It often makes sense to fully standardize traditional activities such as accounting or procurement, where industrial companies do not differ significantly from other sectors and special solutions do not give competitive advantage. When applications and processes can be mapped to a standard solution, the argument for a Greenfield approach grows stronger.

3. SAP has integrated numerous innovations and new functions into SAP S/4HANA and is adding various technologies with applications in industrial manufacturing – from IoT and smart metering to plant maintenance. This allows companies to respond flexibly to increasingly short innovation cycles. Accordingly, a Greenfield approach offers a clean system that is less maintenance-intensive and represents a more future-proof solution.

It is impossible to make a blanket statement as to whether a Greenfield approach, a Brownfield approach, or a combination of the two forms is the correct approach in any specific case. Given the far-reaching implications of transitioning to SAP S/4HANA, choosing the right approach to the project should be based on more than gut feeling.

The objectives to be achieved must be clearly specified in advance. Companies should define a specific level of ambition that they can measure themselves against. This means kicking off the SAP S/4HANA transformation process by looking at the taxonomies and asking themselves: How can we set ourselves apart from the competition? Where do we want to position ourselves more effectively? Where do we want to follow leading standards? Where can we make improvements? How do our benchmarks compare with the market?

“Companies can only harness the full potential of a SAP S/4HANA transformation by selecting the right project approach once all of the relevant questions have been answered.”

— Thomas Keil, Partner
KPMG in Germany

The KPMG advantage

Beyond functional transformation

There is a significant opportunity for organizations to enhance their capabilities for growth and value creation with a SAP S/4HANA transformation. KPMG professionals possess the necessary experience to help organizations unlock value throughout their operations.

By leveraging the experience of KPMG, organizations can ensure a more holistic approach to their SAP S/4HANA transformation, which can lead to better outcomes and a more integrated operational framework.

The impact on the IT landscape

A new mindset for new opportunities

SAP S/4HANA represents a significant transformation in the SAP ecosystem, necessitating a shift in organizational mindset. It features a "clean core" that is central to the intelligent enterprise, emphasizing that it should primarily support a company's core processes. Future developments will see additional processes integrated into the SAP system rather than being executed on it, allowing for the use of tools and extensions as microservices and runtime environments for custom code. This approach enables customers to streamline their SAP core system, focusing on the most essential business processes.

All processes should be mapped using a standard solution wherever possible. Beyond the technical aspects, it is crucial to consider the associated business case. The new platform not only offers a chance to standardize processes but also to automate them (such as through test automation), thereby enhancing IT efficiency and security.

SAP solutions across the product lifecycle

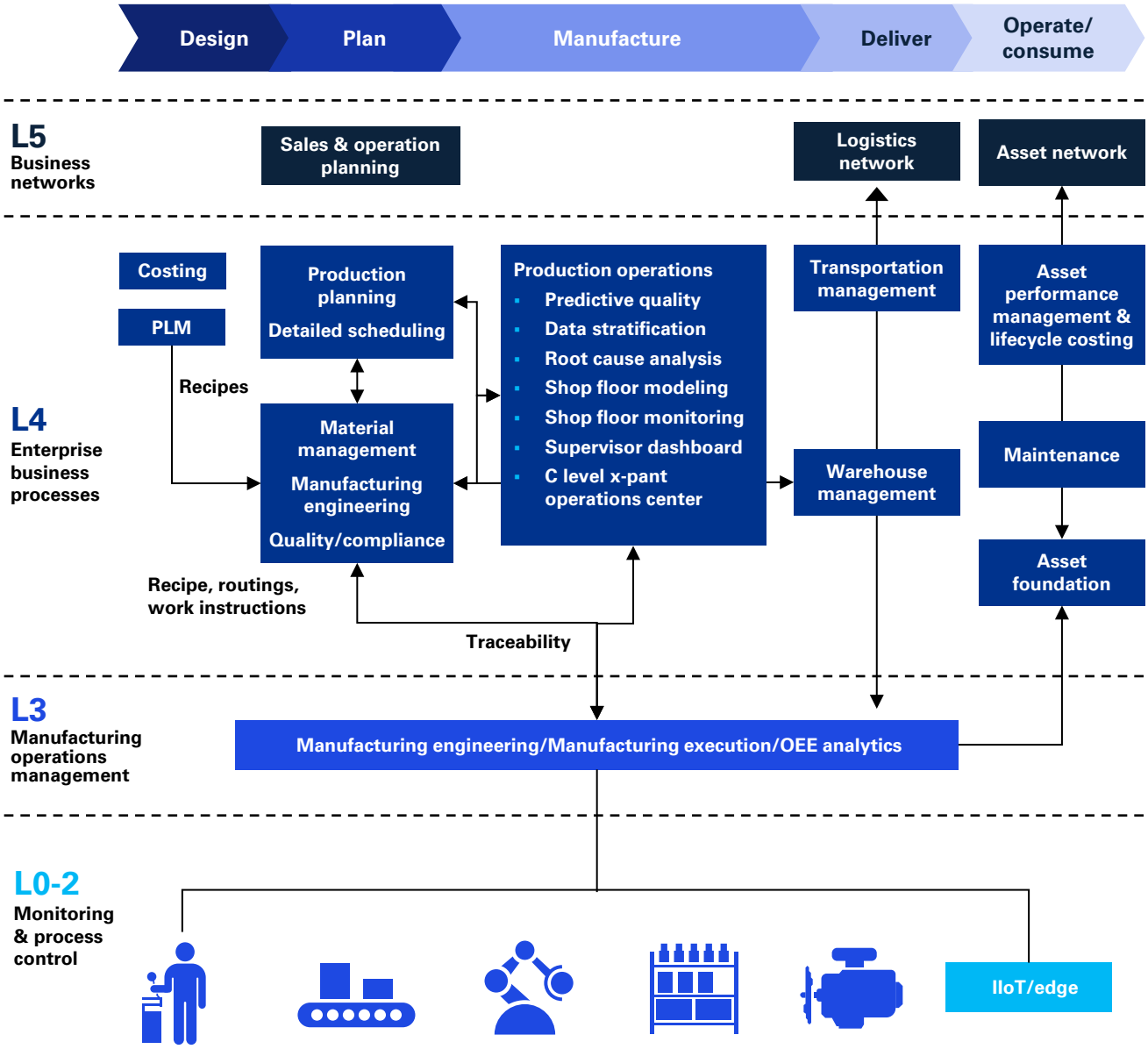
By integrating various solutions within the SAP ecosystem, organizations can effectively map the entire production and manufacturing cycle, starting from the initial idea or requirement all the way to the final production phase. This comprehensive integration is crucial as it is designed to eliminate the necessity for developing and maintaining separate, standalone solutions, which can often lead to inefficiencies and increased operational costs.

The ability to integrate multiple solutions can create a seamless flow of information and processes, which is essential for modern manufacturing environments that demand agility and responsiveness. The interconnected nature of these solutions means that data can be shared and utilized across different stages of the product lifecycle, enhancing decision-making and operational efficiency.

Digital operations management

End-to-end digital thread of business processes

Figure 1:
Overview of new SAP S/4HANA solutions



“US manufacturers are experiencing significant challenges around labor and material costs. Connecting finance with operations and the commercial organization, SAP S/4HANA enables new capabilities that help manage costs and drive value.”

— Brian Higgins,
Principal, Advisory
KPMG in the US

The KPMG advantage

Dedicated SAP specialists

KPMG firms have dedicated SAP specialists with deep knowledge of the SAP S/4HANA system and how to maximize its potential. With more than 6,000 SAP-specialized consultants across the global network of KPMG firms, KPMG professionals are experienced in helping organizations grow using KPMG leading practices and SAP technology. They can help you take a holistic view of the opportunity and then structure the delivery using proven methodologies. KPMG professionals support the change management that is vital to the success of any transformation project.

Mastering data management

End-to-end analysis of industry-specific requirements

Master data is a highly complex construct. It is the cornerstone of all business processes and is particularly relevant in manufacturing. When it comes to SAP S/4HANA transformation, companies face the challenge of getting to grips with their master data, from their data model and data quality to efficient data management that successfully handles the transition to the new SAP world.

That is why it is worth addressing solutions from various perspectives at an early stage: Governance, organizational, data and process levels.

Starting position and challenges in the manufacturing industry

The starting position in the manufacturing industry can be best described as varied. A typical example is the automotive industry, which is home to an often complex supply chain and numerous small and medium-sized enterprises that have grown organically over many decades. These may have made acquisitions, resulting in a complex organizational structure with individual national subsidiaries possessing a high degree of independence.

As part of the transition to SAP S/4HANA, companies need to consider the extent to which a future master data template for all national subsidiaries is feasible. This inevitably raises the question of how to deal with standards in the various business areas and functions. This begins with production, where parts lists and work plans are managed, via procurement, where supplier data and purchasing records play a central role, through to sales and distribution, and where the uniform maintenance of customer information is essential.

Harmonization of data models

The interplay between the individual master data objects and their use in different business processes requires overarching orchestration in a SAP S/4HANA context. This raises the question: How can an organization achieve uniform governance if different locations and departments are responsible for managing master data?

The first prerequisite is the creation of a shared data model (Common Enterprise Model). Staying as close to the standard as possible is frequently the best solution.

Ensuring data quality

From a functional and technical perspective, the topic of data quality is driven by data harmonization, preparation and cleansing. Consider what data is relevant and what is redundant. The material master demonstrates why data quality is such an important issue. It is the most complex object in the manufacturing industry and plays a role in almost all processes – in manufacturing itself, but also in sales, maintenance and service.

After all, materials are the cornerstone of the manufacturing process and need to be given the corresponding focus. The material master needs to be one source of truth accessible to relevant stakeholders around the globe.

“SAP S/4HANA is a naturally open system that facilitates connection with supply and customer ecosystems and can create new revenue streams.”

— Antonio Ziliani
Partner and Global Sector Alliances Lead, Industrial Manufacturing
KPMG in Italy

The KPMG advantage

Insights and AI-driven transformation

Leveraging the power of data, KPMG professionals can unlock actionable insights that inform strategic decisions and operational optimizations throughout the transition. Understanding the implications of artificial intelligence, they integrate SAP S/4HANA with cutting-edge AI solutions to deliver a more intelligent solution that can predict trends, automate processes, clean up master data and empower decision-makers.

A structured approach to recording and controlling

Improved transparency and integration

The transition to SAP S/4HANA not only introduces new tools and functions, it also represents a unique opportunity to make strategic adjustments. This includes a focus on controlling. Although controlling does not contribute directly to value, it helps to ensure that business success is measurable. Accordingly, a first step in the SAP S/4HANA transition should involve careful analysis to define what is measurable and what can be made measurable. This enables transparency around the organizational structure and distribution of responsibilities, both essential components of successful transformation programs.

Challenges of transformation at manufacturing companies

The critical role of measurability and transparency in the SAP S/4HANA transformation is underlined by how informal processes are handled. These may be introduced by one person – to measure a specific KPI, for example – and then evolved unsystematically by subsequent role holders.

The problem with informal processes like this is they are hard to formalize and record. This means they remain in place even when the external circumstances change. This shows that the transition to SAP S/4HANA must be preceded by the question: What needs to change? Answering this question demands a structured approach. In turn, this requires clarity regarding how responsibility is distributed within the organization. Any potential ambiguities must be clarified, and the process design must be structured accordingly.

Benefits of a SAP S/4HANA transition for the controlling model in industrial manufacturing

A core benefit of SAP S/4HANA is that all areas and processes can be integrated. Holistic recording and control of processes enable real cost transparency. For example, if specific logistics tasks are to be outsourced, SAP S/4HANA can provide insight into responsibility and cost, allowing potential savings to be identified.

SAP S/4HANA also offers valuable benefits for billing internal services. In particular, the uniform data pool works to eliminate coordination difficulties. Since cost information from across the entire company can be presented in detail, SAP S/4HANA can also be used to control the associated processes across the entire organization, especially cross-divisional functions like IT.

The KPMG advantage

A digital suite of transformation solutions

At the heart of KPMG professionals' approach is the KPMG digital suite of transformation solutions – a transformation framework refined by experience. This distinctive delivery approach is engineered to fast-track the journey to SAP S/4HANA by leveraging pre-configured, cloud-based solutions and an extensive toolset, including pre-built process models, KPI libraries and automated testing platforms that can facilitate a smooth transition while enabling continuous innovation and agility within the cloud ecosystem.

> **"Many KPMG clients in the ASPAC region recognize the transformative potential of SAP S/4HANA to enhance real-time data processing, improve analytics and streamline operations."**
>
> — Jason Guo, Partner
> KPMG China

Integrated planning as the goal

From sales planning through network planning to production planning

Planning has become considerably more relevant in recent years as the conditions in global supply chains have changed. The coronavirus pandemic significantly increased the importance of considering supply chain risks when managing procurement. Supply chain bottlenecks affected almost all industries, but none more so than manufacturing.

Network planning has assumed new relevance as a means of better accounting for shortage risks and identifying alternative sources of supply in the future. In this context, scenario planning is becoming increasingly important as companies look to ensure they can respond more flexibly to change in the future. The transition to SAP S/4HANA can play a key role in this respect because the new system landscape includes numerous tools that enable integrated and comprehensive planning.

Planning requirements in industrial manufacturing

Product complexity means the planning requirements in industrial manufacturing are vast. In mechanical and plant engineering in particular, planning is strategically relevant because of variant configuration. To minimize default risk and ensure planning security, it is important to consider the business process as a whole – from product development and planning through to production and subsequent delivery. SAP describes this concept as "design to operate."

The potential benefits of integrated planning

While there are different solutions for planning processes, it is worth considering the benefits of the planning tools that can be realized when converting to SAP S/4HANA.

The SAP IBP (Integrated Business Planning) concept entails a comprehensive planning approach for connecting a company's different areas, such as financial planning, sales planning, network planning and distribution planning.

Companies in the manufacturing industry can optimize their planning processes with SAP IBP and planning functions in SAP S/4HANA, thereby benefiting from improved integration and efficiency. They may choose to improve their planning in advance with SAP IBP and realize benefits now or wait for the broader SAP S/4HANA transition.

> **"Organizations increasingly understand that the SAP S/4HANA value proposition is about enabling capabilities versus straightforward functional transformation."**
>
> — Brian Higgins,
> Principal, Advisory
> KPMG in the US

Long-term support, updates and newly developed solutions

Support should not be overlooked when selecting and rolling out a new planning tool – it is an essential consideration for companies with production sites in different locations or countries. For example, to ensure that workflows run smoothly, companies need to guarantee that queries can be answered in the respective language. They should also ensure that long-term support and regular security updates are available for software and other tools used at critical points within the company. SAP offers continuous enhancements to its suite and a steady stream of new functions in cloud solutions in particular.

The KPMG advantage

Driving value through sustainability

KPMG professionals are skilled at implementing SAP S/4HANA transformation projects with sustainability measures that meet environmental, social, and governance (ESG) criteria while driving long-term value top of mind.

Product complexity and variance

Innovations and solutions for mastering complexity

Product complexity can create multiple challenges when integrating SAP into existing processes (see Figure 2). The new SAP S/4HANA system offers numerous solutions and innovations to address many of these problems. The aim is to enable a product to be controlled more effectively across its entire lifecycle – from the automation of production processes and data generation through efficiency improvements in project workflows, and event-driven monitoring to the holistic integration of product and customer order structures within the project system.

Figure 2:
Challenges in the end-to-end production process

- Different data standards and non-integrated business objects make data maintenance more time-consuming
- Insufficient communication between departments
- Cumulative delays lead to non-compliance with project plans
- Establishment of additional interfaces with third-party software
- The high degree of product complexity leads to extremely time and resource-intensive development and production handover processes

Challenges in the manufacturing industry

The variability of products offered creates significant complexity in the manufacturing industry. In addition to this variety, companies may manufacture a specific product tailored to the needs of a single customer. Alongside the large number of components and production processes, design changes are often required, in some cases during actual manufacturing. This leads to fragmented production processes and often calls for manual adjustments that interrupt complex project workflows and can lead to non-compliance with project plans.

Smart configuration of product variants and modularization

Smart configuration is one approach for managing the manufacture of variant products. Like a virtual toolkit, it allows the end customer to design the desired product variants. This can minimize the need for manual input when creating master data and means that production can be adapted to individual customer requirements more quickly.

Modularization is another way to manage the complexity of advanced customer-specific product structures. By reusing standard templates and components, companies can achieve significant time and cost savings in development and product data management. Both smart configuration and modularization are enabled by SAP S/4HANA.

“Industrial manufacturers in the ASPAC region increasingly understand that transitioning to SAP S/4HANA can enable global growth, compliance and integration with complex supply chains.”

— Norbert Meyring, Partner
KPMG China

The KPMG advantage

Optimized supply chains

Geopolitical uncertainty and disruption are prompting manufacturers to focus on the resilience and optimization of their supply chains. KPMG professionals have access to global insights and resources ensuring organizations can move quickly and with confidence. They also empower clients to gain transparency into their supplier, reducing risk and improving compliance.

SAP S/4HANA as an enabler of predictive maintenance and services

From a cost driver to a profitability factor

Predictive maintenance has long been promised for the manufacturing industry. Rather than waiting until production machinery, equipment, or vehicles go wrong before repairing them, predictive maintenance enables critical components to be exchanged as part of planned maintenance cycles. Companies in the automotive, mechanical and plant engineering, and energy industries could benefit hugely from this solution.

However, the potential of services such as predictive maintenance have yet to be realized, and companies are still not entirely convinced of their benefits. However, this could change completely with SAP S/4HANA.

Mobile maintenance as an example of the potential of predictive maintenance

As mobile devices and technologies have become widespread, the concept of mobile maintenance has evolved and become more relevant. Smartphones and tablets support servicing and maintenance activities, allowing technicians and maintenance employees to access important data and information directly from the source. This saves time and money and addresses the growing challenges associated with the skills shortage.

Service & Asset Manager is a cloud-based solution that integrates with SAP S/4HANA and forms part of its Intelligent Asset Management (IAM) portfolio. The solution helps companies manage their physical assets and plan, monitor and perform maintenance work by providing functions such as the administration of services and work orders, notifications, spare parts, measurement recording, attachments, time recording and material consumption. Add integration with geographic information systems (GIS) and role-based visualization (UX) and companies can perform maintenance tasks more efficiently.

The ability to make informed decisions

Predictive maintenance can lead to considerable savings – but each business is unique and must be considered individually. A comprehensive cost-benefit analysis to estimate the potential savings is key. The availability of all data in digital form is a prerequisite, so preparing the master data, parts data and customer data – and including them all in the documentation – is essential. To this end, the transition to SAP S/4HANA enables organizations to make informed decisions about concepts offered by digital transformation and then implement them effectively.

“Many small and medium-sized enterprises (SMEs) in Germany and elsewhere are still behind the curve. They may not fully appreciate the need for digitalization, lack expertise or financial resources, or not have an adequate leadership strategy needed to enter into a SAP S/4HANA transformation.”

— Thomas Keil, Partner
KPMG in Germany

The KPMG advantage

A transformational approach to AI

KPMG firms’ integrated planning and scenario modeling utilizes AI to analyze data, enabling predictive insights and planning, generating strategic maintenance and supply chain scenarios for informed, adaptable decision-making. KPMG professionals use the power of AI for precise demand forecasting and strategic network and inventory optimization, enabling real-time adaptability and transparency.

Strategic development of aftersales business

Transforming from a pure product business to a service business with SAP S/4HANA

The market situation for companies in the manufacturing industry has changed dramatically in recent years and the disruptions to global supply chains from the coronavirus pandemic continue to be felt. At the same time, customer requirements and expectations are evolving. In mechanical and plant engineering in particular, development processes and utilization cycles are undergoing fundamental transformations.

As a result, the strategic importance of the aftersales business has increased significantly. The service business offers considerable growth potential, and the transition to SAP S/4HANA can play a critical role in helping companies position themselves in a more challenging competitive environment and enter new business areas.

Challenges for manufacturers in the aftersales business

Manufacturing companies looking to position themselves more prominently in aftersales face several challenges. Above all, customers expect closer proximity to the manufacturer for greater speed, agility and flexibility. Companies therefore need a better understanding of customer requirements (demand), their own inventories, production processes and delivery times (supply chain), as well as all the requirements when it comes to service provision (fulfilment).

For manufacturing companies, this calls for optimal inventory planning and the ability to quickly and flexibly adapt their supply chains to changing conditions. Effective coordination with external service providers is another prerequisite for agile and autonomous action. Seamless integration between supply chain and service processes is also a must.

Switching from product-oriented to a service-oriented approach

The complexity of these relationships is one side of the coin. When it comes to transformation, however, it is also important to consider the business process as a whole. Any company that wants to be fit for the future needs to adopt a holistic view of the customer service lifecycle. This also means integrating different roles, departments and processes into its service business.

Companies can choose between two clearly defined models: planned or reactive. The planned model involves precisely predicting maintenance and servicing requirements based on product lifecycle analysis, whereas the reactive model aims to respond quickly to customer queries and problems. This requires the flexibility to react to unforeseen events. There is considerable room for innovation in this area, e.g. the close integration of spare parts and services.

Companies transitioning to SAP S/4HANA benefit from new functions that can revolutionize aftersales. Its end-to-end scenarios integrate aftersales and service processes, unlocking value and creating efficiencies.

> **"A step toward SAP S/4HANA is a step toward improved efficiencies, enhanced real-time capabilities and a new way of doing business that maximizes value."**
>
> — Antonio Ziliani
> Partner and Global Sector Alliances Lead, Industrial Manufacturing
> KPMG in Italy

The KPMG advantage

Enhancing customer relationships

KPMG professionals have the deep industry knowledge, data tools and AI expertise to help manufacturers get ahead of shifting customer demands. They understand how SAP S/4HANA can unlock insights and integrate systems, enabling improved customer experiences and enhanced relationships.

The KPMG approach to building cultural alignment

Why professional change management is essential for the successful implementation of SAP S/4HANA

The impact of a move to SAP S/4HANA should not be underestimated. Every ERP process will be analyzed and standardized as part of the transition. Existing structures and roles – and hence responsibilities, tasks and powers – change and new ones emerge.

Professional change management is, therefore, vital. The more relevant a leadership team considers the new solution, the more actively it will support it. The more closely involved the managers are, the more intensively they will prepare their departments for future advances. The more secure employees feel about the path to change, the more positive their attitude will be, and the more quickly they will adopt it.

The KPMG advantage

Cultural and organizational alignment

KPMG professionals prioritize people and culture, underpinning technology transformation with human-centric strategies that align organizational culture with new ways of working.

> **"A successful SAP S/4HANA transition anticipates potential business disruption, data migration hurdles and the requirement for new skill sets among the workforce."**
>
> — Jason Guo, Partner
> KPMG China

The change management master plan

Because SAP S/4HANA projects are so multifaceted and result in far-reaching changes for most employees, change management cannot afford to be reactive. A change management master plan needs to be prepared to define the course of the project and enable the proactive management of all stakeholder groups. The master plan must clarify what stakeholders will focus on, when, and how their needs will be met.

End users are the biggest and most success-critical stakeholder group in SAP S/4HANA implementations in the manufacturing industry. As such, any company that foregoes adequate change management risks significantly damaging its investment. To help ensure an effective transition and reduce this risk, the change management process should be digitalized and modernized wherever possible.

The cybersecurity considerations

IT security considerations in the face of a heightened threat situation

SAP S/4HANA involves changes to the IT architecture, with a number of new components and interfaces. At the same time, the threat of cyber-attacks is on the rise. Just because many companies have operated with insecure IT for the last 20 years without encountering any problems does not guarantee that things will continue in the same vein.

As the operating model is modified and the number of interfaces increases due to the introduction of SAP S/4HANA, the number of potential attack vectors for SAP systems also increases.

A protection requirement analysis ensures clarity for companies at the outset

It is often difficult to build up expertise in cybersecurity within a company, not least because of the skills shortage. The threat situation is also unclear, making establishing a solid security plan a complex challenge. At the same time, cybercrime is becoming increasingly widespread and professional (e.g. ransomware as a service), making it more likely that a company will be the target of an attack.

A protection requirement analysis is advisable to assess vulnerabilities and establish the fundamental security requirements. Once the new architecture has been defined, threat modelling can identify attack paths and evaluate the associated risks. Any system that connects to the internet or has interfaces with external partners, such as suppliers, must be considered a potential gateway. Other potential attack vectors include vulnerabilities in the database or the operating system.

Increased need for action and the SAP S/4HANA transition as an opportunity

A SAP S/4HANA transformation is an opportunity to adapt the security level to current requirements. Even with its default settings, SAP S/4HANA offers a higher degree of security than its predecessor versions. However, users must check whether the default values are sufficient or if stricter values and measures are required for their organization. One central consideration is ensuring security from the outset and during every phase of SAP S/4HANA implementation (security by design).

The manufacturing industry is characterized by complex IT structures and cybersecurity is a continuous task that must be anchored within the company as a permanent process. This requires scheduling the corresponding resources, defining responsibilities and establishing skills.

The KPMG advantage

A holistic, global approach to governance and security

Creating a harmonized master data pool for increased transparency and efficiency is a significant benefit of a SAP S/4HANA transformation. However, it gives rise to challenges in areas such as governance, organization, processes and the data model. KPMG firms have deep industry expertise and a global network, enabling them to offer a holistic view of data management across technology, compliance and security.

“Data governance and security are especially critical in industrial manufacturing, where technology capabilities often lag behind other sectors.”

— Brian Higgins,
Principal, Advisory
KPMG in the US

The value case for a SAP S/4HANA transition and the decision paper

What are the opportunities of digital transformation?

Transition to SAP S/4HANA goes beyond merely maintaining a system that can be updated; it represents a strategic opportunity to create a platform for future growth and innovation. To evaluate the opportunity at the board or management level, the benefits of the transition must be clearly presented.

What is the value-added potential of the SAP S/4HANA transition?

The value case is particularly important to the management board's ability to evaluate the advantages and opportunities and assess the scope of the transformation project. Performing a cost-benefit analysis as part of a value or business case is an important step and requires both qualitative and quantitative analysis.

There are four key value levers that can be used as part of the business case:

1. **Improved efficiency:** Automating manual activities and reducing process complexity
2. **Lower overheads:** e.g. reducing material consumption and optimizing purchasing prices
3. **Lower total cost of ownership:** Optimizing the cost of IT infrastructure, licenses and maintenance
4. **Data analytics:** e.g. identifying new sales potential and optimizing working capital

The decision paper: Purpose, orientation and content

The decision paper is an important tool for establishing the SAP S/4HANA transformation within the wider strategic context. It will reflect the fact that a SAP S/4HANA transformation is essentially a business transformation, not a pure IT project.

The decision paper typically includes the following content:

- Overarching objectives of a SAP S/4HANA transformation and strategic relevance
- What SAP S/4HANA is and what innovations the new system offers
- SAP S/4HANA transformation approach and timeline
- Scenarios for business case analysis and key assumptions
- Business case (benefits and costs) per scenario with detailed evaluations
- Qualitative benefits
- Advantages of an early SAP S/4HANA transformation
- Factors in successful implementation
- Project organization for the next project phase

Moving toward a future-proof IT platform

The potential monetary benefit of the new features and changes serves as a guideline for decision-making. At the same time, it is important to integrate strategic and growth requirements into the project.

Finally, there is a systemic question: How can the IT infrastructure be made fit for the future? In the experience of KPMG professionals, a company can only establish a positive business case by harnessing the momentum to change its processes and organization and adopting a holistic view of the SAP S/4HANA transition. Doing so requires thinking beyond the boundaries of the various dimensions and presenting the business case in the context of the value case, with the aim of deriving the greatest potential monetary benefit from the transformation.

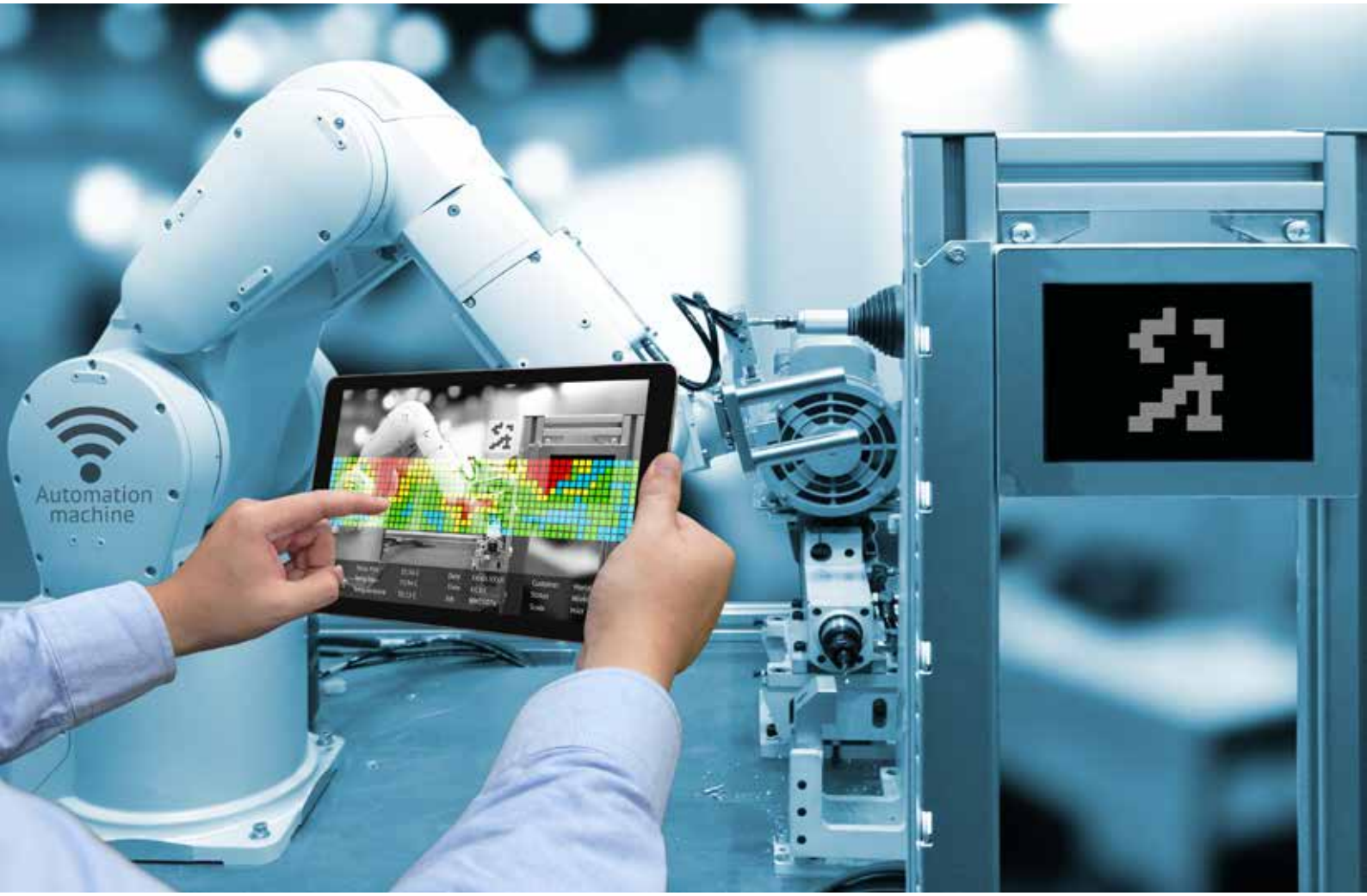
> **"A great deal of consolidation and acquisition is taking place in the manufacturing sector. This may mean that a hybrid, best-of-breed architecture may be particularly suitable. Being cloud-based, SAP S/4HANA can allow this type of plug-and-play integration."**
>
> — Bhanu Mittal, Advisory Managing Director
> KPMG in the US

The KPMG advantage

Practical solutions for real-world challenges

KPMG firms can meet you where you are. KPMG professionals understand that industrial manufacturing companies operate with extreme pressures on cost management and complex organizational structures. A high-speed, complete transformation to SAP S/4HANA will rarely be the right solution. KPMG professionals start with a deep understanding of each business, its acquisitions and specific needs. Their tailored approach factors in budget realities with strategic necessities.
A mix of Greenfield and Brownfield solutions may be adopted, with some legacy systems retained in the first phases. Progressive use of edge tech may also be part of the solution. KPMG professionals understand that it's not a one-size-fits-all approach and can work with your organization to develop a transformation plan that supports the growth of your business while not distrusting business as usual.

Conclusion



The transition to SAP S/4HANA is a transformation project that determines nothing less than the future operating structure of a company and its way of working. This represents a significant opportunity for companies to efficiently redefine and restructure business processes and update solutions that are no longer fit for purpose to ensure that they are positioned competitively. Considering the immense challenges facing the manufacturing industry right now, it is essential that companies recognize and take full advantage of this opportunity. KPMG professionals can help.

> **"The key word is transformation. A step toward SAP S/4HANA is a step toward improved efficiencies, enhanced real-time capabilities and a new way of doing business that maximizes value. The opportunity to transform is there. It's time to seize it."**
>
> — Antonio Ziliani
> Partner and Global Sector Alliances Lead, Industrial Manufacturing
> KPMG in Italy

Contacts

Global

Antonio Ziliani
Partner and Global Sector Alliances Lead, Industrial Manufacturing
KPMG in Italy
aziliani@kpmg.it

Romain Liotard
Global Sector Executive & Alliances Director, Industrial Manufacturing
KPMG in France
rliotard@kpmg.fr

ASPAC

Jason Guo
Partner
KPMG China
jy.guo@kpmg.com

Norbert Meyring
Partner
KPMG China
norbert.meyring@kpmg.com

US

Bhanu Mittal
Advisory Managing Director
KPMG in the US
bhanumittal@kpmg.com

Brian Higgins
Principal, Advisory
KPMG in the US
bhiggins@kpmg.com

EMEA

Thomas Keil
Partner,
KPMG in Germany
tkeil@kpmg.com

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