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# NEXT LEVEL: INTELLIGENT ENTERPRISE – WITH SAP

# Contents





# Intelligent Enterprise

What is an intelligent enterprise? The term "intelligent enterprise" refers to a management approach that applies technology and new service paradigms to the challenge of improving business performance.

Intelligent enterprises use state-of-the-art technology to incorporate real-time insights into initiatives that apply to the entire company. They streamline and automate data-driven processes, introduce new business models, provide their customers with extraordinary experiences, and create an environment that fosters employee development.

An intelligent enterprise is also an organization that succeeds in using data effectively to achieve its goals faster and with less risk. For example, automating processes creates space for innovation while at the same time offering sufficient flexibility to respond to changing market conditions. An intelligent enterprise knows how to combine the strengths of humans and machines and to use them to its advantage.

Scientists agree that the key technologies used will determine the future of companies. Adapting to these concepts at an early stage can give organizations a significant competitive edge.

**The most important technologies are:**

- **Advanced Analytics**
- **Internet of Things (IoT)**
- **Blockchain**
- **Artificial intelligence**

The individual technologies are combined to achieve maximum efficiency. For example, these innovations are put to use in the field of predictive maintenance, making it possible to reduce unplanned downtime of production plants by up to 50 per cent and at the same time extend the useful life of costly machines. Furthermore, new technologies are increasingly being used in smart applications to improve communication between employees, customers and business partners.

# Challenges for Companies

Digitalization will continue to gain momentum over the next few years, increasing the pressure on companies to bring their products to market in ever shorter product cycles. Digitalization is driven by globalization, global networking, changing consumer and purchasing behavior, and increasing cost pressure on companies.

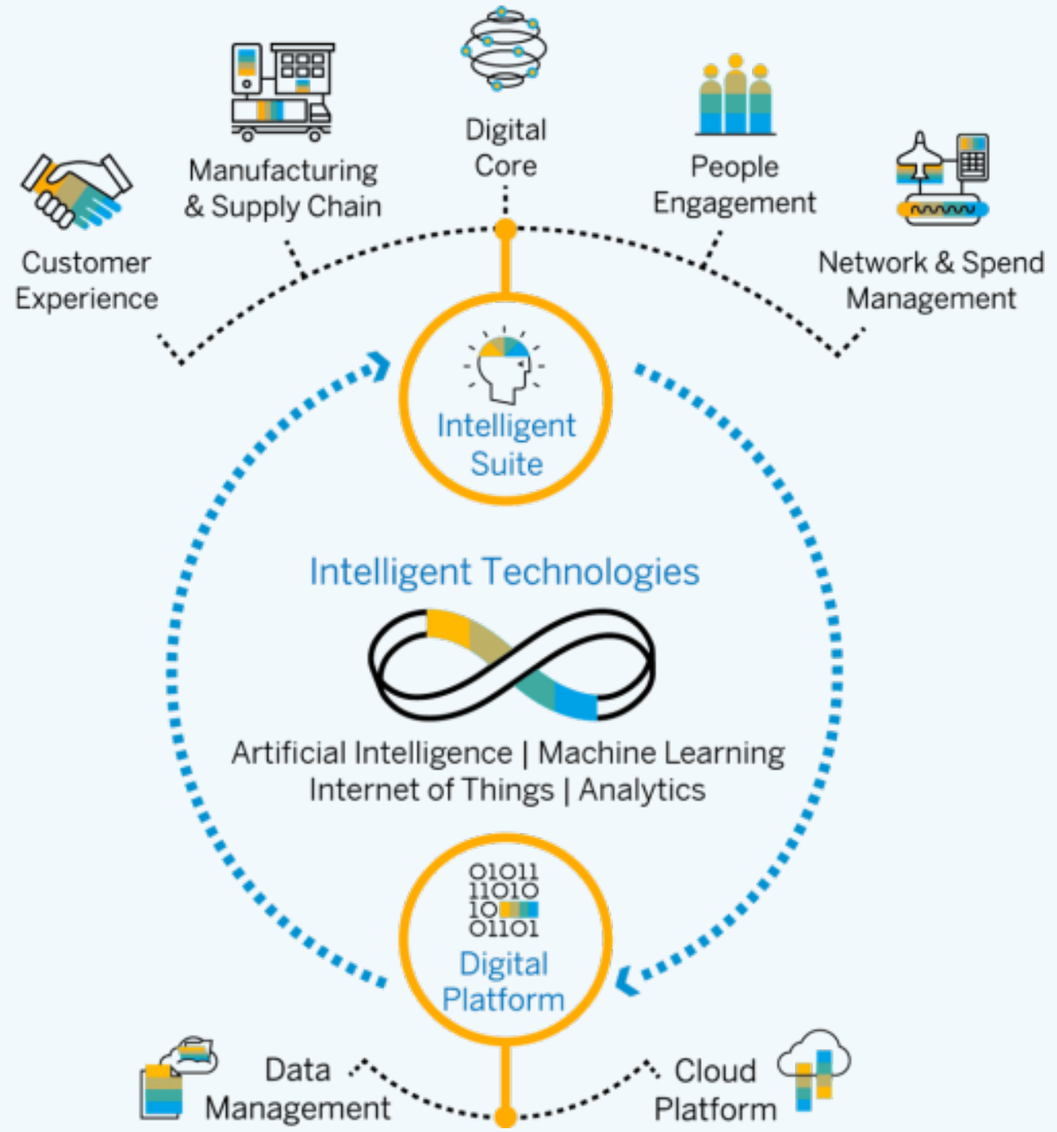
The digitalization of products, services and processes necessitates a comprehensive realignment of all sectors. Companies are having to scrutinize their market position and market focus at more frequent intervals. This challenge is referred to as "digital transformation". Such change processes has a profound impact on existing process and organizational structures, as well as on a company's core business activities. Digital transformation is an opportunity to develop new business models to reconcile the innovative requirements of the markets with the expectations of stakeholders.

If this is to be achieved, an agile system landscape is required – one that is capable of uniting all business units in a single database as well as integrating increasing numbers of tools and technologies. The infrastructure cannot be rigid and the chosen technology must not be a dead end. The system used by intelligent enterprises ideally consists of a digital core for enterprise resource planning (ERP), one or more platforms based on cloud services, and innovative technologies such as IoT, artificial intelligence, and machine learning. Together, these components provide a secure foundation for the future. They can be quickly adapted to any new business model, and they promote innovation and disruption.

An intelligent enterprise takes on the challenges posed by digital transformation and is poised to compete for the best positions on the market. SAP is a pioneering example of how this can be done.

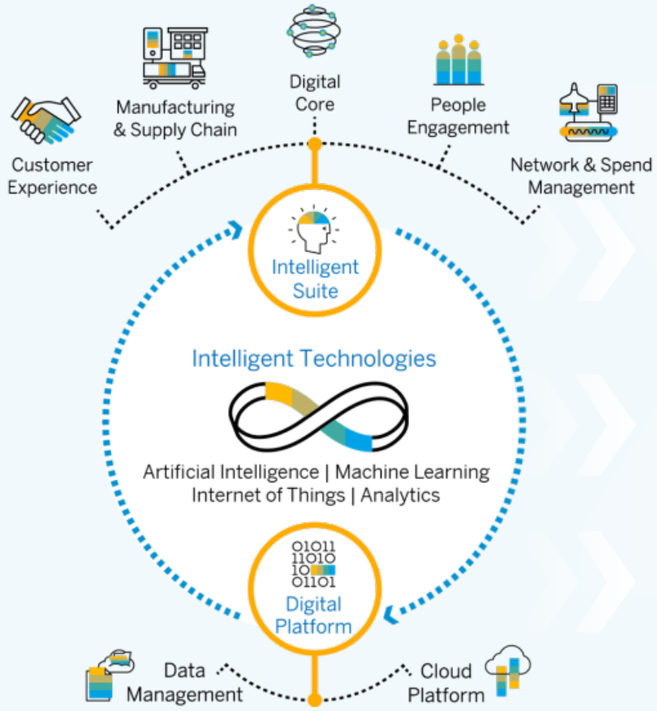
SAP Intelligence Enterprise combines artificial intelligence/machine learning and virtual reality across all business units of the company. Smart technologies are increasingly found not only in our private lives, but also in our professional sphere. Innovations such as machine learning and blockchain are designed to transform organizations into intelligent enterprises. But how can these innovations and the associated digital transformation be implemented in a way that is profitable?

SAP's Intelligent Enterprise concept aims to create smart solutions for companies to help them offer real added value to their customers. But what exactly is SAP Intelligent Enterprise? What areas does it cover? And who benefits in particular from the solutions on offer?




SAP Intelligent Enterprise
Source: SAP

# SAP – The Platform for an Intelligent Enterprise




SAP Intelligent Enterprise
Source: SAP



**Splited into 3 key areas**

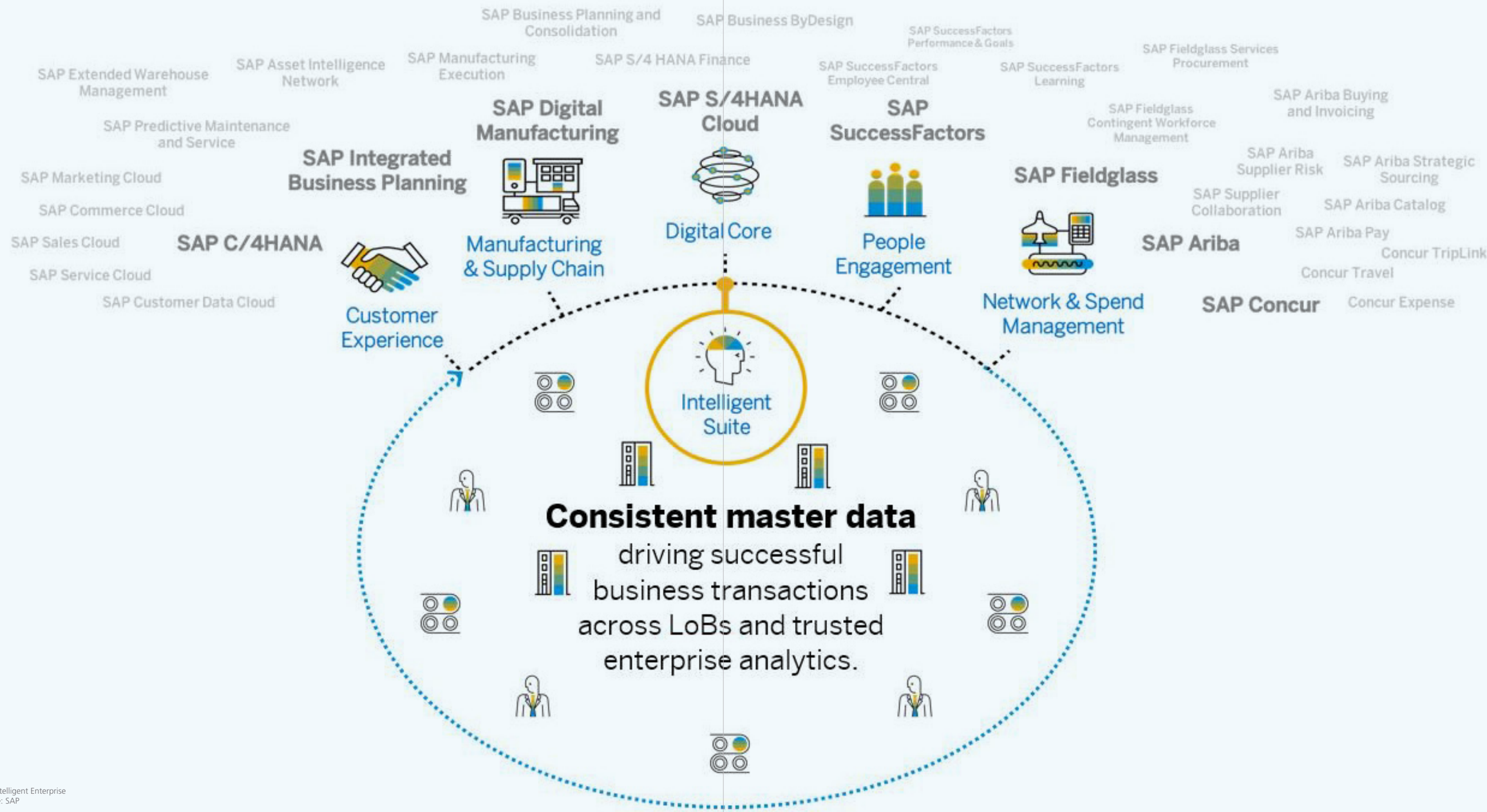
1 **Intelligent Suite**

2 **Digital Platform**

3 **Intelligent Technologies**

SAP has been working on cloud computing for over ten years. Its main focus has been on the SAP HANA software, which, in combination with numerous cloud-based applications, guides customers along the path toward digital transformation. In its latest generation, the platform integrates the key technologies of predictive analytics and machine learning into central business processes. SAP HANA solutions are interesting to both industry and small and medium-sized businesses, not least because the individual solutions can often be used separately on a day-to-day basis. SAP splits its Intelligent Enterprise portfolio into three key areas: **Intelligent Suite, Digital Platform and Intelligent Technologies.**

# Intelligent applications for every line of business




SAP Intelligent Enterprise
Source: SAP

# 1 Intelligent Suite

SAP has concentrated its efforts on the core business process and its end-to-end approach. The software provider offers a business suite that seamlessly integrates customers, employees and suppliers along end-to-end processes. The solutions are multilingual and are available in different versions depending on country and industry. Fiori is SAP's solution for creating a consistent user interface across different products and systems.

### SAP S/4HANA* (Digital Core)

The SAP S/4HANA standard application is available both as a cloud solution and as an any-premise solution, and integrates the functions of established products such as SAP SCM, SAP CRM and SAP SRM. A range of central functions are included in the digital core of SAP S/4HANA, while other functions are available as line of business (LOB) solutions. These solutions provide additional functionality. However, they have to be licensed and installed separately. For the cloud version of the widely used software, SAP currently provides quarterly updates in line with its cloud-first strategy, whereas customers who use the any-premise version receive only annual updates. It is also possible to use SAP S/4HANA as a hybrid operating model that combines the any-premise and the cloud versions.

* With the "RISE with SAP" initiative, SAP has adapted the name of the S/4HANA products


**There are four different options to choose from in the product range.**

- S/4 HANA Public Cloud, previously Essential Edition or Multi-Tenant-Edition
- S/4 HANA Private Cloud, previously Extended Edition or Single-Tenant-Edition
- SAP S/4HANA AnyPremise Private Cloud, managed by SAP (HANA Enterprise Cloud, HEC)
- SAP S/4HANA AnyPremise: managed on-premise or by cloud providers (hyperscalers)

The Cloud Essentials Edition (ES) is available for specific industries and in 43 country variants; the Cloud Extended Edition (EX) offers the same functionality as the any-premise solution and is available for 64 countries, in 39 languages and for 25 industries.

### SuccessFactors

SAP SuccessFactors is the cloud-based human capital management (HCM) software. The solution comprises different modules and can map the complete employee life cycle in a company – from recruitment and onboarding to the various processes involved in personnel administration, talent management, learning management and analysis of HR data. The purpose of SAP SuccessFactors is to provide digital support and optimization for all HR processes, thereby helping companies to recruit the right people, make the best use of them, and provide them with optimum training and development opportunities. Day-to-day core HR processes are thus supported effectively and efficiently.

### Fieldglass

The Fieldglass solutions assist companies in finding and selecting external contractors, and simplify the process of managing and remunerating external personnel.

### Ariba

Ariba offers a wide range of cloud solutions for the entire purchasing and billing process within a company. Some modules support strategic purchasing while others support operational purchasing.

### Concur

Concur simplifies, automates and speeds up travel management. All steps in the travel management process can be carried out using the platform, including travel planning, application and approval, booking, billing, and document handling.

### C/4HANA

SAP C/4HANA is a customer-experience and e-commerce cloud platform. It comprises five components: SAP Marketing Cloud, SAP Customer Cloud, SAP Sales Cloud, SAP Service Cloud and SAP Customer Data Cloud.



### Integrated Buiness Planning

SAP Integrated Business Planning (IBP) is a cloud-based solution based on SAP HANA for demand and inventory planning along the entire supply chain. It combines conventional planning and forecasting functions with modern heuristics for the analysis of time series and business objects. This concept enables companies to respond in real time to the market expectations of their supply chain and to meet demand in a way that is profitable. SAP IBP consists of five modules: SAP IBP for Sales and Operations, SAP IBP for Demand, SAP IBP for Inventory, SAP IBP for Response and Supply, and the Supply Chain Control Tower. The various components can be used both independently and in

### Digital Manufacturing

SAP Cloud Manufacturing complements and expands SAP's existing portfolio of solutions for digital manufacturing. The new cloud-based offering includes various solution packages for manufacturers of different sizes in the production and process industries, as well as for the relevant roles within these companies.

### SAP customers can choose between the following options:

- SAP Digital Manufacturing Cloud for Execution provides all the solutions in the digital manufacturing portfolio.
- SAP Digital Manufacturing Cloud for Analytics is a solution that focuses on analysis of manufacturing performance as well as on predictive quality management and occupational health and safety.

# 2 Digital Platform

SAP Cloud Platform is becoming an increasingly powerful business platform. Customers can easily expand it and integrate existing SAP applications into the solution. This makes it easy to scale SAP Cloud Platform and to adapt it to the needs of companies that are experiencing rapid growth. Moreover, within the Intelligent Enterprise solution, SAP is keen to enter into new collaborations and integrate third-party technologies into the platform.

Thanks to SAP Cloud Platform and the SAP HANA Data Management Suite, SAP facilitates the collection, connection and orchestration of data, as well as the integration and expansion of processes within the intelligent suite. With SAP IoT, SAP also embeds intelligent technologies into customers' core processes. These technologies identify patterns from the data they collect, predict results and propose initiatives. Intelligent technologies help companies to realize new cost savings as well as significantly increase their speed and efficiency. At the same time, these technologies open up some completely new possibilities.

SAP's HANA acronym stands for "high-performance analytic appliance". "In-memory technology" is the key element of the SAP development platform for software applications. The databases designed on this basis use working memory rather than holding data on traditional storage media such as hard drives. This means that large volumes of data can be evaluated with a high performance level. Company data can be analyzed in real time using an SAP HANA database, which speeds up business processes as well as making them more efficient.

SAP HANA is available in various different versions. The high-performance appliance can be installed locally within the company on various hardware or can be made available as a virtual cloud service. The fact that data is stored together in the SAP HANA database eliminates separate data silos within the company and simplifies the IT architecture. Although SAP HANA was originally available only as an appliance, it is now a complete platform for operating and developing SAP business applications.

# 3 Intelligent Technologies

It is not just since SAP Leonardo that SAP has been working on linking existing software solutions with intelligent technologies such as IoT, machine learning, big data, modern analytics, blockchain and data intelligence.

In fact, the company offers a combination of services, smart technologies and industry expertise. The main focus is on the use of artificial intelligence to execute processes with greater precision, efficiency and flexibility, enabling business decisions to be taken faster and with less risk.

# Standardization – The Key for cloud solutions

SAP's cloud-first strategy delivers new features every three months. However, to take advantage of the updates, the applications must run in the cloud. Despite being associated with many benefits, this setup also presents a challenge for companies with very customized processes. As an alternative, the level of complexity can be reduced by means of standardization, which has the added benefit of contributing to agility and flexibility.

### What is the goal of standardization?

Standardization can be achieved in various formats: a uniform and integrated business management system, similar and well-harmonized process sequences, or fully standardized processes in conjunction with tools, systems and management rules.

### Which processes can be standardized?

Almost any process can be modeled and thus standardized, including the purchase of goods, production and storage, infrastructure, financing, sales and communication management. Strategic, long-term business processes are just as appealing for standardization as operational, short-term processes.

### What are the benefits of process standardization?

- Timely integration of innovations
- Cost savings through specialized division of labor and automation
- Use of standardized interfaces
- A reduction in the amount of coordination work required
- Transparency, better monitoring, and opportunities for analysis using key figures
- One-time representation of identical and similar processes

### What are the potential disadvantages?

Too much – and, in particular, too far-reaching – standardization can have a negative impact on processes. This must not be allowed to reduce flexibility since this would have an adverse effect on the necessary adaptability.

### What are the benefits?

Process standardization optimizes operating procedures, and clear definitions make them transparent. Uniform business processes shorten the path to the intended result and minimize the amount of work required in between. Transparency and flexibility are the main reasons for creating standardized processes.



# Conclusion

**In a world where dynamism and adaptability are becoming increasingly important, transparency and flexibility are crucial. SAP releases the latest innovations for its cloud solutions every three months. Standardizing these solutions means that adaptations and enhancements can be integrated and rolled out without the involvement of users. Customers that use best practice processes and cloud solutions benefit from the high speed and efficiency with which the new features can be deployed and adopted.**

**Fit-to-standard is a key factor for any intelligent enterprise. Processes must therefore be scrutinized: Where do they differ from best practice processes and what is the added value of the deviation for the company? Standardization also means moving away from tried-and-tested, customized adaptations that do not help to differentiate the company on the market. Standardizing processes is a prerequisite for using intelligent cloud solutions.**

# Which Processes Differentiate a Company on the Market?

**Processes are divided into three groups according to the underlying activities:**

### Leadership/management processes

These processes are concerned with the structure of the organization, strategic company management as well as planning, monitoring and controlling a company's value-adding and supporting processes. Leadership and management processes "only" add value indirectly i.e., they do not generally make a direct contribution to the customer's perceived value of the services provided to them. However, they do provide strategic guidelines for all processes and thus lay the foundation for value creation within the company.

### Value-adding processes (core processes)

These processes are specifically for creating and marketing products and services for external customers whom they benefit directly. All customer-oriented business activities take place in the value-adding processes, in precisely coordinated sub-processes: from identification of customer requirements, acquisition, product development and production right through to delivery to customers. Establishing contact with the customer is also particularly important here. The value-adding processes help to increase the value of the company.

### Supporting processes

These processes control, support and improve the leadership and management processes and the value-adding processes without generating a direct customer benefit.

> **The key to organizations' future success: An increase in flexibility through decreasing complexity with the ultimate goal of adapting innovation quickly.**

# What Is an End-to-End Process?

Gartner defines a business process as an event-driven end-to-end processing path that starts with a customer request and ends with a result for the customer. Business processes often cross departmental and even organizational boundaries. Integrating end-to-end processes can make organizations more agile, enabling them to achieve high-level business goals, optimize processes and make rapid business decisions. By exposing duplication of effort, end-to-end processes can not only improve the speed and quality of business process execution but also reduce total operating costs. But what does "end-to-end" really mean for companies?

The mantra of managing directors around the world revolves around their company's ability to respond to change, get to market quickly and reduce costs. By managing end-to-end processes and taking a global view of process responsibility, organizations can achieve savings, improve performance, reduce costs and gain more meaningful business insights. Nowadays, companies want a cloud solution that delivers integrated end-to-end business process coverage along with continuous innovation.

An intelligent ERP system in the cloud contributes to this by keeping pace with a company's ever-changing infrastructure requirements and supporting integrated, business-critical end-to-end processes. SAP S/4HANA Cloud brings ERP into the digital age by further automating processes – using artificial intelligence – and thereby enabling companies to become even more intelligent and agile. The market-leading SAP solutions work together seamlessly as well as harmoniously with third-party solutions, promoting an uninterrupted and agile way of working.

# How-to Guide for Intelligent Enterprises

**1. Transfer a complex, customer-specific ERP system to a standardized and simplified S/4HANA ERP.** The agility gained through doing this enables companies to keep pace with ever-shorter innovation cycles.

**2. Expand and integrate the end-to-end processes of the S/4HANA core system via SAP Cloud Platform with other applications from the business suite. Expanding the end-to-end processes leads to the development of an intelligent business suite.** The intelligent business suite offers a variety of applications that are invaluable to both small businesses and large corporations. For example, SAP Intelligent Enterprise offers complete function modules that customers can integrate directly into their applications or into the existing system landscape. In addition, features such as predictive maintenance and real-time analysis across system boundaries are also beneficial for companies that have a heterogeneous system landscape. .

**3. The combination of external and internal data and the use of intelligent technology in end-to-end processes makes the company competitive for the future.** Optimized process chains from product development to market launch and the integration of timely feedback from the market makes products and services seem more unique.

**4. In the final phase of their evolution, companies use all of the available information and combine it with artificial intelligence.** The intelligent enterprise is able to identify problem areas and fields of action at an early stage, propose initiatives and prepare recommendations for action for those responsible for the process. The use of artificial intelligence combines new computer-generated insights with human expertise to deliver optimum results.



# Conclusion

**Experts agree that intelligent technologies and smart systems will determine and change our future. SAP Intelligent Enterprise offers an attractive portfolio for companies to join this trend at an early stage. The SAP framework makes it possible to integrate new features with existing products from different business areas, allowing complex processes to be automated and helping companies to maintain a reliable, secure and uniform IT landscape. However, implementing the end-to-end processes requires detailed planning and a forward-thinking concept that defines how the company will handle Industry 4.0, disruptive technologies and digital trends going forward. Based on such concepts, SAP Intelligent Enterprise can offer the exact foundation that companies are looking for in order to successfully overcome digital challenges of the future.**

# Intelligent Enterprise

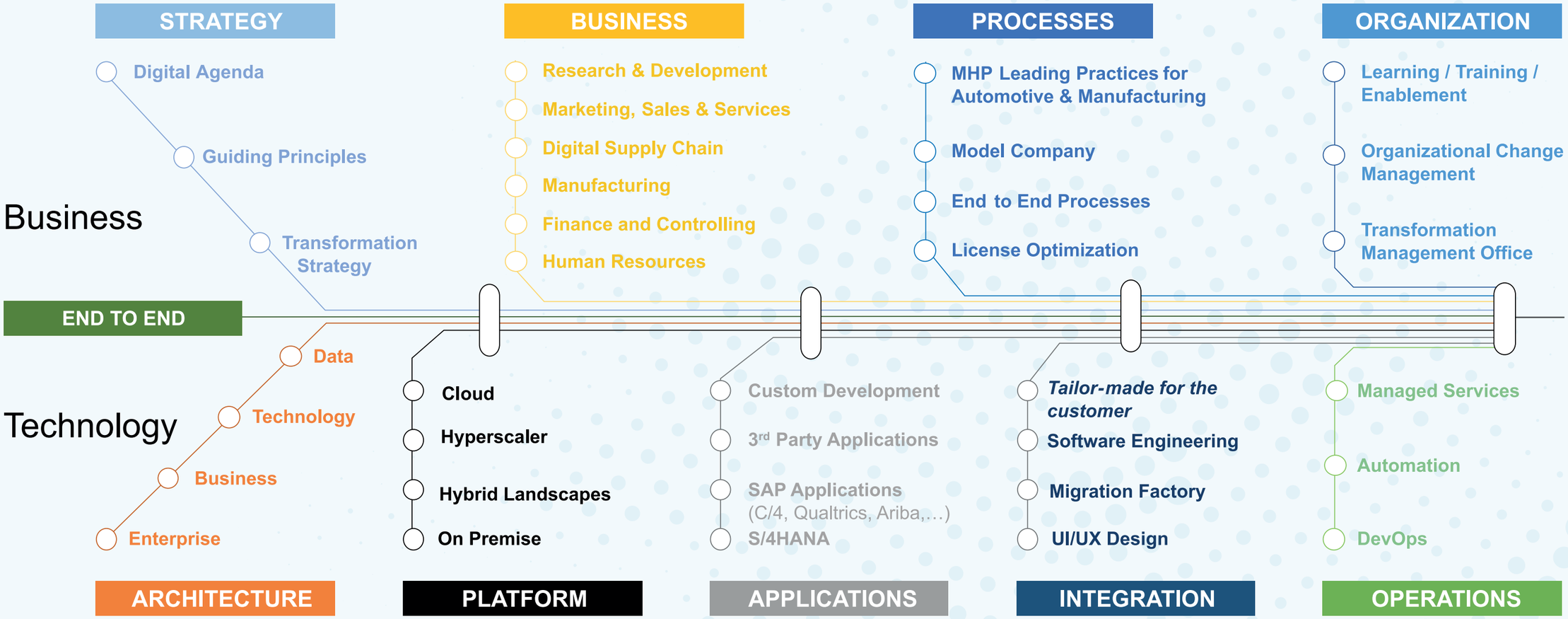



Figure. 1: [I]IoT-Transformation – End-to-End Approach from MHP for digitalization

## Source

https://www.sap.com/index.html
https://www.sap.com/products/intelligent-enterprise.html?url_id=ctabutton-glo-icon-ie
https://news.sap.com/2019/08/sap-s4hana-cloud-intelligent-end-to-end-processes/

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