The SAP Digital Business Framework

If you've been paying attention to new developments at SAP for the past couple of years, you may have come across variations on the image in **Figure 3**. Described as SAP's digital business framework, this graphic offers a high-level view of how SAP sees many of its new innovative technologies coming together to support digital transformation. Central to the digital-business framework is SAP Business Suite 4 SAP HANA (SAP S/4HANA) as the digital core—with SAP HANA and SAP Cloud Platform serving as the foundation.
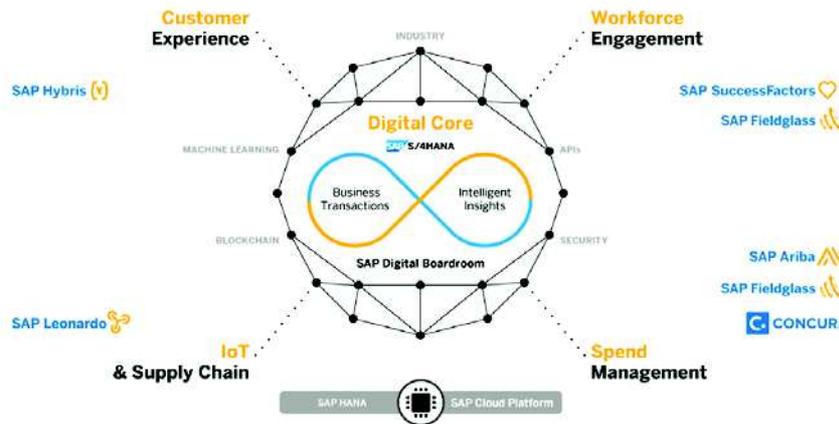

Figure 3 The SAP digital business framework

The Digital Core: SAP S/4HANA

At the center of the digital-business framework is the digital core—otherwise known as the SAP S/4HANA suite. Available in cloud or on premise, SAP S/4HANA is built on top of the SAP HANA platform, which combines advanced in-memory capabilities that bring together lightning-fast transaction processing speeds with equally fast analytics. SAP S/4HANA also uses SAP Fiori on the front end to deliver highly personalized user experiences for standard laptop/desktop and mobile scenarios.

With SAP S/4HANA, SAP has undergone its own digital transformation of sorts—digitizing the popular SAP Business Suite, which includes teh following:

- **SAP ERP** as the enterprise resource planning foundation for operations, financials, and HR

- **SAP Customer Relationship Management (CRM)** to support the sales, marketing, commerce, and service

- **SAP Supplier Relationship Management (SRM)** for e-procurement, source- and purchase-to-pay processes, spend management, and supplier performance evaluation

- **SAP Product Lifecycle Management (PLM)** to support product-related processes from the first idea to manufacturing and product service

- **SAP Supply Chain Management (SCM)** for production planning, business forecasting, and demand planning

At this point, your investment is safe and your path to digital transformation can be helped along by SAP S/4HANA, the digital core for the digital economy. But what exactly is a digital core? Sven Denecken, SVP Product Management and Co-Innovation S/4HANA at SAP, calls it "an enabling platform for transformation and innovation." He goes on to list the following five essential characteristics of the digital core:

1. It provides the enterprise with the capability to drive and anticipate business outcomes in real time.

2. It integrates the business seamlessly across all value-chain processes such as client interaction, administration, production, and research and development.

3. Efficiency is increased by automating processes and distributing responsibility for customer insights across an intelligent business network.

4. Effectiveness increases by converting signals in business data into tangible actions, essentially bringing Big Data to the size and scale needed to turn insight into action for the everyday user.

5. It increases enterprise agility by elevating each employee's view of the organization.[60]

Outcomes, integration, efficiency, effectiveness, and agility are the vocabulary of digital transformation. A digital core, in other words, is the nerve center of the digital business—it's what makes fast innovation possible.

SAP S/4HANA can also be seen, in part, as a mash-up of business suite capabilities—where core processes once supported by SAP NetWeaver are now supported by the SAP HANA platform with greater flexibility and other enhancements. In addition, it is natively integrated with the cloud solutions such as SAP Ariba, SAP SuccessFactors, and more.

The innovations in SAP S/4HANA make many new things possible. Take, for example, any industry that produces and ships products—industries where the pressure to transform digitally is dramatically impacting e-commerce, transportation, and logistics. If you're in such an industry, you can use SAP S/4HANA to optimize your working capital with powerful cockpits for accounts payable and receivables? You can minimize stock buffers with real-time inventory management supported by a simplified data model—while increasing visibility into real-time stock-and-material flow. You can also minimize procurement costs by using Ariba Network and improve "customer service with a new sales order fulfillment cockpit for instantly identifying bottlenecks and issues." [61]

Next-Generation ERP

SAP touts SAP S/4HANA as the next-generation ERP business suite for running a truly live business—one that operates in real-time and can respond to conditions and opportunities in the moment. This is accomplished with "massive simplifications in areas such as customer adoption, data model, user experience, decision making, business processes, and models." It also "offers innovations for the Internet of Things (IoT), Big Data, business networks, and mobile-first to help businesses Run Simple in the digital economy."[62]

From a business perspective, SAP S/4HANA allows you to connect, simplify, and gain insight by doing the following:

- **Connecting** with greater ease to people, devices (IoT), and business networks (SAP Ariba). This enables you "to deliver new value to [your] customers on any channel."

- **Simplifying** business processes, running them in real time and modifying them to increase efficiencies and meet customer needs.

- **Gaining insight** from "any data from anywhere in real time for planning, execution, prediction, and simulation." This enables you to make decisions "on the fly with the finest level of granularity for faster business impact."[63]

From an IT perspective, SAP S/4HANA allows you to simplify your IT landscape, innovate more effectively, improve the user experience, and deploy as you wish, as follows:

- **Simplify your IT landscape** and reduce your total cost of ownership (TCO) by eliminating redundant data and, thus, reducing your data footprint. "This helps you reduce hardware costs, operational costs, and complexity, and to save time."

- **Innovate more effectively** "by leveraging an open platform (SAP HANA Cloud Platform) to drive advanced applications—for example, for predicting, recommending, and simulating—while protecting existing investments."

- **Improve the user experience** with a simple role-based approach that "combines information from various sources at the point where decisions are made" to minimize the need for training and increase productivity.

- **Deploy as you wish** with cloud, on-premise, and hybrid options that fit in with your business preferences and the reality of your current solution landscape.[64]

Legacy Processes vs. SAP S/4HANA[106]

How much faster and better can you run on SAP S/4HANA compared to traditional systems? Take a look at **Table 3** for an overview.

Application	Legacy	SAP S/4HANA
Supply chain	Inventory data is distributed across multiple databases, and transactions need to be aggregated and posted following the Post-Goods Issue (PGI) process, which is run as a batch update. Meanwhile, truck drivers wait.	Inventory data is processed in real time and truckers can get on the road faster.
Sales & marketing	Add-on solutions for social monitoring don't integrate effectively with legacy ERP—and marketing teams can't monitor customers in real time.	With the ability to pull social data from feeds in real time, teams can spot trends and respond immediately to customer needs.
Forecasting	Forecasting takes days. And by the time reports are produced, the assumptions are based on out-of-date data.	Simulations can be run in real time based on timely data—helping you to better capitalize on opportunities and mitigate risk.
Finance	The quarterly and year-end financial close processes take weeks of data aggregation and are prone to errors.	Financial data across business units is consolidated in real time, supporting a soft-close process that frees up accounting for more value-added activities.

Table 3 Old and new processes with SAP

The Experts Speak
Working Smarter with SAP Environments

Connections are continuously on the rise, and therefore, digital transformation becomes a must-have for all types of businesses. Now, the crucial question becomes, how to turn this digitization into a competitive edge. This sidebar deals with essential findings based on Fujitsu/SAP references and use cases across a variety of geographies and industries.

According to Ovum's *2017 Trends to Watch* publication, "the Big Data will grow from $1.7bn in 2016 to $9.4bn by 2020, comprising 10% of the overall market for information-management tooling."[65] Since the Big Data value proposition of improved competitiveness, cost reduction, and risk mitigation is more than appealing, afford-able and innovative architectures are the right step towards a dig-ital advantage.

The Changing Profile of the Data Center

Dynamic business continuity requires platform solutions that sup-port consistent and uniform management of the entire SAP soft-ware landscape. This includes using SAP HANA for every kind of IT provisioning model to ensure real-time management of productive SAP environments and transparency through operations. Based on access to data, speed, agility, and availability, a cross-func-tional operational concept is needed to bring information closer to the digital-transformation business and to turn the data center into a center of business advantage.

Fujitsu's KISS (Keeping IT Simplified and Streamlined) Report II about maximizing the business value of SAP Applications and SAP HANA told us that 60% of interviewed parties desire faster analytics.[66]

Furthermore, in a study conducted by Pierre Audoin Consultants (PAC) about the relevance of SAP S/4HANA for German enter-prises, 90 percent of companies surveyed have been observ-ing improved performance in data analysis and SAP-supported processes.[67]

Data Analytics: Data Quality Matters

In a hyper-connected world, data is a very valuable asset. Consequently, the process of collecting, processing, accessing, and acting on it becomes mission-critical. Due to continuously rising data streams, organizations have access to multiple sources of information. Therefore, the era of digital transformation requires the ability to capture a variety of data from which insights to drive organizational change can be obtained. Organizations need to ensure that they have the right dynamic infrastructures in place to manage and analyze data volumes in a cost effective and efficient manner; data insights are worthless without the mechanisms to use them across the business.

Developed for managing relational databases, data warehouses are better suited to reporting transactions than to overcoming the diverse analytical challenges posed by Big Data. A smarter way is to create an open-source data analytics architecture based on the Apache Hadoop open-source framework, which is coded to manage data in any format, whether it is structured, unstructured, semi-structured, or poly-structured.

SAP Vora is the perfect connector for transactional data from Business Intelligence (BI) and data from a data lake by acquiring and combining total data insight with real-time access. The integrated solution helps organizations access information anywhere, anytime, and from any device. Converting to the new infrastructure uses the latest generation of technology and concepts for flexible expansion and provisioning of new services.

Conclusion

Given that increasing digitization is opening opportunities for new business models and new players, shifting to digital is essential, even in light of its technological complexity and challenges to execute. Real-time data analysis and systems integration allow companies obtain faster, more accurate results, shorten the time it takes to manage data, and provides a more direct route to smarter decision-making.

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