
IDC research shows that digital transformation is a board-level mandate for over 80% of European enterprises.



Creating a Platform for the Real-Time Enterprise: The Red Hat, HPE, and SAP Alliance

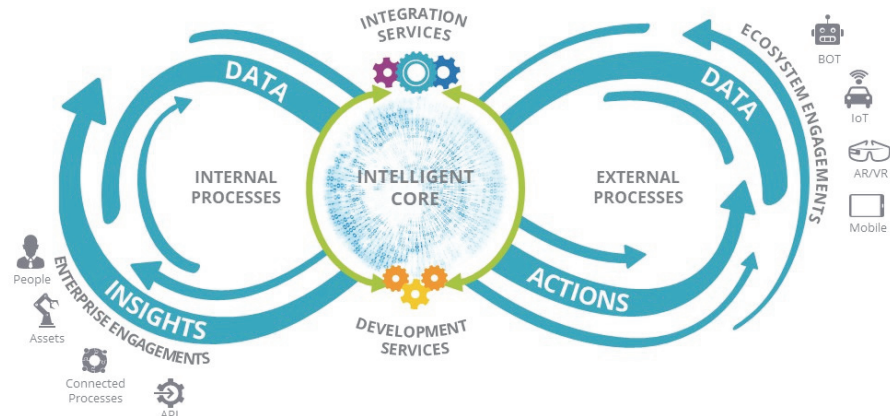
Digital Transformation and the Real-Time Enterprise

It is no secret: organizations around Europe, indeed around the world, are finding their strategies driven by the adoption and use of digital technologies — in themselves or in their competitors, which can be new disruptive entities, startups, or established companies with new digital business models. And so digital business transformation (DX) is a key imperative for most organizations around Europe. Indeed, IDC research reveals that DX is a board-level mandate for over four-fifths of European companies, generally CEO-driven.

CxOs are trying to drive their organizations to exploit new digital platforms and technologies, such as cloud, mobile devices, AI, and robotics, with an aim to create new ways of working with customers, to enable agile, real-time decision making and to enable intelligent responses to changing conditions to increase sales and efficiency while reducing business risk.

Moving the business forward and meeting the need to work faster, more efficiently, and more digitally, is a significant organizational and technical challenge. Digital assets to be leveraged include existing and net-new databases and database types, IoT and sensor data, and social media, mobile, and cloud data from partners and customers. New competitive business models need to be designed and optimized. IDC research has revealed that many organizations are stuck in a digital deadlock — they have the aspiration for transformation but are finding it difficult to make progress.

Figure 1
The New Digital Platform



Source: IDC, 2018

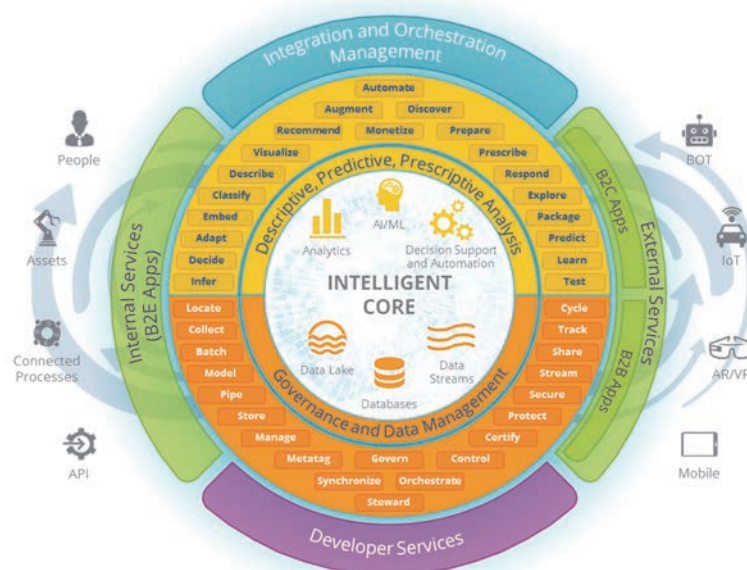
The most fundamental aspect of the many aspects of this deadlock problem is the *information* dimension. Without getting the right (digital) information to the right people at the right time, and with the right tools, coupled to ways of sharing that information in real time across the business and across the ecosystem, then the *digital* part of digital transformation would be sadly lacking. Organizations need to respond to external and internal stimuli as they come in, and to do that enterprisewide, with a common information model. Consequently, for successful and profound transformation, organizations need to put in place a *scalable, real-time business platform*.

IDC's view of such a DX platform, is shown in Figure 1. IDC defines the DX platform as the future technology architecture that accelerates DX initiatives for the enterprise, enabling the rapid creation of externally facing digital products, services, and experiences, while aggressively modernizing the internal IT environment toward an "intelligent core" in parallel.

IDC believes that organizations that can rearchitect for scale using the DX platform approach outlined here will be the most likely to successfully digitally transform their operations in the next three to five years. IDC predicts that by 2020, the number of companies that will have deployed DX platform strategies will have more than doubled to 60% of organizations.

It's important to note that this platform allows a system of innovation that shares a common foundation with the firm's enterprise systems, so it can move fast without increasing the integration burden, allowing it to modernize all its systems at a reasonable pace. It is not optimal to freeze internal ERP while innovation is concentrated on the edge. In this model, the *intelligent core* at the center of the integrated DX platform that supports both new and old styles of IT together.

Figure 2
The Digital Platform's Intelligent Core



Source: IDC, 2018

For SAP customers, this approach generally means building a platform based on the SAP HANA®, Data Hub, and Leonardo technologies to support the new SAP S/4® HANA applications, as well as being able to play a full role in a digital ecosystem with suppliers and partners.

Companies leading the way in implementing this new type of platform-driven approach span multiple industries: finance and insurance, energy and utilities, retail and manufacturing. Leading examples include:

- French utilities corporation ENGIE is putting in place a DX platform to link its efforts with partners and customers as part of the "Smart City Ecosystem."
- U.K. insurer Aviva is building a DX platform to deliver product innovation and development to its customers through data analytics, customer insights, and risk management.
- Leading German online retailer Zalando is looking to aggregate fashion brands on its DX platform for the fashion retail ecosystem.
- German metals logistics company Kloeckner & Co. is building an industry DX platform to connect suppliers and customers in the steel distribution industry.

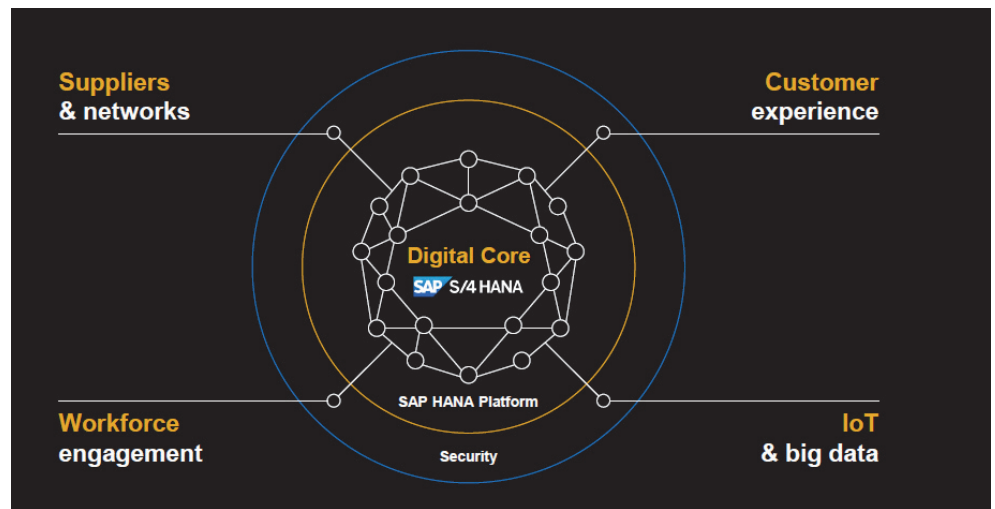
Essential Characteristics of the New Digital Platform

Essential characteristics of the scalable, real-time DX platform, in IDC's view, include its ability to supply data services, including universal, standardized, timely access to data of any type; governance; integration and orchestration services; engagement services (partners, customers, etc); and development services.

SAP's HANA platform — when taken in conjunction with its SAP Leonardo "Innovation System" — fulfils many of these requirements, and SAP is encouraging its customers to view HANA and Leonardo as the essential platform to advance their digital journey.

SAP HANA in effect provides the "digital core," while SAP Leonardo is designed to allow enterprises to innovate (at scale) using machine learning, Big Data and analytics, IoT and other technologies — as shown in Figure 3.

Figure 3
SAP Digital Business Framework



Source: SAP

For this to be possible requires deeper stack support. The underlying systems supporting SAP HANA need to exhibit world-class flexibility, manageability, availability, reliability, and scalability.

Further, IDC believes that hybrid IT will be the "norm" for most enterprises for the foreseeable future. Thus the platform needs to offer secure, next-generation, software-defined infrastructure that will run customers' datacenters today, bridge to multicloud environments tomorrow, and power the emerging intelligent edge that will run campus, branch, and industrial IoT applications for decades to come.

It also needs to support business in real time. So far, many business process transformations have been stymied by the inability to input data and then analyze it fast enough to make real-time decisions such as production changes or supply-chain/logistics re-routing based on ambient conditions. A DX platform can make this possible. Real-time planning, for example, is a "game changer" for one SAP customer. Using SAP HANA reduced the time taken to process one financial report from 40 hours to 20 seconds, a 7,000 times improvement. SAP's vision for the SAP HANA platform is not only enabling customers to make today's decisions but also providing them with a powerful predictive engine for tomorrow's choices. SAP Data Hub can help turn data silos into an integrated, holistic data resource.

IDC research shows that most companies still make decisions primarily by looking in the rearview mirror. But people don't drive that way, rather they use the forward view through the windshield. Eventually, all business operating models will include built-in forward-looking decisions.

HPE and its Support for Real-Time Business With SAP HANA

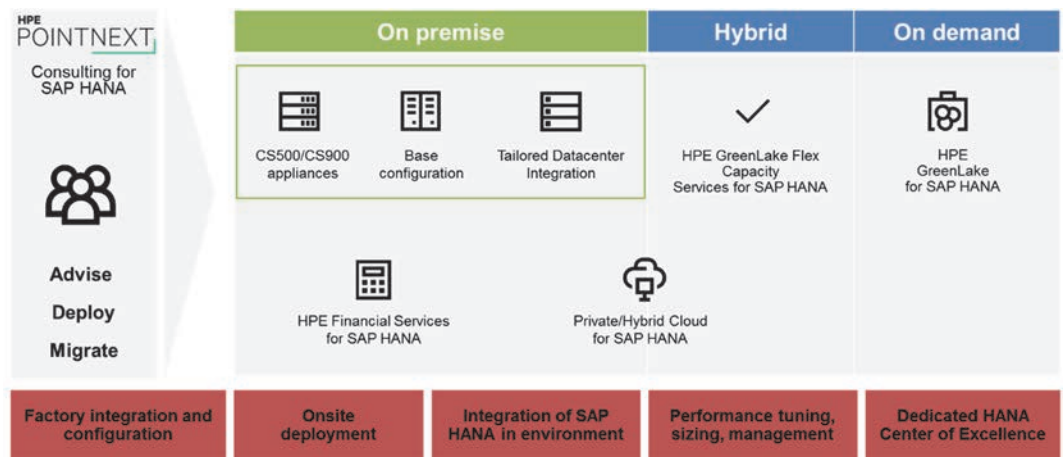
IDC research indicates that HPE is the leading supplier of systems for supporting SAP HANA: on customer premises, in managed data centers and in the SAP HANA Enterprise Cloud (HEC). HPE currently has over 2,800 customers with production HANA systems, and has shipped more than 14,000 dedicated servers into this

customer base. Notably, the SAP customer with the world's largest production SAP HANA BW and SAP HANA ER system runs on HPE systems.

At the same time, SAP HANA runs on Linux, and Red Hat is the largest supplier of Linux worldwide. And so there is a natural synergy between the three players — HPE, Red Hat, and SAP — and there are strategic technology partnerships between all three companies supporting a close collaboration: for instance, both Red Hat and HPE are members of the SAP Benchmark Council.

HPE's offerings in the SAP HANA context are summarised in Figure 4.

Figure 4
HPE Offerings for SAP HANA



Source: HPE

HPE's foundation offering for SAP HANA is its mission-critical infrastructure solutions and hybrid cloud consumption options for SAP HANA. A range of platform choices is offered, starting with TDI compute and storage building blocks all the way up to HPE's flagship appliance offerings — the Converged System 500 and 900. Recently, HPE added the new Superdome Flex to the portfolio that is capable of scaling up to 32 sockets and thus can power the most demanding in memory workloads (configurations up to 48TB are possible). It also offers its Serviceguard cluster automation and a secondary storage portfolio for data protection.

The company also offers HPE Edgeline servers and secure Aruba network solutions to run SAP Leonardo Industrial IoT platforms; a Center of Excellence (CoE) for one-stop support; solution financing; and consulting from HPE's PointNext organization that can help companies to:

- Transform IT to realize new SAP S/4HANA business processes
- Design and implement SAP ERP and SAP S/4HANA
- Operate and support all SAP solutions

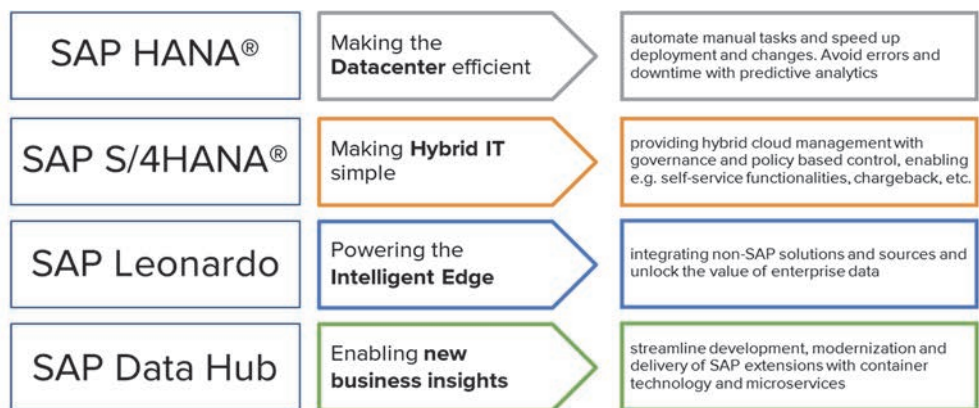
HPE's CoE for SAP HANA offers a worldwide team focused exclusively on SAP HANA providing 24x7 coverage, co-located with the SAP HANA development support at SAP HQ in Walldorf.

Red Hat and its Support for SAP HANA

One of the primary platforms for SAP HANA comes from open source champion **Red Hat**. Red Hat offers a broad range of products under the open source model, including Red Hat Enterprise Linux for SAP Solutions, automation, and hybrid cloud solutions. Its solutions embrace non-SAP applications and sources and Red Hat Openshift, a platform for application modernization and for running SAP Data Hub and SAP Vora. Red Hat JBoss Fuse, an integration middleware platform, can be used as an extension of SAP Leonardo.

Due to the importance of the SAP platform market, Red Hat has created an optimized bundle of its Red Hat Enterprise Linux (RHEL) for the SAP environment — *Red Hat Enterprise Linux for SAP Solutions*. This provides all SAP-specific components and tuning in a so-called "[child channel](#)." This is important for customers, because they have just one version of Red Hat Enterprise Linux to manage. It includes high availability and predictive management solutions, helping to increase uptime.

FIGURE 5
Example Schema of Red Hat and HPE Supporting SAP HANA



Source: Red Hat

Another relevant offering, Red Hat Ansible, offers automated system provisioning using configuration management, in principle allowing customers to set up a SAP (HANA) instance including best practices and tuning within less than 10 minutes, while its orchestration enables secure and faster deployment of changes into the production landscape. Playbooks are available for this, such as [ansible-hana-sysprep](#).

Finally, IBM Cloud Paks allows customers to create a self-service catalogue of standard SAP operations to automatically deploy workloads on-premise and in the cloud and manage across both environments.

Alongside these products and solutions, Red Hat provides enterprise-standard support services. Its engineers are SAP-certified and work closely with SAP on joint development projects, and in particular, Red Hat is a SAP global co-innovation lab member. When sold via HPE, support for the Red Hat solution also comes from HPE, up to Level 3. HPE claims a resolution rate of 99% for Red Hat issues. Only 1% is elevated to Red Hat Level 4 support.

Essential Guidance

IDC believes that the pace of DX change will accelerate, particularly as the Internet of Things becomes more entrenched in the daily fabric of business and society. The proliferation of devices and the information that flows between them will require business leaders to increase their awareness of how their ecosystem is evolving on a continuous basis. Organizations from many industries will move to a real-time business platform and many SAP HANA customers will be in the vanguard.

Their strategic planning cycles will continue to shorten. Dashboards and other metric-oriented analytic tools will become the default feedback systems that drive business model transformation "on the fly," even for well-established industries that today seem relatively impervious to the need for extreme agility. IDC therefore advises organizations to plan for a future technology architecture that underpins their DX initiatives in the enterprise in the next three to five years. Specifically, IDC advises organizations to consider performing the following actions:

- Conduct a gap analysis of the current enterprise IT architecture. This is a critical step that requires significant interaction alignment between the IT and digital teams.
- Look to modernize enterprise IT platforms by replatforming (or in some cases retiring) and rearchitecting traditional applications to accelerate DX initiatives, to support the real-time platform business at scale.
- Increase infrastructure standardization to reduce TCO and free up resources for DX initiatives.
- Plan to implement "cloud first" architectures and data analytics platforms to enable seamless integration across both worlds of on-premise and cloud. Focus on enabling key business outcomes as part of this.

Organizations looking to launch their own real-time platform model will need to evaluate how they can create and manage an enterprise digital platform that cements their position in the future digital economy.

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