

What You Need to Know about Migrating to SAP S/4HANA

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INTRODUCTION

If your company is one of hundreds of thousands that rely on the SAP Business Suite for your critical business operations, then you are likely beginning your preparations to move to SAP's cloud offer, SAP S/4HANA.

Spurring the move is SAP's decision to provide mainstream maintenance for SAP Business Suite 7 core applications only through 2025.¹ The company is encouraging users of its long-time business workhorse to migrate to SAP S/4HANA, a reinvented suite of cloud-based business applications designed to run on the powerful SAP HANA platform. Companies that have already made the move to SAP S/4HANA have found that the platform facilitates their digital transformation initiatives, by introducing agility, innovation, simplicity, and efficiency to business processes.



SAP S/4HANA supports businesses' digital transformation initiatives, by introducing **agility, innovation, simplicity, and efficiency** to business processes.

For most of those that have yet to move to SAP S/4HANA, SAP's announcement isn't forcing a change in strategy: their digital roadmap already calls for eventual modernization and "cloudification" of critical business workloads. However, the SAP decision has focused attention and resources on the execution of the cloud strategy, perhaps with an accelerated timeframe. As they consider their options, IT and business leaders responsible for SAP are currently weighing:

- **Prioritization**—e.g., determining when to initiate the SAP S/4HANA migration, compared with other critical projects
- **Mitigation of business risk associated with migration**—e.g., minimizing business disruption
- **Timelines for the project**—e.g., deciding which SAP workloads to migrate first for maximum impact
- **Available resources**—e.g., identifying resources with sufficient expertise and experience to successfully implement the migration project

In this paper, we provide considerations to help businesses get started with their move to SAP S/4HANA. We identify the business value of SAP S/4HANA in the context of companies' overall digital transformation, and recommend factors to help assess how and when to begin the migration. Finally, we discuss the benefits of engaging a third-party expert for assistance in managing the migration, and offer tips on choosing the right partner.

1 On its [website](#), SAP states, "SAP will prolong mainstream maintenance until the end of 2025 for SAP Business Suite 7 core application releases including SAP ERP 6.0, SAP Customer Relationship Management 7.0, SAP Supply Chain Management 7.0, SAP Supplier Relationship Management 7.0, and SAP Business Suite powered by SAP HANA 2013."

ABOUT SAP S/4HANA

Introduced in 2015, SAP S/4HANA has garnered attention as SAP's first cloud-native suite of business applications. Written specifically to run on the SAP HANA platform, SAP S/4HANA provides a common foundation for all SAP and partner business functions, enabling easy integration and shared capabilities. HANA's in-memory processing capability delivers greater functionality, embedded analytics, and faster delivery of insight across the entire suite, compared to traditional transactional workloads.

Flexible SAP S/4HANA Deployment Options

While SAP S/4HANA is cloud-native, SAP does not require customers to run the platform in a hosted cloud environment. Instead, the software is available in flexible deployment models, including on-premises; hosted cloud environments (public, single-tenant, multi-tenant, bare metal); and via managed services or Software as a Service (SaaS). Two options allow businesses to deploy and configure licensed SAP S/4HANA software, providing maximum flexibility and control:

- **SAP S/4HANA On-Premises:** Bring Your Own License (BYOL) licensed software to deploy on your own hardware or on a pre-configured appliance, in your data center or co-lo facility.
- **SAP S/4HANA Private Cloud:** BYOL licensed software available as a managed service deployed on the SAP HANA Enterprise Cloud or on another private cloud such as IBM Cloud, Google, Microsoft Azure, or Amazon Web Services.

In addition, for businesses that prefer a pre-packaged solution with the convenience of a SaaS subscription, SAP offers two SAP S/4HANA Public Cloud options:

- **SAP S/4HANA Public Cloud (Multi-Tenant):** This SaaS offering has a slightly narrower scope of functionality than the SAP S/4HANA On-Premises Edition, with limited industry solutions.
- **SAP S/4HANA Public Cloud (Single Tenant):** This SaaS subscription model has the same functionality as the SAP S/4HANA On-Premises Edition, plus new SAP S/4HANA public cloud functionality. Because this option supports strict governance related to migrations, it is currently implemented and managed by SAP.

Many businesses choose to deploy multiple models in a hybrid configuration. This option enables businesses to select and control the optimal SAP environment on a workload-by-workload basis. For example, they may choose to deploy SAP Ariba supply-chain software in a public cloud, while maintaining associated partner and customer databases in a premises data center, as a way to ensure compliance with data privacy laws.

In addition, the flexibility of SAP deployment options supports the “two-tier ERP” model that is employed by many enterprises. Two-tier ERP refers to the standardization and integration of business processes between enterprise headquarters and subsidiaries. Large enterprises often run SAP on-premises in their headquarters locations to support complex business requirements. But as their organizational structure changes—for example, acquiring or spinning off subsidiaries—they need to quickly deploy and integrate critical processes and data for business operations. SAP's

two-tier configuration enables an enterprise to seamlessly integrate headquarters and subsidiaries by deploying SAP S/4HANA On-Premises in company headquarters (Tier One); and SAP S/4HANA Cloud in subsidiaries or local operating companies (Tier Two).

Most businesses approach their SAP S/4HANA adoption either as a “greenfield” approach (all new implementation) or a “brownfield” approach (technical upgrade to SAP S/4HANA).² The greenfield approach is broad in scope, involving extensive process transformation and optimization. The brownfield approach, which involves simply a technical software upgrade to SAP S/4HANA, is often considered a short-term, low-cost fix for companies that are still mapping out their digital strategies.

BEYOND ERP FUNCTIONALITY: UNDERSTANDING THE REAL VALUE OF SAP S/4HANA

As they assess their critical SAP applications, forward-looking IT and business leaders view SAP S/4HANA as much more than an alternate deployment model for ERP functions. Instead, they recognize the powerful HANA platform as a means to accelerate their digital transformation. With SAP S/4HANA, businesses benefit from digitized business processes that can be easily integrated with next-generation technologies (e.g., analytics, artificial intelligence, and blockchain). As such, the platform can help organizations transform the way they make decisions, run their business, and interact with customers—and also build a foundation to leverage future technologies.



To gain support from stakeholders, IT leaders should **communicate the value of the upgraded software suite** to both the IT organization and the business as a whole.

Business Value of SAP S/4HANA

For many IT leaders, migration to SAP S/4HANA is part of a broader IT transformation strategy, which calls for modernization of the entire IT stack (infrastructure, platform, and applications). According to a 2017 Frost & Sullivan survey of IT decision-makers, top drivers to cloud include:

- Cost reduction (cited as important by 76% of survey respondents)
- Delivering services and applications faster (cited by 69%)
- Reducing the hardware and software maintenance burden (cited by 64%)
- Better position the company to leverage new technologies (61%)

² Recently, in partnership with SNP, IBM has introduced a new approach, called BLUEFIELD, a migration that combines elements of greenfield and brownfield to deliver greater value to the business. For more information, click [here](#).

IT leaders understand that migration of SAP Business Suite to cloud-based SAP S/4HANA is an investment in the company's future—an essential part of the overall transformation effort that will ensure competitive success in the digital era.

But change can be difficult for stakeholders, who (in the case of SAP suite) include many business users and departments, as well as IT technicians responsible for managing the older products and hardware. To gain support for the migration initiative from constituents, it's a good idea for IT leaders to explain SAP S/4HANA and communicate the value of the upgraded suite, in terms of benefits to the IT organization and to the business.

Benefits to the IT Organization

In communicating with IT technicians who may be concerned about job loss or change, focus on the tactical benefits of SAP S/4HANA, including:

- **Speed to deploy software**—SAP S/4HANA updates can be quickly deployed on premises or in a public cloud, with API integration to new functionality and applications.
- **Reduced capital costs**—SAP S/4HANA On-Premises optimizes resource utilization, thus requiring lower investment in infrastructure. SAP S/4HANA Cloud deployments eliminate most capital investment in favor of more-flexible operating costs.
- **Reduced maintenance burden**—Without the custom integration often required by complex traditional SAP workloads, upgrades can quickly be implemented and tested. This frees up IT resources for more creative and strategic tasks, like developing innovative solutions to business problems.
- **Flexible APIs**—Next-generation technology, including artificial intelligence and analytics, is easy to access and integrate—a plus for recruiting and retaining technical staff eager to work with the latest technologies.
- **Support for Dev/Ops processes**—SAP S/4HANA fits into your business's modern development and deployment processes, including Continuous Integration and Testing.
- **Flexible deployment options (premises or hosted cloud)**—SAP S/4HANA fits into businesses' hybrid environments, enabling IT operations teams to place data and workloads where they make the most sense.

Benefits to Business Organizations

In the collaborative technology environment, in which Line of Business organizations are likely to influence or direct technology decisions, the move to SAP S/4HANA should be socialized among the business users who are likely to be users of the software and may even hold the budget. To gain their support, IT leaders should proactively communicate the strategic business benefits of SAP S/4HANA, such as:

- **Fast application performance**—The streamlined application code is designed to run efficiently, which can mean noticeably faster page-loads and transaction processing. This results in higher employee productivity and customer satisfaction.

- **Easier and faster deployment**—New functionality can be made available to users immediately after launch, which can result in higher user satisfaction.
- **Streamlined business operations**—Embedded analytics allow tasks to be measured and improved, resulting in greater efficiency.
- **Access to next-gen technologies**—SAP Leonardo supports the latest business models and technologies—such as blockchain, machine learning, and artificial intelligence—enabling your business to gain a competitive edge.
- **Simple user interfaces**—Non-technical users can utilize SAP S/4HANA to glean valuable insight into their business processes.

WHEN TO START THE SAP S/4HANA MIGRATION: ASSESSING PRIORITIES

SAP offers a generous timeframe for SAP Business Suite users to migrate to SAP S/4HANA, but that doesn't mean it's in the best interests of the business to wait. Instead, each business must determine how to prioritize the migration among the dozens (or more) other high-importance initiatives vying for budget and resources.

To do this, IT leaders must work with business stakeholders to understand and quantify the immediate business gains to be realized from the move. They also must assess the lost opportunity costs of NOT moving to SAP HANA in the near-term. In other words, in a hypercompetitive business environment, how and how much can SAP S/4HANA contribute to achieving your business goals? And conversely, how much ground are you ceding to competitors because of operational inefficiencies in your current applications?



Work with business stakeholders to quantify the business value of SAP S/4HANA, as well as the lost opportunity costs of NOT moving to SAP HANA right away. In a hypercompetitive business environment, how much ground are you ceding to competitors because of operational inefficiencies?

To make an assessment on the appropriate prioritization of the initiative, consider the following:

- Gather input from line of business leaders about your current SAP systems. What are the key challenges they face (if any) regarding app performance, availability, and functionality? How does the system performance impact downstream users (especially Key Performance Indicators

related to productivity or cost)? Business leaders should be able to share how your company ranks against your industry's best practices in terms of key operational metrics.

- Consider allocation of staff within IT, compared with your company's digital transformation strategy. Are your valuable technical resources disproportionately focused on maintenance activities (hardware and software) at a time when your leadership team is pushing for digital innovation?
- Consider your company's business goals. Objectives such as agility, analytics-driven insights, and rapid leverage of new technologies can be driven by SAP S/4HANA. How would such capabilities better serve the company in achieving its growth plans?

Once you have compiled your "benefits case"—that is, conducted an assessment of the business value associated with a migration—you can consider which adoption approach provides the optimal cost-benefit.

KEYS TO A SUCCESSFUL MIGRATION

Any major technology transition involves business risks, some real and some perceived, and the migration of SAP workloads to SAP S/4HANA are no exception.

Many IT leaders are not confident in their ability to enact a successful migration. Fifty-five percent of IT leaders say they do not have sufficient cloud knowledge on-staff to confidently implement their strategy. A related concern, cited as "important" by 51%, is that their organizations are not structured to meet the needs of a cloud-fueled economy. Instead of leveraging the SAP HANA platform to develop innovative business solutions, much of their staff is still assigned to routine maintenance tasks.

And yet, the stakes are too high to allow for error. The business must continue to operate, even during the migration. Few budgets can tolerate cost overruns caused by project delays and missteps. And business users will demand the highest levels of availability, application performance, and functionality—no excuses.

To minimize the business risks associated with migration, and hasten their SAP S/4HANA deployments (whether on-premises or in the cloud), many businesses are turning to a third-party expert. In fact, 93% of businesses report they are engaging a third-party for assistance in one or more aspects of their cloud strategy implementations—e.g., assess, design, migrate, optimize, manage.

With the right expert partner, businesses can assess deployment options and ensure the migration is done with minimal disruption, according to your business priorities. And you can start reaping the benefits of SAP S/4HANA quickly (maybe before competitors).

WHAT TO LOOK FOR IN AN EXPERT PARTNER FOR YOUR SAP S/4HANA INITIATIVE

The right partner can guide you through your migration, in the context of overall business process transformation. But not all service providers are alike. As you research SAP partners, look for these characteristics:

- **Deep and long partnership with SAP deployments.** It's not enough for the partner to know about SAP S/4HANA or cloud deployments. To successfully handle a migration, the partner needs to understand your current deployment of SAP Business Suite—no matter how long it's been deployed or how much you've customized it.
- **Experience with a variety of SAP migrations.** Migration requirements vary based on what's being migrated and where you are in your digital transformation journey. Look for a partner that will conduct an impact assessment that helps you decide whether to approach the project as a “greenfield” migration (new and refactored SAP apps for cloud deployment) or a “brownfield” migration (“lift and shift” of existing SAP apps, deferring process transformation)—or a new approach combining the two, like IBM SAP S/4HANA BLUEFIELD transformation, in partnership with SNP.
- **Understanding of your entire IT environment.** You may choose to deploy SAP S/4HANA on premises or in the hosted cloud—or both—to support your hybrid environment. Your chosen partner should be able to manage any vendors' infrastructure and cloud services.
- **Understanding of your business environment.** SAP workloads touch many corners of the organization. The right partner can help communicate with users throughout the company about the value of SAP S/4HANA, assess the appropriate timeline for moving specific apps, and can even assist with training.
- **Proven tools and processes for migrating SAP S/4HANA.** To ensure the project remains on-time and on budget, look for a partner whose processes have been honed over time, minimizing unforeseen roadblocks. Your partner should have standardized methodologies that leverage automation.
- **Customer references related to SAP S/4HANA migrations.** It's early days for SAP S/4HANA—so, many consultants have few actual deployments to share. Look for a partner whose SAP S/4HANA migrations include companies that are similar to yours, whether in size, culture, or industry. The partner should rely on pre-configured solutions, pre-seeded documentation, and pre-scripted test cases that are relevant to your business and industry.
- **Suite of services to support a range of needs.** To optimize your SAP S/4HANA deployment, your business may require assistance beyond the migration; for example, help in assessing the impact of the migration on your business processes. Your partner should be able to assist with custom code mapping, to discover what is in your SAP S/4HANA base, what needs slight modification, and what should be “lifted and shifted” to the cloud. You may also opt for ongoing management and optimization of your SAP S/4HANA services. Look for a partner with a flexible suite of services, including managed and professional services.

- **Industry leadership.** Your SAP S/4HANA deployment does not operate in a silo. For most businesses, the SAP migration is part of a broader digital transformation that will support your strategic business goals; for example, leveraging technology to become more nimble, innovative, customer-focused, or growth-oriented. Choose a partner that is a leader across a range of next-generation technologies; for example, artificial intelligence, Internet of Things, and blockchain. With the right market leader in your corner, you can magnify the power of your SAP deployment, providing a solid foundation for your company's future growth.

THE LAST WORD

In the digital economy, businesses can no longer think of mission-critical processes as discrete applications. Instead, they require a flexible cloud-based platform that leverages automation, analytics, and next-generation technologies to maximize efficiency and insight across the suite of business applications. That is the value that SAP S/4HANA brings to businesses.

However, migrating a traditional SAP Business Suite to SAP S/4HANA can be challenging, with risks of business disruptions, and cost and schedule overruns potentially delaying the value to the business. That's why IT leaders are turning to expert third-party partners to assist with the migration project. The right partner has the expertise, experience, and portfolio of proven services to facilitate your migration.

As businesses transform to meet the needs of the digital future, migration to SAP S/4HANA can be a crucial step. Don't be left behind.

Lynda Stadtmueller

Vice President, Cloud Services
Stratecast | Frost & Sullivan

lstadtmueller@stratecast.com

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ABOUT IBM SOLUTIONS FOR SAP

IBM offers a range of solutions for assessing, migrating, and managing your SAP S/4HANA deployments, for greenfield, brownfield, and a new approach pioneered by IBM in partnership with SNP—BLUEFIELD.

- **Greenfield**—All-new implementation with new system, new processes and same challenges for managing scope. Through the use of IBM IMPACT Industry Solutions and SAP Model Company adoption, the journey to S/4HANA can be accelerated by up to 20 to 30% by using pre-configured industry solutions and other assets and accelerators. For more information, click [here](#).
- **Brownfield**—Technical upgrade to S/4HANA with no business transformation. While such a “lift and shift” approach can be seen as cost-effective, the full benefits of S/4HANA won’t be realized without subsequent invasive redesign that may require multiple projects to implement.
- **BLUEFIELD**—IBM and SNP recently announced their collaboration on an adoption approach, called BLUEFIELD. The approach allows clients to adopt SAP S/4HANA up to 75% faster, while including business process transformation, to deliver greater value for the organization. For details, click [here](#).

For more information about IBM’s portfolio of SAP services, click [here](#).

SILICON VALLEY

3211 Scott Blvd
Santa Clara, CA 95054
Tel +1 650.475.4500
Fax +1 650.475.1571

SAN ANTONIO


7550 West Interstate 10, Suite 400,
San Antonio, Texas 78229-5616
Tel +1 210.348.1000
Fax +1 210.348.1003

LONDON

566 Chiswick High Road,
London W4 5YF
Tel +44 (0)20 8996 8500
Fax +44 (0)20 8994 1389

877.GoFrost • myfrost@frost.com
<http://www.frost.com>

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Frost & Sullivan
3211 Scott Blvd
Santa Clara CA, 95054