



SAP S/4HANA®

AN EXECUTIVE GUIDE



Protera

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INTRODUCTION

In today's environment, it's more critical than ever to pursue transformation that can help you reduce costs, execute your growth strategy, and react more quickly to changing conditions.

In this ebook, you'll learn how SAP S/4HANA is different from SAP ERP, what you can get out of an upgrade to SAP S/4HANA, and why now is the ideal time to consider changing how you manage your SAP S/4HANA.

Check out our executive SAP S/4HANA guide to learn how SAP's flagship product fits into the future of your business.

WHAT IS SAP HANA?

The term SAP HANA refers to SAP's modern relationship database management system — a system that stores and organizes your data and enables other programs to interact with it. SAP HANA is:

- **In-memory:**
To improve performance, HANA landscapes keep all current data in memory, using traditional storage only for persistency.
- **Column-based:**
While previous generations of relational databases organized data in rows, HANA organizes it by columns, allowing it to compress memory, and recall and analyze complex datasets more rapidly.
- **Adaptable:**
Like previous generations of SAP software, HANA can be adapted to your specific technology stack and use case, yielding significant performance benefits over legacy databases.

WHAT IS SAP S/4HANA?

S/4HANA is SAP's suite of best-in-class ERP software, rebuilt from the ground up to harness the power of the HANA database. While previous generations of SAP ERP were designed to run on third-party databases such as Oracle or SQL Server, S/4HANA is designed to run exclusively on HANA to harness the database's speed and analytical power.

This change allows S/4HANA to dramatically accelerate a range of business processes, provide real-time reporting and better address a range of use cases around automation, decision-making, predictive analysis, IoT, and other modern business needs.

Businesses that use legacy SAP ERP have until December 31st, 2027 to migrate to S/4HANA, after which the company will no longer provide maintenance & support.

HOW IS SAP S/4HANA DIFFERENT FROM SAP ERP?

SAP S/4HANA and SAP ERP have different resource requirements and costs.

SAP S/4HANA runs on SAP HANA, SAP's underlying in-memory database platform. In comparing resource requirements and costs to build your roadmap to get to S/4HANA, you will have to consider the following:



SAP certified HANA infrastructure (either on-premise or in the cloud):

Due to the computing and throughput requirements of the more powerful in-memory HANA database, SAP certifies major hardware vendors to ensure their HANA servers can meet or exceed published performance benchmarks.



SAP HANA and S/4HANA licensing:

SAP HANA also has associated license costs which will be offset by combining your ERP, Business Warehouse, and other Business Suite applications that run on SAP HANA.

There will also be project costs to get you there, which will depend on a variety of factors, including:

Your existing environment:

Brownfield migrations (updating and migrating an existing landscape) will impose different costs from greenfield installations (building an SAP S/4HANA landscape from scratch). Migration from a non-SAP landscape may also be costlier than migrating from a legacy SAP landscape, all else being equal.

The complexity of the project:

The amount of transformation required can play a role in determining cost. A legacy landscape with older versions of software, extensive customization, issues with inconsistent data or other complicating factors may pose additional costs.

The structure of the upgrade:

Customers may choose to move to S/4HANA all in one go or move to SAP HANA first and move to S/4 later. Each approach has advantages and disadvantages which will require a very customized deep dive in line with your specific SAP initiatives.



Customers may also have to consider other factors, such as existing investments in software licenses, hardware and services, mergers, acquisitions and divestments, and potential changes in their staffing model.

All these factors can pose complex cost/benefit tradeoffs, which need to be carefully considered with the help of a knowledgeable SAP managed services partner.

Once the environment is operational, the customer will need someone on their team with extensive expertise to manage the landscape. They'll need someone who has experience with and preferably certified on S/4HANA, SAP HANA, and SAP Fiori — SAP's new unified user experience.

Your legacy SAP administrator may not have these skills, requiring either further training or a new SAP admin team. Companies will need to weigh the costs and benefits of training and hiring new in-house SAP professionals — as well as any other managed services they'll need to account for.

SAP S/4HANA OR HANA MIGRATION IS AN IDEAL TIME TO RETHINK YOUR HOSTING STRATEGY

Migrating your SAP workload to either SAP S/4HANA or SAP HANA is an ideal time to review where you host your business critical SAP landscape along with the whole suite of services that you will need to keep these critical systems operating smoothly.

There are various SAP hosting options available, including on-premise, cloud, and hybrid hosting. In the past, many customers have chosen to run their SAP environments on-premise within their corporate data centers.

With advancements in cloud technology and security as well as the availability of SAP certified HANA systems on the cloud, more and more customers are seeing the benefits in standing up their new or migrated SAP workloads in the cloud.

Some of these benefits are:



Lower TCO as cloud infrastructure prices are competitive and continue to drop



Higher service quality and availability



Greater agility to respond to business changes



Access to modernized infrastructure services



Robust analytics platform



Global availability and resiliency



Improved scalability, as you can grow or shrink your infrastructure footprint as soon as you need to, without having to invest ahead of time, essentially moving to a true on-demand model



Trading large CapEx expenditures for predictable OpEx



Integration with other cloud platforms and services

In general, SAP S/4HANA or HANA hosted in the cloud is the best solution for the reasons stated above.

AN SAP HANA UPGRADE IMPROVES PERFORMANCE

SAP ECC can be lightning quick if managed correctly, however many companies have difficulty maintaining performance. Having run SAP for decades through many changes and upgrades, they struggle with complex and inconsistent landscapes, which make adequate performance (and in some cases, uptime) a challenge.

They may also have difficulty scaling up resources and tuning the landscape ahead of demand, which can cause particularly bad performance and stability issues to emerge cyclically between upgrades.

Moving to HANA or S/4HANA provides both the performance benefits of HANA and a chance to modernize your system, ensuring consistent performance and reliability. HANA itself is designed to be very fast, by eliminating traditional ERP bottlenecks.

Most relational database management systems store data on disk and only use memory to run programs that are currently being used. Disks are much slower than memory, no matter how powerful your hardware or cloud hosting is.

This is one reason why processes that require HANA to analyze a lot of data — such as end of year reporting — take so long and tie up resources on SAP ERP and other legacy ERP solutions.

Additionally, the structure of the databases SAP ERP runs on make it slower for complex analytical processing (e.g. running reports). Traditional row-based databases can't load a single column of data in isolation — they need to load it row by row, which

means loading many times more data into memory, slowing the process further. Because SAP HANA is columnar, it can perform complex analysis more quickly, with a lower resource cost.

Finally, SAP HANA has a simplified data layout and structure compared to legacy databases. There's less data sprawl and duplication, resulting in a smaller memory footprint and quicker operation.

While legacy databases have separate systems for Online Transaction Processing or OLTP (quick, simple transactions such as processing a sales order) and Online Analytical Processing or OLAP (data mining, analysis and other more complex processes), SAP HANA merges the two databases into a single structure. That means there's a single source of truth, eliminating the risk of inconsistent data across the organization.

By design, S/4HANA is built to run on and take advantage of HANA's in-memory capabilities, leading to further advantages. In addition to raw performance benefits, S/4HANA can improve productivity and decision-making through better UI efficiency.

It can also improve data management, simplification, and innovation through its extension with the SAP cloud platform ecosystem.



SAP IS SUNSETTING ECC SUPPORT

Customers running software on SAP's legacy business suite product lines are approaching the end of life for mainstream maintenance support in 2027. Some SAP ECC users have even less time than that — mainstream maintenance for previous releases of SAP NetWeaver expired at the end of 2020.

Failing to meet these deadlines will limit your ability to execute digital transformation and put you at a disadvantage, whatever your industry — you'll have lower productivity and less agility, and you'll be less effective at using data to develop market insights.

You'll also miss out on the vastly improved user experience, mobile support, and other benefits of SAP Fiori, and will likely be unable to use newer versions of third-party software.

And over time, there will be a dwindling number of SAP resources, making it harder and costlier to maintain an effective admin team.

Even more critical, lack of vendor support poses security and stability risks. SAP won't be hunting for bugs or releasing new patches, but hackers will still be looking for new ways in. And when they find them, there's a chance you'll be undefended.

It's time to draw up your digital transformation roadmap to move your organization to SAP S/4HANA. Considering that the next generation of product implementation is inevitable, it's recommended to start developing your roadmap to S/4HANA with an experienced partner who can help lead the way.

SAP S/4HANA MANAGEMENT REQUIRES A DIFFERENT SKILLSET

Even if you have an experienced SAP ECC team, they may not have the skills required to run S/4HANA. Implementation of S/4HANA requires SAP's new Activate methodology which helps customers complete their SAP projects using agile methodologies with shorter development cycles.

Activate provides best-practices templates and tools such as guided configuration wizards, but these tools require experience and training to apply correctly. SAP transformation is a complex process. Each component of your landscape interacts with every other component.

Additionally, SAP S/4HANA doesn't use the same modules as SAP ECC, so you can't ensure a particular function is there simply by upgrading a module to the newest version. You need to conduct fit-gap analysis to spot missing functional requirements, create the right upgrade path, and rigorously test every step of the way to ensure there are no unintended consequences.

In addition to the deployment and implementation, your technical team needs to ramp up their management and support skills for the new SAP product set. It is important to ensure your support teams can provide efficient and rapid solutions to issues encountered during the implementation and are able to offer SAP HANA database management expertise.

Most importantly, they need to be able to rollout and address issues in the Fiori UX deployment. Fiori is how users avail themselves of all the rich functionality of their S/4HANA environment, so problems at launch and post go-live can interfere with the day-to-day operations of your company.

Extensive training will be necessary to ensure that your team have the requisite skills to keep the environment running optimally.



SAP S/4HANA HAS POWERFUL NEW FEATURES

S/4HANA is SAP's flagship ERP solution, their first to make real-time, intelligent enterprise software a reality for all customers.

This is driven by the power and innovative structure of SAP HANA. From a business perspective, one of the most notable features of HANA is real-time visibility. You can see exactly what is going on in your organization now, down to fine details like cash flow — or you can zoom out for a broad, strategic view.

The speed and visibility also allow you to react more quickly to changing market conditions, using data in a way that wasn't possible before. Instead of relying on end of period reports, you can use current data to answer questions. That means you're not basing your decisions on how the market was a few months ago — you're reacting to how it is today.

This is particularly notable in S/4HANA Finance. Companies can change their whole strategic approach, retiring their static annual planning approach for dynamic planning.

S/4HANA also delivers major benefits for logistics, allowing better optimization, quick resolutions for bottlenecks and supply-chain issues, better service, and leaner, more profitable operation.

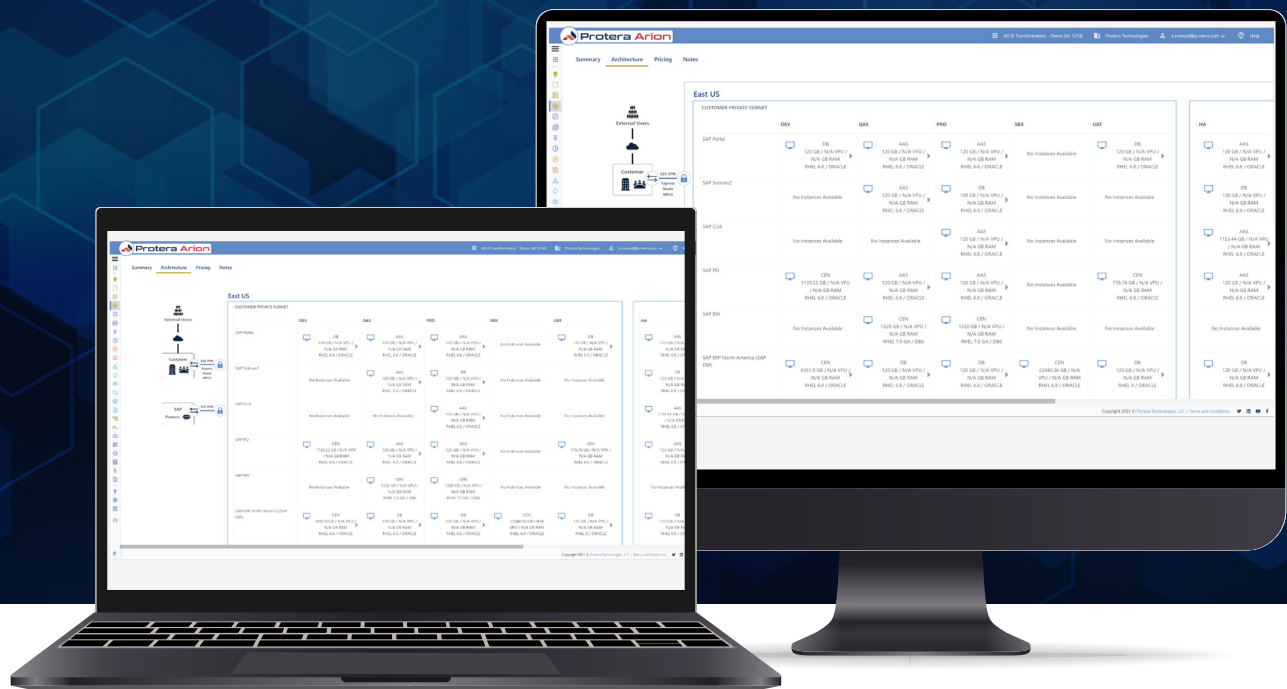
SAP S/4HANA simplifies a range of business processes, increasing end-user efficiency and morale. Fiori largely eliminates menu-dragging, providing customizable role-specific apps. Tasks that used to require users to navigate several screens and fill out multiple fields by hand can be executed with a few clicks.

In short, S/4HANA allows your business to run at the speed you want it to — not the speed it's limited to by technology.

SAP HANA AND S/4HANA — TRANSFORMATION WHEN YOU'RE READY FOR IT

Every SAP tenant is at a different place in the digital transformation process. Some are conservative companies looking to trial SAP HANA for the first time. Others are already benefiting from the speed of Suite on HANA — and they're already planning how to get the most out of their S/4HANA transformation. And a few are early adopters, preferring to stay on the cutting edge of new S/4HANA releases.

Adopting SAP S/4HANA can be a core element of your digital transformation goals and help you achieve your business objectives. With the right strategy, technology, and partnerships, your digital transformation can be a success.



FOUR QUESTIONS TO DESIGN YOUR SAP TRANSFORMATION PLAN

Learn how Protera and Protera Arion® can shorten your migration, optimize cloud landscapes, manage cloud costs and service levels, and use powerful automations to keep your systems up to date.

Answer four simple questions and get your cloud plan that includes:

- Timeline
- Project plan
- Architecture options
- Cost of migrating and running your SAP on AWS or Microsoft Azure

SEE YOUR SAP TRANSFORMATION IN ACTION.

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ABOUT PROTERA TECHNOLOGIES

Founded in 1998, Protera Technologies has established itself as a leading Total IT Outsourcing Services Provider for SAP-centric businesses and organizations across the globe. Protera Arion®, our SAP transformation platform, helps companies shorten downtimes, cut project costs, and enable speedy SAP HANA and SAP S/4HANA migrations.

Protera is a global SAP® partner certified in Hosting, Cloud, Application Management, Global Outsourcing, and SAP HANA Operations Services.



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