

Should my organisation join the rush to S/4HANA?

What is the business value of being an early adopter?

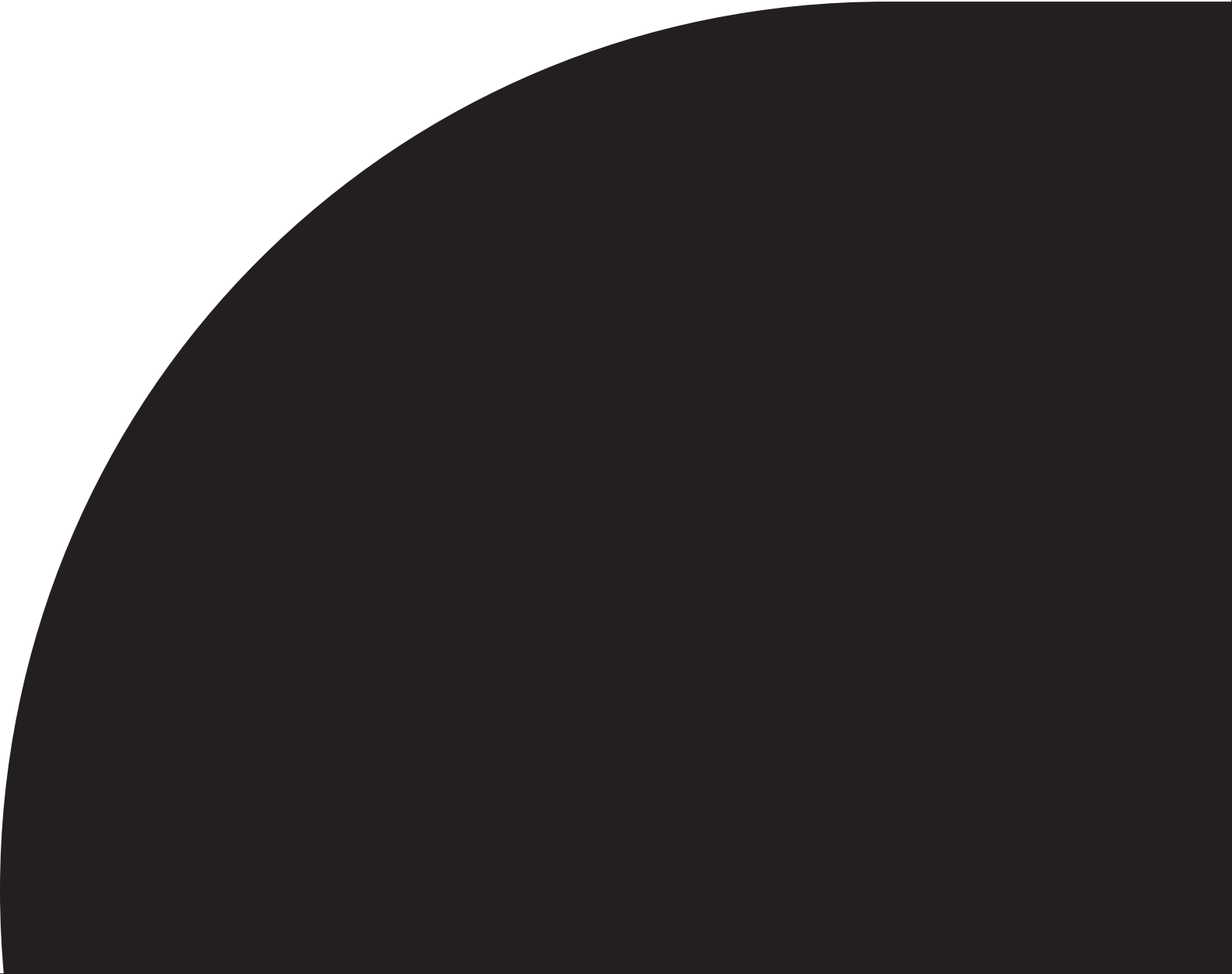


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Overview

Most customers already running SAP will be aware of SAP's HANA and S/4HANA products, and also that moving to them is a bigger step than traditional ERP version upgrades. Much has already been written regarding the technology and application innovations that SAP HANA and S/4HANA products provide; however, this paper is intended to explore how this can be translated into areas of business value, the factors likely to influence the right time for an organisation to move, and how an organisation already using SAP products can determine the best way to transition.



A commonly expressed view is that the pure technology and IT benefits of moving to SAP HANA and S/4HANA create a sufficient business case to make the move, and that downstream business benefits are an additional bonus that can be explored and enabled over time. Whilst IT benefits may well be real and quantifiable, they need to be sufficiently positive versus other initiatives competing for management attention and funding. For customers running sophisticated and highly customised SAP landscapes, with key operational processes dependent on SAP, the businesses will also be cautious about the potential disruption to their core systems. In addition, whilst the benefits of a hardware refresh and moving to a cloud or virtual cloud model are also significant, some of these benefits can be achieved by applying the latest thinking to an existing SAP hardware landscape.

Why are people talking about SAP S/4HANA?

There are a number of reasons why SAP S/4HANA is being discussed currently:

SAP's most significant new product in years

It is SAP's latest product, and a major technical and functional re-architecture. It uses SAP's own HANA database (as opposed to the previous versions of SAP, which ran on a range of databases selected based on client preference). The business applications in SAP are being gradually rewritten to make them more efficient and take advantage of the new technical base. This results in data being stored in new table structures, and the provision of new or reengineered transactions to enhance the business processing capabilities and user efficiency. The result is a more efficient database, reduced storage requirements and faster transaction throughputs.

Businesses are becoming more digitally connected with customers, suppliers and their employees

Digital transformation and the internet of things (IoT) are major trends that many predict will dominate the next decade of technology-enabled industry transformation. SAP's HANA-based product roadmap enables these trends better than previous SAP products and arguably better than any other ERP vendor. This is due mainly to the ability of HANA to handle much larger datasets and provide real-time analysis.

All new SAP projects and initiatives should consider SAP S/4HANA

It is gaining traction, new customers are generally being compelled to use it and the existing installed base is being encouraged to adopt it. However, existing SAP products will continue to be usable for many years to come, but after 2025 may require special and more expensive support arrangements.

A full SaaS version is available, and other cloud options are also possible

Whilst still available on premises and customisable, SAP S/4HANA is also available as a SaaS product, and customers not requiring complex configuration and customisation may find the cloud editions attractive. The cloud version has been designed to be faster and cheaper to install by allowing easier configuration and maintenance of common business scenarios; however, customers requiring extensive customisation and configuration are likely to find it too restrictive.

Interaction with other cloud products in a digital ecosystem

Whether using S/4HANA on premises or in the cloud, SAP has made interacting with other cloud applications and creating new applications combining elements of S/4HANA with functionality available in other cloud-enabled systems or hosted solutions much easier.

“We are entering a highly competitive and disruptive market, so we need a partner who can both help us accelerate the setup of our electric vehicle production and give us the agility we need to quickly adapt. Hewlett Packard Enterprise (now DXC Technology) had the best-engineered solutions to enable us to achieve these goals, and they convinced us with their technology leadership, collaborative approach and proven track record.”

Mattias Bergman, President,
National Electric Vehicle
Sweden AB (NEVS)

Benefits from new business models

The business landscape is changing rapidly; new technology is changing customer behaviour and enabling new and disruptive market players. Organisations need to react and adapt to the changing market forces or risk being left behind. Whilst the previous versions of SAP have shown themselves to be adaptable, the expense and time required to build bespoke functionality is becoming harder to justify and operates within technical constraints. Some examples of scenarios where S/4HANA could provide competitive advantage are:

- **New supply chain and network models.** Whilst much of the logistics investment in the last decade has been directly towards creating large centralised distribution centres — enabling consolidated shipments of orders to large customers, or mass picking of smaller customer orders in the future, organizations need to be more flexible, reacting to customer or local demands. For example, same-day deliveries are likely to require more distributed placement of stock and resources; planning for and then orchestrating transactions efficiently requires more real-time processes and data for decision making. The real-time processing capabilities of S/4HANA for MRP and planning processes, together with new functionality for real-time available to promise (ATP) across a network, can all help to enable this.
- **Dealing directly with your customers.** The end users of your products may wish to order goods directly from you, or interact with your products online in a way you can gain insight into buying preferences and behaviour. Alternatively your resellers/retailers may want to check stock levels directly, reserve stock or request immediate shipment to the end customers. Enabling direct access to your core system (via secure mechanisms) is now more feasible, with a lower risk of high-transaction volumes causing slow response times on a S/4HANA system.
- **Internet of things — using the new data sources to generate business value.** Businesses need to be able to harness the new sources of information to better understand what is happening in their own networks, and also those of customers and end consumers.

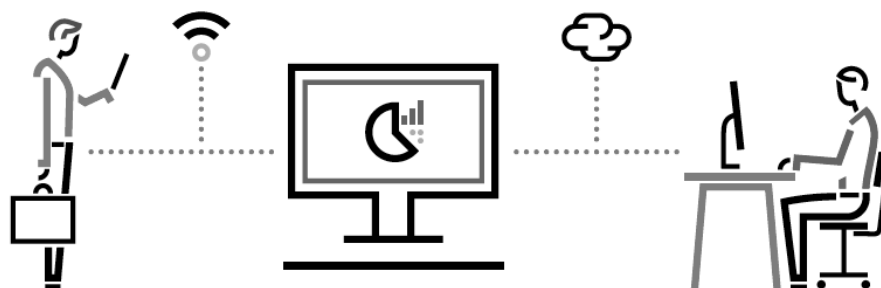
A common characteristic of the above models are that they have large data volumes, and require fast/real-time processing and analysis to deliver value. SAP S/4HANA provides the capacity and speed to enable this. Demand signals to increase/decrease production or prioritise stocks can now be driven by the customer feedback and end sales, rather than orders or forecasts from intermediaries.

- **More flexible use of cloud-based services.** SAP has created its own ecosystem of SaaS cloud products, such as Success Factors for HR processes, and also a platform where third-party services/software vendors can write their own applications or enhancements to SAP Cloud Platform (SCP). These components are now much easier to weave together into integrated business processes. Customers running S/4HANA as an on-premises solution can benefit from easier integration with these SAP and non-SAP cloud solutions.

Benefits from optimisation of exiting business processes

The reengineering of existing data structures and transaction processing in S/4HANA can also provide many business benefits for existing processes. Examples include:

- **Period closing.** System processing and long batch runs are no longer constraints. Faster processing times enable fast close and real-time reporting.
- **Profitability analysis.** In previous versions of SAP, profitability analysis required that figures required for analysis needed be defined up front, derived and posted to separate tables, and profitability calculations run against these large datasets with long run times for results, or extracted to another Business Intelligence tool. In S/4HANA, the new financial document structure stores all the information required as one record, enabling more flexibility to define profitability reporting. Faster processing times allows profitability reporting to be real time off the core SAP databases, with no need for reconciliation.
- **Improved MRP processing and transactions.** Now organisations with large, complex supply chains (and large amounts of data) can run MRP at any time, and results are in fast, enabling planners to evaluate the impact of changing circumstances in real time.
- **Greater workforce mobility and self-service.** Many transactions are now available via PC, tablet, mobile and other devices, enabling business processes to be performed where they can be executed most accurately, most quickly or most cheaply.
- **Redesigned user experience and optimised transactions (fewer clicks).** Faster processing for certain high volume transactions can save time and money.
- **SAP investment in S/4HANA.** The vast majority of SAP's R&D budget is now specifically targeted towards S/4HANA, meaning customers on SAP S/4HANA can expect a steady stream of innovation that will not be available in the legacy ECC suite.



Benefits for IT services and platforms

SAP S/4HANA has involved a complete re-architecture of the database, the storage of key transaction data and the processing transactions. Some of the IT benefits that result from this are:

- **Faster architecture.** Using 'in memory' technology, the SAP HANA database can handle more data, and deliver complex results real time with no need for batch processes. This has enabled the underlying transactions, tables and codebase to be significantly simplified, which in turn reduces costs and increases agility.
- **Reduced database size.** The redesign of key transaction storage tables enabled by the HANA database technology has resulted in a reduced number of tables required to store business documents.
- **Reduced database complexity.** Since the number of tables is reduced and the requirement for indexes and aggregates is removed, the administration of the application databases is simplified.
- **Less need for performance-intensive processes to be put on separate databases and hardware.** SAP, BW, SCM, EWM and CRM were previously developed as separately installed products with their own databases able to run on separate hardware, isolated from the main transaction processing system. This may still be desirable in certain scenarios but is not driven by system constraints.
- **Applications consolidation both of non-SAP and multiple SAP instances.** Most global organisations running SAP also have other ERP or IT systems performing processes that can be carried out in SAP. Many global organisations running SAP have multiple instances of core ERP running for different countries or divisions. Even before SAP S/4HANA was available, organizations had been looking at second waves of SAP transformation/instance consolidation programmes. HANA and S/4HANA remove many of the technical barriers that previously existed.
- **Enhanced ability to move specialist or non-differentiating processes into software as a service cloud products.** Even customers who wish to run S/4HANA as an on-premises solution for core business processes can take advantage of other cloud-based products. For example, HR and Payroll processes continue to be supported by the core SAP S/4 software product and can be run on-premises; however, cloud-based solutions such as Success Factors or Workday can also be used. S/4HANA comes with standard integration to some of these products (either ones owned by SAP or where third-party software vendors have invested).

Key business benefits of SAP S/4HANA by process area

	Business constraints in existing SAP ERP	Business benefits from running S/4HANA	Other options
Financials and cost mgmt.	Period closing takes many days, and a lot of the finance department time.	Faster processing times to enable fast close and real-time reporting.	Upgrading to HANA will also speed up processing times.
	Profitability analysis — Held in aggregated tables with long run times for results, or requires BW extracts and reports. Often requires significant manual reconciliation effort, measured in multiple FTEs.	New financial document structure stores all the information required as one record. Extended 'Account based COPA' reduces the need for 'Costing based COPA'. Faster processing times allow profitability reporting to be real time, with no need for reconciliation. Business warehouse no longer required to resolve performance constraints.	Traditional COPA tables still work in S/4HANA, and reports will be faster than before; however, most SAP customers use COPA as a staging area to BW.
Sales and revenue mgmt.	Available to promise (ATP) not accurate and not able to consider other stock locations	Flexible ATP logic across multiple business locations, and release and reallocation of stock based on business priorities.	SAP APO has similar functionality, but requires additional set up.
	Reacting to real-time data regarding consumption/usage of products	Data from point of sale (POS), business partners systems, social media or devices connected via the internet of things (IOT) can be collected and processed in real time, driving sales decisions such as pricing/promotions or allocation of stock.	Standalone applications built on HANA
Inventory mgmt. and stock levels	Inventory levels of raw materials	Real-time stock updates, and ability to rerun MRP to adjust production and direct raw materials to the priority usage.	SAP APO
	Finished goods inventories	Real-time stock visibility, and ability to run back-order rescheduling and stock reassignment processes much faster can optimize the use of stock, enabling better service levels and/or lower coverage.	SAP APO

	Business constraints in existing SAP ERP	Business benefits from running S/4HANA	Other options
Warehousing and logistics	ECC WM functionality too basic for complex finished goods warehouses	SAP extended WM functionality will be available in the core SAP S/4 product.	SAP EWM as a standalone
	Lack of simple logistics transactions on mobile devices, RF-enabled transactions are limited and the infrastructure expensive	All key transactions can now be simplified and delivered via mobile devices.	
	Time-critical business processes exposed to system performance risks	No need to restrict other processes or system users from using performance-intensive processes/calculations.	WM can be run on a separate instance; however, this complicates the technical solution and increases hardware costs
Production and manufacturing	Daily/batch MRP runs do not allow for dynamic replanning or reprioritisation.	MRP can be run at any time and results are fast, enabling planner to evaluate the impact of changing circumstances real time.	SAP APO
	Data feeds from machines and process flows are used to predict and avoid issues.	SAP can now collect and analyse large volumes of data from machines or other devices. This can be used to proactively create maintenance orders, etc.	

What are the options for moving to S/4HANA and how can I determine the best route?

For customers already using SAP, moving to S/4HANA presents a number of implementation options. These will need to be evaluated carefully, as the decision will impact not only the implementation cost, time scales and risk profile, but will also materially impact the value realisation of the long-term S/4HANA landscape. There is no one-size-fits-all answer.

	Alternative	Indicative pros (but client-specific context is critical)	Indicative cons (but client-specific context is critical)
Option 1	Greenfield implementation of S/4HANA Enterprise	Implementation scope and scale of change can be limited for initial project to manage risk.	Introduces a new SAP system into the landscape before the legacy SAP systems can be decommissioned.
		Provides a new digitally enabled platform sooner for countries/ business units identified as the priority.	Historic transaction data is not migrated into new system.
		Starting afresh means that SAP Enterprise Structures (how the business entities such as companies, plants, trading routes are represented in SAP) can be reimplemented to better align to the current reality in the business.	Adoption of new best practices and user experience could have a large change management and user training implication.
		Set up new S/4HANA system using optimised and best practice solutions/components.	
Option 2	Conversion to S/4HANA Enterprise	Existing structures and data are carried over to the new system	Technical preparation work to existing systems may be costly and disruptive
		Fastest way to get full set of business users onto the new platform	Conversion time and effort
		Immediate ROI for new software and hardware	Time and effort to assess/ absorb simplifications into business
			Greater risk of business disruption
Option 3	Implementation of central finance on S/4HANA Enterprise	Non-disruptive to existing operations	Introduction of an additional SAP system
		Opportunity to configure central finance differently	Effort required to ensure interfacing and reconciliation between central finance and other ERP financial systems
		Support central finance reporting, and acquisition and divesture growth strategy	
		Gradually migrate source transaction ERPs into the S/4HANA system	

	Alternative	Indicative pros (but client-specific context is critical)	Indicative cons (but client-specific context is critical)
Option 4	Consolidate existing SAP and non-SAP ERPs into an existing SAP system. Migrate to Business Suite on HANA as a first step.	<p>Delivers IT cost savings</p> <p>Initial disruption to business users is minimized, i.e., their data and SAP UI stays the same</p> <p>Movement to S/4HANA will be later, onto a more advanced/proven version</p> <p>Business benefits of integration can be delivered</p> <p>No need to have multiple SAP systems due to size/performance constraints</p>	<p>Full digital transformation is delayed</p> <p>The move to S/4HANA becomes harder, since more processes/BUs/users would be impacted by a later migration</p>

When should I move?

There are a number of factors likely to determine this:

Business benefits should be the main driver. So it is important that the value of optimising of existing business processes and enabling new operating models are qualified and quantified.

IT benefits. Whilst SAP licenses and new hardware may be available on more flexible and usage-based terms, and the HANA technology enables large reduction in sizes of databases, customers will also need to consider whether existing hardware contracts can be leveraged and the next landscape refresh point.

- **Complexity of logistics or industry solution functionality in a customer's existing SAP installation.** S/4HANA is not yet complete, and much of the logistics or industry solution functionality is not yet available or has not been used productively. Hence, organisations using end-to-end SAP processes should check carefully the roadmap for the components they require. For example, 'Detailed Production Scheduling' is being moved into the core SAP S/4 product from APO; however, it is not yet in widespread use.

Organisations currently using SAP APO also need to consider SAP Integrated Business Planning (IBP), which will replace much of the APO functionality that is not being replicated in S/4HANA.

- **Instance consolidation strategies are now more feasible.** Many organisations have multiple installations of SAP (by geography or division) as a result of projects being executed locally, mergers and acquisitions, and historic SAP/infrastructure technology constraints limiting the size and use of a single environment. SAP S/4HANA removes many of the technology constraints, which coupled with more robust global IT networks and infrastructure enable more instance consolidation.

- **Current ERP not meeting the business requirements.** If SAP has become an outdated engine that the business regards as a constraint or the business has moved on, then a business transformation programme coupled with a process redesign is probably required. Of course, SAP may not be the only option, but S/4HANA is likely to offer solutions that should be considered.
- **Level of bespoke customization in existing SAP system.** Simply stating that customers should revert to standard SAP or that SAP now supports more processes is over simplistic. Equally, most legacy SAP customers seek to reduce the total volume of customizations, many of which are now redundant. As customers move to S/4HANA, it is imperative that a structured and well-governed approach to customization is adopted.
- **Risk of business disruption.** Whilst the factors in this section and the previous will start to define a preferred route to S/4HANA based on potential benefits, business strategy and technical constraints, by changing key transaction processing systems, these projects will come with risks of disruption to business processes. In addition, since the product is still evolving, early adopters risk exposure to frequent upgrades that have potential business impacts.

What are my other options?

If SAP has become a non-differentiating back-office system that is doing what you require but is not adding value, you may not want to invest in moving to S/4HANA. You can avoid this decision for some time, but eventually the support/maintenance fees from SAP are likely to rise as your version goes out of standard support. There are third-party options available; however, this means expansion or changes to your SAP system will become harder and riskier, as will maintaining statutory and regulatory compliance.

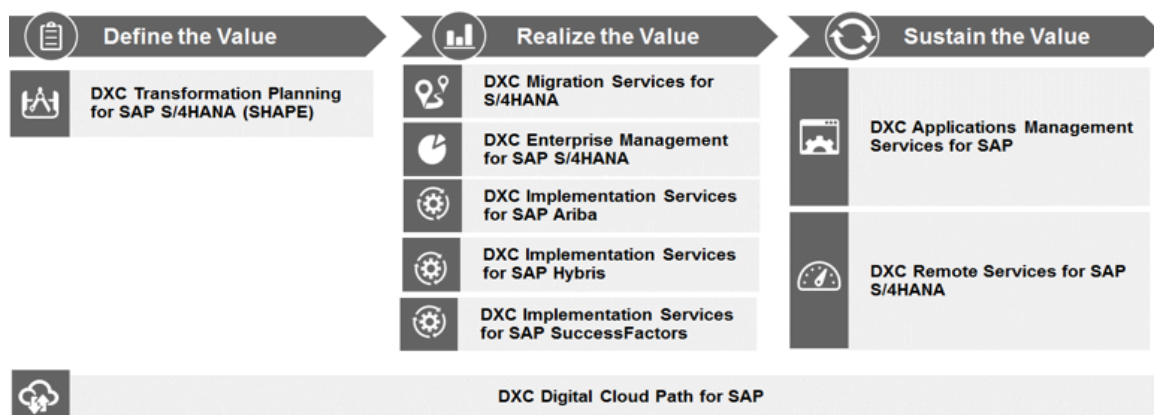
Another option would be to reimplement your on premises SAP system onto the SAP Cloud Edition. Your configuration and customisation options will be limited, but IT and maintenance costs will fall whilst providing a system that is familiar to users.

How DXC can help map and guide your journey to a digital core enabled by S/4HANA

DXC Technology works with clients at all stages of the SAP S/4HANA life cycle. Many of our clients have large, complex SAP landscapes and are unsure how to proceed. DXC's advisory service, DXC Transformation Planning for SAP S/4HANA, uses SAP, third-party tools and a structured consulting approach to deliver a detailed roadmap that provides:

- A comprehensive assessment of existing SAP applications and business processes
- A clear definition of the IT and applications environment needed to support your digital strategy and goals
- An applications transformation roadmap and program plan based on our experience with similar client initiatives, SAP best practices and the use of the most appropriate migration tools
- A costing and resource model that takes into account the business and IT resources required to successfully deliver the program
- The potential business benefits that, coupled with the plans and costs, provide the business case and return on investment (ROI) needed to justify your digital transformation

This service is part of DXC's overall portfolio of SAP S/4HANA services and solutions, as shown in the diagram below:



The team

This white paper was authored by Neil Rogers, DXC's worldwide Transformation Planning for SAP S/4HANA offering manager. For further information, contact Neil [neil.and.rogers@dxc.com] or one of these DXC regional leaders:

David Spade

SAP Practice Leader — North America

dspade@dxc.com

Ricardo Rego

SAP Practice Leader — Latin America

rrego2@dxc.com

Thomas Hansen

SAP Practice Lead — North, Central and Eastern Europe

thomas.hansen@dxc.com

Gianluca D'Angeli

SAP Practice Lead — South and West Europe

gianluca.dangeli@dxc.com

Paul Smith

SAP Practice Lead — UK, Ireland, Middle East and Africa

psmith201@dxc.com

Stuart Dickinson

SAP Practice Lead — Australia and New Zealand

sdickinson3@dxc.com

Learn more at
**[www.dxc.technology/
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