

Best-Practice Document

Elements for Designing a Transition

Roadmap to SAP S/4HANA

Version 1.8

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1 Introduction

SAP S/4HANA® is SAP's next-generation business suite. Many SAP customers are interested in learning more about SAP S/4HANA, and in particular about how they can transition their SAP landscape to SAP S/4HANA or SAP S/4HANA Cloud, private edition. For simplicity, we will only use the term SAP S/4HANA but mean both options (unless otherwise stated).

This document is a collection of facts and discussion points with respect to the transition to SAP S/4HANA. It is meant to provide guidance to customers who are designing the roadmap to SAP S/4HANA. The document focuses on transition aspects; it does not talk much about the potential value of SAP S/4HANA, which is also important when developing a business case for SAP S/4HANA.

The intent of this best-practice document is to help establish a baseline understanding of the key topics to consider when constructing a roadmap for your company. It is not a "one size fits all" roadmap. With SAP MaxAttention and SAP Value Assurance for SAP S/4HANA, SAP can help define a concrete customer-specific SAP S/4HANA roadmap and transition plan.

Nevertheless, we wanted to share some general thoughts behind constructing a roadmap, clarify questions and misunderstandings, provide guidance on what would be typically the best approach for a specific situation, and share some examples of SAP S/4HANA roadmaps.

For feedback on this document, please contact monika.ahrens@sap.com.

The target audiences for this document include IT architects at SAP and at SAP customers who seek answers and guidance for developing an SAP S/4HANA roadmap.

2 Basic Facts for Designing a Roadmap for SAP S/4HANA

The first section will talk about some basic facts about SAP S/4HANA as a product and its relationship to SAP ERP. In addition, this section will also highlight transition options to SAP S/4HANA, in particular, what a system conversion would look like. The section focuses on the technical aspects that you need to know when designing a roadmap to SAP S/4HANA.

2.1 Introduction to SAP S/4HANA

2.1.1 Key Innovation Areas in SAP S/4HANA and Implications for the Transition

As stated in the Introduction, SAP S/4HANA is SAP's next-generation business suite. It is built on over 40 years of knowledge and experience in the ERP space.

One of the main principles for the development of SAP S/4HANA was to enable an "upgrade-like" experience for all customers who want to bring their existing SAP ERP system to the digital era and SAP S/4HANA. To enable innovation while also ensuring a smooth transition for existing customers, SAP took a copy of SAP ERP as the basis for SAP S/4HANA, then started to modernize, simplify, and extend the existing solutions.

This transformation happened, and still happens, in essence, in three main areas:

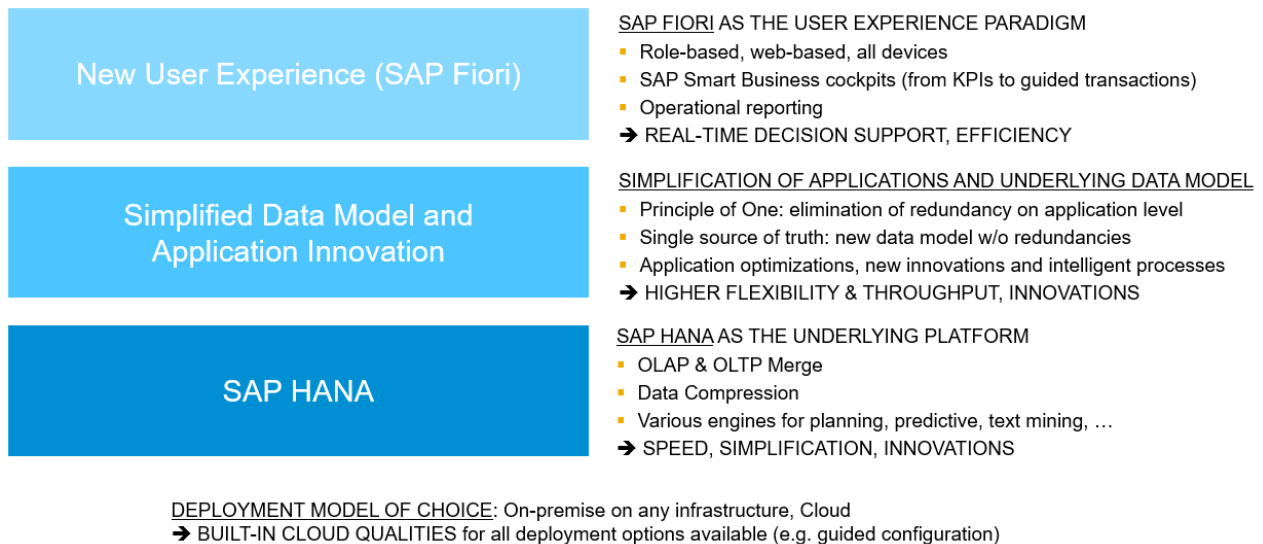


Figure 1: Main Innovation Pillars in SAP S/4HANA

- The foundation of SAP S/4HANA is SAP HANA as the underlying database and platform for innovation. With that, you get all the advantages of SAP HANA in SAP S/4HANA, in particular the ability to process huge amounts of data and the availability of various engines for planning, predictive analytics, and so on.
- ➔ Converting an existing SAP ERP system to SAP S/4HANA requires a database migration from the traditional relational databases to the SAP HANA database (if not already done). The database migration can happen in the same project as the conversion to SAP S/4HANA.**



- Another big innovation pillar is the modernization of the applications themselves. This includes a simplification of the data model (for example, no aggregates and data duplications), elimination of redundant functionality on application level, and enriching the solution with new innovations, for example embedded artificial intelligence. When simplifying the data model, SAP made sure that most of the traditional transactions still work as before without effort. This is achieved via “compatibility views”: the SELECT on an obsolete table (for example, an aggregate) is automatically redirected to the new table (for example, the line item table). This is also true for custom code.

➔ When converting an SAP ERP system to SAP S/4HANA, you need to do some adjustments on application level and for custom code, but the majority will automatically work as before.

- All modernized application areas in SAP S/4HANA use a new Web-based and role-based user interface known as SAP Fiori, allowing end users to prioritize their work based on KPIs updated in real time with every transaction within the system. In addition to this new Web user interface, SAP GUI is still supported for all traditional processes (for exceptions, see the simplification items in the [Simplification List for SAP S/4HANA](#) or the [Simplification Item Catalog](#)). However, new and innovative applications or processes are only developed (and thus only available) with the new Web UI.

➔ When converting an existing SAP ERP system to SAP S/4HANA, there is no immediate requirement to switch users from SAP GUI to SAP Fiori. This can be done over time. Given the positive feedback for SAP Fiori, we expect that customers will want to leverage SAP Fiori with the system conversion to SAP S/4HANA.

2.1.2 Relationship Between SAP ERP and SAP S/4HANA Offerings

As mentioned before, SAP S/4HANA developments started with a copy of the SAP ERP codebase, and development then transformed and modernized the solution. As a result, SAP has two different code lines: one for traditional SAP ERP applications and another for the modernized SAP S/4HANA applications. From these two code lines, SAP ships the following different products:

- SAP ERP contains the traditional applications. Innovations were shipped within enhancement packages. SAP ERP is available on any database (including SAP HANA).
- SAP S/4HANA includes modernized capabilities in Financials and Logistics, complemented with functionality not yet modernized from the SAP ERP code line (“compatibility scope”). As a result, SAP S/4HANA already provides, from the very first release, a functional scope comparable to SAP ERP. It is expected that the scope of the modernized functionality and new innovations will grow with each subsequent version of the SAP S/4HANA software. Technically, the complete scope is shipped as a new software solution. SAP S/4HANA was first released in 2015, with a yearly release schedule. The latest version is SAP S/4HANA 2022 (released in October 2022). SAP S/4HANA is a typical on-premise software package and can be installed in the customer’s data center, runs on IaaS, or hosted by partners.
- SAP S/4HANA Cloud, private edition, is SAP’s answer to enabling a cloud experience with the same functional scope and upgrade flexibility that SAP S/4HANA offers. From an underlying software, functional scope and release cycle perspective it is nearly identical with SAP S/4HANA.

- SAP S/4HANA capabilities are also shipped as public cloud offerings, called SAP S/4HANA Cloud, public edition, with a smaller but ever-increasing functional scope as compared to SAP S/4HANA.
- In the early days of SAP S/4HANA, SAP S/4HANA Finance capabilities (and Finance only) were shipped also as an add-on to SAP ERP. The following releases are available: SAP S/4HANA Finance, on-premise edition 1503 for SAP ERP 6.0 EHP7 and SAP S/4HANA Finance 1605 for SAP ERP 6.0 EHP8. There are currently no plans to ship additional versions of this add-on. Because SAP S/4HANA (on premise) is much richer in Finance functionality and has structural differences compared to the SAP S/4HANA Finance add-on (for example, redesign of actual costing in material ledger or additional currencies in SAP S/4HANA), it does not make sense to seriously consider the SAP S/4HANA Finance add-on as a deployment option anymore.

In this paper, we will focus on the transition to the SAP S/4HANA and SAP S/4HANA Cloud, private edition. For simplicity, we will only use the term SAP S/4HANA but mean both options (unless otherwise stated). SAP S/4HANA Cloud, public edition is not discussed in this document.

2.1.3 SAP S/4HANA and Its Interfaces to Other Applications

Customers often worry about the interface implications of a potential system conversion of their SAP ERP system to SAP S/4HANA, including interfaces to SAP and non-SAP systems.

To make an adoption of SAP S/4HANA easy for all existing customers, SAP tried to keep the official interfaces to and from SAP ERP stable when modernizing the applications in SAP S/4HANA. Exceptions to this rule are documented in the Simplification Item Catalog for SAP S/4HANA.

➔After the system conversion to SAP S/4HANA, the standard application-level interfaces should work without effort. As a general rule of thumb, there is no need for a change in the interfaces or the setup of the surrounding systems.

On the other hand, SAP S/4HANA comes with a largely enriched scope.

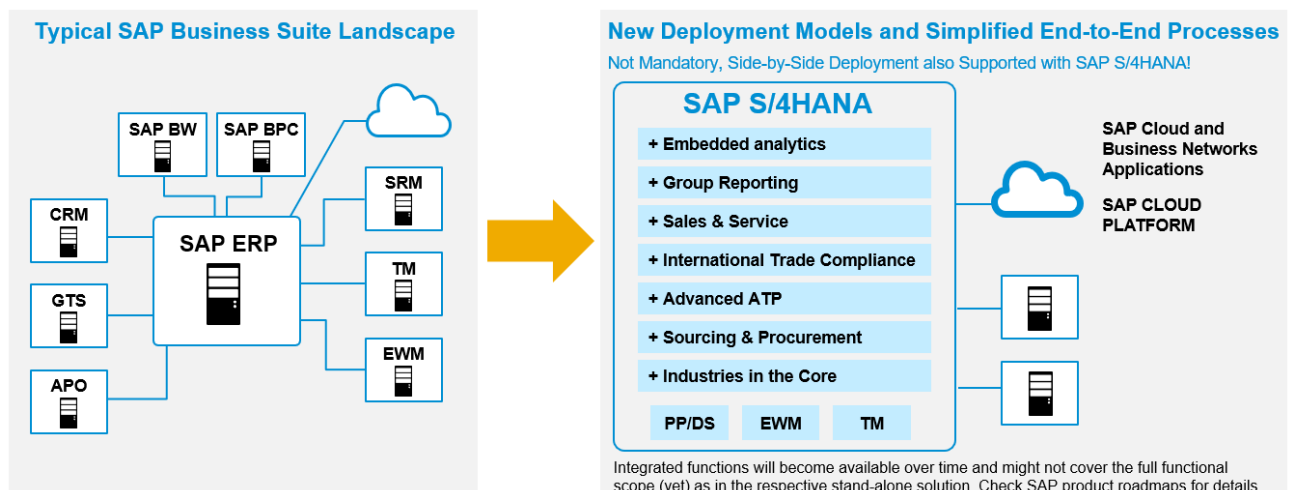


Figure 2: New Solutions in SAP S/4HANA Enable New Deployment Models

Additional functionality is available in SAP S/4HANA that allows for more integrated processes and a simplified landscape, for example:

- SAP S/4HANA embedded analytics allows for operational reporting within SAP S/4HANA, with or without SAP Analytics Cloud as front end, potentially removing operational reporting from SAP BW or SAP BW/4HANA (or other non-SAP reporting tools).
- SAP S/4HANA group reporting supports financial consolidation directly on the operational data without any replication to SAP BW or SAP BW/4HANA.
- SAP Transportation Management and SAP Extended Warehouse Management run embedded in SAP S/4HANA, and can be deployed in one system integrated with core SAP S/4HANA logistics capabilities.
- SAP S/4HANA includes advanced ATP functionality, comparable to functionality only available today with GATP in SAP Advanced Planning and Optimization (SAP APO).
- Production planning and detailed scheduling (PP/DS) can be deployed in SAP Advanced Planning and Optimization, but now also as part of SAP S/4HANA, with tighter integration to material requirements planning.
- Industry-specific functionality is now partly available in SAP S/4HANA core. In SAP ERP, some functionality is only available with an active industry business function set (for example, discrete industries or retail functionality) and you could only have one active business function set per SAP ERP system. In some cases, this restriction resulted in multiple SAP ERP systems in the customers' landscapes. With SAP S/4HANA, discrete industries and retail functionality have moved back into the core without the need for activating an industry business function.

➔ **New innovations in SAP S/4HANA can simplify integrated processes and the landscape over time (this is not required, though).**

2.2 Basic SAP S/4HANA Transition Options

In essence, there are two basic technical installation options for SAP S/4HANA:

- **System Conversion:** You can take an existing SAP ERP system and completely convert it to SAP S/4HANA or SAP S/4HANA, private edition, including all configuration, code, and data.
- **New Implementation (or Selective Data Transition):** You can install a new system with SAP S/4HANA software and load legacy data into this new system. The configuration could be based on SAP Best Practices and model companies, or you could reuse configuration from an existing SAP ERP system (for example via a shell copy of your existing SAP ERP system). This installation option works for SAP S/4HANA, SAP S/4HANA Cloud, private edition, and SAP S/4HANA Cloud, public edition.

These two basic installation options can be combined and/or put in sequence with functional innovation projects, landscape transformation activities, or data center relocations (for example, move to IaaS or SAP HANA Enterprise Cloud).

Section 3.2 will provide guidance on which transition option makes most sense under which conditions.

2.3 Overview of a System Conversion Project

2.3.1 System Conversion: One-Step Procedure Supported

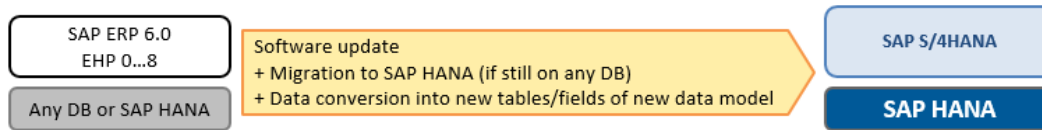


Figure 3: System Conversion – One-Step Procedure Possible

When converting an existing SAP ERP system to SAP S/4HANA, several things have to happen:

- Software components need to be updated, including an upgrade of the underlying SAP NetWeaver stack and an exchange of the SAP application software components (for example, SAP_APPL) with SAP S/4HANA software components (S4CORE).
- If the SAP ERP system is not already on SAP HANA, the database has to be migrated to SAP HANA. With the change to SAP HANA, the operating system of the database service has to be Linux.
- To support the new SAP S/4HANA data model, the data in the system has to be converted into the new tables and fields.

All these activities can be done in one single project and a single downtime, because the Software Update Manager supports a one-step conversion to SAP S/4HANA.

Downtime should generally not be a concern. For larger systems, SAP offers downtime-optimized conversion in Software Update Manager as standard option.

The following prerequisites have to be met for a one-step conversion for SAP ERP systems: 1) The SAP ERP system is on at least release SAP ERP 6.0 (no EHP required), 2) Unicode, and 3) single stack (ABAP-only stack). A system conversion to SAP S/4HANA is also possible in other cases, but would require multiple steps (for example, first a dual-stack split if the system is dual-stack).

➔ If these requirements are met, there is no need to perform an upgrade and/or database migration project before the SAP S/4HANA system conversion.

2.3.2 System Conversion: Prerequisites and Required Solution Adjustments

When considering a system conversion for an SAP ERP system, you need to have transparency on the prerequisites and required solution adjustments. **You can start with this now, even if you have no concrete project plans yet.**

	Condition	Link to documentation for SAP S/4HANA 2022	Check tool	Covered in SAP Readiness Check*
Prerequisites for SUM to start system conversion	SAP ERP 6.0, Unicode, single stack, min. DB version (SUM note)			
	Installed industry solution, add-ons, business functions are released for SAP S/4HANA	SAP Notes 3145277 , 3230844 and 2214409	Maintenance Planner	Yes
	Customer/Vendor Integration in place			Yes
Required solution adjustments	All used functionality (applications, transactions, etc.) needs to be changed through conversion and potentially re-implemented to comply with the functionality available in SAP S/4HANA.	Simplification Item Catalog: https://launchpad.support.sap.com/#/sic/	Simplification Item Relevance Check (2399707)	Yes
Required changes in custom code	All used custom code needs to be (made) compatible with the mandatory rules for SAP HANA and the simplifications in SAP S/4HANA: simplified data model and functionality not available.	SAP Note 2190420	ABAP Test Cockpit/ SAP Code Inspector	High-level only
Required upgrade of connected SAP systems	All connected application and SAP NetWeaver systems have a release or have to be upgraded to a release according to the version interoperability rules.	SAP Notes 2251604 , 3257040		
	Fiori front-end server release matching S/4HANA release, and SAP NW Gateway on SAP DB	SAP Note 3226678		
Others	Compatibility Scope Matrix	SAP Note 2269324		Yes
* Refers to SAP Readiness Check for SAP S/4HANA (see also SAP Note 2758146)				

Figure 4: Prerequisites and Required Solution Adjustments

- First you need to check if there are any showstoppers for a conversion of the existing SAP ERP system; all used industry solutions, add-ons, and business functions need to be released for SAP S/4HANA. The list of non-supported industry solutions, add-ons, and business functions is very short, so there should be hardly ever be any showstoppers from an SAP delivered solution perspective.
- If you use partner add-ons or software, you should check with the respective partners to see where they stand with creating SAP S/4HANA certified solutions for the respective release you are targeting. This activity should be started quite early, as the partner may have released the software for SAP S/4HANA, but not for the latest release of SAP S/4HANA.
- As mentioned above, the modernization for SAP S/4HANA included the elimination of redundant functionality; more specifically, functionality is not available in SAP S/4HANA if a superior alternative solution is available. This is documented in detail in the simplification items (see also section 4). In a system conversion project, the solution has to be adjusted according to the available solution in SAP S/4HANA. In general, this effort is underestimated by customers. Examples of simplification items:
 - In SAP S/4HANA, for customer and vendor master data, the business partner is leading. That means that the creation and update of customers and vendors is only allowed via the business partner maintenance transaction and interface, and that the data is then replicated to the “classic” customer and vendor master data tables. Thus, before the system conversion, all customer and vendor records have to be transferred into business partner records with all fields via customer-vendor-integration conversion. This could be a higher level of effort, depending on the data volume and quality in the existing system. The main reason is that the business partner has more strict checks, for example, with respect to valid entries in fields like credit card number, address, or e-mail.
 - In SAP S/4HANA, new accounting based on the universal journal is mandatory. During the system conversion, classic or new G/L configuration and data is transferred semi-automatically via conversion tools. All old transactions still work via compatibility views (with some exceptions in asset accounting). The transition should be of moderate effort. However, the conversion

tools typically detect data inconsistencies in old data that one needs to check and act upon, for example, archive them out of the system, accept the errors in the tool, or clean-up the data. This is why it makes sense to start early with this topic.

- In SAP S/4HANA, material valuation is always done via material ledger. Compatibility views exist so that the old materials management (MM) transactions also work. The conversion is enabled via conversion programs and should be of low effort. (**Note:** Actual costing in the material ledger can be activated on demand, as in SAP ERP.)
- In SAP S/4HANA, SD Foreign Trade is not available. The functionality is replaced with new SAP S/4HANA functionality combined with SAP Global Trade Services (SAP GTS) functionality. This might imply a re-implementation of foreign trade functionality during (or before) the system conversion project.
- Custom code needs to be made compatible with the mandatory rules for SAP HANA and the simplifications in SAP S/4HANA (for example, for write statements on obsolete tables or for functionality not available in SAP S/4HANA). While it might seem a big effort at the beginning, it is largely a technical and repetitive task, with proposals from the tool. To reduce the effort for custom code maintenance for the conversion and in the long run, cleaning up unused custom code or going back to SAP standard could make sense.
- As with any other SAP software, you need to check the version interoperability of SAP S/4HANA with the surrounding systems. If your surrounding SAP systems are on recent and supported releases, you should not have any additional effort. As previously stated, application interfaces in general should be stable and there should be very little or no effort (interface effort is generally overestimated by customers).

All required adjustments can be determined via the tools mentioned in Figure 4. Alternatively, the SAP Readiness Check for SAP S/4HANA is a comprehensive self-service analysis of your system that includes the most important checks in an early phase and compiles a list of required adjustments based on your system usage.

➔ **Get transparency on the required solution adjustments now (for example, via the SAP Readiness Check for SAP S/4HANA), in particular, the required application adjustments.**

2.3.3 System Conversion: Major Phases with a System Conversion Project

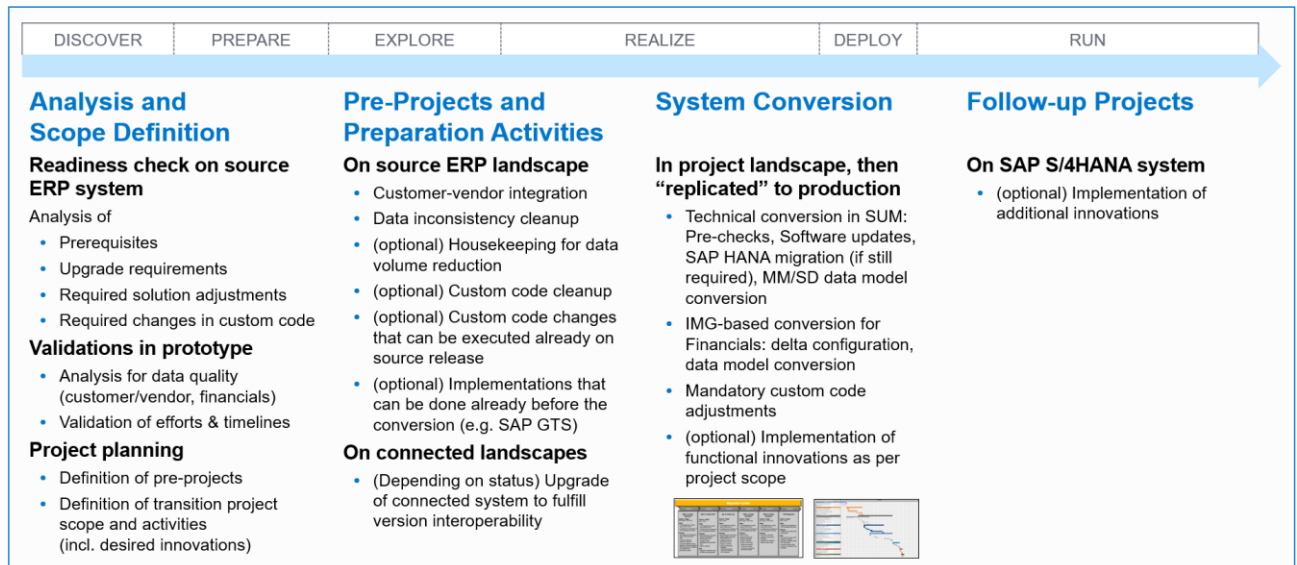


Figure 5: Major Phases with a System Conversion Project

- Analysis and scope definition:**
 The last section demonstrated the importance of gaining transparency on the required adjustment activities for a system conversion. Thus you should always have a proper analysis and scope definition phase, for example, via the SAP Readiness Check for SAP S/4HANA. Then, based on those results, determine the best transition approach, potential pre-projects, transition project scope, and mandatory activities. In this phase, we also recommend to not only check the mandatory adjustments, but also additional innovations that could add value for the business. A lot of customers also do a prototype to better understand the effort and activities with the conversion, and to provide an environment to conduct a functional assessment to understand and demonstrate the value to the business.
- Pre-projects and preparation activities:**
 Based on the scope of required and recommended activities, you may want to plan pre-projects or projects in parallel to the system conversion project. The following activities should be finished before the cutover for the system conversion, ideally even before testing the conversion on any copy of production after the first sandbox/proofs of concept:
 - Analysis and potential cleanup of data inconsistencies/bad data quality, which could create problems in the conversion to the SAP S/4HANA data model (for example, incomplete balance carry forward in Financials, wrong usage of address or e-mail fields in customer/vendor records, etc.)
 - Setting up and executing the customer-vendor-integration conversion so that all customers and vendors are maintained and continuously updated as business partner records (and vice versa)

Other pre-projects that could make sense are those activities that could reduce the complexity of the conversion activities, such as housekeeping for data volume reduction or cleaning up (unused) custom code (or going back to SAP standard).

- **System conversion:**

The system conversion performs the technical conversion of the SAP ERP system to SAP S/4HANA on SAP HANA, including all mandatory configuration changes. There is always the option of combining this project with the implementation of new innovations or other changes usually performed as part of a major project at a customer. The project generally consists of multiple conversion cycles, starting with a system conversion of a sandbox (ideally a copy of a production system), then the conversion of the development and test systems, followed by a mock and dress rehearsal conversion before finally converting the production system. Additional cycles and/or iterations may be required depending on the target non-production landscape requirements, the conversion approach selected, and/or optimization of the conversion to fit the business downtimes.

- **Follow-up projects:**

New innovations can be implemented as part of the system conversion, but also as follow-up projects.

3 Considerations for Designing a Roadmap to SAP S/4HANA

This section is intended to provide guidance on SAP S/4HANA transition planning and roadmap construction, showing the general approach but also answering questions typically received from customers. We will provide generic statements and recommendations, but unfortunately cannot cover every case and requirement within this document. So in specific situations, the roadmap might still look very different for a variety of reasons.

3.1 Target Solution Landscape

The first activity is the definition or review of the target solution landscape. This does not need to be a large activity, depending on when the last target solution landscape was created and how well the current architecture still fits to the business and IT requirements. The outcome should include answers to questions like:

- Which applications should be used to best fulfill the future business requirements?
- How many SAP S/4HANA production systems should be used (for example, global vs. regional production systems vs. separate production system by business sector)?
- Should the existing architecture for other applications remain as is (for example, standalone SAP Advanced Planning and Optimization) or should certain functions now be co-deployed with SAP S/4HANA?

Important note: Defining/reviewing or even changing the solution landscape is not a prerequisite for a system conversion or new installation of SAP S/4HANA. However, in cases of decentralized landscapes, the transition to SAP S/4HANA is an opportunity to also rethink the landscape strategy.

3.1.1 Target Solution Landscape: Number of SAP S/4HANA Systems

The criteria for defining the best production system strategy have not changed with SAP S/4HANA (see also SAP whitepaper [SAP Production System Strategy for Large Enterprises](#)):

- Business requirements for global process harmonization and global process execution should drive the strategy, while also taking into account whether global business alignment is realistic and provides enough agility (compared to alignment on regional level or business sector level), in particular in case of very different business sectors

Note: Business alignment includes defining one set of configurations, effective decision making for day-to-day change request handling and issue resolution, as well as defining a single release calendar with the respective testing periods and downtimes.

- Risks for performance, scalability, and operations have to be mitigated.



Figure 6: Decision Path to a Production System Strategy

For SAP ERP Financials and Logistics (not considering HR), the result of a production system strategy is typically one of the following configurations:

- Single global production system – in the case of smaller customers, regional customers, or in global customers with global process harmonization and global supply chains
- Global production systems by business sector – in the case of very different business sectors or organizational independence of business sectors – potentially with a Central Finance instance for consolidated financial reporting and a central master data management system for global master data.
- Regional production systems with global template (single DEV) and global master data system and Central Finance system – in the case of large companies with regional supply chains (for example, in the consumer products industry)

The main differences in landscape strategy discussions for SAP S/4HANA compared to SAP ERP are the following:

- SAP ERP is primarily a transactional system. In most companies, a split in regional SAP ERP systems based on a global template would not decrease the business value compared to a global SAP ERP system. With SAP S/4HANA, you have the opportunity to also perform analytical activities within this transactional system. So with a global SAP S/4HANA system, there is the opportunity to perform global real-time operational reporting and group reporting on operational data, while with regional SAP S/4HANA configuration, a separate SAP BW, SAP BW/4HANA or SAP Data Warehouse Cloud for global operational reporting and SAP BPC or a Central Finance would be required for financial consolidation. As a consequence, the business value of a global system setup for SAP S/4HANA is higher than the business value of a global SAP ERP system, compared to the respective regional setup.
- System performance and scalability becomes less and less of a concern with the performance and throughput capabilities of SAP S/4HANA.

→ **Global system configurations become more attractive with SAP S/4HANA. Still, for most customers with centralized landscapes (global, regional, or by sector), there should be no change in the production system strategy with SAP S/4HANA (compared to SAP ERP).**

For companies that are unhappy with their SAP ERP landscape, for example because they still have a decentralized, non-consolidated and/or non-harmonized SAP ERP landscape, or because they have a global system but need more agility for business sectors, the transition to SAP S/4HANA is a good opportunity to remodel the landscape. The efforts of a new implementation will be higher compared to converting the systems as-is to SAP S/4HANA, but the additional business value of the new landscape might offset the additional costs.

➔ **For companies that are “unhappy” with their SAP ERP landscape set-up, the transition to SAP S/4HANA might be an opportunity to remodel the landscape, a detailed evaluation of costs and benefits is highly recommended.**

3.1.2 Target Solution Landscape: “Central Finance” Use Case

With SAP S/4HANA, there is a deployment option called Central Finance.

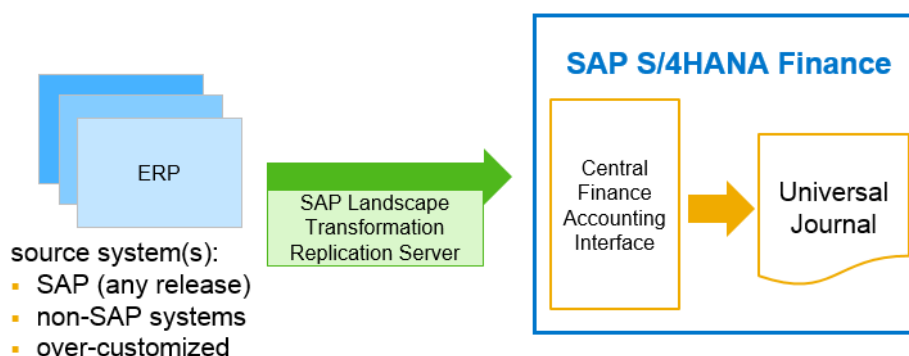


Figure 7: Central Finance Architecture

Basically, the idea is to set up a new central SAP S/4HANA system, use Financials only in that system, and connect it to the existing decentralized SAP ERP and non-SAP systems.

- **How it works:** All financial documents in the source ERP systems are continuously replicated in real time via the SAP Landscape Transformation Replication Server into the new SAP S/4HANA system and re-posted there according to the configuration in that system. Configuration, master data, and cost objects can be replicated and harmonized as well. That is, you still have (potentially non-harmonized) Financials in all source ERP systems, but have all financial postings reposted according to harmonized rules in the Central Finance system.
- **Main use cases:** This allows you to establish a central reporting platform for FI/CO with the option of creating a common reporting structure. Additionally, selected financial processes can be executed centrally in this system, such as central payments, central tax reporting, central budgeting, central management of open items in G/L, central asset accounting and central projects (for details on what these scenarios support, check the SAP documentation and SAP Note [2184567](#)). The Central Finance setup makes the most sense when there are multiple (harmonized or non-harmonized) SAP ERP or SAP S/4HANA systems. Central Finance could be a permanent element in the target solution landscape if you plan for multiple (for example, regional) SAP S/4HANA systems, but could also be considered as an interim state when SAP S/4HANA is already live for Finance – or even Logistics in

some parts of the company – while other parts are still on SAP ERP or non-SAP (for example, in case of acquisitions).

- **Benefits:** Corporate Finance processes are supported in a single system, and you can leverage the latest SAP S/4HANA functionality, for example for planning and group consolidation, even with multiple (for example, regional) SAP ERP or SAP S/4HANA systems. Also, the existing systems can remain untouched and can be different in configuration, while Finance can already use the latest SAP S/4HANA capabilities and a different, potentially harmonized configuration.
- **Notes:** If Central Finance is meant to be a permanent setup with a single SAP S/4HANA system for operations, please verify the long-term operational costs vs. benefits of this split architecture; in general, an integrated Finance-Logistics system has the biggest business and cost benefits. If Central Finance is meant to be an interim step for a process-by-process conversion or a step toward a single instance of SAP S/4HANA, please check the technical feasibility of the required data migration scenarios in the subsequent consolidation activities and compare the benefits, efforts, and risks carefully against other transition scenarios. A process-by-process conversion of a single system to SAP S/4HANA is generally not recommended.

→ Central Finance is a deployment scenario with SAP S/4HANA. It is a valid option for central Financial reporting, planning, and consolidation and selected central processes in case of multiple SAP ERP or SAP S/4HANA systems. For all other cases, you should evaluate the capabilities and restrictions in detail, as well as the effort to implement, potentially via a prototype.

3.1.3 Target Solution Landscape: Standalone vs. Co-Deployment

As stated previously within this document, with SAP S/4HANA there are options to deploy functionality within the SAP S/4HANA system that were previously available in separate, standalone applications only. Examples are advanced ATP functionality or production planning and detailed scheduling that were previously only available in SAP Advanced Planning and Optimization.

First of all, all existing deployment scenarios with SAP ERP still work with SAP S/4HANA. There is no need to change the surrounding landscape as the time of the transition to SAP S/4HANA. This should be a business-case-driven decision.

The following general guidance may help in defining the target solution landscape for components that could be co-deployed within SAP S/4HANA:

- First, if you still have multiple regional SAP S/4HANA systems in the target solution landscape, all applications that require “global views” need to be set up as global, standalone “hub” systems. Examples would be SAP BW or SAP BW/4HANA or SAP Data Warehouse Cloud for global reporting, or SAP Business Planning and Consolidation or Central Finance for global consolidation; SAP Advanced Planning and Optimization or SAP Integrated Business Planning in case of requirements for global planning; and/or global SAP Transportation Management (SAP TM) if there is a need for global transportation planning. This is exactly the same situation as with regional SAP ERP systems.
- Second, all systems with very high business criticality (for example, systems automating manufacturing or warehouse management processes) should be considered for standalone deployments. The most

prominent example is SAP Extended Warehouse Management (SAP EWM). If SAP EWM is set up as a standalone system(s), independent from SAP ERP, then probably this will still hold true in the future, because the main motivation to have SAP EWM separate does not change (that is, the high business criticality if, for instance, material flow system is used). The advantage of standalone systems is independence for software changes and lower risk of “collateral damage”. If SAP EWM has a less critical scope (for example, more or less comparable to an SAP Warehouse Management scope in SAP ERP), then co-deploying SAP EWM with SAP S/4HANA is a valid option.

- Last, you should check the added business value of the integrated processes that are only available with co-deploying certain functions with SAP S/4HANA, compared to the potential disadvantages of a co-deployment and the transitions costs. Examples would be operational reporting with SAP S/4HANA instead of operational reporting in SAP BW or SAP BW/4HANA or SAP Data Warehouse Cloud, or production planning and detailed scheduling integrated with master data and new MRP in SAP S/4HANA instead of standalone PP/DS in SAP Advanced Planning and Optimization or SAP Digital Supply Chain edition. Potential disadvantages of a co-deployment to consider: common maintenance and release schedule, common downtimes, and potentially less flexibility for changes and longer downtime for smaller functions (because all software updates for all components are done at once).

3.2 Transition Approach and Sequencing of Initiatives

Based on the target solution landscape, you define the transition approach and sequencing of initiatives, covering topics like:

- Is system conversion the most appropriate means to transition to SAP S/4HANA, or should a new installation of SAP S/4HANA (or selective data transition) be considered?
- What are suitable system conversion approaches if there is a desire to consolidate a number of SAP ERP systems into fewer SAP S/4HANA systems?
- What could a value-based sequencing of initiatives look like? Which dependencies need to be considered?

This section will provide guidance for typical situations and questions that are based on real customer cases.

3.2.1 Scenario: Centralized SAP ERP – System Conversion vs. New Implementation vs. Selective Data Transition

The first case is about companies with a single SAP ERP for Financials and Logistics (not considering HR).

System conversion	Selective Data Transition	New implementation
<p>What is it?</p> <ul style="list-style-type: none"> An “upgrade” of a complete system, using standard SAP SUM. Simplest and least risky approach, with by far best data conversion performance. Downtime minimization available for larger systems. <p>When does it fit best?</p> <ul style="list-style-type: none"> Solution largely fits to current business needs, and evolutionary approach to consuming SAP S/4HANA innovations is feasible and acceptable. 	<p>What is it?</p> <ul style="list-style-type: none"> A project approach by SAP Services, for migrating and transforming selected historical data into an SAP S/4HANA system (on table level). More complex approach, feasibility, efforts and risks depend on scope. <p>When does it fit best?</p> <ul style="list-style-type: none"> Solution largely fits to business needs, and need for historical data, and data transformation needs, Examples of data transformation: <ul style="list-style-type: none"> Selective data migration (e.g. divestiture, time slice) Consolidation of 2 ERP systems Implementation of parallel ledgers. 	<p>What is it?</p> <ul style="list-style-type: none"> Migration of master data, open items and balances into an SAP S/4HANA system, using standard SAP S/4HANA Migration Cockpit tool (posting via application interface). Phased approach possible. <p>When does it fit best?</p> <ul style="list-style-type: none"> Current solution is too complex or does not fit anymore to the business needs, and strong desire to re-implement the solution or go back to standard (independent of S/4), or data transformation needs and no need for historical data.

Figure 8: Single SAP ERP – System Conversion vs. Selective Data Migration vs. New Implementation

- The default transition approach for this case is a system conversion of the SAP ERP system to SAP S/4HANA. The main benefit is that you get to SAP S/4HANA with all your configuration and data, potentially in only one step. This guidance assumes that the current solution largely fits to the current business needs and that there is no requirement for a complete re-implementation. Smaller changes such as back-to-standard initiatives for isolated areas or cleanup of custom code can also be done with a system conversion. This is the evolutionary approach to consuming the innovations in SAP S/4HANA, protecting the investments made in the current SAP ERP solution.
- If the current solution is overly complex or no longer fits the business needs (for example, solution was developed 20 years ago and the business has changed dramatically) and there is a strong desire to re-implement the solution (even independent of SAP S/4HANA), it makes sense to use the transition to SAP S/4HANA as an opportunity to perform a re-implementation, leveraging SAP Best Practices and model companies to reduce the implementation cost and the time to value. Typically, customers then take over only master data, balances, and open items from their current SAP ERP system (and additional data upon request).
- There are cases in which it could make sense to set up a new SAP S/4HANA using the configuration and code from the existing SAP ERP system as a starting point, for example via a shell copy of the existing production system (taking over configuration and code without data), and convert it to SAP S/4HANA, then perform the desired configuration changes, and take over the required data from the SAP ERP system. In that case, you can either load only master data, balances and open items, or load additional historical data via selective data transition (feasibility and effort depends on the level of process reengineering done).
- Here are examples of when selective data transition could make sense, in case of a single source system:
 - There are transformation needs (for example, chart of account conversion, controlling area merge, or new G/L migration) that would require a separate landscape transformation project in case of a system conversion (for new G/L migration, see also section 3.2.3). With the selective data transition approach, one could potentially do the two changes in one step.

- There is a significant amount of data in the system that should not be taken over to the new SAP S/4HANA system, for example, data from former divestitures that for some reason cannot be deleted via archiving.

The costs and benefits of a new implementation and selective data transition compared to a system conversion combined with or followed by innovation projects need be evaluated in the individual case. In short, you get a lot of flexibility for changes with these approaches, which you “pay” by going to a custom data migration approach, which should not be underestimated. Find additional considerations in the following figure:

	Tasks in an SAP S/4HANA transition project	System conversion	SDT, new implementation
Clean-up in SAP ERP	Data volume management (for old data, old org units)	recommended	no
	Data inconsistency clean-up for customer/vendor, finance data	yes, accepting is possible	yes, for migration scope
	Clean-up of (unused) custom code	optional, but recommended	optional, but recommended
Mandatory solution adjustments	Custom code adjustments for used custom code	yes	yes
	Functional changes (e.g. AA in G/L, use of business partner, credit management, foreign trade)	yes	yes
Data migration	Taking over of data from SAP ERP	automatically done	data selection flexibility, project with tool support (effort increases with level of process reengineering and need for historical data)
Optional other activities: Innovation, optimization, reengineering of existing solution	Implementation of new SAP S/4HANA functionality, e.g. Fiori, operational reporting, new MRP or advanced ATP	possible	possible
	Implementation of new process variants / solutions and back-to-standard (with decommissioning or phasing out of old processes)	possible	possible
	Changes to org. model (e.g. controlling area set-up)	possible, separate project	possible
	More disruptive changes to Financials (e.g. COA, ledgers, document splitting, PCA replacement)	possible, separate project (may be bound to FY end)	possible
→ A new implementation or selective data transition adds flexibility for changes, but also complexity to the project, in particular for data migration, compared to the standard system conversion scenario.			

Figure 9: Transition Tasks in System Conversion vs. New Implementation / SDT

The same thought process is true if a customer has multiple SAP ERP systems (for example, regional SAP ERP systems) and no need to further consolidate the landscape.

→ **System conversion is a well described procedure for getting a system to SAP S/4HANA and suitable whenever an evolutionary approach is possible. A new implementation or selective data transition adds flexibility for changes, but also a lot of complexity to the project, in particular for data migration, which should not be underestimated.**

3.2.2 Scenario: System Conversion – One-Step Conversion vs. Multiple Steps

In the past a lot of companies who had decided for a system conversion of an SAP ERP system to SAP S/4HANA asked about whether they should go directly to SAP S/4HANA in one step or whether they should do an interim step on SAP HANA (SAP Business Suite powered by SAP HANA).

With SAP S/4HANA being very mature now and a lot of experience in the market, this seems less relevant now. Nevertheless, let us recap what needs to be considered for this question.







Criteria	1. Option: One Step Conversion to SAP S/4HANA	2. Option: First Project: Migration to SAP HANA Second Project: Conversion to SAP S/4HANA
Time to Value	 <ul style="list-style-type: none"> Faster on target solution which offers: SAP S/4HANA analytics, higher throughput, new Accounting, new MRP, SAP Fiori, industry functionality, ... 	 <ul style="list-style-type: none"> Fast on first stepping stone (SAP HANA) which offers: performance, SAP HANA Live, some SAP Fiori, ... Longer time to get to target solution.
Transition Costs	 <ul style="list-style-type: none"> Overall lowest costs as only one large project with one time business testing, ... 	 <ul style="list-style-type: none"> Higher costs due to two large projects with each their own testing, ... Risk of unnecessary/throwaway effort
Transition Risks and Impacts	 <ul style="list-style-type: none"> Higher project complexity Potentially longer downtime 	 <ul style="list-style-type: none"> Lower project complexity Two potentially long downtimes Potentially higher risk because of less testing focus

Figure 10: System Conversion – One Step vs. Two Step with Stepping Stone on SAP Business Suite powered by SAP HANA

When evaluating different transition options, you need to take into account time to value, transition costs, and transition risks.

- The one-step approach has the clear benefit that it is only one project, and thus offers fastest time to value of SAP S/4HANA and lowest transition costs (for example, all testing cycles and project management activities are only performed once).
- A two-step approach requires two large projects and, in our experience, often results in postponing the second step for some time due to other priorities (rollouts, functional projects). There may also be unnecessary or throwaway effort if, for example, you want to leverage SAP HANA Live or SAP Fiori after the first step (that is, on SAP Business Suite powered by SAP HANA) because with SAP S/4HANA there is more out-of-the-box content and there would be adjustment effort when converting to SAP S/4HANA in step two.
- On the other hand, the project complexity is (slightly) higher in a one-step approach compared to executing two subsequent projects; thus, the project risks are generally perceived to be higher in a one-step approach. However, this risk can be mitigated by investing appropriate time and resources for testing the scope of the project. It may even be the case that with two projects, companies underestimate the implications and required test efforts, resulting in higher risk for the transition. Overall, the risk for the transition is similar in both approaches.

In the end, the customer-specific decision depends on:

- The business requirements and opportunities identified for SAP S/4HANA (and any intermediate step) and the desired timeline to get to the respective value
- System-specific transition risks and risk mitigation options
- Other project dependencies (for example, calculated project duration, ability to fit the project into the release calendar of ongoing projects, or availability of resources)
- The current state of the existing system with regard to the prerequisites outlined in section 2.3.1

3.2.3 Scenario: System Conversion with Classic G/L vs. New G/L

The topic of classic General Ledger, new General Ledger, and new Accounting in SAP S/4HANA, along with the related implications for the system conversion to SAP S/4HANA, is a common area for questions and misunderstandings.

Key facts to consider:

- SAP S/4HANA includes and extends the new General Ledger concept that exists in SAP ERP.
- The conversion to SAP S/4HANA (blue vertical arrows in Figure 11) converts a classic General Ledger or a new General Ledger (more or less as is) into the new data structures of the new Accounting in SAP S/4HANA. This can happen independent of the fiscal year end, and only one fiscal year should be open if Asset Accounting is used.

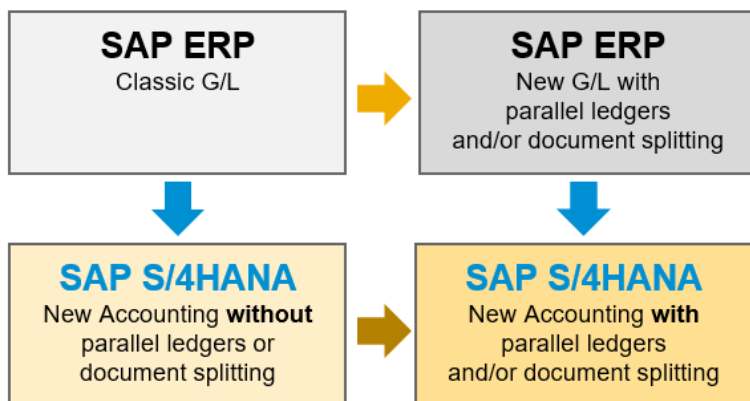


Figure 11: Classic G/L, New G/L, and New Accounting

- The introduction of either document splitting or parallel ledgers—which are key features in new General Ledger in SAP ERP and the accounting in SAP S/4HANA—requires a second type of data migration.
 - On SAP ERP, this can be done via a “new G/L migration” (see top horizontal arrow in Figure 11).
 - On SAP S/4HANA, this can happen with “Subsequent implementation of a further accounting principle” and “Subsequent implementation of document splitting” (bottom horizontal arrow in Figure 11).
 - Please note that in SAP S/4HANA, a change from the accounts approach (parallel accounting) to the ledger approach is currently not supported out-of-the box, but could be done with the support of SAP Services (see SAP Note [3042755](#)).
 - These changes should be implemented at the beginning of a fiscal year.
- It will be necessary to separate the two activities of the SAP S/4HANA conversion and the introduction of parallel ledgers or document splitting into two (or three) separate projects and downtimes.

In essence, a new General Ledger migration is not a prerequisite step for the conversion to SAP S/4HANA. If functionality like document splitting or parallel ledgers is urgently required (for example, to fulfill IFRS requirements), a new G/L migration before the SAP S/4HANA conversion might be necessary.

With the selective data transition approach (see section 3.2.1), the transition to SAP S/4HANA and to parallel ledgers could happen in one single project. But of course, the project complexity increases.

➔ **Although in general there is no prerequisite to perform a new G/L migration before the conversion to SAP S/4HANA and those innovations can be consumed afterwards, there could be cases in which it**

could make sense to consider the selective data transition as alternative approach to get this done in one single project.

3.2.4 Scenario: Decentralized SAP ERP Landscape – Transition Approaches with Consolidation

As stated previously within this document, in the case of a decentralized SAP ERP landscape, the transition to SAP S/4HANA may be an opportunity to consolidate the landscape. There are several transition options in the event that an SAP S/4HANA transition is combined with a system consolidation, supported by SAP solutions.

In general, the following transition approaches could make sense:

- New system implementation, either based on SAP Best Practices and model companies, or using the existing configuration in SAP ERP, with data migration from all existing SAP ERP systems, which would typically include master data, open items, and balance. However, additional data can be taken over with additional effort, with effort depending on the level of process reengineering and amount of historical data needed.

The following variant to this approach is also possible: selective data transition approach and data migration of all historical data from the existing SAP ERP systems in one step, referenced below in Figure 12 as “system consolidation into new system”. This approach is quite complex and should only be considered in very special cases, for example, when all systems are already harmonized to a high extent.

- System conversion of an existing SAP ERP system followed by a data migration from the other existing SAP ERP systems. Similar to the approach above, the data migration in this case would typically be limited to master data, open items, and balances only; however, additional data can be added with additional effort, with effort depending on level of process reengineering and amount of historical data needed.
- System consolidation of the existing SAP ERP systems, with all historical data, into one single SAP ERP system (either single client or multiple clients), followed by a system conversion of the consolidated SAP ERP system to SAP S/4HANA.

To determine the best transition approach, the first question you need to ask is **“How well does the existing solution fit the current and future business requirements? Is there generally a need to re-implement?”**

Answers could include:

- The solution still fits the needs of the business in all SAP ERP systems, but systems should be consolidated. The existing solution can be used as a starting point for SAP S/4HANA. Additional adjustments, like back-to-standard initiatives in isolated areas, custom code cleanup, or implementation of SAP S/4HANA innovations could be in scope.

Example: The solution is based on a common template, but was implemented in a number of systems that should be consolidated to regional systems or a single global system.

- The current solution in one SAP ERP system fits well, and this solution could be used as role model for all other business sectors or regions currently implemented in different systems.

Example: Solution fits in one major region, with different solutions implemented in other satellite regions. The goal is to consolidate and harmonize based on the configuration of the leading region.

- The current solution no longer fits to the business requirements. There is no existing SAP ERP system that could be used as role model.



		How well does the existing solution fit to the business requirements? Is process reengineering required?		
		Solution fits in all systems, no need to change	Solution fits largely in at least one system	Solution does not fit anymore in any of the systems
How much historical data needs to be taken over?	Master data + open items and balances only	New system implementation reusing existing config/code or system conversion of one system, then data migration		New system implementation with model company
	+ Selective migration of historical data	 Additional data could possibly be taken over, will increase effort for data migration. Feasibility check required.		 Additional data could possibly be taken over, will increase effort for data migration. Feasibility check required.
	+ Complete historical data for all systems			Probably not feasible and does not makes sense.
		System consolidation, then system conversion / or System consolidation into new system	Probably not feasible and does not makes sense.	Probably not feasible and does not makes sense.

Figure 12: Transition Approaches If System Consolidation is Desired

The second question is about how much data should be migrated over to the new SAP S/4HANA environment. This can range from master data, open items, and balances to the complete takeover of all historical data. The more data that is required, the complexity of the transition increases—along with effort and duration—as a result of the increased number of data transformations required to comply with the new solution. So the answer to this question may be a topic of negotiation.

The matrix in Figure 12 shows the preferred transition approaches, depending on the answers to the two questions. Please keep in mind that this is only a first high-level guidance. A proper customer-specific evaluation needs to be conducted, looking at time to value, benefits, costs, and risk of transition. Factors to consider, apart from solution fit and the requirements for migrating historical data, are the number of systems to be consolidated, as well as the differences between the existing systems. The technical feasibility of the desired transition option needs to be checked in detail—in particular if there are data migration requirements beyond the migration of master data, open items, and balances.

Note: Using a Central Finance system as a basis for system consolidation is theoretically possible; however, this approach should be carefully compared to other consolidation options mentioned above.

Consolidation activities are not a prerequisite and are generally not recommended as a preparation step (if not done yet). It is generally faster to do a system conversion of one system or a new installation of SAP S/4HANA, followed by taking over data from the other SAP ERP systems onto that new SAP S/4HANA platform.

As consolidation projects are generally a lot of effort, the benefits and costs of consolidation and the transition approaches should be evaluated carefully.

3.2.5 Scenario: Co-Deployment with SAP S/4HANA – Sequencing

SAP S/4HANA also allows for new deployment options, in the sense that functionality previously only available in dedicated standalone systems is now also available or planned for SAP S/4HANA (see sections 2.1.3 and

3.1.3). There might be the question of what these options mean for defining the roadmap, in particular the dependencies of the different activities in the roadmap.

First of all, the landscape does not need to change. You can convert your existing SAP ERP system to SAP S/4HANA and still keep all surrounding systems (for example, SAP BW or SAP BW/4HANA, SAP Data Warehouse Cloud, SAP IBP, SAP Advanced Planning and Optimization, SAP Ariba, SAP SRM, etc.) as is.

If you want to add new standalone systems to the landscape, this can be done independently of the SAP S/4HANA transition; in other words, they work with SAP ERP or SAP S/4HANA. Examples could be starting or continuing the rollout of an SAP EWM implementation with multiple, dedicated SAP EWM systems, or implementing SAP Integrated Business Planning or SAP Ariba in the cloud.

If you want to use one of the new co-deployment options with SAP S/4HANA and replace the corresponding functionality in the standalone systems, the project can only start together with or after the SAP ERP solution has been replaced by SAP S/4HANA. Examples could include the implementation of advanced ATP functionality in SAP S/4HANA, replacing the GATP functionality in SAP Advanced Planning and Optimization, or the implementation of self-service procurement in SAP S/4HANA, thereby replacing the functionality in SAP SRM.

Apart from looking at dependencies, you would determine the best sequence by comparing time to value with cost and risk of transition. For example, in a system conversion situation, companies typically only implement quick wins and new capabilities with high value together with the system conversion project, and leave bigger functional innovation projects for later. For a new implementation, you would ideally use new functionality right away, to avoid throwaway efforts of implementing the same functionality twice.

3.3 Examples of Transition Roadmaps

This section shows some simplified examples of transition roadmaps, illustrating the discussion points in the last sections. You may not have the exact same situation, but may find parts helpful for your roadmap.

3.3.1 Example: Single SAP ERP → Single SAP S/4HANA

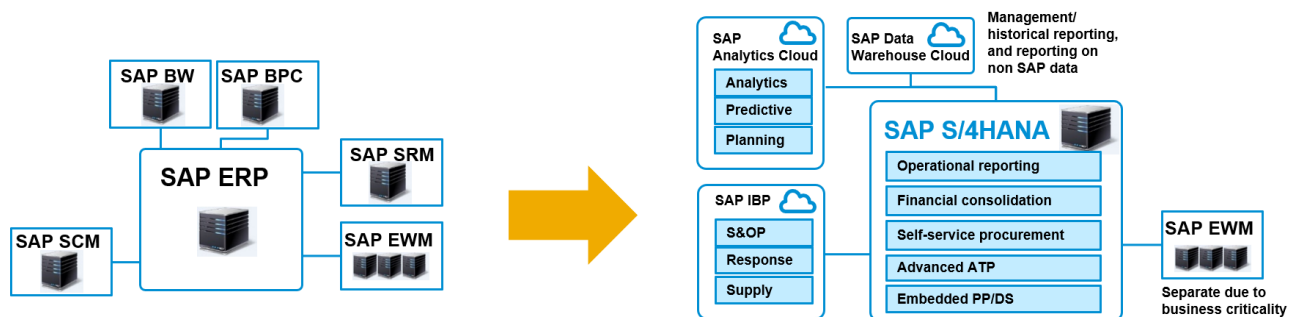


Figure 13: Example 1: Single SAP ERP to Single SAP S/4HANA (Target Solution Landscape)

In the first example, the starting point is a global environment with regional SAP EWM systems. The current solution consists of:

- A single global SAP ERP system
- A single global SAP Advanced Planning and Optimization used for DP, SNP, PP/DS, and GATP

- A single SAP SRM used for self-service procurement
- A single SAP BW used for operational and management/historical reporting, with separate SAP Business Planning and Consolidation for financial planning/consolidation (separate system for some historical reasons)
- An SAP EWM rollout that has just begun, with the target to have three regional SAP EWM systems for risk distribution

The long-term target solution landscape with SAP S/4HANA could be:

- Single global SAP S/4HANA system. In addition to the functionality deployed in SAP ERP today, the following functionality is planned to be used in SAP S/4HANA: real-time operational reporting, financial planning and consolidation, embedded self-service procurement, advanced ATP, and embedded PP/DS.
- A global SAP Data Warehouse Cloud for management and historical reporting, as well as reporting across SAP solutions and on non-SAP data.
- SAP Analytics Cloud as front end for analytics and planning on live data from SAP S/4HANA and SAP Data Warehouse Cloud.
- A global SAP Integrated Business Planning in the cloud for sales and operations planning, response, and supply management.
- Three regional SAP EWM systems for risk distribution.

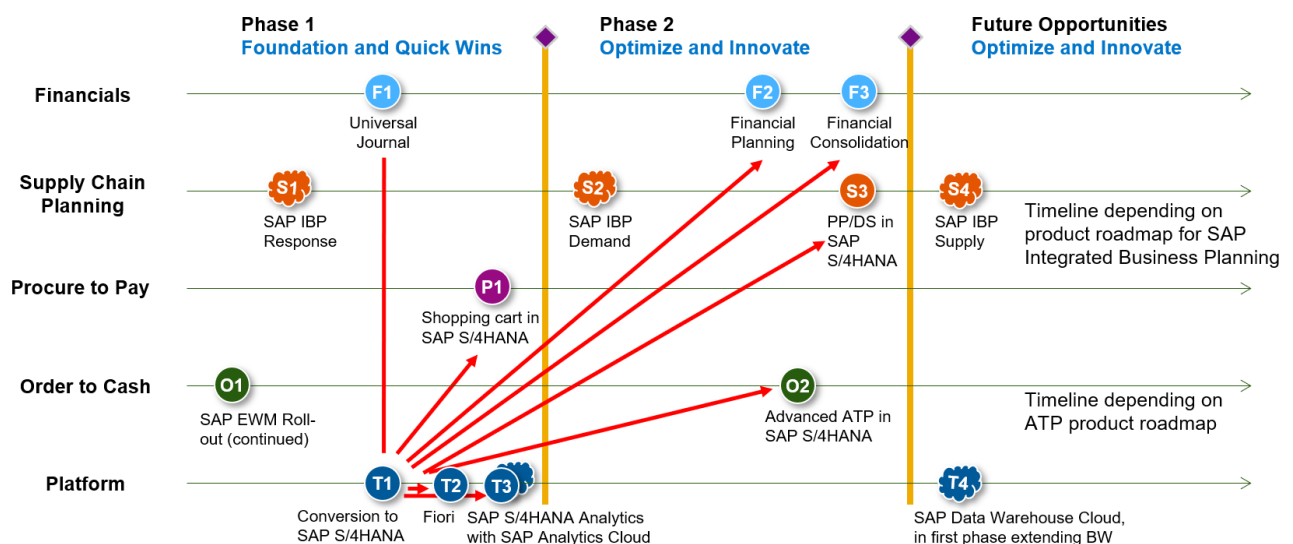


Figure 14: Example 1: Single SAP ERP to Single SAP S/4HANA (Roadmap)

A value-driven adoption roadmap to that target solution landscape could look as follows:

- The SAP EWM rollout can continue as planned; there is no need to change anything.
- SAP Integrated Business Planning in the cloud will be used first for new functionality like response management, complementing the existing SAP Advanced Planning and Optimization implementation.

This is a new implementation and can be performed independently of the transition of the SAP ERP system to SAP S/4HANA.

- SAP Integrated Business Planning will then be extended to demand and supply planning, replacing this functionality in SAP Advanced Planning and Optimization implementation. The timeline for these activities depends on the expected business value and the product roadmap for SAP Integrated Business Planning. It is independent of the transition of the SAP ERP system to SAP S/4HANA.
- The SAP ERP system will be converted to SAP S/4HANA in one single step—including the SAP HANA migration and SAP S/4HANA conversion—because the solution still largely fits to the current needs of the business.
- With the SAP S/4HANA conversion, and in subsequent projects, the functionality in SAP S/4HANA will be enhanced with additional quick wins like SAP Fiori and operational reporting, with or without SAP Analytics Cloud as front end for analytics.
- After the SAP S/4HANA conversion, there are plans to migrate self-service procurement from the standalone SAP SRM to the embedded shopping cart in SAP S/4HANA; to use advanced ATP and embedded PP/DS, replacing similar functionality in SAP Advanced Planning and Optimization implementation; and to implement financial planning and consolidation in SAP S/4HANA and replace the standalone SAP Business Planning and Consolidation. The sequencing of these activities should be driven by business benefits and time-to-value, as well as the respective SAP product roadmap (see <http://scn.sap.com/community/product-and-solution-road-maps>).
- There are also plans to use SAP Data Warehouse Cloud in a first phase, extending SAP BW, but in the long run replacing SAP BW as corporate data warehouse.

3.3.2 Example: Regional SAP ERP → Global SAP S/4HANA

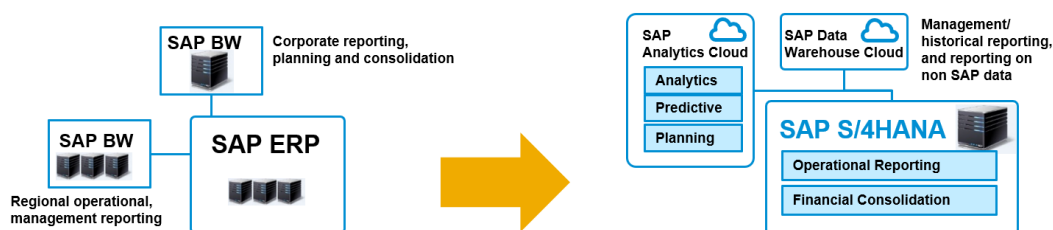


Figure 15: Example 2: Regional SAP ERP to Global SAP S/4HANA

In the second example, the starting point is a regional landscape with:

- Three regional SAP ERP systems with a harmonized global template. There is one large SAP ERP system for the largest “lead region”, with two smaller satellite regional systems.
- Three regional SAP BW systems are used for regional operational and management reporting.
- A global SAP BW/SAP Business Planning and Consolidation is used for corporate reporting and financial planning and consolidation.

The long-term target solution landscape could be:



- A single global SAP S/4HANA system, because the nature of the business has become more and more global. In addition to the functionality deployed in the SAP ERP today, the following functionality should be used in SAP S/4HANA: real-time operational reporting and replication-free financial planning and consolidation.
- A global SAP Data Warehouse Cloud for management and historical reporting, as well as reporting on non-SAP data.
- SAP Analytics Cloud as front end for analytics and planning on live data from SAP S/4HANA and SAP Data Warehouse Cloud.

A value-driven adoption roadmap to that target solution landscape could look as follows:

- The SAP ERP system for the “lead region” will be converted to SAP S/4HANA in one step.
- Afterward, the selective data from the “satellite regional systems” is migrated over to the SAP S/4HANA system, which primarily consists of master data, open items, and balances.
- The solution in SAP S/4HANA is enhanced with the new real-time operational reporting. This can be implemented already with the system conversion to SAP S/4HANA; otherwise, it can be implemented before or after the data transfer for the “satellite regional systems”. More and more reports can be added over time, replacing operational reporting that existed in the regional SAP BW systems. SAP Analytics Cloud is added as front end for reporting and predictive analytics.
- Financial planning and consolidation is migrated from standalone SAP Business Planning and Consolidation to SAP S/4HANA, with SAP Analytics Cloud as front end for planning. This step can only be done after all regions are in the target SAP S/4HANA system, as only then we will have all Financial data required for planning and consolidation in SAP S/4HANA.
- The global SAP BW and the remaining regional management/historical reporting in the regional SAP BW systems will be replaced in the long run with SAP Data Warehouse Cloud. As an intermediate step, SAP Data Warehouse Cloud will be complementing the global SAP BW.

4 SAP Value Assurance for SAP S/4HANA and SAP MaxAttention

SAP Services and Support supports the complete transition to SAP S/4HANA with a standardized methodology.

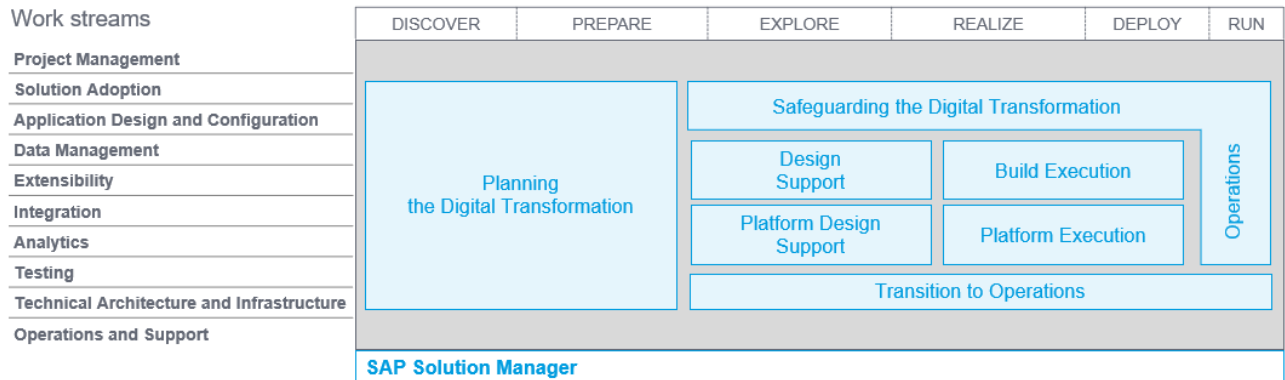


Figure 16: Holistic Service Methodology

The methodology and services of SAP Services and Support cover all phases of a transition project, from transition planning to technical and functional design and execution. They also cover all work streams of such a project, including, for example, solution and custom code adjustments and extensions, technical architecture and infrastructure design, or transition to operations.

The methodology is documented in the Transition to SAP S/4HANA roadmap, which includes descriptions of all involved tasks and roles and highlights best practices and available accelerators. This roadmap is designed for project managers and is available to all SAP customers. **(Note:** To access some of the accelerators, you may need to register or have SAP Enterprise Support services status).

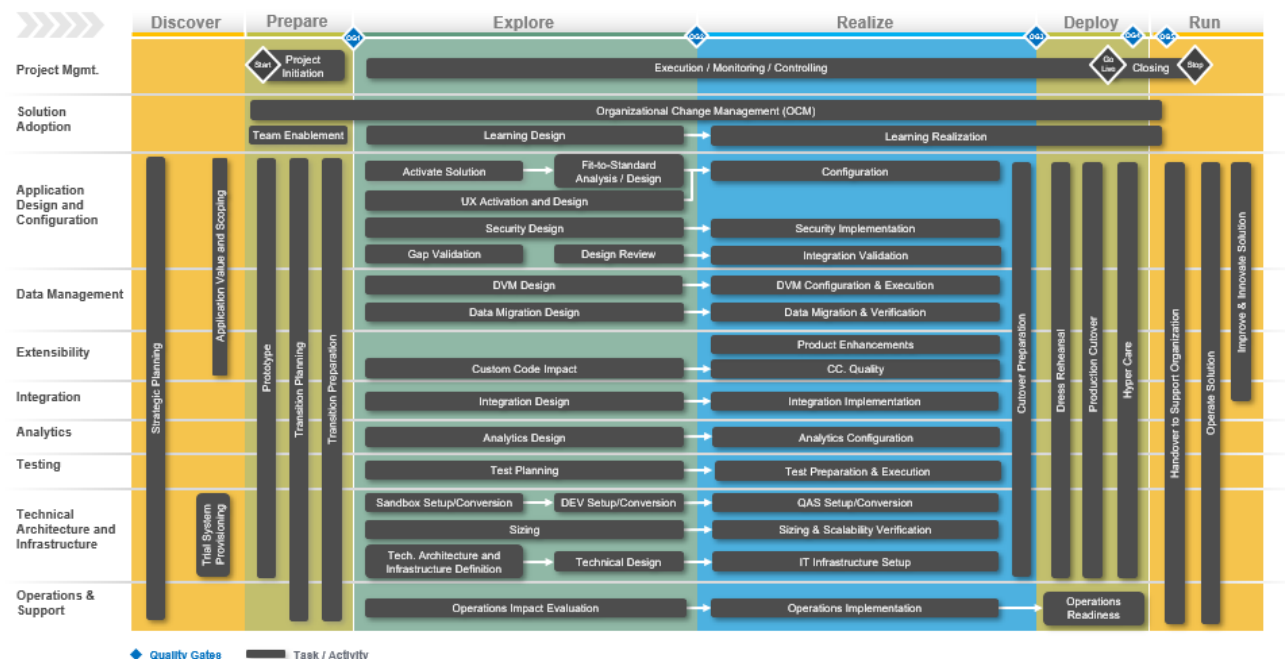


Figure 17: Transition to SAP S/4HANA Roadmap

When planning the transition to SAP S/4HANA the planning phase of such a project is very important. The following services support the creation of a roadmap to SAP S/4HANA with various functional and technical aspects.

- The “SAP S/4HANA Value and Implementation Strategy” service provides a comprehensive SAP S/4HANA transition analysis, including proposing an implementation strategy and providing input for a business case. Starting from business priorities, it identifies key innovations and mandatory changes applicable to the specific customer situation, thereby highlighting the customer-specific value chain built on SAP S/4HANA.
- The “Migration Planning Workshop” provides a holistic overview of the topics required for consideration during the planning phase of a system conversion project, including transition approaches and tools, technical architecture, sizing, application implications, operational readiness, testing, and quality management. The outcome of the workshop includes the development of a system-level transition roadmap and a customer-tailored, high-level milestone project plan.
- “Transition Planning for new Implementations” is a service similar to the “Migration Planning Workshop” in the case of planning a new implementation. It additionally provides implementation best practices, such as SAP Activate and model company solutions, to support the quick and agile adoption of SAP S/4HANA.
- The “Technical Architecture and Infrastructure” service supports the design of the technical architecture for the productive and non-productive layers of the SAP solution based on the customer’s requirements and boundary conditions. The major focus is on sizing, hardware platforms, operating systems, virtualization solutions, HA/DR design, and mapping of systems to hardware resources—for both the SAP HANA database and SAP application servers.

All services offered by SAP Services and Support are based on the Transition to SAP S/4HANA roadmap.

The services are bundled in SAP Value Assurance service packages for SAP S/4HANA. Customers can flexibly choose the level of service coverage and engagement from SAP that works best for them.

Of course, the same set of services is also included in SAP MaxAttention, which can cover the complete transition to the Intelligent Enterprise, not just SAP S/4HANA, and in particular offers architecture planning across the complete SAP landscape, both on premise and cloud.

In addition, the SAP Readiness Check for SAP S/4HANA is a system-specific analysis of your system to derive the mandatory solution adjustments for SAP S/4HANA. It is available as a self-service to all SAP customers. For more information, see SAP Note [2758146](#).

5 Key Messages

- SAP S/4HANA started from the same codebase as SAP ERP, then modernizations and simplifications were done. Interfaces to surrounding SAP systems were kept more or less stable. Conversion tools are available to do an “upgrade”-like transition.
→ System conversion is doable and supported with tools. If there is no business desire for a complete re-implementation, system conversion should be the default approach. Solution and custom code adjustments are necessary.
- The mandatory solution adjustments are documented in the Simplification List and can be analyzed based on your system usage.
→ Start analyzing the mandatory solution adjustments now—even if you have no concrete plans for an SAP S/4HANA project—to gain transparency on the necessary adjustment and cleanup activities (via the SAP Readiness Check for SAP S/4HANA) and which of those could or should start prior to the system conversion project. You could also avoid implementing or rolling out functionality in SAP ERP that is not available in SAP S/4HANA.
- Tools support a one-step system conversion to SAP S/4HANA.
→ A one-step system conversion to SAP S/4HANA is recommended. There is no need for—and no advantage to—a separate upgrade or SAP HANA migration project in preparation for SAP S/4HANA. You should instead work on solution adjustment and cleanup activities (see above).
- For companies that are “unhappy” with their current SAP ERP landscape set-up, the transition to SAP S/4HANA is an opportunity to remodel the landscape.
→ Landscape consolidation/decentralization decisions are largely independent of the SAP S/4HANA implementation/conversion. Consolidation/decentralization activities are not a prerequisite and are generally not recommended as a preparation step (if not yet done). As landscape remodeling projects are generally quite some effort, the benefits and costs of these should be evaluated in detail, together with the respective SAP S/4HANA transition options.
- Central Finance is a deployment scenario with SAP S/4HANA. Currently, this setup supports a limited number of use cases.
→ Central Finance makes the most sense for corporate reporting, planning, and consolidation and selective central processes in case of multiple SAP ERP systems. If you are interested in this scenario, you should evaluate the capabilities and restrictions in detail. Starting with Central Finance as a basis for a process-by-process conversion of a single SAP ERP system to SAP S/4HANA is generally not recommended, because it leads to higher effort and risks compared to other transition scenarios. Using a Central Finance system as a basis for system consolidation is theoretically possible; however, this approach should be carefully compared to other consolidation options mentioned above.

6 Further Information with Additional Details

Mapping Your Journey to SAP S/4HANA – A Practical Guide for Senior IT Leadership

- This very detailed guide provides details on the different transition options, success factors and tools.
- See: <https://www.sap.com/documents/2019/05/44b3ebd5-4b7d-0010-87a3-c30de2ffd8ff.html>

Roadmap for Transition to SAP S/4HANA

- The purpose of the Transition to SAP S/4HANA roadmap is to support on-premise or private cloud implementation projects of SAP S/4HANA. It creates transparency about all involved tasks and roles.
- See: <https://go.support.sap.com/roadmapviewer/#/group/roadmapOverviewPage/S4HANATRANSONPRE>

Simplification Items and SAP Readiness Check for SAP S/4HANA

- The Simplification Item Catalog (<https://me.sap.com/sic>) and Simplification List (see: <http://help.sap.com/s4hana>) include all simplifications for SAP S/4HANA compared to SAP ERP. This list must be treated as a complete inventory that needs to be mapped against a productive environment to determine the impact when converting.
- While the Simplification List is quite a long document, the SAP Readiness Check for SAP S/4HANA filters this list to only those simplification items being relevant for the system.
- The SAP Readiness Check for SAP S/4HANA is a system-specific analysis of your system to derive the mandatory solution adjustments for SAP S/4HANA. It is available as a self-service to all SAP customers. For more information, see SAP Note [2758146](#).

SAP Premium Engagement

- SAP Services and Support can support a customer and partner with the transition to SAP S/4HANA. Premium Engagement Services can be used to plan and safeguard the transition.

SAP Enterprise Support for SAP S/4HANA

- SAP Enterprise Support is the foundational support offering providing (remote) services and tools for your SAP S/4HANA journey, including meet-the-expert sessions, expert-guided implementations, best practices, and continuous quality checks.
- The SAP Enterprise Support SAP S/4HANA On Premise value map offers a simplified consumption of the relevant services and tools. Register for SAP Enterprise Support value maps: <https://support.sap.com/valuemaps>

Best-Practice Document

Elements for Designing a Transition Roadmap to SAP S/4HANA



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