

ARCHITECTURE TRANSFORMATION

INFORMATION SHEET FOR SERVICE DELIVERY

The architecture transformation service provides a comprehensive planning package from strategy to architecture transformation planning. Starting with business priorities, identifying strategic enablers and innovation opportunities, this service looks into digital transformation capabilities with a holistic approach to enterprise architecture. New technology platforms and business applications, such as SAP® Business Technology Platform and SAP S/4HANA®, are included as levers to accelerate innovation. The service reaches from strategic road mapping down to specific technical architectures and sizing efforts.

INTELLIGENT ENTERPRISE

AT A GLANCE

Key Features

Starting with documentation of the as-is enterprise architecture, the to-be architecture is developed step-by-step and a clear set of prioritized initiatives is composed with a multiyear strategic road map. In a modular approach, the perspective is on all layers of the enterprise architecture, such as:

- Business architecture
 - Identification of change drivers
 - Business capability model (as-is and to-be)
- Application architecture:
 - Changing business and IT requirements, derived from a potentially changing business and IT operating model
 - Lifecycle assessment of business applications
 - Integration architecture (interfaces and integration technologies)
- Platform technology architecture
- Technical architecture definition (such as sizing, capacity management, strategies on scaling)
- Prioritized set of transformation projects
- Transformation road map including key dependencies and high-level timing

Benefits

- Creating transparent decisions on a plan to transform the enterprise architecture, platform and technology across the enterprise, aligned with the road map
- Linking of architecture transformation needs to business drivers and changes in business priorities

When to Use

Working on enterprise architecture transformation should not be a one-time effort; we recommend that it be repeated once a year. Depending on the initial effort in year one, further runs could be less comprehensive, for example, when:

- Business models require re-architecting
- Complex and outdated architectures are slowing down agility
- New technology capabilities enable efficiency gains on both the IT and business side

DELIVERY IN DETAIL

Preparation

- Build on top of the architecture point-of-view service, which is typically run within the first four weeks of the engagement setup. Depending on the time gap between the preceding service deliveries and this service, we recommend checking prior results for validity and completeness.
- Align with the technical quality manager (TQM) and prepare a scoping document for the customer
- Prepare an approach based on the information from the TQM and possibly the customer

Delivery

The service comes as a mix of remote and on-site activities. Typical preparation tasks and deep analysis is done remotely, while strategic planning sessions that require an intense interaction are done on-site.

- Remote: Scoping, approach definition, and initial analysis based on either shared documents, such as business blueprints and technical design documents, or system access
- On-site if possible, or remotely: Sharing remote preparation results. Target architecture assessment, innovation strategy and road map, instance strategy and analytics strategy ideally have an on-site portion. Technical architecture or platform definition may be done completely remotely, depending on the complexity of the questions.

Service Component: North Star Architecture

The objective of this service component is to help customers create an innovation road map to support their digital transformation. The resulting road map typically includes SAP S/4HANA software as well as SaaS applications, the Internet of Things (IoT), Big Data, or other technologies and solutions to help deliver innovation.

The following steps are included in this component:

- Determine change drivers; the reasons the customer is considering rearchitecting significant elements of its current landscape. These change drivers can include external factors, such as competitive pressure or solutions from SAP.
- Derive a customer-specific business capability map based on the industry reference architecture. The capability map includes the applications that provide the required capabilities and value drivers that support the change drivers.
- Explain the SAP solution strategy and the best way to leverage it to fulfill the customer's strategic needs.
- Determine the end state and possible transition solution architecture, including temporary integration needs. Various architecture considerations that go beyond the core scope of SAP S/4HANA can be assessed:
 - Data warehouse strategy: can operational reporting be sourced from SAP S/4HANA rather than a separate reporting solution? How can a central data warehouse be leveraged for cross-topic and historical reporting?
 - Instance strategy: staying on the current production system topology is not a given. In this step, consolidation is evaluated with a view of increasing business value or lowering total cost of ownership (TCO). Depending on the complexity of this topic for the customer, this discussion and evaluation may require a dedicated workshop.
 - Data and IoT opportunities: for the digital transformation, an assessment is carried out to determine how external sets of data can be leveraged to trigger better decision-making or transactional processes. Best results may be achieved if these data sets can be integrated into the redefined and optimized business processes in the digital core.
 - Business networks: boundaries of companies are no longer the boundaries of business transactions. Therefore, the optimization of business networks becomes a much higher priority in the digital world.
 - Central finance architecture: such an architecture can be proposed if the need for harmonization and innovation on the finance side is very high, while the complexity of the operational system landscape is too high to trigger a complete transformation to SAP S/4HANA for the entire landscape. In this case, the central finance system will receive real-time replicas of financial line items, which will then be harmonized and further processed on the "new" central instance of SAP S/4HANA.
- Identify landscape transformation scenarios. The primary use case might be system consolidation, which should come with business and IT TCO benefits. In addition, landscape transformation mechanisms can be used for partial migrations of a subset of company codes, or to reduce the data footprint by archiving larger portions of historical data during the migration.
- Determine integration needs and give high-level guidance in terms of integration technologies.
- Assess and prioritize transformation steps or projects in terms of business value, required effort, and risks (assess the transformation project portfolio).
- Based on the input gathered in the preparation and the workshop discussions, compile a multiyear transformation road map. During this step, existing parallel initiatives need to be considered as project resources are never unlimited.

For each of these areas the modules listed in the table below can be aggregated in the North Star Architecture service components. Pre-identified grouped of modules do form pattern, for which additional delivery accelerators are provided.

Strategy	Business	Application & Data
<ul style="list-style-type: none"> Transformation Readiness Business Model Patterns Scoping Strategy Mapping 	<ul style="list-style-type: none"> Business Process Scoping & Mapping Business Capability Scoping & Mapping Template Assessment & Guidelines 	<ul style="list-style-type: none"> Target Application Architecture Deployment Strategy Business Process Intelligence & Design Data Architecture Analytics Architecture Instance Strategy Intelligent Automation Solution Architecture
Technology Platforms	Transition / Roadmap	Governance
<ul style="list-style-type: none"> Intelligent Technologies High-level Platform Strategy UX Strategy & Architecture Integration Extensibility Hybrid Cloud Technical Architecture Scaling Strategy Release & Technical Change Mgmt 	<ul style="list-style-type: none"> Initiative catalog & priorities matrix Roadmap evaluation/ design Implementation & Rollout Strategy Transition Scenario Evaluation Migration Planning 	<ul style="list-style-type: none"> Architecture Maturity Assessment Organizational Change Mgmt Value Management EA Principles Policies & Standards

When to order this service:

Ideally, the implementation strategy road map service is ordered at the beginning of a customer's digital transformation journey. It usually deals with the whole landscape on a strategic level. Follow-up activities plan the transition of specific systems (for example value & implementation strategy service (VIS), migration and upgrade planning workshop (MPW), selective data transition planning workshop (SPW), transition planning for new implementation (TNI), application areas like finance, cross-line-of-business topics like analytics (analytics strategy (AST), analytics design workshop (ADW)), or technology and infrastructure (for example technical architecture and integration (TAI)).

Service Component: Target Architecture Assessment

The target architecture assessment (TAA) initially can be derived by analyzing the as-is solution and developing options for the to-be architecture. This needs to be combined with core IT and business strategy questions, such as cloud preference or drive for shared services. Existing documentation will be reviewed. This may also include assessment of existing transformation plans. The TAA service component focuses on key elements of the target architecture: platform and business applications.

As a prerequisite of a TAA and, as a minimum, the customer needs to have a first draft of the target application architecture and at least a high-level road map. The SAP Transformation Navigator tool can be used for that.

The outcome will result in revised documentation and initial adjustments to the target architecture and transition plans. Compared to an implementation strategy road map, where these artefacts are established collaboratively with the customer's project team, the TAA focuses on reviewing existing plans.

The TAA service component covers the following scope:

- Application architecture assessment can be delivered in different depths on three possible levels
 - Assessment scope 1:
 - Designed business capabilities review, according to industry reference architecture, mapping to customer's business objectives and pains or gains
 - Collection of architecture requirements (functional and nonfunctional) including a high-level assessment and review of how these are being fulfilled within the current architecture
 - Evaluation of customer-designed target application architecture and evaluation of target application choices

- Assessment scope 2 includes the previous level assessments plus:
 - Business capabilities clustering, fulfillment, and value driver indications
 - High-level review of planned production system instances resulting in identification of potential risks
- Assessment scope 3 includes the previous level assessments plus:
 - Assessment of new business models and integration into the business capabilities map
 - Integration architecture review that documents current architecture integration patterns and spots additional integration needs
- Road map assessment
 - High-level evaluation of transition paths: sequences, transition scenarios, and change events
 - Determination of pros and cons of customer choices
 - Address open points and new or changed priorities from previous architecture review cycles

Service Component: Analytics Strategy

Traditional reporting and data warehouse architecture need to be reassessed when re-architecting system landscapes. Real-time analytics, integration of predictive capabilities into transactional systems, and integration of Big Data scenarios all bring new requirements to the table. Defining a future-proof analytics target architecture and road map using state-of-the-art solutions, while considering previous investments, existing solutions and company strategy with hyper-scalers is the goal of this service component.

The service covers the following scope:

- Analytics user interface (UI) strategy
- Embedded analytics capabilities and features
- SAP's strategy for enterprise data warehouse (the SAP BW/4HANA solution, SAP Data Warehouse Cloud solution, and SAP HANA SQL) as well as integration with hyper-scaler solutions
- Integration and planning scenarios (Enterprise Information Management, Big Data, and hybrid scenarios, planning with the SAP Business Planning and Consolidation application and the SAP Analytics Cloud solution)
- Integration of cloud solutions like SAP S/4HANA® Cloud, SAP SuccessFactors® solution, SAP Sales Cloud solution, SAP Integrated Business Planning for Supply Chain solution and non-SAP components into the overall analytics architecture.
- The SAP Business Planning and Consolidation application or SAP Predictive Analytics software

Service Component: Integration Strategy

In the context of an upcoming transformation to SAP S/4HANA and the intelligent enterprise, the existing integration strategy needs to be revisited. This service component includes reviews of the existing and planned integration landscape, explanation and use of the integration solution advisory methodology, and joint creation of an overall and customer-specific integration strategy.

The integration strategy component covers the integration between systems and applications. The existing and planned solution landscape, current integration architecture, integration pain points and concerns are taken into consideration. SAP's integration technologies and products are explained to the customer in the context of capabilities and usage scenarios.

During an on-site workshop, the integration solution advisory methodology is explained to drive integration middleware decisions and to define an overall integration strategy. Key integration scenarios (SAP S/4HANA with on-premise and cloud applications from SAP and third parties) are reviewed, using the methodology, to support the customer in the definition of an ideal integration strategy.

Service Component: Instance Strategy

SAP customers' landscape of production systems is often the result of architecture decisions that were driven by technology constraints. In addition, historic growth through geographic expansion and merger and acquisition activities often lead to additional complexities in customer's landscapes. Within the course of a transition to S/4HANA, and the vast advances in hardware in the recent years, consolidation often is a key transformation driver. Typical questions include:

- What is a "best-fitting" production instance strategy for the SAP target landscape to effectively fulfill future business and IT requirements?
- Is a single global instance an option? What are the impacts? What are the risks? What are the alternatives?
- What are the things that matter to make a decision? What are best practice criteria?
- How have other SAP customers decided their instance strategy and what were their drivers?

The instance strategy service helps customers look at this decision from multiple angles including business strategy, deployment, operations and technology. With an understanding of the customer's specific transformation situation, architecture options are preselected and advantages and disadvantages of each are discussed in the context of the enterprise. After narrowing down the options, a catalog of SAP's best practice criteria is used to compare the options in a qualitative and quantitative manner.

As a result of the service, the customer is in a position to make an informed, transparent decision .

Service Component: Hybrid Cloud Strategy

The hybrid cloud strategy service reveals best practices in the area of technical architecture for a target landscape across all desired types of clouds (private cloud, IAAS, PAAS, SAAS). Key outcomes of this service are:

- A customer specific road map with the major steps and sequence, to transition to a future hybrid cloud landscape from a technical perspective
- High level outlines of technical architecture best practice, that apply for a potential future landscape across all desired clouds, with input from integration, security and software change management (to a degree the early project phase allows).
- A preparation of the technical teams with information about potential upcoming changes in technical architecture, security, software change management, and integration

The service fits perfectly for the delivery in an early phases of projects or even before a project is set up. A cloud strategy commonly accepted by the business does not have to be established as a prerequisite, for the service to be delivered. Typical deployment patterns for private cloud, hosted private cloud, IAAS, PAAS and SAAS are discussed and evaluated in the context of the customer's transformation.

For every step to the cloud, the impact on integration, software change management, security and technical architecture is elaborated.

- In order to outline the technical architecture, the relevant solution stacks to be defined for the overall landscape are identified.
- Integration domains required by the customer during the cloud journey are listed and the change of integration for each step to the cloud is identified.
- Describing both the non-production and production landscape, software change management or on-premise systems and cloud tenants are outlined and the interim landscape for each step to the cloud are defined.
- Best practices on how to build secure SAP systems in hybrid clouds are explained

Service Component: UX Strategy

SAP Fiori® user experience (UX) is the design language that helps brings great UX to enterprise applications. Based on user roles and business processes, SAP Fiori helps simplify doing business.



The UX strategy service component supports customers in building their UX strategy, by introducing, demonstrating, and explaining SAP Fiori concepts. Questions that are typically asked, in an early phase of a project, are addressed in a workshop, such as:

- Is my landscape suited to ensure best results for UX?
- What is needed to make the implementation of SAP Fiori a success?
- What is the right approach to start?
- How much effort do I need?
- Which skills do I need in my team to get optimal results?
- What is the value of SAP Fiori for my stakeholders?

General architecture options and best practice for SAP Fiori are presented and discussed in the context of the customer's UX challenges. Best Practice on SAP Fiori implementation projects are shared. This includes a discussion of the system landscape and of end-user requirements. An overview of SAP Fiori development and extension concepts can be provided. The target architecture for SAP Fiori and implementation strategy will be developed collaboratively with the customer.

The results of this service component include recommendations for an SAP Fiori target landscape and customers' next steps for SAP Fiori implementation and development, where applicable.

DURATION

Preparation durations below are accumulated across the service components. Components need to be planned together to avoid independent and possibly redundant preparation steps. At first glance, the variation looks high; this is the result of the possible delivery options.

- Preparation duration: six to eight weeks
- Delivery duration
 - Remote duration: two to five weeks
 - On-site duration: five to 10 days
- Follow-up duration: five to 10 days

The content and time spent on each task varies according to each customer's situation, depending on specific requirements and experience. This is determined in a scoping process with the TQM and customer during which we jointly define the objectives and requirements.

By component group, the following can be assumed:

- **For North Star Architecture**, the duration based on the number scoped by the customer. We provide a set of typical patterns. One of these is the predecessor "Innovation Strategy & Roadmap", for which we foresee one to two workshops lasting three to four days, in different weeks. In between these, often specialized components are scheduled to validate output of the first workshop and to prepare inputs for the second one in which the final road map will be composed.
- For **analytics strategy**, preparation is typically one week followed by a two to three day on-site workshop and one to two days of follow-up.
- For **hybrid cloud strategy**, the duration can range between five days and 45 days, averaging five to 12 days for technical architecture and advanced sizing, and 10 to 15 days for technical platform design.

PREREQUISITES

- **Customer team**
Depending on the task, we may require contributions from project managers, technical solution architects, infrastructure architects, hardware partners, solution and application architects, and test managers.
- **SAP delivery team**
Enterprise architects, solution architects, technical architects and capacity management experts may be required. Some experts may be on-site, others may join for areas to be discussed.
- **SAP contact person**
Your SAP technical quality manager is the main liaison for platform design support activities.

- **SAP Solution Manager**
SAP Solution Manager is required for basic project management (quality gates and similar). The solution can also be used for data volume design and optimization.
- **Project room setup**
A project room is not required but we need rooms for planned on-site workshops. These rooms should be equipped with a whiteboard or flipchart and a projector.
- **Telephone conferencing**
A conferencing solution is required. It should enable the team to communicate by telephone while presenting slides. Video conferencing may be an alternative.
- **Remote connections**
We may need to establish a remote connection during sizing-verification activities.

RELATED SERVICES

- Innovation lab
 - If missing innovation capabilities have been identified as a clear gap as part of the enterprise architecture review, we recommend use of the innovation lab service to identify important innovation areas early on, so they can be incorporated into the to-be architecture within the enterprise architecture transition.
- Value and design assessment
 - If there is a need for greater emphasis on value and costs, we recommend adding a value and design assessment to the architecture transformation service.
- Design advisory
 - The design advisory service refines aspects of the value and design assessments, such as values to be achieved and how accelerators like the industry reference architecture and best practices can help reduce the implementation effort. Output of this service supports the overall enterprise architecture road map, the result of the enterprise architecture transformation service.
- Transparency and mitigation service or strategy and architecture service (as part of the cybersecurity and compliance service)
 - These services can be linked if security is important.

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