IT-Conductor™

SAP S/4HANA Upgrade & Migration Roadmap

A strategic pathway from assessment to optimization for successful SAP S/4HANA adoption

Published by IT-Conductor
(Last Updated Feb 2026)

ABSTRACT

The transition to SAP S/4HANA is a multi-phase journey that spans assessment, planning, execution, testing, cutover, and optimization. Each phase introduces new considerations that must be addressed to ensure a successful outcome, from understanding the current landscape and dependencies to managing resources, executing the migration, and stabilizing post-go-live operations.

This document is intended to guide business leaders and IT teams in developing a structured approach to SAP S/4HANA adoption. It outlines key considerations for evaluating readiness, planning the transition, and managing organizational and technical change.

While SAP tools such as Readiness Check, Maintenance Planner, and SUM identify required changes and support technical execution, successful S/4HANA adoption ultimately depends on controlled orchestration across systems and teams. Modern service orchestration and automation platforms such as IT-Conductor enhance this journey by transforming landscape visibility into actionable execution intelligence — streamlining discovery, coordinating upgrade activities, and ensuring operational transparency throughout the migration lifecycle.

By combining structured governance, automation, and continuous observability, organizations can reduce complexity, improve predictability, and establish a resilient foundation for long-term innovation on SAP S/4HANA.

TABLE OF CONTENTS

Readiness Assessment

The readiness assessment phase lays the foundation for a controlled and reliable SAP S/4HANA adoption. By evaluating system landscapes, processes, and data quality, teams gain actionable insights that guide strategic decisions and help mitigate potential risks. This structured evaluation ensures that both technical and business considerations are fully understood, enabling organizations to plan with confidence and prioritize efforts effectively.

A. System Landscape Discovery

Before any system change, organizations must gain full visibility into the SAP landscape to prevent surprises during the transition. In large enterprise environments, multiple SAP systems often coexist, each with numerous interfaces, add-ons, and dependencies. Attempting an upgrade or conversion without understanding these relationships can quickly become unmanageable, leading to delays, errors, or operational disruptions.

Landscape Management Database (LMDB) is an integral component of SAP Solution Manager (SolMan) that provides centralized access to landscape-related information. It enables organizations to identify system instances, interfaces, add-ons, and basic configurations across the SAP environment. While LMDB provides valuable visibility, it has limited depth: configuration repositories typically do not capture detailed component relationships or fully map complex interdependencies between systems.

Rather than relying solely on SAP Solution Manager for static visibility, organizations should leverage LMDB data directly within IT-Conductor during this phase. By synchronizing pre-populated landscape information into an orchestration-ready environment, teams can rapidly generate a comprehensive inventory of system interfaces, add-ons, integrations, and in-scope business functions or modules.

This transforms landscape documentation into actionable intelligence, accelerating discovery, improving dependency transparency, and enabling a more controlled and predictable readiness assessment.

Note: For step-by-step guidance on how to configure SAP systems and components based on LMDB objects in IT-Conductor, see **LMDB Discovery.**

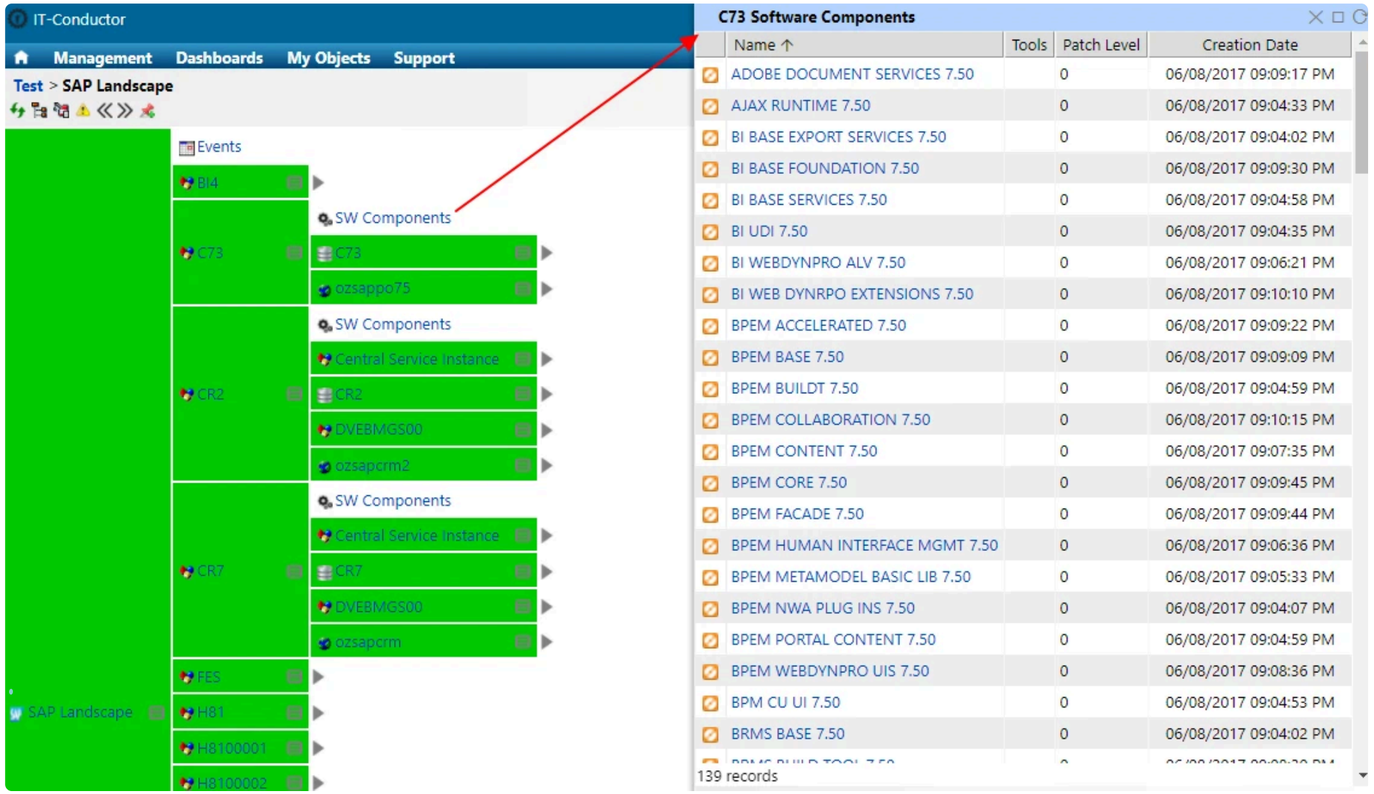
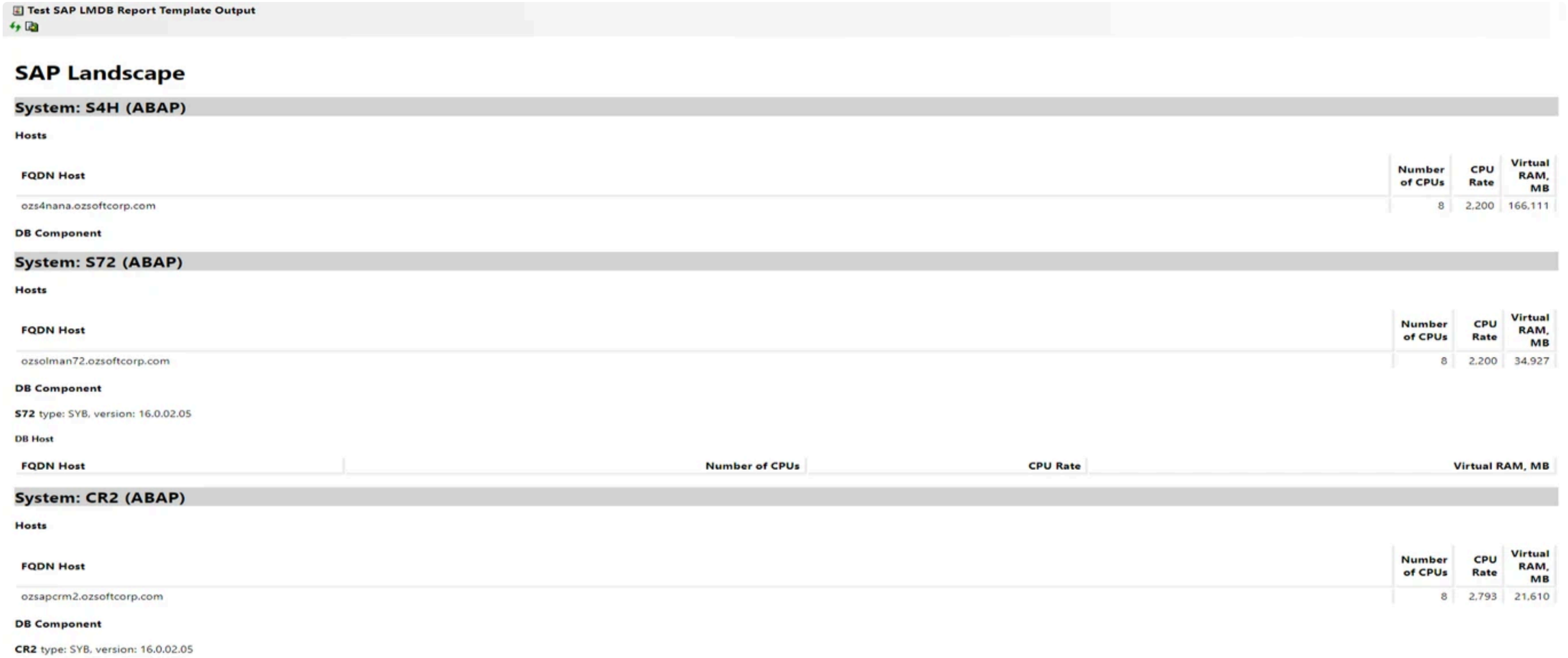


Figure 1: SAP Landscape Discovery in IT-Conductor



Test SAP LMDB Report Template Output

SAP Landscape

System: S4H (ABAP)

Hosts

FQDN Host	Number of CPUs	CPU Rate	Virtual RAM, MB
ozs4nana.ozsoftcorp.com	8	2,200	166,111

DB Component

System: S72 (ABAP)

Hosts

FQDN Host	Number of CPUs	CPU Rate	Virtual RAM, MB
ozsolman72.ozsoftcorp.com	8	2,200	34,927

DB Component

S72 type: SYB, version: 16.0.02.05

DB Host

FQDN Host	Number of CPUs	CPU Rate	Virtual RAM, MB

System: CR2 (ABAP)

Hosts

FQDN Host	Number of CPUs	CPU Rate	Virtual RAM, MB
ozsapcrm2.ozsoftcorp.com	8	2,793	21,610

DB Component

CR2 type: SYB, version: 16.0.02.05

Figure 2: SAP Landscape Report in IT-Conductor

B. Platform Evaluation and Compatibility Review

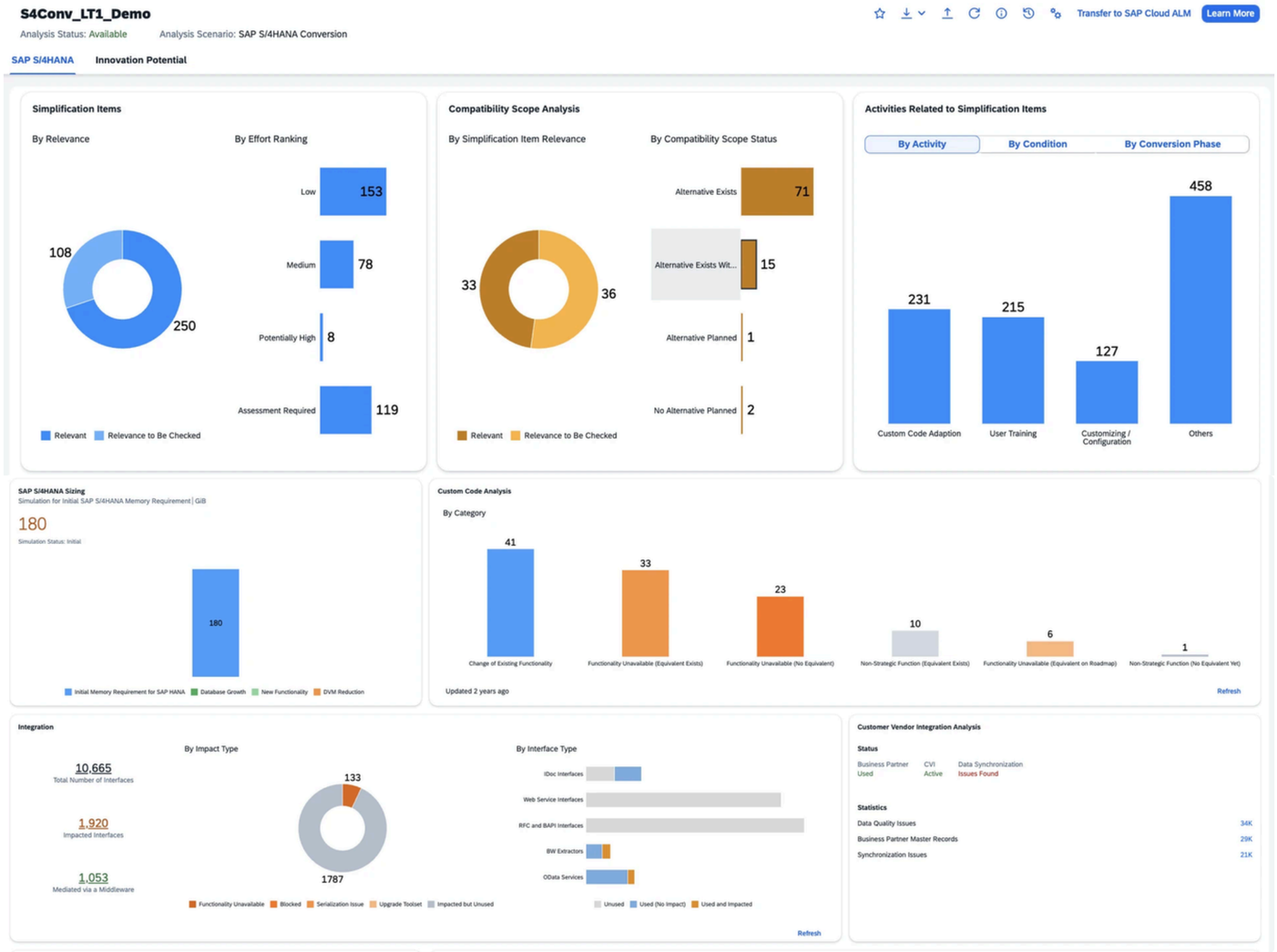


Figure 3: SAP Readiness Check for SAP S/4HANA Upgrades

Once the system landscape and inventory are established, the next step is a thorough platform evaluation and compatibility review to ensure that the existing environment is ready for S/4HANA.

At this stage, organizations assess key technical and functional aspects of the environment to identify potential gaps, risks, and areas requiring remediation.

SAP Readiness Check is a tool that provides a high-level assessment of system readiness, highlighting areas that require attention before an S/4HANA upgrade or conversion. Its insights span both technical and functional aspects, forming the basis for structured evaluations.

Technical Upgrade

To prepare for mandatory technical upgrade activities, focus on the analysis of the following areas:

1. Simplification Items

The tool analyzes your system usage and configuration, then highlights which simplification items are relevant to your environment and target S/4HANA version.

What is a Simplification Item?
A Simplification Item indicates the documented change in SAP S/4HANA that impacts how a specific functionality, transaction, data model, or business process works compared to SAP ERP. When SAP transitioned from ECC to S/4HANA, many components were redesigned, consolidated, replaced, or removed to simplify the data model and improve performance. Each of these changes is formally documented as a Simplification Item.

2. Activities Related to Simplification Items

This step builds on the insights provided by SAP Readiness Check by outlining the actions required to address relevant simplification items. It helps organizations plan and prioritize activities such as adjusting configurations, updating business processes, or modifying custom developments to align with S/4HANA requirements.

3. Compatibility Scope Analysis

The tool validates whether the existing SAP system release meets the technical prerequisites for the intended S/4HANA target version. It evaluates installed add-ons, activated business functions, and extensions to determine their support status, whether they are fully compatible, require updates, fall under compatibility scope, or need replacement before conversion. By identifying unsupported or strategically phased-out components in advance, the assessment helps prevent technical roadblocks during

migration and enables informed planning for remediation, upgrades, or functional redesign.

Maintenance Planner complements the compatibility assessment by validating key elements of the existing SAP landscape against the target S/4HANA release. It checks whether installed add-ons, active business functions, and industry solutions are supported for the planned upgrade or conversion. If any component does not have a valid upgrade path, such as an add-on not yet released for the target version, Maintenance Planner prevents the upgrade, helping to avoid technical roadblocks early in the planning phase. Once the checks are complete, it generates the stack configuration file (stack.xml) along with the required download files for add-ons, packages, and database updates, which are used by the Software Update Manager (SUM) to execute the upgrade reliably.

4. Custom Code Analysis

A comprehensive analysis of customer-developed ABAP objects is conducted to identify potential compatibility issues with S/4HANA. The assessment evaluates custom programs, reports, function modules, and enhancements against the simplified data model and architecture of S/4HANA, highlighting objects that reference obsolete tables, removed functions, or unsupported constructs. By pinpointing these issues early, organizations can prioritize remediation efforts, estimate the required resources, and plan adjustments to ensure custom code aligns with S/4HANA standards, reducing the risk of post-conversion errors.

5. Integration

Beyond core system and custom code evaluation, it is critical to review all active integrations connecting the SAP environment to internal or external systems. This includes RFC connections, IDocs, APIs, and other interface technologies. The assessment identifies interfaces that may be impacted by changes in S/4HANA, highlights potential points of failure, and provides insights for remediation planning. Early identification of integration risks ensures that business processes remain uninterrupted and supports

a smooth technical transition.

6. Add-on Compatibility

Installed add-ons, both SAP-delivered and third-party, must be evaluated for compatibility with the target S/4HANA release. The analysis determines whether each add-on is supported, requires updates, or needs replacement. By evaluating add-ons proactively, organizations can plan upgrades or replacements in advance, mitigating the risk of post-conversion disruptions and ensuring that critical functionality continues to operate as expected in the new environment.

Reminder: Engage with vendors early to obtain necessary updates, patches, or replacement guidance to ensure uninterrupted functionality after the transition.

Functional Upgrade

The following areas highlight which new business functionalities provide the highest impact on efficiency and process optimization:

1. Recommended SAP Fiori Apps

As part of the functional upgrade assessment, SAP Readiness Check identifies SAP Fiori applications that align with existing business processes and transactional usage. This analysis provides guidance on which Fiori apps can replace traditional SAP GUI transactions, enabling a more modern, intuitive user experience.

By reviewing these recommendations early, organizations can plan role adjustments, prioritize user training, and design streamlined workflows that leverage S/4HANA's enhanced capabilities. This ensures that end users benefit from improved usability, efficiency, and process automation while supporting a smoother transition to the new environment.

2. SAP Innovative Business Solutions

SAP Readiness Check includes a specific analysis of SAP Innovative Business Solutions, which refers to specialized solutions developed by SAP to address industry- or line-of-business-specific scenarios. These solutions may extend standard SAP functionality or offer built-in accelerators for certain business outcomes. The assessment reports on which innovative solutions have been applied in the current environment and evaluates whether they are still applicable or beneficial in the context of the target S/4HANA release. This enables organizations to determine if these tailored innovations should be retained, updated, or replaced as part of their functional upgrade planning, ensuring that business value is preserved and aligned with long-term strategic goals.

3. Innovative Potential

The Innovation Potential section of SAP Readiness Check helps organizations identify areas where the transition to S/4HANA could unlock new business value.

Based on key performance indicators (KPIs) and quantitative characteristics derived from the performance of existing business processes, the tool presents business case stories that highlight where innovations, such as process automation, efficiency improvements, or value-driven features, may bring significant benefits. When a given metric exceeds a defined threshold in the analysis, the corresponding business case is activated, providing insight into where the organization may realize improved performance or competitive advantage by adopting new S/4HANA-enabled capabilities.

C. Data Classification and Cleanup

Effective data classification helps organizations prioritize what data should be migrated to the SAP S/4HANA environment and what can be archived or retained in less expensive storage. Grouping data into hot, warm, and cold categories based on usage, business criticality, and access patterns enables smarter decision-making and reduces unnecessary migration overhead.

Hot Data

Hot data describes information that is frequently accessed and mission-critical for daily business operations. Examples include current financial transactions, open sales orders, active production orders, and real-time master data actively used in operational processes.

Recommendation: Because hot data has high business value and performance sensitivity, it should be prioritized for direct migration into the S/4HANA tenant database to ensure fast access and optimal performance post-transition.

Warm Data

Warm data consists of information that is still relevant to the business but accessed less frequently than hot data. This includes recently closed financial periods, historical sales records from the past year, or operational data that supports routine reporting and analysis.

Recommendation: Warm data may be consolidated or selectively migrated based on business needs and reporting requirements, and it can also be stored in near-line systems that balance accessibility with cost.

Cold Data

Cold data refers to older, infrequently accessed information that is no longer critical for day-to-day operations. Examples include archived transactions from several fiscal periods ago, outdated logs, and legacy records that are retained for compliance or audit purposes.

Recommendation: Cold data typically does not need to be migrated directly into the S/4HANA database; instead, it can be archived, retained in external repositories, or managed through long-term storage solutions. Removing or offloading cold data from the migration scope can significantly reduce data volume and associated conversion effort.

D. Sizing Simulation

Sizing simulation is a critical planning activity that helps organizations estimate the computing resources required to support an SAP S/4HANA environment effectively. It uses data collected from the existing system, such as table sizes, data volumes, and usage patterns, to simulate how the system would behave after conversion, providing a forecast of memory, CPU, and storage needs.

Unlike a simple snapshot of current usage, sizing simulation considers how data growth, business transactions, and workload characteristics will influence performance in the target landscape. By analyzing trends and system activity, organizations gain visibility into expected system demands, allowing them to plan infrastructure investments with greater confidence and precision.

Note: To make things much easier, we developed the **IT-Conductor Sizing Table** based on the T-Shirt Sizing principle to guide you in your sizing exercise.

Planning

The planning and governance phase focuses on establishing the project framework, defining timelines, and identifying the tools and resources necessary to support a successful upgrade or conversion.

A. Project Structure

Effective governance begins with the creation of a steering committee to oversee overall strategy and decision-making, supported by specialized working groups covering technical, functional, and business areas.

Clear roles and responsibilities should be defined for each group, ensuring accountability and alignment across stakeholders. This structure helps coordinate cross-functional activities, manage dependencies, and address risks proactively.

IT Teams

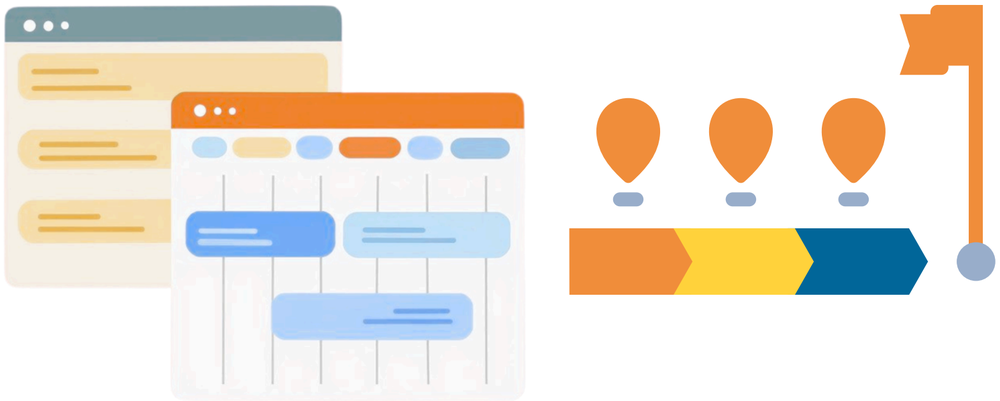
Functional Teams

Stakeholders

B. Timeline and Phasing

Realistic planning of milestones is important for managing complex upgrade or conversion projects. Timelines should cover preparation, technical conversion, testing, and go-live activities. Regression and integration testing phases must be scheduled to validate both core processes and interdependencies with external systems, ensuring business continuity.

By phasing the project thoughtfully, organizations can reduce risks, minimize downtime, and allow for iterative problem-solving.



C. Tools and Resources

Several SAP and complementary tools can streamline the planning process and support technical readiness:

- **SAP Readiness Check:** Provides insights into system, functional, and custom code readiness, highlighting areas that require attention before conversion.
- I**T-Conductor APM:** SAP Landscape discovery and deep system analysis for real-time data-driven full-stack sizing, health-checks, and performance baselines.
- **Maintenance Planner:** Validates system compatibility and identifies required software components and updates.
- **Software Update Manager (SUM):** Guides technical execution of upgrades or conversions while ensuring simplification items are addressed.
- **IT-Conductor SUMMon:** Monitors and orchestrates upgrade and migration activities, helping to track progress, manage dependencies, and ensure operational reliability.

Execution

The execution and technical conversion phase focuses on performing the system changes necessary to move from an existing SAP environment to S/4HANA while ensuring functional continuity and data integrity. This phase requires careful coordination between technical teams, functional experts, and business users to minimize downtime and operational risk.

A. Technical Upgrade

The technical upgrade covers system copy, database migration, and activation of relevant code objects. During this stage, prerequisite checks are performed, and necessary SAP Notes are applied to ensure system stability and compliance with S/4HANA standards.

A common challenge in large enterprise environments is managing upgrades that involve thousands of SUM phases, each representing a step in the SUM execution. Coordinating these phases manually across multiple systems can be time-consuming, error-prone, and difficult to track, increasing the risk of delays or operational disruptions.

IT-Conductor SUMMon™ addresses this gap by providing automated orchestration, monitoring, and workflow management for SUM activities. By leveraging pre-populated system and dependency information, SUMMon automates execution sequencing, tracks phase completion in real time, and correlates logs and outcomes across components.

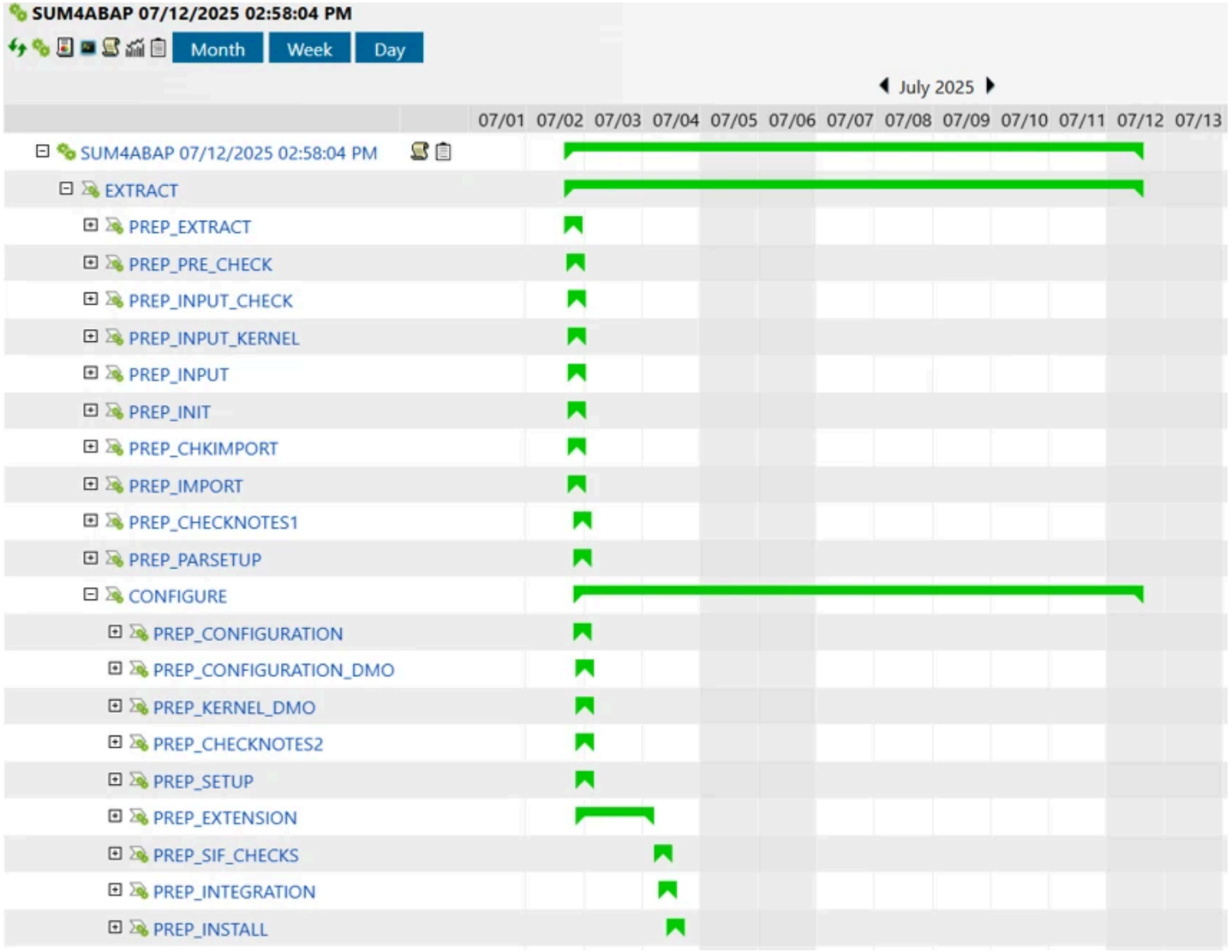


Figure 4: SUM Phase Timeline View in IT-Conductor

Built-in dashboards and alerting help teams identify potential issues early, coordinate remediation activities, and maintain visibility across distributed systems. This approach reduces manual oversight burden, enhances process reliability, and brings predictability to what can otherwise be a highly iterative and operationally complex technical conversion.

AI-driven SAP Upgrades

IT-Conductor SUMMon, combined with agentic AI capabilities, further transforms the upgrade experience. By analyzing execution logs, identifying anomalies, and recommending corrective actions based on historical patterns, the AI layer helps teams resolve issues proactively, reduce troubleshooting time, and maintain predictable execution even in

high-complexity environments. This combination enables a more intelligent, automated, and resilient technical conversion process, supporting faster, safer, and more controlled S/4HANA upgrades.

Note: Read **How AI simplify SAP S/4HANA upgrades** for more information.

B. Functional Upgrade

Functional upgrade addresses changes in business processes and system behavior introduced by S/4HANA. This includes activating the business partner model, transitioning to new master data structures, and enabling or migrating SAP Fiori applications to modernize the user experience.

Early engagement of functional teams ensures that processes align with S/4HANA standards and that the organization can leverage new capabilities effectively.

Testing

A comprehensive testing strategy helps identify issues early, validate system behavior, and build confidence among stakeholders before go-live.

A. Regression Testing

Regression testing verifies that existing business processes continue to function correctly after technical and functional changes. By running standardized test scripts across critical processes, organizations can detect unintended side effects, prevent business disruptions, and ensure continuity of operations throughout the upgrade or conversion.

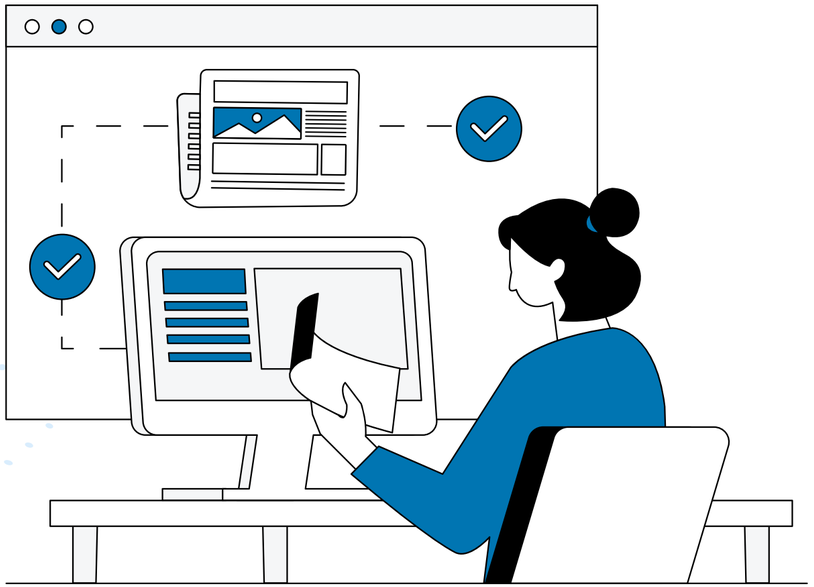
B. Performance and Integration Testing

Performance and integration testing focus on system responsiveness and interoperability with peripheral systems. It validates that workloads, batch jobs, and external interfaces perform as expected in the S/4HANA environment. Any bottlenecks, latency issues, or integration gaps can be identified and remediated before the system is put into production.

C. User Acceptance Testing (UAT)

User acceptance testing engages end-users to confirm that business processes operate correctly and that the system meets functional requirements. UAT validates both new and updated functionalities, including SAP Fiori applications, master data models, and process changes, ensuring that users are comfortable with the system and confident in its readiness for day-to-day operations.

Note: Read Test strategy for SAP S/4HANA upgrades for more information.



Cutover & Go-Live

The cutover and go-live phase marks the final transition from the legacy SAP environment to the S/4HANA system. Careful planning and execution during this stage are necessary to minimize downtime, ensure operational continuity, and confirm that all business processes function as intended.

A. Final Readiness Checks

Before initiating cutover, the project team should perform comprehensive readiness checks across the technical and functional landscape. This includes validating system availability, verifying critical configurations, confirming data integrity, and ensuring that prerequisite tasks have been completed.

B. Cutover Checklist

A detailed cutover checklist ensures that all essential activities are completed before go-live. Key items include: performing backups of all critical data, verifying user roles and authorizations, completing necessary transport requests, and confirming connectivity with peripheral systems. Using a structured checklist reduces the risk of omissions and supports a smooth transition.

C. Contingency and Rollback Strategy

Even with meticulous planning, unforeseen issues can arise during cutover. A defined contingency and rollback strategy enables the team to respond quickly, restoring the previous system state if required. Clear communication protocols, decision points, and documented fallback procedures help mitigate risk and maintain business continuity during this critical phase.

Post-Go-Live Optimization

The post-go-live phase ensures that the S/4HANA system operates efficiently, supports business needs, and continuously improves after the initial transition. Focused monitoring, proactive support, and structured learning help organizations stabilize operations and maximize the value of the new system environment.

A. Monitor System Performance

Ongoing performance monitoring tracks system responsiveness, workload distribution, and interface behavior. Tools and dashboards provide real-time visibility into key metrics, enabling early detection of bottlenecks or abnormal behavior. We combine data collectors, reporting capabilities, and AI-assisted analysis into this playbook, ensuring that system performance is continuously monitored, anomalies are detected proactively, and service-level objectives are maintained.

Note: See **Full-stack SAP Monitoring, Management, and Automation** for more information.

B. Address Early Support Incidents

Early support incidents often arise as end-users engage with the new system. Prompt identification and resolution of issues — ranging from data inconsistencies to workflow disruptions — helps maintain user confidence and minimizes business impact. Structured incident management processes and clear escalation paths ensure that critical problems are addressed efficiently.

C. Capture Lessons Learned

Documenting lessons learned during the transition provides valuable insights for ongoing optimization and future projects. Feedback from technical teams, business users, and functional experts helps refine processes, improve testing and cutover procedures, and enhance overall governance. Capturing these lessons supports continuous improvement, reduces risks in subsequent updates, and strengthens organizational readiness for future S/4HANA innovations.

Contact Us

Curious to learn more? Our team at IT-Conductor is ready to help you navigate your S/4HANA upgrade and migration journey.

Corporate Website
www.itconductor.com

Knowledge Base
docs.itconductor.com

Phone Number
Worldwide: +1 (408) 416-2565
North America Toll-free: +1 (888) 666-2899

E-mail Address
info@itconductor.com

Minimize Noise > Maximize Performance