End-to-End Overview of
System Conversion to SAP S/4HANA (Part 1)

CAA113

SAP TECHED

Speakers

Las Vegas
September 24–27, 2019

Boris Rubarth

Barcelona
October 8-10, 2019

Boris Rubarth
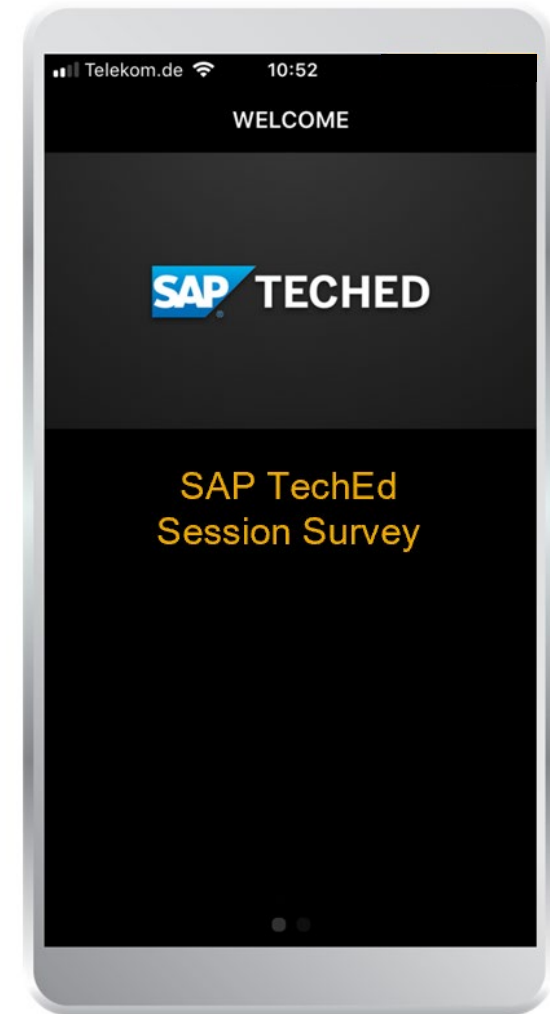
Bangalore
November 13-15, 2019

Anupam Rajput

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Agenda

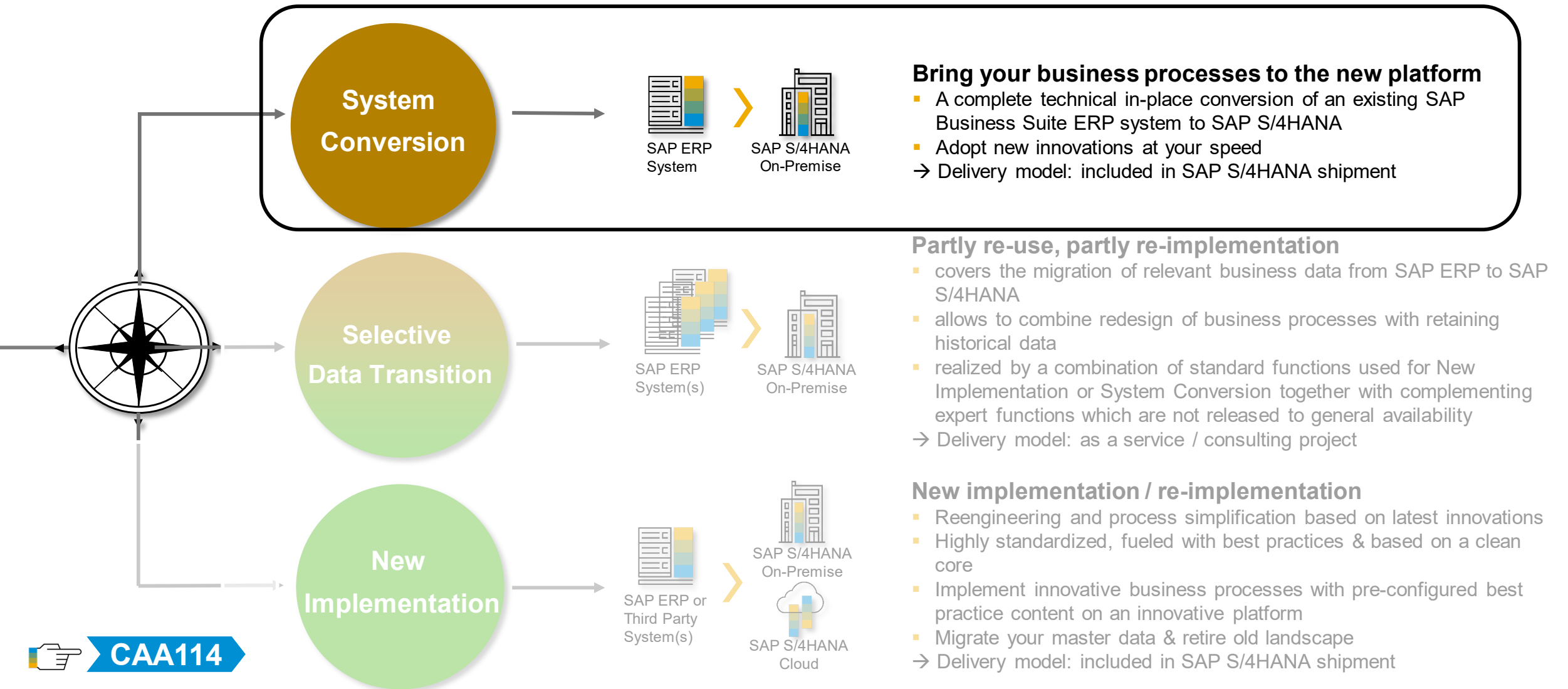## Requirements
- System prerequisites

Preparation
- Checks
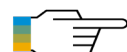
Execution
- SUM & Data conversion

Your way to SAP S/4HANA

System Conversion

SAP ERP System → SAP S/4HANA On-Premise

Bring your business processes to the new platform
- A complete technical in-place conversion of an existing SAP Business Suite ERP system to SAP S/4HANA
- Adopt new innovations at your speed
→ Delivery model: included in SAP S/4HANA shipment

Selective Data Transition

SAP ERP System(s) → SAP S/4HANA On-Premise

Partly re-use, partly re-implementation
- covers the migration of relevant business data from SAP ERP to SAP S/4HANA
- allows to combine redesign of business processes with retaining historical data
- realized by a combination of standard functions used for New Implementation or System Conversion together with complementing expert functions which are not released to general availability
→ Delivery model: as a service / consulting project

New Implementation

SAP ERP or Third Party System(s) → SAP S/4HANA On-Premise / SAP S/4HANA Cloud

New implementation / re-implementation
- Reengineering and process simplification based on latest innovations
- Highly standardized, fueled with best practices & based on a clean core
- Implement innovative business processes with pre-configured best practice content on an innovative platform
- Migrate your master data & retire old landscape
→ Delivery model: included in SAP S/4HANA shipment

CAA114

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

The SAP S/4HANA family and system conversion paths

SAP Business Suite
(e.g. BS7i2013)

SAP S/4HANA family

SAP S/4HANA Cloud

SAP Simple Finance 1503
SAP S/4HANA Finance 1605

SAP ECC System
(on AnyDB or
on SAP HANA)
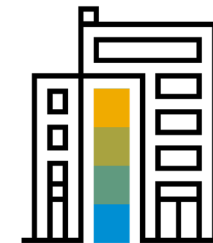
SAP S/4HANA

~~1511~~ | ~~1610~~ | **1709 | 1809 | 1909**

Maintenance Line

SPS00
New release
incl. new
Technology Stack

FPS01
Feature Package Stack
(technically SPS01)

FPS02
Feature Package Stack
(technically SPS02)

SPS03
Support Package Stack
(technically SPS03)
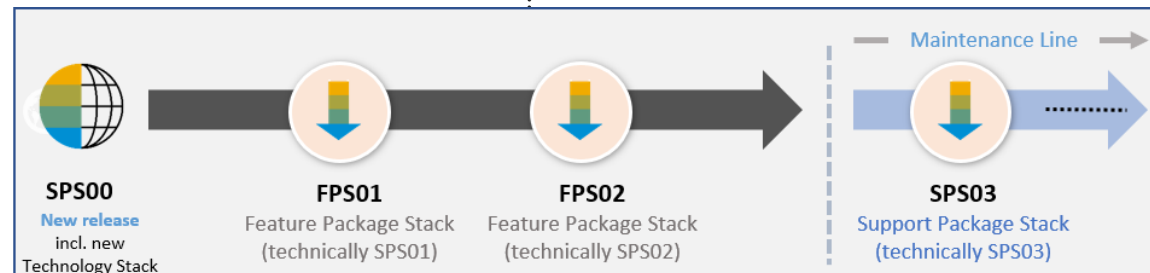
SAP S/4HANA system conversion

Transition paths overview

SAP ERP 6.0, EHP xx

AnyDB or SAP HANA

SAP S/4HANA 1909

SAP S/4HANA FND 1909

ABAP Platform 1909 – Application Server ABAP

SAP_BASIS 7.54
SAP Kernel 7.77

SAP HANA 2.0 SPS 04 rev 41⁺
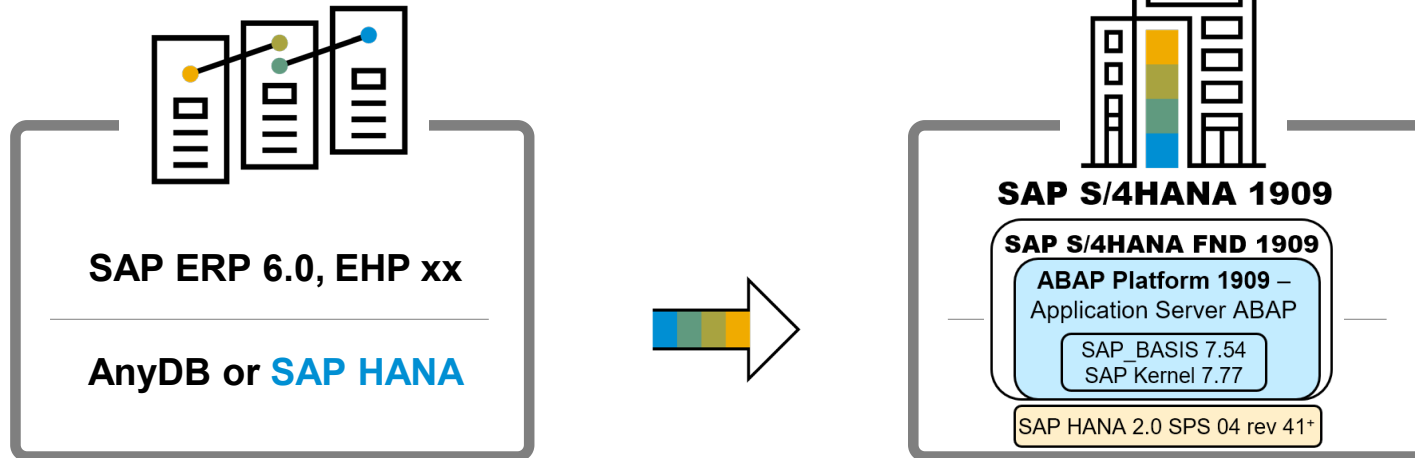
Notes on source system

- Unicode is required
- ABAP single stack required
- SAP HANA database **not** required

Notes on target system

- SAP S/4HANA 1909 is based on ABAP Platform 1909
- Consider different OS coverage since ABAP Platform 1809

Conversion requirements incl. min./max. SP-level on source system:
2769531 - SAP S/4HANA 1909: Release Information Note

2620910 - SAP S/4HANA … and SAP BW/4HANA 1.0:
Recommended Application Server Platforms

SAP S/4HANA system conversion
Overview technical process steps

Preparation phase **Realization phase**

System requirements → Maintenance planner → SI Checks → Custom code preparation → Software Update Manager (SUM) → Application specific follow-up activities

Cross-application & application specific preparation activities

Simplification List
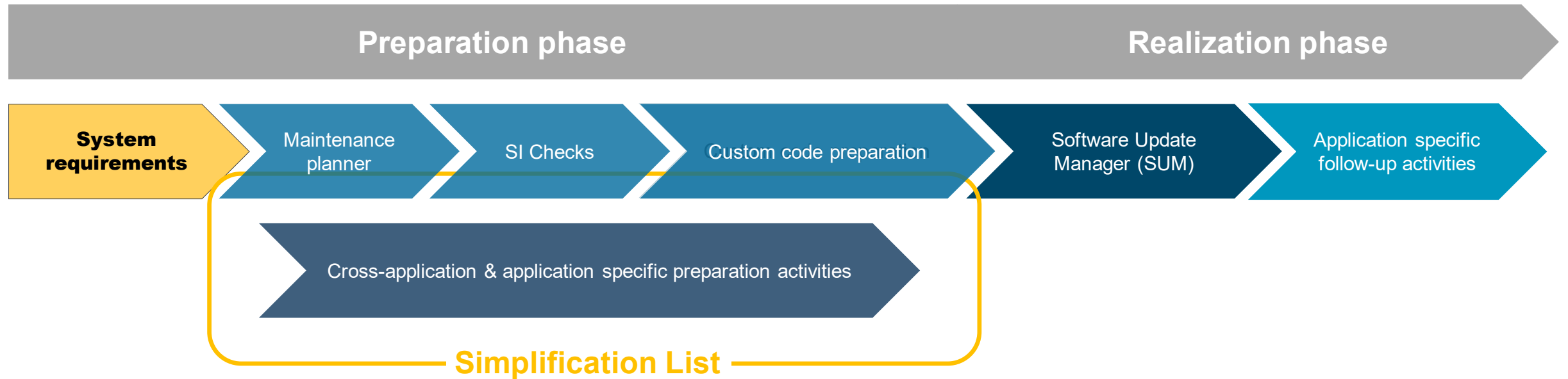
SAP S/4HANA system conversion
Simplification list

The **simplification list** is a collection of **simplification items.**

- A simplification item documents differences in application functionality (changed, replaced, removed) between SAP ERP 6.0 and SAP S/4HANA.

- A simplification item provides information about the potential impact of this change for the customer.

- The simplification list provides this information per SAP S/4HANA On-Premise release as part of the SAP S/4HANA documentation.

- The SAP Readiness Check for SAP S/4HANA, the SAP ABAP custom code analysis, as well as the simplification item checks are based on the information in the simplification items.

Access simplification Items via the simplification item Catalog:

- https://launchpad.support.sap.com/#/sic/

- SAP S/4HANA on the SAP Help Portal: Most current version of the SAP S/4HANA simplification list as PDF

- SAP Blog: SAP S/4HANA Simplification Item Check – How to do it right'

- SAP Blog: The TOP Simplification List Items

» As of SAP S/4HANA 1909 there are **~600** simplification items, but For a given customer system only **approx. 40 - 80** simplification items are typically **relevant and require attention!**
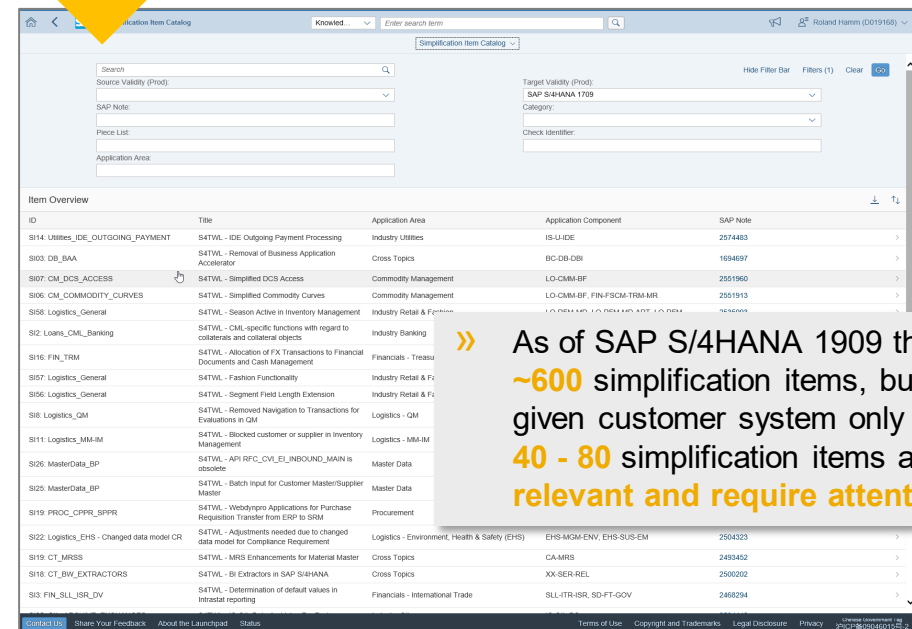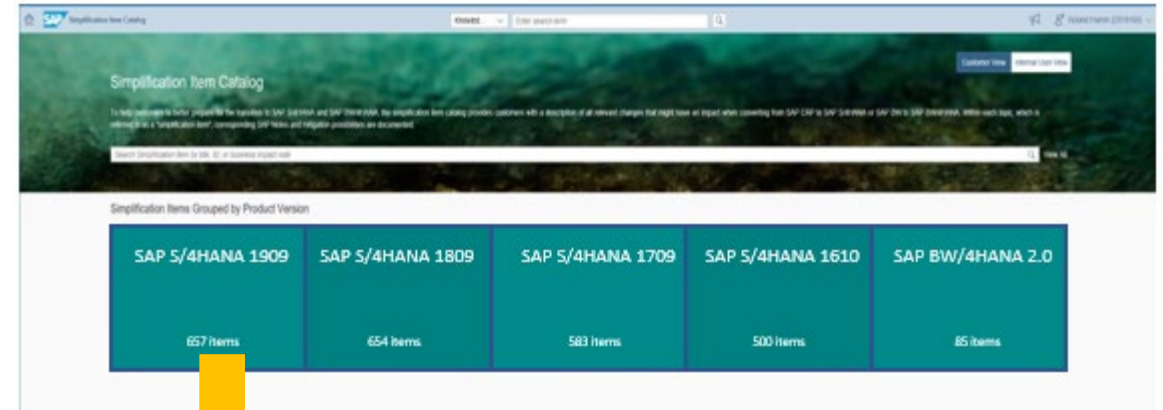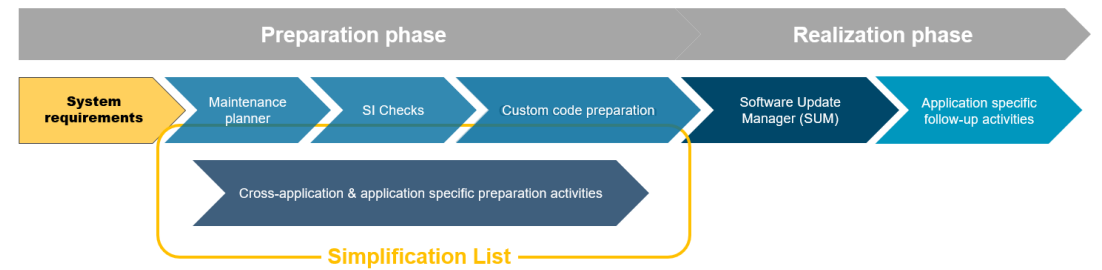
SAP S/4HANA - FIORI aspects
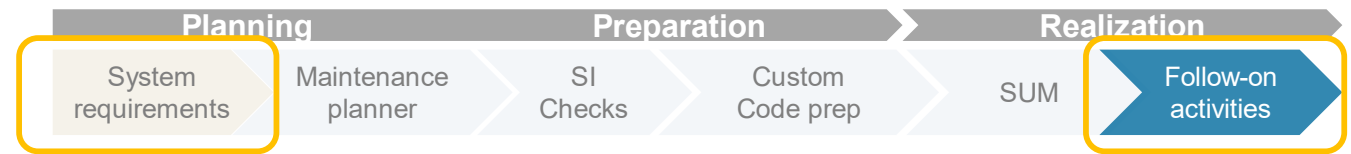
- **SAP Fiori UX is new UI experience,** target architecture for SAP S/4HANA

- **SAP Fiori and SAP GUI** are both supported (for exceptions see *Simplification List*)

- **Relevance and readiness analysis** recommends Fiori Apps based on T-codes

- **Stepwise implementation** of SAP Fiori Apps possible

- **SAP Fiori Frontend Server (FES)**
  – Provides Fiori & central UI components
  – Maintenance planner considers FES software

- **FES deployment**: embedded or separate, depends on other backends (type & release)
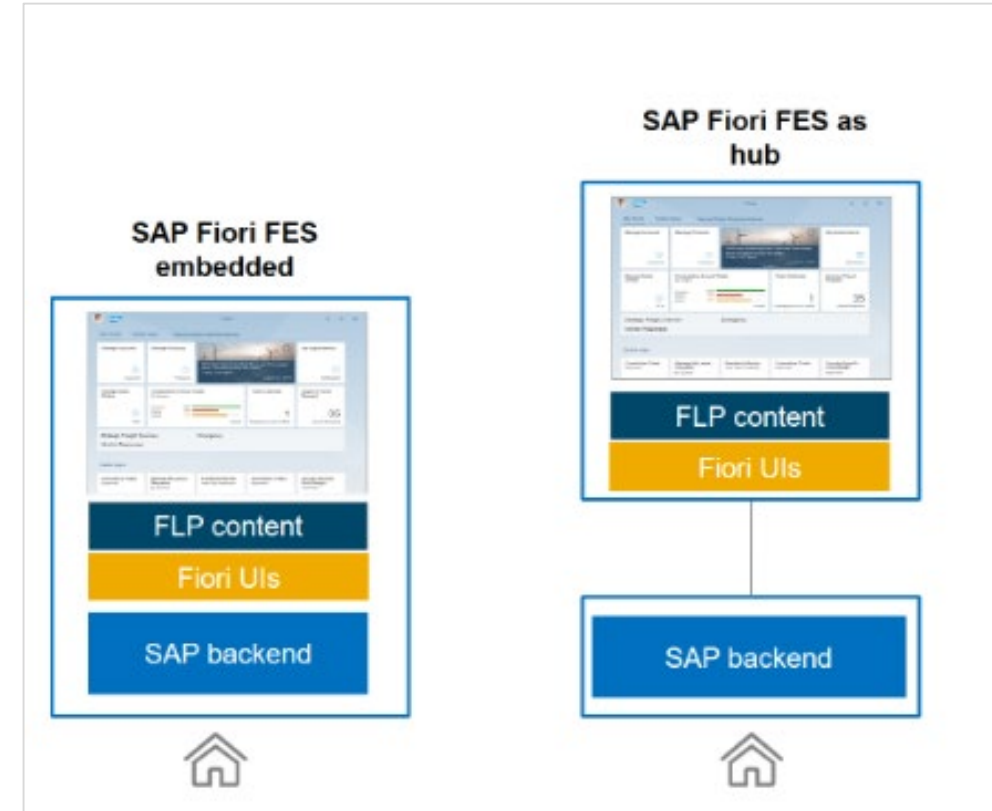
SAP Fiori FES embedded

FLP content
Fiori UIs
SAP backend

SAP Fiori FES as hub

FLP content
Fiori UIs

SAP backend

☞ [2805572](#) - Release information note for product version **SAP Fiori for SAP S/4HANA 1909**.

https://blogs.sap.com/2018/02/16/sap-fiori-deployment-options-and-recommendations/

Agenda

Requirements
- System prerequisites

Preparation
- Checks

Execution
- SUM & Data conversion

SAP Readiness Check 2.0 for SAP S/4HANA

Preparation phase				Realization phase	
System requirements	Maintenance planner	Pre checks	Custom code preparation	Software Update Manager (SUM)	Application specific follow-up activities

Unicode conversion

SAP Readiness Check 2.0

Database migration

Software update
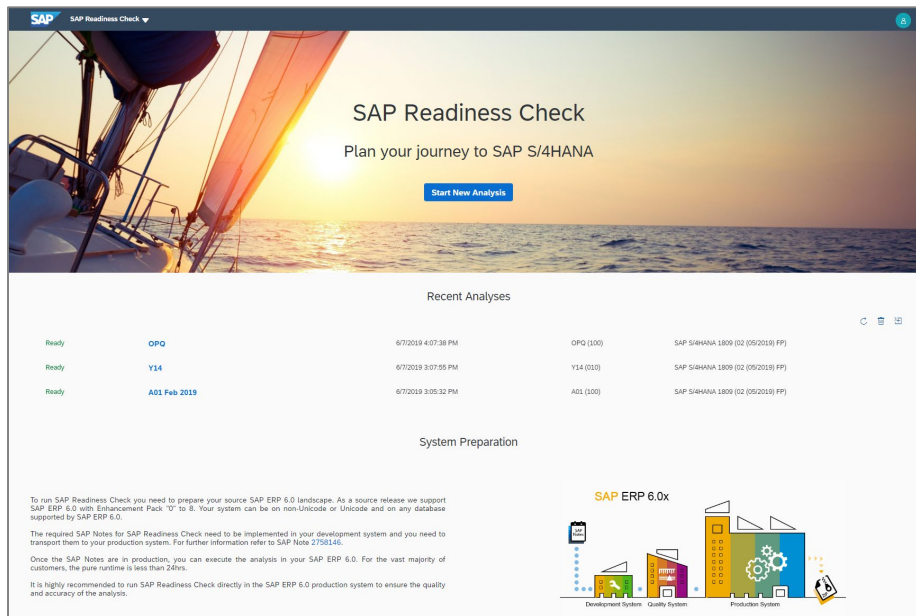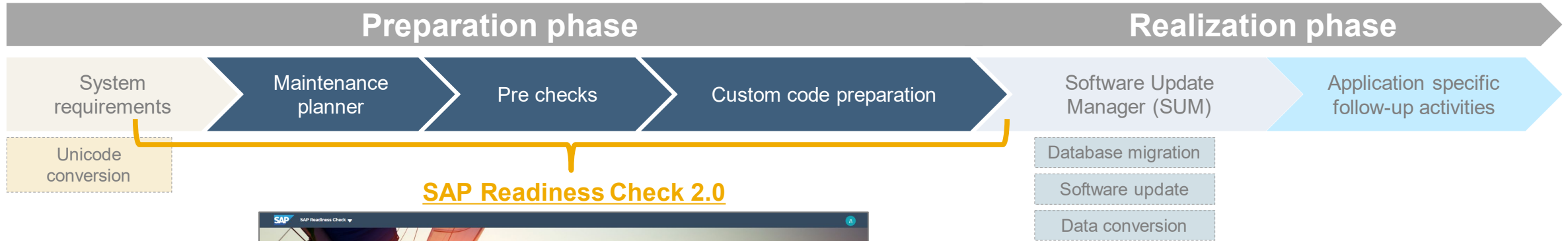
Data conversion

- A holistic system analysis is the foundation for further planning steps toward a successful and smooth SAP S/4HANA system transition.

- The SAP Readiness Check 2.0 for SAP S/4HANA summarizes the most important aspects of the conversion in an easily consumable way.

☞ CAA105

☞ SAP Help Portal: SAP Readiness Check, SAP Notes 2758146

Introduction to the SAP Readiness Check 2.0 for SAP S/4HANA

Overview of the user interface

Relevant simplification items based on your current usage in SAP ECC

Your currently installed **Add-Ons** and **business functions** checked for compatibility with SAP S/4HANA

Estimated memory and disk **size**, before and after clean up, including **archiving potential**

Recommended **Fiori Apps** based on your current usage

Action items resulting from your relevant simplification items

Your **Custom code** analyzed with respect to SAP S/4HANA compatibility

Shows whether your **BW extractors** and **idocs** are still working under SAP S/4HANA
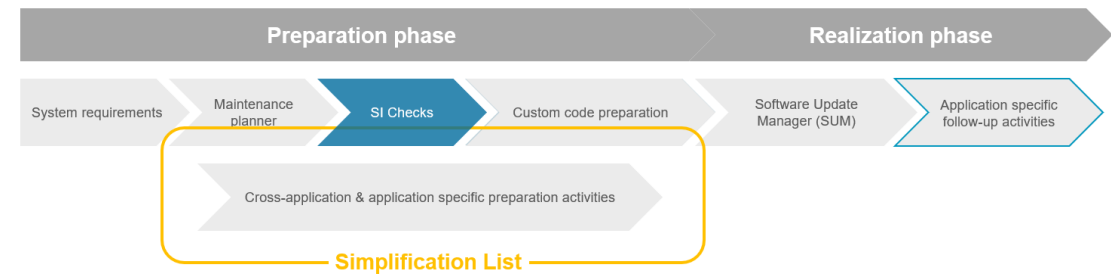
Business process improvement potential

SAP S/4HANA

Maintenance planner for system conversion

- The planning tool (successor for MOpz)
  for update, upgrade, migration, conversion, installation
  http://apps.support.sap.com/sap/support/mp

- Preparations for conversion: Check and plan

- Checking source system
  concerning add-ons, business functions
  License for SAP S/4HANA not required for check

- Planning for conversion
  provides software archives & stack.xml
  Backend and frontend server (FIORI) are considered

- Un-installation of add-ons can be planned;
  3rd party add-ons to be checked in time!

SAP S/4HANA system conversion
Simplification Item Checks

Preparation phase | Realization phase

System requirements | Maintenance planner | SI Checks | Custom code preparation | Software Update Manager (SUM) | Application specific follow-up activities

Cross-application & application specific preparation activities
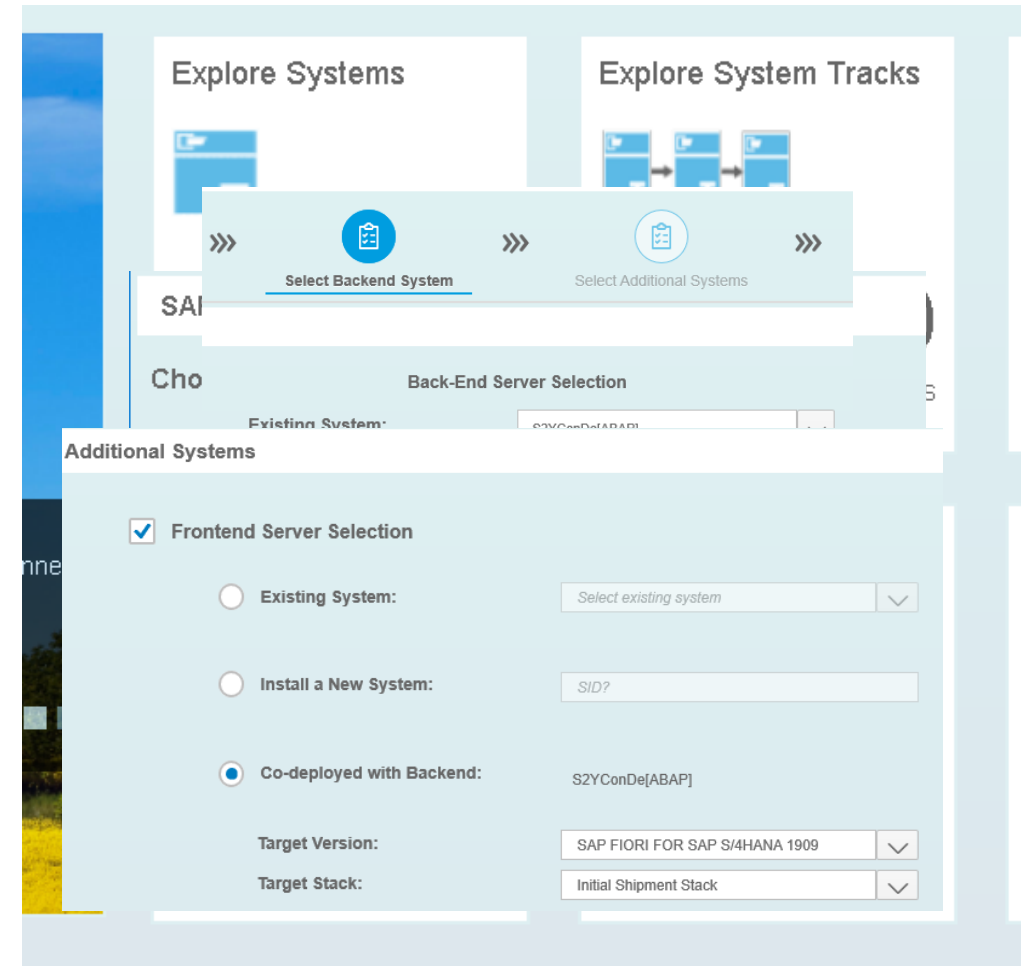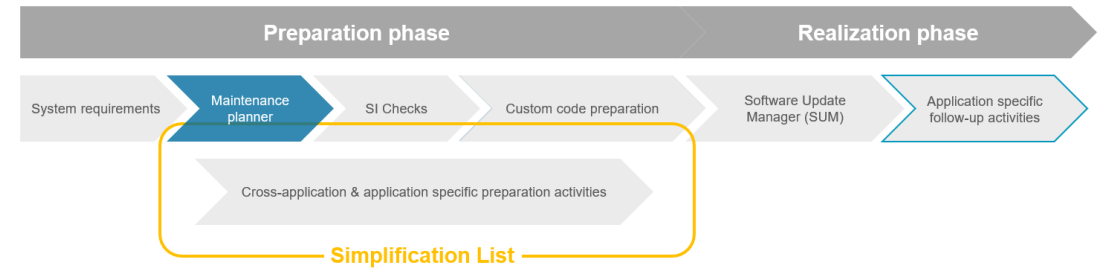
Simplification List

- Simplification item ('SI') checks are shipped as SAP TCI Notes.

- SI-checks are executed on the (SAP Business Suite) start system (preparation phase) to determine relevant simplification items and mandatory application specific preparation steps.

- Check if serious issues exist in the system which could cause the system conversion/upgrade to fail.

- Support not only system conversions to SAP S/4HANA, but also upgrades within SAP S/4HANA

- SI-Checks are executed again as step in the Software Update Manager (SUM). In case dedicated simplification items require mandatory preparation steps the conversion procedure can stop to ensure a consistent system conversion.

SAP note 2399707
Contains the check framework inlcuding the logic for the relevance checks.

SAP note 2502552
Contains application specific check logic for the consistency checks.

Simplification Item Catalog
Check content downloaded from SAP servers.

Relevance check:
- Identifies probably relevant Simplification Items based on an analysis of the data in the system.
- For informational purpose, so customers know which Simplification Items and related SAP notes to have a closer look at.
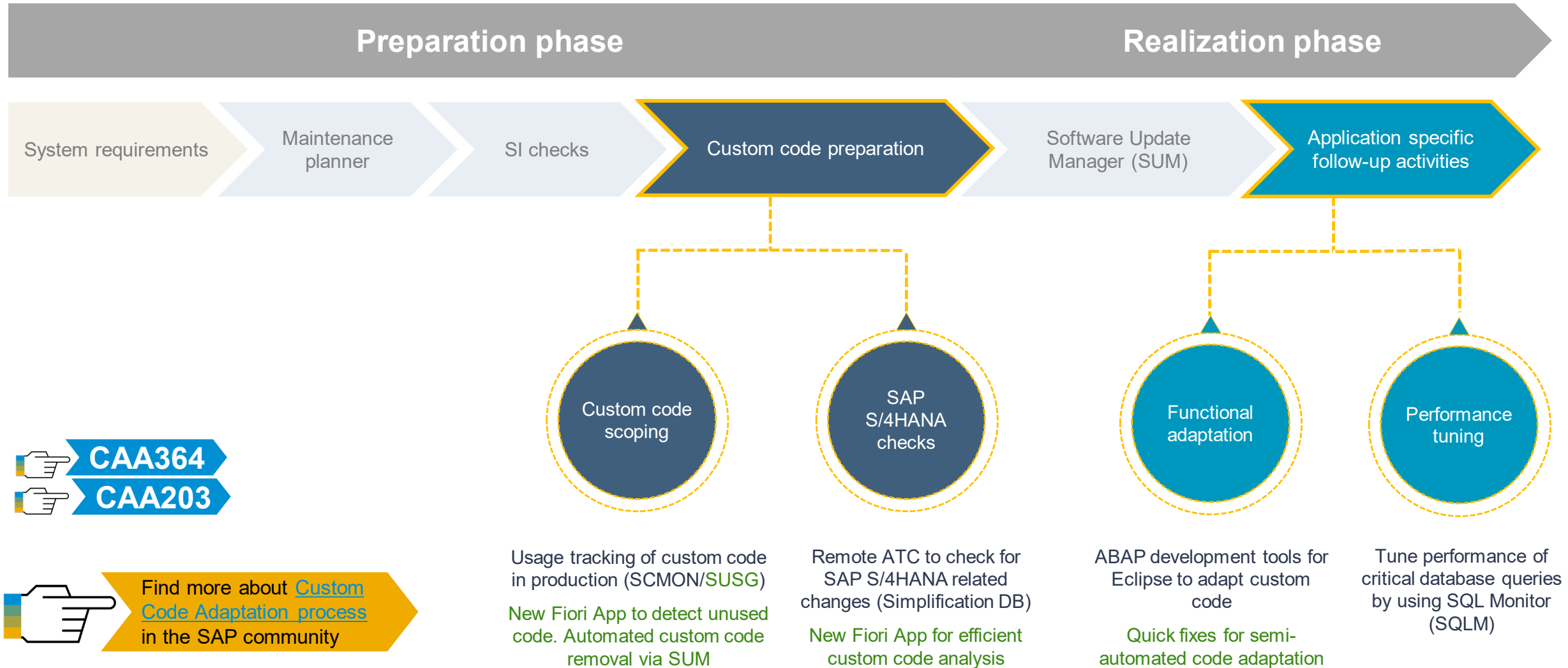
VS.

Consistency check:
- Identify critical issues which could prevent a successful system conversion and where an action from customer side is required.
- Will prevent Software Update Manager from going into the downtime, if not all critical errors are fixed or exempted.
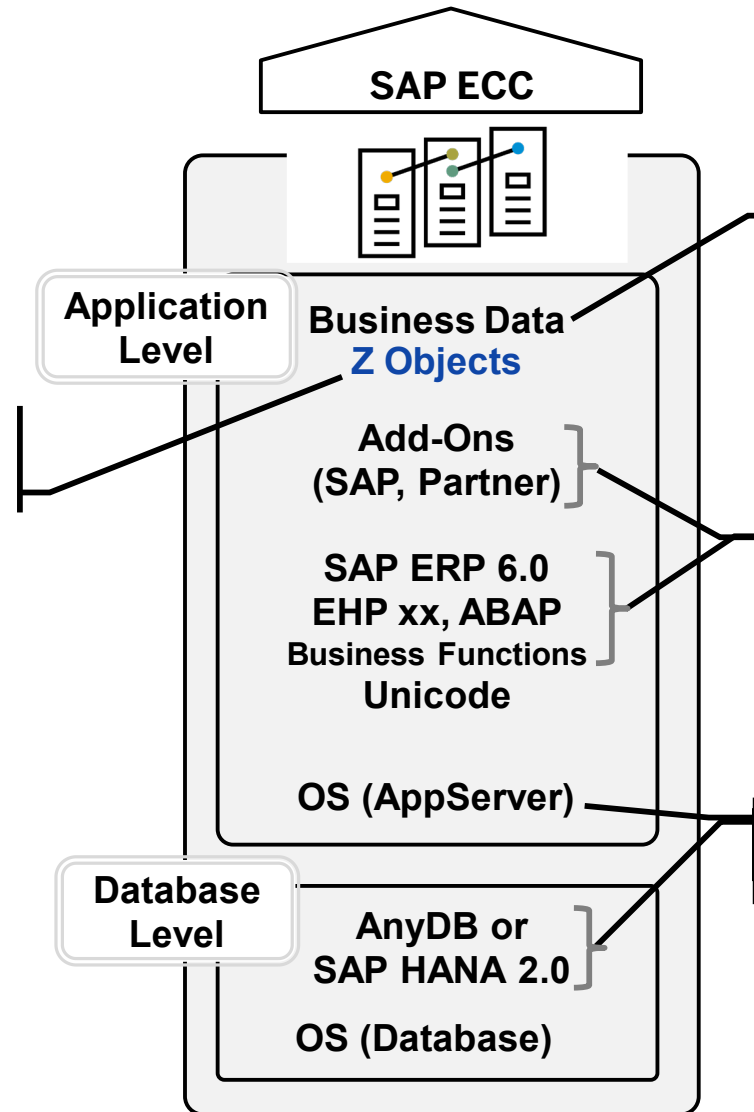
SAP S/4HANA system conversion

Custom code related process

Preparation phase **Realization phase**

| System requirements | Maintenance planner | SI checks | Custom code preparation | Software Update Manager (SUM) | Application specific follow-up activities |

Custom code scoping

Usage tracking of custom code in production (SCMON/SUSG)

New Fiori App to detect unused code. Automated custom code removal via SUM

SAP S/4HANA checks

Remote ATC to check for SAP S/4HANA related changes (Simplification DB)

New Fiori App for efficient custom code analysis

Functional adaptation

ABAP development tools for Eclipse to adapt custom code

Quick fixes for semi-automated code adaptation

Performance tuning

Tune performance of critical database queries by using SQL Monitor (SQLM)

CAA364
CAA203

Find more about Custom Code Adaptation process in the SAP community
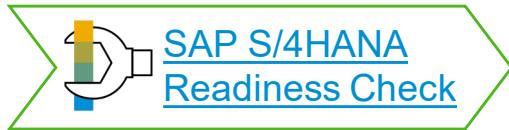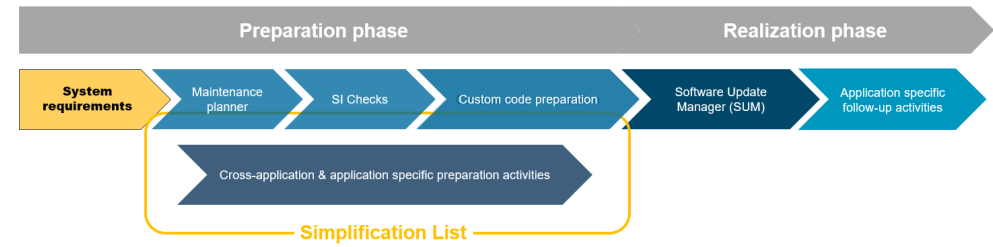
Custom code analysis options

	Remote ATC with SAP GUI	SAP Fiori Custom Code Migration App	SAP Fiori Custom Code Migration App in SAP Cloud Platform
Required system	Central ATC check system **(SAP_BASIS 7.52)**	Central ATC check system **(SAP S/4HANA 1809)**	SAP Cloud Platform, ABAP Environment
System location	in customer landscape	in customer landscape	cloud
Remote connectivity	via RFC	via RFC	via RFC and SAP Cloud Connector
Analyze SAP S/4HANA findings	✓	✓	✓
Simplification information in ATC result	✓	✓	✓
Filter results by scope and Quick Fix availability	✗	✓	✓
Define custom code migration scope based on usage data	✗	✓	✓
Remove unused code during system conversion via SUM	✗	✓	✓

Checks for SAP ECC source system

Agenda

Requirements
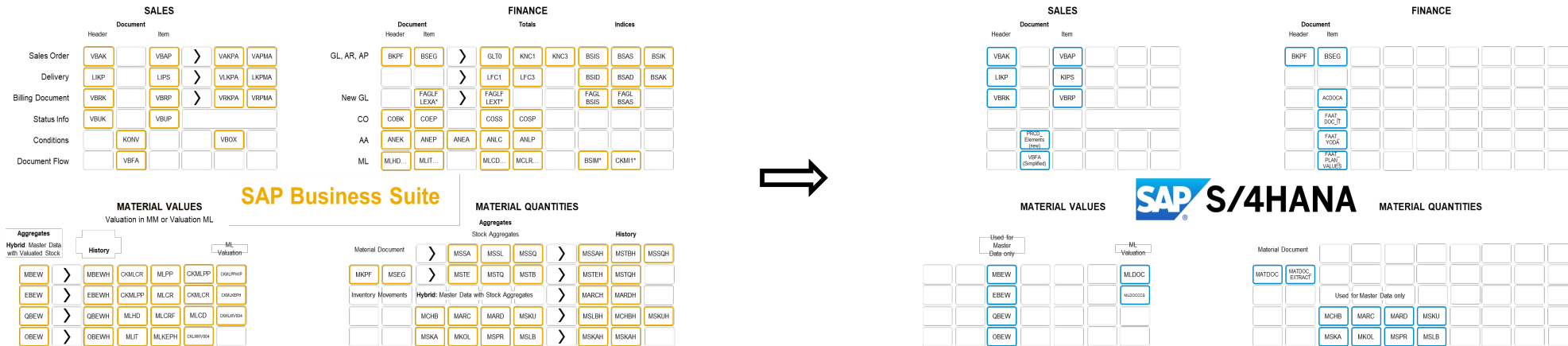
- System prerequisites

Preparation

- Checks

Execution

- SUM & Data conversion

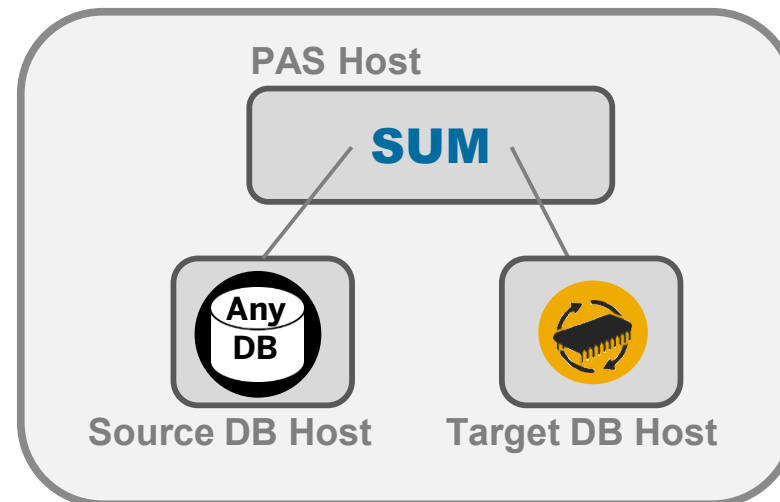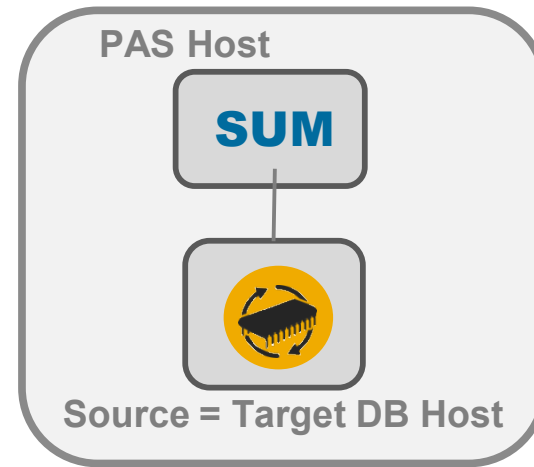# Data conversion as part of system conversion

- Transition of business data (table content) into tables of the new data model - examples:
  - GLT0, FAGLFLEXT, FAGLFLEXA -> ACDOCA (Universal Journal)
  - MKPF, MSEG -> MATDOC

- Handling of "old" tables depends on the application area
  - Some old tables may no longer be used
  - Some fields of old tables may still be used

- Concept of "Obsolete Data Handling", see SAP Note 2661837

SAP S/4HANA system conversion

Technical conversion by Software Update Manager (SUM)
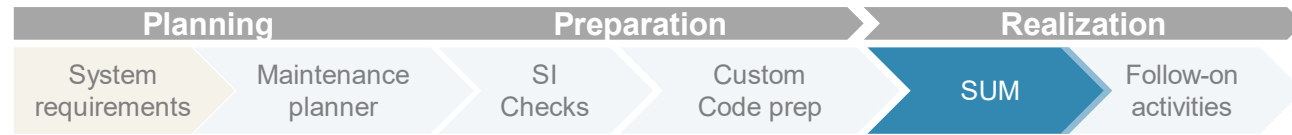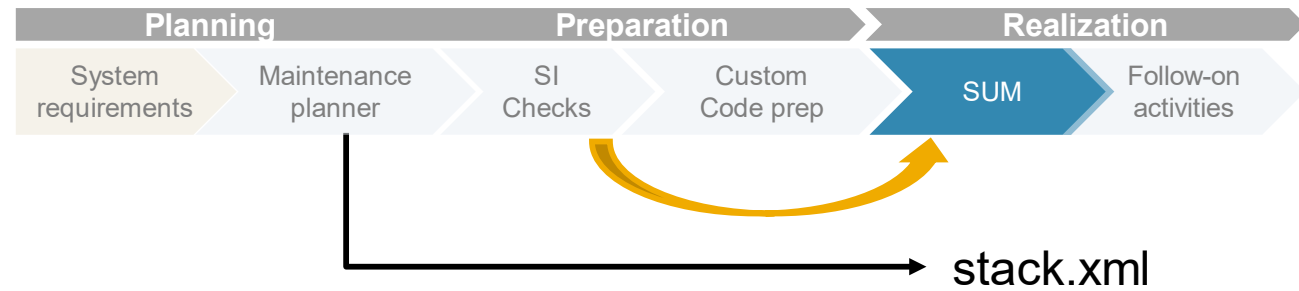
- Conversion tasks for SUM:

  – **Software update**
  Provide new applications and new tables

  – **Data conversion**
  Conversion of table content to new data model

  – **Database migration**
  Migrate to SAP HANA database (if required)

PAS Host

SUM

Source = Target DB Host

PAS Host

SUM

Any DB

Source DB Host   Target DB Host

SAP S/4HANA system conversion
Technical conversion prerequisites

stack.xml

- **Maintenance planner**: provides stack.xml and software archives

- **SI checks**: will be executed by SUM as well -> solve all issues before
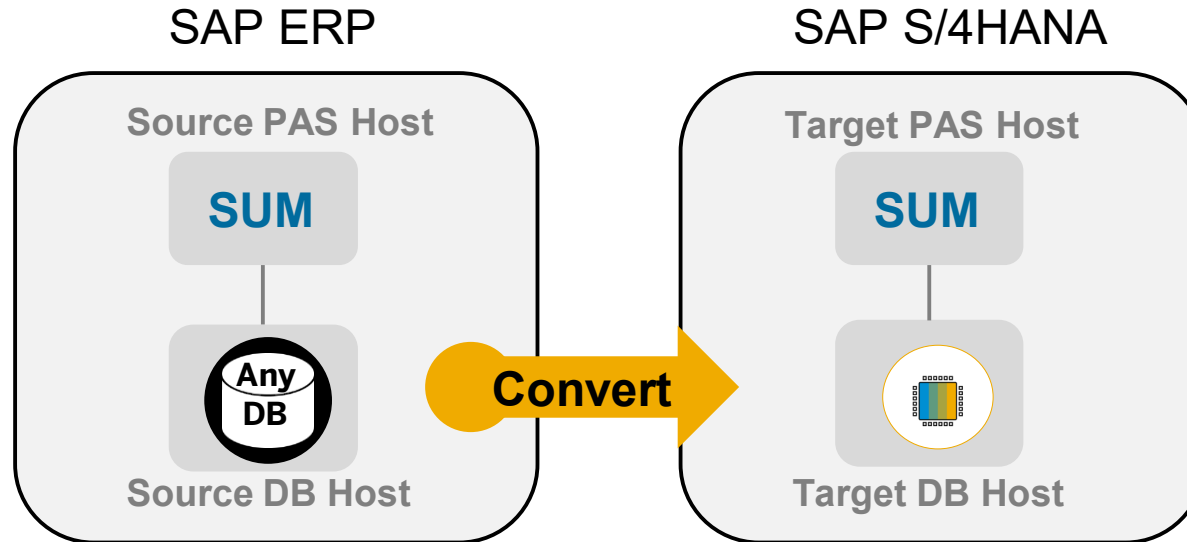

Optional activities (depending on system type)

- **Readiness check:** is optional, but strongly recommended!

- **Custom code check**: may be ignored, e.g. for a sandbox conversion run

- **SUM prerequisite check**: check of OS/DB- and SPAM requirements
  See SUM conversion guide: https://support.sap.com/sltoolset -> Maintenance area

☞ **CAA261**

DMO with system move

Possible option for a system conversion

SAP ERP

Source PAS Host

SUM

Any DB

Source DB Host

Convert

SAP S/4HANA

Target PAS Host

SUM

Target DB Host

DMO with system move allows to switch the complete system (esp. AppServer host):
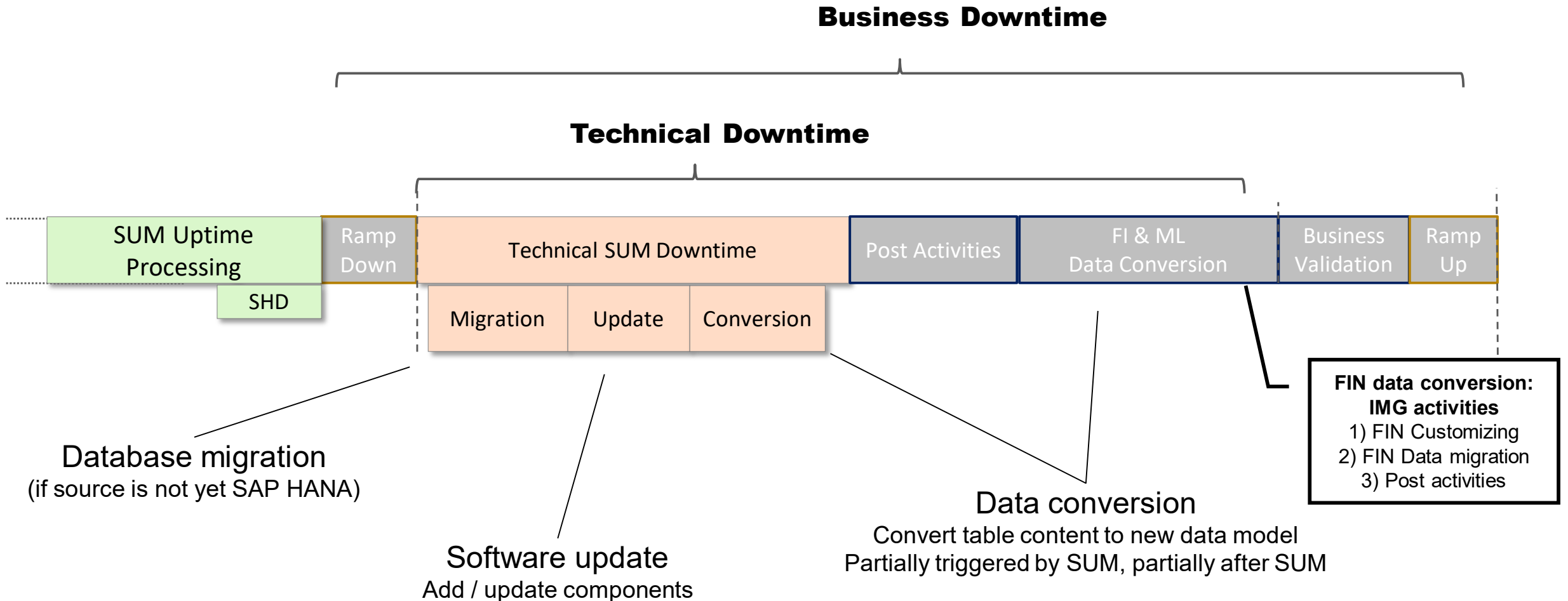
- From one host to a different host (e.g. hardware change)

- From one data center to a different one

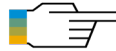- From on-premise to Cloud (IAAS)

Note:
DMO with system move for target SAP S/4HANA **1909** is not supported with SUM 2.0 SP **06**, but it will be supported with a later SUM SP version
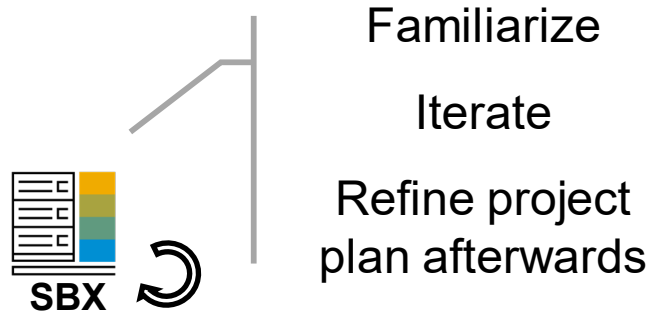
Main technical conversion steps
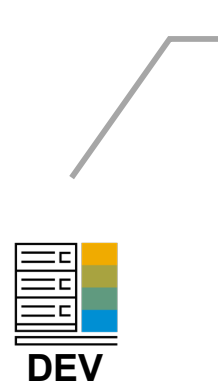Partially related to Software Update Manager (SUM)

Business Downtime

Technical Downtime

SUM Uptime Processing	Ramp Down	Technical SUM Downtime	Post Activities	FI & ML Data Conversion	Business Validation	Ramp Up

SHD

Migration	Update	Conversion

Database migration
(if source is not yet SAP HANA)

Software update
Add / update components

Data conversion
Convert table content to new data model
Partially triggered by SUM, partially after SUM

FIN data conversion:
IMG activities
1) FIN Customizing
2) FIN Data migration
3) Post activities

Aspects of project planning

Familiarize

Iterate
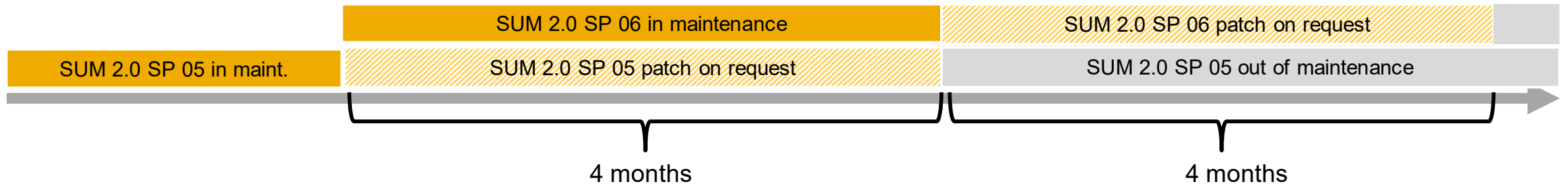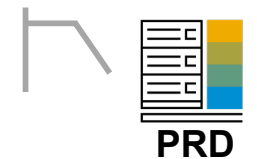
Refine project plan afterwards

SBX

Create transports for custom code adaption

Consider dual maintenance

DEV

Business function testing of new/adapted processes

QAS

Goal: SUM SP version shall not be switched in critical phase
4 to 8 months maintenance => relevant systems to be converted therein

Consider dress rehearsal

PRD

SUM 2.0 SP 06 in maintenance	SUM 2.0 SP 06 patch on request	
SUM 2.0 SP 05 in maint.	SUM 2.0 SP 05 patch on request	SUM 2.0 SP 05 out of maintenance

4 months

4 months

Aspects to consider

Time
- Simplification Item clearance
- Workshops, end user training
- 3rd party Add-on support check
- Archiving and deprecation of custom code to be considered

Knowledge
- Plan project as joint project (Tec & Biz) from the very beginning
- Colleagues with broad knowledge of Finance, Controlling & Asset Accounting required

Testing
- 2 to 3 test conversions on a sandbox/isolated system, with business tests on target
- Tests for roles and authorization changes
- Plan Dress Rehearsal
  (test conversion of productive system under real-time conditions)

☞ **CAA114** for details and additional aspects

Agenda

Requirements
- System prerequisites

Preparation
- Checks

Execution
- SUM & Data conversion

Information sources for system conversion

Transition scenarios:

https://blogs.sap.com/2017/07/06/how-to-find-my-path-to-sap-s4hana-understand-the-available-transition-options/

Mapping your journey to SAP S/4HANA - A practical guide for senior IT leadership:

https://www.sap.com/documents/2019/05/44b3ebd5-4b7d-0010-87a3-c30de2ffd8ff.html

https://blogs.sap.com/2016/11/02/sap-s4hana-system-conversion-at-a-glance/

http://open.sap.com/courses/s4h14

Release and maintenance strategy for SAP S/4HANA

https://help.sap.com/doc/fb3ee8b026b9468890aedd443afb9aae/1511_000/en-US/ReleaseMainStratS4.pdf

Target SAP S/4HANA 1909:

SAP Note 2769531 - SAP S/4HANA 1909: Release Information Note

SAP Note 2620910 - SAP S/4HANA … and SAP BW/4HANA 1.0: Recommended application server platforms

SAP Note 2805572 - Release information note for product version SAP Fiori for SAP S/4HANA 1909

Simplification list https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE

Simplification Item catalog https://launchpad.support.sap.com/#/sic/

Simplification Item checks https://blogs.sap.com/2018/03/26/sap-s4hana-simplification-item-check-how-to-do-it-right

Readiness check https://www.sap.com/readinesscheck

https://rc.cfapps.eu10.hana.ondemand.com

Maintenance planner http://apps.support.sap.com/sap/support/mp

SAP Note 2240359 Always-Off business functions / SAP Note 2240360 Always-On business functions / SAP Note 2214409 Compatible SAP add-ons /
SAP Note SAP Note 2696603 Compatible partner add-Ons 1809 / SAP Note 2011192 Uninstalling ABAP add-ons

Custom code adaptation https://blogs.sap.com/2017/02/15/sap-s4hana-system-conversion-custom-code-adaptation-process/

http://support.sap.com/sltoolset SUM guide, DMO guide, SUM conversion guide, related SAP Notes, software download, Blogs, …

https://help.sap.com/viewer/p/SAP_S4HANA_ON-PREMISE Conversion guide, Custom code migration guide, SI Catalog, SI List, Release Information Note, …

SAP supports you on your way to SAP S/4HANA

"Transition to SAP S/4HANA" road map:

- Best practices project documentation in the Roadmap Viewer for all SAP customers to transition to SAP S/4HANA on-premise

- Graphical overview and structured end-to-end documentation of an implementation or conversion project, including project file templates

- Helps customers, partners, and SAP to prepare and run transition projects according to SAP Best Practices

- Accelerators link to more detailed information, blogs, templates, training

- Links from project activities and tasks to services
  ➔ Your guidance for SAP Support offerings
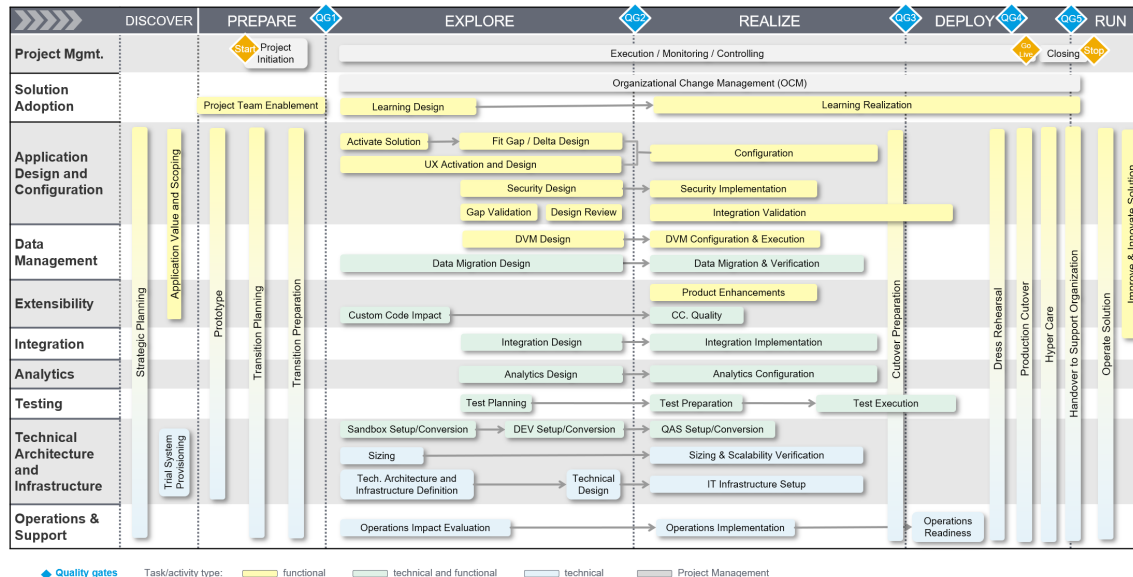
Ask for SAP Service Offerings
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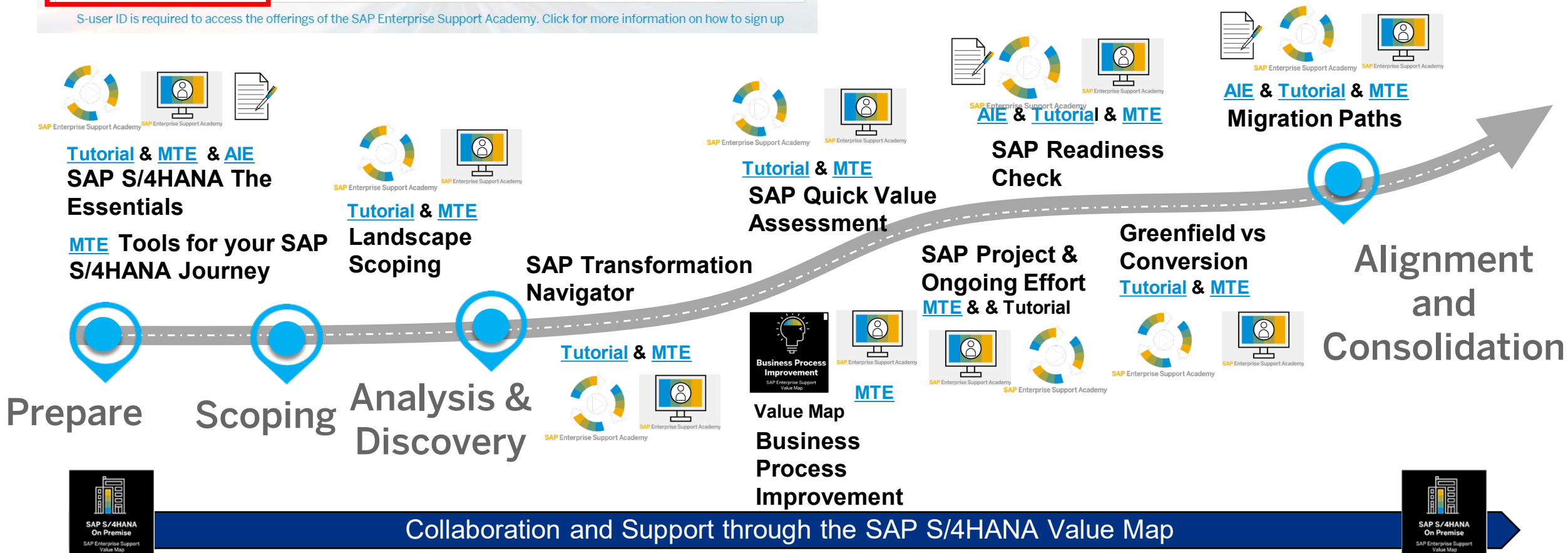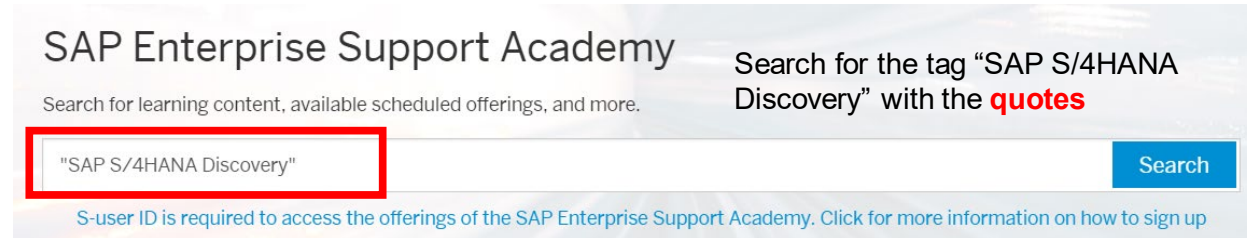- www.sap.com/maxattention

- www.sap.com/activeattention

Check our webinars on Transition to SAP S/4HANA:
https://webinars.sap.com/sap-user-groups-k4u/en/s4hana11

SAP S/4HANA Discovery: Define a transition Roadmap to SAP S/4HANA

SAP Enterprise support content* - public blog

Visit us at **SAP Enterprise Support Academy** and enter the search tag **"SAP S/4HANA Discovery"** with the quotes

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Tutorial & **MTE** & **AIE**
SAP S/4HANA The Essentials

MTE **Tools for your SAP S/4HANA Journey**

Tutorial & **MTE**
Landscape Scoping

SAP Transformation Navigator

Tutorial & **MTE**

Tutorial & **MTE**
SAP Quick Value Assessment

Business Process Improvement
SAP Enterprise Support Value Map

MTE
Value Map
Business Process Improvement

SAP Project & Ongoing Effort
MTE & & Tutorial

AIE & **Tutorial** & **MTE**
SAP Readiness Check

Greenfield vs Conversion
Tutorial & **MTE**

AIE & **Tutorial** & **MTE**
Migration Paths

Prepare   **Scoping**   **Analysis & Discovery**   **Alignment and Consolidation**

SAP S/4HANA On Premise — SAP Enterprise Support Value Map

Collaboration and Support through the SAP S/4HANA Value Map

SAP S/4HANA On Premise — SAP Enterprise Support Value Map

* Examples of the key content, some tutorials are under development. Please note the content/timing is subject to change

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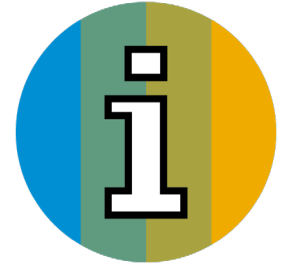
Related SAP TechEd Learning Journeys

- CAA3 – Move to SAP S/4HANA

Show Floor booth: Journey to SAP S/4HANA

Related SAP TechEd sessions

- CAA105 – Check Your System's Readiness for an SAP S/4HANA Conversion
- CAA114 – Paths for Transitioning to SAP S/4HANA
- CAA113 – End-to-End Overview of System Conversion to SAP S/4HANA Part 1
- CAA202 – End-to-End Overview of System Conversion to SAP S/4HANA Part 2
- CAA203 – Custom Code Adaptation for SAP S/4HANA
- CAA261 – System Conversion: Get Firsthand Experience with the Tools (Hands-On)
- CAA362 – Custom Code Adaptation for SAP S/4HANA (Hands-On)

Public SAP Web sites

- SAP Community: www.sap.com/community
- SAP products: www.sap.com/products
- Software Logistics Toolset: http://support.sap.com/sltoolset
- SAP S/4HANA Guides: https://help.sap.com/S4HANA
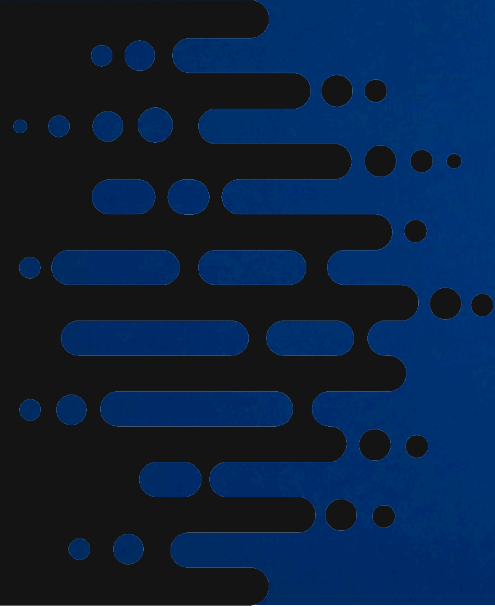
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Contact for further topic inquiries

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