SAP S/4HANA migration cockpit
SAP S/4HANA 2023 FPS02

Public

For **SAP S/4HANA Cloud Public Edition** see:
SAP S/4HANA Migration Cockpit

Agenda

01

Introduction
– Your Way to SAP S/4HANA

Transition to SAP S/4HANA
Transition paths recap

Approach	Business driver	Transition option	Target
REUSE with in-place conversion	Start rapid modernization	**System conversion**	**SAP S/4HANA Cloud Private Edition** / **SAP S/4HANA**
REENGINEER with data migration customer tailored	Selective business process optimization	**Selective data transition**	**SAP S/4HANA Cloud Private Edition** / **SAP S/4HANA**
Highly standardized, with best-practice support and based on a clean core	Business model innovation	**New implementation**	**SAP S/4HANA Cloud Public Edition** / **SAP S/4HANA Cloud Private Edition** / **SAP S/4HANA**

versus

Transition to SAP S/4HANA
Transition paths recap

Approach	Business driver	Transition option	Target
REUSE with in-place conversion	Start rapid modernization	System conversion	SAP S/4HANA Cloud Private Edition / SAP S/4HANA
versus			
REENGINEER with data migration Customer tailored	Use selective business process optimization	Selective data transition	SAP S/4HANA Cloud Private Edition / SAP S/4HANA
NEW Highly standardized, with best-practice support and based on a clean core	Apply business model innovation	New implementation	SAP S/4HANA Cloud Public Edition / SAP S/4HANA Cloud Private Edition / SAP S/4HANA

Mapping Your Journey to SAP S/4HANA – A Practical Guide for Senior IT Leadership
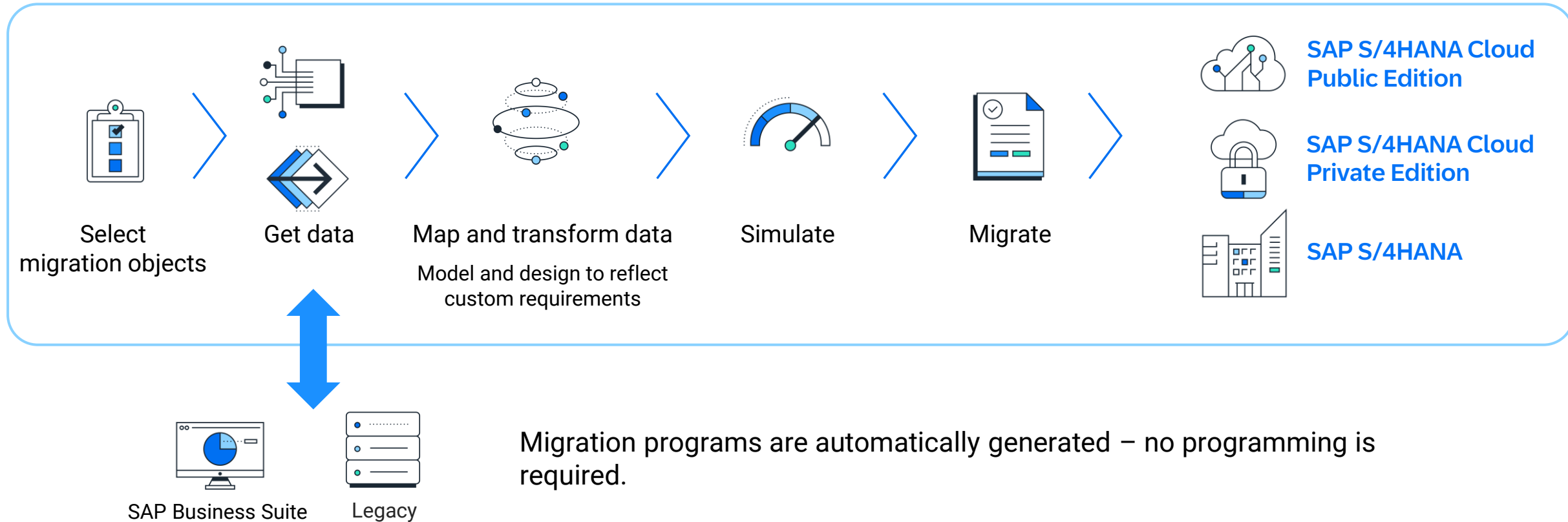
02

Functions & Process

- SAP S/4HANA migration cockpit

Facilitate Migration Projects with SAP S/4HANA Migration Cockpit

Transition scenario: new implementation

SAP S/4HANA migration cockpit

Included in SAP S/4HANA and SAP S/4HANA Cloud license and shipment

Guidance and simulation for the migration process

Preconfigured migration content specific to SAP S/4HANA

Automated mapping between source and target

Integrated into SAP Activate methodology

Lower migration time and costs, with no developer skills required

Migration object modeler for custom requirements

Data Migration Process with SAP S/4HANA Migration Cockpit
Overview

Select migration objects

Get data

Map and transform data

Model and design to reflect custom requirements

Simulate

Migrate

SAP S/4HANA Cloud Public Edition

SAP S/4HANA Cloud Private Edition

SAP S/4HANA

SAP Business Suite

Legacy

Migration programs are automatically generated – no programming is required.

SAP S/4HANA Migration Cockpit
Step: select migration objects

Preconfigured SAP S/4HANA-specific migration content

What is a migration object?

- **Represents a business entity in SAP S/4HANA**, such as a customer, sales order, or invoice
- Encapsulates the logic to create the specific business entities through the corresponding APIs offered by SAP S/4HANA
- Is **delivered by SAP based on SAP Best Practices configuration** and is immediately ready to use
- Is categorized in **master data and transactional data (no historical data)**
- Contains rules how values from source to target are handled – called "mapping"
- Can be extended with the SAP S/4HANA migration object modeler

What is migration content?

- Migration content is the sum of all migration objects

SAP S/4HANA Migration Cockpit
Preconfigured migration objects SAP S/4HANA

Download migration object list

Filter for migration approach

Use filter options
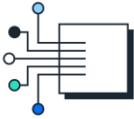
Migration object documentation

Migration object list in SAP Help Portal (SAP S/4HANA) – http://help.sap.com/S4_OP_MO

SAP S/4HANA Migration Cockpit
Step: get data − different options

Two different migration approaches, depending on the source system:

Migrate Data Using Staging Tables	Migrate Data Directly from SAP System (Direct Transfer)

▪ Staging tables are created automatically in SAP HANA DB (either locally or in a remote system)
 	
▪ Populate these staging tables with business data using:
   ▪ XML template files
   ▪ CSV template files
   ▪ SAP or third-party ETL tools
	▪ Connect source system (ABAP-based SAP source systems) via RFC connection
	
	▪ Selection
	  - Based on predefined selection criteria (for example company code for ERP source system) and selected migration objects
	  - Can be adapted with the **SAP S/4HANA migration object modeler**
	
	▪ Supports data migration scenarios from SAP ERP, SAP AFS, SAP APO SPP, SAP CRM, SAP EWM

SAP S/4HANA Migration Cockpit
Step: map and transform
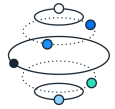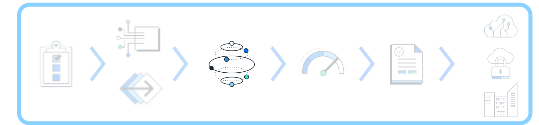
Automated mapping between source & target

What is a mapping?

- Data transformation between a data source and a destination. Here, you link the source values, which were extracted from the source system to the values and formats of the SAP S/4HANA system.

Example:	Source Country Key	Target Country Key
	Deutschland	DE
	USA	US

- The migration cockpit automatically provides proposals for mapping values, if possible. 1:1 mappings and rules are predefined by SAP.

- The mappings have to be maintained only once, they are used for all objects within a project.

  Example: You maintain the country key for migration object BANK, then all other objects in your project will use the same mapping.
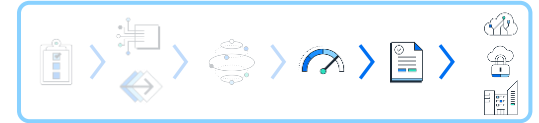
Check the object-related documentation for details on mapping.
Especially for Staging, it is not necessary that the extracted data has to be provided how SAP S/4HANA would expect.

SAP S/4HANA Migration Cockpit
Step: simulate and migrate

Guidance and simulation for the migration process

- Data is posted to the SAP S/4HANA system via standard APIs. Therefore, data is created like it were entered manually into the SAP system.

- All logical and semantic checks are done in the API.

- During the simulation process, no data is written to the target system, but you can view all the messages that would occur during an actual data transfer (for example information about a cost center that does not exist).

- Objects can be simulated/migrated one by one – keep dependencies in mind.

- There is no migration at database table level.

- It is possible to simulate/migrate only specific migration object instances (single instances or a set of instances).

SAP S/4HANA Migration Cockpit

SAP Fiori App
Migrate Your Data

Migrate Your Data
Migration Cockpit

☁ 6

Active Migration Proj...
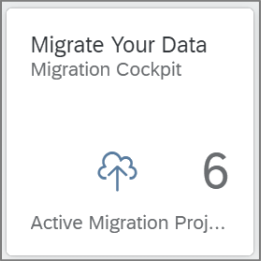
Staging Tables

Staging Tables

↑

▪ Excel XML
▪ CSV
▪ ETL tools of choice

Direct Transfer

▪ SAP ERP 6.0
▪ SAP APO
▪ SAP AFS
▪ SAP CRM
▪ SAP EWM

Process & content

+220 Migration objects Staging
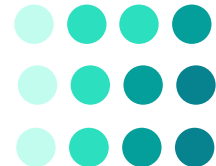
+255 Migration objects Direct Transfer

Data load

API based

SAP S/4HANA Cloud Private Edition
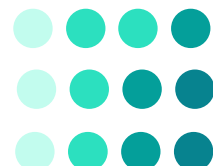
SAP S/4HANA

SAP S/4HANA migration cockpit
What it is designed for (in/out of scope)

Designed for:

- Initial load of data
  master data, open transactional data, no historical data

- Used in context of a new implementation of SAP S/4HANA
  SAP S/4HANA, SAP S/4HANA Cloud Private Edition, and SAP S/4HANA Cloud Public Edition

Not designed for:

- Keep data in sync across systems*

- Realize a continuous exchange or flow of data*

- Establish an integration scenario*

- Data cleansing

- Migrating data directly from SAP S/4HANA system to other SAP S/4HANA systems independent of deployment option is currently not supported.

* For this purpose SAP products like SAP Master Data Governance, Central Finance, Product Data Replication or SAP LT Replication Server or SAP Data intelligence are available (list does not claim to be complete).

SAP S/4HANA migration cockpit
So, what do we migrate?

All data that is required to start business operations (initial data set):

- Master data like Customer, Supplier, Product

- Open transactional data (includes balances, open items, open stocks, open sales and purchase orders, and other open business objects)

- Balances (e.g. material inventory balance, bank account balance, G/L account balance)

- FI - historical balance

Watch out:

- For example, partially delivered sales orders cannot be migrated along with the corresponding completed deliveries. Such orders have to be closed in the old system first.
- Open documents need to be processed in the source system before the migration. In many cases freeze periods for changes or dual maintenance might be required for some of the master data objects during the cutover period.

SAP S/4HANA migration cockpit
Background: Historical data

Do you remember the last time you moved house?
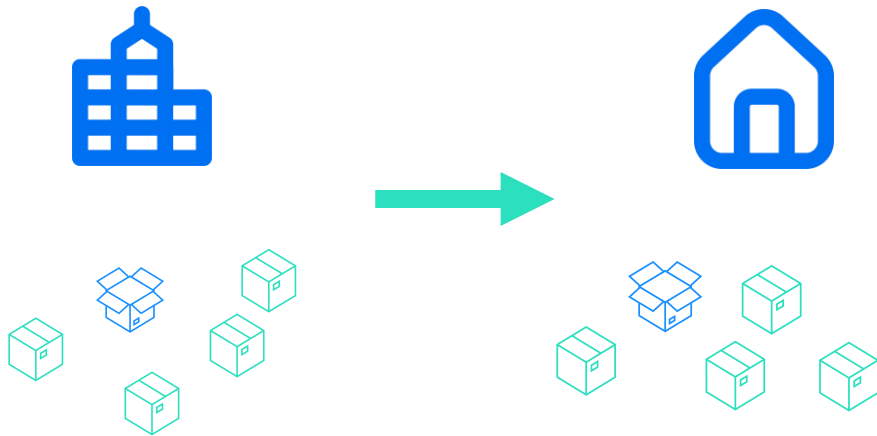
- SAP S/4HANA migration cockpit is designed for a **new implementation**.
- **No migration objects for historical data** in migration cockpit*.
- Only the data necessary for a smooth business start is migrated.
- A comprehensive customer-specific evaluation makes sense. Solutions like Business Warehouse or side-by-side extensibility can be considered.

Examples:

- The migration of closed documents leads to postings which are already included in the balances; there are no longer open items for those documents.
- For partially open items, only the remaining quantities or values should be migrated.

* Exception: FI – Historical balance migration object <u>see SAP Note 2943035</u>

Video
Migrate Data Using Staging Tables

Video
Using CSV Files to Fill Staging Tables

Video
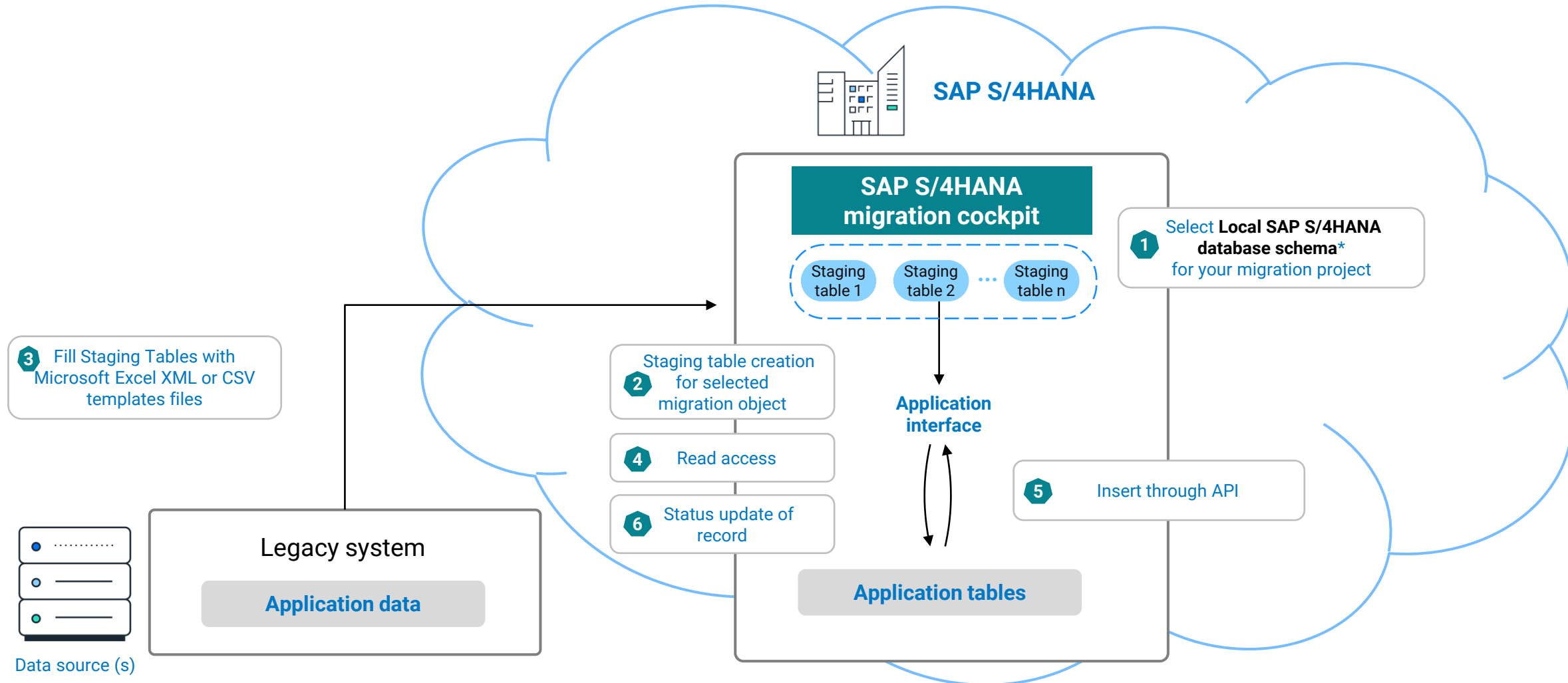**Migrate Data Directly from SAP System**

03

System Setup
- SAP S/4HANA migration cockpit

SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

System setup SAP S/4HANA Cloud - local SAP HANA database schema

SAP S/4HANA

SAP S/4HANA migration cockpit

Staging table 1   Staging table 2   ...   Staging table n

1 Select **Local SAP S/4HANA database schema*** for your migration project

3 Fill Staging Tables with Microsoft Excel XML or CSV templates files

2 Staging table creation for selected migration object

Application interface

4 Read access

5 Insert through API

6 Status update of record

Legacy system

Application data

Data source (s)

Application tables

* Staging Tables reside within the SAP S/4HANA schema

SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

System setup SAP S/4HANA remote SAP HANA database schema

SAP S/4HANA or separate SAP HANA box*

SAP HANA DB schema*

Staging table 1   Staging table 2 ... Staging table 3

ODBC

2 Staging table creation for selected migration object

4 Read access

6 Status update of record

SAP S/4HANA

SAP S/4HANA migration cockpit

1 Select **Remote SAP HANA Database schema** for your migration project

Application Interface

5 Insert through API

Application tables

3 Extraction and fill of staging tables through SAP or third-party tools, or Microsoft Excel XML or CSV templates files

Legacy system

Application data

Data source (s)

* Separate SAP HANA database schema is required, can also be on SAP S/4HANA target system
** Prerequisite: established secondary database connection

SAP S/4HANA Migration Cockpit
How to fill the staging tables?

You can fill the staging tables by using:

XML files*   or   CSV files*   or   your preferred ETL tools

There is a sample code for a file splitter tool that can help splitting big xml files. Details available in GitHub. Note that this is a sample code only!

* The size limit for each file is 100MB. You can upload multiple files at once by using a zip file. Note that the combined size of all the files you want to add to the zip file must not exceed 160MB. The maximum permitted size of the zip file is 100MB. For more information see KBA 2719524
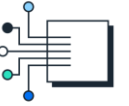
# SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
Matrix - data load into Staging Tables - recommendation

Connection	Staging Tables located	HANA Enterprise Edition	HANA Runtime License (REAB)
Local SAP S/4HANA DB Schema Standard use case	Staging tables will be created in same HANA DB schema as SAP S/4HANA	Fill tables via* ▪ XML/CSV template files ▪ ABAP programming	Fill tables via* ▪ XML/CSV template files ▪ ABAP programming
Remote SAP HANA Database Schema Specific customer use case	Staging tables will be created in a separate HANA DB Schema.	Tables can be accessed via DB layer or filled via ▪ XML/CSV template files ▪ ABAP programming ▪ Data Services ▪ SLT ▪ 3rd Party Tools	Tables can be filled via** ▪ XML/CSV template files ▪ ABAP programming ▪ Data Services ▪ SLT ▪ 3rd Party Tools

* This is the recommendation from SAP. However, if your system administrator provides access to the relevant tables on database level, it is possible to use the tools listed for remote SAP HANA Database Schema below to access the tables.

** Staging tables cannot be filled directly on database level, for example with SAP HANA Studio (SUR Software Usage Rights).
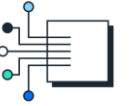
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
Legal statement on use of 3rd party tools to fill Staging Tables in REAB

In addition to the standard options of using either a full-use version of SAP HANA (i.e. SAP HANA, enterprise edition) or the SAP tools provided as Runtime Software with SAP HANA, runtime edition, it is possible to utilize a 3rd party ETL tool to populate the staging tables for the SAP S/4HANA migration cockpit.

In this case, the staging tables will be created by the SAP S/4HANA migration cockpit in a dedicated schema, either in the same database tenant where SAP S/4HANA is installed or a separate dedicated database tenant. Such a schema can then be configured as a remote database connection enabling connectivity and filled by a 3rd party ETL tool solely for the purpose of consumption by the S/4HANA migration cockpit.

For the avoidance of doubt, the tables may not be used for any kind of processing by SAP HANA outside of SAP S/4HANA migration cockpit, including, but not limited to, calculation view modeling, custom SAP HANA Extended Application Services (XS) applications, and other processing by SAP HANA engines. Furthermore, the use of such 3rd party tools to populate staging tables shall be limited to the timeframe during which a migration project is active in the SAP S/4HANA system installed in the same SAP HANA database tenant.

This information is officially published on help.sap.com – Data Migration Landing Page – Further Information (as of 2020 FPS02)

SAP S/4HANA Migration Cockpit – Migrate Data Directly from SAP System
Technical preconditions

Available for

- SAP ERP to SAP S/4HANA

- SAP Apparel and Footwear (SAP AFS) to SAP S/4HANA

- SAP EWM to EWM based on SAP S/4HANA

- SAP CRM to SAP S/4HANA for customer management

- SAP APO SPP to SAP S/4HANA eSPP

For more information about supported releases, see help.sap.com.

> ⚠️ The SAP S/4HANA Migration Cockpit **does not support** the migration of data from SAP S/4HANA systems to other SAP S/4HANA systems*.

Necessary preparations in the system landscape

- Add-on DMIS needs to be installed in the source system (included in the license for SAP S/4HANA), check SAP Note 2973957

- RFC connection from ERP/AFS/EWM/CRM/APO SPP source to SAP S/4HANA target system**

- Further details in section "Project Setup"

* SAP S/4HANA Finance systems (previously known as SAP Simple Finance) are classified as SAP S/4HANA systems.

** Caution: It is not supported to use RFC connections with trusted log on .

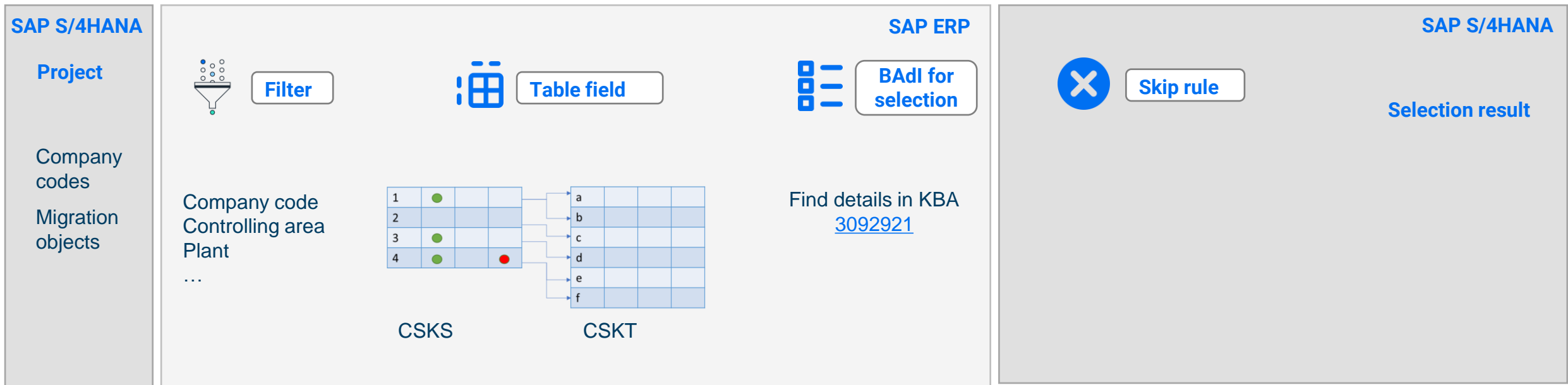# SAP S/4HANA Migration Cockpit – Migrate Data Directly from SAP System
System setup

Define RFC connection — 2

SAP S/4HANA

Data source (s)

Install SAP AddOn DMIS — 1

one SAP legacy system

- SAP ERP
- SAP AFS
- SAP EWM
- SAP CRM
- SAP APO SPP

SAP AddOn: DMIS

Select data for migration objects — 4

SAP S/4HANA migration cockpit

- Instance list migration object 1
- Instance list migration object 2
- Instance list migration object n

Application interface

3 — Create migration project:
- Scenario
- RFC connection
- Development Package
- Migration objects

5 — Insert/update through API

Application tables

SAP S/4HANA Migration Cockpit – Migrate Data Directly from SAP System
Influence the selection - adapt in transaction LTMOM

SAP S/4HANA

Project

Company codes

Migration objects

SAP ERP

Filter

Table field

BAdI for selection

Company code
Controlling area
Plant
…

CSKS   CSKT

Find details in KBA
3092921

SAP S/4HANA

Skip rule

Selection result

How can you influence the selection?

Set a filter which is delivered by SAP

Define selection criteria on table field level

Write coding to define the selection

Write coding to skip items from selection

→ Define **inheritance of restriction** within the data model of the migration object (affected tables)

04

What´s New in 2023
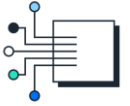
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
What's New in 2023? Data Migration Status App

Data Migration
Status

Imported	87.85K
Ready for Import	6.26K
Failed	7.76K

↻ now
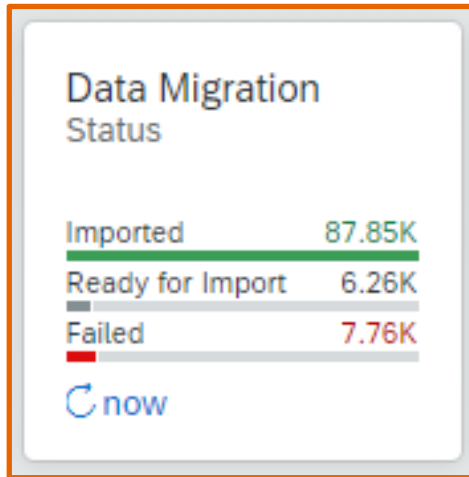
SAP Fiori App Data Migraton – Status

- Real time overview cross migration projects and migration objects

- Audit functionality for migrated data

- Included in standard business role template for data migration*

- Application Help: http://help.sap.com/S4_OP_DM_STATUS

- Video: Data Migration – Status

- App ID: F3280

- Available for staging projects only

SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
What's New in 2023? Data Migration Status App – Initial Screen

SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
What's New in 2023? Data Migration Status App - Audit

The Data Migration Status app provides audit functionality to help validate for your imported data records.
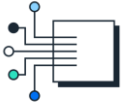

There are two options to select data records for auditing:
- Set Audit Status (manual assignment per record)
- Manage Multiple Audit Status (mass assignment of data records)

Audit Status

- Approved (data record was validated and is okay)
- Rejected (data record was validated but has errors)
- Pending (data record needs to be validated)

SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
What's New in 2023? CSV files

CSV templates

A readme file is available for each migration object with information about the data structures as well as how to enter data in the files.

Template Field List

In the table below, you can view more detailed information about the fields. For example, you can view the name of the field as well as the data type and length.

Basic Data (S_MARA)

Group	Fieldname	Description	Mandatory	Type	Length	Decs	Comment
Key	PRODUCT	Product Number	☑	Text	80		A key that uniquely identifies the product.
Header Data	MTART	Product Type	☑	Text	80		Key that assigns the product to a group of products such as raw product, finished product or trading goods.
Header Data (Retail)	ATTYP	Product Category	☐	Text	80		Specifies the category of the product. For example, whether it is a single product, a sales set, a generic product or a variant.
	SATNR	Configuration Product for Retail Variant	☐	Text	80		Key uniquely identifying a generic product to which the variant is linked.
Header Data	MATKL	Product Group	☐	Text	80		Key that you use to group together several products or services with the same attributes, and to assign them to a particular product group.
	MAKTX	Description	☑	Text	40		Text that describes the product in more detail. Note: You can maintain additional descriptions (for languages other than those provided on the 'Basic Data'

Source data for Product (9).zip.zip > Source data for Product

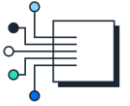| Name	Type	Compressed size	Password .
README.pdf	Acrobat Reader DC	628 KB	No
S_CHARACT#FreeText.csv	Microsoft Excel Comma S...	1 KB	No
S_CLASS#FreeText.csv	Microsoft Excel Comma S...	1 KB	No
S_CRFH#FreeText.csv	Microsoft Excel Comma S...	1 KB	No

SAP S/4HANA Migration Cockpit – Direct Transfer
What's New in 2023? Object Versions

New

Object versions are introduced. Once an update for a migration object is available, you are notified. A new version can come into your system by a release upgrade, a feature pack stack or a TCI note.

You can add the new object version into your project by going to the Migration Object Modeler and clicking: project, create migration object, from template.
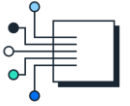
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
What's New in 2023? Template Files

Users will be offered more intuitive assistance on how to fill XML templates data by highlighting all mandatory fields.

SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
What's New in 2023? Template Files

The "mandatory" suffix to CSV file names was added.

Performance improvements for both, XML and CSV files

- file upload
- memory consumption

SAP S/4HANA Migration Cockpit – Direct Transfer
What's New in 2023? Analyze Your Selection Process App

**Analyze Your
Selection Process**
Migration Cockpit

🔍 167

Analysis Runs

New

SAP Fiori App Analyze Your Selection Process

- Get detailed analysis results for specific migration object instances

- Get transparency about the selected data

- Get recommendations about how to account for unexpected selection results

- Application Help: <u>Analyze your selection process</u>

- App ID: F7829

- Available for direct transfer projects only

05

Recommendation - Project Setup

SAP S/4HANA Migration Cockpit – Define Migration Strategy
General considerations

It is important to determine how data is transferred from the legacy system to the new system as early as possible.

There are many influencing factors that could drive the appropriate approach for a specific system. Some factors to consider include, but are not limited to:
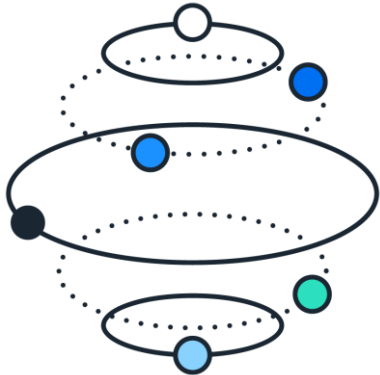
- Amount of business data to be transferred and converted
- Permitted business downtime
- Data changes in scope during migration
- Type of data in scope for migration
- Business data quality of the source system
- Check customizing

Relevant customizing in the target must be available (for example, organizational units, define document type for migration, define accounts for migration, remove account blocks)

SAP S/4HANA Migration Cockpit – Setup Your Project
Different migration approaches

- Check early on whether you want to use one or both approaches

  - Availability of migration objects is not 100% identical in both approaches
  - There might be reasons to use staging for individual objects – e.g. high demand for data cleansing, low data volume

- Using both approaches means:

  - You need at least two projects (one project cannot combine both approaches).
  - You have to keep the mapping in sync between the projects, [KBA 2976393](#).

SAP S/4HANA Migration Cockpit – Setup Your Project

How many projects?

Use only **one project**	Use **several** projects

It might seem as if one project for each application may lead to a better progress overview for a dedicated area but:

Use only one project

- Mapping values valid for all migration objects

- Central overview and control of the migration

- For Direct Transfer:
  If you need different selection criteria for one migration object (e.g. only material category A, then material category B), you can add the same migration object several times to a project.

Use several projects

- You must keep mapping in sync across the projects – this is additional effort and error-prone

- If you use internal numbering for a migration object, you can only upload this mapping after it has been created.

- Distributing migration objects across multiple projects does not improve performance. See KBA 3065607 (Staging) and KBA 3056885 (Direct Transfer).

SAP S/4HANA Migration Cockpit – Setup Your Project
Project setup and planning

- Plan your test cycles and go-live date
    - Do not underestimate the complexity even in case of Direct Transfer
    - If a release change is unavoidable, plan extra effort
    - Plan effort for system refreshes for several test cycles
    - First, create a project in a development system and then transport the project to a test system (test system is a copy of the production system).
    - The more the data in the test system resembles the data in the production system, the more precise the test.
    - Several test data migrations are required before you transfer data to the SAP S/4HANA production system.
- Check available migration objects delivered by SAP (link).
- Plan effort and time for requirements which are **not** covered by the SAP objects
- Plan time for analyzing and solving **application issues** during the tests
- Think about mappings early
- Plan performance tests (involve basis expert)

Test cycle 1

Test cycle 2

Test cycle 3

Go-live
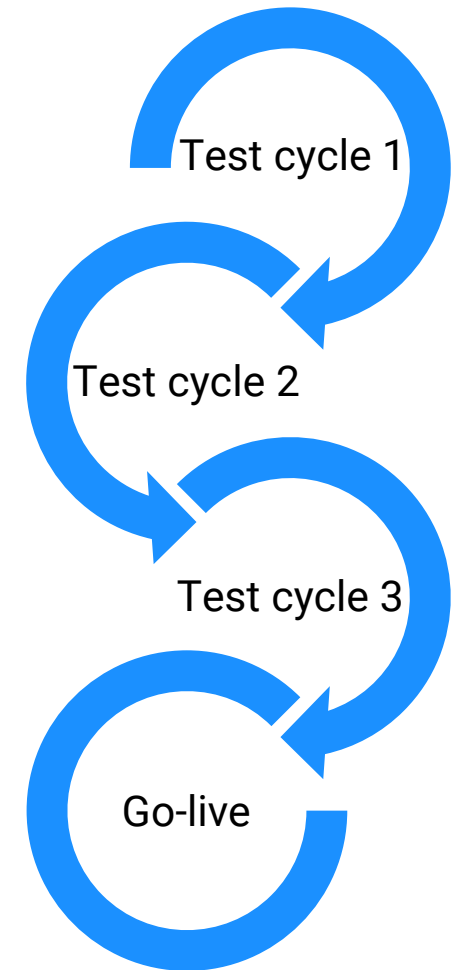
SAP S/4HANA Migration Cockpit
Impact of release upgrade

⚠️ **Note: Avoid upgrading to a newer release during a migration project if possible!**

What is the impact of upgrading to a newer release **during** a migration project?

Though SAP tries to avoid incompatible changes between releases, it **cannot** be guaranteed that migration objects delivered by SAP work after the upgrade.

Same applies to migration objects adapted or created by the customer.

Recommendation
- Staging: migration objects can be updated, but check in detail release comparison. Tests are necessary.
- Direct Transfer: migration objects cannot be updated, you need to create new project in the new release.

SAP S/4HANA Migration Cockpit – Prepare Your System
Important SAP notes – note analyzer

⚠ **Before starting a project, use Note Analyzer to ensure all corrections are implemented - SAP Note 3016862 (Transaction CNV_NA_MC)**

Installation Guide	SAP Note for migration cockpit (Basis)	SAP Note for Direct Transfer	SAP Note for File/Staging
SAP S/4HANA 2023, Chapter 7	**2780378**	**2747566**	**2537549**

Check SAP HotNews: KBA 2342391: How to access and use the SAP HotNews application

Best Practices and Challenges
Mass changes

SAP S/4HANA migration cockpit does not support mass changes!
The APIs used in the migration cockpit are APIs to create data.

Mass change functionality may be available after an initial data migration for some migration objects in the respective application.

Mass processing of master data for **product, customer, and supplier** is available. See Help Portal for further information.
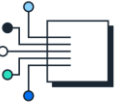
You find this information in the migration object documentation for Customer, Product, and Supplier in the *Post-Processing* section.

In addition, you can check **SAP Fiori Apps Reference Library** to see if the mass change/maintenance app is available for a specific application.
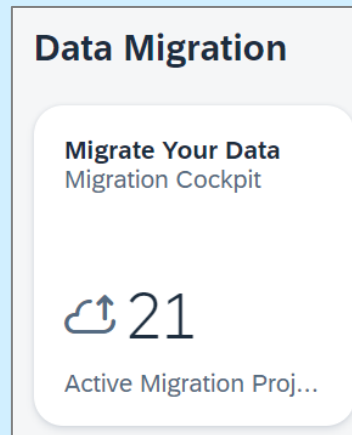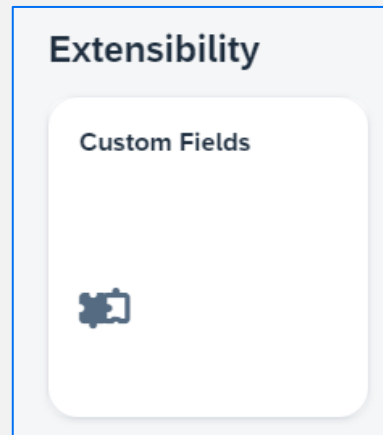
Best practices and challenges
Key user extensibility – Custom fields support

Key-user extensibility

- Business expert or implementation consultant can use the **Custom Fields** app to create additional fields.

- Example: Add product-related bonus to product master data; see video.

Extensibility

Custom Fields

SAP S/4HANA

Classic extensibility	**Key User Extensibility**	**Developer extensibility**	**Side-by-side Extensibility**
Classic custom ABAP development model to extent ABAP-based on-premise SAP solutions	Extend and adapt the core SAP S/4HANA with built-in key user extension capabilities	Extend by developing custom ABAP code in an upgrade-stable, cloud ready programming model	Extend by building new apps on SAP Business Technology Platform

Data Migration

Migrate Your Data
Migration Cockpit

⬆ 21

Active Migration Proj...

SAP S/4HANA migration cockpit

- Some migration objects support these custom fields – check migration object list (details next slide)

- If supported, custom fields are automatically reflected in the template of the corresponding migration object.
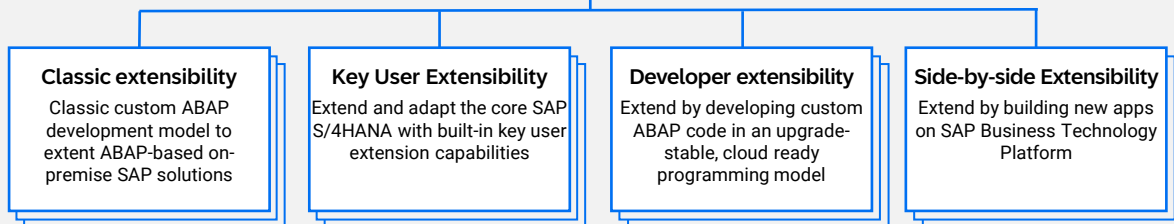
SAP S/4HANA Migration Cockpit – Comparison of Migration Approaches

	Migrate data using Staging Tables			**Migrate data directly from SAP system**	
Availability	SAP S/4HANA Cloud, public edition	SAP S/4HANA Cloud, private edition	SAP S/4HANA	SAP S/4HANA Cloud, private edition	SAP S/4HANA
Source System	Any source system (SAP or non-SAP)			ABAP-based SAP source systems: ▪ SAP ERP ▪ SAP EWM ▪ SAP APO ▪ SAP CRM ▪ SAP AFS	
Data Provisioning	▪ XML files ▪ CSV files ▪ Preferred ETL tool (using for example SAP Data Services, SDI, ABAP, or any 3rd party ETL tool)			Data selected and extracted directly from SAP system via RFC connection	
Data Cleansing	Before starting the migration project, or in the XML template files, or in the Staging Tables			Before starting the migration project. Note that you can always adjust the selection of data by using the migration object modeler	
No. of available objects	210 +			250 +	

Best practices and challenges
Data migration project checklist in a nutshell

Get an overview

- Which **migrations objects** are relevant?
- How many **records** do we have?
- Do we migrate them **manually or automatically**?
- Do we have the necessary **resources** to prepare and migrate them?

Understand

- Have all required **processes** been **discussed and set up** in the system?
- Do I have the **knowledge** to do my daily business in the new system?
- Do I understand the **concepts and processes** of the new system?
- What are the **dependencies** between the migration objects?

Prioritize and focus

- Which migration objects are **really business critical**?
- Which records are **really business critical**?
- What is the single most important **next step**?

Simplify

- Can migration tasks be **simplified or automated**?
- Can we reduce the **administrative workload**?
- Can we reduce the **business workload**?

Align

- Have we aligned and communicated a common **project and cutover plan**?
- Have **dependent streams** aligned on a migration approach and the exchange of relevant mappings and information?

06

Further Information
- And Resources

Data Migration Landing Page on SAP S/4HANA SAP Help Portal

https://help.sap.com/S4_OP_DM

S4: SAP S/4HANA
OP: onPrem, Private Cloud
DM: Data Migration

Introduction to data migration
Sources to support you in your migration process

SAP Activate Methodology (Roadmap Viewer)

- Access implementation guidance for your digital transformation
- View and download SAP Activate methodology assets and accelerators
- https://go.support.sap.com/roadmapviewer/#
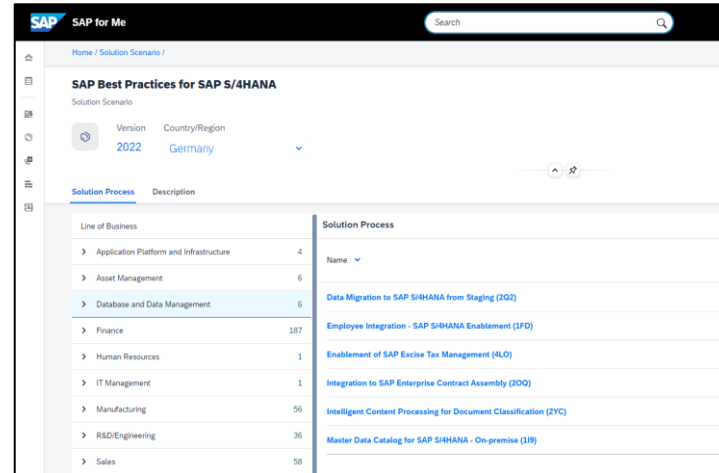
SAP Best Practices via SAP Signavio Process Navigator

- Access and download SAP Best Practices content
- Power your project with ready-to-run business processes
- https://me.sap.com/processnavigator
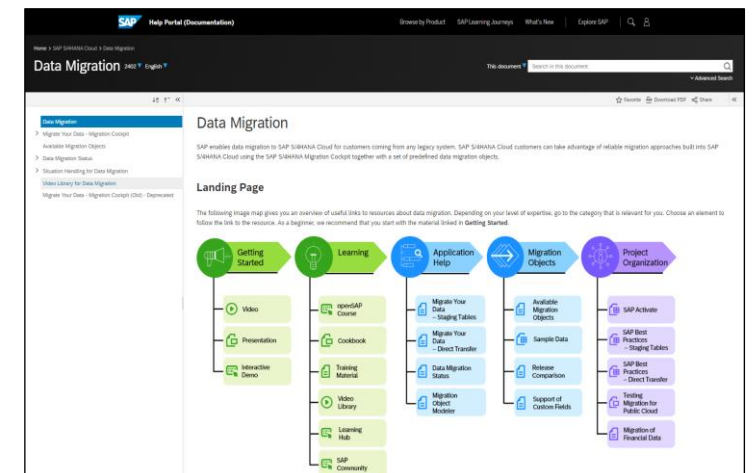
Data Migration Landing Page on SAP Help

- Access documentation – Application Help
- View additional slide decks and training information
- http://help.sap.com/S4_OP_DM

Further Links and Information
Without need of an installation
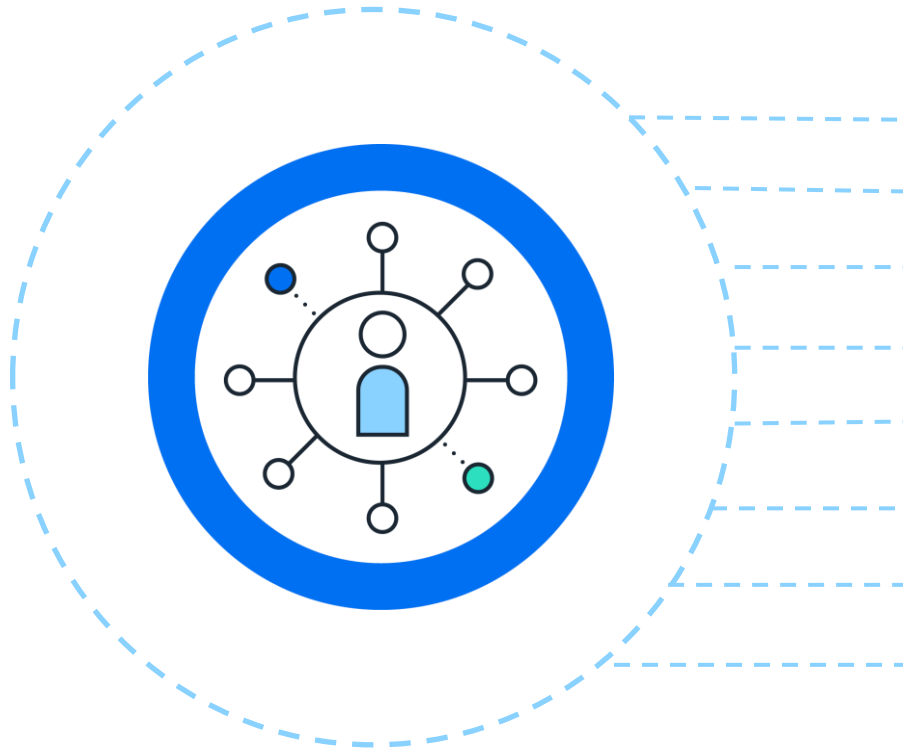
Available migration objects http://help.sap.com/S4_OP_MO

Migration object changes release comparison*

Support of Custom fields Staging Tables*

Migration Template Samples Staging Tables*

Migration Object Modeler Deep Dive Staging Tables, Direct Transfer

Data Migration Status app http://help.sap.com/S4_OP_DM_STATUS

Further Training Material

Transport Concept Staging Tables, Direct Transfer

* Staging Tables only

07

Key Take Aways

- SAP S/4HANA migration cockpit

Key Questions to Understand Your Data Migration Requirements

What deployment option is the target / receiver of the data?
SAP S/4HANA or SAP S/4HANA Cloud

Which data is needed from sources to operate S/4HANA the way you want?
Customizing? Master data? Open items? Balances?

What are the sources / sender systems of the data?
Number and type of source systems? Central master data management active?

Migrate data "as is" or transform on the fly?
Data transformations needed? Data quality improvement necessary?

Who needs to be involved?
Decisions to be taken? Major stakeholder?
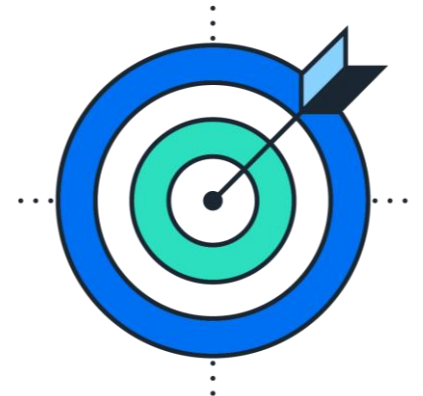
Bottom Line: Start as early as possible and test, test, test

Key Takeaways

SAP S/4HANA migration cockpit – the next-generation data migration software

- SAP's recommended tool for initial data load in new implementation scenarios

- Included in SAP S/4HANA and SAP S/4HANA Cloud

- Migration of data from SAP and non-SAP sources into SAP S/4HANA, SAP S/4HANA Cloud Private Edition, and SAP S/4HANA Cloud Public Edition

- Guided procedure to take users through the migration process; no programming required

- Flexibility for integration of custom business data, including data transformations

Select migration objects | Get data | Map and transform data — Model and design to reflect custom requirements | Simulate | Migrate | SAP S/4HANA Cloud Public Edition / SAP S/4HANA Cloud Private Edition / SAP S/4HANA

SAP Business Suite | Legacy
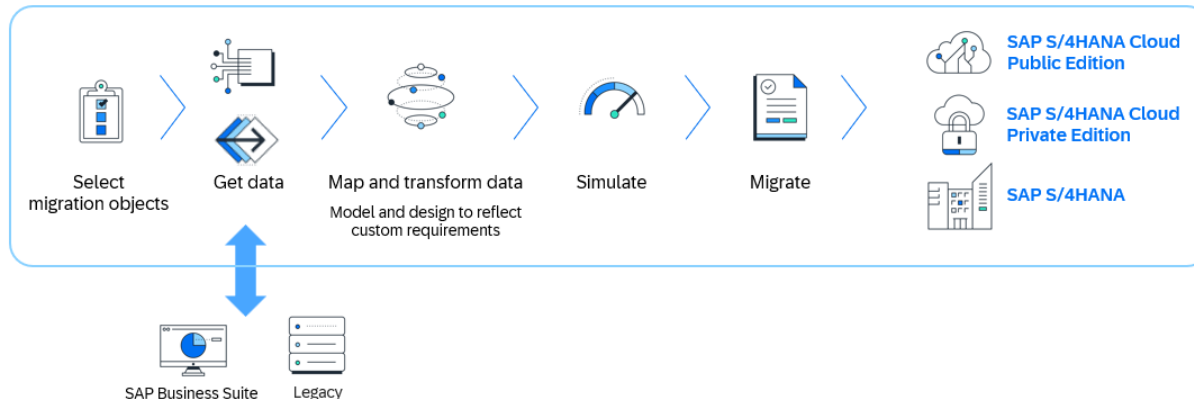
Migration approach
Data Transfer

 Migrate data using Staging Tables

 Migrate data directly from SAP System

Predefined migration content to SAP S/4HANA-specific to facilitates and accelerates your data migration

- Preconfigured content and mapping

- Automated mapping between template and target structure

- Migration programs generated automatically

Thank you.

SAP S/4HANA migration cockpit Product Management

✉ sap_s4hana_migration_cockpit@sap.com

Standard slide deck SAP S/4HANA :	[Migrate Your Data to SAP S/4HANA – SAP S/4HANA Migration Cockpit](#)
Standard slide deck SAP S/4HANA Cloud:	[Migrate Your Data to SAP S/4HANA Cloud – SAP S/4HANA Migration Cockpit](#)
Video:	[Migrate Data Using Staging Tables](#)
Video:	[Migrate Data Directly from SAP System](#)
Data migration landing pages	http://help.sap.com/S4_OP_DM or http://help.sap.com/S4_CE_DM
Community topic page	https://community.sap.com/topics/s4hana-migration-cockpit/
Click through tutorials	[SAP S/4HANA migration cockpit](#)
Classroom Training	[S4D445 Data Migration using the SAP S/4HANA Migration Cockpit](#) (based on 2021; chargeable)

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Appendix

SAP S/4HANA Migration Cockpit - File/Staging Approach
Overview on main functions / Function overview in former releases
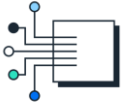
Feature	1909	2020	2021	2022
Transaction LTMC	X	X not recommended	- Only display mode	-
Fiori App Migrate Your Data	-	X	X	X
Use CSV files to upload data	-	-	-	X
Mass processing (instance based)	-	X (FPS01 – delete) (FPS02 – simulation, migration)	X	X
Transport Concept (via CTS)	-	-	X	X
View migration results	-	-	X	X
Download migration results	-	-	X (FPS01)	X
Mapping Down/Upload in Fiori	-	X	X	X
Delete mapping / Clean mapping task	-	-	X	X
Cancel button (in Monitor Screen, e.g. cancel simulation)	-	-	X	X
Finished project cannot be touched	-	-	X	X
Copy projects (*. see next slide)	-	-	X*	X*
Message download customizable	-	-	X (FPS01)	X
Setting data retention time	-	X	X	X

SAP S/4HANA Migration Cockpit - File/Staging Approach
Overview on main functions LTMOM in former releases

Feature	1909	2020	2021	2022
Reset Transfer Status	-	x	x	X
Copy and delete objects	-	x	x	x
Use project in different client	-	x	x	x
Client dependency (e.g. staging tables)	-	X	x	x
System check on modifiable/non-modifiable	-	x	x	x
Export/import projects	X (LTMC)	x	X (FPS0) - (FPS01)	-
Re-apply customer extensions after content upgrade	-	-	x	x
Copy Migration Object from one project to another project with link to original SAP delivered template*	- (no update of copied objects possible)	- (no update of copied objects possible)	- (no update of copied objects possible)	X (no update of copied objects possible)

*: Copy Project 2021 – objects in the project **can´t** be upgraded with standard content
Copy Project 2022 – objects in the project **can** be upgraded with standard content

SAP S/4HANA Migration Cockpit – Direct Transfer Approach
Overview on main functions / Function overview in former releases

The approach "Migrate data directly from SAP system" is available since release 1909. Find below **important** new features.

Feature / Migration Cockpit (Fiori)	2020	2021	2022
Transport projects and project elements	X	X	X
Mapping download/upload in Fiori	X	X	X
Mass processing (select a subset of instances for processing)	X	X	X
Additional view on messages (instances concerned by message)	X (FPS01)	X	X
Copy projects	X (FPS01)	X	X
Step selection split into: selection and prepare mapping tasks	-	X	X
Migration results view – display document no./record ID of migrated item	-	X	X
Detailed view on migration process (multi-step objects, error case)	-	X	X
Cancel function in MC monitor	-	X (FPS01)	X
Download migration results	-	X (FPS01)	X
Download selected items	-	X (FPS01)	X
Message download customizable	-	X (FPS01)	X

SAP S/4HANA Migration Cockpit – Direct Transfer Approach
Overview on main functions LTMOM in former releases

The approach "Migrate data directly from SAP system" is available since release 1909. Find below **important** new features.

Feature / LTMOM	2020	2021	2022
Copy objects	x	x	X
Delete objects	x	x	x
Selection – skip rule	x	x	x
Mapping – custom-own source code rules	X	x	x
Mapping download/upload **disabled** in LTMOM – now in Fiori only	X (FPS01)	x	x
Create migration object from template – copy an (updated) standard SAP migration object into your project (a second time if needed)	x	x	x
Selection – BAdI for selection	-	x	x
Selection – Filter values can be displayed	-	-	x

Preconfigured SAP S/4HANA Sandbox System
Demo scripts for SAP S/4HANA migration cockpit available

SAP S/4HANA trial system (external link):
https://www.sap.com/cmp/oth/crm-s4hana/s4hana-on-premise-trial.html

ⓘ Based on SAP S/4HANA 2022

Joerg Wolf **SAP**

April 23, 2019 | 8 minute read

SAP S/4HANA Fully-Activated Appliance: Demo Guides

💬 59   👍 71   👁 96,271

This blog gives information on the pre-configured sample demo scenarios in the SAP S/4HANA Fully-Activated Appliance. If you stumbled across this blog "by accident" and are interested in bringing up your own preconfigured SAP S/4HANA sandbox system within a few hours, please see this overview for the SAP S/4HANA Fully-Activated Appliance.

Direct links to the most recent appliance releases in SAP CAL are:
2021 SP00 / 2020 FPS02 / 2020 FPS01 / 2020 SP00 / 1909 FPS02 / 1909 FPS01 / 1909 SP00

Demo scripts for SAP S/4HANA migration cockpit (based on 2022 FPS01)

- File approach (bank)
- File approach (material)
- LTMOM – file approach (cost center texts)
- Staging approach (G/L accounts)
- Direct transfer approach (cost centers and activity types)
- LTMOM – direct transfer approach (cost center texts)
- Direct transfer approach (material)
- Direct transfer approach (vendor, CVI)
  ➡ https://blogs.sap.com/2020/04/27/sap-s-4hana-migration-cockpit-create-your-test-system/

System access for externals
External CAL: https://cal.sap.com/catalog#/solutions/b8a9077c-f0f7-47bd-977c-70aa6a6a2aa7

SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
How to fill the staging tables

How can I populate the staging tables?

To extract data from the source systems you can use either SAP tools or third-party tools. The staging tables have to be filled in a ready-to-load data format, i.e. the format expected by SAP S/4HANA.

- **SAP Smart Data Integration to fill staging tables** from Excel files
- **SAP Agile Data Preparation (ADP)**
- **Third-party tools to fill staging tables**

Note: For **SAP S/4HANA Cloud** you can only **use** the **remote SAP HANA database schema** to populate the staging tables using third-party or SAP Tools. Additional costs may apply for using when using the remote SAP HANA database schema option and ETL Tools to fill the staging tables.

SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

How to fill the staging tables – blogs in SAP community
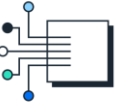
Good to know

To fill the staging tables, you can either use an ETL tool or fill the data directly on the SAP HANA database.

There are several blog posts listed below that explain the different methods to load data into the staging tables:

- [Migrating data using staging tables and methods for populating the staging tables](#)
- [Using SAP HANA Smart Data Integration (SDI) to load data to the staging tables](#)
- [SAP S/4HANA migration cockpit – creating and using synonyms for renaming staging tables](#)

SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
Filling the staging tables – Other possibilities

Good to know

To fill the staging tables, you can either use an ETL tool or fill the data directly on the SAP HANA database.

There are several **blog posts** listed below that explain the different methods to load data into the staging tables:

- Migrating data using staging tables and methods for populating the staging tables

- Using SAP Data Services to load data to the staging tables

- Using SAP HANA Smart Data Integration (SDI) to load data to the staging tables

- Using SAP HANA Studio to load data to the staging tables

- SAP S/4HANA migration cockpit – creating and using synonyms for renaming staging tables

We recommend that you look at the following materials and decide how you would like to populate the staging tables:

- KBA 2733253 FAQ Migrate Data Using Staging Tables