ASSETSTAGE
DATA STAGING & QUALITY PLATFORM

SAP S/4HANA Migration Checklist

Complete Data Preparation Guide for SAP PM to S/4HANA Asset Management Migration

AssetStage

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Before You Start

What's Different in S/4HANA

Area	SAP ECC PM	S/4HANA Asset Management	Migration Impact
Database	Any DB (Oracle, DB2, SQL Server)	SAP HANA only	Full data migration
Data Model	Traditional tables	Simplified data model	Some tables merged/removed
Transactions	Classic GUI (IW31, IE01, etc.)	Fiori apps + GUI	User retraining
Analytics	BW, BI reports	Embedded analytics	Report redesign
Integration	PI/PO, IDocs, BAPIs	SAP Integration Suite	Interface updates
Master Data	ECC structures	MDG-ready structures	Governance changes

Migration Paths

Path 1: Greenfield (New Implementation)

- Fresh S/4HANA installation

- Selective data migration
- Process redesign opportunity
- Highest effort, cleanest result

Path 2: Brownfield (System Conversion)

- Convert existing ECC to S/4HANA
- All data migrates
- Minimal process change
- Fastest but carries technical debt

Path 3: Selective Data Transition (Bluefield)

- New S/4HANA with selected data
- Best of both approaches
- Requires careful scoping

This checklist covers data preparation for all paths.

Phase 1: Discovery & Assessment

1.1 Current Environment Documentation

- ☐ Document SAP ECC version: _____
- ☐ Document Enhancement Package level: _____
- ☐ Document database platform: _____
- ☐ List active PM modules:
    - ☐ PM-EQM (Equipment Management)
    - ☐ PM-PRM (Preventive Maintenance)
    - ☐ PM-WOC (Work Order Management)
    - ☐ PM-SMA (Service Management)
    - ☐ PM-PRO (Projects)
    - ☐ PM-WCM (Work Clearance Management)

- ☐ CS (Customer Service)
- ☐ QM (Quality Management integration)

1.2 Data Volume Assessment

Run transaction DB02 or SE16N to get record counts:

Table	Description	Record Count	Data Size (MB)
EQUI	Equipment Master		
EQKT	Equipment Short Text		
EQUZ	Equipment Time Segment		
ILOA	PM Object Location and Account		
IFLOT	Functional Location Master		
IFLOTX	Functional Location Text		
AFIH	Maintenance Order Header		
AFKO	Order Header		
AFPO	Order Item		
AFVC	Operations		
AFVV	Quantities/Dates		
AUFK	Order Master		
CAUFV	Order Header View		
JEST	Object Status		
JSTO	Status Object Info		
MPOS	BOM Position		
MPLA	Maintenance Plan		
MHIS	Maintenance History		
QMEL	Quality Notification		
QMFE	Notification Items		
QMUR	Notification Causes		
VIQMEL	Notification View		

1.3 Customization Assessment

Custom Tables (Z tables):

```
Count of Z* tables in PM area: _____
Critical Z tables requiring migration:

1. _____________

2. _____________

3. _____________
```

Custom Fields (Append Structures, CI Includes):

```
Equipment (EQUI): _____ custom fields
Functional Location (IFLOT): _____ custom fields
Notification (QMEL): _____ custom fields
Order (AUFK): _____ custom fields
```

Custom Transactions:

Transaction	Description	Usage (High/Med/Low)	S/4HANA Equivalent
Z*			

Custom Reports (Y/Z programs):

Report	Description	Usage	Action (Migrate/Retire/Replace)

Enhancements & Modifications:

- ☐ Count of user exits (CMOD): _____
- ☐ Count of BADIs: _____
- ☐ Count of BTE: _____
- ☐ Count of modified SAP objects (SPAU/SPDD): _____

1.4 Data Quality Assessment

Equipment Master Quality:

```
* Count equipment missing key fields
SELECT COUNT(*) INTO @DATA(lv_no_floc)
  FROM equi
  WHERE tplnr IS INITIAL
```

```
    AND eqtyp <> 'V'.

SELECT COUNT(*) INTO @DATA(lv_no_class)
  FROM equi AS e
  LEFT JOIN klah AS k ON k~clint = e~clint
  WHERE k~clint IS NULL
    AND e~eqtyp <> 'V'.

SELECT COUNT(*) INTO @DATA(lv_no_mfr)
  FROM equi
  WHERE herst IS INITIAL
    AND eqtyp <> 'V'.
```

Record results:

Metric	Count	% of Total	Action Required
Equipment without functional location			
Equipment without classification			
Equipment without manufacturer			
Equipment without serial number			
Inactive equipment (never used)			
Duplicate serial numbers			

Functional Location Quality:

Metric	Count	% of Total	Action Required
FLOCs without structure indicator			
FLOCs without account assignment			
Orphan FLOCs (invalid parent)			
FLOCs with missing descriptions			

Phase 2: Data Cleansing

2.1 Equipment Master Cleanup

Identification:

- ☐ Standardize equipment categories (A, M, Q, etc.)
- ☐ Verify equipment types are consistently used
- ☐ Standardize equipment descriptions (see naming convention guide)

- ☐ Clean up manufacturer names (use vendor master)
- ☐ Clean up model numbers (consistent format)
- ☐ Verify/fill serial numbers
- ☐ Verify/fill inventory numbers

Organizational Assignment:

- ☐ Verify maintenance planning plant
- ☐ Verify maintenance plant
- ☐ Verify company code
- ☐ Verify cost center
- ☐ Verify business area
- ☐ Clean up work centers

Location:

- ☐ Verify functional location assignments
- ☐ Verify location (maintenance) assignments
- ☐ Verify room assignments
- ☐ Verify asset (fixed asset) links

Classification:

- ☐ Verify class type 002 assignments
- ☐ Fill missing characteristic values
- ☐ Standardize characteristic values
- ☐ Remove obsolete classifications

Delete/Archive Candidates:

- ☐ Equipment never installed (created but unused)
- ☐ Equipment scrapped >5 years ago
- ☐ Test/training equipment
- ☐ Duplicate equipment (merge first)

2.2 Functional Location Cleanup

Structure:

- ☐ Verify structure indicator consistency
- ☐ Verify hierarchy is correct (parent-child)
- ☐ Standardize descriptions
- ☐ Verify account assignment categories
- ☐ Clean up object types

Master Data:

- ☐ Fill missing planning plants
- ☐ Fill missing maintenance plants
- ☐ Verify cost center assignments
- ☐ Clean up location data (room, building)

Archive Candidates:

- ☐ Demolished facilities
- ☐ Divested assets
- ☐ Never-used planning locations

2.3 Work Order History Cleanup

Decide Retention Period:

- Open/active orders: All (must migrate)
- Completed orders: _____ years
- Archived orders: _____ years (may not migrate)

Data Quality:

- ☐ Close ancient open orders (or document why open)
- ☐ Verify all orders have valid equipment/FLOC
- ☐ Clean up orders on deleted equipment
- ☐ Verify operation data completeness
- ☐ Clean up orphan confirmations

2.4 Maintenance Plan Cleanup

- ☐ Review plan categories (time-based, counter-based, etc.)
- ☐ Deactivate obsolete plans
- ☐ Verify scheduling parameters
- ☐ Verify task list assignments
- ☐ Clean up call objects
- ☐ Verify maintenance item assignments

2.5 Notification Cleanup

Retention Decision:

- Completed notifications: _____ years
- Open notifications: All

Quality:

- ☐ Close ancient open notifications
- ☐ Verify catalog assignments
- ☐ Verify damage/cause codes
- ☐ Clean up notifications on deleted objects

Phase 3: S/4HANA Specific Preparation

3.1 Simplified Data Model Changes

S/4HANA merges/changes some tables. Verify your custom code and interfaces.

ECC Tables	S/4HANA Status	Action Required
EQUI, EQUZ, EQBS	Merged to EQUI	Check custom joins
IFLOT, IFLOTX	Still separate	None
AFIH, AFKO, AFPO	Still separate	None
JEST	Still exists	None
T370* (old PM config)	Deprecated	Use new config

ECC Tables	S/4HANA Status	Action Required
QMEL, VIQMEL	VIQMEL is view	Use QMEL

3.2 Business Partner Conversion

S/4HANA requires Business Partners instead of separate vendor/customer masters.

- ☐ Verify vendor master data quality
- ☐ Plan BP conversion approach (synchronous vs batch)
- ☐ Map vendor to BP for equipment manufacturer
- ☐ Test equipment-BP relationships

3.3 Material Master Changes

- ☐ Verify material types are S/4HANA compatible
- ☐ Check for deprecated fields
- ☐ Verify stock management settings
- ☐ Test BOM structures

3.4 Finance Integration Changes

- ☐ Verify cost element assignments
- ☐ Check for deprecated cost object types
- ☐ Verify activity type assignments
- ☐ Test settlement rules

Phase 4: Data Export

4.1 Export Sequence

Export in dependency order:

Tier 1: Organizational Structure

1. ☐ Company Codes (T001)
2. ☐ Plants (T001W)
3. ☐ Planning Plants (T024F)

4. ☐ Maintenance Plants

1. ☐ Work Centers (CRHD, CRCO)
2. ☐ Cost Centers (CSKS)

Tier 2: Master Data Setup

1. ☐ Planner Groups (T024I)
2. ☐ Maintenance Activity Types (T353I)
3. ☐ Object Types (T370T)
4. ☐ ABC Indicators (T370A)
5. ☐ Equipment Categories (T370K)

Tier 3: Catalogs and Codes

1. ☐ Catalog Profiles (T357P)
2. ☐ Catalogs (TQ80)
3. ☐ Code Groups (QPCD)
4. ☐ Codes (QPCT)
5. ☐ Damage Codes
6. ☐ Cause Codes
7. ☐ Task Codes

Tier 4: Classification

1. ☐ Class Types (T174)
2. ☐ Classes (KLAH)
3. ☐ Characteristics (CABN)
4. ☐ Class-Characteristic Links (KSML)

Tier 5: Functional Locations

1. ☐ Structure Indicators (T370S)
2. ☐ Functional Location Hierarchy
3. ☐ Functional Location Master (IFLOT)

4. ☐ Functional Location Texts (IFLOTX)
5. ☐ Functional Location Data (ILOA)
6. ☐ Functional Location Classification

Tier 6: Equipment

1. ☐ Equipment Master (EQUI)
2. ☐ Equipment Texts (EQKT)
3. ☐ Equipment-FLOC Links
4. ☐ Equipment Classification
5. ☐ Equipment BOM Links
6. ☐ Measuring Points (IMPT)
7. ☐ Measurement Documents (IMRG)

Tier 7: Task Lists

1. ☐ Task List Headers (PLKO)
2. ☐ Task List Operations (PLPO)
3. ☐ Task List Components (STPO via PLMZ)
4. ☐ Maintenance Packages (PLWP)

Tier 8: Maintenance Plans

1. ☐ Maintenance Plan (MPLA)
2. ☐ Maintenance Items (MPOS)
3. ☐ Maintenance Cycles (MZYK)
4. ☐ Scheduling Parameters (MHIS)
5. ☐ Call Objects

Tier 9: Transactional Data

1. ☐ Notifications (QMEL, QMFE, QMUR)
2. ☐ Order Headers (AUFK, AFIH)
3. ☐ Order Operations (AFVC, AFVV)

4. ☐ Order Components (RESB)
5. ☐ Confirmations (AFRU)
6. ☐ Goods Movements (MSEG linked)

4.2 Export Methods

Option 1: SAP Migration Cockpit (Recommended for S/4HANA)

- Use standard migration objects
- Handles data transformations
- Built-in validation

Option 2: LSMW (Legacy System Migration Workbench)

- Traditional SAP migration tool
- More manual control
- Requires more expertise

Option 3: Direct Database Export

- Maximum flexibility
- Requires transformation layer
- Use for complex scenarios

Export Format Specification:

Field Type	Format	Example
Date	YYYYMMDD	20241115
Time	HHMMSS	143022
Decimal	No thousands separator, period for decimal	1234.56
Text	UTF-8 encoded	
Delimiter	Tab or pipe	

Phase 5: Data Transformation

5.1 Key Field Mappings

Equipment Master (EQUI):

ECC Field	S/4HANA Field	Transformation	Notes
EQUNR	EQUNR	None	Primary key
EQKTX	EQKTX	None	Short text
TPLNR	TPLNR	None	Functional location
EQTYP	EQTYP	None	Equipment category
EQART	EQART	None	Equipment type
ANSWT	ANSWT	None	Acquisition value
ANSDT	ANSDT	None	Acquisition date
HERST	HERST	Business Partner conversion	Manufacturer
TYPBZ	TYPBZ	None	Model
SERGE	SERGE	None	Serial number
MATNR	MATNR	None	Material
SWERK	SWERK	None	Maintenance plant
INGRP	INGRP	None	Planner group
ABCKZ	ABCKZ	None	ABC indicator
IWERK	IWERK	None	Planning plant
BEBER	BEBER	None	Plant section
ANLNR	ANLNR	None	Fixed asset

Functional Location (IFLOT):

ECC Field	S/4HANA Field	Transformation	Notes
TPLNR	TPLNR	None	Primary key
PLTXT	Via IFLOTX	None	Description
FLTYP	FLTYP	None	FLOC type
TPLKZ	TPLKZ	None	Structure indicator
TRESSION	Check usage	May be simplified	Category
IWERK	IWERK	None	Planning plant
SWERK	SWERK	None	Maint. plant

ECC Field	S/4HANA Field	Transformation	Notes
MSGRP	MSGRP	None	Auth. group

Maintenance Order (AUFK + AFIH):

ECC Field	S/4HANA Field	Transformation	Notes
AUFNR	AUFNR	None	Order number
AUART	AUART	Verify mapping	Order type
AUTYP	AUTYP	None	Order category
BUKRS	BUKRS	None	Company code
WERKS	WERKS	None	Plant
EQUNR	EQUNR	None	Equipment
TPLNR	TPLNR	None	FLOC
ARBPL	ARBPL	None	Work center
KTEXT	KTEXT	None	Description
IPHAS	IPHAS	None	PM phase

5.2 Validation Rules

Pre-Load Validation:

```
* Validate equipment references valid FLOC
SELECT e~equnr, e~tplnr
  FROM zstg_equi AS e
  LEFT JOIN zstg_iflot AS f ON f~tplnr = e~tplnr
  WHERE e~tplnr IS NOT INITIAL
    AND f~tplnr IS NULL
  INTO TABLE @DATA(lt_orphan_equi).

* Validate orders reference valid equipment
SELECT a~aufnr, a~equnr
  FROM zstg_aufk AS a
  LEFT JOIN zstg_equi AS e ON e~equnr = a~equnr
  WHERE a~equnr IS NOT INITIAL
    AND e~equnr IS NULL
  INTO TABLE @DATA(lt_orphan_orders).

* Validate no duplicate equipment numbers
SELECT equnr, COUNT(*) AS count
  FROM zstg_equi
  GROUP BY equnr
```

```
HAVING COUNT(*) > 1
INTO TABLE @DATA(lt_dup_equi).
```

Domain Validation:

- ☐ Equipment categories exist in T370K
- ☐ Equipment types exist in T370T
- ☐ Structure indicators exist in T370S
- ☐ Planner groups exist in T024I
- ☐ Work centers exist in CRHD
- ☐ Plants exist in T001W

Phase 6: S/4HANA Load

6.1 Pre-Load Configuration

Organizational Setup:

- ☐ Company codes created
- ☐ Plants created
- ☐ Planning plants configured
- ☐ Work centers created
- ☐ Cost centers created
- ☐ Planner groups created

Master Data Config:

- ☐ Equipment categories configured
- ☐ Equipment types configured
- ☐ Structure indicators configured
- ☐ Object types configured
- ☐ Number ranges assigned

Catalog Config:

- ☐ Catalog profiles created

- ☐ Damage code catalogs loaded
- ☐ Cause code catalogs loaded
- ☐ Activity type catalogs loaded

Classification:

- ☐ Class types configured
- ☐ Classes created
- ☐ Characteristics created
- ☐ Classes linked to characteristics

6.2 Load Sequence

1. ☐ Structure Indicators
2. ☐ Catalog/Code groups
3. ☐ Classification (classes, characteristics)
4. ☐ Functional Locations (by hierarchy level)
    - ☐ Level 1 (top)
    - ☐ Level 2
    - ☐ Level 3
    - ☐ Level 4+
5. ☐ Equipment Master
6. ☐ Equipment Classification
7. ☐ Measuring Points
8. ☐ Measurement Documents
9. ☐ BOMs
10. ☐ Task Lists
11. ☐ Maintenance Plans
12. ☐ Notifications (historical)
13. ☐ Orders (historical)

14. ☐ Confirmations

6.3 Load Methods

Migration Cockpit Objects for PM:

Object	Description	S/4HANA Object Name
Functional Location	FLOC master data	S4_FUN_LOC
Equipment	Equipment master	S4_EQUIPMENT
Measuring Point	Counter/gauge	S4_MEAS_POINT
Measurement Document	Readings	S4_MEAS_DOC
Maintenance Plan	PM schedules	S4_MAINT_PLAN
Maintenance Item	Plan items	Part of S4_MAINT_PLAN
Task List	Routings	S4_TASK_LIST_PM

Phase 7: Validation & Testing

7.1 Record Count Reconciliation

Object	ECC Count	S/4HANA Count	Variance	Status
Functional Locations				
Equipment				
Measuring Points				
Maintenance Plans				
Task Lists				
Notifications				
Orders				
Confirmations				

7.2 Functional Test Cases

Equipment Management (IE01, IE02, IE03):

Test	Transaction	Expected Result	Pass/Fail

Test	Transaction	Expected Result	Pass/Fail
View equipment	IE03	Display all fields correctly	
View equipment BOM	IE03 → Structure	BOM displays	
View equipment docs	IE03 → Documents	Links work	
View where-used	IE03 → Where-used	Shows orders/notifications	
Create equipment	IE01	Creates with all fields	
Change equipment	IE02	Changes save correctly	
Move equipment	IE01	FLOC assignment updates	

Functional Location (IL01, IL02, IL03):

Test	Transaction	Expected Result	Pass/Fail
View FLOC	IL03	Display correctly	
View FLOC hierarchy	IL03 → Structure	Tree displays	
View FLOC equipment	IL03 → Equipment	List displays	
Create FLOC	IL01	Creates in hierarchy	
Change FLOC	IL02	Changes save	

Notification (IW21, IW22, IW23):

Test	Transaction	Expected Result	Pass/Fail
Create notification	IW21	Creates with codes	
Add items	IW22	Damage/cause codes	
Complete notification	IW22	Status changes	
Create order from notif	IW22 → Order	Order created	

Maintenance Order (IW31, IW32, IW33):

Test	Transaction	Expected Result	Pass/Fail
Create order	IW31	Creates with operations	
Plan operations	IW32	Add labor/materials	
Release order	IW32	Status = REL	
Confirm order	IW41	Time/completion	

Test	Transaction	Expected Result	Pass/Fail
Complete order	IW32	TECO status	
View order history	IW33	All data visible	

Maintenance Planning (IP10, IP30):

Test	Transaction	Expected Result	Pass/Fail
View maint plan	IP03	Displays correctly	
Schedule plan	IP10	Creates calls	
Generate orders	IP30	Orders created	
View scheduling params	IP03	Correct parameters	

7.3 Integration Test Cases

Integration	Test	Expected Result	Pass/Fail
MM - Materials	Create order with components	Material reserved	
MM - Goods Issue	Confirm with goods movement	Stock decreases	
FI - Cost Posting	Confirm labor	Cost hits cost center	
FI - Settlement	Settle order	Costs settled	
HR - Time	Confirm with CATS	Time recorded	
QM - Inspection	Complete with inspection	QM lot created	

7.4 Fiori App Testing

App	Function	Test	Pass/Fail
My Maintenance Notifications	Create/view notifications	Create, add damage code	
Maintenance Orders	View/process orders	View details, confirm	
Equipment Master	View equipment	Search, display hierarchy	
Functional Locations	View FLOC	Search, display hierarchy	

App	Function	Test	Pass/Fail
Schedule Maintenance Plans	Schedule plans	Generate orders	

Phase 8: Cutover

8.1 Cutover Timeline

Phase	Duration	Activities
T-4 weeks	1 week	Final dress rehearsal, fix issues
T-2 weeks	1 week	Final data freeze decisions, communicate
T-1 week	1 week	Final testing sign-off, runbook review
Cutover weekend	2-3 days	Execute migration
T+1 week	1 week	Hypercare, issue resolution
T+1 month	Ongoing	Stabilization

8.2 Cutover Runbook

Step	Task	Owner	Duration	Start	End	Status
1	Disable ECC PM transactions		30 min			
2	Final ECC data export		4 hrs			
3	Transform delta data		2 hrs			
4	Validate transformed data		2 hrs			
5	Load to S/4HANA		4 hrs			
6	Reconcile counts		2 hrs			
7	Execute test cases		4 hrs			
8	Go/No-Go decision		1 hr			
9	Enable S/4HANA access		30 min			
10	User communication		30 min			

8.3 Rollback Plan

If Go/No-Go = No-Go:

1. Disable S/4HANA access
2. Re-enable ECC access
3. Document issues
4. Schedule remediation
5. Plan new cutover date

Appendix: Transaction Code Mapping

Function	ECC Transaction	S/4HANA Transaction	Fiori App
Create Equipment	IE01	IE01	Manage Equipment
Change Equipment	IE02	IE02	Manage Equipment
Display Equipment	IE03	IE03	Manage Equipment
Create Func. Location	IL01	IL01	Manage Functional Locations
Change Func. Location	IL02	IL02	Manage Functional Locations
Display Func. Location	IL03	IL03	Manage Functional Locations
Create Notification	IW21	IW21	My Maintenance Notifications
Change Notification	IW22	IW22	My Maintenance Notifications
Display Notification	IW23	IW23	My Maintenance Notifications
Create Order	IW31	IW31	Maintenance Orders
Change Order	IW32	IW32	Maintenance Orders
Display Order	IW33	IW33	Maintenance Orders
Confirm Order	IW41	IW41	Confirmation of MaintOrd
Order List	IW39	IW39	Maintenance Orders
Create Maint Plan	IP01	IP01	Maintain Maint Plans
Schedule Maint Plan	IP10	IP10	Schedule Maintenance Plans
Generate Orders	IP30	IP30	N/A

Appendix: Common Issues

Issue	Cause	Solution
FLOC hierarchy broken	Parent loaded after child	Load top-down by level
Equipment without FLOC	Invalid TPLNR	Validate FLOC exists before loading
Classification errors	Class not activated	Activate classes before loading
MP scheduling fails	Missing parameters	Verify all scheduling params
Confirmation errors	Invalid work center	Verify work center-plant assignment
Settlement errors	Missing rules	Configure settlement rules
BP conversion issues	Missing vendor data	Clean vendor master first

Need help with your CMMS migration? AssetStage provides data staging, validation, and transformation services for any CMMS platform. Contact us at sales@assetstage.io