

CNV-1001 Bill of Materials

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Purpose

The purpose of this document is to define the conversion approach to create Bill of Material (Usage = 4 (Plant Maintenance BOM) in S/4 HANA.

In Syensqo's SAP S/4HANA environment, the Plant Maintenance Bill of Materials (BOM) defines the structured list of components required to perform a specific maintenance task or build an assembly. Each BOM represents a hierarchical breakdown of items - materials, assemblies, or parts - along with their respective quantities and usage context.

In the maintenance and asset management domain, three types of BOMs are utilized:

- Functional Location BOM – Linked to a specific technical location, outlining the parts typically required for maintenance activities at that location.
- Equipment BOM – Associated with a particular equipment asset, detailing spare parts and components relevant to its structure or maintenance.
- Material BOM – Tied to a material number, commonly used in manufacturing or for assemblies that are consumed or produced.

For rotatable materials—such as repairable or reusable components—always refer to the corresponding Equipment or Functional Location Bill of Materials (BOM). Only components that are specific to that individual Equipment or Functional Location and not commonly used across other similar assets, should be included. This ensures that the BOM accurately reflects asset-specific configurations and supports targeted maintenance planning.

Conversion Scope

The scope of this document covers the approach for converting relevant Bill of Material from Legacy Source Systems into S/4HANA following the Bill of Material Master Data Design Standard.

A Bill of Materials (BOM) is a structured list of components, spare parts, or assemblies required for maintenance activities on technical objects like equipment or functional locations. It helps streamline maintenance planning, spare parts procurement, and work order execution.

The data from legacy system includes:

1. BOM Category (STKO-STLTY):
 - a. E-Equipment BOM (EQST-EQUNR) for Equipment where BOM Plant (EQST-WERKS) is in scope
 - b. M-Material BOM (MAST-MATNR) for Assembly where BOM Plant (MAST-WERKS) is in scope
 - c. T-Functional Location BOM (TPST-TPLNR) for Functional Location where BOM Plant (TPST-WERKS) is in scope
 - d. For the relevant plants in scope, refer to Value Mapping: Plant (Maintenance Plant = Yes)
2. BOM Usage (EQST-STLAN/MAST-STLAN/TPST-STLAN) = 4 (Plant Maintenance)
3. Material BOM with the latest Alternative BOM (MAST-STLAL), if multiple alternative BOMs exist

The data from legacy system excludes:

1. Material BOM where the BOM item category (STPO-POSTP) does not contain at least one of the following:
 - a. L (Stock Item)
 - b. N (Non Stock Item)
2. BOM Header with deletion indicator checked (STKO-LKENZ="X")
3. BOM Header with deletion flag checked (STKO-LOEKZ="X")
4. BOM Item with deletion indicator checked (STPO-LKENZ="X" and STAS-LKENZ = "X")
5. Previous Alternative BOM (MAST-STLAL) for Material BOM with more than one Alternative BOM

For info only, a Material BOM for relevant Assembly excludes BOM Assembly Header (MAST-MATNR) that are not assigned to Functional Location (IFLOT-SUBMT), Equipment (EQUZ=SUBMT) or Task List (PLKO-ISTRU).

The following are not in scope for BOM Conversion:

1. Document Info Record (Item Category D)
2. Long Text
3. BOM Item Category T (Text Item)

In other words, if the BOM contains the above, the BOM will still be migrated, but without the above.

List of Tables to extract for this object is maintained here: [Extract Table Register](#).

Scenarios for Migration from Legacy (PF2,WP2)

Scenario	Legacy	To-Be Approach
1	Functional Location BOM or Equipment BOM with at least 1 BOM Component which has relevant Material (not Assembly).	Migrate BOM extracted data as-is, with the legacy values mapped to the to-be values.
2	Material BOM (where Header is relevant Assembly) and the Assembly is assigned to relevant Functional Location / Equipment / Task List. There is at least 1 BOM Component which has relevant Material (not Assembly).	1. Migrate BOM extracted as-is. (The Assembly in the BOM Header is migrated as a Sub Assembly. A new Construction Type is created in the Construction Type DCT) and assigned to the Functional Location / Equipment / Task List. 2. Create a new BOM in the BOM DCT with the Construction Type (above) as the BOM Header and Sub Assembly (above) as the BOM Item.
3	Material BOM (where Header is relevant Assembly) and the Assembly is a sub-item of another BOM. There is at least 1 BOM Component which has relevant Material (not Assembly) This BOM is a sub item of another BOM, and possibly have more than 1 levels of BOMS in between, and the top level BOM is assigned to relevant Functional Location / Equipment / Task List. <u>Example:</u> BOM Level 1 > Assigned to relevant Functional Location BOM Level 2 > BOM Header and BOM Components are Assembly BOM Level 3 > BOM Header and BOM Components are Assembly ... Lowest Level BOM > BOM Header is Assembly, BOM Component is relevant Material	Legacy extracted data cannot be migrated as is. 1. A new Construction Type is created (in the Construction Type DCT) and assigned to the Functional Location / Equipment / Task List. 2. Create a new BOM in the BOM DCT with the lowest level BOM - Sub Assembly as the BOM Header 3. Create a new BOM in the BOM DCT with the Construction Type (above) as the BOM Header and Sub Assembly (above as the BOM Item). <u>Notes:</u> To-Be Design of BOM only allows maximum 3 levels of BOM - hence legacy BOM with more than 3 levels will be migrated with only 3 levels: 1. Level 1 - Construction Type 2. Level 2 - Sub Assembly 3. Level 3 - Material (Stocked / Non-Stocked)
4	Material BOM (where Header is Assembly - Material with Material Type relevant for Assembly) and the Assembly is not assigned to Functional Location / Equipment / Task List.	BOM is not relevant for migration. If required, BOM Header needs to be assigned to a relevant Functional Location / Equipment / Task List.
5	Material BOM (where Header is Material with Material Type relevant for Assembly) and the Assembly is a sub-item of another BOM. There is at least 1 BOM Component which has relevant Material (not Material Type relevant for Assembly) This BOM is a sub item of another BOM, however the top level BOM is not assigned to relevant Functional Location / Equipment / Task List. <u>Example:</u> BOM Level 1 > Not assigned to relevant Functional Location / Equipment / Task List BOM Level 2 > BOM Header and BOM Components are Assembly (Material with Material Type relevant for Assembly) ... Lowest Level BOM > BOM Header is Assembly, BOM Component is relevant Material	BOM and all levels of BOMs are not relevant for migration. If required, Level 1 BOM Header needs to be assigned to a relevant Functional Location / Equipment / Task List.

The following summarises the table above:

Scenario	BOM Type	BOM Level	Additional Notes	To Be Approach	Migrate Extracted Data	DCT Action
1	FL BOM EQ BOM	2	-	1. Migrate Extracted Data	Migrate BOM as-is, with the legacy values mapped to the to-be values.	Not Applicable
2	Material BOM (Assembly Header)	2	Top Level 1 Header Material is assigned to FL /EQ/TL	1. Migrate Extracted Data 2. Migrate DCT Data	Migrate BOM as-is, with the legacy values mapped to the to-be values.	Create a new BOM in the BOM DCT with the Construction Type as the BOM Header and Sub Assembly as the BOM Item.
3	Material BOM (Assembly Header)	3 or more	Top Level 1 Header Material is assigned to FL /EQ/TL	Migrate DCT Data. BOM with multiple levels in Legacy will be migrated to S/4 with only 3 levels: - Level 1 - Construction Type - Level 2 - Sub Assembly - Level 3 - Material (Stocked / Non-Stocked)	Not Applicable	1. Create a new BOM in the BOM DCT with the Construction Type as the BOM Header and Sub Assembly as the BOM Item. 2. Create a new BOM
4	Material BOM (Assembly Header)	2	Top Level 1 Header Material is not assigned to FL/EQ/TL	BOM is not relevant for migration. If required, BOM Header needs to be assigned to a relevant Functional Location / Equipment / Task List.	Not Applicable	Not Applicable
5	Material BOM (Assembly Header)	3 or more	Top Level 1 Header Material is not assigned to FL/EQ/TL	BOM and all levels of BOMs are not relevant for migration. If required, Level 1 BOM Header needs to be assigned to a relevant Functional Location / Equipment / Task List.	Not Applicable	Not Applicable

List of source systems and approximate number of records

Source	Scope	Source Approx No. of Records	Target System	Target Approx No. of Records
PF2, WP2	Relevant BOM will be extracted from PF2 and WP2	10,000	S/4 HANA	10,000
DCT	BOM for plants which do not have data existing from PF2 and PF2 Additional BOM originating from PF2 and WP2 (if required).	10,000	S/4HANA	10,000

Additional Information

Multi-language Requirement

BOM does not have multi language support. BOM texts will be migrated using EN logon using desired language i.e User log on language (ie based on language assigned to the BOM Plant).

Document Management

Refer to the [Document Management in the SyWay Solution](#).

Note: Documents attached to BOM will be migrated as part of 9104-EAM Attachments.

Legal Requirement

Not Applicable

Special Requirements

Not Applicable

Target Design

The technical design of the target for this conversion approach.

1. BOM Header

Table	Field	Data Element	Field Description	Data Type	Length	Requirement
Fields specific to Functional Location BOM						
TPST	TPLNR	TPLNR	Functional Location	CHAR	30	Mandatory for Functional Location BOM
TPST	WERKS	WERKS_D	Plant	CHAR	4	Mandatory for Functional Location BOM
TPST	STLAN	STLAN	BOM Usage	CHAR	1	Mandatory for Functional Location BOM
Fields specific to Equipment BOM						
EQST	EQUNR	EQUNR	Equipment	CHAR	18	Mandatory for Equipment BOM
EQST	WERKS	WERKS_D	Plant	CHAR	4	Mandatory for Equipment BOM
EQST	STLAN	STLAN	BOM Usage	CHAR	1	Mandatory for Equipment BOM
Fields specific to Material BOM						
MAST	MATNR	MATNR	Material Number	CHAR	40	Mandatory for Material BOM
MAST	WERKS	WERKS_D	Plant	CHAR	4	Mandatory for Material BOM
MAST	STLAN	STLAN	BOM Usage	CHAR	1	Mandatory for Material BOM
Generic fields for BOM Header						
STKO	DATUV	DATUV	Valid-From Date	DATS	8	Mandatory
STKO	BMENG	BASMN	Base quantity	QUAN	13	Mandatory
STKO	STLST	STLST	Bill of Material Status	CHAR	2	Mandatory
STZU	ZTEXT	CSTEXT	BOM Description	CHAR	40	Mandatory

2. BOM Item

Table	Field	Data Element	Field Description	Data Type	Length	Requirement
Fields specific to Functional Location BOM						
TPST	TPLNR	TPLNR	Functional Location	CHAR	30	Mandatory for Functional Location BOM Key to link to BOM Header
TPST	WERKS	WERKS_D	Plant	CHAR	4	Mandatory for Functional Location BOM Key to link to BOM Header
Fields specific to Equipment BOM						
EQST	EQUNR	EQUNR	Equipment	CHAR	18	Mandatory for Equipment BOM Key to link to BOM Header
EQST	WERKS	WERKS_D	Plant	CHAR	4	Mandatory for Equipment BOM Key to link to BOM Header
Fields specific to Material BOM						
MAST	MATNR	MATNR	Material Number	CHAR	40	Mandatory for Material BOM Key to link to BOM Header
MAST	WERKS	WERKS_D	Plant	CHAR	4	Mandatory for Material BOM Key to link to BOM Header
Generic Fields for BOM Item						
STPO	POSNR	SPOSN	BOM Item Number	CHAR	4	Mandatory
STPO	POSTP	POSTP	Item category (Bill of Material)	CHAR	1	Mandatory
STPO	IDNRK	IDNRK	BOM component	CHAR	40	Mandatory
STPO	MENGE	KMPMG	Component Quantity	QUAN	13	Mandatory

STPO	MEINS	KMPME	Component Unit of Measure	UNIT	3	System (This field is included for reference and validation of BOM Component Quantity only)
STPO	SANKA	CS_SANKA	Indicator for Relevancy to Costing	CHAR	1	Mandatory
STPO	STKKZ	STKKZ	PM assembly indicator	CHAR	1	Conditional

Bill of Material Data strictly adheres to the Master Data Standard. The complete information of the key fields that hold the Bill of Material information follows the Master Data Standard document that is located [here](#).

Data Cleansing

ID	Criticality	Error Message/Report Description	Rule	Output	Source System
1001-001	C1	Relevant BOM Component Quantity is Zero or Negative.	Relevant Bill of Material with BOM Item where the Material is not blank and Quantity <= 0.	BOM Header, Plant, BOM Item Number, Material, Component Quantity	PF2/WP2
1001-002	C3	Info Report: No Component linked to Bill of Material. These BOMs are not relevant for migration.	Bill of Material whereby there is no BOM Item with relevant Material / Assembly as BOM Component.	Functional Location, Equipment, Material, Plant, BOM Category, Usage, Item Number, Item Category, Material Number, Quantity, Document Type Document Part, Document Version, Document Number, Item Text 1, Item Text 2.	PF2/WP2
1001-003	C3	Info Report: Relevant BOM with BOM Component which is not relevant. These BOMs are migrated but the selected components are not relevant for migration.	Relevant Bill of Material whereby the BOM Component is a Material which is not relevant for migration.	Functional Location, Equipment, Material, Plant, BOM Category, Usage, Item Number, Item Category, Material Number, Quantity	PF2/WP2
1001-004	C3	Info Report: Relevant BOM with BOM Component where Material is not extended to the BOM Header plant.	Relevant Bill of Material whereby the BOM Component is a Material not extended to the BOM Header Plant.	Functional Location, Equipment, Material, Plant, BOM Category, Usage, Item Number, Item Category, Material Number, Quantity	PF2/WP2
1001-005	C3	Info Report: Functional Location BOM assigned to non-relevant Functional Location (based on Category and Equipment Installation check). These BOMs are not relevant for migration.	Bill of Material for relevant Plant with BOM Category (T-Functional Location) and with no Deletion Indicator but are assigned to non relevant Functional Location. Non relevant FL means: 1. FL that are not relevant 2. FL that are relevant, but does not have FL Category (IFLOT-FLTYP) = "A" and Equipment Installation Indicator (IFLOT-IEQUI) <> "X"	Functional Location, Plant, BOM Category, Usage	PF2/WP2
1001-006	C3	Info Report: Equipment BOM assigned to non-relevant Equipment. These BOMs are not relevant for migration.	Bill of Material for relevant Plant with BOM Category (E-Equipment) and with no Deletion Indicator but are assigned to non relevant Equipment.	Equipment, Plant, BOM Category, Usage	PF2/WP2
1001-007	C3	Info Report: Relevant Functional Location BOM with blank Plant. For these BOMs, the Plant will be defaulted from the Functional Location Plant.	Bill of Material with BOM Category (T-Functional Location) assigned to relevant Functional Location with blank Plant	Functional Location, FL Plant, BOM Category, Usage	PF2/WP2
1001-008	C3	Info Report: Relevant Equipment BOM with blank Plant. For these BOMs, the Plant will be defaulted from the Equipment Plant.	Bill of Material with BOM Category (E-Equipment) assigned to relevant Equipment with blank Plant	Equipment, EQ Plant, BOM Category, Usage	PF2/WP2
1001-009	C3	Info Report: Material BOM with previous Alternative BOM are not relevant for migration.	Bill of Material with BOM Category (M-Material) for relevant plant with more than 1 Alternative BOM, report all the previous Alternative BOM except for the latest	Material, Plant, BOM Category, Usage, Alternative BOM	PF2,WP2

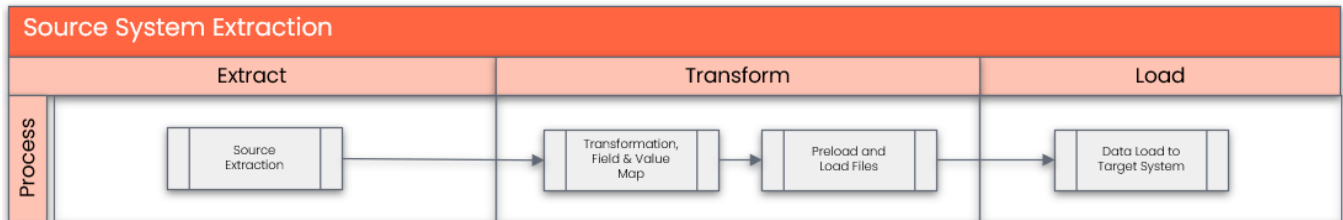
1001-010	C3	Info Report: Material BOM with at least one BOM Item with Stocked / Non-Stocked Material whereby the Header Material is not a relevant Assembly. These BOMs are not relevant for migration.	Bill of Material with BOM Category (M-Material) for relevant plant with 1 or more Stocked / Non-Stocked Material whereby the Header Material is not a relevant Assembly	Material, Plant, BOM Category, Usage, Alternative BOM, Item Number, Item Category, Material Number, Quantity	PF2, WP2
1001-011	C3	Info Report: Relevant BOM with BOM Item Category D (Document Item). These BOMs are migrated but the selected Document Items are not relevant for migration.	Bill of Material whereby the BOM Item is a Document Item and not relevant to be migrated.	Functional Location, Equipment, Material, Plant, BOM Category, Usage, Item Number, Item Category, Material Number, Quantity, Document Type Document Part, Document Version, Document Number	PF2/WP2
1001-012	C3	Info Report: Relevant BOM with BOM Item Category T (Text Item). These BOMs are migrated but the selected Text Items are not relevant for migration.	Bill of Material whereby the BOM Item is a Text Item and not relevant to be migrated.	Functional Location, Equipment, Material, Plant, BOM Category, Usage, Item Number, Item Category, Material Number, Quantity, Item Text 1, Item Text 2	PF2/WP2

Note: List of Cleansing is maintained here: [Conversion Specs Register \(DCT & Cleansing Report\)](#)

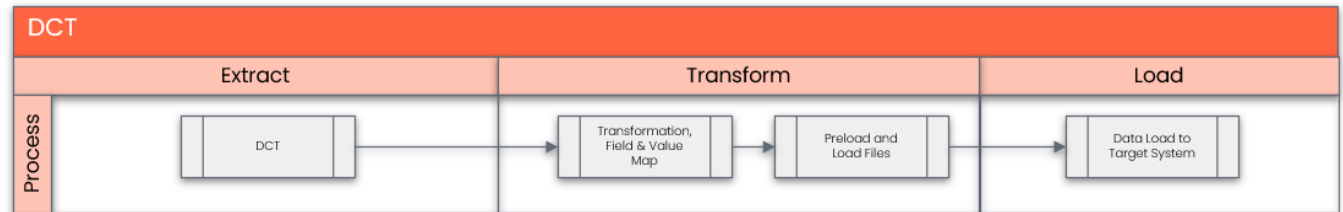
Conversion Process

The high-level process is represented by the diagrams below.

The following represents the high-level process for Source System Extraction:



The following represents the high-level process for DCT:



Collection will be done manually in the Data Collection Template for the following scenarios:

- For sites not on SAP-PF2 or WP2 systems
- For new BOMs that need to be created to support the to-be design

Data Privacy and Sensitivity

Not Applicable.

Extraction

Extract data from a source into Syniti Migrate. There are 2 possibilities:

1. The data exists. Syniti Migrate connects to the source and loads the data into Syniti Migrate. There are 3 methods:
 - a. Perform full data extraction from relevant tables in the source system(s).
 - b. Perform extraction through the application layer.
 - c. Only if Syniti Migrate cannot connect to the source, data is loaded to the repository from the provided source system extract/report.
2. The data does not exist (or cannot be converted from its current state). The data is manually collected by the business directly in Syniti Migrate. This is to be conducted using DCT (Data Collection Template) in Syniti Migrate

The agreed Relevancy criteria is applied to the extracted records to identify the records that are applicable for the Target loads.

Extraction Run Sheet

Req #	Requirement Description	Team Responsible
1	Extract data from source system based on relevancy rule.	SyWay Data Team

Selection Screen

Selection Ref Screen	Parameter Name	Selection Type	Requirement	Value to be entered/set
Not Applicable				

Data Collection Template (DCT)

Target Ready Data Collection Template will be created for data with exception of some fields which require transformation as mentioned in the transformation rule.

Delta Data Management: Initial collection will be done via the report and one-time load to the DCT will be performed. Any delta after the initial collection within the DCT will require business to take due diligence to ensure any subsequent delta cleansing is verified and aligned within the DCT.

Note: All rules specified below should be documented as a **tooltip** in the DC Page.

Format:

- **Line 1:** Mandatory / Conditional
- **Line 2:** Remaining text

1. BOM Construction Rules

Field Name	Field Description	Rule
STLTY	BOM Category	Mandatory (Key for DCT) Allowed values: M: Material BOM T: Functional Location (FL) BOM E: Equipment (EQ) BOM
BOM_HEADER	BOM Header	Mandatory (Key for DCT) For Material BOM, enter relevant Legacy Assembly For FL BOM, enter relevant FL with category 'A' where Equipment Installation allowed Flag is Not Checked For EQ BOM, enter relevant Legacy EQ
WERKS	Plant	Mandatory (Key for DCT) Allowed values: List from Value Mapping - Plant where Maintenance Plant = Yes
BMENG	Base quantity (Header)	Mandatory Must be non-0 positive numeric value. If the user does not provide a value, this will be defaulted to "1"
ZTEXT	BOM Description	Mandatory If the user does not provide a value, • For Material BOM - Assembly Description will be the BOM Description • For Equipment BOM - Equipment Description will be the BOM Description • For Functional Location BOM - Functional Location Description will be the BOM Description

POSNR	BOM Item Number	Mandatory Numbers must be in sequential order (eg: 0010, 0020, 0030 ...) If the numbers provide are not in the required sequential order, this will be overwritten during data migration.
POSTP	Item category (Bill of Material)	Mandatory Allowed values: L (Stock Item), N (Non Stock Item), I (Material is Assembly)
IDNRK	BOM component	Mandatory Must be relevant Assembly / Material. 1. Duplication of BOM Component not allowed 2. To be populated based on the Item Category: • L - Material Type ZIND, UNBW • N - Material Type NLAG • I - Material Type IBAU (Assembly) with A_SUB_ASSEMBLY Characteristics = "Yes"
MENGE	Component Quantity	Mandatory Must be non-0 positive numeric value.
MEINS	Component Unit of Measure	Mandatory Must align with the Base UOM or Alternative UOM of the Material in the BOM Component

Note: List of DCTs is maintained here: [Conversion Specs Register \(DCT & Cleansing Report\)](#).

Extraction Dependencies

Item #	Step Description	Team Responsible
	Not Applicable	

Transformation

The Target fields are mapped to the applicable Legacy field that will be its source, this is a 3-way activity involving the Business, Functional team and Data team. This identifies the transformation activity required to allow Syniti Migrate to make the data Target ready:

1. Perform value mapping and data transformation rules.
 - a. Legacy values are mapped to the to-be values (this could include a default value)
 - b. Values are transformed according to the rules defined in Syniti Migrate
2. Prepare target-ready data in the structure and format that is required for loading via prescribed Load Tool. This step also produces the load data ready for business to perform Pre-load Data Validation

Transformation Run Sheet

Item #	Step Description	Team Responsible
1	Obtain DCT Sign-off from Business.	SyWay Data Team
2	In dspMigrate, select the wave – S4/HANA – Plant Maintenance	Syniti
3	Go to Process Area Launch and Process the Object – BOM	Syniti
4	Review and Validate Error and Preload Reports	Syniti
5	Execute the transformation to prepare the target tables	Syniti
6	Validate data from pre-load and error reports	Business/Data owner
7	Generate load files	Syniti

Transformation Rules

1. BOM Header - DCT

Rule #	Source system	Source Table	Source Field	Source Description	Target System	Target Table	Target Field	Target Description	Transformation Logic
1	DCT	-	BOM_HEADER	BOM Header	S/4 HANA	TPST	TPLNR	Functional Location	Only applicable for Functional Location BOM Direct Mapping where STLTY = "T"
2	DCT	-	WERKS	Plant	S/4 HANA	TPST	WERKS	Plant	Only applicable for Functional Location BOM Direct Mapping
3	-	-	-	-	S/4 HANA	TPST	STLAN	BOM Usage	Only applicable for Functional Location BOM Default to "4"
4	DCT	-	BOM_HEADER	BOM Header	S/4 HANA	EQST	EQUNR	Equipment	Only applicable for Equipment BOM Value Mapping: Equipment Number where STLTY = "E"
5	DCT	-	WERKS	Plant	S/4 HANA	EQST	WERKS	Plant	Only applicable for Equipment BOM Direct Mapping
6	-	-	-	-	S/4 HANA	EQST	STLAN	BOM Usage	Only applicable for Equipment BOM Default to "4"
7	DCT	-	BOM_HEADER	BOM Header	S/4 HANA	MAST	MATNR	Material Number	Only applicable for Material BOM Value Mapping: Assembly and Construction Type where STLTY = "M"
8	DCT	-	WERKS	Plant	S/4 HANA	MAST	WERKS	Plant	Only applicable for Material BOM Direct Mapping
9	-	-	-	-	S/4 HANA	MAST	STLAN	BOM Usage	Only applicable for Material BOM Default to "4"
10	-	-	-	-	S/4 HANA	STKO	DATUV	Valid-From Date	Derive the date as per Value Mapping: OTH_Migration_Date Relevant Values A2D (using Object ID "1001" and Field Name = "STKO-DATUV").
11	DCT	STKO	BMENG	Base quantity	S/4 HANA	STKO	BMENG	Base quantity	If has value in DCT, Direct Mapping. If blank, default to "1"
12	-	-	-	-	S/4 HANA	STKO	STLST	Bill of Material Status	Default to "01"
13	DCT	STZU	ZTEXT	BOM Description	S/4 HANA	STZU	ZTEXT	BOM Description	If has value in DCT, Direct Mapping. If Blank: - For Material BOM, derive from Material Description (MAKT-MAKTX) of BOM Header Material for the language key based on the BOM Header Plant (lookup T001W-SPRAS) - For Functional Location BOM, derive from Functional Location Description (IFLOT-PLTXT) for the language key based on the BOM Header plant (lookup T001W-SPRAS) - For Equipment BOM, derive from Equipment Description (EQUI-SHTXT) for the language key based on the BOM Header plant (lookup T001W-SPRAS)

2. BOM Header - ECC

Rule #	Source system	Source Table	Source Field	Source Description	Target System	Target Table	Target Field	Target Description	Transformation Logic
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1	PF2, WP2	TPST	TPLNR	Functional Location	S/4 HANA	TPST	TPLNR	Functional Location	Only applicable for Functional Location BOM Value Mapping: Functional Location There is possibility that the legacy Functional Location is migrating to S/4 HANA Equipment. This is indicated by the field "New Technical Object" in the Mapping Table. In this case, ensure that the transformation is performed from Functional Location to Equipment for EQST-EQUNR
2	PF2, WP2	TPST	WERKS	Plant	S/4 HANA	TPST	WERKS	Plant	Only applicable for Functional Location BOM Value Mapping: Plant
3	-	-	-	-	S/4 HANA	TPST	STLAN	BOM Usage	Only applicable for Functional Location BOM Default to "4"
4	PF2, WP2	1. EQST 2. TPST	1. EQU NR 2. TPLNR	1. Equipment 2. Functional Location	S/4 HANA	EQST	EQUNR	Equipment	Only applicable for Equipment BOM Value Mapping: Equipment Number Note: There is possibility that the legacy Functional Location is migrating to S/4 HANA Equipment.
5	PF2, WP2	EQST	WERKS	Plant	S/4 HANA	EQST	WERKS	Plant	Only applicable for Equipment BOM Value Mapping: Plant
6	-	-	-	-	S/4 HANA	EQST	STLAN	BOM Usage	Only applicable for Equipment BOM Default to "4"
7	PF2, WP2	MAST	MATNR	Material Number	S/4 HANA	MAST	MATNR	Material Number	Only applicable for Material BOM Value Mapping: Assembly and Construction Type
8	PF2, WP2	MAST	WERKS	Plant	S/4 HANA	MAST	WERKS	Plant	Only applicable for Material BOM Value Mapping: Plant
9	-	-	-	-	S/4 HANA	MAST	STLAN	BOM Usage	Only applicable for Material BOM Default to "4"
10	-	-	-	-	S/4 HANA	STKO	DATUV	Valid-From Date	Derive the date as per Value Mapping: OTH_Migration_Date Relevant Values A2D (using Object ID "1001" and Field Name = "STKO-DATUV").
11	PF2, WP2	STKO	BMENG	Base quantity	S/4 HANA	STKO	BMENG	Base quantity	Direct Mapping (based on the first record for each BOM Header)
12	-	-	-	-	S/4 HANA	STKO	STLST	Bill of Material Status	Default to "01"
13	PF2, WP2	STZU	ZTEXT	BOM Description	S/4 HANA	STZU	ZTEXT	BOM Description	Direct Mapping (based on the first record for each BOM Header) If Blank: - For Material BOM, derive from Material Description (MAKT-MAKTX) of BOM Header Material for the language key based on the BOM Header Plant (look up T001W-SPRAS) - For Equipment BOM, derive from Equipment Description (EQUI-SHTXT) for the language key based on the BOM Header Plant (look up T001W-SPRAS) - For Functional Location BOM, derive from Functional Location Description (IFLOT-PLTXT) for the language key based on the BOM Header Plant (look up T001W-SPRAS)

3. BOM Item - DCT

Rule #	Source system	Source Table	Source Field	Source Description	Target System	Target Table	Target Field	Target Description	Transformation Logic
1	DCT	-	BOM_HEADER	BOM Header	S/4 HANA	TPST	TPLNR	Functional Location	Only applicable for Functional Location BOM Direct Mapping where STLTY = "T"
2	DCT	-	WERKS	Plant	S/4 HANA	TPST	WERKS	Plant	Key to link to BOM Header Only applicable for Functional Location BOM Direct Mapping
3	DCT	-	BOM_HEADER	BOM Header	S/4 HANA	EQST	EQUNR	Equipment	Only applicable for Equipment BOM Value Mapping: Equipment Number where STLTY = "E"

4	DCT	-	WERKS	Plant	S/4 HANA	EQST	WERKS	Plant	Key to link to BOM Header Only applicable for Equipment BOM Direct Mapping
5	DCT	-	BOM_HEADER	BOM Header	S/4 HANA	MAST	MATNR	Material Number	Only applicable for Material BOM Value Mapping: Assembly and Construction Type where STLTY = "M"
6	DCT	-	WERKS	Plant	S/4 HANA	MAST	WERKS	Plant	Key to link to BOM Header Only applicable for Material BOM Direct Mapping
7	-	-	-	-	S/4 HANA	STPO	POSNR	BOM Item Number	Generate based on sequence (eg "0010", "0020", "0030" ... etc) Note: If the records are combined due to duplicates, then this logic should be performed after the records are combined (refer to rule for BOM Component).
8	DCT	STPO	POSTP	Item category (Bill of Material)	S/4 HANA	STPO	POSTP	Item category (Bill of Material)	Direct Mapping
9	DCT	STPO	IDNRK	BOM component	S/4 HANA	STPO	IDNRK	BOM component	If POSTP = "N" or "L", Value Mapping: Material Master Note: If after mapping, there is more than one BOM Item with the same BOM Component, combine the records into single record. If POSTP = "I", Value Mapping: PM Assembly / Construction Type
10	DCT	STPO	MENGE	Component Quantity	S/4 HANA	STPO	MENGE	Component Quantity	Direct Mapping Note: If the BOM Component records are combined due to duplicates (refer to rule for BOM Component), sum up the Component Quantity of the records with the same BOM Component (eg If there are two records for a BOM component with the same material, with quantities of 2 and 1, the combined result should be a total quantity of 3)
11	-	-	-	-	S/4 HANA	STPO	MEINS	Component Unit of Measure	Derive from MARA-MEINS based on BOM Component
12	-	-	-	-	S/4 HANA	STPO	SANKA	Indicator for Relevancy to Costing	Default to "X"
13	-	-	-	-	S/4 HANA	STPO	STKKZ	PM assembly indicator	If Item Category = "I", then default to "X"

4. BOM Item - ECC

Rule #	Source system	Source Table	Source Field	Source Description	Target System	Target Table	Target Field	Target Description	Transformation Logic
1	PF2, WP2	TPST	TPLNR	Functional Location	S/4 HANA	TPST	TPLNR	Functional Location	Key to link to BOM Header Only applicable for Functional Location BOM Value Mapping: Functional Location
2	PF2, WP2	TPST	WERKS	Plant	S/4 HANA	TPST	WERKS	Plant	Key to link to BOM Header Only applicable for Functional Location BOM Value Mapping: Plant
3	PF2, WP2	1. EQST 2. TPST	1. EQUIPMENT 2. TPLNR	1. Equipment 2. Functional Location	S/4 HANA	EQST	EQUNR	Equipment	Key to link to BOM Header Only applicable for Equipment BOM Value Mapping: Equipment Number Note: There is possibility that the legacy Functional Location is migrating to S/4 HANA Equipment.
4	PF2, WP2	1. EQST 2. TPST	WERKS	Plant	S/4 HANA	EQST	WERKS	Plant	Key to link to BOM Header Only applicable for Equipment BOM Value Mapping: Plant

5	PF2, WP2	MAST	MATNR	Material Number	S/4 HANA	MAST	MATNR	Material Number	Key to link to BOM Header Only applicable for Material BOM Value Mapping: Assembly and Construction Type
6	PF2, WP2	MAST	WERKS	Plant	S/4 HANA	MAST	WERKS	Plant	Key to link to BOM Header Only applicable for Material BOM Value Mapping: Plant
7	-	-	-	-	S/4 HANA	STPO	POSNR	BOM Item Number	Generate based on sequence (eg "0010", "0020", "0030" ... etc) Note: If the records are combined due to duplicates, then this logic should be performed after the records are combined (refer to rule for BOM Component).
8	PF2, WP2	STPO	POSTP	Item category (Bill of Material)	S/4 HANA	STPO	POSTP	Item category (Bill of Material)	Direct Mapping
9	PF2, WP2	STPO	IDNRK	BOM component	S/4 HANA	STPO	IDNRK	BOM component	If POSTP = "N" or "L", Value Mapping: Material Master Note: If after mapping, there is more than one BOM Item with the same BOM Component, combine the records into single record. If POSTP = "I", Value Mapping: PM Assembly / Construction Type
10	PF2, WP2	STPO	MENGE	Component Quantity	S/4 HANA	STPO	MENGE	Component Quantity	Direct Mapping Note: 1. If the legacy STPO-MEINS is different compared to S/4 HANA MARA-MEINS (based on BOM Component), perform required conversion (eg if legacy is Dozen, and S/4 HANA is Each, then the component should be multiplied by 12 based on SAP Standard Conversion Rule) 2. If the BOM Component records are combined, sum up the Component Quantity of the records with the same BOM Component (eg If there are two records for a BOM component with the same material, with quantities of 2 and 1, the combined result should be a total quantity of 3)
11	-	-	-	-	S/4 HANA	STPO	MEINS	Component Unit of Measure	Derive from MARA-MEINS based on BOM Component
12	-	-	-	-	S/4 HANA	STPO	SANKA	Indicator for Relevancy to Costing	Default to "X"
13	-	-	-	-	S/4 HANA	STPO	STKKZ	PM assembly in dicator	If Item Category = "I", then default to "X".

List of Custom Target Reports for this object is maintained here: [Conversion Specification - Custom Reports Register](#).

Notes:

1. Unless specified, all validations are performed at the target (and not in SAP)
2. Unless specified, if any of the BOM ITEMS have error(s), the BOM HEADER will not be loaded

Transformation Mapping

Mapping Table Name	Mapping Table Description
Material Type	Mapping of legacy Material Types to target system value
Functional Location	Mapping of legacy Functional Location to new Functional Location
Equipment Number	Mapping of legacy Equipment to new Equipment
Assembly and Construction Type	Mapping of legacy Assembly and Construction Type to new Assembly and Construction Type
Plant	Mapping of legacy Plant to new Plant
Material Master	Mapping of MATNR: Old to New Material No.

List of Transformation Mappings with additional details is maintained here: [Transformation Mappings](#).

Transformation Dependencies

List the steps that need to occur before transformation can commence

Item #	Step Description	Team Responsible
1	Ensure DCT tables completeness	SyWay Data Team
2	Ensure all Transformation mappings are up to date.	SyWay Data Team

Pre-Load Validation

Project Team

Completeness

Task	Action
Verify Record Count	Data team to verify that the total number of relevant records from the source systems is equal to the total number of records in the Preload and Load Sheets.

Accuracy

Task	Action
Conversion Accuracy	Data team to verify that all fields below meet pass the checks: 1. Mandatory Fields 2. Field and Value Mapping Correctness 3. Null Checks 4. Text Length Checks
Review error reports	Review and correct the errors. Achieve a zero-error record count as much as possible. Raise defects for data remediated and requiring a correction in the source data.

Business

Completeness

Task	Action
Verify Record Count	Business team to verify that the total number of relevant records from the source systems is equal to the total number of records in the Preload and Load Sheets.

Accuracy

Task	Action
Conversion Accuracy	Business to verify that all the data in the load table/file is accurate as per endorsed transformation/mapping rules (and signed-off data)

Load

The load process includes:

1. Execute the automated data load into target system using load tool or product the load file if the load must be done manually
2. Once the data is loaded to the target system, it will be extracted and prepared for Post Load Data Validation

Load Run Sheet

Item #	Step Description	Team Responsible
1	Ensure Pre-load sign-offs are obtained.	SyWay Data team
2	Go to the load tool and select the correct load Program.	SyWay Data team
3	Proceed with Data load.	SyWay Data team
4	Validate few records loaded by accessing standard transactions	SyWay Data team
5	Generate the post load reports in the tool.	SyWay Data team
6	Log errors as defects, if any and address resolutions. Close defects.	SyWay Data team
7	Resolve defects by reupload and re-generate post load reports if necessary.	SyWay Data team
8	Business to validate the post load files as part of post-load validation, raise data defects or provide the post-load sign-off.	Business
9	Repeat steps 5 to 7 if necessary.	SyWay Data team

Load Phase and Dependencies

Pre-Cutover

Configuration

Item #	Configuration Item
1	T001W-Plants/Branches
2	T006-Units of Measurement
3	T415S-Bill of Material Status
4	T416-BOM Usage
5	T418-Item Category (Bill of Material)

Conversion Objects

Object #	Preceding Object Conversion Approach
1003	Functional Location
1002	Equipment Number
2019	Materials - Basic Data View
2010	Material - General Plant Data / SLoc Data
1010	PM Assembly / Construction Type

Error Handling

Error Type	Error Description	Action Taken
Configuration	Invalid Plant	Engage Functional team to expedite and fix the error in the system
Configuration	Invalid Unit of Measurement	Engage Functional team to expedite and fix the error in the system
Configuration	Invalid BOM Status	Engage Functional team to expedite and fix the error in the system
Configuration	Invalid BOM Usage	Engage Functional team to expedite and fix the error in the system

Configuration	Invalid Item Category (Bill of Material)	Engage Functional team to expedite and fix the error in the system
Invalid Data	Invalid Functional Location	Expedite whether the master data is changed in the system
Invalid Data	Invalid Equipment	Expedite whether the master data is changed in the system
Invalid Data	Invalid Material	Expedite whether the master data is changed in the system
Invalid Data	Invalid Material Plant	Expedite whether the master data is changed in the system
Invalid Data	Invalid PM Assembly / Construction Type	Expedite whether the master data is changed in the system

Post-Load Validation

Project Team

Completeness

Task	Action
Verify Count	Data team to verify the record count created in target S/4 HANA by accessing post load reports in dspMigrate or standard reports from S/4 HANA.
Verify Logs	Check if there is data that failed to load and perform the necessary actions (e.g. register as post load issue, or attempt to load the record again, etc.).

Accuracy

Task	Action
Conversion Accuracy	Data team to verify that the Bill of Material data in target S/4 HANA were loaded correctly via dspMigrate post load reports or standard reports from S/4 HANA.

Business

Completeness

Task	Action
Verify Count	Download Post Load Reports from dspMigrate and verify that the record count loaded in the target S/4 HANA is the same count as of the endorsed load file.

Accuracy

Task	Action
Conversion Accuracy	Verify that the Bill of Material data in target S/4 HANA were loaded correctly via dspMigrate post load reports or standard reports from S/4 HANA.

Key Assumptions

- Master Data Standard is up to date as on the date of documenting this conversion approach and data load.
- BOM is in scope based on data design and any exception requested by business.
- Data cleansing has met the required percentage threshold for the specified mock cycle and all preparation activities have been completed.
- Data entries in DCT are target-ready data unless a specific transformation rule is stated for that field in the transformation rules.

See also

Change log

Version	Published	Changed By	Comment
CURRENT (v. 166)	Apr 08, 2026 14:33	PUN-ext, Eddy	
v. 165	Jan 20, 2026 13:19	PUN-ext, Eddy	
v. 164	Nov 26, 2025 11:23	PUN-ext, Eddy	
v. 163	Nov 24, 2025 10:27	PUN-ext, Eddy	
v. 162	Nov 17, 2025 06:26	PUN-ext, Eddy	
v. 161	Nov 17, 2025 06:25	PUN-ext, Eddy	
v. 160	Nov 14, 2025 17:22	PUN-ext, Eddy	
v. 159	Nov 14, 2025 16:24	PUN-ext, Eddy	
v. 158	Nov 14, 2025 16:19	PUN-ext, Eddy	
v. 157	Nov 14, 2025 16:05	PUN-ext, Eddy	

[Go to Page History](#)

Workflow history

Title	Last Updated By	Updated	Status
There are no pages at the moment.			

Workflow history

This view shows the 5 most recent entries. The complete workflow log is available from the 'Document Activity' menu item.

Apr 08, 2026	Actor	Type	Activity	Version
Approved	 PUN-ext, Eddy	Edit	updated the page at 2:33 pm	
	 MOUSSA-ext, Eva	State	changed state to Approved at 12:47 pm	v166
Revision under Review	 MOUSSA-ext, Eva	State	gave <i>Minor change</i> approval at 12:47 pm	
		State	changed state to Revision under Review at 12:47 pm	v166
			approved v.166 PDM-1632	
Revision in Progress	 PUN-ext, Eddy	State	changed state to Revision in Progress at 12:33 pm	v166
Jan 21, 2026				
Approved	 MOUSSA-ext, Eva	State	changed state to Approved at 1:53 pm	v165