CNV-1040 Production Version

Status	Approved
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Purpose

The purpose of this document is to define the conversion approach to create 1040-Production Versions in S/4 HANA.

Production Version is used to define the product data structure. Meaning PV contains Master Recipe, BOM and Resources. According with lot size, Production version can be defined for each material to be processed in several production units. Usually, all Manufacturing plants need to use Production Versions for planning and scheduling processes. The aim is to migrate all the active Prod. Versions to S/4 HANA.

Conversion Scope

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

Stand alone rules

The data from legacy system includes:

1. The migration of Production Versions will be governed by the Material Relevancy Criteria, which serve as the foundational rule for identifying and including Production Versions that are valid, active, and business-relevant for conversion to S/4HANA.
2. All active Production Versions W/o locked status
3. All Active Production Versions W/O Deletion Flag
4. All active Production Versions related to active material and Plant (Mapped in the To-Be Plant Mapping)

The data from legacy system excludes:

1. All Production Versions older more than 4 years
2. All production versions with Locked status **(This needs to be checked to approve Production versions with Locked status in CM) Data Relevancy Criteria Meeting Review**
3. All Production Versions with deletion flag
4. All Production Versions belonging to Materials flagged for deletion
5. All Production Versions Belonging to Material-Plant combination not existing in the To-be Plant Mapping

Relevancy for Syniti

1. Production version creation is only relevant when the following is live and active in a sequential order
2. Material and Plant have a live status at Plant and at a Global level and contain 4 years of process order history
3. BOM and all BOM components are live and active at plant level Based on the condition set that Materials contain 4 years of Process order History
4. Master Recipe is live and an active BOM is available and live at Plant level, based on the condition set that Materials contain 4 years of Process order History

Material/Plant active ➡ BOM and all BOM components are live and active at Plant level ➡ Master Recipe is live and an active BOM is available at Plant level = Creation of Production Version

Plant Merging

Plants will be defined accordingly as some plants will be merged into one plant. Plants will be defined as NEW plant codes and be transformed via a transformation table, which will be contained in Syniti.

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	Production Versions will be extracted from PF2 and WP2	105,000	S/4 HANA	105,000

Additional Information

Multi-language Requirement

N/A

Document Management

N/A

Legal Requirement

N/A

Special Requirements

N/A

Target Design

The technical design of the target for this conversion approach.

Table	Field	Data Element	Field Description	Data Type	Length	Requirement
MKAL	MKALMANDT	MANDT	Client	CLNT	3	S
MKAL	MKALWERKS	WERKS_D	Plant	CHAR	4	R
MKAL	MKALMATNR	MATNR	Material Number	CHAR	18	R
MKAL	MKALTEXT1	VERS_TEXT	Version Short Description	CHAR	40	R - max. Of 40 characters.
MKAL	MKALVERID	VERID	Production Version	CHAR	4	C - 4 digits
MKAL	MKAL-MKSP	MKSP	Production Version Lock	CHAR	1	R- "No locked" as default
MKAL	MKALADATU	ADATM	ValidFrom Date	DATS	8	R
MKAL	MKALBDATU	BDATM	ValidTo Date	DATS	8	R
MKAL	MKALBSTMI	SA_LOSVN	Min LotSize Interval Lower Limit	QUAN	13	R
MKAL	MKALBSTMA	SA_LOSBS	LotSize Interval Upper Limit	QUAN	13	R
MKAL	MKALSTLAL	STALT	Alternative BOM	CHAR	2	R
MKAL	MKALSTLAN	STLAN	BOM Usage	CHAR	1	R = BOM usage = "1" - Production
MKAL	MKALPLNTY	PLNTY	Task List Type	CHAR	1	R
MKAL	MKALPLNNR	PLNNR	Task List Group	CHAR	8	R
MKAL	MKALALNAL	PLNAL	Group Counter	CHAR	2	R
MKAL	MKALPLTYG	PLTYG	Task List Type for Ratebased Planning	CHAR	2	R
MKAL	MKALSERKZ	SA_VERSI	Repetitive Mfg Allowed	CHAR	1	NU
MKAL	MKALMDV01	SA_LINE1	Production Line	CHAR	8	NU
MKAL	MKALMDV02	MDV	Planning Identification	CHAR	8	NU
MKAL	MKALMATKO	MATKO	Other Material (BOM+Routing maintained)	CHAR	40	NU
MKAL	MKALVERTO	SA_VERTO	Distribution Key	CHAR	4	NU
MKAL	MKALALORT	ALORT	Repetitive Mfg Storage Loc.	CHAR	4	NU
MKAL	MKALEWM_LGNUM	LGNUM	Warehouse Number (EWM)	CHAR	4	NU
MKAL	MKALEWM_LGPLA	LGPLA	Destination Storage Bin (EWM)	CHAR	4	NU
MKAL	MKALPRVBE	SA_PRVBE	Target PSA	CHAR	10	NU
MKAL	MKALELPRO	SA_ELPRO	Proposed Issue Storage Location	CHAR	4	NU
MKAL	MKAL-TSA_PRVBE	TSA_PRVBE	Default Supply Area	CHAR	10	NU
MKAL	MKAL-UCMAT	VBOB_OB_RFMAT	OB reference material	CHAR	40	NU

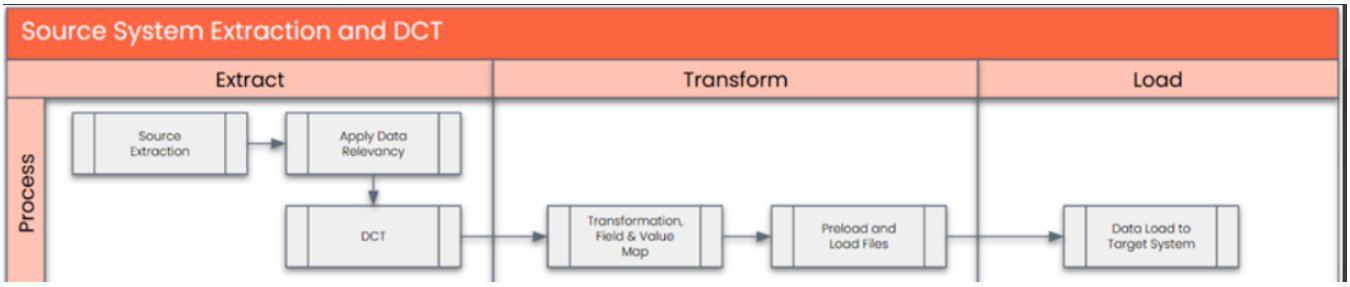
Data Cleansing

Business will perform data cleansing in the current ECC system. This means ECC will serve as the **single source of truth** for Manufacturing Data prior to the migration to S/4HANA.

ID	Criticality	Error Message/Report Description	Rule	Output	Source System
1040-001	C1	Invalid, Inactive or no Master Recipe for the Plant/ Material Combination	Master recipe needs to be created as pre-requisite to create Prod. Versions.	Master Recipe	PF2/WP2
1040-001	C1	Invalid, Inactive or no Bill of Material for the Plant/ Material Combination	Bill of Material needs to be created as pre-requisite to create Prod. Versions.	Bill of Materials	PF2/WP2
1040-004	C1	BOM Alternative Missing / incorrect.	BOM alternative is missing/ incorrect	BOM Alternative	PF2/WP2
1040-005	C2	Master Recipe Group Missing / Incorrect	Master Recipe Group Counter is needed.	Master Recipe Group Counter	PF2/WP2
1040-006	C1	BOM usage 1 / Routing type 2 / Master Recipe	Only BOM usage 1 and Routing type 2 or Master Recipe are valid for creating the Production Version	BOM Type 1 / Routing type 2 / Master Recipe category	PF2/WP2
1040-008	C1	Production Version has status locked	All Production Versions with status Locked, won't be migrated	PV Status Locked	PF2/WP2
1040-009	C1	Production Version NOT used the last 4 years	By rule, all Production Version with no Usage during the last 4 years won't be migrated	Active PV	PF2/WP2
1040-012	C1	PV with master recipe flagged for deletion	PV with a Master recipe flagged for deletion, won't be migrated	Master Recipe deletion Flag	PF2/WP2
1040-013	C1	PV With BOM flagged for deletion	PV with a BOM flagged for deletion, won't be migrated	BOM deletion flag	PF2/WP2

Conversion Process

The high-level process is represented by the diagram below:



Data Privacy and Sensitivity

Extraction

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

1. The data exists. connects to the source and loads the data into . 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 ; 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 . This is to be conducted using DCT (Data Collection Template) in

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	Data Team
2	Google Sheet report pre-populated with PF2 and WP2 information to be generated based on relevancy criteria.	Data Team
3	Sinity Extraction in SQL / Excel to check the result	Sinity/ Data Team

Selection Screen

Selection Ref Screen	Parameter Name	Selection Type	Requirement	Value to be entered/set

Data Collection Template (DCT)

Target Ready Data Collection Template will be created for1040 - Production Version data with exception of some fields which require transformation as mentioned in the transformation rule.

The Data Collection Template (DCT) will not be applicable in this case. If there is a need to create a new Master Data (MD) for Production Version object, the business must perform this activity in the source system. The newly created object will then be captured and migrated as part of the standard migration process. DCT Rules

Field Name	Field Description	Rule

Extraction Dependencies

Item #	Step Description	Team Responsible
1	**Source System Availability** • Ensure that the source database or application is accessible. • Confirm that necessary credentials and permissions are granted	Syensqo IT
2	**Data Structure** • Identify relationships between tables, views, and stored procedures.	Syniti
3	**Referential Integrity** • Ensure dependent records are extracted together.	Syniti
4	**Extraction Methodology** • Define whether extraction is **full, incremental, or delta-based**. • Establish batch processing schedules for large datasets.	Syniti
5	**Performance and Scalability Considerations** • Optimize extraction queries to prevent system overload. • Ensure network bandwidth supports data transfer volumes.	Syniti

6	**Security and Compliance** • Adhere to regulatory standards for sensitive information if applicable	Syniti
7	Data cleansing of legacy Production Version - If standardization within the DCT begins using relevant data from PF2 and WP2 before the cleansing is finalized, it is understood that the business will take due diligence to ensure any subsequent delta cleansing is verified and aligned within the DCT.	Business

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 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
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	<Add steps from Syniti Migrate here>	SyWay Data Team
3	Review and Validate Error and Preload Reports	SyWay Data Team
4	Generate Load Files	SyWay Data Team

Transformation Rules

Rule #	Source system	Source Table	Source Field	Source Description	Target System	Target Table	Target Field	Target Description	Transformation Logic
1	PF2	MKAL	WERKS	Plant	S4 HANA	MKAL	WERKS	Plant	Map from Old Plants to New Plants
2	PF2	MKAL	MATNR	Material Number	S4 HANA	MKAL	MATNR	Material Number	Generate new Material number in Target System and maintain mapping in reference table
3	PF2	MKAL	TEXT1	Version Short Description	S4 HANA	MKAL	TEXT1	Version Short Description	Value Direct from the current system
4	PF2	MKAL	VERID	Production Version	S4 HANA	MKAL	VERID	Production Version	Value Direct from the current system - BASED on conditions
5	PF2	MKAL	MKSP	Production Version Lock	S4 HANA	MKAL	MKSP	Production Version Lock	"Blank - Not locked"
6	PF2	MKAL	ADATU	ValidFrom Date	S4 HANA	MKAL	ADATU	ValidFrom Date	Determines the effective period for BOM and master recipe. Date will be set on creation
7	PF2	MKAL	BDATU	ValidTo Date	S4 HANA	MKAL	BDATU	ValidTo Date	Default 31129999
8	PF2	MKAL	BSTMI	Min LotSize Interval Lower Limit	S4 HANA	MKAL	BSTMI	Min LotSize Interval Lower Limit	Value Direct from the current system
9	PF2	MKAL	BSTMA	LotSize Interval Upper Limit	S4 HANA	MKAL	BSTMA	LotSize Interval Upper Limit	Value Direct from the current system
10	PF2	MKAL	STLAL	Alternative BOM	S4 HANA	MKAL	STLAL	Alternative BOM	Determined by the BOM master if the BOM exists. Auto generated when the BOM is created.
11	PF2	MKAL	STLAN	BOM Usage	S4 HANA	MKAL	STLAN	BOM Usage	R = BOM usage = "1" - Production
12	PF2	MKAL	PLNTY	Task List Type	S4 HANA	MKAL	PLNTY	Task List Type	Default to "2"
13	PF2	MKAL	PLNNR	Task List Group	S4 HANA	MKAL	PLNNR	Task List Group	Derived from the creation of master recipe (internally generated when the Recipe is created)
14	PF2	MKAL	ALNAL	Group Counter	S4 HANA	MKAL	ALNAL	Group Counter	Sequential 1,2,3,4 etc when the master recipe is created (Internally generated when the Recipe is created)

15	PF2	MKAL	PLTYG	Task List Type for Ratebased Planning	S4 HANA	MKAL	PLTYG	Task List Type for Ratebased Planning	Task List Type = "2"

Transformation Mapping

Mapping Table Name	Mapping Table Description
Plant	Mapping of legacy Plants to new Plants to target system value
Material	Mapping of legacy Materials to New Material number

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	Value Mappings are according to the latest design - <List of Value Mappings>	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	Go to <Load Tool>	SyWay Data Team
2	Load 3 records for < > to validate if data is loaded successfully without errors	SyWay Data Team
3	Proceed with full load if steps 2 and 3 are validated	SyWay Data Team
4	Validate few records loaded by accessing standard transactions from S/4HNA eg. MDO4	SyWay Data Team
5	Generate post load report if step 5 is validated	SyWay Data Team

Load Phase and Dependencies

Configuration

Item #	Configuration Item
1	T001W - Plants/Branches
2	MARC/MARA - Material Number connected to a Plant
3	TCA01 - Task List Type

Conversion Objects

Object #	Preceding Object Conversion Approach
2019	Materials - Basic Data View and Plant view
1038	1038 Material BOM
1039	1039 Master Recipe

Error Handling

Error Type	Error Description	Action Taken
1	Material has not been created in a Plant	Ensure the Material mapping is correct and or create the Material if it is valid
2	Material BOM has not been created in a Plant	Makes sure the BOM is available in the Plant, if not check to make sure it is required or Create the BOM for the PV Material
3	Master Recipe has not been created in a Plant	Makes sure the Master Recipe is available in the Plant, if not check to make sure it is required or Create the Master Recipe for the PV Material

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 Sinity Migrate 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 Measuring Point data in target S/4 HANA were loaded correctly via Sinity Migrate post load reports or standard reports from S/4 HANA.

Business

Completeness

Task	Action
Verify Count	Download Post Load Reports from Sinity Migrate 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 Measuring Point 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.
- is in scope based on data design and any exception requested by business.

See also

Change log

Version	Published	Changed By	Comment
CURRENT (v. 53)	**Apr 29, 2026 14:28**	**ULLAH-ext, Colin**	
v. 52	Apr 28, 2026 10:00	**ULLAH-ext, Colin**	

v. 51	Apr 27, 2026 10:28	**ULLAH-ext, Colin**	
v. 50	Apr 27, 2026 09:19	**ULLAH-ext, Colin**	
v. 49	Apr 20, 2026 14:07	**ULLAH-ext, Colin**	
v. 48	Apr 14, 2026 11:21	**ULLAH-ext, Colin**	
v. 47	Mar 18, 2026 16:02	**ULLAH-ext, Colin**	
v. 46	Mar 12, 2026 16:03	**ULLAH-ext, Colin**	
v. 45	Mar 12, 2026 15:32	**ULLAH-ext, Colin**	Updated DCT Fields STLAN and PLTYG
v. 44	Feb 24, 2026 10:50	**ULLAH-ext, Colin**	

Go to Page History

Workflow history

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