

CNV-9068 Z tables for open sales transaction

Status	Approved
Owner	THANGARAJAN-ext, Ganesan
Stakeholders	

Purpose

This Data Conversion Specification outlines the scope, data requirements, extraction logic, transformation rules, validation steps, and load procedures for converting six months of historical sales order data into S/4HANA to support Net Realizable Value (NRV) calculations for inventory provisioning.

The converted data provides the basis for deriving the average selling price per material and plant at period-end. These values will be compared with material cost to identify potential inventory devaluation and post stock provisions accordingly.

Objective

- Enable NRV assessment by leveraging six months of historical sales prices.
- Ensure availability of average sales price (ASP) per material/plant for monthly financial reporting.
- Support Finance in executing accurate, compliant inventory provisioning.

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.

The data from legacy system includes:

1. Extraction of 6 months historical sales order data from ECC Systems. Please refer to the relevancy criteria section for detailed data extraction logic / scope
2. Transformation and formatting according to S/4HANA NRV input structure.
3. One-time load of historical price records into S/4HANA.
4. Post-go-live: continued use of live S/4HANA sales order data for rolling history.

The data from legacy system excludes:

1. Any sales document created prior to six months of go-live. Please refer to the relevancy criteria section for detailed data extraction logic / scope and document types to be excluded
2. Sales documents created to sales area, plant and materials that are not in scope for migration to S/4HANA.
3. Sales document line items that are marked as rejected

List of source systems and approximate number of records

Source	Scope	Source Approx No. of Records	Target System	Target Approx. No. of Records
WP2	6 months Sales Transactions - sales order items	66,000	S/4HANA	21,000
PF2	6 months Sales Transactions - sales order items	32,000	S/4HANA	11,000

Additional Information

Multi-language Requirement

Not Applicable

Document Management

Not Applicable

Legal Requirement

Not Applicable

Special Requirements

Not Applicable

Target Design

The target design enables S/4HANA to perform Net Realizable Value (NRV) calculations using both historical and ongoing sales price data. The solution is designed to store, maintain, and utilize a rolling six-month average selling price (ASP) for each material and plant combination, ensuring accurate and timely monthly inventory provisioning.

1. Overall Design Concept

The target system (S/4HANA) will contain a dedicated repository to store historical sales price data extracted from ECC, as well as continuously updated sales price data generated from S/4HANA sales orders after go-live. This repository will serve as the foundational data source for computing NRV at period end.

The system will automatically derive the Average Selling Price (ASP) for every material–plant combination by aggregating monthly sales transactions for six months. This ASP will then be compared against the material's current cost to determine whether a stock provision is required.

- ECC systems will supply six months of historical sales order data.
- Data will be cleansed, transformed, and loaded into ZZNRVDATA using LSMW.

2. Target Data Structure

The technical design of the target for this conversion approach.

Table	Field	Data Element	Field Description	Data Type	Length	Requirement
ZZNRVDATA	AUDAT	AUDAT	Document Date	DATS	8	Mandatory
ZZNRVDATA	AUART	AUART	Document Type	CHAR	4	Mandatory
ZZNRVDATA	MATNR	MATNR	Material Number	CHAR	40	Mandatory
ZZNRVDATA	WERKS	WERKS_EXT	Plant	CHAR	4	Mandatory
ZZNRVDATA	NETWR	NETWR_AP	Net Value	CURR	15,2	Mandatory
ZZNRVDATA	WAERK	WAERK	Document Currency	CUKY	5	Mandatory
ZZNRVDATA	KWMENG	KWMENG	Condition Pricing Unit	QUAN	15	Mandatory
ZZNRVDATA	VRKME	VRKME	Condition Unit	UNIT	3	Mandatory

Data Cleansing

ID	Criticality	Error Message/Report Description	Rule	Output	Source System
Not Applicable					

Conversion Process

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

The conversion process is designed to extract six months of historical sales price data from the ECC system, transform it into the required format for S/4HANA, and load it into the custom NRV history table (ZZNRVDATA). This ensures that the target system has the necessary baseline price history to perform NRV calculations from the first period-end after go-live.



Data Privacy and Sensitivity

Relevancy Criteria for Data Extraction

NRV Data Extraction Criteria (Monthly Average Material Price at Plant Level)

This data extraction is performed to generate **NRV (Net Realizable Value)** inputs based on historical **sales order pricing** from the ECC systems. The extraction focuses on determining the **monthly average selling price** at **Material-Plant-Currency** level.

Data Source Period

- Extract sales prices from **sales documents (Document Category = C, E, K and L)** created within the **6 calendar months preceding the Go-Live month**.

Inclusion Criteria

- Include only records where **Sales org, Material, and Plant** are **within project scope**.
- Document types in scope:
 - **Sales Documents**
 - System: PF2 KE, SB, TD, TDIV, TDR
 - System: WP2 KE, OR, ZOR, ORB, RCM, ZEXP
 - **Credit Memo Requests**
 - System: PF2 B1, B3, B4, CR, CRV, CRVA, ICR, RK, CC
 - System: WP2 B1, B3, B4, G2, ZG2, CRB, ZCRB
 - **Debit Memo Requests**
 - System: PF2 DR, DRV, DRVA, IDR, IDRV, CD
 - System: WP2 L2, L3, ZCO, ZL2, ZL3, DRB
 - **Scheduling Agreement**
 - System: WP2 LP

Exclusion Criteria

- Exclude the following:
 - Non-billing-relevant documents
 - Free-of-charge items
 - Spot sales
- Exclude following document types
 - **Sales Documents**
 - System: PF2 KA, KB, KBCC, LA, M2, M3, T1, ZRKE, ZSE1, ZSER, ZTDL, ZPVA
 - System: WP2 KA, KB, RCS, ZAGR
 - **Credit Memo Requests**
 - System: PF2 CRVC, CRVS, ICRV
 - System: WP2 ZG3
 - **Debit Memo Requests**
 - System: PF2 DRVD, DRVS
 - System: WP2 ZGV, ZLV, ZDRB

Data Aggregation Requirement

- Compute **Monthly Average Selling Price** per:
 - Material
 - Plant
 - Sales Unit of Measure
 - Currency

Exclude the records with blank values in any of key fields including plant, items with 0 price and items with 0 qty.

Extraction

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
9068-001	Confirm scope and extraction approach for each ECC source systems WP2, PF2 (direct DB or manual extract)	Data Team (L2C), Data Team (Syniti)
9068-002	Perform full data extraction of 6 months data from SAP ECC Systems Sales document tables with high level filters on Sales organizations in Scope, Document Date and document types provided in scope, excluding rejected items and zero value items	Data Team (Syniti)
9068-003	Exclude the Materials that are not in scope for migration to S/4HANA via its respective conversion objects	Data Team (Syniti)
9068-004	Aggregate the above data grouping them in Transaction Month, Doc Type, Material, Plant, Sales UoM, Sales Currency , obtain sum of Sales value	Data Team (Syniti)
9068-005	Perform data quality checks on extracted records (e.g., missing key fields, invalid dates, incorrect formats)	Data Team (Syniti)

Selection Screen

Selection Ref Screen	Parameter Name	Selection Type	Requirement	Value to be entered/set
VBAK-AUDAT	Document Date Range	Range / Single Range	Yes	6 Full months of data prior to go-live
VBAK-AUART	Document Types	Range / Multi input	Yes	List of Document Types marked in scope in the above relevancy criteria
VBAK-VKORG	Sales Organizations	Range / Multi Input	Yes	List of Sales organizations in scope

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.

DCT Rules

Field Name	Field Description	Rule
Not Applicable		

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 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	Identify target S/4HANA fields and determine applicable legacy source fields from both ECC systems WP2, PF2	Functional Team (L2C)+ Data Team (L2C)
2	Map legacy field values to S/4HANA target values (including field-level mapping and technical names)	Data Team (L2C), Data Team (Syniti)
3	Configure transformation rules in Syniti Migrate (including calculated fields, formatting rules, etc.)	Data Team (Syniti), Data Team (L2C)
4	Review transformation logic and mappings with Business for confirmation	Business Team + Functional Team (L2C)
5	Perform initial transformation run and generate draft target-ready dataset	Data Team (Syniti),
6	Review draft target-ready data for structure and completeness	Data Team (L2C), Functional Team (L2C)
7	Share transformed data with Business for Pre-load Validation	Business Team
8	Incorporate feedback from Business and refine mappings or transformation logic as needed	Data Team (L2C)
9	Finalize and approve transformed data as Target Ready Load File	Business + Functional (L2C) + Data Team (L2C)

Transformation Rules

Rule #	Source system	Source Table	Source Field	Source Description	Target System	Target Table	Target Field	Target Description	Transformation Logic
9068-001	WP2/PF2	VBAK	AUDAT	Document Date	S/4HANA	ZZNRVDA TA	AUDAT	Document Date	Extraction will group by Month. Map it with the first day of the respective month. 202501 mapped with 20250101
9068-002	WP2/PF2	VBAK	AUART	Document Type	S/4HANA	ZZNRVDA TA	AUART	Document Type	Map using MAP_AUART
9068-003	WP2/PF2	VBAP	MATNR	Material Number	S/4HANA	ZZNRVDA TA	MATNR	Material Number	Map using MAP_MATNR
9068-004	WP2/PF2	VBAP	WERKS	Plant	S/4HANA	ZZNRVDA TA	WERKS	Plant	Map using MAP_WERKS
9068-005	WP2/PF2	VBAP	NETWR	Net Value	S/4HANA	ZZNRVDA TA	NETWR	Net Value	Aggregate value based on the combination of all remaining fields
9068-006	WP2/PF2	VBAP	WAERK	Document Currency	S/4HANA	ZZNRVDA TA	WAERK	Document Currency	Copy from Source
9068-007	WP2/PF2	VBAP	KWMENG / ZMENG	Condition Pricing Unit	S/4HANA	ZZNRVDA TA	KWMENG	Condition Pricing Unit	If VBAP-FKREL = 'C' use ZMENG Otherwise KWMENG
9068-008	WP2/PF2	VBAP	VRKME	Condition Unit	S/4HANA	ZZNRVDA TA	VRKME	Condition Unit	Copy from Source

Transformation Mapping

Field name	Mapping Table Name	Mapping Table Description
AUART	MAP_AUART	Sales Document Types
MATNR	MAP_MATNR	Material Master
WERKS	MAP_WERKS	Plant

Transformation Dependencies

List the steps that need to occur before transformation can commence

Item #	Step Description	Team Responsible
1	Value Mapping Tables are complete	Functional Team (L2C) + Data Team (L2C)
2	Org structure configuration is complete	Functional Team (L2C) + Data Team (L2C)
3	Dependent Material Master Data records are loaded	Functional Team (L2C) + Data Team (L2C)

Pre-Load Validation

Project Team

Completeness

Task	Action
Configuration	Ensure necessary configurations are in place in target system and field mapping is aligned with sales document types and plants
Review Mapping Table	Ensure all the source config and master data are mapped with target values
Check Values	Validate the pre-load data confirming the values are aligned with target system format and

Accuracy

Task	Action
Review Mapping Table	Ensure all the source organization units are mapped with target values
Review Monthly order value	User Sales Order Line items report to list the sales orders for the selection criteria mentioned above and check the order value total in pre-load data file
Conduct dry runs using LTMC or BAPIs and review logs	Analyze load results and correct format or conversion errors

Business

Completeness

Task	Action
Review populated templates for missing or incorrect values	Use checklists to verify completeness and correctness before submission
Ensure all required sales document types are covered in extraction	Confirm that all the approved sales document types are covered in data extraction

Accuracy

Task	Action
Check generated average price of materials	Check the generated average price of material if it falls under the expected range

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	Confirm readiness of final approved data sets for each ECC source system WP2 and PF2	Business / Functional Team
2	Validate transformation rules and mappings in Syniti tool	Data Team (L2C-Data)
3	Generate target-ready load files based on S/4HANA LSMW Load format	Data Team (Syniti)
4	Review and approve load files before execution	Business / Functional Team
5	Execute data load using LSMW into the S/4HANA system (or generate manual load files if required)	Data Team (L2C-Data)
6	Monitor load progress and capture load statistics (records loaded, errors, duplicates, etc.)	Data Team (L2C-Data)
7	Extract loaded data from S/4HANA for post-load validation	Data Team (L2C-Data)
8	Perform post-load data validation (compare target data with source/approved files) for all loaded pricing condition types	Data Team (L2C-Data)
9	Log and resolve any data load errors or mismatches identified during validation	Data Team (L2C-Data) + Functional Team
10	Obtain business sign-off on successful load and validation	Business Team
11	Archive load logs, error reports, and validation results for audit/compliance	Data Team (L2C-Data) / Data Team (Syniti) / PMO

Load Phase and Dependencies

Configuration

Item #	Configuration Item
Sales Document Type	All Sales document types are configured and mapped via MAP_AUART table
Plant codes	All the plant codes are configured and mapped via MAP_WERKS table

Conversion Objects

Object #	Preceding Object Conversion Approach
2010	CNV-2010 Materials - General Plant Data / S.Loc Data

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Error Handling

Error Type	Error Description	Action Taken
Sales Document Not mapped	Sales document type listed in approved list for data extraction from ECC System	Complete mapping and accept mapped values
Plant code not mapped	Plant code collected from ECC sales order history table not mapped to target ECC system	Complete the mapping and accept mapped values. Exclude the record if the plant is marked out of scope
Duplicate Records	Identical key combinations found more than once in the load file	Duplicates removed or merged as per business rule. Aligned with Business and documented for future loads
Invalid Currency Format	Incorrect currency formatting or unsupported currency code	Standardized to valid ISO currency codes (e.g., USD, EUR, JPY)
Invalid Number Format	KBETR or KPEIN contains special characters or comma separators	Cleaned formatting; ensured decimal values used with '.' as separator
Authorization Errors	Lack of access to execute load in target client/system	Raised access request; obtained necessary authorizations
Obsolete Master Data	Material master data no longer exists in target system	Replaced or removed based on business input
Technical Load Failure	File not processed due to syntax/format error or system issue	Reviewed logs; regenerated file; re-executed load after resolving issue
Missing Key Fields	One or more key fields (e.g., AUDAT, AUART, WERKS, MATNR, VRKME, NETWR, WAERK) are blank	Populated missing values and reload

Post-Load Validation

Project Team

Completeness

Task	Action
Validate loaded data	Extract the loaded data from ZZNRVDATA table and validate against the data used to load via LSMW. Confirm all records are loaded with cell by cell value match

Accuracy

Task	Action
Validate loaded data	Extract the loaded data from ZZNRVDATA table and validate against the data used to load via LSMW. Confirm all records are loaded with cell by cell value match

Business

Completeness

Task	Action
Review and Approve	Review the post load validation report provided by Data Team and approve
Check Calculated 6 moths average price	Based on net value provided for a material, check the average price of any material against expected price range

Accuracy

Task	Action
Check Calculated 6 moths average price	Based on net value provided for a material, check the average price of any material against expected price range

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. 21)	Mar 27, 2026 08:16	THANGARAJAN-ext, Ganesan	
v. 20	Mar 27, 2026 08:10	THANGARAJAN-ext, Ganesan	
v. 19	Mar 26, 2026 16:36	THANGARAJAN-ext, Ganesan	
v. 18	Mar 04, 2026 04:14	THANGARAJAN-ext, Ganesan	Updates as per Syniti feedback
v. 17	Mar 04, 2026 03:28	THANGARAJAN-ext, Ganesan	Order Qty Mapping Field logic
v. 16	Dec 03, 2025 00:31	THANGARAJAN-ext, Ganesan	
v. 15	Nov 25, 2025 10:03	THANGARAJAN-ext, Ganesan	
v. 14	Nov 24, 2025 10:19	THANGARAJAN-ext, Ganesan	
v. 13	Nov 19, 2025 09:49	THANGARAJAN-ext, Ganesan	
v. 12	Nov 19, 2025 08:50	THANGARAJAN-ext, Ganesan	

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