CNV-1052 TM-Transportation Zones

Status	Approved
Owner	OMER-ext, Mohammed
Stakeholders	

Purpose

The purpose of this document is to define the conversion approach to create TM-Transportation zones in S/4 HANA TM (Transportation Management).

The transportation zone is a geographical grouping of locations that is used for the purpose of routing. It can be the combination of country, state, postcodes, or individual locations.

The data for transportation zones in S/4 TM would need to be constructed in data collection template (DCT). The existing legacy data would be provided in google sheet for reference.

Conversion Scope

The scope of this document covers the approach for creating Transportation zones in S/4HANA following the TM Transportation zones Master Data Design Standard. This includes:

- Capturing and using the Transportation zone data in data collection template (DCT).
- Applying transformation logic via Syniti to conform with the S/4 HANA data model.
- Loading the transformed data into SAP S/4 HANA while ensuring data integrity.

The data from legacy system includes:

1. N/A (Manual data collection)

The data from legacy system excludes:

1. N/A (Manual data collection)

List of source systems and approximate number of records

Source	Scope	Source Approx No. of Records	Target System	Target Approx No. of Records
DCT	Creation of TM Transportation zones An initial extract of the transportation zones will be provided in google sheet format to assist business in decision making on including any relevant data from PF2 and WP2.	TBD	S/4 HANA (TM)	TBD

Additional Information

Multi-language Requirement

Transportation zone description will be made available in English.

Multi language is supported for transportation zones. Login via a different language will show the description displayed in the logon language if the language key is maintained.

Document Management

Not Applicable

Legal Requirement

Not Applicable

Special Requirements

Not Applicable

Target Design

The complete information of the key fields that hold the default route information follows the Master Data Standard document.

The technical design of the target for this conversion approach.

Table	Field	Data Element	Field Description	Data Type	Length	Requirement	Notes
/SCMB/ZONE	ID_ZONE	ID_ZONE	Transportation Zone Name	CHAR	20	Mandatory	
/SCMB/ZONET	DESCR	DESCR	Description	CHAR	40	Mandatory	
/SCMB/ZONET	SPRAS	SPRAS	Language Key	CHAR	1	Mandatory	8 languages in scope: English, French, Italian and Mandarin and Brazilian Portuguese, German, Spanish and Thai, as per KDD055
/SCMB/ZONE	TYPE_ZONE	TYPE_ZONE	Zone Type	CHAR	1	Mandatory	
/SAPAPO/LOC	XPOS	XPOS	Longitude coordinate	CHAR	15	Optional	
/SAPAPO/LOC	YPOS	YPOS	Latitude coordinate	CHAR	15	Optional	
/SAPAPO/LOC	PRECISID	PRECISID	Precision of a Geo location	CHAR	4	Optional	
/SAPAPO/LOC	TZONE	TZONE	Time Zone	CHAR	6	Optional	
/SAPAPO/LOC	ZPOS	ZPOS	Location Altitude	NUM	9,3	Optional	
/SAPAPO/LOC	GEO_VALIDITY_END	GEO_VALIDITY_END	Validity End of Geo Data	NUM (DATE)		Optional	
/SAPAPO/LOC	MATCH_GC	MATCH_GC	Percentage of accuracy (coordinates)	NUM	3	Optional	
/SAPAPO/LOC	GC_LEVEL	GC_LEVEL	Geocoding Level for a Location	NUM	4	Optional	
/SAPAPO/LOC	STRATEGY	STRATEGY	Strategy to determine the coordinates	CHAR	10	Optional	
SCMB/ZONE_D	ID_LOC_EXT	ID_LOC_EXT	Location Code	CHAR	20	Optional	
SCMB/ZONE_D	LOC_TYPE	LOC_TYPE	Location Type	CHAR	4	Optional	
SCMB/ZONE_P, SCMB/ZONE_R	COUNTRYISO	COUNTRYISO	Country Key	CHAR	2	Optional	
SCMB/ZONE_P	PCODE_FROM	PCODE_FROM	Postal code_from	CHAR	10	Optional	
SCMB/ZONE_P	PCODE_TO	PCODE_TO	Postal code_to	CHAR	10	Optional	
SCMB/ZONE_R	REGION	REGION	Region (State, Province, County)	CHAR	3	Optional	

Data Cleansing

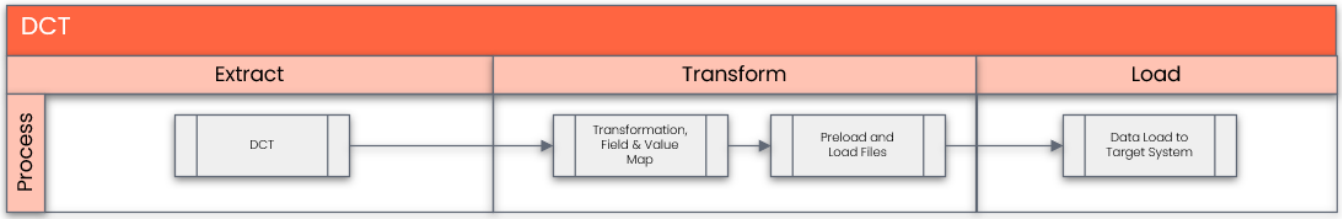
Transportation zone data will be populated directly in the Data Collection Template (DCT).

ID	Criticality	Error Message/Report Description	Rule	Output	Source System

Conversion Process

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

Please note that the data may have to be loaded in multiple target systems (US instance, China instance and RoW).



Data Privacy and Sensitivity

Extraction

1. Syniti Migrate connects to the sources.
2. An initial extract of the relevant Transportation zones will be loaded into a google sheet report to assist business with any rationalization.

If the data does not exist in legacy systems, the data will be manually collected by the business directly in Syniti Migrate. This is to be conducted using DCT (Data Collection Template) in Syniti Migrate.

Extraction Run Sheet

Req #	Requirement Description	Team Responsible
Legacy data extract steps		
1	Extract data from source systems PF2 and WP2 or copy of the systems used for mock rehearsals (ECC table: TZONT)	SyWay Data Team
2	Google Sheet report pre-populated with PF2 and WP2 information to be generated based on the below criteria.	SyWay Data Team
3	Combine the extracted data from two systems and remove the duplicate records based on this key (SPRAS+LAND1+ZONE1+VTEXT). Drop any of the duplicate as they are identical.	Syniti
4	After the above step, drop the records which contain the following keywords in Description (field: TZONT-VTEXT) lapsed delete obsolete ZZZZ	Syniti
DCT steps		
1	Data is populated in the DCT or uploaded from downloaded Excel template	Data owner (Business)
2	If the data is uploaded to DCT in bulk via excel template, any upload errors need to be reviewed and corrected	Data owner (Business), Syniti/ Data Team
3	The data which has passed validation checks in DCT will be used for transformation/further processing	Syniti

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 for Transportation zone data with exception of some fields which require transformation as mentioned in the transformation rule.

Please refer to the below Google sheet for the DCT rules (main DCT page and another page for non English descriptions).

Primary key combination for the DCT: Transportation Zone Name + Language key + Transportation Zone Description + Zone Type

Transportation zones DCT Rules

Field Name	Field Description	Rule

Extraction Dependencies

Item #	Step Description	Team Responsible
1	Ensure Syniti has the necessary connection and access to legacy systems	Syniti
2	Ensure that create, change and deletion of master data is freeze in legacy Production system	Legacy IT

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 platform 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 platform
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	Capture the data for Transportation zone in DCT. Review and correct any errors if bulk uploading data via downloaded excel DCT template.	Business team
2	Ensure the mapping tables which are needed during transformation have been reviewed and signed off by business.	Business team, Data Team (SCM)
3	Obtain DCT Sign-off from Business	Data Team (SCM)
4	Generate Pre-Load reports	Data Team (Syniti)

5	Review and Validate Error and Preload Reports	Data Team (SCM)
6	Log errors as defects, if any and address resolutions.	Data Team (SCM)
7	Re-transform and re-validate the Pre-load reports if necessary.	Data Team (SCM), Data Team (Syniti)
8	Obtain preload validation sign-off from Business	Business + Functional (SCM) + Data Team (SCM)
9	Generate Load Files	Data Team (Syniti)

Transformation Rules

Please check the attached file for the complete source-to-target field mapping, validation checks and proposed error messages. The validation checks list is not exhaustive and may change over time as the design and configuration of the system evolves.

Rule #	Source system	Source Table	Source Field	Source Description	Target System	Target Table	Target Field	Target Description	Transformation Logic	Notes
1052-001	DCT				SAP S/4 HANA	/SCMB /ZONE	ID_ZONE	Transportation Zone Name	Direct Mapping	
	DCT				SAP S/4 HANA	/SCMB /ZONET	DESCR	Transportation Zone Description	Direct Mapping	
	DCT				SAP S/4 HANA	/SCMB /ZONET	SPRAS	Language Key	Direct Mapping	
	DCT				SAP S/4 HANA	/SCMB /ZONE	TYPE_ZONE	Zone Type	Direct Mapping	
	DCT				SAP S/4 HANA	/SAPAPO /LOC	XPOS	Longitude coordinate	Direct Mapping	
	DCT				SAP S/4 HANA	/SAPAPO /LOC	YPOS	Latitude coordinate	Direct Mapping	
	DCT				SAP S/4 HANA	/SAPAPO /LOC	ZPOS	Location Altitude	Direct Mapping	
	DCT				SAP S/4 HANA	/SAPAPO /LOC	PRECISID	Precision of a Geo location	Direct Mapping	
	DCT				SAP S/4 HANA	/SAPAPO /LOC	TZONE	Time Zone	Direct Mapping	
	DCT				SAP S/4 HANA	/SAPAPO /LOC	GEO_VALIDITY_END	Validity End of Geo Data	Direct Mapping	
	DCT				SAP S/4 HANA	/SAPAPO /LOC	MATCH_GC	Percentage of accuracy (coordinates)	Direct Mapping	
	DCT				SAP S/4 HANA	/SAPAPO /LOC	GC_LEVEL	Geocoding Level for a Location	Direct Mapping	
	DCT				SAP S/4 HANA	/SAPAPO /LOC	STRATEGY	Strategy to determine the coordinates	Direct Mapping	
	DCT				SAP S/4 HANA	/SCMB /ZONE_D	ID_LOC_EXT	Location Code	Direct Mapping	Location should exist in SAP.
	DCT				SAP S/4 HANA	/SCMB /ZONE_D	LOC_TYPE	Location Type	Direct Mapping	
	DCT				SAP S/4 HANA	/SCMB /ZONE_P	COUNTRYISO	Country Key	Direct Mapping	
	DCT				SAP S/4 HANA	/SCMB /ZONE_P	PCODE_FROM	Postal code_from	Direct Mapping	
	DCT				SAP S/4 HANA	/SCMB /ZONE_P	PCODE_TO	Postal code_to	Direct Mapping	
	DCT				SAP S/4 HANA	/SCMB /ZONE_R	COUNTRYISO	Country Key	Direct Mapping	
	DCT				SAP S/4 HANA	/SCMB /ZONE_R	REGION	Region	Direct Mapping	

List of Custom Target Reports for this object is maintained here: Conversion Specification - Custom Reports Register.

Transformation Mapping

Mapping Table Name	Mapping Table Description

Transformation Dependencies

List the steps that need to occur before transformation can commence

Item #	Step Description	Team Responsible
1	Ensure DCT tables completeness	Data Team (SCM)
2	Value Mappings are according to the latest design	Functional Team (SCM) + Data Team (SCM)
3	SAP Transportation management configuration for transportation zones is complete	Functional Team (SCM)
4	Dependent Master Data records for Locations is loaded	Functional Team (SCM) + Data Team (SCM)

Pre-Load Validation

Project Team

Completeness

Task	Action
Check Values	Validate the pre-load data confirming the values are aligned with target system format
Validate template structure and required field population	Ensure mandatory fields like Transportation zone name, description and Zone type are filled
Verify Record Count	SCM Data Team to verify that the total number of relevant records from the DCT is equal to the total number of records in the Preload and Load Sheets.

Accuracy

Task	Action
Conversion Accuracy	SCM 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
Perform format validation (date, currency, decimal separators)	Standardize format to match SAP accepted input (e.g., YYYYMMDD for dates)
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.
Conduct dry runs using LTMC or BAPIs and review logs	Analyze load results and correct format or conversion errors

Business

Completeness

Task	Action

Verify Record Count	Business Data Owner/s to verify that the total number of relevant records from the the DCT is equal to the total number of records in the Preload validation file.

Accuracy

Task	Action
Conversion Accuracy	Business Data Owner/s to verify that all the data in the preload validation file is accurate as per endorsed transformation /mapping rules (and signed-off DCT data). Review error reports in tool for any mismatch or missing transformed values.

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

Function_Loader_Inlay program or Custom Migration Cockpit Object (LTMOM) will have to be used for automated load of transportation lanes to SAP S/4 HANA TM. There is no standard object available in SAP Migration Cockpit for transportation lanes. The load file format can be finalized when development system is available.

BAPI: BAPI_TZSRVSCMB_SAVEMULTI

Load Run Sheet

Item #	Step Description	Team Responsible
1	Ensure the load tools are transported into the correct system/instance.	Data Team (SCM)
2	Ensure Pre-load sign-offs are obtained.	Data Team (SCM)
3	Execute upload of Transportation zones using Function_Loader_Inlay program or Custom Migration Cockpit Object.	Data Team (SCM)
4	Validate few records loaded by accessing standard transactions from S/4HNA E.g. Fiori app 'Define Transportation Zone'.	Data Team (SCM)
5	Generate the post load reports in tool.	Data Team (SCM), Data Team (Syniti)
6	Log errors as defects, if any and address resolutions. Close defects.	Data Team (SCM)
7	Resolve defects by reupload and re-generate post load reports if necessary.	Data Team (SCM), Data Team (Syniti)
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 team
9	Repeat steps 5 to 7 if necessary.	Data Team (SCM), Data Team (Syniti)

Load Phase and Dependencies

Transportation zones data will be loaded in the pre-cutover window.

Configuration

Item #	Configuration Item
1	Control Strategy
2	Define Geocoding levels
3	T002 - Language Keys

Conversion Objects

Object #	Preceding Object Conversion Approach
1051	TM - Locations

Error Handling

As part of the transportation zones data load to S/4HANA using the Syniti data migration tool, various data quality, configuration, and technical challenges may arise.

The following table outlines the most commonly observed error types during data load, and the corrective actions typically taken to resolve them. This helps ensure consistency in issue handling, improves traceability during cutover, and supports smooth end-to-end execution of the transportation lanes load.

Error Type	Error Description	Action Taken
Configuration	Invalid or missing Control Strategy and Geocoding levels	Engage Functional team to expedite and fix the error in the system
Formatting Errors	One or more key fields are incorrectly formatted	Ensure formatting is done correctly (e.g., leading zeros). (Leading zero requirements will be confirmed when loading tool is available/tested)
Authorization Errors	Lack of access to execute load in target client/system	Raised access request; obtained necessary authorizations
Transformation Miss	Required transformation logic not applied before load	Re-applied transformation rules and revalidated source-target mapping
Technical Load Failure	File not processed due to syntax /format error or system issue	Reviewed logs; regenerated file; re-executed load after resolving issue

Post-Load Validation

Project Team

Completeness

Task	Action
Run Fiori app/tcode to check loaded data in SAP	Run Fiori app 'Define Transportation zone' to check if data has been loaded
Compare uploaded data against source file values	Use Custom reconciliation tools e.g. SQL Server or Excel based comparison tools to validate the number of records loaded against the load file record volume
Check for load errors in load tool	Review custom load tool or Legacy Transfer Migration Cockpit LTMC logs for any failures

Accuracy

Task	Action

Compare uploaded data against source file values	Use automated postload validation report or standard reports from S/4 HANA to validate field by field value match across all loaded records

Business

Completeness

Task	Action
Verify Count	Download Postload validation reports from Syniti and verify that the record count loaded in the target S/4 HANA is the same count as of the endorsed load file
Review loaded Transportation zones	Access the S/4HANA system (via Fiori app Define Transportation zone) to view loaded transportation zones

Accuracy

Task	Action
Compare Against Approved Load File	Cross-check data in S/4HANA against the final business-approved load file used for migration
Validate Accuracy of Converted/Transformed Data	Review any transformed fields for correctness
Log and Report Discrepancies	Use provided discrepancy log format or defect management tool to report any findings

Key Assumptions

- Master Data Standard is up to date as on the date of documenting this conversion approach and data load.
- Transportation zones is in scope based on data design and any exception requested by business.
- Data entries in DCT are target-ready data unless a specific transformation rule is stated for that field in the transformation rules.
- The list of validation checks in transformation section is not exhaustive and may change over time as the design and configuration of the system evolves.

See also

Change log

Version	Published	Changed By	Comment
CURRENT (v. 24)	**Sept 26, 2025 07:30**	**OMER-ext, Mohammed**	
v. 23	Sept 25, 2025 17:38	**OMER-ext, Mohammed**	
v. 22	Sept 09, 2025 11:51	**OMER-ext, Mohammed**	
v. 21	Sept 09, 2025 11:35	**OMER-ext, Mohammed**	
v. 20	Sept 08, 2025 16:20	**OMER-ext, Mohammed**	
v. 19	Sept 05, 2025 17:21	**OMER-ext, Mohammed**	
v. 18	Sept 05, 2025 16:33	**OMER-ext, Mohammed**	
v. 17	Sept 05, 2025 15:59	**OMER-ext, Mohammed**	

v. 16	Sept 05, 2025 15:32	**OMER-ext, Mohammed**
v. 15	Sept 05, 2025 14:27	**OMER-ext, Mohammed**

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.

Nov 03, 2025	Actor	Type	Activity	Version
Approved	MUTHUSAMY-ext, Kunalan	State	changed state to Approved at 10:23 am (State override) *[PMO Comments] Conversion Spec completed as per CS register and functional review completed*	v24
Tech Review	MUTHUSAMY-ext, Kunalan	State	gave *Minor change* approval at 10:23 am *[PMO Comments] Conversion Spec completed as per CS register and functional review completed*	
Sept 29, 2025				
	OMER-ext, Mohammed	State	changed expiry date to '04 Oct, 2025 09:06 am' at 9:06 am	
		State	changed state to Tech Review at 9:06 am	v24
Peer Review	OMER-ext, Mohammed	State	gave *Peer Review* approval at 9:06 am	
		State	assigned approval *Peer Review* to OMER-ext, Mohammed at 9:06 am	
		State	unassigned MCARDLE-ext, Edward from approval *Peer Review* at 9:06 am	
From Sept 25, 2025 to Sept 26, 2025				
	OMER-ext, Mohammed	Edit	updated the page at 5:38 pm	