

CNV-1057 QM Master Inspection Characteristics

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Purpose

The purpose of this document is to define the conversion approach to create 1057 - QM Master Inspection Characteristics in S/4 HANA.

Master Inspection Characteristics are a fundamental element of SAP Quality Management (QM) used to define the parameters, specifications, and methods for quality inspections. MICs provide a standardized definition of what is to be inspected and how it should be measured, ensuring uniformity and consistency across inspection plans and quality processes. MICs can be maintained as **Quantitative** (numeric specifications such as measurement ranges and tolerances) or **Qualitative** (descriptive specifications such as defect classes or codes).

In SAP S/4HANA, the structure and usage of MICs remain consistent with SAP ECC, typically defined by key combinations such as plant, characteristic name, and characteristic type. MICs may include additional settings such as selected sets for qualitative characteristics, catalog assignments, default inspection methods, target values, upper and lower specification limits, and sampling procedures.

In SAP ECC, aside from the standard MIC structures, there may be additional configurations, such as plant-independent characteristics, characteristics linked to custom catalogs, or MICs with special control indicators and custom fields. Certain legacy systems may also include MICs with obsolete catalog references, inactive units of measure, or unused selected sets (pending MDS review), which must be validated before conversion.

This conversion aims to migrate active and relevant MIC records, along with their associated control indicators, selected sets, catalog assignments, default inspection methods, and specification limits, from existing ECC systems into S/4HANA. The migration will apply the required transformation logic using Syniti as the data migration and transformation platform. The converted records will be loaded into the target S/4HANA system using standard SAP mechanisms such as BAPIs (e.g., `BAPI_INSPOPER_RECORDRESULTS` for linking to inspection operations, or `QS21` transaction for creation), IDOCs, or direct table loads where applicable, ensuring data integrity, compliance, and reusability across inspection plans.

This Conversion Specification does **not include the WPX system (CUI Objects)**.

Conversion Scope

The scope of this document covers the approach for converting active Conversion Specification CNV-1057 Master Inspection Characteristic (MIC) from Legacy Source Systems into S/4HANA following the [Master Inspection Characteristic Master Data Design Standard MDS-1057](#).

From the current landscape, MIC data exists in legacy quality management systems (e.g., PF2 and WP2). Harmonization and validation are required to ensure accurate and consolidated MIC data in S/4HANA. While PF2 and WP2 serve as source systems, extensive mapping and transformation logic will be applied to ensure clean, relevant, and standardized data is migrated.

1. Active MIC records that meet the Material Relevancy Criteria (aligned with valid [Material Master Basic Data View](#), [QM View](#), [QM Inspection Plan](#) and [Master Recipe](#)) and are used in valid inspection processes within the last four (4) years.
2. MICs without deletion flags, ensuring only valid and relevant characteristics are migrated.
3. MICs assigned to in-scope plants or inspection plans based on the To-Be Plant Mapping.
4. MICs linked to valid inspection types and usage (e.g., 01, 04, 09) to ensure functional integration with quality processes in the target system.
5. MICs with valid catalog assignments (e.g., defect class, code group, selected set) and valid control indicators.
6. MICs referenced in sampling procedures or inspection plans to ensure inspection process continuity in the target environment.

The data from legacy system excludes:

1. Inactive or obsolete MICs that are not used in inspection plans or linked processes within the last four (4) years.
2. MICs marked for deletion in the legacy system.
3. MICs assigned to plants that are out of scope, based on the To-Be Plant Mapping in [Enterprise Structure Catalog](#) worksheet "30. Plants"
4. Invalid or incomplete catalog assignments, missing required control indicators, or unsupported settings in S/4HANA.

Relevancy rule

1. Material/Plant with history and active usage
Materials must be defined at both global level (MARA) and plant level (MARC) with valid status and assignment to active in-scope plants. Only materials with active QM View are considered relevant. In addition, QM View relevancy must align with Material Master Basic Views (CNV-2019) to ensure consistent dependency with MARA-level relevancy. Usage confirmation may also include inspection lots (QALS) within the last four (4) years where applicable.
2. Active Inspection Types
Only materials with at least one valid and active inspection type (e.g., 01, 02, 03, 04, 05, 06, 08, 10, 11, 12, 17) maintained in `QMAT` and linked to relevant plants will be considered in scope.
3. Inspection Setup with Valid Usage
Inspection types must be relevant to in-scope Syensqo business processes (e.g., Goods Receipt, In-Process, Delivery). Materials without any active inspection usage in the last four (4) years will be excluded.

4. Plant-Specific Validation

Materials with QM View will be checked against active plant mappings (To-Be Plant Definition) to ensure that only valid, active plants are considered for migration.

Material/Plant active with four (4) years inspection usage history validates active QM View (QMAT) with at least one valid inspection type (e.g., 01, 04, 09) confirms Control Key, Certificate Type, and Q-Score alignment with configuration ensures accurate integration with incoming inspection and quality processes in S/4HANA.

Plant Merging

Plants will be harmonized based on the To-Be Plant Mapping. As some legacy plants will be merged into one target plant, QM Views will be reassigned accordingly to ensure data consistency and alignment with the new plant structure in SAP S/4HANA.

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	Master Inspection Characteristic will be extracted from PF2 and WP2	PF2 =10145 records WP2 = 41526 records	S/4 HANA	11722 records

Additional Information

Multi-language Requirement

Master Inspection Characteristic description will be maintained in English by default.

Since multi-language support is available for Master Inspection Characteristic, users logging in with a different language will see the description displayed in their logon language, provided that the corresponding language key has been maintained in the on Characteristic.

Document Management

Not applicable

Legal Requirement

Not applicable

Special Requirements

Not applicable

Target Design

The technical design of the target for this conversion approach.

T a b l e	Field	Data Element	Field Description	Data Type	Length	Requirement
Q P M K	GUELTIG AB	GUELTIG AB	Valid-from Date	DA TS	8	R
Q P M K	LOEKZ	LOEKZ	Status of Master Record	CH AR	1	R (Migrate only status 1 and 2) 1 = Being Created 2 = Released 3 = Can No Longer Be Used 4 = Deletion Flag 5 = Archive
Q P M K	MASSEI NHSW	MASSEI NHSW	Unit of Measurement in Which Quantitative Data Is Stored	UNIT	3	C

Q P MK	MKMNR	QMERNKR	Master Inspection Characteristic (MIC)	CH AR	18	R
Q P MK	SOLLWE RT	SOLLWE RT	Target Value for a Quantitative Characteristic	DEC	15	C
Q P MK	STELLEN	STELLEN	Number of Places to the Right of a Decimal Point (Accuracy)	NU MC	2	C
Q P MK	STEUER KZ	STEUER KZ	Cntrl Indicator String for Insp. Char./Master Insp. Char.	CH AR	30	R : Correspond to control data. System concatenate the data pulled from TQ27 customizing table or changed by the user --> Definition in Appendix tab
Q P MK	TOLERA NZOB	TOLERA NZOB	Upper Specification Limit	DEC	15	C
Q P MK	TOLERA NZSL	TOLERA NZSL	Tolerance Key	CH AR	3	C
Q P MK	TOLERA NZUN	TOLERA NZUN	Lower Specification Limit	DEC	15	C
Q P MK	VERSION	VERSION	MIC Version	NU MC	2	S
Q P MK	WERKS	WERKS	Plant for Master Inspection Characteristic	CH AR	4	R
Q P MK	ZAEHLER	QZAEHL ER	Plant for Master Inspection Characteristic (Plant Specific MIC)	CH AR	4	R
Q P MT	VERSION	VERSION	MIC Version	NU MC	2	S
Q P MK	CODE9U	CODE9U	Defect Code for Rejection at Lower Specification Limit	CH AR	8	C If defect indicator and lower specification limit is set in QPMK-STEUERKZ and business required to maintain a defect catalog for the lower tolerance defect than this field need to be populated Value can be : Copy from the current system or a data enrichment or can be a blank.
Q P MK	CODEGR 90	CODEGR 90	Defect Code Group for Rejection at Upper Tolerance	CH AR	8	C If defect indicator and upper specification limit is set in QPMK-STEUERKZ and business required to maintain a defect catalog for the upper tolerance defect than this field need to be populated Value can be : Copy from the current system or a data enrichment or can be a blank.
Q P MK	CODE90	CODE90	Defect Code for Rejection at Upper Specification Limit	CH AR	8	C If defect indicator and upper specification limit is set in QPMK-STEUERKZ and business required to maintain a defect catalog for the upper tolerance defect than this field need to be populated Value can be : Copy from the current system or a data enrichment or can be a blank.
Q P MK	ATINN	ATINN	Internal characteristic	NU MC	10	S
Q P MK	EEANTV ERF	EEANTV ERF	Fraction Calculation	CH AR	1	NU
Q P MK	CODEGR QUAL	CODEGR QUAL	Defect Code Group for General Rejection	CH AR	8	C If defect indicator and upper specification limit is set in QPMK-STEUERKZ and business required to maintain a defect catalog for the upper tolerance defect than this field need to be populated Value can be : Copy from the current system or a data enrichment or can be a blank.
Q P MK	CODEQU AL	CODEQU AL	Defect Code for Rejection: General	CH AR	8	C If defect indicator and upper specification limit is set in QPMK-STEUERKZ and business required to maintain a defect catalog for the upper tolerance defect than this field need to be populated Value can be : Copy from the current system or a data enrichment or can be a blank.

Q P MK	DUMMY10	DUMMY10	Spec ID	CH AR	10	C
Q P MK	DUMMY20	DUMMY20	Spec	CH AR	20	C
Q P MK	DUMMY40	DUMMY40	Text Line for Additional Information	CH AR	40	C
Q P MK	SORTFELD	SORTFELD	Search Field	CH AR	20	R
Q P MK	LSPER	LSPER	Data Record Is Used	CH AR	1	S
Q P MK	KONSISTENT	KONSISTENT	Copy Model/Reference Characteristic	CH AR	1	R : Empty is a valid value
Q P MK	AUTOR	AUTOR	Name of User Who Created the Data Record	CH AR	12	S
Q P MK	DATES	DATES	System Date on Which Data Record Was Created	DA TS	8	S
Q P MK	AEAUT	AEAUT	Name of User Who Last Changed Data Record	CH AR	12	S
Q P MK	DATAE	DATAE	System Date on Which Data Record Was Changed	DA TS	8	S
Q P MK	CHANGEDDATETIME	CHANGEDDATETIME	UTC Time Stamp in Short Form (YYYYMMDDhhmmss)	CH AR	14	S
Q P MK	MERKGEW	MERKGEW	Weighting of Characteristic	DEC	3	C (Empty is a valid value) Value can be : Copy from the current system or a data enrichment or can be a blank. Accepted values as per 10/2025 are : <ul style="list-style-type: none">• 01• 02• 03• 04• 05• 91• 92• 93
Q P MK	PRFQL	PRFQL	Inspector Qualification	CH AR	3	C
Q P MK	QAUTH	QAUTH	Authorization Group QM Master Data	CH AR	4	C
Q P MK	PLAUSIOBEN	PLAUSIOBEN	Upper Plausibility Limit	DEC	15	C
Q P MK	PLAUSIUNTE	PLAUSIUNTE	Lower Plausibility Limit	DEC	15	C
Q P MK	TOLERW EIOB	TOLERW EIOB	Change to Upper Specification Limit	CH AR	1	C
Q P MK	TOLERW EIUN	TOLERW EIUN	Change to Lower Specification Limit	CH AR	1	C
Q P MK	TOLERW AB	TOLERW AB	Date from Which the Tolerance Change Is Valid	DA TS	8	C

Q P MK	TOLERW BIS	TOLERW BIS	Date Until Which the Tolerance Change Is Valid	DA TS	8	C
Q P MK	CODEGR 9U	CODEGR 9U	Defect Code Group for Rejection at Lower Tolerance	CH AR	8	C If defect indicator and lower specification limit is set in QPMK-STEUERKZ and business required to maintain a defect catalog for the lower tolerance defect than this field need to be populated Value can be : Copy from the current system or a data enrichment or can be a blank.
Q P MK	GRENZE OB1	GRENZE OB1	First Upper Specification Limit	DEC	15	C
Q P MK	GRENZE UN1	GRENZE UN1	First Lower Specification Limit	DEC	15	C
Q P MK	GRENZE OB2	GRENZE OB2	Second Upper Specification Limit	DEC	15	C
Q P MK	GRENZE UN2	GRENZE UN2	Second Lower Specification Limit	DEC	15	C
S T XH	TDOBJE CT	TDOBJE CT	Texts: application object	CH AR	10	S : Always "QPmerkmal"
S T XH	TDNAME	TDNAME	Name	CH AR	70	S : Link with MIC
S T XH	TDID	TDID	Text ID	CH AR	4	S : Always "QPMT"
S T XH	TDSRAS	TDSRAS	Language Key	LA NG	1	S
S T XH	TDTITLE	TDTITLE	Title in dialog box	CH AR	20	S
S T XH	TDFREL ES	TDFREL ES	Release	CH AR	4	S
S T XH	TDFUSER	TDFUSER	Created by	CH AR	12	S
S T XH	TDFDATE	TDFDATE	Date created	DA TS	8	S
S T XH	TDFTIME	TDFTIME	Time Created	TIMS	6	S
S T XH	TDLREL ES	TDLREL ES	Last Changed in Release	CH AR	4	S
S T XH	TDLUSER	TDLUSER	Last changed by	CH AR	12	S
S T XH	TDLTIME	TDLTIME	Last Changed At	TIMS	6	S
S T XH	TDVERSI ON	TDVERSI ON	Version	CH AR	4	S
S T XH	TDSTYLE	TDSTYLE	Style Name	CH AR	8	S
S T XH	TDFORM	TDFORM	Form name	CH AR	10	S
S T XH	TDHYPH ENAT	TDHYPH ENAT	Hyphenation Active	CH AR	1	S

S T X H	TDTRAN STAT	TDTRAN STAT	Translation status	CH AR	1	S
S T X H	TDOSPR AS	TDOSPR AS	Original language	LA NG	1	S
S T X H	TDMACO DE1	TDMACO DE1	Short Title 1	CH AR	20	S
S T X H	TDMACO DE2	TDMACO DE2	Short Title 2	CH AR	20	S
S T X H	TDXTLI NES	TDXTLI NES	Number of Text Lines in Line Table	NU MC	5	S
S T X H	TDREF	TDREF	Reference text	CH AR	70	S
S T X H	TDREFN AME	TDREFN AME	Name of Referenced Text	CH AR	70	S
S T X H	TDREFID	TDREFID	ID of Referenced Text	CH AR	4	S
S T X H	TDTEXT TYPE	TDTEXT TYPE	SAPscript: Format of Text	CH AR	1	S
S T X H	TDCOMP RESS	TDCOMP RESS	SAPscript: Text is compressed	CH AR	1	S
S T X H	LOGSYS	LOGSYS	Logical system	CH AR	10	S
S T X H	RELID	RELID	CHAR02 data element	CH AR	2	S
S T X L	TDOBJE CT	TDOBJE CT	Text object	CH AR	10	S : Always "QPmerkmal"
S T X L	TDNAME	TDNAME	Text name	CH AR	70	S : Link with MIC
S T X L	TDID	TDID	Text ID	CH AR	4	S : Always "QPMT"
S T X L	TDSRAS	TDSRAS	Language	LA NG	1	S
S T X L	SRTF2	SRTF2	BIN1 data element fo	RAW	2	S
S T X L	CLUSTR	CLUSTR	BIN2 data element fo	RAW	2	S
S T X L	CLUSTD	CLUSTD	Data	RAW	255	S : Correspond to the long text
S T X H	TDLDATE	TDLDATE	Changed On	DA TS	8	S
S T X H	TDREFO BJ	TDREFO BJ	Object of Referenced Text	CH AR	10	S
S T X H	TDOCLA SS	TDOCLA SS	SAPscript: Object Class	CH AR	2	S

Data Cleansing

All data cleansing activities must be performed in the source systems (e.g., PF2, WP2) wherever possible, following the rules and criteria defined in this document. The objective is to ensure that only valid, active, and relevant master data is migrated to S/4HANA, while obsolete, redundant, or inconsistent records are excluded.

If certain data cleansing activities cannot be executed directly in the source systems due to system limitations, they may be managed externally (e.g., using Syniti Migrate, 3rd Party Vendor tools, or DCT processes). In such cases, proper documentation of the cleansing activity must be maintained and appended to this deliverable to support review, validation, and sign-off by stakeholders.

ID	Criticality	Error Message /Report Description	Rule	Output	Source System
1057-001	C1	MIC not used in last 4 years	All MICs not referenced in any inspection plan (PLMK) or inspection lot in the last 4 years won't be migrated.	Active MICs used within last 4 years	PF2/WP2
1057-002	C1	MIC flagged for deletion	All MICs with status 1 and 2 (QPMK-LOEKZ) won't be migrated.	Active MICs with status = 1 (Being Created) and 2 (Released)	PF2/WP2
1057-003	C1	Duplicate MIC (and duplicate description)	Identify all MICs with duplicate or similar descriptions (e.g., PH, PH1, PH3) and provide them for consolidation. Only one MIC should be selected for use.	Business must decide which MIC will be retained as the representative MIC for data migration purpose.	PF2/WP2

Conversion Process

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

The ETL (Extract, Transform, Load) process is a structured approach to data migration and management, ensuring high-quality data is seamlessly transferred across systems. Here's a breakdown of its key components:

1. Extraction

The process begins with extracting metadata and raw data from source systems, such as Syensqo ECC system (i.e. WP2/PF2) periodically. The extracted data is then staged for transformation.

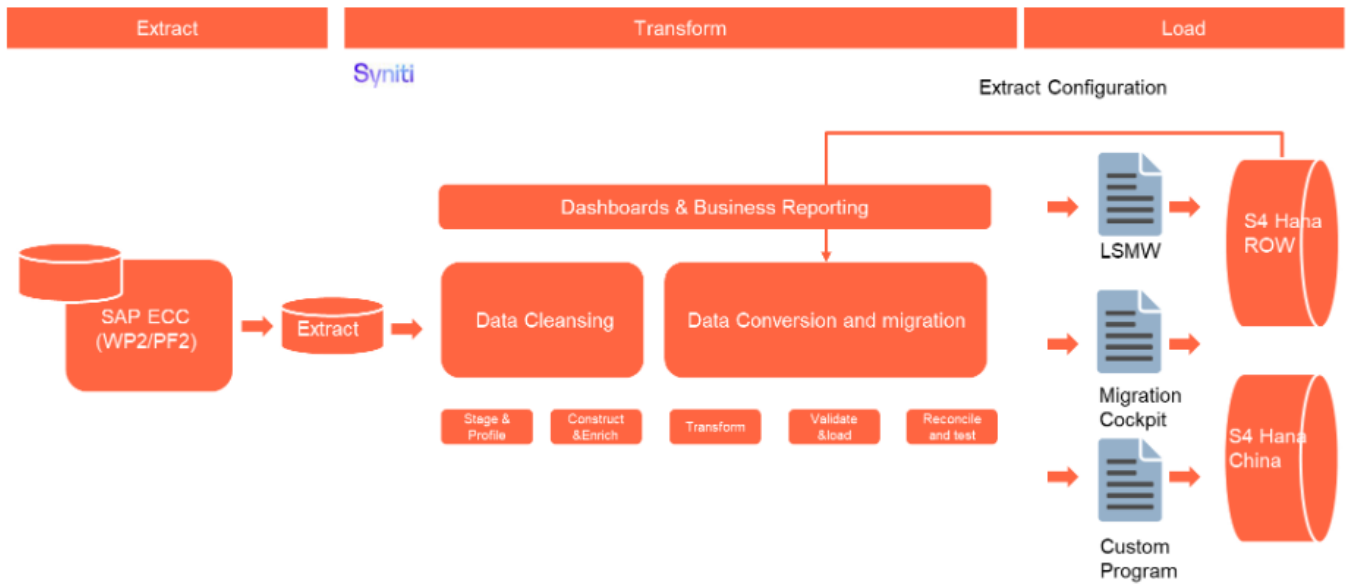
2. Transformation

Once extracted, the data undergoes cleansing, consolidation, and governance. This step ensures data integrity, consistency, and compliance with business rules. The transformation process includes:

- Data validation to remove inconsistencies.
- Standardization to align formats across datasets.
- Business rule application to refine data for operational use.

3. Loading

The transformed data is then loaded into the target S/4HANA system.



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
Extraction Scope Definition	- Identify the source systems and databases involved. - Define the data objects (tables, fields, records) to be extracted. - Establish business rules for data selection.	Syniti / LTC Data team
Extraction Methodology	- Specify the extraction approach (full, incremental, or delta extraction). - Determine the tools and technologies used. - Define data filtering criteria to exclude irrelevant records.	Syniti
Extraction Execution Plan	- Establish execution timelines and batch processing schedules. - Assign responsibilities for extraction monitoring. - Document dependencies on other migration tasks.	Syniti
Data Quality and Validation	- Define error handling mechanisms for extraction failures.	Syniti

Selection Screen

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

Data Collection Template (DCT)

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 Material BOM 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.

Extraction Dependencies

Item #	Step Description	Team Responsible
1	Source System Availability <ul style="list-style-type: none"> Ensure that the source database or application is accessible. Confirm that necessary credentials and permissions are granted 	Syensqo IT
2	Data Structure <ul style="list-style-type: none"> Identify relationships between tables, views, and stored procedures. 	Syniti
3	Referential Integrity <ul style="list-style-type: none"> Ensure dependent records are extracted together. 	Syniti
4	Extraction Methodology <ul style="list-style-type: none"> Define whether extraction is full, incremental, or delta-based. Establish batch processing schedules for large datasets. 	Syniti
5	Performance and Scalability Considerations <ul style="list-style-type: none"> Optimize extraction queries to prevent system overload. Ensure network bandwidth supports data transfer volumes. 	Syniti
6	Security and Compliance <ul style="list-style-type: none"> Adhere to regulatory standards for sensitive information if applicable 	Syniti

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:

- Perform value mapping and data transformation rules.
 - Legacy values are mapped to the to-be values (this could include a default value)
 - Values are transformed according to the rules defined in
- 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, WP2	QPMK	GUELTIGAB	Valid-from Date	S4 HANA	QPMK	GUELTIGAB	Valid-from Date	Use S/4 Start-from Date
2	PF2, WP2	QPMK	LOEKZ	Status of Master Record	S4 HANA	QPMK	LOEKZ	Status of Master Record	Copy from legacy. Migrate both status 1 (Being Created) and status 2 (Released) records
3	PF2, WP2	QPMK	MASSEINH SW	Unit of Measurement in Which Quantitative Data Is Stored	S4 HANA	QPMK	MASSEIN HSW	Unit of Measurement in Which Quantitative Data Is Stored	Xref (value mapping) from master data T006
4	PF2, WP2	QPMK	MKMNR	Master Inspection Characteristic (MIC)	S4 HANA	QPMK	MKMNR	Master Inspection Characteristic (MIC)	Copy from legacy
5	PF2, WP2	QPMK	SOLLWERT	Target Value for a Quantitative Characteristic	S4 HANA	QPMK	SOLLWERT	Target Value for a Quantitative Characteristic	Copy from legacy for quantitative MIC; blank for qualitative
6	PF2, WP2	QPMK	STELLEN	Number of Places to the Right of a Decimal Point (Accuracy)	S4 HANA	QPMK	STELLEN	Number of Places to the Right of a Decimal Point (Accuracy)	Copy from legacy for quantitative MIC. Default value as 0 (blank) for qualitative.
7	PF2, WP2	QPMK	STEUERKZ	Cntrl Indicator String for Insp. Char./Master Insp. Char.	S4 HANA	QPMK	STEUERKZ	Cntrl Indicator String for Insp. Char./Master Insp. Char.	Copy from legacy. Validate against S/4 customizing (only permitted flags).
8	PF2, WP2	QPMK	TOLERANZ OB	Upper Specification Limit	S4 HANA	QPMK	TOLERANZ OB	Upper Specification Limit	Copy from legacy. Numeric check; ensure upper lower when both present.
9	PF2, WP2	QPMK	TOLERANZ SL	Tolerance Key	S4 HANA	QPMK	TOLERANZ SL	Tolerance Key	Copy from legacy. Must exist in S /4 target customizing
10	PF2, WP2	QPMK	TOLERANZ UN	Lower Specification Limit	S4 HANA	QPMK	TOLERANZ UN	Lower Specification Limit	Copy from legacy. Numeric check; ensure lower upper when both present.
11	PF2, WP2	QPMK	WERKS	Plant for Master Inspection Characteristic	S4 HANA	QPMK	WERKS	Plant for Master Inspection Characteristic	Xref (value mapping) from To-Be Plant Mapping
12	PF2, WP2	QPMK	ZAEHLER	Plant for Master Inspection Characteristic (Plant Specific MIC)	S4 HANA	QPMK	ZAEHLER	Plant for Master Inspection Characteristic (Plant Specific MIC)	Copy from legacy. Plant must be exist in Material Relevancy Rules.
13	PF2, WP2	QPMK	CODE9U	Defect Code for Rejection at Lower Specification Limit	S4 HANA	QPMK	CODE9U	Defect Code for Rejection at Lower Specification Limit	Copy from legacy. Catalog/code must exist in target.
14	PF2, WP2	QPMK	CODEGR9O	Defect Code Group for Rejection at Upper Tolerance	S4 HANA	QPMK	CODEGR9O	Defect Code Group for Rejection at Upper Tolerance	Copy from legacy. Target catalog group must exist.
15	PF2, WP2	QPMK	CODE9O	Defect Code for Rejection at Upper Specification Limit	S4 HANA	QPMK	CODE9O	Defect Code for Rejection at Upper Specification Limit	Copy from legacy. Ensure code is valid in target.
16	PF2, WP2	QPMK	CODEGRQ UAL	Defect Code Group for General Rejection	S4 HANA	QPMK	CODEGRQ UAL	Defect Code Group for General Rejection	Copy from legacy. Target catalog group must exist.
17	PF2, WP2	QPMK	CODEQUAL	Defect Code for Rejection: General	S4 HANA	QPMK	CODEQUAL	Defect Code for Rejection: General	Copy from legacy. arget code must exist.
18	PF2, WP2	QPMK	DUMMY10	Spec ID	S4 HANA	QPMK	DUMMY10	Spec ID	Copy only if value exists (optional). Leave blank otherwise.
19	PF2, WP2	QPMK	DUMMY20	Spec	S4 HANA	QPMK	DUMMY20	Spec	Copy only if value exists (optional). Leave blank otherwise.
20	PF2, WP2	QPMK	DUMMY40	Text Line for Additional Information	S4 HANA	QPMK	DUMMY40	Text Line for Additional Information	Copy only if value exists (optional). Leave blank otherwise.
21	PF2, WP2	QPMK	SORTFELD	Search Field	S4 HANA	QPMK	SORTFELD	Search Field	Copy from legacy
22	PF2, WP2	QPMK	KONSISTEN T	Copy Model/Reference Characteristic	S4 HANA	QPMK	KONSISTEN T	Copy Model/Reference Characteristic	Copy from legacy
23	PF2, WP2	QPMK	MERKGEW	Weighting of Characteristic	S4 HANA	QPMK	MERKGEW	Weighting of Characteristic	Copy from legacy
24	PF2, WP2	QPMK	PRFQL	Inspector Qualification	S4 HANA	QPMK	PRFQL	Inspector Qualification	Copy from legacy
25	PF2, WP2	QPMK	QAUTH	Authorization Group QM Master Data	S4 HANA	QPMK	QAUTH	Authorization Group QM Master Data	Copy from legacy. Ensure target auth group exists
26	PF2, WP2	QPMK	PLAUSIOB EN	Upper Plausibility Limit	S4 HANA	QPMK	PLAUSIOB EN	Upper Plausibility Limit	Copy from legacy. Numeric check; only relevant to quantitative MICs.
27	PF2, WP2	QPMK	PLAUSIUN TE	Lower Plausibility Limit	S4 HANA	QPMK	PLAUSIUN TE	Lower Plausibility Limit	Copy from legacy. Numeric check; only relevant to quantitative MICs.
28	PF2, WP2	QPMK	TOLERWEI OB	Change to Upper Specification Limit	S4 HANA	QPMK	TOLERWEI OB	Change to Upper Specification Limit	Copy from legacy

29	PF2, WP2	QPMK	TOLERWEI UN	Change to Lower Specification Limit	S4 HANA	QPMK	TOLERWE IUN	Change to Lower Specification Limit	Copy from legacy
30	PF2, WP2	QPMK	TOLERWAB	Date from Which the Tolerance Change Is Valid	S4 HANA	QPMK	TOLERWAB	Date from Which the Tolerance Change Is Valid	Copy from legacy. Validate as a real date; must be "valid-to".
31	PF2, WP2	QPMK	TOLERWBIS	Date Until Which the Tolerance Change Is Valid	S4 HANA	QPMK	TOLERWB IS	Date Until Which the Tolerance Change Is Valid	Copy from legacy. Validate as a real date; must be "valid-from".
32	PF2, WP2	QPMK	CODEGR9U	Defect Code Group for Rejection at Lower Tolerance	S4 HANA	QPMK	CODEGR9U	Defect Code Group for Rejection at Lower Tolerance	Copy from legacy. Target group must exist.
33	PF2, WP2	QPMK	GRENZEO B1	First Upper Specification Limit	S4 HANA	QPMK	GRENZEO B1	First Upper Specification Limit	Copy from legacy. Numeric; ensure UoM alignment
34	PF2, WP2	QPMK	GRENZEU N1	First Lower Specification Limit	S4 HANA	QPMK	GRENZEU N1	First Lower Specification Limit	Copy from legacy. Numeric; check lower upper.
35	PF2, WP2	QPMK	GRENZEO B2	Second Upper Specification Limit	S4 HANA	QPMK	GRENZEO B2	Second Upper Specification Limit	Copy from legacy
36	PF2, WP2	QPMK	GRENZEU N2	Second Lower Specification Limit	S4 HANA	QPMK	GRENZEU N2	Second Lower Specification Limit	Copy from legacy

Transformation Mapping

Mapping Table Name	Mapping Table Description
Plant	Mapping of legacy Plants to new S/4HANA Plant codes according to To-Be Plant Mapping definition. Ensures characteristics are assigned to valid and active plants only.
Characteristic Name (MIC)	Mapping of legacy Master Inspection Characteristic (QS21) names to new harmonized naming convention in S/4HANA, following corporate quality standards.
Characteristic Type	Mapping of legacy Characteristic Type values (Quantitative / Qualitative) to target system domain values (QMTB-KZQUI).
Catalog Type	Mapping of legacy Catalog Type to valid Catalog Type entries in configuration table TQ15 in S/4HANA.
Selected Set / Code Group	Mapping of legacy Selected Set and Code Group to harmonized sets in target system (reference configuration table TQ15T). Ensures consistency of catalog-based inspection characteristics.
Unit of Measure (UoM)	Mapping of legacy Units of Measure to ISO-compliant Units of Measure in S/4HANA (as defined in table T006).
Decimal Places	Mapping of legacy Decimal Place format to target format as per S/4HANA numeric precision standard (QPMK-ANZST / QPMK-STELL).
Target Value / Upper & Lower Limit	Conversion of legacy target, lower, and upper specification limits into harmonized decimal format consistent with target measurement system.
Characteristic Group	Mapping of legacy characteristic groups (QPMK-MERKNR grouping) to harmonized groups in target system for standardized reporting and search.
Plant Authorization Group	Mapping of legacy Authorization Groups (QPMK-BEGRU) to target Authorization Groups in S/4HANA (per configuration table TBRG).
Class / Class Type (Optional)	Mapping of legacy class assignments (if MICs were linked to classes) to target class and class type configuration in S/4HANA.
Reference Indicator	Mapping of legacy Reference Indicator values to target domain values ensuring correct reference linkage between global and plant-specific MICs.

Transformation Dependencies

List the steps that need to occur before transformation can commence

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

Pre-Load Validation

Project Team

Completeness

Task	Action
Business validates the load file	Send the load file to the Business Representatives for all plants so they can review and validate the data.
Mock 1 test must occur beforehand	The 1st mock load (manual) must be executed before the actual load can take place.
Count before and after	Review and document the item counts in the Transformation Files before the load, and verify them again after the load.
Validation Reports	

Accuracy

Task	Action
Conversion Accuracy	SyWay P2F-MFG Data Team to verify that all fields below meet pass the checks: <ol style="list-style-type: none">1. Mandatory Fields2. Field and Value Mapping Correctness3. Null Checks4. 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 Data Owner/s to verify that the total number of relevant records from the the system is equal to the total number of records in the Preload and Load Sheets.

Accuracy

Task	Action
Conversion Accuracy	Business Data Owner/s to verify that all the data in the load table/file is accurate as per endorsed transformation/mapping rules.

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
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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 re-upload 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: Definition of plants where Master Inspection Characteristics are created and maintained.
2	T006 – Units of Measurement: ISO-compliant UoM definitions to ensure consistency of quantitative inspection characteristics.
3	TQ07A – Inspection Types: Configuration of valid inspection types used for assigning MICs in inspection plans or material QM view.
4	TQ08 – Control Keys (QM): Definition of control keys for inspection processing, including in-process and final inspection controls.
5	TQ09 – Usage Keys: Definition of usage keys to determine where inspection characteristics can be used (e.g., in inspection plans, material QM view).
6	TQ15 – Catalog Types: Definition of catalog types for qualitative inspection characteristics (e.g., defect codes, result recording codes).
7	TQ15T – Selected Sets & Code Groups: Configuration of selected sets and code groups used to classify qualitative MIC values.
8	TBRG – Authorization Groups: Assignment of authorization groups controlling access and maintenance rights for MICs.
9	TQ30 – Reference Indicators: Configuration of reference indicator usage for linking global and plant-specific MICs.
10	TQ75 – Decimal Places & Format: Configuration of decimal places, number format, and rounding rules for quantitative MIC values.
11	TCLA – Class Type (optional): Configuration of class type if MICs are linked to classification system (e.g., class type 023).
12	TQ33 – Catalog Profile Assignment: Control of which catalog profiles are assigned to MICs for standardizing defect recording.
13	TQ85 – Inspection Lot Origin: Configuration of inspection lot origin values that determine MIC usage in inspection processes.

Conversion Objects

Object #	Preceding Object Conversion Approach
1064	Sampling Procedure
1043	Inspection Methods

Error Handling

Error Type	Error Description	Action Taken
1	Plant does not exist or not mapped in target system	Verify that the plant exists in the target system and mapping is correctly maintained. Reprocess once mapping is updated.

2	UoM (Unit of Measure) not valid or not harmonized	Ensure that UoM is mapped correctly in T006 and harmonized with the target system. Correct invalid values in the collection template and reload.
3	Catalog or Selected Set not found in target system	Check if the required catalog and selected set are already migrated or configured in the target system. Migrate or create them before reprocessing.
4	Characteristic code or description missing	Validate source data completeness. Update missing mandatory fields (e.g., short text, characteristic ID) in the collection template.
5	Duplicate inspection characteristic records for the same plant	Perform deduplication and retain only the valid active characteristic in the collection file before loading.
6	Invalid characteristic type or control indicators	Review and correct control indicators (e.g., quantitative/qualitative flags, sampling procedures) to align with target system configuration.
7	Authorization group or class type not maintained in target system	Ensure the required authorization group or class type is configured in the target system before reprocessing.
8	Obsolete or marked-for-deletion characteristics	Exclude these records from migration as per data cleansing rules.

Post-Load Validation

Project Team

Completeness

Task	Action
Verify Count	SyWay P2F-MFG 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.

Accuracy

Task	Action
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.).

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 Material BOM data in target S/4 HANA were loaded correctly via DSP Migrate post load reports or standard reports from S/4 HANA.

Key Assumptions

- Master Data Standard (MDS) is up to date as of the date of documenting this conversion approach and Master Inspection Characteristic data load.

- Data cleansing activities have been completed to ensure only active, valid, and relevant Master Inspection Characteristics are migrated. Characteristics marked for deletion or obsolete records are excluded.
- Required configuration elements such as Catalogs, Selected Sets, Code Groups, Control Indicators, and Authorization Groups are already in place in the target S/4HANA system prior to migration.
- All Units of Measure (UoM) used in quantitative characteristics are harmonized between source and target systems to ensure data consistency during migration.
- Plant master data and organizational mapping are completed prior to Master Inspection Characteristic load to ensure proper assignment.
- Number ranges for characteristic identifiers are preconfigured in S/4HANA and internal numbering will be applied during migration unless otherwise specified.
- Only fields required for QM inspection processing, quality planning, and execution are in scope for migration. Legacy-specific or unused fields will not be migrated.
- Enrichment activities (such as missing control indicators, invalid UoM, or obsolete characteristics) are handled outside of the automated migration process and may require business sign-off.
- Dependencies such as catalog entries, selected sets, and reference data are assumed to be loaded and validated prior to characteristic migration.
- Any exceptions to these assumptions (e.g., manual updates to control indicators or special characteristic types) will be managed through a formal exception process.

See also

[CNV-2009 Material Master QM view](#)

[CNV-1064 QM Sampling Procedure](#)

[CNV-1043 QM Inspection Methods](#)

[CNV-1041 QM Inspection Plan](#)

[CNV-1047 Batch Characteristics of Class Type: 023](#)

Change log

Version	Published	Changed By	Comment
CURRENT (v. 52)	May 08, 2026 10:02	SUSANTO-ext, William	Section Update - Conversion Spec Update (DCT Section) v5.0
v. 51	Apr 07, 2026 14:15	SUSANTO-ext, William	Section Update - Conversion Spec Update (DCT Section) v4.0
v. 50	Apr 03, 2026 09:37	SUSANTO-ext, William	Section Update - Conversion Spec Update (DCT Section) v3.0
v. 49	Mar 26, 2026 09:35	SUSANTO-ext, William	Section Update - Minor Update v4.0
v. 48	Mar 26, 2026 09:32	SUSANTO-ext, William	Section Update - Minor Update v3.0
v. 47	Mar 13, 2026 12:39	SUSANTO-ext, William	Section Update - Conversion Spec Minor Update (DCT & Transformation Rules) v2.0
v. 46	Feb 24, 2026 08:41	SUSANTO-ext, William	Section Update - Conversion Spec Minor Update v1.0
v. 45	Feb 18, 2026 16:57	SUSANTO-ext, William	Section Update - Conversion Scope Draft v1.7
v. 44	Feb 18, 2026 16:47	SUSANTO-ext, William	Section Update - Conversion Scope Draft v1.6
v. 43	Feb 18, 2026 16:40	SUSANTO-ext, William	Section Update - Conversion Scope Draft v1.5

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Workflow history

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