

KDD009 - Standardisation of Units of Measure

Status	Approved
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Issue

Syensqo has close to 700 non-standard/custom units of measure created in the system.

- These non-standard units of measure might cause data consistency issues as the definitions and the conversions are not standardised
- These custom units of measure cause issues with integrations with other SAP modules or 3rd party systems that do not recognise these units

Recommendation

Based on the evaluation of the solution options, it is recommended to Use SAP / ISO Standard UoMs and conversions. This follows the Simplification /Standardisation approach of the project and ensures consistency and ease of integration across the landscape.

Any legacy data using non-standard UoMs will be mapped to standard UoMs during data migration.

Background & Context

Syensqo has close to 700 non-standard/custom units of measure created in the system. These units are historically created to cater to UoM's published by suppliers in various catalogs and also as a workaround to support certain business processes. Below are some of the issues faced currently

- Incorrect Conversion Factors - Missing or incorrect conversion factors between non-standard UoM's sometimes cause calculation errors e.g., in pricing, inventory etc.
- Reporting and Analysis Errors - Non-standard UoM's create issues in reporting and analytics, leading to miscalculations or inaccurate data representation and aggregations
- Incompatibility with SAP Standard Functions - Some SAP standard functions (e.g., MRP, ATP checks) do not fully support non-standard UoM's, or require additional customisation
- User Confusion and Data Entry Mistakes - Non-standard UoM's sometimes lead to user confusion and result in data entry mistakes, especially when the same unit of measure is shared across multiple business units

Scale of Issue

Below table provides the statistics of non-standard UoM's in the system along with the usage of the same.

Syst em	Non-Standard UoM's	POs in past 5 years	PO's with non-Standard UoM	%	UoM's used in affected POs	Materials changed in 10 Years	Materials with Non-Standard UoM	%	UoM's used in Material Masters
QF2	404	4,642,346	184,587	4%	66	613,651	27,648*	5%	32
WQ2	357	2,877,450	82,007	3%	73	567,413	5,995	1%	51

*23,000 of the Material Masters in QF2 use just one non Std UoM - "NR - Number"

As a part of the above analysis, though there are ~700 non-standard UoM's that are existing in the system, there are only ~200 of them are currently active and being used in material master and Purchase Orders.

Assumptions

- Business processes are simplified and standardised and will not have any requirements for non-standard units of measure
- Punch-out catalogs used by Syensqo will have standard ISO units of measure - In case of any exceptions, the unit of measure in the catalog will be mapped to a standard unit of measure in SAP

Constraints

N/A

Impacts

Data Migration

- All dependent master data ex: Material master, BOM's etc.. will be updated with the standard unit of measure (All the quantities in these data objects ex: BOM Header quantity, MOQ in material master will be updated based on the conversion factors)
- Stock quantities ex: Inventory, Stock in transit etc.. will adjusted based on the standard UoM before migrating to the new system
- Prices ex: Info records, pricing conditions etc.. will be adjusted based on the standard UoM before migrating to the new system

Downstream systems

- Any downstream system using the master data with non-standard UoM will be updated with new UoM and conversions. Mapping table will be used in case the UoM updates are not possible

Communication

- Communication along with the mapping for non-standard to Standard UoM's will be sent to the relevant customers / Vendors / 3rd party systems

Business Rules

All the master data and Business processes use only Standard SAP / ISO Units of Measure

Options considered

Following are the options considered.

Option 1: Use SAP / ISO Standard UoMs and conversions

As a part of this option, all the master data and business processes use only the standard SAP/ISO unit of measures available in the system. Non-standard UoM's are not permitted to be created / used. Mapping activity will be carried out when the master data / transactional data is migrated from the legacy systems to the new S/4 HANA system.

Advantages:

- UoM's and conversions are standardised across all the master data objects and business processes
- No additional effort / customisations required to enable the standard SAP functionality
- Uniform and Simplified reporting as the UoM's and conversion factors are standardised
- Standard integrations without any additional data mappings with other modules of SAP, SAAS systems and any other 3rd party applications

Disadvantages:

- One time data conversion effort to map the master and transactional data with standard UoM
- One time data conversion / mapping of the non-standard UoM's in the downstream systems
- Business processes that require creation of the non-standard UoM needs to be remediated

Option 2: Allow the use of non-standard UoM's

As a part of this option, the existing As-Is active non-standard UoM's are migrated to the new S/4 Hana system.

Advantages:

- The existing processes can continue without any changes
- No data migration/mapping effort except when there is de-duplication of master data

Disadvantages:

- No standardisation of the UoM's across master and transactional data
- Complex governance process to govern the non-standard UoM's and the conversion factors
- User errors due to confusion and unfamiliarity of the non-standard UoM's
- Customisations and data mappings required for integrations to any SAAS or 3rd party applications
- Not all standard functionalities will be able to support the non-standard UoM's
- Potential incorrect reporting and aggregations

Evaluation

Based on the evaluation of the solution options, Option 1: Use SAP / ISO Standard UoM's and conversions is recommended. This follows the Simplification/Standardisation approach of the project and minimises any maintenance burden going forward.

Criteria	Option 1: Use SAP / ISO Standard UoM's and conversions	Option 2: Allow the use of non-standard UoM's
Alignment with project charter - Standardization and Simplification	+ Aligned with the Simplification and Standardisation principle	- Not Aligned
Integration	+ Standard integration without any data mapping or customisations required for UoM's	- Data mappings or customisations required for integrating with other SAP modules are 3rd party applications which doesn't support the non-standard UoM
Data Migration	- One time effort to map the non-standard UoM's on the master and transactional data and migrate	+ No mapping required. However where there is de-duplication of materials with a standard and non-standard UoM, additional mapping effort is required
Reporting	+ Accurate and consistent reporting as the UoM and the conversion factors are standardised	- Potential errors / requirement of mappings due to incorrect conversion factors or inconsistent use of non-standard UoM

See also

File	Modified
PDF File Workspace Mail - Fwd_ ERP Rebuild SteerCo Sept 2024 - Decisions and Actions.pdf	Sept 30, 2024 by FALL-ext, Cheikh

Change log

Version	Published	Changed By	Comment
CURRENT (v. 38)	Jul 24, 2025 10:30	WENNINGER-ext, Sascha	
v. 37	Aug 30, 2024 10:06	NARAHARI-ext, Bhargavi	
v. 36	Aug 29, 2024 19:56	NARAHARI-ext, Bhargavi	
v. 35	Aug 29, 2024 19:55	NARAHARI-ext, Bhargavi	
v. 34	Aug 29, 2024 17:42	NARAHARI-ext, Bhargavi	
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v. 31	Aug 29, 2024 16:53	NARAHARI-ext, Bhargavi	
v. 30	Aug 29, 2024 16:02	MCCARTNEY-ext, Stephen	
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