

ERP-201 Material Group Derivation for integrated MM Postings

Status	Approved
Owner	Alexander Bechter
Stakeholders	Gilles Madjaran NARAHARI-ext, Bhargavi Matthias Strickx
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Jira Development ID	 ERP-201 - Jira project doesn't exist or you don't have permission to view it.

High- Level Specification

Parameter	Value
Application System	S/4 HANA
Business Process Reference	06.10.02.01. Manage Inbound Deliveries 09.11.01.05. Perform Operational Reporting for General Ledger Accounting

Functional Overview

The main purpose of this custom development is to facilitate detailed cost and spend reporting based on material group information in financial reports in S/4 HANA. Due to limitations of SAP standard as explained further in SAP note '[2843578 - S/4 HANA Finance: Attribute assignment for material inventory lines](#)' the material group is now available as a table field but it is only populated for specific posting scenarios which is insufficient for comprehensive cost analysis on financial reporting. By implementing this custom development, the material group will be available for all material movements recorded in the system and all financially-relevant relevant sales as well as purchasing transactions and therefore allows for a holistic and flexible reporting of financial costs and spend based on the material group classification defined in S/4 HANA.

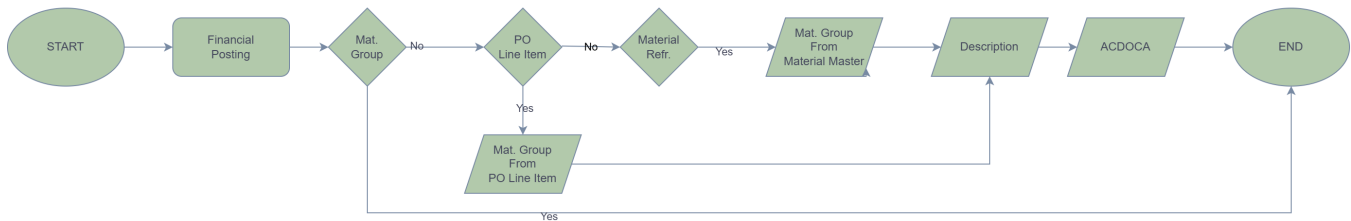
Scope and Objectives

In SAP standard, the material group is only captured for integrated, sales-related financial postings in the financial line item tables used for Financial reporting in S/4 HANA. The material group is equally if not more important for cost and spend analysis in integrated, procurement-related financial postings as it provides further and more detailed insights into the nature of the costs that may not always be obvious from just looking at the G/L account used for the financial posting. The Chart of Accounts in S/4 HANA has been condensed to a large extent under the premise that auxiliary reporting dimensions such as the material group can be used for a more detailed and granular analysis of costs incurred in the operational activities of an organization in financial reporting. The material group therefore serves as an important instrument for more detailed cost/spend reporting beyond the G/L account.

The scope of this development therefore includes the following components:

- Derivation and capture of material group attribute from purchase order line item in the universal journal ledger.
- Derivation and capture of material group attribute from the material master data where available in the universal journal ledger (technical table name: ACDOCA) in S/4 HANA.
- Derivation and capture of material group description in universal journal ledger in custom field. This field should inherit the field labels, descriptions and other attributes from reference field 'Material Group Description'. It must be available in latest Fiori reports based on the universal journal ledger used for Financial Reporting in S/4 HANA (e.g. Display Line Items in General Ledger).
- Ensure custom field added to universal journal ledger is available for reporting across all key Finance reporting applications used in S/4 HANA.

Process Flow Diagram



Step	Description	Comment
1	Financial posting executed by end user.	This posting can come from various source applications and processes such as goods receipt, invoice receipt, process order settlement, etc.
2	Check if material group is populated in universal journal ledger.	In some scenarios as explained in note 2843578 the material group is populated automatically. In this case, no further action is required.
3.	Posting contains reference to purchase order line item.	The material group used in the purchase order should take precedence over the material group assigned in the material. Spend analysis between Procurement and Financial reporting based on material groups shall be kept in sync.
3	Derive material group from purchase order line item captured in universal journal ledger record.	The material group should be directly read from the purchase order line item if a PO reference is present in the financial line item record.
4	Posting contains reference to material but no purchase order details.	Should a material movement be posted without a reference to a PO and the material group does not get determined by SAP standard behavior, it shall be derived from the material master.
5	Derive material group from material captured universal journal ledger record.	
6	Derive material group text and capture it in universal journal ledger custom field.	Ideally the material group text should be stored in a custom field in ACDOCA for easier identification of the actual spend category.
7	Execute financial report and drill-down by material group and material group description.	The fields for material group and material description can be added as drill-down dimension in key Finance reports used in S/4 HANA.

Assumptions

- All purchase order line items are created in the system with at least a material group assignment.
- All materials are assigned to exactly one material group in the material master.
- If the purchase order line item is pointing to a material group which is different to the material group defined in the material master record of the purchased material, the material group used in the purchase order line item shall be taken for updating the Financial line item table. This is to keep the Financial reporting in sync with the Procurement spend reporting by material group.
- Financial cost and spend reporting in S/4 HANA will be based on the universal journal ledger (ACDOCA) and not the classic FI line item table (BSEG)
- Custom development will be deployed across all S/4 HANA instances as the material group per se is not relevant for export controls.
- Detailed cost reporting for plain FI invoices (e.g. non-order invoices, free-form payment invoices) based on the material group is not supported as the material group can neither be derived from a PO nor a material.

Dependencies

Not applicable. No dependencies with other custom developments identified.

Security, Integrity and Controls

No specific requirements for authorization checks identified. For the CUI instance, the overarching export control principles shall apply and data shall be masked as per CUI classification requirements.

Apart from that, for this custom development the calling program's s authorization checks shall be followed.

Configuration Requirements

Materials Management:

- Material Groups need to be set up in the system and assigned to materials with extended purchasing views.
- Basic configurations for testing procure-to-pay processes end-to-end needs to be in place.

Sales and Distribution:

- Basic configurations for testing order-to-billing process end-to-end needs to be in place.

Financial Accounting:

- Basic configurations for Financial Accounting and Controlling needs to be in place to post financial accounting entries via integrated MM/SD processes.
- Automatic account determinations for procure-to-pay and sales processes needs to be maintained.

Language Requirements

No specific language requirements for this custom development. Material groups shall be translated as per rules defined in [KDD055 - Multi-Language Support](#).

Special Requirements

No other special requirements identified for this custom development.

Design Rationale

Functional Requirements

The following functional requirements must be covered by this custom development:

- Material Group must be available as drill-down dimension in financial line item reports used in S/4 HANA
- Material Group Description must be available in financial line item reports used in S/4 HANA for ease of reconciliation.

The above details shall be enriched for all line items posted in the universal journal table (ACDOCA) in S/4 HANA where material group details are required for financial reporting in S/4 HANA.

Proposed Technology to Use

Using Key User Extensibility, a custom field for "Material Group Text" will be added to ACDOCA. Custom posting logic will derive and populate the Material Group text (WGBEZ) from T023T

The proposed technology to use is a custom enhancement via pre-defined BADIs enhancement spots to update records in the universal journal ledger directly (e.g. enhancement spot: FINS_ACDOC_MODIFY) before the database updates are performed.

The advantages of this enhancement method are as follows as opposed to other methods such as classic FI substitutions via user exits:

- Call-up point is after document splitting routines have been processed hence all line items of the Financial Accounting documents are known and fully enriched once called.
- All FI documents can be checked and processed. With a classic FI substitution only BSEG-relevant line items are checked and processible, furthermore not all documents posted by integrated modules MM/SD are going through substitution routines defined in the classic substitution framework.

Data Source Considerations

This section is not applicable for this custom development

Data Validation Considerations

This section is not applicable for this custom development

Custom Tables

This section is not applicable for this custom development.

Master Data

This section is not applicable for this custom development.

Configuration Table

This section is not applicable for this custom development.

Selection Screen Enhancement

This section is not applicable for this custom development.

Processing Logic

The processing logic shall be sequenced as follows:

a) To limit the number of line items to be processed, the following exclusions can be defined:

- Document type (BKPF-BLART) not in value set 'Z_BLART_MATKL'. Value sets need to be maintained/updated by IT (via GS01/GS02) in the BAU phase on the back of a service request.

b) For all documents that need to be included, proceed with the following steps in the given sequence:

- 1.) Check if material group is populated. If yes, do nothing and exit. If no, proceed with step 2.)
- 2.) Check if purchase order and purchase order line item is populated in table record (ACDOCA-EBELN and ACDOCA-EBELP <> 'blank')
- 3.) If it's not populated, exit and proceed to step 5.)
- 4.) If populated, go to the PO line item table EKPO and retrieve the material group (MATKL) using the purchase order (EBELN) and (EBELP) as matching criteria for both tables (ACDOCA, EKPO). Populate ACDOCA-MATKL.
- 5.) If the purchase order and order line item is not populated (ACDOCA-EBELN and ACDOCA-EBELP = <blank>), check if a material (ACDOCA-MATNR) is populated. If not, do nothing and exit. If yes, proceed to step 6.)
- 6.) Go to table MARA and read out MARA-MATKL using MATNR as the matching criteria for both tables (ACDOCA, EKPO). Populate ACDOCA-MATKL.

c) Fetch material class description and populate it in a custom field created via the ACDOCA extensibility framework in the universal journal ledger. This part of the processing logic is applicable to all documents and line items that pass the first check defined under a).

- Go to table T023T and retrieve WGBEZ using MATKL as matching criteria for both tables (ACDOCA, T023T).
- Populate the material description in the newly created custom field in ACDOCA.

Volumetrics

Volumes are expected to be high as most Financial Accounting documents line items are required to be checked and potentially enriched. To limit the volume of call-ups for the custom development, exclusion criteria at document header level have been defined in the processing logics.

Performance Considerations

The volumes of custom code processing is expected to be high on the high side as most Financial Accounting document line items are required to be checked and potentially enriched.

Technical team is requested to propose an ideal enhancement technology considering performance aspects and optimize the custom code such that system performance is not impeded.

Error Handling

No specific error handling is required as part of this custom development.

Missing attribute derivations in the universal journal ledger need to be investigated by IT on a case-by-case basis via a support ticket as it requires custom code analysis.

Testing

How to Test

Testing needs to be done in collaboration with the functional consultant in charge of the custom development.

The functional consultant shall provide sample documents that can either be reversed and re-posted by the developer or copied with reference for repetitive and continuous testing.

The following scenarios need to be tested:

- Valuated Goods Receipts with price differences (for both, purchase orders with material and without material but with material group)
- Invoice Receipts with price difference (for both, purchase orders with material and without material but with material group)
- Goods Issue
- Proof of Delivery
- Billings
- Goods Receipt from Production Order
- Settlement of Production Order
- Material Ledger Settlement

Test Conditions and Expected Results

ID	Condition	Expected Result
1	Purchase Order details and material populated in ACDOCA but no material group	Material group derived from purchase order line item. Material group and description populated in ACDOCA.
2	Purchase order details populated in ACDOCA but no material	Material group derived from purchase order line item. Material group and description populated in ACDOCA.
3	Purchase order details empty in ACDOCA but material populated	Material group derived from material master. Material group and description populated in ACDOCA.
4	Material group populated in ACDOCA	Material group must not be re-derived.
5	Document type included in set 'Z_BLART_MATKL'	Processing logic must be executed.
6	Document type not included in set 'Z_BLART_MATKL'	Processing logic can be skipped.

Test Considerations/Dependencies

- Testing of this functionality will only be possible with a representative set of materials and material groups created in the system that follow the target design of those objects in the new S/4 HANA systems.
- All necessary configurations for procure-to-pay processing needs to be set up in the system to commence testing of the implemented custom development features.
- Key financial reporting Fiori applications need to be available to test the availability of the material group in them main reporting views used for Financial reporting in S/4 HANA.

Other Information

This section is not applicable to this custom development.

Development Details

Package

Package Name	Parent Package

Enhancement Implementation

Enhancement Type	Standard Definition Name	Custom Implementation Name	Design Rationale Reference

Other Development Objects

Object Type	Object Name	Purpose/High Level Logic	Design Rationale Reference

Appendix

Custom Authorization Group Naming Convention

This table is based on the Syensqo development standards document. It provides the naming conventions for authorization groups to associated with custom reports and tables to comply with security requirements.

ABAP	ZFI	ZMM	ZPS	ZCO	ZSD	ZBC	ZFI	ZCA
TABLES	ZFIT	ZMMT	ZPST	ZCOT	ZSDT	ZBCT	ZFIT	ZCAT

See also

File	Modified
File -PFD_201.tmp draw.io Draft	Nov 25, 2025 by ASMI-ext, Arsalan Ahmad
File PFD_201 draw.io diagram	Nov 25, 2025 by ASMI-ext, Arsalan Ahmad

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Change log

Version	Published	Changed By	Comment
CURRENT (v. 32)	Dec 02, 2025 08:26	ASMI-ext, Arsalan Ahmad	
v. 31	Nov 28, 2025 11:33	ASMI-ext, Arsalan Ahmad	
v. 30	Nov 28, 2025 11:32	ASMI-ext, Arsalan Ahmad	
v. 29	Nov 26, 2025 14:52	ASMI-ext, Arsalan Ahmad	updated section Proposed Technology to Use for custom field
v. 28	Nov 26, 2025 14:36	ASMI-ext, Arsalan Ahmad	General Set Maintenance tCode
v. 27	Nov 25, 2025 09:43	ASMI-ext, Arsalan Ahmad	
v. 26	Nov 25, 2025 08:39	BECHTER-ext, Alex	
v. 25	Nov 25, 2025 08:37	BECHTER-ext, Alex	
v. 24	Nov 25, 2025 08:36	BECHTER-ext, Alex	
v. 23	Nov 25, 2025 08:33	BECHTER-ext, Alex	

[Go to Page History](#)

Workflow history

This view shows the 5 most recent entries. The complete workflow log is available from the 'Document Activity' menu item.

Jan 09, 2026	Actor	Type	Activity	Version
Approved	 BOUMSSAHAL-ext, Mohamed	State	changed state to Approved at 11:02 am	v32
Lead Approval	 BOUMSSAHAL-ext, Mohamed	State	gave <i>POD Lead Review</i> approval at 11:02 am	
Dec 02, 2025				
	 ASMI-ext, Arsalan Ahmad	Edit	updated the page at 8:26 am	
	WEINERT-ext, Patrick	State	changed expiry date to '09 Dec, 2025 07:34 am' at 7:34 am	
		State	changed state to Lead Approval at 7:34 am	v32
Tech Review	WEINERT-ext, Patrick	State	gave <i>Tech Review</i> approval at 7:34 am	