

ERP-640 Outbound Delivery Distribution (LE to EWM)

Status	Approved
Owner	AROKIARAJAN-ext, Francis
Stakeholders	HOWES, Jamie PALMER, Francine VENKAT-ext, Rama
Jira Request ID	ERP-537 Outbound Delivery Distribution (LE to EWM)
Jira Development ID	ERP-640 Outbound Delivery Distribution (LE to EWM)

High- Level Specification

Parameter	Value
Application System	SyWay S/4HANA
Business Process Reference	06.10.03.01. Manage Outbound Deliveries

Functional Overview

Outbound Delivery creation will be happened through Manual/background job, which will be run periodically. At the time of outbound delivery creation, system will try to allocate the batch based on the predefined rules and distribution from S/4HANA to EWM is triggered when saving the delivery.

Enhancement to Check Distribute Outbound Delivery:

Once all the line item have been allocated batches in outbound delivery then allow to distribute the outbound delivery to EWM for those only relevant for deliveries with storage locations active for EWM.

Note: the distribution is for the whole outbound delivery, not for the individual delivery item.

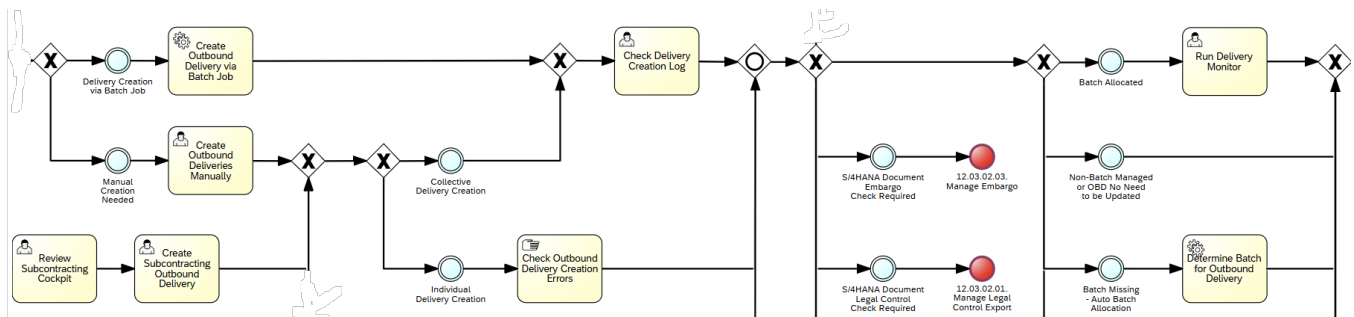
Scope and Objectives

Objective

To Implement an automated check during Outbound Delivery processing that inspects all line items. When saving an outbound delivery, if any item is for a batchmanaged material and the batch field is empty, the system must prevent distribution to EWM (no ODO created; distribution status remains Relevant/Planned).

- **In scope:** Outbound deliveries relevant to **Embedded EWM**
- **Out of scope:** Other delivery (Inbound deliveries, IM outbound deliveries, return deliveries..etc).

Process Flow Diagram



Step	Description	Comment
1	Create Outbound Delivery Manually	An Automated check during Outbound Delivery processing that inspects all line items. if any item is for a batchmanaged material and the batch field is empty for EWM Relevant SLOC, the system must prevent distribution to EWM.
2	Create Outbound Delivery Via Batch Job	An Automated check during Outbound Delivery processing that inspects all line items. if any item is for a batchmanaged material and the batch field is empty for EWM Relevant SLOC, the system must prevent distribution to EWM.
3	Create Subcontracting Outbound Delivery	An Automated check during Outbound Delivery processing that inspects all line items. if any item is for a batchmanaged material and the batch field is empty for EWM Relevant SLOC, the system must prevent distribution to EWM.

Assumptions & Dependencies

- Materials that participate are **batchmanaged** (MARA-XCHPF = 'X').
- Plants/storage locations are **EWMrelevant** (/SCWM/TMAPSTLOC - mapped to EWM based on Plant/SLOC standard integration active).

Security, Integrity and Controls

- BADI implementation class must be transportable and accessible in the Private Cloud tenant.
- No special enduser auth needed beyond standard LE/EWM authorizations.

Configuration Requirements

Not Applicable

Language Requirements

Not Applicable

Special Requirements

Not Applicable

Design Rationale

Functional Requirements

When saving an outbound delivery (Document Category 'J'), if any line items (include Batch Split line also) Storage Location is relevant EWM and a batchmanaged material and the batch field is empty, the system must prevent distribution to EWM (no ODO created; distribution status remains Relevant/Planned).

Note: For batch split, the **main item's batch is expected to be blank**; validate **each batch split subitem** instead.

- **Enhancement Spot:** ES_LE_SHP_EXTEND
- **BADI:** LE_SHP_CHECK_DISTRIBUTION
- **Interface:** IF_LE_SHP_CHECK_DISTRIBUTION
- **Method:** CHECK_DISTRIBUTION (parameters include DELIVERY_DOCUMENT_IN, DELIVERY_DOCUMENT_ITEMS_IN, MESSAGES, DISTRIBUTION_NOT_ALLOWED_OUT).

Data Source Considerations

Table	Field Name	Comments/Calculation/Field Manipulation
LIKP	VBTYP	delivery Header (Document Category)
LIPS	MATNR	delivery items (Material)
LIPS	CHARG	delivery items (Batch)
LIPS	WERKS	delivery items (Plant)
LIPS	LGORT	delivery items (Storage Location)
MARA	XCHPF	Material Master (Batch Management Indicator)

Data Validation Considerations

Table	Field Name	Comments/Calculation/Field Manipulation
LIKP	VBTYP	If LIKP-VBTYP = 'J' then only apply the following conditions
LIPS	MATNR	To check Material Batch Management Indicator (MARA-XCHPF) as 'X' then apply the following conditions
LIPS	WERKS & LGORT	If LIPS-WERKS & LIPS-LGORT is EWM Relevant then only apply the following conditions

Custom Tables

Not Applicable

Master Data

Field	Description	Data Type/Length	Validation rule/ Value Help

Configuration Table

Field	Description	Data Type/Length	Validation rule/ Value Help

Selection Screen Enhancement

Field Name	Description	Select:	Data Type/Length	Default Value/ Validation rule/ Value Help	Selection Logic

Processing Logic

To apply the following Logic at METHOD (CHECK_DISTRIBUTION) in interface (IF_LE_SHP_CHECK_DISTRIBUTION)

1) To check the Scope to Outbound Delivery only based on Document Category (J) of Delivery. If LIKP-VBTYP <> 'J' then RETURN. otherwise continue

2) Loop all items of delivery to check EWM Relevant and batch-managed material based on Plant & Storage Location combination and Material master Batch Management Indicator (MARA-XCHPF)

If batch-managed material (MARA-XCHPF) = "X" then check Batch not allocated in Delivery item.

If it is not allocated then update Block distribution as TRUE otherwise FALSE

3) If there is Block distribution as TRUE then

Update DISTRIBUTION_NOT_ALLOWED_OUT = TRUE

MESSAGE = "Batch missing on at least one batch-managed item; distribution to EWM blocked" with MSGID='VL' MSGNO = '000' MSGTY = 'E'.

Volumetrics

Not Applicable

Performance Considerations

- Use **in-memory item tables** where possible.
- Single **SELECT** for MARA-XCHPF with **FOR ALL ENTRIES**.
- Early exit as soon as one batch is found.

Error Handling

- **Info message** : "Batch missing on at least one batch-managed item; distribution to EWM blocked"
- **No hard error**: Do not block save unless explicitly required.
- **Logging**: Add to application log (BAL) with object LE and sub object DELIVERY.

Testing

How to Test

Create **Outbound Deliveries** (manual or via **background jobs**) with **multiple line items**, driven by **EWM-relevant storage locations**, supporting both **Batch-Managed** and **Non-Batch-Managed** materials.

Note: EWM distribution is applicable **only** when the **Storage Location** is **EWM-relevant**.

Test Conditions and Expected Results

ID	Condition	Expected Result
TS1	Block distribution when one item missing batch: Create a Outbound delivery (LF) with two items; Item 10 batchmanaged, CHARG empty; Item 20 batchmanaged, CHARG filled and Save Outbound Delivery.	Distribution to EWM is prevented , error message shown; EWM ODO not created.

TS2	Allow distribution when all batches allocated: Create a Outbound delivery (LF) with two items; where all batchmanaged items have CHARG filled and SAVE Outbound Delivery.	Distribution proceeds; ODO appears in EWM monitor /SCWM/MON or /SCWM/PRDO.
TS3	Redistribution after correction: Change Outbound Delivery for outbound delivery previously distributed Erroneously (From TS1) and allocate Batch & SAVE Outbound Delivery.	Distribution proceeds; ODO appears in EWM monitor /SCWM/MON or /SCWM/PRDO.
TS4	Nonbatch material: Create a Outbound delivery (LF) with two items; Where all items nonbatch materials only and SAVE Outbound Delivery.	Distribution proceeds; ODO appears in EWM monitor /SCWM/MON or /SCWM/PRDO.

Test Considerations/Dependencies

Other Information

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**






No files shared here yet.

Change log

Version	Published	Changed By	Comment
CURRENT (v. 8)	Mar 22, 2026 13:27	AROKIARAJAN-ext, Francis	
v. 7	Jan 15, 2026 10:35	AROKIARAJAN-ext, Francis	
v. 6	Jan 09, 2026 16:19	BIRSE-ext, Gary	
v. 5	Jan 06, 2026 13:22	AROKIARAJAN-ext, Francis	
v. 4	Dec 12, 2025 08:26	AROKIARAJAN-ext, Francis	
v. 3	Dec 08, 2025 18:55	AROKIARAJAN-ext, Francis	
v. 2	Dec 08, 2025 18:36	AROKIARAJAN-ext, Francis	
v. 1	Dec 08, 2025 13:49	AROKIARAJAN-ext, Francis	

Workflow history

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

Mar 27, 2026	Actor	Type	Activity	Version
Approved	 VENKAT-ext, Rama	State	changed state to Approved at 8:30 am	v8
Lead Approval	 VENKAT-ext, Rama	State	gave <i>POD Lead Review</i> approval at 8:30 am	
	 JAIN-ext, Dhiraj	State	changed expiry date to '03 Apr, 2026 05:44 am' at 6:44 am	
		State	changed state to Lead Approval at 6:44 am	v8
Tech Review	 JAIN-ext, Dhiraj	State	gave <i>Tech Review</i> approval at 6:44 am	
Mar 22, 2026				
	 AROKIARAJAN-ext, Francis	Edit	updated the page at 1:27 pm	