

ERP-1003 Mobility-Central Functions - General

Status	Approved
Owner	BIRSE-ext, Gary
Stakeholders	PALMER, Francine RIZOS, Antonios VENKAT-ext, Rama
Jira Request ID	blocked URLERP-406 - Mobility-Central Functions ENDORSED
Jira Development ID	blocked URLERP-712 - Mobility-Central Functions - Mobile Admin app FS IN PROGRESS

High- Level Specification

Parameter	Value
Application System	SAP S4/HANA SyWay
Business Process Reference	04.06 Manage Production Execution 06.10 Manage Inventory and Logistics 06.11 Manage Warehouse and Logistics 06.12 Manage Transportation

Functional Overview

This functional specification includes the general aspects of the Logistics Mobility Solution (LMS):

- Login
- OAuth authentication method
- MFA
- Switch User
- Logout
- Connectivity
- Postings from LMS apps
- Shared logic used by all LMS apps
 - Barcode decoding logic
 - Determine if HU is IM or EWM

Scope and Objectives

The Logistics Mobility Solution is mandatory for all Syensqo plants that manage stock. 3PL Plants that have direct system access can also use the Logistics Mobility solution.

Process Flow Diagram

The Central Functions functionality will be used by all users of the Logistics Mobility Solution.

Step	Description	Comment
1	Start Logistics Mobility Solution App	
2	Enter username	
3	Enter password	
4	Perform MFA	
5	Enter PIN	
6	Confirm PIN	
7	Launchpad is shown	
8	Exit to start screen	
9	Return to launchpad using PIN	
10	Exit to start screen	
11	Logoff	

Assumptions

None

Dependencies

None

Security, Integrity and Controls

The Logistics Mobility Solution will be accessed using single sign on credentials, using the OAuth authentication method and MFA.

CUI compliance is mandatory for app execution on the CUI instance.

Configuration Requirements

None

Language Requirements

The Logistics Mobility Solution will be available in all SyWay languages.

Special Requirements

None

Design Rationale

Functional Requirements

Logon to Logistics Mobility Solution

On starting the Logistics Mobility Solution on a mobile device, the user will logon using their single sign on network credentials and an agreed form of multi-factor authentication. The authentication method will be OAuth.

The user will be asked to set a PIN at the time of logon. This can later be used to re logon on a shared device, instead of having to repeat the full logon process.

The logon of the EWM resource is only to be done after the entry of the PIN. Refer to ERP-712.

After a successful sign on, the launchpad with the tiles for all the available apps will be shown.

The user must have a Forgot Password option that will allow them to reset their password on the mobile device.

Switch User

For shared devices, users will have an option to quickly switch between the users already logged on to the device, without the need for the full logon process to be repeated. Having this method will reduce the risk that a device logged in by one user will also be used by other users throughout the day, where all postings will reflect the single user that logged into the device.

Example: At any time the user can choose to return to an initial screen that will list all users actively logged on to the mobile device. From this screen the user can choose to fully logout of the Logistics Mobility App, or to logon again. e.g. using the PIN that was entered at the time of the initial logon.

The logout of the EWM resource must be done when a user chooses to return to this initial screen.

The login of the EWM resource is only to be done after the entry of the PIN to return to the launchpad for an actively logged on user.

Refer to ERP-712 for information regarding the login and logout of the EWM resource.

CMMC 2.0 requirements must be followed. This includes the requirement that idle sessions must be logged out after an agreed period.

Logout

After choosing to logout of the Logistics Mobility Solution the user will be logged out of SAP and the mobile app will close.

Connectivity

The Logistics Mobility Solution is an online solution but network dropouts or dead zones must not be disruptive for the user operation. Temporary network drops should not result in scanned data being lost. Scans made in a WiFi dead zone should still be recorded on the device and then validated later, once the network connection is reestablished.

Postings from Logistics Mobility Solution apps

A custom table will store the details of all the postings made from Logistics Mobility Solution Apps, including the app name, document processed, username, date, time and message back from SAP.

In the Mobile Admin app (ERP-712) the user has the option to see the information of their own postings. The desktop Handheld Manager app (ERP-713) will allow all postings from all users to be shown.

Shared logic used by all mobility apps

Barcode decoding logic

The primary barcode symbology for the solution will be GS1 Data Matrix, but other barcode symbologies like CODE 128, GS1 128, Data Matrix and QR Codes will also be supported.

All scans are to automatically include an enter key after the barcode content.

Scans of GS1 Data Matrix barcodes, CODE 128 or GS1 128 barcodes will populate all applicable fields, from a single scan, without the need for the user to manually select fields.

The solution must support scanning on the different mobile devices used by SyWay and also will support execution on smartphones.

Initial testing of scanning functionality will be done on smartphones.

Determine if HU is IM or EWM and calculate the cumulated content

All apps involving the scan of handling units will need to determine if the HU is an IM HU or an EWM HU. The logic described here will be used in all these apps.

- First check to see if the HU exists in ERP on VEKP-EXIDV
- If the HU exists on VEKP-EXIDV, calculate the cumulated content of the HU in IM.
 - If the storage location of the HU is an IM storage location, then the HU is an IM HU
 - If the storage location of the HU is an EWM storage location, then the HU is an EWM HU. Recalculate the cumulated content of the HU in EWM, since this may be different to the IM information.
- If the HU does not exist on VEKP-EXIDV, check to see if the HU exists in EWM on /SCWM/HUHDR-HUIDENT
- If the HU exists in EWM on /SCWM/HUHDR-HUIDENT then the HU is an EWM HU. Calculate the cumulated content of the HU in EWM.
- The cumulated content of each HU will store the HU status, material(s), batch(es), stock type(s) and quantity on the HU.

Recommended UI Technology

The Logistics Mobility Solution (LMS) will be developed using Neptune DXP Open Edition.

Application Screen

Wireframe or Mock-Up

Not applicable

Screen Behavior

Not applicable

Screen Navigation

Not applicable

Data Integration

Not applicable

Field	Table-Field Name	Comments / Calculation / Field Manipulation / Input / Output / Validation rule / Value help
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Custom Tables

A custom table will be used to store the details of all postings made from the Logistics Mobility Solution mobile apps.

Postings from Logistics Mobility Solution (LMS) Apps

LMS Postings

This table will store the details of all the postings made from Logistics Mobility Solution Apps, including the app name, document processed, username, date, time and message back from SAP.

The user has the option to see all their own postings for the day in this mobility admin app. The desktop admin app will allow all postings to be shown.

Field	Description	Data Type/Length	Validation rule / Value help
	App Name	CHAR 30	
	Plant	CHAR 4	
	Warehouse	CHAR 4	EWM warehouse number for EWM postings
	Document	CHAR 10	The primary document processed in the posting
	Username	CHAR 10	
	Date	DATE	
	Time	TIME	
	SAP Message Type	CHAR 1	Success or Error.
	SAP Message	CHAR 100	Last message received back from posting

Master data

Not applicable

Field	Description	Data Type/Length	Validation rule / Value help

Configuration table

Not applicable

Field	Description	Data Type/Length	Validation rule / Value help

Tooltips

None

Front-End

The Logistics Mobility Solution will mainly be used on handheld scanners but can also be executed on the desktop.

Mobile Services

Not applicable

Authentication & Authorization

The logon to the Logistics Mobile Solution will use the OAuth authentication method in conjunction with an agreed form of multi factor authentication.

Users must authenticate against the Syensqo SSO infrastructure. The postings to S/4HANA must be made under the authenticated context of the person that made the posting from the device.

Logon to the Logistics Mobility Solution can be via WiFi, GSM or a wired LAN connection, depending on the available connection methods at the plant.

The user must have a forgot password option, that allows them to process a password reset on the mobile device.

Accessibility

The logistics Mobility Solution will be primarily used on handheld scanners, with input from the scanner interface on the device.

Some apps will use the camera to allow photos to be taken and attached to SAP documents.

Volumetrics

This solution will be used at approximately 100 plants. The total users is estimated to be around 800.

Error Handling

Standard errors from SAP only.

Testing

How to Test

Test Conditions and Expected Results

ID	Condition	Expected Result
1	Logon on mobile device	Successful logon using SSO/OAuth and MFA. Entry of PIN.
2	Switch user	User can exit launchpad and then restart without having to perform full logon process.
3	Logoff Logistics Mobility Solution on mobile device.	Logoff successful.

Test Considerations/Dependencies

None

Other Information

None

Development Details

Package

Package Name	Parent Package

UI Implementation

UI Type	UI Name	Fiori Catalogue	Design Rationale Reference

API Implementation

API Type	API Name	Purpose / High Level Logic	API Product	Design Rationale Reference

Other Development Objects

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

Appendix

See also

Change log

Version	Published	Changed By	Comment
CURRENT (v. 16)	Dec 18, 2025 13:32	BIRSE-ext, Gary	
v. 15	Dec 18, 2025 13:31	BIRSE-ext, Gary	
v. 14	Dec 18, 2025 09:30	BIRSE-ext, Gary	
v. 13	Dec 18, 2025 09:30	BIRSE-ext, Gary	
v. 12	Dec 17, 2025 13:52	BIRSE-ext, Gary	
v. 11	Dec 11, 2025 12:05	BIRSE-ext, Gary	
v. 10	Dec 10, 2025 16:04	BIRSE-ext, Gary	
v. 9	Dec 09, 2025 11:06	BIRSE-ext, Gary	
v. 8	Dec 09, 2025 10:59	BIRSE-ext, Gary	
v. 7	Nov 26, 2025 10:24	BIRSE-ext, Gary	

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Workflow history

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

Jan 08, 2026	Actor	Type	Activity	Version
Approved	 VENKAT-ext, Rama	State	changed state to Approved at 2:05 pm	v16
Lead Approval	 VENKAT-ext, Rama	State	gave <i>POD Lead Review</i> approval at 2:05 pm <i>The FS is reviewed and approved - thanks. Regards Rama</i>	
	BIRSE-ext, Gary	State	assigned approval <i>POD Lead Review</i> to  VENKAT-ext, Rama at 11:36 am	
Dec 19, 2025				
	MAKKAY-ext, Kas	State	changed expiry date to '26 Dec, 2025 12:42 am' at 12:43 am	

		State	changed state to Lead Approval at 12:42 am	v16
Tech Review	MAKKAY-ext, Kas	State	gave <i>Tech Review</i> approval at 12:42 am	