

ERP-350 Automate Settlement Rule creation for WBS Elements in Maintenance Orders

Status	Approved
Owner	SARUKAN-ext, Ayse
Stakeholders	LEIGHTON-ext, Dean
Jira Request ID	 ERP-99 - Jira project doesn't exist or you don't have permission to view it.
Jira Development ID	 ERP-350 - Jira project doesn't exist or you don't have permission to view it.

High- Level Specification

Parameter	Value
Application System	SAP S/4HANA ROW, SAP S/4HANA China, SAP S/4HANA CUI
Business Process Reference	07.05.02.01. Perform Asset Maintenance Planning

Functional Overview

The purpose of this enhancement is to introduce a validation and logic control during the creation of Settlement Rules in Plant Maintenance Orders. Settlement rules are created automatically in line with standard SAP functionality, based on the Order Type configuration and assigned Settlement Profile. For Turnaround scenarios, the settlement should go to the WBS Element associated with the Turnaround event.

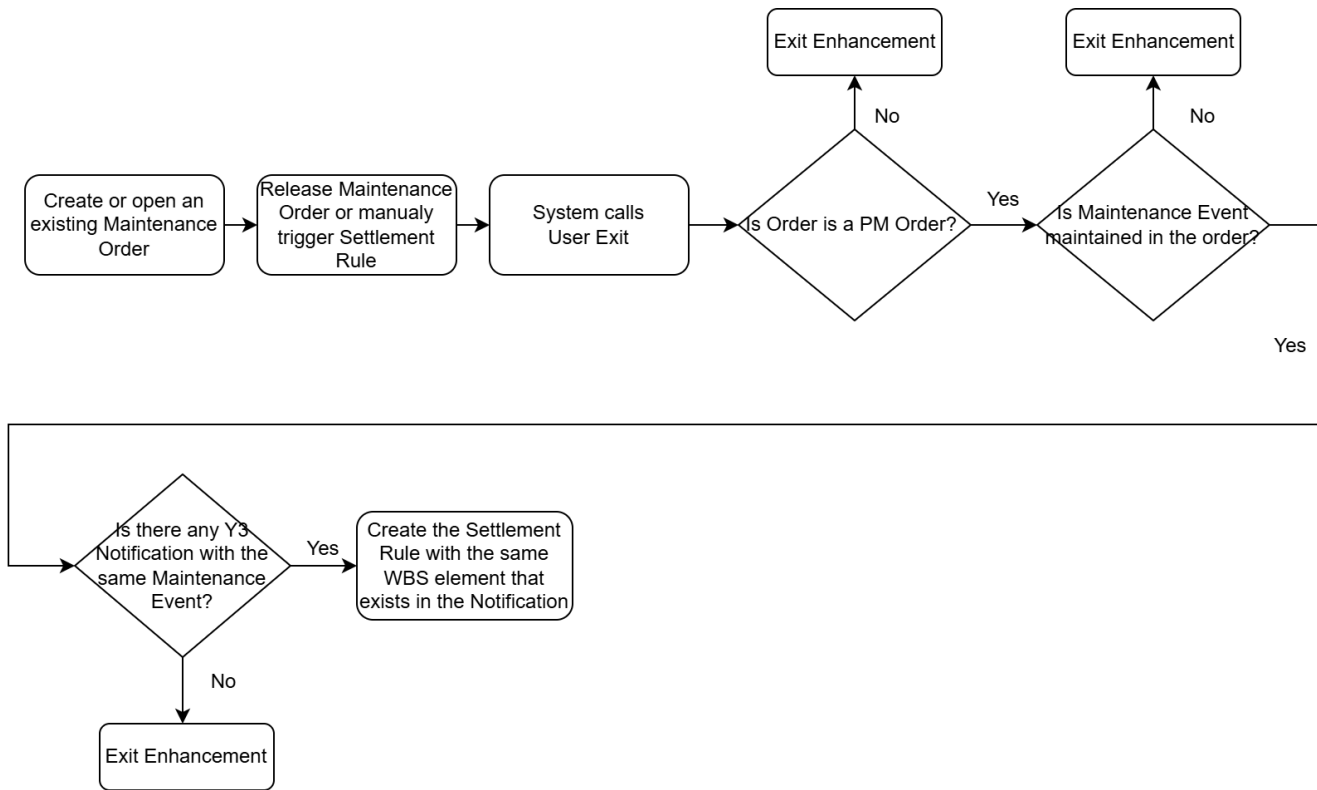
The enhancement will trigger at the moment of Settlement Rule creation (not necessarily during Order Release), check whether the Maintenance Order is part of a Turnaround (via Revision/Maintenance Event field), and assign the correct receiver type accordingly.

Scope and Objectives

- Enhancement of Settlement Rule creation logic in PM Orders.
- Automatic determination of WBS element for Turnaround-related orders.
- Preserve standard settlement functionality for all non-Turnaround orders (no impact or modification in this case).

To ensure correct and automated determination of the appropriate settlement receiver (WBS element for Turnaround scenarios), while all other PM orders follow the standard settlement rule logic, maintaining compliance with project cost accounting principles.

Process Flow Diagram



Step	Description	Comment
1	User creates a Maintenance Order or opens an existing active order.	
2	User opens the Cost tab manually triggers Settlement Rule Creation or triggers Settlement Rule via releasing the order.	
3	System calls Enhancement (User Exit).	
4	Settlement Rule created accordingly.	<ul style="list-style-type: none"> If the order is identified as a <i>Turnaround Order</i>, the system assigns the WBS element assigned in the Y3 Notification, which is in the same maintenance planning bucket as the said order, as the new settlement receiver. If it is not a Turnaround order, the enhancement does not intervene, and the standard SAP settlement logic applies according to the existing order type configuration.
5	Order costs will settle correctly.	

Assumptions

- Y3 Notification Type is available and configured in the system.
- Maintenance Orders will be released exclusively via the Fiori applications.
- Relevant users have Fiori app access (Change Maintenance Order).
- Each Turnaround Order has at least one Maintenance Event/Revision assigned.
- Notifications with the same Maintenance Event/Revision contain the correct WBS element to be used for settlement.
- Standard SAP PM settlement logic is assumed to be functioning correctly for non-turnaround orders.
- Users creating Maintenance Orders have appropriate authorization for reading Notifications and WBS Elements.

Dependencies

- Fiori app configuration for Notifications and Orders.
- Y3 Notification must have WBS Element assigned.
- Y3 Notification Type is configured.
- To prevent creation of multiple Y3 Notifications for the same Maintenance Event, an enhancement will be implemented under "ERP-349 - UI Extensions in Create Maintenance Notification App." This enhancement will ensure control and validation during Notification creation.
- BADI implementation must be activated in the system for Settlement Rule enhancement.
- Integration with PS module (for WBS Element retrieval) must be in place.

- Other custom developments interacting with Tables AFIH, VIQMEL, or Settlement Rules must not conflict with this logic.

Security, Integrity and Controls

The enhancement will follow the SAP standard security and authorization framework to ensure data integrity and controlled access during the creation of Settlement Rules in Maintenance Orders.

Configuration Requirements

Not Applicable

Language Requirements

Not Applicable

Special Requirements

- Ensure performance is not impacted when processing large numbers of Orders or Notifications.
- If future integrations consume WBS or settlement data, ensure compliance with their data structure and format.

Design Rationale

Functional Requirements

- **Check Order:**
 - Validate if the order is PM Order (Table-Field): AUFK-AUTYP.
 - Check if the Maintenance Event/Revision (Field: REVNR) field is filled in the order (Table: AFIH).
- **Retrieve Maintenance Event:**
 - If Maintenance Event/Revision (Field: REVNR) exists, go to the Notification (Table: VIQMEL) and populate Y3 Notification Type (Field: QMART) with the Maintenance Event/Revision (Field: REVNR) value from the order.
- **Identify WBS Element:**
 - For the maintenance notification matching this Maintenance Event/Revision (Field: REVNR), retrieve the associated WBS element (Field: PROID).
- **Settlement Rule Creation:**
 - For all orders with this Maintenance Event/Revision, create settlement rule to the retrieved WBS element.
 - If no Maintenance Event/Revision (Field: REVNR) is found, continue with the standard settlement rule logic.

Proposed Technology to Use

Component	Details
Enhancement Type	User Exit Implementation
User Exit	IWO10027 – Generate user-defined settlement rule

When the system starts creating a settlement rule for an order, the exit IWO10027 is called.

Data Source Considerations

Table	Field Name	Comments/Calculation/Field Manipulation
AFIH	AUFNR, REVNR	Maintenance Event assigned to the order.
VIQMEL	QMART, REVNR, PROID	Used to identify if there is a notification of type 'Y3' linked to the same Maintenance Event. If yes, PROID (WBS Element) is used as the settlement receiver.

Data Validation Considerations

Table	Field Name	Comments/Calculation/Field Manipulation
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AFIH	REVN	Validate that the Maintenance Event field is not empty before proceeding to check in VIQMEL.
VIQMEL	QMART	Validate that QMART = 'Y3'
VIQMEL	PROID	Validate that PROID (WBS Element) is filled for the identified notification; if missing, continue with the standard settlement rule logic.

Custom Tables

Not Applicable

Master Data

Not Applicable

Configuration Table

Not Applicable

Selection Screen Enhancement

Not Applicable

Processing Logic

- **Trigger Point:**
 - Enhancement is triggered when the system attempts to create a settlement rule for a maintenance order.
 - The exit IWO10027 is called.
- **Validate Order Type:**
 - Check CAUFVD_IMP-AUTYP = "30" (Maintenance Order)
 - If not, exit enhancement.
- **Check Maintenance Event:**
 - Check CAUFVD_IMP-REVN
 - If REVN = " ", exit enhancement.
- **Check Related Notification:**
 - If REVN is filled, check table VIQMEL for any notification where:
 - QMART = 'Y3'
 - REVN = <CAUFVD_IMP-REVN>
- **Determine Settlement Receiver:**
 - If such a notification exists:
 - Read PROID (WBS element) from the notification.
 - Create settlement rule for WBS element.
 - ZXWOCU24

```

pmdfu_tab-konty = 'PR'.
pmdfu_tab-fdind = 'VIQMEL-PROID'.
pmdfu_tab-perbz = 'GES'.
pmdfu_tab-prozs = 100.
APPEND pmdfu_tab

```
 - If no matching notification found:
 - Continue with standard SAP settlement rule logic.
- **For the Change Parameter: APROF (Parameter Name)**
 1. **Use Existing Profile (YEAM02):**

The existing settlement rule profile YEAM02 can be retained. In this case, no profile change is required. Within the settlement rule profile configuration, ensure that WBS Element is defined as an "optional" receiver under the Valid Receivers section.
- **Validation Checks:**
 - Ensure WBS element or Cost Center is valid and open for posting.

Volumetrics

Not Applicable

Performance Considerations

Not Applicable

Error Handling

No Error Handling Needed.

Testing

How to Test

Unit testing should be performed during settlement rule creation for maintenance orders to validate the enhancement logic implemented in User Exit IWO10027 (Generate user-defined settlement rule). The tester should create or use existing maintenance orders under different scenarios to confirm that settlement rules are correctly assigned to WBS elements or Cost Centers according to the defined logic.

Test Conditions and Expected Results

ID	Condition	Expected Result
1	Order with Maintenance Event/Revision and there is a valid Y3 notification with the same Maintenance Event/Revision.	System creates settlement rule for WBS Element (VIQMEL-PROID)
2	Order with Maintenance Event but Y3 notification missing WBS element.	System continues with standard settlement rule logic.
3	Order without Maintenance Event/Revision.	System continues with standard settlement rule logic.
4	Order with Maintenance Event/Revision but there is no Y3 notification with the same Maintenance Event/Revision.	System continues with standard settlement rule logic.

Test Considerations/Dependencies

- This enhancement depends on the implementation of User Exit IWO10027 – Generate user-defined settlement rule.
- Data validation relies on correct entries in tables AFIH (REVNR), VIQMEL (QMART, REVNR, PROID).
- Ensure master data such as Cost Centers and WBS Elements are valid and open for posting in the test environment.
- To prevent creation of multiple Y3 notifications for the same Maintenance Event, a separate enhancement under “ERP-98 – UI Extensions in Create Maintenance Notification App” will provide additional control and validation.
- Testing should be executed in both standalone order creation and integrated Turnaround scenarios to confirm system behavior consistency.
- Ensure proper authorizations exist for testers to create and edit orders, notifications, and settlement rules.

Other Information

Not Applicable.

Development Details

Package

Package Name	Parent Package
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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 -Settlement Rule ERP 350-1763381168591.tmp draw.io Draft	Nov 17, 2025 by SARUKAN-ext, Ayse
File Settlement Rule ERP 350-1763381168591 draw.io diagram	Nov 17, 2025 by SARUKAN-ext, Ayse

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Change log










Version	Published	Changed By	Comment
CURRENT (v. 44)	Mar 19, 2026 08:35	SARUKAN-ext, Ayse	
v. 43	Feb 04, 2026 14:22	SARUKAN-ext, Ayse	
v. 42	Nov 17, 2025 13:09	SARUKAN-ext, Ayse	
v. 41	Nov 14, 2025 09:44	SARUKAN-ext, Ayse	
v. 40	Nov 12, 2025 09:42	SARUKAN-ext, Ayse	
v. 39	Nov 11, 2025 15:24	SARUKAN-ext, Ayse	
v. 38	Nov 11, 2025 14:48	SARUKAN-ext, Ayse	
v. 37	Nov 07, 2025 12:31	SARUKAN-ext, Ayse	

v. 36	Nov 07, 2025 12:17	SARUKAN-ext, Ayse
v. 35	Nov 07, 2025 12:11	HEARD-ext, Kevin

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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.

Apr 02, 2026	Actor	Type	Activity	Version
	 L EIGHT ON-ext, Dean	State	changed state to Approved at 10:28 am	v44
	 L EIGHT ON-ext, Dean	State	gave <i>POD Lead Review</i> approval at 10:28 am	
Mar 20, 2026				
	 J OUHA UD-ext, Yoann	State	changed expiry date to '27 Mar, 2026 07:34 am' at 7:34 am	
	 J OUHA UD-ext, Yoann	State	changed state to Lead Approval at 7:34 am	v44
	 J OUHA UD-ext, Yoann	State	gave <i>Minor change</i> approval at 7:34 am	
Mar 19, 2026				
	 S ARUKAN-ext, Ayse	Edit	updated the page at 8:35 am	
	 S ARUKAN-ext, Ayse	State	assigned approval <i>Minor change</i> to  J OUHA UD-ext, Yoann at 7:44 am	
	 S ARUKAN-ext, Ayse	State	changed state to Tech Review of Updates at 7:43 am	v44
	<p><i>As discussed with Arsalan Ahmad Asmi from the technical team, Option 2 for the Settlement Profile usage has been removed. This decision was not finalized at the time this FD was prepared; however, as it has now been confirmed, the existing Settlement Rule profile will be used going forward.</i></p>			