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| Test Script  SAP S/4HANA - 18-09-20 | public |
| Predictive Analytics Model Training - Supply Chain (20N) |

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# Purpose

The document is aimed to provide description on how to use the prediction scenarios in supply chain area. There are three user cases covered in the scope item, overdue - stock in transit, demand-driven replenishment, and defect code proposal.

Overdue - stock in transit consists of analyzing whether a purchase order is delayed according to the scheduled delivery date. Based on historical data, the system tries to predict whether the stock in transit order will be delayed.

Demand-driven replenishment provides an additional way to calculate the lead time in the production area with the help of machine learning models.

Defect code proposal makes defect code proposal based on the title of the defect and historical defect recordings.

With this scope item, the first step is to train the predictive model by the analytics specialist. Then other professional roles could improve their efficiency and productivity with the help of these machine learning models.

This document provides a detailed procedure for testing the scope item after solution deployment, reflecting the predefined scope of the solution. Each process step is covered in its own section, providing the system interactions (that is, test steps) in a list view.

# Prerequisites

This section summarizes all the prerequisites for conducting the test in terms of systems, users, master data, organizational data, other test data and business conditions.

## System Access

|  |  |
| --- | --- |
| System | Details |
| System | Accessible via SAP Fiori launchpad. Your system administrator provides you with the URL to access the various apps assigned to your role. |

## Roles

If you want to train the model, the Analytics Specialist role must have been assigned to your user to be able to work with predictive models. If you want to check the business results, the Inventory Manager role must have been assigned to your user to run the Overdue Materials - Stock in Transit application or Production Planner in the demand-driven replenishment case.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name (Role) | ID (Role) | Description (Space) | ID (Space) | Log On |
| Analytics Specialist | SAP\_BR\_ANALYTICS\_SPECIALIST |  |  | Please ask your system administrator to assign to the testers. |
| Inventory Manager | SAP\_BR\_INVENTORY\_MANAGER | Inventory Management | SAP\_BR\_INVENTORY\_MANAGER | Please ask your system administrator to assign to the testers. |
| Production Planner | SAP\_BR\_PRODN\_PLNR | Production Planning | SAP\_BR\_PRODN\_PLNR | Please ask your system administrator to assign to the testers. |
| Quality Technician | SAP\_BR\_QUALITY\_TECHNICIAN | Quality Inspection | SAP\_BR\_QUALITY\_TECHNICIAN | Please ask your system administrator to assign to the testers. |

## Business Conditions

Follow the procedures described in the following scope items for creating the corresponding business data if needed.

Table 1: Overdue Stock in Transit Case

|  |  |
| --- | --- |
| Scope Item | Business Condition |
| BMH - Stock Transfer without Delivery | Follow the scope item to create the corresponding business data. |
| BME - Stock Transfer with Delivery | Follow the scope item to create the corresponding business data. |
| 1P9 - Intercompany Stock Transfer | Follow the scope item to create the corresponding business data. |

Table 2: Demand-driven Buffer Case

|  |  |
| --- | --- |
| Scope Item | Business Condition |
| 1Y2 - Demand-Driven Buffer Level Management | Follow the scope item to create the corresponding business data. |

Table 3: Defect Code Proposal case

|  |  |
| --- | --- |
| Scope Item | Business Condition |
| 2QN - Nonconformance Management | Follow the scope item to create the corresponding business data. |

# Overview Table

This scope item consists of several process steps provided in the following table.

If your system administrator has enabled spaces and pages on the SAP Fiori launchpad, the homepage will only contain the essential apps for performing the typical tasks of a business role.

You can find all other apps not included on the homepage using the search bar.

If you want to personalize the homepage and include the hidden apps, navigate to your user profile and choose Settings > App Finder .

|  |  |  |  |
| --- | --- | --- | --- |
| Process Step | Business Role | Transaction / App | Expected Results |
| [Train Predictive Model](#unique_7) [page ] 6 | Analytics Specialist | Predictive Models (F1837) | The model is trained successfully. |
| [Overdue - Stock in Transit](#unique_8) [page ] 8 | Inventory Manager | Overdue Materials - Stock in Transit (F2139) | After having trained the model, the inventory manager can monitor the overdue stock in transit |
| [Defect Code Proposal](#unique_9) [page ] 9 | Quality Technician | Record Defects (F2929) | The defect code is proposed after you entered the description of the defect. |

# Test Procedures

This section describes test procedures for each process step that belongs to this scope item.

## Train Predictive Model

Purpose

SAP S/4HANA® is shipped with preconfigured predictive scenarios. Depending on your use case, you can choose a predictive scenario to train your models based on your system data.

You can use Predictive Models (F1837) to administrate the life cycle of a predictive model with your own data. Train a model to produce a model version, retrain model versions, validate, and activate predictive models in order to return a predictive result.

Please refer to the documentation on SAP Help Portal to perform the steps and gain more detailed information like the Model Status and Model Version Report.

[SAP S/4HANA](https://help.sap.com/s4hana) > English (under Product Assistance) > Cross Components > Analytics > Predictive Analytics integrator (PAi) > Predictive Models App .

### Train Model

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  | | | | |
| Responsibility | <State Service Provider, Customer or Joint Service Provider and Customer> | | | Duration | Enter a duration. |

Use

Your modeling context has been created. You would like to create a model from the existing template based on the predictive scenario options defined by the application developer. Choose the corresponding predictive scenario and perform the following test steps for each application.

Overdue - Stock in Transit - MATERIAL\_OVERDUE\_SIT

Defect Code Proposal - QM\_DEF\_CODE\_PRPSL

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as an Analytics Specialist. | The SAP Fiori launchpad is displayed. |  |
| 2 | Access the App | Open the Predictive Models (F1837) app. | The  Predictive Models (F1837) screen is displayed. |  |
| 3 | Select Predictive Scenarios | Under Predictive Scenarios (F2033), choose MATERIAL\_OVERDUE\_SIT. | The Predictive Scenario screen is displayed. |  |
| 4 | Select Modeling Context | Choose the default modeling context ALL and click it to add the model. | The Model Context displays. |  |
| 5 | Choose Model | Under Models, select DEFAULT. | The Train button is enabled. |  |
| 6 | Train the Model | Choose Train. | The model version is added to the model list with the status Training. |  |

### Set a Model Version to Active

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  | | | | |
| Responsibility | <State Service Provider, Customer or Joint Service Provider and Customer> | | | Duration | Enter a duration. |

Use

The active model version is the version that is used to generate predictions when the modeling context is queried.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as an Analytics Specialist. | The SAP Fiori launchpad is displayed. |  |
| 2 | Access the App | Open the Predictive Models (F1837) app. | The  Predictive Models (F1837) screen is displayed. |  |
| 3 | Select Version | Select the relevant model version from the models list. | The model version is selected. |  |
| 4 | Activate | Choose Activate. | The model version status changes to Active.  The procedure is updated with this model version associated with its modeling context. |  |

## Overdue - Stock in Transit

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  | | | | |
| Responsibility | <State Service Provider, Customer or Joint Service Provider and Customer> | | | Duration | Enter a duration. |

Use

You can check the predicted differences between the planned and the predicted delivery date in the Overdue Materials - Stock in Transit app. With the following steps, you can check the results of the prediction.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Pass / Fail / Comment |
| 1 | Log On | Log on to the SAP Fiori launchpad as an Inventory Manager. | The SAP Fiori launchpad is displayed. |  |
| 2 | Access the App | Open the  Overdue Materials - Stock in Transit (F2139) app. | The Overdue Materials - Stock in Transit app screen is displayed. |  |
| 3 | Get the List View for all Available Line Items | Choose Go to get a list view of the line items. You can use filters here as well. | A list view of the line items is displayed. |  |
| 4 | Add Predicted Deviation (if it is not available in the line items view) | On the right side of the screen, in the Line Items list view, there is a setting to choose which fields should be displayed. Select Predicted Deviation. | The Predicted deviation field is displayed in the Line Items list view. You can check the value of the field for each stock. |  |

## Defect Code Proposal

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  | | | | |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | | | Duration | Enter a duration. |

Procedure

You can create a defect to check the result of the Predictive Models. For details, please refer to chapter record defect in scope item 2QN - Nonconformance Management.

Typographic Conventions

|  |  |
| --- | --- |
| Type Style | Description |
| Example | Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.  Textual cross-references to other documents. |
| Example | Emphasized words or expressions. |
| EXAMPLE | Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE. |
| Example | Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools. |
| Example | Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation. |
| <Example> | Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system. |
| EXAMPLE | Keys on the keyboard, for example, F2 or ENTER. |

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