

PUBLIC

SAP Intelligent Product Recommendation

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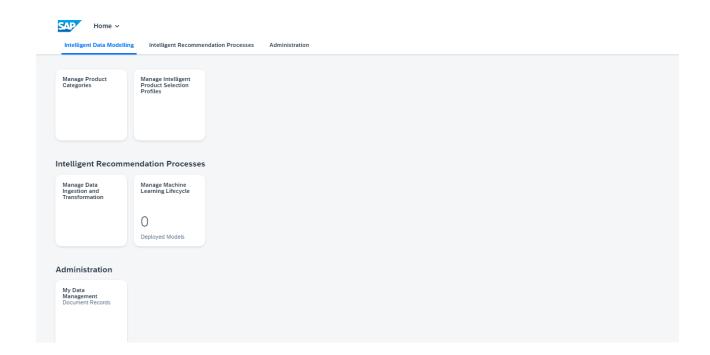
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Step 1

Login to SAP Intelligent Product Recommendation

1. Open <u>SAP Intelligent Product Recommendation</u> FLP. (User credentials will be provided in the hands-on session)



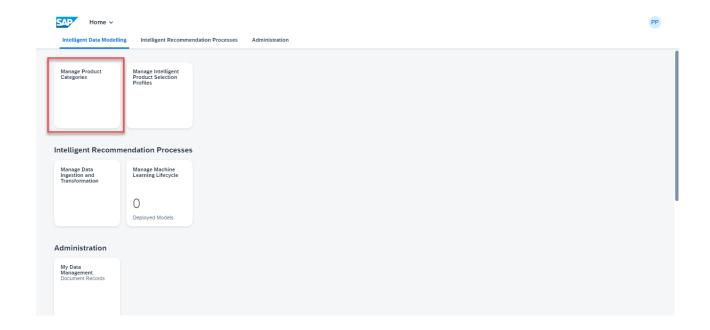
Step 2

Assign a Configurable Product to the Product Category

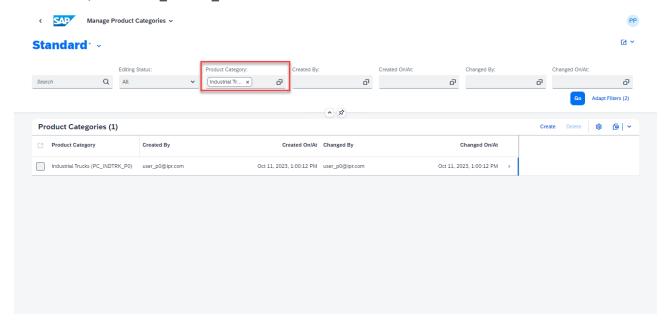
Product categories and solutions are the building blocks in SAP Intelligent Product Recommendation.

The assignment of configurable products to solutions helps in determining the best technical configuration for a product recommendation.

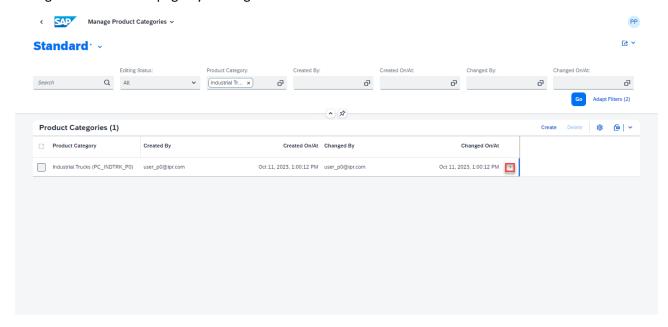
Open "Manage Product Categories" application.



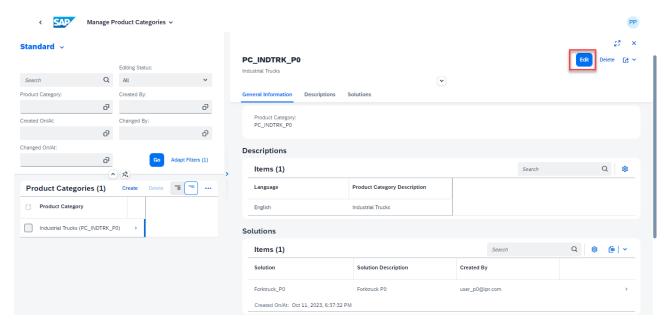
1. Search for the **Product Category** "**PC_INDTRK_<UserID>**" with your User ID and click "**Go**". **Ex**: If your User ID is P0, search "PC_INDTRK_P0".



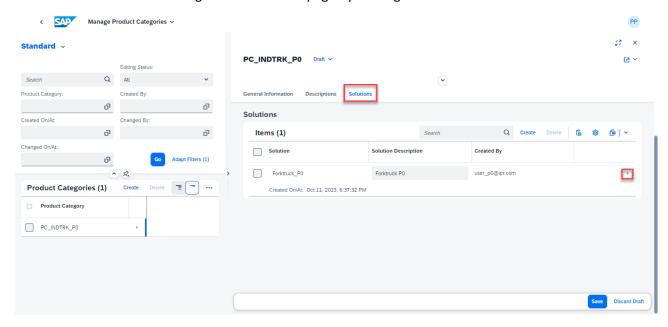
2. Navigate to the details page by clicking the arrow.



3. Click "Edit".

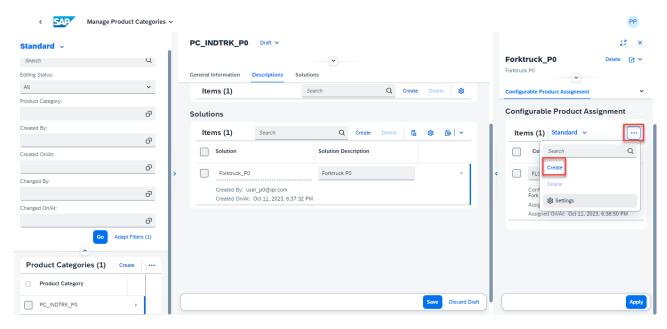


4. Click "Solutions" tab and navigate to the details page by clicking the arrow.

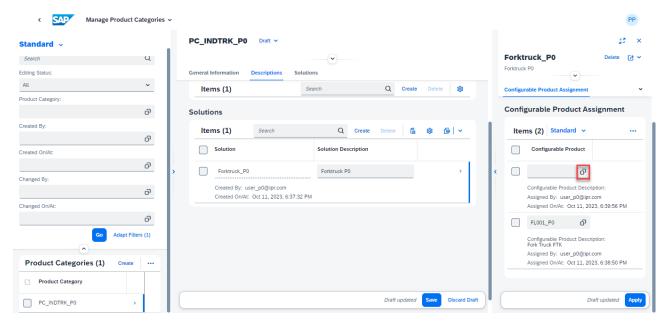


5. Scroll down to "Configurable Product Assignment" and click "Create".

Depending on the screen resolution, you will see three dots at the corner of the table instead of "Create". Click the dots and select "Create".

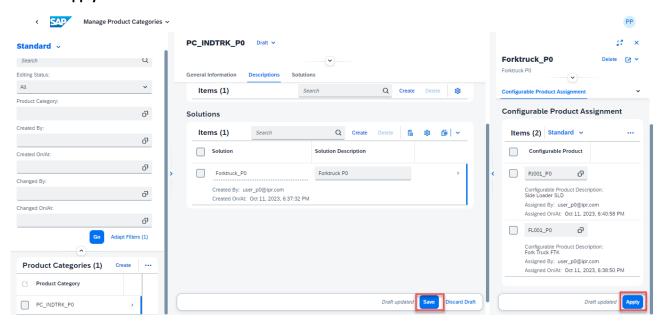


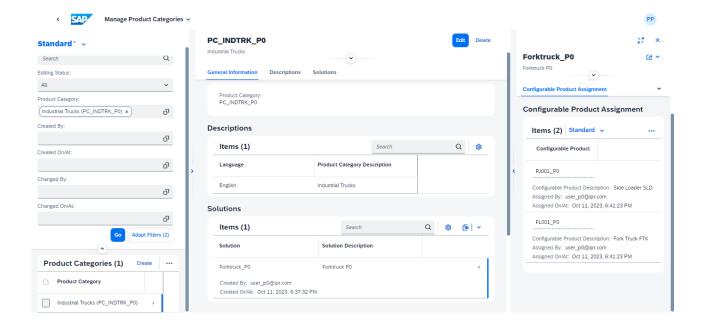
6.Open the value help and search for the **Product "PJ001_<UserID>"**. **Ex**: If your User ID is P0, search "PJ001_P0".



(add search result SS)

7. Click "Apply" and "Save".



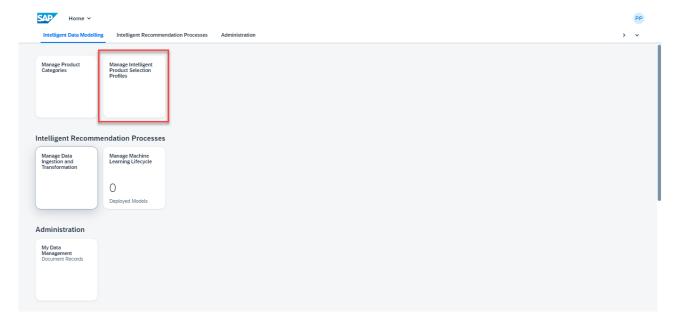


Step 3

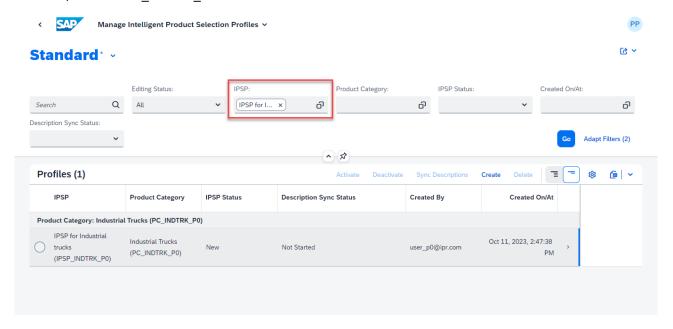
Add Characteristics to the Intelligent Product Selection Profile

You can define the relationship between needs or requirements that customers want from a product and the technical configurations of solutions using a product selection profile (IPSP).

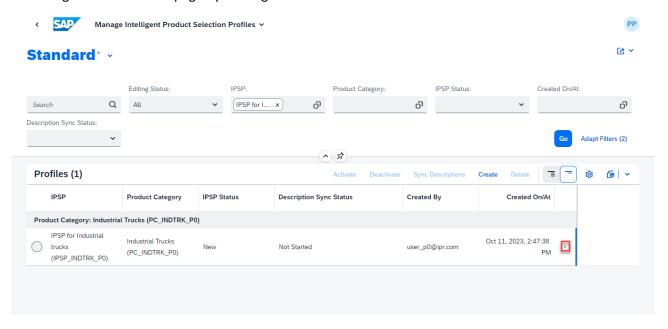
1. Open "Manage Intelligent Product Selection Profile" app.



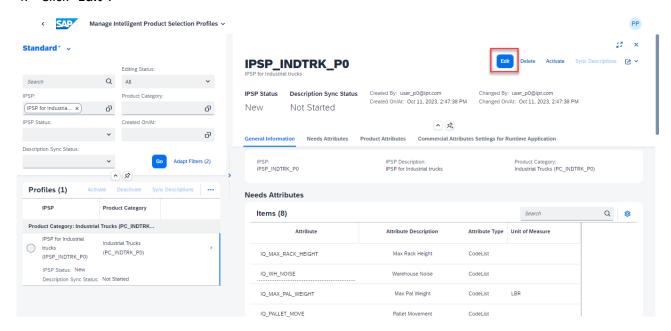
2. Search for the profile "IPSP_INDTRK_<UserID>" with your UserID and click "Go". Ex: If your User ID is P0, search IPSP_INDTRK_P0.



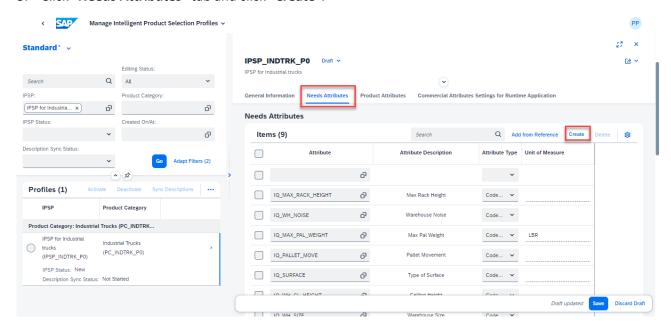
3. Navigate to the details page by clicking the arrow.



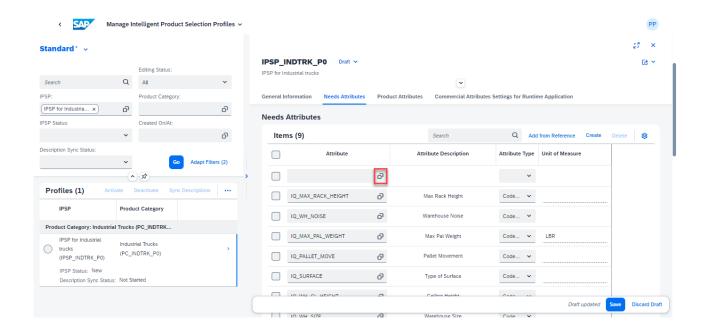
4. Click "Edit".

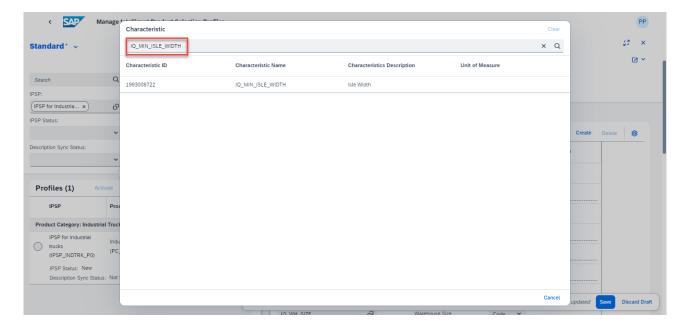


5. Click "Needs Attributes" tab and click "Create".

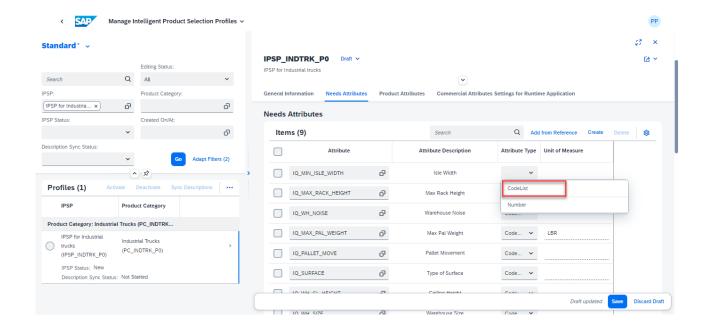


6. Open the value help and search "IQ_MIN_ISLE_WIDTH". Select the record from the results.

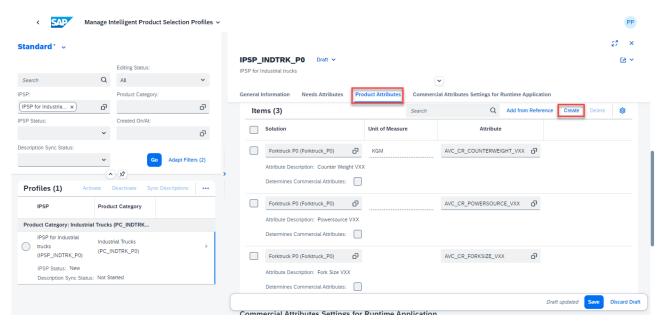




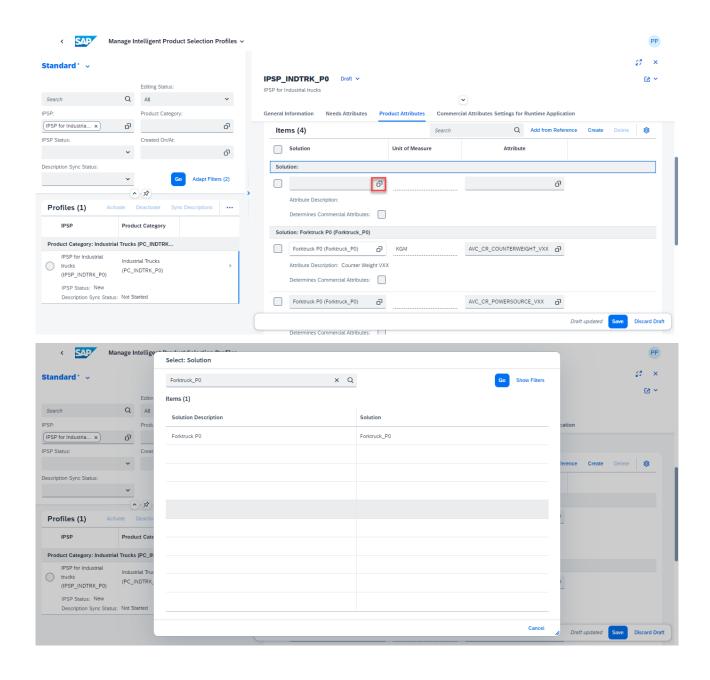
7. Select the "Attribute Type" as "CodeList".



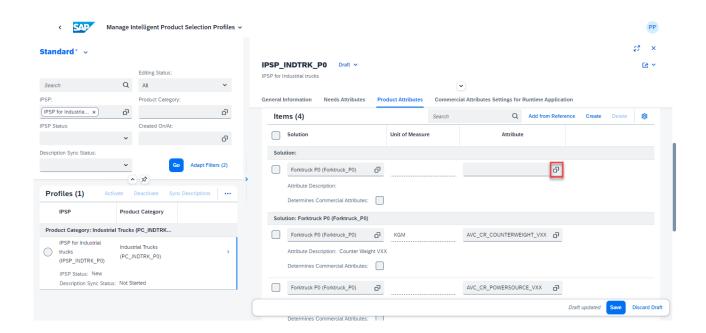
8. Click "Product Attributes" tab and click "Create".

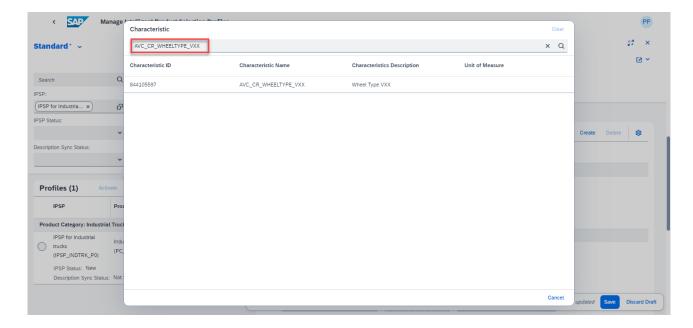


9. Open the value help for "Solution" and search for "Forktruck_<UserID>" with your UserID and click "Go". Ex: If your User ID is P0, search Forktruck_P0. Select the solution from the results.

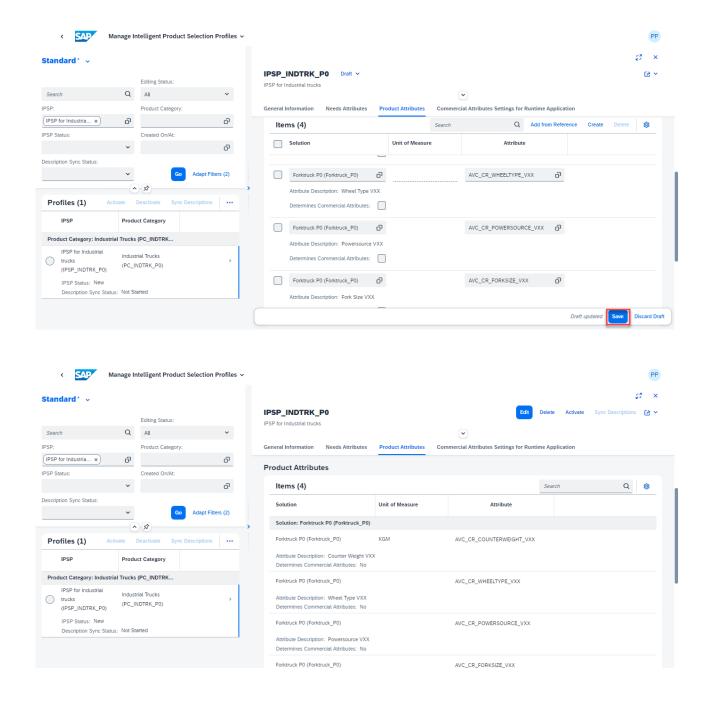


10. Open the value help for "Attribute", search "AVC_CR_WHEELTYPE_VXX" and select the record from the results.





11. Click "Save".



Note: Step 2 and Step 3 will setup the data to be used for Schema creation in SAP Data Attribute Recommendation service.

Step 4

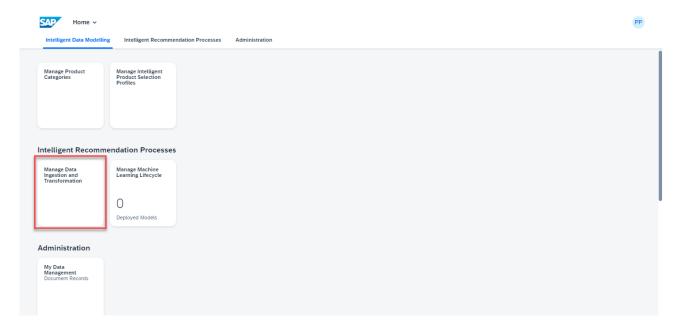
Create an Engineered Dataset and upload data.

The following steps are to prepare your data for machine learning trainings to get the best product recommendations.

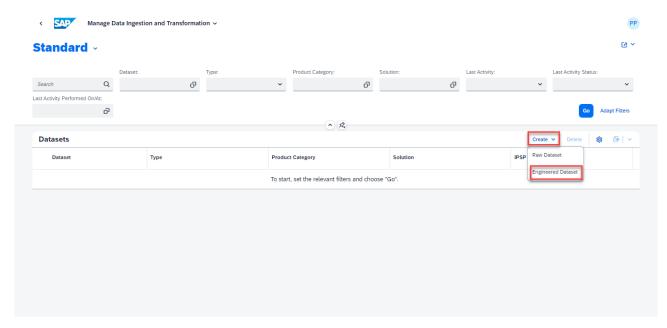
Uploading a document lets you transfer your modified or fresh data to SAP Intelligent Product Recommendation.

Importing document makes your data available for machine learning trainings.

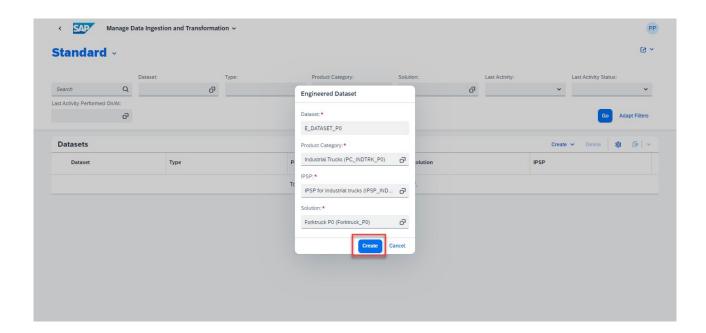
1. Open "Manage Data Ingestion and Transformation" application.



2. Click "Create" and choose "Engineered Dataset".



- 3. Enter the following details and click "Create".
 - Dataset: "E_DATATSET_<UserID>" with your User ID. Ex: If your User ID is P0, search E_DATASET_P0.
 - Product Category: "PC_INDTRK_<UserID>" with your User ID. Ex: If your User ID is P0, search PC_INDTRK_P0.
 - IPSP: "IPSP_INDTRK_<UserID>" with your User ID. Ex: If your User ID is P0, search IPSP_INDTRK_P0.
 - **Solution**: "Forktruck_<UserID>" with your user ID. If your User ID is P0, search Forktruck_P0.



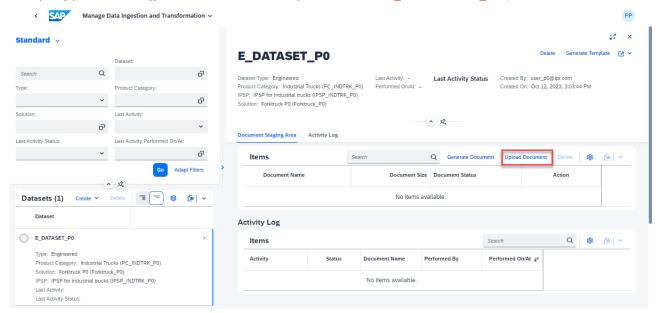
4. Click "Upload Document" in the details page and select the file "E_DATATSET_<UserID>" with your User ID. Ex: If your User ID is P0, select "E_DATASET_P0".

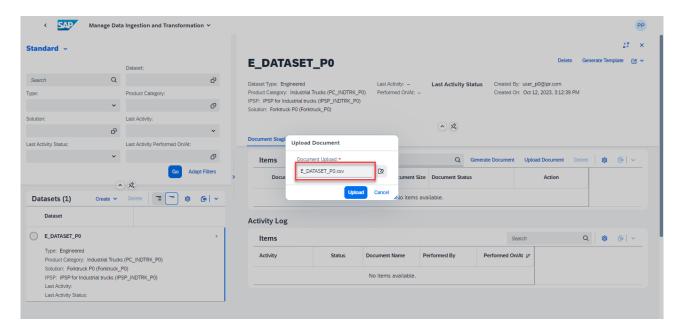
(Download the CSV file from here.

Replace the CONFIG_PRODUCT FL001_P0 with FL001_<your user id suffix>.

Replace the CONFIG PRODUCT PJ001 P0 with PJ001 <your user id suffix>.

Example, if your user id suffix is P25 then rename the products as FL001_P25 and PJ001_P25)





5. Click "Upload".

Dataset

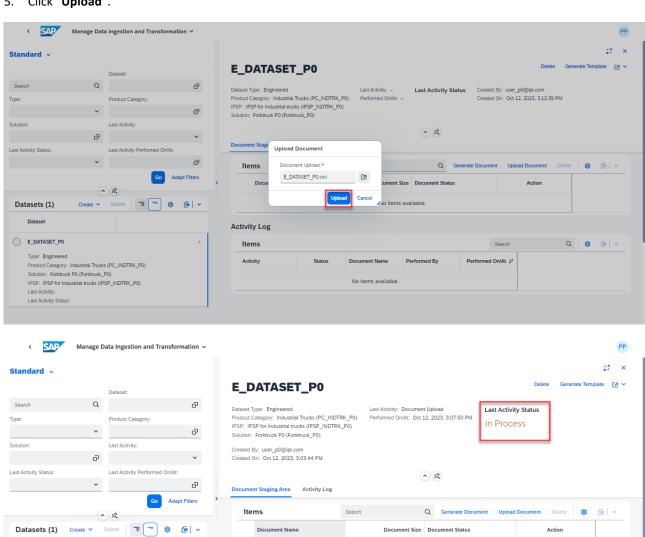
E_DATASET_P0

Type: Engineered

Last Activity Status: In Process

Product Category: Industrial Trucks (PC_INDTRK_P0)
Solution: Forktruck P0 (Forktruck_P0)

IPSP: IPSP for Industrial trucks (IPSP_INDTRK_P0)



Document Name

Activity Log

Items (1)

Document Size Document Status

Performed By

user_p0@ipr.com

No items available

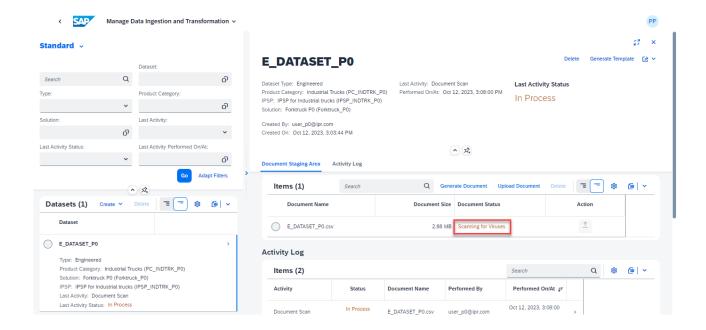
Document Name

In Process

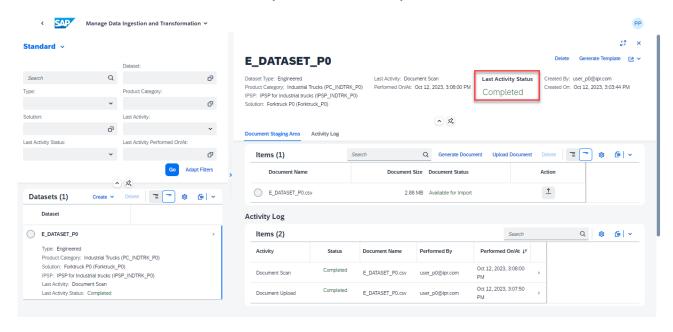
Action

Performed On/At 1F

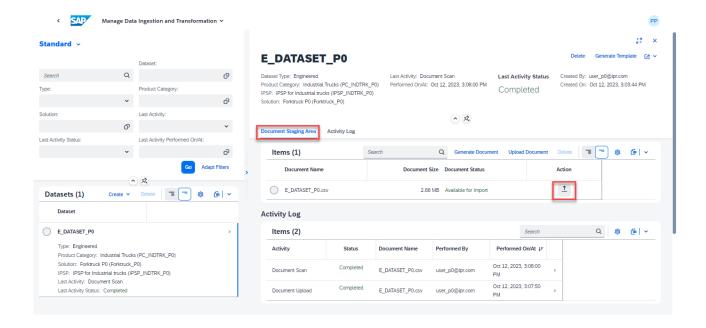
Oct 12, 2023, 3:07:50



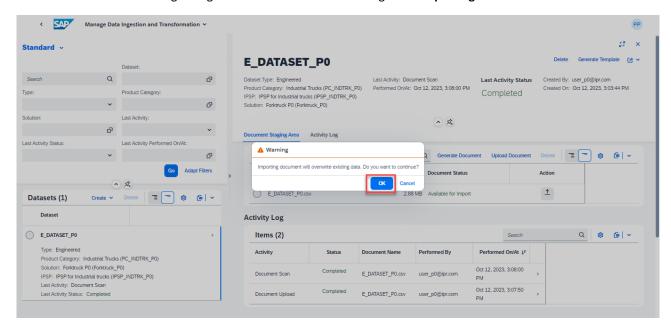
6. Refresh the browser until the "Last Activity Status" is set to "Completed".

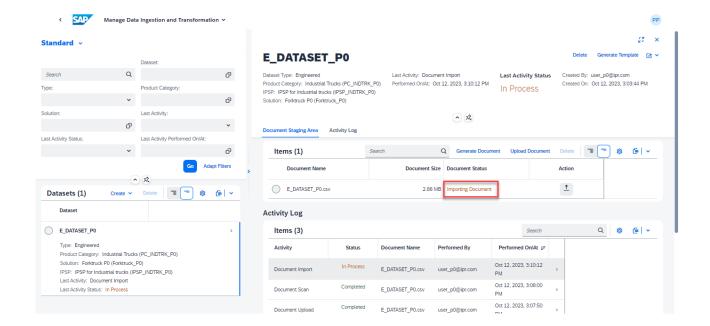


7. Click "Document Staging Area" and click the Import icon for the CSV file uploaded in the previous step.

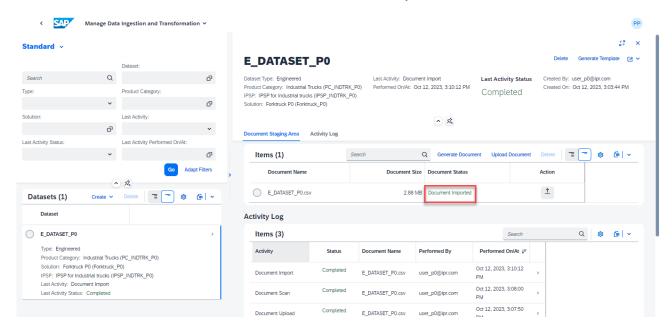


8. Click "OK" in the warning dialog. The "Document Status" changes to "Importing Document".





9. Refresh the browser until the "Document Status" is "Document Imported".



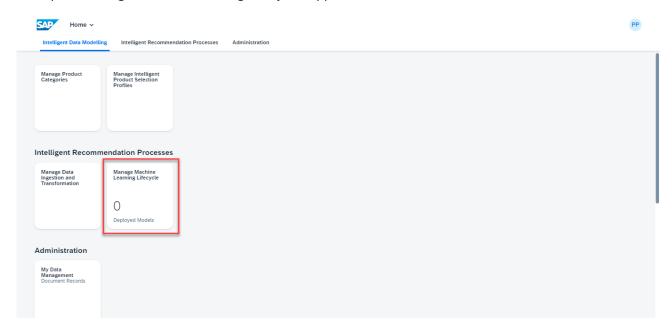
Note: Step 4 will setup the data that will be used for generating the training dataset that will be uploaded to SAP Data Attribute Recommendation service.

Step 5

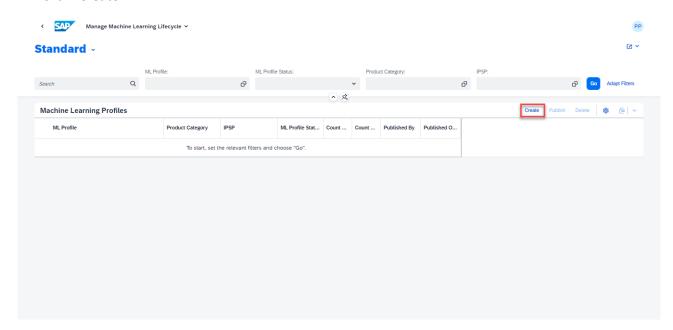
Create a Machine Learning model.

This application is to create, train, and deploy ML models to check their predictive performances. The ML Specialist can then select the best match for their requirements.

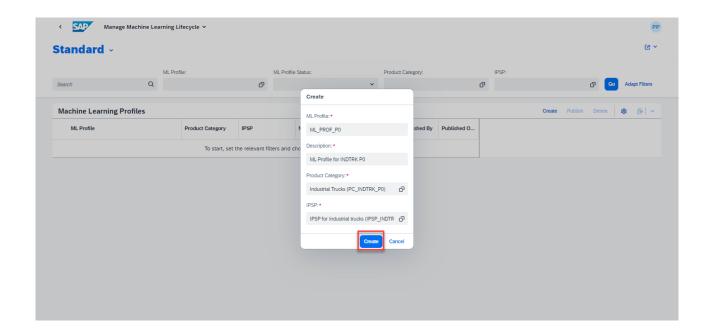
1. Open "Manage Machine Learning Lifecycle" application.



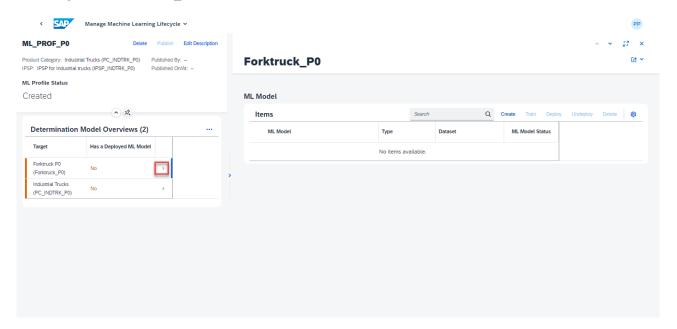
2. Click "Create".



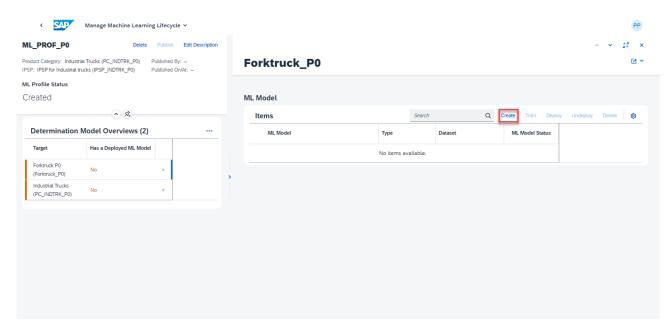
- 3. Enter the following details and click "Create" in the dialog.
 - ML Profile: "ML_PROF_<UserID>" with your User ID. Ex: If your User ID is P0, search "ML_PROF_P0".
 - **Description**: "ML Profile for INDTRK <UserID>" with your User ID. Ex: If your User ID is P0, search "ML Profile for INDTRK P0".
 - **Product Category**: "**PC_INDTRK_<UserID>**" with your User ID. **Ex**: If your User ID is P0, search PC_INDTRK_P0.
 - IPSP: "IPSP_INDTRK_<UserID>" with your User ID. Ex: If your User ID is P0, search IPSP_INDTRK_P0.



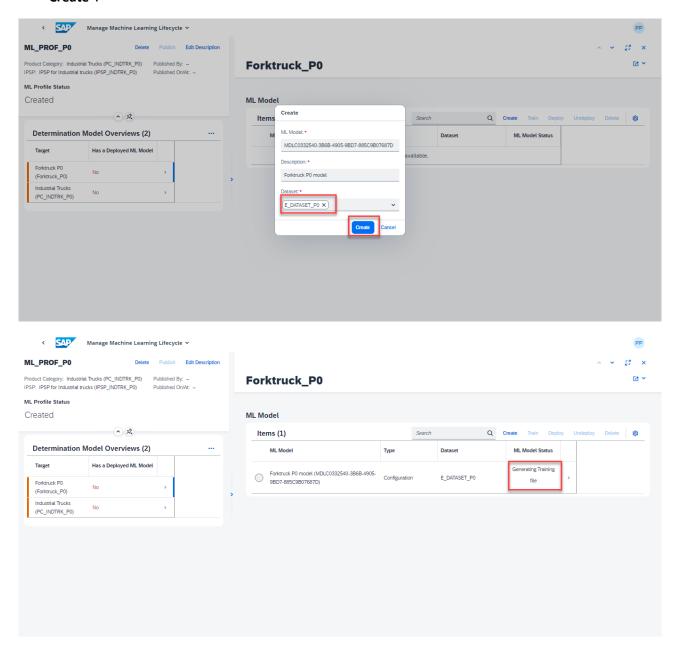
4. Navigate to the details page of the "Target" – "Forktruck_<UserID>". Ex: If your User ID is P0, navigate to "Forktruck_P0".



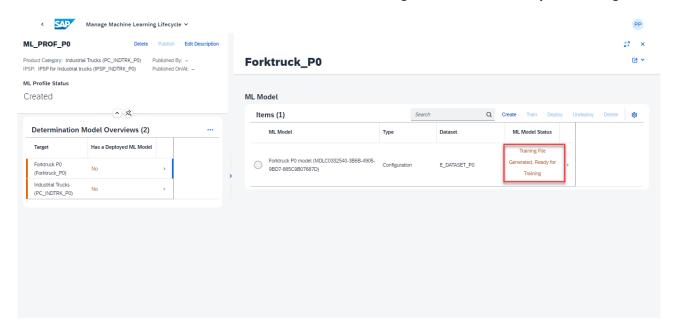
5. Click "Create".



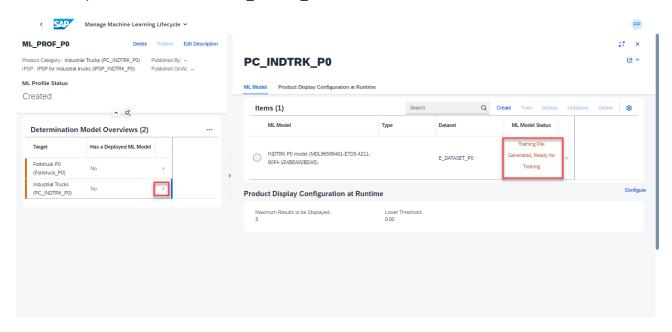
6. Enter a Description, select the Dataset from the dropdown (created in the earlier step 4.3) and click "Create".



7. Refresh the browser until the "ML Model Status" is "Training File Generated, Ready for Training".



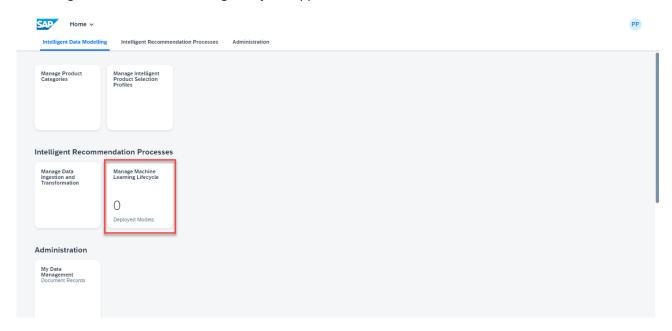
8. Similarly create a ML Model for PC_INDTRK_<UserID>



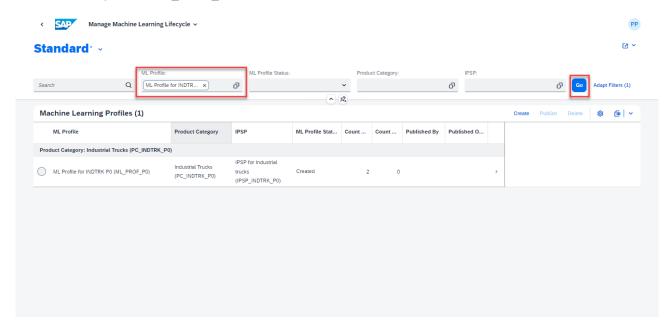
Next steps (For your information, not part of the exercise)

Train and deploy the ML model.

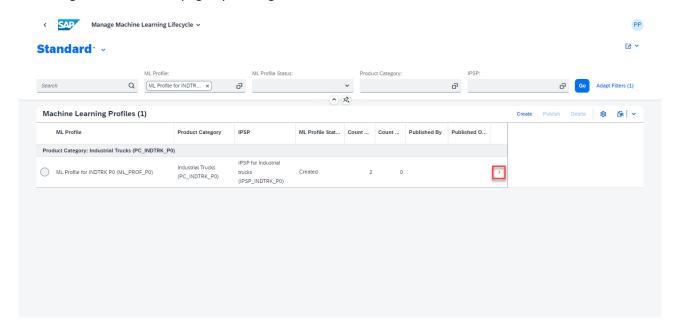
1. Navigate to "Machine Learning Lifecycle" application.



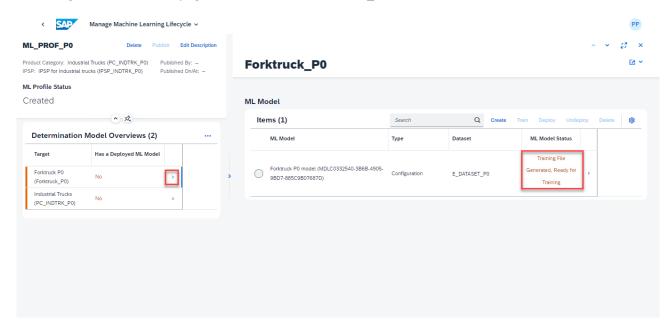
2. Search for profile "ML_PROF_P0" and click "Go".



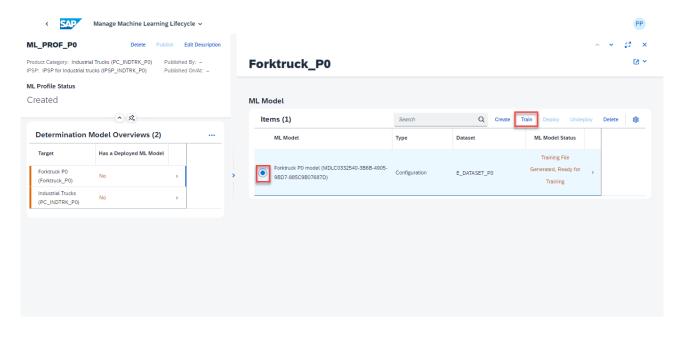
3. Navigate to the details page by clicking the arrow.

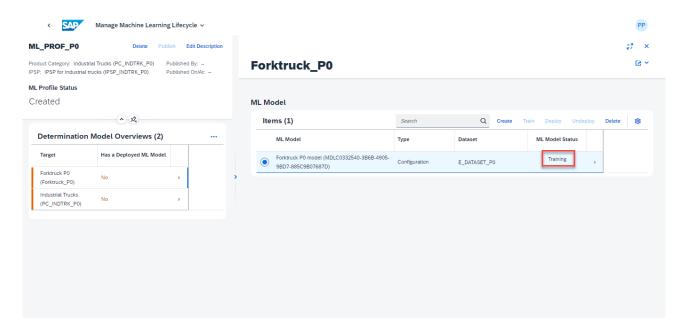


4. Navigate to the details page of the Solution "Forktruck_P0".



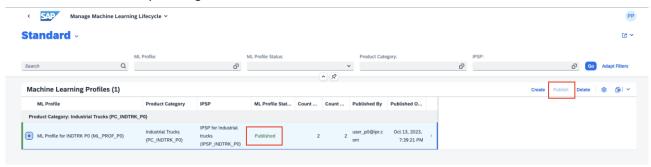
5. Select the ML Model and click "Train". The "ML Model Status" changes to "Training".



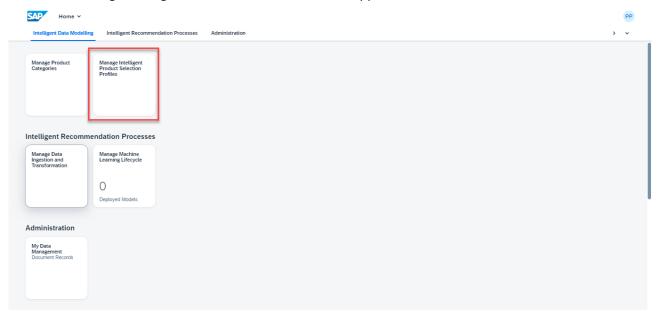


- 6. Refresh the browser until the "ML Model Status" is "Trained".
- 7. Click on "Deploy" to deploy the model. The "ML Model Status" changes to "Deploying".
- 8. Refresh the browser until the "ML Model Status" is "Deployed".

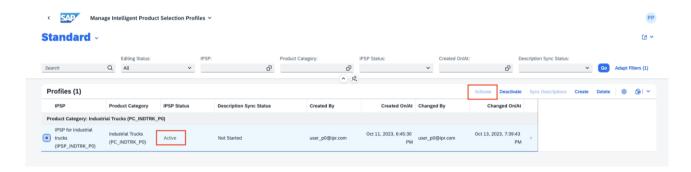
- 9. Repeat these steps for the ML model associated with the Target "PC_INDTRK_PO" to deploy the associated ML model.
- 10. Publish the ML Profile by clicking the "Publish" button.



11. Go to the "Manage Intelligent Product Selection Profiles" app.



12. Activate the IPSP by clicking the "Activate" button.



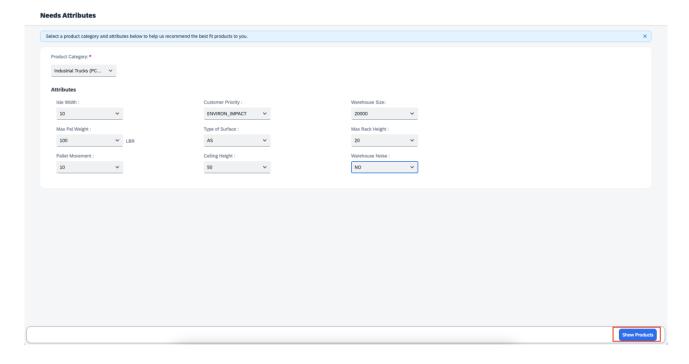
Note: Step 5 will use the APIs offered by SAP Data Attribute Recommendation service for training ML models, getting the model metrics and to deploy them.

Step 6

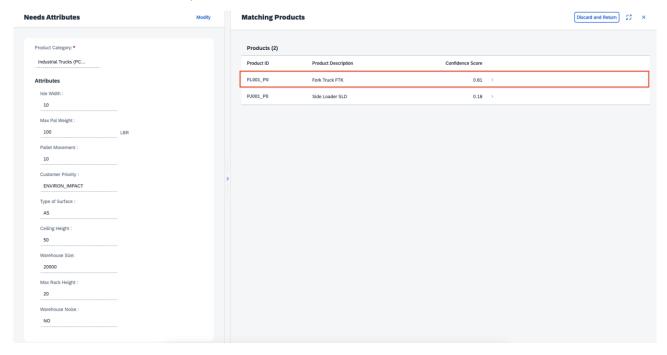
Launch the Runtime UI and run inferences.

You can embed the runtime UI in configure, price, quote (CPQ), or e-commerce business processes.

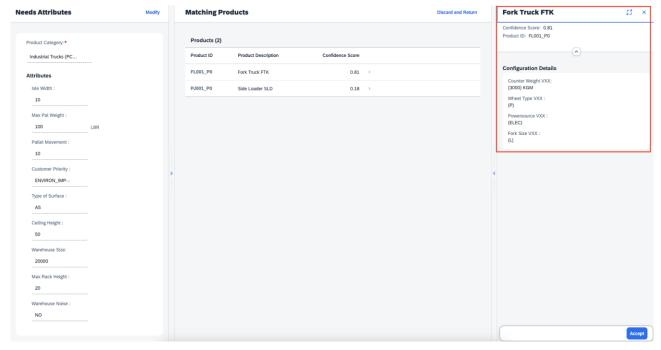
1. Open <u>SAP Intelligent Product Recommendation Runtime UI</u> and select the **"Product Category"**, **"Attributes"** and click on **"Show Products"**.



2. Choose the recommended product.



3. View the recommended product configuration.



Note: Step 6 will use the APIs offered by SAP Data Attribute Recommendation service for sending inference requests.