PUBLIC

How To Create a DQM (Data Quality Management) Rule to Check Product Classification Dimension Assignment

APPLICABLE RELEASES: SAP MASTER DATA GOVERNANCE ON SAP S/4HANA 2020 AND HIGHER

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Introduction

With SAP Master Data Governance on SAP S/4HANA 1909 SAP introduced a central rule repository for master data. It is quite easy to configure simple rules like "for all FERT products a material group must be defined" but you might also want to check if a specific scope of products has a classification characteristic (sometimes also called dimension) assigned. This requirement looks quite similar, but you will recognize that it is not that easy to define this rule because the classification data is not stored in your base table MARA and even the classification characteristics are stored in another table than KSSK. In this blog I will show you how to configure such a rule. BTW: Configuration means that you do not need to write any line of code; it is pure configuration in a Web UI.

The overall steps are:

1. Preparation – You will create the classification with characteristics and the test records.
2. Rule Creation – Create the DQM Rule via Fiori app.
3. Test – Execute a DQM evaluation run and check if the result is as expected.

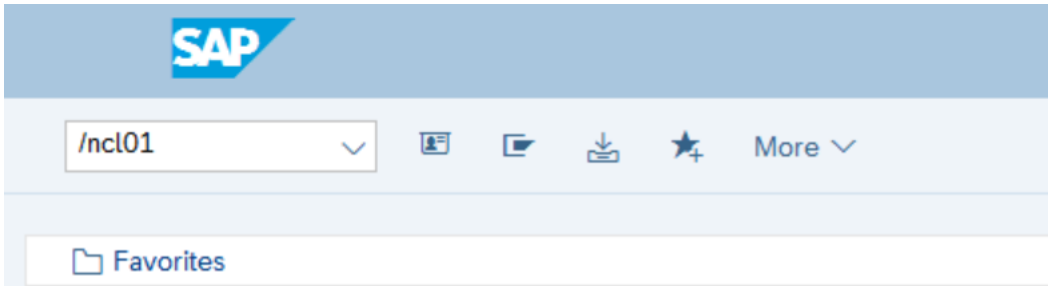
Preparation: classification and test records

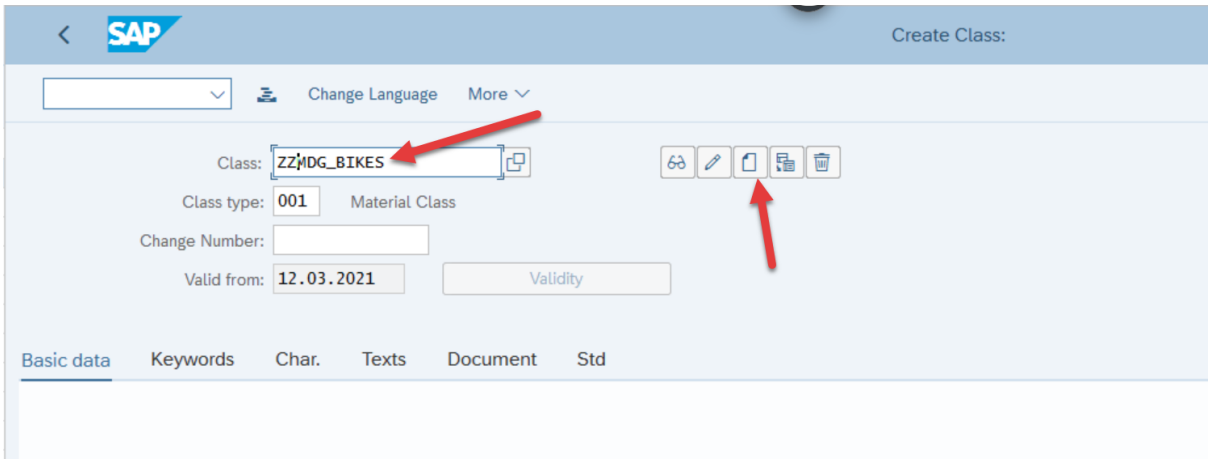
Because classifications and their characteristics are typically different from system to system or customer to customer it is not that easy to choose an example which you can rebuild in your own system. As a preparation is have done the following:

1. Create a new class and characteristics using SAP GUI
2. Create test records to double check at the end of the development if your rule works as expected.

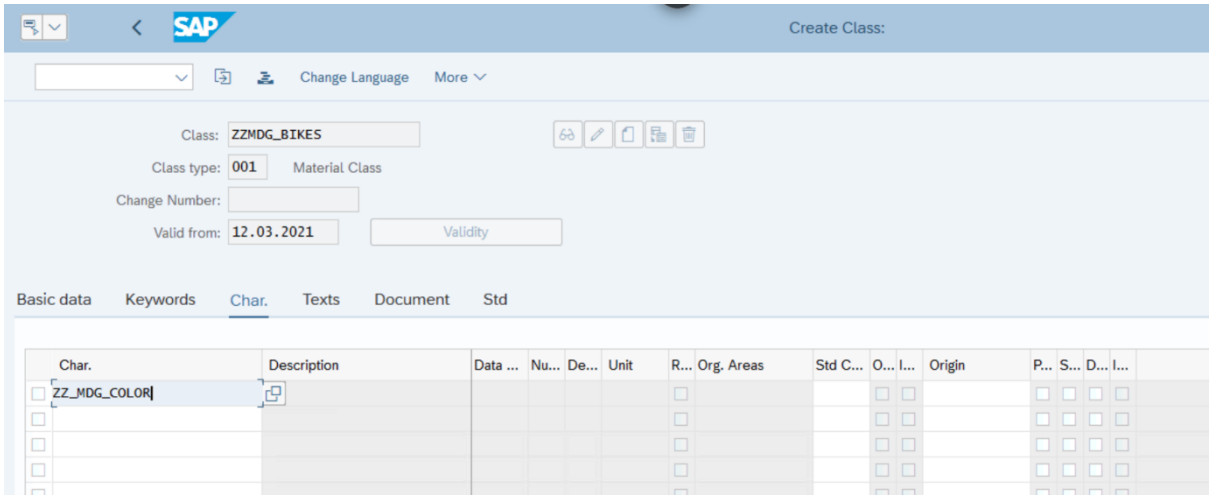
Create a new class and characteristic with transaction cl01.

a. In SAP GUI start transaction cl01 and enter a class name like “ZZMDG_BIKES”

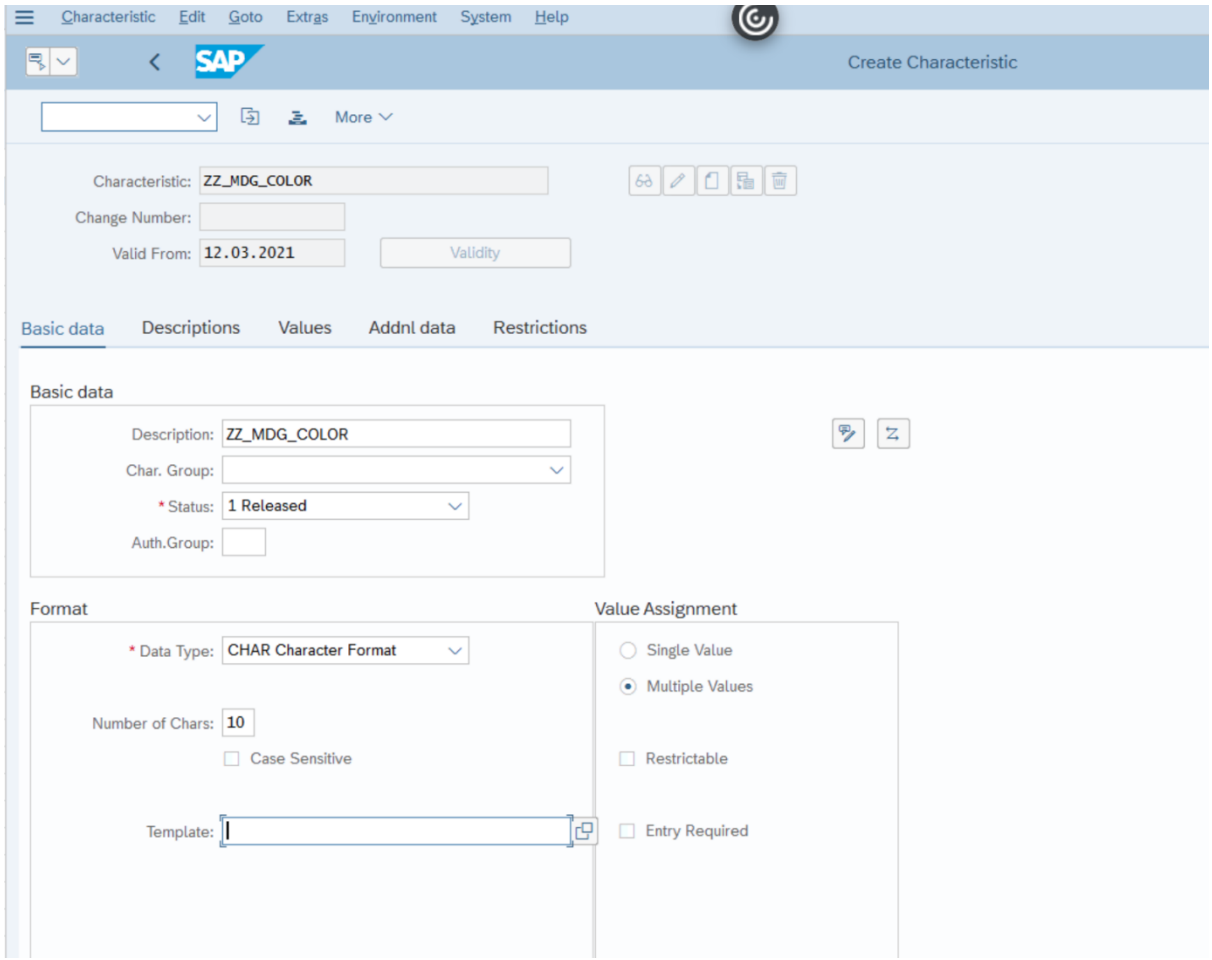




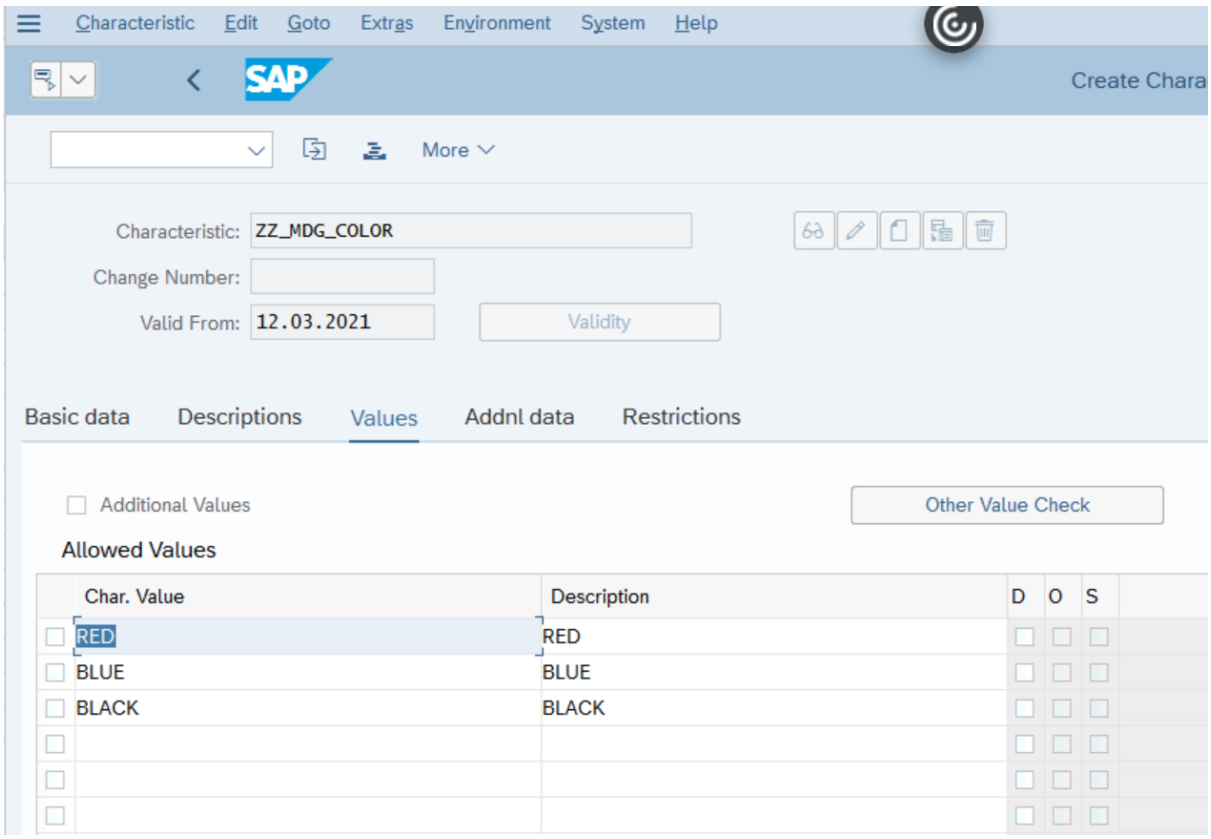
b. Enter description and click on Char. Tab
c. Enter a Char. Like “ZZ_MDG_COLOR”



d. Hit enter and the system will ask you if you want to create this characteristic. Click Yes
e. Enter a description like “ZZ_MDG_COLOR.”
f. Define Data Type CHAR (10) and Choose Multiple Values. Do not select “Entry Required.”



g. Click on Values and add 3 values like BLUE; RED; BLACK.

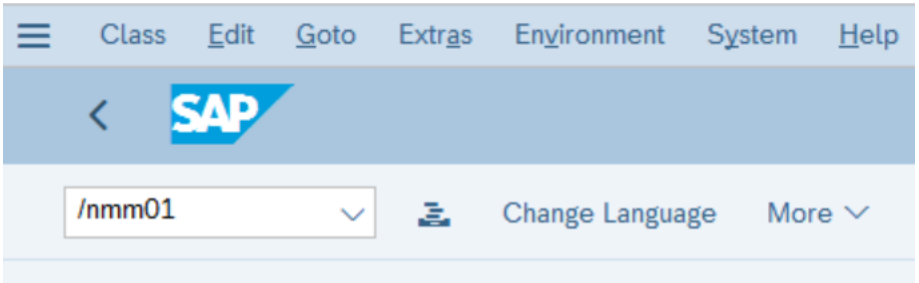


h. Save the class and characteristics.

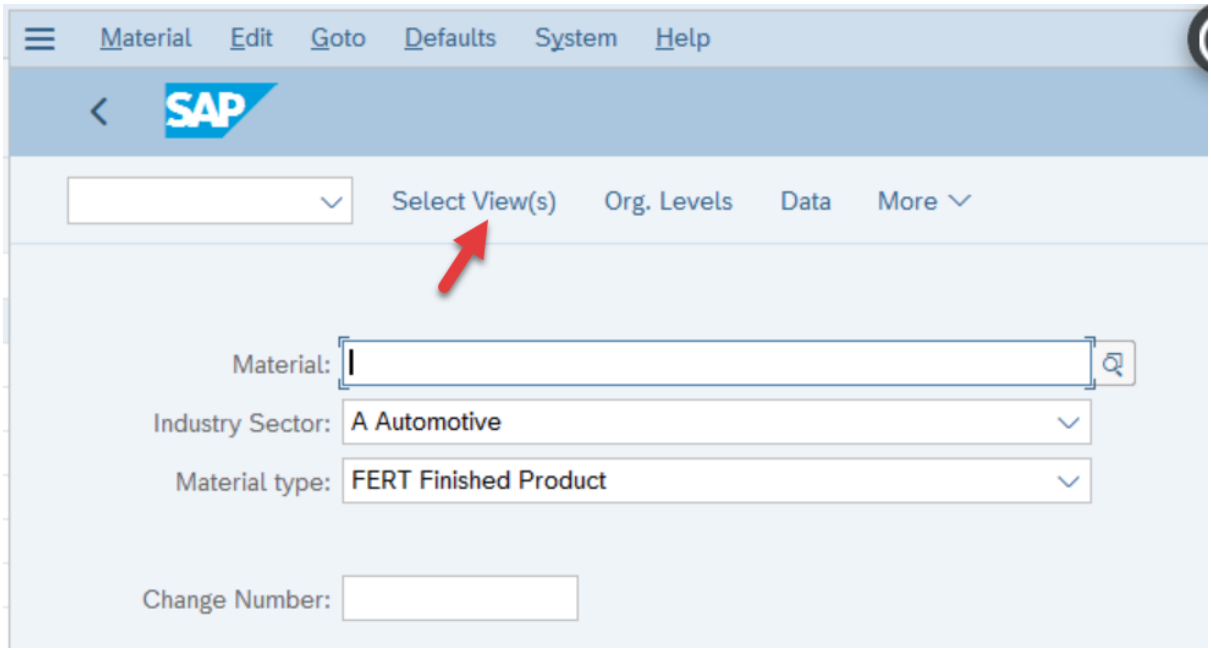
Create test record

You will create 2 new records via transaction mm01. Both records will be assigned to the newly created class, but one record will not have the characteristics “ZZ_MDG_COLOR.” Ideally you would use SAP MDG Central Governance to create new materials/products but for simplification reasons we use the backend transaction because the focus is not on “governance of new master data” in this blog.

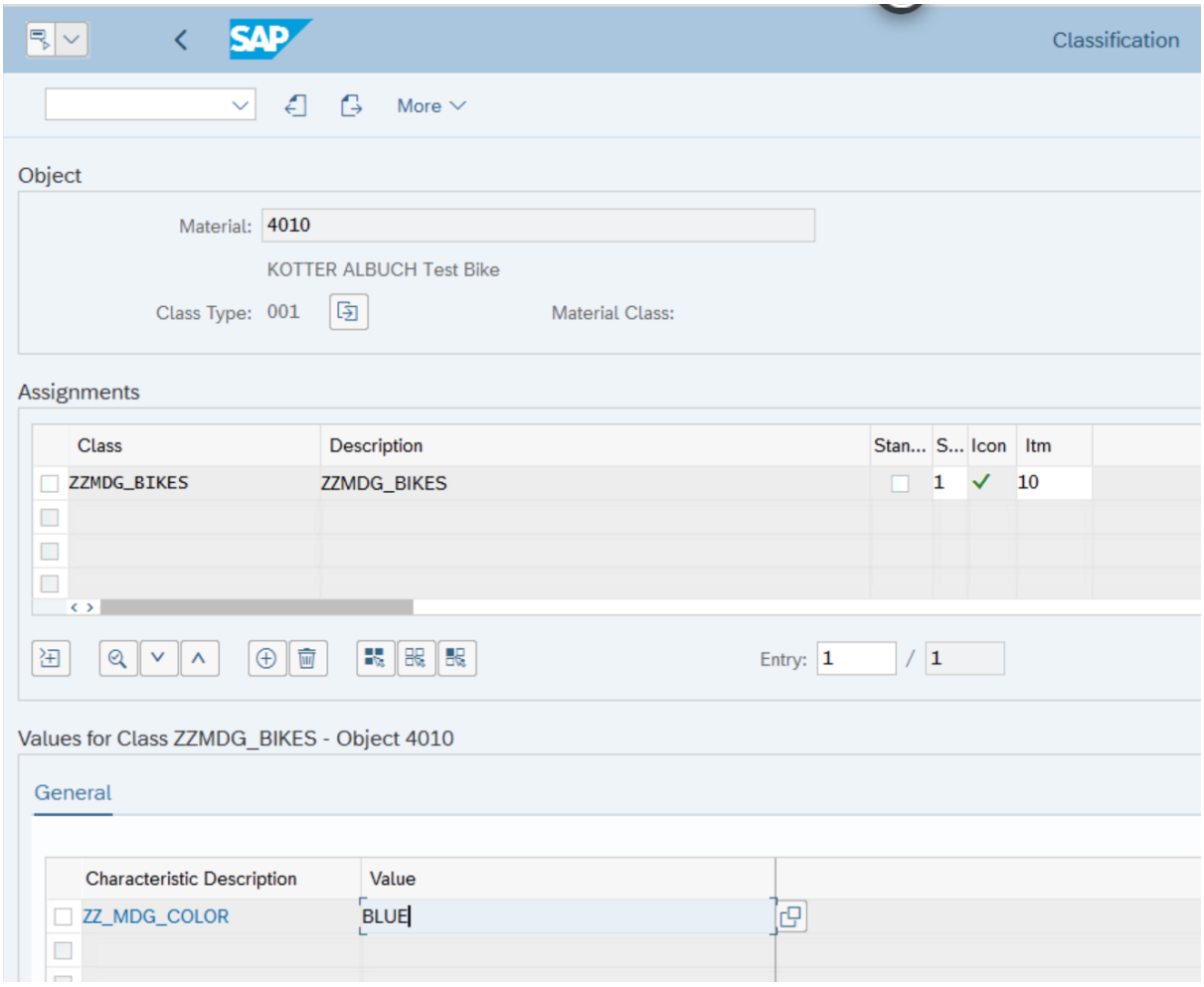
a. Start transaction mm01.



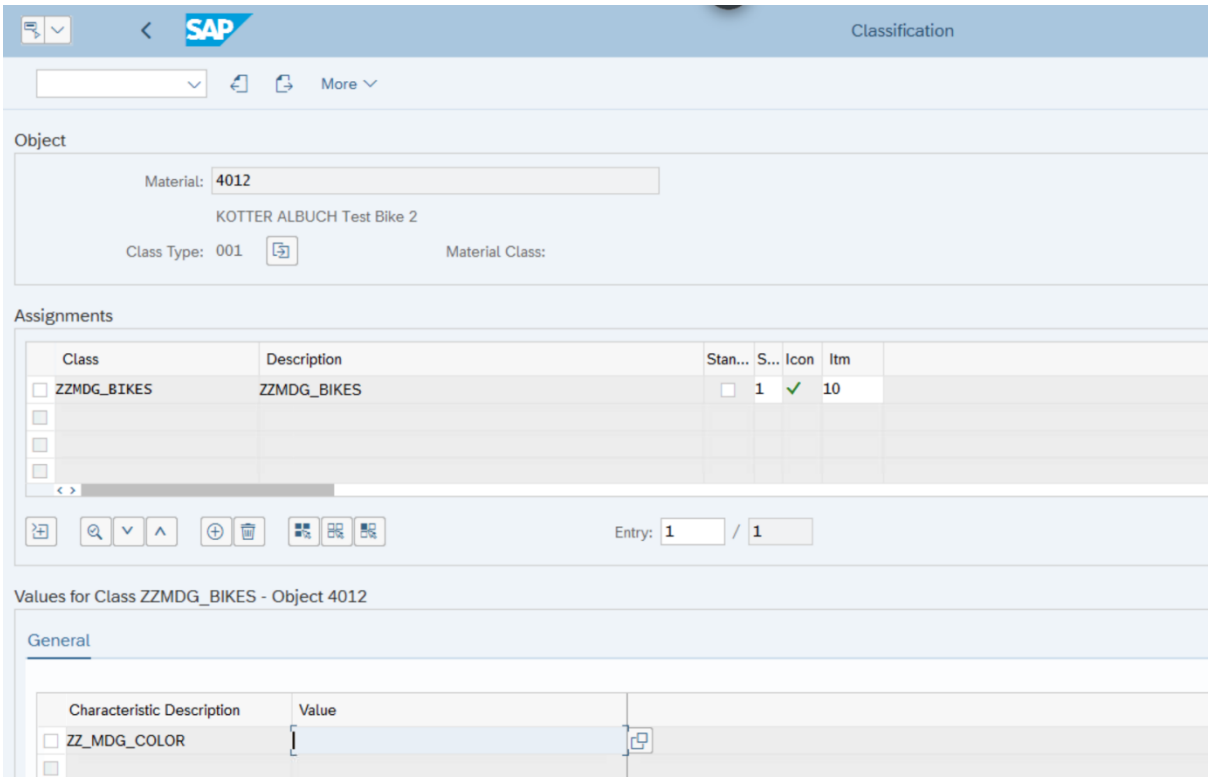
b. Enter Industry Sector and Material Type and click on “Select Views.”



c. Select only Basic data and classification.
d. Enter a description and BUOM.
e. Enter class “ZZMDG_BIKES” and select value for the characteristic ZZ_MDG_COLOR
f. Save your new record.
g. Result:



h. Repeat the steps again but this time do not enter a value for the characteristic. Result:



Rule Creation – Create the DQM Rule via Fiori app

Solution concept

To make sure that the MARA_AUSP_PRC is filled during the runtime of an evaluation run you may need to create a dummy rule with the base table “AUSP”. The dummy rule is only needed if you do not already have another DQM rule created with base table AUSP. In upcoming releases, it is also planned to overcome this workaround.

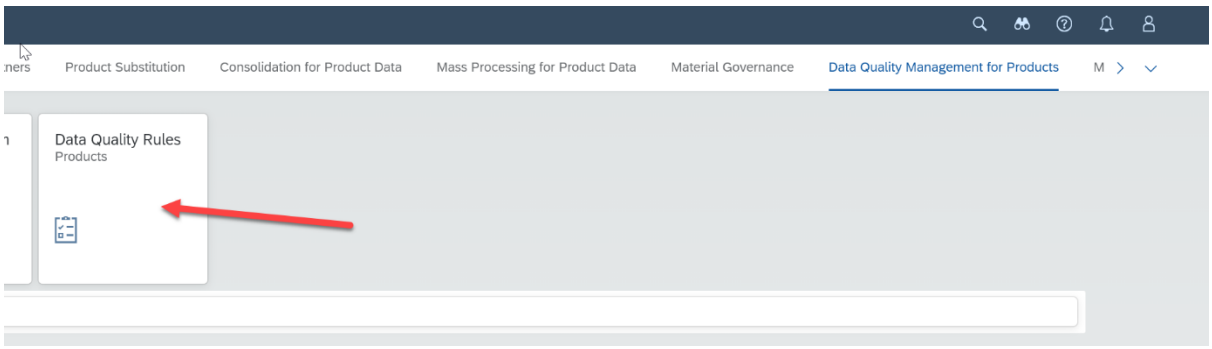
In a second rule you will define the base table “KSSK”. Within the condition expression you will do a DB-lookup to the MARA_AUSP_PRC to check the characteristic assignment for the record in scope related to MARA_KSSK_PRC.

This is the configuration process:

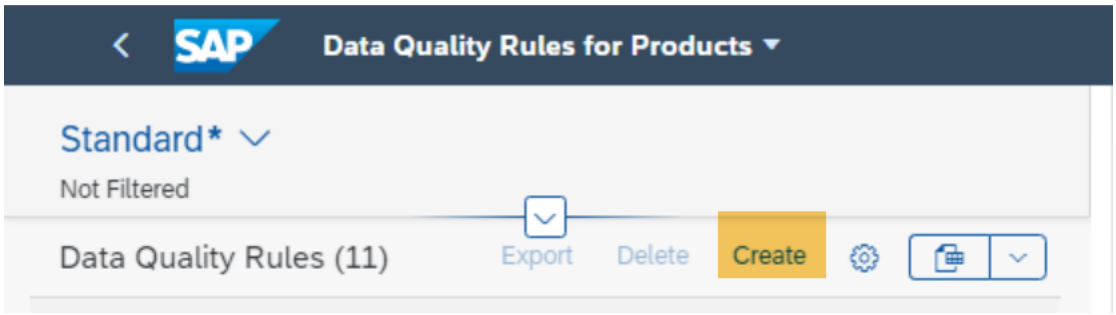
1. Create a dummy DQM rule with base table “MARA_AUSP”.
2. Implement a new DQM rule with base table “MARA_KSSK” and field to be checked “Class Type.”
3. Define the scope expression: Only product records which have the ZZMDG_BIKES assigned.
4. Define condition expression: define a DB lookup to MARA_AUSP_PRC table and check if for the given sourceID the entry for ZMDG_BIKE_COLOR exists.

Create dummy rule on AUSP

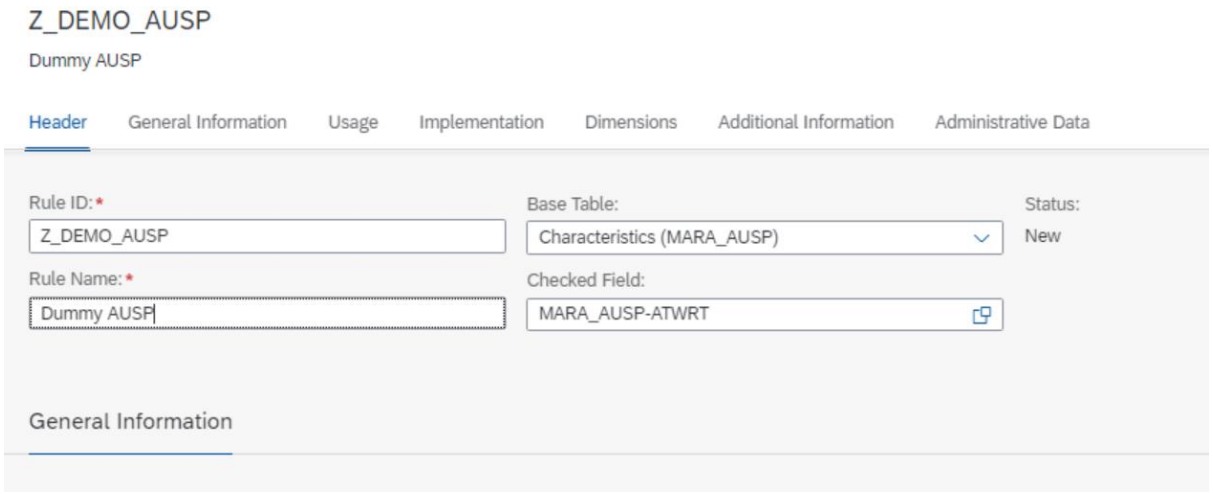
a. Start the app “Data Quality Rules – Products.”



b. Create a new Rule.

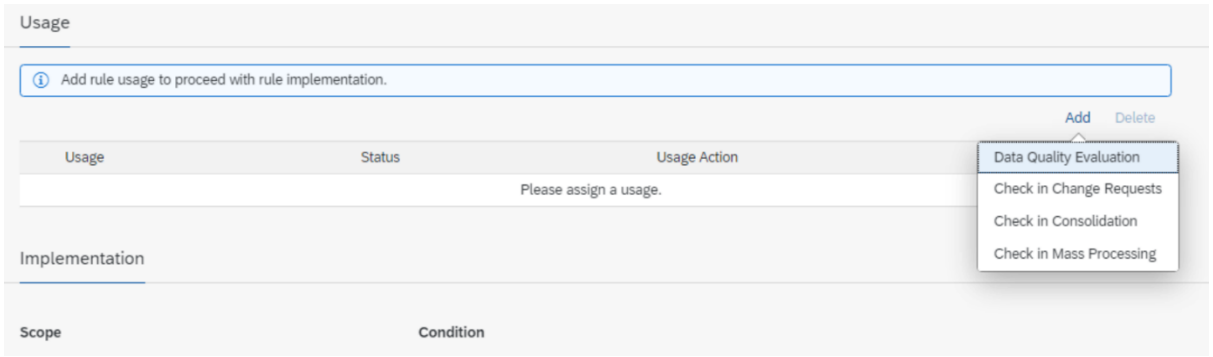


c. Enter the mandatory fields:

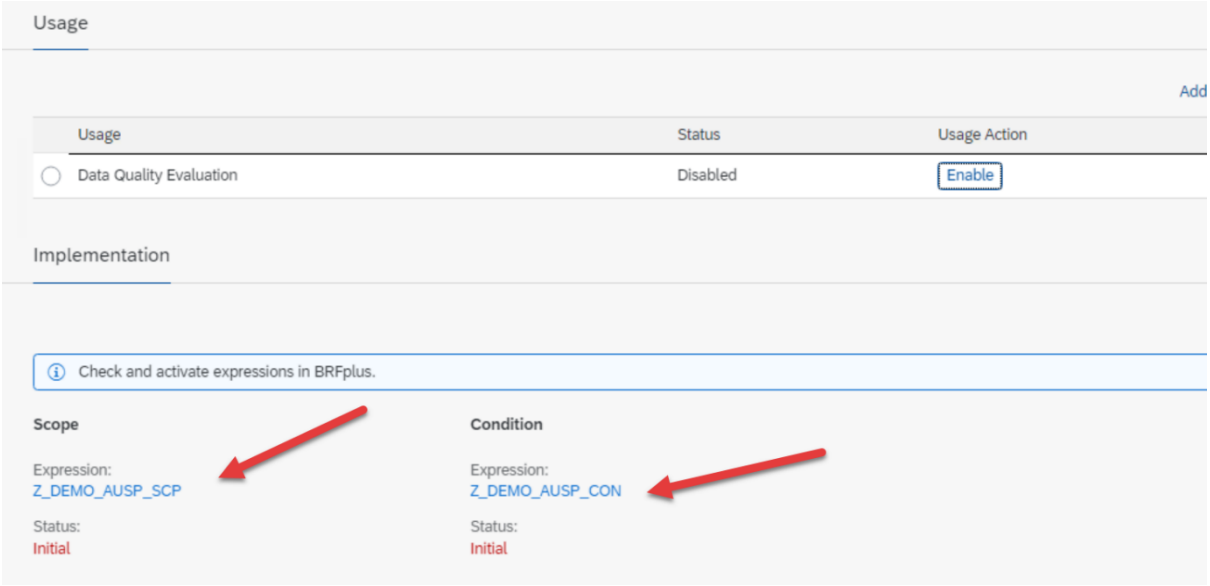


d. Click Create

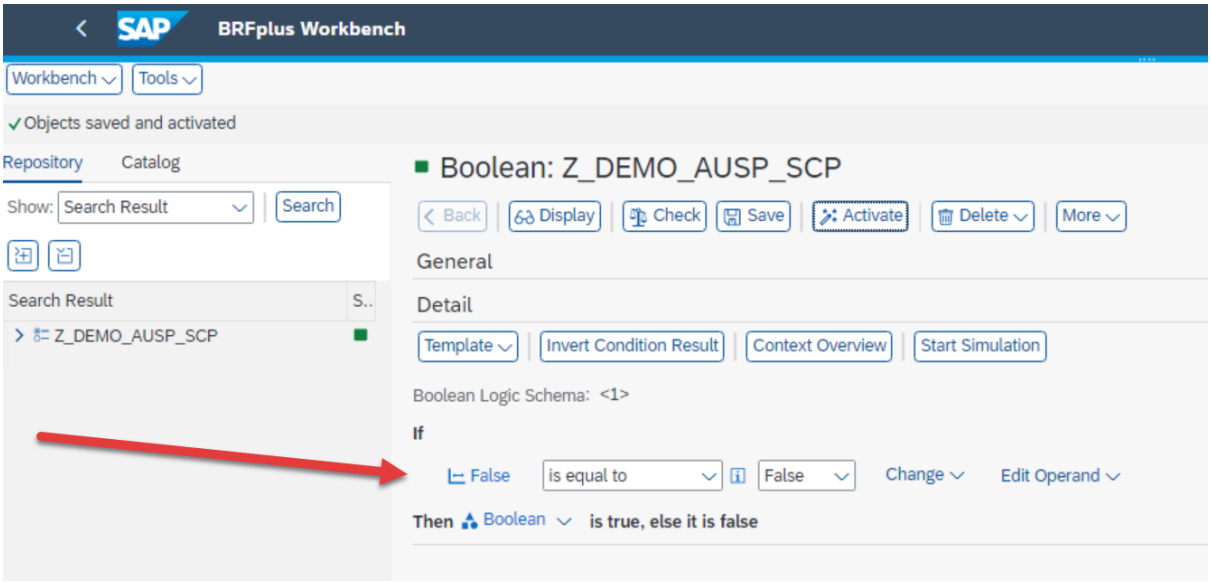
e. Add the usage “DQM.”



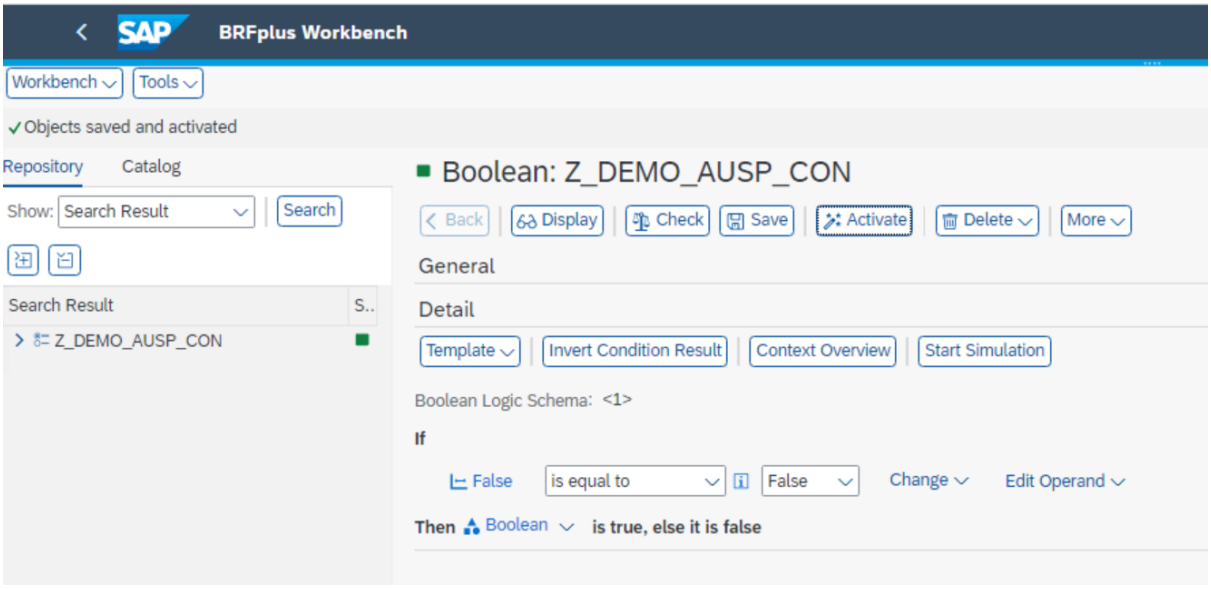
f. Click on Prepare
g. Define the BRF+ dummy settings for both expressions:



h. The dummy expression for the scope is “false eq false” which is always true. This means that for all records the MARA_AUSP_PRC is filled during runtime.

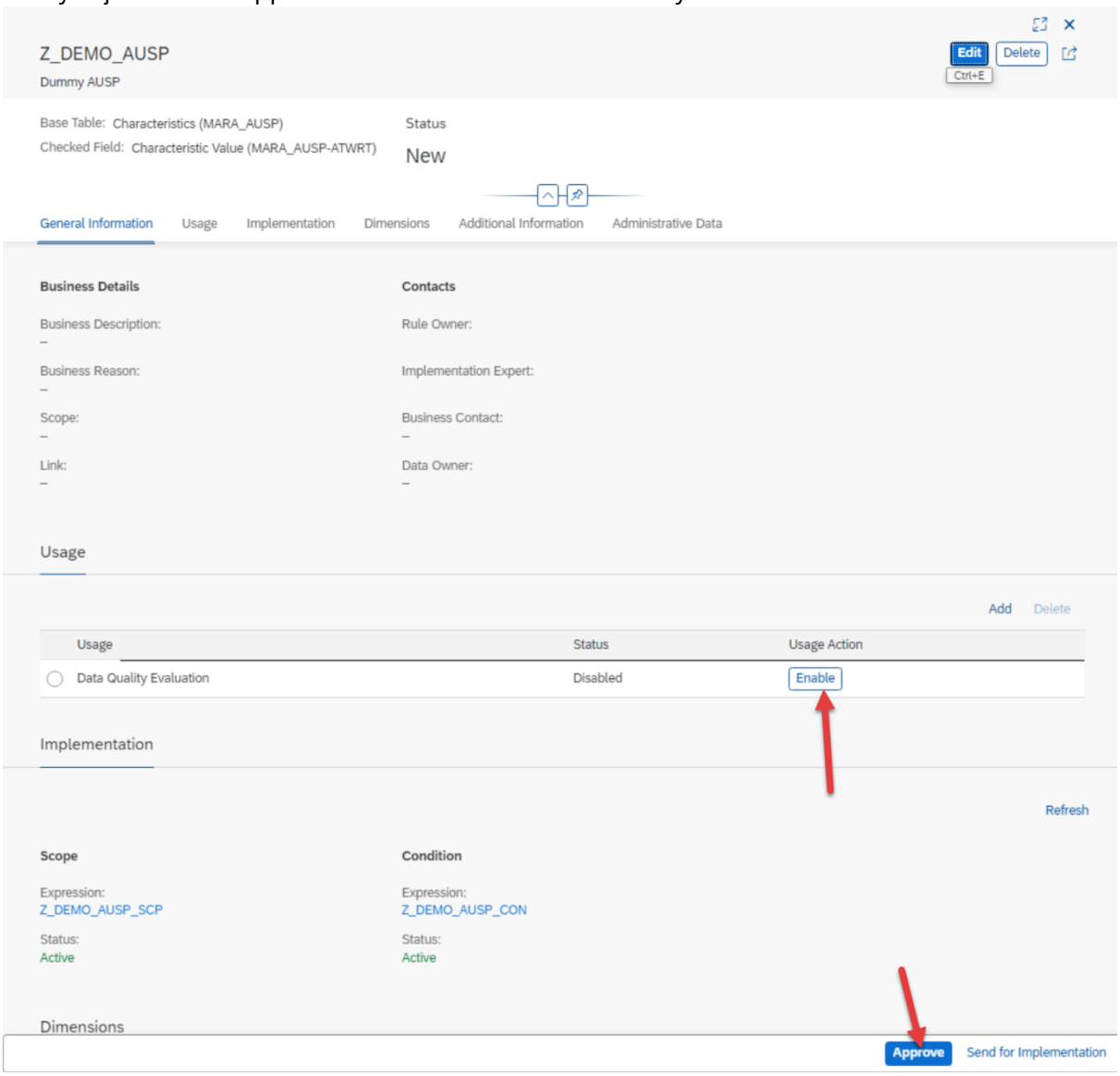


i. Same settings must be done for the condition expression:



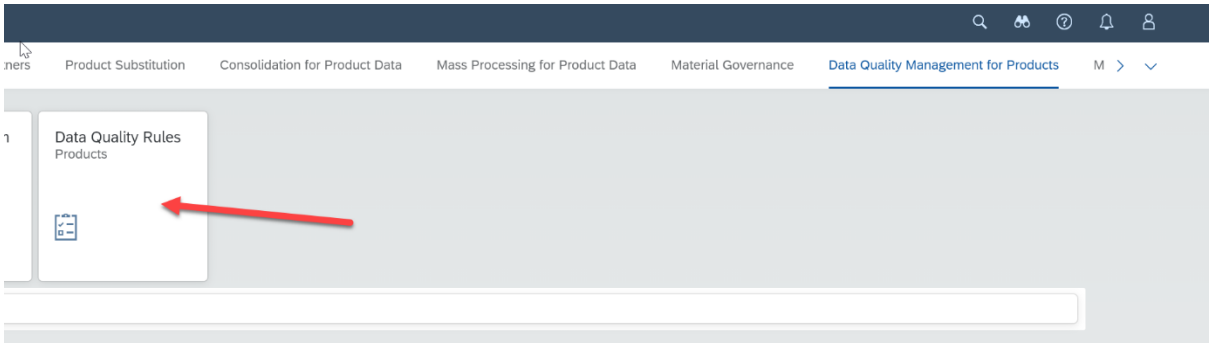
j.

k. Now you just need to Approve and enable the rule and dummy rule is created.

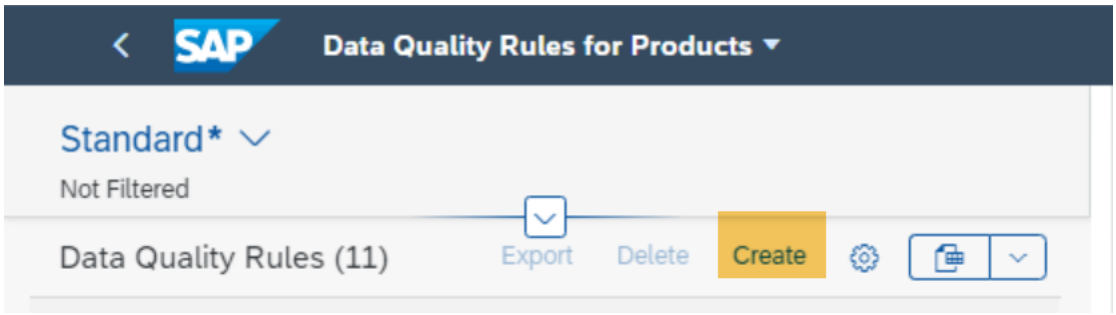


Implement a DQM rule to check class and characteristics assignment

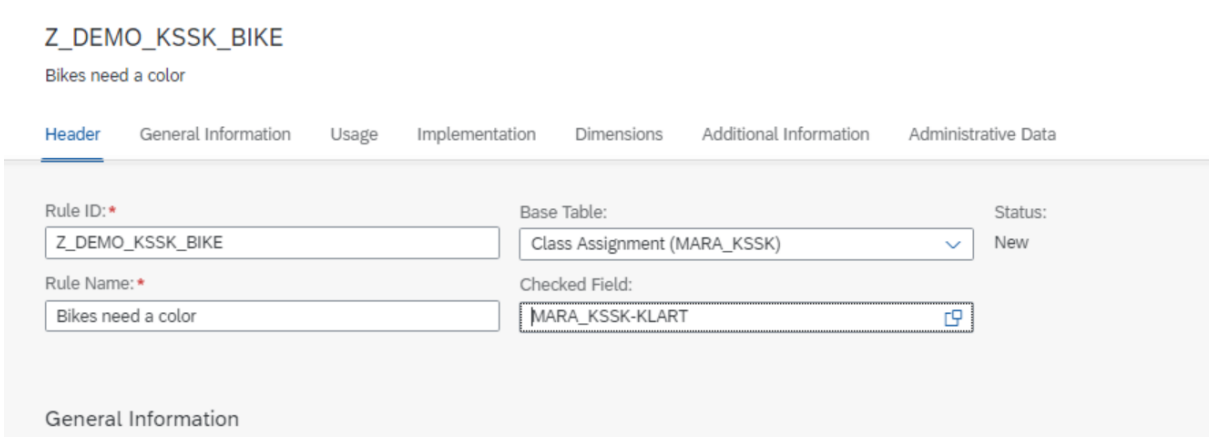
a. Start the app “Data Quality Rules – Products.”



b. Create a new Rule.

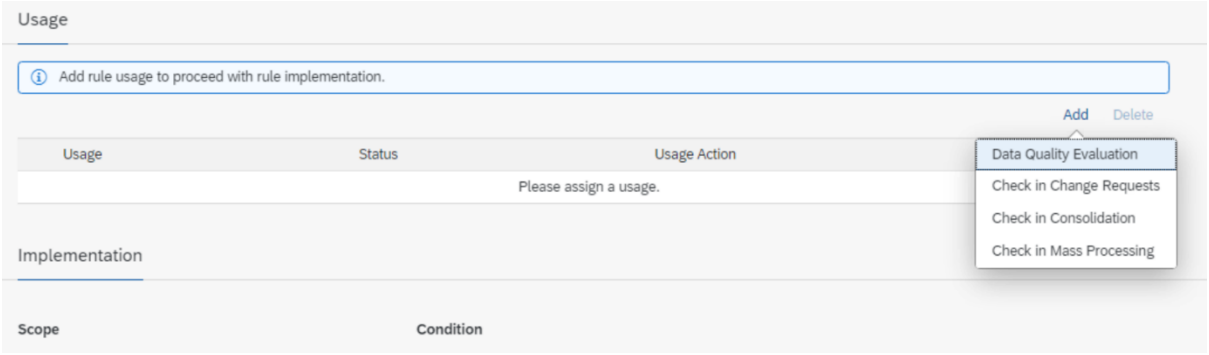


c. Enter the mandatory fields:



d. Click Create

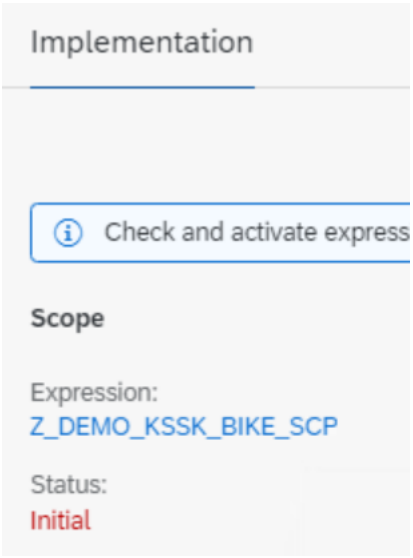
e. Add the usage “DQM.”



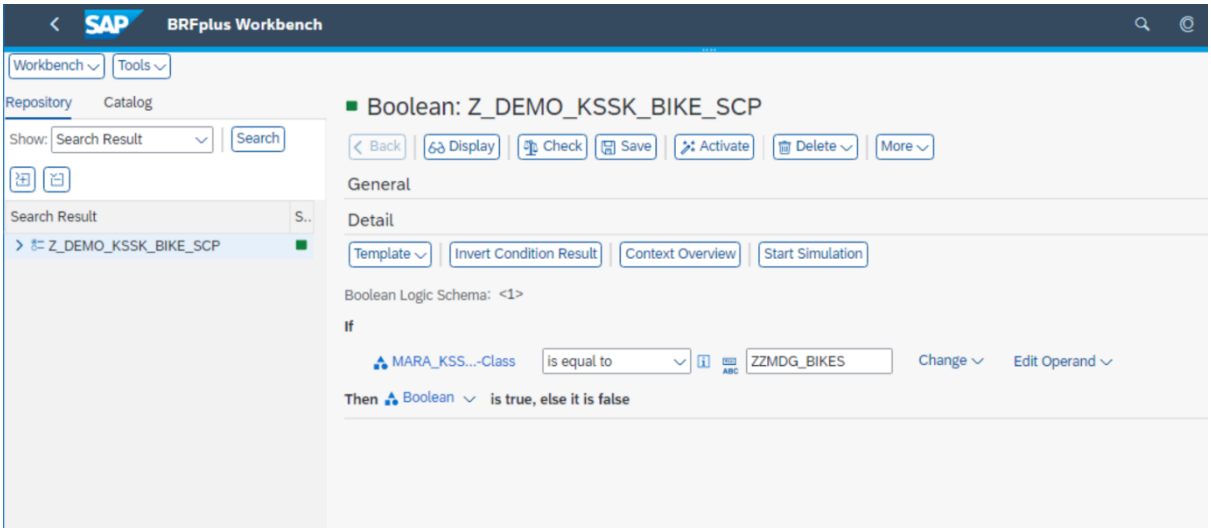
f. Click on Prepare

Scope Expression

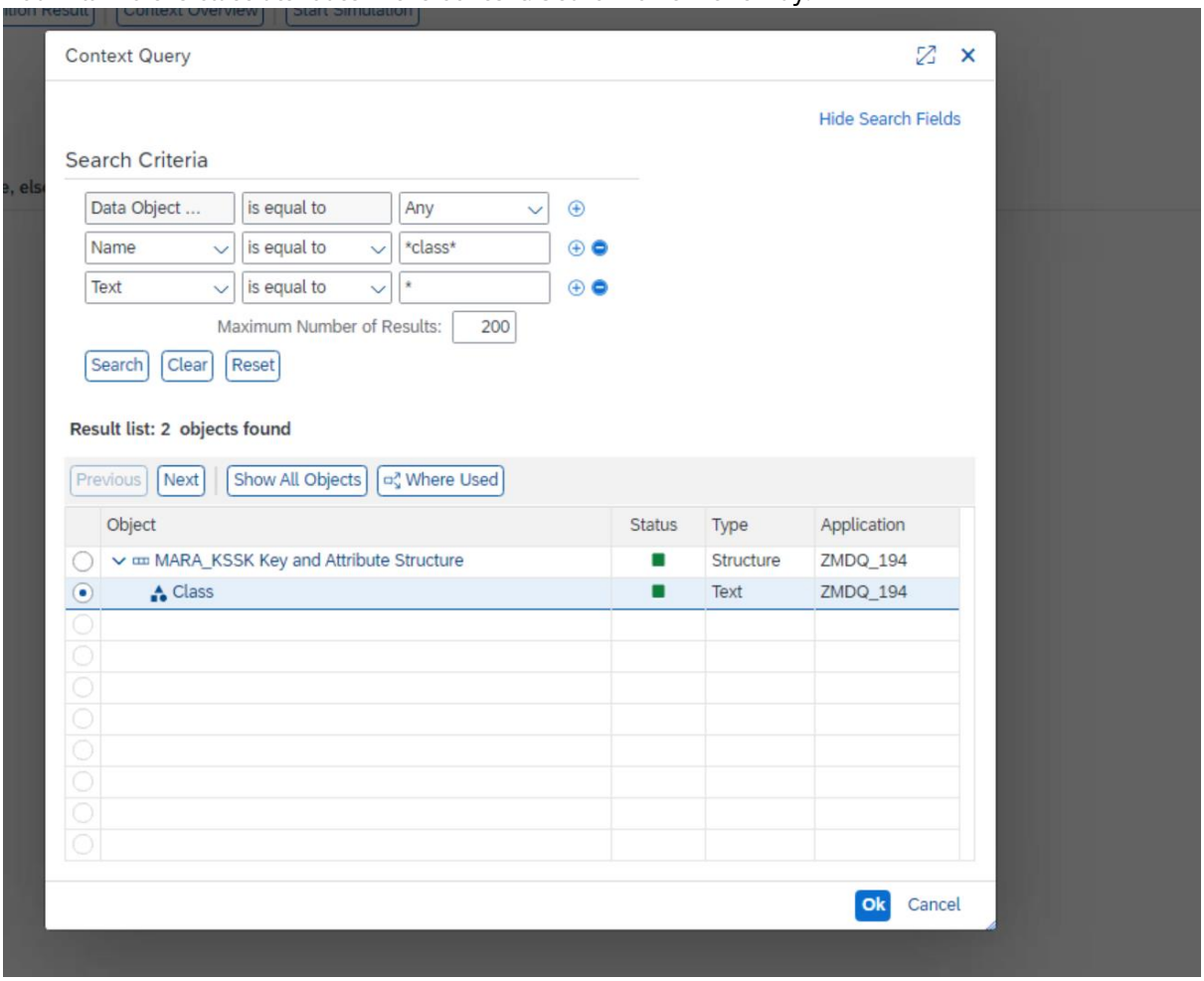
a. Define the scope expression: You want to check only products which have the class “ZZMDG_BIKES” assigned:
b. Click on the link on the scope expression to navigate into the BRF+ Workbench.



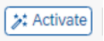
c. Click on Edit and define the rule:



d. You will find the class attribute in the context. Search for it in this way:

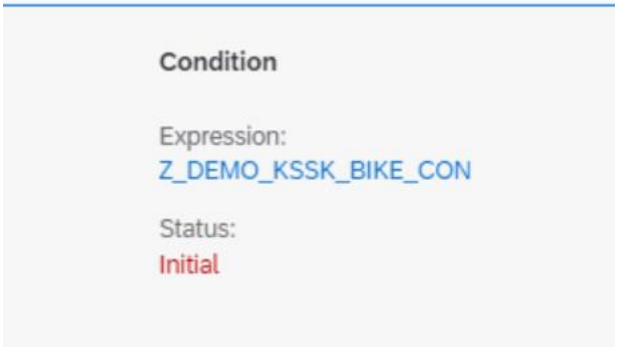


e. Activate the scope expression.

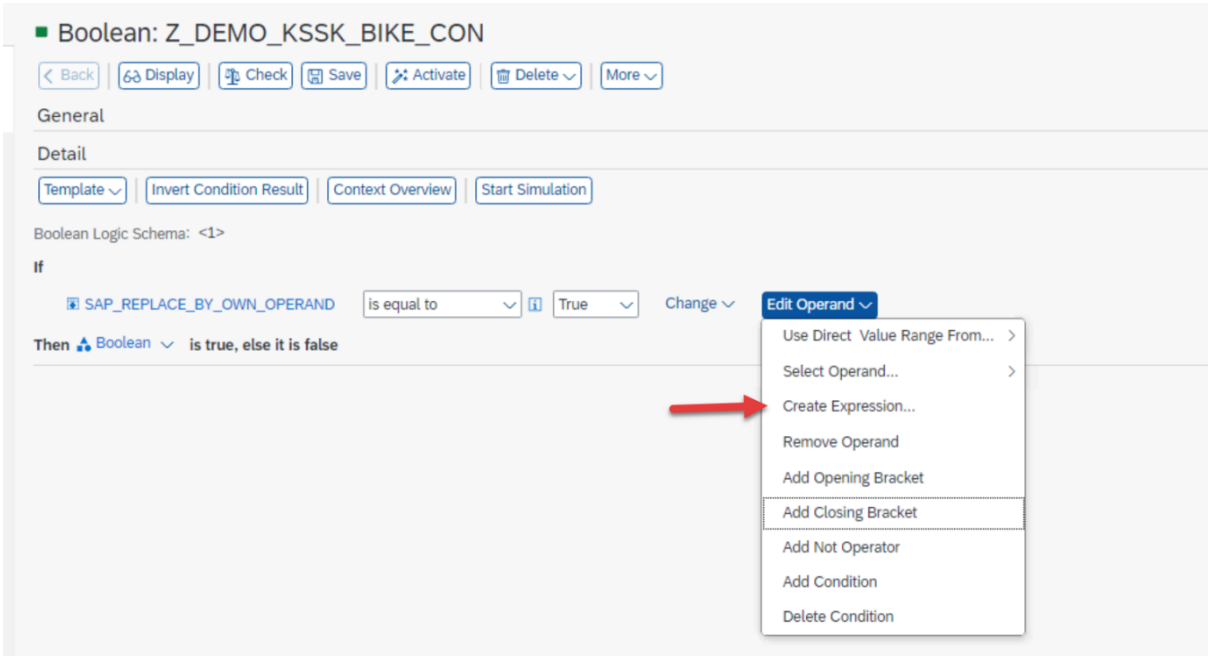


Condition Expression

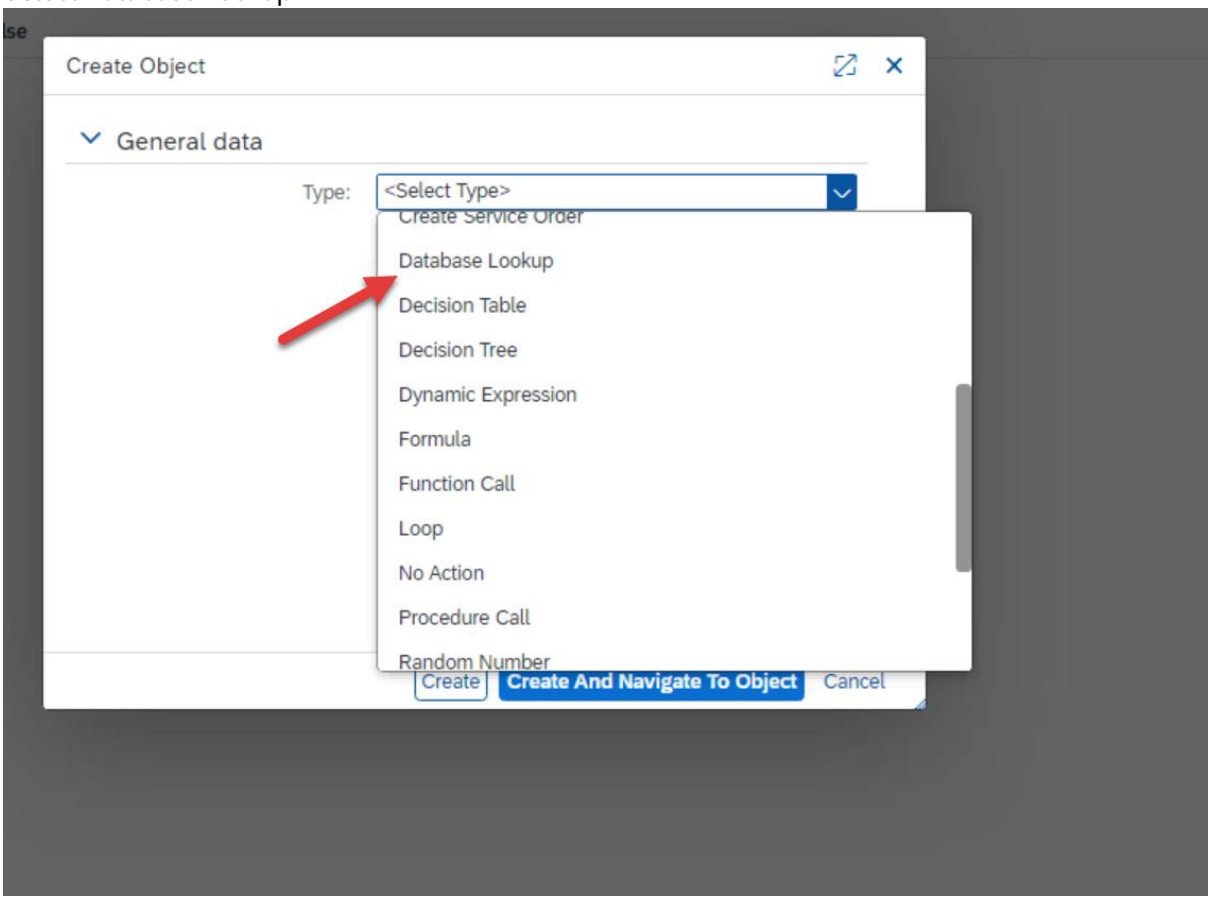
a. Go back to the DQM Rule and open the BRF+ Workbench for the condition expression:



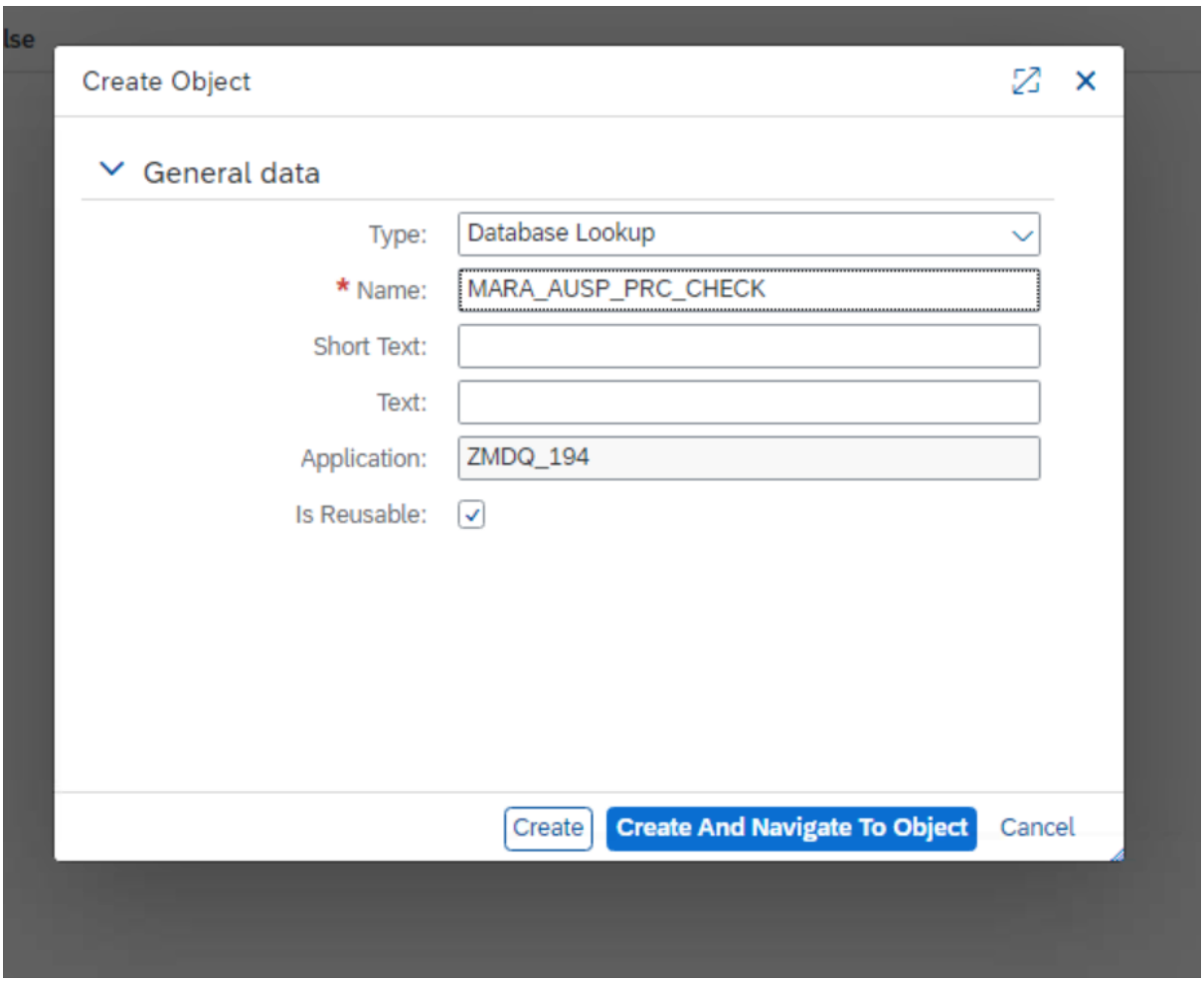
b. Create a new Expression as shown in the next screenshot.



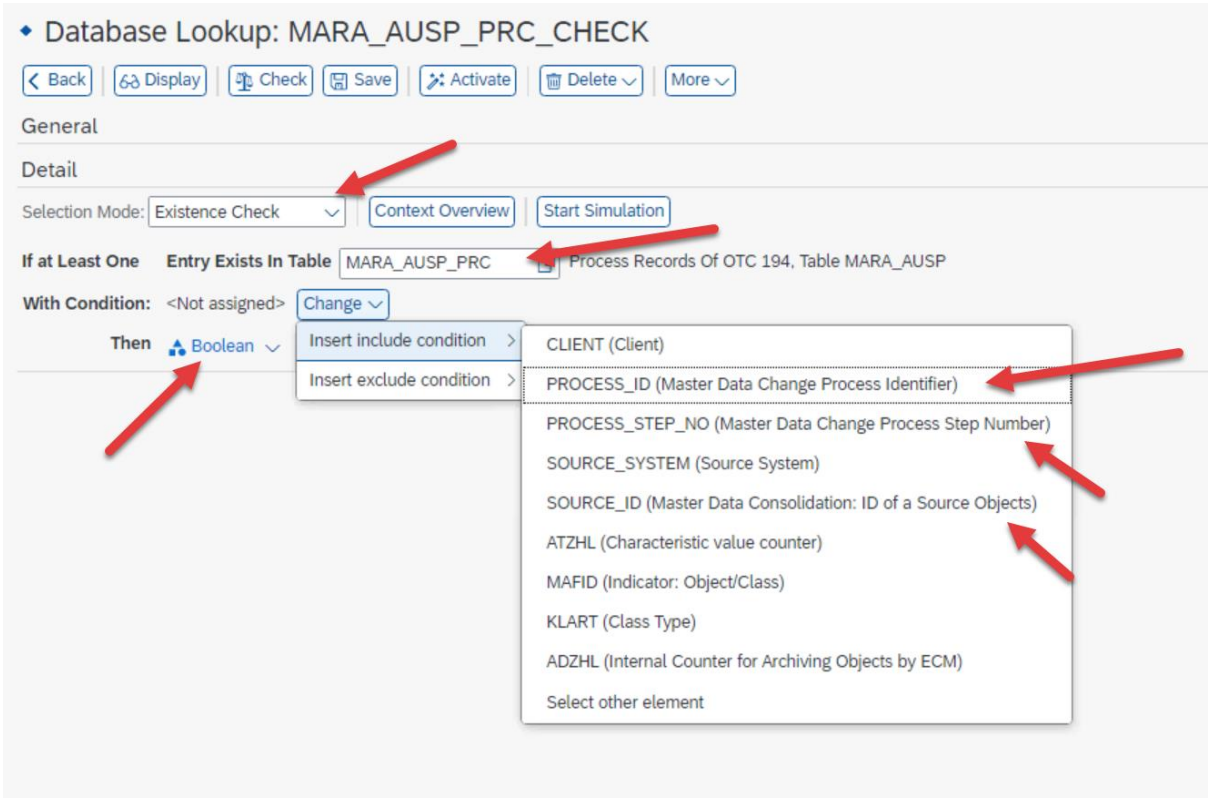
c. Select Database Lookup



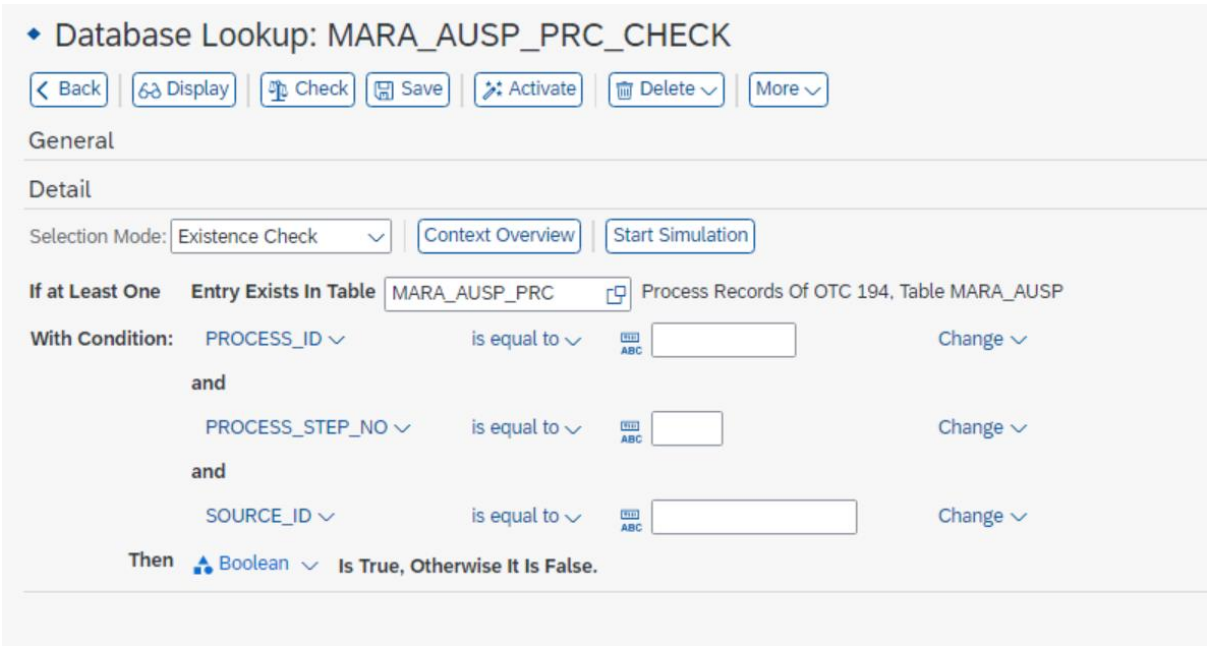
d. Define a name:



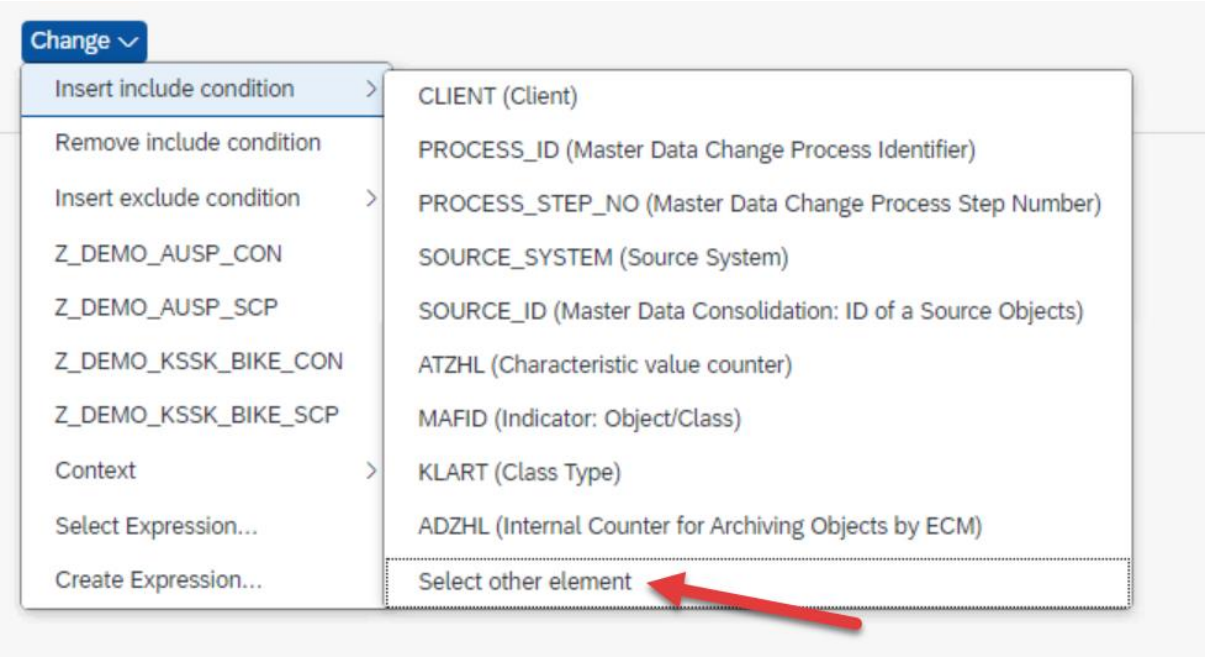
e. Create and Navigate to the Object
f. Define the DB Lookup as mentioned on the screenshot:



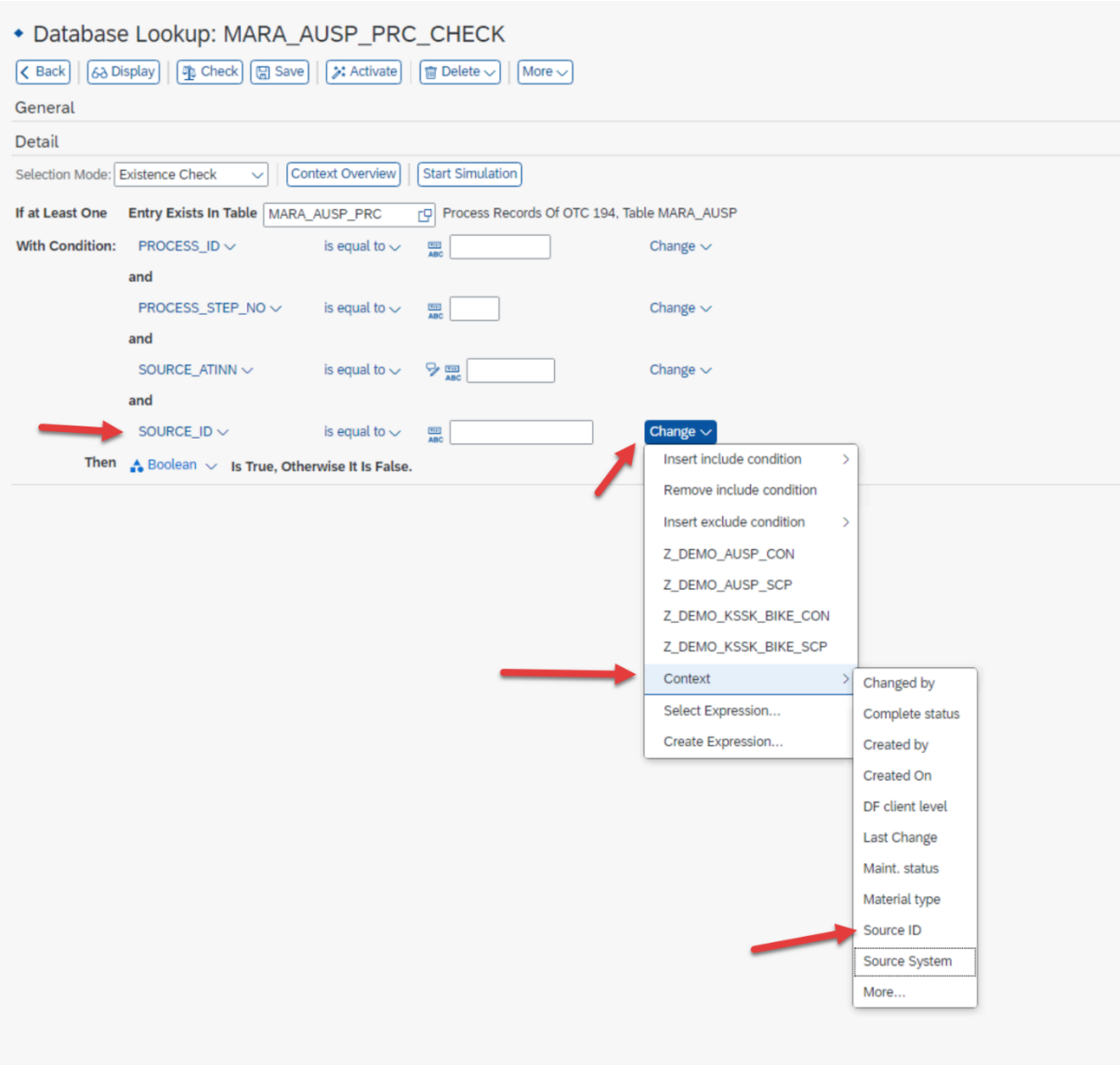
Now, it will look like this:



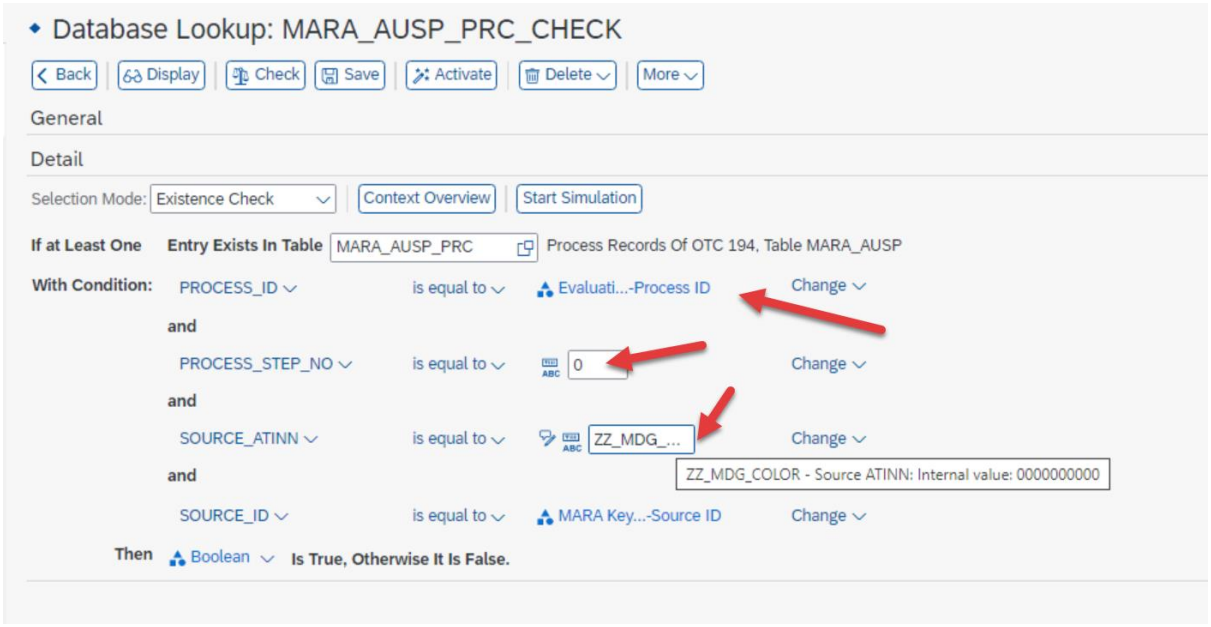
g. Now also add the SOURCE_ATINN: You will find it within “Select Other element.”



h. Now enter these values:
    a. PROCESS_ID -> from context
    b. SOURCE_ID -> from context
    c. SOURCE_ATINN = “ZZ_MDG_COLOR”
    d. PROCESS_STEP_NO = “0”

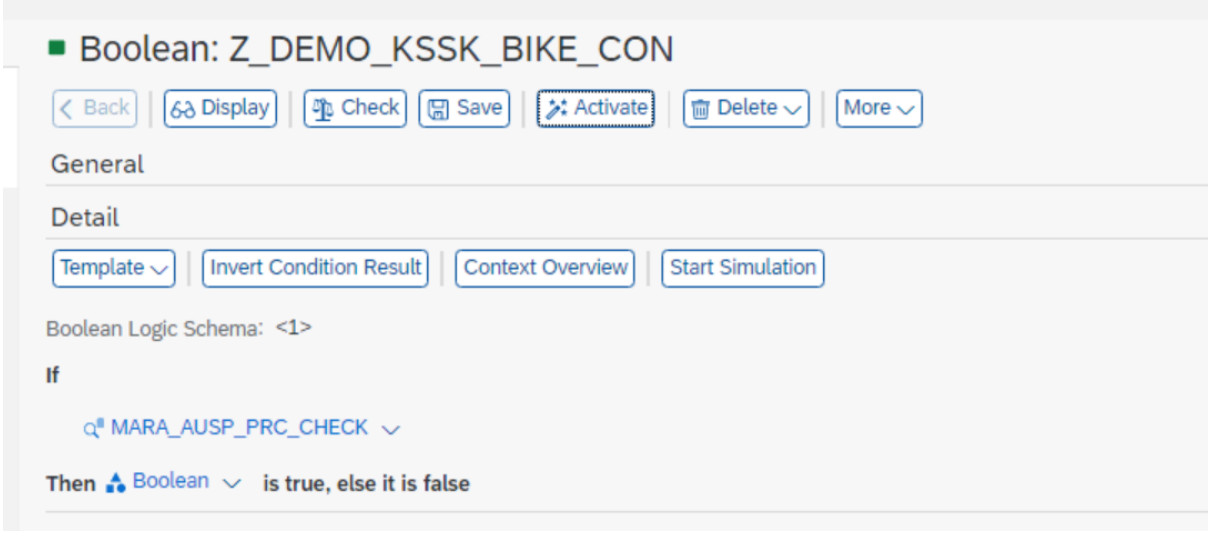


i. Result:



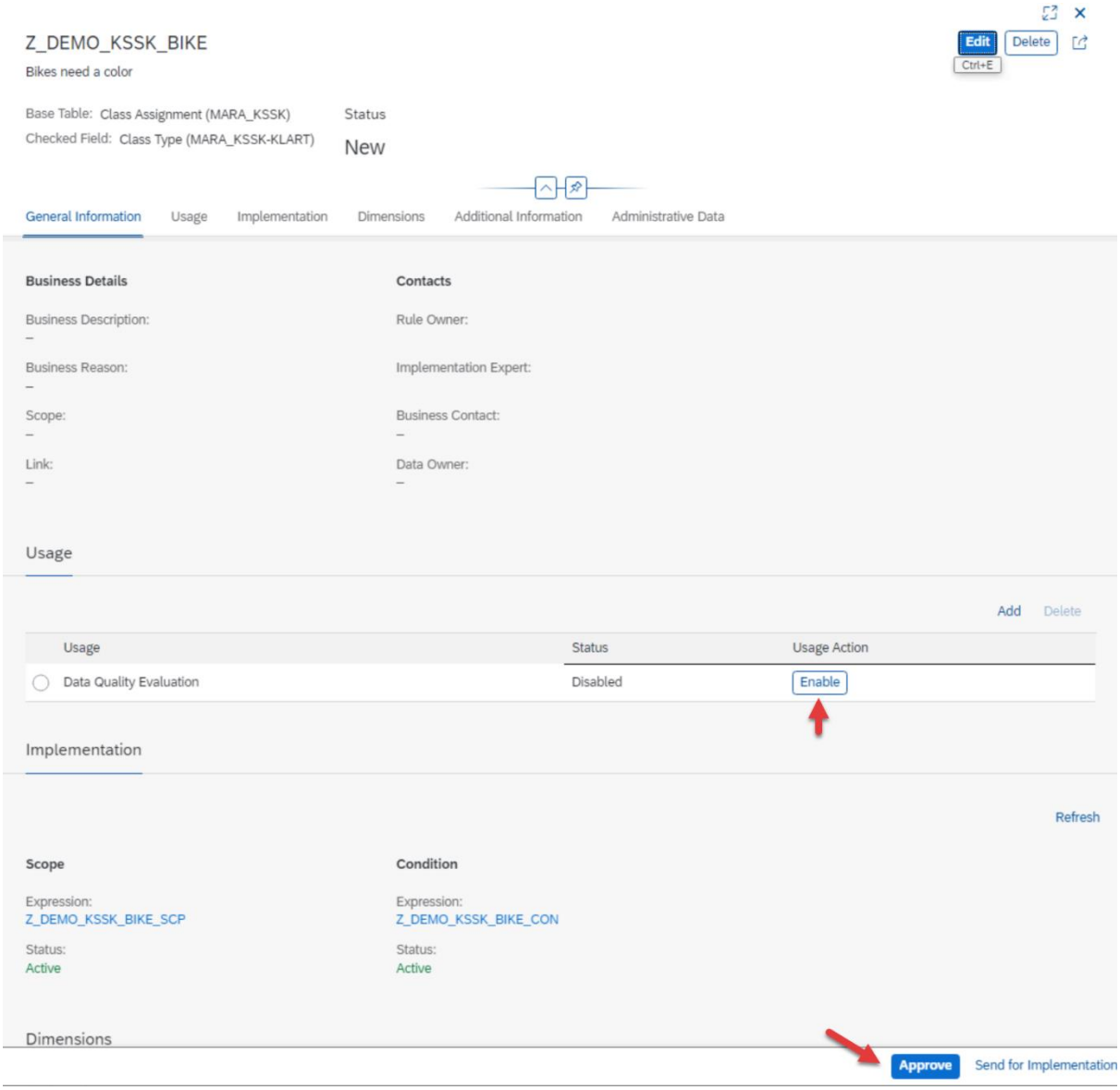
j. Activate the Expression

k. Go back to the BRF+ rule and delete the predefined line. It should look like this:



Explanation: This condition expression gives back TRUE if where is an entry in MARA_AUSP_PRC (related to the process id, source or productid, Process Step and characteristic). This is done via the database lookup to the table which was filled by the dummy rule.

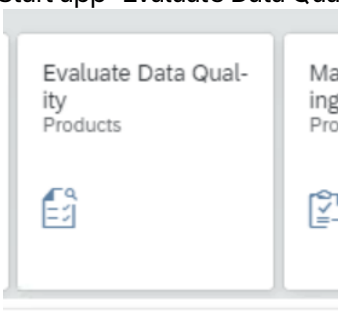
l. Now you just need to Approve and enable the rule and dummy rule is created.



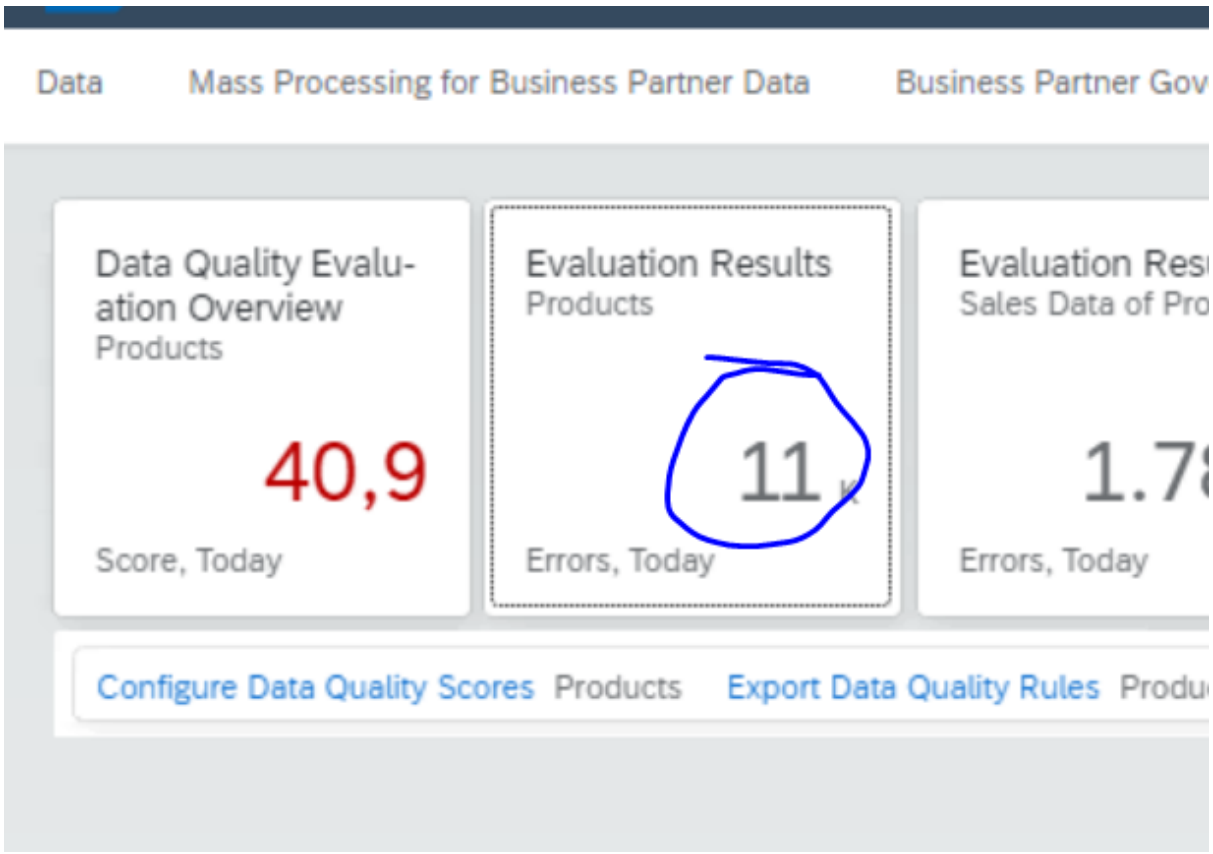
Test the solution

Execute an DQM evaluation run and check if the result is as expected:

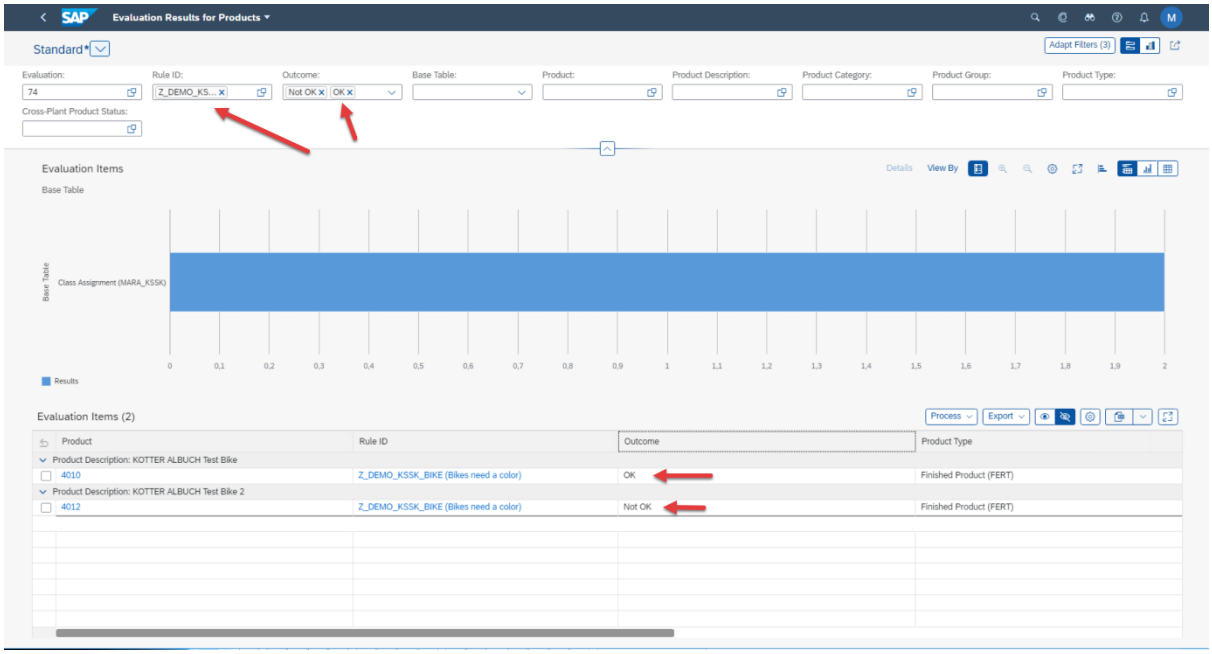
a. Start app “Evaluate Data Quality for Products.”



b. Start the evaluation and wait until the run is completed.
c. Start the app “Evaluation Results Products.”



d. Filter on “Base Table” and/or “Rule ID”:



If you followed the guide from the beginning, you would see the 2 product records: one record is “ok” and the other is “Not Ok”. This is the expected result.