Production Planning and Execution (PP)

This document is intended to help instructors understand the case study process and manage the learning process in and outside the classroom. The main focus lies on prerequisites and common tasks such as testing and trouble-shooting.

Product

SAP S/4HANA 2022
Global Bike

Fiori 3.0

Level

Instructor

Focus

Production Planning and Execution

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MOTIVATION

Theoretical lectures explain concepts, principles, and theories through reading and discussion. Therefore, they enable students to acquire knowledge and gain theoretical insights.
In contrast, case studies allow them to develop their abilities to analyze enterprise problems, learn and develop possible solutions, and make sound decisions.

The main objective of the Global Bike case studies in general is for students to understand the concept of integration. These descriptive and explanatory case studies will allow students to understand the importance and the advantages of integrating enterprise areas using an S/4HANA system.

The main goal of this document is to help instructors prepare the SAP system for the Production Planning and Execution case study process and to support them trouble-shoot problems that might occur during the course.

Beside technical and didactic prerequisites, the lecturer notes list SAP transactions for testing and correcting student results in the SAP system. In addition, this document describes common problems and explains their reason and solution.

SAP University Alliances

Prerequisites

Note Before using this case study in your classroom please make sure that all technical (month-end closing, user management etc.) and didactic prerequisites are fulfilled. Such prerequisites are briefly pointed out below. Detailed documentation can be displayed at and downloaded from the *Learning Hub of SAP UA* or the *UCC websites*.

Technical Prerequisites

The Production Planning and Execution case study is based on a standard SAP S/4HANA client with the current Global Bike dataset. Before processing the case study on your own or with your students all general setting should be checked.

Note With the current version of the Global Bike client a **year-end closing** is not necessary, because it has already been automated or because it is not needed for the process described in the curriculum material.

~~Year-end closing~~

User accounts in the SAP system need to be created or unlocked.

User management

These student user accounts should end with a three-digit numeric number (e.g. LEARN-001, LEARN-002 etc.). This number will be represented by ### in the case study and helps differentiate customer accounts, products etc.

In an SAP S/4HANA Global Bike client, 1000 user accounts from **LEARN-000** to **LEARN-999** already exist. These users need to be unlocked. The initial password for each LEARN-### account is set to **tlestart**.

LEARN-000 to LEARN-999

tlestart

Transaction **ZUSR** was developed in the Global Bike client in order to mass maintain SAP user accounts. For a detailed description of this and SAP standard transactions for user management (**SU01** and **SU10**) please refer to the *lecturer notes „User Management“* (see: current Global Bike curriculum → chapter 99 – Instructor Tools).

ZUSR

SU01
SU10

All LEARN-### user accounts have been assigned to the role *Z_UCC_GBI_SCC* and have authorizations to use all applicative transactions in the SAP S/4HANA system. The role allows access to all transactions necessary for Global Bike exercises and case studies. If you need access to system-critical transactions, i.e. for development purposes, you may assign the composite profile *SAP_ALL* to your student accounts.

It is useful for the instructor to have a user account available for testing that has the same authorizations as the student accounts. You may use the predefined instructor account **LEARN-000** for this purpose.

Instructor account LEARN-000

Didactic Prerequisites

Navigation

In order to successfully process this case study, students should be familiar with the **navigation** in SAP systems, especially the SAP Fiori Launchpad, the SAP transaction concept as well as possible documentation and help options. We highly recommend using the *navigation slides* and the *navigation course* (see: current Global Bike curriculum → chapter 2 – Navigation).

Company background

In addition, it has been proven beneficial that students have a thorough understanding of the **historic background** and the enterprise structure of the Global Bike concern before they start working on the SAP system. For this purpose we recommend the *case study „Global Bike Inc.“* (see: current Global Bike curriculum → chapter 3 – Global Bike).

Because the case study is not based on the exercises, it is not necessary to have processed the PP exercises before you start with the case study. However, it is recommended.

Global Bike client version

In order to function properly, this case study needs a **Global Bike client version** that is equal to or higher than the case study version (see cover page). Please check. If you do not know the client version please use the transaction **ZGBIVERSION** within your SAP S/4HANA system or contact your UCC team.

Global Feedback

Do you have any suggestions or feedback about Global Bike? Please send it to our email-address **gbi@ucc.ovgu.de** which is used to gather feedback globally. All emails will be evaluated by the persons responsible for the curriculum bi-weekly. This way your feedback might influence future releases directly.

Please note that any support requests send to this email-address will be ignored. Please keep using the common support channels for your support requests.

Student Assessment

Note With the app described below you can check master and transactional data that your students have created during your course.

Global Bike Monitoring Tool (beta)

We are developing a Global Bike Monitor, which is available for the PP case study.

A detailed tutorial for this tool is available in the module *99 Instructor Tools* of the current Global Bike curriculum.

Please keep in mind that this transaction is an additional functionality designed by the UCC Magdeburg and still in development. Therefore, we kindly ask you to send any feedback or detailed error descriptions to the following address: **gbi@ucc.ovgu.de**

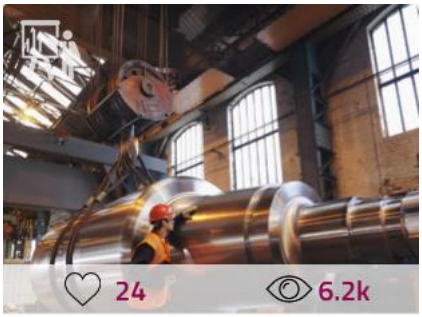
Learning Snacks PP

Note With the Learning Snacks PP you can check your learning success in the module PP.

What is Learning Snacks ?

Learning Snacks offers the possibility to check the knowledge gained during the case studies and exercises by means of small single-choice questions. Depending on the selected module, you can play through a Learning Snacks (PP here). Learning Snacks can be used with or without prior registration. By having your own account, you can create snacks yourself, like other snacks and receive some kind of points for each question you answer correctly.

You can find detailed instructions on Learning Snacks in the module "98 Cross-Module".



PP English

Result Verification

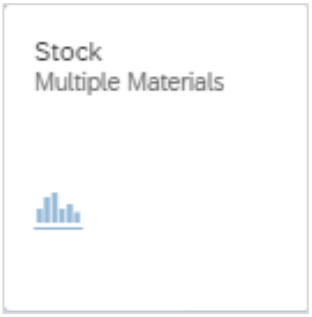
Note SAP provides several reports for the production process. Two transactions are suitable for verification of case study results. These two transactions can be used as a starting point for error tracking.

Stock Level Each student should produce a certain amount of red bikes (DXTR3###) during the case study.

You can verify all stock changes for a range of materials as described below.

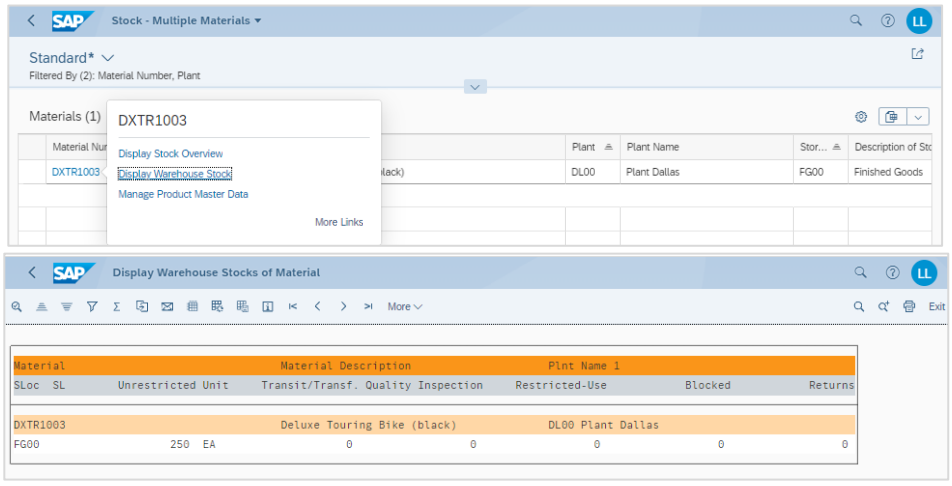
Open transaction *Stock Multiple Materials* under the Sales and Distribution case study**.**

Fiori App



On the next screen enter *Material Number* **DXTR3###** and the *Plant* **DL00** and click on Go. Then select the materials and choose *Display Warehouse Stock.*

DXTR3###
DL00



Note Your Stock level may have different values depending on your historical consumption values.

Materials listed in this report indicate that the goods from the production order were received into inventory.

Problem: Error Message during Transfer to Demand Management

Symptom You receive an error message while transferring planning data to Demand Management.

Reason The master data view MRP 3 of DXTR1### and DXTR2### was not maintained.

Solution Please maintain the necessary data as described below.

Error Message

During transfer of the SOP to Demand Management (case study Step 5) you receive the following error message:

Errors occurred while reading data, see the message log.

The detailed error log available from the menu **More ► Goto ► Error log** should look similar to the screen depicted below:

No requirements type exists for material DXTR1### in plant DL00.

Solution

Maintain the values for material master view MRP3 of DXTR1### and DXTR2### described on case study Step 1.

Rerun the SOP transfer from case study page 16f.

Note During the case study only DXTR3### is produced and is not directly affected by the error described above. If you choose to ignore the error and proceed with the case study some screens that show the whole product group will differ from the case study.

Problem: SOP screen does not show all 12 period columns

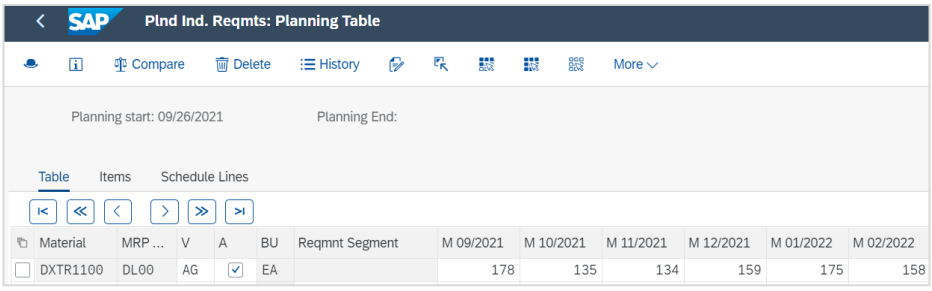
Symptom Less than 12 periods are available in the SOP planning screen.

Reason The relative size of your SAP window is too small.

Solution Use the steps below to enter the values

Error Message

While creating the SOP less than 12 periods are displayed. Therefore, you cannot enter *Target days' supply* for all necessary periods.



Solution

Use the  icon to navigate through the planning periods.

Alternatively, increase the size of the SAP window and click on  . Choose not to save planning values and then click on 

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Problem: MRP Run Error (With Self-Created Materials)

Symptom The MRP run fails (Error 52 - No BOM found). The error occurs in particular when self-created materials are used.

Reason Since S/4HANA 2020, a production version is required for BOM explosion. However, this cannot be created with the “Manage Product Master Data” app.

Solution

You have two options. 1. In the SAP GUI, you can use transaction code **MM02** to add the production version manually. 2. Alternatively, in the Fiori Launchpad, you can use the app “Schedule mass creation of production version” to create the corresponding background process.

Solution: PP Challenge

Learning Objective Understand and perform a manufacturing process cycle.

Motivation After you have successfully worked through the *Production Planning and Execution* case study you should be able to solve the following challenge on your own.

Scenario In this challenge you should create sales and operations plan (SOP) for the product group (product family) Mountain Bikes. Take into consideration that the materials of the product group have to be assigned to the strategy group. Therefore, enter manually the following sales figures:

Period	Sales (volume)
Current month + 2	150
Current month + 3	175
Current month + 4	200
Current month + 5	85
Current month + 6	90
Current month + 7	115

In addition, you must post the correct goods for material ORMN1### in the storage location in order to be able to produce and settle costs afterwards.

Task Information Since this task is based on the *Production Planning and Execution* case study you can use it as guidance. However, it is recommended that you solve it without any help in order to test your acquired knowledge.

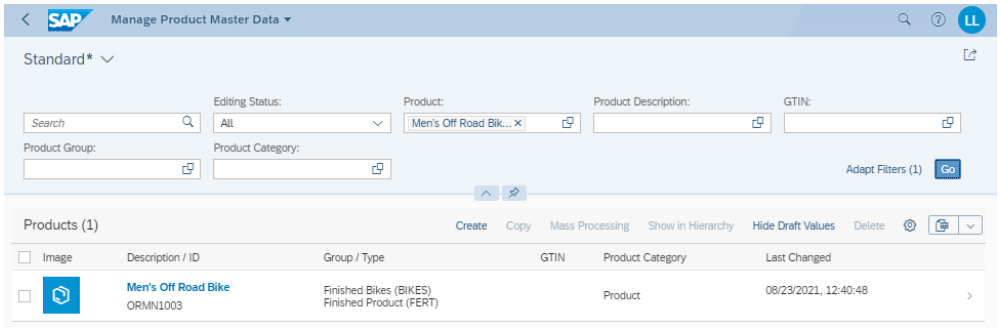
Change Material Master Record

Change your material with the app *Manage Product Master Data* in the Production Planning and Execution area.

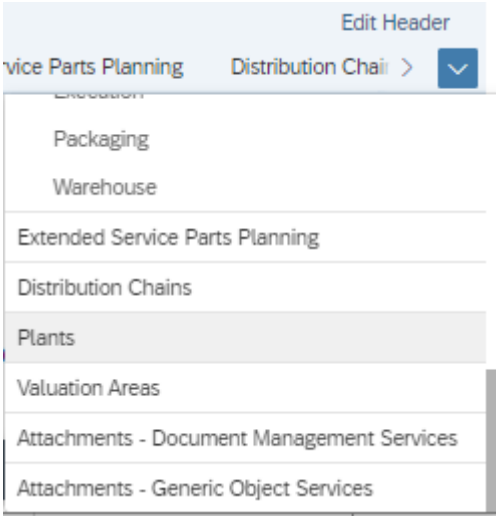
Fiori App

When your material number (**ORMN1###)** is entered in the *Material field* press Go. On the following screen, please select the product **ORMN1###** and click on to see a detailed view and then click on Edit.

ORMN1###

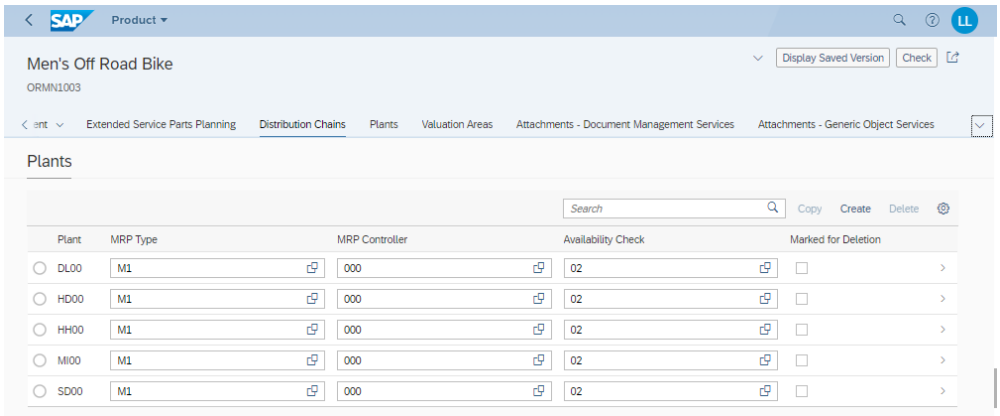


From the drop-down menu, choose *Plants*. The window scrolls automatically to the correct place.



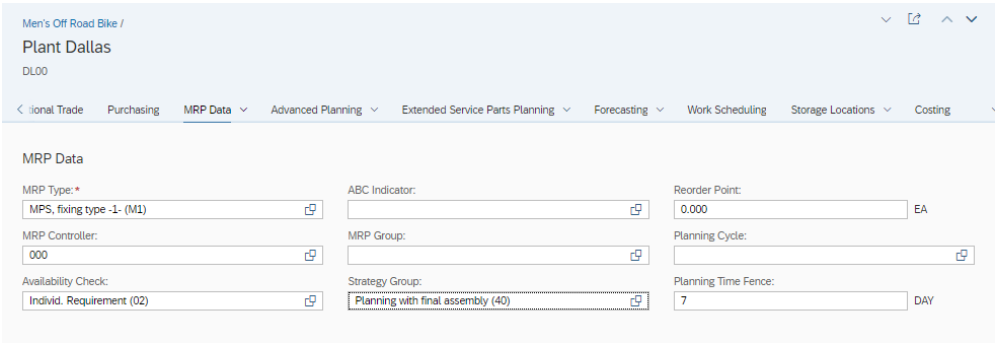
Click on on the row of Plant **DL00**.

DL00



40

Under tab MRP Data, please enter **40** (planning with final assembly) into the *Strategy Group*.

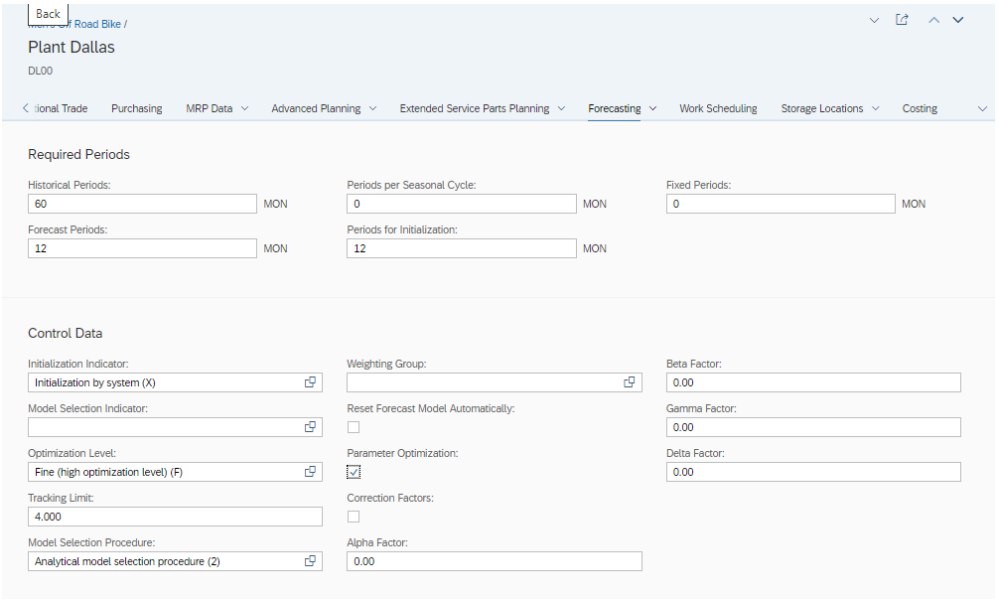


Select the area *Forecasting* → *Required Periods*. If the tab is not visible, you can use the pull-down menu again. Enter **12** in the *Periods for Initialization* field.

ORWN1###
12

Scroll down to the next *Control Data* area. In the Control Data area below, click on the input help symbol for the *Optimization Level* field and select the **F-Fine (High Optimization Level**). Then select the box of **Parameter Optimization**.

F-Fine
Parameter Optimization



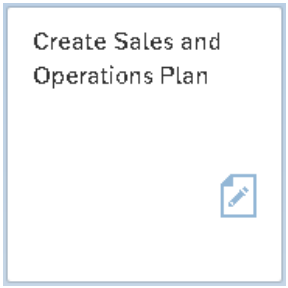
Click on Save to save your entries for the Men's Off Road Bike. Repeat the same procedure for the Women's Off Road Bike. (**ORWM1###**).

ORWM1###

Create Sales and Operation Plan (SOP)

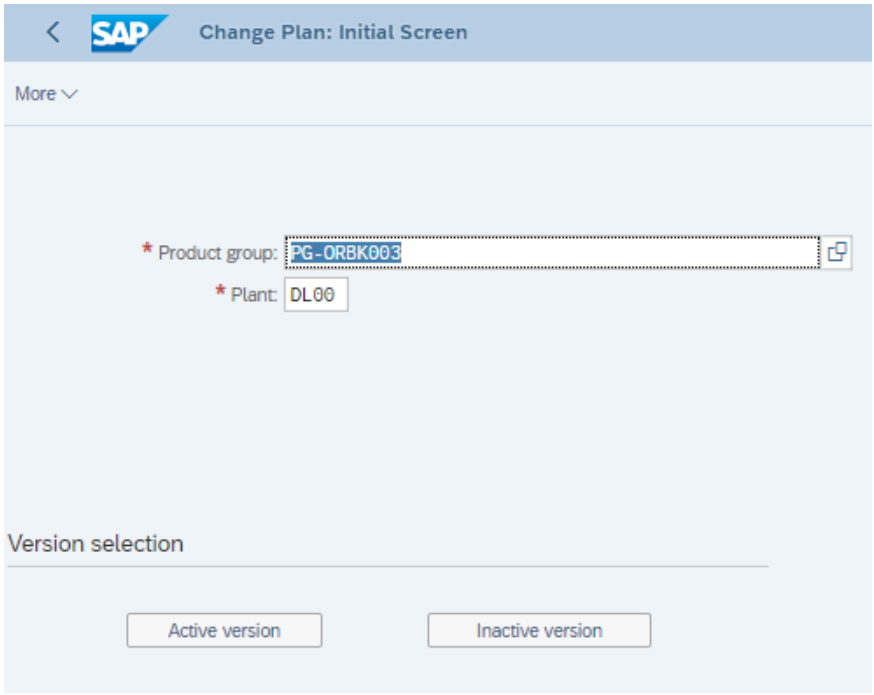
In the app **Create Sales and Operations Plan** create a sales and operation plan for the product group Off Road Bicycles. (**PG-ORBK###**)

Fiori App



Make sure that Product group **PG-ORBK###** and Plant **DL00** are entered. Then select Active version.

PG-ORBK###
DL00



In the *Change Rough-Cut Plan* screen, enter manually the values for the sales, starting in two months from today's date.

Period	Sales (amount)
current month + 2	150
current month + 3	175
current month + 4	200
current month + 5	85
current month + 6	90
current month + 7	115

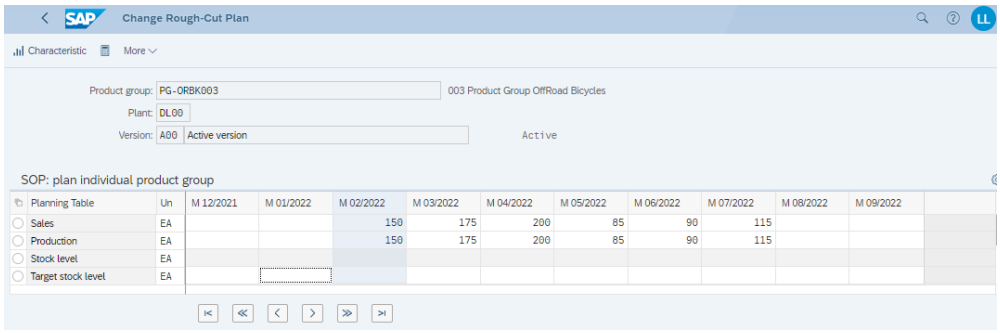
As *Target day's supply* enter **5** for each forecasted period (a total of 6 months).

5

In the system menu, select:

More ► Edit ► Create production plan ► Synchronous to sales

Note the change in the Production and in the Stock level lines. The production plan is created to match the sales forecast.



Now select in the system menu:

More ► Edit ► Create production plan ► Target day's supply

Note the impact on the production plan and stock levels. Production levels are generated to match the sales plus produce enough to put into stock to meet the target days of supply specifications

Save by clicking on Save.

Transfer SOP to Demand Management

Start the app *Transfer SOP to Demand Management.* Follow the instructions as described in the case study, just change the product group to **PG-ORBK###**.

Fiori App

PG-ORBK###

Run MPS with MRP

In the app *Schedule MRP Run – Run MPS with MRP* start the Master Production Scheduling with your material **ORMN1###**. Further follow the steps as described in the case study.

Fiori App

ORMN1###

Convert Planned Order into Production Order

In the app *Monitor Stock / Requirements List* proceed as described in the case study, just change your material to **ORMN1###**.

Fiori App

ORMN1###

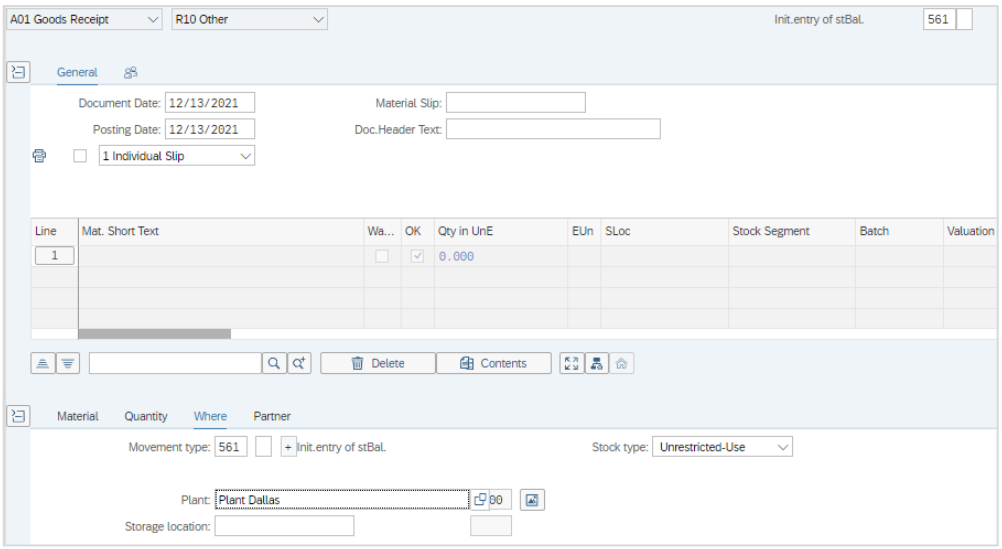
Receive Goods in Inventory

In app **Post Goods Movement** you post the goods received of your required raw materials in stock. Choose in the dropdown menu **Goods Receipt** and **Other**.

Fiori App
Goods Receipt
Other

Enter **today** as *Document and Posting Date*, *Movement Type* **561** (Receipt per initial entry of stock balances into unr. –use). *Plant* **DL00**, and leave Storage Location blank. Then press Enter.

today
561
DL00



In the *Goods Receipt Other – Learn-###*, you can't use the same materials as in the case study, because you now plan for material ORMN1###.

To find out the required materials for ORMN1### you need to take a look at the BOM via the app *Maintain Bill of Material*. Transfer the required materials to the *Enter Goods Receipts: New item* screen. For the Off Road Aluminum Wheel Assembly (ORWA1###) enter **SF00** (Semi-Fin. Goods) and for all the other materials **RM00** (Raw-Materials) as Storage Location. Enter **500** as *Quantity* for each material.

Fiori App

SF00
RM00
500

Save your goods receipt and record the material document number. Then, click on the SAP icon to return to the SAP Fiori Launchpad screen.

Issue Goods to Production Order

In the app *Post Goods Movement* advance as described in the case study.

Fiori App

Confirm Production Completion

In the app *Enter Production order Confirmation* confirm the completion of your production, therefore advance as described in the case study.

Fiori App

Receive Goods from Production Order

In the app *Post Goods Movement* advance as described in the case study as well.

Fiori App

Settle Costs of Production Order

In the app *Actual Settlement* you can settle the costs of the production order as described in the case study.

Fiori App