

Production Planning and Execution (PP)

This case study explains an integrated production planning and execution process in detail and thus fosters a thorough understanding of each process step and underlying SAP functionality.

Product

S/4HANA 1809
Global Bike

GUI 7.50

Level

Undergraduate
Graduate
Beginner

Focus

Production Planning and
Execution

Authors

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Version

3.3

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MOTIVATION

The data entry requirements in the production planning exercises (PP 1 through PP 6) were minimized because much of the data already existed in the SAP system. This stored data, known as master data, simplifies the processing of business transactions. Examples for this were material master data, bills of materials, and routings.

In this case study, we will create consumption values for a finished product to plan and process a complete manufacturing cycle.

PREREQUISITES

Before you use this case study, you should be familiar with navigation in the SAP system.

In order to successfully work through this case study, it is not necessary to have finished the PP exercises (PP 1 through PP 6). However, it is recommended.

NOTES

This case study uses the Global Bike data set, which has exclusively been created for SAP UA global curricula.

Process Overview

Learning Objective Understand and perform a manufacturing process cycle.

Time 140 min

Scenario In order to experience a complete manufacturing process you will take on different roles within the Global Bike Group, e.g. production supervisor, shop floor worker and plant manager. Overall, you will be working in the Materials Management (MM) and the Production Planning and Execution (PP) departments.

Employees involved

- Jun Lee (Production Supervisor)
- Hiro Abe (Plant Manager Dallas)
- Lars Iseler (Production Order Worker)
- Susanne Castro (Receiving Clerk)
- Sanjay Datar (Warehouse Employee)
- Michael Brauer (Shop Floor Worker 4)
- Jamie Shamblin (Cost Accountant)

Before you can start forecasting demand for your touring bike product group, changes in the material master record of the bikes needs to be maintained.

Afterwards you will create a 12-month sales and operations plan (SOP) for your product group, receive the production relevant goods from the warehouse storage location and issue them to the production order.

To conclude the process, the production is confirmed as complete, the finished goods are received into the warehouse and costs assigned to the production order are analyzed.

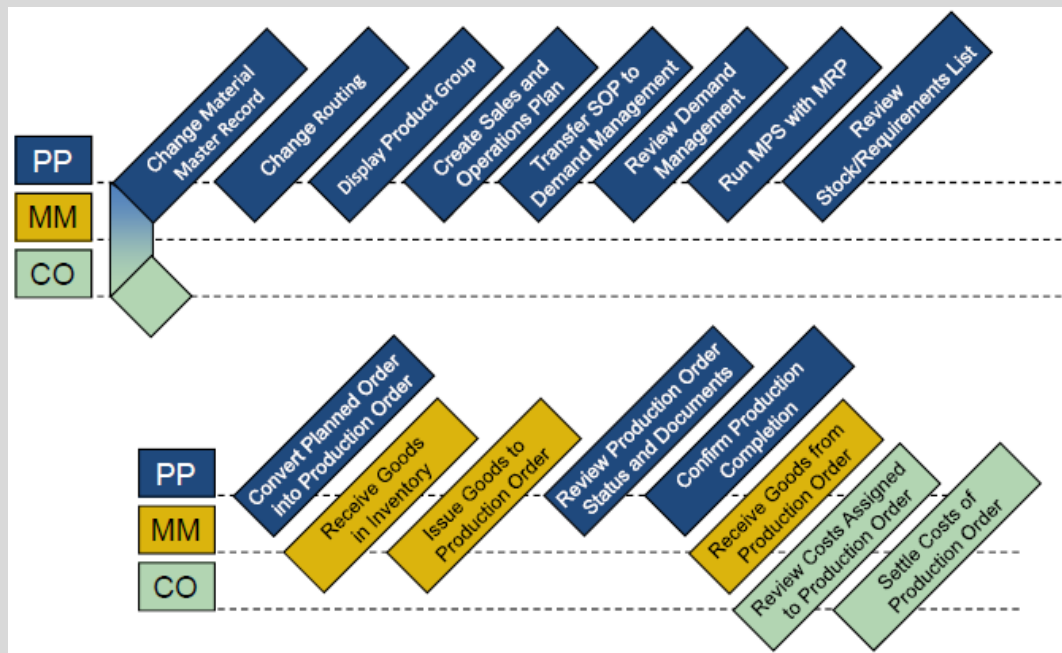


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Step 1: Change Material Master Record

Task Prepare a material master record for Demand Planning. **Time** 20 min


Short Description In order to plan Global Bike’s deluxe touring bikes (black, silver and red) prepare their material master records by changing the MRP 3 and Forecast view.

Name (Position) Jun Lee (Production Supervisor)

To change a material’s view, follow the menu path:

Logistics ▶ Production ▶ Master Data ▶ Material Master ▶ Material ▶ Change ▶ Immediately Menu path


In the Material field, find and select your red Deluxe Touring bike first.

If you do not remember its material number, position your cursor in the Material field and click on the search icon  or press **F4**. Make sure you are on the *Material by Material Type* tab. Select Material Type **Finished Product** (FERT) and enter ***###** in the Material field. Remember to replace **###** by your three-digit number given by your instructor, e.g. ***005** if your number is 005. Then, press Enter and select the red Deluxe Touring bike with a double click.

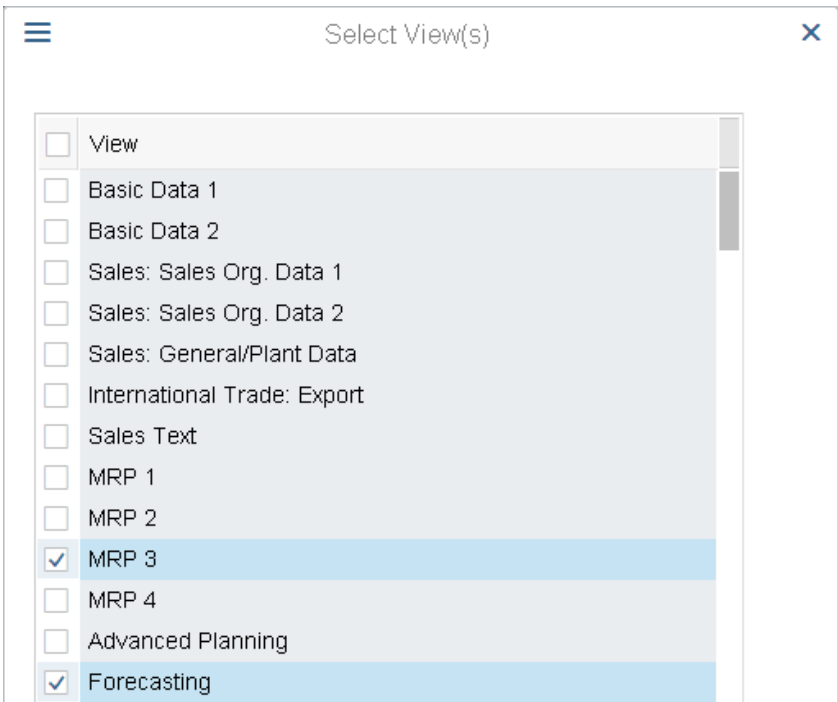
F4
Finished Product
*###

When your material number (**DXTR3###**) is entered in the Material field, click on **Continue** or press Enter.

DXTR3###

On the following pop up, select **MRP 3** and **Forecasting**. Then, press Enter or click on .

MRP3
Forecast



Select View(s)

<input type="checkbox"/>	View
<input type="checkbox"/>	Basic Data 1
<input type="checkbox"/>	Basic Data 2
<input type="checkbox"/>	Sales: Sales Org. Data 1
<input type="checkbox"/>	Sales: Sales Org. Data 2
<input type="checkbox"/>	Sales: General/Plant Data
<input type="checkbox"/>	International Trade: Export
<input type="checkbox"/>	Sales Text
<input type="checkbox"/>	MRP 1
<input type="checkbox"/>	MRP 2
<input checked="" type="checkbox"/>	MRP 3
<input type="checkbox"/>	MRP 4
<input type="checkbox"/>	Advanced Planning
<input checked="" type="checkbox"/>	Forecasting

Enter in the following pop up as Plant **DL00** (Dallas) and as Stor. Location **FG00** (Finished Goods). Then click on Enter or on 

DL00
FG00


Organizational Levels


Organizational levels


Plant: DL00

Stor. Loc.: FG00

☐ Org. levels/profiles only on request

 Select View(s)

 Default Setting






In the *MRP3* tab, enter Strategy group **40** (Planning with final assembly), Consumption mode **1** (Backward consumption only) and Bwd consumption per. **30**. Press Enter to continue to the *Forecasting* tab.

40
1
30

MRP 2MRP 3MRP 4Advanced PlanningForecastingWork schedulingPlant data / stor. 1

Material: DXTR3001





* Descr.: Deluxe Touring Bike (red)

Plant: DL00Plant Dallas

Forecast Requirements

Period Indicator: M

Fiscal Year Variant:

Splitting indicator:

Planning

Strategy Group: 40

Consumption mode: 1

Fwd consumption per.:

Planning material:

Plng conv. factor:

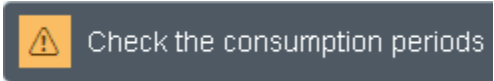
Bwd consumption per.: 30

Mixed MRP:

Planning plant:

Planning matl BUnit:

If the following warning message shows up, press Enter again.



On the *Forecasting* tab, select Initialization pds **12**, uncheck **Reset automatically**, check **Param.optimization**, select Optimization level **F** (Fine), Alpha factor **0.20**, Beta factor **0.10**, Gamma factor **0.30**, and Delta factor **0.30**. Compare your entries with the screen capture shown below.

12
Reset automatically
Param.optimization
F
0.20
0.10
0.30
0.30

Advanced Planning

Forecasting

Work scheduling

Plant data / stor. 1

Plant data / stor. 2

Warehouse

Material: DXTR3014

* Descr.: Deluxe Touring Bike (red)

Plant: DL00

Plant Dallas

General data

* Base Unit of Measure: EA

Forecast model: X

Period Indicator: M

Last forecast:

Fiscal Year Variant:

RefMatl: consumption:

RefPlant: consumption:

Date to:

Multiplier:

Number of periods required

Hist. periods: 60

Forecast periods: 12

Periods per season: 12

Initialization pds: 12

Fixed periods:

Control data

Initialization: X

Tracking limit: 4.000

☐ Reset automatically

Model selection:

Selection procedure: 2

☒ Param. optimization

Optimization level: F

Weighting group:

☐ Correction factors

Alpha factor: 0.20

Beta factor: 0.10

Gamma factor: 0.30

Delta factor: 0.30

Execute forecast

Forecast values

Consumption vals

Historic consumption values already have been entered into the Global Bike system. You can view them on the *Forecasting* tab, select

[Consumption vals](#). If you do not see the Total

consumption column, press on [Total consumption](#). Within the table you will see the Corrected Total Consumption for the periods 04.2014 to 03.2018. These values form the base for later forecasts within this case study.

Please note that within a productive system these values would have been updated based on the goods moved out of the warehouse.

Click on [Main Data](#) to return to the overview.

Click on [Save](#) to save your entries for the red bike.

Repeat the same procedure for the silver and the black deluxe touring bike material master. Start with the silver bike (**DXTR2###**), then modify the black bike (**DXTR1###**).

DXTR2###
DXTR1###

Click on [Exit](#) to return to the SAP Easy Access screen.

Step 2: Change Routing

Task Change a routing for a finished good.

Time 15 min

Short Description Change the routing for your red Deluxe Touring bike.

Name (Position) Jun Lee (Production Supervisor)

After the operational steps are defined, the components that make up the bikes must be allocated to the individual operations. This is a progressive process where each operation builds off the materials that were used in production during a previous operations.

Component allocation

To change a routing, follow the menu path:

Logistics ▶ Production ▶ Master Data ▶ Routings ▶ Routings ▶ Standard Routings ▶ Change

Menu path

Enter the material number for your red Deluxe Touring bike (**DXTR3###**). In the Plant field, enter Global Bike’s Dallas plant number (**DL00**). Please ensure that the Group field is empty. Then, press Enter or click on [Continue](#).

DXTR3###
DL00

Operation Overview							
<input type="checkbox"/>	Op...	SOp	Work cent...	Plant	Co...	Standard ...	Description
<input type="checkbox"/>	0010		ASSY1000	DL00	ASSY		Material staging
<input type="checkbox"/>	0020		ASSY1000	DL00	ASSY		Attach seat to frame
<input type="checkbox"/>	0030		ASSY1000	DL00	ASSY		Attach handle bar assembly
<input type="checkbox"/>	0040		ASSY1000	DL00	ASSY		Attach derailleur gear assm. to wheel
<input type="checkbox"/>	0050		ASSY1000	DL00	ASSY		Attach front and rear wheels to chain
<input type="checkbox"/>	0060		ASSY1000	DL00	ASSY		Attach brakes
<input type="checkbox"/>	0070		ASSY1000	DL00	ASSY		Attach peddles
<input type="checkbox"/>	0080		INSP1000	DL00	ASSY		Test bike
<input type="checkbox"/>	0090		PACK1000	DL00	ASSY		Disassemble
<input type="checkbox"/>	0100		PACK1000	DL00	ASSY		Pack bike
<input type="checkbox"/>	0110		PACK1000	DL00	ASSY		Move to storage

Note: A routing can be defined using the routing group and group counter. Moreover, the routing contains reference to the material whose production it describes, and, in addition to the standard sequence, can contain parallel or alternative sequences. Alongside the standard values, the routing also contains the time elements that are relevant for scheduling operations. Each operation in the routing may contain its own base quantity, to which these time elements may refer.

Choose [Allocation](#) and select the materials **TRFR3###** as well as **TRSK1###**. Afterwards, choose [New Assignment](#).

TRFR3###
TRSK1###

Item Overview					
<input type="checkbox"/>	...	L...	Path	Ite...	Component
<input type="checkbox"/>		0	0	0010	TRWA1001
<input checked="" type="checkbox"/>		0	0	0020	TRFR3001
<input type="checkbox"/>		0	0	0030	DGAM1001
<input checked="" type="checkbox"/>		0	0	0040	TRSK1001
<input type="checkbox"/>		0	0	0050	TRHB1001
<input type="checkbox"/>		0	0	0060	PEDL1001
<input type="checkbox"/>		0	0	0070	CHAN1001
<input type="checkbox"/>		0	0	0080	BRKT1001
<input type="checkbox"/>		0	0	0090	WDOC1001
<input type="checkbox"/>		0	0	0100	PCKG1001

In the following pop up, click **Oper./act. list**. Choose operation **0020** and press Enter. Back on the Material Component Overview screen, you see that now both components have been assigned to operation 0020.

0020

Item Overview										
<input type="checkbox"/>	...	L...	Path	Ite...	Component	Quantity	Sort String	U...	L...	Activity
<input type="checkbox"/>		0	0	0010	TRWA1001	2		EA	L	
<input type="checkbox"/>		0	0	0020	TRFR3001	1		EA	L	0020
<input type="checkbox"/>		0	0	0030	DGAM1001	1		EA	L	
<input type="checkbox"/>		0	0	0040	TRSK1001	1		EA	L	0020
<input type="checkbox"/>		0	0	0050	TRHB1001	1		EA	L	
<input type="checkbox"/>		0	0	0060	PEDL1001	1		EA	L	
<input type="checkbox"/>		0	0	0070	CHAN1001	1		EA	L	
<input type="checkbox"/>		0	0	0080	BRKT1001	1		EA	L	
<input type="checkbox"/>		0	0	0090	WDOC1001	1		EA	L	
<input type="checkbox"/>		0	0	0100	PCKG1001	1		EA	L	

Repeat the same process for the other components and assign them to operations as shown below.

Component	Operation
TRHB1### (touring handle bar)	0030
TRWA1### (touring aluminum wheel assembly)	0040
DGAM1### (derailleur gear assembly)	0040
CHAN1### (chain)	0050
BRKT1### (brake kit)	0060
PEDL1### (pedal assembly)	0070
WDOC1### (warranty document)	0100
PCKG1### (packaging)	0100

TRHB1###
TRWA1###
DGAM1###
CHAN1###

BRKT1###
PEDL1###
WDOC1###
PCKG1###

Item Overview

<input type="checkbox"/>	...	L...	Path	Ite...	Component	Quantity	Sort String	U...	I...	...	Activity
<input type="checkbox"/>	<input type="checkbox"/>	0	0	0010	TRWA1001	2		EA	L	<input type="checkbox"/>	0040
<input type="checkbox"/>	<input type="checkbox"/>	0	0	0020	TRFR3001	1		EA	L	<input type="checkbox"/>	0020
<input type="checkbox"/>	<input type="checkbox"/>	0	0	0030	DGAM1001	1		EA	L	<input type="checkbox"/>	0040
<input type="checkbox"/>	<input type="checkbox"/>	0	0	0040	TRSK1001	1		EA	L	<input type="checkbox"/>	0020
<input type="checkbox"/>	<input type="checkbox"/>	0	0	0050	TRHB1001	1		EA	L	<input type="checkbox"/>	0030
<input type="checkbox"/>	<input type="checkbox"/>	0	0	0060	PEDL1001	1		EA	L	<input type="checkbox"/>	0070
<input type="checkbox"/>	<input type="checkbox"/>	0	0	0070	CHAN1001	1		EA	L	<input type="checkbox"/>	0050
<input type="checkbox"/>	<input type="checkbox"/>	0	0	0080	BRKT1001	1		EA	L	<input type="checkbox"/>	0060
<input type="checkbox"/>	<input type="checkbox"/>	0	0	0090	WDOC1001	1		EA	L	<input type="checkbox"/>	0100
<input type="checkbox"/>	<input type="checkbox"/>	0	0	0100	PCKG1001	1		EA	L	<input type="checkbox"/>	0100

Save your entries with

Save

.

☒

 Routing was saved with group 500000022 and material DXTR3001

Click on

Exit

 to go back to the SAP Easy Access Menu.

☐

Step 3: Display Product Group

Task Display a product group.

Time 5 min

Short Description Display the product group (product family) for all your Deluxe Touring bikes.

Name (Position) Jun Lee (Production Supervisor)


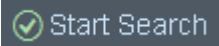
A product group (product family) supports high-level planning. This way, it is not necessary to delve into the minutia of creating planning forecasts for every material in the company.

Product group

To display the deluxe touring bike product group, follow the menu path:

Logistics ▶ Production ▶ SOP ▶ Product Group ▶ Display

Menu path

In the *Display Product Group: Initial Screen*, in the Product group field find and select your group for deluxe touring bikes. In order to do so, press the search icon  (or pressed F4), enter **###*** in the Material description field. Remember to replace **###** with your three-digit number, e.g. enter 009* if your number is 009. Enter **DL00** as Plant. Then, press Enter or click on  to display the search results. You should see ten product groups already defined for your set of material master data (compare with the screen shown below).

###*
DL00

Name of the product group (1)


Find product group via MRP controller

Find product group via description

Find product gro...


MRP Controller:

Material description:



014*


Language Key:



EN

Product group:


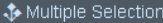

Plant:



DL00

Maximum No. of hits:

500

Double-click on the line for deluxe touring bicycles to select the group.

Name of the product group (1) 5 Entries found

Find product group via MRP controllerFind product group...

MRP Controller:

Material description	Language	Product group	Plant
014 PRODUKTGRUPPE DELUXE TOURING BIKE	EN	PG-DXTR014	DL00
014 PRODUKTGRUPPE FAHRRÄDER	EN	PG-BIKE014	DL00
014 PRODUKTGRUPPE MOUNTAINBIKES	EN	PG-ORBK014	DL00
014 PRODUKTGRUPPE PROFI TOURING BIKE	EN	PG-PRTR014	DL00
014 PRODUKTGRUPPE TOURING BIKES	EN	PG-TRBK014	DL00

5 Entries found

Now that the correct product group (**PG-DXTR###**) is filled in, make sure Plant **DL00** is selected as well. Then, press Enter to display the product group details.

PG-DXTR###
DL00

< SAP

More

Product group: PG-DXTR014

Plant: DL00

On this screen you can see that this product group defines proportions for three different bikes: the black, silver and red deluxe touring bike. For the black bike a share of 40% will be considered and 30% for the silver and the red bikes each.

Product group: PG-DXTR014:

014 Produktgruppe Deluxe Touring Bike

Plant: DL00: Plant Dallas

Base Unit: EA

Member number	Plant	Unit conv.	Aggr fact.	Proportion	U...
DXTR1014	DL00	1	1	40	EA
DXTR2014	DL00	1	1	30	EA
DXTR3014	DL00	1	1	30	EA

Click on **Exit** to return to the SAP Easy Access screen.

Step 4: Create Sales and Operations Plan

Task Create a sales and operations plan for a product group.

Time 20 min

Short Description Create a 12-month sales and operations plan (SOP) for your product group.

Name (Position) Jun Lee (Production Supervisor)

A sales and operations plan (SOP) is a planning tool used to consolidate data for forecasting future sales and production levels as well as the methods needed to meet those requirements. In this task, our SOP will be based on historical consumption values taken from a fixed period. This is in contrast to forecasting within a real-life system which would base the prediction on previous periods and their respective consumption.

Sales and operations plan

To create an SOP, follow the menu path:

Logistics ▶ Production ▶ SOP ▶ Planning ▶ For Product Group ▶ Change

Menu path

Make sure that Product group **PG-DXTR###** and Plant **DL00** are entered.

PG-DXTR###
DL00

Then, select .

Record the version number: _____

In the system menu, select:

More ▶ Edit ▶ Create sales plan ▶ Forecast...

Menu bar

Select **Period intervals**, Forecast from **current period/current year** to **previous period/next year**, Historic Data from **04/2014** to **03/2018**, Forecast execution **Aut. model selection**. Compare your screen with the one below

Period intervals
current period/current
year
previous period/next
year
04/2014
03/2018
Aut. model selection

before clicking on .

Forecast: Model Selection

Periods

☒ Period intervals

Forecast * From: 05/2019 * To: 04/2020

Historical data * From: 04/2014 * To: 03/2018

☐ No. of periods

No. of forecast periods: 0

No. of historical values: 120

Forecast execution

☐ Constant models ☐ Seasonal models

☐ Trend models ☐ Season. Trend Models

☒ Aut. model selection ☐ Historical

Forecast parameters

Profile: SAP


Forecasting Historical... Forecast profile... Version...

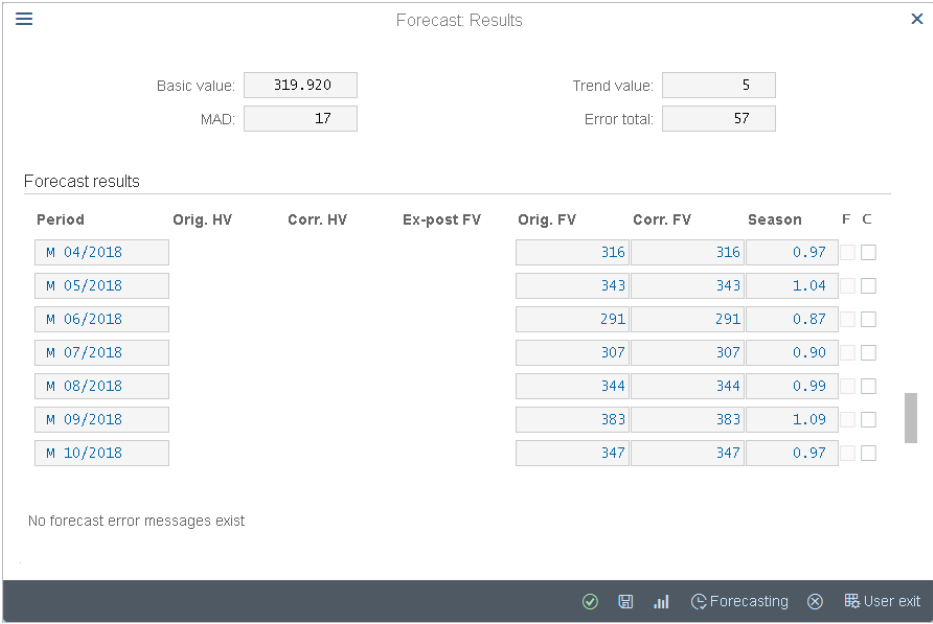
If needed, press Enter and continue through warning messages.

In the next pop up you will see, that the system selected *Trend and season*.

Click on **Forecasting**.

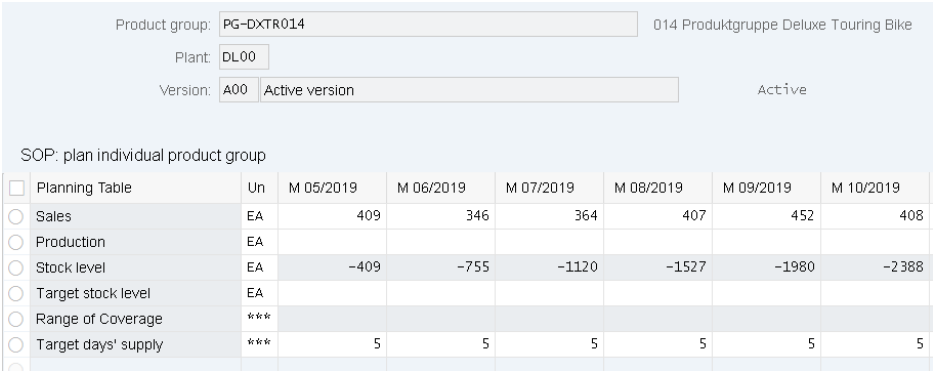
You can see that the system tested and found Seasonal and Trend tendencies in the past consumption data and has applied a Seasonal Trend Model.

Click on  (Copy and Save). The sales forecast is copied into your Sales and Operations Plan.



As Target day's supply enter 5 for each forecasted period.

5



In a production plan, you plan the quantities you need to produce in order to meet your sales plan. The system then calculates stock levels and days' supply for each period on the basis of the sales and production quantities and any target data. There are several different planning strategies available which differ in the production values and the stock levels proposed.

As the SOP is high-level planning, discrete production values are not necessary. The SAP system calculates discrete numbers once the SOP is transferred to the Demand Management.

In the menu bar, select:

More ► Edit ► Create product plan ► Synchronous to sales

Menu bar

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

Product group: PG-DXTR014 014 Produktgruppe Deluxe Touring Bike

Plant: DL00

Version: A00 Active version Active

SOP: plan individual product group

	Un	M 05/2019	M 06/2019	M 07/2019	M 08/2019	M 09/2019	M 10/2019
<input type="checkbox"/> Planning Table	Un						
<input type="radio"/> Sales	EA	409	346	364	407	452	408
<input type="radio"/> Production	EA	409	346	364	407	452	408
<input type="radio"/> Stock level	EA						
<input type="radio"/> Target stock level	EA						
<input type="radio"/> Range of Coverage	***						
<input type="radio"/> Target days' supply	***	5	5	5	5	5	5

In the menu bar, select

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

Menu bar

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.

Review the Planning Table (your numbers may be different).

Product group: PG-DXTR014 014 Produktgruppe Deluxe Touring Bike

Plant: DL00

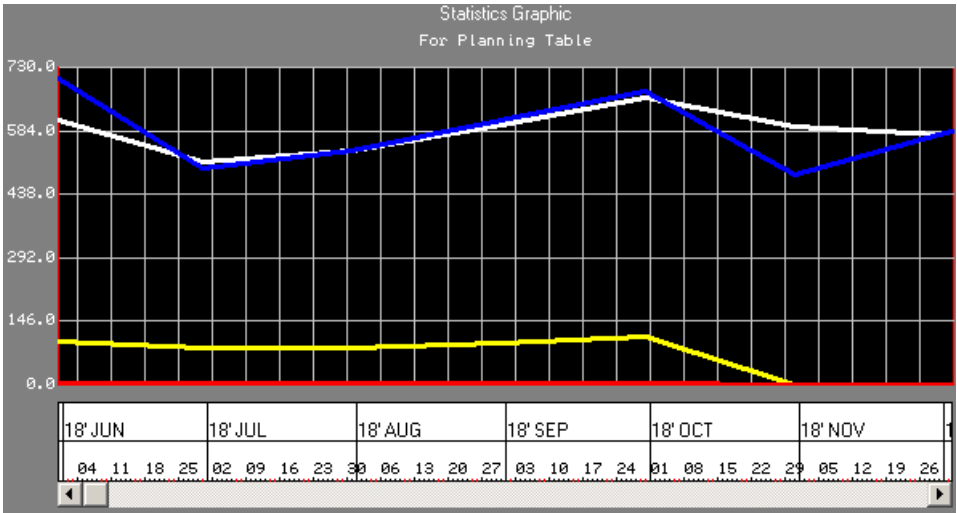
Version: A00 Active version Active

SOP: plan individual product group

	Un	M 05/2019	M 06/2019	M 07/2019	M 08/2019	M 09/2019	M 10/2019
<input type="checkbox"/> Planning Table	Un						
<input type="radio"/> Sales	EA	409	346	364	407	452	408
<input type="radio"/> Production	EA	474	337	365	413	461	398
<input type="radio"/> Stock level	EA	65	57	58	65	75	65
<input type="radio"/> Target stock level	EA						
<input type="radio"/> Range of Coverage	***	5	5	5	5	5	5
<input type="radio"/> Target days' supply	***	5	5	5	5	5	5

Click on **Characteristic** to review a graphic representation of your planning table.

Note: Although the screen displays integer production values, the SAP system calculates with decimal accuracy. You can display the decimal places by highlighting a row and pressing F8 and enter the number of decimal places required. Then (re)create the production plan.



You may click on **Legend** to display a legend for this graphic.

Sales
Production
Stock level
Target stock level
Range of Coverage
Target days' supply

Close the pop ups and save with **Save**.

☒ Plan saved under version number A00

Click on **Exit** to return to the SAP Easy Access screen.



Step 5: Transfer SOP to Demand Management

Task Transfer SOP to Demand Management.

Time 10 min

Short Description Transfer the Sales and Operations Plan to Demand Management.

Name (Position) Jun Lee (Production Supervisor)

Demand Management is the tool used to disaggregate planning data from high-level plans down to the detailed planning level. For this task, planning for the Deluxe Touring Product Group will be broken down into the individual components that belong to this group.

Demand Management

To transfer the SOP to Demand Management, follow the menu path:

Logistics ▶ Production ▶ SOP ▶ Disaggregation ▶ Transfer PG to Demand Management

Menu path

Enter Product group **PG-DXTR###**, Plant **DL00**, and the version saved in the previous task (**A00**).

PG-DXTR###
DL00
A00

Select **Prod.plan for mat. or PG members as proportion of PG** and **Active**. Then, deselect the **Invisible Transfer** indicator to present the disaggregation results on another screen allowing the planner to modify the results before saving them manually to Demand Management.

Prod.plan for mat. or PG
members as prop. of PG
Active
Invisible Transfer

Select **Transfer now** and examine the Planned Independent Requirements generated for DXTR1###.

<

SAP

Transfer now

More

*Product group:

PG-DXTR014

014 Produktgruppe Deluxe Touring Bike

*Plant:

DL00

Plant Dallas

Version:

A00

Transfer strategy and period

☐ Sales plan for material or PG members

☐ Sales plan for mat. or PG members as proportion of PG

☐ Production plan for material or PG members

☒ Prod.plan for mat. or PG members as proportion of PG

From:

05/15/2019

To:

☐ Invisible transfer

Independent requirement specifications

Requirements type:

Version:

☒ Active

Then, click on Save to save.

Table

Items

Schedule Lines

K

⏪

⏴

⏵

⏩

⏶

<input type="checkbox"/>	Material	MRP A...	V	A	BU	Reqmnt Segment	M 05.2018	M 06.2018	M 07.2018	M 08.2018	M 09.2018
<input type="checkbox"/>	DXTR1001	DL00	AG	<input checked="" type="checkbox"/>	EA		282	200	215	243	270

Examine the Planned Independent Requirements generated for **DXTR2###** and save them with Save.

DXTR2###

Table

Items

Schedule Lines

K

⏪

⏴

⏵

⏩

⏶

<input type="checkbox"/>	Material	MRPA...	V	A	BU	Reqmnt Segment	M 05.2018	M 06.2018	M 07.2018	M 08.2018	M 09.2018
<input type="checkbox"/>	DXTR2001	DL00	AG	<input checked="" type="checkbox"/>	EA		212	150	161	182	202

Finally, examine the requirements for **DXTR3###** and save them with Save.

DXTR3###

Table

Items

Schedule Lines

K

⏪

⏴

⏵

⏩

⏶

<input type="checkbox"/>	Material	MRP A...	V	A	BU	Reqmnt Segment	M 05.2018	M 06.2018	M 07.2018	M 08.2018	M 09.2018
<input type="checkbox"/>	DXTR3001	DL00	AG	<input checked="" type="checkbox"/>	EA		212	150	161	182	202

Note DXTR1### makes up 40%, DXTR2### makes up 30% and DXTR3### another 30% of the production plan created in your Sales and Operations Plan. How is this derived?

Click on Exit to return to the SAP Easy Access screen.



Step 6: Review Demand Management

Task Review the requirements for a product group.

Short Description Review the requirements for the product group to ensure that there are production requirements for the individual production items.

Name (Position) Hiro Abe (Plant Manager Dallas)

Time 10 min

To review planned requirements, follow the menu path:

Logistics ▶ Production ▶ Production Planning ▶ Demand Management ▶ Planned Independent Requirements ▶ Display

Menu path

Select the **Product group** indicator, enter Product group **PG-DXTR###**, Plant **DL00**, and select Continue.

Product group
PG-DXTR###
DL00

Planned Independent Requirements for

☐ Material:

☒ Product group:

☐ Requirements Plan:

☐ Ext. Req. Plan:

MRP Area:

Plant:

On the *Table* tab, review the Planned Independent Requirements for the Deluxe Touring bike product group by material.

Product group: PG-DXTR014

014 Produktgruppe Deluxe Touring Bike

Table Items Schedule Lines

K << < > >> K

<input type="checkbox"/>	Material	MRP A...	V	A	BU	Reqmnt Segment	M 05/2019	M 06/2019	M 07/2019	M 08/2019
<input type="checkbox"/>	DXTR1014	DL00	AG	✓	EA		190	135	146	165
<input type="checkbox"/>	DXTR2014	DL00	AG	✓	EA		142	101	110	124
<input type="checkbox"/>	DXTR3014	DL00	AG	✓	EA		142	101	110	124

On the *Schedule Lines* tab, review the requirement dates, planned quantities, values, and total planned quantities.

Table Items <u>Schedule Lines</u>									
Material: <input type="text" value="DXTR1014"/> Deluxe Touring Bike (black)									
Plant: <input type="text" value="DL00"/> Reqmts type: <input type="text" value="VSF"/> Version/active: <input type="text" value="AG"/> / <input checked="" type="checkbox"/> ReqmtsPlan: <input type="text"/>									
Plan Qty: <input type="text" value="2,063"/> <input type="text" value="EA"/> MRP Area: <input type="text" value="DL00"/>									
<input type="checkbox"/>	...	ReqmtDate	Planned qty	Spl.	S	Value / USD	PVer	BOMExpNo	StandardVal.
<input type="checkbox"/>	M	05/2019	190			139,089.50			
<input type="checkbox"/>	M	06/2019	135			98,826.75			
<input type="checkbox"/>	M	07/2019	146			106,879.30			
<input type="checkbox"/>	M	08/2019	165			120,788.25			
<input type="checkbox"/>	M	09/2019	184			134,697.20			
<input type="checkbox"/>	M	10/2019	159			116,395.95			
<input type="checkbox"/>	M	11/2019	158			115,663.90			
<input type="checkbox"/>	M	12/2019	187			136,893.35			
<input type="checkbox"/>	M	01/2020	205			150,070.25			
<input type="checkbox"/>	M	02/2020	183			133,965.15			
<input type="checkbox"/>	M	03/2020	175			128,108.75			
<input type="checkbox"/>	M	04/2020	176			128,840.80			

Select to move to the next material.

Click on to return to the SAP Easy Access screen.



Step 7: Run MPS with MRP

Task Run Master Production Scheduling (MPS).

Time 10 min

Short Description Run Master Production Scheduling (MPS) to generate a series of planned orders that satisfy the requirements from SOP and demand management. Concurrently with MPS, the MRP materials will be processed leading to the generation of planned orders for dependent requirements that have been created by the BOM explosion process.

Name (Position) Jun Lee (Production Supervisor)

To run Master Production Scheduling, follow the menu path:

Logistics ▶ Production ▶ Production Planning ▶ MPS ▶ MPS ▶ Single-Item, Multi-Level

Menu path

Enter your material **DXTR3###**, Plant **DL00**, Processing key **NETCH**, select **2** (Purchase requisition in opening period), **3** (Schedule lines), **1** (MRP list), **1** (Adapt planning data (normal mode)), and **1** (Determination of Basic Dates for Planned). Then, select **Display material list.**,
Press Enter.

DXTR3###, DL00
NETCH
2
3
1
1
1
Display material list

Note: In MRP, a net requirements calculation is executed in the planning run to determine whether a material shortage exists for a certain material. In addition, stock and fixed receipts that currently exist (for example, purchase orders, production orders, fixed purchase requisitions and planned orders) are compared with the safety stock and requirements. The result of this comparison is the quantity available for planning.

If the quantity available for planning is lower than zero, a material shortage exists. MRP reacts to material shortages by creating new procurement proposals (purchase requisitions and planned orders). The suggested procurement quantity results from the lot-sizing procedure that is set in the material master.

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Page 21

< **SAP** Single-Item, Multi-Level

Mehr ▾

*Material:

MRP Area:

Plant:

Scope of Planning

☐ Product group

MRP Control Parameters

*Processing Key:	<input type="text" value="NETCH"/>	Net Change in Total Horizon
*Create Purchase Req.:	<input type="text" value="2"/>	Purchase requisitions in opening period
*SA Deliv. Sched. Lines:	<input type="text" value="3"/>	Schedule lines
*Create MRP List:	<input type="text" value="1"/>	MRP list
*Planning mode:	<input type="text" value="1"/>	Adapt planning data (normal mode)
*Scheduling:	<input type="text" value="1"/>	Determination of Basic Dates for Planned

Process Control Parameters

☐ Also Plan Unchanged Components

☐ Display Results Prior to Saving

☒ Display material list

☐ Simulation mode

A warning message will appear asking you to check input parameters. Press Enter to confirm and bypass the warning message.

Review the planning details from the List Display.

Statistics	
Materials planned	11
Materials with New Exceptions	11
Materials with Termination MRP List	

Parameters	
MRP Area	DL00
Plnt	DL00
Processing Key	NETCH
Create Purchase Requisition	2
SA Schedule Line	3
Create MRP List	1
Planning Mode	1
Scheduling	1

Database Statistics	
Planned orders created	132
Dependent requirements created	120

Runtime Statistics	
Start of Planning Run	10:03:42
End of Planning Run	10:03:46
Runtime	00:00:04
CPU Time Read-In	00:00:01
.. Read In Preread Mat. Package	00:00:01

Click on [Exit](#) to return to the SAP Easy Access screen.



Step 8: Review Stock/Requirements List

Task Review the Stock/Requirements List.

Time 10 min

Short Description Review the Stock/Requirements List for your deluxe touring bike.

Name (Position) Lars Iseler (Production Order Worker)

The Stock/Requirements List is a list which dynamically changes whenever a transaction occurs using the given material. Display and review the Stock/Requirements List for all materials of the red deluxe touring bike on hand and the demand that exists against these products. The report shows that there is no stock and therefore nothing is available for use at this time.

Stock/Requirements List

To review the Stock/Requirements List, follow the menu path:

Logistics ▶ Production ▶ Production Planning ▶ MPS ▶ Evaluations ▶ Stock/Reqmts List

Menu path

On the *Individual access* tab, enter Material **DXTR3###** and Plant **DL00** and click on Continue.

DXTR3###
DL00

<

SAP

Stock/Requirements List: Initial Screen

▼

Mehr ▼

Individual access

Collective access

*Material:

DXTR3001

Description:

Deluxe Touring Bike (red)

MRP Area:

Plant:















DL00

Plant Dallas

With filter:

☐

Choose Σ (Switch to Period Totals). This will allow you to see the planned independent requirements, planned receipts, and ATP quantities based on time - days, weeks, or months.

<div> <div>Days</div> <div>Weeks</div> <div>Months</div> </div>							
<div> <div>Date</div> <div>GR</div> <div>ST On</div> </div>		Page 1 / 1					
...	Period/Segment	Plnd Ind req...	Requirement	Receipts	Avail. Quantity	ATP quantity	Actual ...
	Stock				0	0	15.0-
	05/01/19	142-	0	0	142-	0	22.0-
	05/22/19 End of Planni						
	05/22/19	0	0	142	0	142	0.0
	06/01/19	101-	0	101	0	101	0.0
	07/01/19	110-	0	110	0	110	0.0
	08/01/19	124-	0	124	0	124	0.0
	09/01/19	138-	0	138	0	138	0.0
	10/01/19	119-	0	119	0	119	0.0
	11/01/19	119-	0	119	0	119	0.0
	12/01/19	140-	0	140	0	140	0.0
	01/01/20	154-	0	154	0	154	0.0
	02/01/20	137-	0	137	0	137	0.0
	03/01/20	131-	0	131	0	131	0.0
	04/01/20	132-	0	132	0	132	0.0



Material: DSTR3014

Description: Deluxe Touring Bike (red)

MRP Area: DL00 **DC Dallas**

Plant: DL00 **MRP type:** M1 **Material type:** FERT **Unit:** EA

Σ 🔍 ✎ 🏠 ⚙️ ⌵ ⬆ 📅 Date 🗒 GR 📅 ST On 🔄 On Vendor Cust.

...	Date	MRP el...	MRP element data	Reschedulin...	...	Receipt/Reqmt	Available Qty	Pro...
🔍	05/15/2019	Stock					0	
🔍	05/01/2019	IndReq	VSF			142-	142-	
🔍	05/22/2019	----->	End of Planning Time Fe...					
🔍	05/22/2019	PldOrd	0000000001/STCK	05/01/2019	30	142	0	0000
🔍	06/01/2019	PldOrd	0000000002/STCK			101	101	0000
🔍	06/01/2019	IndReq	VSF			101-	0	
🔍	07/01/2019	PldOrd	0000000003/STCK			110	110	0000
🔍	07/01/2019	IndReq	VSF			110-	0	
🔍	08/01/2019	PldOrd	0000000004/STCK			124	124	0000
🔍	08/01/2019	IndReq	VSF			124-	0	
🔍	09/01/2019	PldOrd	0000000005/STCK			138	138	0000
🔍	09/01/2019	IndReq	VSF			138-	0	

Additional Data for MRP Element

Plnd Order: 0000000001 **Make-to-stock**
 Order End Date: 05/22/2019
 GR pr.time: 0

Order Qty.: 142 **EA**
 Order Start: 05/18/2019
 Proc. type: **E**

Scrap: 0
 Opening Date: 05/17/2019
 Order Type: **LA**

Exception: 30 = Plan process according to schedule (05/01/19)

You can see that this planned order is to fulfill our Safety Stock and the first planned independent requirement that was created when we disaggregated our SOP.

Pegged Requirements

Date	Material	Material description	Material Memo	MRP Area	EI	Data	Recpt/reqd	Quantity	Unit
05/01/2019	DXTR3014	Deluxe Touring Bike (red)		DL00	PP	VSF	142	142	EA

Click on [Exit](#) twice to return to the SAP Easy Access screen.

Pegged Requirements									
Date	Material	Material description	Material Memo	MRP Area	El	Data	Recpt/reqd	Quantity	Unit
05/01/2019	DXTR3014	Deluxe Touring Bike (red)		DL00	PP	VSF	142	142	EA

Click on **Exit** twice to return to the SAP Easy Access screen.

Downloaded from <http://ajph.org/> on November 10, 2015

Step 9: Convert Planned Order into Production Order

Task Convert a planned order into a production order.

Short Description Convert a planned order generated in the MPS/MRP run to a production order. The stock requirements list displays the suggested planned orders from the MPS run.

Name (Position) Lars Iseler (Production Order Worker)

Time 10 min

To convert planned orders into production orders, follow the menu path:

Logistics ▶ Production ▶ MRP ▶ Evaluations ▶ Stock/ Requirements List

Menu path

Enter Material **DXTR3###**, Plant **DL00**, and click on **Continue** or press Enter. Then, double-click on the second planned order.

DXTR3###
DL00

...	Date	MRP el...	MRP element data	Reschedulin...	...	Receipt/Reqmt
	05/15/2019	Stock				
	05/01/2019	IndReq	VSF			142-
	05/22/2019	----->	End of Planning Time Fe...			
	05/22/2019	PldOrd	0000000001/STCK	05/01/2019	30	142
	06/01/2019	PldOrd	0000000002/STCK			101
	06/01/2019	IndReq	VSF			101-
	07/01/2019	PldOrd	0000000003/STCK			110

In the Additional Data screen, click on **-> Prod.Ord.** (Convert planned order to production order).

Order: %000000000001

Material: DXTR3014

Status: REL MACM SETC

Deluxe Touring Bike (red)

General

Assignment

Goods Receipt

Control

Dates/Qties

Master Data

Long Text

Quantities

* Total Qty: 101

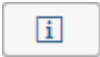
Delivered: 0

Scrap Portion:



Short/Exc. Rcpt: 0

Note: At this point, please note down the total quantity in your production order. You will need it later when confirming your order.

Total quantity

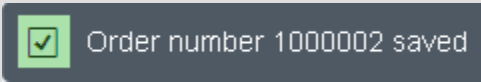
Determine the status of your order by clicking on . What does this mean? _____

Note: When you converted the planned order to a production order scheduling takes place, an availability check was automatically carried out and a reservation was placed on the materials specified within the bill of materials. The order was also automatically released when the production order was created.


Click on  to go back to the *Production order Create: Header* screen and  your production order.

Note: When you save the production order the system will automatically calculate the planned costs for the production order and the production order is given a number.


Production order
number



Make sure you record your production order number.

Select  to refresh the Stock/Requirements List. In the MRP Element column the planned order *PldOrd* that you selected should now have changed into a production order *PrdOrd*.

...	Date	MRP el...	MRP element data	Reschedulin...	...	Receipt/Reqmt	Available Qty
	05/15/2019	Stock					0
	05/01/2019	IndReq	VSF			142-	142-
	05/22/2019	----->	End of Planning Time Fe...				
	05/22/2019	PldOrd	0000000001/STCK	05/01/2019	30	142	0
	06/01/2019	PrdOrd	000001000000/PP01/Re	05/01/2019	10	101	101
	06/01/2019	IndReq	VSF			101-	0
	07/01/2019	PldOrd	0000000003/STCK			110	110

Click on  to return to the SAP Easy Access screen.



Step 10: Receive Goods in Inventory

Task Receive goods in the Dallas plant.

Time 10 min

Short Description Receive enough goods in the Dallas storage locations to start the production process.

Name (Position) Susanne Castro (Receiving Clerk)

Usually, at this point the purchasing department in Dallas would take over and procure enough raw materials from vendors to fill the inventory so that the production process can be initiated. In this case study, we are bypassing this procurement process (this process is explained in the MM unit in detail). Because the inventory for all DXTR3### components is empty, we will assume that we find 500 pieces each in the storage location.

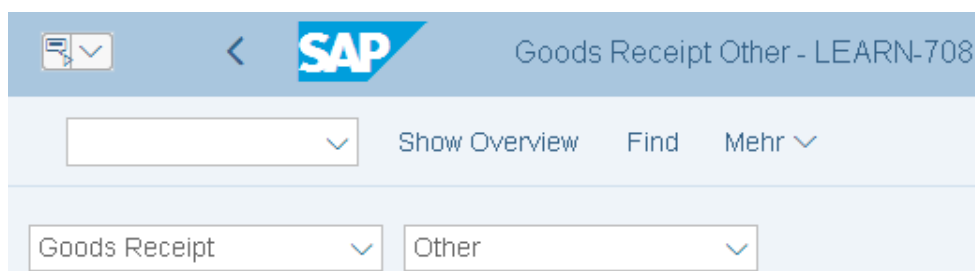
Goods receipt

To receive goods in the inventory, follow the menu path:

Logistics ► Materials Management ► Inventory Management ► Goods Movements ► Goods Movement

Menu path


Make sure that *Goods Receipt* and *Other* is selected in the drop-down menu.



Enter Movement Type **561** (Receipt per initial entry of stock balances into unr.-use), **today** as Document and Posting Date. Then, press Enter. If necessary, confirm the information pop-up.

today
561

In the *Goods Receipt Other* screen, enter the following data. Each of these ten materials are components that you need in your production order later on. Note that all materials are stored in the raw materials storage location in DL00 (Dallas) except the touring wheel assembly (first component in the list) which is a semi-finished good.

If the material field is shown grayed click on  to minimize the *Detail data*.

Material	Quantity	SLoc
TRWA1### (Touring Aluminum Wheel Assembly)	500	SF00
TRFR3### (Touring Frame-Red)	500	RM00
DGAM1### (Derailleur Gear Assembly)	500	RM00
TRSK1### (Touring Seat Kit)	500	RM00
TRHB1### (Touring Handle Bar)	500	RM00
PEDL1### (Pedal Assembly)	500	RM00
CHAN1### (Chain)	500	RM00
BRKT1### (Brake Kit)	500	RM00
WDOC1### (Warranty Document)	500	RM00
PCKG1### (Packaging)	500	RM00

TRWA1###
TRFR3###
DGAM1###
TRSK1###

TRHB1###
PEDL1###
CHAN1###
BRKT1###
WDOC1###
PCKG1###

Enter DL00 as Plnt in all of the ten lines.

DL00

Press Enter.

Then compare your screen with the screenshot shown below. Remember that your material numbers are different.

A01 Goods Receipt

R10 Other

Init.ent

General

Document Date: 05/15/2019

Material Slip:

Posting Date: 05/15/2019

Doc. Header Text:

1 Individual Slip

Line	Mat. Short Text	OK	Qty in UnE	E...	SLoc	St...	M...	Stock Ty...	Plnt
1	Touring Aluminum Wheel Assembly	<input checked="" type="checkbox"/>	500	EA	Semi-Fin. Goods		561 +	Unre... Plant Dallas	
2	Touring Frame-Red	<input checked="" type="checkbox"/>	500	EA	Raw Materials		561 +	Unre... Plant Dallas	
3	Derailleur Gear Assembly	<input checked="" type="checkbox"/>	500	EA	Raw Materials		561 +	Unre... Plant Dallas	
4	Touring Seat Kit	<input checked="" type="checkbox"/>	500	EA	Raw Materials		561 +	Unre... Plant Dallas	
5	Touring Handle Bar	<input checked="" type="checkbox"/>	500	EA	Raw Materials		561 +	Unre... Plant Dallas	
6	Pedal Assembly	<input checked="" type="checkbox"/>	500	EA	Raw Materials		561 +	Unre... Plant Dallas	
7	Chain	<input checked="" type="checkbox"/>	500	EA	Raw Materials		561 +	Unre... Plant Dallas	
8	Brake Kit	<input checked="" type="checkbox"/>	500	EA	Raw Materials		561 +	Unre... Plant Dallas	
9	Warranty Document	<input checked="" type="checkbox"/>	500	EA	Raw Materials		561 +	Unre... Plant Dallas	
10	Packaging	<input checked="" type="checkbox"/>	500	EA	Raw Materials		561 +	Unre... Plant Dallas	

Save your goods receipt with

Post

 and record the material document number.

Material document number



Then, click on

Exit

 to return to the SAP Easy Access screen.

Step 11: Issue Goods to Production Order

Task Issue goods to a production order. **Time** 10 min

Short Description Now that all necessary components are on stock issue them to your production order in precise quantity.

Name (Position) Sanjay Datar (Warehouse Employee)

The goods issue process is fully defined in the production order, BOM, and routing. The quantities and the materials are reserved for this specific production order, they will be withdrawn with reference to the order number and will be used to assign actual costs to the production order for managerial accounting purposes.

Goods issue

To issue goods to a production order, follow the menu path:

Logistics ▶ Production ▶ Shop Floor Control ▶ Goods Movements ▶ Goods Issue / Goods Receipt

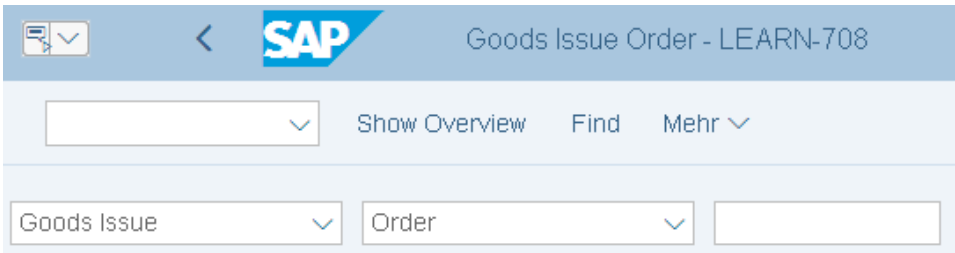
Menu path

Make sure that *Goods Issue* and *Order* is selected.

Note: Goods issues posting for the required components is another milestone in the production order process. The following functions are performed when a GI for the components of the production order is posted:

- Storage-location-specific update of the stock and consumption fields
- Reduction of the reservation (for planned withdrawal)
- Update of costs for unplanned withdrawals
- Determination of actual costs (valuation) and order update
- Consumption update
- Generation of material and accounting documents (FI and CO documents)
- Creation of material document.
- Creation of accounting document
- Creation of controlling document
- Printing of GI document

The goods issues posting is controlled through a movement type (261), to which each posting refers. This can take place manually or automatically.





Enter Movement Type **261** (Consumption for order from warehouse), **today** as Document Date and Posting Date.

today
today
261

Enter your **production order number** from two tasks back. Then choose Enter.

Production order number

If you have not written down your production order number you can find it in the system. In order to do so, in the Order field press **F4** or click on the search icon . In the *Order Number (1)* screen, use the icon on the far right  to display a list of all tabs. Please select the *Production orders using the info system* tab. On this tab, enter your material **DXTR3###** in the Material field and click on **Execute**. Double-click on the result row to adopt your production order number into the initial screen.

F4

DXTR3###

Once you have found and entered your production order number, click on Enter to continue.




An itemized list will appear. It lists all the materials and their respective quantities that need to be issued to your order. You need to tell the system what Storage Location the materials should be withdrawn from. For the Touring Aluminum Wheel Assembly (TRWA1###), enter **SF00** (Semi-finished goods) and for all other materials **RM00** (Raw materials) in the SLoc fields. Furthermore, flag each item with **OK**. Before pressing Enter compare your screen with the one shown below. Notice that your quantity could be different.

SF00
RM00


OK

A07 Goods Issue

R08 Order



General




Document Date: 05/15/2019

Material Slip:

Posting Date: 05/15/2019

Doc. Header Text:

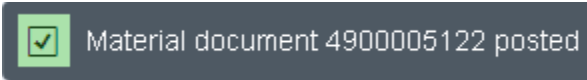



☐ 1 Individual Slip

Line	Mat. Short Text	OK	Qty in UnE	E...	SLoc
1	Touring Aluminum Wheel Assembly	<input checked="" type="checkbox"/>	202	EA	SF00
2	Touring Frame-Red	<input checked="" type="checkbox"/>	101	EA	RM00
3	Derailleur Gear Assembly	<input checked="" type="checkbox"/>	101	EA	RM00
4	Touring Seat Kit	<input checked="" type="checkbox"/>	101	EA	RM00
5	Touring Handle Bar	<input checked="" type="checkbox"/>	101	EA	RM00
6	Pedal Assembly	<input checked="" type="checkbox"/>	101	EA	RM00
7	Chain	<input checked="" type="checkbox"/>	101	EA	RM00
8	Brake Kit	<input checked="" type="checkbox"/>	101	EA	RM00
9	Warranty Document	<input checked="" type="checkbox"/>	101	EA	RM00
10	Packaging	<input checked="" type="checkbox"/>	101	EA	RM00

Click on **Post** and record the material document number _____.

Material document number



Click on the exit icon  to return to the SAP Easy Access screen.



Step 12: Review Production Order Status

Task Review the production order status.

Short Description Review the current production order with respect to the status of the order.

Name (Position) Michael Brauer (Shop Floor Worker 4)

Time 10 min




To display the production order, follow the menu path:

Logistics ▶ Production ▶ Shop Floor Control ▶ Order ▶ Display

Menu path



Enter the number of your **production order number**.

Production order number

If you have not written down your production order number you can find it in the system. In order to do so, in the Order field press **F4** or click on the search icon . In the *Order Number (1)* screen, use the icon on the far right  to display a list of all tabs. Please select the *Production orders using the info system* tab. On this tab, enter your material **DXTR3###** in the Material field and click on . Double-click on the result row to adopt your production order number into the initial screen.

F4

DXTR3###

When your production order number is entered, click on . Note that the order status has changed and review it by clicking on  again.

Order: 1000000

Material: DXTR3014


Status

Business processes

Syst. Status

X	Stat...	Text
<input checked="" type="checkbox"/>	REL	Released
<input checked="" type="checkbox"/>	PRC	Pre-costed
<input checked="" type="checkbox"/>	GMPS	Goods movement posted
<input checked="" type="checkbox"/>	MACM	Material committed
<input checked="" type="checkbox"/>	SETC	Settlement rule created

You did a goods issue to the production order in the last task. Now, you want to review the cost assigned to the order, the material document, and the corresponding accounting document.

In order to do so, click on  to go back to the header screen.


Then in the system menu select:

More ► Goto ► Costs ► Analysis

Menu bar

Cost Element	Cost Element (Text)	Origin	Σ	Total Target Costs	Σ	Total Actual Costs
720300	Aufwendungen Halbfertigerzeugnisse	DL00/TRWA1014		0.00		22,826.00
				0.00		22,826.00
720000	Aufwendungen Rohstoffe	DL00/TRFR3014		0.00		20,200.00
720000	Aufwendungen Rohstoffe	DL00/DGAM1014		0.00		7,575.00
720000	Aufwendungen Rohstoffe	DL00/TRSK1014		0.00		5,050.00
720000	Aufwendungen Rohstoffe	DL00/TRHB1014		0.00		2,525.00
720000	Aufwendungen Rohstoffe	DL00/PEDL1014		0.00		4,545.00
720000	Aufwendungen Rohstoffe	DL00/CHAN1014		0.00		1,010.00
720000	Aufwendungen Rohstoffe	DL00/BRKT1014		0.00		7,070.00
720000	Aufwendungen Rohstoffe	DL00/WDOC1014		0.00		101.00
720000	Aufwendungen Rohstoffe	DL00/PCKG1014		0.00		353.50
	Raw Materials			0.00		48,429.50
				0.00		71,255.50

Here you can see the costs that were assigned to the production order from our goods issue.

Click on  to go back to the SAP Easy Access menu.



Step 13: Confirm Production Completion

Task Confirm production order completion.

Time 10 min

Short Description Confirm completion for your production order.

Name (Position) Michael Brauer (Shop Floor Worker 4)

When the assembly has been completed for the current production order, we need to confirm that certain procedures and activities have been completed and record the quantity of the end product that has been manufactured.

Production completion

To confirm production completion, follow the menu path:

Logistics ▶ Production ▶ Shop Floor Control ▶ Confirmation ▶ Enter ▶ For Order

Menu path

Enter your **production order number** and click on **Continue**.

Production order number

Select **Final Confirm.** and **Clear Open Reserv.** In the Yield Quantity field, enter the **number** of bikes you were supposed to produce for this order. Remember that your amount might be different from the screen below.

Final Confirm.
Clear Reservation
Amount

Order: 1000000

Status: REL PRC GMPS MACM SETC

Material: DXTR3014

Material Descr.: Deluxe Touring Bike (red)

Confirmation Type

Partial confirmation: ☐

Clear Open Reserves.: ☒

Final Confirmation: ☒

Autom. Final Conf.: ☐

Actual Data

	Curr. t/b Conf.	Unit	Confirmed to Date	Planned t/b Conf.	Unit
Yield Quantity:	101	EA	0	101	EA
Scrap Quantity:			0	0	
Rework Quantity:			0		
Reason for Var.:					
Personnel no.:					

Then, change the Start Execution to **1 hour earlier** than the default time.

1 hour earlier

To Be Confirmed

Start Execution:

05/15/2019

12:48:14

Finish Execut.:

05/15/2019

13:48:14

Posting Date:

05/15/2019

Save your entries with [Save](#).



Confirmation of order 1000002 saved

Note: When the confirmation is saved, labor costs for the order are calculated automatically. The quantity yield also establishes the parameters for the goods receipt into Inventory.

Click on [Exit](#) to return to the SAP Easy Access screen.



Step 14: Receive Goods from Production Order

Task Post a goods receipt from production order.

Time 15 min

Short Description Post a goods receipt from your production order.

Name (Position) Susanne Castro (Receiving Clerk)

Receive the completed products into finished goods inventory. Check the quantity proposed against the quantity specified in the production order and the quantity specified during confirmation. If there are any discrepancies, the system will decide if an error or warning message should be generated depending upon the deviation identified.

Goods receipt

To post a goods receipt, follow the menu path:

**Logistics ► Production ► Shop Floor Control ► Goods Movements
► Goods Issue / Goods Receipt**

Menu path

Select *Goods Receipt* and *Order* in the drop-down menu.

Enter Movement Type **101** (Goods receipt for order to warehouse) and your **production order number**.

101
Production order
number

Choose Enter.

Select **OK** for your item and enter FG00 in the SLoc field.

OK

In the overview screen, review the item to ensure that all the data is correct.

- Movement Type → 101 (goods receipt into Inventory)
- Storage Location → FG00 (Inventory)
- Quantity → should equal the amount that you confirmed in the previous task

A01 Goods Receipt

R08 Order

General

Document Date: 05/15/2019

Delivery Note:

Posting Date: 05/15/2019

Doc.Header Text:

1 Individual Slip

Line	Mat. Short Text	.. OK	Qty in UnE	E...	...	SLoc	:
1	Deluxe Touring Bike (red)	<div></div> <div></div>	101	EA	<div></div>	FG00	

Click on **Post** to post the goods receipt. When you save this material document the actual value of the material produced was entered into the production order.

Material document 5000000050 posted

Record the material document number _____.

Material document
number

Click on **Exit** to return to the SAP Easy Access screen.



Step 15: Review Costs Assigned to Production Order

Task Review costs assigned to your production order.

Short Description Display and review the costs that have been assigned to your production order.

Name (Position) Jamie Shamblin (Cost Accountant)

Time 5 min

To display costs assigned, follow the menu path:

Logistics ▶ Production ▶ Shop Floor Control ▶ Order ▶ Display

Menu path

Enter your **production order number** and click on [Continue](#).

Production order number

In the system menu, select:

More ▶ Goto ▶ Costs ▶ Analysis

Menu bar

Cost Element	Cost Element (Text)	Origin	Σ Total Target Costs	Σ Total Actual Costs
720300	Aufwendungen Halbfertigerzeugnisse	DL00/TRWA1014	0.00	22,826.00
741600	Ausgleich Produktionsmengen	DL00/DXTR3014	0.00	73,937.05-
			0.00	51,111.05-
800000	Arbeit	NAPR1000/LABOR	0.00	2,526.75
	Production		0.00	2,526.75
720000	Aufwendungen Rohstoffe	DL00/TRFR3014	0.00	20,200.00
720000	Aufwendungen Rohstoffe	DL00/DGAM1014	0.00	7,575.00
720000	Aufwendungen Rohstoffe	DL00/TRSK1014	0.00	5,050.00
720000	Aufwendungen Rohstoffe	DL00/TRHB1014	0.00	2,525.00
720000	Aufwendungen Rohstoffe	DL00/PEDL1014	0.00	4,545.00
720000	Aufwendungen Rohstoffe	DL00/CHAN1014	0.00	1,010.00
720000	Aufwendungen Rohstoffe	DL00/BRKT1014	0.00	7,070.00
720000	Aufwendungen Rohstoffe	DL00/WDOC1014	0.00	101.00
720000	Aufwendungen Rohstoffe	DL00/PCKG1014	0.00	353.50
	Raw Materials		0.00	48,429.50
			0.00	154.80-

Now that the finished products have been received in the Inventory, the Manufacturing Output Settlement Variance has been added. How is this figure calculated by the system?

Click on [Exit](#) to return to the SAP Easy Access screen.



Step 16: Settle Costs of Production Order

Task Settle costs of your production order. **Time** 20 min

Short Description Settle the costs of your production order. The costs are temporarily captured in the production order and they need to be assigned to an appropriate cost object. Compare the actual costs to the planned costs to identify any deviations or potential problems in this regard.

Name (Position) Jamie Shamblin (Cost Accountant)

To settle costs of a production order, follow the menu path:

Logistics ▶ Production ▶ Shop Floor Control ▶ Period-End Closing ▶ Settlement ▶ Individual Processing

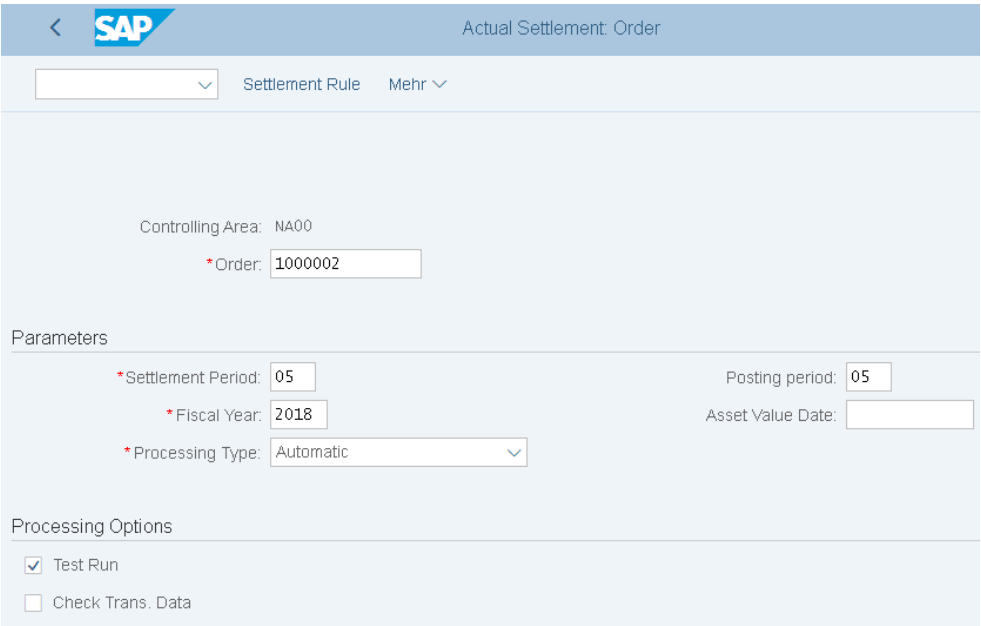
Menu path

If you have to input the Controlling Area, enter **NA00**, and click on **Continue**.

NA00

Enter your **production order number**, the **current month** as Settlement period (e.g. 007 for July), the **current month** as Posting period, and the **current year** as Fiscal year. Make sure that **Test Run** is selected.

Production order number
current month
current month
current year
Test Run

The screenshot shows the SAP 'Actual Settlement: Order' interface. At the top, there's a header bar with the SAP logo and the title 'Actual Settlement: Order'. Below this, there's a dropdown menu for 'Settlement Rule' and a 'Mehr' button. The main area contains several input fields: 'Controlling Area' is set to 'NA00'; '*Order' is '1000002'; 'Parameters' section includes '*Settlement Period' (05), '*Fiscal Year' (2018), '*Processing Type' (Automatic), 'Posting period' (05), and 'Asset Value Date' (empty). At the bottom, 'Processing Options' are shown with 'Test Run' checked and 'Check Trans. Data' unchecked.

Then, click on **Execute**. Confirm any occurring pop-up.

Processing Options		
Selection Parameters		Value
Execution Type		Settlement Executed
Processing completed with no errors		
Statistics		
Processing Category	Σ	Number
Settlement Executed		1
No Change		
Not Relevant		

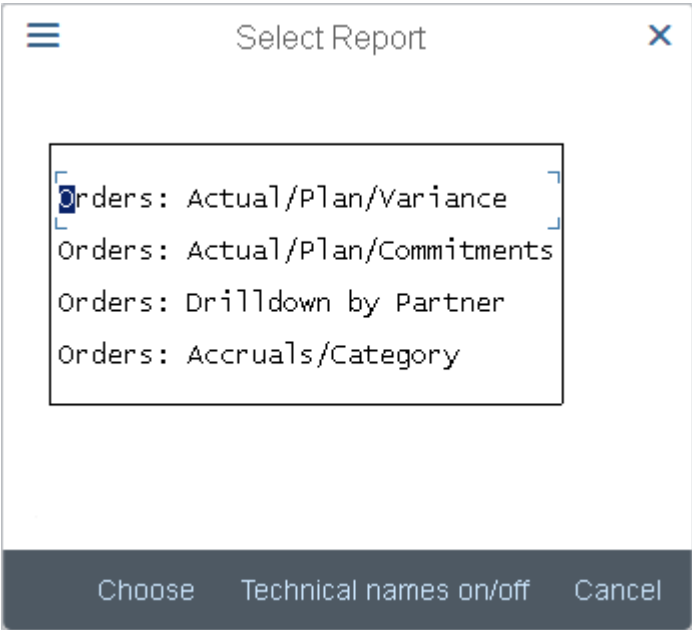
Click on [Detail lists](#).

In the system menu, choose:
More ► Environments ► Report

Menu bar

Then, double-click on **Actual/Plan/Variance** to select the report.




Actual/Plan/Variance






Acknowledge any warning which may pop-up.

Orders: Actual/Plan/Variance		Date: 05/15/2019 14:04:27	Page: 2 / 2
Order/Group	1000000	000001000000	
Fiscal year	2019		
Period	1 - 5		

Cost Elements	Actual	Plan	Var. (Abs.)	Var. (%)
720000 Aufwendungen Rohstoffe	48,429.50	48,429.50		
720300 Aufw Halb	22,826.00	22,826.00		
800000 Arbeit	2,526.75	2,526.75		
* Costs	73,782.25	73,782.25		
741600 Ausgleich Produktionsmengen	73,937.05-		73,937.05-	
* Deliveries to Stock	73,937.05-		73,937.05-	
** Balance	154.80-	73,782.25	73,937.05-	100.21-

Click on  to go back. Then, select  and click on  twice.

Yes

Deselect **Test Run** and execute again with . Click on  and select . Choose report **Actual/Plan/Variance**.

Test Run

Actual/Plan/Variance

Orders: Actual/Plan/Variance		Date: 05/15/2019 14:08:50	Page: 2 / 2
Order/Group	1000000	000001000000	
Fiscal year	2019		
Period	1 - 5		

Cost Elements	Actual	Plan	Var. (Abs.)	Var. (%)
720000 Aufwendungen Rohstoffe	48,429.50	48,429.50		
720300 Aufw Halb	22,826.00	22,826.00		
800000 Arbeit	2,526.75	2,526.75		
* Costs	73,782.25	73,782.25		
741600 Ausgleich Produktionsmengen	154.80		154.80	
* Settled Costs	154.80		154.80	
741600 Ausgleich Produktionsmengen	73,937.05-		73,937.05-	
* Deliveries to Stock	73,937.05-		73,937.05-	
** Balance		73,782.25	73,782.25-	100.00-

Note: The manufacturing output settlement is higher than the consumption expenses for raw materials and semi-finished goods? Review and explain the expenses and the settlements of your production order in detail. How is the balance derived?

Click on [Exit](#), choose [Yes](#) and click on [Exit](#) again to return to the SAP Easy Access screen.

Yes

☐

PP Challenge

Learning Objective Understand and perform an integrated manufacturing process.

Time 60 min

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) Mountainbikes. 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.

