

Controlling Case Study Product Costing (CO-PC)

This case study explains an integrated product costing 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

Product Costing

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Version

3.3

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MOTIVATION

The data entry requirements in the controlling exercises (CO 1 thorough CO 3) were minimized because much of the data was stored in the SAP system. This stored data, known as master data, simplifies the processing of business transactions.

In this case study, we create a variant of an existing product in order to calculate associated costs. The cost estimate for this new bike version was initiated by the sales department, which plans on running a sales campaign with a special edition of this bike. After the new material is created in the system, existing bills of materials and routings need to be copied and modified.

After the material has been created the product cost estimate is calculated.

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 CO exercises (CO 1 through CO 3). However, it is recommended.

NOTES

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



Process Overview

Learning Objective Understand and perform a product costing process.

Time 55 min

Scenario In order to perform a product costing process you will take on different roles within the GBI company, e.g. production data administrator, cost accountant or chief accountant. Overall, you will be working in the Production Planning (PP) and the Controlling (CO) departments.

Employees involved Jermain Kumins (Production Data Administrator)

Jamie Shamblin (Cost Accountant)

Shuyuan Chen (Chief Accountant)

You start the product costing process by creating a slightly changed version of your top-selling Deluxe Touring bike. As you plan to manufacture and sell a white color in the future, you create new finished goods and necessary raw materials. The bill of material and routing are changed accordingly. Prices are calculated for the new frame and then released.

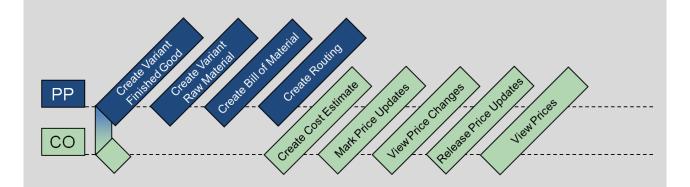


Table of Contents

Process Overview	2
Step 1: Create Variant Finished Good for Product Costing	4
Step 2: Create Variant Raw Material for Product Costing	6
Step 3: Create Bill of Material for Product Costing	7
Step 4: Create Routing for Product Costing	9
Step 5: Create Cost Estimate	. 12
Step 6: Mark Price Updates	. 14
Step 7: View Prices Changes	. 16
Step 8: Release Price Updates	17

CASE STUDY

Step 9: View Prices	8
CO-PC Challenge19	9



Step 1: Create Variant Finished Good for Product Costing

Task Create a variant of the Deluxe Touring Bike (black).

Time 10 min

Short Description Create a variant of the Deluxe Touring Bike (black) for product costing. In order to do so, you will create a new product while copying the data from your Deluxe Touring Bike (black).

Name (Position) Jermain Kumins (Production Data Administrator)

	To create a product, fo Logistics Materia Create (Special) This will produce the f	Is Management ► Material Master ► Material ► Finished Product	Menu path
	< SAP	Create Material (Initial Screen)	
		✓ Select View(s) Org. Levels Data More ✓	
	Material:		
	Industry Sector:		
	Material type:	FERT Finished Product	
	7,		
	Change Number:		
	Copy from		
	Material:		
u	hoose Industry sector ander Copy from. Clic	4### (replace ### with your assigned number), Mechanical Engineering and enter DXTR1### k on or press Enter now. ect the following views by clicking on the square in	DXTR4### Mechanical Engineering, DXTR1###
	ront of the respective	• • •	
	- Basic Data 1	- Basic Data 2	Basic Data 1 Basic Data 2
	- Accounting 1	- Accounting 2	Accounting 1 Accounting 2
	- Costing 1	- Costing 2	Costing 1 Costing 2
A	Also, select Create vi e	ews selected. Then, click on .	Create views selected

On the Organizational Levels screen, enter plant DL00 (Dallas) and DL00 DL00, DL00 under Copy From. Compare with the screen shown below. Then, click on \equiv × Organizational Levels Organizational levels Copy from Plant: DL00 DL00 Org. levels/profiles only on request Select View(s) ☐ Default Setting 💢 On the Basic Data 1 tab, change the material description to **Deluxe Touring** Deluxe Touring Bike (white) **Bike** (white). On the tab *Accounting 1* enter **1400.00** as Standard Price. 1400.00 Save Then, click on to save your material. to return to the SAP Easy Access screen. Click on the exit icon



Step 2: Create Variant Raw Material for Product Costing

Task Create a new raw material for your variant bike.

Time 5 min

Short Description Create a white frame as a new material. It will be used later in the BOM of your new Deluxe Touring Bike (white)

Name (Position) Jermain Kumins (Production Data Administrator)

To create a new raw material, follow the menu path:

Menu path

Logistics ► Materials Management ► Material Master ► Material ► Create (Special) ► Raw Material

Create raw material TRFR4###, choose Industry sector Mechanical

Engineering and enter TRFR1### under Copy from. Click on or press Enter now.



On the next screen, select the following views by clicking on the square in front of the respective rows:

- Basic Data 1 - Basic Data 2

- Accounting 1 - Accounting 2

- Costing 1 - Costing 2 Basic Data 1 Basic Data 2 Accounting 1 Accounting 2 Costing 1 Costing 2

DL00, DL00

Also, select **Create views selected**. Then, click on ...

On the Organizational Levels screen, enter plant Dallas (DL00) and DL00 under Copy From. Then, click on

Create views selected

On the Basic Data 1 tab, change the material description to **Touring Frame-**

Save White. Then, click on to save your material. Touring Frame-White

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



Step 3: Create Bill of Material for Product Costing

Task Create a new BOM for your Deluxe Touring Bike (white).

Time 5 min

Short Description Create a new BOM for your Deluxe Touring Bike (white) to be used in the product costing process.

Name (Position) Jermain Kumins (Production Data Administrator)

To create a bill of material, follow the menu path:

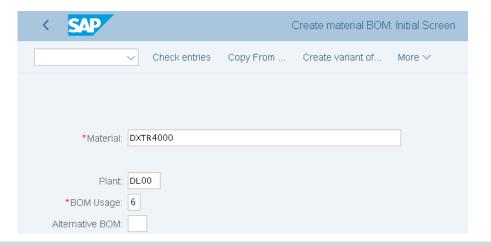
Menu path

Logistics ► Production ► Master Data ► Bills of Material ► Bill of Material ► Material BOM ► Create

On the following screen, enter material **DXTR4**###, plant **Dallas** (**DL00**)

DXTR4###, DL00

and select **Costing (6)** as BOM usage. Compare with the screen shown below. Then, click on or hit F7.



Note Bill of Material (BOM) contains the components, which are to be included in the production of a material. BOMs are used in MRP, production, procurement, and for product costing.

On the Copy From screen, enter material **DXTR1**###, **DL00** as plant and **1 for the BOM Usage**. If you select the BOM Usage search drop down, make sure that you select the 1 entry from plant DL00.

DXTR1###, DL00, 1

=	Copy Fro	om
*Material:	DXTR1000	
Plant:	DL00 Plant Dallas	
*BOM Usage:	1 Costing	
BOW Gage.	Costing	
Alternative BOM:		
Continue		
Now, click on Continue.		
	Select All Co	рру
Copy the bill of materials by	clicking Select All first and then	
SAD	Create material BOM: Copy From	
	Greate material Dem. Gopy From	
✓ Select All	Deselect All Copy Item Header Subitems	Validity
Material: DXTR1000		
Deluxe Tourin	g Bike (black)	
Plant: DL00 Plant I		
	Janas	
Alternative BOM: 1 BOM items		
ltem ICt Component	Component descripti	Quantity
Leni lot component		addritty
0010 L M TRWA1000		2
0010 L M TRWA1000	Touring Aluminum Wh	2
0020 L M TRFR1000		
0020 L M TRFR1000 0030 L M DGAM1000	Touring Aluminum Wh Touring Frame-Black Derailleur Gear Asse	1
0020 L M TRFR1000 0030 L M DGAM1000 0040 L M TRSK1000	Touring Aluminum Wh Touring Frame-Black Derailleur Gear Asse Touring Seat Kit	1
0020 L M TRFR1000 0030 L M DGAM1000 0040 L M TRSK1000 0050 L M TRHB1000	Touring Aluminum Wh Touring Frame-Black Derailleur Gear Asse Touring Seat Kit Touring Handle Bar	1 1 1
0020 L M TRFR1000 0030 L M DGAM1000 0040 L M TRSK1000 0050 L M TRHB1000 0060 L M PEDL1000	Touring Aluminum Wh Touring Frame-Black Derailleur Gear Asse Touring Seat Kit Touring Handle Bar Pedal Assembly	1 1 1 1
0020 L M TRFR1000 0030 L M DGAM1000 0040 L M TRSK1000 0050 L M TRHB1000 0060 L M PEDL1000 0070 L M CHAN1000	Touring Aluminum Wh Touring Frame-Black Derailleur Gear Asse Touring Seat Kit Touring Handle Bar Pedal Assembly Chain	1 1 1 1 1 1
0020 L M TRFR1000 0030 L M DGAM1000 0040 L M TRSK1000 0050 L M TRHB1000 0060 L M PEDL1000 0070 L M CHAN1000 0080 L M BRKT1000	Touring Aluminum Wh Touring Frame-Black Derailleur Gear Asse Touring Seat Kit Touring Handle Bar Pedal Assembly Chain Brake Kit	1 1 1 1 1 1 1
0020 L M TRFR1000 0030 L M DGAM1000 0040 L M TRSK1000 0050 L M TRHB1000 0060 L M PEDL1000 0070 L M CHAN1000	Touring Aluminum Wh Touring Frame-Black Derailleur Gear Asse Touring Seat Kit Touring Handle Bar Pedal Assembly Chain	1 1 1 1 1 1
O020 L M TRFR1000 O030 L M DGAM1000 O040 L M TRSK1000 O050 L M TRHB1000 O060 L M PEDL1000 O070 L M CHAN1000 O090 L M WDOC1000 O100 L M PCKG1000 Your screen should look sime Change the component of ite (TRFR4###) and then hit En	Touring Aluminum Wh Touring Frame-Black Derailleur Gear Asse Touring Seat Kit Touring Handle Bar Pedal Assembly Chain Brake Kit Warranty Document	1 1 1 1 1 1 1 1 1 1 1 1 The state of the sta
O020 L M TRFR1000 O030 L M DGAM1000 O040 L M TRSK1000 O050 L M TRHB1000 O060 L M PEDL1000 O070 L M CHAN1000 O090 L M WDOC1000 O100 L M PCKG1000 Your screen should look sime Change the component of ite (TRFR4###) and then hit En	Touring Aluminum Wh Touring Frame-Black Derailleur Gear Asse Touring Seat Kit Touring Handle Bar Pedal Assembly Chain Brake Kit Warranty Document Packaging Illar to the one shown in the picture about the new frame previously creater to see the updated description, nex	1 1 1 1 1 1 1 1 1 tove. Atted t click on



Step 4: Create Routing for Product Costing

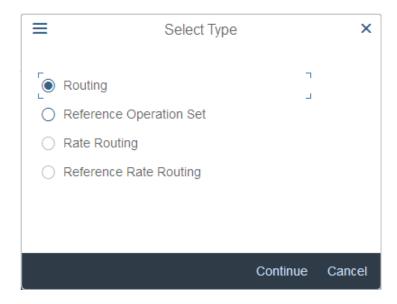
Task Create a new routing for your Deluxe Touring Bike (white).

Time 5 min

Short Description Create a new routing for your Deluxe Touring Bike (white) to be used later in the product costing process.

Name (Position) Jermain Kumins (Production Data Administrator)

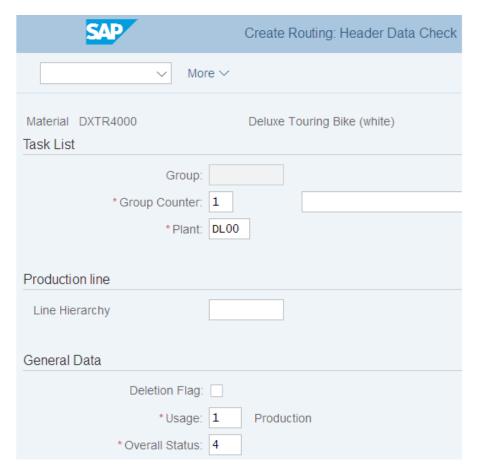
To create the routing, follow the menu path: Menu path Logistics ▶ Production ▶ Master Data ▶ Routings ▶ Routings ▶ Standard Routings ► Create This will produce the following screen. Create Routing: Initial Screen Copy from Routings Sequences Operation More V Material: DXTR4000 Plant DL00 Sales document Sales Document Item: WBS Element Group: Validity Change Number: *Key date: 16.03.2018 Revision level: **Note** Routings contain the steps that are necessary for production and these steps are called operations. Routings include the sequence in which the operations occur, and the work centers at which the operations are to be executed. Enter your material **DXTR4**### and plant **DL00**. Then, click on Copy from. DXTR4###, DL00 Make sure that **Routing** is selected on the Select Type screen and click on Routing Continue



On the following screen enter the material number of your black Deluxe Touring Bike (**DXTR1**###). Plant **DL00** should already show up, if not enter it.

DXTR1###, DL00

Again, click on Continue .This will produce the following screen.



Set the Overall Status to 4 Released (general) and press Enter.

You can see all the operations necessary to assemble your bike. Make sure the changed BOM is already in effect by selecting operation 10 and clicking

© SAP SE Page 10

4

Allocation. The white frame previously created should be listed as item number 20.

Now, click on Save.

Routing was saved with group 50021980 and material DXTR4000.

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



Step 5: Create Cost Estimate

Task Create a cost estimate for your bike.

Time 10 min

Short Description Create a cost estimate for your white Deluxe Touring Bike and review the cost components.

Name (Position) Jamie Shamblin (Cost Accountant)

Product costing calculates the cost of goods manufactured and the cost of goods sold per product unit. Products are costed automatically using bills of materials and routings from Production Planning.

To estimate costs, follow the menu path:

Menu path

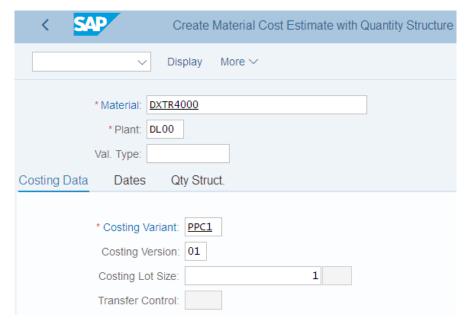
Accounting ► Controlling ► Product Cost Controlling ► Product Cost Planning ► Material Costing ► Cost Estimate with Quantity Structure ► Create

On the *Create Material Cost Estimate with Quantity Structure* screen, choose your bike **DXTR4**### and plant **DL00**.

On the *Costing Data tab*, choose **Standard Cost Est.** as the Costing Variant via the F4-Help, Costing Version **01** and **1** as the Costing Lot Size.

Compare with the screen shown below.

DXTR4###, DL00 Standard Cost Est. 01, 1



Press Enter. If the following yellow warning message occur, press again Enter.



Mat. DXTR4000 in plant DL00 should be costed in cost est, w/o gty structure

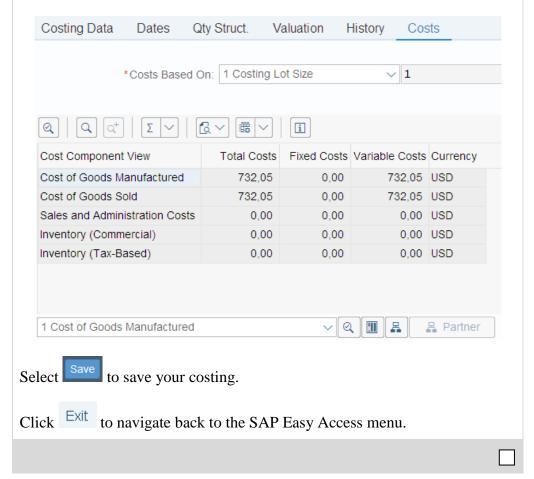
Current date

On the *Dates* tab, change the *Costing Date From* to the **current date** and press Enter to confirm all other date entries. The system now calculates the material based on the bills of material and the routings.

Material costs of 732.05 USD are calculated for the Deluxe Touring Bike.

To display the exact cost components, select ☐ or More ➤ Costs ➤

Display Cost Components. Select again and Choose Layout.... Select the Cost Component Groups.





Step 6: Mark Price Updates

Task Mark the standard cost estimate.

Time 5 min

Short Description Transfer the cost estimate to the material master record.

Name (Position) Jamie Shamblin (Cost Accountant)

The Price Update function is used to transfer the calculated product cost as a cost estimate to the material master record. The cost is transferred in two steps: Marking and release.

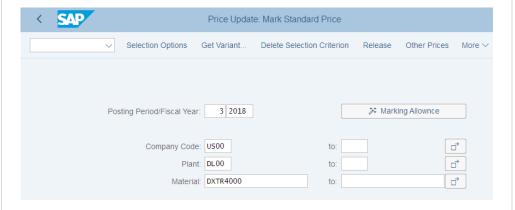
To mark prices, follow the menu path:

Menu path

Logistics ► Production ► Product Cost Planning ► Material Costing ► Price Update

Enter the **current period** (current month), company code **US00**, plant **DL00** and your bike **DXTR4**###.

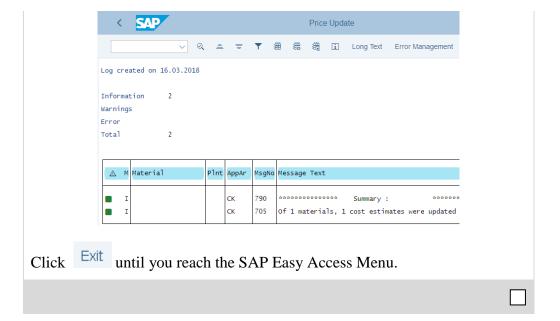
Current period, US00 DL00, DXTR4###



Remove the indicator from the Test Run field. Execute the marking by selecting

Test Run

The system should display the following message:



Time 5 min



Task View the planned price.

Step 7: View Prices Changes

Short Description View the planned price in the material master record of your white Deluxe Touring Bike. Name (Position) Shuyuan Chen (Chief Accountant) To view prices, follow the menu path: Menu path Logistics ► Materials Management ► Material Master ► Material ► **Display** ► **Display Current** Choose your Material and Enter. Select only the *Costing 2* view. Hit enter DXTR4### DL00 then enter plant **DL00**. Hit enter again and the market future price is displayed in the left costing column (Future). Compare with the screenshot shown below. Standard Cost Estimate Future Current **Cost Estimate** Period / Fiscal Year: 3 2018 Planned Price: 732,05 0,00 Standard price: 1.400,00 Click on the exit icon Exit to return to the SAP Easy Access Menu.



Step 8: Release Price Updates

Task Release the price updates.

Time 5 min

Short Description Release the price updates.

Name (Position) Shuyuan Chen (Chief Accountant)

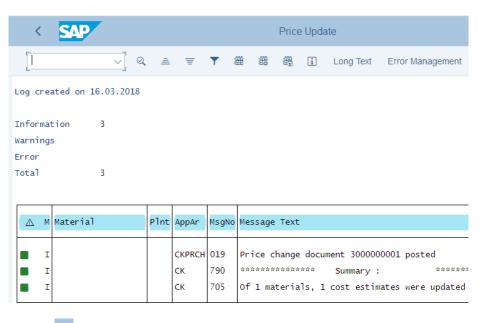
To update the price, follow the menu path:

Menu path

Logistics ► Production ► Product Cost Planning ► Material Costing ► Price Update

Select Release. Choose the **current period**, company code **US00**, plant **DL00** and your bike **DXTR4**###. Remove the Test Run indicator and release the price by selecting Execute. Compare with the screen below:

Current period, US00 DL00, DXTR4### Test Run



Click on . You should find your material in the Price Update: Release Standard Price screen.

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



plant **DL00**. Hit Enter again.

Step 9: View Prices

Time 5 min Task Review the current prices. **Short Description** View the current prices. Name (Position) Shuyuan Chen (Chief Accountant) To view prices, follow the menu path: Menu path Logistics ► Materials Management ► Material Master ► Material ► **Display** ► **Display Current** Choose your Material. Choose Costing 2 in the select views. Hit Enter. Enter DL00

The planned price that you have released is displayed in the middle column Current as a planned and standard price for the current period.

Cost Estimate		Future	Current
Period	1 / Fiscal Year: 0		3 2018
1	Planned Price: 0,00		732,05
		Standard prid	ce: 732,05
	Exit to return		

CO-PC Challenge

Learning Objective Understand and perform an integrated product costing process.

Time 45 min

Motivation After you have successfully worked through the *Product Costing* case study, you should be able to solve the following task on your own.

Scenario In the case study you have personalized the routing and the bill of material for the white Deluxe Touring Bike. Some customers have complained because of bad quality of the tires. For this reason, from next month on, two touring tires and two touring tubes respectively should be additionally delivered. This will obviously change the product costing. Calculate the new price onwards so that it will be valid from next month on.

Task Information Since this task is based on the *Product Costing* 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.