

Controlling Product Costing (CO-PC)

This case study explains an integrated product costing process in details and thus fosters a thorough understanding of each process step and underlying SAP functionality.

Product

S/4HANA 2020 Global Bike

Fiori 3.0

Level

Undergraduate Graduate Beginner

Focus

Product Costing

Author

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Version

4.1

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MOTIVATION

The data entry requirements in the controlling exercises (CO 1 through CO 3) were minimized because most 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 work successfully through this case study, it is not necessary to have finished the CO exercises. Anyway, it is recommended.

NOTES

This case study uses the Global Bike (GB) data set.



Process Overview

Learning Objective Understand and perform an integrated product costing process.

Time 65 min

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

Employees involved Jermain Kumins (Shop Floor Worker 1)

Jamie Shamblin (Controller)

Shuyuan Chen (Head of Accounting)

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.

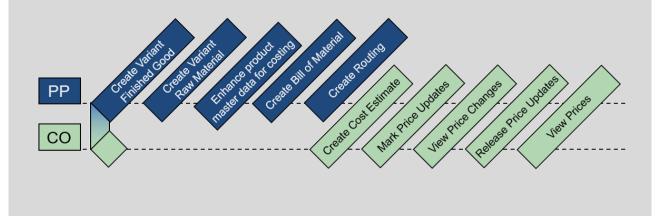


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Step 1: Copying a finished product

Task Copy the product master data of a finished product.

Time 10 min

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

Name (Position) Jermain Kumins (Shop Floor Worker 1)

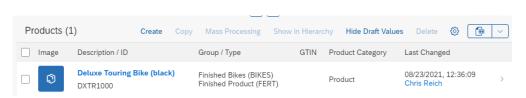
To create the product master record for a finished product, use the *Manage Product Master Data* app in the tab *Controlling*, the subsection *Product Cost Controlling*, and the role *Shop Floor Worker*.



Fiori App

Enter as *Product* **DXTR1**### (replace ### with your three-digit number) and choose Go.

DXTR1###



Select the line by clicking the checkbox at the beginning of the line and click

Copy

In the following popup, in the Plants row on the far right, select the icon

...

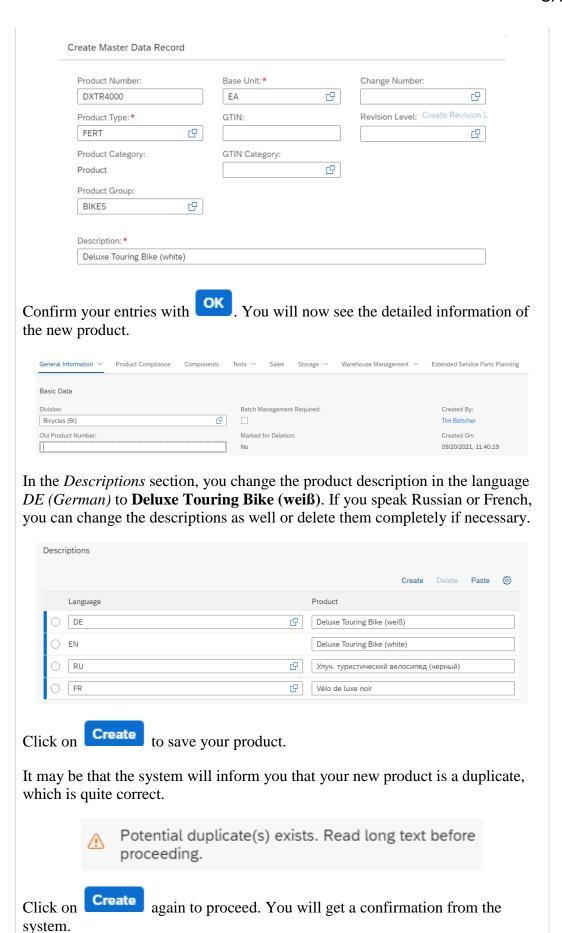


DL00

In the following window, li	it the selection to	the <i>plant</i> DL00	plant.
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		Plant	Total		
	✓	Plant Dallas (DL00) 1 item selected	1	>	
		Plant Heidelberg (HD00) No item selected	1	>	
		DC Hamburg (HH00) No item selected	1	>	
		DC Miami (MI00) No item selected	1	>	
		DC San Diego (SD00) No item selected	1	>	
To return to the	previ	ious menu, press <	deselect D	istribi	ıtion Chains
	De	ious menu, press . Then one luxe Touring Bike (black transformation)		istribi	ution Chains
	De	eluxe Touring Bike (blac		istribi	ution Chains
To return to the line.	De DX	eluxe Touring Bike (blac TR1000 Plants	ck)		ution Chains

Change the *Description* to **Deluxe Touring Bike** (white).



Master data record created	
L	1
Click on to return to the SAP Fiori Launchpad.	



Step 2: Create a copy from a raw material

Task copy a new raw material for your bike.

Time 5 min

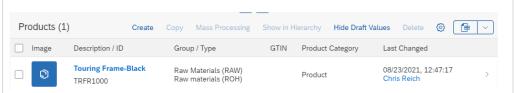
Short Description Create a white frame as a new material. It will be used later in the BOM of your new Deluxe Touring Bike (white)

Name (Position) Jermain Kumins (Shop Floor Worker 1)

To create the product master record for a finished product, use the *Manage Product Master Data* app in the tab *Controlling*, the subsection *Product Cost Controlling*, and the role *Shop Floor Worker*.



Enter as *Product* **TRFR1**### (replace ### with your three-digit number) and click Go.



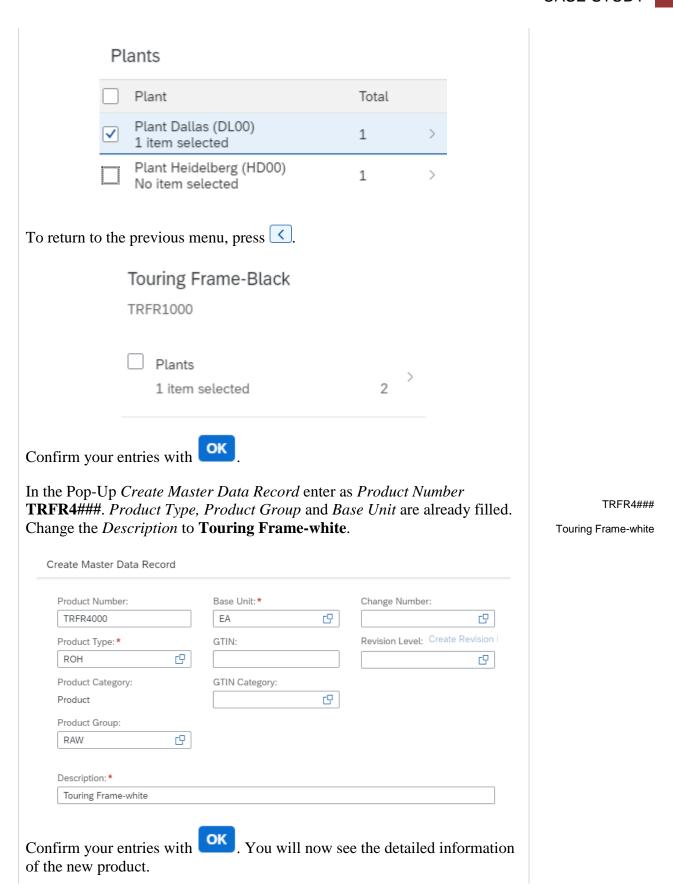
Select the line by clicking the checkbox at the beginning of the line and click Copy. In the following popup, in the Plants row on the far right, select the icon.

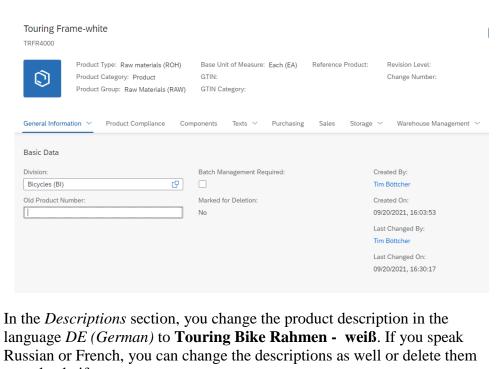
In the following window, limit the selection to the *plant* **DL00** plant.

Fiori App

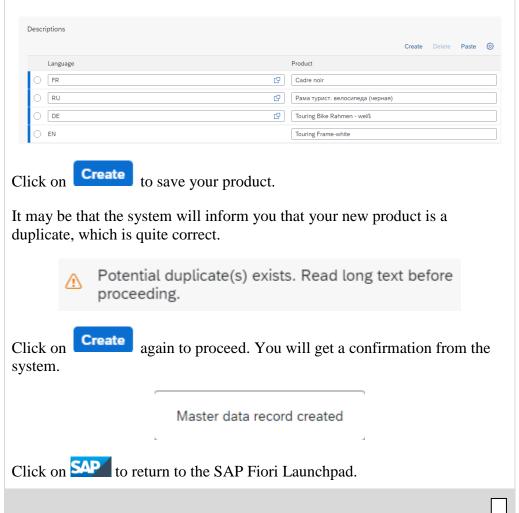
TRFR1###

DL00





completely if necessary.





Step 3: Extend your raw material for calculation

Task Enhance your raw material master data.

Time 5 min

Short Description In order to enable the cost calculation with quantity structure, the previously created master record must be extended

Name (Position) Jermain Kumins (Shop Floor Worker 1)

To extend the material master record for your raw material, use the Change Material app in the tab *Controlling*, the subsection *Product Cost Controlling*, and the role Shop Floor Worker.

Change Material

Fiori App

Enter as *Material* **TRFR4**### and press view selection.

Continue . You will enter the

TRFR4###

Choose view *Costing 1* and confirm with \checkmark .

Costing 1

	View	
	Basic Data 1	
	Basic Data 2	
	Extendend SPP Basic Data	
	Purchasing	
	International Trade: Import	
	Purchase Order Text	
	MRP 1	
	MRP 2	
	MRP 3	
	MRP 4	
	Advanced Planning	
	Extended SPP	
	General Plant Data / Storage 1	
	General Plant Data / Storage 2	
	Accounting 1	
	Accounting 2	
✓	Costing 1	
	Costing 2	
	Plant Stock	
	Storage Location Stock	
	WM Execution	
	WM Packaging	

General Data				
* Base Unit of Measure: EA each				
Do Not Cost:				
With Qty Structure: ✓				
Material origin: 🗸				
Origin group:				
Overhead Group:				
Plant-Sp.Matl Status:				
Valid From:				
Click Save afterwards.				
You will get the following confirmation:				
Click on to return to the SAP Fiori Launchpad.				
Confirm any browser warning messages for unsaved data with				



Step 4: Create Bill of Material

Task Create a new BOM.

Time 10 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 (Shop Floor Worker 1)

To create a bill of material, use the app *Maintain Bill of Material* from the *Controlling* section, *Product Cost Controlling* subsection, and *Shop Floor Worker* role.



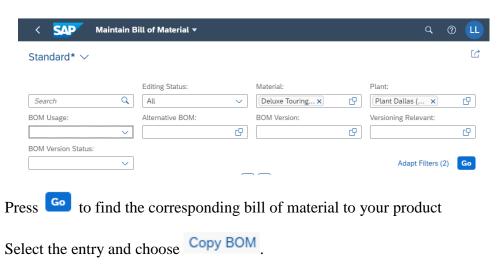
Fiori App

A *bill of material* contains all the components that go into the manufacture of a product. Bills of material are used in material requirements planning, production, procurement and product costing. Furthermore, alternative BOMs can be used to represent the same product by several BOMs. This is used, for example, to represent different manufacturing processes.

Bill of Material

On the screen *Maintain Bill of Material* enter in the field *Material*: **DXTR1**### and in the field *Plant*: enter **DL00**.

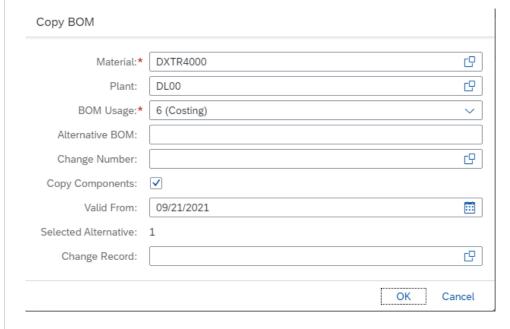
DXTR1###, DL00



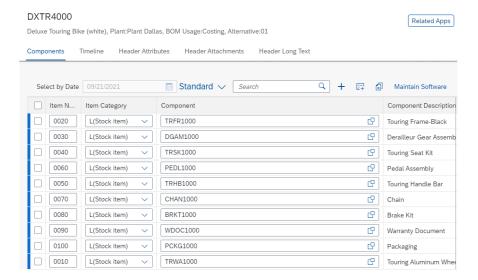


In the *Copy BOM* pop-up, enter **DXTR4**### in the *Material* field and **DL00** in the *Plant* field, and select **6** (**Costing**) in the *BOM Usage* field.

DXTR4### DL00 6 (Costing)



Click on OK to apply your entries. You will get to the new screen *Maintain Bill of Material*.



Change the *Component* in Item Number 20 to your previously created frame **TRFR4**### and press Enter.



	Material BOM saved	
Click on to retu	urn to the SAP Fiori Launchpad.	



Step 5: Create Routing

Task Create a new routing.

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 (Shop Floor Worker 1)

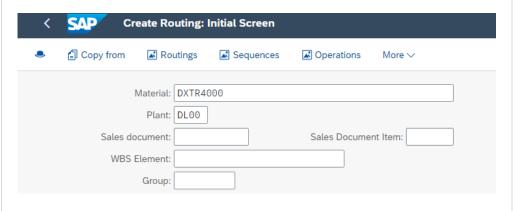
To create the routing, use the app *Create Routing* in the *Controlling* section, *Product Cost Controlling* subsection, and *Shop Floor Worker* role.



Fiori App

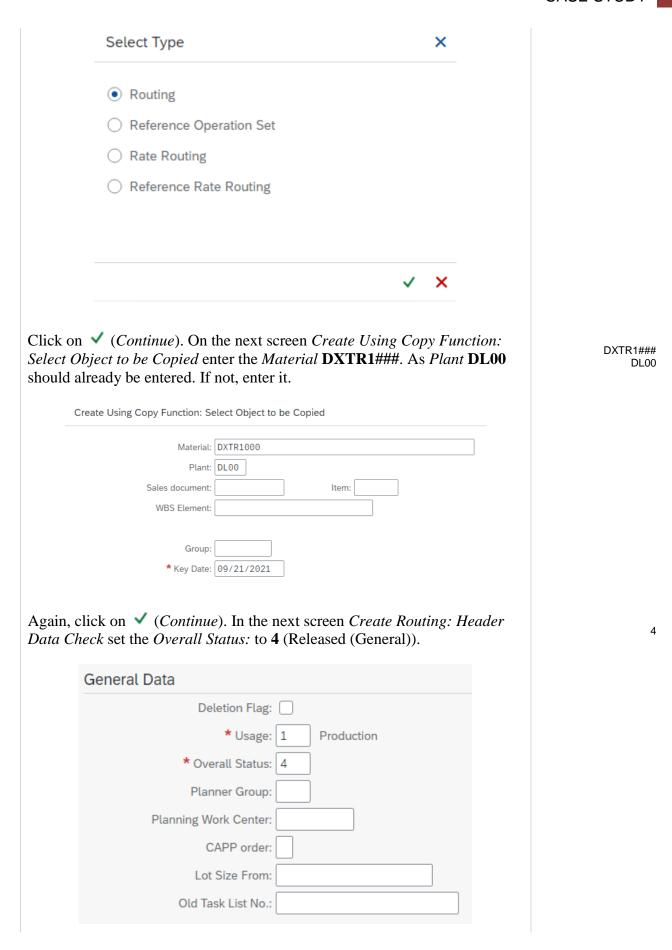
Note: Routings contain the steps that are necessary for production and these steps are called operations. Routings include the sequence in which the operations occur, and the work centers at which the operations are to be executed.



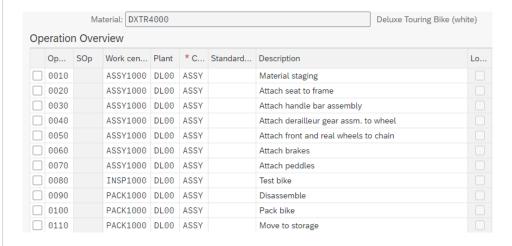


Make sure that **Routing** is selected on the *Select Type* pop-up.

Routing



Press Enter to confirm your changes. The system now shows you in the *Operation Overview*, all operations necessary to assemble your bike.



Make sure that the modified BOM is already valid by selecting operation 0010 and clicking Allocation. If this option is not displayed, you will find it in the pull-down menu under $More \triangleright Allocation$.

Your previously created frame should be listed as *Item Number 20*.



Click on Save. You will get a confirmation from the sytem.

Click on to return to the SAP Fiori Launchpad. You may get a pop-up stating this page contains unsaved data. Click on



Step 6: 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 (Controller)

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, use the app *Create Material Cost Estimates* in the *Controlling* section, *Product Cost Controlling* subsection, and *Controller* role.

Create Material Cost Estimates



Fiori App

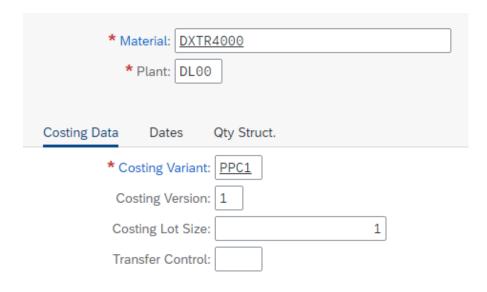
On the *Create Material Cost Estimate with Quantity Structure* screen, choose your bike **DXTR4**### and plant **DL00**.

DXTR4##, 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.

Standard Cost Est. 01.

Compare with the screen shown below.



Press Enter. If a warning occurs close it and continue by pressing Enter once again.

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 and costs based on the bills of material and the routings.

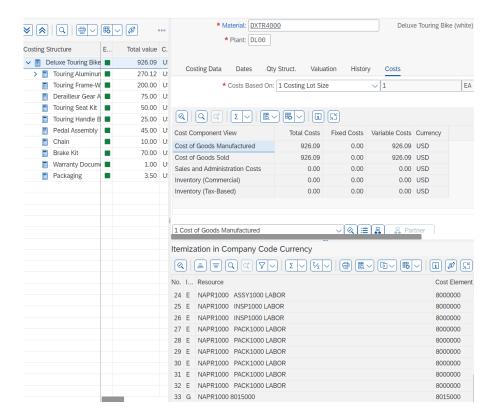
* Costing Date From: 06/26/2022

* Costing Date To: 12/31/9999

* Qty Structure Date: 07/01/2022

* Valuation Date: 07/01/2022

Current date



Material costs of 926.09 USD are calculated for the Deluxe Touring Bike.

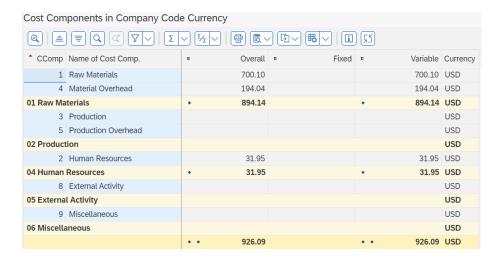


To display the exact cost components, press **F5**. Or choose from the Pull-Down-Menu **More** ► **Costs** ► **Display Cost Components**

Then select in the header area of the lower table and click *Choose Layout....*



Choose the Layout **1SAP02 - Cost Component Groups**. The table will be altered.



Click to save your costing. You will get a confirmation from the system.

The cost estimate is being saved

Click on to return to the SAP Fiori Launchpad. You may get a pop-up stating this page contains unsaved data. Click on



Step 7: Mark Price Updates

Task Mark the standard cost estimate.

Time 5 min

Short Description Transfer the cost estimate to the material master record (future Price).

Name (Position) Jamie Shamblin (Controller)

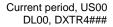
The Price Update function is used to transfer the calculated product cost as a cost estimation to the material master record. The cost is transferred into two steps: marking and release.

To mark prices, use the aps *Release Material Cost Estimates* in the *Controlling* section, *Product Cost Controlling* subsection, and *Controller* role.



Fiori App

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

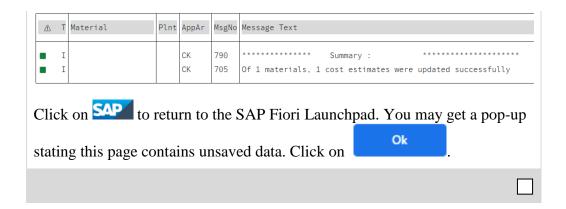




Test Run

Remove the indicator from the **Test Run** field. Execute the marking by pressing Execute .

The system should display the following message:





Step 8: View Prices Changes

Task View the planned price.

Time 5 min

Short Description View the planned price in the material master record of your white Deluxe Touring Bike.

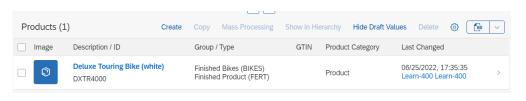
Name (Position) Shuyuan Chen (Head of Accounting)

To view prices, use the app *Manage Product Master Data* in the *Controlling* section, *Product Cost Controlling* subsection, and *Head of Accounting* role.



Fiori App

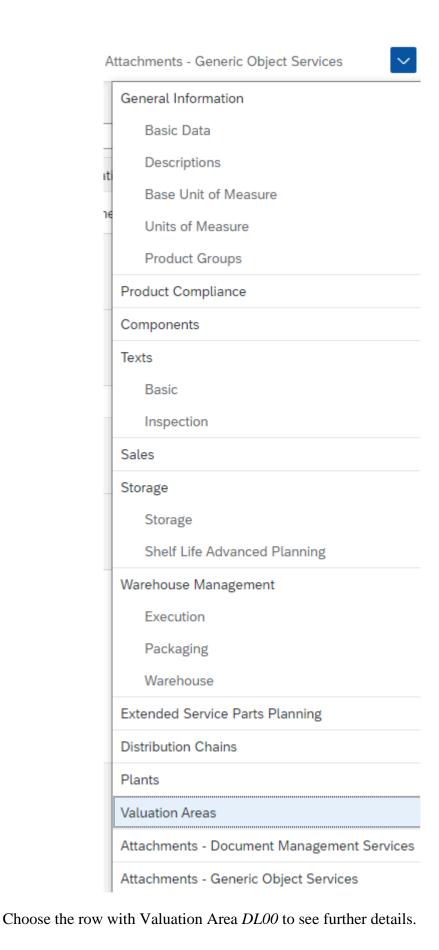
Enter *Product* **DXTR4**### in the search field and click on the row of your only search result to open the product details.

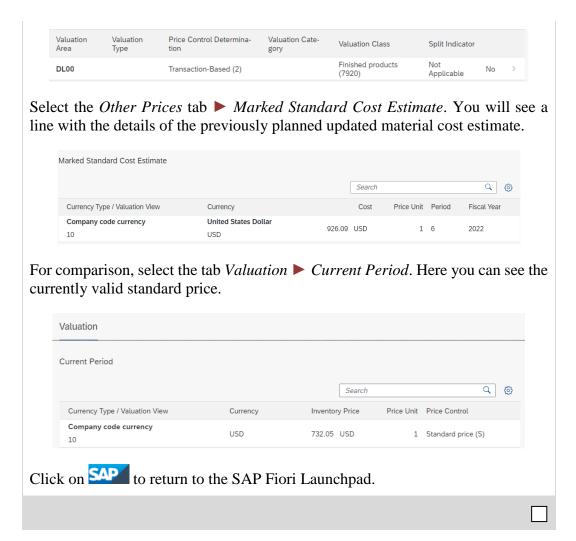


DXTR4###

Use the pull-down menu to select the *Valuation Areas* section. The screen automatically scrolls to the appropriate section.

Valuation Areas







Step 9: Release Price Updates

Task Release the price updates.

Time 5 min

Short Description Release the price updates.

Name (Position) Shuyuan Chen (Head of Accounting)

To update the price, use the aps Release Material Cost Estimates in the Controlling section, Product Cost Controlling subsection, and Head of Accounting role.



Fiori App

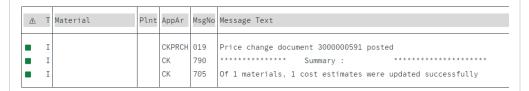
💦 Release (or More \rightarrow Release). Choose the **current period**, Select Company Code US00, Plant DL00 and Material DXTR4###.

Current period, US00

Remove the Test Run indicator and release the price by selecting Compare with the screen below:

Test Run

Execute



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



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DL00, DXTR4###

Click on to return to the SAP Fiori Launch	pad. You may	get a pop-up
stating this page contains unsaved data. Click on	Ok	



Step 10: View Prices

Task Review the current prices.

Time 5 min

Short Description View the current prices.

Name (Position) Shuyuan Chen (Head of Accounting)

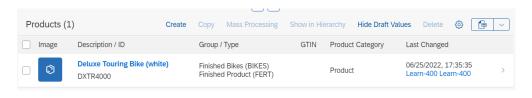
To view prices, use the app *Manage Product Master Data* in the *Controlling* section, *Product Cost Controlling* subsection, and *Head of Accounting* role.



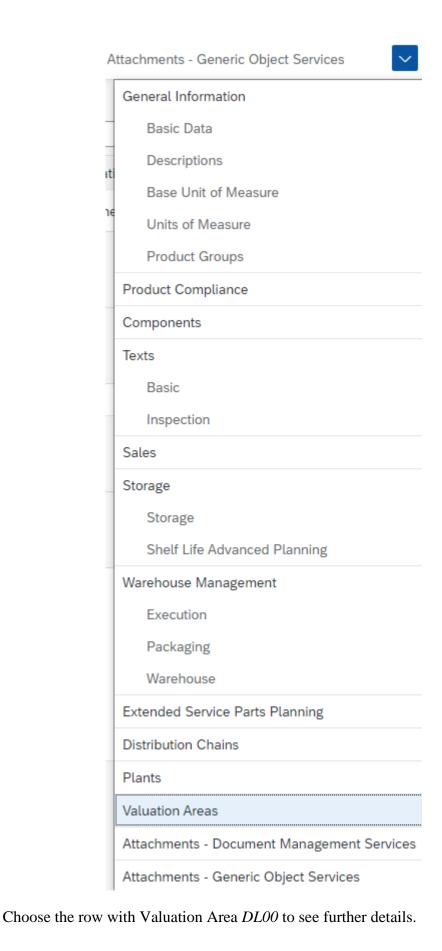
Fiori App

DXTR4###

Enter *Product* **DXTR4**### in the search field and click on the row of your only search result to open the product details.

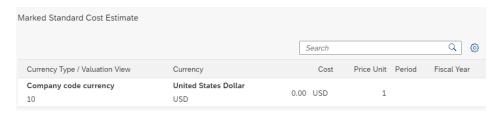


Use the pull-down menu to select the *Valuation Areas* section. The screen automatically scrolls to the appropriate section.

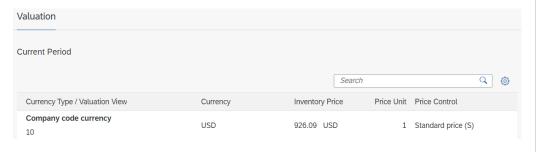




Select the *Other Prices* tab *Marked Standard Cost Estimate*. You will see that there is no more cost estimation present, since it is already posted.



For comparison, select the tab *Valuation Current Period*. Here you can see the currently valid standard price.



Click on to return to the SAP Fiori Launchpad.

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 As 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.