

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

SAP ERP
Global Bike
Release 6.07

Level

Undergraduate
Graduate
Beginner

Focus

Product Costing

Author

Michael Boldau
Stefan Weidner

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3.0

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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 it in the white colour 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.

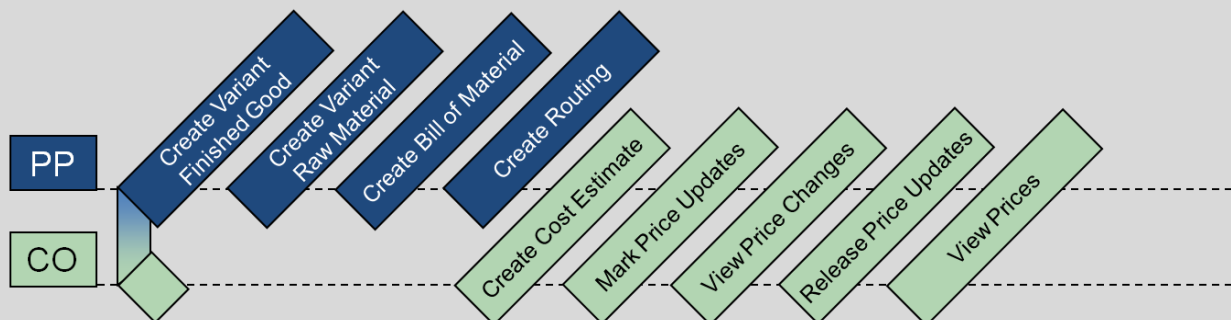


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Step 1: Create Variant Finished Good for Product Costing

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, follow the menu path:

Menu path

Logistics ► **Materials Management** ► **Material Master** ► **Material** ► **Create (Special)** ► **Finished Product**

This will produce the following screen.

Create material **DXTR4###** (replace ### with your assigned number), choose Industry sector **Mechanical Engineering** and enter **DXTR1###** under Copy from. Click on or press Enter now.

DXTR4###
Mechanical Engineering,
DXTR1###

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

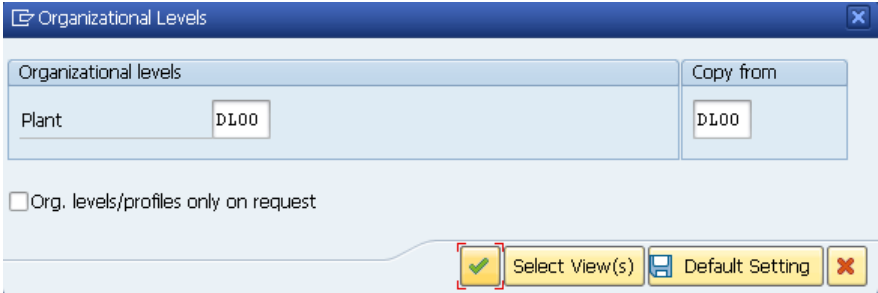
Also, select **Create views selected**. Then, click on .


Create views selected

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


DL00, DL00





On the *Basic Data 1* tab, change the material description to **Deluxe Touring Bike (white)**. Then, click on  to save your material.

Deluxe Touring Bike
(white)

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



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.

TRFR4###
Mechanical Engineering
TRFR1###


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

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


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

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


Create views selected

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

DL00, DL00

On the *Basic Data 1* tab, change the material description to **Touring Frame-White**. Then, click on  to save your material.

Touring Frame-White

Click on the exit icon  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)

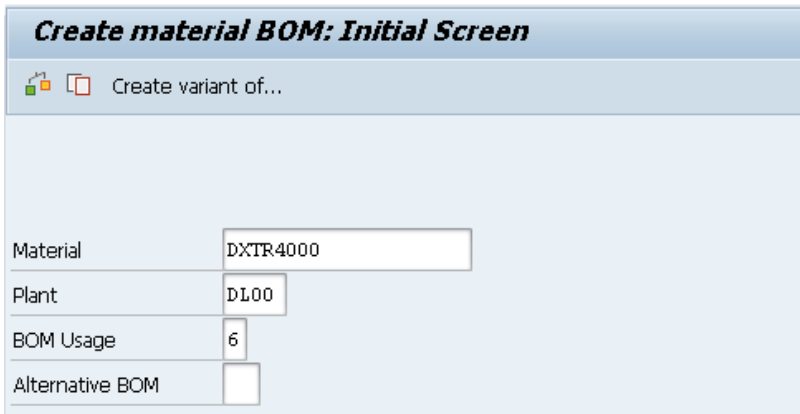
To create a bill of material, follow the menu path:

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

DXTR4###, DL00
6



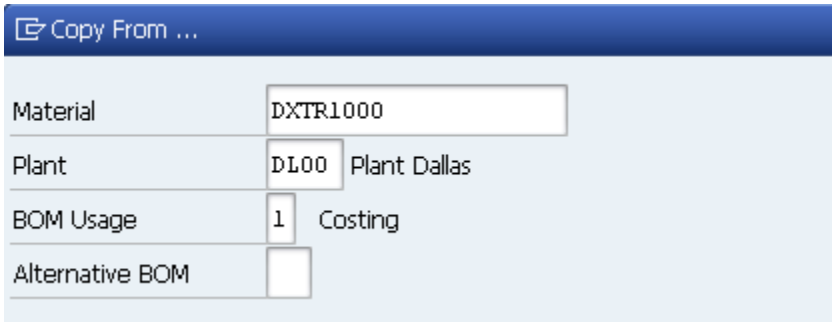
Create material BOM: Initial Screen

Create variant of...

Material	DXTR4000
Plant	DL00
BOM Usage	6
Alternative BOM	

On the Copy From screen, enter material **DXTR1###**, **DL00** as plant and **1**.



DXTR1###, DL00, 1



Copy From ...

Material	DXTR1000
Plant	DL00 Plant Dallas
BOM Usage	1 Costing
Alternative BOM	

Now, click on .

Copy the bill of materials by clicking  first and then .


Create material BOM: General Item Overview

Subitems | New Entries | Header | Validity


Material: DXTR4000 Deluxe Touring Bike (white)
Plant: DL00 Plant Dallas
Alternative BOM: 1

Material | Document | General

Item	ICt	Component	Component description	Quantity	Un
0010	L	TRWA1000	Touring Aluminum Wheel Assembly	2	EA
0020	L	TRFR1000	Touring Frame-Black	1	EA
0030	L	DGAM1000	Derailleur Gear Assembly	1	EA
0040	L	TRSK1000	Touring Seat Kit	1	EA
0050	L	TRHB1000	Touring Handle Bar	1	EA
0060	L	PEDL1000	Pedal Assembly	1	EA
0070	L	CHAN1000	Chain	1	EA
0080	L	BRKT1000	Brake Kit	1	EA
0090	L	WD0C1000	Warranty Document	1	EA
0100	L	PCKG1000	Packaging	1	EA

Your screen should look similar to the one shown in the picture above. Change the component of item position 20 to the frame previously created (**TRFR4###**) and click on .

TRFR4###

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



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 Operations

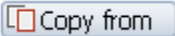
Material: DXTR4000
Plant: DL00
Sales document: [] Sales Document Item: []
WBS Element: []
Group: []

Validity

Change Number: []
Key date: 07/14/2016
Revision level: []

Enter your material **DXTR4###** and plant **DL00**. Then, click on

DXTR4###, DL00



Make sure that **Routing** is selected on the Select Type screen, and click on

Routing




Select Type

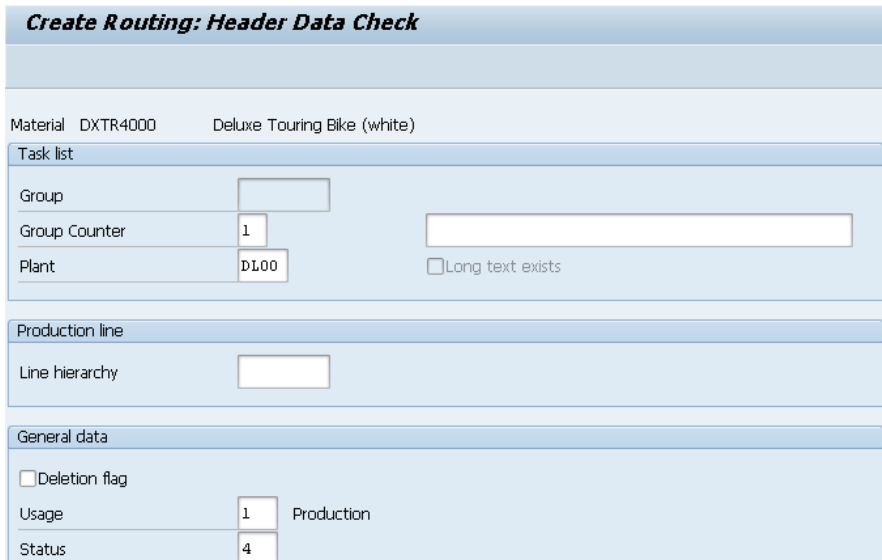
Routing
 Reference Operation Set
 Rate Routing
 Reference Rate Routing

[Green Checkmark] [Red X]

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 . This will produce the following screen.



Create Routing: Header Data Check

Material DXTR4000 Deluxe Touring Bike (white)

Task list

Group

Group Counter 1

Plant DL00 Long text exists

Production line

Line hierarchy

General data


Deletion flag

Usage 1 Production


Status 4

Set the status to **Released (general)** and click  or press Enter.

4

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

Now, click on .

Click on the exit icon  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**.


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, 1

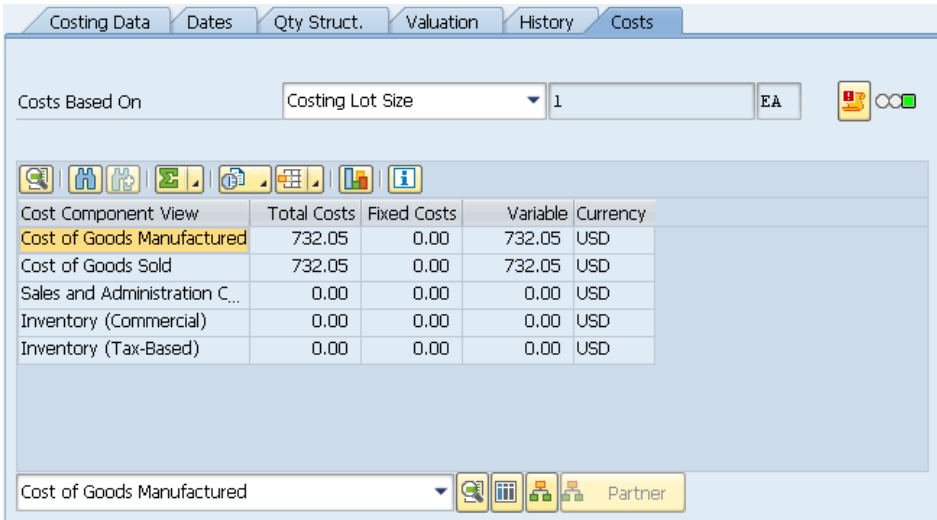
Compare with the screen shown below.

Click  or press Enter.

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

Current date

To display the exact cost components, select  or Costs → Display Cost Components. Select  again and Choose Layout.... Select the Cost Component Groups.




The screenshot shows the SAP Costing Data interface. At the top, there are tabs for Costing Data, Dates, Qty Struct., Valuation, History, and Costs. Below the tabs, there is a section for 'Costs Based On' with a dropdown menu set to 'Costing Lot Size' and a value of '1'. To the right of this section are icons for 'EA' and a refresh button. Below this is a toolbar with various icons. The main area contains a table with the following data:

Cost Component View	Total Costs	Fixed Costs	Variable	Currency
Cost of Goods Manufactured	732.05	0.00	732.05	USD
Cost of Goods Sold	732.05	0.00	732.05	USD
Sales and Administration C...	0.00	0.00	0.00	USD
Inventory (Commercial)	0.00	0.00	0.00	USD
Inventory (Tax-Based)	0.00	0.00	0.00	USD

At the bottom of the interface, there is a dropdown menu set to 'Cost of Goods Manufactured' and a 'Partner' button.

Select  to save your costing.

Click  twice to navigate back to the SAP Easy Access menu.



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###

Price Update: Mark Standard Price

Posting Period/Fiscal Year: 7 2016 Marking Allowance

Company Code: US00 to

Plant: DL00 to

Material: DXTR4000 to

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

The system should display the following message:

```

Message Text
-----
***** Summary : *****
Of 1 materials, 1 cost estimates were updated successfully

```

Click until you reach the SAP Easy Access Menu.



Step 7: 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 (Chief Accountant)

To view prices, follow the menu path:


Menu path

Logistics ▶ **Materials Management** ▶ **Material Master** ▶ **Material Display** ▶ **Display Current**

Choose your Material and select only the *Costing 2* view. Enter plant **DL00**. The market future price is displayed in the left costing column (Future). Compare with the screenshot shown below.

DXTR4###
DL00

Standard Cost Estimate				
Cost Estimate	Future		Current	
Period / Fiscal Year	7	2016	0	
Planned price	732.05		0.00	
Standard price			1,400.00	

Click on the exit icon  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 . Choose the **current period**, company code **US00**, plant **DL00** and your bike **DXTR4###**. Remove the Test Run indicator and release the price by selecting . The system displays the message:

Current period, US00
DL00, DXTR4###

Message Text

```
Price change document 3000000001 posted
***** Summary : *****
Of 1 materials, 1 cost estimates were updated successfully
```

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

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



Step 9: View Prices

Task Review the current prices.

Time 5 min

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 and select only the *Costing 2* view. Enter plant **DL00**.

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.

Standard Cost Estimate				
Cost Estimate	Future		Current	
Period / Fiscal Year	0		7	2016
Planned price	0.00		732.05	
Standard price			732.05	

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



 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. Type 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.

