

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
G.B.I.
Release 6.04

Level

Undergraduate
Graduate
Beginner

Focus

Product Costing

Author

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Version

2.11

MOTIVATION

The data entry requirements in the controlling exercises (CO 1 thorough CO 4) 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 4). However, it is recommended.

NOTES

This case study uses the Global Bike Inc. (G.B.I.) 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.

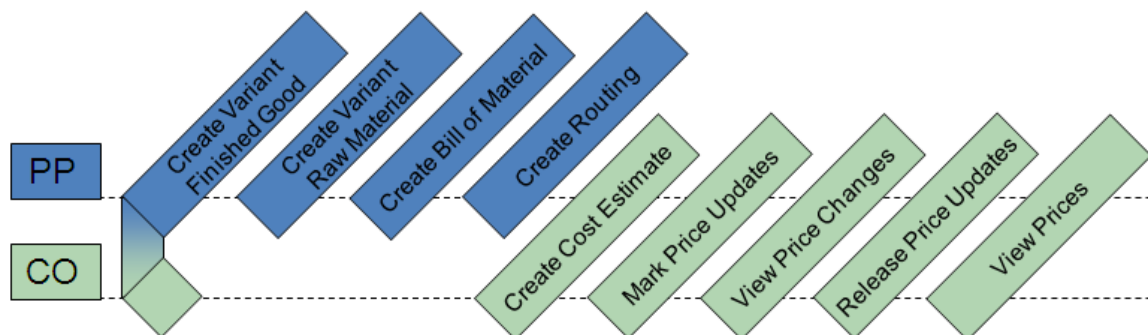
Employees involved Jermain Kumins (Production Data Administrator)

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.

Process description



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).

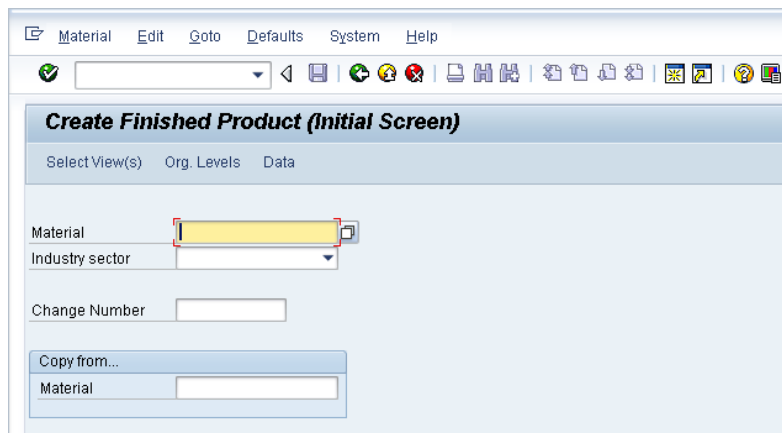
Name (Position) Jermain Kumins (Production Data Administrator)

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*
- *Accounting 1*
- *Costing 1*

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

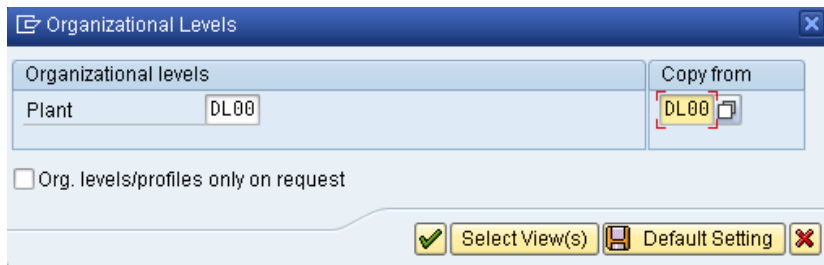
Basic Data 1
Basic Data 2
Accounting 1
Accounting 2
Costing 1
Costing 2


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

Create views selected


On the Organizational Levels screen, enter plant **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.



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*

- *Basic Data 2*

Basic Data 1

- *Accounting 1*

- *Accounting 2*

Basic Data 2

- *Costing 1*

- *Costing 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.



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)

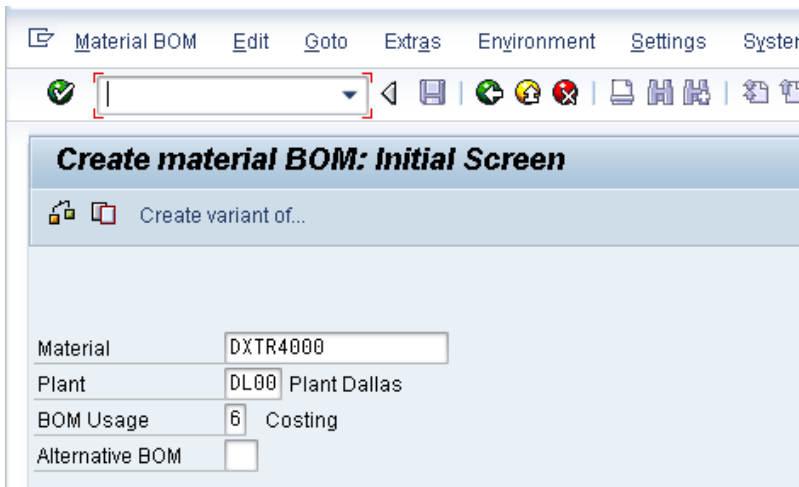
To create a bill of material, follow the menu path:

Menu path

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

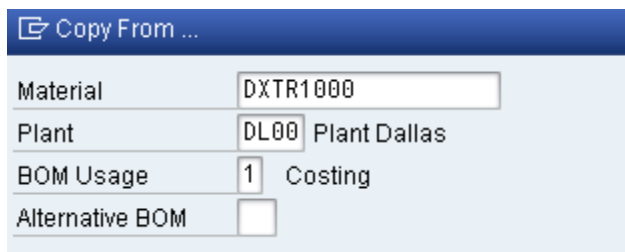
On the following screen, enter material **DXTR4###**, plant **Dallas (DL00)** and select **Costing (6)** as BOM usage. Compare with the screen shown below. Then, click on  or hit F7.

DXTR4###, DL00
6





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

DXTR1###, DL00, 1



Now, click on .


Copy the bill of materials by clicking  first and then .

Create material BOM: General Item Overview


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

Material | Document | General

It...	I...	Component	Component description	Quantity	U.	A.	S..	Valid Fr
0010	L	TRWA1000	Touring Aluminum Whee...	2	EA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	04/18/2
0020	L	TRFR1000	Touring Frame-Black	1	EA	<input type="checkbox"/>	<input type="checkbox"/>	04/18/2
0030	L	DGAM1000	Derailleur Gear Assembly	1	EA	<input type="checkbox"/>	<input type="checkbox"/>	04/18/2
0040	L	TRSK1000	Touring Seat Kit	1	EA	<input type="checkbox"/>	<input type="checkbox"/>	04/18/2
0050	L	TRHB1000	Touring Handle Bar	1	EA	<input type="checkbox"/>	<input type="checkbox"/>	04/18/2
0060	L	PEDL1000	Pedal Assembly	1	EA	<input type="checkbox"/>	<input type="checkbox"/>	04/18/2

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.



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.

The screenshot shows the 'Create Routing: Initial Screen' in SAP. The window title is 'Routing' and the menu bar includes 'Routing', 'Edit', 'Goto', 'Details', 'Extras', 'Environment', 'System', and 'Help'. The toolbar contains various icons for navigation and actions. The main area is titled 'Create Routing: Initial Screen' and has sub-titles for 'Copy from', 'Routings', 'Sequences', and 'Operations'. The form contains the following fields:

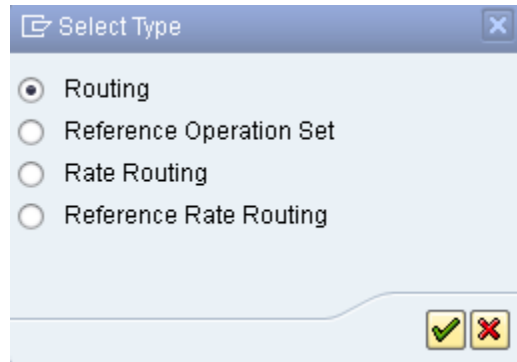
- Material: []
- Plant: []
- Sales Document: [] Sales Document Item: []
- WBS Element: []
- Group: []
- Validity section:
 - Change Number: []
 - Key date: 04/20/2011
 - Revision Level: []
- Additional data section:
 - Profile: []

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



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.

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.



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.

Create Material Cost Estimate with Quantity Structure

Costing Structure On | Detail List On | Hold | F4 | ?

Material: DXTR4000
Plant: DL00

Costing Data | Dates | Qty Struct.



Costing Variant: PPC1
Costing Version: 01
Costing Lot Size: 1
Transfer Control:

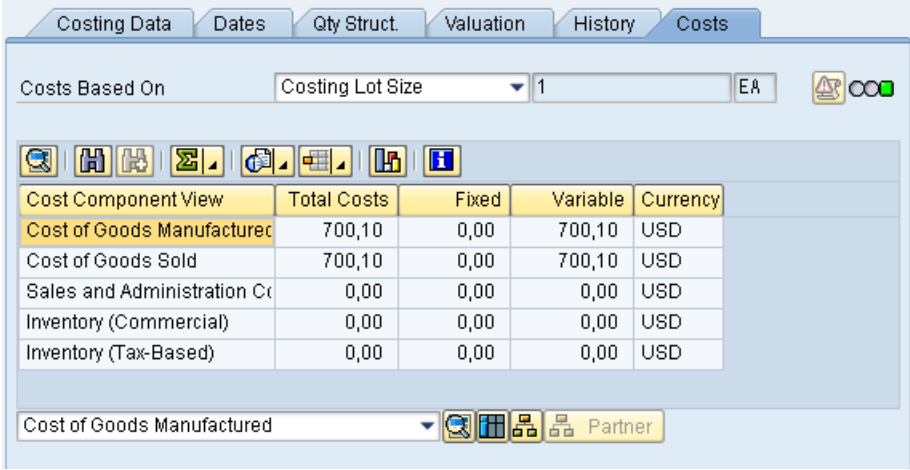
Click or press Enter.

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

Material costs of 700.10 USD are calculated for the Deluxe Touring Bike.


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



The screenshot shows the SAP Costing Data interface. The 'Costs' tab is active. The 'Costs Based On' field is set to 'Costing Lot Size' with a value of '1'. Below the table, the 'Cost of Goods Manufactured' is selected, and the 'Partner' field is visible.

Cost Component View	Total Costs	Fixed	Variable	Currency
Cost of Goods Manufactured	700,10	0,00	700,10	USD
Cost of Goods Sold	700,10	0,00	700,10	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

Select  to save your costing.

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



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
DL, DXTR4###

Price Update: Mark Standard Price

Release Other Prices Log

Posting Period/Fiscal Year: 7 2011 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.



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 2011	0
Planned price	700,10	0,00
Standard price		1.400,00

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



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 . The system displays the message:

Current period, US00
DL00, DXTR4###

Message Text

```
Price change document 3000013951 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.



 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	2011
Planned price	0,00		700,10	
Standard price			700,10	

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

