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.

MOTIVATION
The data entry requirements in the controlling exercises (CO 1 through 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 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.
CASE STUDY

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:

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.

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

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

On the Organizational Levels screen, enter plant DL.00 (Dallas) and DL.00 under Copy From. Compare with the screen shown below. Then, click on .
On the Basic Data 1 tab, change the material description to Deluxe Touring Bike (white). Then, click on ☑️ to save your material.

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:

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**

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 ☑️.

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

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).

**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.

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

Now, click on ☑.

Copy the bill of materials by clicking ☐ first and then ☑.
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 

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.

**Create Routing: Initial Screen**

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

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

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

<table>
<thead>
<tr>
<th>Material</th>
<th>DXTR1###</th>
<th>Deluxe Touring Bike (White)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task list</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Counter</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Plant</td>
<td>DL00</td>
<td></td>
</tr>
<tr>
<td>Long text exists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production Info</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line hierarchy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Deletion flag</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usage</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Status</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Planner group</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Set the status to **Released (general)** and click ✔ or 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 ✔. 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:

1. **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.

![Create Material Cost Estimate with Quantity Structure](image)

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

To display the exact cost components, select \[\text{Costs} \rightarrow \text{Display Cost Components}\]. Select \[\text{again and Choose Layout}....\] Select the \[\text{Cost Component Groups}\].

Select \[\text{to save your costing.}\]

Click \[\text{twice to navigate back to the SAP Easy Access menu.}\]
Mark Price Updates

**Task**  Mark the standard cost estimate.  
**Short Description**  Transfer the cost estimate to the material master record.  
**Name (Position)**  Jamie Shamblin (Cost Accountant)  
**Time**  5 min

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 🔄.

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.  

**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.

<table>
<thead>
<tr>
<th>Standard Cost Estimate</th>
<th>Future</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period / Fiscal Year</td>
<td>7 2013</td>
<td>0</td>
</tr>
<tr>
<td>Planned price</td>
<td>732.05</td>
<td>0.00</td>
</tr>
<tr>
<td>Standard price</td>
<td>1,400.00</td>
<td></td>
</tr>
</tbody>
</table>

Click on the exit icon 🎁 to return to the SAP Easy Access Menu.
Release Price Updates

**Task** Release the price updates.

**Short Description** Release the price updates.

**Name (Position)** Shuyuan Chen (Chief Accountant)

To update the price, follow the menu path:

- **Logistics** ➜ **Production** ➜ **Product Cost Planning** ➜ **Material Costing** ➜ **Price Update**

Select ![Release](image). Choose the **current period**, company code **US00**, plant **DL00** and your bike **DXTR4###**. Remove the Test Run indicator and release the price by selecting ![Release](image). The system displays the message:

```
Price change document 3000013951 posted
************************ Summary : ************************
Of 1 materials, 1 cost estimates were updated successfully
```

Click on ![Release](image). You should find your material in the **Price Update: Release Standard Price** screen.

Click on the exit icon ![Exit](image) 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:

Logistics ► Materials Management ► Material Master ► Material ►
Display ► Display Current

Choose your Material and select only the Costing 2 view. Enter plant
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.

<table>
<thead>
<tr>
<th>Cost Estimate</th>
<th>Future</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period / Fiscal Year</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Planned price</td>
<td>0.00</td>
<td>732.05</td>
</tr>
<tr>
<td>Standard price</td>
<td></td>
<td>732.05</td>
</tr>
</tbody>
</table>

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