

Controlling Product Costing (CO-PC)

This document is intended to help instructors understand the case study process and manage the learning process in and outside the classroom. The main focus lies on prerequisites and common tasks such as testing and trouble-shooting.

Product

SAP S/4HANA 2020
Global Bike

Level

Instructor

Focus

Controlling

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4.1

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MOTIVATION

Theoretical lectures explain concepts, principles, and theories through reading and discussion. Therefore, they enable students to acquire knowledge and gain theoretical insights.

In contrast, case studies allow them to develop their abilities to analyze enterprise problems, learn and develop possible solutions, and make sound decisions.

The main objective of the Global Bike case studies in general is for students to understand the concept of integration. These descriptive and explanatory case studies will allow students to understand the importance and the advantages of integrating enterprise areas using an S/4HANA system.

The main goal of this document is to help instructors prepare the SAP system for the Controlling case study Product Costing process and to support them trouble-shoot problems that might occur during the course.

Beside technical and didactic prerequisites, the lecturer notes list SAP transactions for testing and correcting student results in the SAP system. In addition, this document describes common problems and explains their reason and solution.

Prerequisites

Note Before using this case study in your classroom please make sure that all technical (month-end closing, user management etc.) and didactic prerequisites are fulfilled. Such prerequisites are briefly pointed out below. Detailed documentation can be displayed at and downloaded from the *Learning Hub of SAP UA* or the *UCC websites*.

Technical Prerequisites

The Controlling case study Product Costing is based on a standard SAP S/4HANA client with the current Global Bike dataset. Before processing the case study on your own or with your students, all general settings should be checked.

Note: With the current version of the GBI client a **year-end closing** is not necessary, because it has already been automated or because it is not needed for the process described in the curriculum material.

Year-end closing

User accounts in the SAP system need to be created or unlocked.

User management

These student user accounts should end with a three-digit numeric number (e.g. LEARN-001, LEARN-002 etc.). This number will be represented by ### in the case study and helps differentiate customer accounts, products etc.

In an SAP S/4HANA Global Bike client, 1000 user accounts from **LEARN-000** to **LEARN-999** already exist. These users need to be unlocked. The initial password for each LEARN-### account is set to **tlestart**.

LEARN-000 to
LEARN-999

tlestart

Transaction **ZUSR** (app User Maintenance) was developed in the Global Bike client in order to mass maintain SAP user accounts. For a detailed description of this and SAP standard transactions for user management (**SU01** and **SU10**) please refer to the lecturer notes „User Management“ (see: current Global Bike curriculum → chapter 99 – Instructor Tools).

ZUSR

SU01
SU10

All LEARN-### user accounts have been assigned to the role **Z_UCC_GBI_SCC** and have authorizations to use all applicative transactions in the SAP S/4HANA system. The role allows access to all transactions necessary for Global Bike exercises and case studies. If you need access to system-critical transactions, i.e. for development purposes, you may assign the composite profile **SAP_ALL** to your student accounts.

It is useful for the instructor to have a user account available for testing that has the same authorizations as the student accounts. You may use the predefined instructor account **LEARN-000** for this purpose.

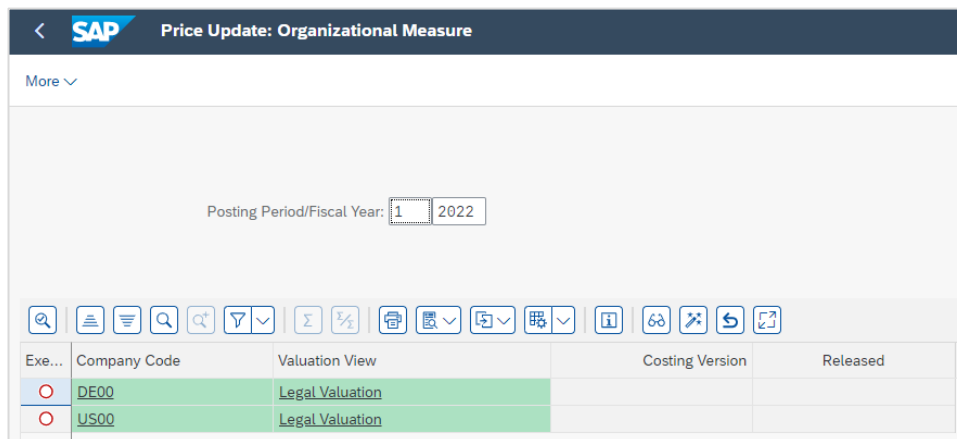
Instructor account
LEARN-000

In order to be able to transfer the results of the cost estimates to the corresponding material master records marking allowance must be enabled.

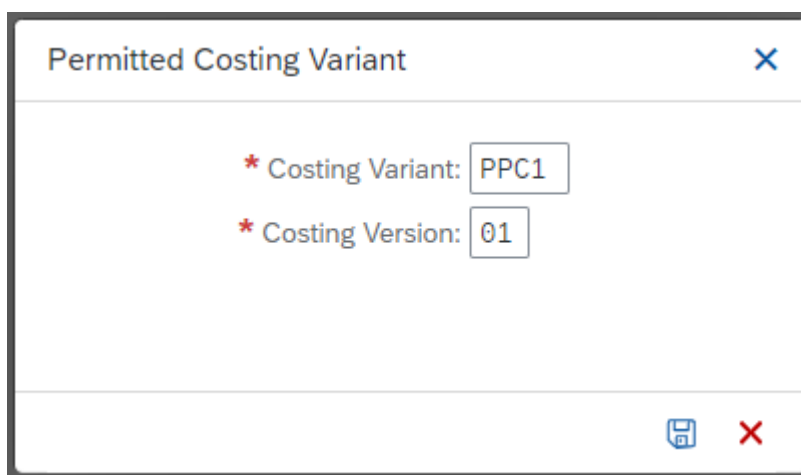
Open app *Release Material Cost Estimates* and click on




Your screen should look similar to the one depicted below.



Make sure your selected the period and fiscal year in which you want to update prices and click on **Legal Valuation** in the US00 row, which opens up the following screen.



Enter **PPC1** as *Costing Variant* and click on  (Issue allowance for marking). Price update is now possible.

Repeat the steps if you require marking allowance for another company code or period.

If you plan on using the CO-PCII case study enter **ZPC1** as *Costing Variant* for company code **DE00**.

Didactic Prerequisites

In order to successfully process this case study, students should be familiar with the **navigation** in SAP systems, especially the SAP Fiori Launchpad, the SAP transaction concept as well as possible documentation and help options. We highly recommend using the *navigation slides* and the *navigation course* (see: current GBI curriculum → chapter 2 – Navigation).

Navigation

In addition, it has been proven beneficial that students have a thorough understanding of the **historic background** and the enterprise structure of the Global Bike concern before they start working on the SAP system. For this purpose we recommend the *case study „Global Bike Group“* (see: current GBI curriculum → chapter 3 – GBI).

Company background

Because the case study is not based on the exercises, it is not necessary to have processed the CO exercises before you start with the case study. However, it is recommended.

In order to function properly this case study needs a **Global Bike client version** that is equal to or higher than the case study version (see cover page). Please check. If you do not know the client version please use the app *Global Bike Version* within your SAP S/4HANA system or contact your UCC team.

Global Bike client
version

Global Feedback

Do you have any suggestions or feedback about Global Bike? Please send it to our email-address **gbi@ucc.ovgu.de** which is used to gather feedback globally. All emails will be evaluated by the persons responsible for the curriculum bi-weekly. This way your feedback might influence future releases directly.

Please note that any support requests send to this email-address will be ignored. Please keep using the common support channels for your support requests.



Student Assessment

Note With the app listed below you can check and correct master and transactional data that your students have created during your course.

Global Bike Monitoring Tool (beta)

We are developing a Global Bike Monitor, which is available for the CO-PC case study.

A detailed tutorial for this tool is available in the module *99 Instructor Tools* of the current Global Bike curriculum.

Please keep in mind that this transaction is an additional functionality designed by the UCC Magdeburg and still in development. Therefore, we kindly ask you to send any feedback or detailed error descriptions to the following address: **gbi@ucc.ovgu.de**



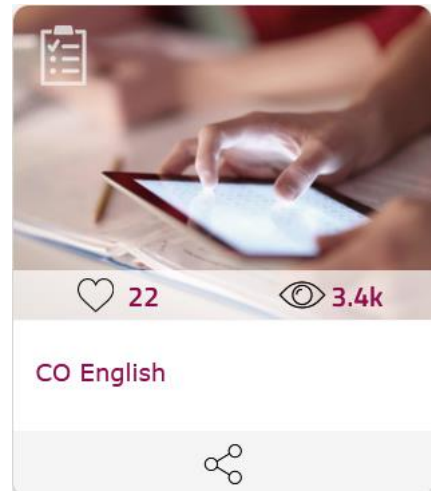
Learning Snacks CO

Note With the Learning Snacks CO you can check your learning success in the module CO.

What is Learning Snacks?

Learning Snacks offers the possibility to check the knowledge gained during the case studies and exercises by means of small single-choice questions. Depending on the selected module, you can play through a Learning Snacks (CO here). Learning Snacks can be used with or without prior registration. By having your own account, you can create snacks yourself, like other snacks and receive some kind of points for each question you answer correctly.

You can find detailed instructions on Learning Snacks in the module "98 Cross-Module".



Problem: Copy from field not filled out

Symptom Upon saving Finished Good DXTR4### or Raw Material TRFR4### not all required fields are filled out.

Reason The Copy from field was not filled out.

Solution Since saving is not possible you can abort the transaction and fill out the fields with the correct material.

Verify Issue

Open the app *Change Material* and insert der material you are looking for (exp. DXTR4###). Check if the fields are filled out as shown on the picture below.

Fiori App
DXTR4###

SAP Change Material DXTR4000 (Finished Product)

→ Additional Data Org. Levels Check Screen Data Services for Object More

Basic data 1 Basic data 2 Sales: sales org. 1 Sales: sales org. 2 Sales: General/Plant Ext. SPP Basic Data

Material: DXTR4000 ⓘ

* Descr.: Deluxe Touring Bike (white) ⓘ ⓘ

General Data

* Base Unit of Measure: EA each Material Group: BIKES


Old material number: Ext. Matl Group: ⓘ

Division: BI Lab/Office: ⓘ

Product allocation: Prod.hierarchy: ⓘ

X-Plant Mat.Status: Valid from: ⓘ

Assign effect. vals: GenItemCatGroup: NORM Standard item

Leave the app by clicking on  Exit. Click *No* in the Exit window.

Exit ⓘ

You are about to exit.

❓ Do you want to save your data for this material first?

Yes No ⓘ Cancel



Problem: Wrong Valuation Class


Symptom You receive an error message when trying to save the raw material.

Reason Another material type with was entered in the Copy from field.

Solution Cancel the transaction and start the process step again.

Verify Issue

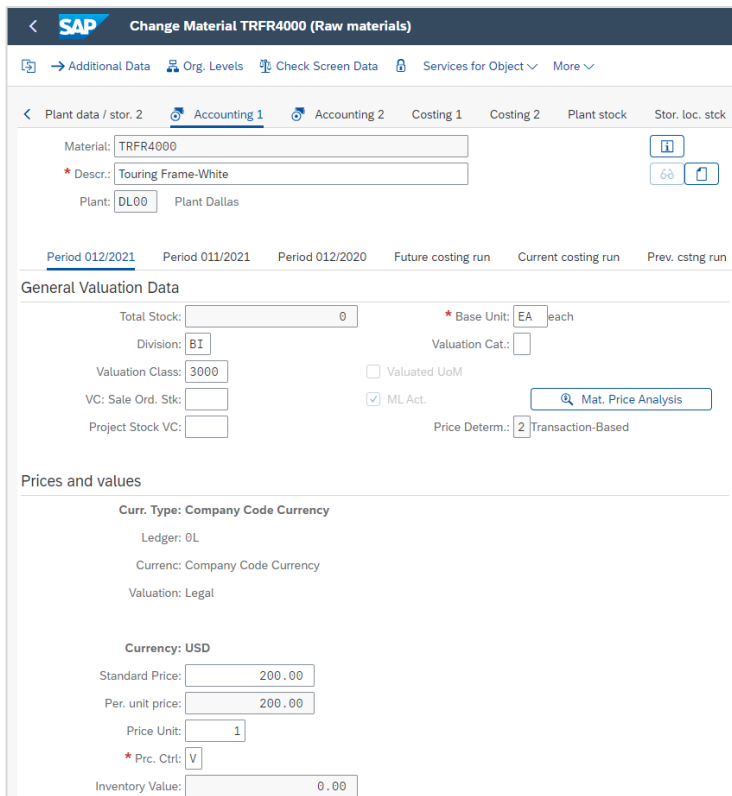
Upon saving the raw material TRFR4### you receive the following message.

 Valuation class 7920 not allowed for material type Raw materials

This is caused by an already filled out *Copy from* field of the previous step. If DXTR1### is not replaced with TRFR1### the wrong valuation class is copied.

Open *Change Material*, enter **TRFR1###** and select **Accounting 1**. The proper Accounting 1 view is depicted below in the screenshot.

Fiori App
TRFR1###
Accounting 1



SAP Change Material TRFR4000 (Raw materials)

→ Additional Data Org. Levels Check Screen Data Services for Object More

Plant data / stor. 2 **Accounting 1** Accounting 2 Costing 1 Costing 2 Plant stock Stor. loc. stk

Material: TRFR4000
* Descr.: Touring Frame-White
Plant: DL00 Plant Dallas

Period 012/2021 Period 011/2021 Period 012/2020 Future costing run Current costing run Prev. cstng run

General Valuation Data

Total Stock: 0 * Base Unit: EA each
Division: BI Valuation Cat.:
Valuation Class: 3000 Valuated UoM
VC: Sale Ord. Stk: ML Act. Mat. Price Analysis
Project Stock VC: Price Determin.: 2 Transaction-Based

Prices and values

Curr. Type: Company Code Currency
Ledger: 0L
Currency: Company Code Currency
Valuation: Legal

Currency: USD
Standard Price: 200.00
Per. unit price: 200.00
Price Unit: 1
* Prc. Ctrt: V
Inventory Value: 0.00

Leave the transaction by clicking on . Click *No* in the Exit window.

Open the transaction again and proceed as described in the case study.



Problem: Bill of Material empty / Cost Estimate too low

Symptom The Bill of Material is empty or the Cost Estimate is close to zero.

Reason The BOM was created without reference to DXTR1###. This will not produce an error message from the system, therefore students can proceed with the case study. The Cost Estimate will be close to zero as the BOM is empty and no material can be costed.

Solution If the wrong BOM was not saved yet the transaction can be aborted. Else the BOM has to be deleted.

Identify Issue

The Material Cost Estimate should be **USD 732.05**. If it is close to zero it might be because of an empty Bill of Material. Open the Fiori App *Change Bill of Material*.

Fiori App



Enter the material in question (**DXTR4###**), Plant **DL00** and BOM Usage **6 (costing)**.

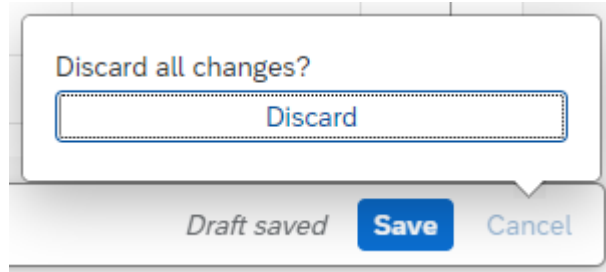
DXTR4###
DL00
6 (costing)

Compare with the screen shown below.

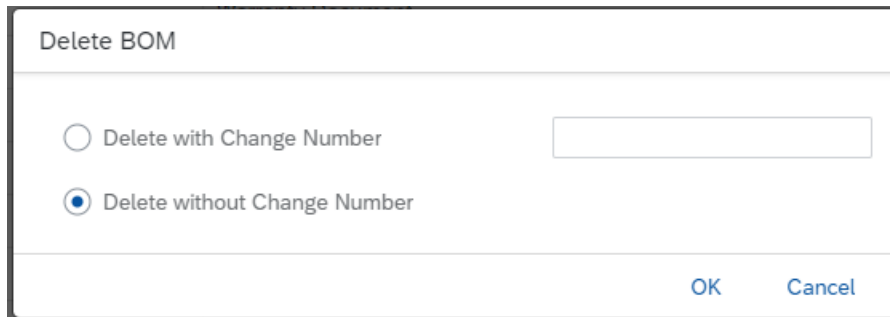
Item N...	Item Category	Component	Component Description	Component Quantity	Valid From	Valid To	Chan
0020	L (Stock Item)	TRFR4000	Touring Frame-White	1.000 EA	11/04/2021	12/31/9999	>
0030	L (Stock Item)	DGAM1000	Derailleur Gear Assembly	1.000 EA	11/04/2021	12/31/9999	>
0100	L (Stock Item)	PCOG1000	Packaging	1.000 EA	11/04/2021	12/31/9999	>
0060	L (Stock Item)	PEDL1000	Pedal Assembly	1.000 EA	11/04/2021	12/31/9999	>
0080	L (Stock Item)	BRKT1000	Brake Kit	1.000 EA	11/04/2021	12/31/9999	>
0090	L (Stock Item)	WDOC1000	Warranty Document	1.000 EA	11/04/2021	12/31/9999	>
0070	L (Stock Item)	CHAN1000	Chain	1.000 EA	11/04/2021	12/31/9999	>
0040	L (Stock Item)	TRSK1000	Touring Seat Kit	1.000 EA	11/04/2021	12/31/9999	>
0050	L (Stock Item)	TRHB1000	Touring Handle Bar	1.000 EA	11/04/2021	12/31/9999	>
0010	L (Stock Item)	TRWA1000	Touring Aluminum Wheel Assembly	2.000 EA	11/04/2021	12/31/9999	>

Solution

If the BOM was not saved yet, the student can abort the transaction with [Cancel](#) and click *Discard* in the following window.



If the BOM was already saved, choose [Delete](#). Select *Delete without Change Number* and press *OK* in the following popup window.



Leave the screen by clicking on  to reach the SAP Fiori Launchpad.

You can continue with the case study from step Create Bill of Material for Product Costing.



Problem: Price Update not possible

Symptom During Price Update zero materials are updated.

Reason No cost estimate exists for the selected dates. During cost estimate creation the proper dates have to be entered. The default is the first of the following period, this has to be changed to the current date.

Solution Create a valid cost estimate

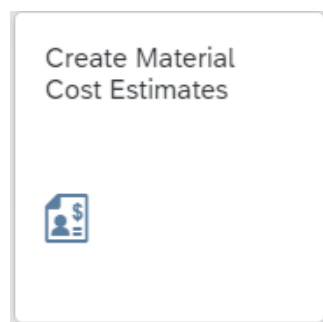
Identify Issue


The following message appears after a price update run.

Δ	T	Material	Plnt	AppAr	MsgNo	Message Text
■	I			CK	790	***** Summary : *****
■	I			CK	705	Of 0 materials, 0 cost estimates were updated successfully

Make sure the current period and year are entered (see case study) before executing the price update. If yes, leave the window and open the Fiori App *Create Material Cost Estimates*.

Fiori App



In the *Create Material Cost Estimate with Quantity Structure* Screen click on  (Display). Enter your material **DXTR4###**, plant **DL00**, costing variant **PPC1**, costing version **6** and the **current date**. Compare with the screen below. Then press Enter.

DXTR4###
DL00
PPC1
6
Current date

If the cost calculation is not valid on the current date, you will receive the following message:

✔ No cost estimate found (please check your entry) [View Details](#)

Leave the screen by clicking on  to go back to the SAP Fiori Launchpad.

Solution

Open the Fiori app *Create Material Cost Estimates* and proceed as described in the case study starting with step Create Cost Estimate.

Fiori App



Solution: CO-PC Challenge

Lernziel Understand and perform a product costing process.

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.

Create alternative Bill of Material for Product Costing

In the transaction **Create Bill of Material** you can create an alternative bill of material for your material DXTR4####.

Fiori App



Enter your material **DXTR4####**, plant **Dallas (DL00)** and click **Go**. Select your BOM and choose *Create Alternative*.

DXTR4####
DL00
6
2

Enter **2** as Alternative BOM. Compare your entries with the following screen, then click on **OK** or press Enter.

Create Alternative

Material: DXTR4000

Plant: DL00

BOM Usage: 6

Alternative BOM:

Change Number:

Copy Components: ☒

Valid From:

Selected Alternative: 1

Change Record:

OK

Cancel

You can now see the details of the BOM with the copied components.

In this screen insert the materials **Touring Tube (TRTB1000)** and **Touring Tire (TRTR1000)**. Enter Item Category **L** and Quantity **2**.

1

TRTB1000
TRTR1000
L
2

DXTR4000

Deluxe Touring Bike (white), Plant:Plant Dallas, BOM Usage:Costing, Alternative:02

View Change Records

Components Timeline Header Attributes Header Attachments Header Long Text

Select by Date <input type="text" value="06/26/2022"/> <input type="button" value="Calendar"/> Standard* <input type="button" value="Search"/> <input type="button" value="+"/> <input type="button" value="Print"/> <input type="button" value="Maintain Software"/>				
<input type="checkbox"/>	Item Category	Component	Component Description	Comp
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	TRWA1000 <input type="button" value="Copy"/>	Touring Aluminum Wheel Assembly	2.000
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	TRFR4000 <input type="button" value="Copy"/>	Touring Frame-White	1.000
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	DGAM1000 <input type="button" value="Copy"/>	Derailleur Gear Assembly	1.000
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	TRSK1000 <input type="button" value="Copy"/>	Touring Seat Kit	1.000
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	TRHB1000 <input type="button" value="Copy"/>	Touring Handle Bar	1.000
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	PEDL1000 <input type="button" value="Copy"/>	Pedal Assembly	1.000
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	CHAN1000 <input type="button" value="Copy"/>	Chain	1.000
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	BRKT1000 <input type="button" value="Copy"/>	Brake Kit	1.000
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	WDOC1000 <input type="button" value="Copy"/>	Warranty Document	1.000
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	PCKG1000 <input type="button" value="Copy"/>	Packaging	1.000
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	TRTB1000 <input type="button" value="Copy"/>	Touring Tube	2.000
<input type="checkbox"/>	L(Stock item) <input type="button" value="v"/>	TRTR1000 <input type="button" value="Copy"/>	Touring Tire	2.000

Create

your BOM.

Create Routing for Product Costing

In the Fiori App **Create Routing** you create a new routing for your material DXTR4###.

Fiori App



To achieve this proceed as described in the case study, just enter as template material the material **DXTR4###** you created in the case study and the newly created BOM.

DXTR4###

< **SAP** Create Routing: Initial Screen

Copy from Routings Sequences Operations More

Material: DXTR4000

Plant: DL00

Sales document: Sales Document Item:

WBS Element:

Group:

Validity

Change Number:

* Key Date: 12/21/2021

Revision Level:

Additional data

Profile:

Proceed further as described in the case study.

Create Cost Estimate

Open the Fiori App *Create Material Cost Estimates*.

Fiori App



Proceed as described in the case study as well, just enter on the *Create Material Cost Estimate with Quantity Structure* under the *Qty Struct.* tab **2** as Alternative.

2

Furthermore, change the *Costing Date From* under the *Dates* tab to the **1st of the next month**. The system now calculates the costs based on the bill of materials and the routing.

1st of the next month

Material costs of **962.09** USD were calculated for the Deluxe Touring Bike.

Cost Component View	Total Costs	Fixed Costs	Variable Costs	Currency
Cost of Goods Manufactured	962.09	0.00	962.09	USD
Cost of Goods Sold	962.09	0.00	962.09	USD
Sales and Administration Costs	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

Click **Save** to save your calculation.

Mark Price Updates

To mark prices, use the app *Release Material Cost Estimates*.



In the app enter the **next period** (next month), the Company Code **US00**, the Plant **DL00** and your Material **DXTR4###**. Remove the indicator from the Test Run field.

Next month
US00
DL00
DXTR4###
Test Run

The screenshot shows the SAP 'Price Update: Mark Standard Price' app interface. The top bar includes the SAP logo and the title 'Price Update: Mark Standard Price'. Below the bar are navigation icons and a menu with 'Release', 'Other Prices', and 'More'. The main form contains the following fields and options:

- Posting Period/Fiscal Year:** 1 2022
- Company Code:** US00
- Plant:** DL00
- Material:** DXTR4000
- Marking Allowance:** (button with a plus icon)
- Valuation View:**
 - Legal Valuation:** ☒
- Processing Options:**
 - Test Run:** ☐
 - With List Output:** ☒
 - Parallel Processing:** ☐
 - Background Processing:** ☐

Execute the marking by clicking **Execute**.

The system should display the following message:

SAP Price Update						
Log created on 12/21/2021						
Information 2						
Warnings						
Error						
Total 2						
	Material	Plnt	AppAr	MsgNo	Message Text	ItmNo
■	I		CK	790	***** Summary : *****	
■	I		CK	705	Of 1 materials, 1 cost estimates were updated successfully	

View Price Changes

Open the App **Display Material**.

Fiori App

Display Material

Choose your Material **DXTR4###** 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

	Costing 2	Plant stock	Stor. loc. stck	WM Execution	WM Packaging	Seg. Valuation Data
Material:	DXTR4000					
Descr.	Deluxe Touring Bike (white)					
Plant:	DL00	Plant Dallas				
Standard Cost Estimate						
Cost Estimate	Future	Current	Previous			
Period / Fiscal Year:	7 2022	6 2022	0			
Planned Price:	962.09	926.09	0.00			
Standard price:	926.09					