Warehouse Management (WM)
Case Study I

This case study explains an integrated warehouse management process which is triggered by a purchase order for a warehouse-managed storage location.

**MOTIVATION**

Warehousing has significant value for logistics.

Current trends such as higher cost pressure, shorter cycles of innovation, higher customer expectations and globalization of markets make great demands on companies, in particular on warehouse logistics. This is especially difficult in industries with high differentiation like the consumer goods industry. Furthermore, customers have increasingly higher demands on reliability, promptness and flexibility of deliveries.

Warehouse management systems support the global flow of goods between the producer and the purchaser and facilitate near fail-proof logistic operations in increasingly complex supply chains.

**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 WM exercises. 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.
**Learning Objective** Understand and perform a warehousing process for ext. goods   

**Time** 70 min

**Scenario** Due to increasing sales output in your San Diego distribution center, the management has decided to install a Warehouse Management System there. These adjustments have just been completed. Now the new system needs to be tested. For this purpose, trading goods shall be procured from a vendor and put in stock in San Diego using the new warehouse management system.

**Employees involved** Tirrell Winsten (Buyer)  
Wilton Saban (Inventory Supervisor)  
Carolin Bruzik (Warehouse Supervisor)  
Sunil Gupta (Warehouse Employee)  
Yoshi Agawa (Receiving Clerk)

In order to receive goods from a vendor you need to create a purchase order. Then, goods will be sent from the vendor to the distribution center. As soon as you register the receipt of the goods in San Diego, you will create a transfer order for the received goods. Due to this order, the Warehouse Management will put the goods into stock. In conclusion, you will check if the goods were sorted into the correct storage bins. Because this case study focuses on Warehouse Management detailed instructions of how to receive the invoice and how to pay the vendor are not included. However, you may use respective parts of the Materials Management (MM) case study to finalize the procurement process and see the financial impact.
Create Purchase Order

**Task** Create a purchase order.  

**Time** 10 min

**Short Description** Use the Easy Access Menu to create an immediate purchase order for materials from a vendor, i.e. to start the procurement process without having created a purchase requisition before.

**Name (Position)** Tirrell Winsten (Buyer)

To create a purchase order, follow the menu path:

**Menu path**

Logistics ► Materials Management ► Purchasing ► Purchase Order ► Create ► Vendor / Supplying Plant Known

In the *Create Purchase Order* screen, change the type of purchase order to **Standard PO** and enter *103###* (replace ### with your number) as Vendor. Confirm your entries by clicking ✅ or Enter and accept any warning messages with Enter.

Then, fill in **US00** as Purch.Org., **N00** as Purch. Group and **US00** as Company Code.

Select 📍 to expand the Item Overview. Enter **KPAD1###** as Material (replace ### with your number), 50 as PO Quantity, **SD00** as Plant, **TG00** as Storage Location, 40 USD as Net Price and 8 days from today as Delivery Date.

In the next row, repeat your entries but choose **EPAD1###** as Material. Confirm your entries by clicking ✅ or pressing Enter.

Repeat for **EPAD1###**
Compare your entries with the screenshot above.

Then, click on ![button] to save your order. The system will assign a Standard PO document number.

Standard PO created under the number 4500000000

Click on the exit icon ![exit icon] to return to the SAP Easy Access screen.
Display Material Inventory

**Task** View the inventory of your material.  
**Time** 5 min

**Short Description** Use the Easy Access Menu to display the inventory of your material.

**Name (Position)** Wilton Saban (Inventory Supervisor)

To display the material inventory, follow the menu path:

**Logistics ► Materials Management ► Inventory Management ► Environment ► Stock ► Stock Overview**

In the **Stock Overview** screen, enter **KPAD1###** as Material (remember to replace ### with your number). Ensure that all other search criteria fields are blank and click on 🔄.

Note that the amount of your good in San Diego is zero. However, after double clicking on **SD00 DC San Diego** you can see that you have an On-Order Stock balance of 50 for your distribution center.
Repeat this task for the material **EPAD1###**.

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

Display Material Inventory Value

Task  View the value of your material inventory.  

Short Description  Use the Easy Access Menu to display the value of your material inventory.

Name (Position)  Wilton Saban (Inventory Supervisor)

To display the material inventory value, follow the menu path:

**Logistics ► Materials Management ► Inventory Management ► Environment ► Stock ► Warehouse Stock**

In the *Display Warehouse Stocks of Material* screen, enter **KPAD1###** as Material (remember to replace ### with your number). Ensure that all other search criteria fields are blank and click on **Apply**.

You can see that all values listed for this material are currently zero.

Repeat this task for the material **EPAD1###**.

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

**Task** Receive goods at receiving plant.  
**Time** 5 min

**Short Description** Use the Easy Access Menu to create a goods receipt which documents the receiving of your materials in San Diego.

**Name (Position)** Yoshi Agawa (Receiving Clerk)

To create a goods receipt, follow the menu path:

**Menu path**

Logistics ► Materials Management ► Inventory Management ► Goods Movement ► Goods Receipt ► For Purchase Order ► PO Number Known

In the *Goods Receipt Purchase Order – Username* screen, change the Material Document drop down to *Goods Receipt*, adjust the type of Goods Receipt to a *Purchase Order*, and input your *Purchase Order Number* in the blank space next to it.

If you have not written down the PO number you created in the first task, you may use the F4 help in the PO number field (first blank field next to the second drop-down field).

In the following screen, use ☰ to choose the Purchasing Documents for Material tab. Then, enter **KPAD1###** as Material and press Enter.

Now double click on your entry.
After your order number is filled in, please blank out the position field (field behind your order number).

Note: If you do not clear this field, only one of the two line items of your purchase order may be transferred.

Then, click on ![green check mark] or press Enter.

After your purchase order data comes up select the check boxes in the **OK** column. If one of the boxes is grayed out click on ![gray check mark] to close the Detail Data Screen. Make sure that Quantity is **50**, SLoc is **TG00**, Movement Type is **101** and Stock Type is **Unrestricted Use**.

Then, click on ![gray check mark] to save your receipt. The system will assign a unique material document number.

Click on the exit icon ![exit icon] to return to the SAP Easy Access screen.
Display Material Inventory

**Task** View the inventory of your material again.  
**Time** 5 min

**Short Description** Use the Easy Access Menu to display the inventory of your material again.

**Name (Position)** Wilton Saban (Inventory Supervisor)

To display the material inventory, follow the menu path:

1. Logistics ➤ Materials Management ➤ Inventory Management ➤ Environment ➤ Stock ➤ Stock Overview

In the **Stock Overview** screen, enter **KPAD1###** as Material (remember to replace ### with your number). Ensure that all other search criteria fields are blank and click on ✗.

![Stock Overview](image)

Note that the amount of your good for unrestricted use in San Diego has changed now. By double clicking on **SD00 DC San Diego** you can also see that your On-Order Stock balance is zero now.

Repeat this task for the material **EPAD1###**.

Click on the exit icon ✗ to return to the SAP Easy Access screen.
Display Material Inventory Value

**Task** View the value of your material inventory again.

**Time** 5 min

**Short Description** In this step, you will use the Easy Access Menu to display the value of your material inventory again.

**Name (Position)** Wilton Saban (Inventory Supervisor)

To display the material inventory value, follow the menu path:

**Menu path**

**Logistics ► Materials Management ► Inventory Management ► Environment ► Stock ► Warehouse Stock**

In the *Display Warehouse Stocks of Material* screen, enter **KPAD1###** as Material (remember to replace ### with your number). Ensure that all other search criteria fields are blank and click on "&gt;".

As you can see the value for the 50 units of your material has been added to the distribution center in San Diego.

Repeat this task for the material **EPAD1###**.

Click on the exit icon twice to return to the SAP Easy Access screen.
Run Bin Status Report

**Task** Check the status of your bins.  

**Short Description** Use the Easy Access Menu to run a bin status report which will display a detailed report of each storage bin within the specified warehouse.

**Name (Position)** Carolin Bruzik (Warehouse Supervisor)

To run a bin status report, follow the menu path:

**Menu path**

1. **Logistics** ➤ **Logistics Execution** ➤ **Internal Whse Processes** ➤ **Bins and Stock** ➤ **Display** ➤ **Bin Status Report**

In the *Bin Status Report: Initial Screen*, enter **100** (for your San Diego Warehouse) as Warehouse Number and **STBN*###** as Storage bin (replace ### with your number). Then, click on 🔄.

In the *Bin Status Report: Overview* screen you should see a list of all your storage bins for the entire warehouse in San Diego. Double click on one of your storage bins to get detailed information. As you can see the ordered materials are note present yet. Currently they are located in temporary bins.
Click on the exit icon twice to return to the SAP Easy Access screen.
CASE STUDY

Create Transfer Order

**Task** Create a transfer order.  

**Time** 10 min

**Short Description** Use the Easy Access Menu to create a transfer order to place your goods into your storage bin. It is a handoff from inventory management to warehouse management. The system recognizes that there are goods that have been received, but need to be put away.

**Name (Position)** Sunil Gupta (Warehouse Employee)

To create a transfer order, follow the menu path:

**Menu path**

Logistics ► Logistics Execution ► Inbound Process ► Goods Receipt for Purchase Order, Order, Other Transactions ► Putaway ► Create Transfer Order ► For Material

In the *Display Transfer Requirement: List of Material* screen, enter 100 (for your San Diego Warehouse) as Warehouse Number, KPAD1### as Material (replace ### with your number) and SD00 as Plant. Then, click on or press Enter.

In the *Transfer Requirements for Material* screen, you should see a line item describing the goods just received for your purchase order. The requirement number should be the same as the purchase order number you received earlier. Make sure that the line item is selected and click on the button.
In the *Create TO for TR 00000000XX 0001: Prepare for Putaway* screen, hit or Enter to copy your quantity of 50 from the *Palletization* section to the *Items* section. Enter **001** as Sec, **STBN-1-###** as Destination Bin (replace ### with your number) and use F4 to select *Shelf Storage* as Type. Confirm your entries by clicking or pressing Enter.

Then, click on to save your transfer order. If any warnings occur ignore them by pressing Enter. The system will assign a unique transfer order number.

Please write down this number.

Repeat the whole procedure for your material **EPAD1###** to put it in the same storage bin.

Click on the exit icon twice to return to the SAP Easy Access screen.
**CASE STUDY**

**Confirm Transfer Order**

**Task** Confirm your transfer order.  

**Time** 10 min  

**Short Description** Use the Easy Access Menu to confirm the transfer order you created in the previous step. This is confirming that the goods are physically in the storage bin indicated in the transfer order.  

**Name (Position)** Sunil Gupta (Warehouse Employee)

To confirm a transfer order, follow the menu path:

**Menu path**

Logistics ► Logistics Execution ► Inbound Process ► Goods Receipt for Purchase Order, Order, Other Transactions ► Putaway ► Confirm Transfer Order ► Single Document ► In One Step

In the **Confirm Transfer Order: Initial Screen**, enter the **Transfer Order Number** from the previous task and **100** as Warehouse Number. Then click on or press Enter.

Note: If you have not written down the number you can search for it using the transaction code **LT23**.

In the **Transfer Orders: List of Resident Documents** you have to fill in **100** as Warehouse number. Then, click on .

In the **Confirm Transfer Order: Overview of Transfer Order Items** screen you should see an overview of your transfer order created in the previous step. Review all of the details to make sure you have the correct quantity and storage bin.

Then, click on to confirm your transfer order. The system will return a success message.

Repeat this step for your other transfer order number (second material).

Click on the exit icon to return to the SAP Easy Access screen.
Run Bin Status Report

**Task** Check the status of your bins again.

**Short Description** Use the Easy Access Menu to run a bin status report, which will display a detailed report of each storage bin within the specified warehouse.

**Name (Position)** Carolin Bruzik (Warehouse Supervisor)

To run a bin status report, follow the menu path:

**Menu path**

**Logistics** ► **Logistics Execution** ► **Internal Whse Processes** ► **Bins and Stock** ► **Display** ► **Bin Status Report**

In the **Bin Status Report: Initial Screen**, enter **100** (for your San Diego Warehouse) as Warehouse Number and **STBN*###** as Storage bin (replace ### with your number). Then, click on 100.

In the **Bin Status Report: Overview** screen you should see that the StorageBin **STBN-1-###** is filled now. Click on one of your storage bins to display detailed information and check whether 50 of each of your goods are stored in it.
Note: As you can see each of the materials is dedicated to an own quant within the storage bin you have selected.

Click on the exit icon 🛋 to return to the SAP Easy Access screen.
WM I Challenge

**Learning Objective** Understand and perform a warehousing process for ext. goods  
**Time** 70 min

**Motivation** After having finished the *Warehouse Management I* case study successfully you should now be able to solve the following challenge.

**Scenario** The warehouse management system has been tested without any problems, so the management decided to use the system productively. Now your task is to order two different products (water bottles and road helmets) from the supplier *Spy Gear*, 50 pieces each. A water bottle will cost 11 USD and a road helmet will cost 27 USD. The trading goods should be delivered in 8 days.

After the goods arrived in your Distribution Center in San Diego they need to be transferred in two different bins.

**Task Information** You can use the *Warehouse Management I* case study as a guideline but it is recommended to complete this challenge without further assistance to prove your WM skills.