Warehouse Management (WM)

Case Study III

This case study explains an integrated warehouse management process which is triggered by a sales order for material to be delivered to the customer from a warehouse-managed storage location.

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| Product  SAP ERP  G.B.I.  Release 6.07  Level  Beginner  Focus  Warehouse Management  Authors  Simha Magal  Stefan Weidner  Chris Bernhardt  Version  2.40  Last Update  June 2015 | 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. |



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|  | Process Overview | |
| **Learning Objective** Understand and perform a warehousing sales process cycle. **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. After running some tests you have some material in your warehouse and you can fulfill a new sales order.  **Employees involved** Karim Messalem (Salesperson 1)  Carolin Bruzik (Warehouse Supervisor)  Sunil Gupta (Warehouse Employee)  Zarah Morello (Shipping Clerk) | | |
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| First, you have to create a sales order. In order to fulfill this new sales order you need to create an outbound delivery. You may remember this part from the SD case study. However, this time the process is slightly different because you deliver from a warehouse-managed storage location. After picking the materials, goods are shipped to the customer. Because this case study focuses on Warehouse Management detailed instructions of how to create the invoice and how to receive the payment are not included. However, you may use respective parts of the Sales and Distribution (SD) case study to finalize the sales process and see the financial impact. | | Process description |
| WM_III_process_en | | |

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|  | Step 1: Create Sales Order | |
| **Task** Create a sales order. **Time** 10 min  **Short Description** Use the Easy Access Menu to create a sales order.  **Name (Position)** Karim Messalem (Salesperson 1) | | |
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| To create a sales order, follow the menu path:  Logistics ► Sales and Distribution ► Sales ► Order ► Create | | Menu path |
| In the *Create Sales Order:Initial Screen*, enter **OR** (Standard Order) as Order Type, **UW00** as Sales Organization, **WH** (Wholesale) as Distribution Channel, **BI** (Bicycles) as Division, **SD00** as Sales Office and **US** as Sales Group. Confirm your entries by clicking ok or pressing Enter. | | OR  UW00  WH  BI  SD00  US |
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| At the top of the *Create Standard Order: Overview* screen, enter **9###** (SoCal Bikes Irvine; replace ### with your number) as Sold-To Party, **54321###** as PO Number and leave the fields Standard Order and Ship-To Party blank. In the *Sales* tab, enter **one week from today** as Req. deliv. date and do the same in the Pricing date field. Then, enter **PRTR2###** as Material and **5** as Order Quantity. Finally, confirm your entries by clicking ok or pressing Enter. You may receive a warning message which you can ignore by clicking on S_S_OKAY. | | 9###  54321###  one week from today  one week from today  PRTR2###  5 |
| ScreenShot00263  Compare your entries with the screenshot above. | |  |
| Then, click on sichern to save your order. The system will assign a unique standard order number. | | Standard Order Number |
| Click on the exit icon S_F_ENDT to return to the SAP Easy Access screen. | |  |
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|  | Step 2: 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)** Carolin Bruzik (Warehouse Supervisor) | | |
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| To display the material inventory, follow the menu path:  Logistics ► Materials Management ► Inventory Management ► Environment ► Stock ► Stock Overview | | Menu path |
| In the *Stock Overview* screen, enter **PRTR2###** as Material (remember to replace ### with your number). Ensure that all other search criteria fields are blank and click on S_B_EXEC. | | PRTR2### |
| ScreenShot00264 | |  |
| Note that you still have the same amount of goods in San Diego. However, after double clicking on *SD00 DC San Diego* you can see that you have a Sales orders balance of 5 for your distribution center. | |  |
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| Click on the exit icon S_F_ENDT to return to the SAP Easy Access screen. | |  |
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|  | Step 3: Create Outbound Delivery | |
| **Task** Create an outbound delivery. **Time** 10 min  **Short Description** Use the Easy Access Menu to create the outbound delivery note for the sales order.  **Name (Position)** Carolin Bruzik (Warehouse Supervisor) | | |
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| To create an outbound delivery, follow the menu path:  Logistics ► Sales and Distribution ► Shipping and Transportation ► Outbound Delivery ► Create ► Single Document ► With Reference to Sales Order | | Menu path |
| In the *Create Outbound Delivery with Order Reference* screen, enter **SD00** as Shipping point, **7 days from today** as Selection dateand the **Standard Order Number** of the order you have created in the first task as Order. Confirm your entries by clicking ok or pressing Enter. | | SD00  7 days from today  Standard Order Number |
| ScreenShot00265 | |  |
| In the *Outbound Delivery Create: Overview* screen, choose the *Picking* tab and enter **FG00** as SLoc*.* Then click on ok or press Enter. | | FG00 |
| Note: Due to the fact that we are using the San Diego warehouse picking has to be done a little differently. Hence, the *Picked Qty* field is now grayed out. | |  |
| ScreenShot00266  Compare your entries with the screenshot above. | |  |
| Then, click on sichern to save your outbound delivery. The system will assign a unique outbound delivery number. | | Outbound Delivery Number |
| Click on the exit icon S_F_ENDT to return to the SAP Easy Access screen. | |  |
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|  | Step 4: 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)** Carolin Bruzik (Warehouse Supervisor) | | |
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| To display the material inventory, follow the menu path:  Logistics ► Materials Management ► Inventory Management ► Environment ► Stock ► Stock Overview | | Menu path |
| In the *Stock Overview* screen, enter **PRTR2###** as Material(remember to replace ### with your number). Ensure that all other search criteria fields are blank and click on S_B_EXEC. | | PRTR2### |
| ScreenShot00267 | |  |
| Note that the amount of goods in San Diego has not changed yet. However, after double clicking on *SD00 DC San Diego* you can see that instead of the Sales orders balance, which is zero now, the Schedule for delivery balance is 5 for your distribution center. | |  |
| ScreenShot00268 | |  |
| Click on the exit icon S_F_ENDT to return to the SAP Easy Access screen. | |  |
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|  | Step 5: Pick Materials with Transfer Order | |
| **Task** Create a transfer order to pick the materials. **Time** 10 min  **Short Description** Use the Easy Access Menu to create a transfer order based on the delivery note created previously.  **Name (Position)** Sunil Gupta (Warehouse Employee) | | |
|  | | |
| To create an outbound delivery, follow the menu path:  Logistics ► Sales and Distribution ► Shipping and Transportation ► Picking ► Create Transfer Order ► Via Outbound Delivery Monitor | | Menu path |
| In the *Outbound Deliveries for Picking* screen, enter **SD00** as Shipping Point/Receiving Ptand **select** the Only WM Picking radio button. Then, click on S_B_EXEC or press F8 to execute. | | SD00  Only WM Picking |
| ScreenShot00269 | |  |
| In the *Day’s Workload for Picking* screen, you should see a line item with your **Outbound Delivery Number**. Select it and click on the  button. | | Outbound Delivery Number |
| ScreenShot00270 | |  |
| In the *Create Transfer Order for Delivery Note: Initial Screen*, click on ok or press Enter to create your transfer order to be able to pick your documents. | |  |
| On the next screen, click on sichern to save your transfer order. | |  |
| ScreenShot00271 | |  |
| The system will save the transfer order automatically and assign a unique transfer order number.  ScreenShot00167 | | Transfer Order Number |
| Click on the exit icon S_F_ENDT twice to return to the SAP Easy Access screen. | |  |
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|  | Step 6: Run Bin Status Report | |
| **Task** Check the status of your bins. **Time** 5 min  **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) | | |
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| To run a bin status report, follow the menu path:  Logistics ► Logistics Execution ► Internal Whse Processes ► Bins and Stock ► Display ► Bin Status Report | | Menu path |
| 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 S_B_EXEC. | | 100  STBN\*### |
| ScreenShot00137 | |  |
| In the *Bin Status Report: Overview* screen you should see that the StorageBin**STBN-8-###** is filled. | |  |
| ScreenShot00127 | |  |
| Click on your material to display detailed information of this quant and check whether 10 pieces of your good are stored in it. | |  |
| Note: As you can see 5 pieces of your material are marked as available stock and the other 5 as pick quantity. | |  |
| ScreenShot00272 | |  |
| Click on the exit icon S_F_ENDT to return to the SAP Easy Access screen. | |  |
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|  | Step 7: Confirm Transfer Order | |
| **Task** Confirm your transfer order. **Time** 5 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) | | |
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| To confirm a transfer order, follow the menu path:  Logistics ► Logistics Execution ► Inbound Process ► Goods Receipt for Inbound Delivery ► Putaway ► Confirm Transfer Order ► Single Document ► In One Step | | Menu path |
| In the *Confirm Transfer Order: Initial Screen*, enter the **TO Number** from the previous task and **100** as Warehouse Number. Then, click on ok or press Enter. | | TO Number  100 |
| ScreenShot00171 | |  |
| 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 S_B_EXEC. | | 100 |
| 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. | |  |
| ScreenShot00273 | |  |
| Then, click on sichern to confirm your transfer order. The system will return a success message.  ScreenShot00175 | |  |
| Click on the exit icon S_F_ENDT to return to the SAP Easy Access screen. | |  |
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|  | Step 8: Run Bin Status Report | |
| **Task** Check the status of your bins again. **Time** 5 min  **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:  Logistics ► Logistics Execution ► Internal Whse Processes ► Bins and Stock ► Display ► Bin Status Report | | Menu path |
| 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 S_B_EXEC. | | 100  STBN\*### |
| ScreenShot00137 | |  |
| In the *Bin Status Report: Overview* screen click on your material in StorageBin**STBN-8-###** to display detailed information and check if there are just 5 pieces of your good left. | |  |
| ScreenShot00274 | |  |
| Click on the exit icon S_F_ENDT to return to the SAP Easy Access screen. | |  |
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|  | Step 9: Display Material Inventory Value | |
| **Task** View the value of your material inventory. **Time** 5 min  **Short Description** Use the Easy Access Menu to display the value of your material inventory.  **Name (Position)** Carolin Bruzik (Warehouse Supervisor) | | |
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| To display the material inventory value, follow the menu path:  Logistics ► Materials Management ► Inventory Management ► Environment ► Stock ► Warehouse Stock | | Menu path |
| In the *Display Warehouse Stocks of Material* screen, enter **PRTR2###** as Material(replace ### with your number). Ensure that all other search criteria fields are blank and click on S_B_EXEC. | | PRTR2### |
| ScreenShot00275 | |  |
| Note the total value associated with the DC in San Diego. | |  |
| Click on the exit icon S_F_ENDT twice to return to the SAP Easy Access screen. | |  |
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|  | Step 10: Ship Materials | |
| **Task** Ship the materials. **Time** 5 min  **Short Description** Use the Easy Access Menu to ship the materials by posting a goods issue. This will reduce unrestricted stock to reflect that the inventory is shipped. It also indicates a change of ownership.  **Name (Position)** Zarah Morello (Shipping Clerk) | | |
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| To ship materials, follow the menu path:  Logistics ► Sales and Distribution ► Shipping and Transportation ► Outbound Delivery ► Change ► Single Document | | Menu path |
| In the *Change Outbound Delivery* screen, enter your **Outbound Delivery Number** from the *Create Outbound Delivery* task. | | Outbound Delivery Number |
|  | |  |
| Note: If you have not written down the number you can search for it using the F4 help.  To do so select the *Outbound Delivery* field and click on f4 or press F4. In the *Outbound Delivery: Not Posted for Goods Issue* tab, enter **SD00** as Shipping Point. Then, click on S_B_OKAY or press Enter. | | F4  SD00 |
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| In the next screen choose your Outbound Delivery by double-clicking on it. | |  |
| Then, click on ok or press Enter. | |  |
| In the *Outbound Delivery ##### Change: Overview* screen, choose the *Item Overview* tab and scroll to the right until you can see the *Picked Qty* column. As you can see you picked the full amount to be delivered. | |  |
| ScreenShot00276 | |  |
| Then, click on the  button. The system will return a success message. | |  |
| Click on the exit icon S_F_ENDT to return to the SAP Easy Access screen. | |  |
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|  | Step 11: 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)** Carolin Bruzik (Warehouse Supervisor) | | |
|  | | |
| To display the material inventory, follow the menu path:  Logistics ► Materials Management ► Inventory Management ► Environment ► Stock ► Stock Overview | | Menu path |
| In the *Stock Overview* screen, enter **PRTR2###** as Material(remember to replace ### with your number). Ensure that all other search criteria fields are blank and click on S_B_EXEC. | | PRTR2### |
| ScreenShot00278 | |  |
| Note that the amount of your good in San Diego has decreased. This represents that the 5 pieces of your material actually have been shipped. | |  |
| Click on the exit icon S_F_ENDT to return to the SAP Easy Access screen. | |  |
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|  | Step 12: Display Material Inventory Value | |
| **Task** View the value of your material inventory again. **Time** 5 min  **Short Description** Use the Easy Access Menu to display the value of your material inventory again.  **Name (Position)** Carolin Bruzik (Warehouse Supervisor) | | |
|  | | |
| To display the material inventory value, follow the menu path:  Logistics ► Materials Management ► Inventory Management ► Environment ► Stock ► Warehouse Stock | | Menu path |
| In the *Display Warehouse Stocks of Material* screen, enter **PRTR2###** as Material(remember to replace ### with your number). Ensure that all other search criteria fields are blank and click on S_B_EXEC. | | PRTR2### |
| ScreenShot00279 | |  |
| As you can see the values associated with the material in San Diego has decreased. Also there is no value associated to the *Transit/Transf.* for San Diego. This indicates the change of ownership after processing the shipping order. | |  |
| Click on the exit icon S_F_ENDT twice to return to the SAP Easy Access screen. | |  |
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|  | WM III Challenge | |
| **Learning Objective** Understand and perform a warehousing sales process cycle. **Time** 75 min  **Motivation** After having finished the *Warehouse Management III* case study successfully you should now be able to solve the following challenge.  **Scenario** Thewarehouse management system has been tested without any problems, so the management decided to use the system productively. Due to a higher demand of bikes for the Tour de France black Professional Touring Bikes are almost out of stock in Europe. The Distribution Center in San Diego still has them available so that the delivery of a wholesale sales order has to be managed by the new warehouse management system.  The customer VeloDOM from Magdeburg (Germany) has ordered 20 black Professional Touring Bikes with a delivery time of 10 days.  **Task Information** You can use the case study *Warehouse Management III* as a guideline, but it is recommended to complete this challenge without further assistance to prove your WM skills. | | |
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