Warehouse Management (WM) I

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

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| Product  S/4HANA 2020  Global Bike  Fiori 3.0  Level  Beginner  Focus  Warehouse Management  Authors  Simha Magal  Stefan Weidner  Chris Bernhardt  Version  4.1  Last Update  June 2022 | 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, particularly 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 work successfully through this case study, it is not necessary to finish the WM exercises. Anyway, it is recommended.  NOTES  This case study uses the Global Bike (GB) data set, which has been exclusively created for SAP UA global curricula.  M:\Curricula\Vorlagen\Logo_Global Bike\Global_Bike_Logo_neu_2018\Logo1.png |

|  | Process Overview | |
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| **Learning Objective** Understand and perform a warehousing process for externally procured goods.  **Scenario** Due to increasing sales output in your San Diego distribution center, management has decided to install a Warehouse Management System. This implementation has just been completed and the new system needs to be tested. For this purpose, trading goods should be procured by a vendor and put in the stock in San Diego, using the new warehouse management system.  **Employees involved** Jennifer Brown (Plant Manager)  Carolin Bruzik (Warehouse Supervisor)  Sunil Gupta (Warehouse Employee)  Yoshi Agawa (Goods Receipt Clerk) | | **Time** 70 min |
|  | | |
| In order to receive goods from a vendor you need to create a purchase order. Goods will be sent by the vendor to the distribution center and you will create a goods receipt in San Diego. The system will automatically create a transfer order for the received goods to put them into stock. In conclusion, you will check if the goods were stored in the correct storage bins. As 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. | | |
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|  | Step 1: Create Purchase Order | |
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| **Task** Create a purchase order.  **Short Description** Use the SAP Fiori Launchpad to create an immediate purchase order for materials from a supplier, i.e. to start the procurement process without having created a purchase requisition before.  **Name (Position)** Jennifer Brown (Plant Manager) | | **Time** 10 min |
|  | |  |
| To create a purchase order, use the app *Create Purchase Order* in the *Warehouse Management* area on the *Storage Purchasing* page in the *Plant Manager* role. | |  |
|  | |  |
| **Note** By clicking  you can close the help on the left side of the screen. This can be shown again at any time by clicking on . | |  |
| In the *Create Purchase Order* screen, change the type of purchase order to **NB Standard PO** and enter **103###** (replace ### with your number) as Supplier. Confirm your entries by clicking Enter and accept any warning messages. | | NB Standard PO  103### |
| Then, fill in **US00** as Purch.Org, **N00** as Purch. Group and **US00** as Company Code. Press Enter again to confirm your entries. | | US00  N00  US00 |
|  | |  |
| Select  to expand the *Item Overview*. In the item overview enter **KPAD1###** as Material(replace ### with your number), **50** as PO Quantity, **8 days from today** as Delivery Date, **40** USD as Net Price, **SD00** as Plant and **TG00** as Storage Location. | | KPAD1###  50  8 days from today  40  SD00  TG00 |
| In the next row, repeat your entries but choose **EPAD1###** as Material. Confirm your entries by pressing Enter. | | Repeat for EPAD1### |
|  | |  |
| Compare your entries with the screenshot above. Then, click on  to save your order. The system will assign a Standard PO document number. | |  |
|  | |  |
| Click on  to return to the SAP Fiori Launchpad. | |  |
| Confirm any browser warnings that may appear with . | |  |
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|  | Step 2: Display Material Inventory | |
| **Task** View the inventory of your material.  **Short Description** Use the SAP Fiori Launchpad to display the inventory of your material.  **Name (Position)** Jennifer Brown (Plant Manager) | | **Time** 5 min |
|  | |  |
| To display the material inventory, use in the *Warehouse Management* area on the *Storage Purchasing* page in the *Plant Manager* role the app *Display Stock Overview*. | | Display Stock Overview |
|  | |  |
| Enter **KPAD1###** as Material(remember to replace ### with your number). All other settings can be applied. | | KPAD1### |
|  | |  |
| Choose .Note that the amount of your good for unrestricted use in San Diego is zero. However, the just created on-order stock can be seen. | |  |
|  | |  |
| After double clicking on *SD00 DC San Diego*, you will see a separate *Stock Overview* for your distribution center and the On-Order Stock balance of 50. | |  |
|  | |  |
| Repeat this task for the material **EPAD1###**. | | Repeat for EPAD1### |
| Click on  to return to the SAP Fiori Launchpad. | |  |
| Confirm any browser warnings that may appear with . | |  |
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|  | Step 3: Display Material Inventory Value | |
| **Task** View the value of your material inventory.  **Short Description** Use the SAP Fiori Launchpad to display your material inventory.  **Name (Position)** Jennifer Brown (Plant Manager) | | **Time** 5 min |
|  | |  |
| To display the material inventory value, use in the *Warehouse Management* area on the *Storage Purchasing* page in the *Plant Manager* role the app *Display Warehouse Stock*. | | Display Warehouse Stock |
|  | |  |
| In the *Display Warehouse Stocks of Material* screen, enter **KPAD1###** as Material. Ensure that all other search criteria fields are blank and click on . | | KPAD1### |
|  | |  |
| You can see that all values listed for this material are currently zero. | |  |
| Repeat this task for the material **EPAD1###**. | | Repeat for EPAD1### |
| Click  to return to the SAP Fiori Launchpad. | |  |
| Confirm any browser warnings that may appear with . | |  |
|  | |  |

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|  | Step 4: Receive Goods | |
| **Task** Receive goods at receiving plant.  **Short Description** Use the Fiori Launchpad to create a goods receipt which documents the receiving of your materials in San Diego.  **Name (Position)** Yoshi Agawa (Goods Receipt Clerk) | | **Time** 5 min |
|  | |  |
| To create a goods receipt, use the app *Post Goods Receipt* in the *Warehouse Management* area on the *Storage Purchasing* page in the *Goods Receipe Clerk* role. | |  |
|  | |  |
| In the *Goods Receipt Purchase Order* screen, check that **A01 Goods Receipt** is selected in the first drop-down menu, that **R01 Purchase Order** is selected for Type of Goods Receipt and put your **Purchase Order Number** in the blank space next to it. | | A01 Goods Receipt  R01 Purchase Order  PO Number |
| If you have not written down the PO number you have created in the first task, you may use the input help. Click in the PO number field (first blank field next to the second drop-down field) and choose .  In the following screen, use  to choose the *Purchasing Documents per Supplier* tab. Then, enter **103###** as *Supplier*. | | 103### |
|  | |  |
| Press , select your order from the results list and choose  to apply the 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 will be transferred. | |  |
|  | |  |
| Then, click on . | |  |
| After your purchase order data appears select the check boxes in the **OK** column. | | OK |
| **Note** If one of the lines is grayed out, then click on  in the lower area to close the Detail data. | |  |
| Make sure that Quantity is **50**, SLocis **Trading Goods** (TG00), Movement Typeis **101** and Stock Typeis **Unrestricted Use**. | | 50  Trading Goods  101  Unrestricted Use |
|  | |  |
| Then, click on  to save your receipt. The system will assign a unique material document number. | | Material document number |
|  | |  |
| Click on  to return to the SAP Fiori Launchpad. | |  |
| Confirm any browser warnings that may appear with . | |  |
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|  | Step 5: Display Material Inventory | |
| **Task** View the inventory of your material again.  **Short Description** Use the Fiori Launchpad to display the inventory of your material again.  **Name (Position)** Jennifer Brown (Plant Manager) | | **Time** 5 min |
|  | |  |
| To display the material inventory, use in the *Warehouse Management* area on the *Storage Purchasing* page in the *Plant Manager* role the app *Display Stock Overview*. | | Display Stock Overview |
|  | | Fiori App |
| Enter **KPAD1###** as Material(remember to replace ### with your number). All other settings can be applied. | | KPAD1### |
|  | |  |
| Choose . Note that the amount of your good for unrestricted use in San Diego has changed and that there is no longer any order inventory for it. | |  |
|  | |  |
| By double clicking on *SD00 DC San Diego*, you can again display the associated *Basic List* of the *Stock Overview*. | |  |
|  | |  |
| Repeat this task for the material **EPAD1###**. | | Repeat for EPAD1### |
| Click on  to return to the SAP Fiori Launchpad. | |  |
| Confirm any browser warnings that may appear with . | |  |
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|  | Step 6: Display Material Inventory Value | |
| **Task** View the value of your material inventory again.  **Short Description** In this step, you will use the Fiori Launchpad to display the value of your material inventory again.  **Name (Position)** Jennifer Brown (Plant Manager) | | **Time** 5 min |
|  | |  |
| To display the material inventory value, use in the *Warehouse Management* area on the *Storage Purchasing* page in the *Plant Manager* role the app *Display Warehouse Stock*. | | Display 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 . | | KPAD1### |
|  | |  |
| 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###**. | | EPAD1### |
| Click on  to return to the SAP Fiori Launchpad.. | |  |
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|  | Step 7: Run Bin Status Report | |
| **Task** Check the status of your bins.  **Short Description** Use the SAP Fiori Launchpad 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) | | **Time** 5 min |
|  | |  |
| To run a bin status report, use in the *Warehouse Management* area on the *Storage Purchasing* page in the *Warehouse Supervisor* role the app *Run Bin Status Report*. | |  |
|  | | Fiori App |
| 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  STBN\*### |
|  | |  |
| 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 not present yet. Currently they are located in temporary bins. | |  |
|  | |  |
| Click on  to return to the SAP Fiori Launchpad. | |  |
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|  | Step 8: Create Transfer Order | |
| **Task** Create a transfer order.  **Short Description** Use the Fiori Launchpad 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) | | **Time** 10 min |
|  | |  |
| To create a transfer order, use in the *Warehouse Management* area on the *Storage Purchasing* page in the *Warehouse Employee* role the app *Display Transfer Requirement – List for Material*. | |  |
|  | | Fiori App |
| 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, press Enter. | | 100  KPAD1###  SD00 |
| **Note:** The warehouse number is the highest level of organizational unit in warehouse management. In practice, the warehouse number usually corresponds to a physical building or distribution center. Each warehouse number has a substructure that maps the spatial relationship in the warehouse complex in detail.    Storage bins are the lowest level of organizational structure. They are assigned to a storage type and a storage section (if one exists). Storage bins represent the physical location where the goods are stored in the warehouse. | |  |
|  | |  |
| 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  and button. | |  |
|  | |  |
| In the *Create TO for TR 00000000XX 0001: Prepare for Putaway* screen, hit 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 pressing Enter. | | 001  STBN-1-###  001 (Shelf Storage) |
|  | |  |
| 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. | |  |
|  | | Transfer Order Number |
| Repeat the whole procedure for your material **EPAD1###** to put it in the same storage bin. | |  |
| Click on  to return to the SAP Fiori Launchpad. | |  |
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|  | Step 9: Confirm Transfer Order | |
| **Task** Confirm your transfer order.  **Short Description** Use the Fiori Launchpad to confirm the transfer order you created in the previous step. This is to confirm that the goods are physically in the storage bin indicated in the transfer order.  **Name (Position)** Sunil Gupta (Warehouse Employee) | | **Time** 10 min |
|  | |  |
| To confirm a transfer order, use in the *Warehouse Management* area on the *Storage Purchasing* page in the *Warehouse Employee* role the app *Confirm Transfer Order*. | |  |
|  | | Fiori App |
| In the *Confirm Transfer Order: Initial Screen*, enter the **Transfer Order Number** from the previous task and **100** as Warehouse Number. Then press Enter. | | Transfer Order Number  100 |
|  | |  |
| **Note** If you have not written down the number, you can search for it using the app *Display Transfer Order / Material*. | |  |
|  | |  |
| In the *Transfer Orders for Materials* you have to fill in **100** as *Warehouse number* and your material **KPAD1### / EPAD1###** to display the regarding transfer order. Then, click on . | | 100  KPAD1###  EPAD1### |
| 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). | | Repeat for second Transfer Order |
| Click on  to return to the SAP Fiori Launchpad. | |  |
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|  | Step 10: Run Bin Status Report | |
| **Task** Check the status of your bins again.  **Short Description** Use the Fiori Launchpad 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) | | **Time** 5 min |
|  | |  |
| To run a bin status report, use in the *Warehouse Management* area on the *Storage Purchasing* page in the *Warehouse Supervisor* role the app *Run Bin Status Report*. | |  |
|  | | Fiori App |
| 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  STBN\*### |
|  | |  |
| In the *Bin Status Report: Overview* screen you should see that the Storage Bin**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  to return to the SAP Fiori Launchpad. | |  |
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|  | 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** Thewarehouse 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 studyas a guideline, but it is recommended to complete this challenge without further assistance to prove your WM skills. | | |
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