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.

Product

S/4HANA 1809
Global Bike

Fiori 2.0

Level

Beginner

Focus

Warehouse Management

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Version

3.3

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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.

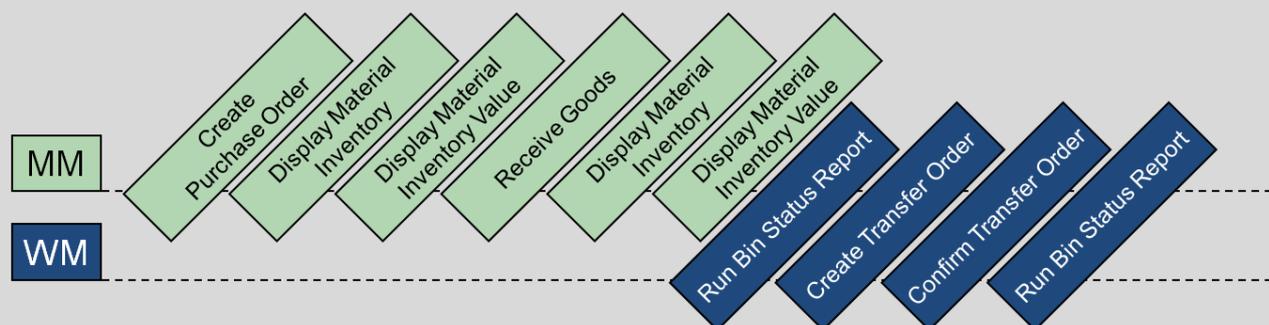**SAP University Alliances**

Process Overview

Learning Objective Understand and perform a warehousing process for externally procured goods.

Time 70 min

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 San Diego)
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. 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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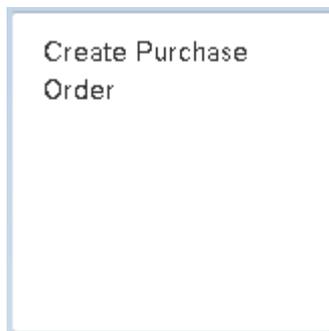
Step 1: Create Purchase Order

Task Create a purchase order.	**Time** 10 min
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 San Diego)	

To create a purchase order, use the app *Create Purchase Order*.

Fiori App

Create Purchase Order

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 Enter and accept any warning messages with Enter.

Standard PO
103###

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

US00
N00
US00
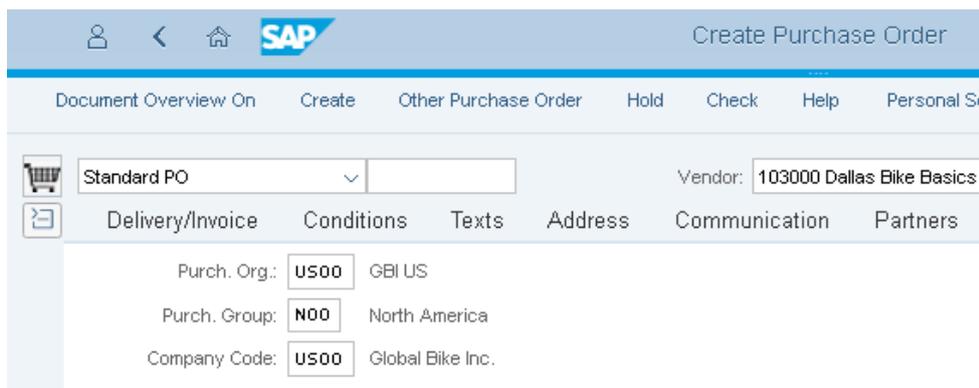
Select [icon] to expand the Item Overview. Enter **KPAD1###** as Material (replace ### with your number), **50** as PO Quantity, **SD00** as Plant, **TG00** as Storage Location, **40** USD as Net Price and **8 days from today** as Delivery Date.

KPAD1###
50
SD00
TG00
40
8 days from today

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 **Save** to save your order. The system will assign a Standard PO document number.

☑ Standard PO created under the number 4500000007

Click on the home icon 🏠 to return to the Fiori Launchpad overview.

Step 2: Display Material Inventory

Task View the inventory of your material.	**Time** 5 min
Short Description Use the SAP Fiori Launchpad to display the inventory of your material.	
Name (Position) Jennifer Brown (Plant Manager San Diego)	

To display the material inventory, use the app *Display Stock Overview*.

Fiori App

Enter **KPAD1###** as Material (remember to replace ### with your number). Choose Execute.

KPAD1###

Note that the amount of your good in San Diego is zero.

Stock Overview

Client/Company Code/Plant/Storage Location...	Unrestr...	Qual. in...	Reserved	Rcp...	On-Order Stock
⌄ 🌐 Full					50,000
🗄 DE00 Global Bike Germany GmbH					
⌄ 🗄 US00 Global Bike Inc.					50,000
⌄ 🏭 SD00 DC San Diego					50,000
🏭 TG00 Trading Goods					50,000

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.

Stock Overview: Basic List ✕

Stock Plant
Plant SD00

Plant

Stock Type	Stock
Unrestricted use	0,000
Qual. inspection	0,000
Returns	0,000
On-Order Stock	50,000
Consgt ordered	0,000
Reserved	0,000
Stck trans.(plnt)	0,000
Transfer (SLoc)	0,000
Consgt unrestr.	0,000
Consgt qual.insp.	0,000
GR Blocked Stock	0,000
Cust. inquiries	0,000
Cust. quotations	0,000
Sales orders	0,000
Cust.sched.agmts	0,000
Cust. contracts	0,000
Deliv. w/o charge	0,000
Schd.for delivery	0,000
Rcpt reservation	0,000
RetPckgCust.unres	0,000
Empties cust. QI	0,000
ConsgtCust.unrest	0,000
Consgt cust. QI	0,000
Stock in transit	0,000
SC stock unrestr.	0,000
SC stock QI	0,000
Sales order unre.	0,000
Sales order QI	0,000
Blocked	0,000
Sales order blckd	0,000

✓ ≜ ≡ 🔍 🔍⁺ 🖶

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

Click on the home icon 🏠 to return to the Fiori Launchpad overview.

Repeat for EPAD1###

☐

Step 3: Display Material Inventory Value

Task View the value of your material inventory.

Short Description Use the SAP Fiori Launchpad to display the value of your material inventory.

Name (Position) Jennifer Brown (Plant Manager San Diego)

Time 5 min

To display the material inventory value, use the app *Display Warehouse Stock*.

Fiori App

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 **Execute**.

KPAD1###

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

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

Click on the home icon to return to the Fiori Launchpad overview.

■ Step 4: Receive Goods

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

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 (Receiving Clerk)

To create a goods receipt, use the app *Post Goods Movement*.

In the *Goods Receipt* screen, change the Material Document drop down to **Goods Receipt** and **Purchase Order**, and put your **Purchase Order Number** in the blank space next to it.

Goods Receipt
Purchase Order
PO number

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 per Supplier* tab. Then, enter **103###** as *Vendor* and press Enter.

103###

Now double click on your entry.

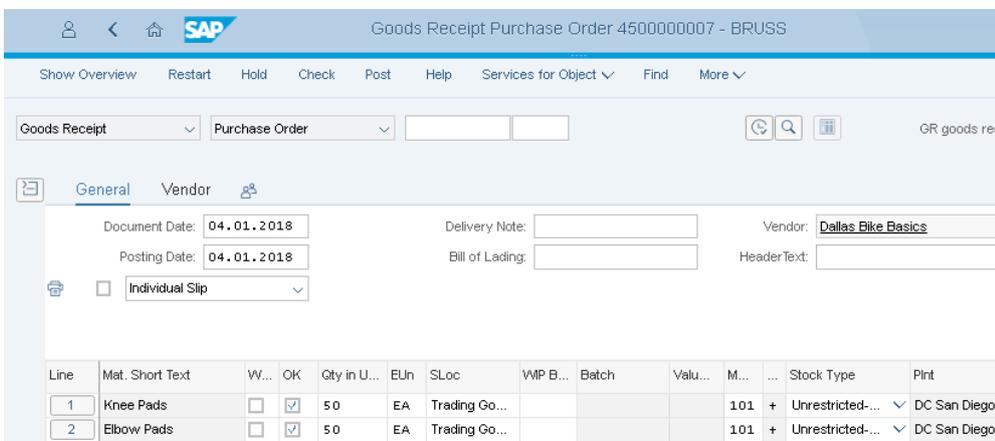After your order number is filled in, please blank out the position field (field behind your order number).

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

Goods Receipt ∨	Purchase Order ∨	4500000007

Then, click on **Execute** or press Enter.

After your purchase order data appears select the check boxes in the **OK** column. If one of the boxes is grayed out, click on [icon] 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 **Post** to save your receipt. The system will assign a unique material document number.

☑ Material document 5000000022 posted View Details

Click on the home icon [icon] to return to the Fiori Launchpad overview.

Step 5: Display Material Inventory

Task View the inventory of your material again.	**Time** 5 min
Short Description Use the Fiori Launchpad to display the inventory of your material again.	
Name (Position) Jennifer Brown (Plant Manager San Diego)	

To display the material inventory, use the app *Display Stock Overview.*

Fiori App

In the *Stock Overview* screen, enter **KPAD1###** as Material (remember to replace ### with your number) and click Execute .

KPAD1###

Note that the amount of your good for unrestricted use in San Diego has been 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 home icon 🏠 to return to the Fiori Launchpad overview.

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 San Diego)	**Time** 5 min

To display the material inventory value, use the Fiori App *Display Warehouse Stock*.

Display Warehouse
Stock

Fiori App

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 Execute .

KPAD1###

Material				Material description		Plnt	Name 1
SLoc	SL	Unrestricted	Unit	Transit/Transf.	In Quality Insp.	Restricted-Use	
		Total Value	Crcy	Total Value	Total Value	Total Value	
KPAD1000				Knee Pads		HD00	Plant Heide
TG00		0	EA	0	0	0	
		0,00	EUR	0,00	0,00	0,00	
KPAD1000				Knee Pads		HH00	DC Hamburg
TG00		0	EA	0	0	0	
		0,00	EUR	0,00	0,00	0,00	
KPAD1000				Knee Pads		MI00	DC Miami
TG00		0	EA	0	0	0	
		0,00	USD	0,00	0,00	0,00	
KPAD1000				Knee Pads		SD00	DC San Dieg
TG00		50	EA	0	0	0	
		2.000,00	USD	0,00	0,00	0,00	
* Total							
		✖		✖	✖	✖	

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 the home icon to return to the Fiori Launchpad overview.

Step 7: Run Bin Status Report

Task Check the status of your bins.	**Time** 5 min
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)	

To run a bin status report, use the app *Run Bin Status Report*.

Run 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 Execute .

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 the home icon 🏠 to return to the Fiori Launchpad overview.

Step 8: Create Transfer Order

Task Create a transfer order.	**Time** 10 min

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)

To create a transfer order, use the app *Create Transfer Order*.


Create Transfer Order
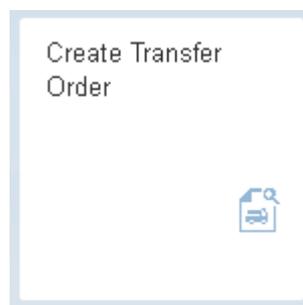
Fiori App

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.
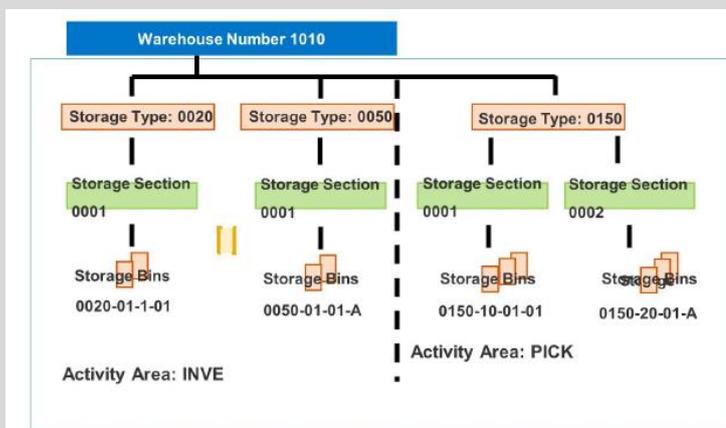
Storage bins are the lowest level of organizational structure. They are assigned to a storage type and a storage section (if one exists). Storage bins represent the physical location where the goods are stored in the warehouse.

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 the TO in Foreground 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 **Posting** 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 home icon 🏠 to return to the Fiori Launchpad overview.

Transfer Order Number

Step 9: Confirm Transfer Order

Task Confirm your transfer order.	**Time** 10 min

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)

To confirm a transfer order, use the app *Confirm Transfer Order*.

Fiori App
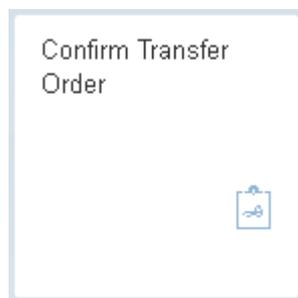
Confirm Transfer Order

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

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.

	SAP	Confirm Transfer Order: Overview of Transfer Order Items					
		Confirm Internally	Header	Enter Actual Data	More ∨		Exit

Warehouse No.: 100   Creation Date: 20.09.2017
TO Number: 2002   Group:

Active worklist   Inactive items   Confirmed intern.   Confirmed

	Item	Material	Plnt	Batch	D...	Dest. Bin	Actual qty	
	1	EPAD1000	SD00		001	STBN-1-000	50	

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

☑ Transfer order 0000002012 confirmed

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

Click on the home icon ⌂ to return to the Fiori Launchpad overview.

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Step 10: Run Bin Status Report
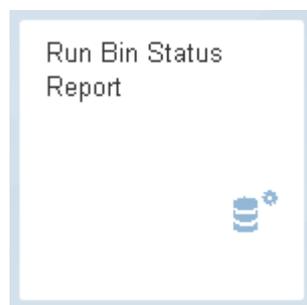
Task Check the status of your bins again.	**Time** 5 min
Short Description Use the Fiori Launchpad to run a bin status report, which will display a detailed report of each storage bin within the specified warehouse.	
Name (Position) Carolin Bruzik (Warehouse Supervisor)	

To run a bin status report, use 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 Execute.

100
STBN*###

Bin Status Report: Overview

Warehouse Number 100

Typ	StorageBin	Material	Plnt	Batch	S	S	Special Stock Number	TiL
001	STBN-1-000	EPAD1000	SD00					
001	STBN-1-000	KPAD1000	SD00					
001	STBN-2-000	<<empty>>						
001	STBN-3-000	<<empty>>						
002	STBN-7-000	DXTR1000	SD00					1
002	STBN-8-000	PRTR1000	SD00					587
002	STBN-8-000	PRTR2000	SD00					587
002	STBN-9-000	<<empty>>						

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.
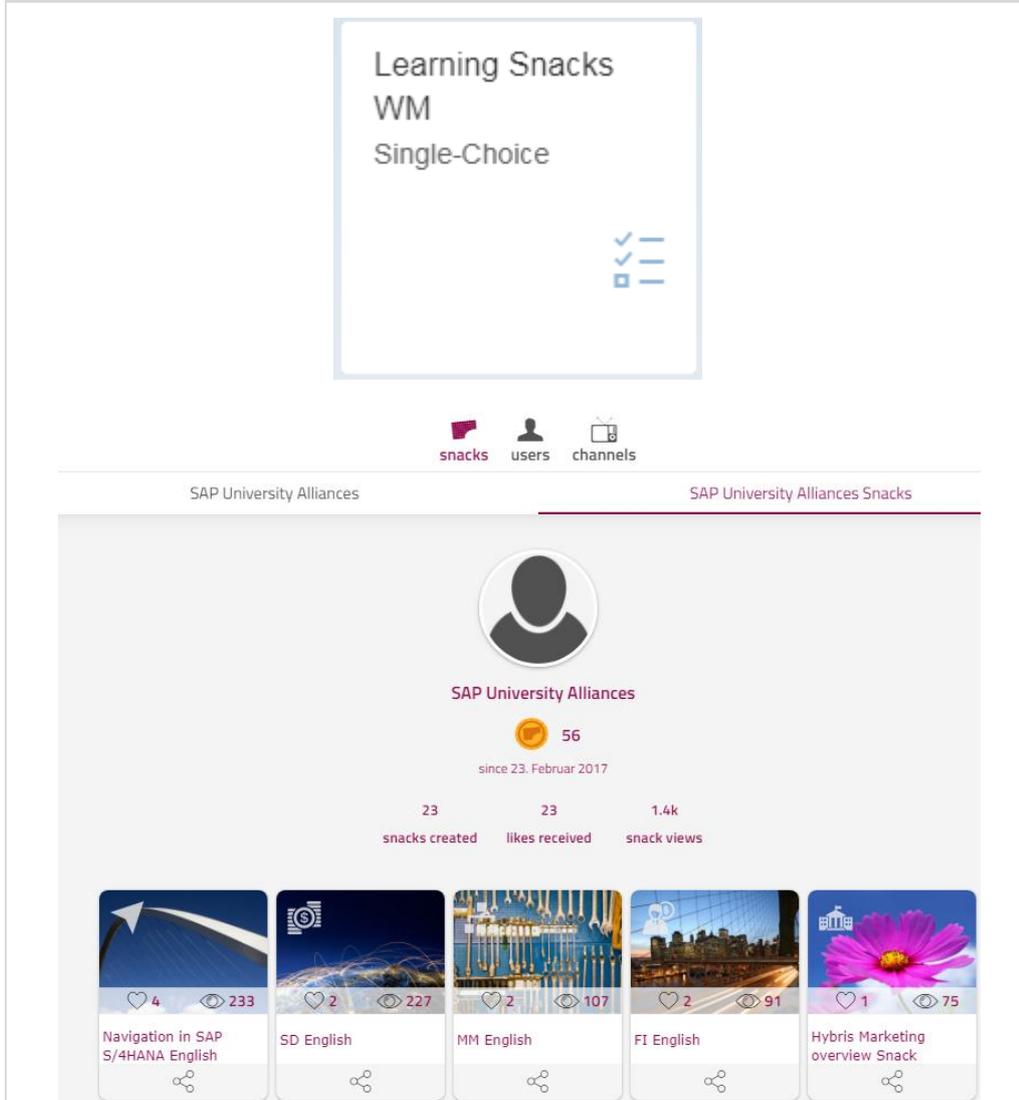
Note As you can see each of the materials is dedicated to an own quant within the storage bin you have selected.

Click on the home icon [home icon] to return to the Fiori Launchpad overview.

Learning Snacks

In order to test and consolidate your knowledge use the app *Learning Snack WM*.

Fiori App

You see all the snacks for the individual case studies. Select the Snack *WM English* and answer all nine questions.

Learning Snack

Hint:

If you do not see any Apps, you need to change the language on the page Learning Snacks. Therefore click on the current language right next to *change language* and choose **English**.

When you have answered all the questions you will receive a success message and your placement.

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.

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