

# Warehouse Management (WM) II

This case study explains an integrated warehouse management process, which is triggered by a stock transport order from a manufacturing facility to a warehouse-managed storage location.

#### **Product**

S/4HANA 2022 Global Bike

Fiori 3.0

#### Level

**Beginner** 

#### **Focus**

Warehouse Management

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#### **Version**

4.2

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#### **MOTIVATION**

Warehousing has significant value for logistics.

Current trends such as higher cost pressure, shorter cycles innovation, higher customer expectations and globalization of markets make great demands on companies, particularly warehouse logistics. This 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. However, it is recommended.

#### **NOTES**

This case study uses the Global Bike (GBI) data set, which has exclusively been created for SAP UA global curricula.





## Process Overview

**Learning Objective** Understand and perform a warehousing process for int. goods

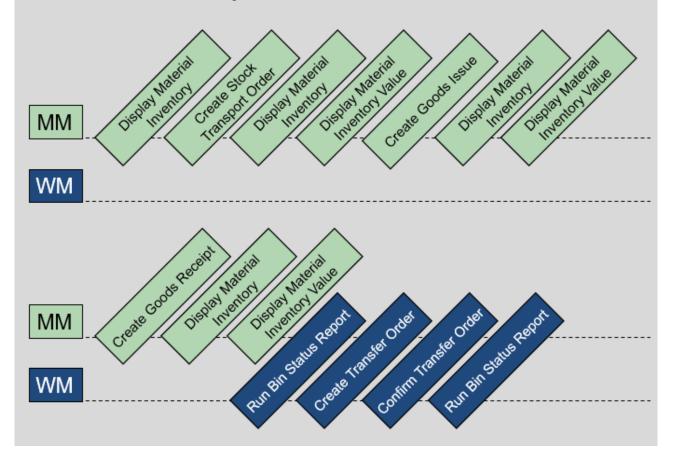
Time 90 min

**Scenario** Due to increasing sales output in your San Diego distribution center, management has decided to install a Warehouse Management System there. The implementation is completed and now the new system needs to be tested. For this purpose, finished goods should be requested from your manufacturing facility in Dallas and put in stock in San Diego using the new warehouse management system.

Employees involved Carolin Bruzik (Warehouse Supervisor)

Jennifer Brown (Plant Manager) Sanjay Datar (Warehouse Employee) Yoshi Agawa (Goods Receipt Clerk)

In order to receive goods from the plant in Dallas you need to create a stock transport order. Dallas will send the goods to the San Diego distribution center. As soon as you perform the goods receipt in San Diego, the system will create a transfer order for the received goods. Due to this order, the Warehouse Management will put the goods into stock. In the end, you can check if the goods have been sorted into the correct storage bins.



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## Step 1: 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) Carolin Bruzik (Warehouse Supervisor)

To display the material inventory, use the app *Display Stock Overview* in the *Warehouse Management* area on the *Stock Transport Order* page in the *Warehouse Supervisor* role.

Fiori App

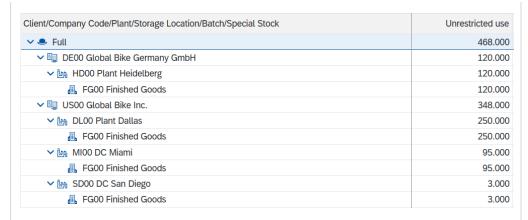


In the *Stock Overview: Company Code/Plant/Storage Location/Batch* screen, enter **DXTR1**### as Material (replace ### with your number). Make sure that all other search criteria fields are blank and click on Execute.

DXTR1###

nt/Storage Location/Batch
0
to:
to:
to:
to:

In the following screen you see the global amount of your material on stock as well as the current amount in your Dallas plant where from you can order the material.



Write down the stock overview to each plant. Note: Your numbers may vary, because of the case studies you performed before.

because of the case studies you performed before.
Plant Dallas
Plant Heidelberg
Plant Hamburg
Plant Miami
Plant San Diego
Click on to return to the SAP Fiori Launchpad.



### Step 2: Create Stock Transport Order

Task Create a stock transport order.

Time 10 min

**Short Description** Use the Fiori Launchpad to create a stock transport order. This means that you request material from another GBI plant instead of procuring it from a vendor.

Name (Position) Jennifer Brown (Plant Manager)

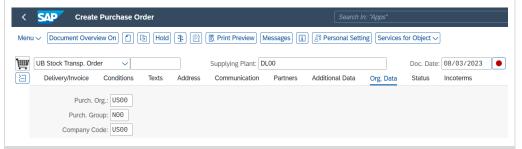
To display the material inventory, use in the *Warehouse Management* area on the *Stock Transport Order* page in the *Plant Manager* role the app *Create Purchase Order*.

Fiori App

Create Purchase Order

In the *Create Purchase Order* screen, change the type of purchase order to **Stock Transp. Order** and accept any warning messages with Enter. Fill in **US00** as Purch.Org., **N00** as Purch. Group, **US00** as Company Code and **DL00** as Supplying Plant. Press Enter.

Stock Transp. Order US00 N00 US00 DL00

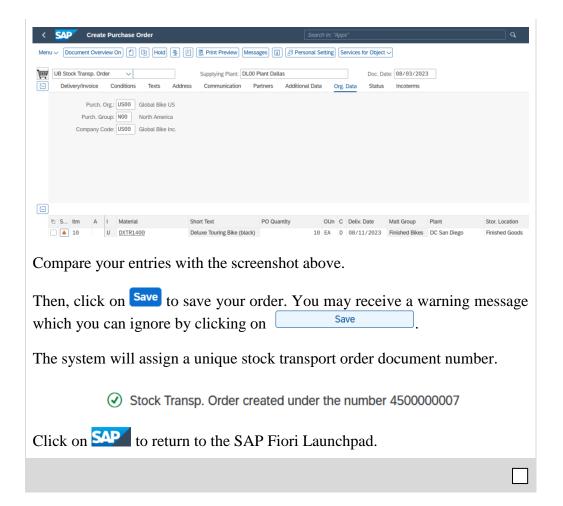


**Note** Transfer postings should not involve a physical goods movement; however, in stock transfers, there is always a physical movement of goods. In a plant-to-plant stock transfer, the plants, between which the material is transferred, can belong to the same company code or different company codes. The cross-plant stock transfers can only be booked out of the unrestricted-use stock.

Select to expand the Item Overview. Enter **DXTR1**### as Material (replace ### with your number), **10** as PO Quantity, **SD00** as Plant, **FG00** as Storage Location and **8 days from today** as Delivery Date. Confirm your entries by pressing Enter.

DXTR1### 10 SD00 FG00 8 days from today

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Save



## Step 3: Display Material Inventory

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

Time 5 min

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

Name (Position) Carolin Bruzik (Warehouse Supervisor)

To display the material inventory, use in the *Warehouse Management* area on the *Stock Transport Order* page in the *Warehouse Supervisor* role the app *Display Stock Overview*.

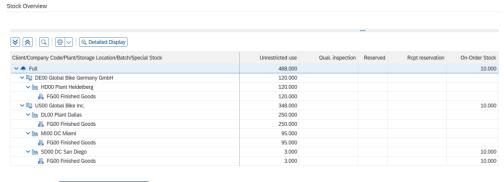
Fiori App



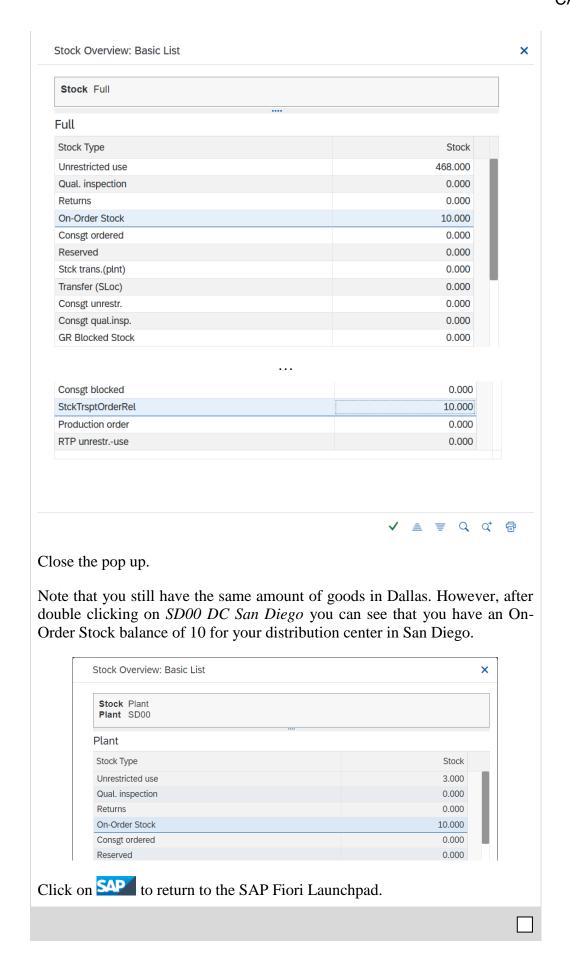
Enter **DXTR1**### as Material (replace ### with your number). Make sure that all other search criteria fields are blank and click on Execute. Your numbers may vary.

DXTR1###

In the following screen you see the global amount of your material on stock as well as the current amount in your Dallas plant which you will order the material from.



Click at Q Detailed Display to get more information.





## Step 4: Display Material Inventory Value

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

Time 5 min

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

Name (Position) Carolin Bruzik (Warehouse Supervisor)

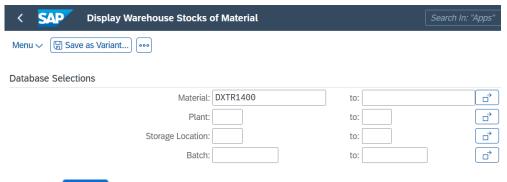
To display the material inventory, use in the *Warehouse Management* area on the *Stock Transport Order* page in the *Warehouse Supervisor* role the app *Display Warehouse Stock*.

Fiori App

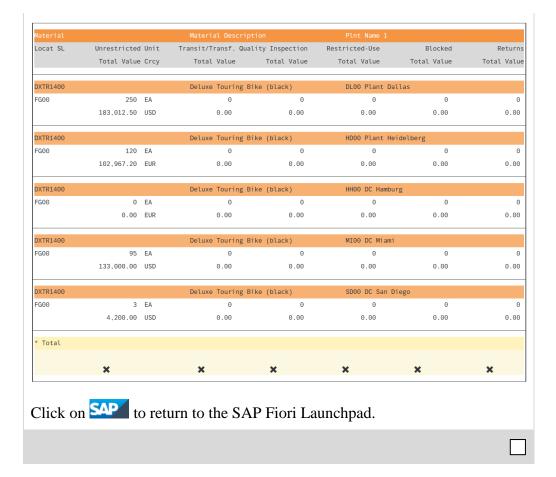


In the *Display Warehouse Stocks of Material* screen, enter **DXTR1**### as Material (replace ### with your number). Ensure that all other search criteria fields are blank.

DXTR1###



Click on Execute. As you can see there is no total value associated with the DC in San Diego. Please be aware that your numbers may vary.





### Step 5: Create Goods Issue

**Task** Create a goods issue from the issuing plant.

Time 10 min

**Short Description** In this step, you will use the SAP Fiori Launchpad to issue the goods, requested from your plant in Dallas to your distribution center in San Diego.

Name (Position) Sanjay Datar (Warehouse Employee)

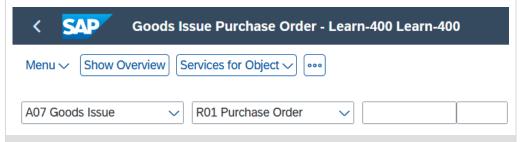
To create a goods issue, use in the Warehouse Management area on the Stock Transport Order page in the Warehouse Employee role the app Post Goods Movement.

Fiori App



In the screen, change the Material Document drop down to **Goods Issue** and adjust the type of Goods Issue to a **Purchase Order**.

Goods Issue Purchase Order



**Note** A purchase order is the same as a stock transport order, you technically purchase the goods from the other plant, but it is a transport, because the plants are under the same company code.

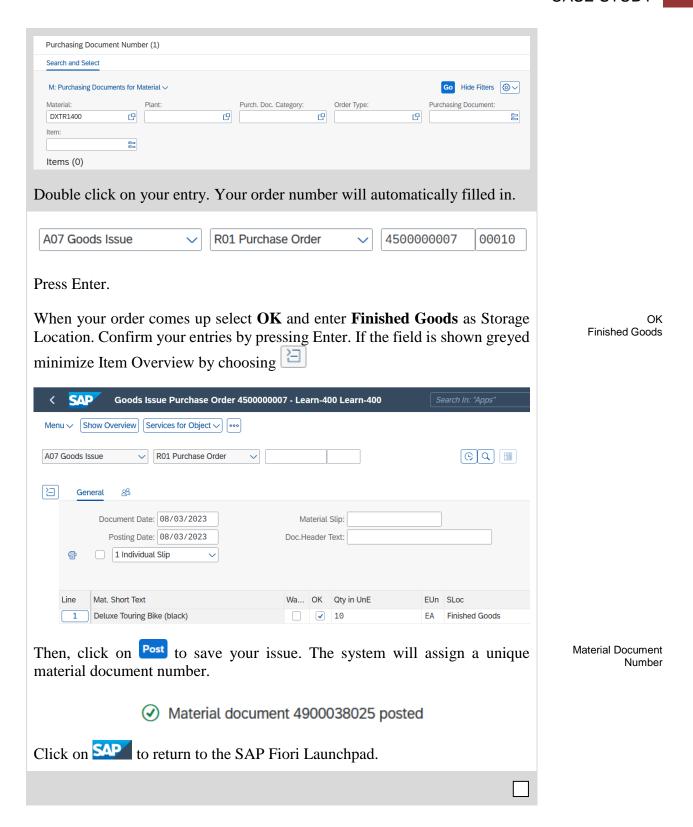
Input your **Stock Transport Order Number** in the blank space next to it.

Stock Transp. Order Nr.

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

In the following screen choose the *Purchasing Documents for Material* tab by using  $\checkmark$ . Then, enter **DXTR1**### as Material and click on  $\checkmark$ .

DXTR1###





## Step 6: 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) Carolin Bruzik (Warehouse Supervisor)

To display the material inventory, use in the *Warehouse Management* area on the *Stock Transport Order* page in the *Warehouse Supervisor* role the app *Display Stock Overview*.

Fiori App



In the *Stock Overview* screen, enter **DXTR1**### as Material (remember to replace ### with your number). Choose Execute. Please be aware that your numbers may vary.

DXTR1###

▼ Q   Q Detailed Display	
Client/Company Code/Plant/Storage Location/Batch/Special Stock	Unrestricted use
∨ ● Full	458.000
✓ I  ■ DE00 Global Bike Germany GmbH  Output  Description  Descri	120.000
✓ ➡ HD00 Plant Heidelberg	120.000
FG00 Finished Goods	120.000
✓ 🗐 US00 Global Bike Inc.	338.000
✓ Em DL00 Plant Dallas	240.000
FG00 Finished Goods	240.000
✓ Em MI00 DC Miami	95.000
FG00 Finished Goods	95.000
✓ Em SD00 DC San Diego	3.000
FG00 Finished Goods	3.000

Note that your amount of goods in Dallas has changed now.

By double clicking on *SD00 DC San Diego* you can also see, that you still have an On-Order Stock balance of 10 for your distribution center in San Diego. This means that the goods have not arrived in San Diego yet.

Click on to return to the SAP Fiori Launchpad.

L



## Step 7: Display Material Inventory Value

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

Time 5 min

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

Name (Position) Carolin Bruzik (Warehouse Supervisor)

To display the material inventory value, use in the *Warehouse Management* area on the *Stock Transport Order* page in the *Warehouse Supervisor* role the app *Display Warehouse Stock*.

Fiori App



In the *Display Warehouse Stocks of Material* screen, enter **DXTR1**### as Material (remember to replace ### with your number). Ensure that all other search criteria fields are blank and click on Execute. Please be aware that your numbers may vary.

DXTR1###

Locat SL	Unrestricted	Unit	Transit/Transf. Qua	lity Inspection	Restricted-Use	Blocked	Return
	Total Value	Crcy	Total Value	Total Value	Total Value	Total Value	Total Valu
DXTR1400	ju-		Deluxe Touring B	like (black)	DL00 Plant Da	illas	4
FG00	240	EA	0	0	0	0	0
	175,692.00	USD	0.00	0.00	0.00	0.00	0.00
DXTR1400			Deluxe Touring B	like (black)	HD00 Plant He	idelberg	
FG00	120	EA	0	0	0	0	0
	102,967.20	EUR	0.00	0.00	0.00	0.00	0.00
DXTR1400			Deluxe Touring B	like (black)	HH00 DC Hambu	irg	
FG00	0	EA	0	0	9	0	Θ
	0.00	EUR	0.00	0.00	0.00	0.00	0.00
DXTR1400			Deluxe Touring B	like (black)	MIOO DC Miami		
FG00	95	EA	0	0	0	0	0
	133,000.00	USD	0.00	0.00	0.00	0.00	0.00
DXTR1400			Deluxe Touring B	like (black)	SD00 DC San D	iego	
	0	EA	10	0	0	0	0
	0.00	USD	14,000.00	0.00	0.00	0.00	0.00
FG00	3	EA	0	0	0	0	0
	4,200.00	USD	0.00	0.00	0.00	0.00	0.00
* Total							
	×		×	×	×	×	×

As you can see the values associated with the material in Dallas has decreased. Also, the value of *Transit/Transf*. for San Diego has now increased to the value of the goods on order.

Click on SAP for to return to the SAP Fiori Launchpad.

П



### Step 8: Create Goods Receipt

Task Receive goods at receiving plant.

Time 5 min

**Short Description** Use the SAP Fiori Launchpad to confirm the receipt of goods from Dallas by creating a goods receipt.

Name (Position) Yoshi Agawa (Goods Receipt Clerk)

To create a goods receipt, use in the *Warehouse Management* area on the *Stock Transport Order* page in the *Goods Receipt Clerk* role the app *Post Goods Movement*.

Fiori App

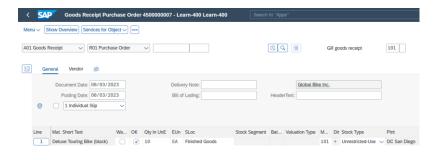


In the *Goods Movement* screen, change the Material Document drop down to **Goods Receipt**, adjust the type of Goods Receipt to a **Purchase Order**, and input your **Stock Transport Order Number** in the blank space next to it. You may use the F4 help like explained in the goods issue task. Then, press Enter.

Goods Receipt Purchase Order Stock Transport Order Number

After your stock transport order comes up select **OK.** Make sure that **SD00** is chosen as Plant, **101** as Movement Type and **FG00** as Storage Location (for some of this information you may need to scroll over to the right to find it).

OK SD00 101 FG00



Then, click on Post to save your receipt. The system will assign a unique material document number.

Material Document Number

✓ Material document 500000019 posted

Click on to return to the SAP Fiori Launchpad.

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## Step 9: 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) Carolin Bruzik (Warehouse Supervisor)

To display the material inventory, use in the *Warehouse Management* area on the *Stock Transport Order* page in the *Warehouse Supervisor* role the app *Display Stock Overview*.

Fiori App

Display Stock Overview

<u>ıllıı.</u>

In the *Manage Stock* screen, enter **DXTR1**### as Material (remember to replace ### with your number). Choose Execute. Please be aware that your numbers may vary.

DXTR1###



Client/Company Code/Plant/Storage Location/Batch/Special Stock	Unrestricted use
∨ ● Full	468.000
✓   ■ DE00 Global Bike Germany GmbH	120.000
✓ ➡ HD00 Plant Heidelberg	120.000
FG00 Finished Goods	120.000
✓ I  ■ US00 Global Bike Inc.	348.000
✓ Em DL00 Plant Dallas	240.000
FG00 Finished Goods	240.000
✓ Em MI00 DC Miami	95.000
FG00 Finished Goods	95.000
✓ Image SD00 DC San Diego	13.000
FG00 Finished Goods	13.00

Note that your amount of goods in San Diego has changed now. By double clicking on *SD00 DC San Diego* you can see that the On-Order Stock balance is now zero for San Diego and its Unrestricted Use has been updated.

Click on to return to the SAP Fiori Launchpad.



## Step 10: Display Material Inventory Value

Task View the value of your material inventory again.

Time 5 min

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

Name (Position) Carolin Bruzik (Warehouse Supervisor)

To display the material inventory value, use in the *Warehouse Management* area on the *Stock Transport Order* page in the *Warehouse Supervisor* role the app *Display Warehouse Stock*.

Fiori App



In the *Display Warehouse Stocks of Material* screen, enter **DXTR1**### as Material (remember to replace ### with your number). Ensure that all other search criteria fields are blank and click on Execute. Please be aware that your numbers may vary.

DXTR1###

Material							
Locat SL	Unrestricted	Unit	Transit/Transf. Qua	lity Inspection	Restricted-Use	Blocked	Return
	Total Value	Crcy	Total Value	Total Value	Total Value	Total Value	Total Valu
DXTR1400			Deluxe Touring B	ike (black)	DL00 Plant Da	allas	
FG00	240	EA	0	0	0	0	0
	175,692.00	USD	0.00	0.00	0.00	0.00	0.00
DXTR1400			Deluxe Touring B	ike (black)	HD00 Plant He	eidelberg	
FG00	120	EA	0	0	0	0	0
	102,967.20	EUR	0.00	0.00	0.00	0.00	0.00
DXTR1400			Deluxe Touring B	ike (black)	HH00 DC Hambu	ırg	
FG00	0	EA	0	0	0	0	0
	0.00	EUR	0.00	0.00	0.00	0.00	0.00
DXTR1400			Deluxe Touring B	ike (black)	MI00 DC Miami	i	
FG00	95	EA	0	0	0	0	0
	133,000.00	USD	0.00	0.00	0.00	0.00	0.00
DXTR1400			Deluxe Touring B	ike (black)	SD00 DC San I	Diego	
FG00	13	EA	0	0	0	0	0
	18,200.00	USD	0.00	0.00	0.00	0.00	0.00
* Total							
	×		×	×	×	×	×

As you can see the value of Transit/Transf. for San Diego is now zero and its
Unrestricted Amount and Total Value is increased.

Click on to return to the SAP Fiori Launchpad.



### Step 11: Run Bin Status Report

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

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 in the *Warehouse Management* area on the *Stock Transport Order* page in the *Warehouse Supervisor* role the app *Run Bin Status Report*.

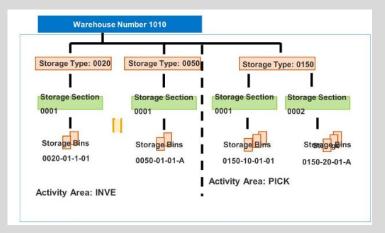
Fiori App



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 Execute.

100 STBN\*###

**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 details.



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 *Bin Status Report: Overview* screen you should see a list of all of your storage bins for the entire warehouse in San Diego. Double click on one of your storage bins to get detailed information.

Тур	StorageBin	Material	Plnt
	STBN-1-400 STBN-1-400		SD00
001	STBN-2-400	< <empty>&gt;</empty>	3000
002	STBN-3-400 STBN-7-400	< <empty>&gt;</empty>	0000
002	STBN-8-400 STBN-8-400	PRTR2400	SD00 SD00
	STBN-9-400 STBN-9-400		SD00 SD00

**Note** Your bin report might look different, depending on whether you have already processed a Warehouse Management case study or not.

Click on to return to the SAP Fiori Launchpad.	



### Step 12: 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) Yoshi Agawa (Goods Receipt Clerk)

To create a transfer order, use in the *Warehouse Management* area on the *Stock Transport Order* page in the *Goods Receipt Clerk* role the app *Display Transfer Requirement – List of Material*.

Fiori App

**Note** If the app is not displayed, search for it using the search bar .

Display Transfer Requirement List for Material

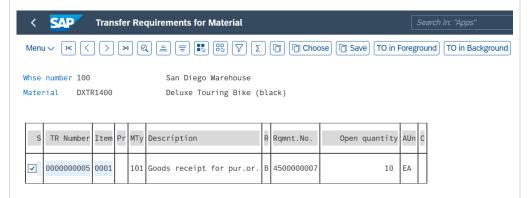
In the *Display Transfer Requirement: List of Material* screen, enter **100** (for your San Diego Warehouse) as Warehouse Number, **DXTR1**### as Material (replace ### with your number) and **SD00** as Plant. Compare your entries with the screenshot below and then click Enter.

100 DXTR1### SD00

C SAP Display T	ransfer Requirement: Lis	t for Material		Search In: "Apps"
Menu ✓				
Warehouse Number	100			
Material	DXTR1400			
		Stock Cat.	*	
Plant	SD00	Special Stock	*	
Location				
Batch				
Shipment Type	*			
Stock Segme	nt:			

In the *Transfer Requirements for Material* screen, you should see a line item describing the goods, just received for your stock transport order. The requirement number should be the same as the stock transport 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 000000XXXX 0001: Prepare for Putaway* screen press Enter to copy your quantity of 10 from the *Palletization* section to the *Items* section. Enter **001** as Sec, **STBN-7-###** as Destination Bin (replace ### with your number) and use F4 to select **Pallet Storage** as Type. Confirm your entries by pressing Enter.

001 STBN-7-### 002 (Pallet Storage)

< <u>S</u>	Create TO fo	or TR 00000000	5 0001: Prepare for	Putaway		arch In: "Apps"	
Menu ∨	Generate + Next Mat.	P	re-Allocated Stock Add	to Existing Stock			
	Material: DXTR14	400					
	Deluxe 1	Touring Bike (black					
	Plant/Stor.loc.: SD00	FG00	Me	ovement Type: 101 G	loods receipt for	pur.or.	
	Stock Category:		S	ource Stor.Bin: 003	1500000007		
	Special Stock:			GR Date: 08/03	/2023		
	Stock Segment:		]				
Palletiza	ition		Quantities				
SU	Qty per SUnit	SUT Typ	ec Si	ck plcmnt qty:		10 EA	
	X			Open Quantity:		0	
	X 10			Total TO items:		0	
Items							
ltm	Dest.target quantity	SUT Type Sec	Destination Bin	Dest.storage unit	Т	Batch	
_ 1	10	002 003	STBN-7-400				
Then, ounique	click on Posting transfer or			rder. The sys write down		assign a number:	Transfer Order Numbe
	@		order 0000005				
Click o	on SAPT to retu	urn to the S	AP Fiori Laur	nchpad.			



### Step 13: Confirm Transfer Order

Task Confirm your transfer order.

Time 5 min

**Short Description** Use the Fiori Launchpad 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) Yoshi Agawa (Goods Receipt Clerk)

To confirm a transfer order, use in the *Warehouse Management* area on the *Stock Transport Order* page in the *Goods Receipt Clerk* role the app *Confirm Transfer Order*.

Fiori App



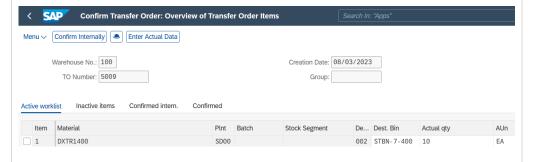
In the *Confirm Transfer Order: Initial Screen*, enter the **TO Number** from the previous task and **100** as Warehouse Number. Then, press Enter.

TO Number

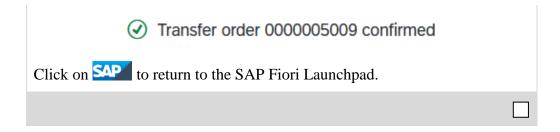
**Note** If you have not written down the number you can search for it using the app *Display Transfer Order*.

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

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 Posting to confirm your transfer order. The system will return a success message.





## Step 14: 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 in the *Warehouse Management* area on the *Stock Transport Order* page in the *Warehouse Supervisor* role the app *Run Bin Status Report*.

Fiori App



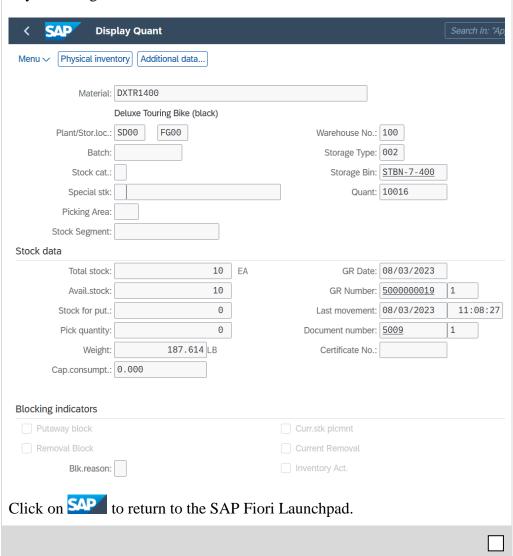
In the *Bin Status Report: Initial Screen*, enter **100** (for your San Diego Warehouse) as Warehouse Number and **STBN**\*### as Storage bin (replace ### with your number). Then, click on Execute.

100 STBN\*###

Тур	StorageBin	Material	Plnt
	STBN-1-400 STBN-1-400		SD00
001	STBN-2-400	< <empty>&gt;</empty>	3500
	STBN-3-400 STBN-7-400		SD00
	STBN-8-400 STBN-8-400		SD00
	STBN-9-400		SD00
002	STBN-9-400	ORWN1400	SD00

In the *Bin Status Report: Overview* screen you should see that the Storage Bin **STBN-7-**### is filled now. Click on your material to display detailed

information of this quant and check whether 10 pieces of your goods are stored in your storage bin.



## WM II Challenge

**Learning Objective** Understand and perform a warehousing process for int. **Time** 80 min goods

**Motivation** After having finished the *Warehouse Management II* 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. The distribution center in San Diego will soon start delivering customers. In order to do so, you need to ensure that there are enough silver Deluxe Touring Bikes available on stock. Unfortunately, you cannot order any from your plants in Dallas, as there are no free resources available, because of problems with one of the assembly lines. In order to have on time 50 silver Deluxe Touring Bikes (estimation by the management) in San Diego you need to order them from your plant in Heidelberg (Germany). The delivery time is 10 days maximum.

As soon as the goods arrive in your DC in San Diego they need to be stored in the same bin, where the black Touring Bikes from this case study already are.

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