

# **TS452**

## **Sourcing and Procurement in SAP S/4HANA - Academy Part II 1/2**

### **PARTICIPANT HANDBOOK INSTRUCTOR-LED TRAINING**

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# Typographic Conventions

American English is the standard used in this handbook.

The following typographic conventions are also used.

This information is displayed in the instructor's presentation



Demonstration



Procedure



Warning or Caution



Hint



Related or Additional Information



Facilitated Discussion



User interface control

*Example text*

Window title

*Example text*



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# Course Overview

## TARGET AUDIENCE

This course is intended for the following audiences:

- Application Consultant
- Project Stakeholder
- Super / Key / Power User



# UNIT 1

# Introduction to Inventory Management

## Lesson 1

Defining Inventory Management and Physical Inventory

3

## Lesson 2

Moving Goods with the Post Goods Movement App

9

## UNIT OBJECTIVES

- Sketch the basics of inventory management and physical inventory
- Describe the central app for goods movements
- Hold data for goods movements
- Explain the transaction MIGO
- Display print outputs for goods movements
- Use Post Goods Movement app
- Distinguish between different units of entry for goods movements



# Defining Inventory Management and Physical Inventory



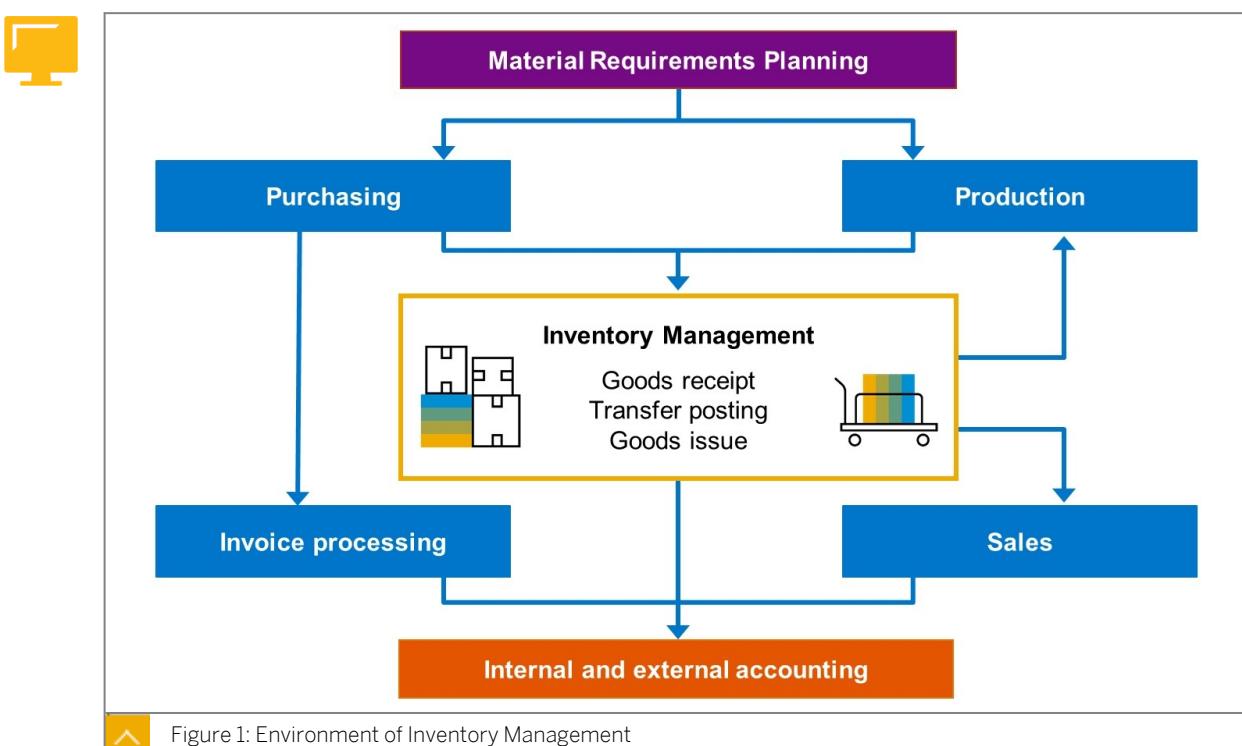
## LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Sketch the basics of inventory management and physical inventory

## Inventory Management Environment

Inventory management is an essential component of materials management and is embedded in the whole logistics process.



Inventory management provides information to material requirements planning (MRP), which takes into account not only the physical stock but also planned movements (requirements and receipts). Requirements calculated by MRP are acquired externally or internally.

When you order a material from a supplier (that is external procurement), the goods receipt (GR) with respect to the purchase order takes place in inventory management. The supplier invoice is later processed by invoice verification. This verification process checks, for example, whether the quantities and values from the purchase order and the goods receipt match those on the invoice.

With in-house production (that is internal procurement), the components are made available for production by inventory management and the goods receipt is posted for the end product.

On the other hand, material is not only withdrawn from the warehouse for internal production, but also for the delivery of sales orders. When the system generates the delivery, it marks the quantity to be delivered as delivery to customer and deducts it from the total stock when the goods issue (GI) is posted.

## The Tasks of Inventory Management

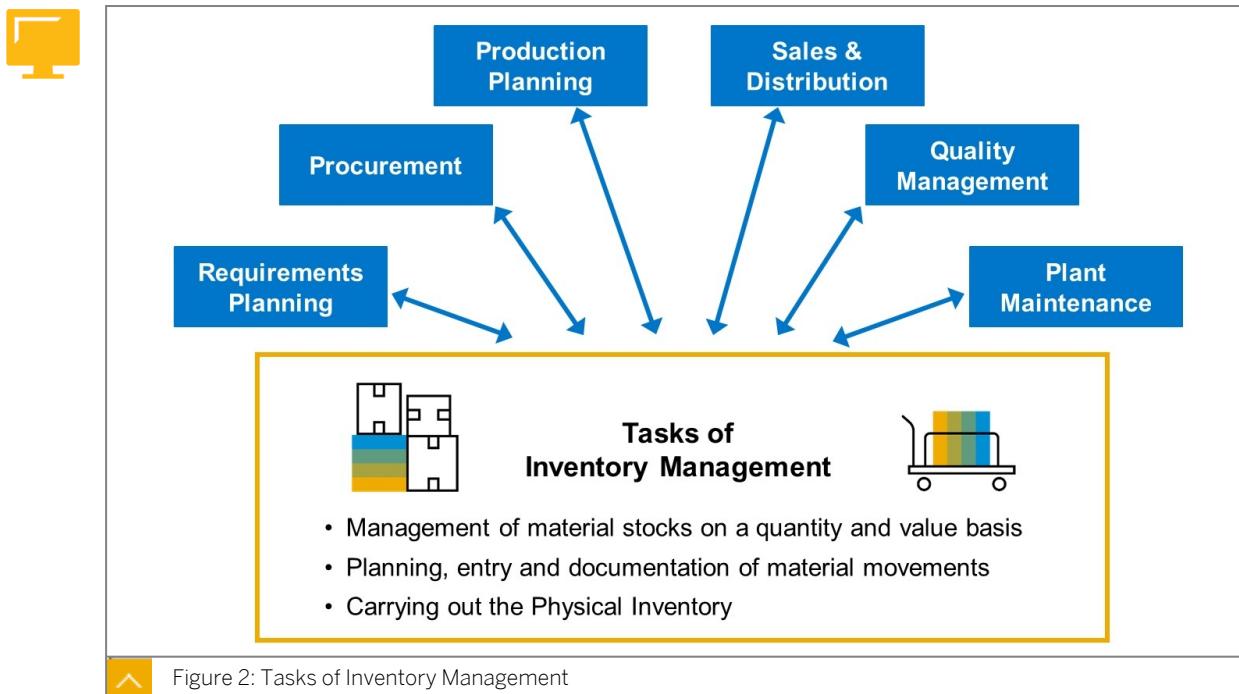


Figure 2: Tasks of Inventory Management

In the area of logistics, inventory management takes over the following tasks:

- Management of material stocks on a quantity and value basis
- Planning, entry, and documentation of material movements
- Carrying out the physical inventory

### Managing Material Stock on a Quantity and Value Basis

#### Managing Stocks by Quantity

Inventory management maps the physical stock in real time by recording all stock-changing transactions and the resulting stock updates. An overview of the current stock situation of a material is always available. For example, you can differentiate between the following:

- Stock quantities in unrestricted-use stock
- Stock quantities in quality inspection
- Stock quantities already ordered but not yet received
- Stock quantities that are in the warehouse, but that are already reserved by the system for production or for a customer

The storage location is the organizational level on which the material's stocks are managed by quantity. Exceptions are some special stocks that are only managed at plant level (for example, customer consignment stock).

If a material is to be subdivided further into lots, a batch can be created for each lot, which is then managed individually in the stock. Inventory management can also manage many of its own and external special stock forms, such as consignment stocks, separately from the normal stock.

### Managing Stocks By Value

Stocks are managed not only on a quantity but also on a value basis. With each goods movement, the system automatically updates the following data:

- Stock quantities and stock values for inventory management
- G/L accounts for financial accounting by means of automatic account determination
- Account assignments for cost accounting (provided the internal accounting is active)

The valuation area is the organizational level at which a material's stock value is managed.



#### Note:

The valuation area can correspond to a plant or company code. Inventory management generally operates at plant and storage location levels. When you enter a goods movement, you only need to enter the plant and the storage location of the goods. The system derives the company code from the plant based on the valuation area.

### Planning, Entry, and Documentation of Goods Movements

In general, a transaction that causes a stock change is marked as a goods movement. When you post a goods movement, documents are created that form the basis for the quantity and value updates and are also used in the verification process for the movement.

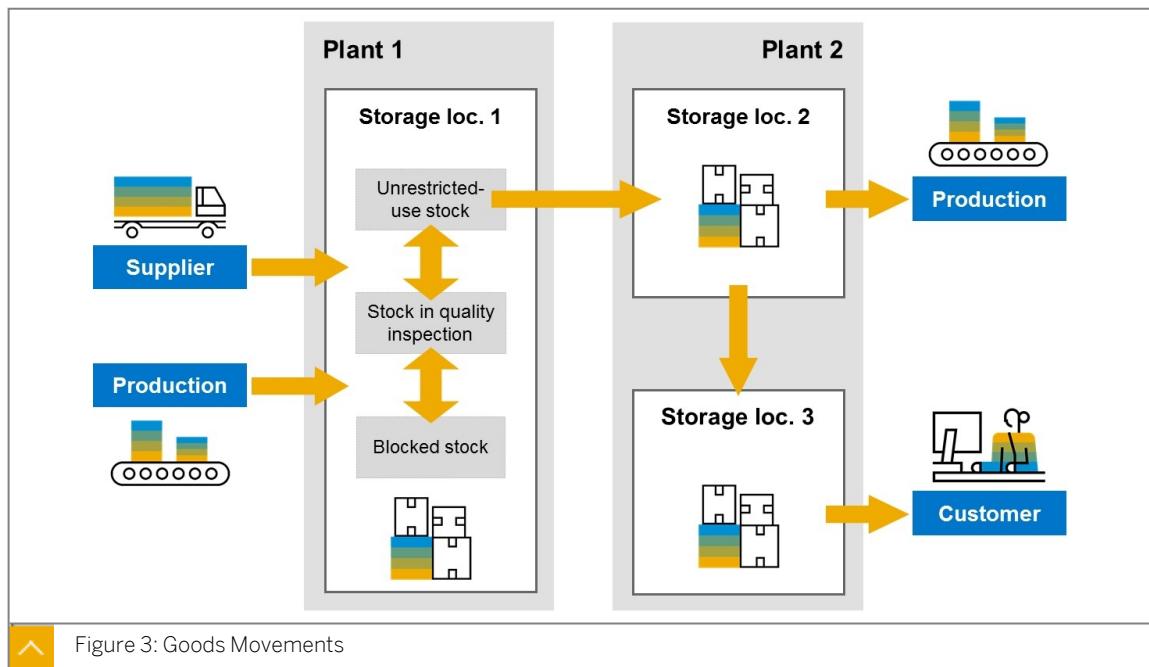


Figure 3: Goods Movements

We distinguish between goods receipts, goods issues, stock transfers, and transfer postings:

- Goods receipt (GR):

A goods receipt is a goods movement that is posted with the goods received from external vendors as well as production. A goods receipt leads to an increase in warehouse stock.

- Goods Issue (GI):

A goods issue is a goods movement in which a material withdrawal, material consumption, or goods shipment is posted to a customer. A goods issue leads to a decrease in warehouse stock.

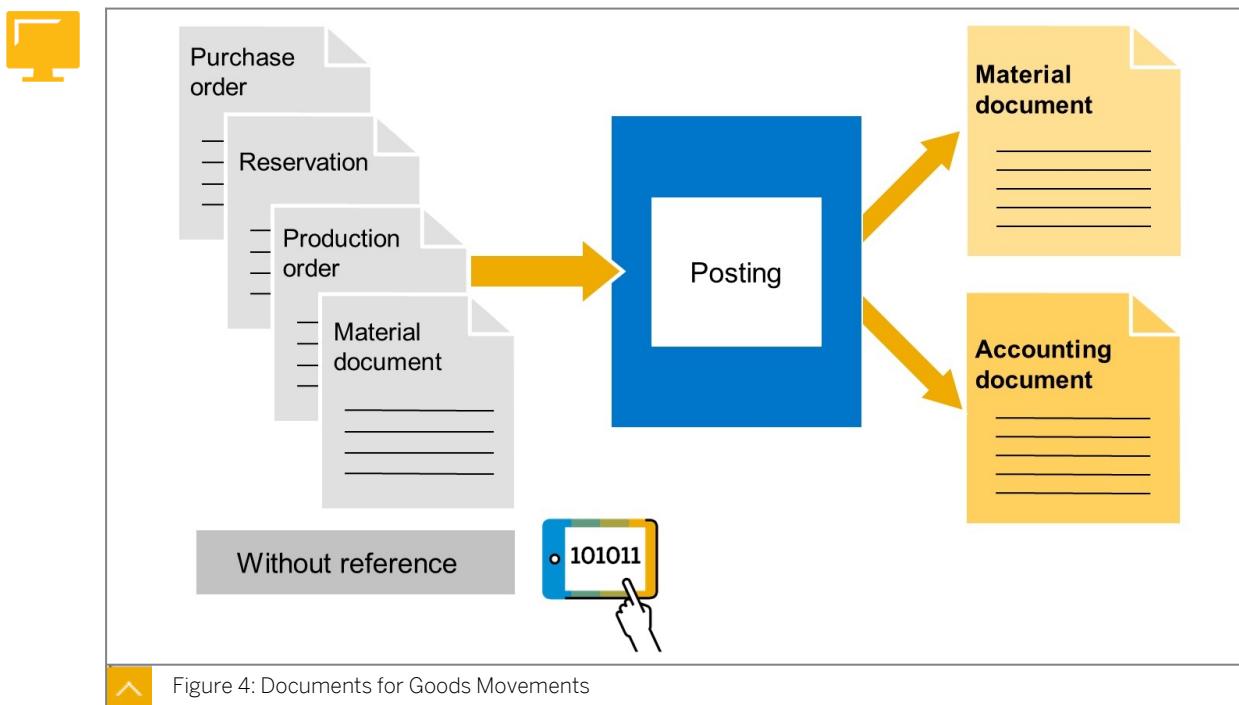
- Stock transfer:

A stock transfer is a goods movement in which materials are removed from a particular storage location and placed into another storage location. Stock transfers can take place both within the same plant and between two plants.

- Transfer posting:

A transfer posting is a superordinate term for stock transfers and changes the stock identification or qualification of a material, regardless of whether the posting is linked to a physical movement. Examples of transfer postings include the release of the stock for quality inspection, the transfer posting from material to material, and the transfer of consignment material to own stock.

### Documents for Goods Movements



Many goods movements are entered with reference to a reference document, for example, the goods receipt for a purchase order, the goods issue for a reservation, or the return delivery to a material document. For these goods movements, data such as material, quantity or plant is taken from the reference document. For goods movements without reference all necessary data must be entered manually.

When a goods movement is posted, documents are also created. These documents are used as proof of the movement and are also the basis for the quantity and value update. The bookkeeping principle "no posting without document" applies.

### **Material document**

The material document serves as verification for the goods movement and as a source of information for all subsequent applications. The material document consists of a header and at least one item. The header contains general data about the movement type, such as the date and delivery note number. The items describe the individual goods movements.

A material document is identified by the document number and the material document year.

### **Accounting document**

If the movement is relevant for financial accounting, or in other words if the movement leads to an update of the G/L accounts, the system creates an accounting document parallel to the material document. Using automatic account determination, the system updates the G/L accounts that are affected by a goods movement.

An accounting document is identified by the company code, the document number, and the fiscal year.



#### Hint:

As a rule, the material document number and the accounting document number are different.

As well as the creation of the documents mentioned above, the entry of a goods movement triggers other transactions in the system. For example, the stock quantities and values are updated in the material master record. The system also updates any other applications involved in the transaction.

### **Carrying Out the Physical Inventory**

With physical inventory, you carry out a physical stock-taking in your warehouse. You compare the actual physical material stock with the data stored in the system. By writing-off the determined inventory differences, you update the accounting inventory data according to the results of the physical inventory. You can carry out physical inventory for both your own stock and external stock.

**SAP\_Accordion-Template**

**SAP\_FAQ\_Template**

**SAP\_Simple-Dialogue1\_Template**

**SAP\_Tabs\_Template**

**SAP\_UserRoles1\_Template**



### **LESSON SUMMARY**

You should now be able to:

- Sketch the basics of inventory management and physical inventory



# Unit 1

## Lesson 2

# Moving Goods with the Post Goods Movement App



## LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Describe the central app for goods movements
- Hold data for goods movements
- Explain the transaction MIGO
- Display print outputs for goods movements
- Use Post Goods Movement app
- Distinguish between different units of entry for goods movements

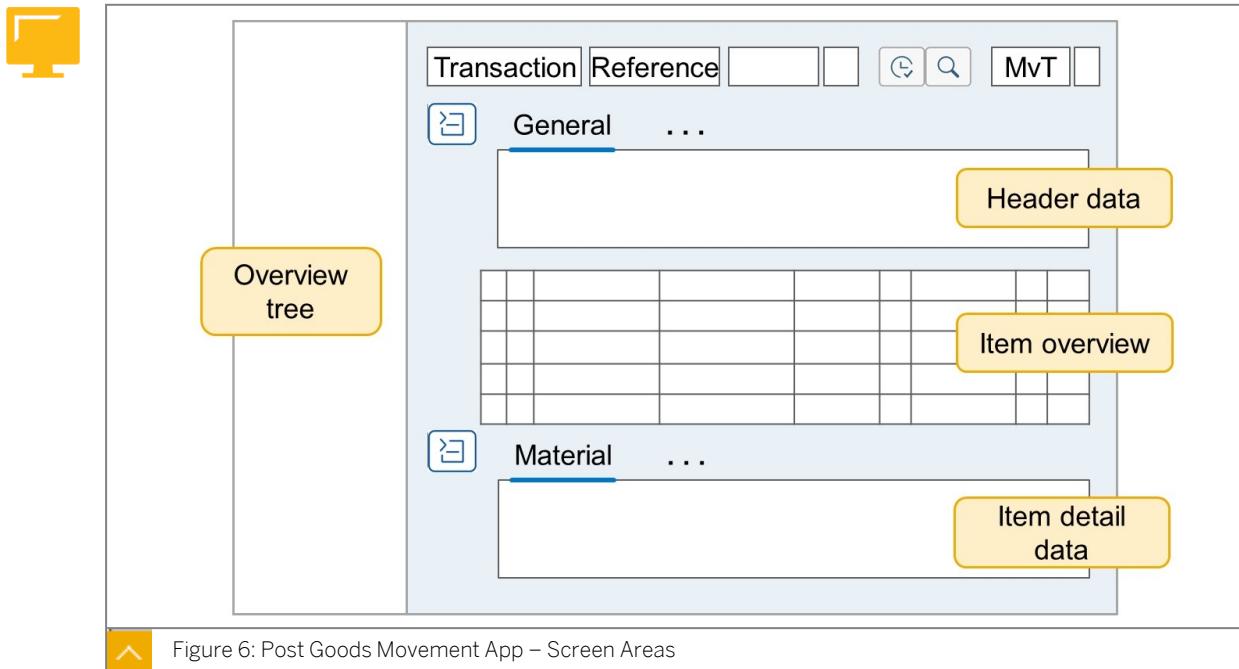
## The Post Goods Movements App



Figure 5: Post Goods Movement App

The Post Goods Movement app is a SAP GUI for HTML transaction. The app is part of the Business Roles Warehouse Clerk (SAP\_BR\_WAREHOUSE\_CLERK) and Inventory Manager (SAP\_BR\_INVENTORY\_MANAGER), for example.

With this app, you can record all types of goods movements. This includes, for example: Goods receipts and goods issues with and without reference, but also transfer postings. In addition, you can use the app to display, change and cancel material documents.



As you can see in the figure "Post Goods Movement App - Screen Areas", the app can be divided into the following screen areas:

- Header data
- Item overview
- Item details
- Overview tree

In the header and detail data screen areas, the information is grouped on individual tab pages.

#### **Header data**

The header data contains information that refers to the complete material document, such as the document and posting date, the document header text, the person who created it, and the entry date. You can branch from the header data to the accounting document.

#### **Item overview and item details**

The document items are listed in the item overview. If you click the number of an item in the overview, the system opens the detail data for this item. In both the item overview and the item details, you will find, for example, details such as plant and storage location and the movement type, but also information about the reference document or account assignment.

**Caution:**

If you have opened the detail data for an item, changes to this item can only be made in the detailed data, but not in the item overview..

## Overview tree

The overview tree displays your last 10 documents for purchase orders, orders, reservations, material documents, and held data. The system inserts these documents automatically into the overview tree. These documents are documents you referred to when posting a goods movement, as well as the material documents that were created.

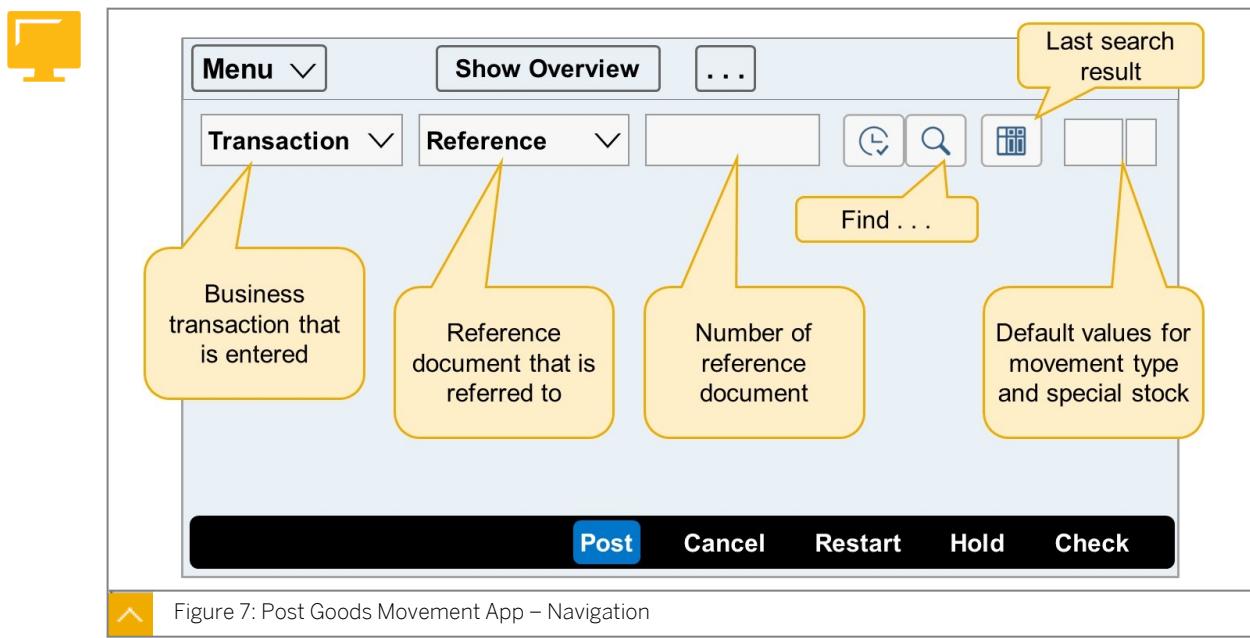
You therefore always have an overview of the activities you last executed.



**Hint:**  
From the document overview, you can only select material documents for display.

You can open and close the individual screen areas, except the item overview. You can show and hide the overview tree using *Show/Hide Overview*. For the header, choose *Open/Close Header Data*, and for the item details, choose *Open/Close Detail Data*. You can also open the item details by clicking the item number in the item overview.

## Navigation in Post Goods Movement App



The figure “Post Goods Movement App – Navigation” shows some important fields and functions of the app.

### List box Transaction

In this list box, you select the business transaction that you want to process. You can choose between the following transactions:

- Goods receipt
- Return delivery
- Subsequent delivery

- Subsequent adjustment
- Release GR blocked stock
- Goods issue
- Transfer posting
- Remove from storage
- Place in storage
- Cancel
- Display
- Change

#### **List box Reference document**

In this list field, you specify the reference document to which you want to refer. You can choose from the following reference documents:

- Inbound delivery
- Order
- Outbound delivery
- Purchase order
- Delivery note
- Material document
- Reservation
- Others (without reference)
- Transport
- Transport ID code

The entries available for selection in the *Reference document* list box depend on the *Transaction* selected.

#### **Functions Find reference document and Last search result**

Depending on the reference you have selected, you can search for reservations, purchasing documents, or material documents by choosing  (*Find Document*).

When you call the search function, enter your search criteria in the dialog box. The search result is displayed in a separate screen area at the bottom of the screen. You can use the SAP List Viewer (ALV) functions in the results list to sort the documents according to different criteria. You can double-click a document in the search result to transfer it to the item overview for processing.

To close the window with the search results, choose  (*Close Search Result*).

If you want to show the last search result again, choose  (*Display Last Search Result*).

When you exit the transaction, the search result is lost.

#### **Default values for movement type and special stock indicator**

You can use these fields to enter default values for the movement type and the special stock indicator. The system then proposes these values for all items. If you change the default values during an entry transaction, your change does not affect the items you have already entered. The new default values apply only to items that you enter after the change.

#### Function Restart

You do not have to leave the *Post Goods Movement* app to terminate processing. To start with a new transaction, choose *Restart*.

#### Function Check

When you process goods movements and enter data, the system does not issue any warning messages or error messages. If you want to know whether the system will issue any warning messages or error messages before you perform the actual posting, choose *Check* first. A dialog box then displays all warning messages and error messages. When you check a document for the first time, you see a new *Status* column in the item overview that displays the check result for each item with a traffic light symbol. When you click a traffic light symbol, the message log for the corresponding item appears.

If you save the document without performing a check and error messages appear, the system displays a dialog box with a message log that includes the warning messages and error messages. If no error messages occur during posting, the system does not display any warning messages that may have occurred.

You can use a Customizing setting to force the check before posting. This setting is transaction-specific for the combination of transaction and reference.

#### Direct Help

When you choose  → *Help*, a separate screen area opens with information and user tips. This means that you can display the help documentation while working in the app. To hide the help again, choose  *Close*.

### Default Values for Post Goods Movement App

In the *Post Goods Movement* app, you can change the default values for movement type and special stock indicator directly on the entry screen. However, you can also select *Menu* → *Settings* → *Default Values*. A separate dialog window appears in which you can define these and other user-dependent default values.



Change Default Values

**General Default Values**

Action	Reference Document	Move...	Sp...	Stock Type	Movement Type Text
Goods Receipt	▼ Purchase Order	▼ 101		Unrestricted-Use	▼ GR goods receipt
Goods Receipt	▼ Inbound Delivery	▼ 101		Unrestricted-Use	▼ GR goods receipt
Goods Receipt	▼ Outbound Delivery	▼ 101		Unrestricted-Use	▼ GR goods receipt
Goods Receipt	▼ Transport	▼ 101		Unrestricted-Use	▼ GR goods receipt
Goods Receipt	▼ Transport ID Code	▼ 101		Unrestricted-Use	▼ GR goods receipt
Goods Receipt	▼ Order	▼ 101		Unrestricted-Use	▼ GR goods receipt
Goods Receipt	▼ Reservation	▼ 501		Unrestricted-Use	▼ Receipt w/o PO

Propose the OK Function in Future  
 Propose All Items  
 Copy Account Assgt Fields

**Non-Ordered Items at Goods Receipt for Purchase Order**

Material:	501	Receipt w/o PO
Transport Equipment:	501	M Receipt to RTP

**General Settings**

<input type="checkbox"/> Create Serial Numbers Automatically	<input type="checkbox"/> No Transfer Requirmt
<input type="checkbox"/> Display Parameter for Expanding the BOM	Special movement <input type="checkbox"/>
<input type="checkbox"/> Display Autom. Line in Transfer Posting	

**Redisplay Tips Already Read**

Check Adopt Cancel

Figure 8: Post Goods Movement App – Default Values

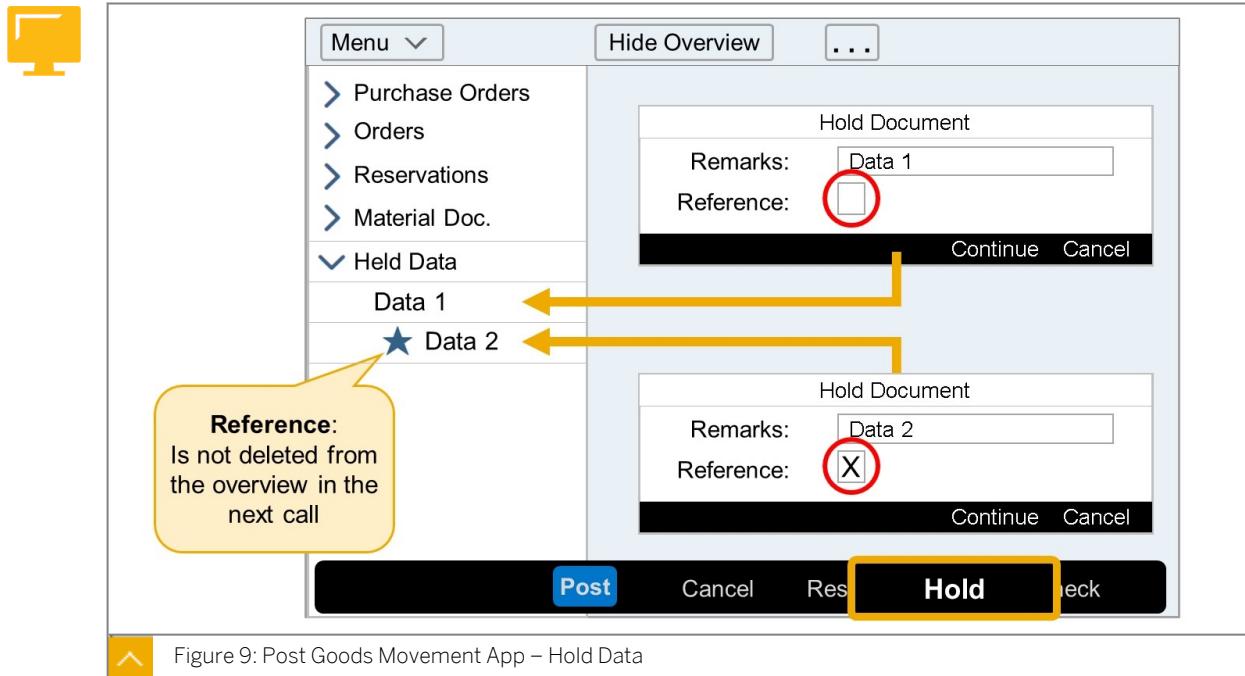
Depending on the transaction and reference document, you define the default values for the movement type, special stock indicator and stock type in a list.

You can also specify additional values for the system to propose when you enter a goods movement. These values may include plant, storage location and the OK indicator.

The system saves all default values for each user individually, and they are valid until you change them again.

### Hold Data Function in Post Goods Movement App

If you have to interrupt the processing of a goods movement before posting, you can hold the data entered so far. If you want to continue entering the goods movement, you do not have to enter the data again. Instead, you call up the held data. Note that no document is created when you hold a goods movement.



To hold data, choose the **Hold** function in the *Post Goods Movement* app. After this, you have the following two options for calling up held data for further processing:

- Choose *Menu → Goods Receipt → Held Data*. Then select the held data that you want to continue processing and choose ✓ (Get Entry).
- Via the overview tree: The last 10 items of held data are displayed in the overview tree. Double-click to select the held data that you want to process further.

The system deletes the held data automatically when you continue processing the goods movement.

You can also use held data as a reference template for frequently recurring transactions. The system does not delete references when you call them up again. To make a reference template from held data, select the *Reference* checkbox. You can recognize a reference template in the overview tree by the *Favorite (Star)* symbol in front of the comment.

You can delete held data that you no longer require. To do this, choose *Menu → Goods Receipt → Held Data*, select the held data you want to delete, and choose ⚡ (Delete Selected Entries).

If you want to delete data that is being held by other users, use the *Manage Held Data - Inventory Management* app.

**Caution:**



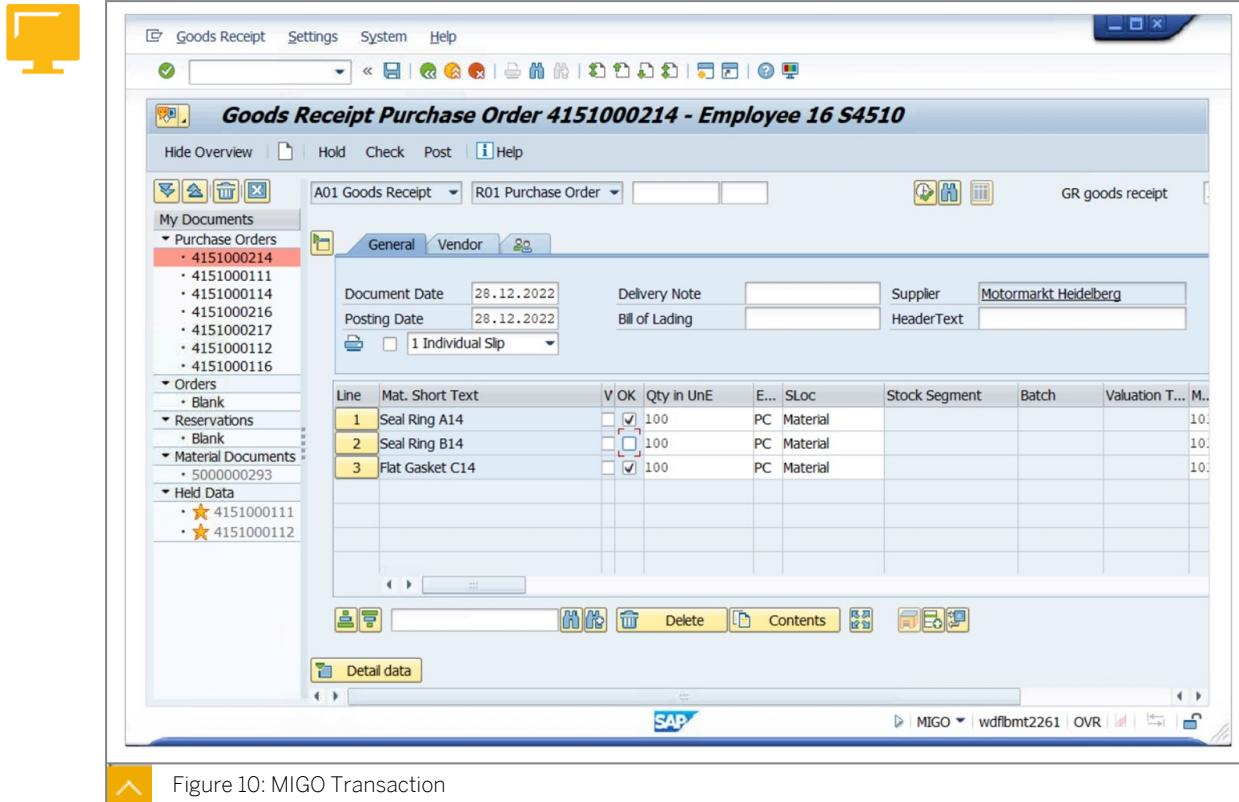
Some data cannot be held by the system and you have to re-enter it after trying to retrieve it. This data is as follows:

- Batch classification
- Import data
- Profitability segment

In the batch classification, newly created selection criteria are lost if the document is not posted immediately.

### SAP GUI Transaction for Goods Movements (MIGO)

You can also call the function for posting goods movements using the SAP GUI. On the Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement* (transaction MIGO).



The functions and screen layout of the MIGO transaction are the same as those of the Post Goods Movement app. The basic navigation in the transaction also corresponds to the app navigation. However, there are small differences in the arrangement of the buttons and in the menu navigation.

This is how you find the *Post*, *Cancel*, *Restart*, *Hold*, and *Check* buttons at the top of the screen. The settings of the default values or the list of the held data can be accessed via the menu options in the menu bar above the entry screen.

Also a transaction corresponding to the *Manage Held Data - Inventory Management* app is available. You start this transaction MBPM from the *Easy Access* menu using the following menu path: *Logistics → Materials Management → Inventory Management → Periodic Processing → Manage Held Data*.

## Goods Receipt/Issue Slip for Goods Movements



### Hint:

More information about message determination in inventory management is provided in the course S4550 (Cross-Customizing in Materials Management (MM)) and in the TS452.

A document in printed form is often required for a physical goods movement. In inventory management, this document is known as a goods receipt/issue slip (GR or GI slip) and is used as follows:

- A shipping paper (GR or GI slip) for the warehouse
- An identification slip (pallet slip) for the material
- An issue slip during a GI

In addition to GR or GI slips, inventory management offers the option of printing material document information on labels.

The system processes GR or GI slips and labels in inventory management using message technology. Depending on the type, a message can be printed or sent to a recipient (for example, by mail). Goods receipt/issue slip and labels are usually printed.

In standard a distinction is made between the following types of goods receipt/issue slips:

- GR slip for external goods receipts (such as goods receipts for purchase order, or a return delivery)
- GR slip for internal goods receipts (such as goods receipts for production order)
- GI slip for goods issues and other goods movements

In addition, there are usually three different versions for GR or GI slips. Depending on the version you choose, the system performs one of the following actions:

- The system prints a separate slip for each item of the material document either with or without quality inspection text.
- The system prints a single slip with all the items of the material document.

When you enter a goods movement, you can decide whether the system should generate GR or GI slips, and if so, with which version.

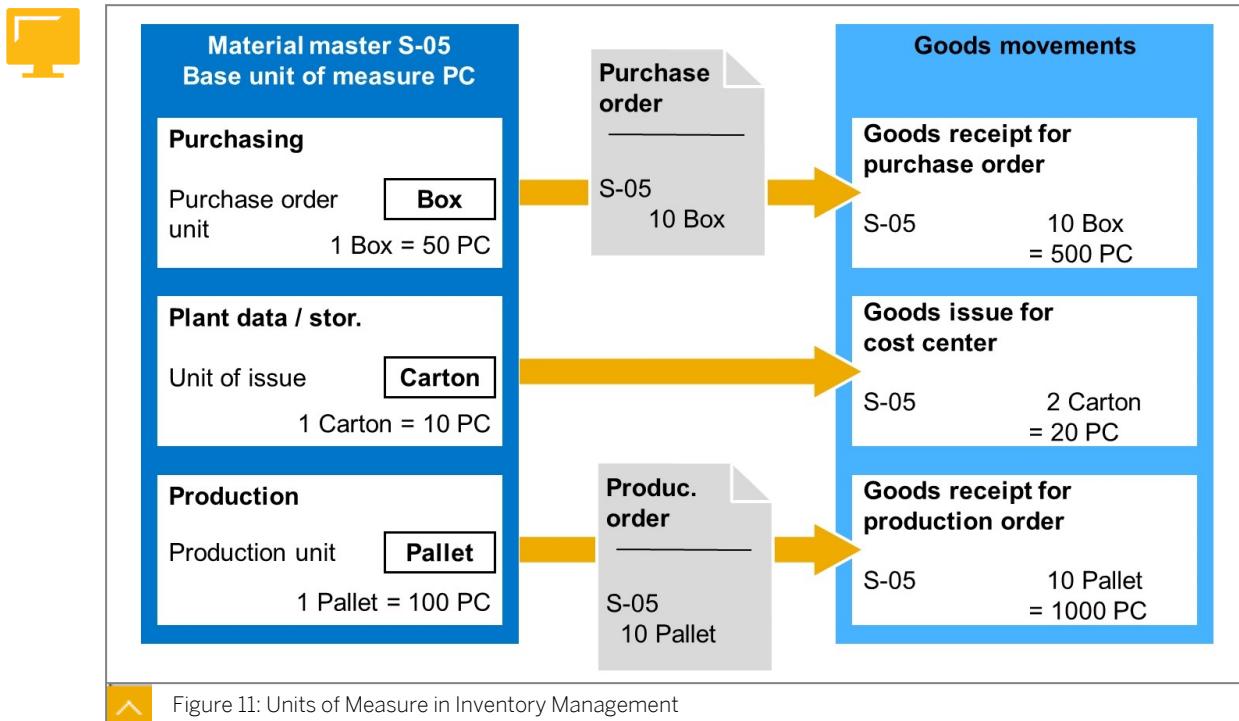
## Units of Measure in Inventory Management

In inventory management, a distinction is made between the following units of measure:

- Base unit of measure or stockkeeping unit
- Unit of entry

- Purchase order price unit

The stockkeeping unit is the unit in which the stock of a material is managed. You can enter goods movements in other units of measure, if these units of measure are defined in the material master record as alternative units of measure or as standard conversions (for example, grams into kilograms). If the unit of entry differs from the stock keeping unit, the system converts the quantity from the unit of entry into the stockkeeping unit.



In the material master record, you can define different units of entry for the applications as follows:

- Purchase order unit (OUN)
- Sales unit (SUn)
- Unit of issue (UnI)
- Production unit (PUn)

These units of measure are then proposed directly or via the reference document for the respective goods movement.



## LESSON SUMMARY

You should now be able to:

- Describe the central app for goods movements
- Hold data for goods movements
- Explain the transaction MIGO
- Display print outputs for goods movements
- Use Post Goods Movement app

- Distinguish between different units of entry for goods movements



## Learning Assessment

1. What are tasks of inventory management?

*Choose the correct answers.*

- A Planning of material requirements
- B Quantity-based management of material stocks
- C Execution of the balance sheet valuation after the physical inventory
- D Documentation of goods movements

2. Which of the following screen sections in the *Post Goods Movement* app (or MIGO transaction) can be closed?

*Choose the correct answers.*

- A Overview tree
- B Header data
- C Item overview
- D Item details

3. For which functions can you use the *Post Goods Movement* app or the MIGO transaction?

*Choose the correct answers.*

- A Entering a goods receipt (GR) with reference to another document
- B Creating a reservation
- C Changing a material document
- D Deleting a material document

4. In the *Post Goods Movement* app, you can hold data. Which indicator do you use to hold data for multiple use?

*Choose the correct answer.*

- A Transaction
- B Delivery complete
- C Reference
- D OK

## Learning Assessment - Answers

1. What are tasks of inventory management?

*Choose the correct answers.*

- A Planning of material requirements
- B Quantity-based management of material stocks
- C Execution of the balance sheet valuation after the physical inventory
- D Documentation of goods movements

Correct. The planning of the material requirements is a task of material requirements planning. The execution of the balance sheet valuation is a task of financial accounting. Managing stocks on a quantity and value basis and the documentation of goods movements are tasks of inventory management.

2. Which of the following screen sections in the *Post Goods Movement* app (or MIGO transaction) can be closed?

*Choose the correct answers.*

- A Overview tree
- B Header data
- C Item overview
- D Item details

Correct. You can close the overview tree, the header data area, and the item details in the app or in the transaction for posting goods movements.

3. For which functions can you use the *Post Goods Movement* app or the MIGO transaction?

*Choose the correct answers.*

- A Entering a goods receipt (GR) with reference to another document
- B Creating a reservation
- C Changing a material document
- D Deleting a material document

Correct. You can enter a goods receipt with reference to another document and change a material document using the app or the transaction for posting goods movements. You can also display and cancel material documents. But material documents cannot be deleted as they are used for the documentation of goods movements. To create a reservation you need to use another transaction.

4. In the *Post Goods Movement* app, you can hold data. Which indicator do you use to hold data for multiple use?

*Choose the correct answer.*

- A Transaction
- B Delivery complete
- C Reference
- D OK

Correct. You have to use the *Reference* field to define the held data as a template.

## Lesson 1

Posting a Goods Receipt Without Reference

27

## Lesson 2

Posting a Goods Receipt with Reference

33

## Lesson 3

Posting a GR with Automatic Generation of a PO

43

## Lesson 4

Posting Cancellations, Return Deliveries, and Returns

47

## Lesson 5

Applying Order Price Unit in Inventory Management

55

## Lesson 6

Applying Tolerances and the Delivery Completed Indicator

57

## Lesson 7

Setting Up Date Checks to Goods Receipt for Purchase Order

63

## UNIT OBJECTIVES

- Post a goods receipt without reference
- Post a goods receipt with reference to a purchase order or a production order in different stock types
- Post a goods receipt in GR blocked stock
- Use different functions to post a goods receipt with reference
- Enter a GR without reference to a PO so that a PO is generated automatically
- Post a cancellation of a material document

- Post a return delivery to a supplier
- Enter a return for a purchase order
- Use an order price unit in a GR with reference to a PO
- Use the tolerances for underdelivery and overdelivery
- Use the delivery completed indicator
- Use the shelf life expiration date check
- Customize system messages for a delivery that is too early or too late

## Unit 2

### Lesson 1

# Posting a Goods Receipt Without Reference



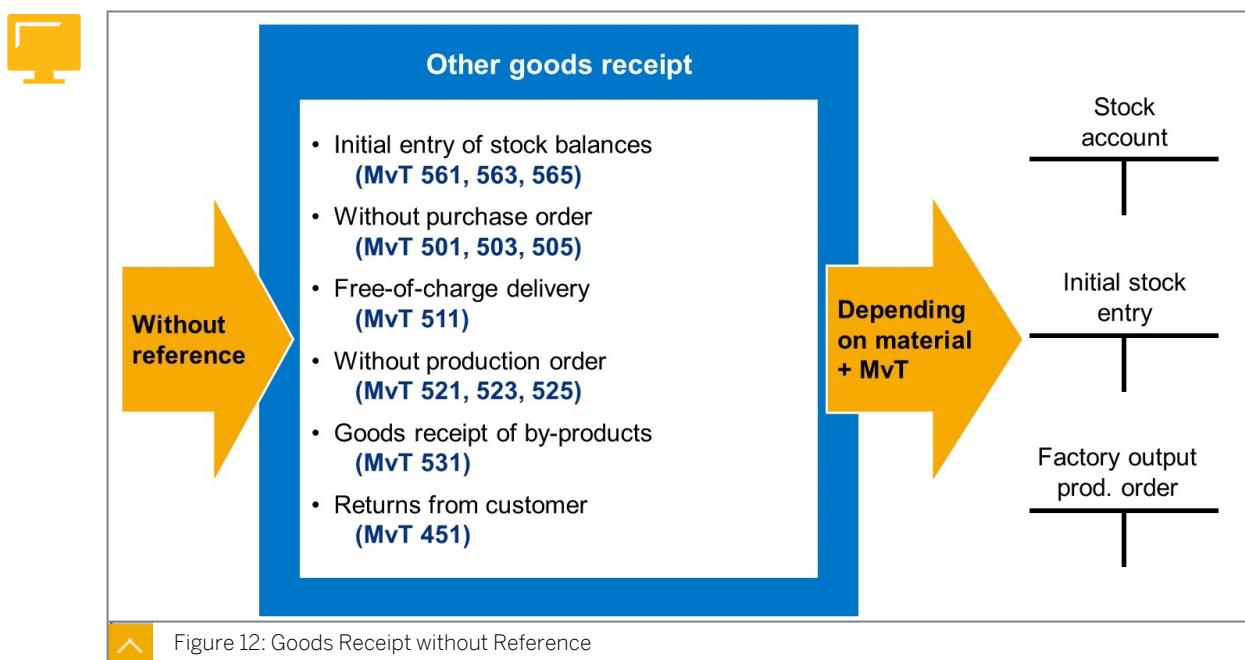
#### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post a goods receipt without reference

#### Other Goods Receipt

If you enter a goods receipt without reference to another document, it is known as an other goods receipt. Such goods receipts belong to unplanned goods movements because no information on the material, quantity, delivery date, receiving plant, or origin is stored in the system prior to the actual posting.



Other goods receipts are depicted using various movement types. This is done for the following reasons:

- The movement type controls quantity and value updating.
- The movement type can influence the account determination for the offsetting entry to the stock posting.
- The movement type influences field selection.
- The movement type influences message determination.

**Hint:**

The Stock Type field is ready for input for movement types 501, 511, 521, 531, and 561. This means, for example, that for stock in quality inspection you can enter an initial stock balance either by using movement type 563 or by using movement type 561 plus stock type quality inspection.

## Initial Entry of Stock Balances

You must carry out an initial entry of stock balances when implementing the SAP system in order to transfer physical warehouse stocks or book inventories from an existing system into the SAP system as book inventories. No physical material movement occurs during this process. The initial entry of stock balances can be carried out for the following three stock types:

- Unrestricted-use stock (movement type 561)
- Stock in quality inspection (movement type 563)
- Blocked stock (movement type 565)

The quantity recorded is posted to the selected stock type and increases the total valued stock of the material.

The movement types can also be used together with all special stock indicators. This means that the initial entry of stock balances can be done for consignment stock with vendors and customers, for example, or the project and sales order stock.

**Note:**

If the stock figures are adopted from a legacy system, the entry of large volumes of data is not done manually but via the SAP S/4HANA migration cockpit.

The valuation of the stocks to be recorded depends on the following factors:

- The data in the material master record (valuation class, price control, and current valuation price)
- Whether you enter a value for the quantity to be recorded in the initial entry of stock balances (*External Amount in Local Currency* field in the item details on the *Quantity* tab page)

If no external amount is specified in local currency in the initial entry of stock balances, the quantity to be recorded is valued based on the valuation price from the material master record (that is, at the moving average price (MAP) or standard price).

If an external amount is entered, the quantity to be recorded is valued at this amount. In this case, if the material involved is valued at moving average price, the latter is then adjusted accordingly.

The offsetting posting to the stock posting is made to a special account for the initial entry of stock balances.

## Goods Receipt Without a Purchase Order or a Production Order

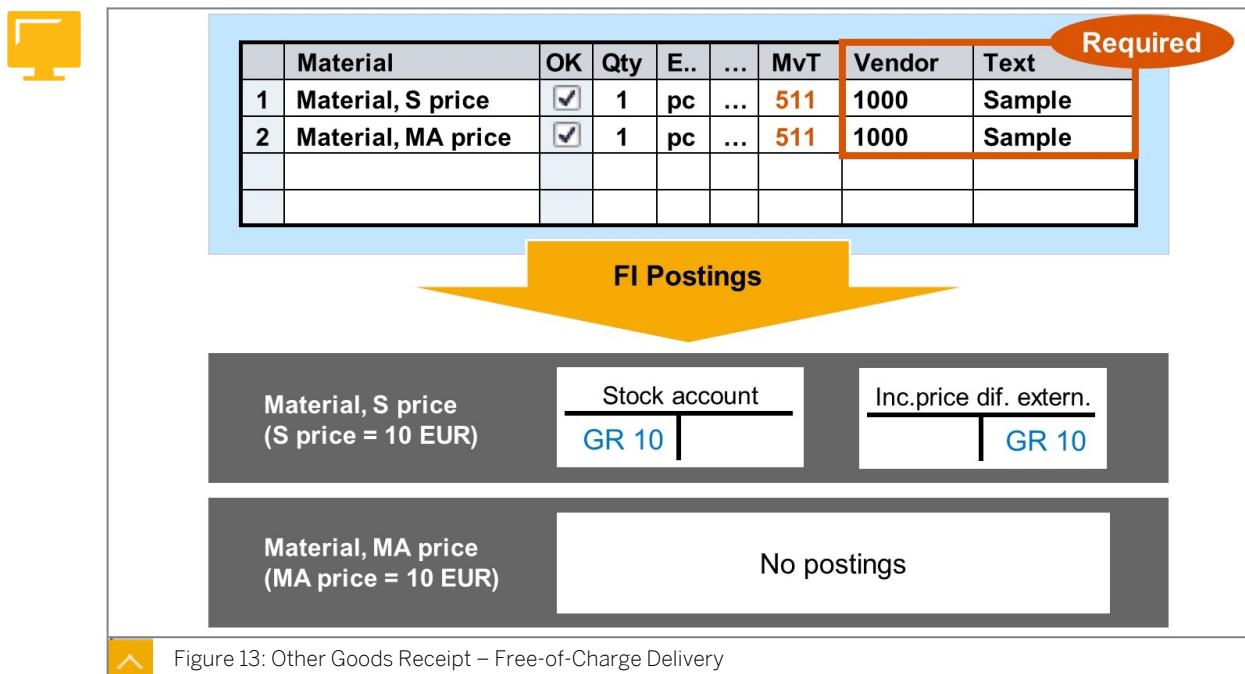
If you receive an external receipt of goods without having previously created a corresponding purchase order in the SAP system, you must enter it as an other goods receipt. The same scenario also applies to an internal receipt from production for which no production order has

been previously created. The lack of preceding documents for external or internal procurement may be because the relevant application area has not been implemented.

For these goods receipts, you can also decide in which of the following stock type the goods receipt takes place:

- Unrestricted-use stock (without purchase order: movement type 501, without production order: movement type 521)
- Stock in quality inspection (without purchase order: movement type 503, without production order: movement type 523)
- Blocked stock (without purchase order: movement type 505, without production order: movement type 525)

### Free-of-Charge Delivery



If you receive a free-of-charge delivery from a vendor without a previously issued purchase order, you post the delivery as an Other Goods Receipt. The standard movement type for the free-of-charge delivery is 511. The *Vendor* and *Text* fields are required fields for this movement type.

**For the valuation of materials delivered free of charge, note which price controls is defined in the material master record:**

- If the material is valued at moving average price, the stock figure is updated on a quantity basis only and not on a value basis. Therefore, the total stock quantity increases but the total value of the stock remains unchanged, resulting in a reduction in the moving average price.
- If the material is valued at the standard price, the stock figure is updated on a quantity and a value bases. The receipt is valued based on the standard price. The offsetting posting to the stock account is made to a revenue account for price differences.

## Functions for Entering Other Goods Receipts

Various functions in SAP S/4HANA are available to you for entering other GRs.

- SAP Fiori app *Post Goods Movements* respectively transaction MIGO
- SAP Fiori app *Manage Stock* (Initial entry of stock balances only)
- SAP Fiori app *Post Goods Receipt without Reference* (without purchase order only)

### SAP Fiori App Post Goods Movement and Transaction MIGO

You can enter all Other GRs using the *Post Goods Movement* app or the MIGO transaction. To do this, proceed as follows:

1. Start the *Post Goods Movement* app (or the MIGO transaction).
2. Choose *Goods Receipt* as transaction and *Other* as reference.
3. Check the default value for the movement type and change it if necessary to the correct MvT. Confirm the change of the default value with enter.
4. Enter material number, quantity, storage location, and plant for the items to be entered.
5. Post the document.

### SAP Fiori App Manage Stock

Storage Location	Unrestricted-Use Stock	Blocked Stock	Stock in Quality Inspection
Material (0001)	200,000 PC	0,000 PC	0,000 PC
Finished/Fertig (0002)	50,000 PC	0,000 PC	0,000 PC
	250,000 PC	0,000 PC	0,000 PC

Figure 14: Manage Stock App

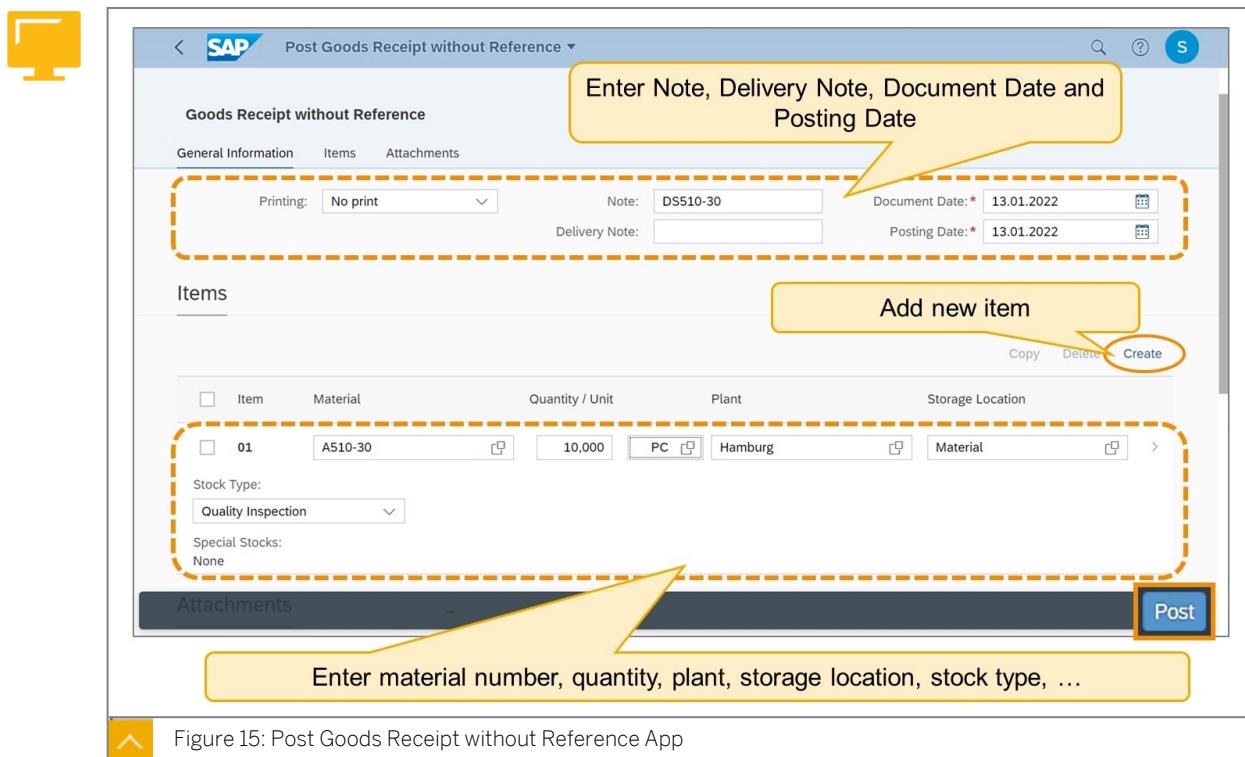
You can also enter an initial stock entry using the *Manage Stock* app. This app is part of the Business Role *Inventory Manager* (SAP\_BR\_INVENTORY\_MANAGER). To do this, proceed as follows:

1. Enter *Material* and *Plant* and confirm your entries with *Enter*. The system then displays the current stocks of the material in this plant.
2. Select the stock you want to change by clicking .
3. In the dialog screen *Manage Stock*, choose *Initial Entry as Stock Change*.
4. Enter the quantity to be posted.
5. Enter the document date, posting date, and any assets.
6. Post the initial entry.

The *Manage Stock* app can be used to enter an initial entry of stock balances for Standard Stock and for the special stock types Project Stock (Q) and Supplier Consignment (K).

In addition, it is possible to first collect several initial entries of stock balances to be posted in an item list, for example, for one material, initial entries of stock balances in the different stock types, or initial entries of stock balances for different materials. Once all items are collected, the goods movements can be posted in one step. The result is a material document with all posted items.

### SAP Fiori App Post Goods Receipt without Reference



The screenshot shows the SAP Fiori app interface for posting a goods receipt without reference. The top navigation bar includes the SAP logo and the title 'Post Goods Receipt without Reference'. Below the header, there are tabs for 'General Information', 'Items', and 'Attachments'. A callout box highlights the input fields for 'Note' (DS510-30), 'Document Date' (13.01.2022), and 'Posting Date' (13.01.2022). The 'Items' section contains a table with columns for Item, Material, Quantity / Unit, Plant, and Storage Location. An item row for '01 A510-30' is selected, with a callout box highlighting the 'Stock Type' dropdown set to 'Quality Inspection' and the 'Special Stocks' field set to 'None'. A large callout box at the bottom prompts the user to 'Enter material number, quantity, plant, storage location, stock type, ...'. The 'Post' button is highlighted with a blue border.

To post a goods receipt without purchase order (movement types 501, 503, 505) you can use the *Post Goods Receipt without Reference* app. The app is part of the Business Role *Warehouse Clerk* (SAP\_BR\_WAREHOUSE\_CLERK).

Similar to the MIGO transaction, you have to enter the material, quantity, plant, storage location, and stock type manually. However, the entry of the movement type is not explicitly

required. The movement type is determined by the app and the choice of stock type. In the app, the special stocks Orders on Hand (E), Supplier Consignment (K) and Project Stock (Q) are allowed.



### LESSON SUMMARY

You should now be able to:

- Post a goods receipt without reference

## Unit 2

### Lesson 2

# Posting a Goods Receipt with Reference



### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post a goods receipt with reference to a purchase order or a production order in different stock types
- Post a goods receipt in GR blocked stock
- Use different functions to post a goods receipt with reference

### Goods Receipt with Reference

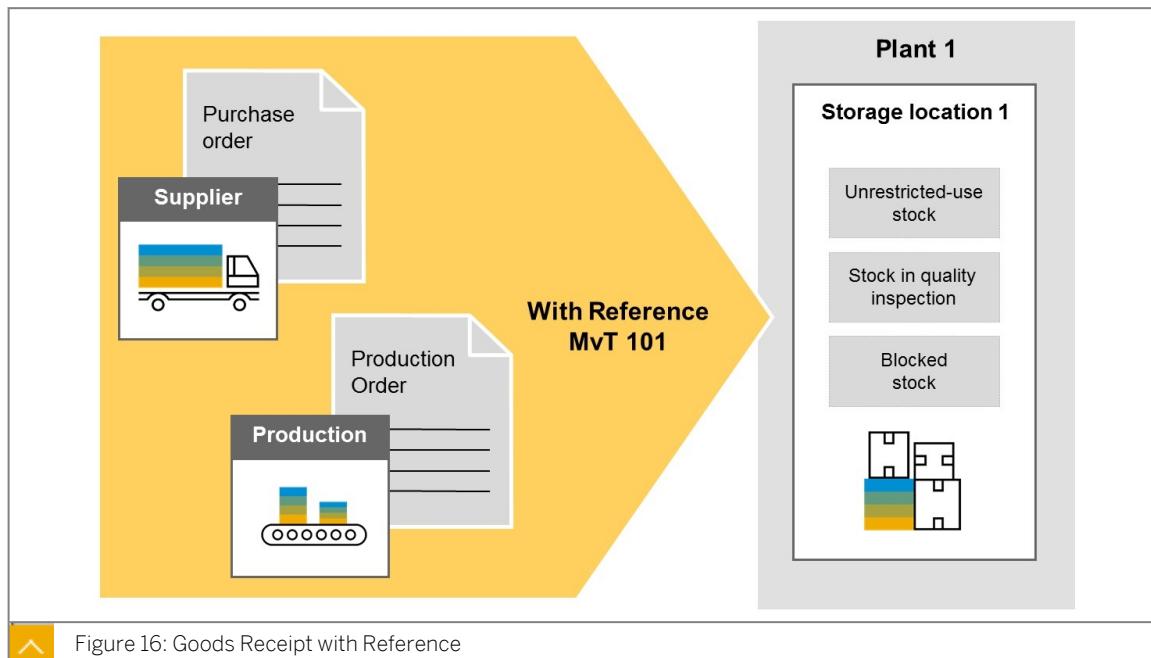


Figure 16: Goods Receipt with Reference

A goods receipt with reference is always a planned goods movement. To preplan a receipt, you need to enter certain key information pertinent to the receipt prior to the actual goods receipt posting:

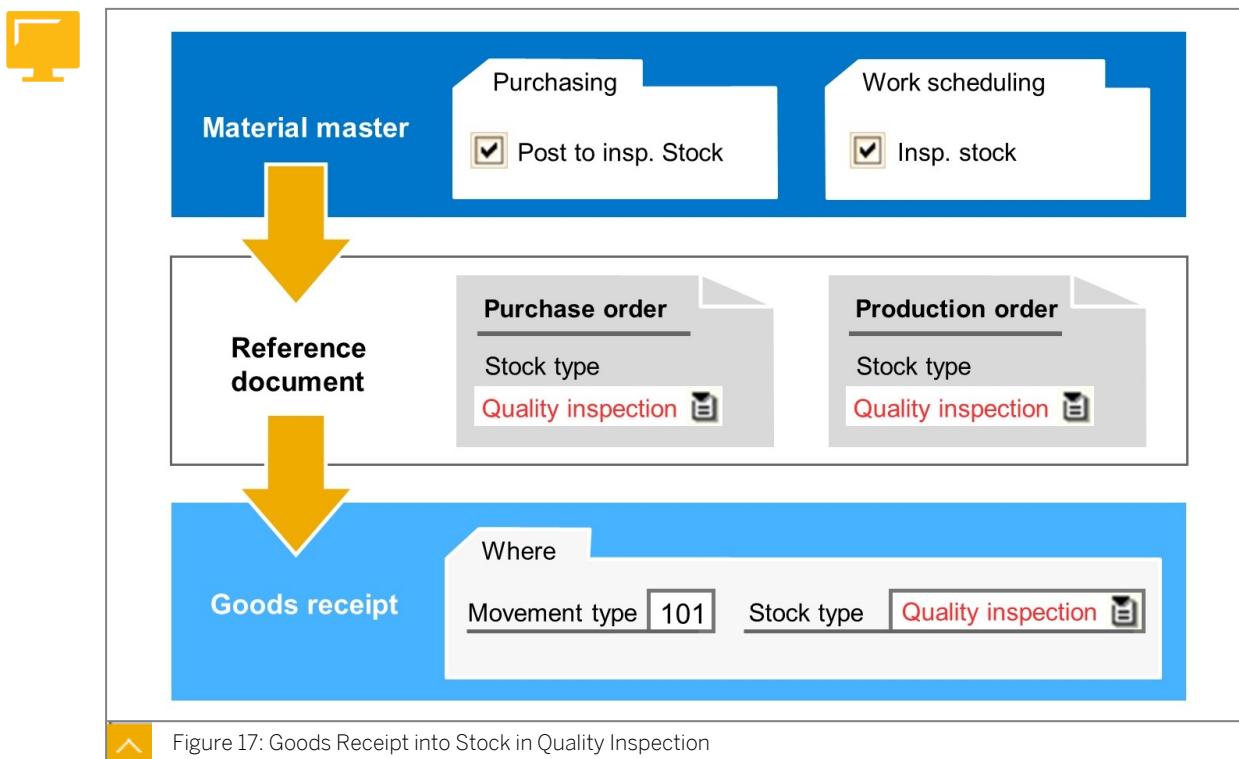
- What? (Which material?)
- When? (Which delivery date?)
- How much? (What quantity?)
- From which source? (From which vendor, plant, or company?)
- To where? (Which location or stock type?)

The aim of preplanning is to facilitate and accelerate the goods receipt process and efficiently organize work in the goods receiving department, thereby avoiding bottlenecks, for example. Also, materials planning can use preplanning to monitor stocks of ordered materials and materials produced in-house and optimize stockholdings.

The documents with which you preplan a goods receipt serve as reference documents when you enter the goods movement. The preplanning of goods receipts takes place using purchase orders and production orders.

You enter goods receipts against production and purchase orders with movement type 101. For a goods receipt into the warehouse, based on the stock type, you can book the receipt into unrestricted-use stock, stock in quality inspection, or blocked stock. When you post a receipt to the warehouse, the quantity and value of the stock are increased irrespective of the stock type (except for material types without value updating).

### Goods Receipt for Stock in Quality Inspection



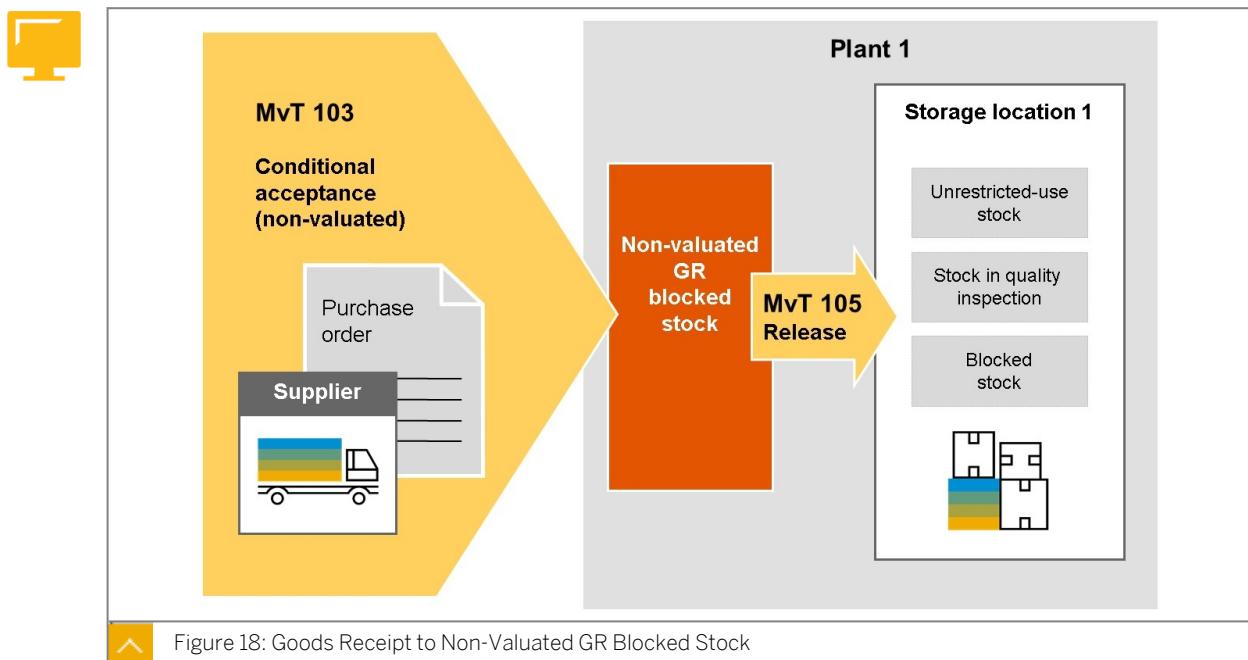
If the goods receipt into stock in quality inspection is to be preplanned, you have a number of options.

- If the material is generally subject to a quality check (that is done without SAP quality management) prior to use, set the *Post to inspection stock* indicator in *Purchasing* or *Work Scheduling Data* in the material master record. The system then adopts the stock type *Quality Inspection* in the production order or purchase order.
- If you want to make the material subject to a quality check in exceptions only, enter stock type stock in *Quality Inspection* only in the relevant document (PO or production order). This procedure is useful, for example, when a material is procured from a new supplier and you want to check the quality of the goods received at the first delivery.

You locate the stock type for the PO item in the item details on the *Delivery* tab page. In the production order, you locate the stock type on the *Goods Receipt* tab page.

- If *Quality Management (QM)* is active for a material, the relevant QM data is maintained in the material master record. QM uses the inspection type to determine the goods movements (movement types) for which a check is relevant and whether a posting is made to the stock in quality inspection. The system then automatically creates an inspection lot for a goods movement. All subsequent steps are mapped using this inspection lot.

### Non-valuated Goods Receipt (GR) Blocked Stock



If you want to accept goods from a vendor conditionally (because of a missing certificate, for example), you initially post the goods to the non-valuated GR blocked stock upon receipt, using movement type **103**. The quantity you post to GR blocked stock does not yet form part of your regular inventory but is recorded in the PO history.

The material document generated at the time of the goods receipt serves as a record of the receipt of the goods. As GR blocked stock is not valued in posting with movement type 103, no accounting document is generated at the time of the goods receipt.

The system does not change the valued stock as a result of a receipt to the non-valuated GR blocked stock. Although the system updates the non-valuated GR blocked stock in the PO history, the open PO quantity is not reduced as a result.

The non-valuated GR blocked stock is displayed in the following functions:

- PO history for the PO item with the PO history view *Blocked Stock*:

Use the *Display Purchase Order – Advanced* app or the *Display Purchase Order* transaction ME23N.

To start the transaction ME23N, on the SAP Easy Access screen, choose *Logistics → Materials Management → Inventory Management → Environment → Information → Purchase Order*.

- Stock overview for the material (at plant level):

Use the *Display Stock Overview* app or the *Stock Overview* transaction MMBE.

To start the transaction MMBE, on the SAP Easy Access screen, choose *Logistics → Materials Management → Inventory Management → Environment → Stock → Stock Overview*.

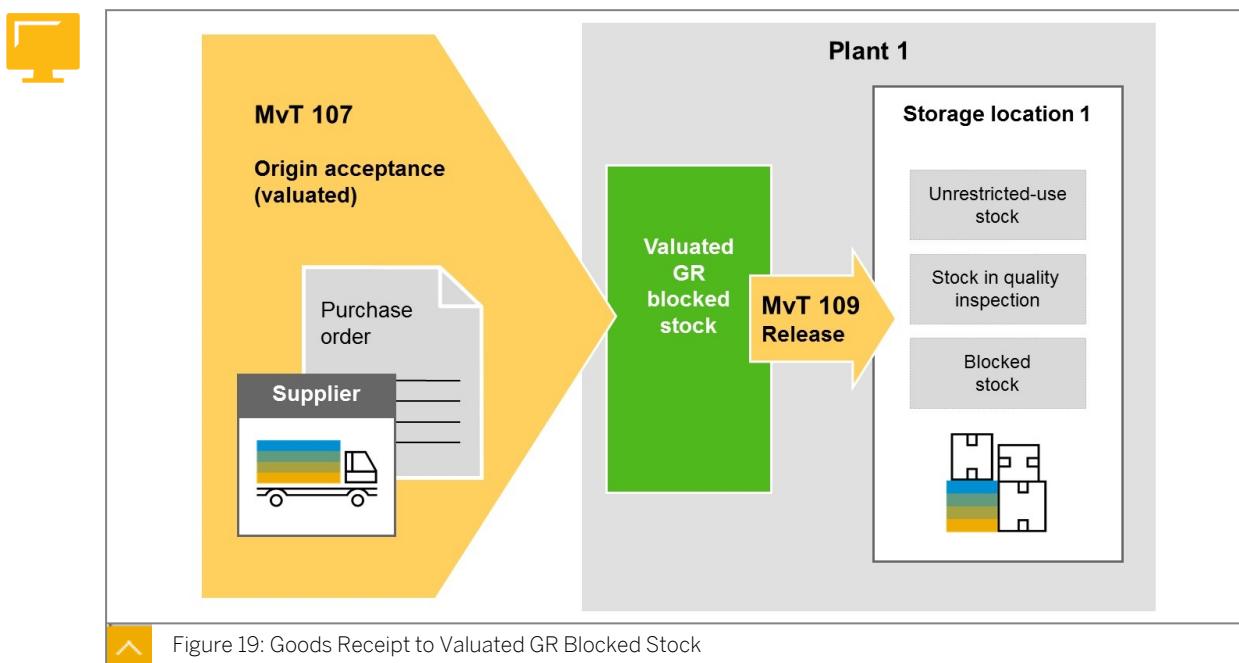
- SAP Fiori app *Overdue Materials - Goods Receipt Blocked Stock*:

The app is part of the Business Roles Inventory Manager (SAP\_BR\_INVENTORY\_MANAGER), Receiving Specialist (SAP\_BR\_RECEIVING\_SPECIALIST) and Shipping Specialist (SAP\_BR\_SHIPPING\_SPECIALIST). In the SAP Fiori launchpad, choose the tile group *Stock Monitoring*.

With this app you can get an overview of the overdue materials for which a goods receipt was posted into the non-valuated GR blocked stock. You can search for existing overdue materials, and sort and filter them according to their *Days since Posting Date (GR)* status, for example. For each purchase order or material from the results list you can immediately perform further tasks with linked apps. In particular, you can call the *Post Goods Receipt for Purchasing Document* app to release the GR blocked stock.

When conditions for the acceptance of the delivery are fulfilled, you transfer the material to unrestricted-use stock, stock in quality inspection, or blocked stock. The valuation and updating of the stock data does not take place until the material is released using movement type **105**. If the conditions for release are not satisfied, you can return the goods to the vendor using movement type **124**.

### Valuated GR Blocked Stock



With the valuated GR blocked stock, you can map origin acceptance of goods before the actual goods delivery. With origin acceptance (post with movement type 107), the value of the material is already posted to your own stock, even though the material has not arrived at the warehouse. The postings in Financial Accounting are similar to those of a goods receipt with movement type 101.

You can use the option of valuated GR blocked stock if you have contractually agreed with the vendor that the quality inspection and acceptance takes place at the point of origin before the goods are delivered, and that an invoice is issued immediately after acceptance. If origin

acceptance has been preplanned in the purchase order, the system proposes the accepted quantity as the amount to be invoiced in invoice verification. The actual shipment of the goods takes place after acceptance. The release of the valued GR blocked stock with movement type 109 maps the receipt of goods at your company. (For movement type 109, use the entry made for the stock type to determine whether the goods receipt is to be posted to unrestricted-use stock, stock in *quality inspection*, or blocked stock.)

You can preplan origin acceptance in a purchase order item (select the *Origin Acceptance* checkbox in the item details for the purchase order, *Delivery tab page*). The goods receipt for such a PO item must be posted using the valued GR blocked stock using movement type 107.

You can also opt for a receipt using the valued GR blocked stock when you post the goods receipt. In this case, the quantity posted with movement type 107 is not updated as a quantity to be settled.

A return delivery from the valued GR blocked stock is not possible. If you post the origin acceptance incorrectly, you need to reverse the posting with movement type 108. If the material has been delivered after origin acceptance, and errors or defects are discovered, you need to post the release with movement type 109, and then a return delivery with movement type 122.

The valued GR blocked stock is displayed in the following functions:

- PO history for the PO item with the PO history view *Val. Blocked Stock*:

Use the *Display Purchase Order – Advanced* app or the *Display Purchase Order* transaction ME23N.

To start the transaction ME23N, on the SAP Easy Access screen, choose *Logistics → Materials Management → Inventory Management → Environment → Information → Purchase Order*.

- Valuated Goods Receipt Blocked Stock:

Use the *Display Valuated GR Blocked Stock* app or corresponding transaction MB50A.

To start the transaction MB50A, on the SAP Easy Access screen, choose *Logistics → Materials Management → Inventory Management → Environment → Stock → Valuated Goods Receipt Blocked Stock*.

## Functions for Entering Goods Receipts with Reference

Various functions in SAP S/4HANA are available to you for entering goods receipts with reference.

- SAP Fiori app *Post Goods Movement* respectively transaction MIGO
- SAP Fiori app *Post Goods Receipt for Purchasing Document*
- SAP Fiori app *Post Goods Receipt for Production Order*

### SAP Fiori App Post Goods Movement and Transaction MIGO

You can enter all goods receipts with reference using the **Post Goods Movement** app or the MIGO transaction. You can refer to one or more documents of the same category.

To post a goods receipt with reference, proceed as follows:

1. Start the *Post Goods Movement* app or the MIGO transaction.
2. Choose *Goods Receipt* as transaction and *Purchase Order* (or *Production Order*) as reference.
3. Check the default value for the movement type and change it to **101** if necessary. If you want to post a goods receipt for a purchase order into the GR-Blocked Stock, enter **MvT 103** (nonvaluated) or **MvT 107** (valuated).
4. Enter the number of the reference document. If don't know the number of the document, use the  *Search* function.
5. To copy the items from the reference document, choose  *(Execute)*.
6. If you post a goods receipt for purchase order, enter the document date and the delivery note number of the supplier on the *General* tab page. If you want to print a goods receipt slip, set the print indicator and choose the required version.
7. Select the delivered items using the *OK* indicator. If necessary, change the quantity for the items, and specify a storage location and stock type.

**Caution:**

If you are displaying the item details, you can make changes to this item in the detailed data, but not in the item overview.

8. Post the goods receipt.

To release GR-Blocked stock, proceed as follows:

1. Start the *Post Goods Movement* app or the MIGO transaction.
2. Choose *Release GR Blocked Stock* as transaction and *Material Document* as reference.

**Hint:**

On releasing the GR blocked stock, the movement type is automatically derived from the movement type for the reference document.

3. Enter the material document number and the year of the document generated at the time of posting to GR blocked stock.

**Hint:**

To find the material document number, choose  *(Find Material Doc)*. Enter selection values, such as movement type **103** or **107**, the material, and the posting date.

4. Choose  *(Execute)*. Enter a storage location, stock type and select the *OK* checkbox.
5. Post the release of the GR-Blocked stock.

### SAP Fiori App Post Goods Receipt for Purchasing Document

You can also enter a goods receipt with reference to a purchase order using the **Post Goods Receipt for Purchasing Document** app. This app is part of the Business Roles *Inventory Manager* (SAP\_BR\_INVENTORY\_MANAGER) and *Warehouse Clerk* (SAP\_BR\_WAREHOUSE\_CLERK); tile group *Warehouse Processing*.

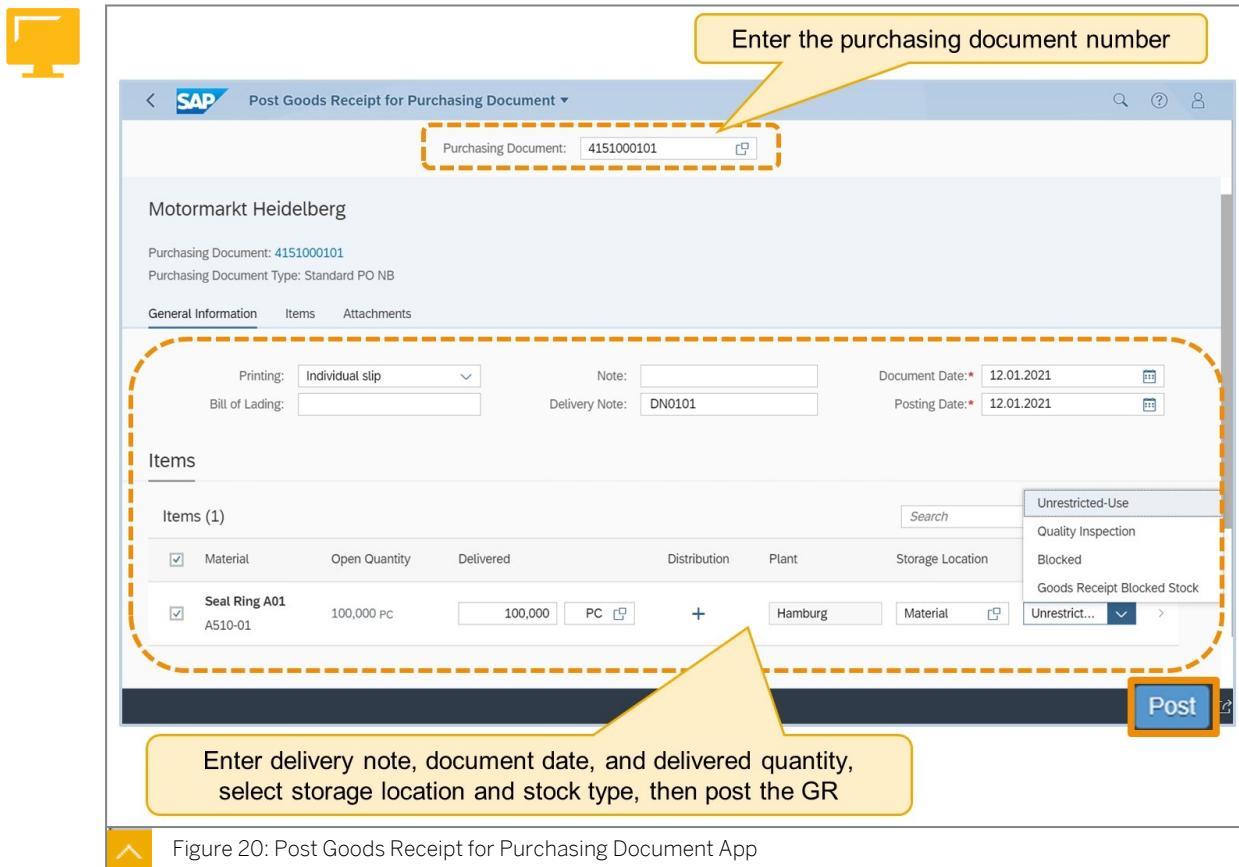
Note the following for this app:

- It is only possible to refer to one, but not to several purchasing documents.
  - Purchasing documents with alpha-numeric document numbers are not accepted.
  - For PO items with account assignment, only the items with the following account assignment categories are copied:  
A (Asset), C (Sales order), F (Order), K (Cost center), M (Individual customer requirements without KD-CO), P (Project), Q (Project make-to-order), R (Service Order), S (Third party), X (All auxiliary account assignments)
  - PO items with *Delivery Completed* indicator are not copied.
  - To post a goods receipt to the nonvaluated GR Blocked Stock, choose the stock type *Goods Receipt Blocked Stock*. To release the nonvaluated GR blocked stock for a purchase order item, choose one of the stock types *GR Blocked Stock to Unrestricted Use / to Quality Inspection / to Blocked*.
- A goods receipt into non-valuated GR blocked stock is not possible for PO items with GR-based Invoice Verification.
- A goods receipt to the valuated GR Blocked Stock is not possible.
  - The app supports barcode scanning of purchasing documents with mobile devices. You activate this feature in the *Application Settings* for the app. For this start the app, choose *Me Area → Scanner Settings*, mark the *Enable Scanning* checkbox and select which scanner should be used (Device Camera, External Scanner).



Note:

For more information, see [Barcode Scanning in Inventory Management](#).



To post a goods receipt with the *Post Goods Receipt for Purchasing Document* app, proceed as follows:

1. Start the *Post Goods Receipt for Purchasing Document* app.
2. Select the purchasing document (purchase order or scheduling agreement) for which you want to post the goods receipt. You can enter the desired purchasing document number directly or enter the supplier name to find the desired document.
3. Enter the relevant data like delivery note, bill of lading, document date and posting date. Mark the items which are delivered.
4. For each delivered item check and, if necessary, change the quantity. For items procured for stock enter a storage location and choose the stock type. If you want to post a goods receipt into non-valuated GR blocked stock, choose the stock type Goods Receipt Blocked Stock.
5. Post the goods receipt.

You can also enter the release of the non-valuated GR blocked stock via the app. To do this, proceed in the same way as for entering a goods receipt and select a stock type that begins with "GR Blocked Stock to ...".

### SAP Fiori App Post Goods Receipt for Production Order

Enter production order number

Production Order: 1000240

Forklift FL01 T-FL01

Production Order: 1000240  
Order Type: Standard production order PP01

General Information Items Attachments

Printing: No print Note: Document Date: \* 12.01.2021  
Delivery Note: Posting Date: \* 12.01.2021

**Items**

Items (1)

Material	Open Quantity	Delivered	Distribution	Plant	Storage Location	Stock Type
Forklift FL01 T-FL01	15,000 PC	15,000	PC	Hamburg	Std. storag...	Unrestrict...

**Post**

Enter delivery note, document and posting date, and delivered quantity, select storage location and stock type, then post the GR.

Figure 21: Post Goods Receipt for Production Order App

You can also enter a goods receipt with reference to a production order using the *Post Goods Receipt for Production Order* app. This app is part of the Business Role *Warehouse Clerk* (SAP\_BR\_WAREHOUSE\_CLERK), tile group *Goods Receipt Processing*. It is only possible to refer to one, but not to several production orders.

The handling of this app is comparable with the handling of the *Post Goods Receipt for Purchasing Document* app. However, a goods receipt in the GR blocked stock is not possible with production order reference.



### LESSON SUMMARY

You should now be able to:

- Post a goods receipt with reference to a purchase order or a production order in different stock types
- Post a goods receipt in GR blocked stock
- Use different functions to post a goods receipt with reference



## Posting a GR with Automatic Generation of a PO

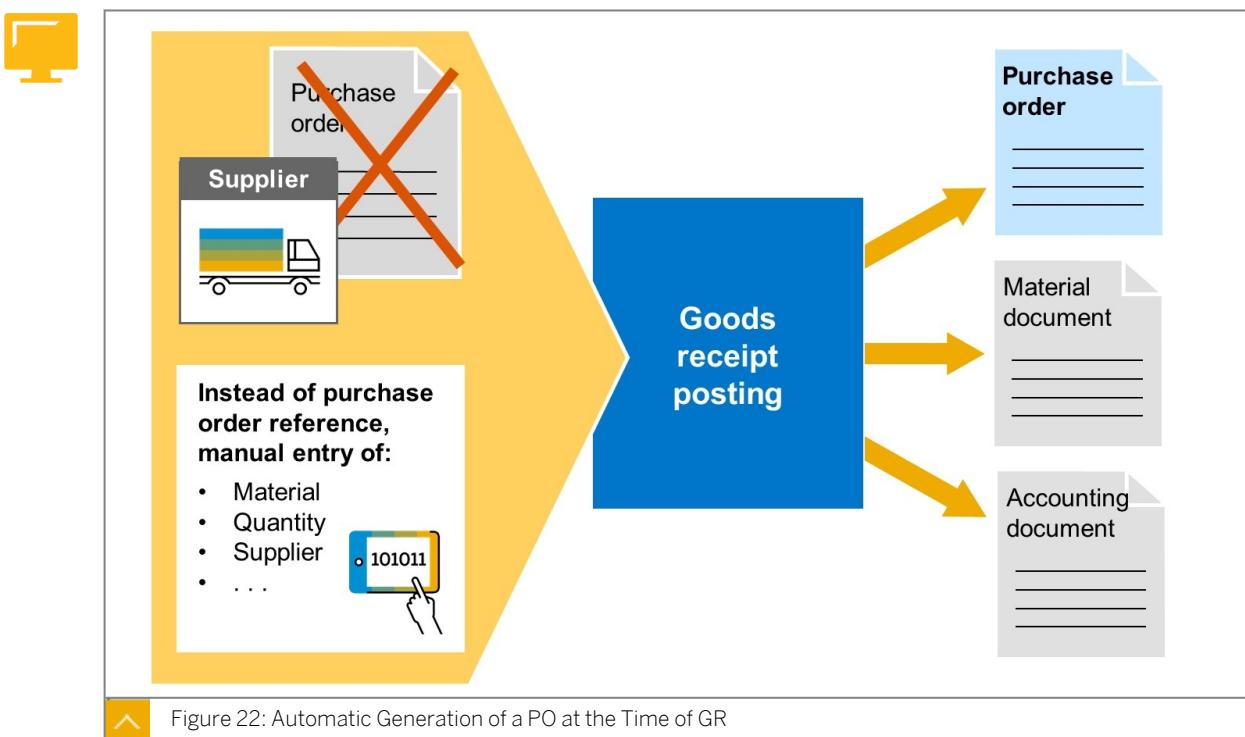


### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter a GR without reference to a PO so that a PO is generated automatically

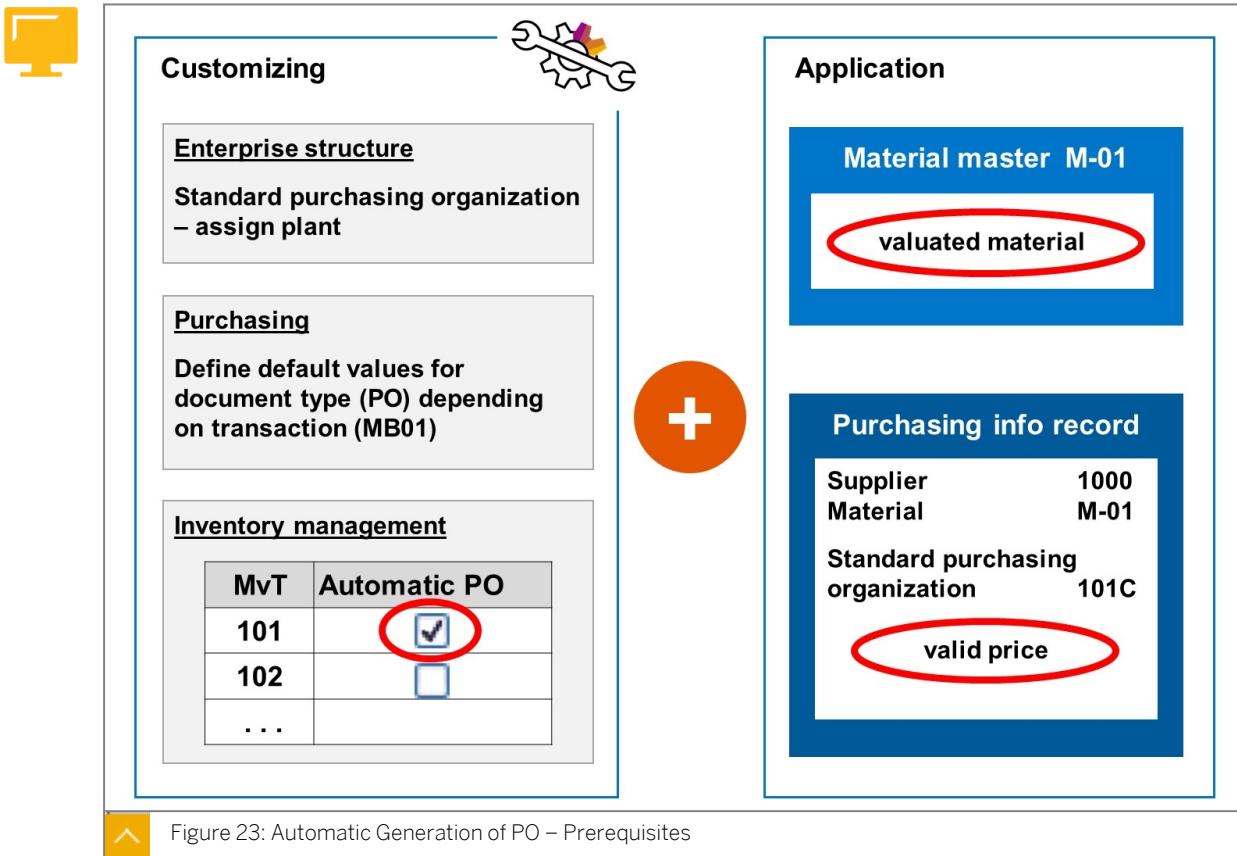
### Automatic Generation of a Purchase Order at Goods Receipt



If you receive a delivery from a supplier for which there is no purchase order in the system, you can enter it as an *Other Goods Receipt*, which is a goods receipt without reference to a purchase order. The invoice for this delivery cannot be entered and checked with reference to the purchase order.

If the right prerequisites are maintained, alternatively you have the option of having a purchase order automatically generated by the system at the time of goods receipt.

## Automatic Generation of a Purchase Order – Prerequisites



For automatic generation of a purchase order, certain prerequisites must be fulfilled in Customizing and the application.

### Prerequisites in Customizing

- Automatic purchase order generation must be activated for the movement type.

In Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Goods Receipt* → *Create Purchase Order Automatically*.



#### Hint:

The automatic generation of a purchase order is only possible for movement types for which you can enter a goods receipts with reference to purchase order (101 and 161).

- A standard purchasing organization must be assigned to the plant for which the goods receipt is entered if there are multiple purchasing organizations for the plant.

In Customizing for *Enterprise Structure* under *Assignment* → *Materials Management* → *Assign standard purchasing organization to plant (OMKI)*.

- A default document type for the purchase order must be specified for the goods receipt.

In Customizing for *Materials Management* under *Purchasing* → *Define Default Values for Document Type* a document type must be maintained for transaction MB01.

### Prerequisites in the application

- The material delivered must be managed as a valued material.
- A purchasing info record must exist for the vendor, the material, and the standard purchasing organization of the plant receiving the deliveries. The conditions of the purchasing info record must be valid, or a link to the last purchasing document must exist in the purchasing info record.

The automatic generation of a purchase order is only possible for a receipt in the warehouse, not for consumption. Similarly, you cannot use this function to post movements to GR blocked stock. To enter the goods receipt with automatic purchase order generation, use the SAP Fiori app *Post Goods Movement*, or the corresponding transaction MIGO.

Select 101 (or 161) as the movement type for the item and enter the material, quantity, plant, storage location, and vendor manually. The system determines the additional data required for automatic purchase order generation as follows:

- Purchasing organization: standard purchasing organization of the plant
- Purchasing group (purchasing group from the material master record)
- Delivery date: posting date of the GR
- The price: price from purchasing info record



## LESSON SUMMARY

You should now be able to:

- Enter a GR without reference to a PO so that a PO is generated automatically



# Posting Cancellations, Return Deliveries, and Returns



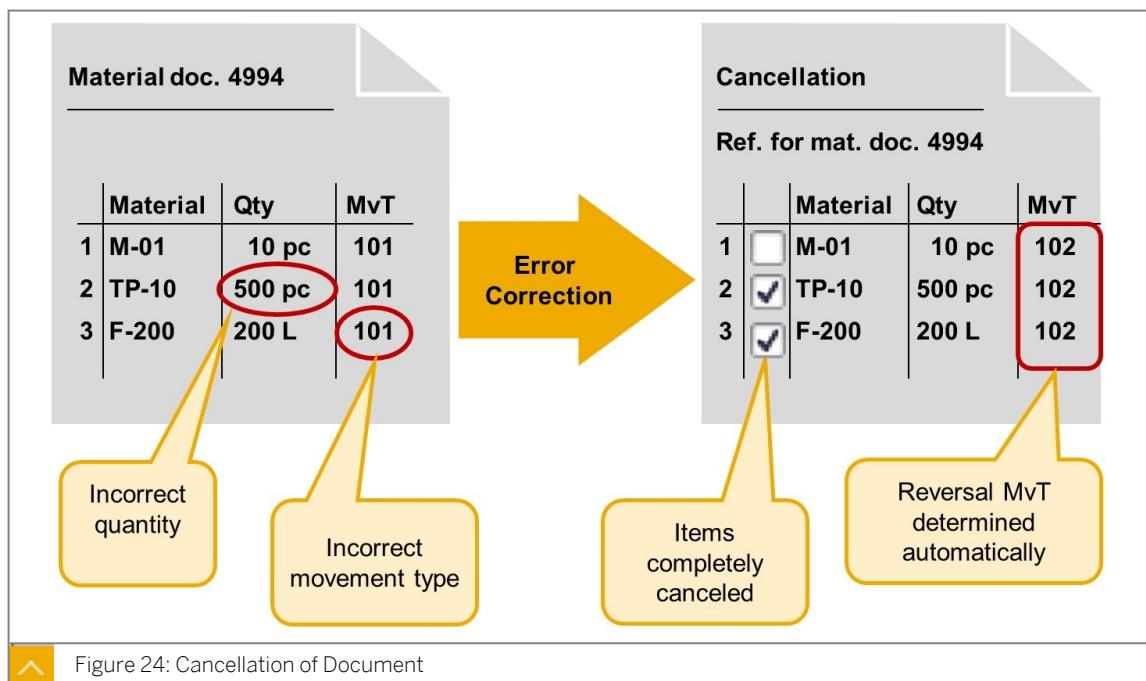
## LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post a cancellation of a material document
- Post a return delivery to a supplier
- Enter a return for a purchase order

## Cancellation

If you make an error when posting a goods movement (for example, incorrect quantity or incorrect movement type), you need to cancel the material document of this posting because the data in the material document can no longer be changed. Then, enter the item with the correct data.



It is recommended that you enter a reversal document with reference to the original material document. This has several advantages:

- You can copy the items to be reversed from the source document.
- The system automatically determines the reversal movement type.

- Reversal postings of goods issues, transfer postings, and goods receipts without references are valued with the value of the original document.
- Reversal postings of goods receipts with reference to purchase orders or production orders are valued with the value determined from the purchase order or production order.
- You can use the list of cancelled material documents to analyze the cancelled material documents.

Use the *Display Cancelled Material Documents* app or the corresponding transaction **MBSM**.

To start the transaction **MBSM**, on the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Inventory Management* → *Environment* → *List Displays* → *Cancelled Material Documents* (**MBSM**).

### **Posting Reversal Document**

To post a reversal with reference to the original material document, use transaction **MIGO** or the corresponding SAP Fiori app *Post Goods Movement*. Choose the *Cancellation* transaction and *Material document* as the reference document. Then flag the items to be canceled with *Item OK* and post the cancellation. Alternatively, you can cancel a material document in the SAP Fiori launchpad directly when you display the document. To select the material document, you can use the SAP Fiori app *Material Documents Overview*, for example.

In transaction **MIGO** or in the app *Post Goods Movement*, you can also enter a cancellation document without reference to the original material document. To do this, enter the cancellation document in the same way as the original material document, with the only difference being that you use the reversal movement type. You can use the reversal movement type, for example, if you want to only reverse a partial quantity.



#### Hint:

As a rule, this is valid for the reversal movement type, where reversal movement type = Original movement type + 1.

The following table shows examples of reversal movement types:

Goods Movement	Movement Type	Reversal Movement Type
GR for PO or production order	101	102
GR to nonvaluated GR blocked stock	103	104
Return delivery	122	123
Initial entry of stock balances	561	562

### **Return Delivery**

You entered goods from a supplier in the system with reference to a purchase order. Now you determine that, for example, the incorrect material was delivered, or the quality of the delivered material is unsatisfactory. In either case, you return the material to the supplier. Such a return delivery can be made from all three stock types (unrestricted-use, quality inspection, blocked), but also from non-valuated GR blocked stock.

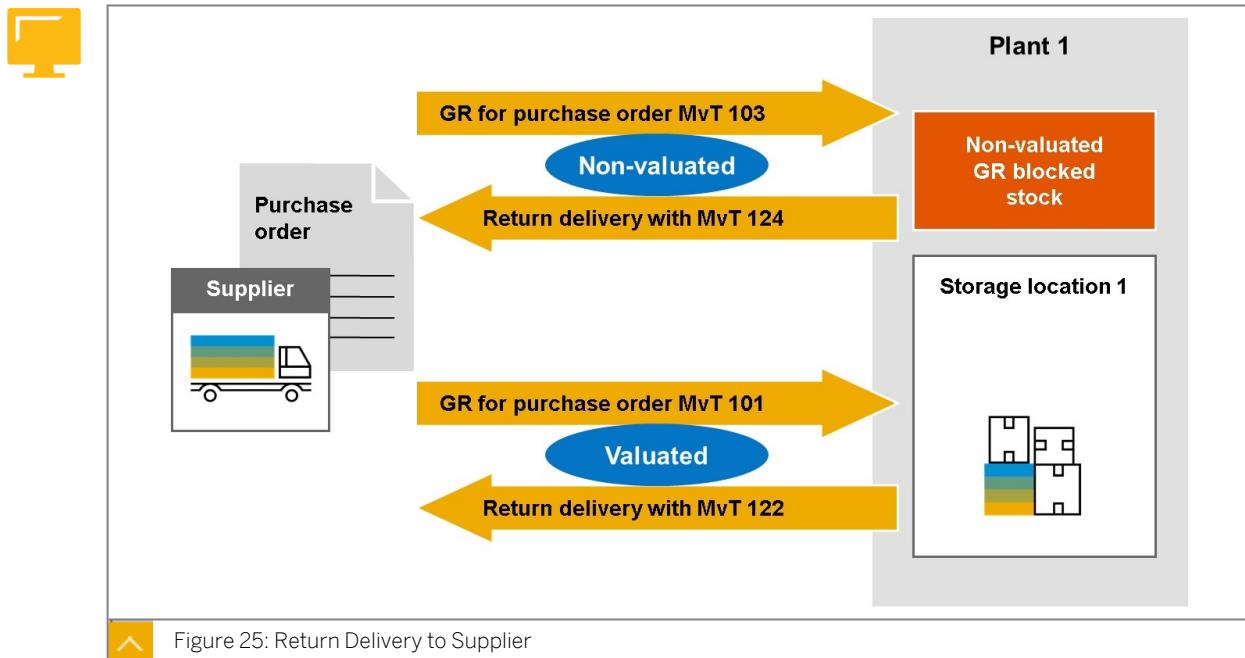


Figure 25: Return Delivery to Supplier

If you accepted the goods conditionally and posted the goods receipt with movement type (MvT) 103 in the nonvaluated GR blocked stock, use movement type 124 for the return delivery. As the goods receipt is nonvaluated in this case, the return delivery is also nonvaluated.

If, however, you increased your own valued stock in the goods receipt by posting with movement type 101, then the return delivery is posted with movement type 122. This means that the return delivery reduces your stock on both a quantity and value basis.

If you enter a return delivery, you can refer to the material document of the goods receipt or to the purchase order. You also have the option of using the functions of the *Shipping* component when posting a return delivery, for example, you can use picking and packing. Therefore, you have detailed shipping documents and delivery notes. You can use return deliveries via *Shipping* for standard purchase orders, purchase orders with account assignment and material number, and purchase orders with special stocks.

## Subsequent Delivery

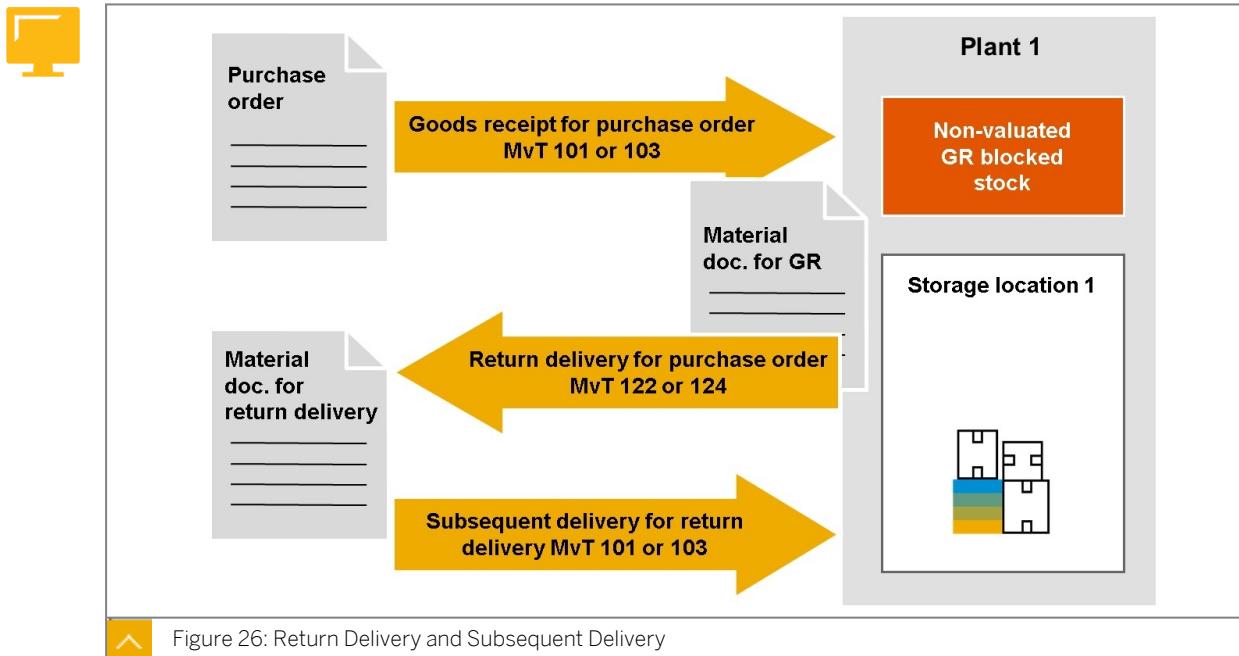


Figure 26: Return Delivery and Subsequent Delivery

If the supplier sends a substitute delivery after the return delivery, you can enter the new goods receipt as a subsequent delivery. In a subsequent delivery, refer to the material document of the original goods receipt or the material document of the return delivery. The original reference document number (delivery note number) is copied into the new material document. The direct assignment between the goods receipts and the invoice remains. In addition, the items are proposed from the reference document.

If, for example, the supplier specifies your document number for the return delivery on the delivery note for the substitute delivery, you can refer to this document using the subsequent delivery. This means that the system proposes the exact materials and quantities for the return delivery. You do not need to select the purchase order items again.

Entering a substitute delivery as a subsequent delivery is particularly useful in GR-based invoice verification. Even if a goods receipt is reversed and a new goods receipt is posted after you enter the invoice, the new goods receipt must be a subsequent delivery for GR-based invoice verification.



### Hint:

In Customizing for *Inventory Management*, you can specify for each movement type whether a reversal of a goods receipt or a return delivery is allowed in GR-based invoice verification if the corresponding invoice has already been entered.

These settings are in Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Goods Receipt* → *Allow Reversal of GR Despite Invoices (OMBZ)*.

## Reason for Movement

You can configure that a reason can or must be entered for a goods movement. You can use this information to analyze why a goods movement was posted, for example, why goods were returned to a supplier or why a reversal posting was made.




Control Reason			
MvT	...	Reason	Control Reason
101		-	Field is suppressed
103		.	Entry in this field is optional
122		+	Entry in this field is required
...		....	

Reason for Movement			
MvT	...	Reason	Reason for Movement
103		1	Certificate missing
122		1	Poor quality
122		2	Incomplete
122		3	Damaged
...		....	


 Figure 27: Customizing – Reasons for Goods Movements

In Customizing for inventory management, you specify the following settings depending on the movement type:

- Whether it is mandatory, possible, or not possible to specify a reason.
- Which reasons are available for selection.

These settings can be made in the Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Movement Types* → *Record Reason for Goods Movements* (OMBS).



### To Enter a Return Delivery with Reference to a Material Document

1. Start *Post Goods Movement* app (or MIGO transaction).
2. Choose transaction *Return Delivery* and, as reference *Material Document* or *Delivery Note*, depending on the number you know.



Hint:

You can then refer to the delivery note only when the document or delivery note number is entered in the goods receipt.

3. Enter the material document number and the document year or delivery note number. If you do not know the material document number, you can search for it by choosing  (*Find Material Doc.*).
4. To copy the data from the material document, choose  (*Execute*).

5. Select the items that were returned using the *OK* checkbox and, if necessary, change the proposed values for quantity, stock type, and storage location.
6. On the *Where* tab page, enter a reason for the goods movement for each item in the item details.

**Hint:**

If the return delivery is to take place via shipping, you must select the *Via Delivery* checkbox in the header on the *General* tab page. In this case, instead of a goods issue posting, the system generates an outbound delivery. If required, you can preselect the checkbox using the *MB\_DELIV* parameter.

7. Post the return delivery.

1  
2  
3

**To Enter a Return Delivery with Reference to a Purchase Order**

1. Start *Post Goods Movement* app (or *MIGO* transaction).
2. Choose transaction *Goods Receipt* and, as reference *Purchase Order*.
3. Change the default value for the movement type to *122* (or to *124* if the return delivery is to be made from nonvaluated goods receipt blocked stock).
4. Enter the number of the purchase order.

If you do not know the purchase order, you can search for it by choosing (*Find Purch. Order*).

5. To copy the data from the purchase order, choose (*Execute*). The system proposes the items with the delivered quantities.

**Hint:**

For PO items that are intended for GR-based invoice verification, the system proposes one item for each GR.

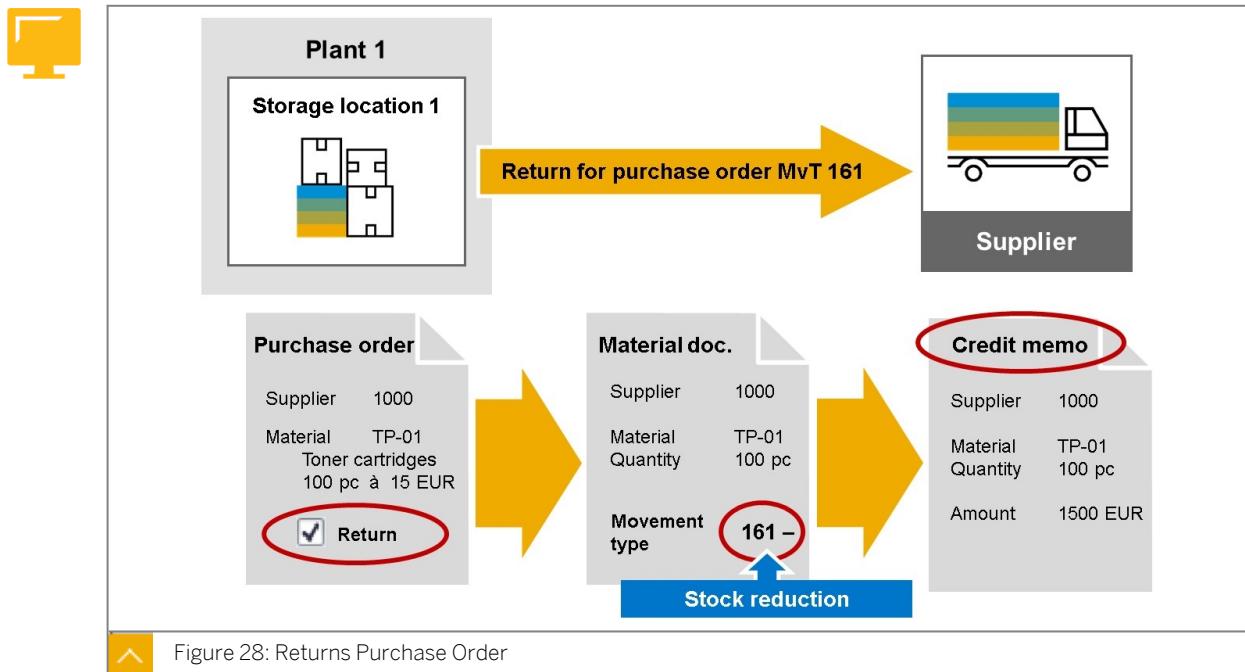
6. Select the items that were returned with the *OK* checkbox and, if necessary, change the proposed quantity. On the *Where* tab page, enter a reason for the goods movement for each item in the item details.

**Hint:**

A return delivery via shipping is not possible with this procedure. In this case, the *via shipping* checkbox is not available in the header on the *General* tab page.

7. Post the goods movement.

## Returns Purchase Order



If you want to plan the delivery of material to an external supplier, you can do this using a returns purchase order. In this case, it does not matter how the material got into your stock. No reference is made to an original purchase order or goods receipt.

To create a returns item in a purchase order, set the *Returns* indicator in the item. If you receive a credit memo from the supplier for the return, enter this credit memo with reference to the returns purchase order.

**Examples of returns for a PO are as follows:**

- You procure filters from a vendor. You return the dirty filters to the vendor for recycling.
- You agree with your cable vendors that you can return cable remnants to them. You then receive a credit memo for the value of the copper contained in the cables.

You enter such a return in the same way as you enter a GR for a PO. You can use the following functions to post the goods movement for a returns purchase order:

- SAP Fiori app *Post Goods Movement* or SAP GUI transaction **MIGO**
- SAP Fiori app *Post Goods Receipt for Purchasing Document*

In the SAP Fiori app *Post Goods Movement*/transaction **MIGO**, enter transaction *Goods Receipt* and, as the reference, enter *Purchase Order*. The system automatically proposes movement type 161 and the direction indicator *Issue (-)* for the returns item.

In the SAP Fiori app *Post Goods Receipt for Purchasing Document*, you can recognize a returns item by the corresponding indicator in the item list.

To handle the return in *Shipping*, you must select the *Returns Supplier* checkbox in the supplier master record in the purchasing organization data. The required settings for shipping processing must also exist.



## LESSON SUMMARY

You should now be able to:

- Post a cancellation of a material document
- Post a return delivery to a supplier
- Enter a return for a purchase order

## Unit 2

### Lesson 5

# Applying Order Price Unit in Inventory Management



#### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use an order price unit in a GR with reference to a PO

#### Order Unit and Order Price Unit

In a purchase order, you can specify a purchase order price unit (OPUn) and an order unit (OUn) that are different from each other. The purchase order price unit is valid in connection with the net price and is used as the basis for valuating the goods receipt and for invoice verification. You need to enter the delivered quantity in both units of measure (OUn and OPUn) when the goods are received.

For example, you order 10 frozen geese at a price of EUR 5/kg. In the purchase order, you assume that one goose has an average weight of 4 kg (order value 40 kg \* EUR 5). During the goods receipt, you determine that 10 geese weigh a total of 45 kg. For the valuation of the goods receipt and the invoice verification, there is an amount of 45 kg \* EUR 5 for the 10 geese.



#### Set Tolerance Limits for variance in the purchase order price quantity



Tolerance limit	Reaction to under-/overrun
<b>B1:</b> Lower limit 50% Upper limit 50%	Error message, GR cannot be posted
<b>B2:</b> Lower limit 20% Upper limit 20%	Warning message, mail to purchasing, GR can be posted

#### Purchase order

PO quantity      10 PC  
Order price quantity       $\approx 40 \text{ KG}$

#### Goods receipt

Deliv. quantity      10 PC  
Order price quantity      45 KG

#### Post Goods receipt

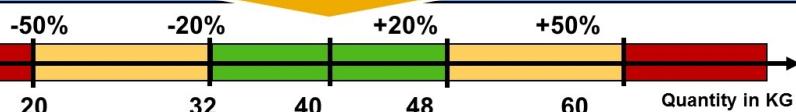


Figure 29: Order Price Quantity Variances

In Customizing, two tolerance keys are provided to define limits for variance in the order price quantity for each company code.

Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Goods Receipt* → *Set Tolerance Limits* (OMC0).

- **Tolerance key B1 (error message)**

With tolerance key B1, you define the lower and upper limits for the maximum percentage variance. If the variance is larger than the maximum variance, the system creates an error message. The goods receipt cannot be posted.

- **Tolerance key B2 (warning message)**

With tolerance key B2, you define the lower and upper limits for the percentage variance as of which a warning message is issued (only with the *Check* function). In addition, the buyer can be informed by mail about the purchase order price quantity variance if the following conditions are met.

- The *GR Message* indicator is set on the *Delivery/Invoice* tab page in the header data for the purchase order.
- The Customizing settings required for message determination (message type *MLMD*) are made.



Note:

In the *Post Goods Receipt to Purchasing Document* app, it is not yet possible to enter the quantity in the purchase order price unit (OPUn). When posting, the system automatically uses the conversion factor between the order unit (OUn) and the order price unit (OPUn) from the purchase order item.

Therefore, you should enter the goods receipt for such purchase orders using the *Post Goods Movement* app. For this app and the transaction MIGO, you can force the entry of the quantity in the order price unit (OPUn). To do this, you must define that an entry is required for the field *GOITEM\_BPMNG*.

Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Settings for Goods Movements* (MIGO) → *Field Selection for MIGO* (OMJX).



## LESSON SUMMARY

You should now be able to:

- Use an order price unit in a GR with reference to a PO

# Applying Tolerances and the Delivery Completed Indicator



#### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use the tolerances for underdelivery and overdelivery
- Use the delivery completed indicator

#### Under and Overdeliveries in Goods Receipt for Purchase Order

For a goods receipt for a purchase order, the system proposes the open purchase order quantity of an item for the goods receipt.

The open purchase order quantity specifies the quantity still to be delivered for a purchase order item. The system calculates the open purchase order quantity as the difference between the ordered quantity and the delivered quantity. If the total quantity delivered for a purchase order item is equal to or greater than the purchase order quantity, the open purchase order quantity is zero.

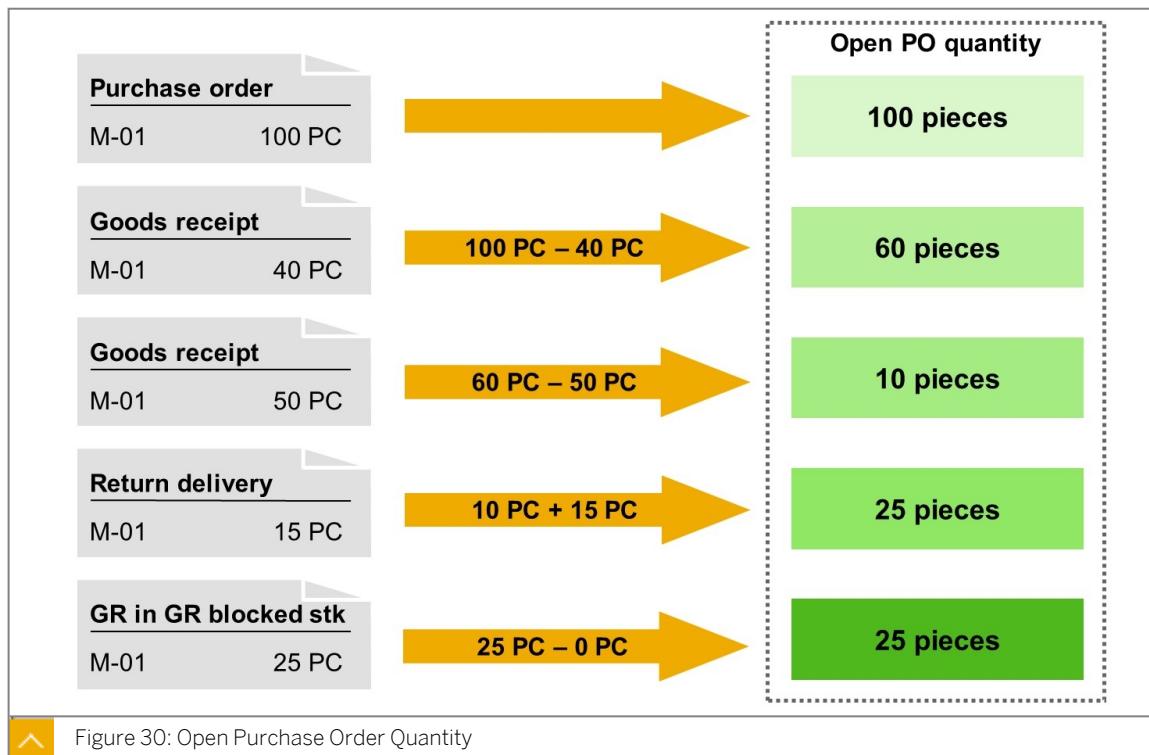


Figure 30: Open Purchase Order Quantity

The system automatically adjusts the open purchase order quantity for each goods movement for the purchase order item (goods receipt, subsequent delivery, return delivery, and cancellation).

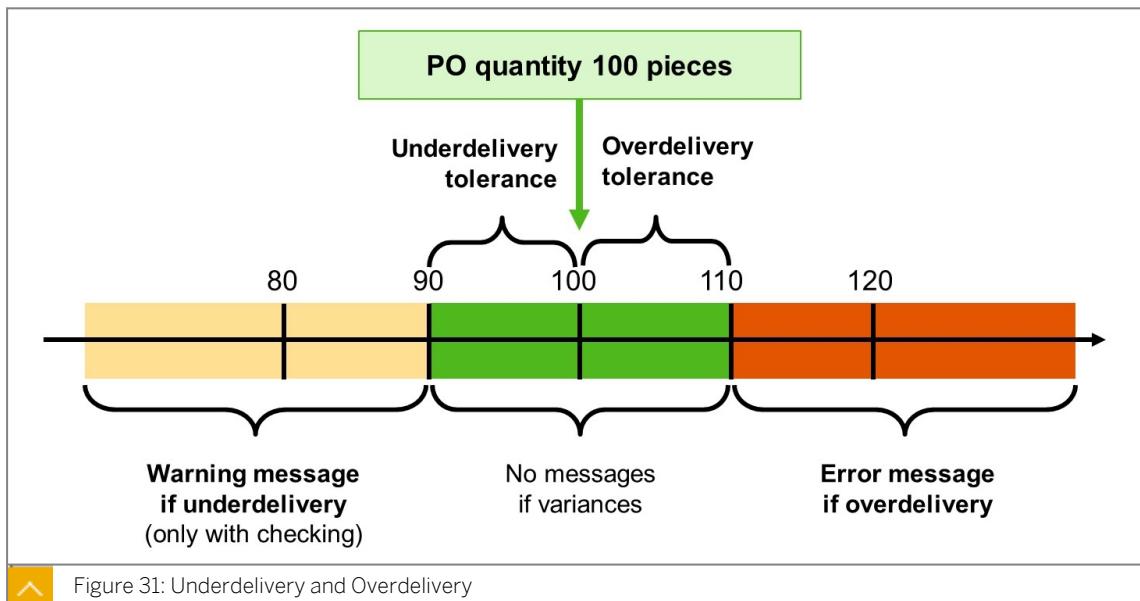


#### Note:

A goods receipt in the GR blocked stock or a return delivery from the GR blocked stock does not change the open purchase order quantity.

At goods receipt, you must change the proposed quantity to match the quantity actually delivered. The system compares the goods receipt quantity with the open purchase order quantity and determines whether there is an underdelivery or overdelivery.

#### Underdelivery and Overdelivery



In the standard system **underdeliveries** are in principle allowed. The system interprets and accepts the underdelivery as a partial delivery. If you post the goods receipt with transaction MIGO or the SAP Fiori app *Post Goods Movement* and you check the entries before posting the GR, the system indicates the underdelivery by displaying a warning message. In the order item, you can enter a percentage value for underdelivery tolerance. If the total of previously delivered quantities and currently entered quantities lie within the underdelivery tolerance, the system does not issue a warning message. If the total is less than the tolerance, the system creates a warning message during a check.

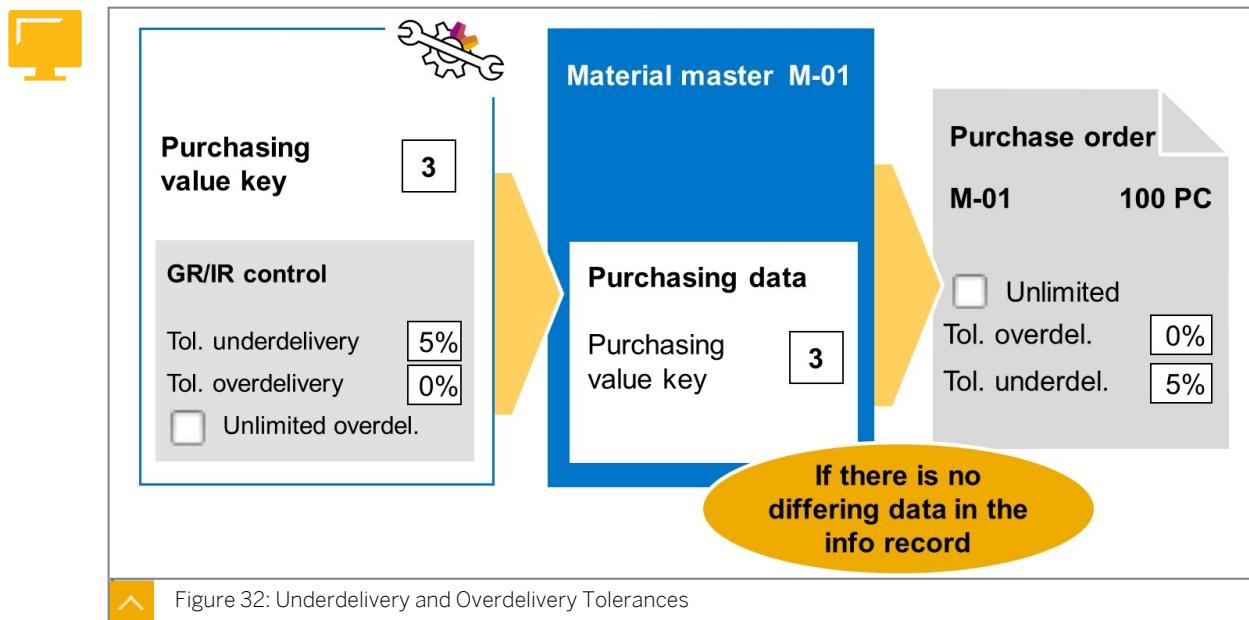
**Overdeliveries** to a purchase order item are only allowed if this is determined in the purchase order item. You have the option of selecting the indicator for unlimited overdelivery in the purchase order item, or specifying a percentage overdelivery tolerance. If the total of previously delivered and currently entered quantities lies within the overdelivery tolerance, the system does not issue a message. If the total is more than the tolerance, the system issues an error message.

#### Default Values for Underdelivery and Overdelivery Tolerances

If the same underdelivery and overdelivery tolerances always apply for one material, you can define them in the material master record as default values for purchasing. The tolerances are

determined by the purchasing value key specified in the purchasing data of the material master record.

The purchasing value key delivers the further default values and is created in Customizing for Materials Management under Purchasing → Material Master → Define Purchasing Value Keys.



If underdelivery and overdelivery tolerances that vary from the material master record are valid for a vendor-material combination, you can define the tolerances in the purchasing info record for the vendor and material.

It is also possible to specify tolerances directly in the order. The *Tolerance limit for underdelivery* and *Tolerance limit for overdelivery* fields, as well as the *Unlimited overdelivery allowed* indicator, are found in the detail data of an item on the *Delivery* tab page.

### Delivery Completed Indicator

The **Delivery Completed** indicator specifies whether a purchase order item is considered closed. This means that no more goods receipts are expected for this item. If the *Delivery Completed* indicator is set, the open purchase order quantity becomes zero, even if the full quantity has not been delivered. It is still possible to post goods receipts of remaining quantities, but these no longer change the open purchase order quantity.



Hint:

- GUI transaction MIGO and the SAP Fiori app *Post Goods Movement*:  
If the delivered quantity is less than the quantity ordered at GR for the PO item, the system proposes the difference between the quantity ordered and the delivered quantity (as the open order quantity), even if the *Delivery Completed* checkbox is selected. The checkbox does not prevent you from entering additional GRs for the PO item. This condition only applies as long as the overdelivery tolerance is not exceeded.
- SAP Fiori app *Post Goods Receipt for Purchasing Document*:  
PO items with *Delivery Completed* indicator are no longer copied.

Setting the *Delivery Completed* indicator in a PO item has the following effects:

- The open PO quantity of the PO item equals zero.
- The PO item is no longer relevant for materials planning.
- The PO item is ignored when letters urging delivery of overdue goods are generated.
- An additional delivery is not expected, but is possible.
- The commitment for the PO item is canceled.
- The PO item can be deleted and archived.

### **Selection of the Delivery Completed Indicator**

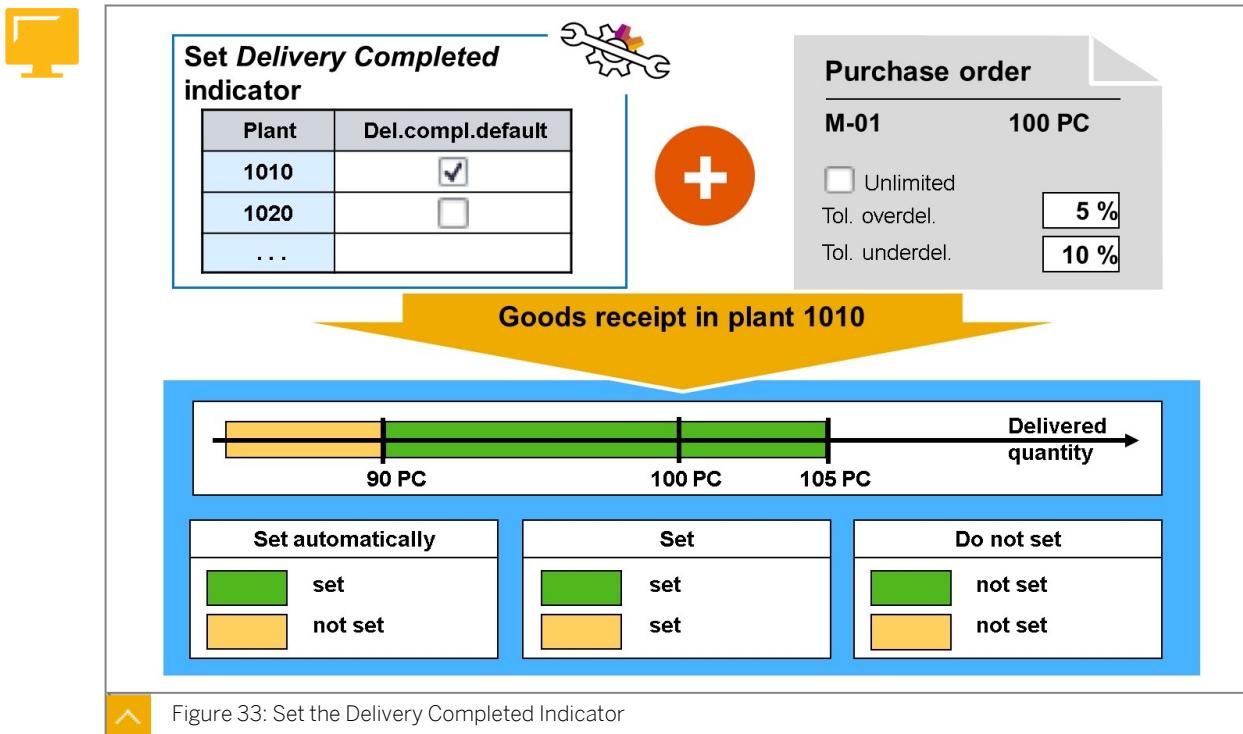
The various ways in which the *Delivery Completed* indicator can be set in a purchase order item are as follows:

- Manually when changing a purchase order item
- Manually when entering a goods receipt for the purchase order item with the SAP Fiori app *Post Goods Receipt for Purchasing Document*
- Manually when entering a goods movement for the purchase order item (GR, return delivery, subsequent delivery, and cancellation) with the *Post Goods Movement* app or the transaction MIGO
- Automatically when entering a goods receipt for the purchase order item

In Customizing for *Inventory Management and Physical Inventory*, you can determine for each plant whether the system automatically selects the *Delivery Completed* checkbox for delivery quantities within the underdelivery and overdelivery tolerances.

Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Goods Receipt* → *Set Delivery Completed Indicator* (OMCD).

### **Automatic Setting of the Delivery Completed Indicator**



The following applies to the transaction MIGO or the SAP Fiori app Post Goods Movement:

In the *Delivery Completed Indicator* field, you can specify whether the *Delivery Completed* indicator is to be set automatically, not set, or set in all cases. You can locate the list field for each item in the item overview and on the *PO data* tab page.

If you enter a return delivery or cancellation for a delivery completed item, and the delivered quantity falls short of the underdelivery tolerance, then the *Delivery Completed* checkbox is automatically reset. If no further delivery is expected, you can change the value of the *Delivery Completed Indicator* field from *Set automatically* to *Set*, completing the delivery process.



#### Hint:

For goods receipts for production orders, the functions for under, over, and final delivery correspond to those for goods receipts for purchase orders.

In the production order, you can specify the tolerances for underdelivery and overdelivery on the *Goods Receipt* tab page.



#### Hint:

You can use the system message M7433 (*The "Delivery Completed" Indicator is set for the PO item*) in connection with Business Add-In (BAdI) *Set Delivery Completed Indicator* (MB\_GOODSMOVEMENT\_DCI). If you have configured this message as an error message, you will not be able to post further GRs for a PO item for which the *Delivery Completed* indicator is set.

The *BAdI* also allows custom logic for selecting the *Delivery Completed* indicator in a PO item.



## LESSON SUMMARY

You should now be able to:

- Use the tolerances for underdelivery and overdelivery
- Use the delivery completed indicator

## Unit 2

### Lesson 7

# Setting Up Date Checks to Goods Receipt for Purchase Order



#### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use the shelf life expiration date check
- Customize system messages for a delivery that is too early or too late

#### Shelf Life Expiration Date Check

When you receive goods from a supplier, the system may check the minimum shelf life of the goods during the goods receipt. You can therefore ensure that goods are only placed in storage if their shelf life corresponds with your requirements.



The screenshot shows the SAP Fiori interface for setting up shelf life expiration date checks. On the left, the 'Set expiration date check' screen is displayed, featuring two tables: 'Plant' and 'Movement Type'. A large orange plus sign icon is positioned between the two screens. On the right, the 'Application' screen shows the 'Material master S-01' and 'Purchase order' configurations, both specifying a 'Minimum remaining shelf life' of 30 days.

**Set expiration date check**

**Plant**

Plant	Check BBD/Prod. Dat
1010	<input checked="" type="checkbox"/>
1020	<input checked="" type="checkbox"/>
1030	<input type="checkbox"/>
...	<input type="checkbox"/>

**Movement Type**

MvT	Ceck SLExpDate
101	1
102	: No check
105	1: Enter and check 2: Enter only 3: No check at goods issue
...	

**Application**

**Material master S-01**

General plant data/  
storage

Minimum remaining  
shelf life **30 d**

**Purchase order**

S-01 100 pc

Minimum remaining  
shelf life **30 d**

Figure 34: SLED Check – Prerequisites

To check the minimum shelf life in the goods receipt for the purchase order, the following prerequisites must be met:

1. The shelf life expiration date check must be activated for the plant and the movement type in Customizing.

Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Goods Receipt* → *Set Expiration Date Check* (OMJ5).

2. You have to enter the (minimum) remaining shelf life in the material master record (general plant data/storage) and/or in the PO item (item details, *Delivery* tab page).

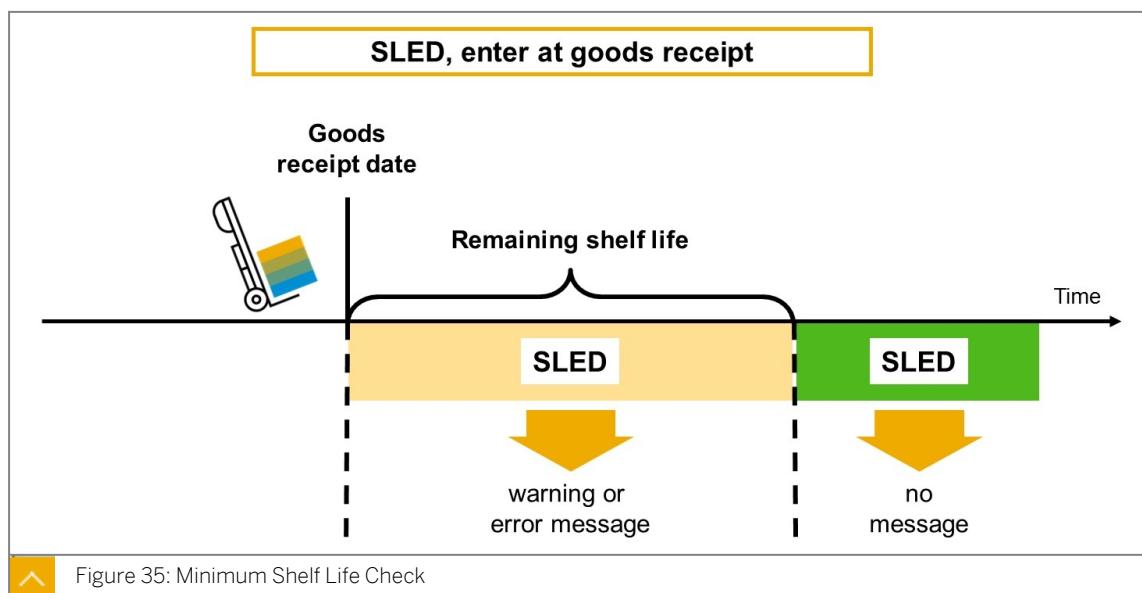
The minimum remaining shelf life value is the number of calendar days that a material must be usable for the system to accept the goods receipt.



**Caution:**

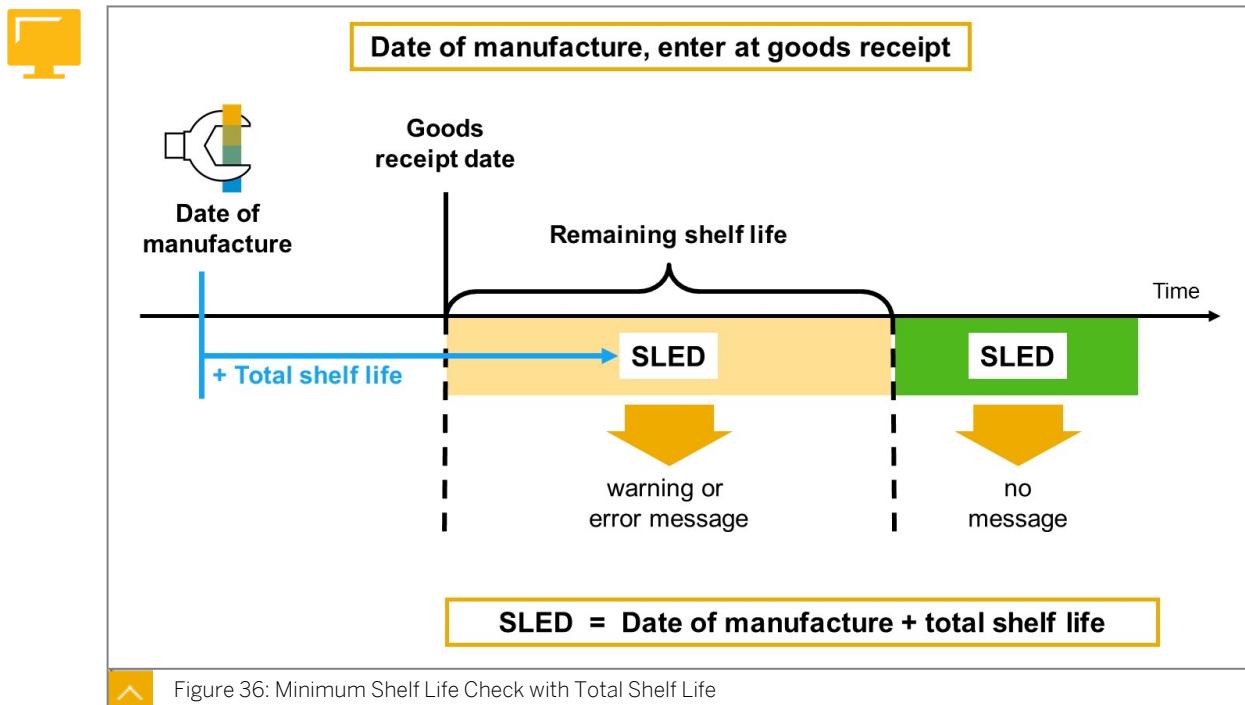
The minimum remaining shelf life in the material master is not plant specific, but only client dependent.

### Minimum Shelf Life Check



If these prerequisites are fulfilled, the system requests that you specify the minimum shelf life expiration date (SLED) in the *Shelf Life Expiration Date/BBD* field in the goods receipt. The system then checks whether the SLED you entered complies with the required remaining shelf life. In case of a shortfall, you can decide in Customizing whether the system issues the message (work area 12, message no. 007) as a warning, or an error message.

### Checking the Minimum Shelf Life (with Total Shelf Life)



In the SLED check, you can also use the date of manufacture to calculate the remaining shelf life. To use the date of manufacture in a SLED check, you must enter the total shelf life as well as the remaining shelf life in the material master record. In this case, enter the date of manufacture in the GR. The system calculates the minimum SLED (date of manufacture + total shelf life = SLED).

For materials without a batch management requirement, you can enter and check the minimum SLED for only the GR. You can also print the minimum SLED on the GR and goods issue (GI) slip.

For materials with a batch management requirement, it is possible to use the SLED in batch determination for GIs and analyses for batches.

### Too Early or Too Late Delivery

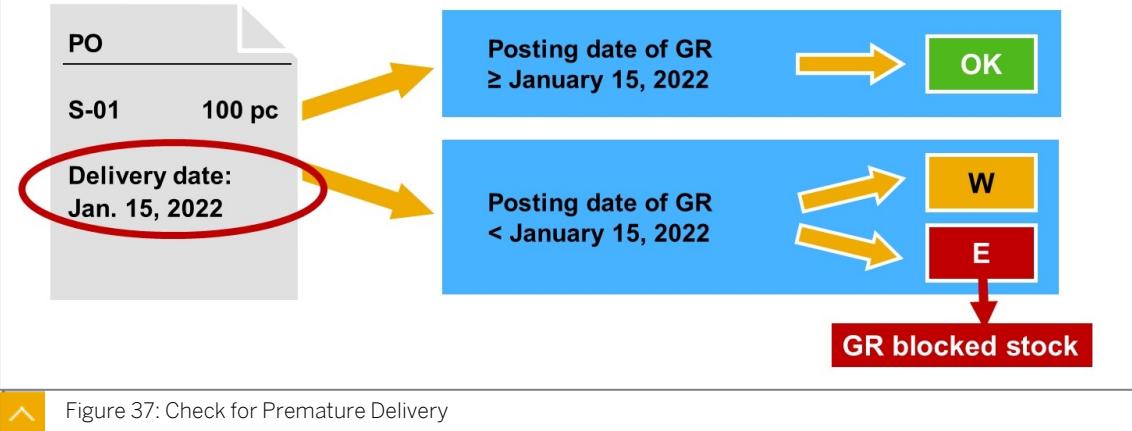
For each purchase order item, *Purchasing* specifies a delivery date. The system may check during the GR posting whether the goods are delivered too early or late.



### Define Attributes of System Messages



Version	Appl.ar	No.	Message text	Cat
...	...	...	...	
00	M7	254	<b>Earliest possible delivery date is &amp;1</b>	<b>W E</b>
...	...	...	...	



To check whether the delivery is made before the planned delivery date, you must set message number 254 (work area M7) as the warning or error message in Customizing.

Define the attributes of system messages in Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Define Attributes of System Messages* (OMCQ).

If the GR date lies before the planned delivery date in the PO, the system then issues the message **Earliest delivery date is ...** according to your settings.

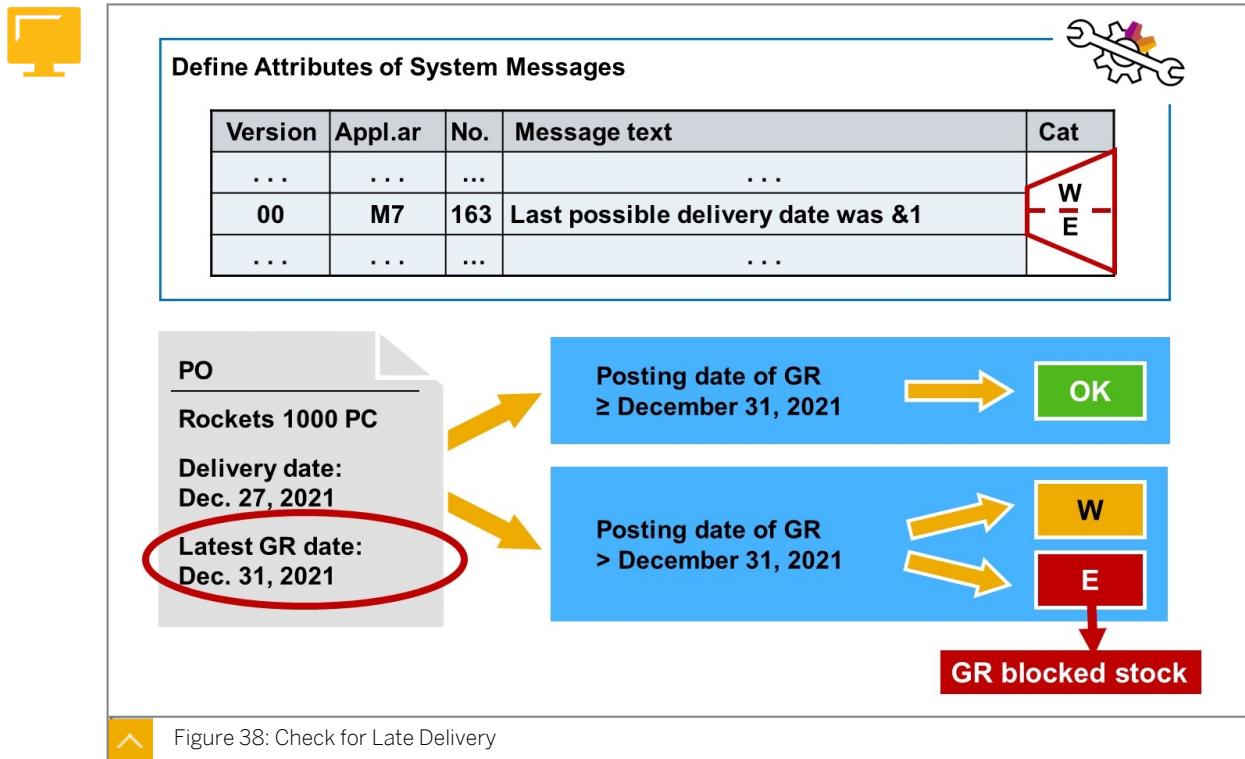


#### Hint:

If you have defined message M7 254 as a warning message, the message due to early delivery is only displayed in the *Post Goods Movement* app (or MIGO transaction), not in the *Post Goods Receipt for Purchasing Document* app. However, this is only the case if the *Check* function is called up in the *Post Goods Movement* app before the posting.

If you have set the message 254 as an error message, you can still post prematurely delivered goods to non-valuated or valuated GR blocked stock. If the delivery date is achieved, you can release the GR blocked stock. The check for premature delivery may be useful if your storage capacity is limited.

### Check for Late Delivery



To prevent goods from being accepted in the case of **delayed delivery**, you must specify the *Latest Possible Goods Receipt Date* for the item in the purchase order. The *Latest Possible Goods Receipt Date* field is in the purchase order item detail data on the *Delivery* tab page. You also need to set message 163, *Last possible delivery date was ...* (work area M7), as a warning or error message in Customizing.


**Hint:**

If you have defined message M7 163 as a warning message, the message due to late delivery is only displayed in the *Post Goods Movement* app (or MIGO transaction), not in the *Post Goods Receipt for Purchasing Document* app. However, this is only the case if the *Check* function is called up in the *Post Goods Movement* app before the posting.

If you have set the message as an error message for delayed delivery, you can post the delivered goods to the GR blocked stock, and then post a return delivery from the GR blocked stock.



### LESSON SUMMARY

You should now be able to:

- Use the shelf life expiration date check
- Customize system messages for a delivery that is too early or too late



# Learning Assessment

1. Which of the following stock types can you post to with movement type 501?

*Choose the correct answers.*

- A Unrestricted-use stock
- B Stock in quality inspection
- C Blocked stock
- D Rejected stock

2. Which of the following statements about posting without reference are true?

*Choose the correct answers.*

- A For other goods receipts, the valuation price must be entered manually during posting.
- B For a delivery from a vendor, you can also enter a goods receipt without a purchase order.
- C You can post an other goods receipt into non-valuated GR blocked stock.
- D You can enter an initial entry of stock balances for special stocks.

3. Which of the following statements are correct?

*Choose the correct answers.*

- A GR blocked stock is always valuated and is comparable with stock in quality inspection.
- B The GR blocked stock can be valuated or nonvaluated, and is only managed at plant level.
- C A GR for a PO can be posted to general blocked stock or GR blocked stock using movement type 101.
- D You post deliveries that are subject to conditional acceptance to nonvaluated GR-blocked stock upon receipt.
- E You release GR blocked stock using special movement types (105 or 109).

4. Which of the following statements regarding goods receipt (GR) blocked stock are true?

*Choose the correct answers.*

- A No accounting document is created at the time of the goods receipt into GR blocked stock.
- B A material document is created at the time of the goods receipt into GR blocked stock.
- C Movement types 103 and 107 are defined in the standard system for posting a goods receipt to GR blocked stock.
- D A goods receipt into GR blocked stock can always be preplanned in the purchase order.

5. A goods receipt to stock in quality inspection can be preplanned in a production order.

True or False?

*Determine whether this statement is true or false.*

- True
- False

6. Which prerequisites must be fulfilled for automatic purchase order generation at the time of goods receipt?

*Choose the correct answers.*

- A A reference purchasing organization must be assigned to the plant.
- B Automatic purchase order generation must be allowed for the movement type.
- C Automatic order generation must be allowed for the plant.
- D This process is only possible for valued material.
- E In the source list, you specify which vendor can be used for automatic purchase order generation at goods receipt.

7. Using the app *Post Goods Movement* or the transaction **MIGO** you are able to change the delivery note number in a material document. True or False?

*Determine whether this statement is true or false.*

- True
- False

8. Which of the following statements regarding a cancellation of a goods movement are correct?

Choose the correct answers.

- A Like an invoice, a material document can only be cancelled completely.
- B If you post a cancellation with reference to a material document the movement type is automatically determined by the system.
- C When cancellation takes place with reference to a material document, you can also reverse partial quantities.
- D A goods movement with movement type (MvT) 101 is cancelled with movement type 102.
- E A reversal does not have any consequences in Financial Accounting (FI).
- F You can only define reasons for reversal movement types in Customizing.

9. Which of the following statements regarding returns items in a purchase order (PO) are true?

Choose the correct answers.

- A You must create a returns item in a purchase order with reference to the purchase order you created for the initial delivery of the material.
- B You create a returns item in an PO by selecting the *Returns item* checkbox.
- C At goods receipt for the purchase order, the system automatically proposes movement type 161 and the direction indicator */Issue (-)* for a returns item.
- D In the purchase order, the *Free of Charge* indicator must also be set for a returns item. Therefore, the goods movement for the returns item is always non-valuated.

10. You enter a goods receipt and an invoice for a purchase order. Which quantity specification is used for valuation.

Choose the correct answer.

- A Quantity in order unit
- B Quantity in purchase order price unit
- C Quantity in goods receipt unit
- D Quantity in unit of issue

11. Purchasing has created a purchase order item with an order price unit that differs from the order unit. A goods receipt is posted for this purchase order item. Which of the following statements are correct in this case?

*Choose the correct answers.*

- A If you do not enter the delivered quantity in the order price unit, the system posts the goods receipt with the quantity zero.
- B The tolerances for the allowed quantity variances in the order price unit are defined company-code-specific in Customizing.
- C The allowed variances for the quantity in the order price unit are determined from the PO item.
- D If you have defined the tolerance key B1 and the variance is larger than the maximum variance, goods cannot be posted.

12. Which of the following statements regarding under and overdeliveries are correct?

*Choose the correct answers.*

- A Underdelivery and overdelivery tolerances are copied from the material master record to the purchase order.
- B A goods receipt for a partial quantity can only be posted if an underdelivery tolerance is specified in the purchase order item.
- C In transaction MIGO, the user can subsequently allow an unlimited overdelivery for a purchase order item.
- D If you use the check function before posting a goods receipt, the system uses the underdelivery tolerance from the purchase order to determine whether a warning message is issued.

13. Which of the following statements regarding the *Delivery Completed Indicator* are correct?

*Choose the correct answers.*

- A You can set the *Delivery Completed Indicator* manually in a purchase order item.
- B You can specify whether the *Delivery Completed Indicator* is to be set automatically.
- C A purchase order item for which the *Delivery Completed Indicator* has been set is no longer relevant for materials planning.
- D Once you have set the *Delivery Completed Indicator* for a PO item, you can no longer delete it.

14. You want to ensure that a goods receipt for a purchase order item cannot be posted after the specified delivery date. Which of the following prerequisites must be fulfilled?

*Choose the correct answers.*

- A The same date must be specified in the *Delivery date* and *Latest GR date* fields in the PO item.
- B Set a low maximum shelf life for the material.
- C Message 163 from application area M7 (Last possible delivery date was ...) must be set as an error message.
- D In Customizing the check for late delivery must be activated for the plant.

15. Which of the following statements are correct?

*Choose the correct answers.*

- A The system checks the SLED for all GRs.
- B You must set the check for the SLED in Customizing for the plant and movement type.
- C When the expiration date check is active and you enter the remaining shelf life in the material master record, you must enter the date of manufacture in the GR.
- D When the expiration date check is active and you enter the remaining shelf life in the material master record, you must enter the shelf life expiration date in the GR.
- E You can maintain the total shelf life of the material manually in the PO.
- F You can maintain the remaining shelf life of the material in the PO.

# Learning Assessment - Answers

1. Which of the following stock types can you post to with movement type 501?

*Choose the correct answers.*

- A Unrestricted-use stock
- B Stock in quality inspection
- C Blocked stock
- D Rejected stock

Correct. In the transaction MIGO or the app *Post Goods Movement*, you can post to unrestricted-use stock, quality inspection stock or blocked stock by selecting the appropriate stock type for movement type 501.

2. Which of the following statements about posting without reference are true?

*Choose the correct answers.*

- A For other goods receipts, the valuation price must be entered manually during posting.
- B For a delivery from a vendor, you can also enter a goods receipt without a purchase order.
- C You can post an other goods receipt into non-valuated GR blocked stock.
- D You can enter an initial entry of stock balances for special stocks.

Correct. For other goods receipts, the valuation price is determined from the material master record. Manual entry is usually not possible. You can post a goods receipt without a purchase order using movement types 501, 503, 505 or 511. You cannot post an other GR into nonvaluated GR blocked stock. You can enter an initial entry of stock balances for special stocks.

3. Which of the following statements are correct?

*Choose the correct answers.*

- A GR blocked stock is always valued and is comparable with stock in quality inspection.
- B The GR blocked stock can be valued or nonvaluated, and is only managed at plant level.
- C A GR for a PO can be posted to general blocked stock or GR blocked stock using movement type 101.
- D You post deliveries that are subject to conditional acceptance to nonvaluated GR-blocked stock upon receipt.
- E You release GR blocked stock using special movement types (105 or 109).

Correct: Both, the valued and the nonvaluated GR blocked stock are managed at plant level. A receipt can be posted to GR blocked, nonvaluated stock using movement type 103. To post a receipt to a GR blocked, valued stock, use movement type 107. If you post a conditional acceptance using movement type 103, the system updates it to accounting when it is released.

4. Which of the following statements regarding goods receipt (GR) blocked stock are true?

*Choose the correct answers.*

- A No accounting document is created at the time of the goods receipt into GR blocked stock.
- B A material document is created at the time of the goods receipt into GR blocked stock.
- C Movement types 103 and 107 are defined in the standard system for posting a goods receipt to GR blocked stock.
- D A goods receipt into GR blocked stock can always be preplanned in the purchase order.

Correct. An accounting document is created when the goods receipt is posted to valued GR blocked stock with movement type 107. The system does create a material document at the time of GR. In standard you use movement type 103 to post a GR to nonvaluated GR blocked stock and movement type 107 for a GR to valued GR blocked stock. Only a goods receipt into valued GR blocked stock can be planned in the purchase order.

5. A goods receipt to stock in quality inspection can be preplanned in a production order.  
True or False?

*Determine whether this statement is true or false.*

True

False

Correct. A goods receipt to stock in quality inspection can be preplanned both in the production order and in the purchase order using a special indicator.

6. Which prerequisites must be fulfilled for automatic purchase order generation at the time of goods receipt?

*Choose the correct answers.*

- A A reference purchasing organization must be assigned to the plant.
- B Automatic purchase order generation must be allowed for the movement type.
- C Automatic order generation must be allowed for the plant.
- D This process is only possible for valued material.
- E In the source list, you specify which vendor can be used for automatic purchase order generation at goods receipt.

Correct. The standard purchasing organization must be assigned to the plant, not a reference purchasing organization. Automatic purchase order generation must be allowed for the movement type in Customizing. The plant is not relevant for the activation of automatic order generation. This process is not possible for unvalued material. An entry in the source list is not relevant for the function.

7. Using the app *Post Goods Movement* or the transaction **MIGO** you are able to change the delivery note number in a material document. True or False?

*Determine whether this statement is true or false.*

True

False

Correct. You cannot change the delivery note number in the material document with any function. To do this, you always have to cancel and reenter the document.

8. Which of the following statements regarding a cancellation of a goods movement are correct?

*Choose the correct answers.*

- A Like an invoice, a material document can only be cancelled completely.
- B If you post a cancellation with reference to a material document the movement type is automatically determined by the system.
- C When cancellation takes place with reference to a material document, you can also reverse partial quantities.
- D A goods movement with movement type (MvT) 101 is cancelled with movement type 102.
- E A reversal does not have any consequences in Financial Accounting (FI).
- F You can only define reasons for reversal movement types in Customizing.

Correct. A material document does not have to be completely reversed. Instead, you can select individual items for the reversal posting. The system automatically determines the reversal movement type if you enter a reversal document with reference to the original material document. When cancellation takes place with reference to a material document, you cannot change the quantity for a selected item. As a rule, reversal MvT = original MvT + 1. The reversal of a valued goods movement is also valued, which means that the reversal posting has effects in FI. You can define reasons for all movement types in Customizing.

9. Which of the following statements regarding returns items in a purchase order (PO) are true?

*Choose the correct answers.*

- A You must create a returns item in a purchase order with reference to the purchase order you created for the initial delivery of the material.
- B You create a returns item in an PO by selecting the *Returns item* checkbox.
- C At goods receipt for the purchase order, the system automatically proposes movement type 161 and the direction indicator */Issue (-)* for a returns item.
- D In the purchase order, the *Free of Charge* indicator must also be set for a returns item. Therefore, the goods movement for the returns item is always non-valuated.

Correct. You can just create individual returns items in a PO without referencing anything. You create a returns item by selecting the *Returns item* checkbox. The system automatically proposes movement type 161 and the direction indicator */Issue (-)* for the returns items. The *Free of Charge* indicator is not necessary for a returns item.

10. You enter a goods receipt and an invoice for a purchase order. Which quantity specification is used for valuation.

*Choose the correct answer.*

- A Quantity in order unit
- B Quantity in purchase order price unit
- C Quantity in goods receipt unit
- D Quantity in unit of issue

Correct. The quantity in purchase order price unit is used as the basis for valuation at goods receipt and invoice entry.

11. Purchasing has created a purchase order item with an order price unit that differs from the order unit. A goods receipt is posted for this purchase order item. Which of the following statements are correct in this case?

*Choose the correct answers.*

- A If you do not enter the delivered quantity in the order price unit, the system posts the goods receipt with the quantity zero.
- B The tolerances for the allowed quantity variances in the order price unit are defined company-code-specific in Customizing.
- C The allowed variances for the quantity in the order price unit are determined from the PO item.
- D If you have defined the tolerance key B1 and the variance is larger than the maximum variance, goods cannot be posted.

Correct. If no quantity in order price unit is specified for the GR, the conversion between order unit and order price unit specified in the order item is used. The relevant tolerances are defined company code-specific in Customizing. In the purchase order, you can only specify tolerances for quantities in order units. You use tolerance key B1 to set error messages and the tolerance key B2 to set warning messages.

12. Which of the following statements regarding under and overdeliveries are correct?

Choose the correct answers.

- A Underdelivery and overdelivery tolerances are copied from the material master record to the purchase order.
- B A goods receipt for a partial quantity can only be posted if an underdelivery tolerance is specified in the purchase order item.
- C In transaction MIGO, the user can subsequently allow an unlimited overdelivery for a purchase order item.
- D If you use the check function before posting a goods receipt, the system uses the underdelivery tolerance from the purchase order to determine whether a warning message is issued.

Correct. Underdelivery and overdelivery tolerances are copied from the material master record to the purchase order. An underdelivery tolerance is not necessary for a partial GR for a PO item. With transaction MIGO it is not possible to change the delivery tolerances in the PO. With the underdelivery tolerance, the system determines when to issue a warning message.

13. Which of the following statements regarding the *Delivery Completed Indicator* are correct?

Choose the correct answers.

- A You can set the *Delivery Completed Indicator* manually in a purchase order item.
- B You can specify whether the *Delivery Completed Indicator* is to be set automatically.
- C A purchase order item for which the *Delivery Completed Indicator* has been set is no longer relevant for materials planning.
- D Once you have set the *Delivery Completed Indicator* for a PO item, you can no longer delete it.

Correct. The *Delivery Completed Indicator* can be set manually in the purchase order item and causes the open purchase order quantity to be zero. In Customizing, you specify for each plant whether the final delivery indicator can be set automatically for the GR. You can still delete the PO item after selecting the *Delivery Completed Indicator*.

14. You want to ensure that a goods receipt for a purchase order item cannot be posted after the specified delivery date. Which of the following prerequisites must be fulfilled?

*Choose the correct answers.*

- A The same date must be specified in the *Delivery date* and *Latest GR date* fields in the PO item.
- B Set a low maximum shelf life for the material.
- C Message 163 from application area M7 (Last possible delivery date was ...) must be set as an error message.
- D In Customizing the check for late delivery must be activated for the plant.

Correct. In this case, message M7 163 must be set as error message and in the PO item the *Latest GR date* must be the same as the *Delivery date*. All other answers are wrong.

15. Which of the following statements are correct?

*Choose the correct answers.*

- A The system checks the SLED for all GRs.
- B You must set the check for the SLED in Customizing for the plant and movement type.
- C When the expiration date check is active and you enter the remaining shelf life in the material master record, you must enter the date of manufacture in the GR.
- D When the expiration date check is active and you enter the remaining shelf life in the material master record, you must enter the shelf life expiration date in the GR.
- E You can maintain the total shelf life of the material manually in the PO.
- F You can maintain the remaining shelf life of the material in the PO.

Correct. You must set the check for the SLED or date of manufacture in Customizing. You can maintain the total shelf time of the material only in the material master record. You can maintain the remaining shelf life in the material master record, in the purchasing info record, and in the PO.

## UNIT 3

# Stock Transfers and Transfer Postings

### Lesson 1

Performing Transfer Postings

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### Lesson 2

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Performing Stock Transfers Between Plants

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### UNIT OBJECTIVES

- Perform transfer postings
- Post physical stock transfer postings Storage location to Storage location
- Post a plant-to-plant stock transfer



## Performing Transfer Postings



### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Perform transfer postings

### Transfer Postings and Physical Stock Transfer

In any enterprise, goods movements do not only take the form of goods receipts (GRs) and goods issues (GIs). For organizational reasons (for example, decentralized storage) or due to other factors (for example, quality assurance) internal transfer postings and physical stock transfers may be necessary.

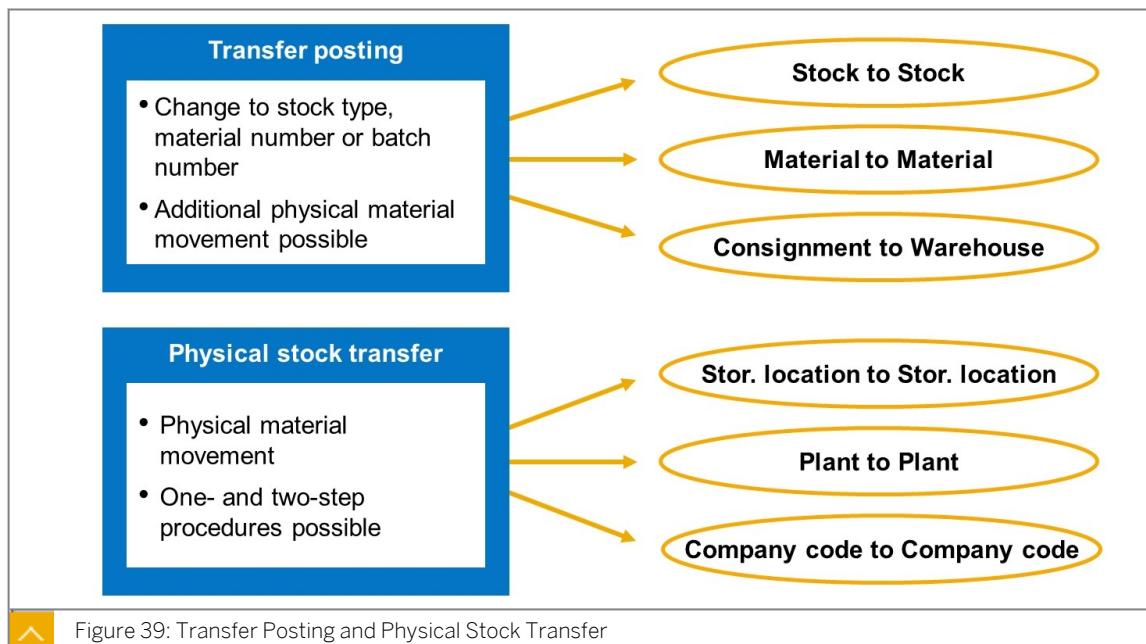


Figure 39: Transfer Posting and Physical Stock Transfer

In the case of **transfer postings**, the key aspect is a change in the stock ID number or the stock category of a material. Transfer postings do not need to involve an actual (physical) goods movement. In the case of **stock transfers**, on the other hand, there is always a physical movement of goods.

Examples of transfer postings and physical stock transfers are as follows:

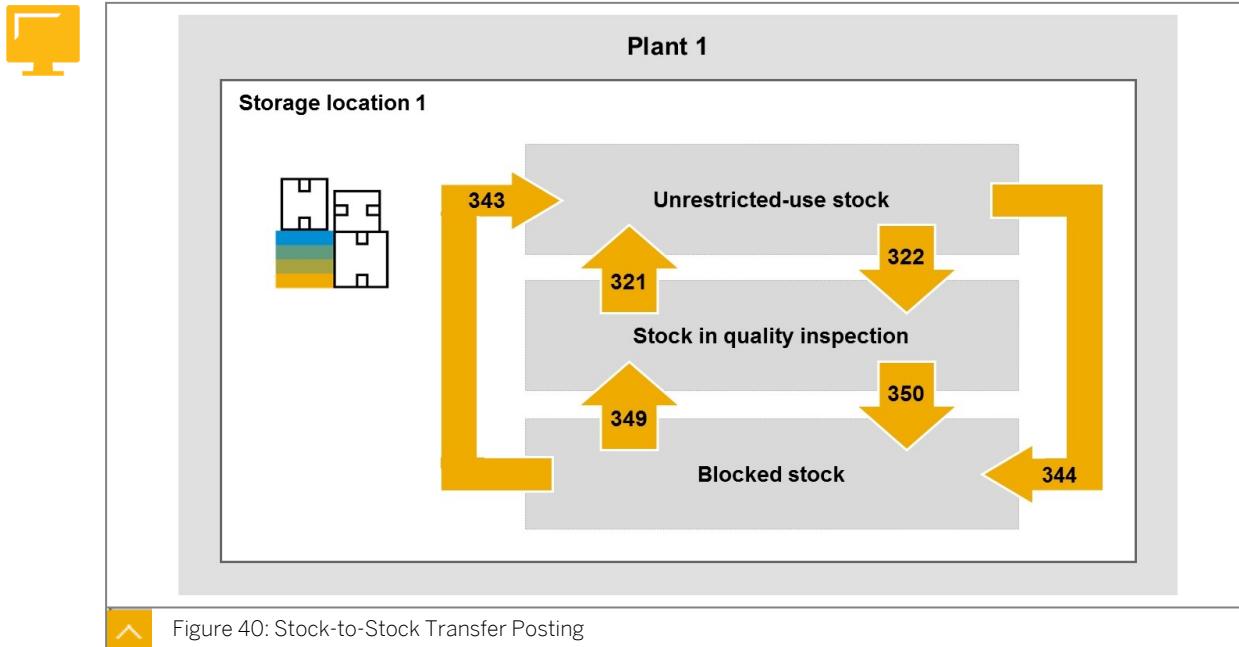
- Transfer postings: stock to stock (for example, in quality inspection to unrestricted use) or material to material.
- Physical stock transfers: storage location to storage location or plant to plant.

As you can see from the examples, transfer postings and physical stock transfers can take place at different organizational levels. If stock is transferred between two storage locations

within a plant, we speak of a **storage location-to-storage-location** stock transfer. If stock is transferred between two plants and the plants belong to the same company code, we speak of a **plant-to-plant** stock transfer. If the plants are assigned to different company codes, we speak of a **company code-to-company-code** stock transfer.

### Transfer Posting: Stock to Stock

In inventory management, three stock types indicate the usability of a material: unrestricted-use stock, stock in quality inspection and blocked stock.



If the usability of a material changes, you need to make transfer postings between the different stock types. With a stock-to-stock transfer posting, you can also enter a physical goods movement to a different storage location.

The following are examples of stock-to-stock transfer postings:

- Due to a damaged water pipe in a warehouse, a material can no longer be used and is transferred to blocked stock.
- Material is posted to stock in quality inspection at the time of a goods receipt (GR) against a purchase or production order. Following quality inspection, the quantity is posted to unrestricted-use stock.



Hint:

If inspection processing in quality management is active, you cannot post any issues from stock in quality inspection within inventory management. You can only perform such movements within the framework of inspection processing.

### Functions for Entering Transfer Postings

The following functions for entering stock-to-stock transfer postings are available in SAP S/4HANA:

- SAP Fiori app *Post Goods Movement* respectively transaction MIGO
- SAP Fiori app *Transfer Stock – In-Plant*

### SAP Fiori app Post Goods Movement and Transaction MIGO

Figure 41: Transfer Posting with Post Goods Movement App (Example)

With the *Post Goods Movement* app and the **MIGO** transaction, you can enter all transfer postings and physical stock transfers. The following describes how you enter transfer postings (or stock transfers) with these functions.

1. Start the *Post Goods Movement* app or the **MIGO** transaction.
2. Choose transaction *Transfer Posting*, and as a reference, choose *Other*.
3. Check the default value for the movement type and change it if necessary (for example, movement type 321 for the transfer posting quality inspection stock to unrestricted-use stock).
4. In the item detail data, you enter the material that you want to transfer in the *From* data area. You also have to specify the issuing plant and the issuing storage location.
5. Under the *Dest* data, you specify the receiving material, the receiving plant, and the receiving storage location.



**Note:**

The fields available under the *Dest* data depend on the movement type. For example, in the case of stock-to-stock transfer postings, it is only possible to specify a receiving storage location. In the case of a material-to-material transfer posting, on the other hand, you can also enter the material and the plant.

6. Enter the quantity to be transferred in the item details.

7. Post the goods movement.

### Copying Rules for Transfer Postings

Figure 42: Copying Rules for Transfer Postings

If you need to enter several transfer posting items in one document using the *Post Goods Movement* app or MIGO transaction, you can save time and effort by using the copying rules for transfer postings.

For example, you want to transfer 20 materials in plant 1010 from stock in quality inspection at storage location 0001 to unrestricted-use stock at storage location 0002. Using copying rules, you can specify that the system always suggests storage location 0001 as the issuing location and storage location 0002 as the receiving location in plant 1010.

In this case, proceed as follows:

1. Enter the first item with the necessary data.

2. Choose (*Copy to New Item*).

If you are using the *Copy to New Item* function for the first time for a combination of the movement type and special stock indicator, you are automatically taken to a dialog box in which you have to specify the copying rule.

3. In the *Enter/Change Copying Rules* window, you specify the fields from the current item that are to be adopted to a new item when using the copy function. In this example, select the fields *Plant*, *Storage Location*, and *Storage Location (Transfer Posting)*.

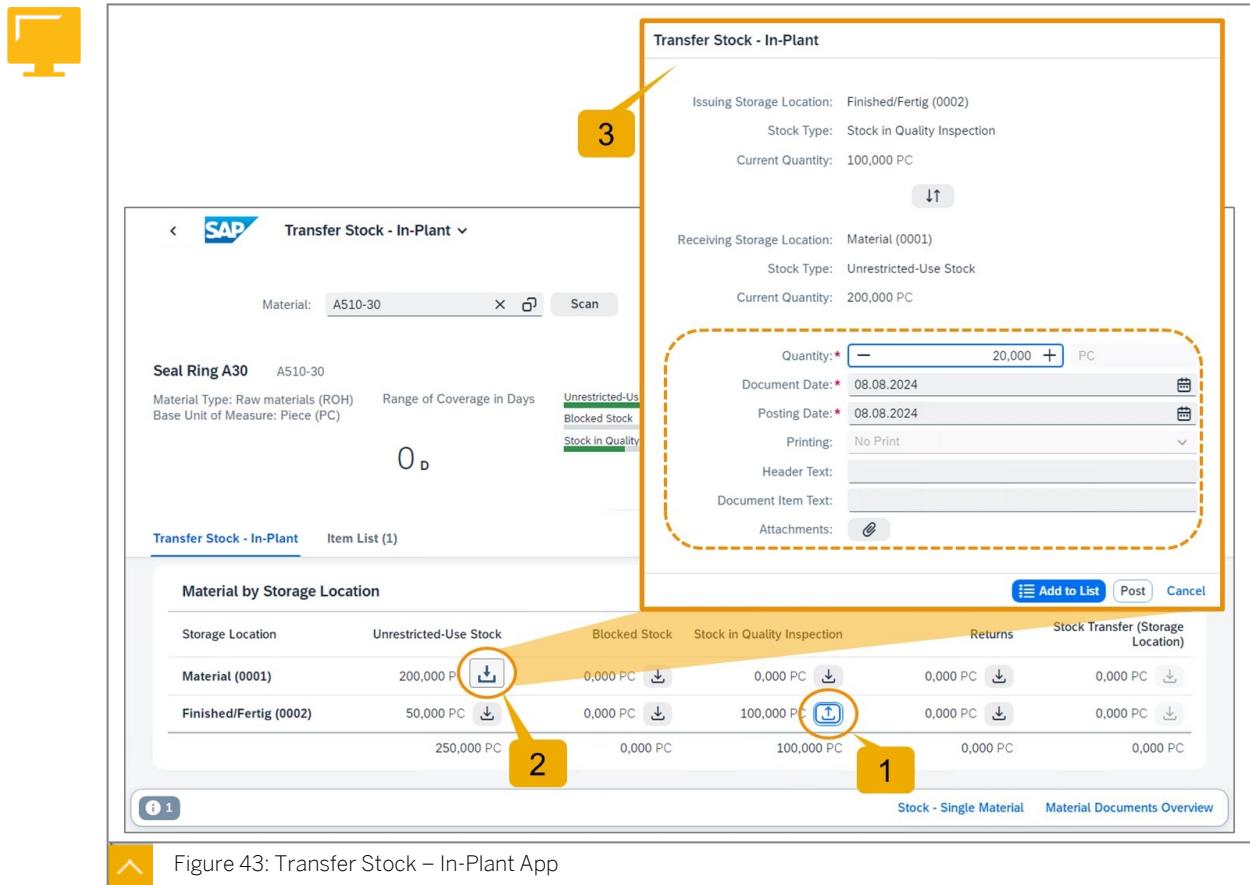
4. Choose *Adopt* to save the copying rule.

After this you have a new item with the same values for plant and storage locations as in the first item.

5. To enter another item, click on (*Copy to New Item*) again. Since the copying rule for the movement type has already been defined, a new item is created immediately with the default values for plant and storage locations.

You can predefine, change, or delete copying rules at any time by choosing *Menu → Settings → Copying Rules Transfer Postings*.

### SAP Fiori App Transfer Stock – In-Plant



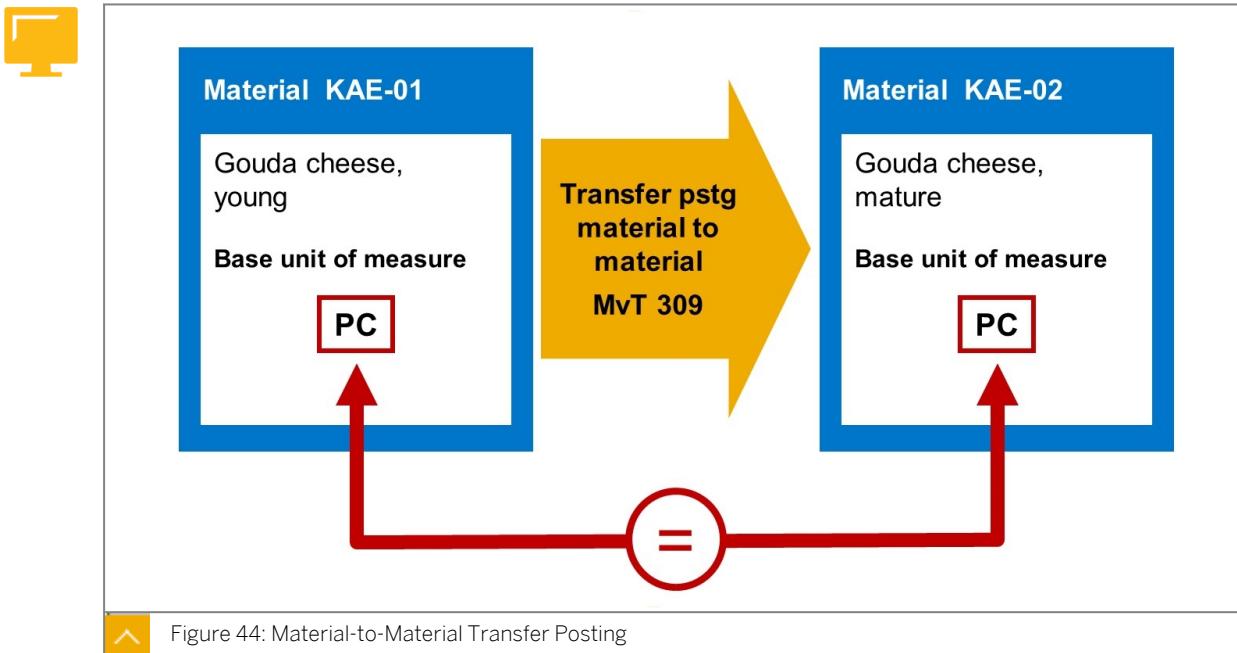
You can use the app to enter transfer postings (stock-to-stock) and physical stock transfer (storage location-to-storage location) for one material within a plant. The app is part of the Business Roles Inventory Manager (SAP\_BR\_INVENTORY\_MANAGER) and Warehouse Clerk (SAP\_BR\_WAREHOUSE\_CLERK).

To enter a transfer posting, proceed as follows:

1. Start the SAP Fiori app *Transfer Stock – In-Plant* (tile group *Warehouse Processing*).
2. Enter *Material* and *Plant* and confirm your entries with *Enter*. The system then displays the current stocks of the material in this plant.
3. Select the issuing stock by clicking on (on the right side of the stock quantity).
4. Select the receiving stock by clicking on (on the right side of the stock quantity).
5. In the dialog screen *Transfer Stock – in-Plant*, enter the quantity to be transferred. Enter also the document and posting date.
6. Post the goods movement.

Since SAP S/4HANA 2023, with the *Transfer Stock – In-Plant* app, you can also post more than one material at the same time if you first temporarily save the transfer postings to be done in an item list (*Add To List* action). From this item list, you can later select the materials to be posted at once.

## Transfer Posting: Material to Material



If a material changes over time in such a way that it no longer corresponds to the features defined in the material master record but to the features of a different material number, you have to carry out a transfer posting from material to material. This is often the case in the chemical and pharmaceuticals industry, for example.



### Caution:

A material-to-material transfer posting is possible only if both materials have the same base unit of measure and standard procedures.

The following also applies to material-to-material transfer posting:

- The posting cannot be preplanned via a reservation.
- The posting can be made only from unrestricted-use stock of the issuing material to unrestricted-use stock of the receiving material.
- The posting can be made only in a single step.
- The posting can be entered in the system with transaction MIGO or the SAP Fiori app *Post Goods Movement*.



### LESSON SUMMARY

You should now be able to:

- Perform transfer postings

## Performing Stock Transfers Between Storage Locations



### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post physical stock transfer postings Storage location to Storage location

### One-Step and Two-Step Procedures

A stock transfer or transfer posting consists of a goods issue from the issuing point and a goods receipt at the receiving point. For all transfer postings and stock transfers, the goods issue and goods receipt can be posted together in one entry step.

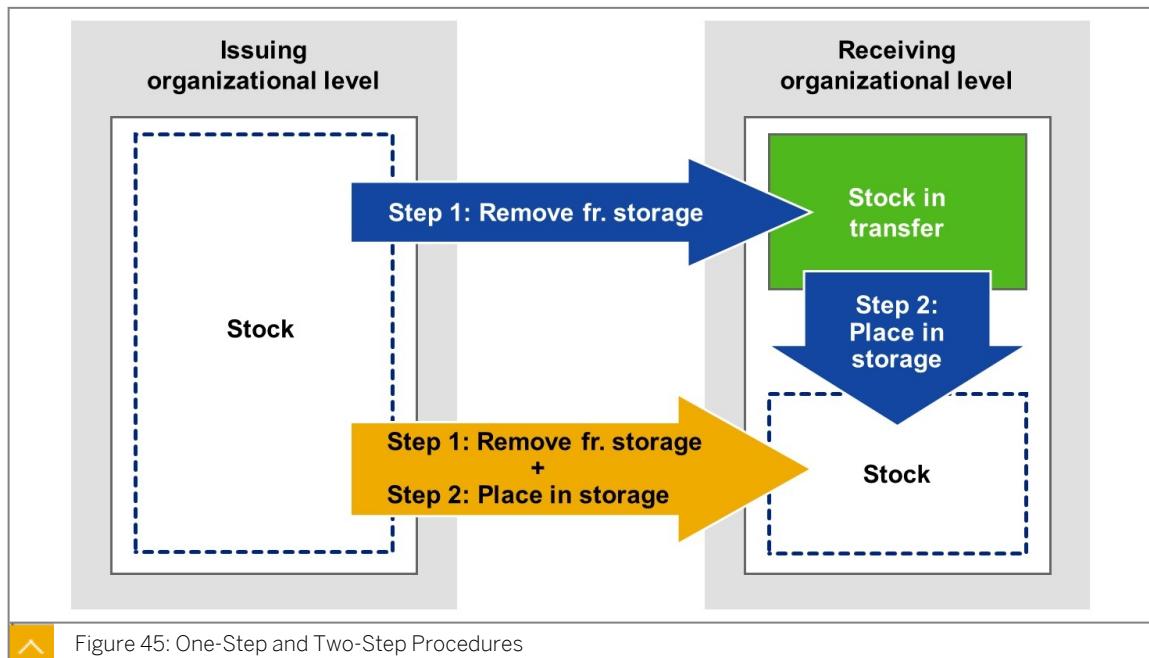


Figure 45: One-Step and Two-Step Procedures

For some stock transfers, you have the additional option of entering the GI and GR in two separate steps and, therefore, in two separate postings. In the case of storage location-to-storage location and plant-to-plant stock transfers, a distinction is made between the **one-step procedure** and the **two-step procedure**.

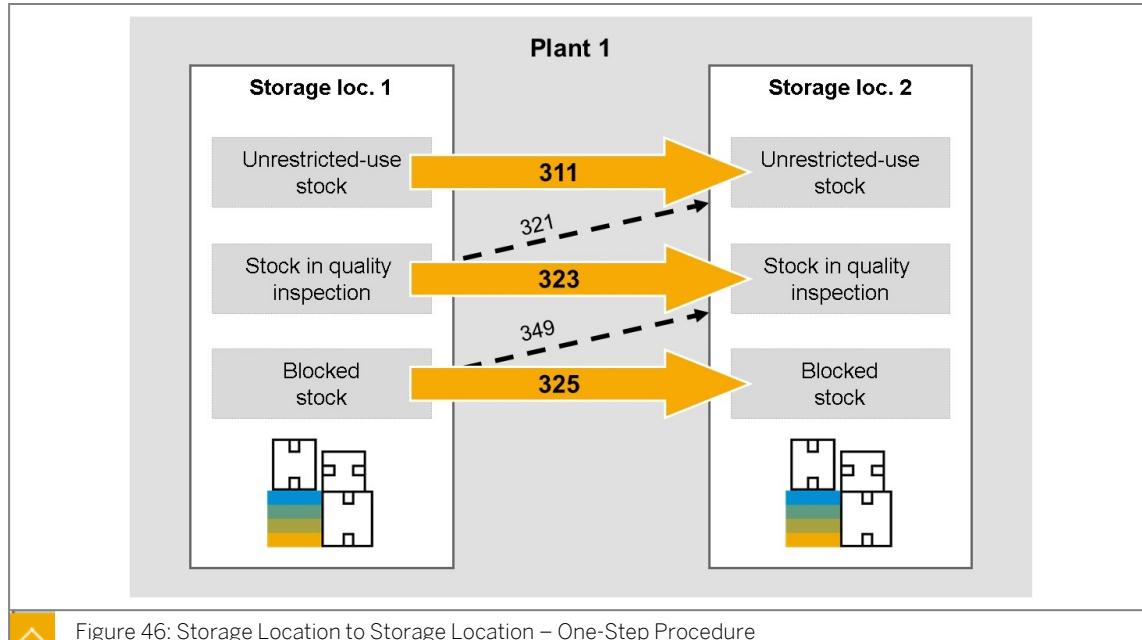
The one-step procedure has the advantage that you have to enter only a single transaction in the system. However, the two-step procedure enables you to monitor stocks that you are in the process of transferring from one place to another. Once you have posted the GI from the issuing point, the stock is regarded as in transfer at the receiving point, and is treated as such in the system.



Hint:

At the time of physical inventory, ensure that you do not have any stocks in transfer because you cannot inventory such stocks.

### Storage Location to Storage Location: One-Step Procedure



A stock transfer from one storage location to another is carried out within a plant. You can post a storage location-to-storage location stock transfer using the one-step procedure for all stock types.

**The material document items generated during the one-step procedure are as follows:**

- One item for the removal of the material from storage (GI) at the issuing storage location
- One item for the placement of the material in storage (GR) at the receiving storage location

No accounting document is generated for a stock transfer storage location-to-storage location, because both the material and the plant (and therefore the valuation area) remain the same.

## Storage Location to Storage Location: Two-Step Procedure

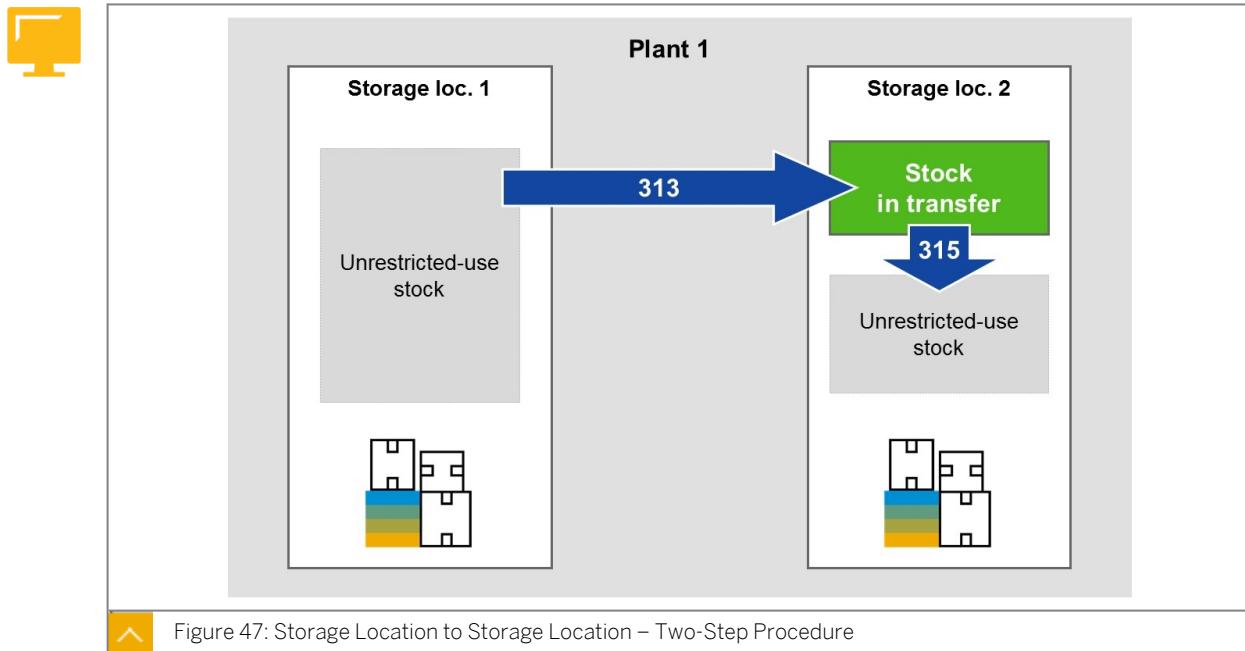


Figure 47: Storage Location to Storage Location – Two-Step Procedure

Using the two-step procedure, you can transfer material only from unrestricted-use stock at the issuing location to unrestricted-use stock at the receiving storage location. After the stock removal posting, the quantity is booked out of the issuing storage location. At the receiving storage location, the quantity is already included in the stock for that location, not as unrestricted-use stock, but as a **stock in transfer**. When the goods are put away at the receiving storage location, the quantity is transferred from stock in transfer to unrestricted-use stock.

The system generates two material documents in the course of a stock transfer from storage location-to-storage location using the two-step procedure:

- One material document with two items for **stock removal** with movement type 313:  
One item for the GI from the issuing storage location, and one item for the receipt in stock in transfer at the receiving storage location.
- One material document with one item for **putaway** with movement type 315:  
One item for putaway in the receiving storage location.

Valuation does not take place in the case of the two-step procedure.

### Functions for Posting Storage-Location-to-Storage-Location transfers

You can use the following functions to post a storage-location-to-storage-location transfer in one-step or two-step procedure:

- SAP Fiori app *Post Goods Movement* respectively transaction MIGO
- SAP Fiori app *Transfer Stock – In-Plant*



### LESSON SUMMARY

You should now be able to:

- Post physical stock transfer postings Storage location to Storage location

## Performing Stock Transfers Between Plants



### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post a plant-to-plant stock transfer

### Cross-Plant Stock Transfer

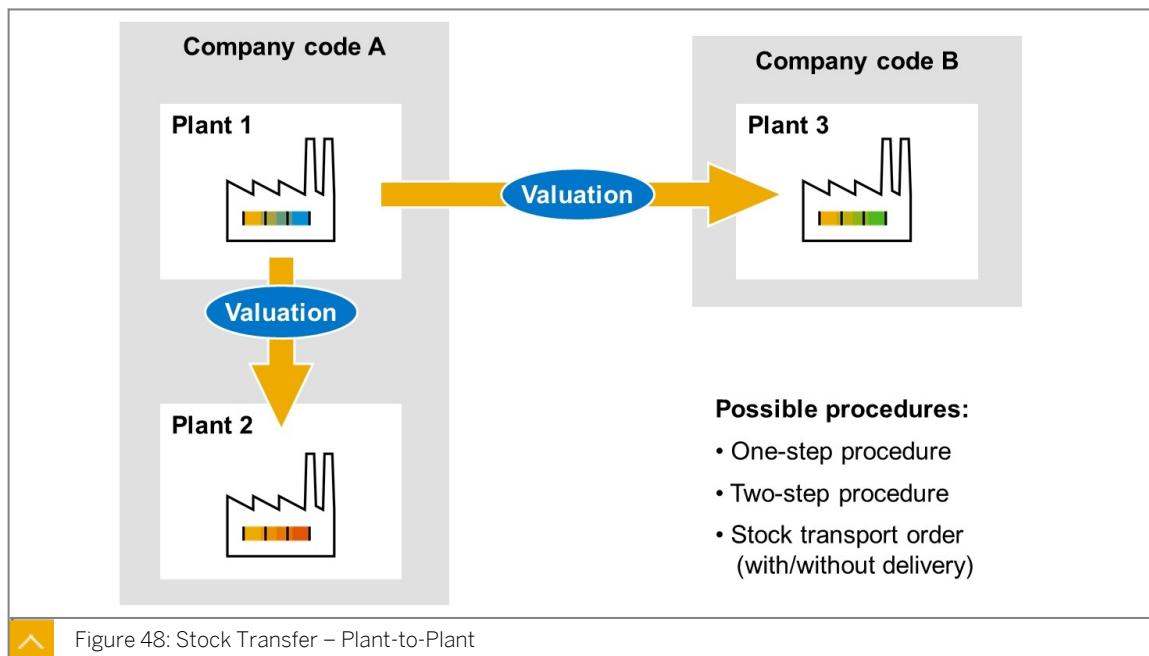


Figure 48: Stock Transfer – Plant-to-Plant

In the case of a plant-to-plant stock transfer, the plants between which material is transferred can belong either to the same company code or to different ones.

In contrast to a storage location-to-storage location stock transfer, a plant-to-plant transfer affects Financial Accounting (FI) and material requirements planning (MRP) in the following ways:

- FI (only if the two plants are assigned to different valuation areas):

A cross-plant stock transfer leads to a value update in the stock accounts. An accounting document is generated parallel to the material document for the stock transfer. The stock transfer is valued at the valuation price of the material in the issuing plant.

In the case of a cross-company-code stock transfer, two accounting documents are created at the time of posting - one for each company code. The offsetting entry to the stock posting is then made to a company-code clearing account.



**Hint:**  
If the stock transfer is entered in two separate steps, valuation always takes place at the time of the first step.

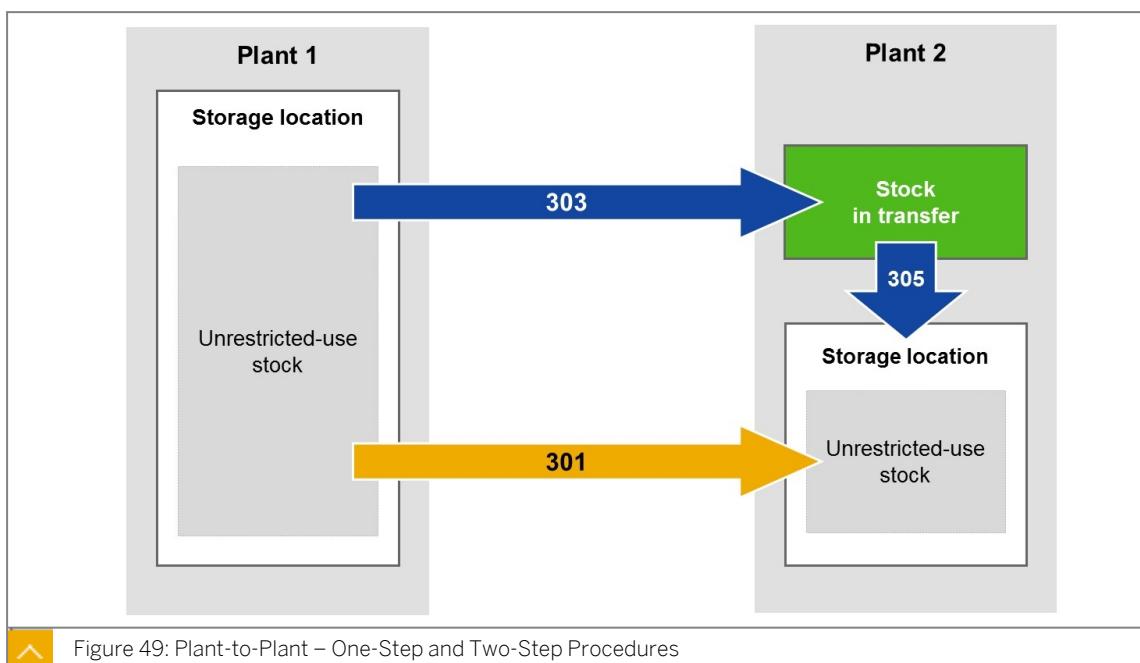
- MRP:  
A change in the plant stock is taken into account by MRP.

### Procedures for the Physical Transfer Plant-to-Plant of Materials

Several procedures are available for the physical transfer of materials from one plant to another:

- One-step procedure
- Two-step procedure
- Stock transport order without delivery (only possible with the two-step procedure).
- Stock transport order with delivery via shipping (possible with the one-step or two-step procedure, and also with the billing document).

#### Plant-to-Plant: One-Step and Two-Step Procedures



The approaches to the entry of plant-to-plant stock transfers for the one-step and two-step procedures without a stock transport order correspond to those for storage-location-to-storage-location transfers.

- **One-step procedure:**

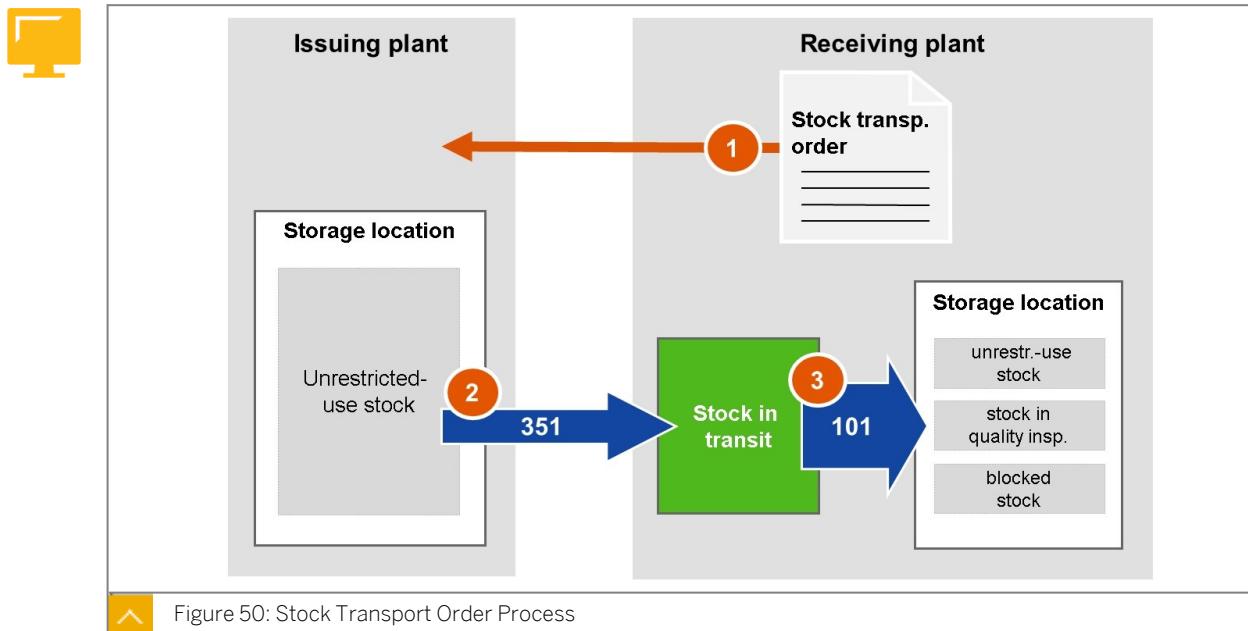
In the one-step procedure, the goods issue (GI) and goods receipt (GR) are posted in a single material document. Therefore, you must enter all relevant data such as the material, issuing plant, issuing storage location, receiving plant, and receiving storage location in this one step. The movement type (in the standard system) is 301.

- Two-step procedure:

In the two-step procedure, when removing the material from storage (movement type 303), you must specify the receiving plant in addition to the material and the issuing organizational levels. This is necessary because valuation of the stock transfer takes place when the material is removed from storage and posted to stock in transfer at the receiving plant. You can either enter the putaway (placement in storage, movement type 305) with reference to the material document of the stock removal or enter all data manually.

As a result of the putaway, the quantity is booked out of stock in transfer and into unrestricted-use stock at the receiving plant. Valuation of the putaway is not necessary, because the stock in transfer and the unrestricted-use stock at the receiving storage location belong to the same plant.

### Stock Transport Order (Without Delivery)



This type of stock transfer involves not only inventory management but also Purchasing at the receiving plant. The process can be divided into the following steps:

1. In the receiving plant, the stock transport order is entered in the purchasing department.
2. A GI referencing this stock transport order is entered in the issuing plant. After this goods issue, the quantity booked out is managed in the stock in transit of the receiving plant.
3. The GR is posted against the stock transport order at the receiving plant.

**A stock transfer using a stock transport order has the following advantages, compared to a stock transfer without a stock transport order:**

- The stock transport order is integrated within MRP. You can convert purchase requisitions generated by MRP into stock transport orders.
- The MRP controller can plan the receipt at the receiving plant.
- You can enter delivery costs and a forwarder in the stock transport order.
- You can enter an account assignment in a stock transport order item. Therefore you can post the GR directly to consumption.

- In the case of a GR into the warehouse, you can also post the material to stock in quality inspection or to blocked stock.
- You can monitor the entire process (GI and GR) via the PO history.

### Stock in Transit

To determine the quantities of a material that are transferred to a plant with or without a stock transport order, you can classify the stock segments as follows:

Stock Segment	Stock Transport Order
Stock in transfer	No
Stock in transit	Yes

The stock in transit is shown in the material master record in the plant stock view for the receiving plant. Furthermore the stock in transit is also displayed in the reports *Stock Overview* and *Warehouse Stocks of Material*. In the *Warehouse Stocks of Material* report, stocks in transit and stocks in transfer are summarized at plant level in a stock line without a storage location.

A special report for the analysis of transit stocks is available under *Inventory Management → Stock → Stock in Transit* (MB5T). With this report you can, for example, select stock in transit via the receiving or issuing plant.

Additionally, the SAP Fiori app *Overdue Materials - Stock in Transit* is available. With this app, you can get an overview of the overdue materials for which a stock transport order has been created. You can identify these materials to complete the stock transfer process or investigate potential problems. The app is part of the Business Roles Inventory Manager (SAP\_BR\_INVENTORY\_MANAGER), for example.



#### Note:

The *Overdue Materials - Stock in Transit* app supports only the following stock transfer processes:

- Goods issues with movement types 351, 641, 643, 654
- Goods receipts with movement types 101, 103, 107, 109

### Functions for Entering Physical Stock Transfers Plant-to-Plant

The following functions for posting a plant to plant stock transfer are available in SAP S/4HANA.

- SAP Fiori app *Post Goods Movement* respectively transaction MIGO
- SAP Fiori app *Transfer Stock – Cross-Plant*

## SAP Fiori App Post Goods Movement and Transaction MIGO

### Plant to Plant – without stock transport order

The approaches to the entry of plant-to-plant stock transfers for the one-step and two-step procedures without a stock transport order correspond to those for storage location-to-storage location transfers.

### Plant to Plant — with stock transport order

The first step in this process is a goods issue with reference to the stock transport order. To enter the goods issue, proceed as follows:

1. Start the *Post Goods Movement* app or MIGO transaction.
2. Choose transaction *Goods Issue* and, as the reference, choose *Purchase Order*.
3. Check the default value for the movement type and change it to **351**, if necessary.
4. Enter the number of the stock transport order.
5. Choose  (Execute) to copy the items from the purchase order.
6. Choose the items you want to remove from storage using the *OK* checkbox. If necessary, change the default quantity for the items and specify the storage location from which the material is to be withdrawn.
7. Post the goods issue.

A material document and an accounting document are generated. The quantity is booked out of the issuing plant. At the receiving plant, the material is not yet part of unrestricted-use stock. Instead, it is recorded as stock in transit at plant level. The PO history is also updated.

The second step is the goods receipt against the stock transport order. You enter this goods receipt in the same way as a goods receipt against a normal purchase order (movement type 101). You can enter the goods receipt for the stock transport order with the *Post Goods Movement* app, the MIGO transaction or the *Post Goods Receipt for Purchase Order* app. However, you cannot post the goods receipt to the GR blocked stock.

### Plant to Plant — with stock transport order

The first step in this process is a goods issue with reference to the stock transport order. To enter the goods issue, proceed as follows:

1. Start the *Post Goods Movement* app or MIGO transaction.
2. Choose transaction *Goods Issue* and, as the reference, choose *Purchase Order*.
3. Check the default value for the movement type and change it to **351**, if necessary.
4. Enter the number of the stock transport order.
5. Choose  (Execute) to copy the items from the purchase order.
6. Choose the items you want to remove from storage using the *OK* checkbox. If necessary, change the default quantity for the items and specify the storage location from which the material is to be withdrawn.

## 7. Post the goods issue.

A material document and an accounting document are generated. The quantity is booked out of the issuing plant. At the receiving plant, the material is not yet part of unrestricted-use stock. Instead, it is recorded as stock in transit at plant level. The PO history is also updated.

The second step is the goods receipt against the stock transport order. You enter this goods receipt in the same way as a goods receipt against a normal purchase order (movement type 101). You can enter the goods receipt for the stock transport order with the *Post Goods Movement* app, the MIGO transaction or the *Post Goods Receipt for Purchase Order* app. However, you cannot post the goods receipt to the GR blocked stock.

### SAP Fiori App Transfer Stock – Cross-Plant

The SAP Fiori app *Transfer Stock – Cross-Plant* is part of the Business Roles Inventory Manager (SAP\_BR\_INVENTORY\_MANAGER) and Warehouse Clerk (SAP\_BR\_WAREHOUSE\_CLERK).

You can use this app to make various transfer postings for a material. You can post the following goods movements:

- Stock transfers across plants and within a plant
- Transfer postings of stock from one stock type to another stock type

The app supports several movement types for different business processes. Which movement types you can use depends on your authorizations.

### How to make transfers with the Transfer Stock - Cross Plant app

Plant	Unrestricted-Use Stock	Blocked Stock	Stock in Quality Inspection	Returns	Stock Transfer (Plant)	Stock Transfer (Storage Location)
Hamburg (1010)	250,000 PC	0,000 PC	100,000 PC	0,000 PC	0,000 PC	0,000 PC
Berlin (1020)	0,000 PC	0,000 PC	0,000 PC	0,000 PC	0,000 PC	0,000 PC
Frankfurt (1030)	100,000 PC	0,000 PC	100,000 PC	0,000 PC	0,000 PC	0,000 PC
	350,000 PC	0,000 PC	200,000 PC	0,000 PC	0,000 PC	0,000 PC

Figure 51: Transfer Stock - Cross-Plant App



Figure 52: Transfer Stock - Cross-Plant App: Detail Screen

1. Start the SAP Fiori app *Transfer Stock - Cross-Plant*.
2. Select the material you want to transfer.
3. At plant level, select the issuing stock and then the receiving stock.
4. Choose the issuing storage location and the receiving storage location.



**Note:**

The value help supports you in posting stock more easily into all available storage locations of a plant. The value help for the receiving storage location contains all the available storage locations if the following prerequisites are fulfilled:

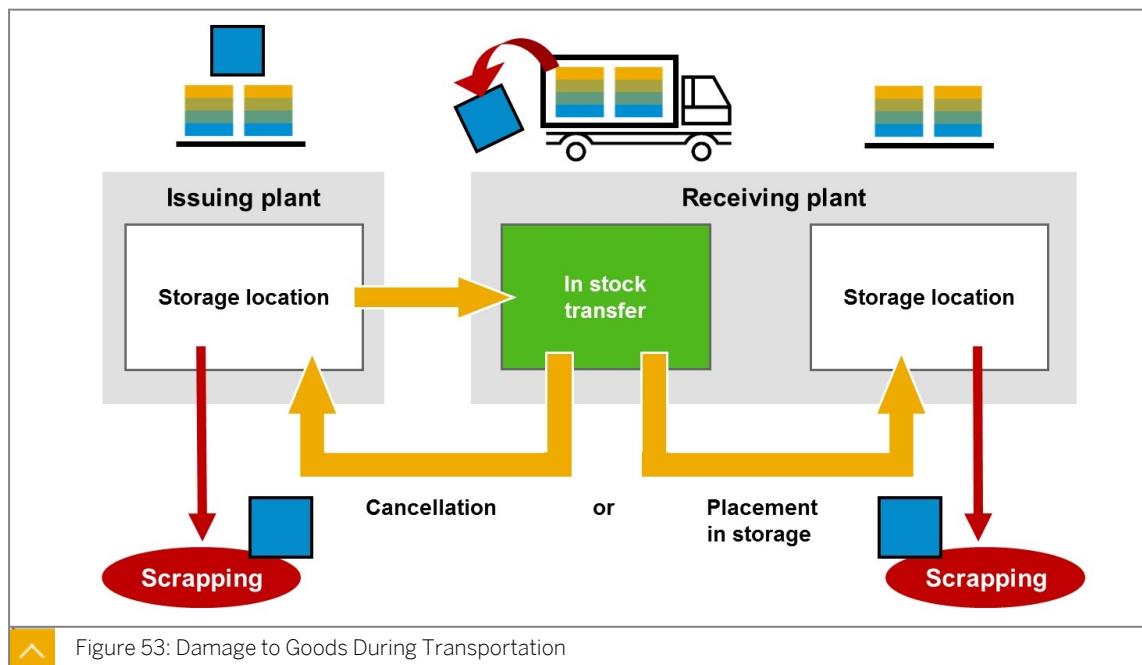
- The provided storage locations are already defined for the selected material in the material master
- Plants and the related movement types are configured for automatic creation of a storage location

5. Enter the quantity you want to transfer from the issuing stock to the receiving stock.
6. Enter the document date and the posting date.
7. Post the transfer.

**Note:**

You can also use the app to create a stock transport order. The *Create Stock Transport Order* button is only visible in the app if the necessary configuration for stock transport orders is maintained.

### Damage to Goods During Transportation



If goods are damaged during transportation, leading to their destruction you must report this as scrapping so that the system can arrive at the correct quantity of stock in transfer or stock in transit.

#### You can report scrapping in the following ways:

- Reverse the removal from storage at the issuing plant and then post the scrapping of the material at the issuing plant. The scrapping is posted on a value basis in the issuing plant.
- Place the full quantity of the goods into storage at the receiving plant and then post the scrapping at the receiving plant. The scrapping is posted on a value basis at the receiving plant.

It is important that the quantity destroyed does not remain in stock in transfer or stock in transit, but is reported in the system as scrapped.



#### LESSON SUMMARY

You should now be able to:

- Post a plant-to-plant stock transfer

## Learning Assessment

1. Which of the following statements are true for material-to-material transfer postings?

*Choose the correct answers.*

- A They cannot be preplanned via a reservation.
- B They can be posted for materials with a different base unit of measure.
- C They can be posted only from unrestricted-use stock of the issuing material to unrestricted-use stock of the receiving material.
- D The posting can be made in two step procedure.

2. Which of the following statements about the one-step and two-step procedures are true?

*Choose the correct answers.*

- A In the two-step procedure, the same movement type is used for both the removal from and the placement into storage.
- B For all stock types, you can post a storage-location-to-storage-location stock transfer using the one-step procedure.
- C Once you post the goods issue (GI) from the issuing point, the stock is regarded as in transfer towards the receiving point.
- D Regardless of procedures, only one material document is generated in the system for the whole stock transfer process.

3. How does a plant-to-plant transfer affect Financial Accounting (FI) if material valuation is at plant level (valuation area = plant)?

*Choose the correct answers.*

- A Plant-to-plant transfers do not affect FI.
- B The stock transfer results in a value update to the stock accounts.
- C The stock transfer without a stock transfer order is valued at the valuation price of the material in the issuing plant.
- D In the case of cross-company transfer, only one accounting document is generated for the stock transfer.

4. You post a plant-to-plant stock transfer using the two-step procedure. Why are no postings made in Financial Accounting during the putaway?

*Choose the correct answer.*

- A Because the quantity is booked into unrestricted-use stock at the receiving plant.
- B Because the stock in transfer and the stock at the receiving storage location belong to the same plant.
- C Because the stock in transfer and the stock at the receiving storage location belong to different plants.

## Learning Assessment - Answers

1. Which of the following statements are true for material-to-material transfer postings?

*Choose the correct answers.*

- A They cannot be preplanned via a reservation.
- B They can be posted for materials with a different base unit of measure.
- C They can be posted only from unrestricted-use stock of the issuing material to unrestricted-use stock of the receiving material.
- D The posting can be made in two step procedure.

Correct. They cannot be preplanned via a reservation. The two materials involved need to have the same base unit of measure. They can be posted only from unrestricted-use stock of the issuing material to unrestricted-use stock of the receiving material. You have to do this posting in one step.

2. Which of the following statements about the one-step and two-step procedures are true?

*Choose the correct answers.*

- A In the two-step procedure, the same movement type is used for both the removal from and the placement into storage.
- B For all stock types, you can post a storage-location-to-storage-location stock transfer using the one-step procedure.
- C Once you post the goods issue (GI) from the issuing point, the stock is regarded as in transfer towards the receiving point.
- D Regardless of procedures, only one material document is generated in the system for the whole stock transfer process.

Correct. In the two-step procedure, different movement types must be used for removal from storage and placement in storage, for example, for storage location-to-storage location 313 and 315. You can post a storage location-to-storage location stock transfer using the one-step procedure for all stock types. For the two-step procedure, in the first step the stock in the issuing storage location is reduced and the quantity is posted to the stock in transfer of the receiving location. With the one-step procedure, one material document is created, with the two-step procedure, two material documents are created.

3. How does a plant-to-plant transfer affect Financial Accounting (FI) if material valuation is at plant level (valuation area = plant)?

*Choose the correct answers.*

- A Plant-to-plant transfers do not affect FI.
- B The stock transfer results in a value update to the stock accounts.
- C The stock transfer without a stock transfer order is valued at the valuation price of the material in the issuing plant.
- D In the case of cross-company transfer, only one accounting document is generated for the stock transfer.

Correct. Plant-to-plant transfers do affect FI if valuation of materials is done on plant level. Plant-to-plant transfers leads to a value update to the stock accounts. The stock transfer without a stock transfer order is valued at the valuation price of the material in the issuing plant. A company code represents a legally independent accounting unit. Therefore, two accounting documents are created, one for each company code involved.

4. You post a plant-to-plant stock transfer using the two-step procedure. Why are no postings made in Financial Accounting during the putaway?

*Choose the correct answer.*

- A Because the quantity is booked into unrestricted-use stock at the receiving plant.
- B Because the stock in transfer and the stock at the receiving storage location belong to the same plant.
- C Because the stock in transfer and the stock at the receiving storage location belong to different plants.

Correct. The valuation of the putaway unnecessary in the two-step procedure because the stock in transfer and the stock at the receiving storage location belong to the same plant. The update in FI already takes place during the stock removal.

### Lesson 1

Creating Manual Reservations

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### Lesson 2

Evaluating Reservations

115

### UNIT OBJECTIVES

- Create a reservation manually
- Use reservations as a reference for a goods movement
- Execute various evaluations for reservations



## Creating Manual Reservations



### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create a reservation manually
- Use reservations as a reference for a goods movement

### Function and Origin of a Reservation

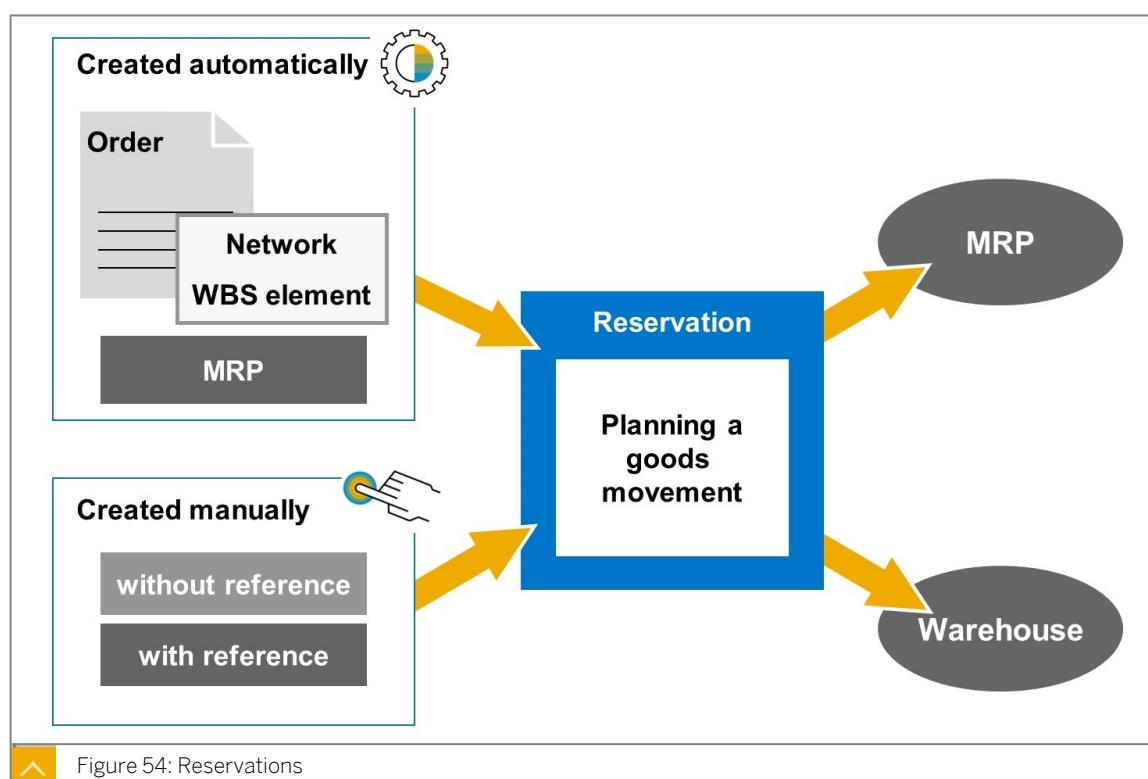


Figure 54: Reservations

A reservation is the requirement of the warehouse to make the materials for a goods movement (generally a withdrawal) ready at a later date and for a particular purpose. It is important that reservations are considered in materials planning so that a required material can be procured at the right time. A reservation also simplifies and speeds up the entry process, and helps prepare the work in the goods issuing department.

Typically, you preplan goods issues (GIs) and transfer postings with a reservation, but you can also preplan goods receipts (GRs).

Preplanning of transfer postings is only possible for transfer postings in the one-step procedure, from storage location-to-storage location (movement type 311) and plant-to-plant (movement type 301). The preplanning of GRs with a reservation should only take place in

exceptional cases. If you are using purchasing and production, then GRs are planned with purchase orders (POs) and production orders. Receipt reservations are not necessary.

Reservations can be created both manually and automatically.

To the automatically generated reservations belong the following:

- Dependent reservations:

These reservations are for orders, networks, and work breakdown structure (WBS) elements.

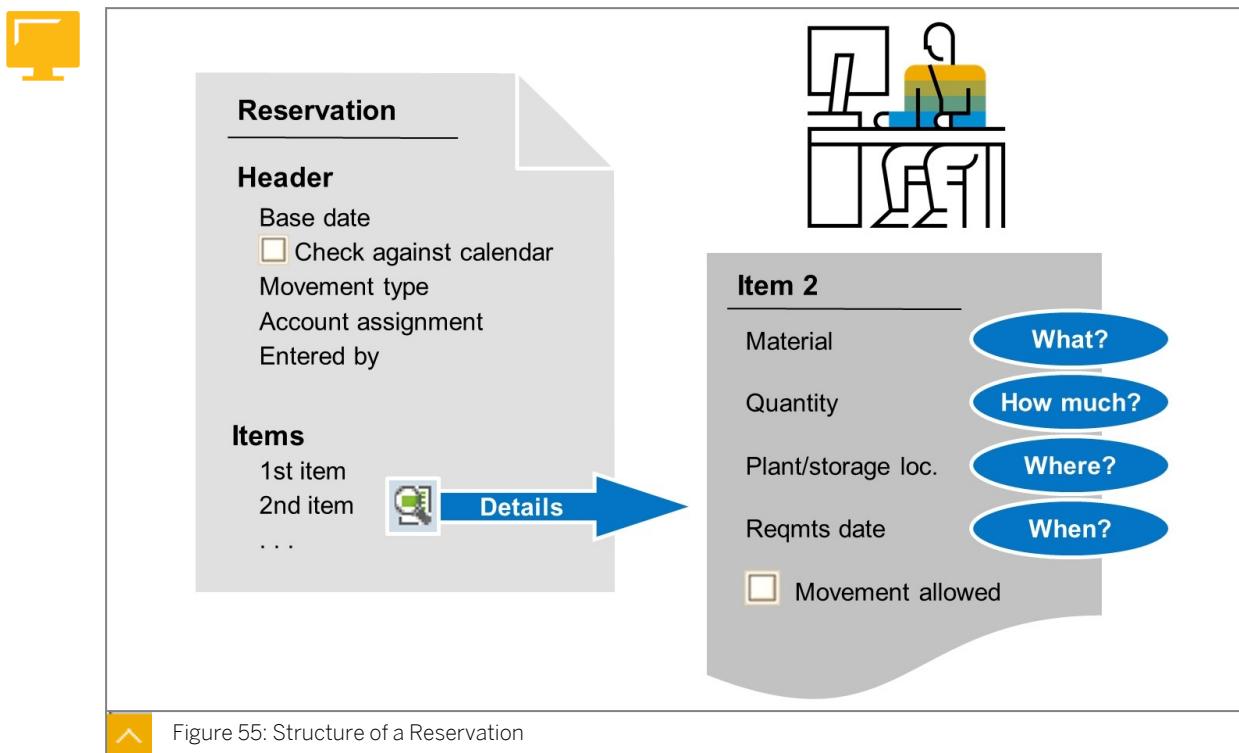
When you open an order, network, or project, the system automatically reserves the warehouse components.

Although you can display dependent reservations, you cannot maintain them directly. For example, you cannot change a dependent reservation for an order directly, but need to change the components in the order. The system then automatically updates the reservation.

- Stock transfer reservations:

These reservations plan transfers between storage locations. If, for example, reorder point planning is managed at storage location level, and the available stock falls short of the reorder point, the system creates a stock transfer reservation in the plant with the amount of the replenishment quantity.

## Structure of a Reservation



A reservation document consists of a header and at least one item. The header contains general data about the reservation transaction (created by, movement type, account assignment, and base date). The items describe the individually planned movements (material, quantity, requirement date, plant, and storage location).

**Caution:**

You can create a reservation for only one particular purpose. In other words, you can only enter **one** movement type in a reservation and create **one** account assignment. You cannot change these two entries after posting.

## Functions for Processing Manual Reservations

The following functions are available in SAP S/4HANA for processing manual reservations.

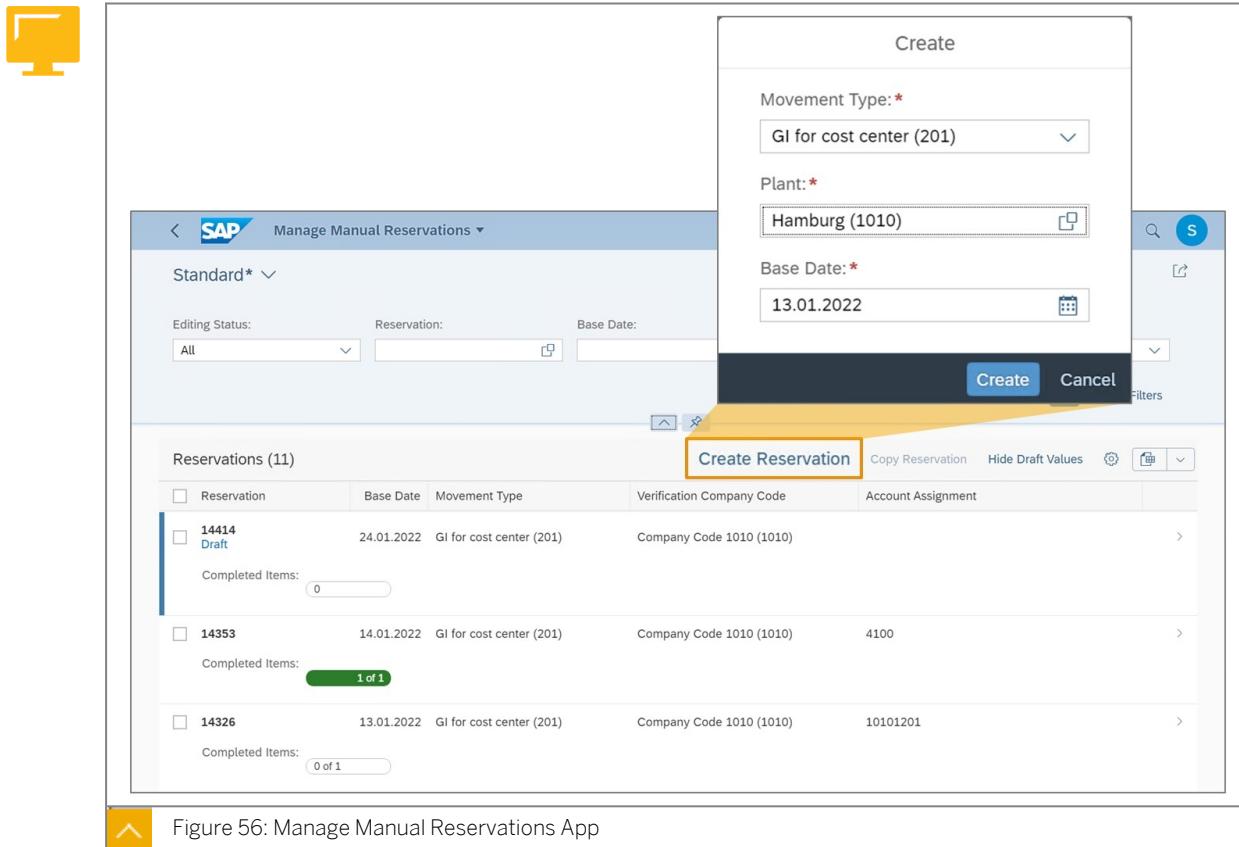
- SAP Fiori app *Manage Manual Reservations*
- SAP Fiori app *Manage Reservation Items*
- SAP GUI transactions MB21 (Create Reservation), MB22 (Change Reservation), and MB23 (Display Reservation) and the corresponding apps

### SAP Fiori App Manage Manual Reservations

With this app, you can create a reservation manually with or without a template. You can also use this app to select manual reservations, display them in detail, and edit them if necessary. It is also possible to delete a manual reservation if none of the materials have been withdrawn. In the list of reservations, you can see, among other things, how many of the items of a reservation are completed. The app is part of the business role SAP\_BR\_WAREHOUSE\_CLERK.

**Note:**

This app supports the Advanced ATP (aATP) availability check only. If a dynamic availability check is required, activate the aATP in the customizing configurations of your checking group.



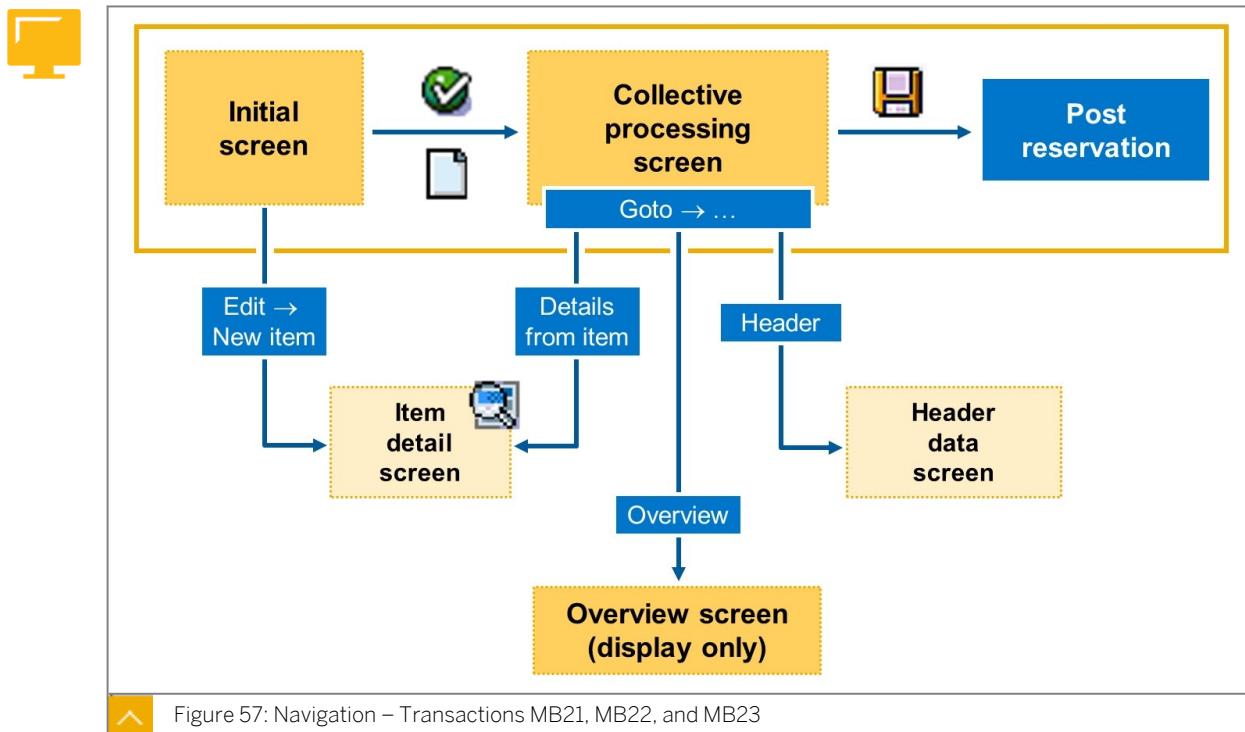
To create a reservation using the app proceed as follows:

1. On the app home page, choose the *Create Reservation* button at the top of the reservation list.
2. In the pop-up window, enter a *Movement Type*, *Plant* and *Base Date* and click *Create* button.
3. In the *General Information* header, check the essential data and fill in the required fields, such as the account assignment object or the receiving storage location.
4. In the *Reservation Items* tab page, enter data such as the material and the quantity. To create another item, click *Create* button at the top of the item list.
5. Finally, choose *Create*.

### SAP Fiori App Manage Reservation Items

With this app, you can also create, change, and display reservations manually. You do this in the same way as in the *Manage Manual Reservations* app. You can also complete reservation items or mark items as deleted directly from the list. The app is part of the business role SAP\_BR\_WAREHOUSE\_CLERK.

Transactions MB21 / MB22 / MB23 to create, change, and display a manual reservation



You can find the breakdown into header and item data in transactions *Create Reservation* (MB21), *Change Reservation* (MB22) and *Display Reservation* (MB23). In these transactions, you first see the initial screen from which you can reach other data screens. When creating and changing reservations, you can quickly enter the most important data for the header and item on the collective processing screen.

To display the detail screens for the header data and each item, choose *Goto → Header* and *Goto → Details from Item*.

To access an overview screen that displays the individual items with more-detailed data, choose *Goto → Overview*.



**Hint:**

You cannot make changes on the overview screen. To make changes, go to the collective processing screen (choose *Goto → Collective Processing*). From the collective processing screen, you can also choose an item to display to the item detail screen.

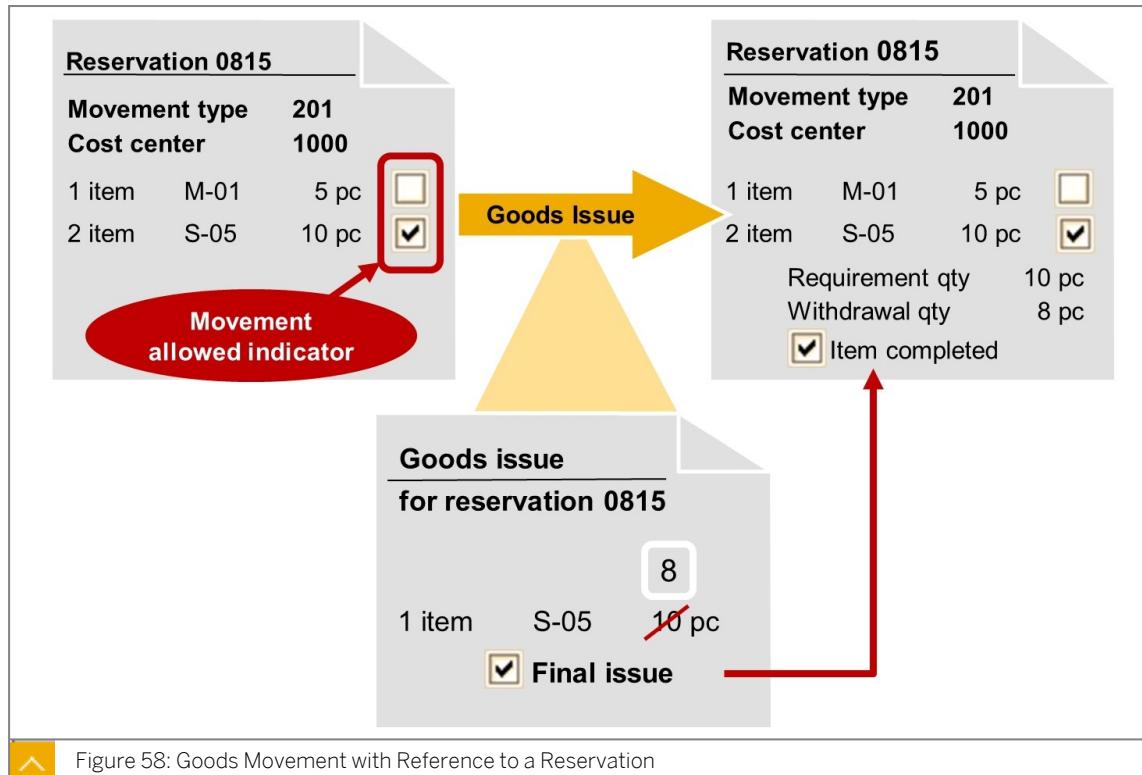
When you create a reservation, you can also refer to another reservation. You can then change the base date, movement type, and account assignment data. The system suggests the items from the reference reservation, and you can select the items you want to copy. You can also change the quantities and requirement dates of the items.

**Hint:**

To specify whether copying is already set for all items in the reference reservation, go to Customizing for Inventory Management and Physical Inventory under *Reservation → Maintain Copy Rules for Reference Documents*.

You can also call the transactions using corresponding apps in the SAP Fiori launchpad.

## Goods Movement with Reference to a Reservation



### Movement Allowed Indicator

When posting a goods movement, you can refer only to reservation items for which the *Movement Allowed* indicator is selected. With this indicator, you can also prevent a goods movement from being posted to a reservation item. This is useful if the requirement date for the material is far in the future.

In the MB21 / MB22 transactions or the corresponding apps, you can select or deselect the indicator for all items of a reservation together. To do so, choose (*Menu*) → *Edit* → *Additional Functions* → *For All Items* → *Movement On/Off*.

With the *Manage Reservations* report, you can automatically have the system select the *Movement allowed* indicator even for items from several reservations.

If you determine the reservation with the search function during the goods movement, the system selects only reservation items for which the *Movement Allowed* indicator is selected.

**Hint:**

In Customizing, you can specify for each plant whether the *Movement Allowed* indicator is selected when you create a reservation for the items.

Go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Reservation* → *Define Default Values*.

### Final Issue Indicator

The *Final Issue* indicator is used to mark a reservation item as completed. It is set automatically during goods issue posting if the entire reserved quantity is withdrawn. You can also set the *Final Issue* indicator for a reservation item manually if you only issue a part of the reserved quantity and no longer require the remaining quantity. You can set the indicator directly when you enter the goods movement, but also by changing the reservation.

You can edit the *Final Issue* indicator with the following functions:

- *Manage Reservation Items* app
- *Manage Manual Reservations* app
- MB22 transaction or the corresponding app



### LESSON SUMMARY

You should now be able to:

- Create a reservation manually
- Use reservations as a reference for a goods movement



# Evaluating Reservations



## LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Execute various evaluations for reservations

### Various Evaluations for Reservations

Various functions are available in SAP S/4HANA for selecting reservations.

- SAP Fiori app *Manage Manual Reservations*
- SAP Fiori app *Manage Reservation Items*
- SAP Fiori app *Display Reservation List* or the corresponding SAP GUI transaction MB25 (*Reservation List*)
- SAP Fiori app *Manage Reservations* or the corresponding SAP GUI transaction MBVR (*Manage Reservations*)
- SAP GUI transaction MB26 (*Pick List*)

### Manage Manual Reservations App and Manage Reservation Items App

Note the following for these apps:

In the *Manage Manual Reservations* app, the results list contains one entry for each selected reservation. For example, you can see in the list how many items the reservation contains and how many of them are marked as *Completed*. Details of individual items are not shown in the list.

With the *Manage Manual Reservations* app, only manually created reservations can be selected. Dependent reservations, such as reservations for a production order are not selected.

To create a list of individual reservation items, use the *Manage Reservation Items* app.

In both apps, different filter criteria are available to restrict the selection.

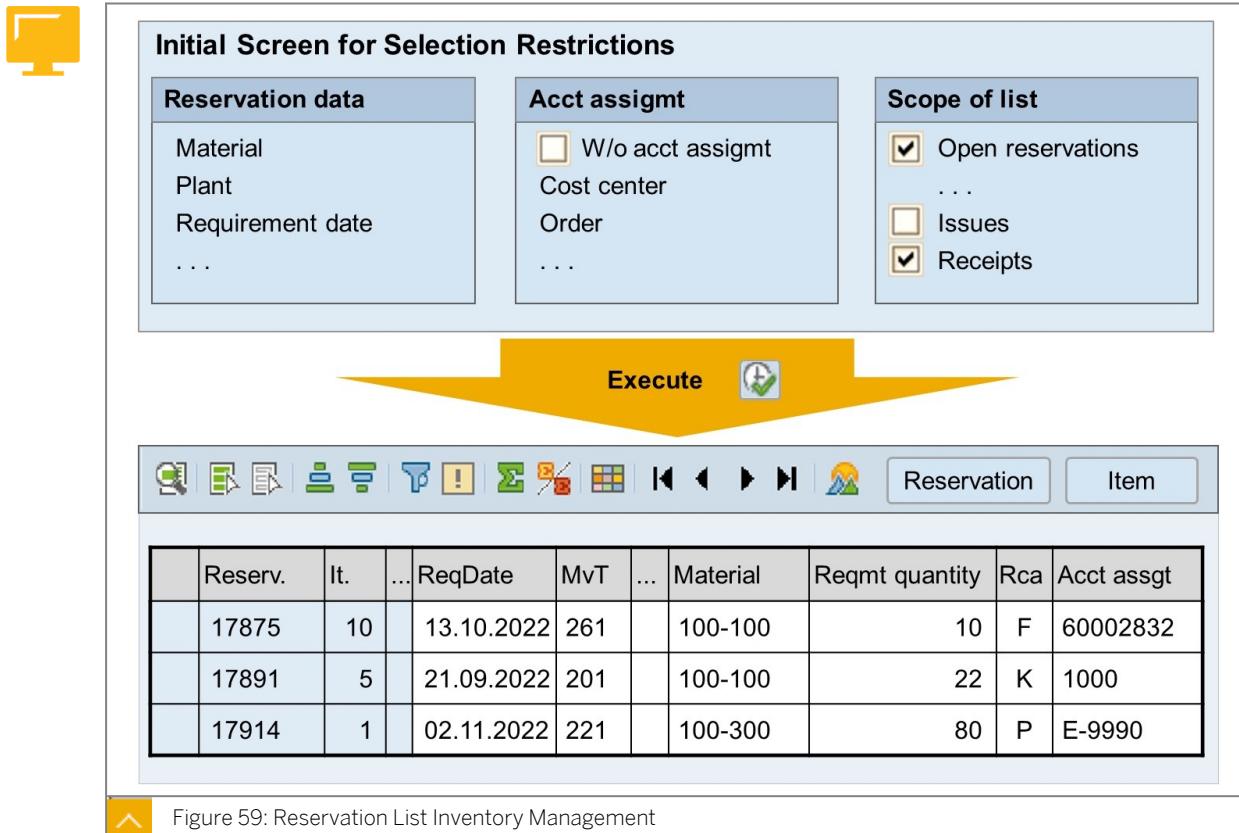


Note:

For more information on these apps see the “Creating Manual Reservations” lesson.

### Reservation List Inventory Management

The *Reservation List* provides another option for evaluating reservations at item level. You can call this function via the SAP Fiori app *Display Reservation List* or the SAP GUI transaction MB25 (*Reservation List*).



Various criteria are available in this report for selecting reservations, such as:

- Material
- Requirement date
- User name (created by)
- Goods recipient
- Account assignment (such as cost center, order, work breakdown structure element)

The report issues a list with reservation items according to the selection. Receipt reservations are highlighted in yellow. For each reservation item, a variety of detailed information is displayed. Among other things, the following values are shown:

- Reservation number and item
- Material
- Requirements quantity
- Movement type
- Account assignment
- Requirement date
- Difference quantity between the reserved and already reduced quantity

If you require further data and want to evaluate it in detail, enhance the current layout or select another existing layout by choosing (*Menu*) → *Settings* → *Layout*.

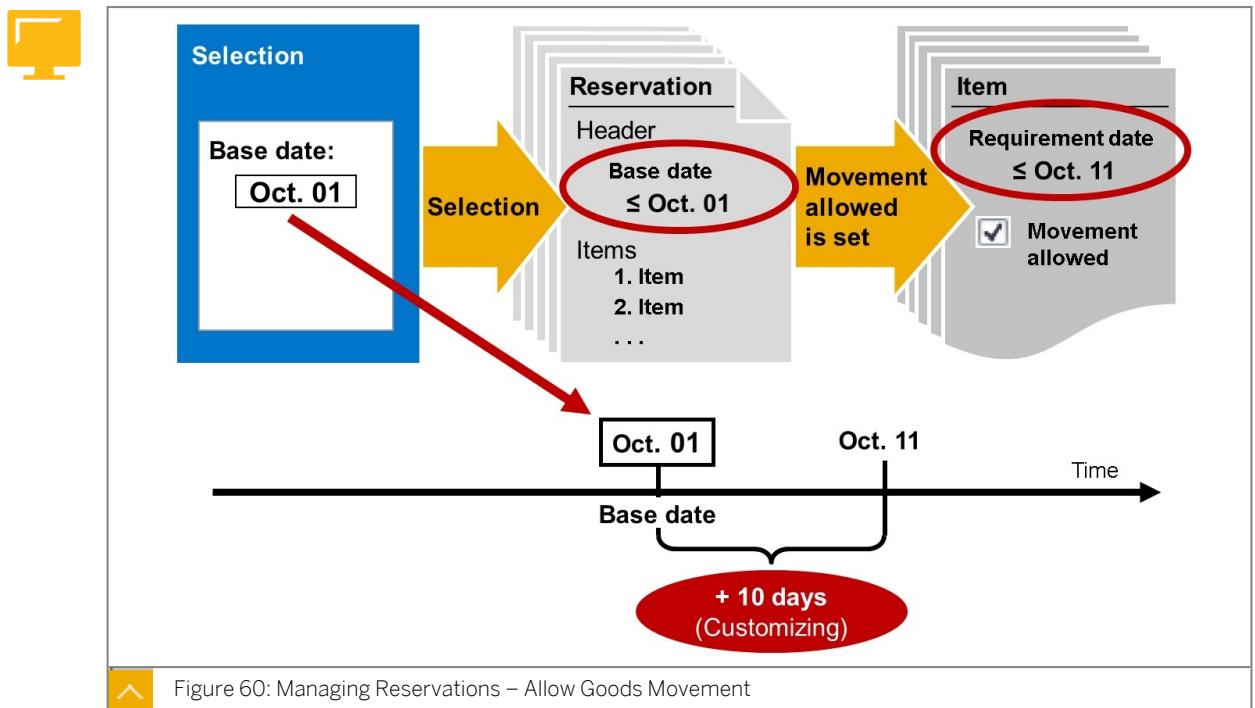
To display a reservation from the list, double-click the reservation number. If you double-click the reservation item, you can see the details of this item.

## Reservation Management

With the *Reservation Management* report, you can set the *Movement Allowed* indicator for reservations created manually through a mass change. You can also delete reservations with the reservation management report. You can call this function via the SAP Fiori app *Manage Reservations* or the SAP GUI transaction MBVR (*Manage Reservations*).

The base date is of double importance in this report. On the one hand, the base date serves as a selection value. This means that only reservations that have a base date in the reservation header less than or equal to this date are taken into account for further processing. On the other hand, it is used to calculate the time intervals used in the two functions (mass change and deletion of reservations).

### Set Movement Allowed Indicator



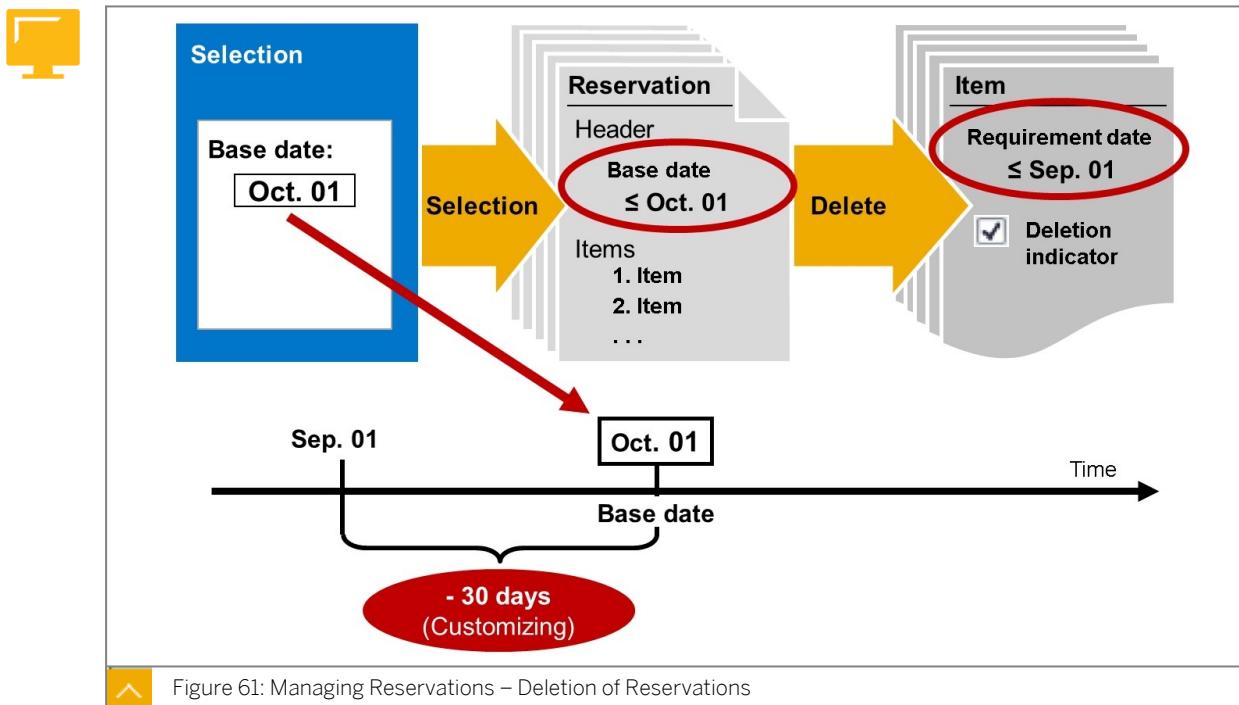
When creating reservations, you decide whether the *Movement Allowed* indicator is to be set for the items. To book goods movements for a reservation item, you must set this indicator.

With this report, you can now automatically set the *Movement Allowed* indicator for all reservation items whose requirement dates lie in the near future.

Specify a base date and, if necessary, any other selection criteria (for example, the reservation number) on the initial screen. Select the *Set Goods Movement to Allowed* checkbox in the *Actions to be Performed* area, and then execute the report.

Taking the other selection criteria into account, the system first selects all reservations whose base date is equal to or less than the base date specified for the selection. The system then checks the requirements dates of the individual items for all selected reservations. The key date for this check is calculated from the base date of the selection plus a fixed number of workdays defined in Customizing. If the requirements date of the reservation item is less than or equal to this key date, the *Movement allowed* indicator is set in the item.

### Deletion of Reservations



You can prevent the reservation file from becoming too large by regularly deleting finished, old, and extra reservations. The management program marks the reservation items for deletion. If all the items of a reservation are marked, the reservation is removed from the file.

When deleting reservations, you also need to specify a base date for the selection. Select the *Set deletion incl/delete reservation* checkbox in the *Actions to be Performed* area, and then execute the report. For all selected reservations (base date of the reservations equal or less than the base date of the selection), the system checks whether the requirement date of the individual reservation item lies before the key date calculated by the system. The system calculates this key date from the base date minus a fixed number of days defined in Customizing (the standard is 30 days). The deletion indicator is set for reservation items that fulfill this condition.

If all items of a reservation are marked for deletion, the reservation is physically deleted.



#### Hint:

On the selection screen, you can determine that only completed items are marked for deletion. In addition, a completed reservation item must be withdrawn completely or marked as final issue.

It is also possible to delete only the reservations that were created for a particular account assignment (cost center or order). To do this, enter the account assignment as a selection criterion.

You can also call the transaction *Manage Reservations* using the corresponding app in the SAP Fiori launchpad.

## Default Values for Reservations

The number of days for managing reservations is defined with further default values in Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Reservation* → *Define Default Values* (OMBN).

Plant	Name 1	Mvt...	Days mvt all.	Reten. Per.	M...
0001	Plant 0001	<input type="checkbox"/>	10	30	<input checked="" type="checkbox"/>
1010	Hamburg	<input type="checkbox"/>	10	30	<input checked="" type="checkbox"/>
1020	Berlin	<input type="checkbox"/>	15	40	<input checked="" type="checkbox"/>
1030	Frankfurt	<input checked="" type="checkbox"/>	7	20	<input checked="" type="checkbox"/>
...	...				

Figure 62: Default Values for Reservation

In this Customizing setting, you define the following for each plant:

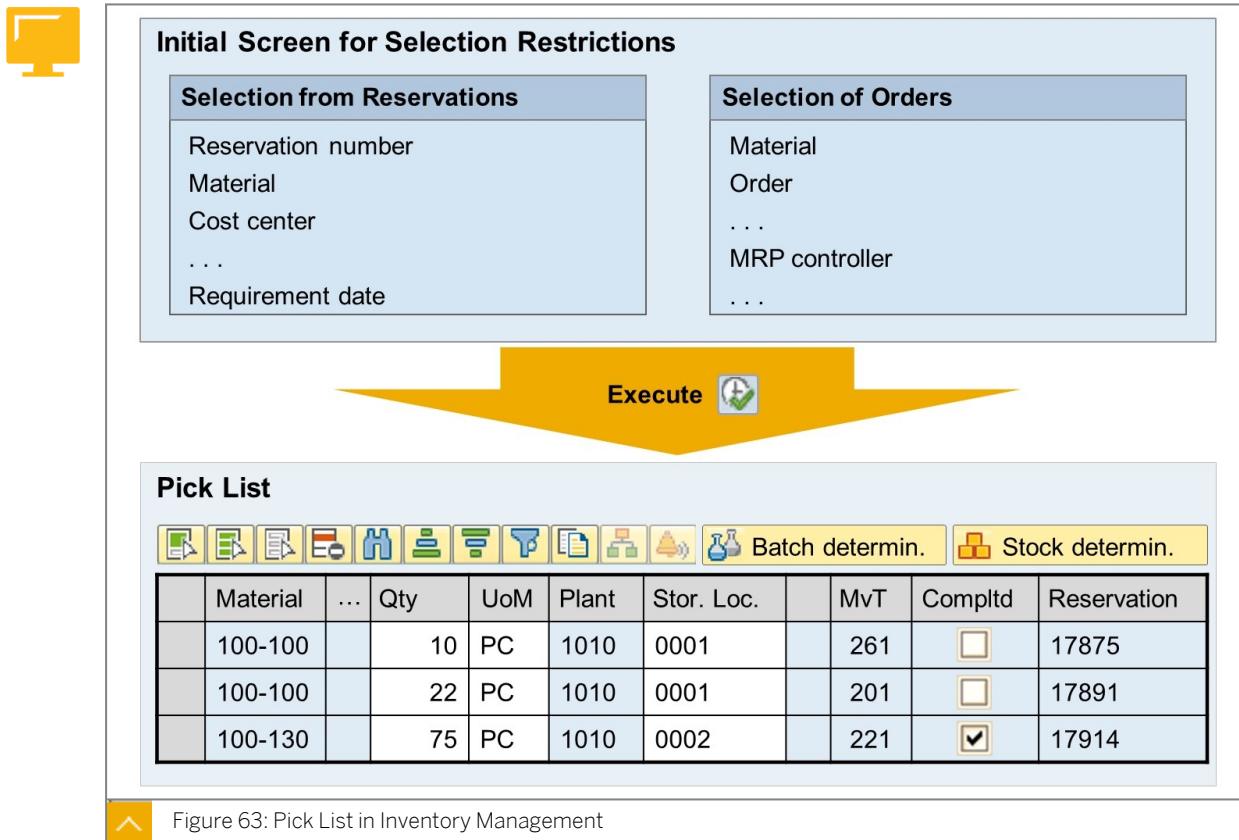
- Whether the *Movement Allowed* indicator is proposed when you create reservations
- The number of days used for calculating the period for setting the *Movement Allowed* indicator in the *Manage Reservations* report
- The number of days used for calculating the period for deleting the reservations in the *Reservation Management* report
- Whether the relevant storage location stock data is automatically created when you post a reservation for a material.



### Note:

This function must also be activated in Customizing for the plant and movement type.

## Picking Lists for Reservations (Transaction MB26)



The picking list enables you to enter and post goods movements for several reservations in one processing step. When generating a picking list, you can select according to reservations, material and account assignments, and production orders.

Before posting, you can change the entry quantity for each item, set the *Final Issue Affected* indicator, and if necessary, enter a storage location. To determine the stocks to be posted for stock transfers and GIs, you can call up stock determination by choosing *Goto → Stock Determination*, and batch determination by choosing *Environment → Batch Management → Batch Determination*. If it is necessary to split an item for a goods movement, choose *Edit → Splitting*.

*Sort and Filter* are other functions of the picking list.



### Caution:

When you post the goods movements, all the reservations and production orders that correspond to the selection criteria are taken into consideration. This list includes the items that you hid with the filter function. If there are items for which you do not want to book goods movements, you select and remove them from the list by choosing *Edit → Delete*.

You can also print a list of the materials to be picked. To do so, choose *List → Print*. You then receive a list of goods movements for which you can adjust the current layout, or choose an existing layout by choosing *Settings → Layout*. To print the list, choose *List → Print* again.



## LESSON SUMMARY

You should now be able to:

- Execute various evaluations for reservations



# Learning Assessment

1. How can reservations be created?

*Choose the correct answers.*

- A Through an MRP run
- B Manual
- C When creating a purchase order
- D When creating a production order
- E If the stock quantity of the material becomes lower than the reorder point at goods issue.

2. You want to manually create a reservation for a goods issue. Which of the following data must you enter so that you can save the reservation?

*Choose the correct answers.*

- A Movement type
- B Storage location
- C Plant
- D Base date
- E *Movement Allowed* indicator
- F *Check date* indicator
- G Material number
- H Number of a reservation

3. Which of the following statements about the use of reservations as a reference for a goods movement is true?

*Choose the correct answer.*

- A You can only reference the header data of a reservation when entering a goods movement.
- B If you use the search function for reservations during a goods movement, the system selects all reservation items according to your selection values.
- C You can only manually select the *Final Issue* checkbox for reservations.
- D You can manually select the *Final Issue* checkbox when you enter a goods movement with reference to a reservation.

4. Which of the following functions can you perform with the Picking List for Reservations?

*Choose the correct answers.*

- A Create a reservation
- B Post a goods movement with reference to a reservation
- C Delete a reservation item
- D Create a printing list

5. In the *Reservation Management* function, the base date is not relevant. True or False?

*Determine whether this statement is true or false.*

- True
- False

## Learning Assessment - Answers

1. How can reservations be created?

*Choose the correct answers.*

- A Through an MRP run
- B Manual
- C When creating a purchase order
- D When creating a production order
- E If the stock quantity of the material becomes lower than the reorder point at goods issue.

Correct. Reservations can be created manually and automatically. Automatic reservations include dependent reservations for production orders and reservations created by the MRP run.

2. You want to manually create a reservation for a goods issue. Which of the following data must you enter so that you can save the reservation?

*Choose the correct answers.*

- A Movement type
- B Storage location
- C Plant
- D Base date
- E *Movement Allowed* indicator
- F *Check date* indicator
- G Material number
- H Number of a reservation

Correct. To create a reservation manually, you must enter the base date, movement type, plant, material, quantity and, depending on the movement type, account assignment data.

3. Which of the following statements about the use of reservations as a reference for a goods movement is true?

*Choose the correct answer.*

- A You can only reference the header data of a reservation when entering a goods movement.
- B If you use the search function for reservations during a goods movement, the system selects all reservation items according to your selection values.
- C You can only manually select the *Final Issue* checkbox for reservations.
- D You can manually select the *Final Issue* checkbox when you enter a goods movement with reference to a reservation.

Correct. You can't refer to a reservation on header level. It is always on item level that you refer to a reservation. If you determine the reservation with the search function during the goods movement, the system selects only reservation items for which the *Movement Allowed* checkbox is selected. If the requirement quantity of a reservation item is completely withdrawn, the *Final Issue* indicator is set automatically. You can manually select the *Final Issue* indicator when you enter a goods movement with reference to a reservation.

4. Which of the following functions can you perform with the Picking List for Reservations?

*Choose the correct answers.*

- A Create a reservation
- B Post a goods movement with reference to a reservation
- C Delete a reservation item
- D Create a printing list

Correct. Post a goods movement with reference to a reservation and Create a printing list are the functions you can perform with the Picking List for Reservations.

5. In the *Reservation Management* function, the base date is not relevant. True or False?

*Determine whether this statement is true or false.*

- True
- False

Correct. In the *Reservation Management* function, the base date is relevant.

## Lesson 1

Posting Unplanned Goods Issues

129

## Lesson 2

Posting a Goods Issue with Reference

135

## Lesson 3

Configuring Stock Determination

139

## UNIT OBJECTIVES

- Post unplanned GIs
- Post GIs with references
- Configure and test stock determination in inventory management



## Posting Unplanned Goods Issues

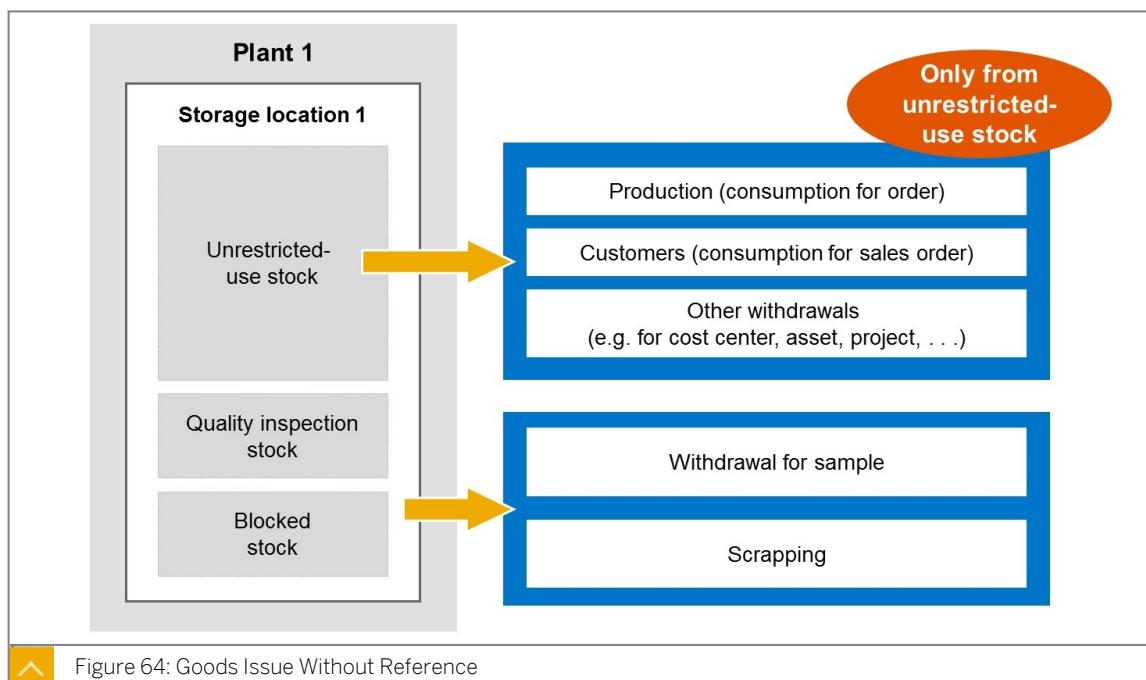


### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post unplanned GIs

### Goods Issues without Reference



A goods issue is a goods movement that leads to a reduction in stock. There are various reasons for withdrawing goods.

#### Examples for Goods Issues:

- Material staging for production
- Withdrawal of a random sample for the quality inspection
- Scraping of material
- Internal staging of material for other purposes
- Shipping of goods to a customer

The transaction you enter is determined by the movement type selected.

Withdrawals for consumption (for example, for a production order, a sales order, or a cost center) can be posted only out of unrestricted-use stock the standard system. A withdrawal

for random sampling or scrapping can be booked out of unrestricted-use stock, quality inspection, and blocked stock.



#### Hint:

You also post goods issues involving stock-reducing transactions when you return ordered goods to vendors or when the system transfers stock. You post these issues under the special return delivery and transfer posting operations, respectively.

### Goods Issue for Consumption – Movement Types

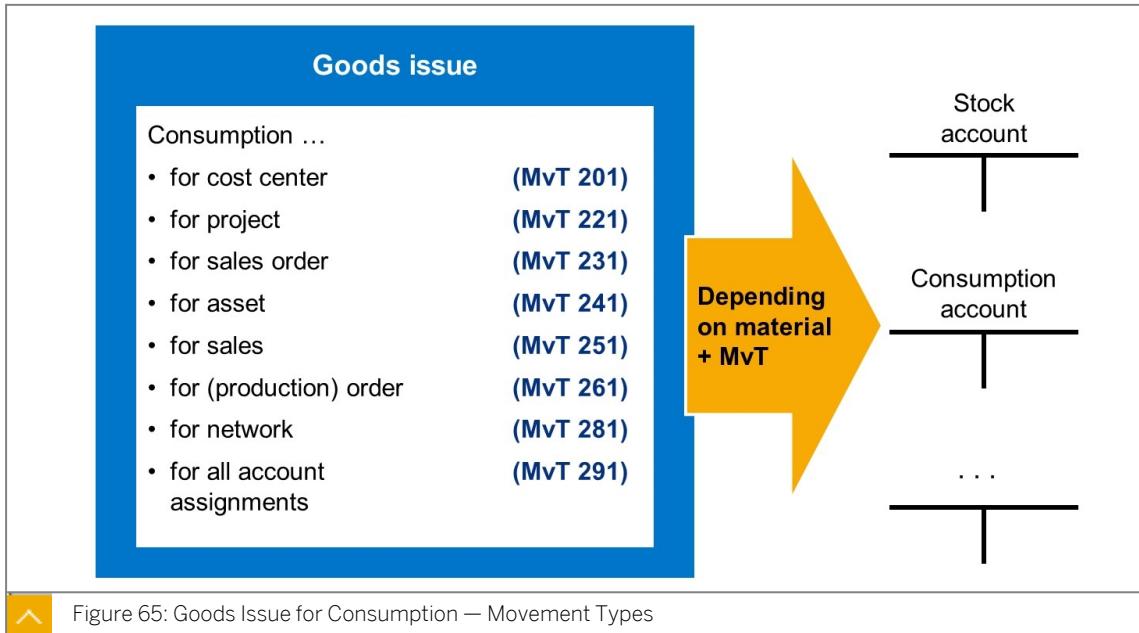


Figure 65: Goods Issue for Consumption – Movement Types

The movement type selected determines the transaction you enter. The movement type also determines the additional account assignment data that you need to specify. To post a goods issue to a cost center, for example, you use movement type 201. In this case, you must specify a cost center as the account assignment object. Material, movement type, and account assignment object influence the accounts in Financial Accounting determined during posting.

### Effects of a Goods Issue

The most important effects of a GI are as follows:

- The system generates a material document and an accounting document.
- The system indicates the reduced stock of the material.
- The system books the amount of the material withdrawn from the stock account and posts it to some type of offsetting account, which depends on the relevant transaction, for example, a consumption account. The material master record provides the posted value at the time of posting.
- If consumption updating has been configured for the movement type, the consumption for this material is increased by the quantity withdrawn. A distinction is made between

planned and unplanned withdrawals. If the withdrawal is planned, total consumption is updated. If the withdrawal is unplanned, total and unplanned consumption are updated. Consumption is not updated for withdrawals for scrapping and random sampling.



#### Hint:

You can display the consumption of a material in the material master record at plant level. To do so, choose the *Consumption* tab page in the *Additional Details* screen area.

- If appropriate, the system debits the specified account assignment, for example, the cost center.

If you cannot reference another document such as a production order or reservation when entering the goods issue, you must enter another goods issue without a reference and enter all the necessary data manually. Such cases are referred to as unplanned goods issues.

If you want to withdraw several materials that display as components on a BOM (BOM = bill of material), you can reference the BOM when entering the goods issue, thereby reducing the effort required for manual entry.

### Sample Drawing

Random samples are usually taken as part of quality control measures. Frequently, only a small quantity of the material subjected to quality inspection (QI) is actually checked or tested. The result of this check then forms the basis of the usage decision for the entire quantity.

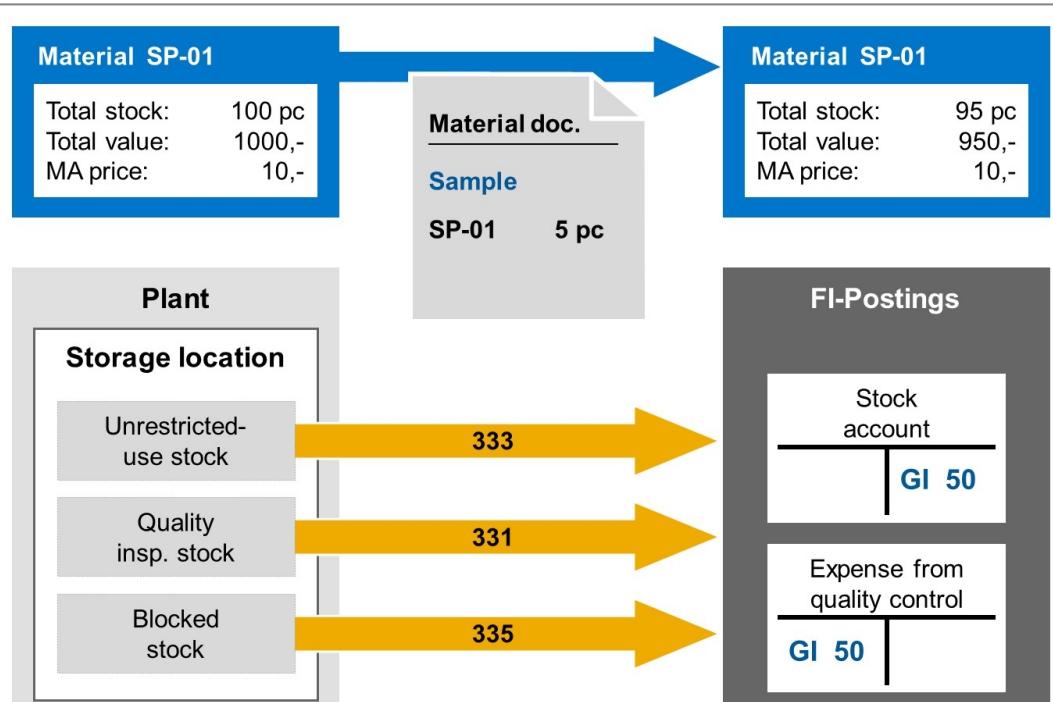


Figure 66: Destructive Sampling

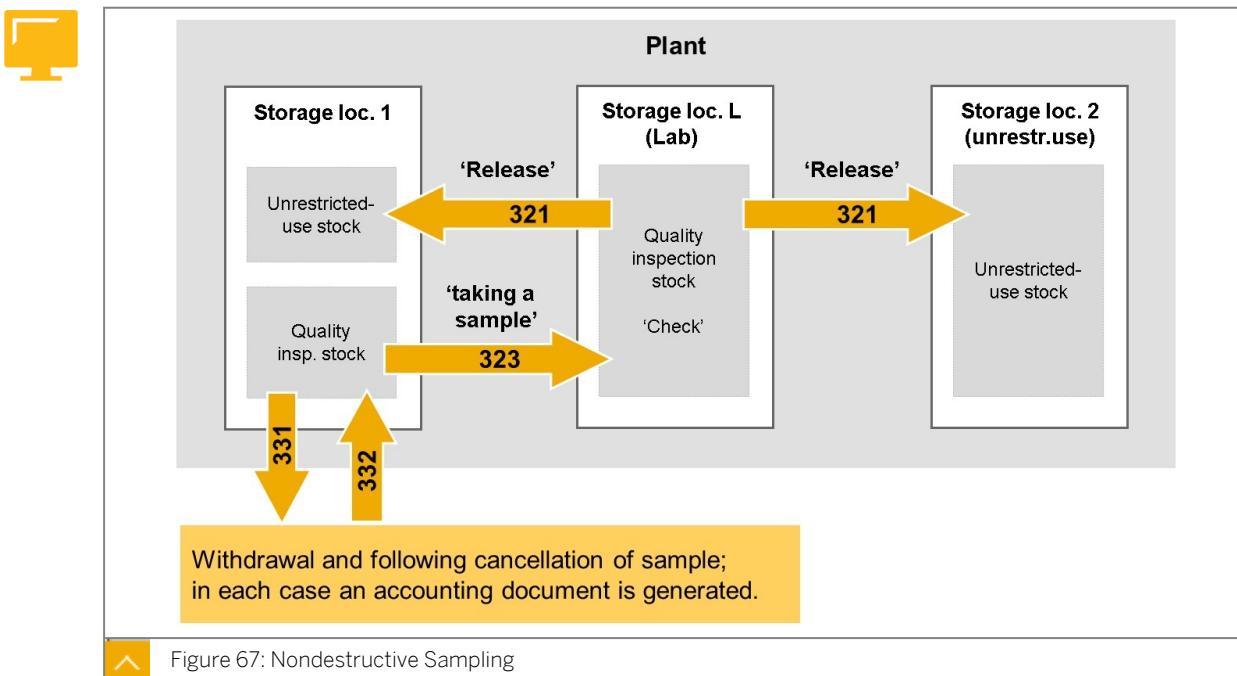
At the time of quality inspection, you must decide whether the check or test causes the destruction of the material, that is, whether it is possible to use the material subsequently. If

the check or test is destructive, you enter a withdrawal for sampling. As a result of this posting, the quantity and value of the material is reduced. The system posts the value from a stock account to a quality-inspection expense account. A withdrawal for sampling does not result in a consumption update.

You can enter a sample in the same way as a GI without a reference. In the standard system, the following movement types are defined for a withdrawal for sampling:

- 331: Withdrawal for sampling from stock in quality inspection
- 333: Withdrawal for sampling from unrestricted-use stock
- 335: Withdrawal for sampling from blocked stock

### Nondestructive Sampling



If the material can still be used after the inspection, it makes more sense to define the inspection point or laboratory as a separate storage location. The sample to be inspected can then be transferred to this storage location. Doing so, the relevant quantity of the material is still part of stock in quality inspection but is kept at a different storage location from the rest of the material, allowing you to keep track of exactly what quantities of materials are currently undergoing quality tests.

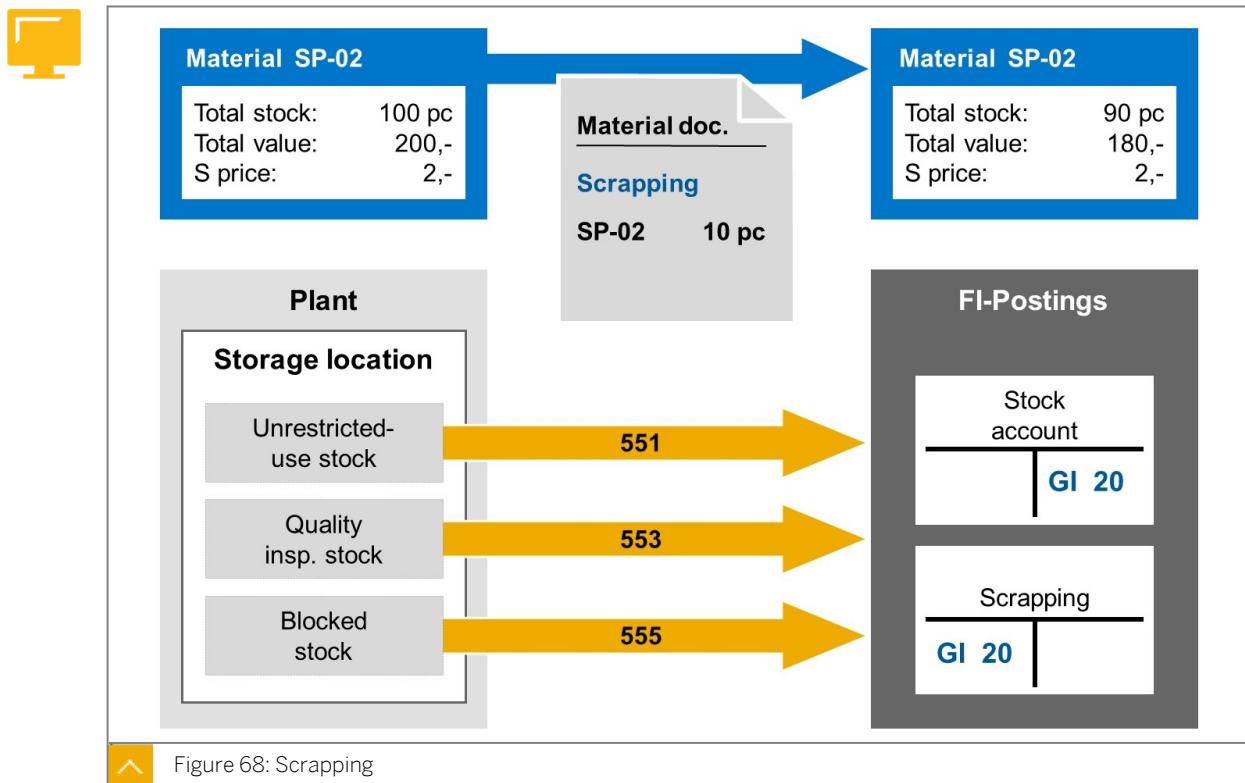
This transfer posting has no effect on the total quantity or value of the material. After a successful check or test, the material can be released directly from the checking or testing point storage location.



#### Caution:

If inspection processing is active for a material, you perform the quality inspection of the material in the quality management (QM) system. Note that issues from inspection stock can no longer be carried out in inventory management, but only during inspection processing.

## Scraping



You enter a scrap posting if it is not possible to use a material any longer, for example, because it has been damaged or because its minimum shelf life has been exceeded. Scrapping is possible from each of the three stock types and is entered as a GI without a reference.

The following movement types are defined for scrapping:

- 551: Withdrawal for scrapping from unrestricted-use stock
- 553: Withdrawal for scrapping from stock in quality inspection
- 555: Withdrawal for scrapping from blocked stock

Scraping causes a reduction in the associated stock. The system moves the value of the scrapped material from the stock account to a scrap account.

### Functions for Entering Goods Issues without Reference

The following functions for entering goods issues without reference to a reference document are available in SAP S/4HANA:

- SAP Fiori app *Post Goods Movements* respectively transaction MIGO

You can use this app to enter goods withdrawals with all movement types mentioned above. You can post these goods withdrawals with the *Post Goods Movements* app without reference, but also with reference to a reference document.

- SAP Fiori app *Manage Stock*

With the *Manage Stock* app, you can only post goods issues for cost centers and scrapping. You can post these goods withdrawals from standard stock, supplier consignment stock, and project stock.

The procedure for the entry is the same as for the initial entry of stock balances using this app. You can post goods withdrawals for several materials at the same time by adding the items to be posted in the item list, and then post all items together.

### SAP Fiori App Post Goods Movement and Transaction MIGO

To enter a goods issue without reference using the *Post Goods Movement* app or the **MIGO** transaction, proceed as follows:

1. Start the *Post Goods Movement* app (or the **MIGO** transaction).
2. Choose *Goods Issue* as transaction and *Other* as reference.
3. Enter the required movement type in the *Default Values for the Movement Type* field, for example, **201** (consumption for a cost center from a warehouse), **221** (consumption for a project from a warehouse), or **241** (consumption for an asset from a warehouse).



Hint:

If you want to enter items with different movement types, you can change the default value for the movement type before entering further items. You can also change the movement type in the item itself.

4. Enter material number, quantity, storage location, and plant for the items to be entered.  
You must also enter the account assignment data that is dependent on the movement type (such as the cost center, work breakdown structure (WBS element), or asset).
5. Post the document.



### LESSON SUMMARY

You should now be able to:

- Post unplanned GIs

# Unit 5

## Lesson 2

## Posting a Goods Issue with Reference



### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post Gls with references

### Goods Issue with Reference to a Reservation

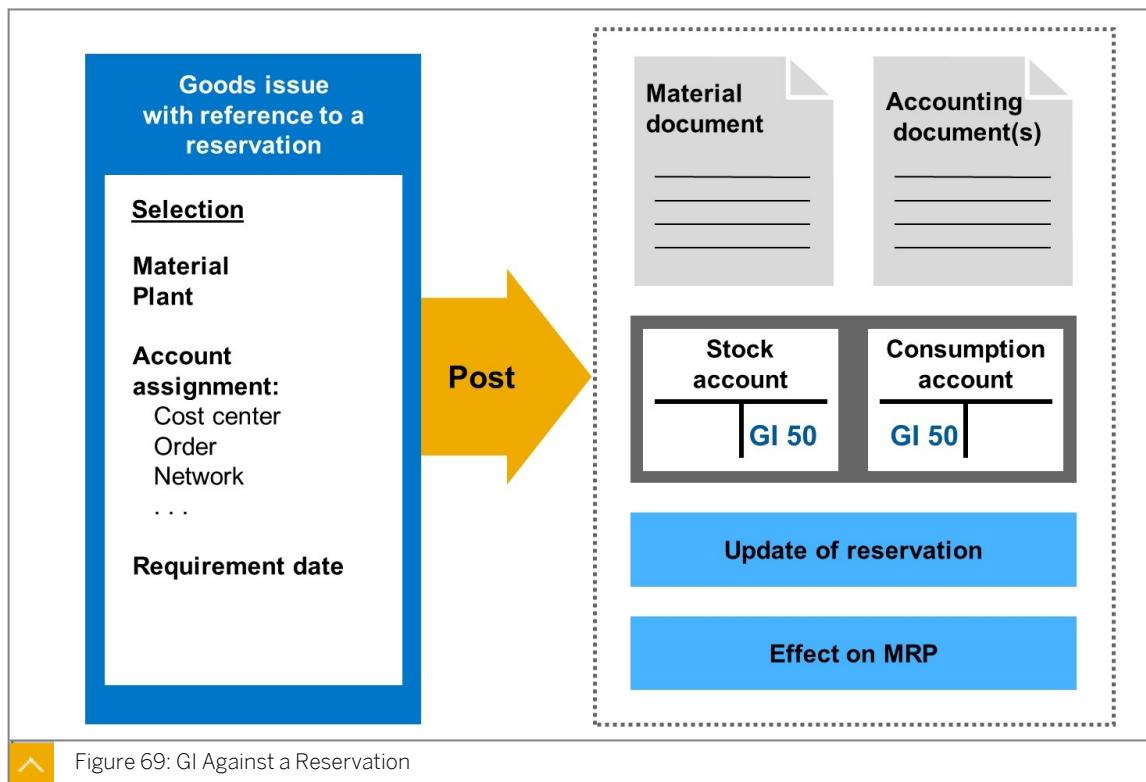


Figure 69: GI Against a Reservation

If you have used a reservation to ensure that a material is staged on time, you should also enter the goods issue with reference to this reservation. By referencing the reservation, you simplify the entry of the goods movement because the system can adopt the data of the individual items from the reservation.

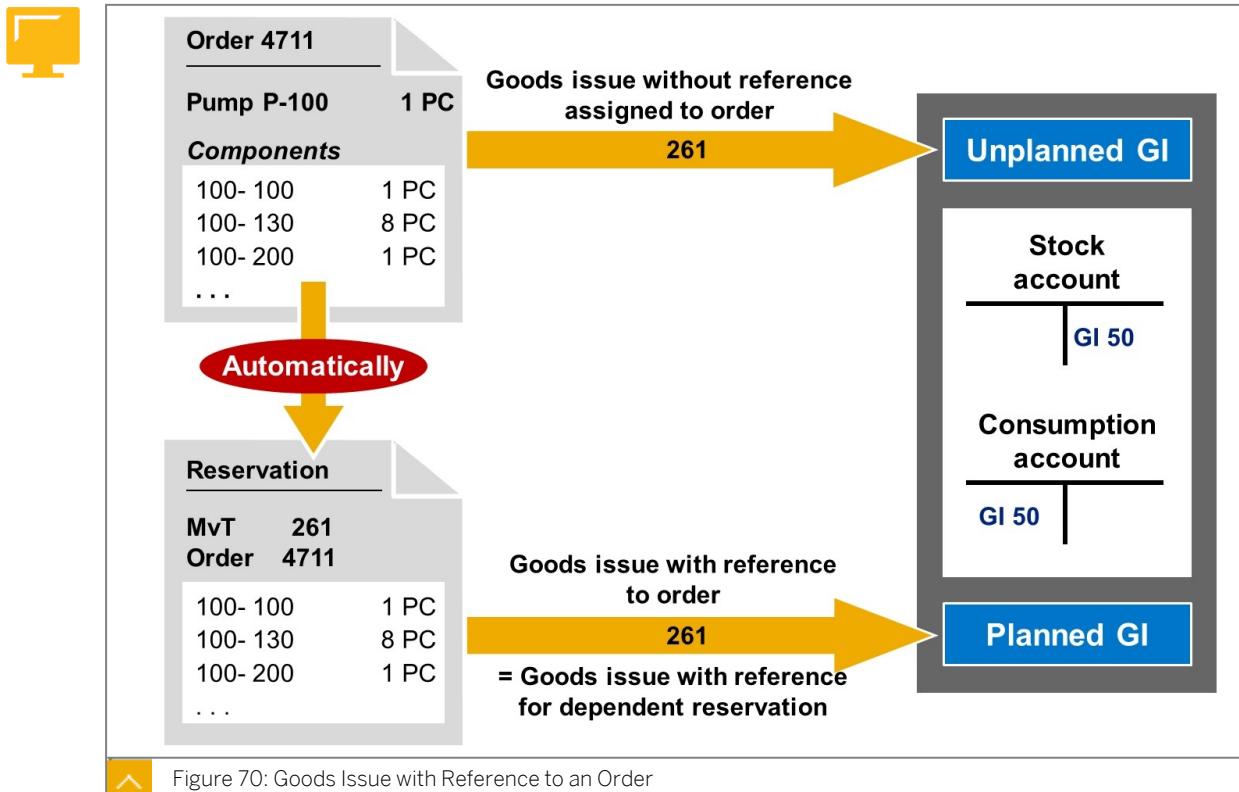
The reference to the reservation is also necessary to update the quantities withdrawn in the reservation, thus providing material requirements planning (MRP) with the correct values. If you reserve the entire reserved quantity for an item, the *Final Issue* indicator is selected automatically in the reservation item. If you withdraw only a partial quantity and do not require the remaining quantity, you must select the *Final Issue* indicator manually at the time of the entry of the GI, so that the requirement is completely canceled in MRP.

**Caution:**

A withdrawal with reference to a reservation item is possible only if the *Movement Allowed* indicator is selected for the item.

If you do not know the reservation number, you can find the reservation using the search function. For the selection values, you can, for example, enter the material, plant, and account assignment. You can also stipulate that you only want to see open reservations (non final-issue reservations) or final-issue (cancelable) reservations in the list of search hits.

### Goods Issue with Reference to an Order



If you create a production order, the system automatically reserves the required quantities of the components. However, you may need additional parts. For this reason, a distinction is made between different goods issues for withdrawals of components for an order:

- Planned goods issue (GI):

You enter this GI with reference to the dependent reservation for the order. The system automatically determines 261 (consumption for order from warehouse) as the relevant movement type.

- Unplanned goods issue (GI):

You enter this GI without reference to a reservation as another GI. You choose movement type 261 (consumption for order from warehouse). You must specify the order number as the account assignment.

- Backflush:

With this type of withdrawal, the components are already at the place of production. They are physically consumed in the course of the production process; however, their consumption is not reported until the quantity consumed is known, that is, when completion of the order is confirmed. You do not need to enter a goods movement in inventory management for these components.

When completion of the order is confirmed, you can flag all quantities reserved for the order but not needed as the final issue is effected.



### LESSON SUMMARY

You should now be able to:

- Post GLs with references



## Configuring Stock Determination



### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Configure and test stock determination in inventory management

### Principles of Stock Determination

With stock determination, you can use strategies based on the specified Customizing settings for material withdrawal of GIs and stock transfers. Based on the created material demand, the systems determine the sequence of the storage locations and stocks from which the desired material is to be withdrawn.

You can use stock determination in various application components, such as inventory management, sales and distribution, and shipping.

This lesson introduces stock determination as used in inventory management. The settings listed in this lesson are valid for the other applications; however, the rule assignments for stock determination are different in the individual applications. For more information, go to *Customizing for Stock Determination* under *Assign Stock Determination Rules* in the applications.

### Calling Stock Determination

The following figure shows the most important values for stock determination from the perspective of an application, using the example of another goods issue.

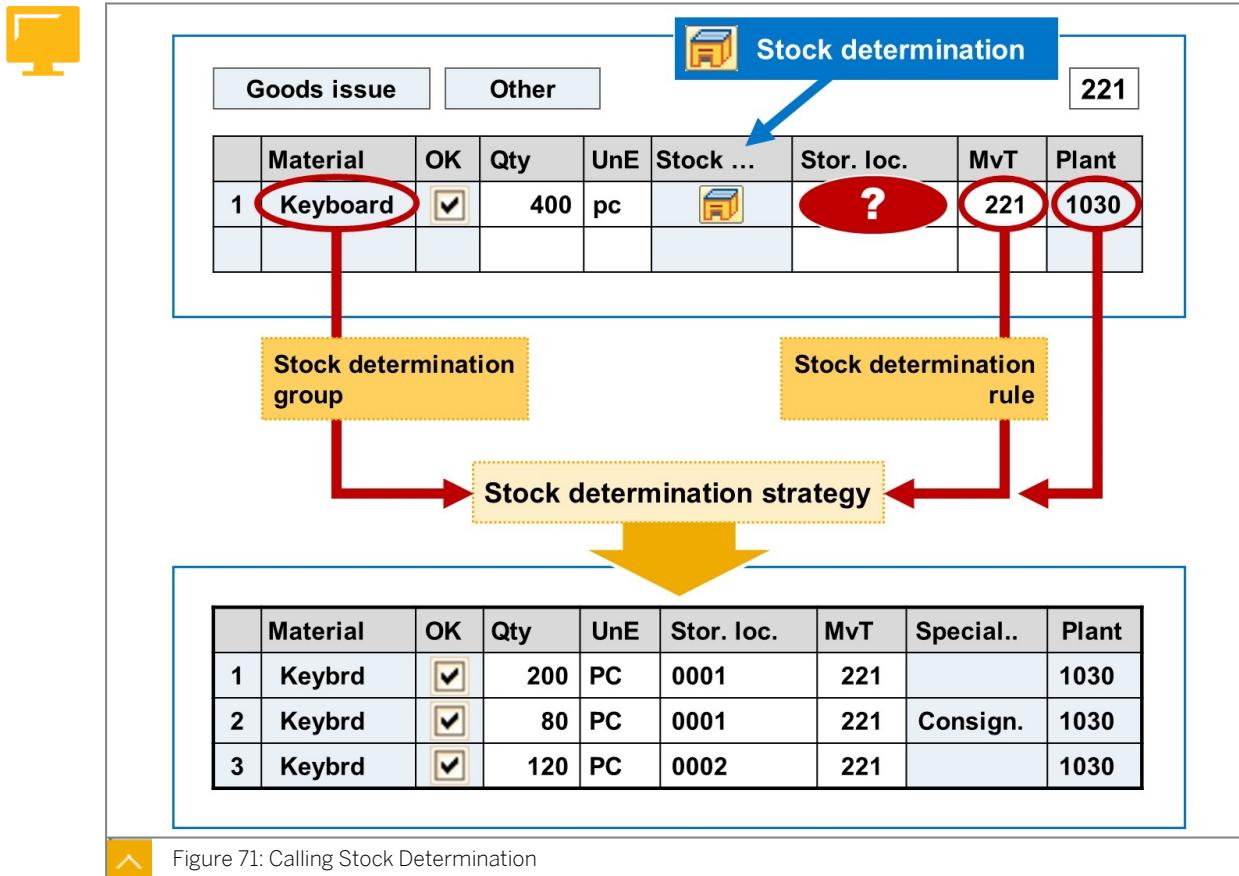


Figure 71: Calling Stock Determination

You can use the stock determination function only for items that do not specify a storage location. In transaction MIGO, you can start stock determination for individual items or for all items that do not specify a storage location.

### Settings for Stock Determination – Fundamentals

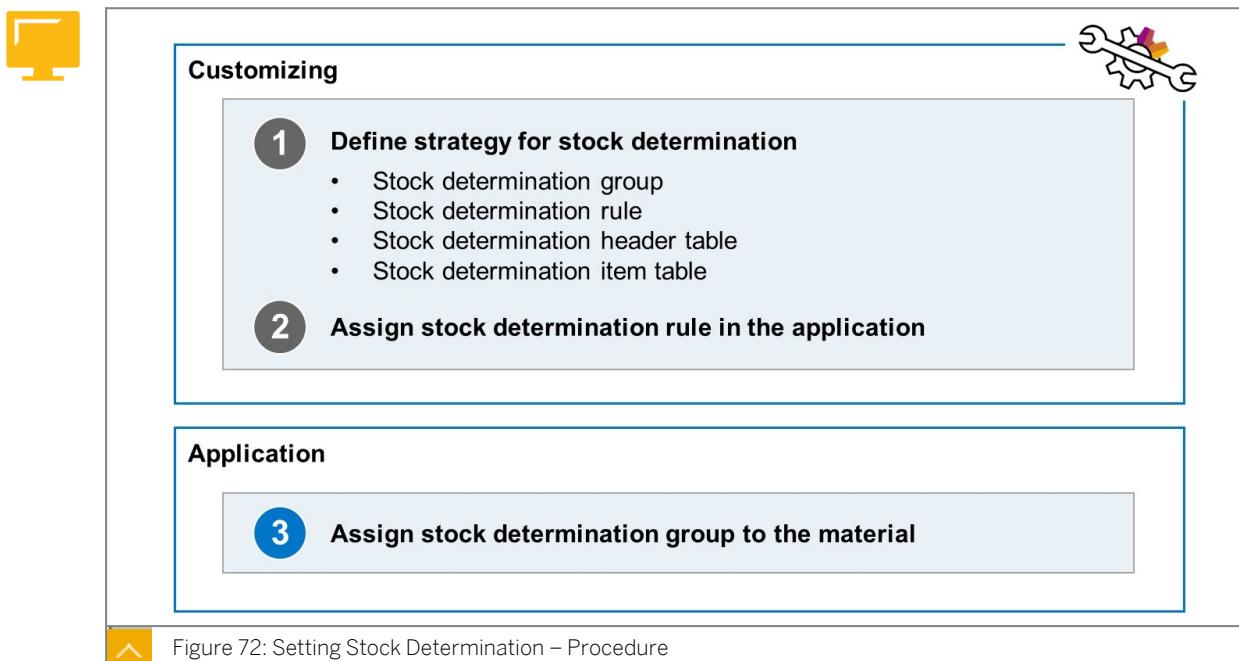


Figure 72: Setting Stock Determination – Procedure

To use stock determination, you must make the following settings:

1. In Customizing for *Inventory Management*, create a cross-application strategy for stock determination to reduce stocks. Each strategy is uniquely defined at plant level using a stock determination group and a stock determination rule.

Go to Customizing for *Materials Management* → *Inventory Management and Physical Inventory* → *Stock Determination* → *Define Strategies for Stock Determination* (OSPX).

2. In Customizing for the corresponding application, assign a stock determination rule to the business transaction.

The assignment to the movement type takes place in inventory management.

Go to Customizing for *Materials Management* → *Inventory Management and Physical Inventory* → *Stock Determination* → *Assign Stock Determination Rule in the Applications* → *Inventory Management*.

3. In the material master record, assign a stock determination group to the material involved.

The strategy that is determined therefore depends on the plant, the material (stock determination group), and the application (stock determination rule).



Examples of the different combinations of stock determination group and stock determination rule.

Material	Application 1 (Stock Determination Rule IM1)	Application 2 (Stock Determination Rule PP2)
Material A (Stock determination group 0001)	Strategy (0001/IM1)	Strategy (0001/PP2)
Material B (Stock determination group 0002)	Strategy (0002/IM1)	Strategy (0002/PP2)

The system can determine different stock determination strategies for the same material in different applications as various stock determination rules are assigned to the applications. However, it is also possible that different strategies are determined for the same business operation for various materials by assigning different stock determination groups to the materials.

### Customizing Settings for Stock Determination Strategies

If you open the IMG-Activity *Define Strategies for Stock Determination* in Customizing under *Materials Management* → *Inventory Management and Physical Inventory* → *Stock Determination*, the left screen area displays a dialog structure with the individual steps for processing.

The configuration of a new stock determination strategy consists of the following steps:

- Definition of a plant-dependent stock determination group (key and text).
- Definition of a stock determination rule (key and text).
- Definition of a stock determination strategy for the combination of the plant, stock determination rule, and stock determination group. This is done using the stock determination header table.

Fine tuning of the settings can be done in the detail view of the header table and in the relevant item table.

### Customizing: Stock Determination Strategy – Item Table

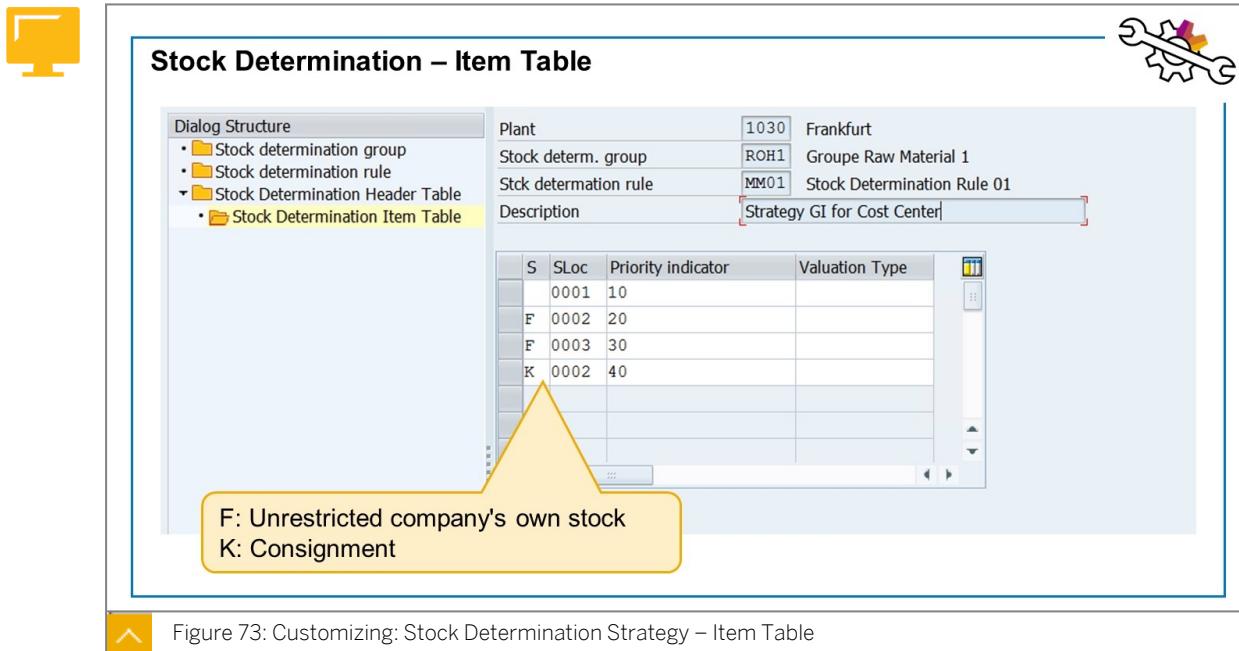


Figure 73: Customizing: Stock Determination Strategy – Item Table

Preferably you first maintain the item table. In the item table, you enter the stocks (unrestricted-use stock or consignment stock) and the storage locations that are to be taken into account during stock determination. With the priority indicator, the stocks can be sorted in ascending or descending order and, therefore, placed in the desired sequence. The priority indicator must always be larger than or equal to one (1). However, there may be several items with the same priority indicator.

If you want to access all stocks (unrestricted-use stock, own and consignment) without restriction, enter only a priority indicator in the first line of the item table.

If the valuation type is to be considered for separately valued material, maintain the corresponding values in the *Valuation type* column.

## Customizing: Stock Determination Strategy – Header Table

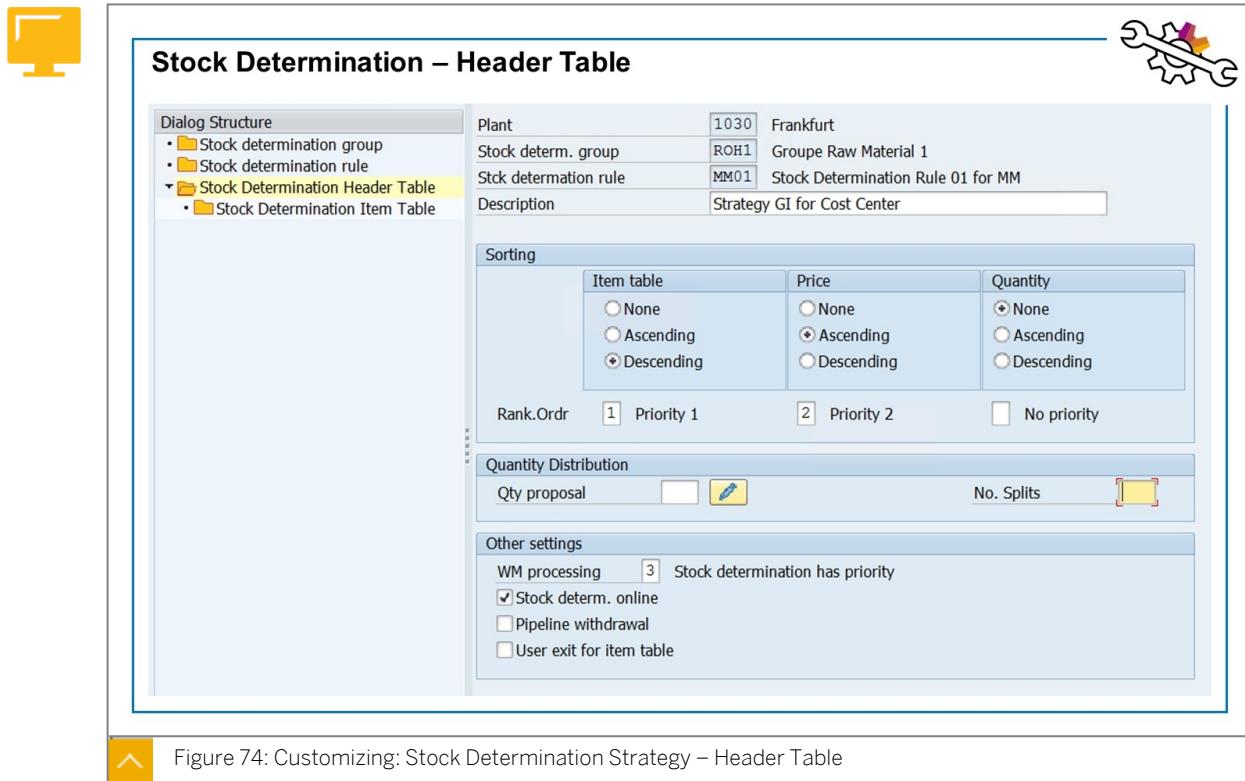


Figure 74: Customizing: Stock Determination Strategy – Header Table

After you maintained the item table, return to the detailed view of the header table.

Under *Sorting*, you can see the sorting criteria item table, price, and quantity. For sorting, you need to determine the following values:

- The sort criteria that play a role in the strategy and whether the sort for this criterion is ascending or descending.
- The sequence (ranking order) in which the selected sort criteria are to be considered.

Under *Quantity Distribution*, you can find the *Quantity Proposal* field. This allows you to use an exit to determine the quantity distribution. In the *Number of splits* field, you can specify the maximum number of partial quantities into which a demand quantity can be distributed. The proposed quantity and number of splits are not taken into account if stock determination is called from the Warehouse Management (WM) application.

Under *Other settings*, you can see the following checkboxes and fields:

- *Warehouse Management (WM) processing:*

You can determine the interaction between stock determination and warehouse management.

- *Stock determination online:*

You can determine whether the stock determination takes place in the background or online. The online function is particularly useful during the test phase of stock determination.

- *Pipeline withdrawal:*

You can define that the replenishment of the remaining quantities with a pipeline withdrawal is allowed if there are missing quantities. This is possible only for materials for which pipeline withdrawal by way of the material type is allowed and where a pipeline info record exists.

- *User exit for item table:*

You must maintain this checkbox if you want to use the user exit EXIT\_SAPLMDBF\_002 for the item table.



### LESSON SUMMARY

You should now be able to:

- Configure and test stock determination in inventory management

## Learning Assessment

- Sampling and scrapping are goods movements that are updated as consumption in the SAP standard system. True or False?

*Determine whether this statement is true or false.*

- True
- False

- You post a goods issue for a material that is managed in inventory on a quantity and value basis. What are effects of this posting?

*Choose the correct answers.*

- A The stock quantity of the material is reduced by the withdrawal quantity.
- B An accounting document is created.
- C A reservation is created that is marked as final issued immediately.
- D A debit posting is created on a material stock account.
- E A material document is generated.

- For a material, you post a goods issue (GI) for cost center with reference to a reservation. Which of the following statements is correct in this context?

*Choose the correct answer.*

- A You must withdraw the entire reserved quantity.
- B The planned consumption is updated in the material master record.
- C If you withdrawal the entire reserved quantity for an item, you also have to set the *Final Issue* indicator in the reservation item.

4. Which assignments are to be made when implementing stock determination?

*Choose the correct answers.*

- A Assignment of stock determination rule to material
- B Assignment of stock determination rule to application
- C Assignment of stock determination group to material
- D Assignment of stock determination strategy to application
- E Assignment of stock determination strategy to plant

# Learning Assessment - Answers

- Sampling and scrapping are goods movements that are updated as consumption in the SAP standard system. True or False?

*Determine whether this statement is true or false.*

- True  
 False

Correct. The consumption update in the material master record depends on a Customizing setting of the movement type. For the movement types for sampling and scrapping, the consumption update is not activated in the standard system.

- You post a goods issue for a material that is managed in inventory on a quantity and value basis. What are effects of this posting?

*Choose the correct answers.*

- A The stock quantity of the material is reduced by the withdrawal quantity.  
 B An accounting document is created.  
 C A reservation is created that is marked as final issued immediately.  
 D A debit posting is created on a material stock account.  
 E A material document is generated.

Correct. The stock of the material is reduced in quantity as well as in value in the case of a GI. Therefore, a credit posting is created on a material stock account and all FI postings are documented in an accounting document. And a material document is basically created for all goods movements. A reservation can be used as a reference when entering a GI, but is not automatically generated by a GI.

3. For a material, you post a goods issue (GI) for cost center with reference to a reservation. Which of the following statements is correct in this context?

*Choose the correct answer.*

- A You must withdraw the entire reserved quantity.
- B The planned consumption is updated in the material master record.
- C If you withdrawal the entire reserved quantity for an item, you also have to set the *Final Issue* indicator in the reservation item.

Correct. In the case of a GI with reference to the reservation, a partial quantity can also be withdrawn. Since the GI is made with reference, the withdrawn quantity is updated as planned consumption in the material master record. A completely withdrawn reservation item is automatically marked as final.

4. Which assignments are to be made when implementing stock determination?

*Choose the correct answers.*

- A Assignment of stock determination rule to material
- B Assignment of stock determination rule to application
- C Assignment of stock determination group to material
- D Assignment of stock determination strategy to application
- E Assignment of stock determination strategy to plant

Correct. For stock determination, a plant-specific stock determination group must be assigned to the material, and a stock determination rule must be assigned to the application. A stock determination strategy is defined (created) depending on the three key variables plant, stock determination group, and stock determination rule. An additional assignment to a plant is therefore not necessary.

## Lesson 1

Performing the Process of Vendor Consignment

151

## Lesson 2

Performing the Process of Subcontracting

159

## UNIT OBJECTIVES

- Perform a process for vendor consignment
- Provide components to a subcontractor
- Post a GR to a subcontract PO and further goods movements for subcontracting stock



## Performing the Process of Vendor Consignment



### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Perform a process for vendor consignment

### Special Procurement Vendor Consignment

Consignment means that the material provided to you by a vendor is stored in your warehouse but is still owned by the vendor. A liability toward the vendor only arises when you withdraw material from the consignment stores.

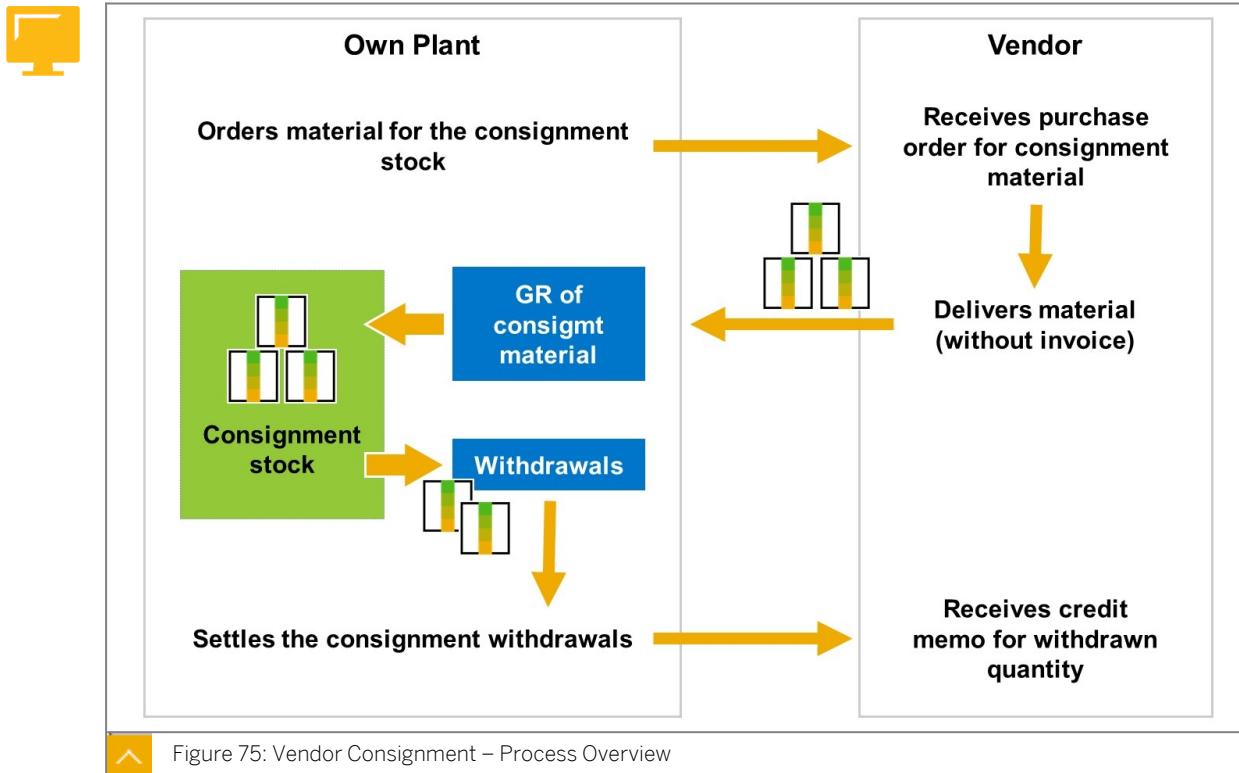
To manage material in the consignment stores, you need the following master data:

- Material master record:

If you manage the relevant material as your own material, you do not need to create a new material master record for the consignment material. By using the same material number, you can include the consignment stock in the own unrestricted-use stock of a material.

- Supplier master record
- Purchasing info record:

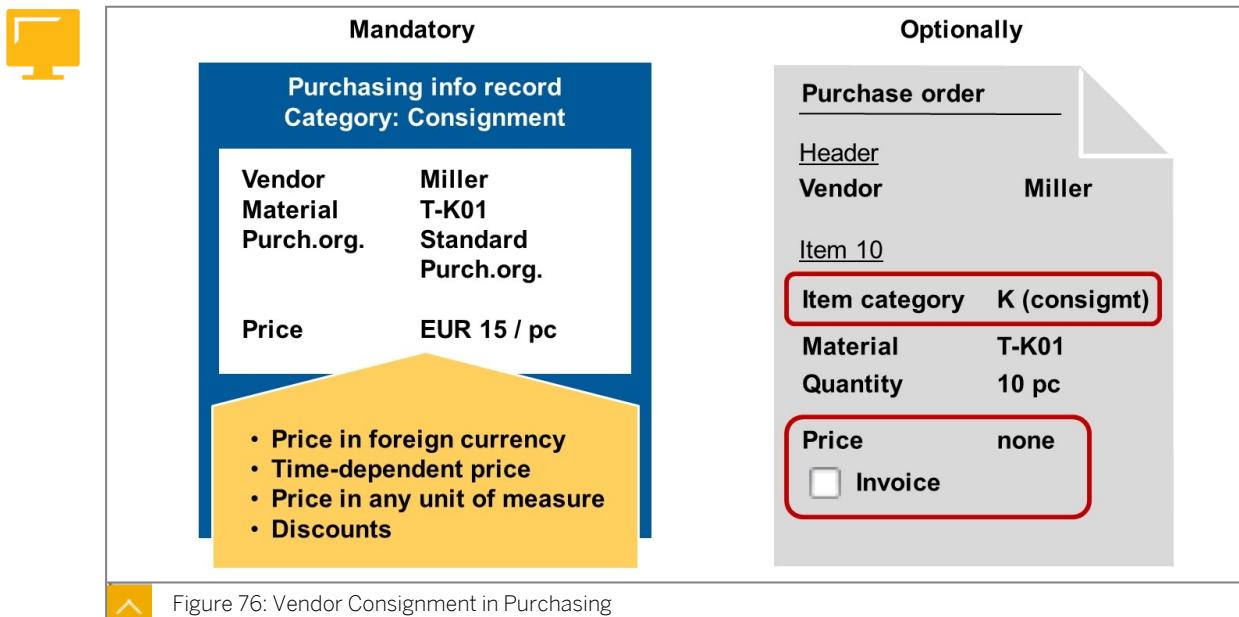
An info record with the info category *Consignment* must be created for the combination of the consignment supplier and the material.



To request consignment goods from vendors, create a purchase order with a special consignment item. With reference to the consignment item, the system directly posts to the consignment stock of the affected vendor during goods receipt. The system does not valuate the consignment stock during goods receipt.

When material is withdrawn from the consignment stock, for example, for production, the system valuates the withdrawal with the vendor price that you define in the consignment info record. There is a special report for settling withdrawals.

### Vendor Consignment in Purchasing



An info record of the *Consignment* info category is a mandatory prerequisite for a goods receipt into consignment special stock. This means that before you can post a goods receipt for a material into the consignment stock of a vendor, the consignment info record must be created for this vendor-material combination. The price defined in the consignment info record is used for the valuation and settlement of withdrawals from consignment stock. If you procure a material from several vendors via consignment, you must create a separate consignment info record for each vendor.

To create the consignment info record, use the transaction *Create Info Record* (ME11) or the corresponding SAP Fiori app. Create the info record for the standard purchasing organization of the plant in which the consignment stock is to be managed, and choose the info category *Consignment*. If there is just one purchasing organization for the plant, you do not need to use a standard purchasing organization.

Consignment prices can be determined in foreign currency, based on period, and in various units of measure. You can also take advantage of the purchasing condition technique, including the definition of discounts and price or quantity scales.

### **Consignment Order**

To determine whether a material is procured for consignment stores, enter item category **K** (Consignment) in a PO.

The following characteristics apply to this item category:

- You must enter a material number.
- You cannot enter a PO price or conditions for the item.
- You require a GR for the item. The GR is posted in the vendor consignment stock and is nonvaluated.
- You cannot enter an invoice for the consignment item.

You can also use item category **K** in outline agreements and purchase requisitions.

If a material is always procured for the consignment stores of a plant, you can consider this with material requirements planning using a special procurement key in the material master record. This special procurement key means that the system creates a purchase requisition with item category **K** during the planning run for a demand for this material.

## Vendor Consignment in Inventory Management

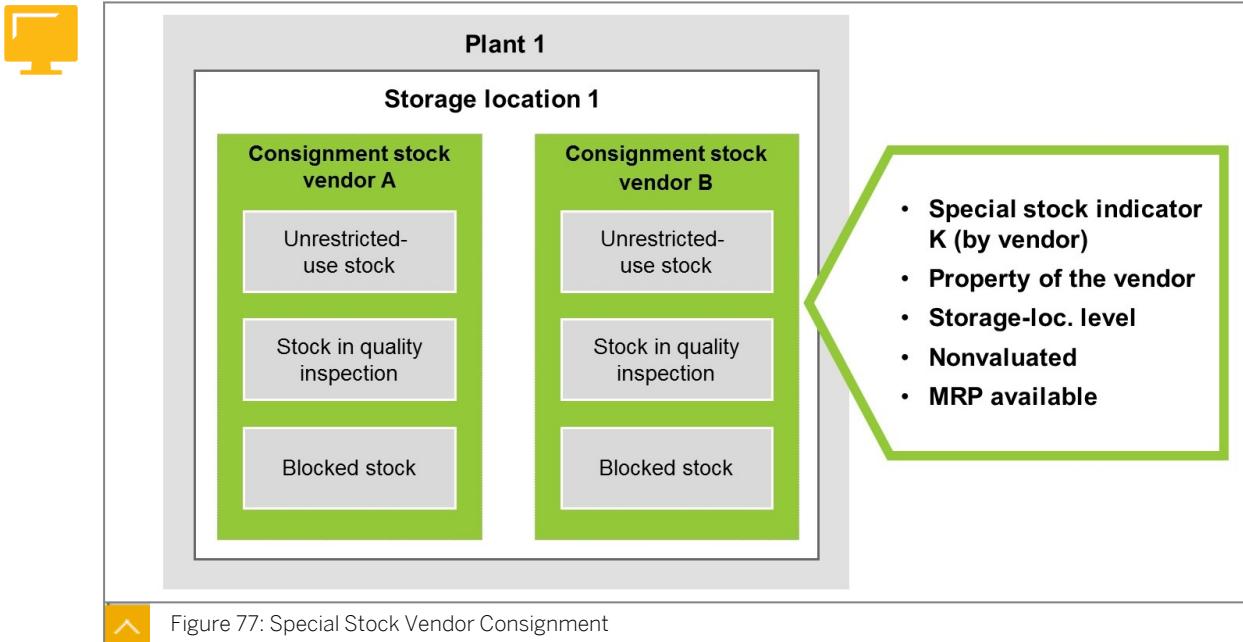


Figure 77: Special Stock Vendor Consignment



Inventory management supports the following functions within vendor consignment:

- Special stock type vendor consignment
- Goods receipt in the vendor consignment stock with and without reference to a purchase order
- Transfer postings within the vendor consignment stock and transfer postings from the vendor consignment stock to your own stock
- Goods issues from the vendor consignment stock

### Vendor Consignment Stock

The material that you procure using vendor consignment is managed in a vendor-related special stock, K (consignment vendor). The special stock is updated at storage location level because the material is stored at your company facility.

The consignment stock is not valued because it still belongs to the vendor. For the consignment stock, the stock types are unrestricted use, in quality inspection, and blocked. The consignment stock is considered when you determine the available stock of a material.

Consignment stock is displayed in various stock evaluations, for example:

- *Display Stock Overview* app and corresponding transaction *Stock Overview* (MMBE):

In the stock overview, at storage location level, the total of all consignment stocks in this storage location is displayed. With a double-click on this special stock line you see a detailed overview of the consignment stock per consignment vendor.

To start the transaction from the SAP Easy Access menu, choose *Logistics* → *Material Management* → *Inventory Management* → *Environment* → *Stock* → *Stock Overview* (MMBE).

- *Consignment Stocks* app and corresponding transaction *Display Consignment Stocks* (MB54):

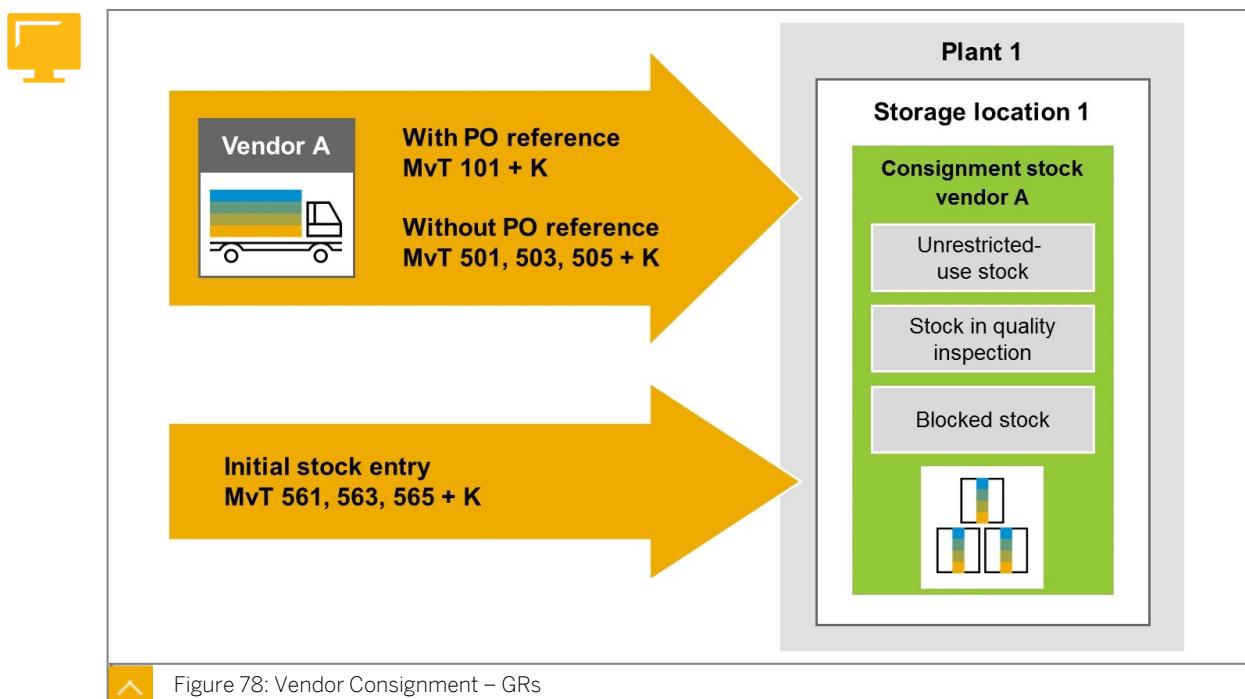
Unlike the stock overview, with this function, you can display consignment stocks for several materials at the same time. It is also possible to evaluate consignment stocks on a supplier-specific basis.

To start the transaction from the SAP Easy Access menu, choose *Logistics → Material Management → Inventory Management → Environment → Consignment → Consignment from Supplier → Stock* (MB54).

- *Stock – Multiple Material* app:

To select only supplier consignment stock in the app, select the predefined view *Stock Value for Sales Supplier Consignment (K)*. In this view, the filter for the special stock type is already preset with K (Supplier Consignment).

### GR to the Vendor Consignment Stock

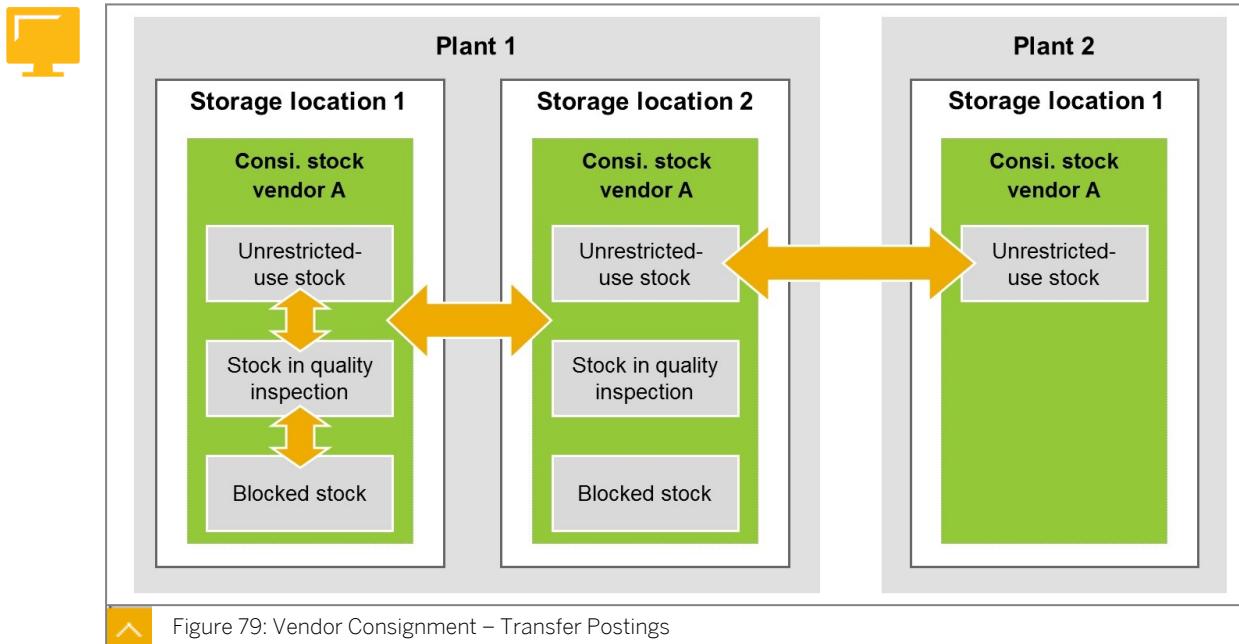


You can enter GRs in your consignment stores with or without PO reference. When you enter a GR for a consignment order, the system automatically posts the delivered quantity to the consignment stock of the vendor. Choose movement type 101 to automatically set special stock indicator K. For a normal GR with a PO, you can post to all three stock types.

You can also post another GR without a PO and make an initial entry of stock balances in the three stock types for consignment. In addition to the known movement types for these goods movements (501, 503, 505 for GR without PO; 561, 563, 565 for initial entry of stock balances), you must specify the special stock indicator K and the vendor of the consignment material.

All GRs in the consignment stock are nonvaluated.

## Transfer Postings



For consignment stocks, you can also execute transfer postings and stock transfers. For these goods movements, you must specify the special stock indicator *K* and the vendor of the consignment material, in addition to the movement types for stock material. These goods movements are also nonvaluated.

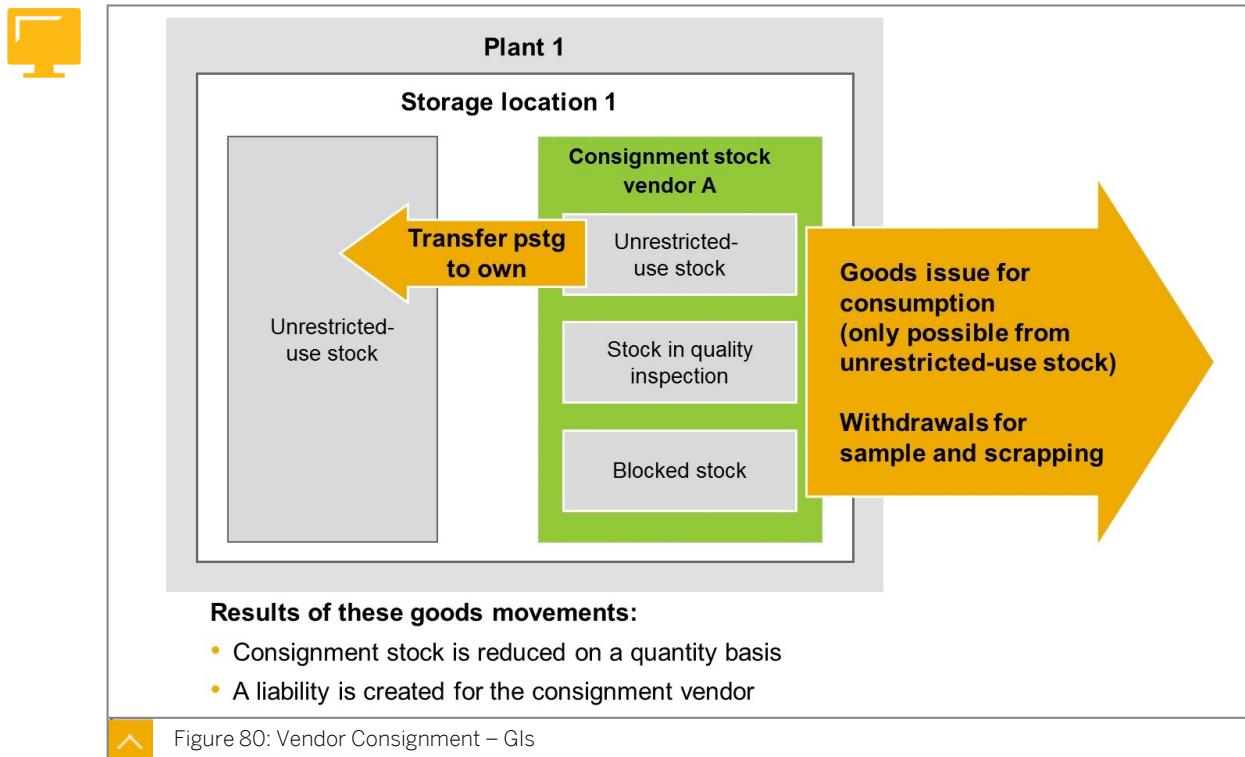
The possible stock transfers and transfer postings for consignment stock are as follows:

- Stock-to-stock transfer posting
- Storage location-to-storage location stock transfers (one-step procedures only)
- Plant-to-plant stock transfers (one-step procedures only)

### GI from the Consignment Stock

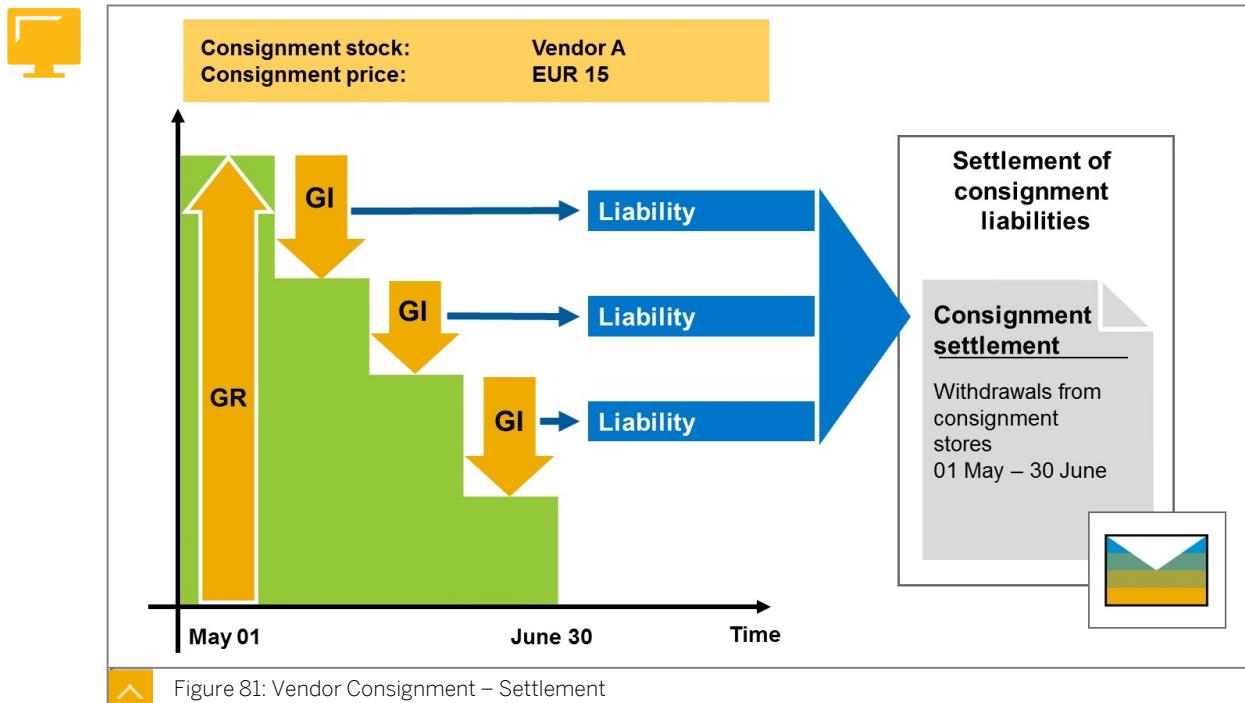
You can only post a GI from unrestricted-use consignment stock for consumption. If the consignment material is in stock in quality inspection or in blocked stock, you must first post the consignment material to unrestricted-use stock. You can make withdrawals for samples and scrapping from all three stock types. When entering GIs, you must specify the special stock indicator *K* and the consignment vendor, in addition to the movement type in all goods movements.

You also have the option of adopting consignment stocks into your own stock. To do this, post a transfer posting with movement type (MvT) 411 and special stock indicator *K*. Unlike the GI for consumption, this transfer posting causes an increase in the valued stock and no consumption posting.



For both GIs from consignment stock and transfer postings to your own stock, there is a liability towards the consignment vendor. The withdrawal is valued based on the price in the consignment info record on the day of the withdrawal or transfer posting.

### Vendor Consignment in Invoice Verification



You must regularly clear liabilities towards the vendor that exist because of the issues from the vendor consignment stock. The consignment goods are settled without invoice receipts.

because the vendor cannot trace the goods withdrawal directly. The vendor can only manage the consignment stock with the deliveries from the vendor, and with your payments.

To settle consignment withdrawals, on the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Automatic Settlement* → *Consignment and Pipeline Settlement* (MRKO).

Obtain a report with which you can display settled and nonsettled consignment withdrawals and settle the nonsettled withdrawals. Possible selection criteria include company code, plant, vendor, material, document date, posting date of the withdrawal, and the material document number.

The system creates a message with message type *KONS*, in addition to the settlement document, so that you can inform the vendor about the settled withdrawals and the credit memo amount.



### LESSON SUMMARY

You should now be able to:

- Perform a process for vendor consignment

## Performing the Process of Subcontracting



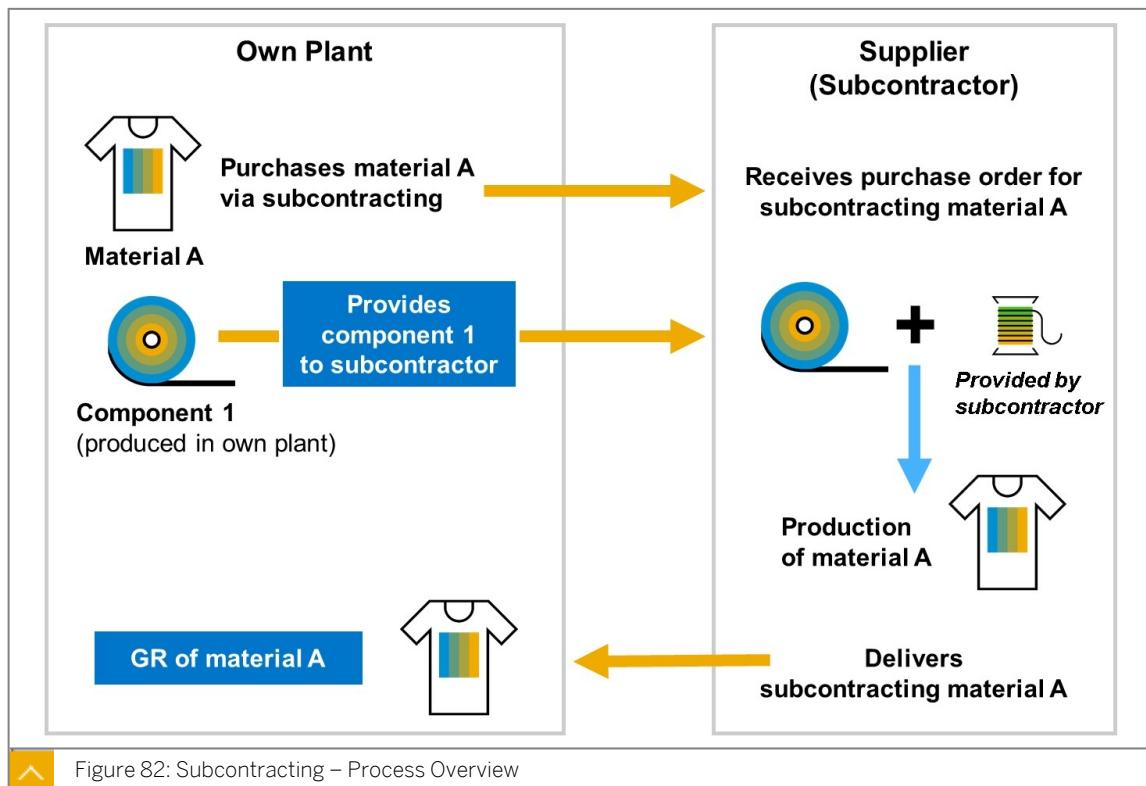
### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Provide components to a subcontractor
- Post a GR to a subcontract PO and further goods movements for subcontracting stock

### Special Procurement Process of Subcontracting – Overview

During subcontracting, your company orders material from an external supplier. Unlike a normal external procurement process, your company makes the components for the production of the materials partially or completely available to the supplier (subcontractor).



The subcontracting process has the following characteristics:

- You order the finished product with a subcontracting order that also contains entries about the components to be provided for the subcontractor.
- In inventory management, you post the components which are delivered to the subcontractor in the “stock of material provided to the supplier”.

- The subcontractor supplies the service and delivers the manufactured or processed material. You enter the GR for the finished product in inventory management. At the same time the consumed components are cleared by the system from the stock of material provided to the supplier.
- If the subcontractor reports an excess or under-consumption of components after the GR posting, you can correct the GR with a subsequent adjustment.
- The subcontractor invoices the service rendered. You enter the invoice in Logistics Invoice Verification.

## Subcontracting in Purchasing

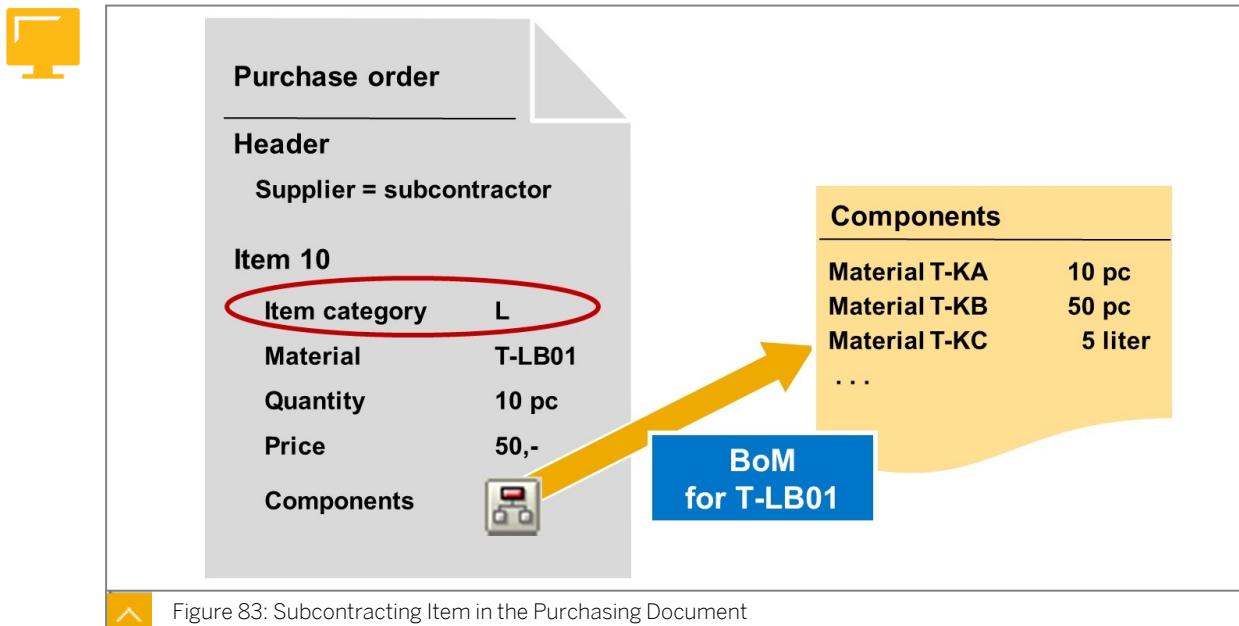


Figure 83: Subcontracting Item in the Purchasing Document

You represent subcontracting items in purchasing documents with a special item category. For each subcontracting item, you must enter one or several subitems for the components to be provided. When there is a bill of material (BOM) with the components for the material to be procured, then the components are copied from this BOM into the subcontracting item. You can also enter the components manually or add the components from the BOM.

The PO price is the price of the supplier subcontracting work and the materials that the subcontractor provides. You can define conditions for subcontracting in a subcontracting purchasing info record.

## Subcontracting in Inventory Management

Inventory management supports the following functions within subcontracting:

- Special stock type “Stock of Material Provided to Supplier”
- Provision of components
- Goods receipt for finished product with consumption of components
- Subsequent adjustment in the case of excess or under-consumption of components
- Transfer postings (material to material, stock to stock, and plant to plant)

## Stock of Material Provided to Vendor

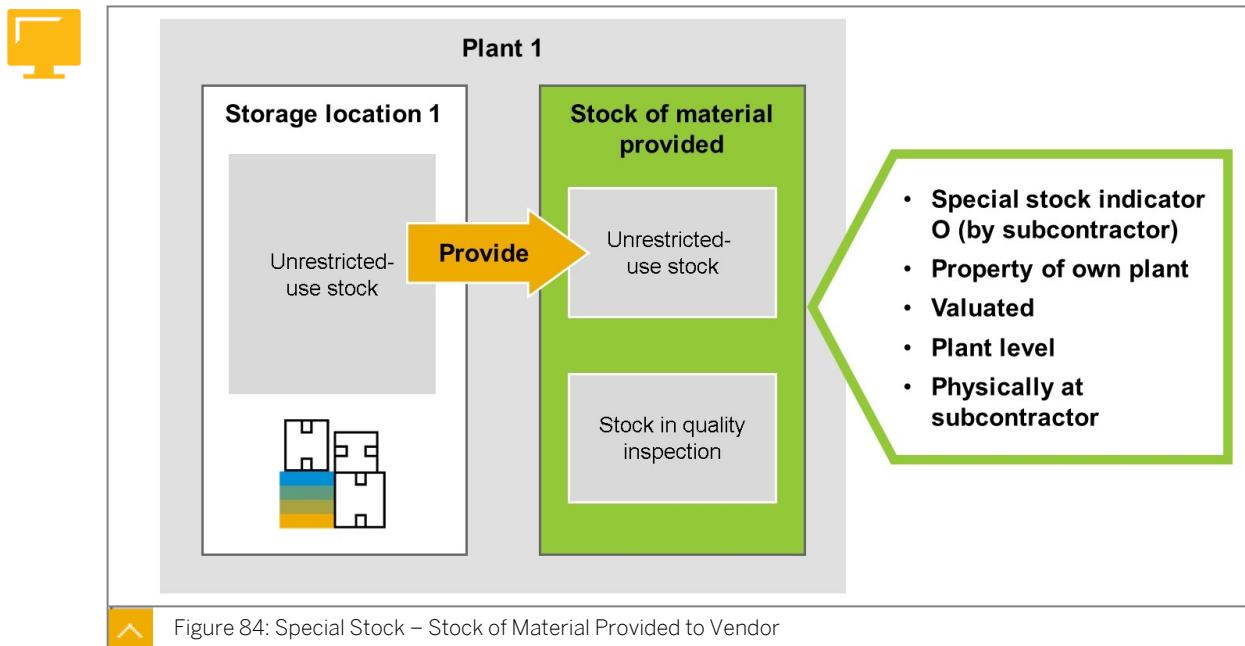


Figure 84: Special Stock – Stock of Material Provided to Vendor

The components that you provide for a subcontractor are managed in a supplier-related special stock, O (stock of material provided to supplier). The system updates this special stock at plant level because the material is not stored in your own company but it is with the supplier. However, this special stock is valued and available for planning.



### Hint:

In materials planning, you can work with subcontractor material requirements planning (MRP) areas.

The advantage is that you can separate the stock of material provided for the individual subcontractors. The provided material quantities are not in the available plant stock, so you can include these material quantities in materials planning at plant level.

For the stock of material provided to suppliers, the available stock types are unrestricted-use stock and stock in quality inspection. The quantities consumed by the subcontractor can be withdrawn only from the unrestricted-use stock. A physical inventory is to be carried out for the stock of material provided to the supplier.

To analyze the stocks of material provided, you can use various stock evaluations, for example:

- *Display Stock Overview app and corresponding transaction Stock Overview (MMBE):*

In the stock overview, at plant level, the total of all stocks of material provided for this material in this plant is displayed. With a double-click on this special stock line you see a detailed overview of the stock of material provided per subcontractor.

To start the transaction from the SAP Easy Access menu, choose *Logistics → Materials Management → Inventory Management → Environment → Stock → Stock Overview (MMBE)*.

- Stocks at Subcontractor app and corresponding transaction Stocks at Subcontractor (MBLB):

With this function, you can display stocks provided for several materials and several subcontractors (supplier) at the same time.

To start the transaction from the SAP Easy Access menu, choose *Logistics → Materials Management → Inventory Management → Environment → Stock → Stock with Subcontractor* (MBLB).

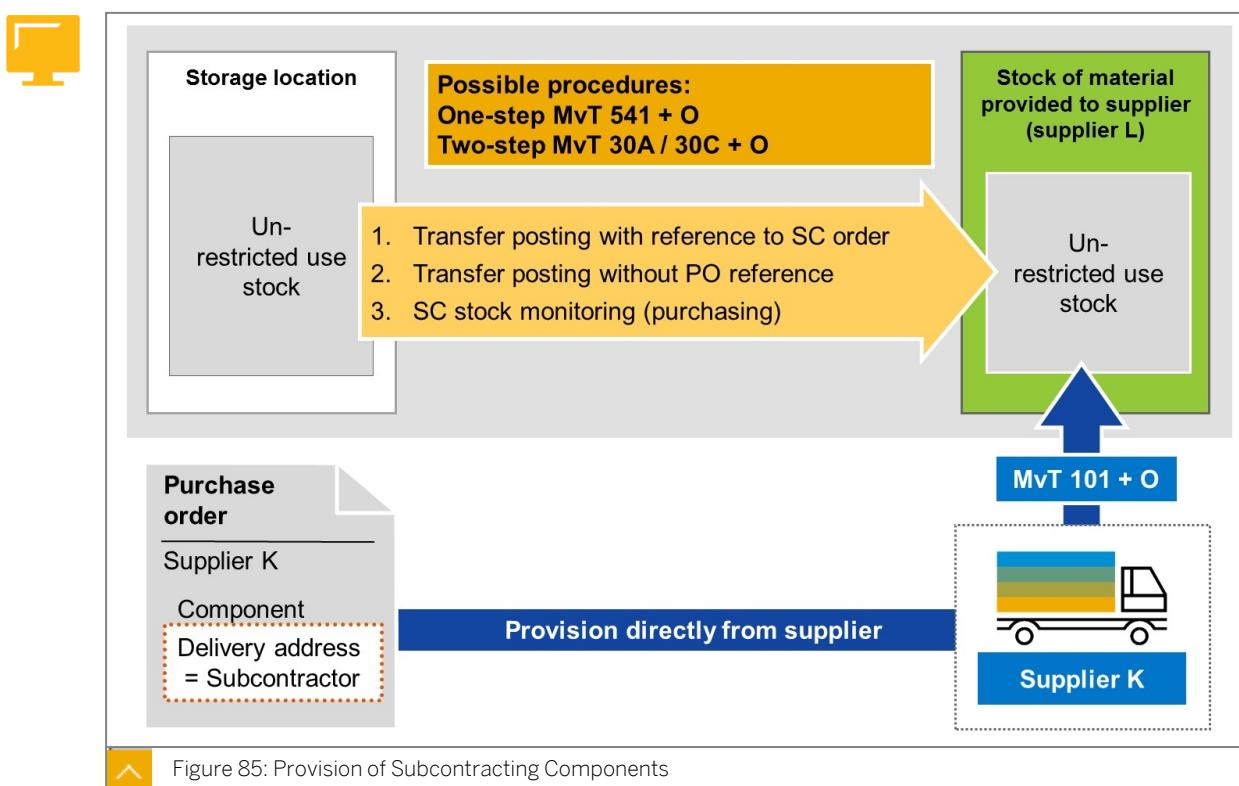
- Stock – Multiple Material app:

In the app, to select only stocks of material provided, select the predefined view *Stock Value for Subcontracting Stock (O)*. In this view, the filter for the special stock type is already preset with O (Subcontracting Stock).

- Display Subcontracting Stocks by Supplier app and corresponding transaction *Subcontracting Cockpit* (ME2ON):

To start the transaction from the SAP Easy Access menu, choose *Logistics → Materials Management → Purchasing → Purchase Order → Reporting → Subcontracting Cockpit* (ME2ON).

## Subcontracting: Provision of Components



From the point of view of inventory management, the posting of a provision of components corresponds to a transfer posting from unrestricted-use stock to the stock of material provided to vendor. This transfer posting can be carried out using the one-step procedure (MvT 541), or the two-step procedure (MvT 30A and 30C).

There are different options available for posting the provision of components.

1. In Inventory Management, you can post a provision of components using transaction MIGO and the corresponding SAP Fiori App *Post Goods Movement*. You can refer to the subcontracting item (SC item) of the purchase order when entering this transfer posting. The components and their quantities are then proposed from the SC item. You can change the proposed quantities of the materials to be provided.

Provision of components with reference to a purchase order is **not** updated in the purchase order history because the stock of the material provided is not purchase-order based.

2. In transaction MIGO and the corresponding SAP Fiori App *Post Goods Movement*, you can also provide components without reference to a purchase order. To do this, you enter another transfer posting and specify the required materials and quantities as well as the subcontractor manually.
3. In Purchasing, you can use the *Subcontracting Cockpit* (transaction ME2ON) or the corresponding app *Display Subcontracting Stocks by Supplier* to post a goods issue for the components. As the selection criteria, you enter, for example, the supplier, the component to be provided, or the material to be produced. A list containing the requirements and stocks of the components, and the pegged requirements is then displayed. To post a provision for a component, select the relevant line and choose *Edit* → *Post goods issue*.

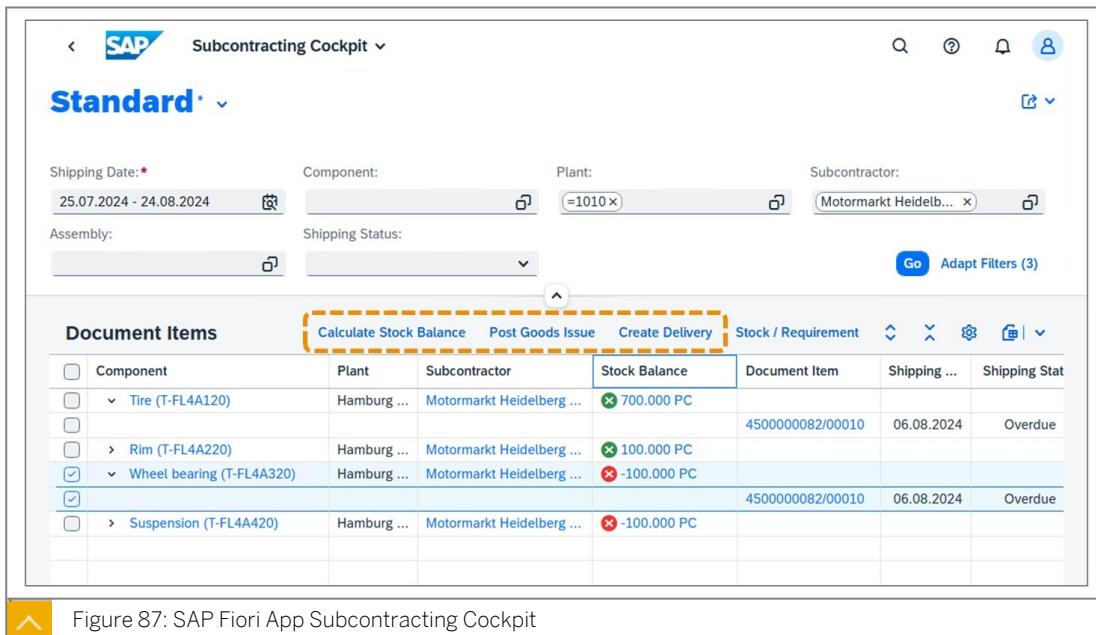
Figure 86: GUI Transaction ME2ON (Subcontracting Cockpit)

You can also use the subcontracting cockpit to create an outbound delivery for shipping. The prerequisite for this is that the data relevant for shipping has been maintained in Customizing, in the material master, and in the business partner record for the subcontractor.



#### Hint:

If you use subcontracting in Plant Maintenance for the refurbishment process, you can also use the subcontracting monitor (transaction ADSUBCON).



In addition, in SAP S/4HANA there is the *Subcontracting Cockpit* Fiori app. Its functions are similar to those of transaction ME2ON. The SAP Fiori app provides you with an overview of open and completed purchasing documents (purchase orders and scheduling agreements). As filter criteria, you are offered subcontractor (supplier), component, assembly (material to be produced), plant and shipping status, among others. You can execute the following functions for the selected subcontracting documents and the associated components:

- Post goods issue on purchasing document item level.
  - Create the delivery document for the component delivery.
  - Calculate the stock balance at component, plant, and supplier level. If you click on the calculated stock balance for a component, you get a detailed overview of the stock and requirements situation of the component.
4. If you have to procure a component from a second supplier, you can have it delivered directly to the subcontractor. To do this, you must specify the following in the delivery address of the purchase order item:
- the supplier number of the subcontractor
  - the *Subcontractor supplier (SC Supp)* indicator

When your subcontractor informs you that the component has arrived, you enter the goods receipt for the component purchase order. At this goods receipt, the component is posted directly to the stock of material provided which is assigned to the subcontractor. You cannot do without this goods receipt posting, since it is the only way to update the stock of material provided and thus also your own, usually valued stock.

This direct delivery of a component is taken into account in transaction ME2ON during selection if you set the *With external receipts from purchase orders/purchase requisitions* indicators. In the *Subcontracting Cockpit* Fiori app, the direct delivery is also taken into account when calculating the stock balance for a component.

## Subcontracting: Transfer Postings of the Stock of Material Provided

The following transfer postings are allowed for the stock of material provided to supplier special stock:

- Plant to plant in the one-step procedure (movement type 301)
- Material to material (movement type 309)
- Stock in quality inspection to unrestricted-use stock (movement type 321)

To execute these transfer postings for the stock of material provided to supplier, you must specify the special stock indicator O; otherwise, the transfer postings do not differ from normal transfer postings.

## Subcontracting: Goods Receipt for the Finished Product

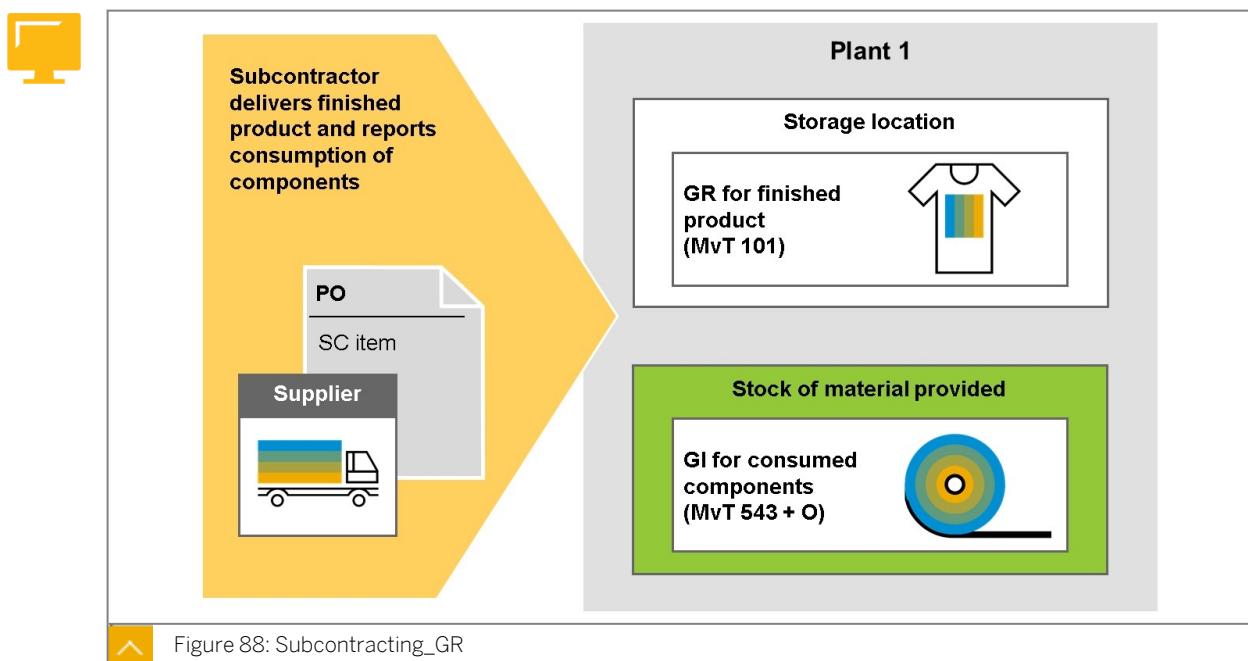


Figure 88: Subcontracting\_GR

When the subcontractor delivers the ordered material (finished product), you then post the GR for the subcontracting order as you would post a GR for a normal PO (MVT 101). For the subcontracting order item, the system determines the components and creates a GI item internally for each component.

The material document consists of the following items:

- GR item for the material delivered by the supplier
- GI item(s) for the components

Before posting the goods movements, you can change the component quantities in the goods issue items. Such a change is necessary if the subcontractor notifies you of an excess consumption or under consumption of components in the delivery.

## Subcontracting: Subsequent Adjustment

If the subcontractor reports excess or under-consumption of subcontracting components after the delivery of the finished product, you must post a subsequent adjustment to correct the component consumption.

The following functions are available for posting a subsequent adjustment:

- Transaction MIGO or the corresponding *Post Goods Movements* app
- *Post Subsequent Adjustment* Fiori app, since SAP S/4HANA 2021

#### **Enter a subsequent adjustment using transaction MIGO:**

In the list of business transactions, choose *Subsequent Adjustment*. As a reference document, the system automatically enters *Purchase Order*. After you have specified the purchase order item, you can enter the difference quantity for each component. If a component has excess consumption, you only need to enter the additional quantity consumed. If less was consumed by a component than was posted at goods receipt, you also set the *Underconsumption / Short Receipt* indicator. This increases the stock provided of this component by the difference quantity (the consumption is reversed).

#### **Enter a subsequent adjustment using Post Subsequent Adjustment app:**

On the initial screen, enter the document number of the purchasing document for which you want to enter a subsequent adjustment. To enter the overconsumption or underconsumption of a component, open the item details. In the *Components* section, in the *Goods Movement* field, select whether there is *Overconsumption* or *Underconsumption* for the individual component and enter the quantity to be posted. For components for which no subsequent adjustment needs to be posted, leave the default *No Posting* for the goods movement unchanged. Finally, choose *Apply* for the component data and post the subsequent adjustment.



##### Note:

A subsequent adjustment cannot be entered for a subcontracting purchasing document until a goods receipt has been posted for this document.



#### **LESSON SUMMARY**

You should now be able to:

- Provide components to a subcontractor
- Post a GR to a subcontract PO and further goods movements for subcontracting stock

## Learning Assessment

1. Which of the following master records are required to be able to manage a material in vendor consignment stock?

*Choose the correct answers.*

- A Vendor master record
- B Customer master record
- C Material master record
- D Purchasing info record
- E Source list

2. Which of the following statements on subcontracting are correct? *Determine whether this statement is true or false*

*Choose the correct answers.*

- A This process is used when you purchase material for a customer and the vendor delivers this material directly to the customer.
- B To represent a subcontracting item in a purchasing document, set the special stock indicator O.
- C For each subcontracting item in a purchase order, you must enter one or several subitems for the components to be provided.
- D In Inventory Management, the components provided to the subcontractor are managed in a special stock.

3. The stock type *Blocked stock* is not possible for the stock of material provided. True or False?

*Determine whether this statement is true or false.*

- True
- False

4. Which of the following transfer postings or stock transfers are allowed for the stock of material provided to the vendor (special stock type O)?

*Choose the correct answers.*

- A Plant to plant in the one-step procedure
- B Material to material
- C Stock in quality inspection to unrestricted-use stock
- D Vendor to vendor

## Learning Assessment - Answers

1. Which of the following master records are required to be able to manage a material in vendor consignment stock?

Choose the correct answers.

- A Vendor master record
- B Customer master record
- C Material master record
- D Purchasing info record
- E Source list

Correct. Vendor master record, material master record, and purchasing info record are required master records (info record of the info category consignment).

2. Which of the following statements on subcontracting are correct? *Determine whether this statement is true or false*

Choose the correct answers.

- A This process is used when you purchase material for a customer and the vendor delivers this material directly to the customer.
- B To represent a subcontracting item in a purchasing document, set the special stock indicator O.
- C For each subcontracting item in a purchase order, you must enter one or several subitems for the components to be provided.
- D In Inventory Management, the components provided to the subcontractor are managed in a special stock.

Correct. The process described in the first answer is third-party business, but not subcontracting. You use a special *Item category* to represent a subcontracting item in purchasing documents. For each subcontracting item in a purchase order, you must enter one or several subitems for the components to be provided. The components that you provide for a subcontractor are managed in a vendor-related special stock, O (stock of material provided to vendor).

3. The stock type *Blocked stock* is not possible for the stock of material provided. True or False?

*Determine whether this statement is true or false.*

True

False

Correct. Only unrestricted-use stock and stock in quality inspection are possible for stock of material provided.

4. Which of the following transfer postings or stock transfers are allowed for the stock of material provided to the vendor (special stock type O)?

*Choose the correct answers.*

A Plant to plant in the one-step procedure

B Material to material

C Stock in quality inspection to unrestricted-use stock

D Vendor to vendor

Correct. Plant to plant in the one-step procedure is allowed; Material to material is allowed; Stock in quality inspection to unrestricted-use stock is allowed; Vendor to vendor is not allowed because you cannot post subcontracting stock from one vendor to another vendor.

## Lesson 1

Conducting Physical Inventory

173

## Lesson 2

Simplifying Physical Inventory

185

## UNIT OBJECTIVES

- Create physical inventory documents, enter count results, and post differences
- Use the apps for creating inventory documents and entering count results



# Unit 7

## Lesson 1

# Conducting Physical Inventory



## LESSON OBJECTIVES

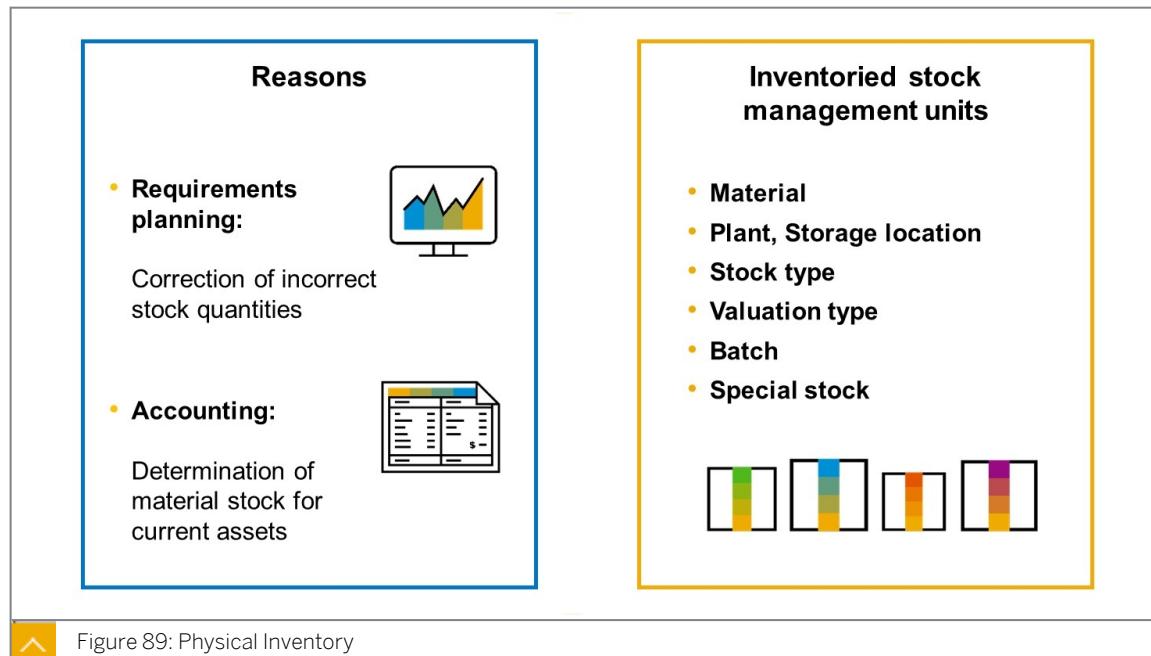
After completing this lesson, you will be able to:

- Create physical inventory documents, enter count results, and post differences

## Physical Inventory

There are at least two reasons why an enterprise must make an inventory of its stocks at regular intervals. Many countries require by law that each company takes a physical inventory of its material stocks. This physical inventory checks the material stocks for the current assets shown in the financial statement of the company.

It is also important for internal reasons to establish the correct stock quantities available. It is the goal of MRP, for example, to ensure the availability of materials at all times while at the same time minimizing stockholdings. Incorrect stock data leads to faulty availability figures.



The physical inventory is conducted on the basis of stock management units. A stock management unit is the nondivisible part of a stock of materials for which a separate book inventory exists.

**A stock management unit is defined by the following criteria:**

- Material
- Plant and storage location

- Stock type
- Valuation type and batch
- Special stock

For a material, each stock management unit of a material is counted separately, and the inventory differences are posted per stock management unit. For example, you must separately record the quantity of material at each storage location of a plant that is in each of these stock types: unrestricted-use stock, stock in quality inspection, and blocked stock.



#### Note:

In a warehouse that is subject to warehouse management, the physical inventory is conducted on the basis of quants and storage bins.

### Phases of the Physical Inventory Process

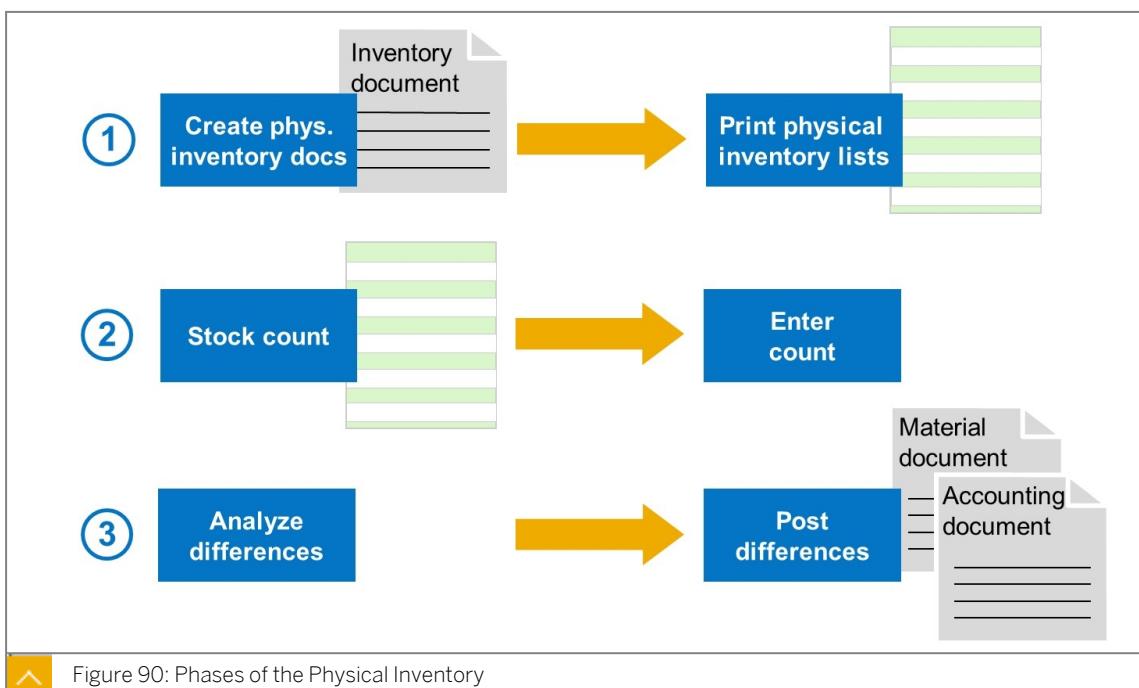


Figure 90: Phases of the Physical Inventory

The physical inventory process comprises the following phases:

- Creation of physical inventory documents

In the first phase, you select the stocks to be counted and create the inventory documents for them. Then you print the inventory documents.

- Entry of count

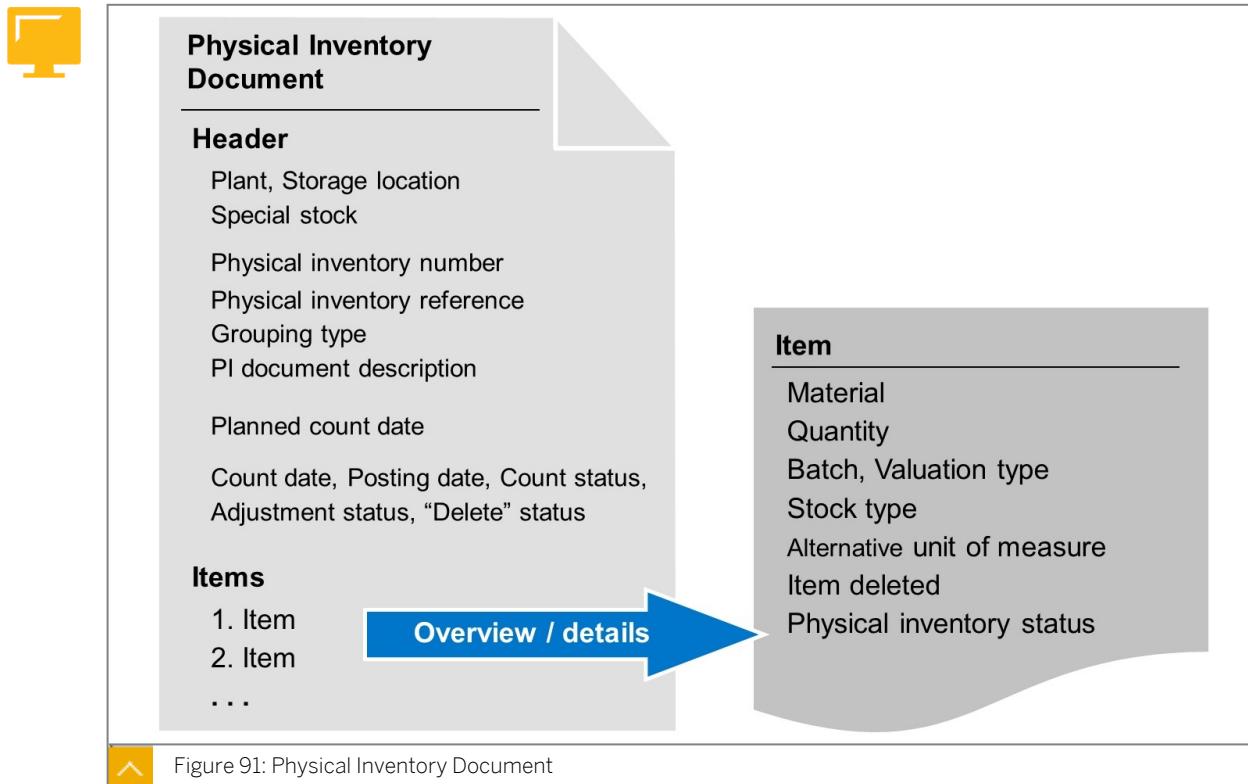
In the second phase, you collect the physical stocks by counting, measuring or weighing. You then enter the counting results determined in this way in the system.

- Analysis and posting inventory differences

In the third phase, you first analyze the inventory differences. If the results are questionable, you initiate a recount of the affected inventory units. For a recount, you create a new inventory document with reference to the first inventory document.

Finally, you clear the inventory differences. This updates the inventory in terms of quantity and value. The stock accounts in Accounting are updated.

## Physical Inventory Document



A physical inventory document contains the following data:

- Plant and storage location where the stock is to be counted (place of physical inventory)
- Date on which the count is to take place (planned count date)
- Materials to be counted
  - Batches to be counted (in the case of a material subject to a batch management requirement)
  - Partial stock to be counted (in the case of split valuation)
- Stock types to be counted
- Status of the item
- Status of the physical inventory document

Create physical inventory documents for each plant and storage location. If you wish to inventory special stocks, you create physical inventory documents per plant, storage location, special stock, and vendor or customer or project (depending on the special stock). You can specify the storage bin or the material group as further grouping values. The items of a physical inventory document are then all assigned to a material group or a storage bin in addition to the mentioned groupings.

When you create a physical inventory document, you can specify a *Physical Inventory Number* in the document header. Do not confuse this physical inventory number with the number of the physical inventory document. The physical inventory number facilitates the selection of

the physical inventory documents to be processed for a material during entry of the count results, posting of differences, and evaluations. You have free choice in assigning the physical inventory number. For example, you may want to use the ID of the count group, the processor, the department, or the month and/or date of the physical inventory.

If the physical inventory transaction references a document that lies outside the system or, conversely, if a document that lies outside the system references the physical inventory transaction, enter the document number in the *Physical Inventory Reference* field.

The *Description text* field is also available in the header of the physical inventory document. You can enter data in this field if you create or change physical inventory documents manually.

To monitor the inventory process, the system records in each inventory document which inventory steps have already been performed. This information can be found in the item data and in the document header.

The inventory history in the item detail informs you which steps have been carried out for the item. In the document header, the fields *Count status*, *Adjustment status*, and *Delete status* specify whether some or all of the items have been counted, posted, or deleted. You can also display a statistic for the physical inventory document; the statistic list how many document items are open, counted, posted, recounted, or deleted.

### **Changes to a Physical Inventory Document**

If you have not yet entered an inventory count result, you can make the following changes to an inventory document:

- In the document header
  - Change the planned count date.
  - Set or unset the posting block.
  - Freeze or unfreeze the book inventory.
  - Specify or change the physical inventory number, reference, and name.
- In an item record
  - Change the stock type.
  - Change the count unit of measure.
  - Set the deletion indicator.
- Enter new items.
- Delete the document.

If you have already entered inventory count results for some of the items in an inventory document (but not for all items), you can only make the following changes:

- Set or remove the posting block.
- Freeze the book inventory or remove the freeze.
- Set the deletion indicator for individual items or delete the document completely.
- Enter or change the physical inventory count results.

## Physical Inventory Count

For the inventory count, the physical inventory document is printed in order to perform the physically inventory count and to record its results. After completion of the physical inventory, the inventory list with the written count results is returned to the person in charge, who enters the count results in the system, in the corresponding inventory document.

When the first count result is entered in an inventory document, the count date must be specified. This date is relevant for two things:

- Determine the book inventory:

If the count date lies in the current period, the book inventory is the quantity at the relevant stock level at the current time, that is, when the count results are entered.

If the count date lies in the previous period, the book inventory is the quantity at the time of the last period-end closing.

- Determine the posting period for the difference posting:

The count date is used to determine the period in which the differences have to be posted, for example, if the count date is December 30, 2020, the posting period is December 2020.

If the differences are not posted until January 2021, posting back to the previous period must be permitted.

When you enter the count results, on the initial screen of the transaction, you can also specify a tolerance for inventory difference as a percentage variance. If the difference between the count result and the book inventory exceeds the value derived from the percentage variance, the system issues a warning message.

Note that you cannot enter 0 as a count result. If zero stock is counted for a stock management unit, you must specify this using the *Zero Count* checkbox in the physical inventory document. In a physical inventory document, you can select the *Zero Count* checkbox for a single item or simultaneously for all items for which no count result has been entered.

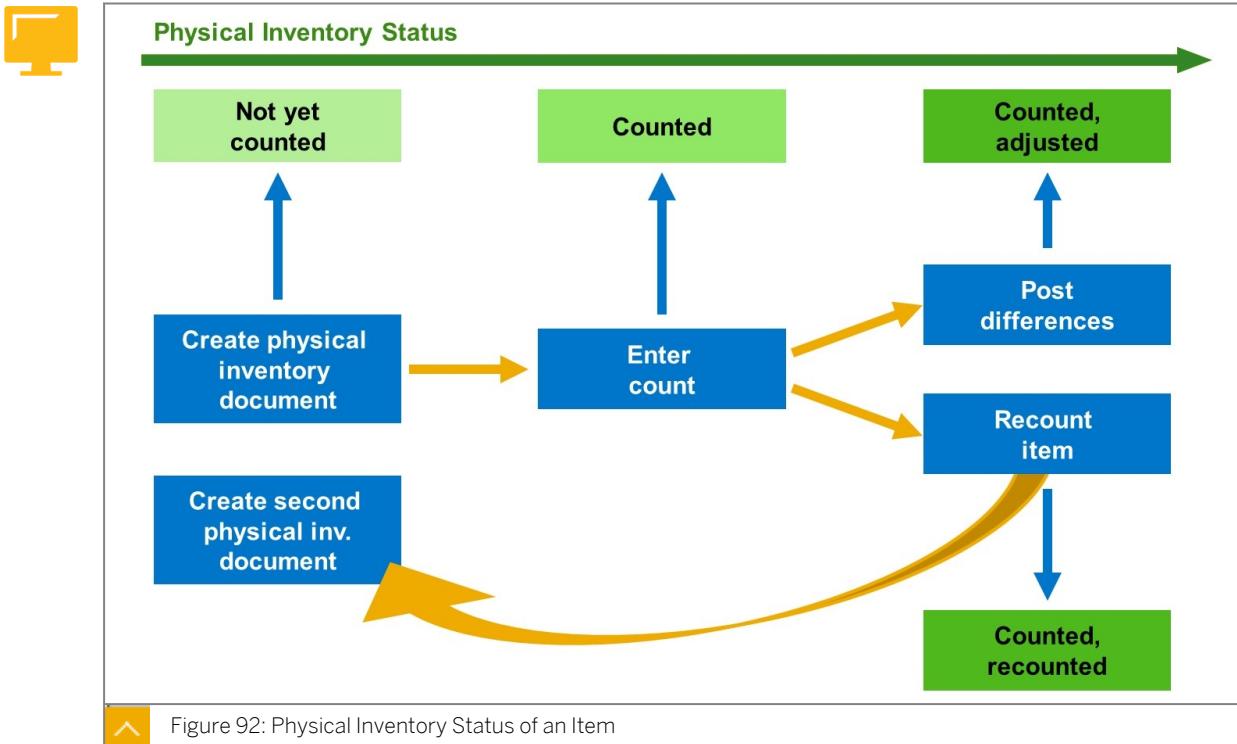


Figure 92: Physical Inventory Status of an Item

If the count result for an item is posted in the physical inventory document, the count status of the item changes to *Counted* and the difference between the count and book inventory values is calculated.

You can simultaneously analyze inventory differences for multiple physical inventory documents using the list of differences. The list of inventory differences contains the following information for each item:

- Quantity counted
- Book inventory
- Difference quantity
- Difference amount

You can perform the following functions with the list of inventory differences:

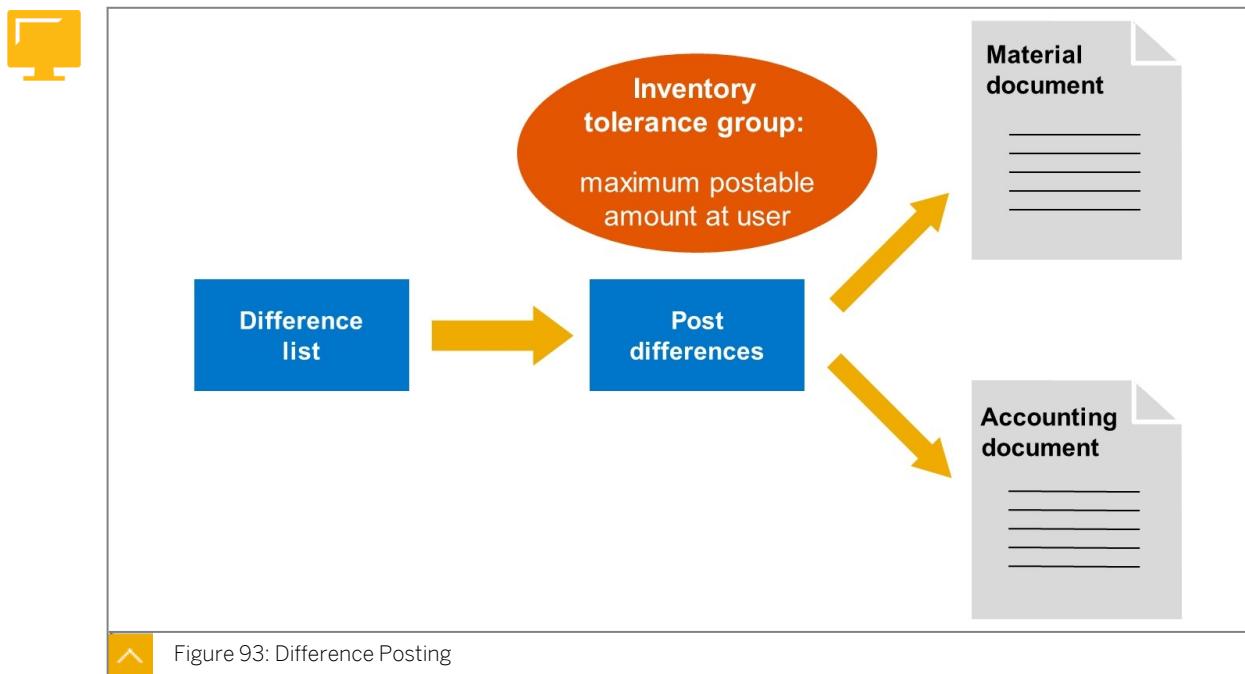
For a recount, a new physical inventory document is created with reference to the original physical inventory document. For the recount document, the physical inventory process starts from the beginning.

The items to be recounted in the original physical inventory document receive the status "counted, recounited". Differences can no longer be posted for these items.

### Difference Posting

You can post the inventory differences either by using the list of differences or through separate transactions. When an inventory difference is posted, the system creates a material document that corrects the stock figures and an accounting document that records the necessary account movements. If the physical inventory document for an item is completed in a different posting, the status of the item changes to *counted, posted*.

The difference posting must be made for all items of a physical inventory document, even if there is no inventory difference. The physical inventory for a stock management unit is only complete once the difference posting is made.



You can define tolerances for the posting of inventory differences for a user group in Customizing for *Inventory Management and Physical Inventory* under *Physical Inventory* → *Define Tolerances for Physical Inventory Differences*(OMJ2).

In a user group, you can define the following tolerances for posting inventory differences:

- Maximum postable difference amount for each inventory document
- Maximum postable difference amount for each inventory document item

If an inventory difference exceeds the tolerance defined for the user group, and you are assigned to this physical inventory tolerance group, you cannot post any inventory differences for this document. If the total value of the document is within the inventory tolerance but certain items exceed the tolerance for the specific item, you cannot post the differences for those items but you can process the differences for other items in the physical inventory document.

The system automatically sets the posting period of the accounting document when you enter the first count for the physical inventory document. The inventory difference must, therefore, either be posted in the same period or, if backposting to the previous period is allowed, in the preceding period.



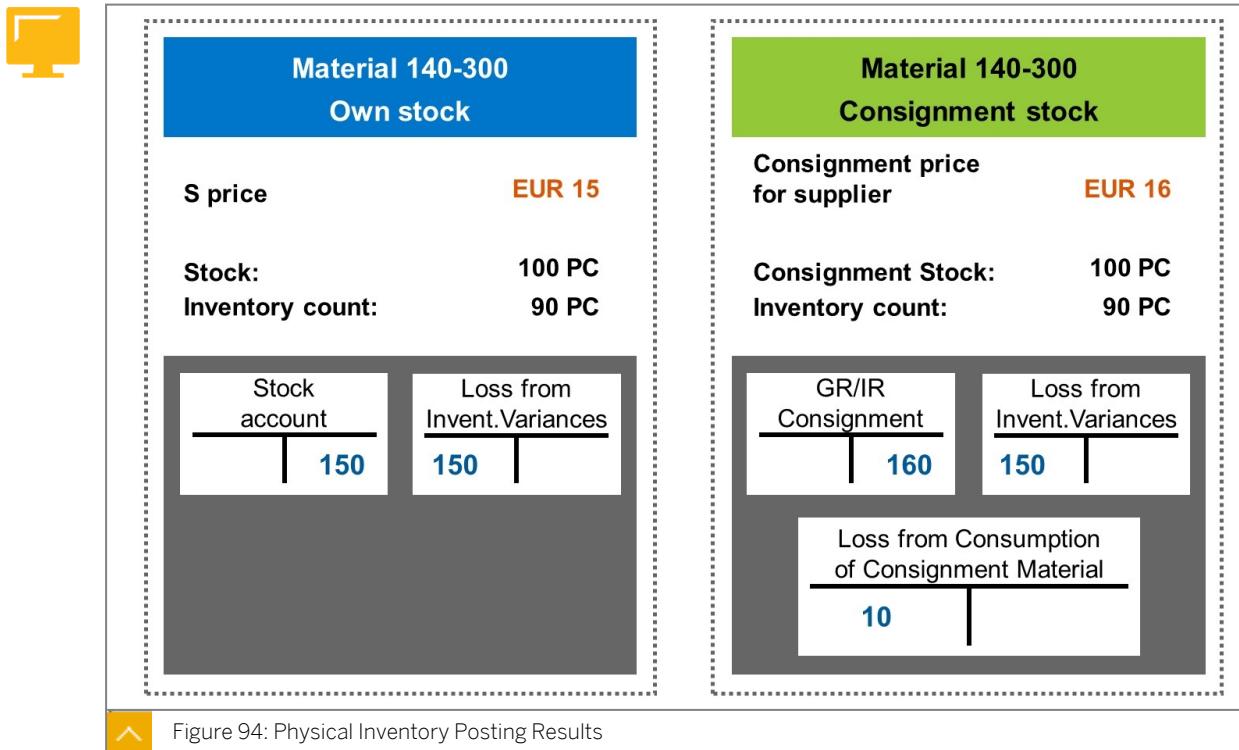
**Caution:**

The fiscal year is specified by the planned count date set in the physical inventory document. All postings for this document must be made in this fiscal year or in the first period of the following year if back posting is allowed.

## Physical Inventory Posting Results

Account movements that take place when the physical inventory differences are posted depend on the stock inventoried.

The following figure shows the postings in Financial Accounting for own stock and vendor consignment stock.



### Own Stock

When the inventory difference is posted, the stock figure in the material master record is changed; the total stock is automatically corrected by the inventory difference. From the accounting point of view, this corresponds to a goods receipt or goods issue. This means that when the inventory difference is cleared, the stock account is debited or credited:

- If the count result is less than the book inventory, the stock account is credited with the value of the inventory difference multiplied by the price. The offsetting entry is made to the “Expense from Physical Inventory” account.
- If the count result is greater than the book inventory, the stock account is debited with the value of the inventory difference multiplied by the price. The offsetting entry is made to the “Revenue from Physical Inventory” account.

Because the posting amount is calculated based on the current valuation price in the material master record, posting the inventory difference does not change the valuation price.

### Vendor Consignment

When inventory differences are posted, the vendor consignment stock is automatically adjusted by the inventory difference. Because this stock is managed on a nonvaluated basis, there is initially no posting to the accounting side. Nevertheless, an accounting document is created because a difference is interpreted as follows.

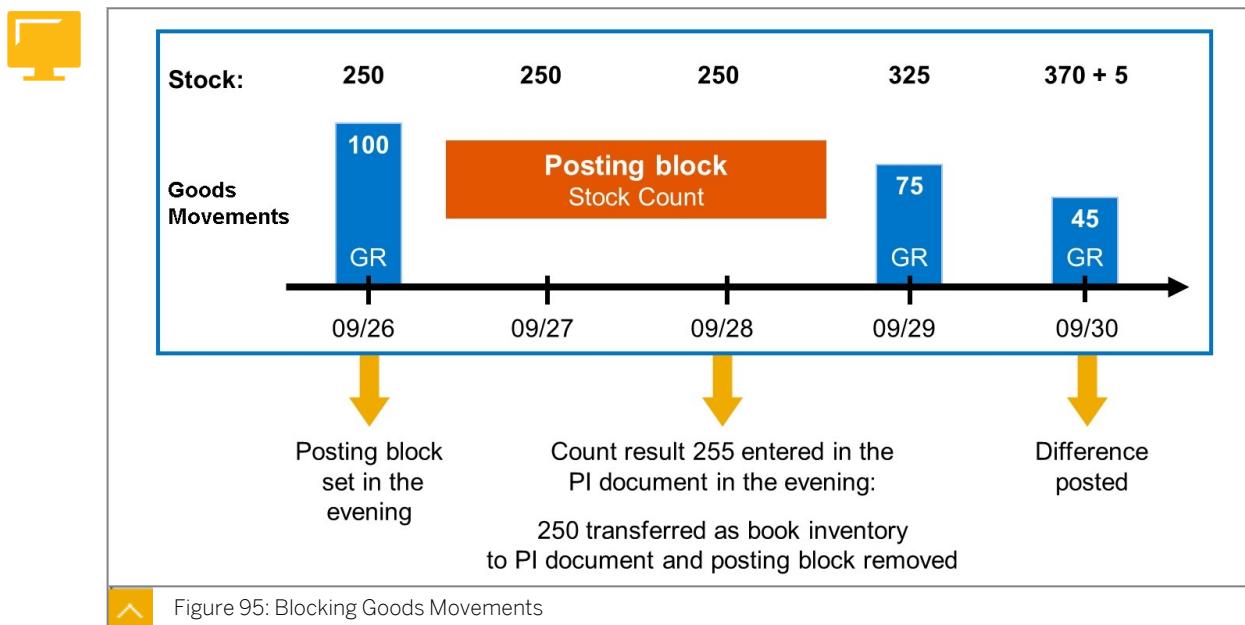
- Count result less than book inventory:

If the count result of consignment stock is less than the book inventory, it is assumed that the difference was withdrawn from consignment stock and subsequently cannot be traced. The inventory difference is, therefore, posted as a withdrawal. The vendor must be paid for the withdrawal. For this reason, when an inventory difference is posted, the same account movements take place as for a transfer posting from consignment to own stock. There is one exception; that is, the amount that would be posted to the stock account at the time of the transfer posting goes to the "*Expense from Inventory Differences*" account when the inventory differences are posted.

- **Count result greater than book inventory:**

If the count result of consignment stock exceeds the book inventory, it is assumed that larger withdrawals from consignment stores are posted than actually took place. The inventory difference is, therefore, posted as a reversal (cancellation) of withdrawals. Since withdrawals are posted to the "*Liabilities from Consignment Stores*" account, this account must also be posted when the inventory difference is posted. The system, therefore, makes postings that contrast completely to the case "*Count quantity less than book inventory*".

## Goods Movements Blocking



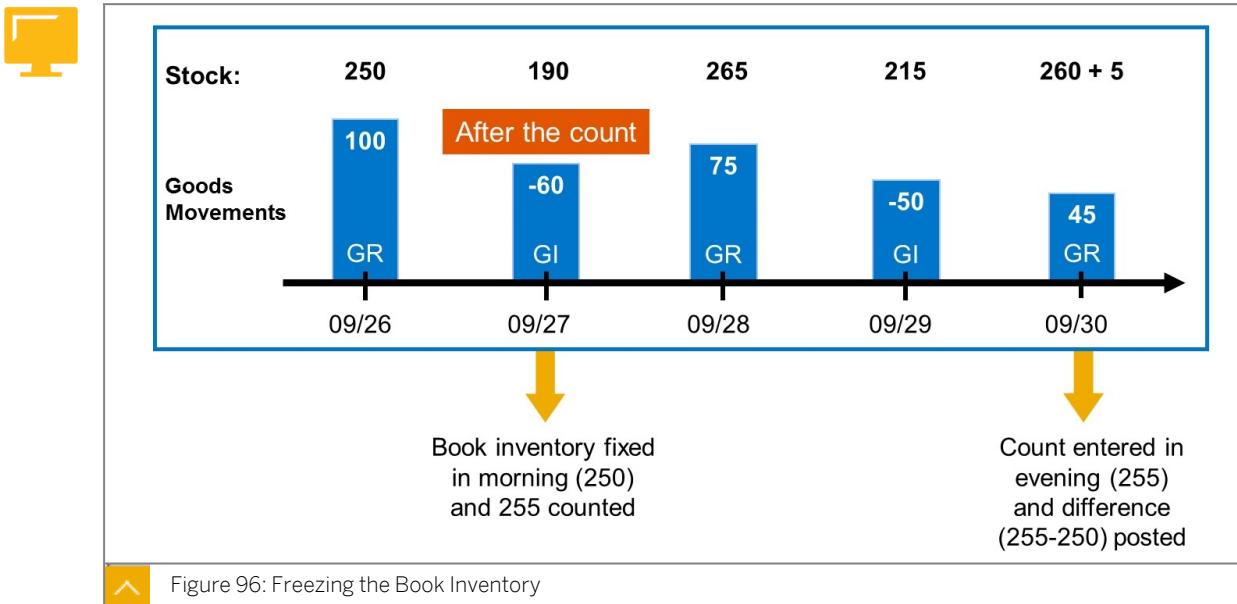
You can block materials (more precisely, stock management units) from posting goods movements during physical inventory. To do this, you set the *Posting Block* indicator at header level in the physical inventory document.

As a result, the system sets the posting block in the material master record for all stock management units from this physical inventory document. This means that in the material master record, in the *Storage Location Stock* view, the value X (Due to phys. inv., material is blocked for movements) is set in the *Physical Inventory Block* field.

In the case of the stock of your company, goods movements are blocked at the levels of the plant and the storage location. In the case of a special stock, blocking takes place at the level of the plant, storage location, special stock, and additional data (customer, vendor, order, or project).

When the count result for the relevant stock management is entered, the block is lifted. In the material master record, the *Physical Inventory Blocking* indicator is set to A (physical inventory of the material not yet completed). The indicator is unset when the inventory difference is posted.

### Book Inventory Freezing



If it is not possible to block the goods movement for organizational reasons, you can freeze the book inventory in the physical inventory document at the time of the count. To do so, set the *Freeze Book Inventory* indicator in the physical inventory document. This prevents the goods movements from changing the book inventory figure that is relevant to the inventory-taking process.



#### Hint:

Specify whether book inventory freezing is permitted at the storage location in Customizing for Materials Management under *Inventory Management and Physical Inventory* → *Physical Inventory* → *Allow Freezing of Book Inventory Balance in Storage Location* (OMBP).

### Book Inventory Adjustment in a Physical Inventory Document

The initial situation for the scenario is as follows:

Physical inventory is active for a stock management unit of a material. The book inventory for the stock management unit was already transferred in the inventory document, either because

- The *Freeze Book Inventory* indicator is set in the physical inventory document.
- Or the count result is entered in the physical inventory document.

With the *Adjust Book Inventory* function, you can have a goods movement for the inventory unit adjust the book inventory in the inventory document by the corresponding quantity.

If the *Adjust Book Inventory* function is active, the system checks whether a goods movement would have had an effect on the book inventory in the physical inventory document if it had

been posted at the correct time. If this is the case, the book inventory in the inventory document is adjusted by the quantity added or deducted by the goods movement. The inventory difference of the item changes accordingly.

During the check, the system compares the posting date of the goods movement with the count date (planned or actual) in the physical inventory document. If the goods movement posting date is before the count date, the system then adjusts the book inventory in the physical inventory document. If the posting date of the goods movement and the count date are the same, the indicator that you selected to activate the function determines whether an adjustment takes place.

To activate the function in Customizing, choose *Materials Management → Inventory Management and Physical Inventory → Physical Inventory → Settings for Physical Inventory* and choose a value for the *Adjust Book Inventory* field.

The *Adjust Book Inventory* indicator has the following values:

- Not active ("\_")
- Active ("1")

If the dates of the goods movement and the count date of the physical inventory are the same, the physical inventory was before the goods movement.

- Active ("2")

If the dates of the goods movement and the count date of the physical inventory are the same, the goods movement was before the physical inventory.

#### **Example:**

##### **1. On date 12/27:**

The stock of the material is 31 PC; the physical inventory document is created.

##### **2. On date 12/28:**

The count result of 35 PC is entered; 31 PC is used as the book inventory in the physical inventory document, and an inventory difference of +4 PC is returned.

##### **3. On date 12/29:**

A goods receipt of 5 PC is entered with the **posting date of 12/26**; the book inventory in the physical inventory document is adjusted to 36 PC (31 + 5); the inventory difference is -1 PC.



#### **LESSON SUMMARY**

You should now be able to:

- Create physical inventory documents, enter count results, and post differences



## Simplifying Physical Inventory



### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use the apps for creating inventory documents and entering count results

### Overview

In SAP S/4HANA, there are various ways of simplifying physical inventory processing. This includes, for example, the grouping of individual steps of the physical inventory or the mass processing of physical inventory documents.

In the following, various simplification options are described in more detail:

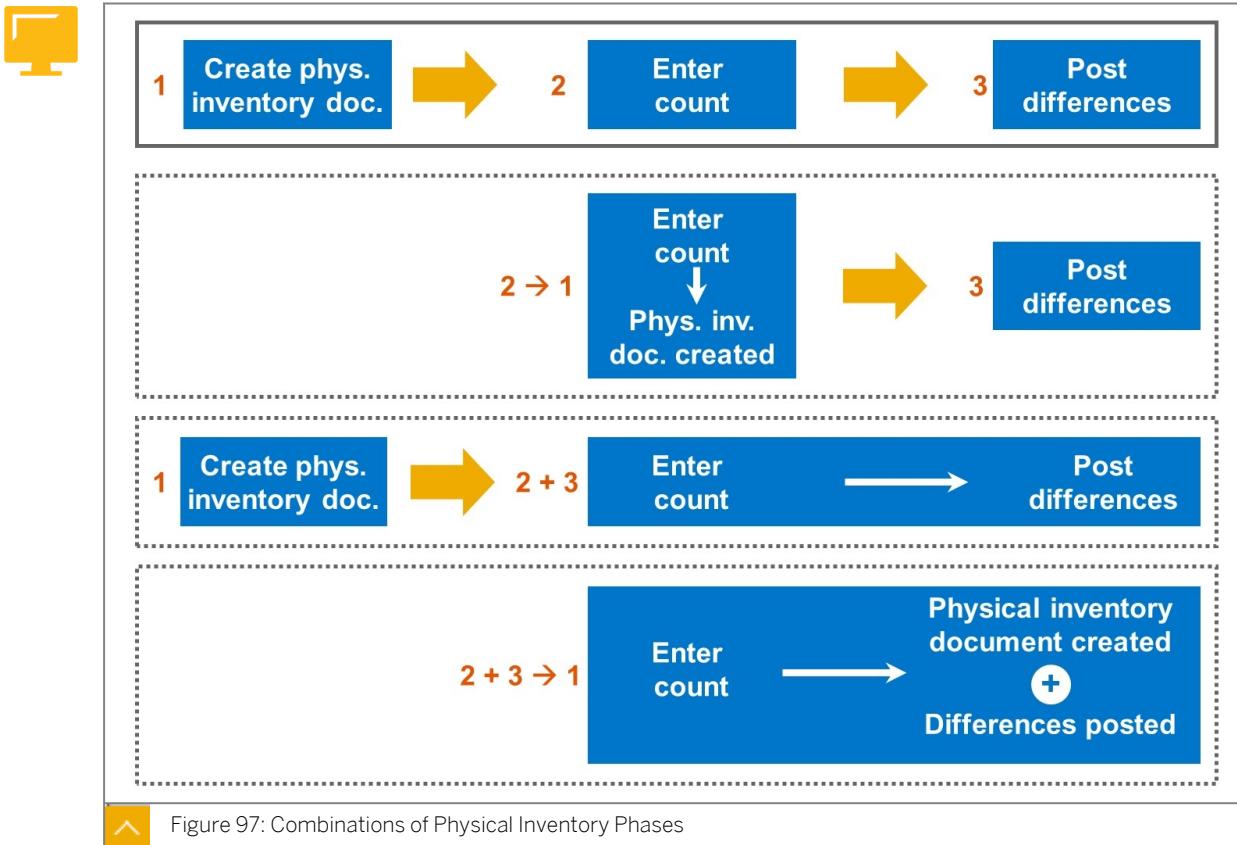
- Combinations of physical inventory phases
- Possibilities for mass and automatic creation of physical inventory documents
- Simplifications in entering count results
- Use of batch input in the physical inventory

### Combinations of Physical Inventory Phases

In every physical inventory, you go through three basic phases:

1. Creation of physical inventory documents
2. Stock count
3. Posting and analysis of difference

In the SAP system, you can combine individual phases and conduct more than one phase of physical inventory in one step.



The following options are available if you wish to combine steps in the physical inventory:

- Enter count without reference to a physical inventory document, transaction MI09.  
When you enter the count result without a document, the system automatically creates a physical inventory document when you save the entries. Post the difference with reference to this physical inventory document.
- Enter count and post physical inventory differences, transaction MI08.  
Enter the count results for an existing physical inventory document. When you save the count results, the system automatically posts inventory differences.
- Enter count without reference to a physical inventory document and post the inventory difference, transaction MI10.  
You can conduct all three phases in one step. You enter the count results without reference to a physical inventory document. When you post the results, the system generates a physical inventory document and posts the inventory difference.

### Simplifications in the Creation of Physical Inventory Documents

With the SAP Fiori apps *Create Physical Inventory Documents* and *Job Scheduling and Mass Processing – Physical Inventory*, you can reduce the effort of manually entering data when creating physical inventory documents.

#### SAP Fiori App Create Physical Inventory Documents

With this app, you can search for materials that are due for physical inventory and directly create inventory documents for them.

The screenshot shows the SAP Fiori App 'Create Physical Inventory Documents' interface. At the top, there's a search field with the value '\*515-30' and a filter icon. Below it is a 'Filter area' with dropdowns for 'Posted to Stock:' (Yes), 'Plant:' (Berlin (1020)), 'Storage Location:' (=0001), and 'Not Counted Since:' (dd.MM.yyyy). A 'Go' button and a 'Adapt Filters (4)' link are also present. The main area displays a table with three tabs: 'Unrestricted-Use Stock (5)', 'Blocked Stock (2)', and 'Quality Inspection Stock (3)'. The 'Unrestricted-Use Stock' tab is selected, showing five rows of material data. Each row includes a checkbox, material name, plant, storage location, item counted status, special stock indicator, average book quantity, and storage location code. The data includes items like 'Slug for spiral casing', 'Flat gasket', 'Packing gasket', 'Lantern ring', and 'HD brake system'. At the bottom, there are 'Create Physical Inventory Documents' and 'Schedule Physical Inventory Document Creation' buttons.

Figure 98: Fiori App Create Physical Inventory Documents – Selection

In the standard system, the filter criteria *Posted to Stock* (since S/4HANA 2023), *Plant*, *Storage Location* and *Not Counted Since* date are offered for the selection. You can also adapt filters by selecting other filter criteria, such as material type and material group, or the key figure goods issues since the last count.

The *Search field* in the filter area you use to find stock by material, batch, customer, or supplier IDs.



#### Caution:

Do not choose time periods for your data analysis where the necessary data for goods issue or goods receipt, for example, is already part of the data aging process. No data from the data aging process can be considered in the data analysis of the *Create Physical Inventory Documents* app.

To create physical inventory documents using the app, in the results list select all entries for which a physical inventory document is to be created and choose *Create Physical Inventory Documents* button. As in the *Create Physical Inventory Document* transaction (M101), physical inventory documents are always created per plant and storage location.

The screenshot shows the Fiori App interface for creating physical inventory documents. At the top, a blue header bar contains the title "Create Physical Inventory Documents". Below the header, there are two main sections: "Document Structure" and "Document Header Data". The "Document Structure" section includes fields for "Split Documents by:" (set to "None") and "Maximum Number of Items:" (set to 20). The "Document Header Data" section includes fields for "Planned Count Date:" (set to 09.08.2024) and "Document Date:" (set to 09.08.2024). Below these sections is a collapsed section titled "Additional Header Data" which contains fields for "Physical Inventory Number", "Physical Inventory Reference", and "Physical Inventory Description". It also includes checkboxes for "Set Posting Block" and "Freeze Book Inventory". At the bottom right of the form are "Create" and "Cancel" buttons.

Figure 99: Fiori App Create Physical Inventory Documents – Create Documents

For creating the inventory documents, the following functions are also available:

- Definition of an additional grouping level in the *Split Documents by* selection, to split documents by Storage Bin, Material, or Material Group
- Specification of the *Maximum Number of Items* to define the maximum number of items in each new physical inventory document
- Specification of *Document Date*, *Planned Count Date* and, for example, *Physical Inventory Number*
- Setting of posting block and freezing of book inventory

## SAP Fiori App Job Scheduling and Mass Processing – Physical Inventory

Log Details   Standard		
Message Type	Description	Time Stamp
Information	Processing Plant 1010, Storage Location 0001	10.01.2023, 15:25:45
Success	Physical inventory document 100000080 created	10.01.2023, 15:25:51
Success	Object MB_PI_DOCUMENTS_CREATE of class RE does not exist in languag...	10.01.2023, 15:25:51
Information	Processing Plant 1010, Storage Location 0002	10.01.2023, 15:25:52
Success	Physical inventory document 100000081 created	10.01.2023, 15:25:52

Figure 100: Fiori App Job Scheduling and Mass Processing – Physical Inventory: Job Monitoring

You use this app to create, schedule, and monitor jobs for the creation and printing of physical inventory documents. This way, you can ensure that inventory documents are created for the right materials at the right time. Ideally, you schedule these jobs in advance and for background processing.

When you create a new job, you first need to select a job template. You can define your own job templates or use one of the predefined job templates and then adapt them to your needs

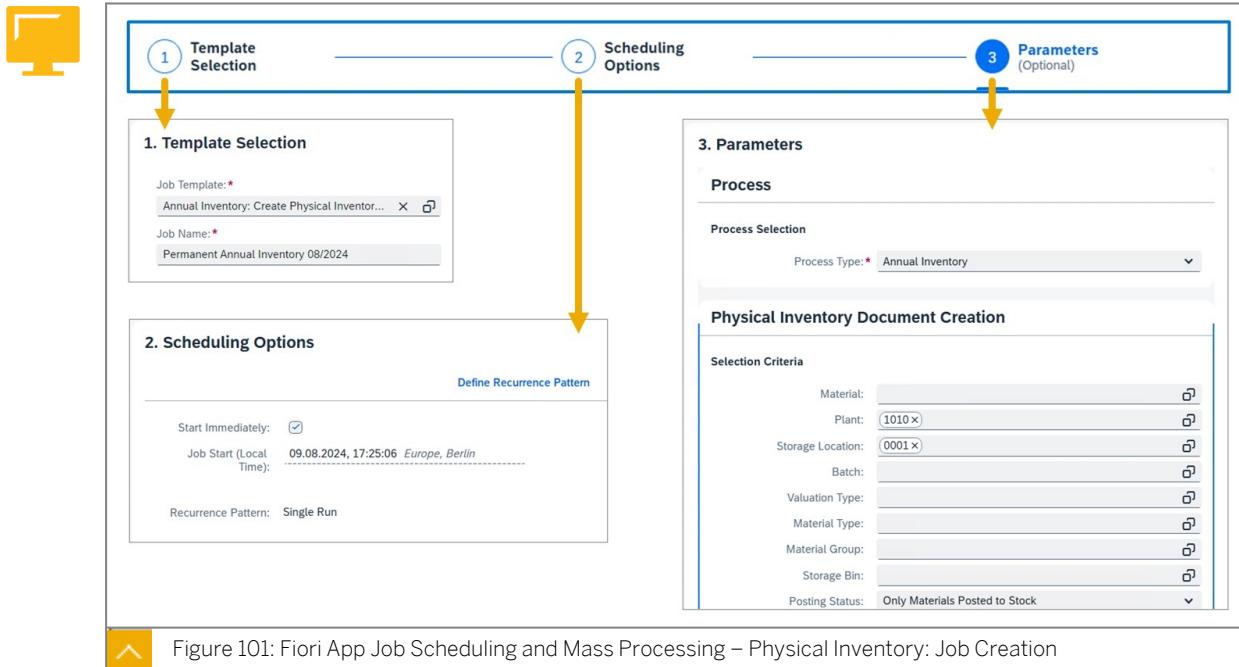
- In the predefined job template for **annual physical inventory**, the system schedules a physical inventory for all materials that have to be counted since the last run, for example, because you need to prepare the physical inventory that is due by the end of the fiscal year.
- In the predefined job template for **cycle counting**, the system schedules all materials that have to be counted because a new counting cycle is due again, for example, for a monthly counting.



### Note:

For more information about cycle counting, see the “Applying Cycle Counting” lesson

- In the predefined job template for **printing physical inventory documents**, the system schedules a background printing job for the selected physical inventory documents (mass printing).



After selecting a job template and assigning a job name, in the *Scheduling Options* section, you define the start time and the recurrence pattern for the job.

Then, in the *Parameter* section, you specify further details for the selection of the stock management units to be inventoried and for the document creation. You can make the following entries in this section:

- Process type (Annual Inventory, Cycle Counting or Printing)
- Filter values for the selection of materials to be included in the physical inventory documents, or physical inventory documents which should be printed:

For inventory document creation, for example, you can use the material number, plant, storage location, batch, material type, and material group as filter criteria. In addition, you can restrict the stock units to be included, for example, using the stock type or the stock quantity (greater than, equal to, or less than zero).

- Data for the document header of the physical inventory documents to be created

As in the *Create Physical Inventory Documents* app, here you specify, for example, the planned count date, physical inventory number, the maximum number of items per physical inventory document, and split criteria for physical inventory document creation.

Finally, you schedule your new job.

## SAP Fiori App Manage Physical Inventory Count

**Documents (33)**

Physical Inv...	Fiscal Year	Count Status	Planned Count Date	Plant
100000080	2024	Fully Counted		Berlin (1020)
100000093	2024	Not Counted	09.09.2024	Berlin (1020)
100000094	2024 Draft	Not Counted	09.09.2024	Berlin (1020)
100000095	2024	Not Counted	09.09.2024	Berlin (1020)
100000096	2024	Not Counted	09.09.2024	Berlin (1020)
100000097	2024	Not Counted	09.09.2024	Berlin (1020)

Figure 102: SAP Fiori App Manage Physical Inventory Count – Selection

With this app, you can select physical inventory documents and enter or change count results. You can also create a physical inventory document and enter the count results in one step (ad hoc counting).

You can search for physical inventory documents in the app using a variety of filter criteria. For example, the planned count date, the plant and the storage location, and the physical inventory number are available as filter criteria.

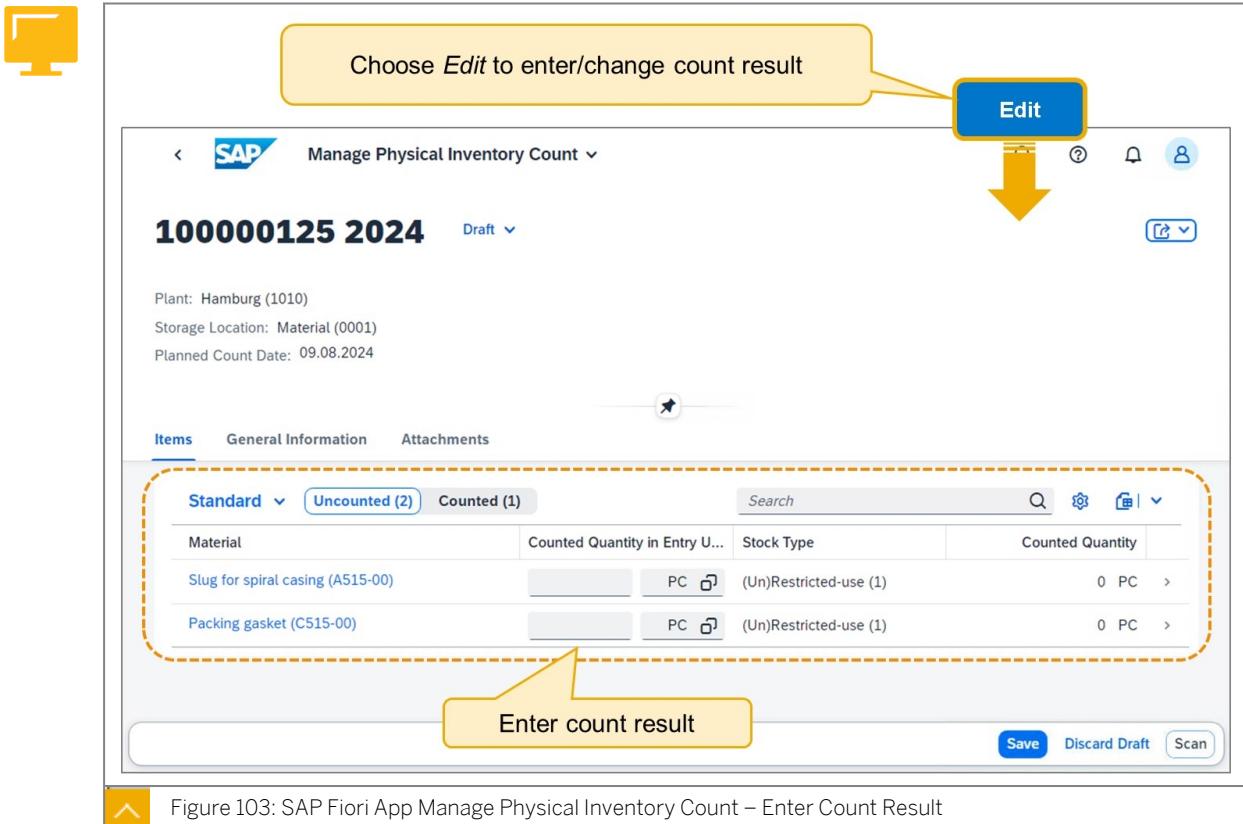
From the results list, you can navigate directly to the desired physical inventory document to enter the count result for uncounted items, or to change the count result for items that have already been counted. To simplify processing, all items are grouped in *Uncounted* or *Counted* at physical inventory document item level. In the case of zero count, enter the number 0 as the counted quantity. Otherwise, the app still interprets the item as uncounted.



### Note:

Unlike the transactions or the corresponding apps for entering physical inventory count results (M104, M105, M108, M109, M110), in the *Manage Physical Inventory Count* app, you directly enter a quantity of zero as the result. The *Zero Count* indicator is not necessary in the app.

Via the user action menu, you can define a user-specific percentage for the deviation between the counted quantity and the book quantity, that the system uses to issue a warning message when saving the count result.



### Manage Physical Inventory Count App and Integration of a Mobile Scanner

As a warehouse clerk, you can simplify finding physical inventory documents and then entering count results for physical inventory by using a scanner. This ensures fast and reliable data collection and the mapping to the appropriate material items in the physical inventory document.

There are two types of scanning options: internal smartphone camera or external barcode scanner. In the personalization area (User Action menu) you define which option you want to use.



#### Note:

Barcode scanning requires a mobile device with a touch-sensitive display together with an SAP Fiori client.

Manual barcode entry is also supported by the app. However, this option should only be used if no scanner option is available.

Regardless of the scan method used, you have to enter the counted quantity manually.

There are different scenarios that you can map using the scan function. For example:

- Scan of documents:

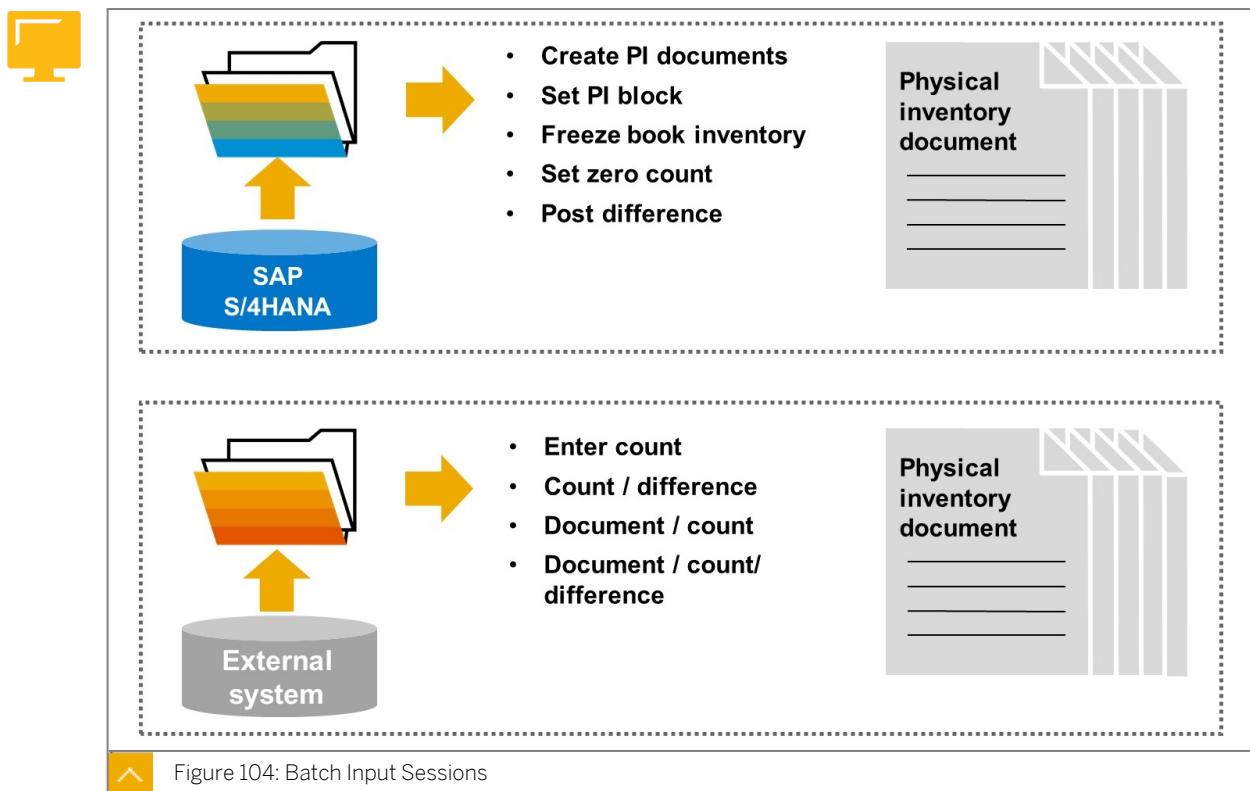
You can scan a barcode containing the physical inventory document number of one of your documents. In the app, a message appears with the physical inventory document number. The app navigates to the detail page of the document that you have scanned and displays all items of this document.

- Scan of materials:

You can scan a barcode containing the material number of a material. In the app, a message appears with the material number. Then a dialog appears with a table that displays all the open documents that contain this material item. Now you can select the document with the material item you are interested in. The app navigates to the detail page of the document and displays only your selected item.

For more information about the app, the scan function and possible scenarios, see SAP Help Portal at SAP S/4HANA → *Enterprise Business Applications* → *Supply Chain* → *Inventory* → *Inventory Management and Physical Inventory (MM-IM)* → *Fiori Apps in Inventory Management* → *Physical Inventory* → *Manage Physical Inventory Count*.

## Administration of Batch Input Sessions



You can perform various steps of the physical inventory by using batch input sessions. Batch input is a standard procedure for transferring large amounts of data to an SAP system. The transaction process is simulated in this way. The data is transferred as if it had been entered online. The advantage of this procedure is that all transaction checks are performed, which ensures data consistency.

The batch input procedure is performed as follows:

1. A batch input session containing all relevant data is generated.
2. The batch input session is processed and the data it contains is imported into the SAP system.

Batch input is typically used for one-time import of data from a legacy system into a newly installed system. It is also used for periodic data transfers (hourly, daily) from non-SAP systems or legacy systems into a SAP system, in which all enterprise data is

consolidated. Batch input offers the advantage of automating the process steps. With batch input, data is not manually entered.

To access the main menu of the batch input service, choose *System → Services → Batch Input → Sessions* (or call transaction `SM35`).

A batch input session consists of one or more transaction calls with the data to be processed by the transactions. Usually, the system does not perform the transactions in an interactive session. Consequently, a large volume of data can be imported in a very short time. Batch input sessions are usually started automatically, not manually.

In a physical inventory, this procedure can be used for the mass processing of data and for transferring count result data.

### **Batch Input Sessions in Physical Inventory**

Batch input sessions are differentiated between sessions that can only be run in the SAP system and those systems that transfer data from other systems.

The following sessions accept data from the SAP system:

- Create physical inventory documents:

To create physical inventory documents for batch input, materials that will be subject to the physical inventory are selected based on predefined selection criteria. When you run the session, the system creates the inventory documents.

When batch input sessions are created, a distinction is made between normal stock (without special stock) and each type of special stock.

- Create physical inventory documents for special procedures (cycle counting (CC), sample-based physical inventory):

In the case of the CC procedure and the sample-based physical inventory, always generate physical inventory documents using the batch input procedure. With CC, the selections contain data such as the cycle-counting indicator (CC indicator) in the material master record.

With sample-based physical inventory, the stock management units to be inventoried are determined using a random number generator and a session is created with this data.

- Block material and freeze book inventory:

The *Physical Inventory Block* and *Freeze Book Inventory* checkboxes can be selected and deselected in many physical inventory documents with batch input.

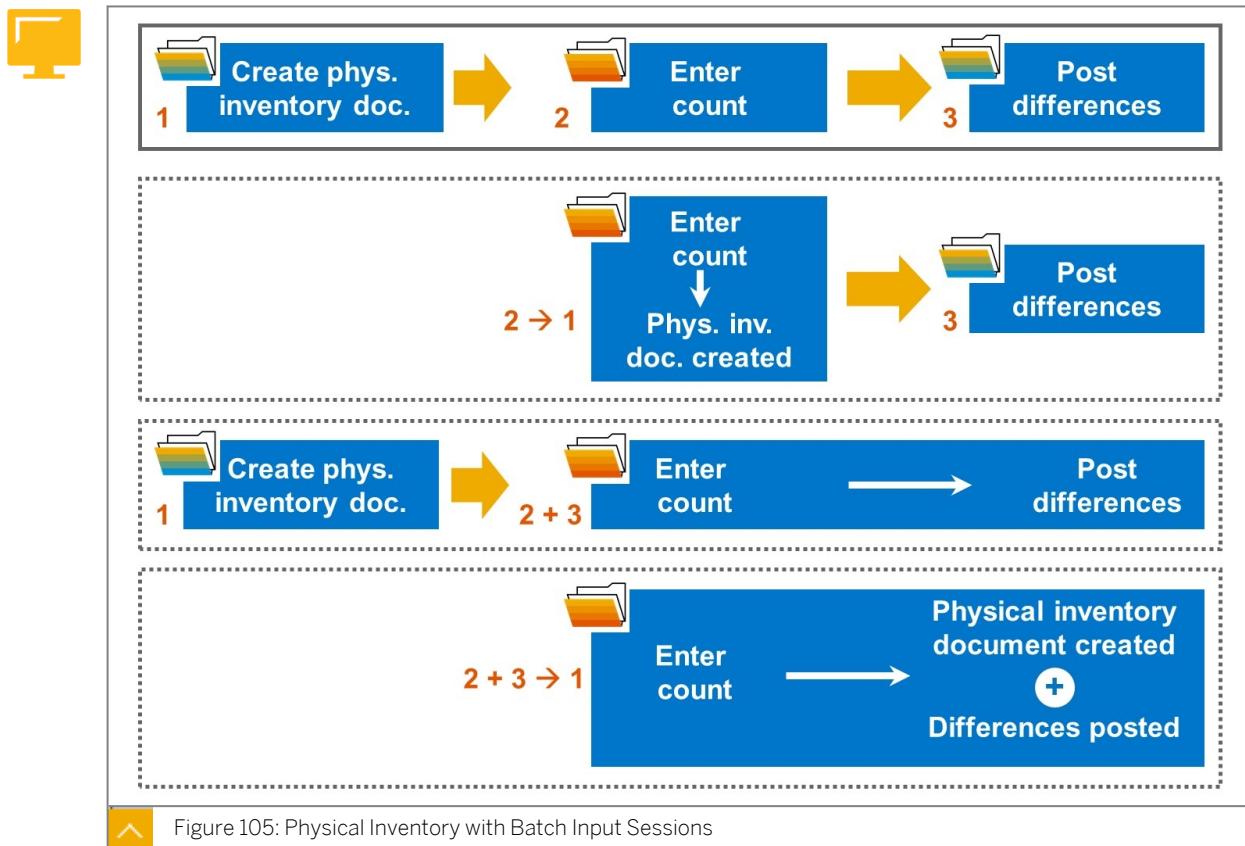
- Set zero count:

You can also select the *Zero Count* checkbox by using a batch input report. As a result, the zero count is set for all items of a physical inventory document for which no count result has been entered.

- Post difference:

After the difference has been analyzed in the list of differences, and if necessary, a recount triggered for individual items, the differences can be posted using the list. However, this procedure can unnecessarily overload system performance during the hours of operation. If materials are locked by other processes, the difference cannot be posted. For these reasons, you will want to post the differences by processing a batch input session.

## Physical Inventory with Batch Input Sessions



If count results were manually recorded on the physical inventory documents, the count results must be transferred from these lists to the system.

Count results can be transferred to the SAP system using a batch input session.

You must complete a test run before importing the sequential file. For this purpose, you must maintain relevant test data in Customizing for *Inventory Management*.

The following sessions accept data from other systems:

- Enter count:

This program was developed to facilitate the special requirements of SAP Retail. If the scope of functions provided fail to satisfy your needs, you must transfer the mobile data entry (MDE) inventory count data to the SAP system using Business Application Programming Interfaces (BAPIs). Use the business object MaterialPhysInv (material physical inventory, object type BUS2028), method Count: Enter Count for Certain Items of a PI Document (function module BAPI\_MATPHYSINV\_COUNT).

- Post count results and differences:

To enter material count results using a batch input session, the relevant physical inventory documents must have been created in the system. If an attempt is made to enter result counts for items for which no physical inventory document has been created, an error is caused when the session is run, resulting in the termination of processing.

- Enter count without reference:

This report generates a batch input session that creates physical inventory documents and simultaneously enters the count results when it is run. Before starting the report, you must ensure that the file specified on the selection screen has been created at the operating system level in the specified directory.

- Enter count without reference and posting of difference:

This report generates a batch input session that creates physical inventory documents and simultaneously enters the count results and posts inventory differences when the session is run.

#### **Default Values for Batch Input in Customizing**

In Customizing, you can define default values for the individual batch input reports that enable mass processing of data in the SAP system. For the *Create Phys. Inventory Doc. w/o Special Stock* report, for example, you can pre-assign default values for the session name, the planned count date, and the selection of stock types.

Go to Customizing, for *Materials Management* under *Inventory Management and Physical Inventory* → *Physical Inventory* → *Default Values for Batch Input* (OMCN) and then choose the relevant batch input report.



#### **LESSON SUMMARY**

You should now be able to:

- Use the apps for creating inventory documents and entering count results

## Learning Assessment

1. Which of the following criteria are used to differentiate between stock management units in Inventory Management?

*Choose the correct answers.*

- A Material number
- B Plant
- C Warehouse number
- D Material group
- E Base unit of measure
- F Valuation type

2. In the following, individual process steps of a physical inventory are listed. Which sequence makes sense for carrying out these steps?

*Arrange these steps into the correct sequence.*

- Freeze book inventory
- Print physical inventory lists
- Post differences
- Set posting block
- Create physical inventory document
- Count stock
- Remove posting block
- Check differences
- Enter Count result

3. The difference posting must also be carried out for a physical inventory item with a difference quantity of zero in order to complete the physical inventory for these items. True or False?

*Determine whether this statement is true or false.*

True

False

4. The difference posting must also be carried out for a physical inventory item with the status *Counted, recounted*. True or False?

*Determine whether this statement is true or false.*

True

False

5. Which of the following options are simplifications for physical inventory?

*Choose the correct answers.*

A Combination of individual phases in one step.

B Use batch input sessions.

C Copy physical inventory documents from the last physical inventory.

D Create physical inventory documents with the *Create physical inventory documents* app.

## Learning Assessment - Answers

1. Which of the following criteria are used to differentiate between stock management units in Inventory Management?

*Choose the correct answers.*

- A Material number
- B Plant
- C Warehouse number
- D Material group
- E Base unit of measure
- F Valuation type

Correct. A stock management unit is defined by the criteria material number, plant and storage location, stock type, batch, valuation type and special stock.

2. In the following, individual process steps of a physical inventory are listed. Which sequence makes sense for carrying out these steps?

*Arrange these steps into the correct sequence.*

- 4** Freeze book inventory
- 2** Print physical inventory lists
- 9** Post differences
- 3** Set posting block
- 1** Create physical inventory document
- 5** Count stock
- 6** Remove posting block
- 8** Check differences
- 7** Enter Count result

Correct. The order in which the specified steps can be executed in a physical inventory is: Create physical inventory document, Print physical inventory lists, Set posting block, Freeze book inventory, Count stock, Remove posting block, Enter Count result, Check differences, Post differences.

3. The difference posting must also be carried out for a physical inventory item with a difference quantity of zero in order to complete the physical inventory for these items. True or False?

*Determine whether this statement is true or false.*

- True
- False

Correct. The difference posting must be made for all items of a physical inventory document, even if there is no inventory difference. The physical inventory for a stock management unit is only complete once the difference posting is made.

4. The difference posting must also be carried out for a physical inventory item with the status *Counted, recounted*. True or False?

*Determine whether this statement is true or false.*

- True
- False

Correct. For inventory items with status *Counted, recounted* it is not possible to post the difference.

5. Which of the following options are simplifications for physical inventory?

Choose the correct answers.

- A Combination of individual phases in one step.
- B Use batch input sessions.
- C Copy physical inventory documents from the last physical inventory.
- D Create physical inventory documents with the *Create physical inventory documents* app.

Correct. It is not possible to create a new inventory document with reference to an old document. – All other answers are correct.



## UNIT 8

# Analyses for Inventory Management

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Using Analytical Apps for Inventory Management

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Applying Periodic Processing

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### UNIT OBJECTIVES

- Use overview pages and analytical apps for inventory management
- Analyze goods movements and the stock situation
- Execute a report from the Periodic Processing menu



# Unit 8

## Lesson 1

# Using Analytical Apps for Inventory Management



## LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use overview pages and analytical apps for inventory management

## Overview Pages in Inventory Management

In SAP S/4HANA, different SAP Fiori apps are available for analysis for Inventory Management.

These also include two overview pages, which summarize the most important information and tasks for a user, depending on the role. The information is displayed on a set of actionable cards. This allows you to concentrate on the most important tasks and thus make decisions more quickly and take immediate action.

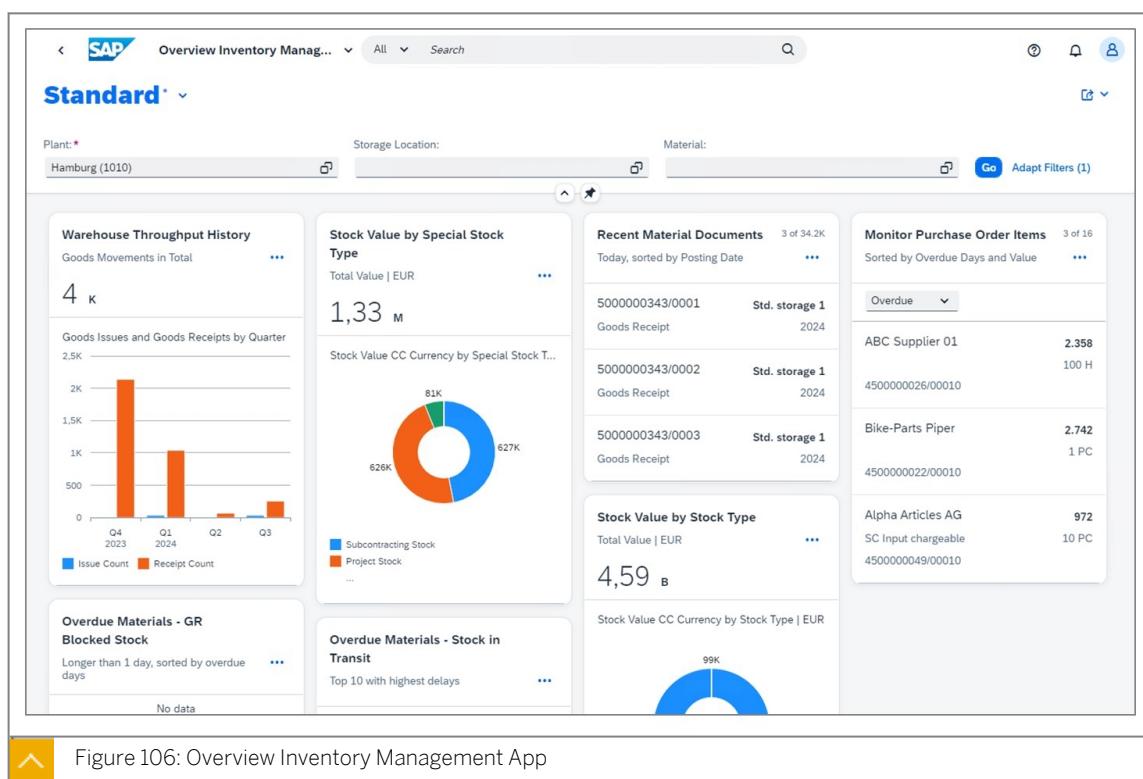


Figure 106: Overview Inventory Management App

You can customize the overview pages by rearranging cards and by hiding or showing them:

- If you want to hide a card, select the User icon in the header bar. Then select *Manage Cards*, and use the switch control to hide the relevant card.

- If you want to rearrange the cards, drag and drop a card to the place you want.

The filter of an overview page is applied to all displayed cards. The plant is a single-value and mandatory filter for both overview pages. In addition, you can restrict the analysis to specific storage locations and materials.

For list cards, selecting the header of a card brings you to the app itself, while selecting an item brings you to more detailed item information. For graphical or analytical cards, selecting the card brings you to more detailed analytical information.

### Overview Inventory Processing

This overview page is included in the user role SAP\_BR\_WAREHOUSE\_CLERK.

The following table describes the various cards that are displayed on the *Overview Inventory Processing* page.

Card Name	Description
Recent Inventory Counts	<ul style="list-style-type: none"> <li>• Shows you detailed information up to the item level of a specific material to support you in making decisions for different kinds of physical inventory strategies, such as annual, continuous, and cycle counts.</li> <li>• Priority is sorted by count date.</li> <li>• Selecting the header brings you to the <i>Physical Inventory Document Overview</i> app, while selecting an item brings you to that item in the <i>Physical Inventory Document</i> app.</li> </ul>
Warehouse Throughput History	<ul style="list-style-type: none"> <li>• Shows you the goods movements in your company. You can choose from many different available dimensions and key figures and drill-down to the individual material document item you are looking for.</li> <li>• Selecting the header or the chart brings you to the <i>Goods Movement Analysis</i> app with the corresponding parameters.</li> </ul>
Recent Material Documents	<ul style="list-style-type: none"> <li>• Shows you a list of the last posted material document items.</li> <li>• Priority is sorted by posting date, and material document number.</li> <li>• Selecting the header brings you to the <i>Material Documents Overview</i> app. Selecting a material document item displays that material document in the <i>Material Document</i> app. Here you can see more details for the goods movement or reverse the goods movement if necessary.</li> </ul>
Monitor Purchase Order Items	<ul style="list-style-type: none"> <li>• Using the view switch, you can view overdue items and items in approval.</li> <li>• Priority is sorted by overdue days and item value.</li> <li>• Selecting the header brings you to the <i>Monitor Purchase Order Items</i> app, while selecting an item brings you to that item in the same app (filtered by the selected item).</li> </ul>

Card Name	Description
Overdue Materials - GR Blocked Stock	<ul style="list-style-type: none"> <li>Shows you the overdue materials for which a goods receipt (GR) was posted into the non-valuated GR blocked stock.</li> <li>Priority is sorted by posting date (GR).</li> <li>Selecting the header brings you to the <i>Overdue Materials - GR Blocked Stock</i> app, while selecting an item brings you to that item in the same app (filtered by the selected item).</li> </ul>
Outbound Delivery List	<ul style="list-style-type: none"> <li>Shows you completed outbound deliveries and outbound deliveries that are still open. The outbound delivery list is the result of a collective processing of deliveries and used for obtaining information on general shipping processing.</li> <li>Priority is sorted by planned goods issue date.</li> <li>Selecting the header brings you to the <i>Outbound Delivery Monitor</i> app, while selecting an item brings you to that item in the same app.</li> </ul>
Inbound Delivery List	<ul style="list-style-type: none"> <li>Shows you completed inbound deliveries and inbound deliveries that are still open. The inbound delivery list is the result of a collective processing of deliveries and used for obtaining information on general shipping processing.</li> <li>Priority is sorted by delivery date.</li> <li>Selecting the header brings you to the <i>Inbound Delivery Monitor</i> app, while selecting an item brings you to that item in the same app.</li> </ul>
Overdue Materials – Stock in Transit	<ul style="list-style-type: none"> <li>Displays the top 10 items of stock transport orders with the highest time delay for which a goods receipt process has not been completed yet.</li> <li>Priority is sorted by days since posting date and PO quantity.</li> <li>Selecting the header brings or the graphic brings you to the <i>Overdue Materials – Stock in Transit</i> app with the corresponding parameters.</li> </ul>

## Overview Inventory Management

This overview page is included in the user role SAP\_BR\_INVENTORY\_MANAGER.

The *Overview Inventory Management* page contains the following cards, which are also displayed in the *Overview Inventory Processing*:

- Recent Material Documents
- Overdue Materials - GR Blocked Stock
- Warehouse Throughput History

- Monitor Purchase Order Items
- Overdue Materials – Stock in Transit

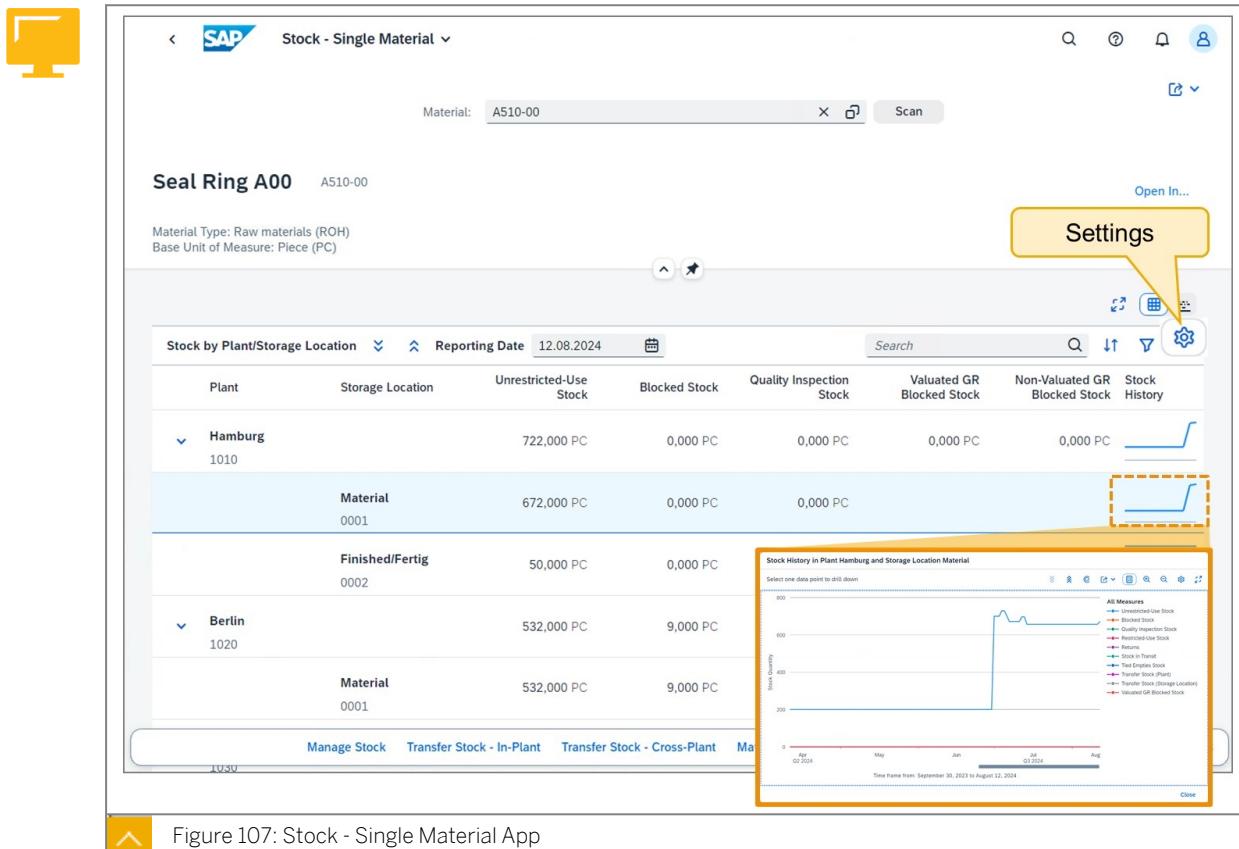
The following table lists the additional cards that are displayed on the *Overview Inventory Management* page.

Card Name	Description
Stock Value by Stock Type	<ul style="list-style-type: none"> <li>Shows you an overview of your material stock values by stock types.</li> <li>Selecting the header brings or the graphic brings you to the <i>Stock - Multiple Materials</i> app with the corresponding parameters.</li> </ul>
Stock Value by Special Stock Type	<ul style="list-style-type: none"> <li>Shows you an overview of your material stock values by special stock types.</li> <li>Selecting the header or the graphic brings you to the <i>Stock - Multiple Materials</i> app with the corresponding parameters.</li> </ul>

## Further Analytical Apps

In addition to the analytical apps included in the overview pages, there are other apps that help you monitor your processes and inventory. Some of them are listed below.

### Stock – Single Material



This app gives you an overview of the stock of an individual material depending on plants and storage locations. You can display the stock information as a table or chart. In addition, the stock history of the last 11 periods and the current stock is displayed as a curve diagram.

The app uses today's date as the reporting date. You can change the reporting date. If you leave the *Reporting Date* field empty, the system displays the stock of material for the current period (end of period).

The app offers the following features:

- Barcode scanning of material numbers with internal and external scanner devices. There are two types of scanning options: Smartphone camera or external scanner.
  - Compare stock data with the values for safety stock and minimum safety stock defined for the material. Note that you can only access the safety stock using stock history.
  - Display the stock history for each plant or storage location for the last 11 calendar months. You access the stock history of all visible stock in the table by clicking on the micro chart.
- Presentation of a first-level drill down to stock history (day-end closing) as a time series.
- Presentation of a second-level drill down to material document item postings for each day showing the key figures of each posting.
- Personalization of stock types and further display settings: You use the *Settings* function to define which columns and therefore which stocks are displayed in the results list and the stock history. However, you can also use the settings to hide the stock history column or all columns or rows with zero stocks, for example.

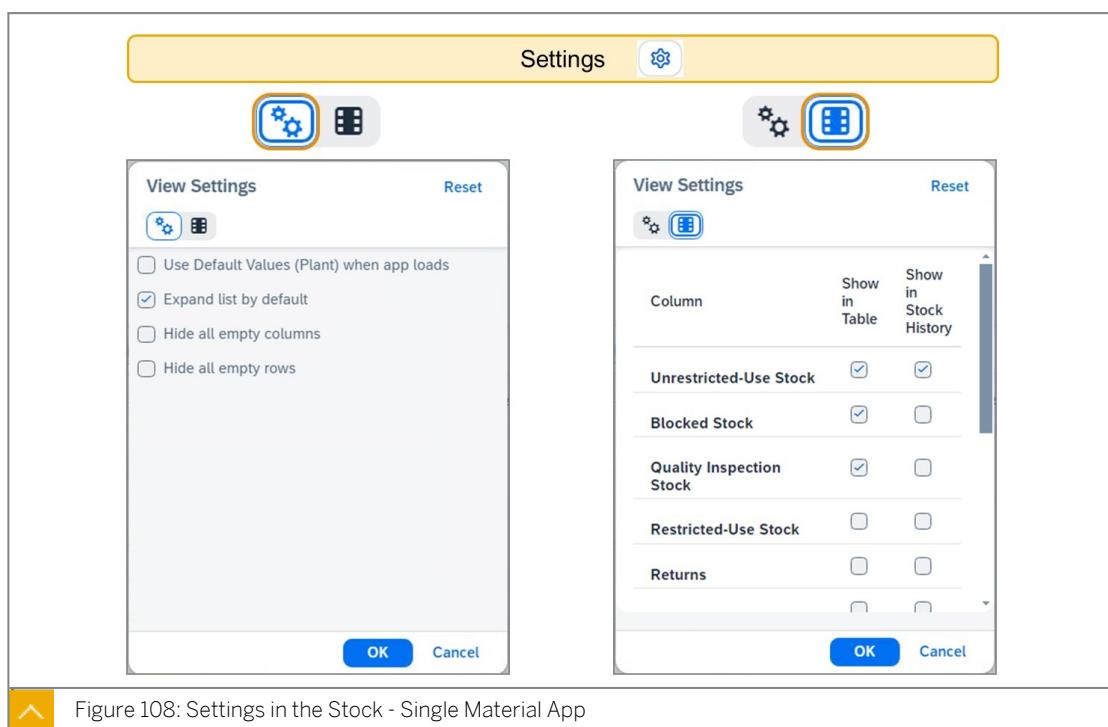


Figure 108: Settings in the Stock - Single Material App

## Stock – Multiple Materials

This app gives you an overview of the stock situation of one or more materials on a reporting date that you have specified. You can also select additional filters, such as plant, storage location, material group, or shelf life expiration date. If you do not enter a reporting date, the system displays the material stock on the current date.

The app offers the following features:

- Personalization of the display:

You use the *Settings* function to specify the columns that the system displays in the results list.

- Display the value of stock:

The app calculates the stock values based on the stock quantity of the selected reporting date multiplied by the current material price. This means that the app always calculates using the current material price, irrespective of the reporting date you have selected. The associated fields begin with *Current value of ...*

In addition, in the *Stock - Multiple Materials* app, you can display the result of a calculation method based on the historical prices at the time of the related material postings. The associated fields begin with *Value of ...*

Note that these two calculation methods lead to different results. SAP recommends that you use the main calculation method based on the current material price, because this method leads to faster results and is optimized for stock analysis.

- Export the result list to a spreadsheet.

### **Slow or Non-Moving Materials**

With this app, you can monitor and make time-dependent investigations of the slow or non-moving materials in your stock. Based on these results you can react immediately with follow-on activities such as scrapping or stock transfers.

A non-moving material represent a combination of material and plant/storage location for which the stock level is not zero and no consumption postings occurred for a defined period of time. With this app it is also possible to track slow-moving materials.

### **Dead Stock Analysis**

With this app, you can monitor and make time-dependent investigations of your dead stock.

Dead stock represents a combination of materials and plant/storage location where the stock value has increased over a defined analysis period despite existing consumption postings within that period.

The analysis of the dead stock identifies materials that could potentially have a negative impact on the company's cash flow and profitability. Based on these results, you can react immediately with follow-on activities and decide whether a material should, for example, be discontinued, discounted, or transferred to a different location.

### **Analyze Stock in Date Range**

With this app, you can analyze and monitor goods movement postings for one or more materials in a defined date range. The app displays stock quantities and values on the defined analytical start and end date. The detail page provides a comprehensive analysis of all goods movements that happened within the defined date range.

You can immediately start your search in the stock analysis with one of the 3 predefined use-case-specific filter variants:

- Standard (takes all important stock quantity and stock value fields into account)
- Stock Quantity (takes *Net Goods Receipt Quantity* and *Net Goods Issue Quantity* into account)

- Supplier Consignment Stock (takes Special Stock Type Supplier Consignment (K) into account)

In addition, you can build your own filter view from the pool of existing filter criteria.

By selecting a line item on the *Main Page*, you can navigate directly to the *Detail Page* to see further information regarding the material posting history.

For more information about the apps listed above and other apps, see the SAP documentation ([help.sap.com](http://help.sap.com)) for SAP S/4HANA under *Enterprise Business Applications* → *Supply Chain* → *Inventory* → *Inventory Management and Inventory* → *Fiori Apps in Inventory Management* → *Inventory Analytics and Control*.



## LESSON SUMMARY

You should now be able to:

- Use overview pages and analytical apps for inventory management



## Unit 8

### Lesson 2

# Using Classic Stock Lists and Document Lists



## LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Analyze goods movements and the stock situation

## Analyses in Inventory Management

Inventory Management provides you with various functions for monitoring your stocks and goods movements. Some of these evaluations can only be called as SAP Fiori apps using the SAP Fiori launchpad. The other evaluations can be used as transaction using the SAP GUI and as app using the launchpad.

In the SAP GUI, in the *Inventory Management* standard menu, you can find evaluations under *Environment* and *Periodic Processing*. This lesson deals with analyses under the *Environment* heading.



The screenshot shows the SAP GUI environment menu. It is divided into two main sections:

- Evaluations of documents**:
  - Material documents
  - Accounting documents
- Evaluations of stocks**:
  - for a single material
  - for several materials

Next to each section is a list of further options:

- List displays**:
  - Material document list
  - Accounting documents for material
  - Cancelled materials documents
  - ...
- Stock**:
  - Stock overview
  - Availability of plant stock
  - Warehouse stock
  - Stock in Transit
  - ...

Figure 109: Analyses in the Environment Menu

Your first step is to decide whether you need information about the stock situation or want to track goods movements. The analyses for material and accounting documents for goods movements are listed under *Environment* → *List Displays*. The analyses for stocks are listed under *Environment* → *Stock*.

Almost all the lists in inventory management display with the SAP List Viewer (ALV). In some lists (such as *Material Documents*, *Stock in Transit*, or *Stock with Subcontractor*), you can switch to an alternative display by choosing *Goto* → *Detail Lists*. The detail list is

nonhierarchical. In this list, you can generate accurate subtotals of any columns or totals of different units.

If you display a list with the SAP List Viewer, you can expand the current layout or select one that has been created by choosing *Settings* → *Display Variants* or *Settings* → *Layout*.

For more information on the individual analyses, see the program documentation for the respective function. To display this documentation from the analysis selection screen, choose  (*Program Documentation*).

## Document Lists

- List of material documents (`MB51` transaction) / *Display Material Document List* app:

This report displays a list of material documents that were posted for one or more materials.

The selection fields available include the *Plant*, *Storage Location*, *Movement Type*, and the *Special Stock Indicator*. You can also restrict the selection according to the user, the posting date, and the transaction type.

(For information on customizing settings for the material document list, see the "Customizing" section of this lesson.)

- Accounting documents for material (`MR51` transaction) / *Accounting Document List for Materials* app:

This report issues a list with all accounting documents that are relevant for a selected material. You can make selections based on the material, company code, valuation area, posting date, document date, and the document type of the accounting document.

- Archived material documents (`MBAL` transaction) / *Material Documents: Read Archive* app):

This report reads archives for material documents and issues the corresponding documents according to the selection criteria.

- Canceled materials documents (`MBSM` transaction) / *Display Cancelled Material Documents* app):

This report issues a list with reversal documents and the corresponding original documents. You can make selections based on the number of the reversal document or the number of the original document, as well as the material, plant, posting date, and name of the user who created the document.



### Caution:

This report selects only reversal documents that were created with the *Cancel Material Documents* function.

- Material documents with reason for movement (`MBGR` transaction) / *Display Material Documents with Reason for Movement* app):

According to your selection, this report displays a list of all goods movements in which a reason for movement was specified during entry. The report selects documents according to two criteria:

- Without reference to purchase orders:

The system evaluates all document items where you have entered a reason for the movement. If you set the *No Vendor* indicator on the initial screen, the system only evaluates those documents that do not have a reference to either a purchase order or to a vendor.

- With reference to purchase orders:

This criteria is valid if the document contains at least one item with a reason for the movement, and if it has a reference to a purchase order. Using the PO history, the system reads all other GR documents for the PO item.

You can restrict the selection using the material, plant, posting date, vendor, and purchasing document. For items with purchase order reference, the system displays the total delivered and returned quantities and their values, and the percentage of the returned quantity to the total delivered quantity.

## Stock Lists

- Stock overview (MMBE transaction) / *Display Stock Overview* app:

This report gives you an overview of the stocks for one material across all organizational levels. You can restrict your selection according to the material, plant, storage location, and batch (for materials subject to the batch management requirement). On the initial screen, you can decide whether you want to display special stocks in the stock overview and, if so, which ones.

For the list display, you can specify that zero-stock lines are hidden and you can select the levels that display in the basic list.

The stock types that displays in the basic list is determined by the display version that you specify on the initial screen. This display version also determines the sequence in which the selected stock types display. Display versions are defined in Customizing for *Inventory Management*.

- Stock/requirements list (MD04 transaction):

The stock/requirements list displays the stock situation and requirements situation that currently applies to a material. The system reads the MRP (material requirement s planning) elements (for example, plant stock, purchase requisitions, POs, and reservations) each time the list is created. The stock/requirements list, therefore, always shows the current availability status of the material. The stock/requirements list contains information about one material in one plant.

- Plant stock availability (MB53 transaction) / *Display Plant Stock Availability* app:

This report gives you an overview of the available stock of one material in selected plants using the static availability check.

- Availability overview (CO09 transaction) / *Monitor Product Availability* app:

This analysis uses a dynamic availability check to give you an overview of the stocks that exist for a material. The quantity available on the day of analysis is specified.

**Caution:**

This function can be used only for materials for which a checking group has been specified for the availability check in the material master record.

- Warehouse stock (**MB52** transaction) / *Display Warehouse Stock* app:

With this report, you can display the total stock of several materials with quantities and values at plant and storage location level. As with the stock overview, you can make selections based on materials, plants, storage locations, and batches. For this report, you can also make selections based on material type, material group, and purchasing group.

On the initial screen, you can specify whether special stocks are to be analyzed, and if so, which ones. When analyzing warehouse stock, you can monitor materials with negative stocks. To analyze the warehouse stock, select the *Display Negative Stocks Only* checkbox on the initial screen.

- Stock for posting date (**MB5B** transaction) / *Stocks for Posting Date* app:

This report lists stocks in a time interval (00:00 on the start date to 24:00 on the end date). Starting with the current stock, the system uses the existing material documents to calculate the stock on the specified posting date.

The list displays the stock quantity and stock value on the start and end date, the sum and value of all receipts, the sum and value of all issues, and a list of the material documents in the selection period.

- Stock in transit (**MB5T** transaction) / *Display Stock in Transit* app:

This report displays a list of materials for a plant that are in transit. It includes both cross-plant stock transport orders and cross-company-code stock transport orders. On the selection screen, you can choose which types of POs to display. You can also include delivered or deleted POs. If you enter a special stock indicator, you can specifically select stock transfers of the sales order stock.

- Stock in transit on key date (**MB5TD** transaction) / *Stock in Transit on Key Date* app:

This is an evaluation similar to transaction **MB5T**. However, you can restrict it using a key date. The system only selects and processes purchase order history entries whose posting date is before or the same as the key date entered.

- Valuated GR blocked stock (**MB50A** transaction) / *Display Valuated GR Blocked Stock* app:

The report selects the records from the purchase order history on the basis of the selection criteria entered. If you wish to select purchase orders according to the *Acceptance at Origin* indicator, the stock quantities determined from the PO history are assigned to the corresponding transactions of origin acceptance. After this, the system calculates the proportional valuated GR blocked stocks at the level of the PO document item. The system displays the results of this calculation in an output list.

- Valuated special stock (**MBBS** transaction) / *Display List of Stock Values - Sales Order and Project Stock* app:

This report issues a list with the valuated sales order stock and the valuated project stock.

- Stock with subcontractor (**MBLB** transaction) / *Stocks at Subcontractor* app:

This report analyzes which materials and material quantities are found with a particular subcontractor.

## Customizing for Lists in Inventory Management

In Customizing for *Inventory Management and Physical Inventory*, the *Reporting* node contains the functions for configuring the analysis in inventory management.

### Define Stock List Display

To define the display versions for the stock overview, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Reporting* → *Define Stock List Display* (OMBG). The settings for stock display in the stock overview (MMBE) are divided into three steps:

- Display version:

Definition of a display version by assigning a version number and a description.

- Rules for display of stock balances:

Version-dependent definition of the stocks that are displayed in the basic list. Thereby it is defined which stocks appear on which screen and in which column of the screen.

- Detail screen for stock balance display:

Definition of the stocks and their sequence for the detail list of the stock overview. These settings depend on organizational level and, if applicable, on special stock.

### Define Field Selection for Material Document List

The screenshot shows the SAP Fiori interface for defining field selection for a material document list. At the top, there's a title bar with the text "Define Field Selection for Material Document List (Cross-Client)". Below the title, there's a table with columns: "...", "Table", "Field name", "Field content", "Selection field", and "Output field". The table has three rows corresponding to MKPF fields: BKTXT (Doc. Header Text), BUDAT (Posting Date), and MBLNR (No. of Mat. Document). In the "Selection field" column, the first row has an empty checkbox, while the others have checked boxes. In the "Output field" column, the first row has an empty checkbox, while the others have checked boxes. A yellow arrow points from the "Output field" column of the table to the "Column Set" section of a "Change layout" dialog box. Another yellow arrow points from the "Header data" section of a "Selection screen" preview to the "Column Set" section of the same dialog box. The "Selection screen" preview shows fields for "Item data" and "Header data", with "Posting date" and "Material doc." being the relevant ones. The "Change layout" dialog shows a list of fields: "Doc. Header Text", "Posting Date", "Material Document", and "...".

For the material document list, you can configure the selection screen and the number of fields contained in the field catalog. To do so, choose in Customizing *Materials Management* → *Inventory Management and Physical Inventory* → *Reporting* → *Define Field Selection for Material Document List*.

- *Selection screen* indicator

Use this indicator to add fields to the selection screen, such as the number of the material document or the material document year.

- *Output field* indicator

The *Output field* indicator controls whether a field is contained in the field catalog for the material document list or not. The field catalog contains all fields that can be selected for display when you set up your own layout. In the standard setting, the *Output field* indicator is set for all fields. By reducing the number of fields in the field catalog, you can improve the performance of the report if required.

### **Set Up Print Functions for Reporting**

You can specify which additional information is printed along with the output list for inventory management reports in Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Reporting* → *Set Up Print Functions for Reporting*.

You can also specify whether the detail list (non-hierarchical list) for a report displays in the ALV Grid Control instead of the SAP List Viewer.

### **Group Movement Types for Stock Lists**

You assign movement types to a movement type group in Customizing for Materials Management under *Inventory Management and Physical Inventory* → *Reporting* → *Group Movement Types for Stock Lists*.

This assignment can be used in the *Stock for Posting Date* report for evaluation purposes. This enables you, for example, to group together all movement types that affect purchasing. In the output list of the report, you can then filter out material documents using this group without individually specifying all purchasing-relevant movement types.



### **LESSON SUMMARY**

You should now be able to:

- Analyze goods movements and the stock situation

## Unit 8

### Lesson 3

# Applying Periodic Processing



#### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Execute a report from the Periodic Processing menu

#### Analysis of Conversion Differences ( MB5U Transaction) / Analyze Conversion Differences app

In the SAP system, you can manage materials in different units of measure. You must always specify a base unit of measure for the material. Alternative units of measure are then defined using a conversion factor with reference to this base unit of measure. The system automatically converts all quantities that you enter in an alternative unit of measure during a goods movement into the base unit of measure.

Rounding differences may occur during these conversions. Especially in the following cases, rounding effects may occur:

- The base unit of measure is a metric unit of measure (such as meter, liter, and kilogram) and goods movements are posted in non-metric units (such as yard, gallon, and pound) (or vice versa).
- The base unit of measure is not the smallest unit of measure, unlike the alternative unit of measure.



#### Material Master Record

Base unit of measure

Tonnes

Alternative unit

1000 KG = 1 TO

#### Goods receipt:

Quantity 987.6 KG ≈ 0.988 TO

#### Goods issue:

Quantity 123.3 KG ≈ 0.123 TO

RM07AUMD

	Quantity entered	Stock quantity	Conversion difference
Total receipts	987.600 KG	0.988 TO	0.000400 TO
Total issues	123.300 KG	0.123 TO	0.000300 TO
Balance	864.300 KG	0.865 TO	0.000700 TO



Figure 111: Analyzing Conversion Differences

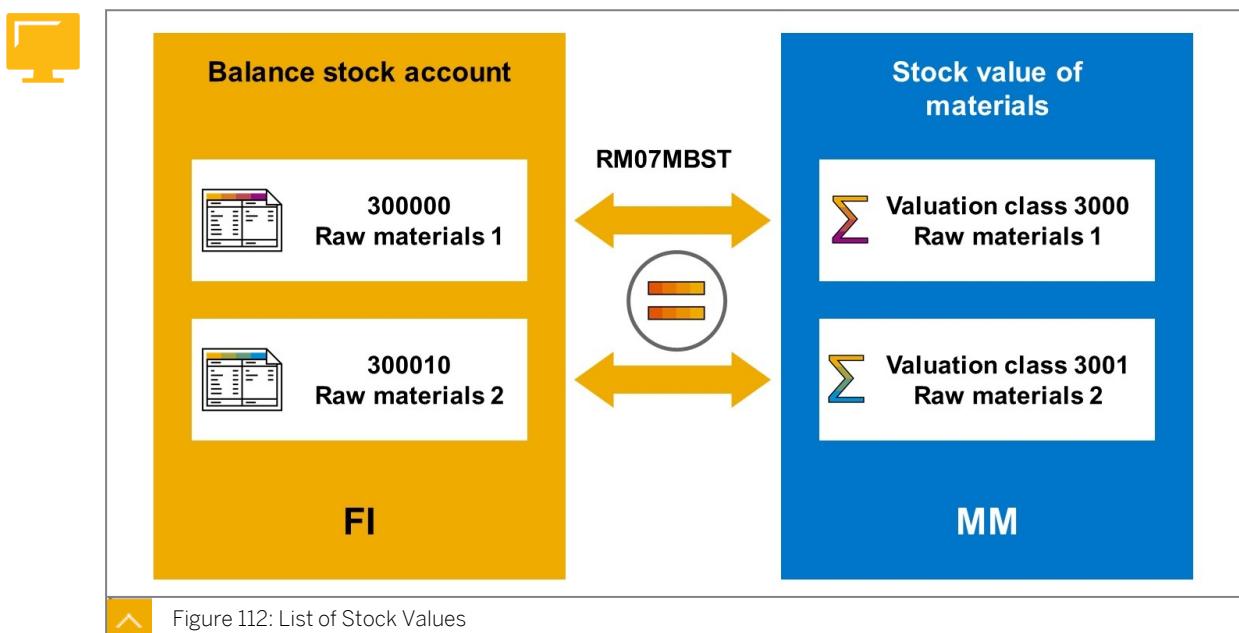
To make your selection, you can use the posting date, material, plant, and special stock indicator. You can also specify a threshold value for the conversion difference to exclude negligible differences from the analysis.

In the output list, the system generates the total of all receipts and issues and displays the quantity in the entry unit of measure and the base unit of measure. In the *Conversion differences* column, the system shows the rounding errors that occurred during conversion. With the help of the balance of the conversion differences, you can post the determined differences manually.

### List of Stock Values (MB5L Transaction) / Display List of Stock Values App

With the report *List of Stock Values*, you can display the total stock quantity and the total stock value for a material (or several materials) at company code and valuation area level. In addition, the stock account to which the specified material is posted during goods movements is determined.

You can also display the balance values per company code and G/L account. For each G/L account, the balance is compared with the sum of the stock values of the associated materials. The difference between the two totals is displayed.



You can restrict the search options in the *List of Stock Values* report with the following fields:

- Material
- Company code
- Valuation area
- Valuation type
- Valuation class
- G/L account

In addition, you can choose the period for the evaluation (current period, previous period, or previous year) and specify the scope of the list, for example, totals or negative stocks only.

If you start the report without specifying a material, valuation area, and valuation class, the balance for each stock account must match the total of all stock values of the materials for the relevant valuation class. A variance can have the following reasons:

- You made manual postings to the stock account.
- Other postings besides stock postings are made to the stock account. In this case, you need to check the account determination in the Customizing settings for valuation. Ensure that the stock accounts are used only for transaction key BSX (stock postings).
- You changed the account determination for stock accounts (transaction and event key BSX) in the current operation, but you did not debit the relevant stocks from the old account (movement type 562) and posted to the new account (movement type 561).

If you place the cursor on the G/L account in the output list and choose *Environment → Stocks*, the system displays an overview of all materials that are managed in this G/L account. The system also displays the total value and total stock for each material.



**Caution:**

Postings are possible because you cannot lock the materials when the report is executed and, therefore, the balance values may not equal zero even though there are no inconsistencies. In the current posting system, you get significant results only when you let the report run several times and then compare the results.

### **Stock Consistency Check ( MB5K Transaction) / Check Stock Consistency App**

Using the *Stock Consistency Check* report, you can check the consistency of your stock data at valuation area level or material level. You can, therefore, determine possible errors in your stocks before they cause greater problems.



**Note:**

For information on all functions provided by the report, see the program documentation.

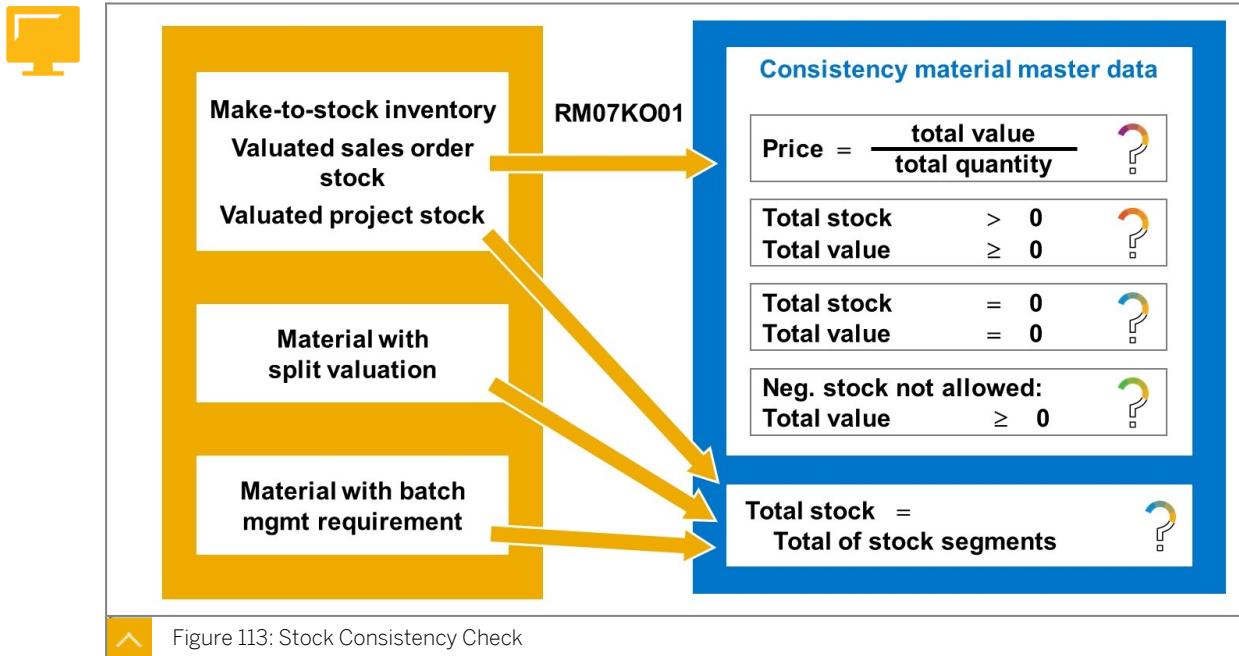


Figure 113: Stock Consistency Check

For the stock values of the make-to-stock inventory, the valued sales order stock and the project stock, the system verifies the following:

- Whether the valuation data in the material master record is coherent according to the following specifications:
  - Is the specified valuation price the same as the quotient of value and quantity?
  - Does the positive quantity of a material also have a negative price?
  - Does a negative value exist for a material even though negative stocks are not allowed?
  - Is the value unequal to zero even though the relevant material has a stock of zero?
- Whether the quantity of the total valued stock corresponds to the total of the individual subordinate segments. For example, the program checks whether the total valued stock of a material with split valuation corresponds to the total of all valuation types of this material.



### LESSON SUMMARY

You should now be able to:

- Execute a report from the Periodic Processing menu

## Learning Assessment

1. Which of the following are features of Fiori App Stock - Single Material?

*Choose the correct answers.*

- A It allows you to display the stock information as a table or a diagram.
- B It allows you to recognize a combination of locations and materials where the consumption postings were posted for a defined period of time.
- C It allows you to compare stock data with the values for safety stock and minimum safety stock defined for the material.
- D It allows you to summarize the most important information for an employee, depending on the role.

2. \_\_\_\_\_ should be analyzed to identify materials that can have a negative impact on a company's profitability and cash flow.

*Choose the correct answer.*

- A Non-moving materials
- B Dead stock
- C Inbound delivery stock
- D Cancelled materials

3. Which of the following lists displays reversal documents and the corresponding original documents?

*Choose the correct answer.*

- A Stock/requirements list
- B Canceled materials documents
- C List of material documents
- D Archived material documents

4. Which of the following evaluations from Inventory Management belong to the so-called *Periodic Processing*?

*Choose the correct answers.*

- A Analysis of conversion differences
- B Stock overview
- C Stock/requirements list
- D Stock consistency check
- E List of stock values

5. Which of the following are possible reasons why variances in stock values between MM and FI are showing in transaction MB5L (List of stock values)?

*Choose the correct answers.*

- A You made manual postings to a stock account.
- B You manage the stock values of several materials on one stock account.
- C You made postings other than stock postings to the stock account.
- D You reversed all negative stock balances.

## Learning Assessment - Answers

1. Which of the following are features of Fiori App Stock - Single Material?

*Choose the correct answers.*

- A It allows you to display the stock information as a table or a diagram.
- B It allows you to recognize a combination of locations and materials where the consumption postings were posted for a defined period of time.
- C It allows you to compare stock data with the values for safety stock and minimum safety stock defined for the material.
- D It allows you to summarize the most important information for an employee, depending on the role.

Correct. One feature of the Fiori App Stock – Single Material is to change the display between table or diagram. Another feature of the app is to compare stock data with the values for safety stock and minimum safety stock defined for the material.

2. \_\_\_\_\_ should be analyzed to identify materials that can have a negative impact on a company's profitability and cash flow.

*Choose the correct answer.*

- A Non-moving materials
- B Dead stock
- C Inbound delivery stock
- D Cancelled materials

Correct. The analysis of the dead stock identifies materials that could potentially have a negative impact on the company's cash flow and profitability.

3. Which of the following lists displays reversal documents and the corresponding original documents?

*Choose the correct answer.*

- A Stock/requirements list
- B Canceled materials documents
- C List of material documents
- D Archived material documents

Correct. The canceled materials documents list displays reversal documents and the corresponding original documents.

4. Which of the following evaluations from Inventory Management belong to the so-called *Periodic Processing*?

*Choose the correct answers.*

- A Analysis of conversion differences
- B Stock overview
- C Stock/requirements list
- D Stock consistency check
- E List of stock values

Correct. Analysis of conversion differences, List of stock values, Stock consistency check, and Manage held data belongs to the periodic processing.

5. Which of the following are possible reasons why variances in stock values between MM and FI are showing in transaction MB5L (List of stock values)?

*Choose the correct answers.*

- A You made manual postings to a stock account.
- B You manage the stock values of several materials on one stock account.
- C You made postings other than stock postings to the stock account.
- D You reversed all negative stock balances.

Correct. Making manual postings to a stock account and making postings other than stock postings to the stock account are possible reasons why variances in stock values between MM and FI are showing in transaction MB5L.

# UNIT 9

# Further Customizing for Inventory Management

## Lesson 1

Implementing Settings for Documents

229

## Lesson 2

Setting Up Movement Types

233

## Lesson 3

Applying Other Customizing Settings

237

## UNIT OBJECTIVES

- Set up Customizing for documents in inventory management
- Define a new movement type in inventory management
- Customize plant parameters and transaction MIGO



## Implementing Settings for Documents



### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Set up Customizing for documents in inventory management

### Number Assignment for Accounting Documents

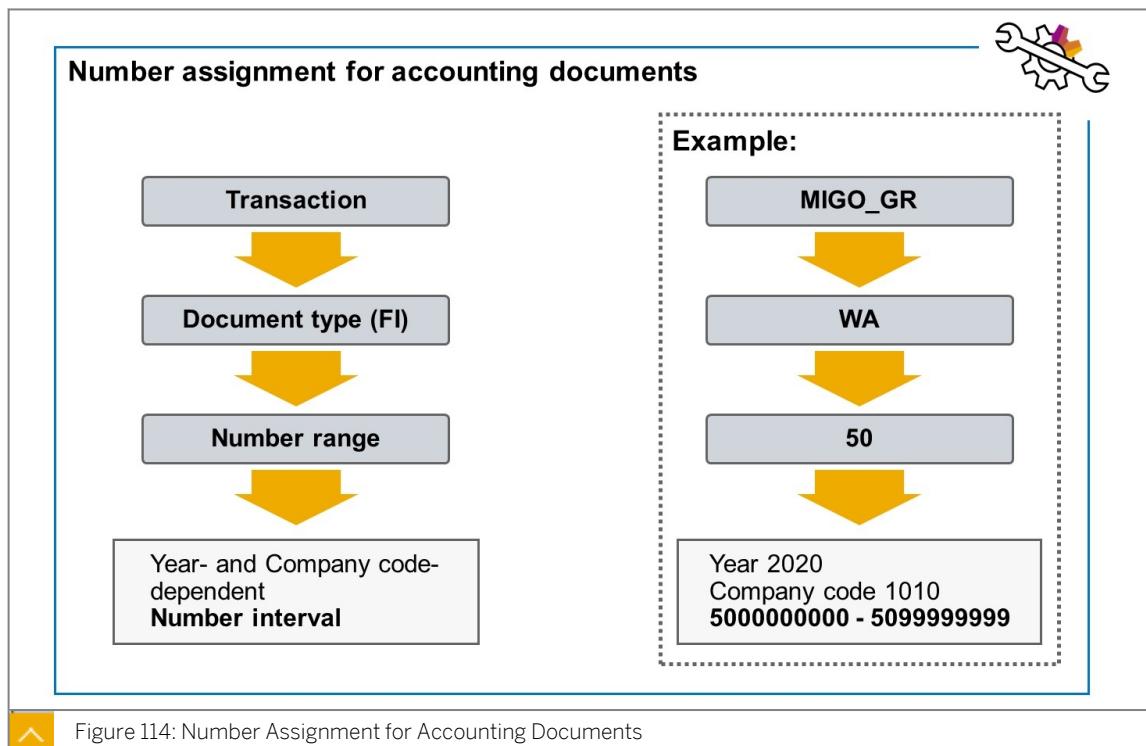


Figure 114: Number Assignment for Accounting Documents

To enable you to assign document numbers differently and, therefore, provide a distinction between accounting transactions, the SAP system contains various document types for accounting documents. In inventory management, the transaction determines the type of accounting document. The system also allocates a number range to a document type. You define intervals for each company code based on the number range and the fiscal year.

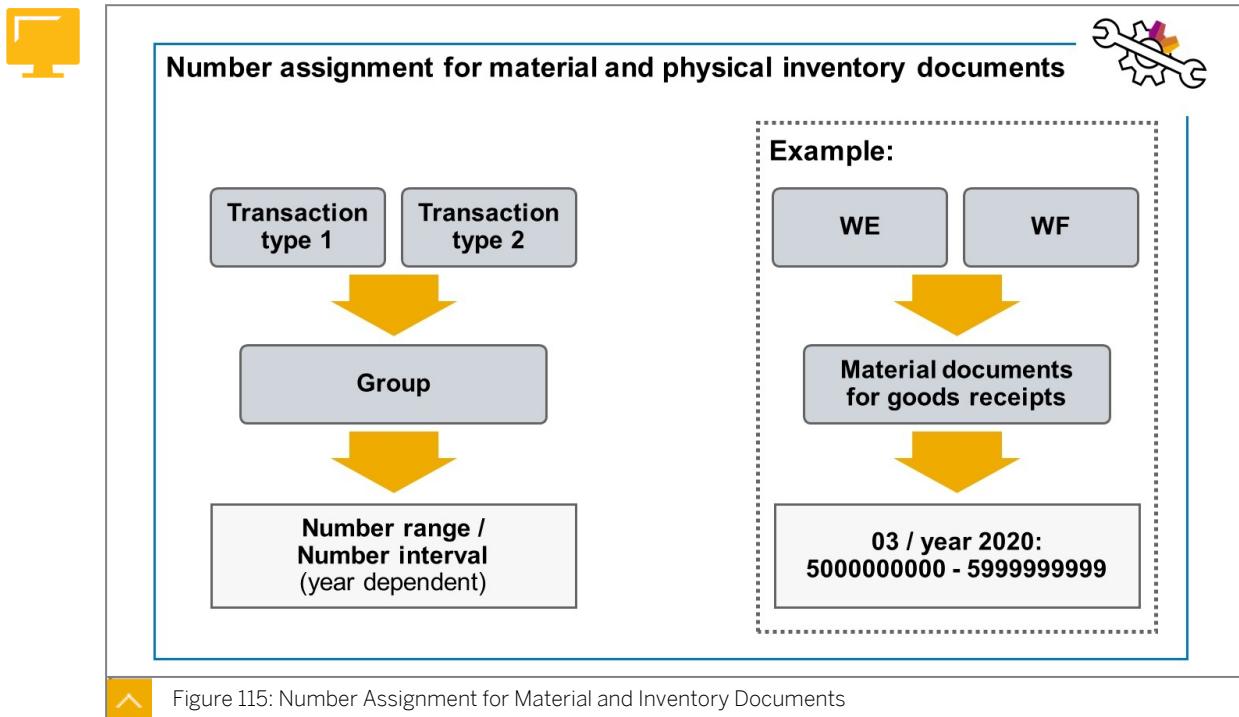
To change the settings for the number assignment for accounting documents, go to *Customizing for Materials Management* under *Inventory Management and Physical Inventory* → *Number Assignment* → *Define Number Assignment for Accounting Documents* (OMBA).

In the standard SAP system, the following document types are predefined for inventory management:

- WA for goods issues, transfer postings, and other goods receipts

- WE for goods receipts with reference to purchase orders
- WI for inventory differences
- WL for goods issues with reference to deliveries
- WN for net postings of goods receipts
- PR for revaluation documents

## Number Assignment for Material and Inventory Documents



The number assignment of the material and physical inventory documents is assigned to each transaction in inventory management depending on the transaction type. The transaction types are split into number range groups. You must define a number range interval for each group.

You cannot change the transaction types. However, you can change the number range intervals or assign transaction types to new groups.

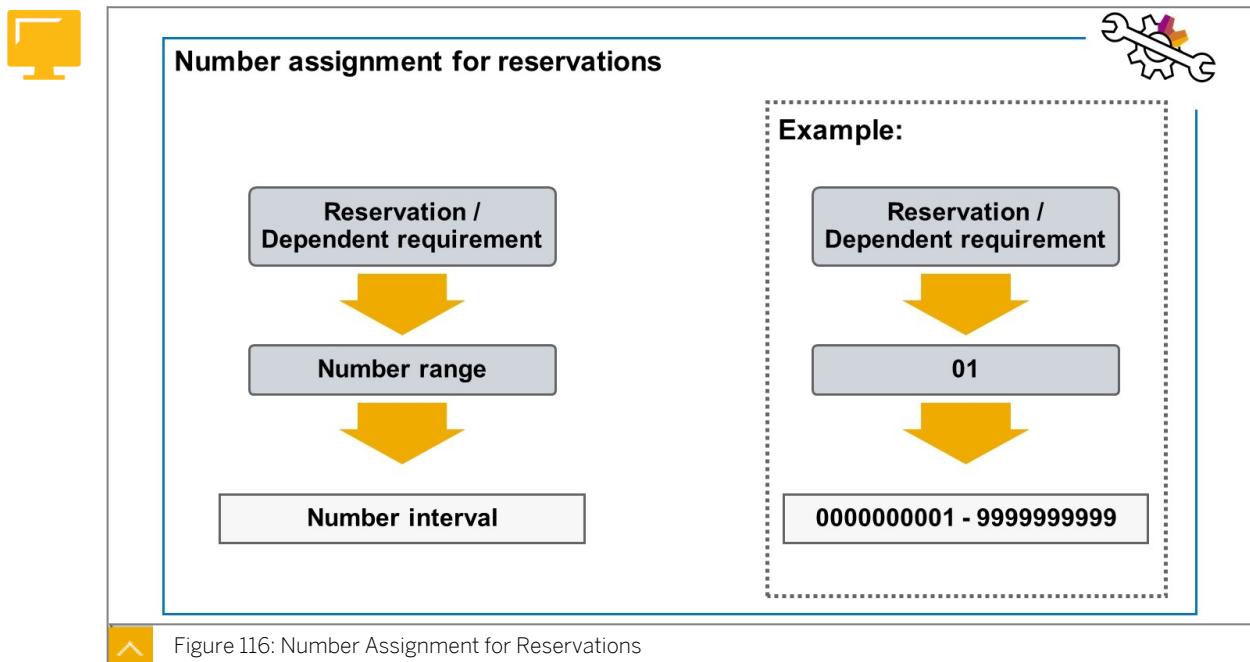
To change the settings for the number assignment for the material documents, go to *Customizing for Materials Management* under *Inventory Management and Physical Inventory* → *Number Assignment* → *Define Number Assignment for Material and Physical Inventory Documents (OMBT)*.

The following list shows how the transaction types and number intervals for inventory management are present in the standard SAP system:

- Physical inventory documents (number range interval of 0100000000 to 0199999999), which include the following transaction types:
  - IB for physical inventory documents
  - ID for physical inventory documents for counts and differences without references

- IN for physical inventory documents for recounts
- IZ for physical inventory documents for counts without references
- WV for physical inventory documents for difference posting (Warehouse Management)
- Material documents for goods movements and physical inventory differences (number range interval of 4900000000 to 4999999999), which include the following transaction types:
  - WA for GIs, transfer postings, and Other GRs
  - WI for material documents for inventory adjustment postings
  - WL for GIs for delivery documents (Sales and Distribution (SD))
  - WR for goods movements for confirmations (Production Planning (PP))
  - WS for goods movements for run schedule headers (PP)
  - WH for goods movements for handling units (HU)
  - WQ for goods movements for usage decisions (QM)
- Material documents for GRs (number range interval of 5000000000 to 5999999999), which include the following transaction types:
  - WE for GRs for POs
  - WF for GRs for production orders
  - WO for subsequent adjustment of subcontract orders
  - WW for subsequent adjustment of active ingredient materials
- Inventory sampling numbers (number range interval of 0200000000 to 0299999999), which includes transaction type SI.

## Number Assignment for Reservations



When assigning numbers for reservations, you can create several number ranges with intervals, but only one number range can be used for number assignment.

In the standard SAP system, number range 01 is allocated so that only the interval for number range 01 is defined.

To change the settings for the number assignment for reservations, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Number Assignment* → *Define Number Assignment for Reservations* (OMC2).

The setting for the number assignment is valid for all reservations and plants in your client. You can only create an internal number assignment for reservations that are created directly in the SAP system.



**Hint:**

If you create reservations with method CreateFromData1 (function module BAPI\_RESERVATION\_CREATE1), use number range RB for external number assignment.



### LESSON SUMMARY

You should now be able to:

- Set up Customizing for documents in inventory management

# Setting Up Movement Types



## LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Define a new movement type in inventory management

### Movement Type

To differentiate between individual goods movements, you must enter a movement type when entering a movement. The movement type is a three-digit key for identifying a goods movement. The movement type has important control functions in inventory management.

The movement type plays a central role, for example, in the following operations:

- Updating quantity fields
- Updating stock and consumption accounts
- Determining the screen structure of a document entry

To create a new movement type or change an existing one, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Movement Types* → *Copy, Change Movement Types*.

### Movement Type Control Functions



M...	Movement Type Text	Print	Auto.SLoc.	Acct	Reas.	Cons...	Ind. rqmts redu
101	GR goods receipt	<input checked="" type="checkbox"/>			-	G	<input checked="" type="checkbox"/>
102	GR for PO reversal	<input type="checkbox"/>			-	G	<input checked="" type="checkbox"/>
103	GR into blocked stck	<input type="checkbox"/>			-		<input type="checkbox"/>
104	GR to blocked rev.	<input type="checkbox"/>			-		<input type="checkbox"/>
105	GR from blocked stck	<input checked="" type="checkbox"/>			-	G	<input checked="" type="checkbox"/>
106	GR from blocked rev.	<input type="checkbox"/>			-	G	<input checked="" type="checkbox"/>
107	GR to Val. Bl. Stock	<input type="checkbox"/>			-	G	<input type="checkbox"/>
108	GR to Val. Bl. Rev.	<input type="checkbox"/>			-	G	<input type="checkbox"/>
109	GR fr. Val. Bl. St.	<input checked="" type="checkbox"/>			-		<input checked="" type="checkbox"/>
110	GR fr. Val. Bl. Rev.	<input type="checkbox"/>			-		<input checked="" type="checkbox"/>

Figure 117: Customizing Activity to Copy and Change Movement Types

You can configure several movement type settings in other places in Customizing for *Inventory Management*. However, you will also find these control indicators in this central Customizing activity for movement types. For example, the following settings are involved:

- Shelf life expiration date check
- Automatic creation of storage location data in the material master record
- Automatic generation of PO at time of GR
- Stock determination
- Dynamic availability check
- Field selection

The individual settings for the movement types are split into different views, for example, field selection and update control. Each view contains the relevant control indicator. As some control indicators depend not only on the movement type but also on other parameters (such as special stock indicator, and indicators for quantity and value update and movement indicator), some views contain several entries for a single movement type. These entries are necessary to cover every possible data constellation in the system.

The following table gives you an overview of the different views, the relevant parameters per view and some settings that can be found on the view.



Table 1: Settings for Movement Types

View	Dependent on ...	Settings for ...
Movement type	Movement type	<b>Entry control</b> (print and batch indicators, check best before date, control reason for Mvt) <b>Update control</b> (SLoc automatic, consumption posting, statistically relevant, generate physical inventory doc)
Short texts	Movement type Language Special stock indicator Movement indicator Receipt indicator Consumption indicator	Movement type text (Description of movement)
Allowed transactions	Movement type	In which transaction can the movement type be used?
Help texts	Movement type Language Special stock indicator Transaction	<b>Enhanced text</b> (Text to describe the individual goods movement)

View	Dependent on ...	Settings for ...
Field selection (from 201) / Batch search procedure	Movement type Special stock indicator	<b>Field selection</b> (Field selection not for MIGO transactions) <b>Search procedure for batch determination</b>
Field selection (Enjoy)	Movement type	<b>Field selection</b> (entry in field required or optional)
Update control / WM movement types	Movement type Indicators for value and quantity update Special stock Movement indicator Receipt indicator Consumption posting	<b>Entry control</b> (Availability date and missing part processing) <b>Updating control</b> (Reference MvTs for WM, LIFO/FIFO-relevant)
Account grouping	Movement type Indicators for value and quantity update Special stock Movement indicator Receipt indicator Consumption	<b>Account modification</b> (Account modification dependent on transaction/event key for account determination, indicator for <i>Check account assignment</i> )
Reversal / follow-on movement types	Movement type Function code	<b>Movement type</b> and <i>Type of posting</i> indicator
Reason for movement	Movement type Key for reason	Description of reason
Deactivate QM inspection procedure	Movement type and indicator for special stock, movement, receipt, and consumption	Movement type for inactive QM inspection processing
Statistics group Logistics Information Systems (LIS)	Movement type and indicator for special stock and movement	Update control (LIS)

### Creation of a New Movement Type

To create a new movement type, copy an existing one first. Select a movement type that meets your requirements for the new movement type, especially in terms of the quantity and value update, to use as a template. After you have copied the template, save the new movement type. Then adapt the settings for the new movement type to your requirements.

Observe that the key of the new movement type must start with 9, X, Y, or Z. When you copy the template, ensure that you also copy all dependent entries of the reference movement type.

It is also best to copy the reversal movement type of the referenced standard movement type and assign it to the new movement type.



Note:

- The quantity update of a movement type is controlled by the quantity string. Quantity strings are fixed values in the SAP system. Neither the control itself nor the assignment to a movement type can be changed.
- The value string of the movement type is responsible for the value update for a goods movement. Like the quantity string, it is a fixed value and cannot be changed. The value string is used to determine the transactions are relevant for automatic account assignment.

You can use a second variable, the account grouping code, to control G/L account determination differently for certain account determination transactions. Account grouping code can be used, for example, for the offsetting entry transaction for the inventory posting. Account grouping code can be used, for example, to post a different consumption account for a goods issue for cost center (movement type 201) than for a withdrawal for scrapping (movement type 551).



### LESSON SUMMARY

You should now be able to:

- Define a new movement type in inventory management

## Applying Other Customizing Settings



### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Customize plant parameters and transaction MIGO

### Plant Parameters

The plant parameters are a summary of the plant-dependent control parameters of inventory management and physical inventory. In Customizing, you can find the settings under *Materials Management → Inventory Management and Physical Inventory → Plant Parameters*.

Be aware that most of the inventory management functions are configured not only depending on the plant. Often there are other settings that need to be made depending on the movement type or other values. You should therefore make the settings for a specific function in the corresponding Customizing activity. This ensures that you do not forget any relevant settings.



Hint:

If you create a new plant with the copy function, the plant parameters are also copied from the reference plant.

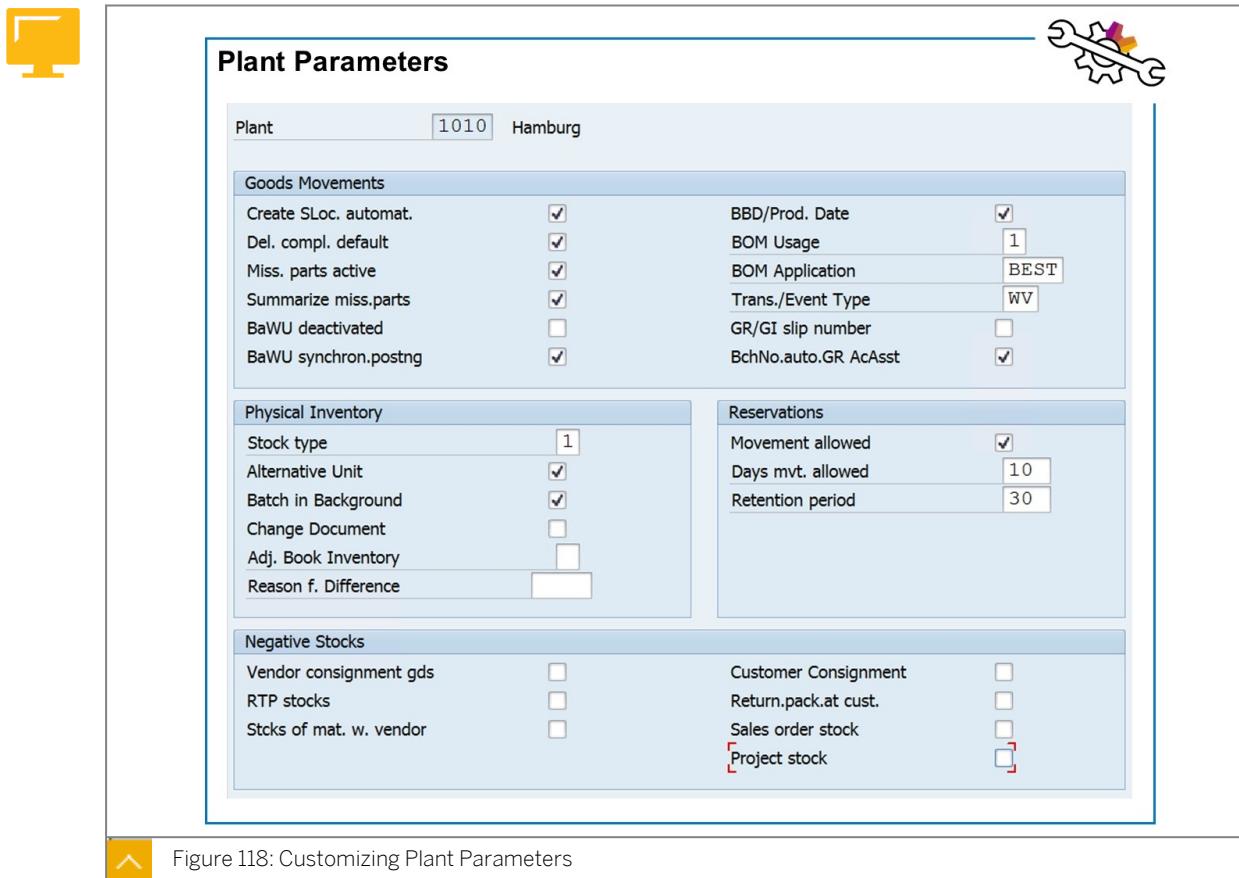


Figure 118: Customizing Plant Parameters

For each plant, the parameters are grouped as follows (see figure above):

- Settings for goods movements, for example:
  - Set automatic creation of storage location data for materials.
  - Set the delivery completed indicator as default.
  - Set the missing parts check as active at Goods Receipt (GR).
  - Activate or deactivate the batch where-used list.
  - Check the remaining shelf life.
- Settings for physical inventory:
  - Specify the stock type.
  - Propose alternative units of measure.
  - Determine the batch in the background.
  - Create change documents with changes to count results.
  - Adjust the book inventory balance.
  - Specify a reason for inventory difference.
- Settings for reservations:
  - Activate the *Movement allowed* checkbox.

- Specify the number of days prior to which movement is allowed.
- Define the retention period for reservation items.
- Settings for negative stocks:
  - Allow negative stocks for individual special stocks (to set this, negative stocks must be allowed at plant and storage location levels).

## Settings for Goods Movements (MIGO)

The settings for the goods movements are divided into three sections.

- Field selection for MIGO
- Field selection per movement type
- Settings for transactions and reference documents

### Field Selection for MIGO



**Field Selection for MIGO**



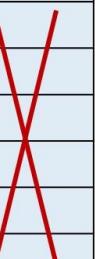
Modifiable field	Input	Required	Display	Hide	HiLi
...	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Delete	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<b>Bill of Lading</b>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Delivery Note</b>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

 Figure 119: Field Selection for MIGO Transaction

In this step you can hide individual fields or buttons that you do not require. You can also define fields for which you want to ensure that an entry is made as required entries, for example, *Delivery note* and *Bill of lading*.

The settings can be found in Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Settings for Goods Movements (MIGO)* → *Field Selection for MIGO* (transaction OMJX).

In the standard SAP system, all configurable fields are defined as optional entry fields except for the *Goods Receipt/Issue Slip* field. This field is hidden in the standard system because it is only required in some countries, such as Italy.



#### Hint:

The characteristic required entry field is evaluated only for fields with the name *GOHEAD* (header fields) and *GOITEM* (item fields).

### Field Selection per Movement Type



**Field Selection per Movement Type**



Movement Type	Field Name	Required Entry	Optional Entry
101	SGTXT	<input type="radio"/>	<input checked="" type="radio"/>
101	WEMPF	<input type="radio"/>	<input checked="" type="radio"/>
...		<input type="radio"/>	<input checked="" type="radio"/>
201	KONTO	<input type="radio"/>	<input checked="" type="radio"/>
201	KOSTL	<input checked="" type="radio"/>	<input type="radio"/>
...	...	<input type="radio"/>	<input checked="" type="radio"/>

Figure 120: Field Selection per Movement Type

To make the settings for the movement-type-dependent field selection, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Settings for Goods Movements (MIGO)* → *Field Selection per Movement Type*. You can also define the settings in the Customizing activity *Copy, Change Movement Types*. You determine for each field whether an entry is optional or required.

The table contains all the fields that are visible on the screen interface. For these fields, choose either the optional entry or the required entry. To hide a field, delete the required entry from the table. There is no difference between the various special stock indicators in the entries. If relevant, the system displays special stock fields automatically.

To show a hidden field, choose the *New Entry* button. Then, enter the movement type and select the field to be inserted from the list of input options.



**Hint:**  
You cannot change every field for every movement type.

## Settings for Transactions and Reference Documents

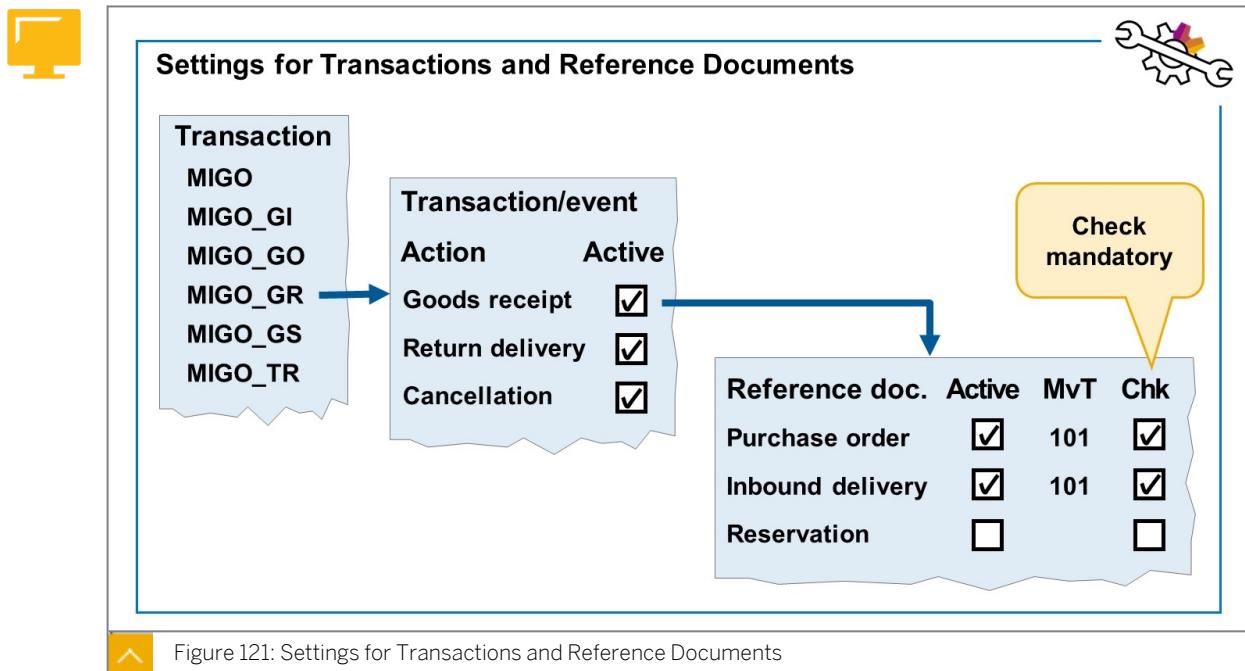


Figure 121: Settings for Transactions and Reference Documents

In Customizing, you can specify the selectable transactions (actions) and reference documents for each MIGO transaction. You can also make the following settings for each combination of MIGO-transaction - Action - Reference Document:

- Which movement type is proposed to a user when this combination is used for the first time.
- Whether the *Check* function (F7) must be executed before the goods movement can be posted.

To make these settings, go to Customizing for *Materials Management* under *Inventory Management and Physical Inventory* → *Settings for Goods Movements (MIGO)* → *Settings for Transactions and Reference Documents*.



### LESSON SUMMARY

You should now be able to:

- Customize plant parameters and transaction MIGO



## Learning Assessment

1. Which of the following statements about customizing documents in inventory management are true?

*Choose the correct answers.*

- A The number assignment of the material and physical inventory documents depends on the transaction type.
- B In inventory management, the company code determines the type of accounting document.
- C For an accounting document, number range intervals are defined for each company code and the fiscal year.
- D For reservations it is not possible to define own number ranges.

2. You want to create a new movement type and select a key from the customer namespace. Which of the following keys could you use?

*Choose the correct answers.*

- A Z101
- B 991
- C X92
- D C93

3. In the Customizing settings for Goods Movements (MIGO) you can define whether the Check function must be executed before the goods movement can be posted. True or False?

*Determine whether this statement is true or false.*

- True
- False

4. Which of the following settings can you make in the plant parameters for Inventory Management and Physical Inventory?

*Choose the correct answers.*

- A Define the retention period for reservation items.
- B Define default movement types for goods movements.
- C Activate shelf life expiration date check for the plant.
- D You can restrict the movement types that can be used per plant.

## Learning Assessment - Answers

1. Which of the following statements about customizing documents in inventory management are true?

*Choose the correct answers.*

- A The number assignment of the material and physical inventory documents depends on the transaction type.
- B In inventory management, the company code determines the type of accounting document.
- C For an accounting document, number range intervals are defined for each company code and the fiscal year.
- D For reservations it is not possible to define own number ranges.

Correct. The number assignment of the material and physical inventory documents is assigned to each transaction in inventory management depending on the transaction type. In Inventory Management, the accounting document type is determined by the transaction, not by the company code. For an accounting document, number range intervals are defined for each company code and the fiscal year. For the allocation of numbers to reservations, you can create own number ranges with intervals, but only one will be used.

2. You want to create a new movement type and select a key from the customer namespace. Which of the following keys could you use?

*Choose the correct answers.*

- A Z101
- B 991
- C X92
- D C93

Correct. A movement type (MvT) can have a maximum of 3 characters, and a new customer specific MvT should start with 9, X, Y, or Z.

3. In the Customizing settings for Goods Movements (MIGO) you can define whether the Check function must be executed before the goods movement can be posted. True or False?

Determine whether this statement is true or false.

True

False

Correct. You find this setting in Customizing for Materials Management under *Inventory Management* → *Inventory Management and Physical Inventory* → *Settings for Goods Movements (MIGO)* → *Settings for Transactions and Reference Documents*. Depending on the transaction code, the event and the reference document you can activate the Check Mandatory function.

4. Which of the following settings can you make in the plant parameters for Inventory Management and Physical Inventory?

Choose the correct answers.

- A Define the retention period for reservation items.
- B Define default movement types for goods movements.
- C Activate shelf life expiration date check for the plant.
- D You can restrict the movement types that can be used per plant.

Correct. The definition of the retention period for reservation items and the activation of the shelf life expiration date check are two of the setting, which could be made in the plant parameters. – All other answers are wrong.

## Lesson 1

Defining Settings for Business Partners

249

### UNIT OBJECTIVES

- Define settings for vendor master records



## Defining Settings for Business Partners

### LESSON OVERVIEW

This lesson explains the key settings for business partners. This lesson also explains the settings for partner roles and partner determination.

### Business Example

Your company has migrated to SAP S/4HANA. In SAP S/4HANA the functions of customers and vendors have been merged to business partners.

For this reason, you require the following knowledge:

- An understanding of how to make the necessary settings for business partners

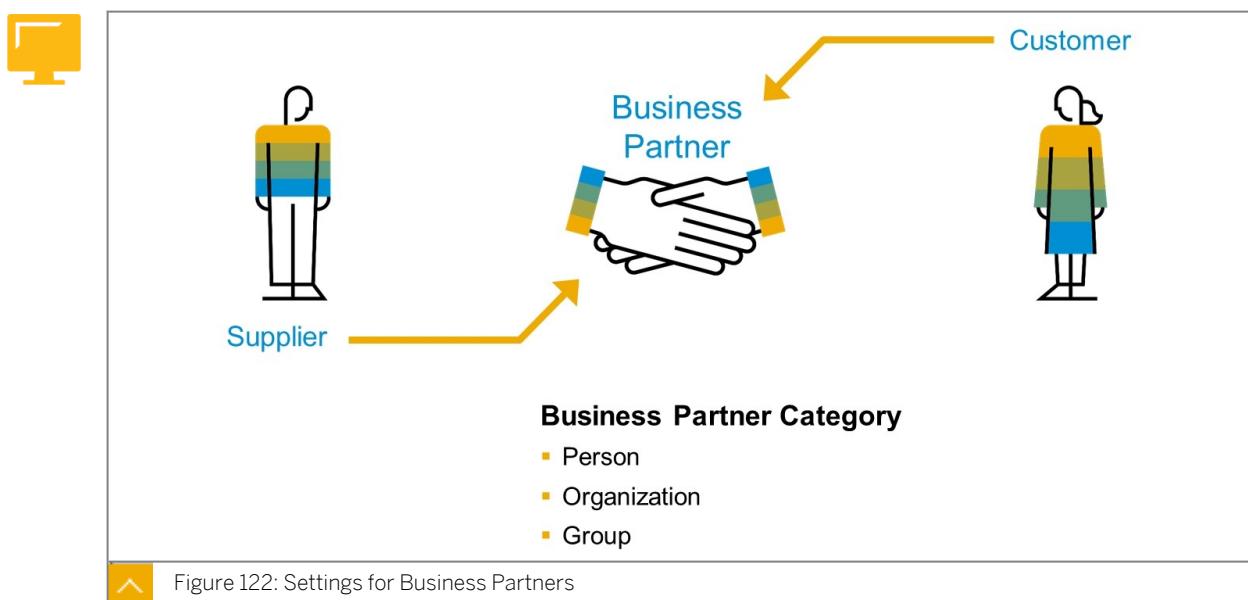


### LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Define settings for vendor master records

### Overview of Settings for Business Partners



The master data of suppliers and customers is managed in SAP S/4HANA by using business partner master data. By using this approach, it is possible to centrally maintain the master data for suppliers and customers.

Business partner (BP) master data can be maintained with the transaction BP, or by using the corresponding app *Maintain Business Partner* from the SAP Fiori launchpad.

**The settings for business partners include:**

- Defining Business Partner roles
- Defining number ranges and groupings
- Assigning number ranges to groupings
- Assigning account groups to groupings
- Defining field attributes
- Setting partner roles and partner determination

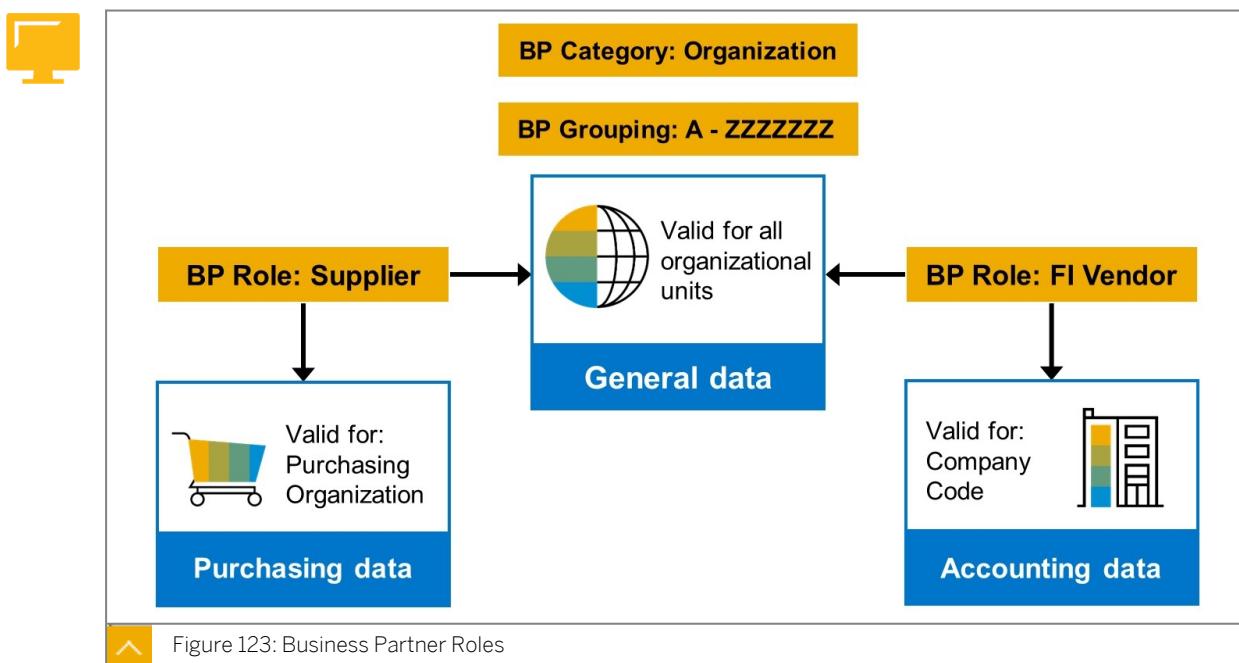
Business partners can be categorized as a person, group, or organization (legal person or part of a legal entity, for example, department).

A group represents, for example, a shared living arrangement, a married couple, or an executive board. An organization represents units such as a company, a department of a company, or an association.

### Business Partner Roles

The link between a business partner and its usage is achieved by a role concept. A **business partner role** corresponds to a business context in which a business partner can appear.

Possible roles are, for example, *supplier* and *FI vendor* (relevant for procurement processes), or *customer* and *FI customer* (relevant for sales processes). This ensures that the relevant master data for the various processes can be recorded accordingly, and that the business partner can be used for the relevant functions (such as procure-from party).



A business partner can have one or more roles; roles can be removed or added for a business partner.

For suppliers (business partner category *Organization*) used in purchasing processes, the following roles are required:

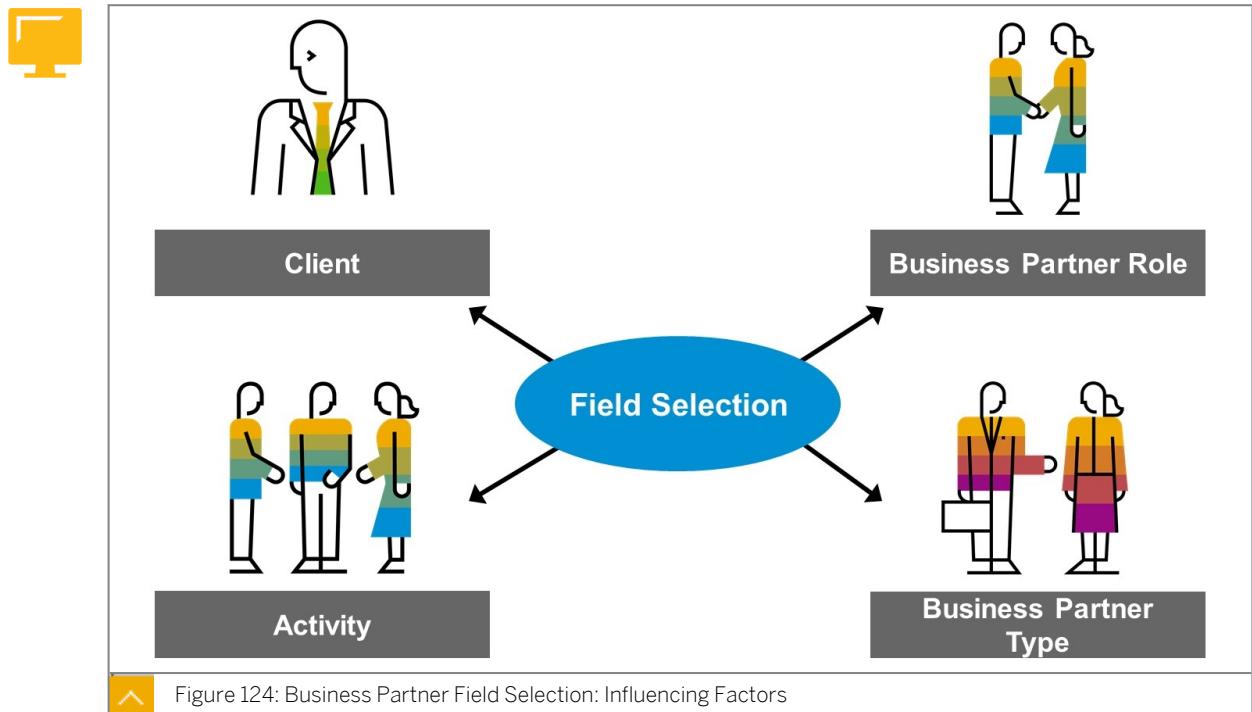
1. *000000 Business Partner (general)* for the general data on client level
2. *FLVN00 FI Vendor* for the financial data on company code level

### 3. FLVN01 Supplier for the data on purchasing organization level

#### Influencing Factors for Business Partner Field Selection

You use the field attributes to specify:

- The fields that should not be displayed (hide)
- The fields that should only be displayed, but not ready for input (display)
- The fields that data must be entered (required entry)
- The fields that data is optional (optional entry)



As in the case of a material master record, various factors influence the field attributes for business partners. These factors are:

- Client
- Business Partner Role
- Activity
- Business Partner Type

**Note:**

In SAP ECC, account groups, transactions and purchasing organizations were used to control the field selection.

An account group is also assigned to the business partner in SAP S/4HANA via the grouping. This means that the field selection for the business partner can also be made in SAP S/4HANA using the classic SAP ECC settings.

**CAUTION:** You should control the field selection either via the settings for the business partner or via the classic SAP ECC settings. See also the documentation for then Customizing activity *Define Account Groups with Screen Layout (Vendors)*, transaction OBD3 (*IMG → Financial Accounting → Accounts Receivable and Accounts Payable → Supplier Accounts → Master Data → Preparations for Creating Supplier Master Data → Define Account Groups with Screen Layout (Vendors)*).

### Field Selection Maintenance and Rules for Influencing Factors

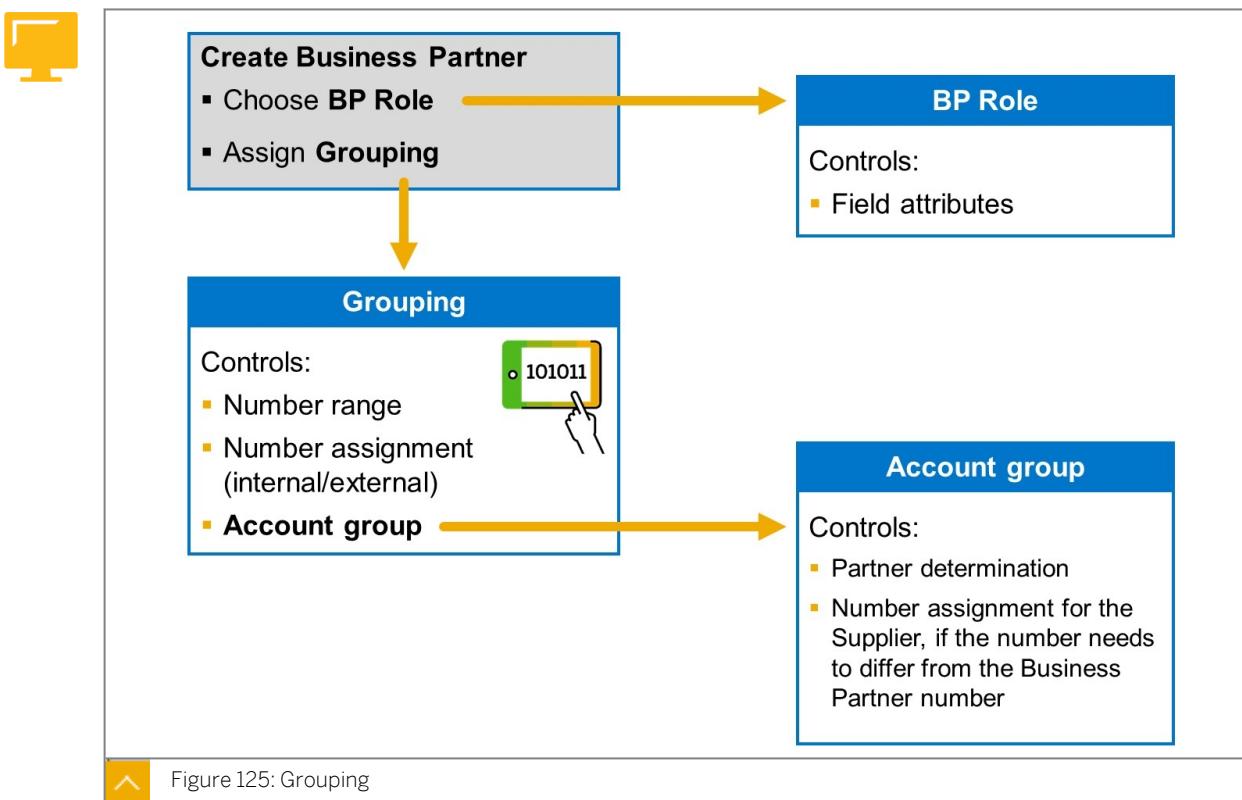
The field status depends on various influencing factors; therefore, link rules are necessary. These rules determine which property a field has if the different influencing factors have different values. The link rules for field selection settings for business partners correspond to the settings that apply to material master records.

**The rules for individual field selection settings for Business partners are as follows:**

Characteristic	Hide	Display	Required Entry	Optional Entry
Hide	Hide	Hide	Hide	Hide
Display	Hide	Display	Display	Display
Required Entry	Hide	Display	Required Entry	Required Entry
Optional Entry	Hide	Display	Required Entry	Optional Entry

An exception is the priority within business partner roles. If the settings for different partner roles are different, required entry has the highest priority, followed by optional entry, display, and hide. Example: You have set the field *Internet Mail Address (E-Mail)* as required entry for Business Partner Role FLVN00 FI Vendor and as hide for Business Partner Role FLVN01 Supplier. When you maintain any supplier the field is now a required entry, no matter which role you maintain.

## Number Assignment for Business Partners



When you create a business partner, a unique number identifies the relevant master record. This number is derived from the number range (numeric or alphanumeric) that is assigned to the **grouping**, which needs to be selected when creating a business partner on client level.

### The options available for assigning the number are as follows:

- Internal number assignment:

The system automatically assigns a sequential number from the defined number range. The last number assigned is logged in the number status.

- External number assignment:

In external number assignment, a user must assign a number from the defined number range when creating the vendor master record.

### To set up number ranges and to assign them, perform the following steps:

1. Add (a) new number range interval(s).

Choose: *SAP Customizing Implementation Guide (IMG) → Cross-Application Components → SAP Business Partner → Business Partner → Basic Settings → Number Ranges and Groupings → Define Number Ranges*.

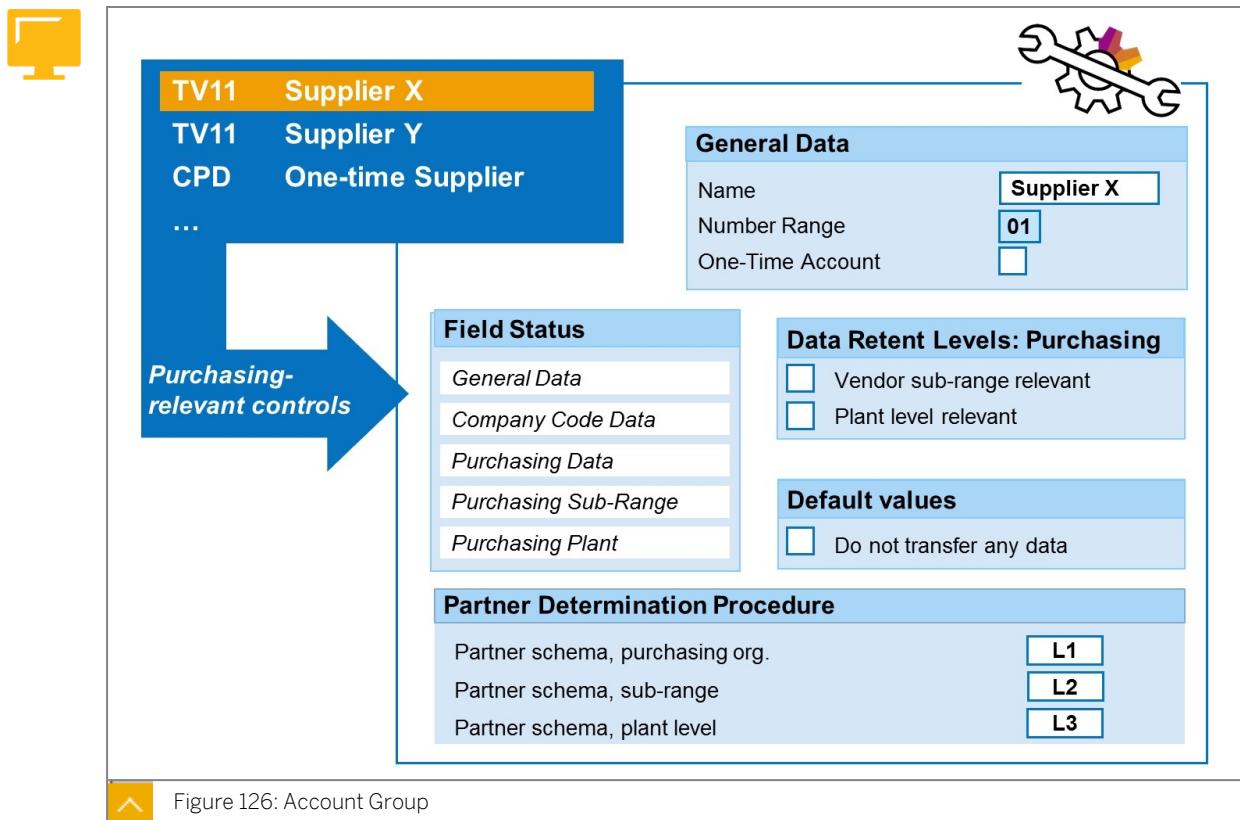
The individual number range intervals must not overlap. If a number range is for external number assignment, the appropriate checkbox must be selected.

2. Define Groupings and assign number ranges. Choose: *SAP Customizing Implementation Guide (IMG) → Cross-Application Components → SAP Business Partner → Business Partner → Basic Settings → Number Ranges and Groupings → Define Groupings and Assign Number Ranges*.

Create Groupings and assign the desired number range. You can assign the same number range to several groupings. Besides, you can define standard groupings for internal and external number assignment. These groupings are used when no grouping is selected during the creation of a new business partner.

The assignment of business partners to groupings is stored in table BUT000.

### Account Group



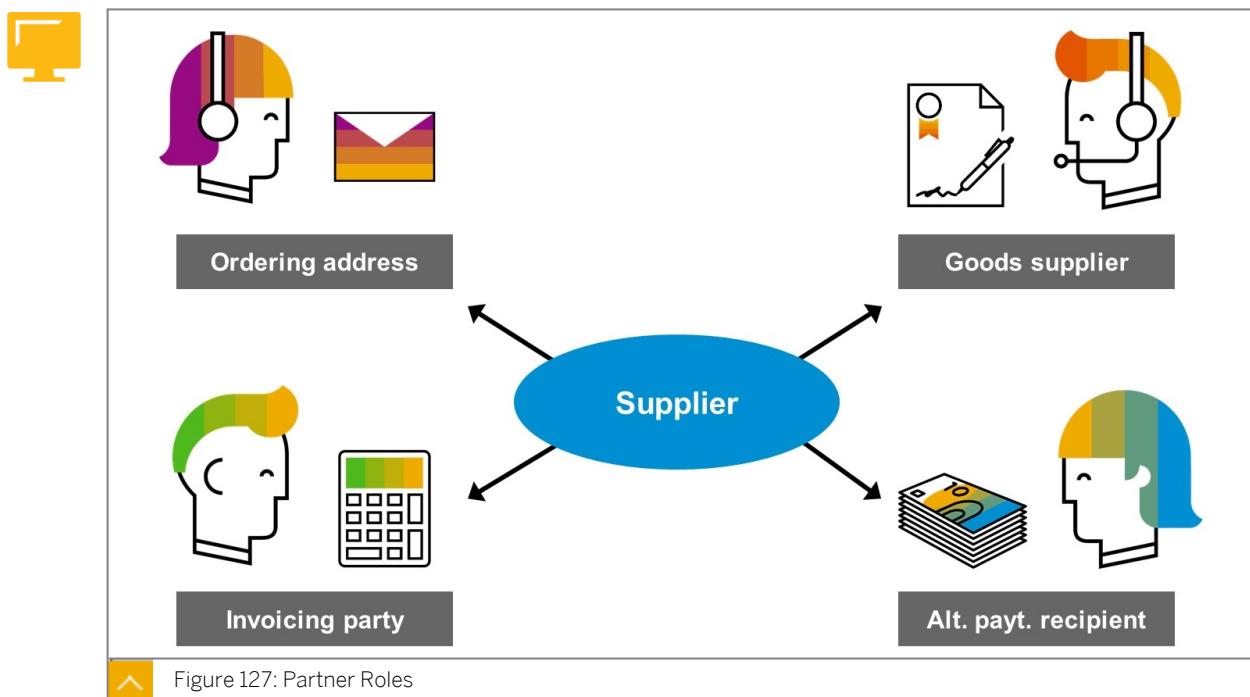
A supplier master record is automatically created in the background when you create a business partner master record for a supplier. An **account group** is assigned automatically to this supplier master record. The account group depends on the **grouping** and is assigned in table *TBC001*.

To maintain this table, go to *SAP Customizing Implementation Guide (IMG) → Cross-Application Components → Master Data Synchronization → Customer/Vendor Integration → Business Partner Settings → Settings for Vendor Integration → Field Assignment for Vendor Integration → Assign Keys → Define Number Assignment for Direction BP to Vendor*.

The **Same Numbers** checkbox in this customizing activity decides whether business partner master records and supplier master records have the same numbers. If the checkbox is not selected, the number for the supplier is assigned through the account group.

You can display the assigned account group on the *Vendor: General Data* tab in the business partner master record for the BP role *Supplier*.

## Partner Roles for Business Partners



A business partner can have different roles in relation to a company. For example, during the procurement process, a business partner is the ordering address of a company, the goods supplier, the invoicing party, and the payee. Sometimes it is not the same business partner who assumes these roles, but different business partners who take on different tasks.

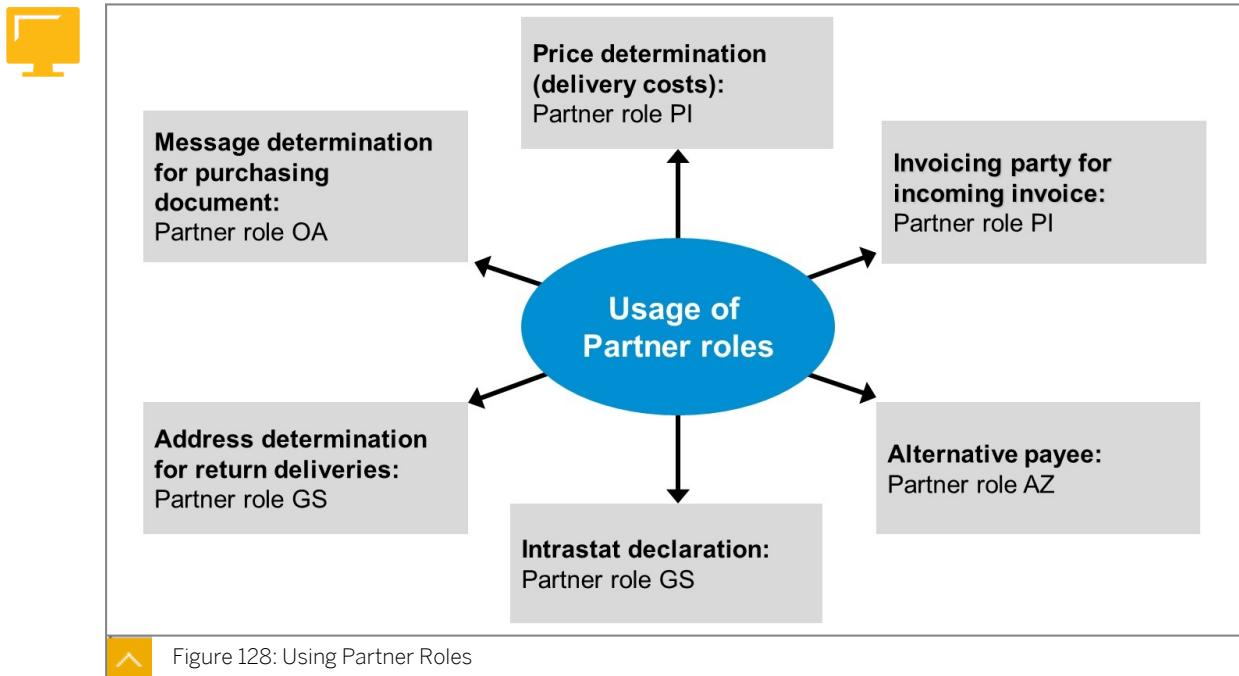
You can store the corresponding partner roles for your business partners across purchasing organizations, and depending on the plant or subrange. These partners appear as default values in various documents. The system copies a different invoicing party from a vendor master record into a purchase order. The invoicing party appears as a default when you post an invoice.

Partner roles, also referred to as partner functions, define the rights, duties, and tasks of each partner when a business transaction is processed. You can use such roles to replicate the relationships between different business partners, for example with customers, vendors, and freight forwarders.

The following are some of the partner roles for materials management predefined in SAP S/4HANA:

- Supplier (VN)
- Ordering address (OA)
- Goods supplier (GS)
- Invoicing party (PI)
- Alternative Payment Recipient (AZ)
- Manufacturer (HR)

## Usage of Partner Roles



If a business partner performs all the roles in the procurement process, you do not have to store each role separately in its master record. You need to maintain only the differing partners.

A prerequisite for the use of partner roles is the existence of a corresponding master record for the required partner.



**Note:**  
Partner roles are also referred to as partner functions.

With partner functions in the area of materials management, you can facilitate the processes of message determination, price determination, address determination, and statistics.

**Partner roles and differing partners can be stored in the business partner master record at the following levels:**

- Purchasing organization
- Purchasing organization + plant
- Purchasing organization + subrange
- Purchasing organization + plant + subrange

To enable differing partner functions for business partners, you must make various settings in Customizing.

## Definition of Partner Roles



Funct	Name	NoTpe	Unique	HigherPar.Role
SP	Sold-To Party	KU	<input checked="" type="checkbox"/>	
AI	IS-PAM: Cert. owner	KU	<input checked="" type="checkbox"/>	
AO	Author	US	<input type="checkbox"/>	
CP	Contact Person	AP	<input type="checkbox"/>	
AR	IS-PAM: Agency	KU	<input checked="" type="checkbox"/>	
AS	Applicant Warranty	KU	<input type="checkbox"/>	
AU	Author	PE	<input type="checkbox"/>	
AW	SH Contract rel. ord	KU	<input type="checkbox"/>	
AZ	Alt. Payt. Recipient	LI	<input checked="" type="checkbox"/>	
OA	Ordering Address	LI	<input type="checkbox"/>	
BE	IS-PAM: Doc. receiv.	KU	<input type="checkbox"/>	
BI	Bidder	LI	<input type="checkbox"/>	
BM	SumJIT Order Address	LI	<input checked="" type="checkbox"/>	
CB	Contact at Add.Not.P	AP	<input type="checkbox"/>	
CE	IS-PAM: Chiffre rec.	KU	<input type="checkbox"/>	
CF	Cust.Office of Entry	LI	<input type="checkbox"/>	
CG	Cust.Office of Exit	LI	<input type="checkbox"/>	

NoTy	Description
A	Work center
AP	Contact Persons
KU	Customer
LI	Vendor
LS	Logical system
MA	Mail Address
MP	Mail Partner
O	Organizational Unit
PE	Personnel Number
S	Position
US	User
VS	Shipping Point
WK	Plant

Figure 129: Definition of Partner Roles

First, you define all the partner roles that you want to use client wide. When defining the roles, you can specify that a partner role may be used only once per organizational level for a business partner (*Unique* checkbox). If the checkbox is not selected, several partners with the same role may be maintained for a supplier per organizational level. When creating a purchase order, the buyer obtains a list of all possible partners with this role and has to choose the desired one.

If you maintain several partners for a single partner role in a supplier master record, you can designate one of them as the default value. When the user creates a purchasing document, the default partner is listed in the selection list on top and is highlighted.

To define partner roles in Customizing, choose *IMG → Materials Management → Purchasing → Partner Determination → Partner Roles → Define Partner Roles*.

After the partner roles are defined, you have to specify which category of suppliers can assume which roles for another partner. This categorizing is done using the account group. You thus assign to each relevant account group the partner roles that the suppliers with that account group can assume.

To specify the allowed partner roles for each account group in Customizing, choose *IMG → Materials Management → Purchasing → Partner Determination → Partner Roles → Define Permissible Partner Roles per Account Group*.

**Note:**

This Customizing setting applies to the suppliers that are to be entered in another business partner master record to assume a partner function.

### **Partner Schemas for Account Groups**

A partner schema contains a selection of partner roles. You can assign partner schemas to account groups in Customizing.

This time it is the account group of the business partner for which you want to define different partner functions.

Assigning a partner schema to an account group is optional and restricts the selection of partner functions when maintaining master records for suppliers with that account group.

To define partner schemas for account groups in Customizing, choose *IMG → Materials Management → Purchasing → Partner Determination → Partner Settings in Supplier Master Record → Define Partner Schemas in Supplier Master Record*.

When defining partner schemas for account groups, you can set the following indicators:

- *No Change* indicator:

If you want to prevent changes in the partner defined in the supplier master record, set the *No Change* indicator. However, this indicator does not prevent a partner from being deleted.

- *Mandatory* indicator:

The *Mandatory* indicator determines whether a partner role is mandatory.

After creating partner schemas, you can assign them to account groups. To assign partner schemas to account groups, choose *IMG → Materials Management → Purchasing → Partner Determination → Partner Settings in Supplier Master Record → Assign Partner Schemas to Account Groups*. You can assign different schemas on the levels purchasing organization, supplier subrange and plant.

**Note:**

The assignment of a partner schema to an account group is optional.

If the account group for a supplier is assigned a partner schema, the system checks whether the partner role you enter in the business partner master record is included in the schema. If the role is not included, you receive an error message.

If no schema is assigned, you can enter any existing partner function.

### **Partner Schemas for Purchasing Documents**

If you want to use partner roles in purchasing documents, you have to assign a partner schema for the relevant purchasing document types. If you need a new partner schema, define it in Customizing under *IMG → Materials Management → Purchasing → Partner Determination → Partner Settings in Purchasing Documents → Define Partner Schemas in Purchasing Documents*. When defining partner schemas for purchasing documents, you can set the following indicators:

- *No Change* indicator:

If you want to prevent changes in the partner determined from the supplier master record, set the *No Change* indicator. This indicator also prevents a partner to be deleted.

- *Mandatory* indicator:

The *Mandatory* indicator determines whether a partner role is mandatory.

- *Higher Level* indicator:

If the *Higher Level* indicator is set, the system searches for partner roles at the purchasing organization level if no partner roles exist at the plant or supplier subrange level.

This indicator is also necessary if you want the system to find partners for purchase orders which are not created manually with transaction ME21N, for example, but with

- Automatic creation ME59N
- Assignment list ME58
- Converting purchase requisitions in transaction MD04

- *End* indicator:

The *End* indicator specifies the time of partner determination. If the *End* indicator is set, the partner roles are determined from the business partner (or, in the case of release orders, from the relevant contract) at the end of the document entry process (when the document is saved or checked). If the indicator is not set, the partner roles are determined when a purchasing document is created, after you enter the supplier number in the document header and press *Enter*.

Determining a partner when a document is checked or saved is particularly beneficial if different data has been stored for the business partner at the plant and/or supplier subrange levels (if partners have been maintained at these levels). The system checks whether all document items contain the same plant or subrange. If all items contain the same plant or subrange, the system searches for partners that are defined just at this level.

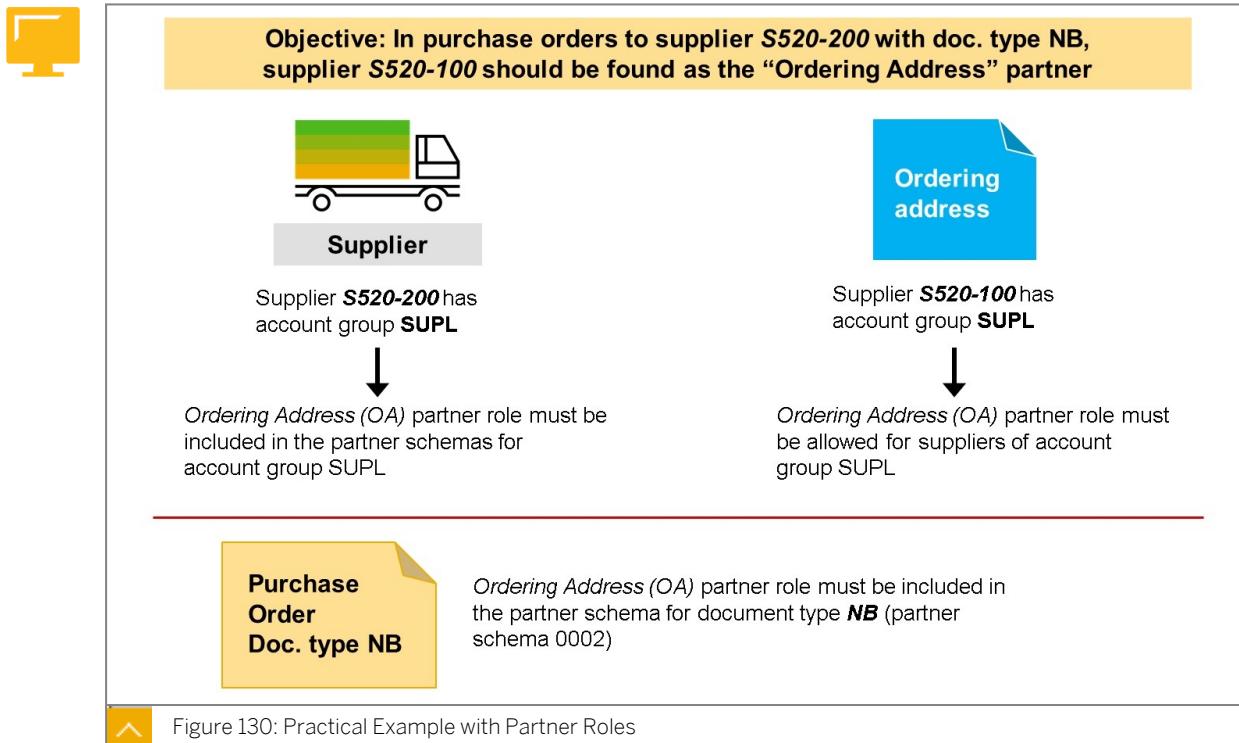
If a purchase order contains several items with different plants or subranges, the partners are determined at the purchasing organization level, irrespective of whether or not the *Higher Level* indicator is selected.

Invoicing parties are not determined until you check or save a purchase order, because the *End* indicator is set. For this, they cannot be considered in price determination.

Example: Conditions have been created for a different invoicing party on the SAP Easy Access screen, under *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Conditions* → *Discounts/Surcharges* → *By Invoicing Party* (MEKJ). Price determination occurs at the start, but the invoicing party is determined at the end (if the *End* indicator has been set). Therefore, the conditions of the invoicing party are not found. To find the invoicing party's conditions, either carry out new pricing in the purchase order items or remove the *End* indicator in the partner schema.

To assign partner schemas to document types, choose *IMG* → *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Settings in Purchasing Documents* → *Assign Partner Schemas to Document Types*.

## Practical Example with Partner Roles



For example, if you want to use partners for message determination, the following steps are required:

1. Determine the account group for the supplier who should have the partner. You will find the account group in the general data of the business partner. In this example, this is account group **SUPL** for supplier S520-200.
2. Determine the partner schema for this account group. In the example, account group **SUPL** has the partner schema **SUPL**.
3. Check whether the partner role ordering address is included in partner schema **SUPL**. If the role is missing, add it.
4. Determine the account group for the supplier that you want to enter as the ordering address. In this example, this is account group **SUPL** for supplier S520-100.
5. Check whether the ordering address partner role is allowed for suppliers of account group **SUPL**. If the role is not permitted, add the missing table entry.
6. Enter supplier S520-100 as the ordering address (OA) in the master record of business partner S520-200.
7. Check which partner schema is used to determine the partner roles for the purchasing document type. In this example, this is partner schema **0002** for purchasing document type **NB**.
8. Check whether the ordering address partner role is included in partner schema **0002** for purchasing documents. If the partner role is missing, add it.

If you now create a purchasing document with document type **NB** for supplier S520-200, partner S520-100 is determined as the ordering address.

To create a message to this partner, message determination must be set up.

For example, to create a message condition record using document type *NB*, on the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Messages* → *Purchase Order* → *Create* (*MN04*).

#### **The message record must:**

- Contain the output type you want to create (for example, *NEU*)
- Specify the dependent information for the message determination (for example, document type, purchasing organization, and vendor)
- Specify, among other things when (for example, immediately when document is saved) and how (medium, such as fax) the message is to be output or transferred

If you are using the new output management, you have to create a corresponding rule instead.

#### **Further Partner Functions**



##### Hint:

For planned delivery costs, you can enter a supplier directly in the condition details for a condition type that is defined as delivery costs in the purchasing document or info record. This supplier is automatically determined during invoice entry for planned delivery costs. Determination of this supplier does not depend on any partner settings.

You can enter an alternative freight supplier for planned delivery costs when you post a goods receipt.

During invoice verification, partners can be checked with two messages

- Message M8 776 (Payments to partner are not allowed for purchase order)
- Message M8 777 (Invoicing party has no partner role in purchase order)

You find the settings for messages in Customizing under *Materials Management* → *Logistics Invoice Verification* → *Define Attributes of System Messages*.

Message M8 776 (Payments to partner are not allowed for purchase order) allows you to specify whether the invoicing party must have an allowed partner role in *Customizing*. You can configure this message as a warning or an error message.

For example, supplier 1058 is entered as a partner with partner role forwarding agent (*CR*) in a purchase order for supplier 1000. When you need to post an invoice from supplier 1058 for this purchase order, you must define role *CR* as an allowed role in *Customizing*. If *CR* is not defined as an allowed role, this message is displayed. If the message is configured as an error message, the invoice cannot be posted.

You define the permitted partner roles in *Customizing* under *Materials Management* → *Logistics Invoice Verification* → *Incoming Invoice* → *Define Partner Role as Allowed Payee*.

Message M8 777 (invoicing party has no partner role in purchase order) allows you to specify whether an invoicing party has to be entered as a partner in the referenced purchase order. You can configure this message as a warning or an error message.

For example, supplier 1005 is entered as partner with partner function invoicing party (*PI*) in a purchase order for supplier 1000. You enter an invoice for this purchase order and change the invoicing party to 1010. If the message is configured as an error, the invoice cannot be posted.

For more frequently asked questions regarding partner determination, see SAP Note 459350.



### LESSON SUMMARY

You should now be able to:

- Define settings for vendor master records

## Learning Assessment

1. What controls field selection for business partners?

*Choose the correct answers.*

- A Account group
- B Business partner role
- C Client
- D Purchasing Organization

2. On which level can you specify alternative purchasing data for business partners?

*Choose the correct answers.*

- A Plants
- B Supplier sub-ranges
- C Material groups
- D Material types

3. Which partner role can be used for price determination?

*Choose the correct answer.*

- A Ordering address
- B Alternative Payee
- C Invoicing Party
- D Goods Supplier

4. To which of the following can you assign partner schemas?

*Choose the correct answers.*

- A Suppliers
- B Account groups
- C Document types
- D Supplier sub-ranges

## Learning Assessment - Answers

1. What controls field selection for business partners?

*Choose the correct answers.*

- A Account group
- B Business partner role
- C Client
- D Purchasing Organization

Correct. The business partner role and the client are responsible for the field selection for business partners.

2. On which level can you specify alternative purchasing data for business partners?

*Choose the correct answers.*

- A Plants
- B Supplier sub-ranges
- C Material groups
- D Material types

Correct. Alternative data can be maintained on plant and supplier sub-range level.

3. Which partner role can be used for price determination?

*Choose the correct answer.*

- A Ordering address
- B Alternative Payee
- C Invoicing Party
- D Goods Supplier

Correct. For price determination you can use the Invoicing Party partner role.

4. To which of the following can you assign partner schemas?

*Choose the correct answers.*

- A Suppliers
- B Account groups
- C Document types
- D Supplier sub-ranges

Correct. Partner schemas can be assigned to account groups and document types.