

- R/3 System Tamm40 Materials Management
- Release 4.6B
- April 2000
- Material number: 50032313

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## Section: Purchasing Details & Optimization



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## Content: Purchasing Details & Optimization

SAP

### Preface

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- Unit **Introduction to Purchasing Details**
  - Unit **Outline Agreements**
  - Unit **Source Determination**
  - Unit **Optimized Purchasing**
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## Purchasing Details & Optimization: Section Goals

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**This section will prepare you to:**

- **Recognize the various options for optimizing and simplifying processes in purchasing and their prerequisites**
- **Outline additional special functions in purchasing**

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## Introduction to Purchasing Details

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### Contents:

- **Optimized Purchasing (Overview)**
- **Sources of Supply (Overview)**
- **Purchasing Info Record**



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## Introduction to Purchasing Details: Unit Objectives

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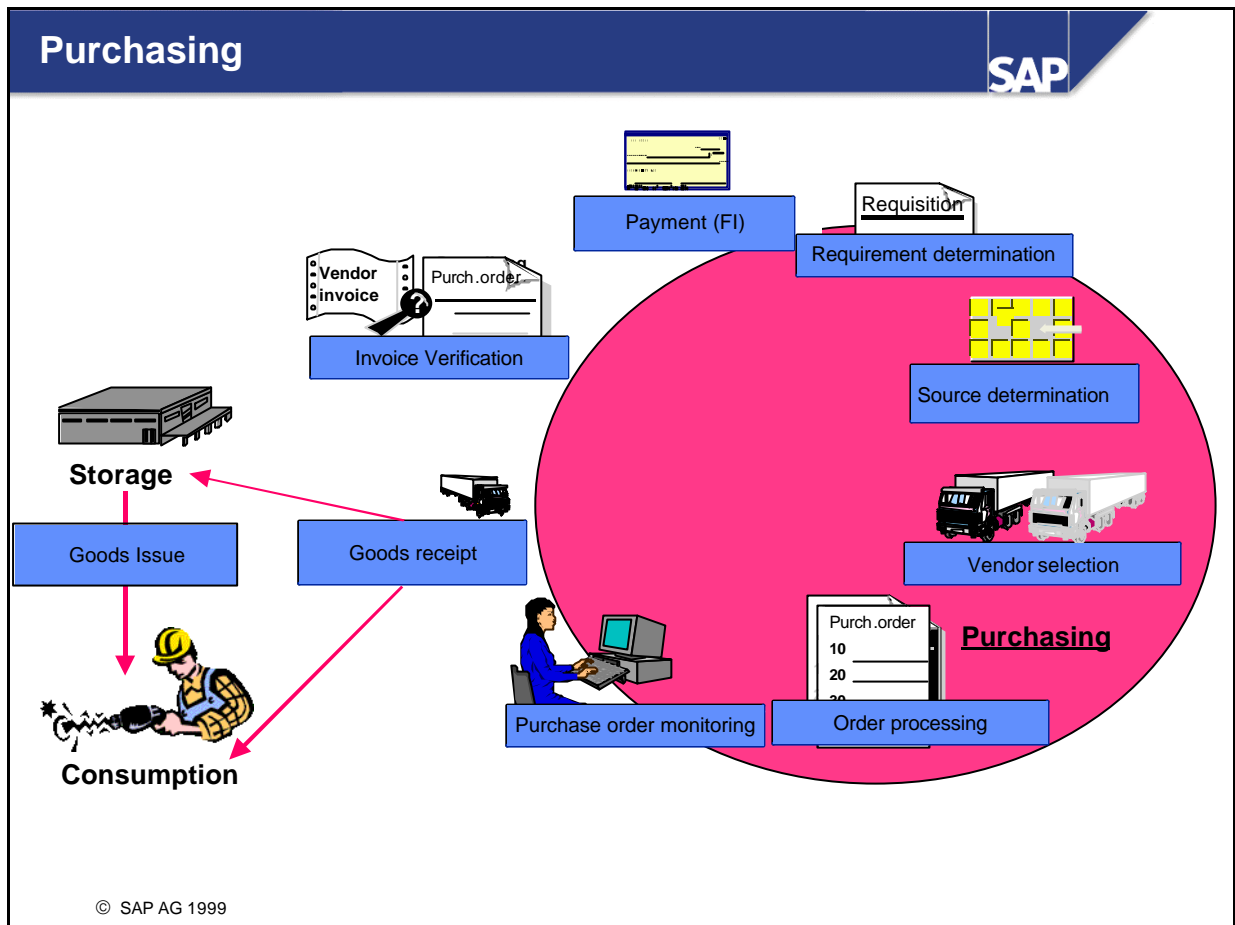


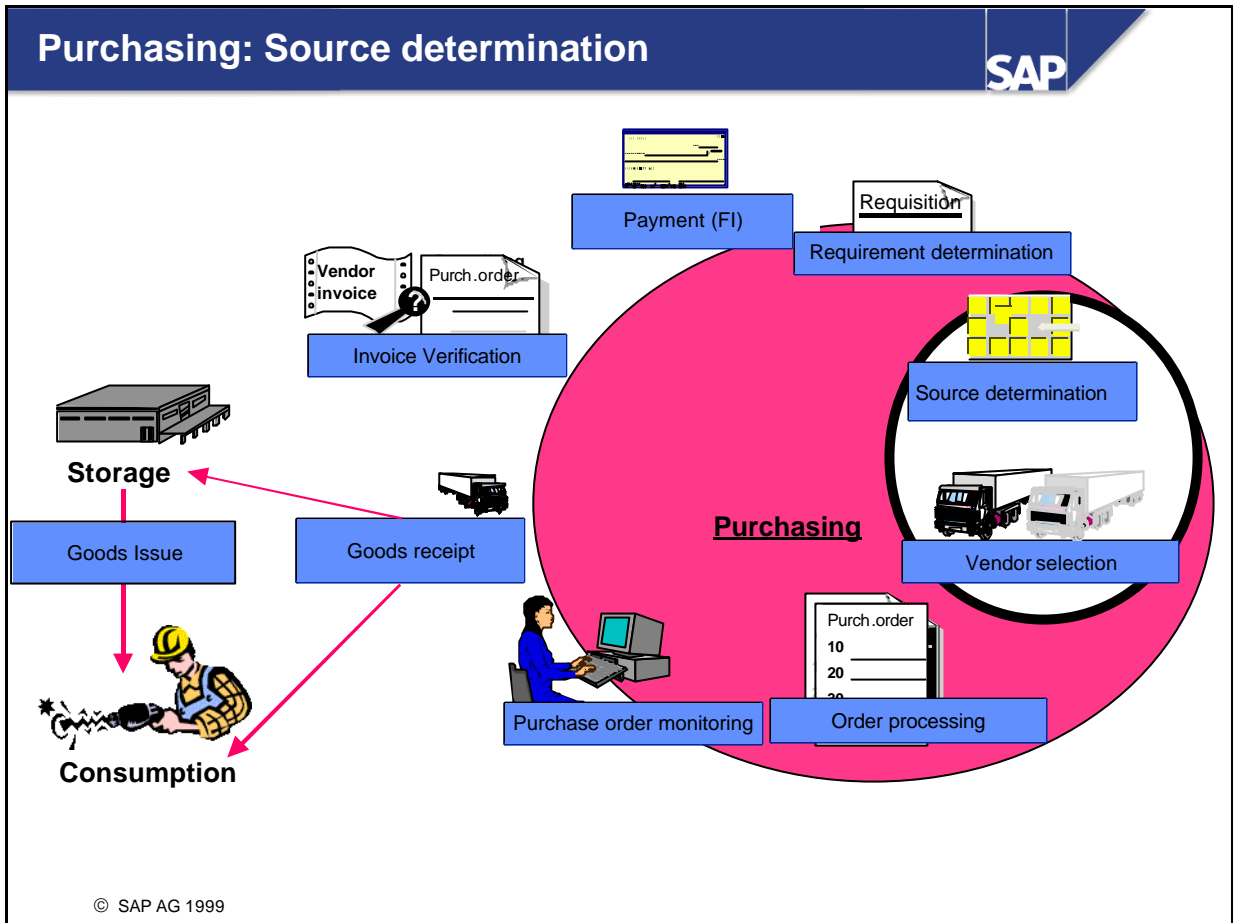
**At the conclusion of this unit, you will be able to:**

- **List some functions to optimize the purchasing process**
- **Name the sources of supply**
- **Create and illustrate the use of info records with and without material master records**

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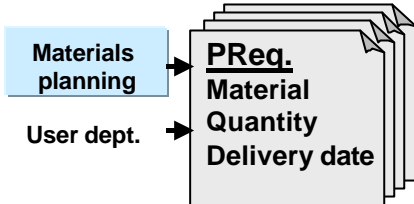




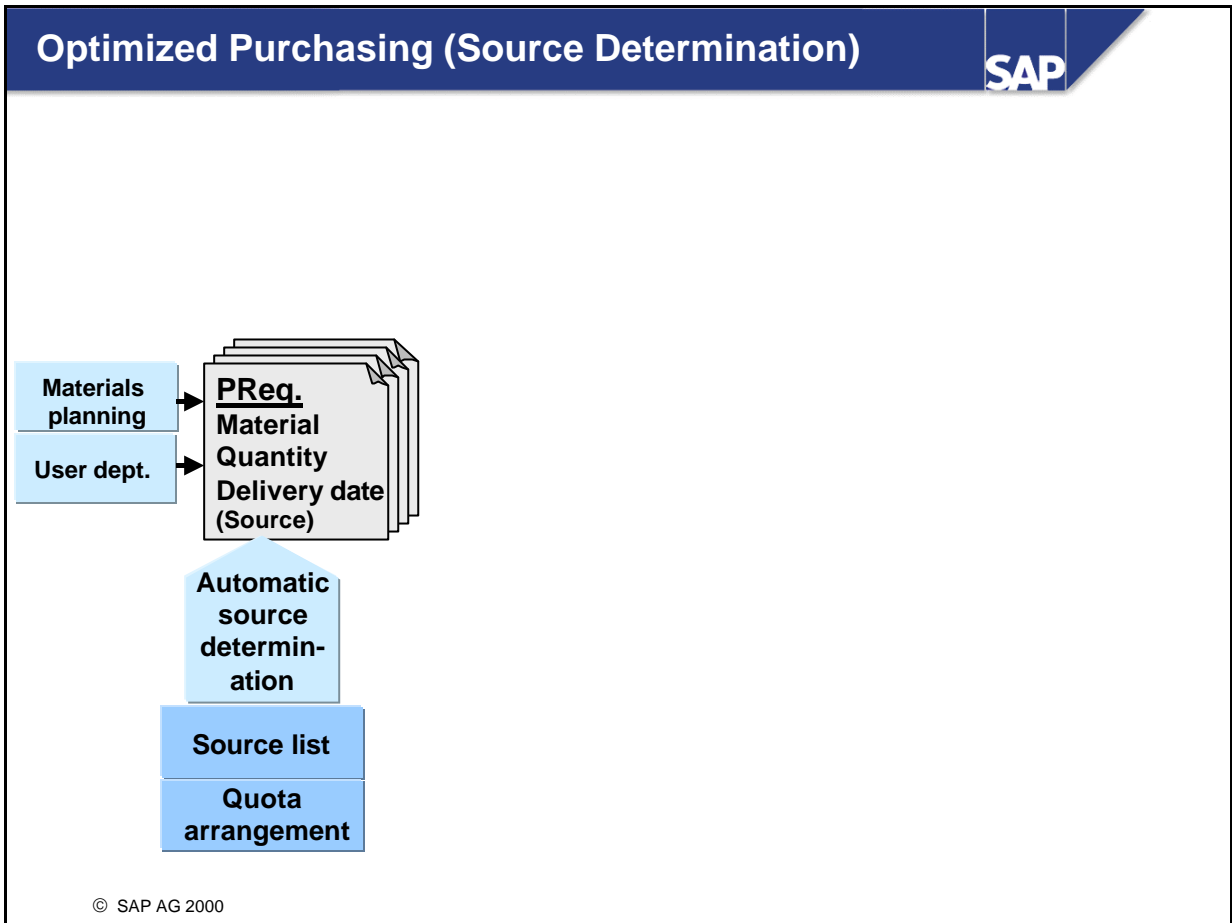


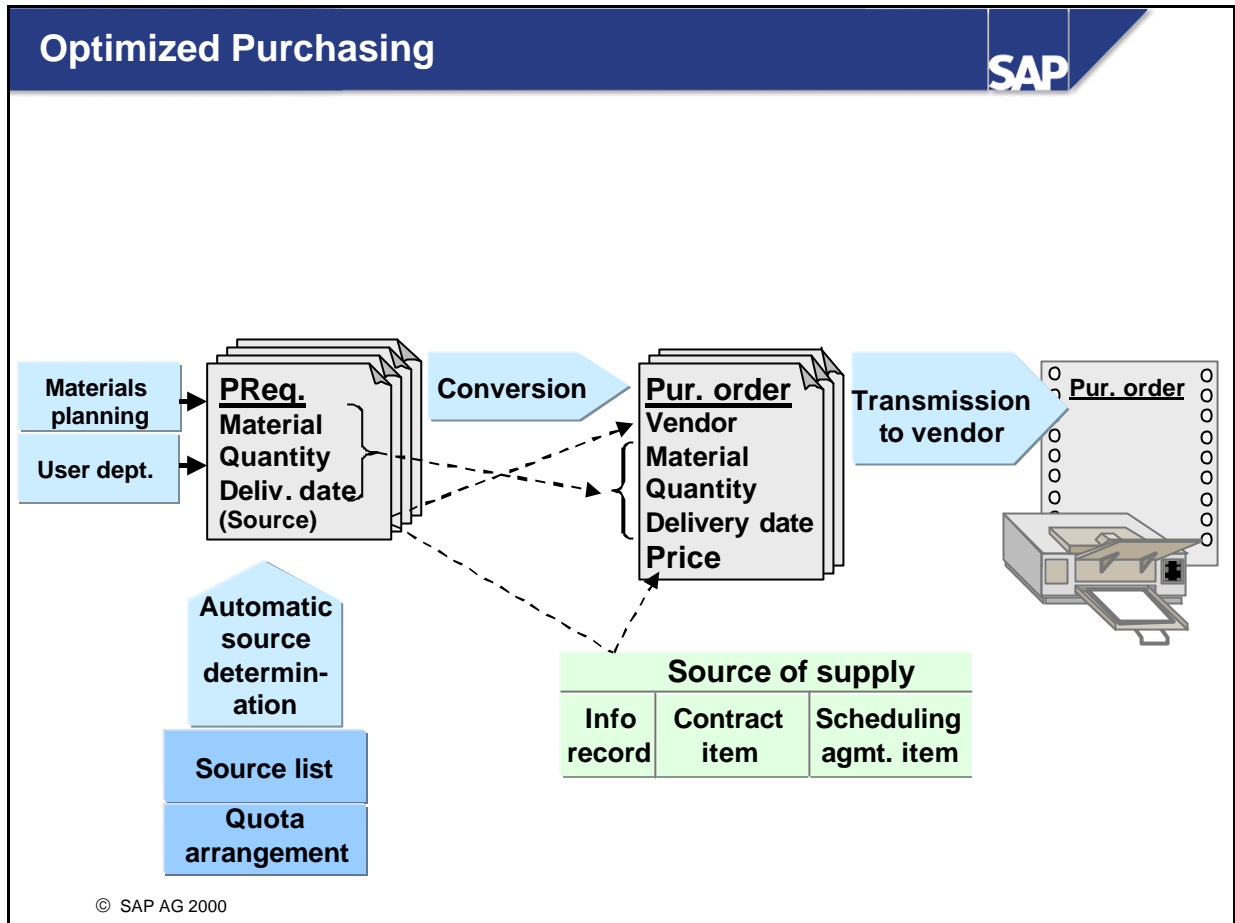
## Optimized Purchasing (Purchase Requisition)

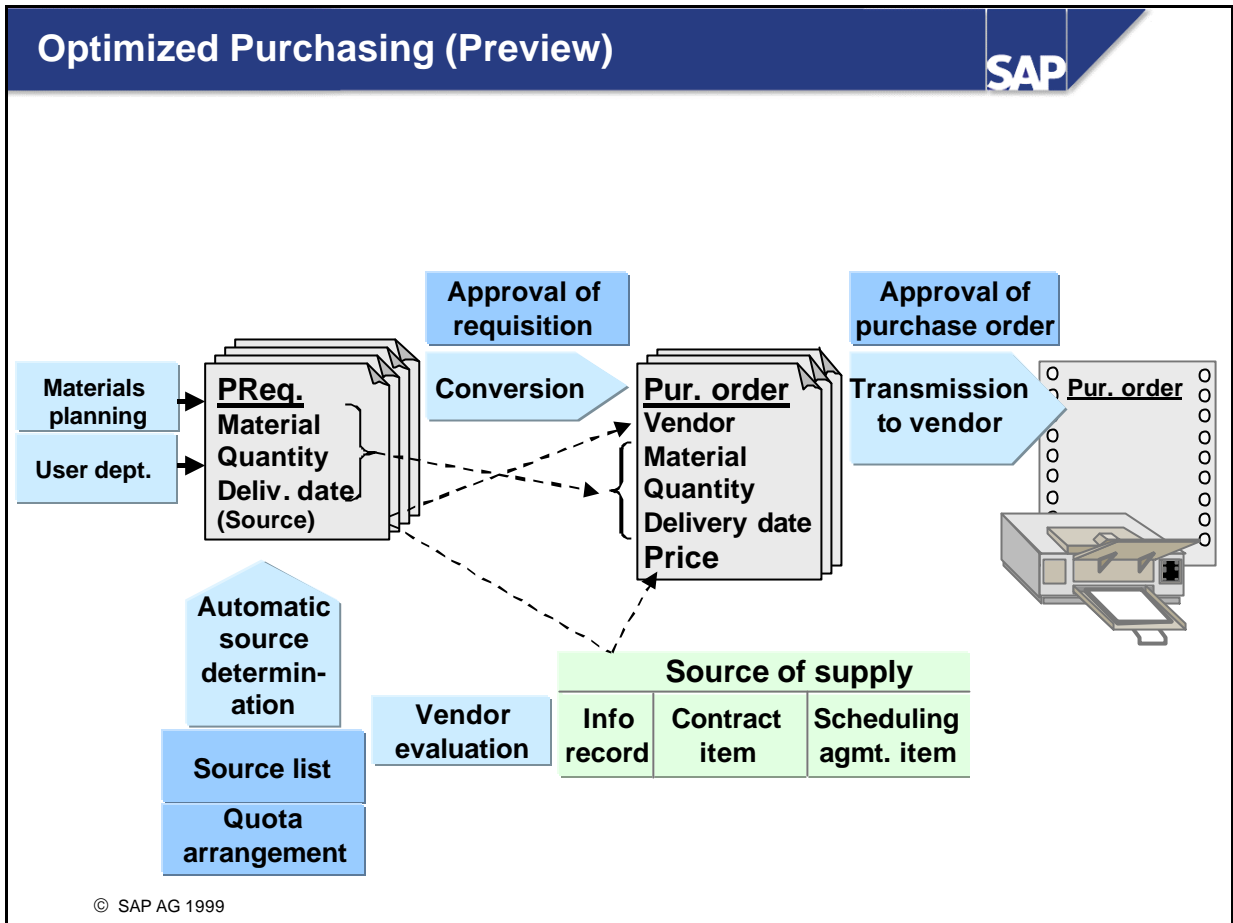
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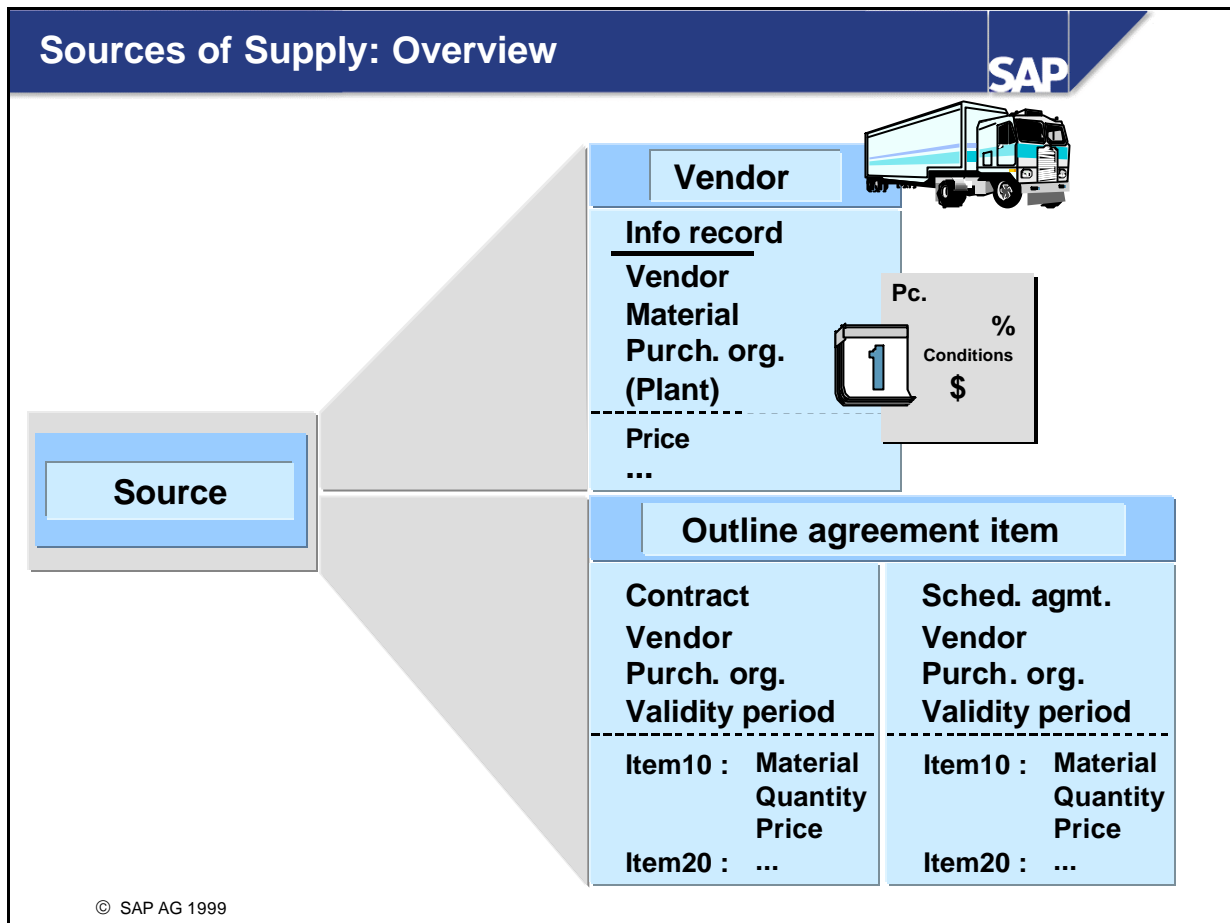


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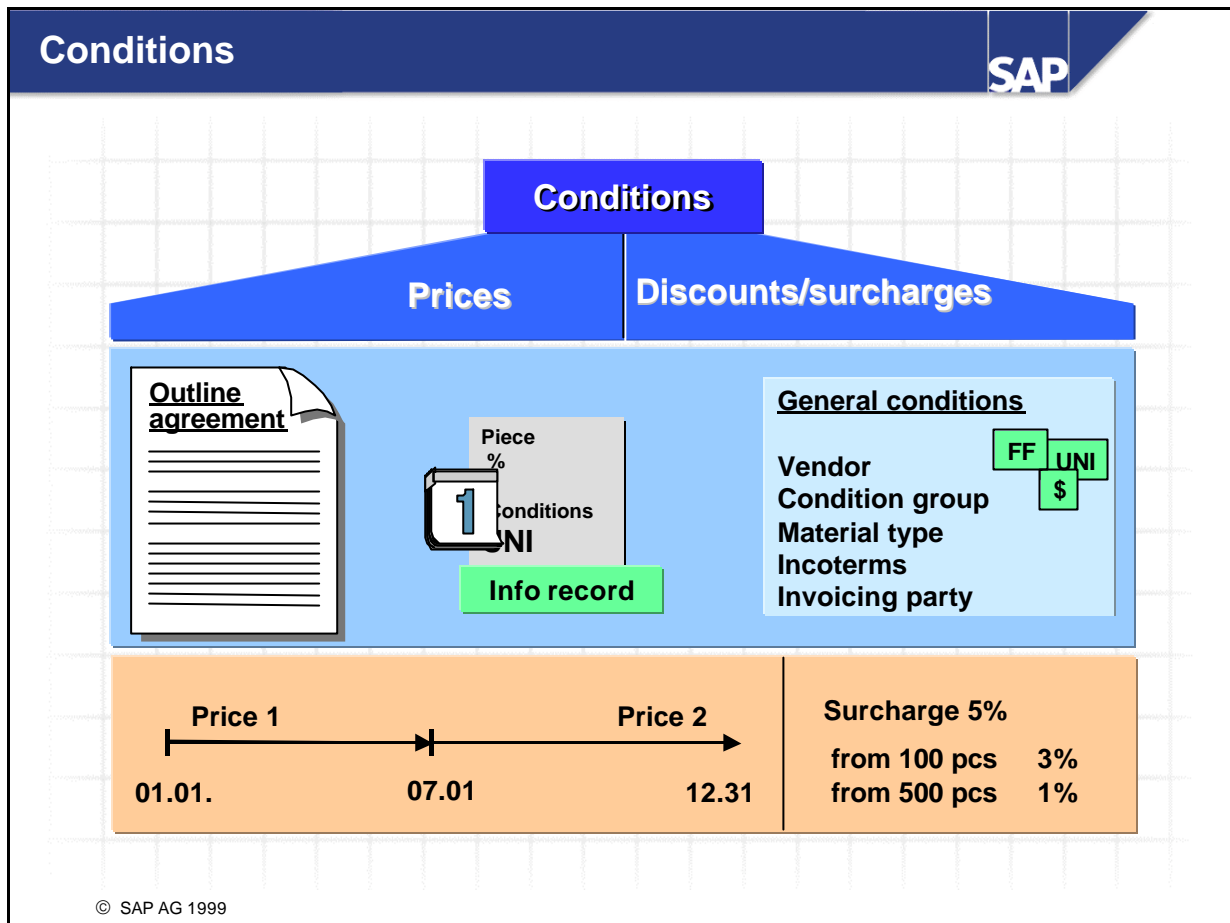






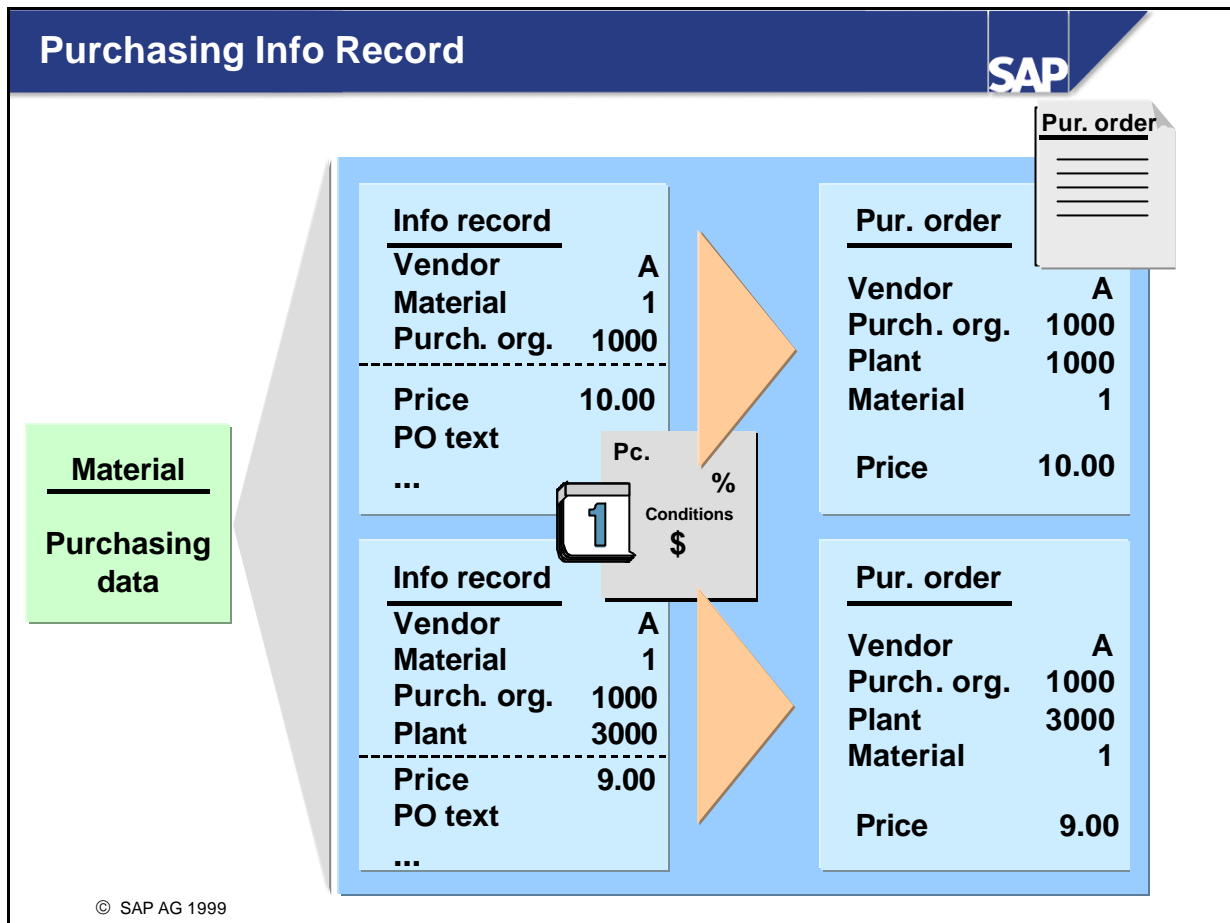


- In MM *Purchasing*, the term “source of supply” (or “source”) can mean a vendor (external supplier) or an outline purchase agreement.
- An info record (short for “purchasing information record”) provides information for *Purchasing*. It contains data on a certain material and the vendor (supplier) of that material. For example, the vendor’s current price for the material is stored in an info record.
- An outline purchase agreement is a longer-term arrangement with a vendor regarding the supply of materials or performance of services according to predefined terms and conditions. The latter apply for a prearranged period and a predefined total purchase quantity or value.

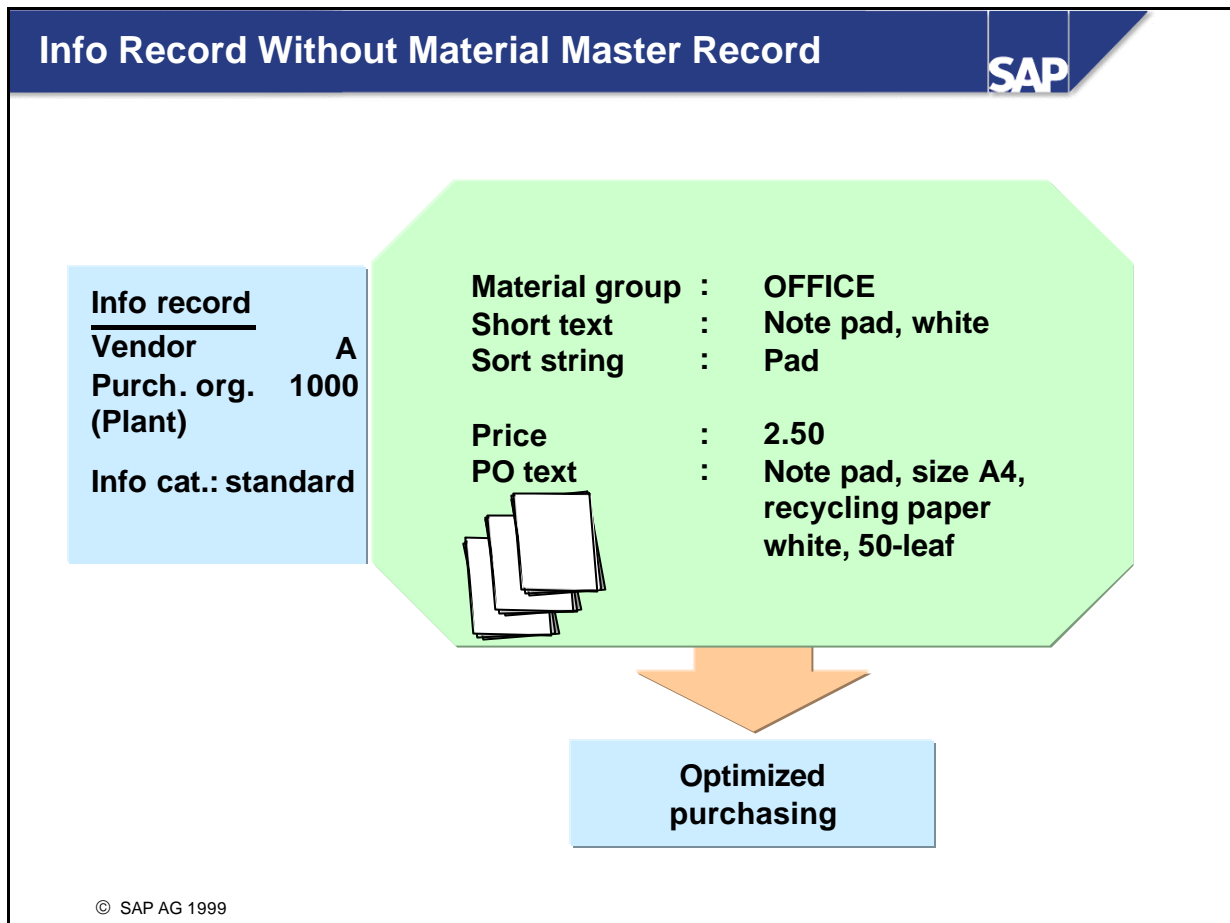


- Conditions are stipulations agreed with vendors concerning prices, discounts and surcharges, and so on. The effective net price in purchase orders is determined on the basis of these conditions.
- You can maintain conditions when you create quotations, info records, outline agreements, and purchase orders.
- Conditions in info records, contracts, and extended conditions are time-dependent conditions. Conditions in purchase orders are time-independent conditions.
- Time-dependent conditions are also available for quotations and scheduling agreements if you set the time-dependent conditions indicator for the document type in Customizing.
- Extended conditions provide you with the option of specifying time-dependent conditions independently of outline agreements and info records.
- Time-dependent conditions can be restricted to a certain period of validity.
- If, for example, a vendor's prices vary according to quantity, you can enter the pricing data in the form of a price/quantity scale.
- You can enter conditions in the document header or in the item details. Item conditions apply to one item only. Header conditions apply to all the items in the document.











- A purchasing info record serves as a source of information for *Purchasing*. It contains data on a certain material and the vendor (external supplier) of that material. For example, the vendor's current price is stored in the info record.
- Data from the info record is used as default data in documents such as purchase orders.
- Purchasing info records enable the buyer to determine:
  - Which materials a certain vendor has offered or supplied to date
  - Which vendors can offer or supply a certain material
- A purchasing info record can be valid for all the plants covered by a purchasing organization or for a single plant within a purchasing organization.
- Info records can be created manually or automatically during the maintenance of a quotation, a purchase order or an outline purchase agreement. Ordering data is updated automatically in the info record.



- There are two types of info records:
  - Info record with material master record (for example, stock material)  
 This represents the relationship between a material or service (with a material master record) and a vendor.
  - Info record without material master record (for example, material for direct consumption)  
 This represents the relationship between a material or service (without a material master record) and a vendor.
- For an info record with reference to a material master record, you can specify the following for each purchasing organization:
- Whether only the info record PO text is to be displayed and printed in purchasing documents. (To do so, set the *No MText* indicator in the purchasing organization data of the info record.)
- Whether the info record PO text and the purchase order text from the material master record are to be displayed and printed in purchasing documents. If the *No MText* indicator is not set, both texts are displayed and printed out.

## Exercise Data Sheet

### Key to Icons in Exercises and Solutions

	<b>Exercises</b>
	<b>Solutions</b>
	<b>Objectives</b>
	<b>Business Scenario</b>
	<b>Hints and Tips</b>
	<b>Warning or Caution</b>

### Data Used in Exercises

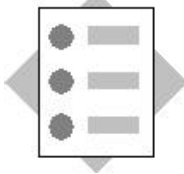
Type of Data	Data in Training System
Company Code	1000
Purchasing Organization	1000 (IDES)
Plants	1000, 1100, 1300
Storage location	0001 (IDES)
Purchasing Group	Z##
Materials	T-REA## T-REB## T-REC## T-RED## T-REE##
Vendors	T-L20A## T-L20B## T-L20C## T-L20D## T-L20E## T-L20F##
G/L account	400000
Cost center	T-L20
Currency	UNI

## Exercises



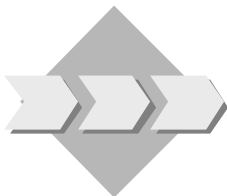
### Unit: Introduction to Purchasing Details

#### Topic: Info Records



At the conclusion of this exercise, you will be able to:

- Create and illustrate the use of info records with and without material master record
- Create and illustrate the uses of cross-plant and plant-specific info records



You wish to optimize your work processes in purchasing and want to create the necessary prerequisites in the system. You also need a place to store prices and other purchasing information that you will use repeatedly when buying a certain item from a particular vendor.

- 1-1 Your company procures non-stock materials as well as raw materials used in the production process. Create a new material master record for a non-stock material with the following data:

Material number:	<b>T-ZN1##</b>
Industry sector:	<b>Mechanical Engineering</b>
Material type:	<b>Non-stock material (NLAG)</b>
Views:	<b>Purchasing, Purchase order text</b>
Plant:	<b>1000</b>
Material short text:	<b>Photocopying paper 5x500, size DIN A4</b>
Base unit of measure:	<b>Carton</b>
Purchasing group:	<b>Z##</b>
Material group:	<b>ZT##</b>
Purchase order text:	<b>Photocopying paper, White, suitable for laser and inkjet printers</b>

- 1-1-1 Add the material master record task that you used in the preceding exercise to your *Favorites*.

- 1-1-2 Check the material master T-REA## and maintain the purchase order text:

**Rocker bearing,  
With official test certification,  
Individually packed,  
Freight costs as agreed**

- 1-2\* In your role as a buyer, there are certain tasks that you perform on a regular basis. In order to facilitate the completion of your tasks, activate the menu for the activity group SAP\_MM\_Buyer.

1-2-1 So that this menu will be available the next time you sign on, assign it to your user.

1-3\* Select *Documentation* and read about this activity group. What tasks are included in the role of a buyer?

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1-4 Now create an info record relating to your new material **T-ZN1##** and vendor **T-L20E##** for purchasing organization **1000**:

- The planned delivery time is **7 days**
- Purchasing group **Z##** is responsible for procurement
- **20 cartons** are usually ordered each time at a price of **30/carton**

1-4-1 Add the task from the above exercise into your *Favorites*.

1-5 Your firm buys other office supplies that are assigned to material group **ZT##**. However, no material master records are to be created. Descriptive information on these office supplies is to be stored in an info record for vendor **T-L20E##**.

1-5-1 Create an info record without a material master record using the following data:

Vendor:	<b>T-L20E##</b>
Purchasing organization:	<b>1000</b>
Short text:	<b>Mechan. pencils 0.5 - 1.00 mm</b>
Material group:	<b>ZT##</b>
Order unit:	<b>Carton</b>
Sort string:	<b>Pencil##</b>
Planned delivery time:	<b>7 days</b>
Purchasing group:	<b>Z##</b>
Standard quantity	<b>5 cartons</b>
Price per 1 carton:	<b>60</b>
Price from 10 cartons upwards:	<b>55</b>

- 1-6 Vendor **T-L20A##** supplies you with material **T-REA##**, for which a material master record exists. Create the info record for purchasing organization **1000** with the following data:

Planned delivery time: **10 days**  
Purchasing group: **Z##**  
Standard quantity: **100**  
Price per pc.: **20**  
Freight per pc.: **1** (condition type FRC1)

- 1-7 Material **T-REA##** is supplied freight prepaid by vendor **T-L20A##** when ordered for plant **1000**.

- 1-7-1 Create an info record for purchasing organization **1000**, plant **1000** with the following data:

Planned delivery time: **7 days**  
Purchasing group: **Z##**  
Standard quantity: **100**  
Price: **20**  
PO text: **Rocker bearing,  
With official test certification,  
Individually packed,  
Freight prepaid**

Ensure that the PO text from the info record is used in purchase orders and other purchasing documents instead of the PO text from the material master record.

- 1-7-2 How do you ensure this?
- 

- 1-8 Now create a purchase order with two items:

Vendor: **T-L20E##**  
Purchasing organization: **IDES (1000)**  
Purchasing group: **##-LO520 (Z##)**  
Delivery date: **In 4 weeks** (applies to both items)

- 1-8-1 First item: Order **20 cartons** of your non-stock material **T-ZN1##** for plant **1000**. Using account assignment category K, enter G/L account **400000** and cost center **T-L20**.

- 1-8-2 Do you have to enter an order price?
-

1-8-3 Second item: Order **10 cartons** of mechanical pencils 0.5 mm for plant **1000**, assigned to G/L account **400000** and cost center **T-L20**. There is no master record for this material, so assign the item to material group **ZT##**. Select your info record without a material master record from the *Info rec.* field.

1-8-4 Which search help procedure do you use to find the info record?

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1-8-5 What order price does the system suggest?

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Purchase order  
number: \_\_\_\_\_

1-8-6 Add the task for creating purchase orders to your *Favorites*.

1-9 Create another purchase order with two items:

Vendor: **T-L20A##**  
Purchasing organization: **IDES (1000)**  
Purchasing group: **##-LO520 (Z##)**  
Delivery date: **In 4 weeks** (applies to both items)

1-9-1 First item: Order **100 pc** of material **T-REA##** for plant **1000**.

1-9-2 What actual price is  
calculated? \_\_\_\_\_

1-9-3 Check the PO text for this item. Which text was adopted?

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1-9-4 Second item: Order **100 pc** of material **T-REA##** for plant **1100**.

1-9-5 Which actual price is  
suggested? \_\_\_\_\_

1-9-6 Check the PO text for this item. Which text was adopted?

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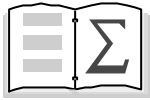
Purchase order number: \_\_\_\_\_

1-10 Change your user master record as follows:

Enter a parameter ID for purchasing organization **IDES (1000)** and purchasing group **##-LO520 (Z##)**.

## Introduction to Purchasing Details: Unit Summary

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**You are now able to:**

- **List some functions to optimize the purchasing process**
- **Name the sources of supply**
- **Create and illustrate the use of info records with and without material master records**

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## Solutions



### Unit: Introduction to Purchasing Details

#### Topic: Info Records

1-1 **Logistics** ® **Materials Management** ® **Material Master** ® **Material** ® **Create (general)** ® **Immediately**

1-1-1 **Favorites** ® **Add**

1-1-2 **Logistics** ® **Materials Management** ® **Material Master** ® **Material** ® **Change** ® **Immediately**

1-2\* Select *Other menu*.

Select *SAP\_MM\_Buyer*.

1-2-1 Select *Assign users*.

Enter your user ID, then select *Add users*.

Select *Yes* to generate profiles.

1-3\* Select *Documentation*. Tasks include:

Processing purchase requisitions

Creation and monitoring of purchase orders

Creation and administration of contracts

The process of inviting suppliers to submit bids

1-4 **User menu** ® **Master Data** ® **Info Record** ® **Create**

After completing the initial screen, choose *Enter*.

Select *Purch org data 1* and enter the remaining data.

1-4-1 **Favorites** ® **Add**

1-5

1-5-1 **Favorites** ® **Master Data** ® **Info Record** ® **Create**

After completing the initial screen, choose *Enter*.

Enter the short text, material group, order unit and sort string on the General data screen.

Select *Purch org data* and enter the remaining data.

To enter the price for 10 cartons and above, first enter **60** in *net price*, then select *Conditions*. From there, select the condition type PB00 and choose *Scales*.

1-6 ***Favorites*** ® ***Master Data*** ® ***Info Record*** ® ***Create***

After completing the initial screen, chose *Enter*, then select *Purch org data*.

To enter the freight condition, first enter **20** in *net price*, then choose *Conditions*.

1-7

1-7-1 ***Favorites*** ® ***Master Data*** ® ***Info Record*** ® ***Create***

After completing the initial screen, chose *Enter*, then select *Purch org data*.

To enter the text, choose *Text* and change the text that defaults.

Since this vendor ships freight prepaid, make sure there is no freight condition entered. Select *Conditions* if you need to remove it.

1-7-2 Select *No mat. txt* on the *Purch org data 1* screen.

1-8 ***Menu*** ® ***SAP Standard menu***. ***Logistics*** ® ***Materials Management*** ® ***Purchasing*** ® ***Purchase Order*** ® ***Create*** ® ***Vendor/supplying plant known***

1-8-2 You do not have to enter an order price because the 30 UNI price defaults from the info record.

1-8-3 Since there is no material master, leave *Material* blank and enter the short text.

1-8-4 Use matchcode **N (Info Records per Material Group)** in the *Info rec* field.

1-8-5 The order price of **55** is suggested from the info record for ordering **10** or more.

1-8-6 ***Favorites*** ® ***Add***

1-9 ***Favorites ® Purchasing ® Purchase Order ® Create ®  
Vendor/supplying plant known***

1-9-2 To see the actual price, select your line item, then choose the *Conditions* tab. An actual price of **20** UNI is suggested.

1-9-3 Select the *Texts* tab in the item details screen area. The text from the info record should appear.

1-9-5 The actual price of **21** UNI is suggested. To see this, select the item, then the *Conditions* tab.

1-9-6 Select the *Texts* tab in the item details screen area. The text from the material master PO text view should appear.

1-10 ***System ® User profile ® Own data***

Select the *Parameters* tab

Enter **EKO** (Purchasing organization) and a value of **1000**

Enter **EKG** (Purchasing group) and a value of **Z##**. Use an upper case Z.

### Contents:

- **Contracts**
- **Scheduling Agreements**



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## Outline Agreements: Unit Objectives

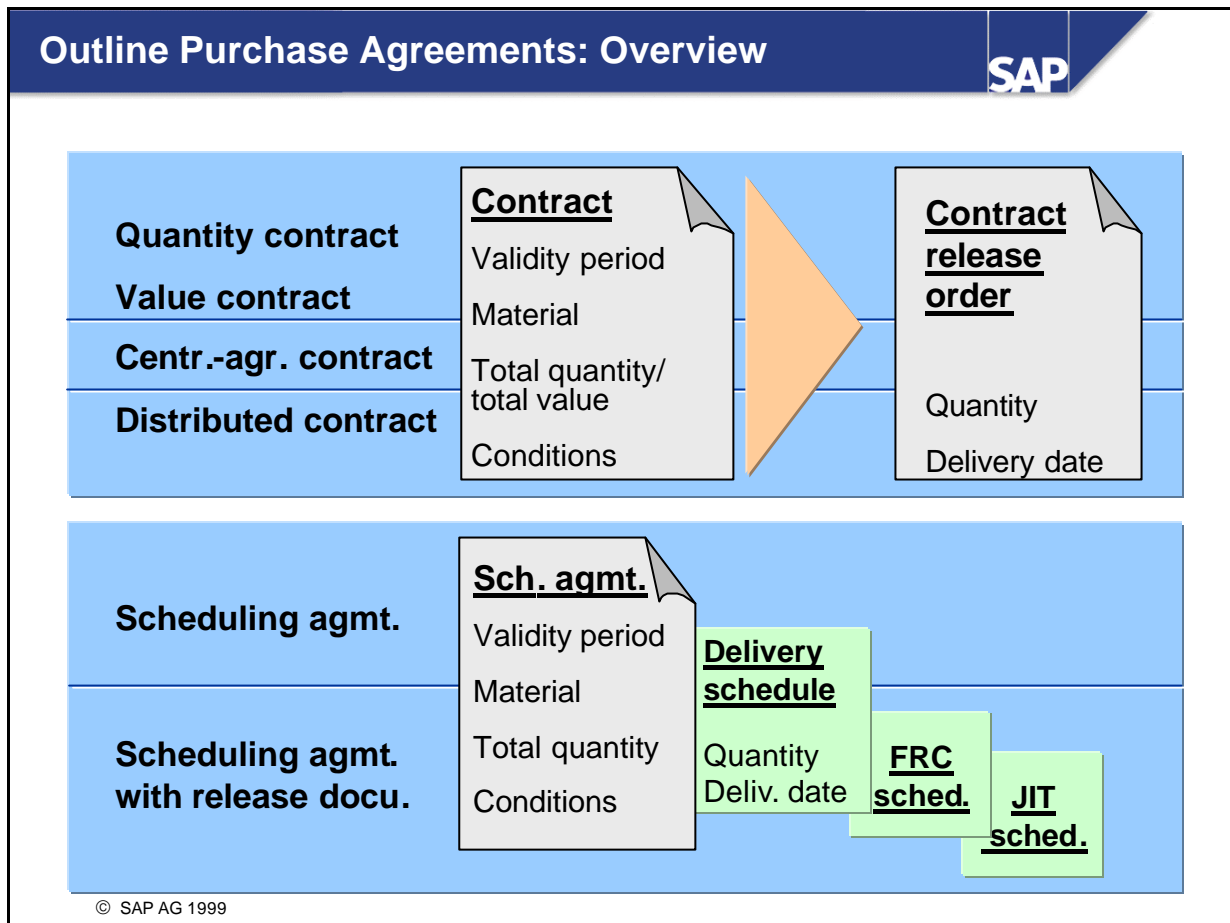
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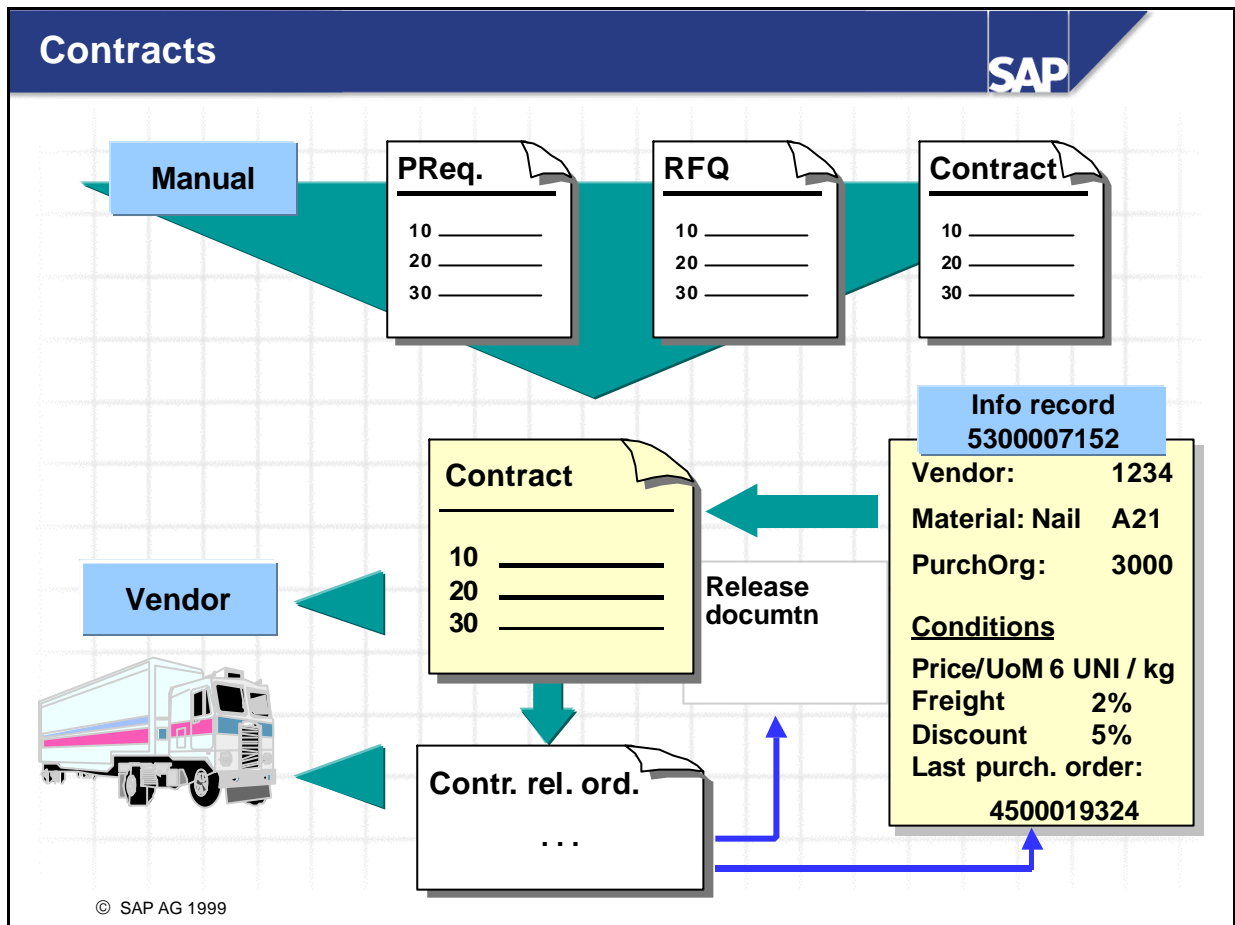
### **At the end of this unit, you will:**

- **Be aware of the different types of outline purchase agreements**
- **Know when to use the item categories M and W in contracts**
- **Be able to create release orders for various types of contract items**
- **Be aware of the special advantages of working with scheduling agreements**
- **Be able to differentiate between the various types of scheduling agreements**
- **Know the difference between a forecast delivery schedule and a JIT delivery schedule**
- **Be able to create scheduling agreements, standard delivery schedules, forecast schedules, and JIT schedules**

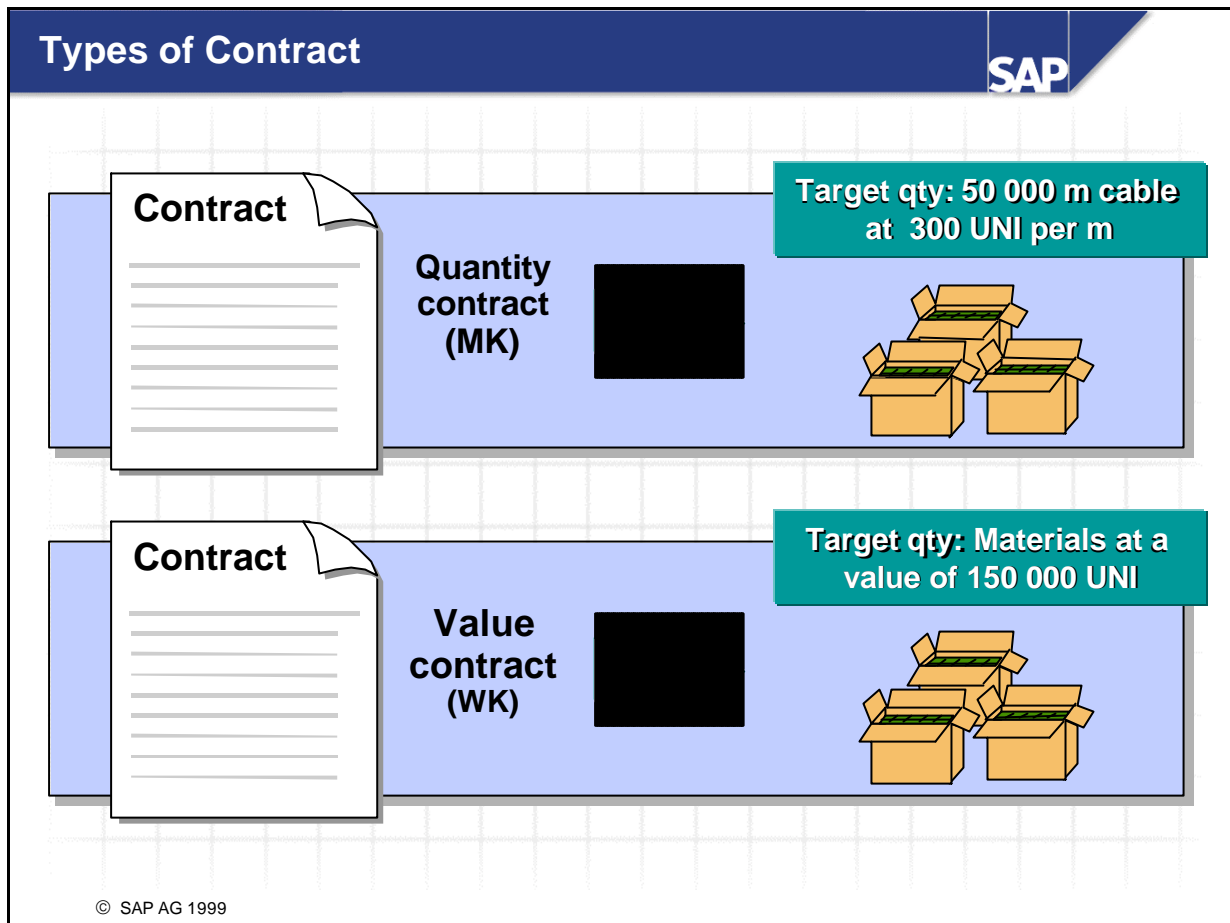
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- In the R/3 System, an “outline agreement” is a longer-term purchase arrangement with a vendor concerning the supply of materials or the performance of services according to predetermined conditions. These are valid for a certain period of time and cover a predefined total purchase quantity or value.
- Specific dates or quantities for individual deliveries are not set out in the outline agreement. This information is provided separately in release orders or rolling delivery schedules (comprising a number of individual schedule lines), depending on the type of agreement.
- An outline agreement can be a contract or a scheduling agreement.
- There are two types of contracts:
  - Quantity contract – this type of contract is regarded as fulfilled when the agreed total quantity has been supplied on the basis of individual release orders issued against the contract.
  - Value contract – this type of contract is regarded as fulfilled when the agreed total value has been supplied on the basis of individual release orders issued against the contract.
- The items of a contract can relate to a single plant or all the plants covered by a purchasing organization (centrally agreed contract).
- Distributed contracts are centrally agreed contracts that are made available to other R/3 Systems for the purpose of issuing release orders against them.



- Contracts are outline agreements. They do not contain details of the delivery dates for each of the items.
- To inform vendors of which quantities you need for which date, you enter contract release orders for a contract. A release order is a purchase order that references a contract.
- If an info record with conditions exists for the material and the vendor, the system automatically suggests the net price according to these conditions when you create the contract item.



- A contract is a long-term agreement with a vendor concerning the supply of material or performance of services.
- You can create contracts manually. When doing so, you can reference other contracts, purchase requisitions, and RFQs or quotations.
- One of the things you define in the contract header is the validity period.
- For each item in a quantity contract, you define the target quantity and purchase order conditions.



**Item Categories M and W**

Item category **M** =  
material unknown

**Contract**

<u>ICat</u>	<u>Mat.</u>	<u>Short text</u>	<u>Qty.</u>	<u>Price</u>
	<u>Mat. group</u>			
M	Office	Notepads	1000 pcs.	2.50

**Contract release order**

<u>AACat</u>	<u>Mat.</u>	<u>Short text</u>	<u>Price</u>
K		Notepad ruled	2.50
	B100	Notepad unruled	2.50

Item category **W** =  
material group

**Contract**

<u>ICat</u>	<u>Mat.</u>	<u>Short text</u>	<u>Qty.</u>	<u>Price</u>
	<u>Mat. group</u>			
W	Office	Office materials		

**Contract release order**

<u>AACat</u>	<u>Mat.</u>	<u>Short text</u>	<u>Price</u>
K		Calendar	9.80
	B900	Ball-point pens	0.50

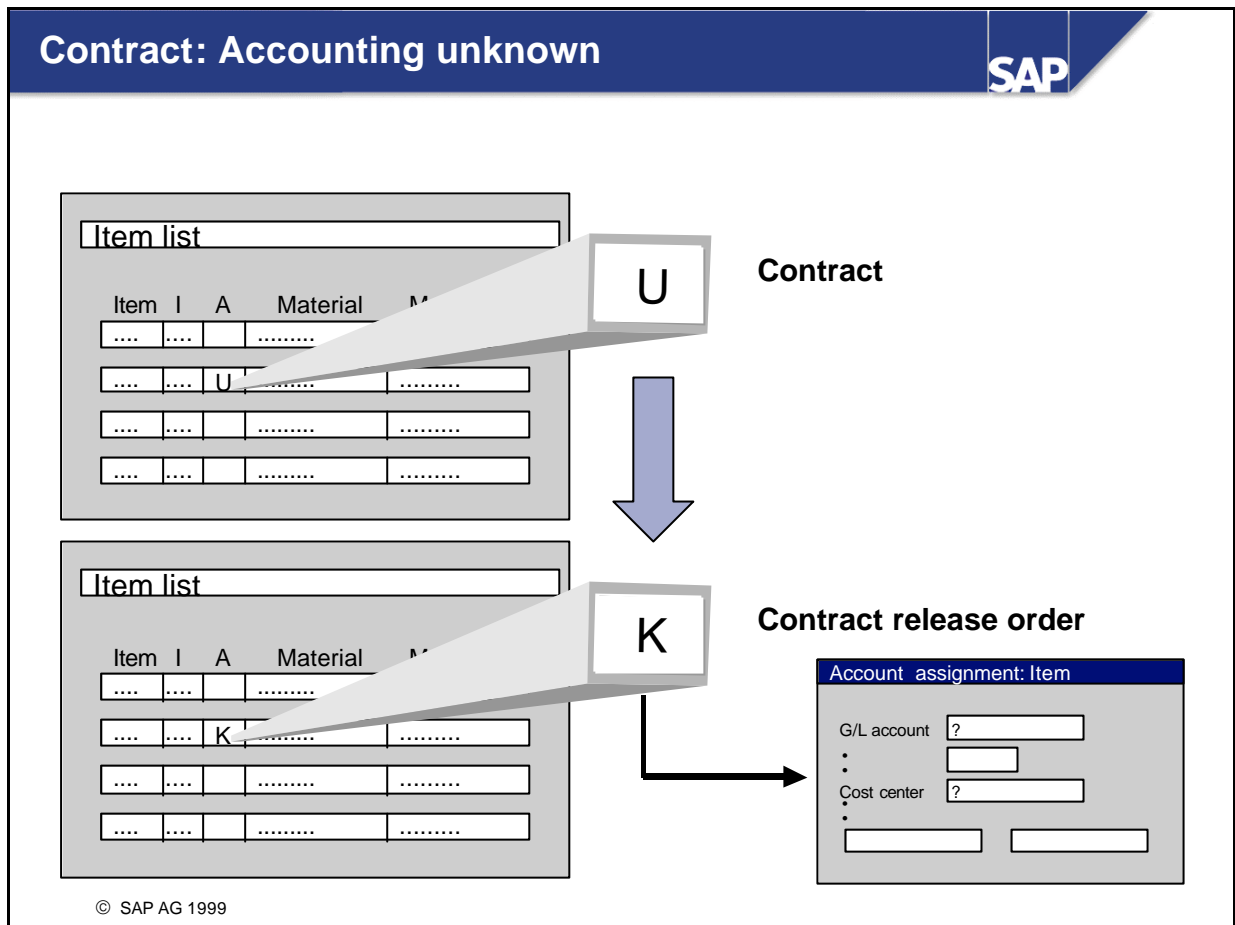
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- In contracts, you can use the special item categories M (material unknown) and W (material group).
- Item category M is recommended for similar materials with the same price but different material numbers. When you create the contract item, you enter the short text, material group, quantity and unit of measure, but no material number. This is not specified until a release order for such a material is created against the contract.
- Item category W is recommended for materials belonging to the same material group but with different prices. When you create the contract item, you enter the short text and the material group, but no price. This and the material number are not entered until a release order is created against the contract.
- Item category W can be used only in value contracts.
- You can enter a material number in the contract release order. The corresponding material master record must be assigned to the same material group as the contract item that is referenced. If the contract release order does not contain a material number, it must have a valid account assignment (such as a cost center).
- The item categories M and W are not allowed in contract release orders and must be cancelled if a release order referencing such a contract item is created.

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- You may use the account assignment category ,unknown' (U) in contracts.
- The account assignment category ,U' is denied in contract release orders. You have to replace the account assignment category with a possible one.

Release Documentation

**Contract**

➔

**Contract  
rel. order**

10 \_\_\_\_\_  
20 \_\_\_\_\_  
30 \_\_\_\_\_

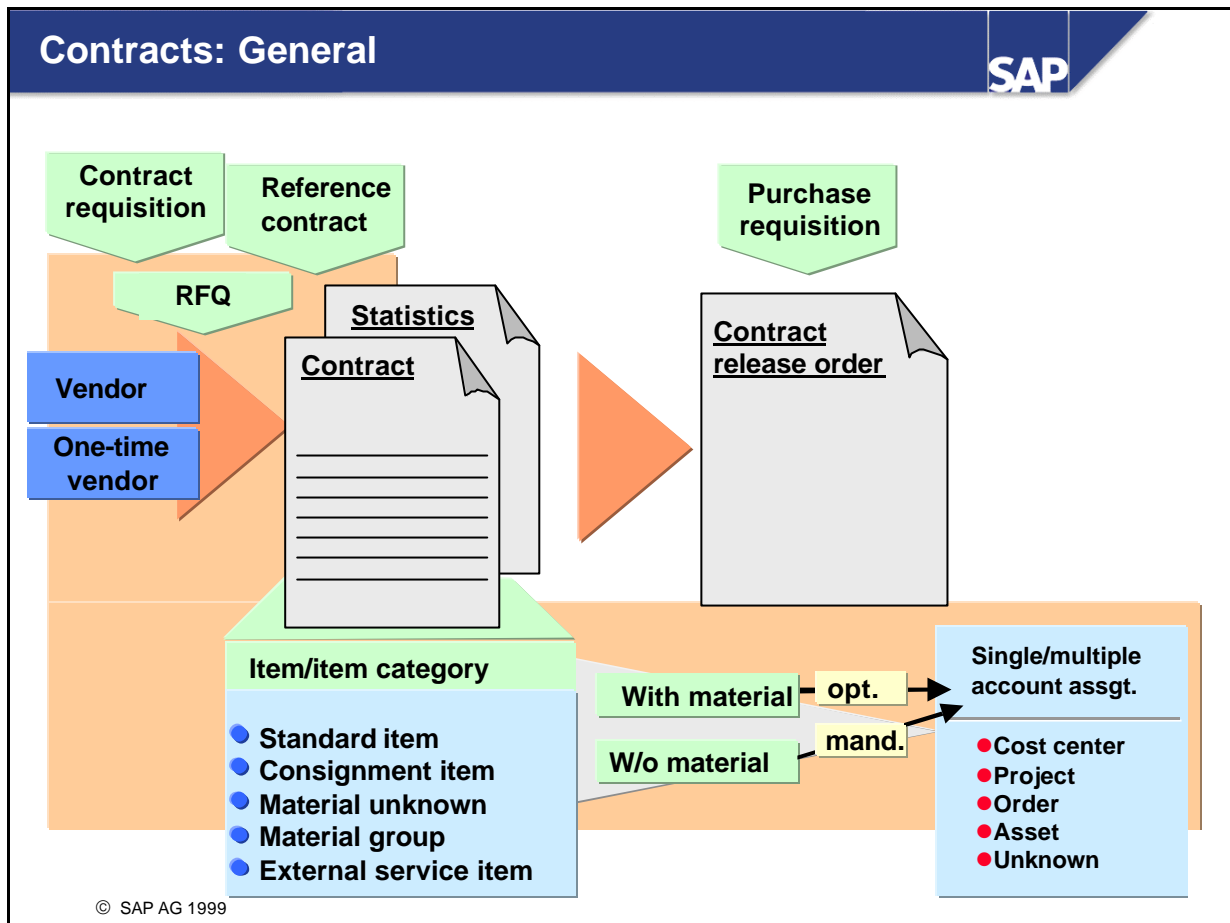
Release documentation

PO	Date	Qty
450000026	May 01 1998	1000
450000042	Dec 02 1998	1500
450000056	Jun. 04 1998	2500
Open target qty		15000

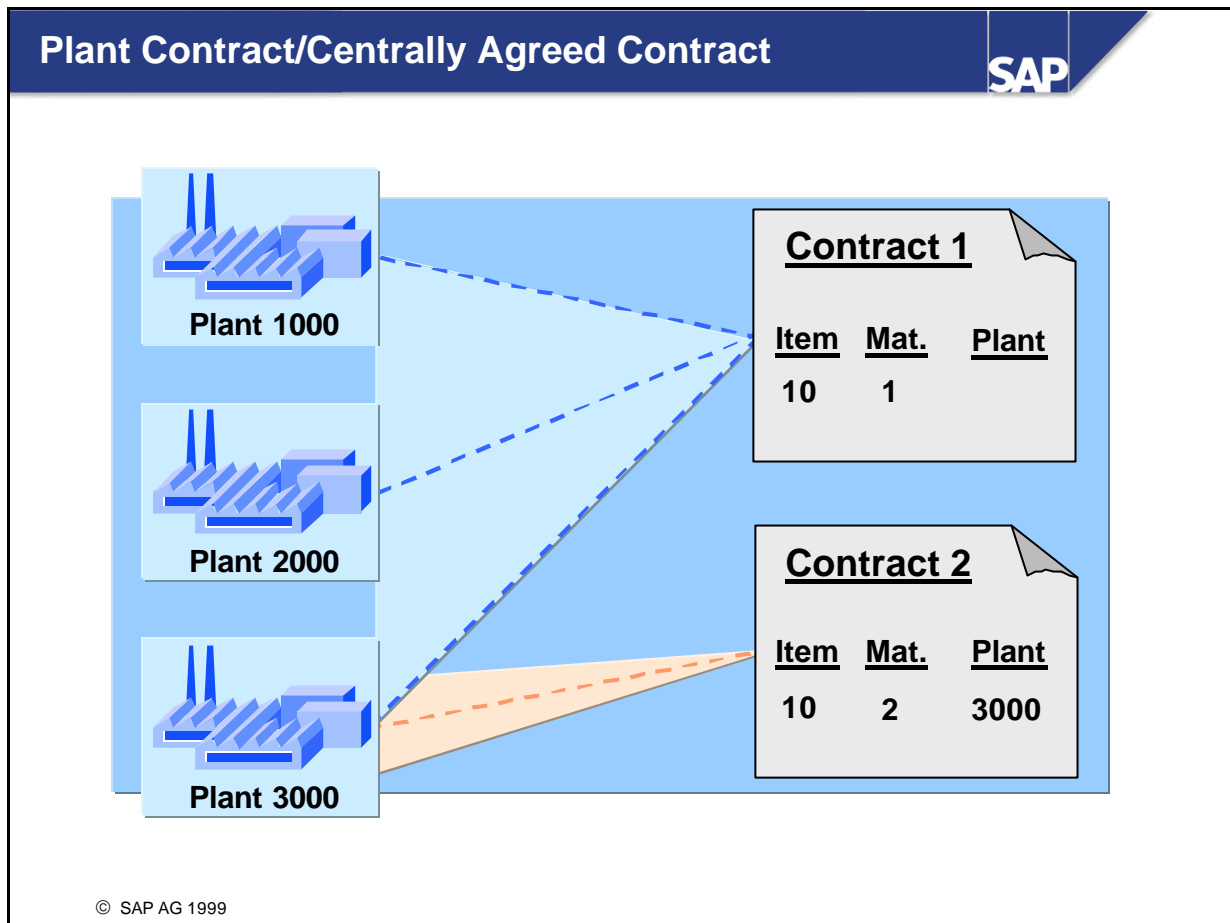
- The release documentation shows the status of the release order activities for a contract.
- This includes information on the open quantity, the release order number, date, and quantities.

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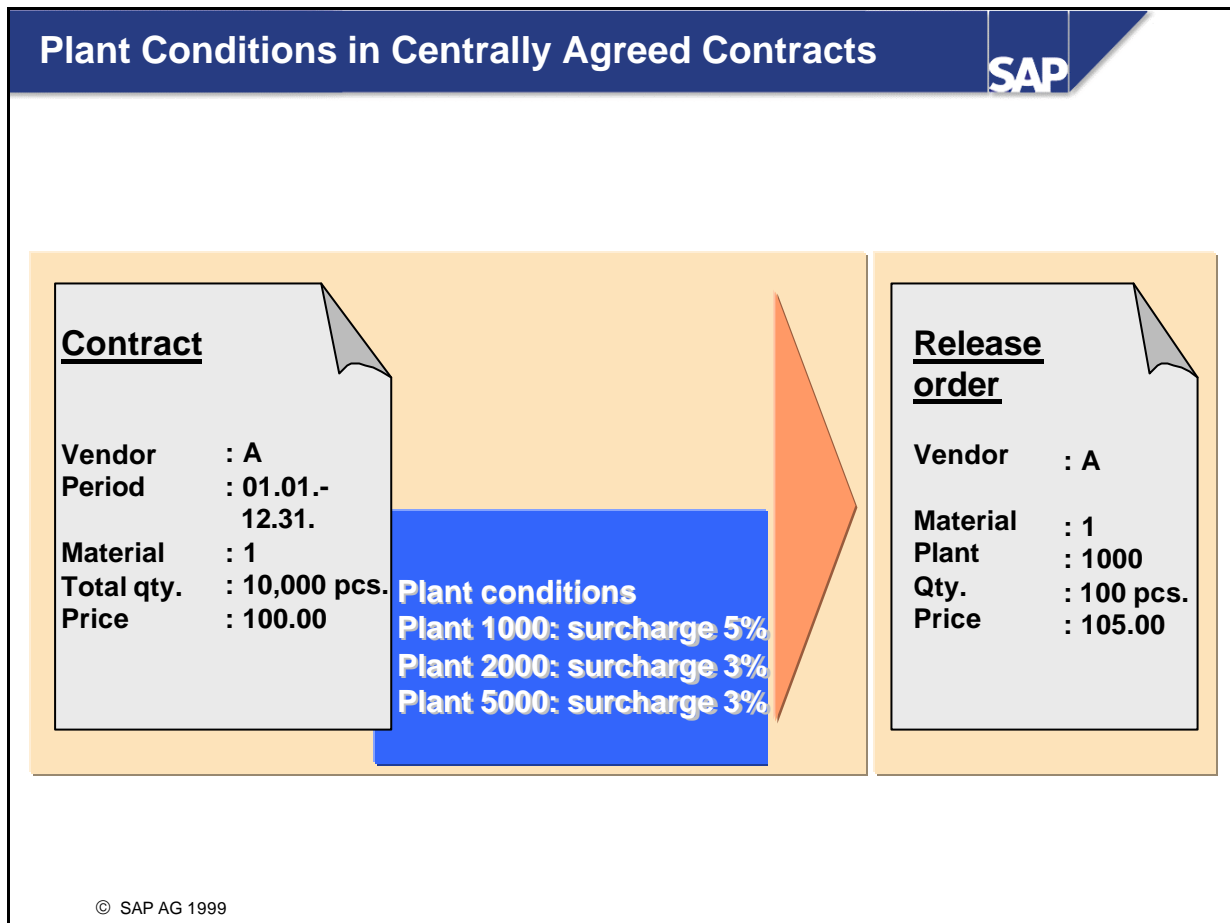
- Contract release orders are purchase orders that are created with reference to a contract.
- The release order documentation (for example, the quantity released until now, and the open quantity) is automatically updated when you create a contract release order. This is used for monitoring the contract.
- The release order documentation is contained in the statistics for a contract item.
- Note: You can enter contracts as a source of supply in the purchase requisition. This ensures that the outline agreement is referenced when the purchase requisition is converted into a purchase order. We would also call this a contract release order.



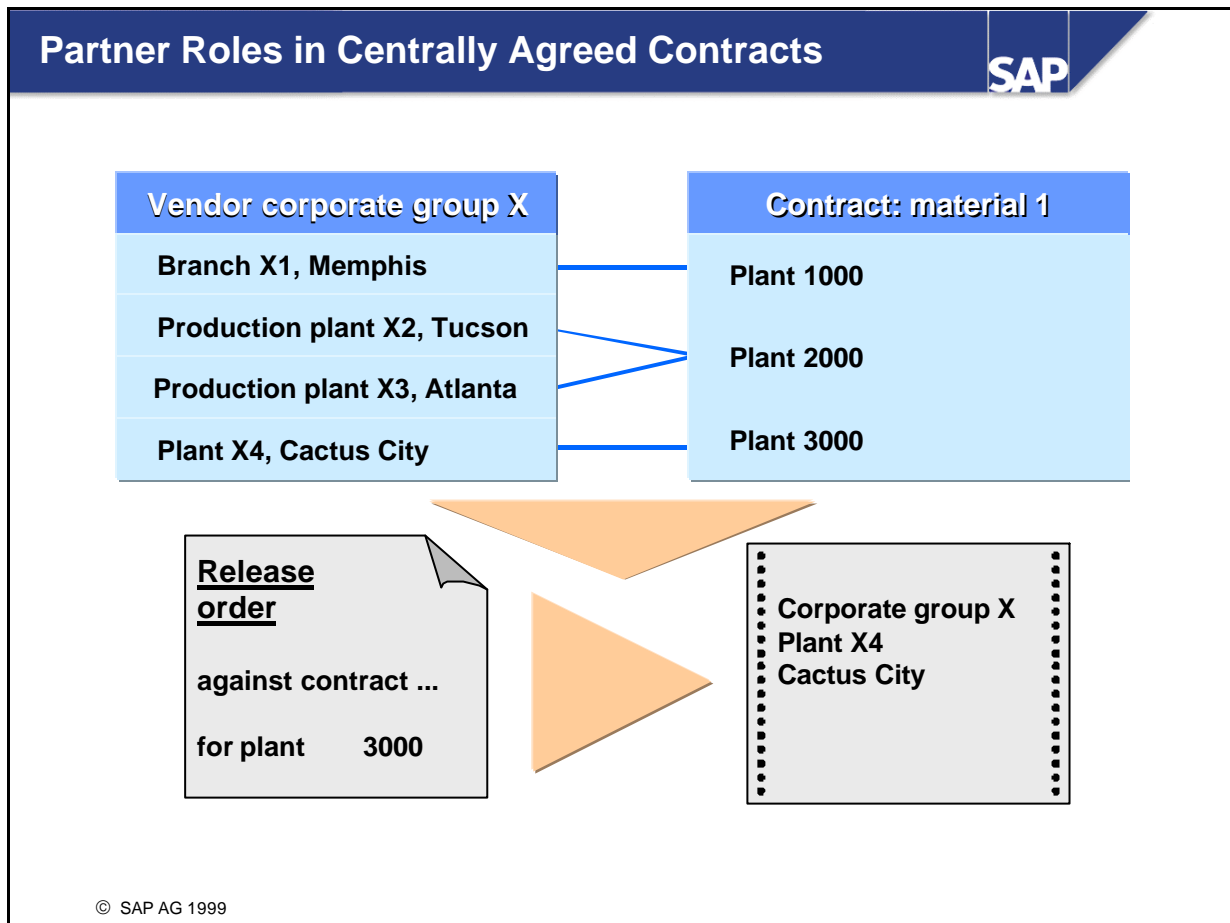
- Contracts can be created with or without reference to an outline agreement requisition, an RFQ or another contract.
- Contract release orders can be created with or without reference to a purchase requisition.
- The release order documentation comprises details of ordering activities relating to a contract. The system supplies the following data on each release order:
  - Number of the contract release order
  - Order date
  - Order quantity
  - Order value
  - Quantity released to date
  - Target quantity
  - Open target quantity
- Note that in addition to standing for a method of ordering against a longer-term purchase agreement (as above), the term “release” is also used in MM within the context of document approval.
- You can list all contracts that are due to expire in the immediate future. The analysis is carried out using the *Target value* and *Total value released* fields in the contract header, based on a suitable selection parameter.



- Contract items can relate to a single plant or to all plants covered by a purchasing organization (centrally agreed contract).
- All the plants of a purchasing organization can order against a centrally agreed contract.
- An enterprise working with a central purchasing organization covering several plants can negotiate better conditions at a high level.
- Centrally agreed contracts can be entered into with a vendor's entire corporate group. The individual contract release orders can be issued to different individual companies belonging to the vendor corporate group. This is made possible by the partner functionality.
- You can stipulate that certain plants are to be supplied by certain companies belonging to the vendor corporate group.



- Items of a centrally agreed contract do not relate to just one specific receiving plant.
- All the plants covered by a purchasing organization can order against a centrally agreed contract.
- An enterprise that works with a central purchasing organization covering several plants can negotiate better conditions at a high level.
- Using the *Plant conditions* function, the centrally agreed contract allows you to stipulate separate prices and conditions for each receiving plant. Among other things, you can take account of differing transport costs for different supply routes.



- You can set up centrally agreed contracts that are valid for an entire vendor corporate group. You can assign several vendors to a contract, each of which then assumes a different role, using the partner functionality.
- The partners can be stored in the vendor master record for the vendor corporate group or maintained individually in the contract.
- The individual contract release orders can be issued to different vendors belonging to the vendor corporate group.
- You can stipulate that certain plants are to be supplied by certain vendors within the vendor corporate group.

## Exercises



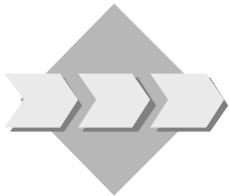
### Unit: Outline Agreements

### Topic: Contracts



At the conclusion of this exercise, you will be able to:

- Recognize the different types of contracts
- Explain the uses of item categories M and W in contracts
- Create a centrally agreed contract
- Create release orders for different types of contracts



You wish to optimize your work processes in purchasing and want to create the necessary prerequisites in the system. You also need a place to store prices and other purchasing information that you will use repeatedly when buying a certain item from a particular vendor.

- 2-1 You have entered into a contractual agreement with vendor **T-L20B##** regarding the purchase of material **T-REB##**.

As purchasing group **Z##**, you have agreed to purchase **10000** pc over a period of **2 years** starting **today**. The agreement is to be valid for all plants covered by purchasing organization **1000**. However, different prices apply to two plants.

- 2-1-1 Create a centrally agreed quantity contract (agreement type **MK**).



Make sure that you do not specify a plant on either the initial screen or the overview screen.

The following prices apply:

General price: **9.90**

**Plant Conditions:**

Plant 1000: **9.20**

Plant 1100: **9.50** plus **10 UNI** freight (value) (condition type FRB1)

Contract no.: \_\_\_\_\_

- 2-1-2 Add the task from above to your *Favorites*.



2-2 Three of your plants need material **T-REB##**. You want one release order with reference to your centrally agreed contract:

2-2-1 First activate the *Document overview* and create a selection variant for contracts of your vendor **T-L20B##**.

2-2-2 Now create the release order:

- **100** pc for plant **1000**, delivery in **4** weeks
- **120** pc for plant **1100**, delivery in **8** weeks
- **80** pc for plant **1300**, delivery in **8** weeks

2-2-3 What net prices are suggested by the system?

Plant 1000: \_\_\_\_\_

Plant 1100: \_\_\_\_\_

Plant 1300: \_\_\_\_\_

Purchase order number: \_\_\_\_\_

2-3 As purchasing group **Z##**, you have also entered into a contractual agreement with vendor **T-L20C##**.

2-3-1 This agreement covers the purchase of a total of **5000** pc. of packaging materials, and is valid only for plant **1000**. It is to be in force for **12 months** as of today's date.

The materials are assigned to material group **008** (packaging materials) and have a uniform price of **1/pc**.

Create the contract.

2-3-2 Which item category do you use for the contract item? \_\_\_\_\_

2-3-3 Explain why you chose this item category.

\_\_\_\_\_

Contract no.: \_\_\_\_\_

2-4 Now create a release order against your second contract for the following two items.

2-4-1 First, create a new Selection variant in the *Document overview* area.

2-4-2 You need **50 pc** of material **PK-080** for storage location **0001**. Delivery is to take place in **four weeks**. Order with reference to your second contract.



Item category **M** is not allowed in the contract release order. If it appears it must be removed.

2-4-3 On the same delivery date, you also need **80 pc** of **Size 5 Packing cases**. There is no master record for this material. Order this item with reference to your second contract, too, and assign it to G/L account **400000** and cost center **T-L20**. Use account assignment category **K**.

Purchase order number \_\_\_\_\_

2-5 You enter into an additional contractual agreement with vendor **T-L20C##** covering two items. The agreement is to:

- Apply to plant **1000** only
- Take effect as of the first day of the current month
- End on December 31 of the coming year
- Have a target value of **10000**

2-5-1 Which agreement type do you use? \_\_\_\_\_

2-5-2 First item: you have negotiated a particularly favorable price of **340** for material **T-RED##**.

2-5-3 Second item: various small parts belonging to material group **010**. The prices of the various small parts vary and therefore cannot be recorded in the agreement.

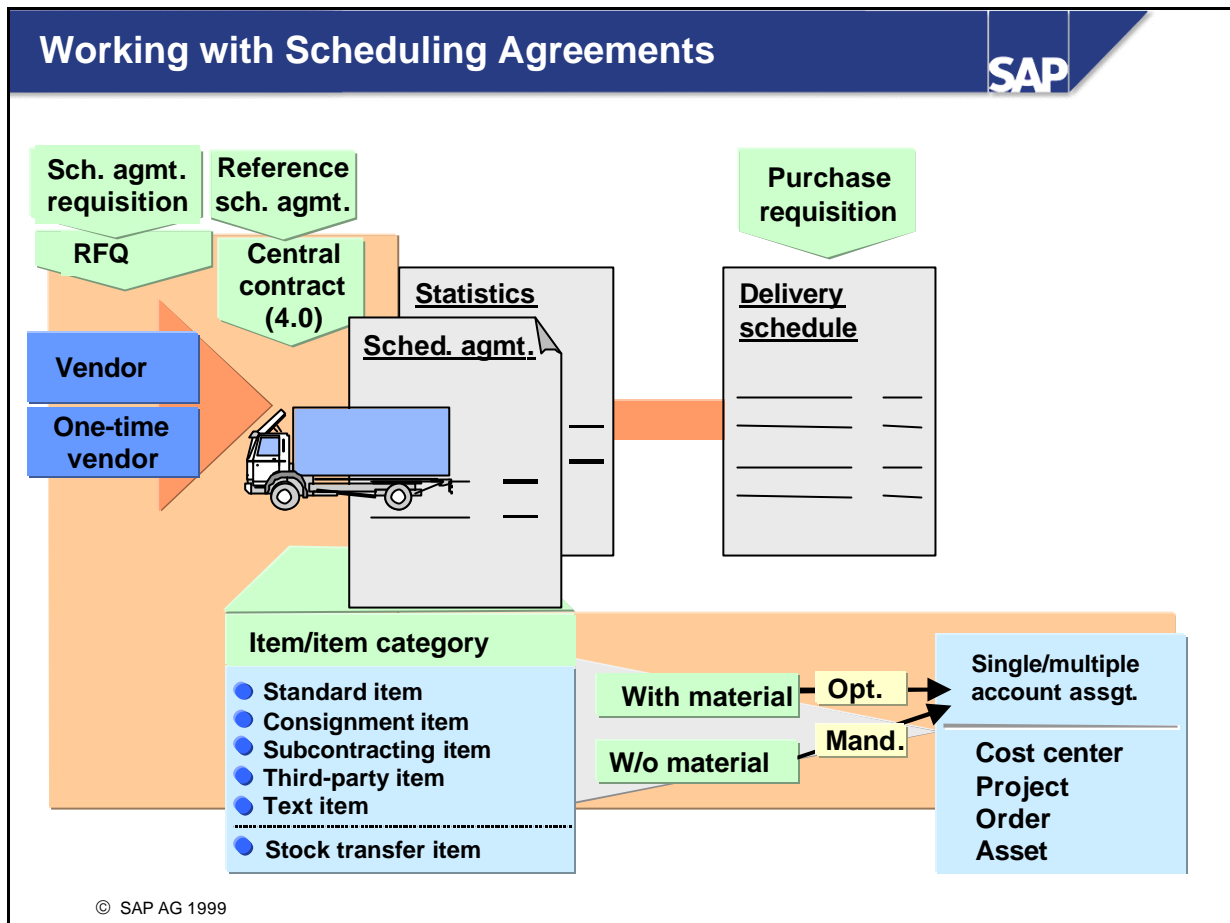
2-5-4 Which item category do you choose for the second item? \_\_\_\_\_

2-5-5 Explain why you chose this item category.

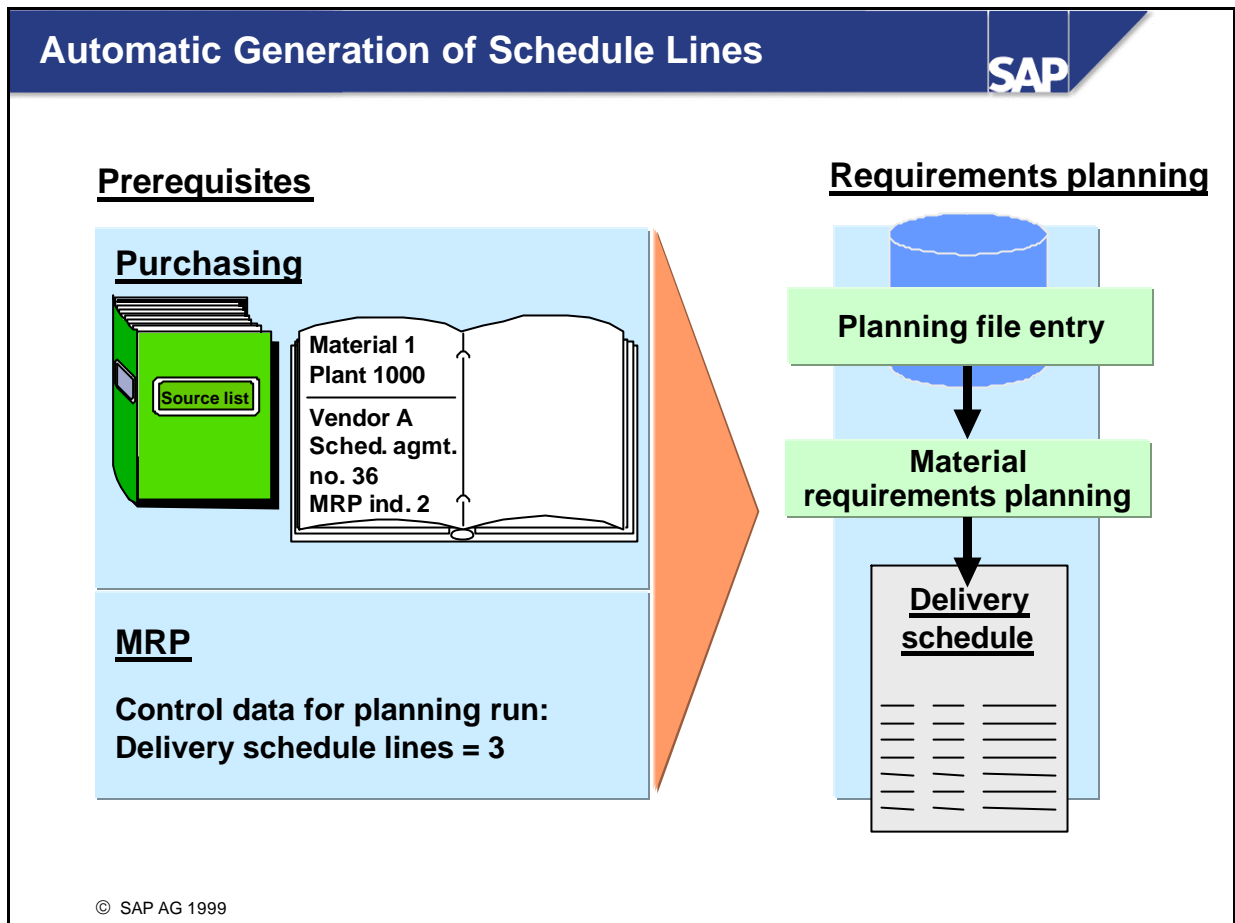
\_\_\_\_\_ Contract no.: \_\_\_\_\_

2-6 Order **2 pc** of material **T-RED##** with reference to your third contract. The material is needed for plant **1000** and is to be delivered in six weeks.

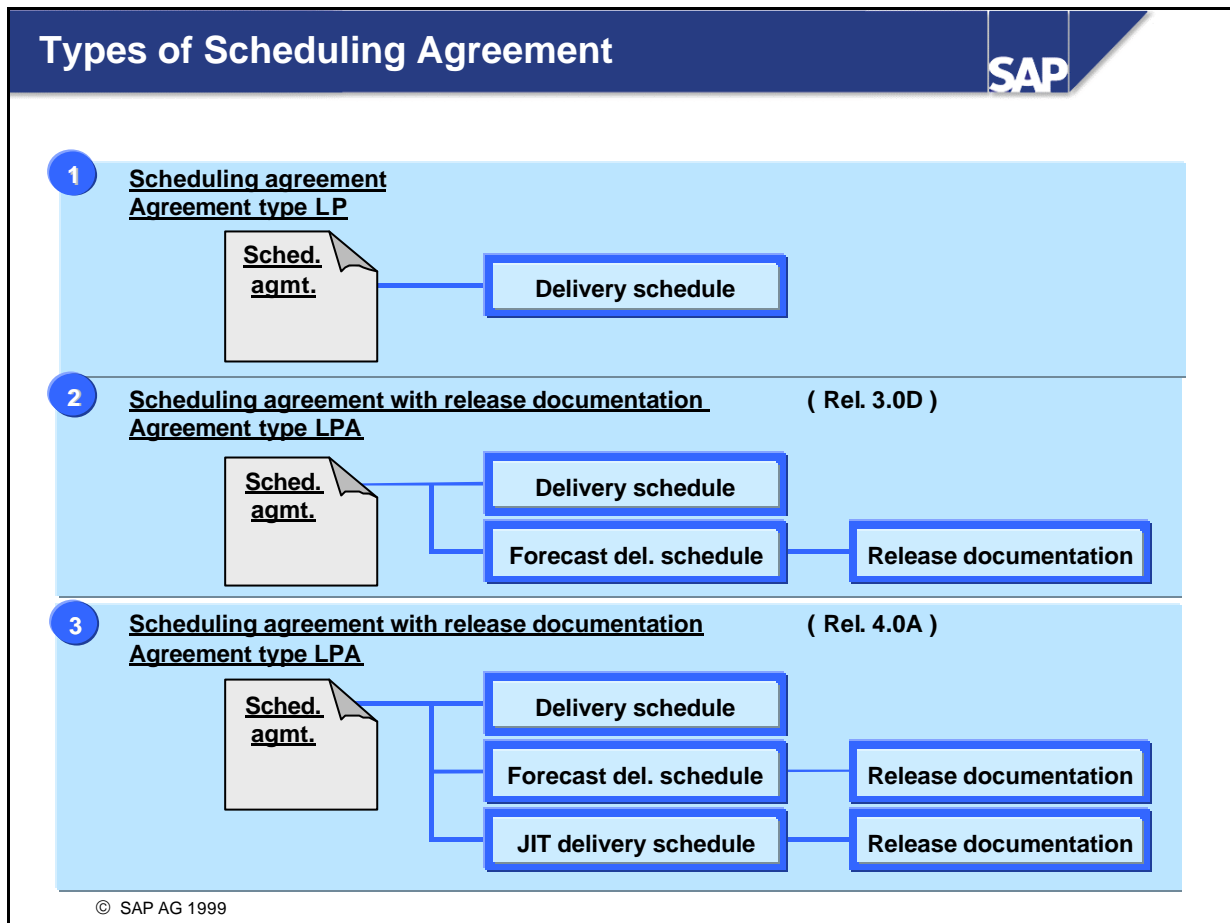
Purchase order no. \_\_\_\_\_



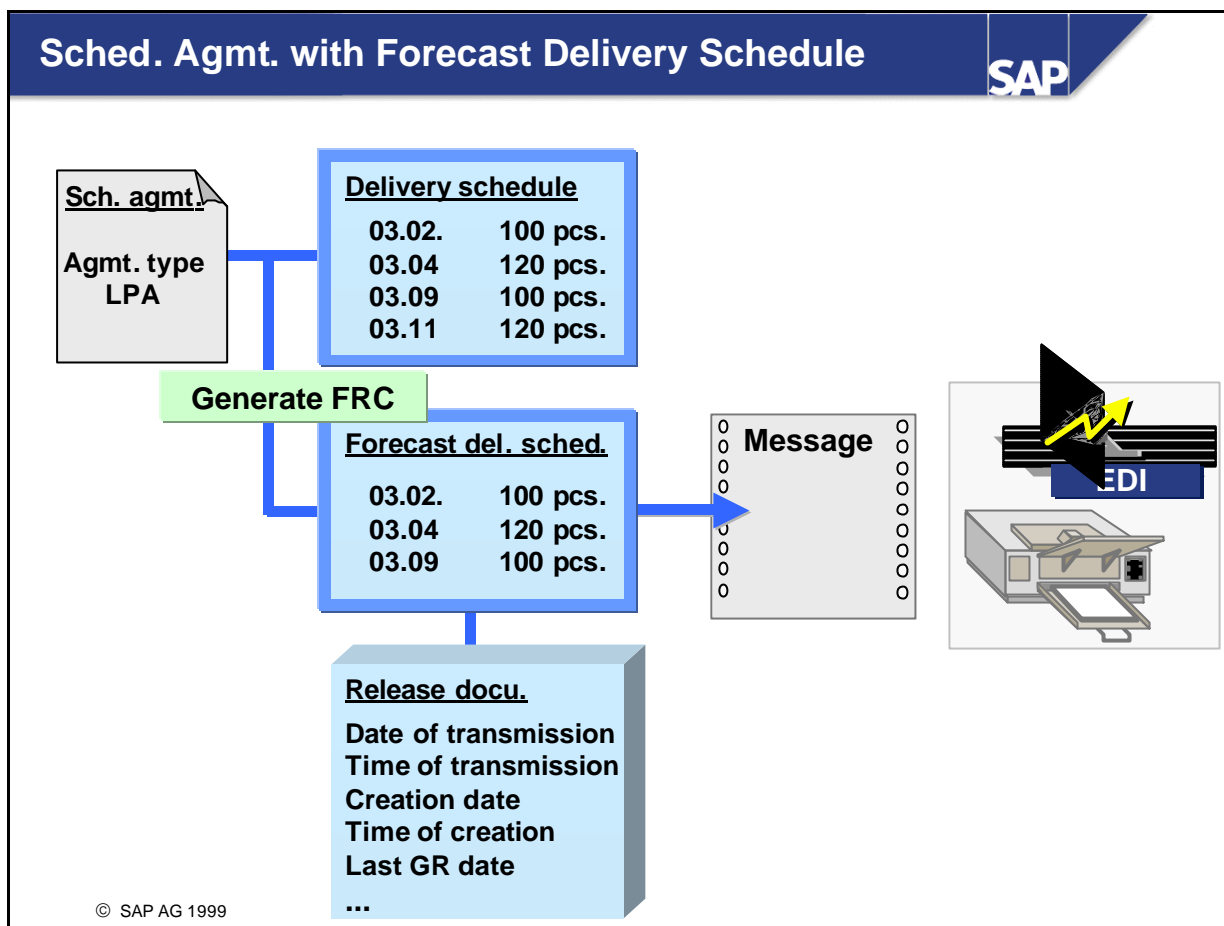
- A scheduling agreement is a longer-term purchase arrangement with a vendor covering the supply of materials according to predetermined conditions. These apply for a predefined period and a predefined total purchase quantity.
- Scheduling agreements can be created with or without reference to an outline agreement requisition, an RFQ or another scheduling agreement.
- You can create scheduling agreements with reference to a centrally agreed contract, thus taking advantage of prices negotiated centrally.
- Neither the item categories M and W, nor the account assignment category U (account assignment unknown) are allowed in scheduling agreements.
- Details of delivery dates and quantities are communicated to the vendor in the form of delivery schedules.
- Delivery schedule lines can be created with or without reference to a purchase requisition. Schedule lines can also be generated automatically using the MRP system.
- Such delivery schedules/schedule lines do not constitute separate documents, but form part of the scheduling agreement. Procurement using scheduling agreements therefore helps to reduce the volume of documents in use.



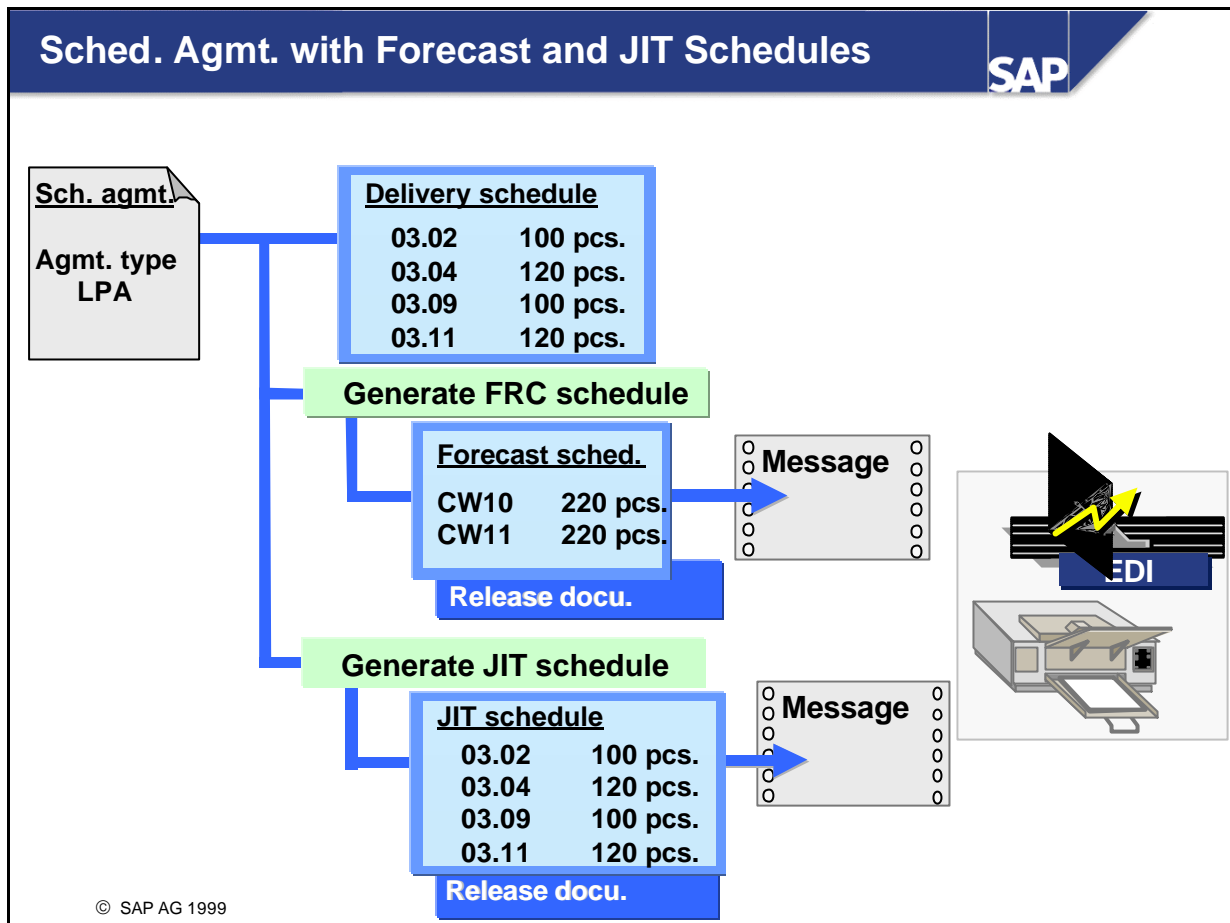
- A particular advantage of working with scheduling agreements is that delivery schedule lines can be generated by the MRP system automatically provided that certain prerequisites are fulfilled:
  - The scheduling agreement must be uniquely defined as the source of supply
  - Automatically generated schedule lines must be allowed by the source list (MRP indicator 2).
  - Automatically generated schedule lines must be allowed in the MRP system



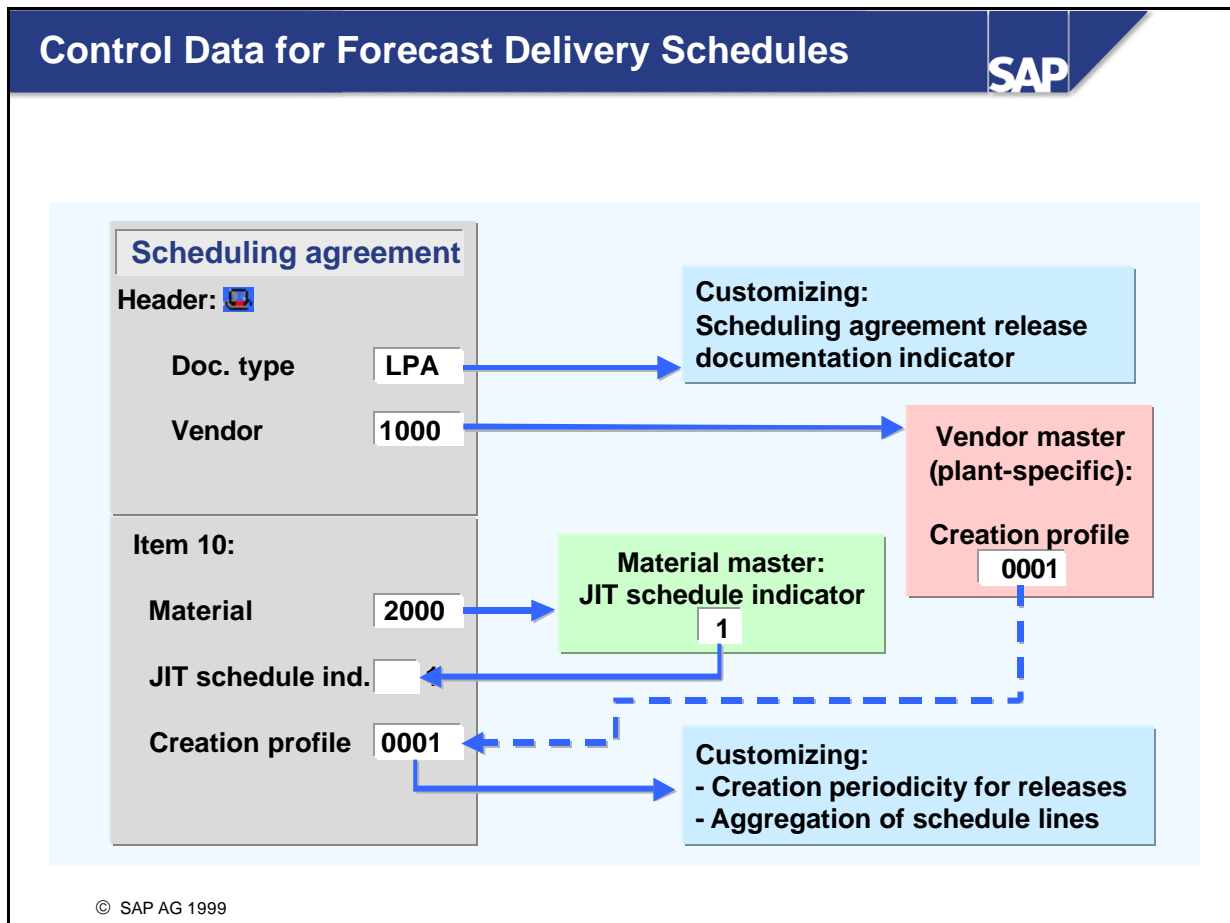
- When using scheduling agreements for procurement purposes, you can work with or without release documentation. Working with release documentation has the advantage in that at any time you can see when you sent specific scheduling information to your vendor.
- If you work with scheduling agreements without release documentation, the current schedule lines are transmitted to the vendor automatically after creation using the message output control program.
- If you use scheduling agreements with release documentation, the delivery schedule lines are not transmitted to the vendor automatically as soon as they are created. Instead, you initially record schedule lines that are final in character in a scheduling agreement release. Transmission of scheduling data can take place only after you have created such a release.
- There are two kinds of scheduling agreement release:
  - Forecast (FRC) delivery schedules are used to give the vendor a medium-term overview of your requirements.
  - Just-in-Time (JIT) delivery schedules are used to inform your vendor of your requirements in the near future. Such schedules may comprise a daily or even hourly breakdown of your requirements over the next few days or weeks.
- Whether you create a scheduling agreement with or without release documentation is determined using the release documentation indicator for the document type.



- You create a scheduling agreement with release documentation if you use a document type for which the release documentation indicator has been set in Customizing. This indicator is pre-set for the standard document type LPA.
- In a scheduling agreement release, you record the current status of your overall delivery schedule for a scheduling agreement item in the system. You can then transmit this status to the vendor.
- A scheduling agreement release can be created either manually or on a regular basis by means of a report. If you work with the report (online or in the background), you can generate releases either for all selected scheduling agreement items or only for those in respect of which additional schedule lines have been created or previously existing ones changed.
- Delivery schedule lines for a scheduling agreement with release documentation initially constitute internal information only. You can change them at will, or have schedule lines created automatically using the MRP system. They are not automatically transmitted to the vendor as soon as they are created. Your delivery schedule data does not acquire finalized status until you create a scheduling agreement release. As a rule, such releases are transmitted to the vendor automatically shortly afterwards.
- The release documentation enables you to keep track of when you transmitted specific information to the vendor.
- Note that in addition to standing for a method of ordering against a longer-term purchase agreement (as above), the term “release” is also used in MM within the context of document approval.

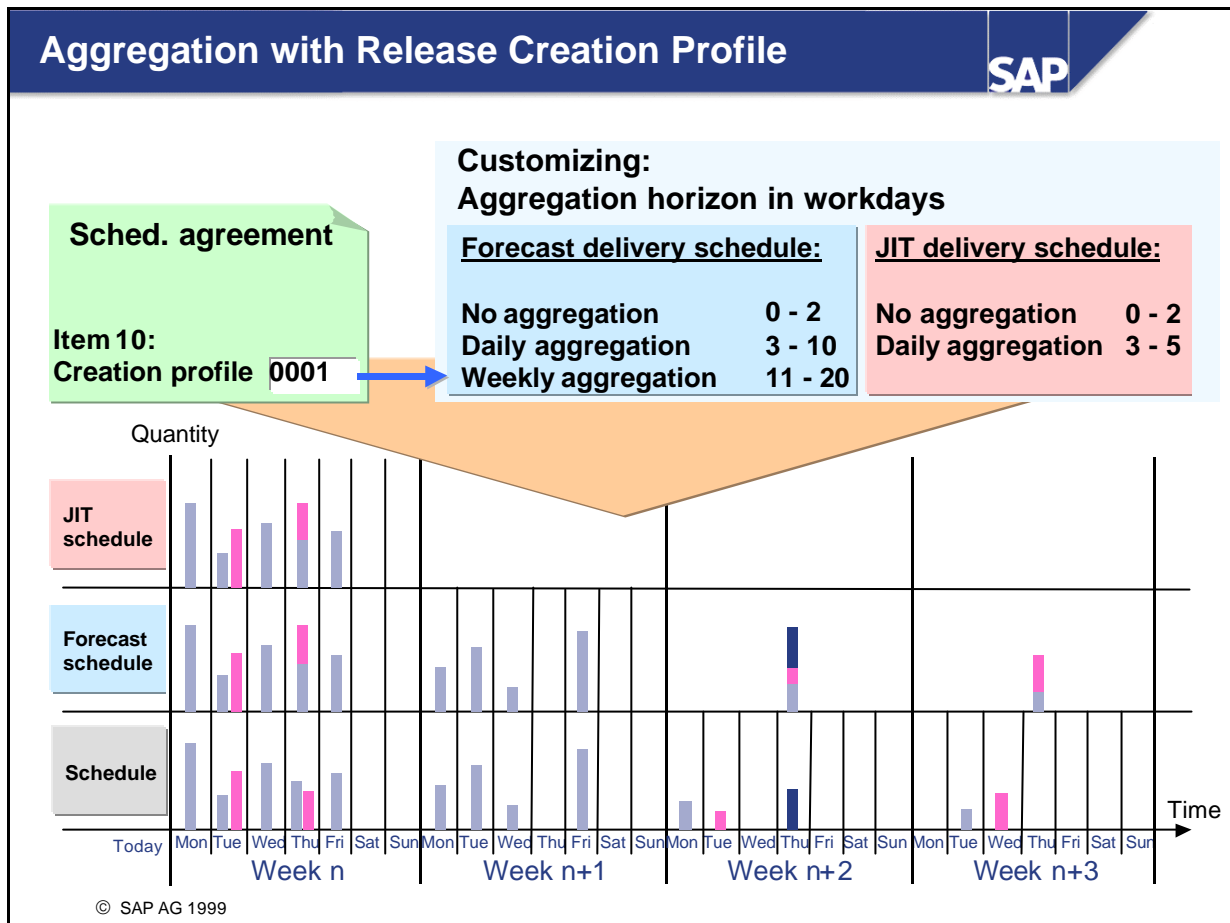


- As of Release 4.0A, if you work with scheduling agreements with release documentation, the relevant functionality is available for JIT delivery schedules in addition to FRC schedules.
- FRC schedules are used to give the vendor a medium-term overview of your requirements. JIT schedules are used to inform the vendor of your requirements in the near future, broken down on a daily or even hourly basis.
- Whether you can generate FRC and JIT delivery schedules with respect to a scheduling agreement with release documentation is determined by the JIT schedule indicator in the material master record. No JIT delivery schedules can be created for the material if the indicator is not set.
- A scheduling agreement release (FRC or JIT delivery schedule) can be created manually or on a regular basis with the aid of a report. If you work with the report (online or in the background), you can generate releases either for all selected scheduling agreement items or only for those with respect to which new schedule lines have been created or previously existing ones changed.

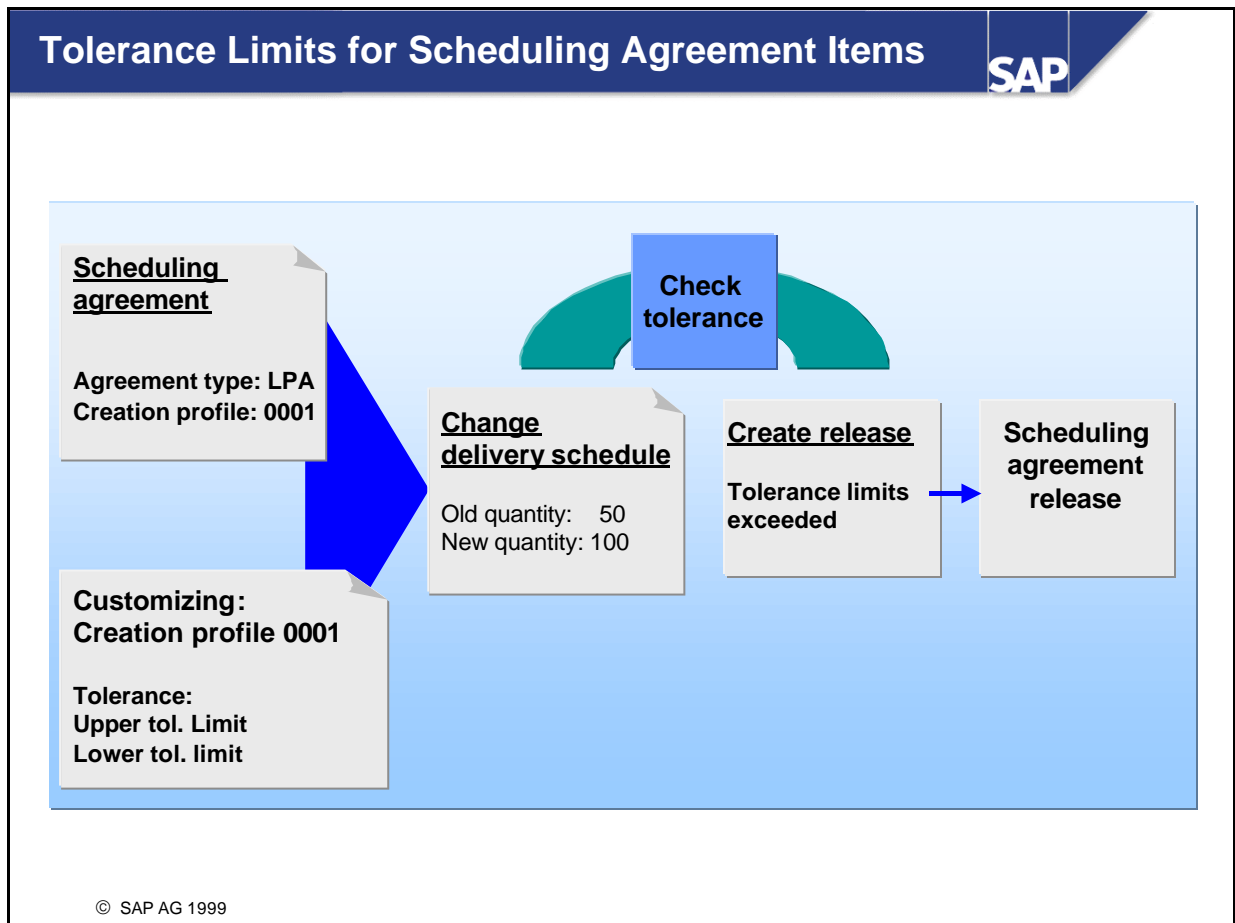


- You can choose whether to create a scheduling agreement with or without release documentation. You create a scheduling agreement with release documentation if you use a document type for which the release documentation indicator has been set in Customizing. The indicator is pre-set for the standard document type LPA.
- As of Release 4.0A, if you work with scheduling agreements with release documentation, the relevant functionality is available for JIT delivery schedules in addition to FRC schedules. Whether you can generate FRC and JIT delivery schedules with respect to a scheduling agreement with release documentation is determined by the JIT schedule indicator in the material master record. No JIT delivery schedules can be created for the material if the indicator is not set.
- As of Release 4.0A, there is a release creation profile for scheduling agreements with release documentation. The creation profile determines the transmission periodicity of scheduling agreement releases and the aggregation of schedule line quantities. Its use is optional. The profile is defined on a plant-specific basis in Customizing and can be assigned in the vendor master record or the scheduling agreement item.

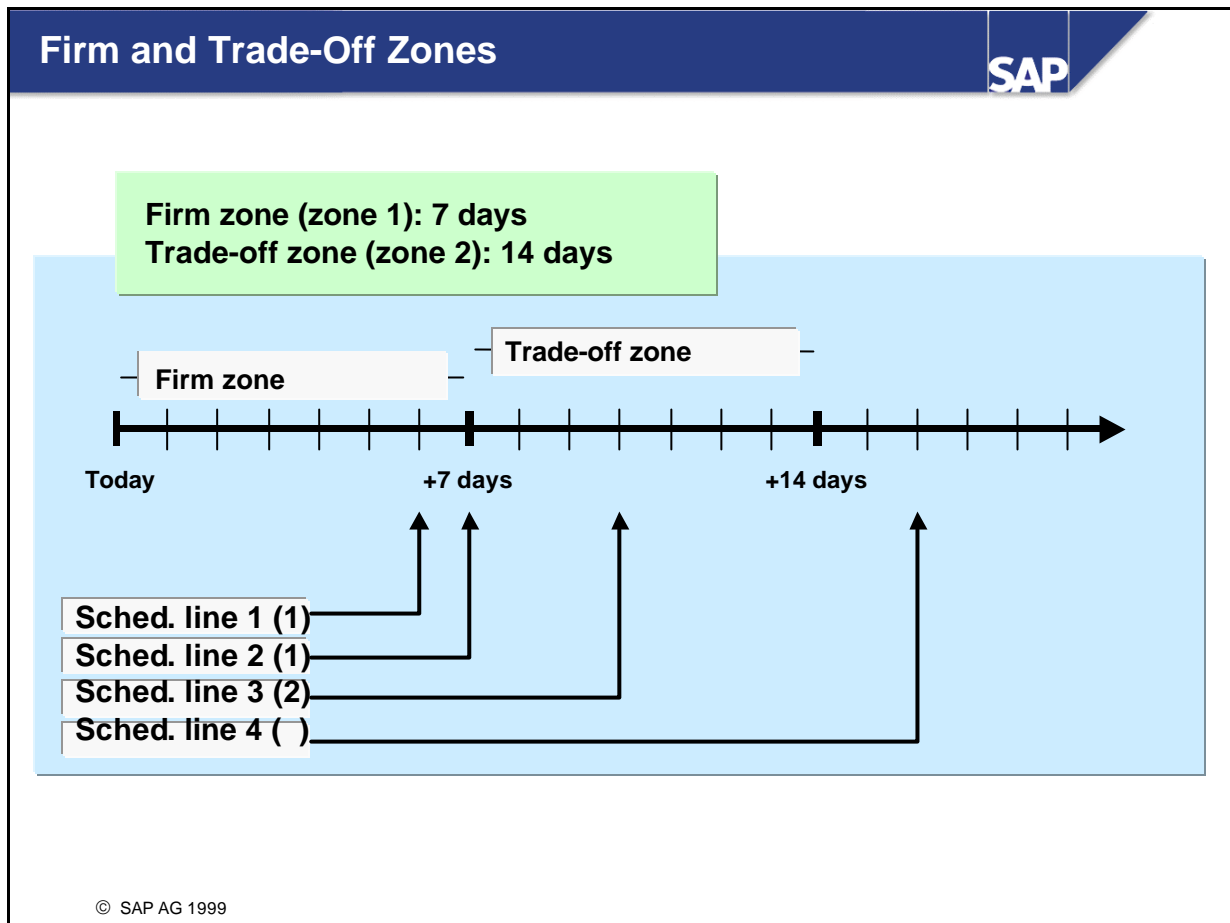




- There is a release creation profile for scheduling agreements with release documentation. Its use is optional. The profile can be assigned in the vendor master record or the scheduling agreement item.
- Release creation profiles are defined in Customizing on a plant-specific basis.
- A release creation profile determines the transmission periodicity of scheduling agreement releases and the aggregation of schedule line quantities.
- The transmission periodicity determines the time intervals (e.g. daily, weekly) in which scheduling agreement releases are to be generated and transmitted. You can define different time intervals for forecast delivery schedules and JIT delivery schedules.
- The aggregation of schedule line quantities involves determining the time horizon for which individual schedule line quantities of a scheduling agreement item are to be added together to form total quantities. You can define different time horizons for forecast delivery schedules and JIT delivery schedules. This enables you to aggregate scheduled quantities for forecast delivery schedules to a greater extent than for JIT schedules, which usually feature a daily or even an hourly breakdown of requirements. When aggregating schedule line quantities, you also delimit the transmission horizon. This enables you to transmit to the vendor an aggregated forecast of likely requirements over several months in an FRC delivery schedule and your more precise daily requirements for the next few weeks in a JIT schedule.



- As of Release 4.5A, you can generate releases for changed scheduling agreement items on the basis of exceeded tolerance limits. You can thereby specify that releases are to be generated only for substantial changes.
- You define the tolerance limits in Customizing in the release creation profile. Tolerance limits can be defined for a maximum of three checking periods for each release type (FRC and JIT). You assign the release creation profile to a scheduling agreement item.



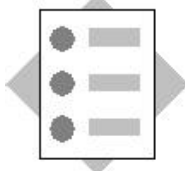
- Firm and trade-off zones define the degree to which schedule lines are to be regarded as binding.
- Scheduled delivery dates that lie in the near future can represent a firmer commitment than those that are further away in time.
- You can define a firm zone and a trade-off zone for an item of a scheduling agreement:
  - The firm zone defines the point in time (calculated from the current date) at which the period when the vendor has the go-ahead for production ends. The firm zone begins on the current (today's) date. Delivery schedule lines falling within this zone count as firm and fully binding.
  - The trade-off zone defines the point in time (calculated from the current date) at which the period when the vendor has the go-ahead for the purchase of input materials ends. The trade-off zone begins at the end of the firm zone. Delivery schedule lines falling within this zone count as semi-firm.
- Delivery schedule lines lying beyond the firm and trade-off zones fall within the planning zone.
- The firm and trade-off zones are printed out in the delivery schedule for information purposes. It is assumed that procurement with respect to each delivery schedule line is carried out on the terms applicable to the zone in which the line in question falls.

## Exercises



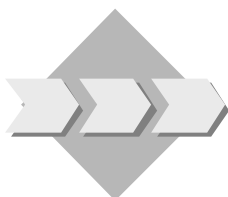
### Unit: Sources of Supply 2

#### Topic: Scheduling Agreement with Release Documentation



At the conclusion of this exercise, you will be able to:

- List the advantages of using scheduling agreements
- Explain the various types of scheduling agreements
- Create scheduling agreements, standard delivery schedules, and scheduling agreement releases (forecast and JIT delivery schedules)
- Recognize the difference between forecast schedules and JIT schedules



You wish to use scheduling agreements to procure certain materials that are to be delivered on a Just-in-Time (JIT) basis. At first, the vendor is to be provided with a rough overview of the quantities that you are likely to need over the next few weeks. You will later provide your vendor with information on a JIT basis.

- 1-1 You have entered into a scheduling agreement covering your material **T-REC##** with vendor **T-L20B##**. The vendor wishes to be informed of required quantities some months in advance.

In order to be able to generate forecast and JIT delivery schedules under a scheduling agreement, you must first create the necessary prerequisites by making the appropriate entries in the relevant master records:

- 1-1-1 Set the JIT delivery schedule indicator to “1” for material **T-REC##** in plant **1000**. The JIT delivery schedule indicator is on the Purchasing view of the material master record.
- 1-1-2 Add this task to your *Favorites*.
- 1-1-3 Assign creation profile **ZTM1** to vendor master **T-L20B##**. The creation profile is part of the plant-specific purchasing data of the vendor master record, which you can maintain separately from the purchasing organization data. Therefore maintain alternate purchasing data for plant **1000**.
- 1-1-4 Add this task to your *Favorites*.

1-2 Create the scheduling agreement.



Make sure you enter the plant on the initial screen of the scheduling agreement.

1-2-1 Which agreement type do you choose if you wish to work with scheduling agreement releases (forecast and JIT delivery schedules)?

Agreement type: \_\_\_\_\_

1-2-2 The agreement begins on today's date and is valid for 12 months. It is effective for plant **1000**.

The agreement covers a total quantity of **10000** pc. You have negotiated a price of **9.80/pc**. If necessary, overwrite the default net price taken from the info record.

Goods receipts are expected in storage location **0001**.

1-2-3 Before saving the scheduling agreement, go to the Additional data screen and verify that the release creation profile has copied from the vendor master.

Scheduling agreement: \_\_\_\_\_

1-2-4 Add this task to your *Favorites*.

1-3 Maintain a delivery schedule for your scheduling agreement as follows:

	<u>Delivery date</u>	<u>Scheduled quantity</u>	<u>Time</u>
1)	Today	50	10:00
2)	Today	60	14:00
3)	Tomorrow	80	10:00
4)	Tomorrow	40	14:00
5)	In 3 days	60	10:00
6)	In 3 days	80	14:00
7)	In 7 days	50	10:00
8)	In 7 days	60	14:00
9)	In 2 weeks	150	
10)	In 3 weeks	200	

1-3-1 What is the total scheduled quantity? \_\_\_\_\_

Save your delivery schedule.

1-3-2 Add this task to your *Favorites*.

1-4 Convert your schedule into a forecast (FRC) delivery schedule. To do so, choose the *Generate forecast delivery schedule* function from within delivery schedule maintenance.

1-4-1 Go to the release documentation for your scheduling agreement item. Display the transmission details.

Which creation profile is assigned to your scheduling agreement item?  
Creation profile: \_\_\_\_\_

1-4-2 Display the aggregation details for the assigned creation profile and determine the settings for forecast delivery schedules:

No aggregation: \_\_\_\_\_ workdays

Daily aggregation: \_\_\_\_\_ workdays

Weekly aggregation: \_\_\_\_\_ workdays

1-4-3 Display the summary of the lines of your forecast delivery schedule. Which schedule lines are aggregated on a daily basis?

\_\_\_\_\_

Save your forecast delivery schedule.

1-5 Create a Just-in-Time (JIT) schedule from your delivery schedule. To do so, choose the *Generate JIT delivery schedule* function from within delivery schedule maintenance.

1-5-1 Go to the release documentation for your scheduling agreement item. Display the aggregation details for creation profile **ZTM1** and determine the settings for JIT delivery schedules:

No aggregation: \_\_\_\_\_ workdays

Daily aggregation: \_\_\_\_\_ workdays

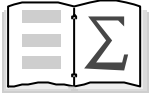
1-5-2 Display the summary of the lines of your JIT delivery schedule. Which lines of the original schedule have not been taken into account in the JIT delivery schedule?

\_\_\_\_\_

Save your JIT delivery schedule.

## Outline Agreements: Summary (1)

SAP

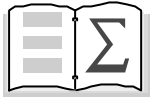


- **An outline agreement can be a contract or a scheduling agreement.**
- **Contracts are subdivided into quantity and value contracts.**
- **A contract item can be valid for a single plant or for all plants covered by a purchasing organization. It can relate to an individual material or all the materials belonging to a material group.**

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## Outline Agreements: Summary (2)

SAP



- **A scheduling agreement is a longer-term purchase arrangement with a vendor covering the supply of materials according to predetermined conditions. Individual delivery dates and quantities are stipulated in delivery schedule lines.**
- **Scheduling agreements with release documentation enable you to inform the vendor of planned delivery quantities and dates over a period extending into the distant future in a forecast delivery schedule or to provide more detailed information for the near future (quantity, date, time) in a JIT delivery schedule.**

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## Solutions



### Unit: Outline Agreements

### Topic: Contracts

#### 2-1 *User menu* ® *Outline Agreement* ® *Contract* ® *Create*

##### 2-1-1 Choose Agreement type **MK**.

For the net price on the item overview screen, enter the general price of **9.90**.

To enter the conditions for plant 1000, select *Edit* ® *Plant Conditions* ® *Overview* from the item overview screen.

Enter plant **1000**, then choose *Enter*.

Enter the net price of **9.20** for plant **1000**.

Don't save yet. Select the *Back* arrow

Repeat for plant **1100**. Choose *Item* ® *Conditions* to record the freight.

Save after you have entered the conditions for both plants.

##### 2-1-2 *Favorites* ® *Add*

#### 2-2 *Favorites* ® *Purchasing* ® *Purchase order* ® *Create* ® *Vendor/supplying plant known*

##### 2-2-1 Select *Document overview on*.

Choose *Selection variant*.

Choose *Contracts*.

Enter *Document type* **MK** and *vendor* **T-L20B##**.

*Execute*.

Your contract should now appear on the left side of the screen.

##### 2-2-2 Select your contract and choose *Adopt*.

The data from your contract should copy to your purchase order line item.

Enter the quantity, delivery date and first plant.

Select *Adopt* again for the other two plants.

2-2-3 Which net prices are suggested by the system?

Plant 1000: 9.20

Plant 1100: 9.50

Plant 1300: 9.90

2-3 ***Favorites ® Outline Agreement ® Contract ® Create***

2-3-1 Use agreement type MK.

2-3-2 Item category M is used for the contract item.

2-3-3 Item category M means material unknown. At the time the contract is created, you are not sure exactly what packaging materials will be ordered. The contract is valid for many different packaging materials. The price, however, is the same for all packaging materials covered by the contract.

2-4 ***Favorites ® Purchasing ® Purchase Order ® Create ® Vendor/supplying plant known***

2-4-1 Select *Document overview on* (if not already on).

Choose *Selection variant*.

Choose *Contracts*.

Enter *Document type MK* and *purchasing group Z##*.

*Execute*.

Both of your contracts should now appear on the left side of the screen.

2-4-2 Select your second contract and drag to the shopping basket.

The data from your contact should copy to your purchase order line item.

Enter the material, quantity, delivery date and storage location.

2-4-3 Again, select your second contract and drag to the shopping basket.

The data from your contact should copy to your purchase order line item.

Enter the remaining data.

2-5 ***Favorites ® Outline Agreement ® Contract ® Create***

2-5-1 Agreement type **WK** (value contract).

2-5-4 Item category **W** is used for the second item.

2-5-5 Item category **W** is used since the line item covers parts in a particular material group, and the prices vary.

2-6 ***Favorites ® Purchasing ® Purchase Order ® Create ® Vendor/supplying plant known***

Choose *Selection variant*.

Choose *Contracts*.

Enter purchasing group **Z##**.

Execute.

All of your contracts should now appear on the left side of the screen.

Choose the last contract and drag the first item to the shopping basket.

## Solutions



### Unit: Sources of Supply 2

### Topic: Scheduling Agreement with Release Documentation

#### 1-1

##### 1-1-1 *Menu* ® *SAP standard menu.*

*Logistics* ® *Materials Management* ® *Material Master* ® *Material* ® *Change* ® *Immediately*

##### 1-1-2 *Favorites* ® *Add*

##### 1-1-3 *User menu* ® *Vendor* ® *Purchasing* ® *Change (current).*

Select *Purchasing data* screen.

Select *Alternative data* and then choose *Yes* to create it.

Enter plant 1000, select *Purchasing data* and select *Continue*.

##### 1-1-4 *Favorites* ® *Add*

#### 1-2 *User menu* ® *Outline Agreement* ® *Scheduling Agreement* ® *Create* ® *Vendor Known*

##### 1-2-1 Agreement type: LPA

##### 1-2-3 *Item* ® *More functions* ® *Additional data*

##### 1-2-4 *Favorites* ® *Add*

#### 1-3 *Menu* ® *SAP standard menu.* *Logistics* ® *Materials Management* ® *Purchasing* ® *Outline Agreement* ® *Scheduling Agreement* ® *Delivery Schedule* ® *Maintain*

Select the line item, then *Item* ® *Delivery Schedule*. If you need more lines, use *Edit* ® *Enter lines*

1-3-1 What is the total scheduled quantity? 830

1-3-2 Select **Favorites** ® **Add**.

1-4 **Favorites** ® **Scheduling Agreement** ® **Delivery Schedule** ® **Maintain**

Select the line item, then **Item** ® **Delivery Schedule**

**Edit** ® **Generate forc. schd.**

1-4-1 While in the delivery schedule, select **Item** ® **SA release docu**

Choose **Creation/Transmission**.

Creation profile: ZTM1

1-4-2 While in **Creation/Transmission**, select **Profile details** (the large **I** next to the creation profile), then choose **Aggregation**.

No aggregation: 2 workdays

Daily aggregation: 10 workdays

Weekly aggregation: 20 workdays

1-4-3 Select **release 1** under **FRC schds** and then **select Goto** ® **Sched lines/release**.

All schedule lines from the third through tenth workdays (after the current date) are aggregated on a daily basis.

1-5 **Favorites** ® **Scheduling Agreement** ® **Delivery Schedule** ® **Maintain**.

Select the line item, then **Item** ® **Delivery Schedule**.

Choose **Edit** ® **Generate JIT sched.**

1-5-1 While in the delivery schedule, select **Item** ® **SA release docu**.

Choose **Creation/Transmission**.

While in **Creation/Transmission**, select **Profile details** (the large **I** next to the creation profile), then choose **Aggregation**.

No aggregation: 2 workdays

Daily aggregation: 5 workdays

1-5-2 Select **release 1** under **JIT schds** and then choose **Goto** ® **Sched lines/release**.

Any schedule lines after the fifth workday are not shown.

### Contents:

- Source Lists
- Quota Arrangements
- Source Determination



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## Source Determination: Unit Objectives

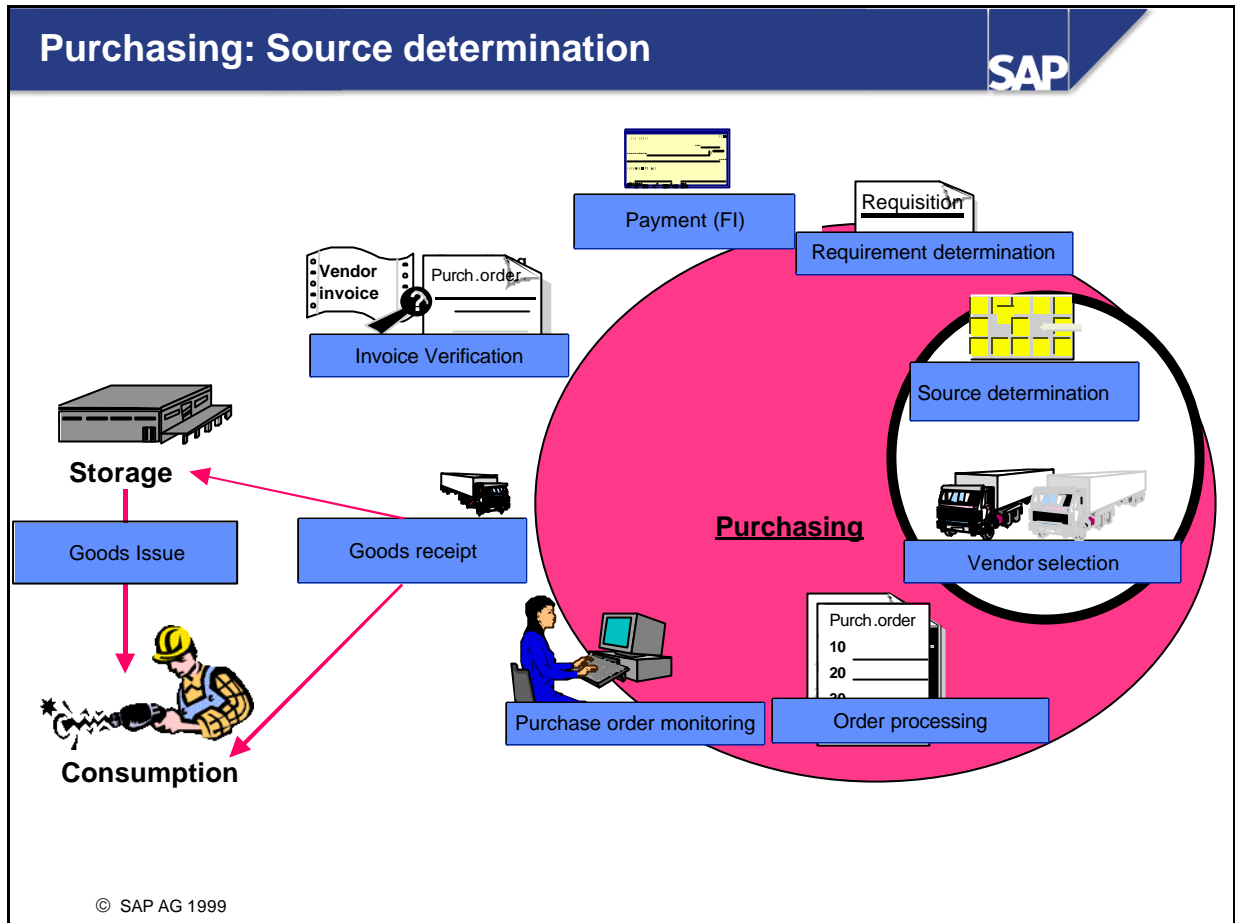
SAP



**At the conclusion of this unit, you will be able to:**

- **Describe the different kinds of master data for source determination**
- **Carry out maintenance of source lists and quota arrangements**
- **Demonstrate the process of automatic source determination**

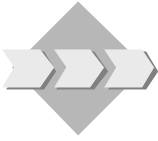
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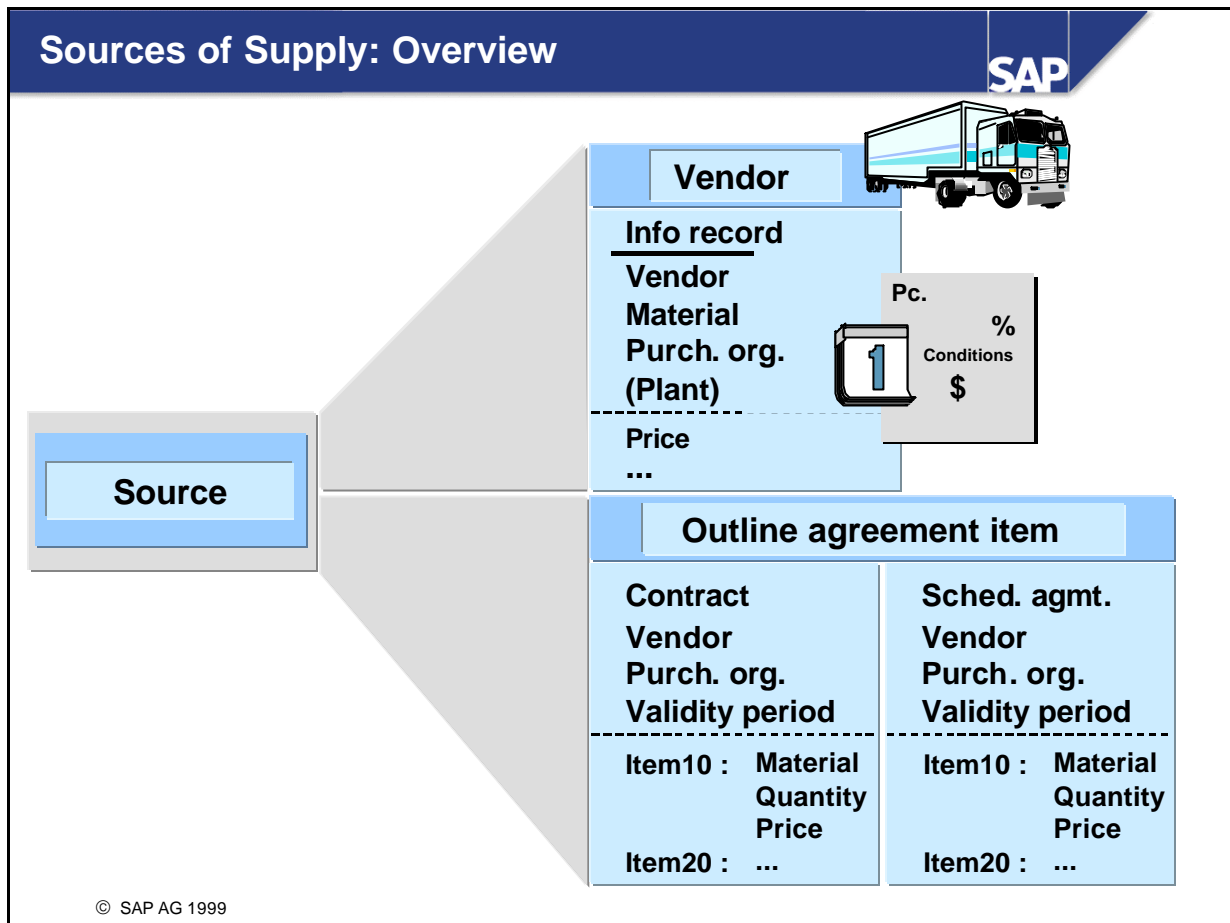
## Source Determination: Business Scenario

SAP

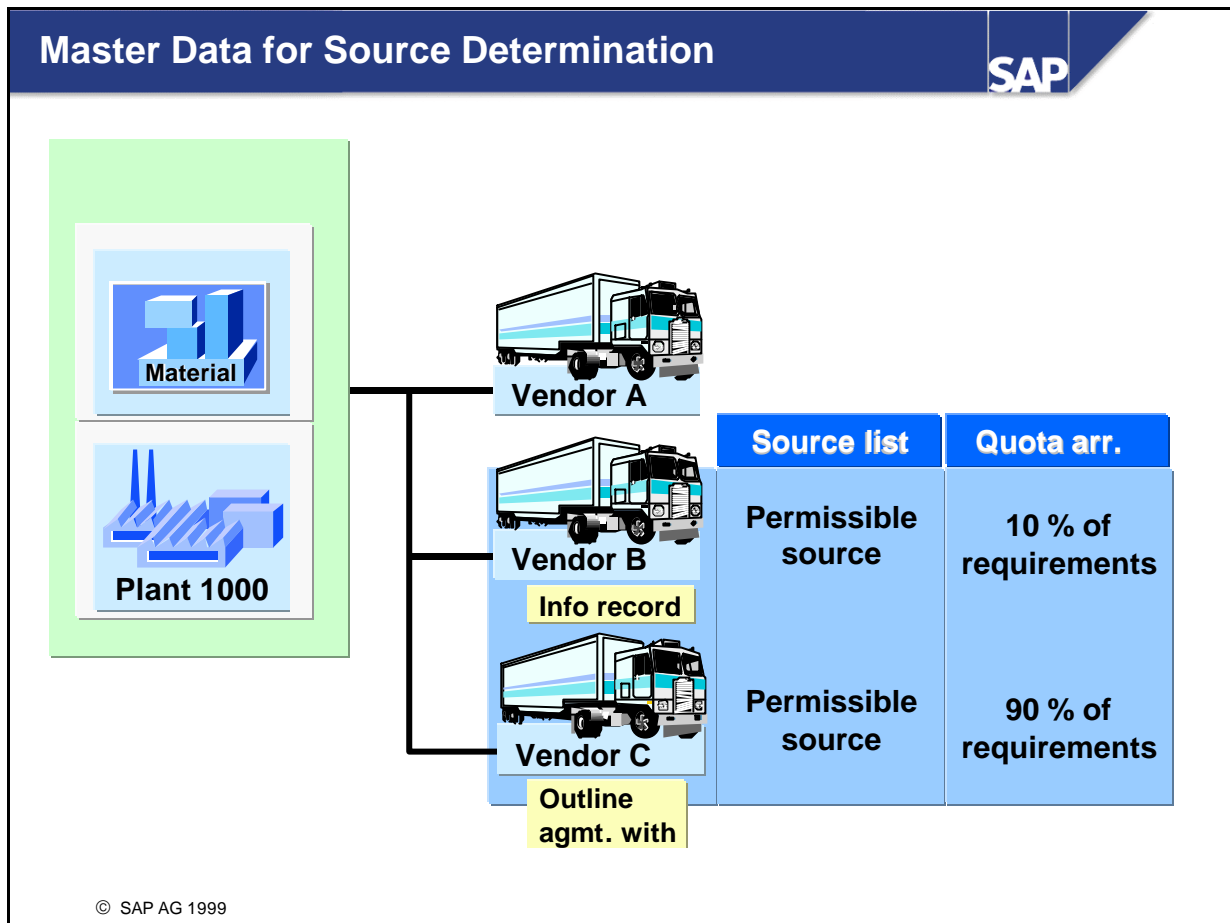


- For some of your materials, there exists more than one possible source.
- In order to manage these sources, you will use source lists and quota arrangements. When a requisition is created manually or through MRP, the R/3 system can then determine the correct source.

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- In MM *Purchasing*, the term “source of supply” (or “source”) can mean a vendor (external supplier) or an outline purchase agreement.
- An info record (short for “purchasing information record”) provides information for *Purchasing*. It contains data on a certain material and the vendor (supplier) of that material. For example, the vendor’s current price for the material is stored in an info record.
- An outline purchase agreement is a longer-term arrangement with a vendor regarding the supply of materials or performance of services according to predefined terms and conditions. The latter apply for a prearranged period and a predefined total purchase quantity or value.



- In the R/3 System, a source of supply can be a vendor (external supplier) or an outline agreement.
- Sources are administered using source lists and quota arrangements.
- With the source list, you define the preferred or allowed sources of a material. With the quota arrangement, you specify the share of total requirements over a period to be procured from each source.
- Source list records and quota arrangements are used in source determination. The purpose of source determination is to make it possible for a purchase requisition to be assigned to a source automatically.

Source List

<b>Material 1</b> <b>Plant 1000</b> <hr/> 01.01. - 12.31. Vendor A allowed Vendor B allowed <hr/> Vendor C blocked	<b>Material 2</b> <b>Plant 1000</b> <hr/> 01.01. - 06.30. Vendor Z fixed <hr/> 07.01 - 12.31. Vendor Y fixed
---	---

**Plant 1000**  
Source list reqt. ✕

**Material 1**  
Source list reqt. ✕

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- The source list contains the allowed, preferred and/or blocked sources of supply for a material in a plant that are valid within a certain period. Each source is defined in the source list by a source list record.
- Source list records enables you to determine and check sources.
- Fixed sources are always preferred over other sources in the relevant validity period. Only one fixed source may exist for a material within a certain validity period.
- Buyers are not allowed to procure from blocked sources. Blocked sources are not taken into account in source determination.
- The MRP indicator in the source list stipulates how the source defined in a source list record is taken into account in materials planning.
- If a source list requirement exists, a material may not be procured from sources other than those included in the source list. A source list requirement can be specified either for an individual material (in the material master), or for all the materials of a plant (using a Customizing parameter).
- Source list analysis enables you to list the materials of a plant for which no source list records exist during a certain period. This function is useful in the case of a source list requirement (use of source list mandatory).

## Source determination and Source list (Examples)



### Sources:

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_

**System &**



### Without Source List :

- All sources can be used (user & determination)
- Only if exactly one source exists, the system determines a source (otherwise you get a pop-up list, to choose from)

### Sources:

- 1 **Blocked**
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_

Not usable

**System**

Only User



### With Source List / without Requirement:

- pop-up list: 2, 3 (manual selection)  
[if only 1 non-blocked SL entry: automatic]
- Sources 2, 3 & 4 can be used by the user.
- It is not possible to use source 1.

### Sources:

- 1 **Blocked**
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_

Not usable

**System &**

Not usable



### With Source List / with Requirement:

- pop-up list: 2, 3 (manual selection)  
[if only 1 not-blocked SL entry: automatic]
- Sources 2 & 3 can be used by the user.
- It is not possible to use sources 1 & 4.

### Sources:

- 1 **Blocked**
- 2 **Fix**
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_

Not usable

**System: 2**

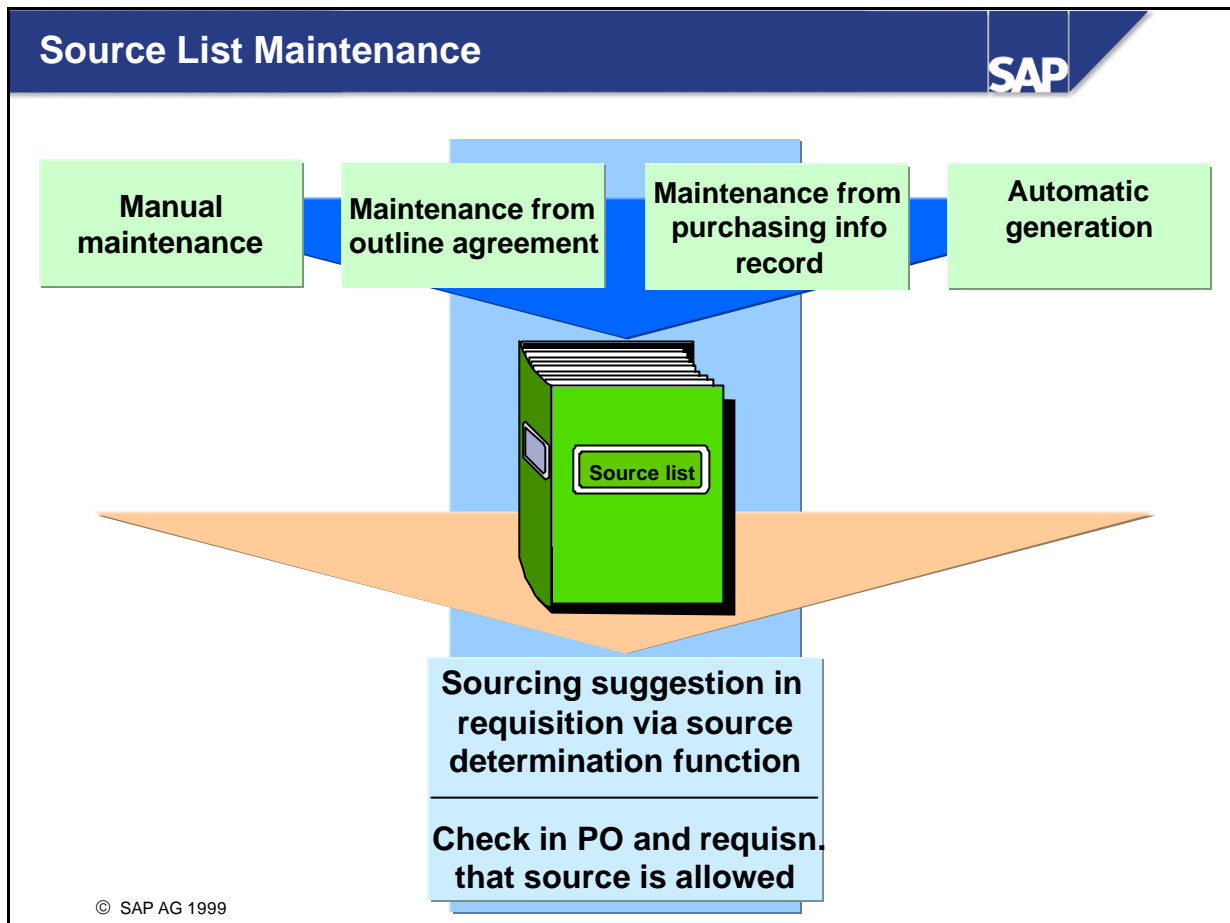
User / w/o SL requ.



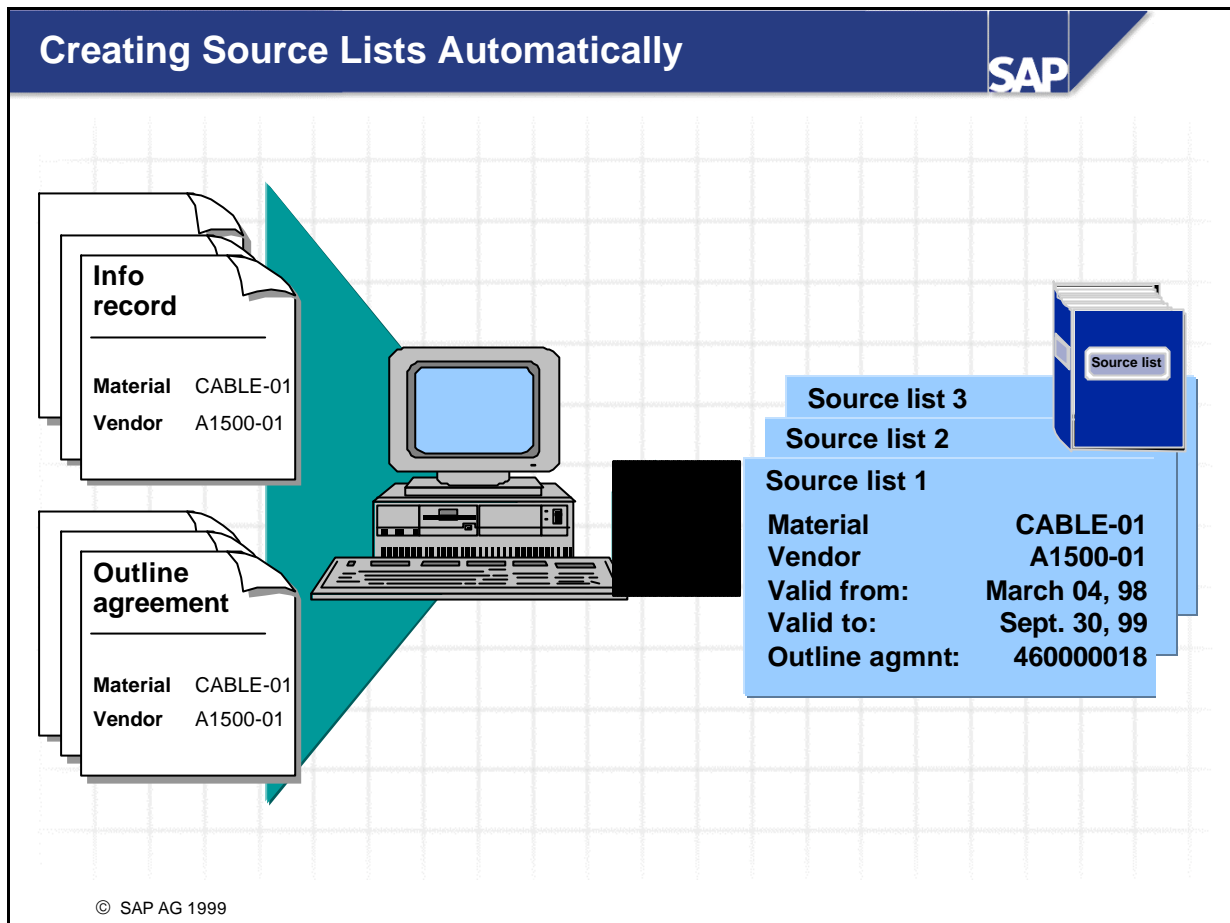
**With Requ./ w/o Requ.**

### With Source List / with Fixing flag:

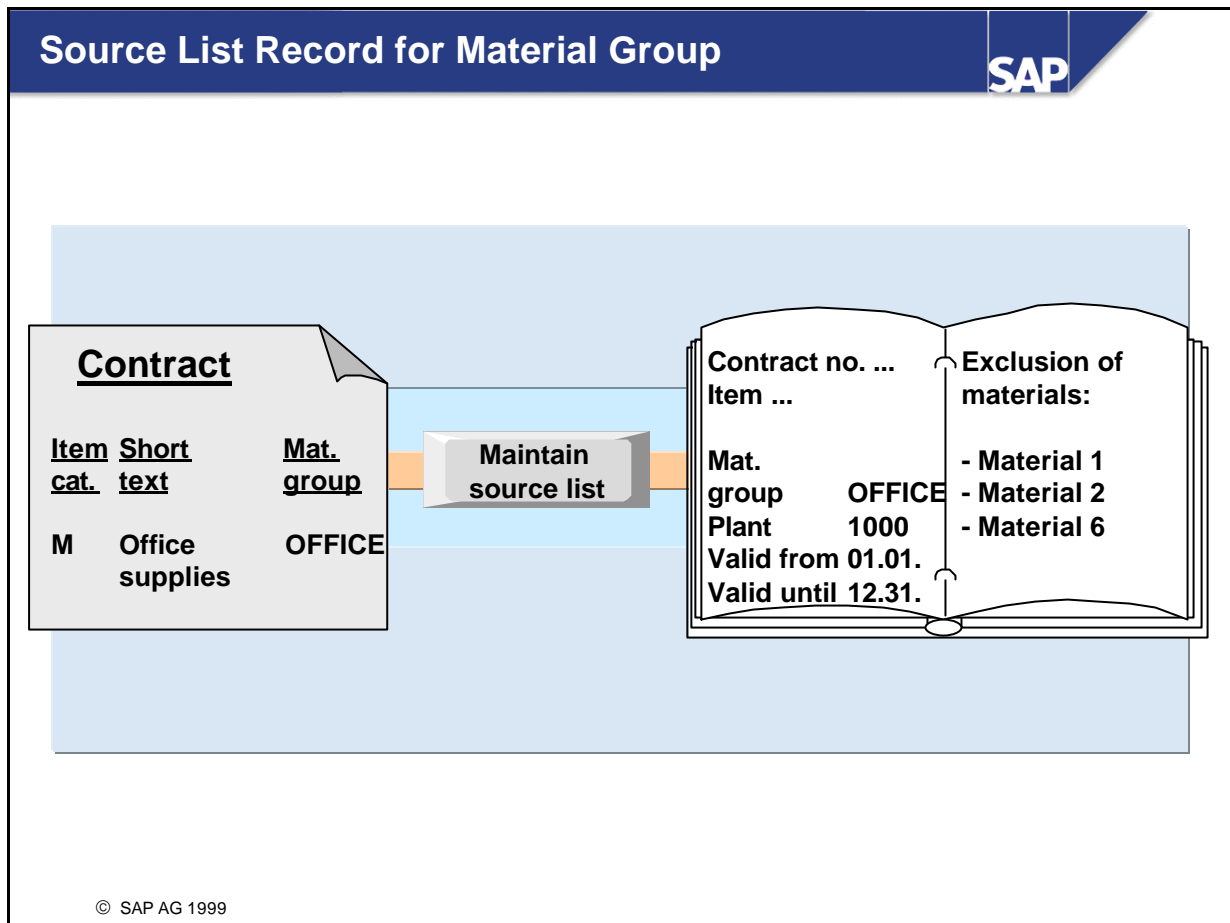
- Automatically determined source: 2
- Sources 2 & 3 can be used with SL requirement.
- Sources 2, 3 & 4 can be used without SL requirement.



- Source list records facilitate the source determination process and the checking of sources.
- Source list records can be created manually, either directly or from within outline agreement or info record maintenance.
- If you maintain the source list from within a centrally agreed contract or a cross-plant info record, you can create source lists for several plants in a single process.
- You can create the source list for a material by referencing another material.
- You can have source list records generated automatically on the basis of info records or outline agreement items for a single material (individual procedure) or several materials (collective procedure).

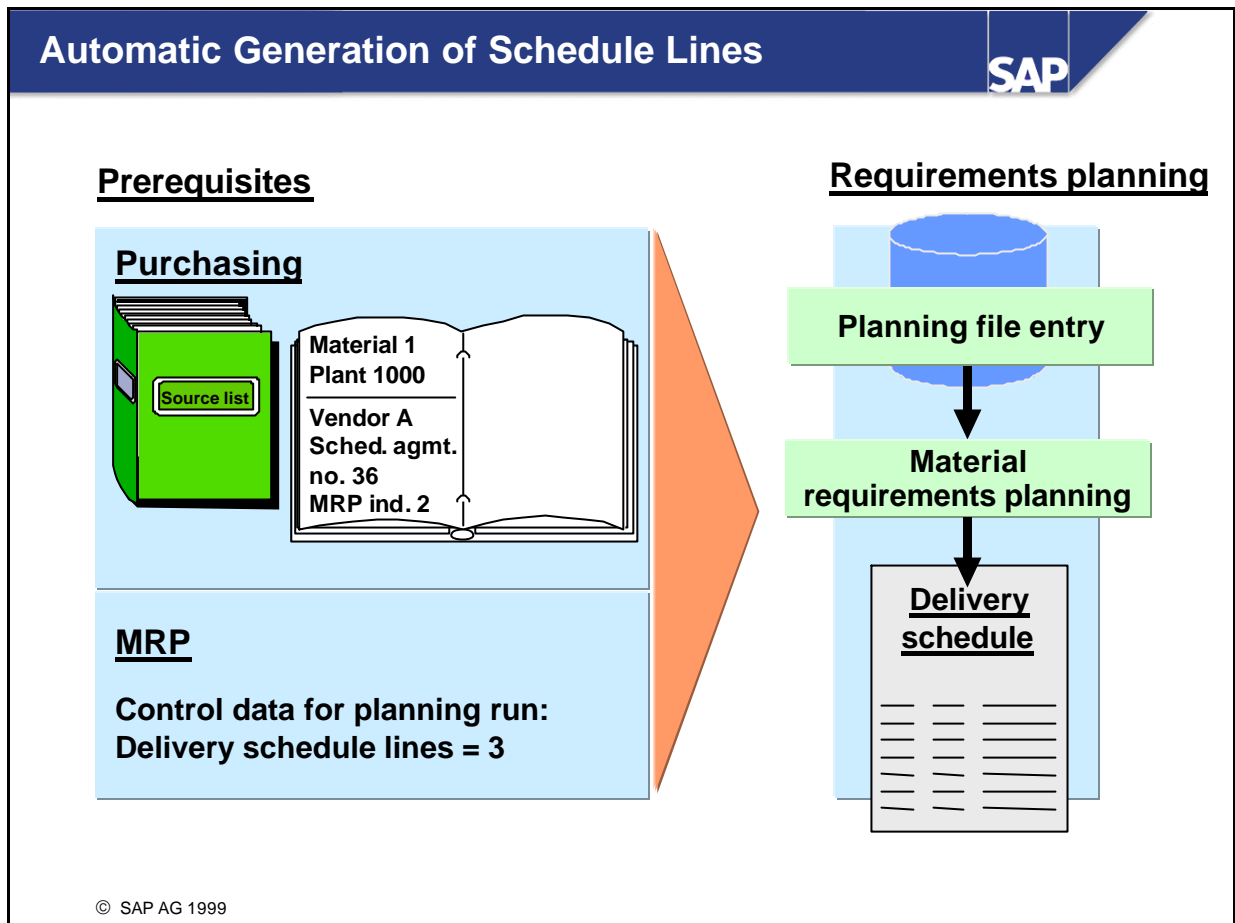


- You can have the system automatically create a source list. This allows you to enter or update all of a material's sources of supply.
- In this procedure, the system creates a source list record for each info record or outline agreement item.
- You can create a source list for several materials (collective procedure) or for an individual material (individual procedure).
- There is a preview function for creating source lists automatically. This allows you to simulate the effects of the source list creation.
- After update, the source lists can be restored to their original status.



- Within the contract maintenance function, you can create source list records for a material group for contract items with the item category M (material unknown) or W (material group).
- Source list records for material groups define which materials can be released against a contract item with item category M or W.
- You can list either all disallowed materials (exclusion of materials) or all allowed materials (inclusion of materials). To exclude materials, you must retain the standard setting of the exclusion indicator. To include materials, you must deselect the exclusion indicator.





- A particular advantage of working with scheduling agreements is that delivery schedule lines can be generated by the MRP system automatically provided that certain prerequisites are fulfilled:
  - The scheduling agreement must be uniquely defined as the source of supply
  - Automatically generated schedule lines must be allowed by the source list (MRP indicator 2).
  - Automatically generated schedule lines must be allowed in the MRP system

Quota Arrangement

**Material** 1

**Plant** 1000

**Period** 01.01. - 12.31.

---

**To date:**

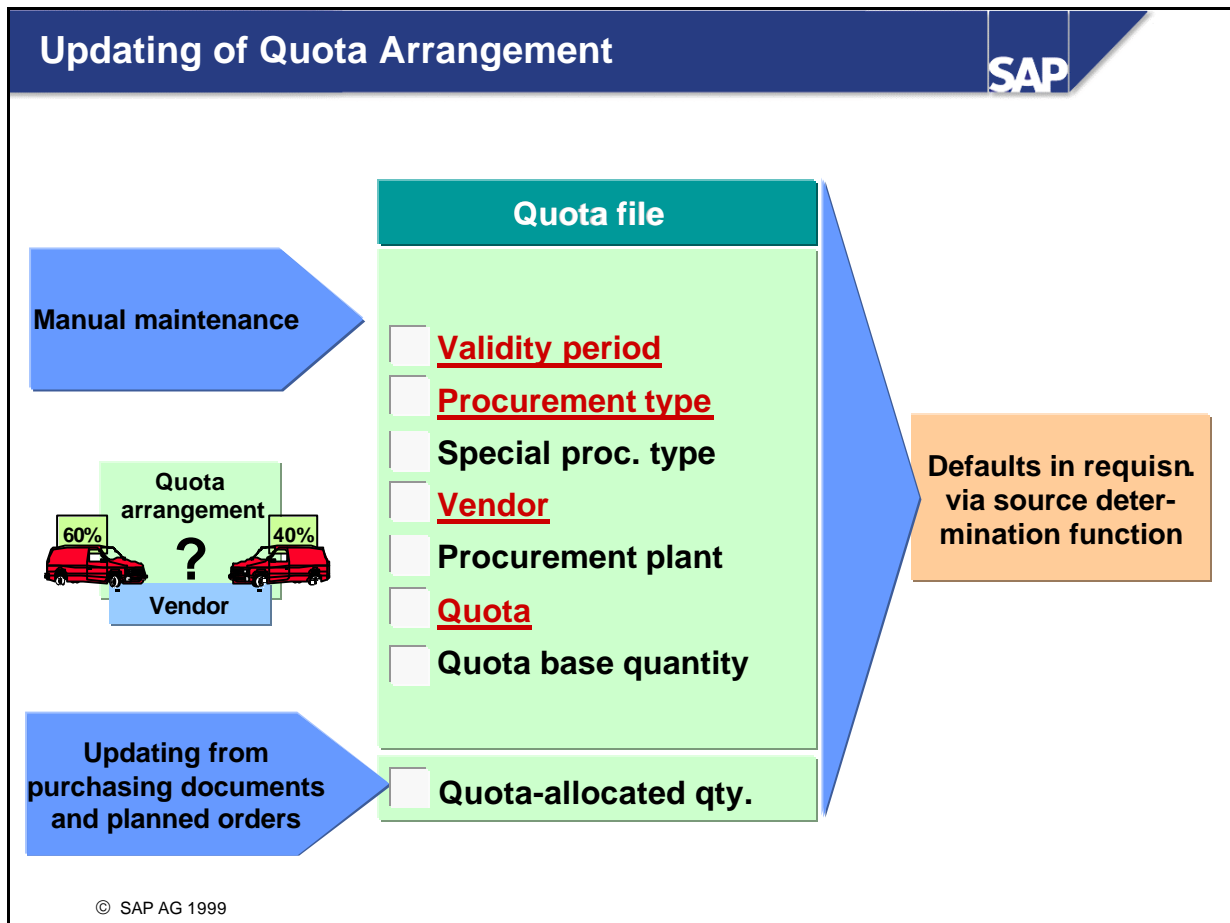
Vendor	A	(external)	10%	10
Vendor	B	(external)	10%	15
Plant	Atlanta	(internal)	70%	120
Vendor	K1	(external)	10%	Consignment 0

**Quota arrangement**  
?

Vendor


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- If a certain material is to be procured alternately from different sources of supply, these individual sources can be assigned quotas. The quotas indicate the percentages of a total requirement that are to be procured from each of the various sources over a period.
- A quota arrangement is set up for a specific timeframe. A quota arrangement item is created for each source of supply within the period. Only consecutive validity periods can be specified for a material.
- A quota arrangement can provide for external procurement or internal (in-house) production, as well as various special procurement types.
- For a quota arrangement to be applied to a material, the *quota arrangement usage* indicator must be set in the material master record.
- By setting the *quota arrangement usage* indicator in the material master record, you specify that:
  - A quota arrangement can be applied to a material
  - The business application areas in which the quota arrangement is used, and the quota-allocated quantity, is updated progressively
- *Quota arrangement usage* indicators are defined in Customizing.



- In the case of procurement from sources for which quotas have been specified in the current validity period, the system calculates which source is the next in line with respect to a certain requirement. This assessment is carried out when you have the source for a requested material determined by the system. The calculation is made on the basis of the specified quota, the continually updated quota-allocated quantity and, in certain cases, the quota base quantity.
- The quota-allocated quantity is the total quantity from all requisitions, purchase orders, contract release orders, scheduling agreement delivery schedules and planned orders that are assigned to a source of supply (provided that these documents are to be taken into account according to the *quota arrangement usage* indicator). The quota-allocated quantity is updated automatically for each order proposal to which a quota arrangement is applied.
- Among other things, the *quota arrangement usage* indicator stipulates the business application areas from which the quota-allocated quantity is updated progressively.
- The quota base quantity is treated as an additional quota-allocated quantity. The quota base quantity can be used when a source is newly included in an existing quota arrangement, for example, to prevent the new source being assigned all requirements until its quota-allocated quantity exceeds the quota-allocated quantity of one of the old sources.
- A quota arrangement item is no longer suggested as the source if the quota-allocated quantity is equal to or greater than the maximum quantity.

## Calculation of the Quota Rating





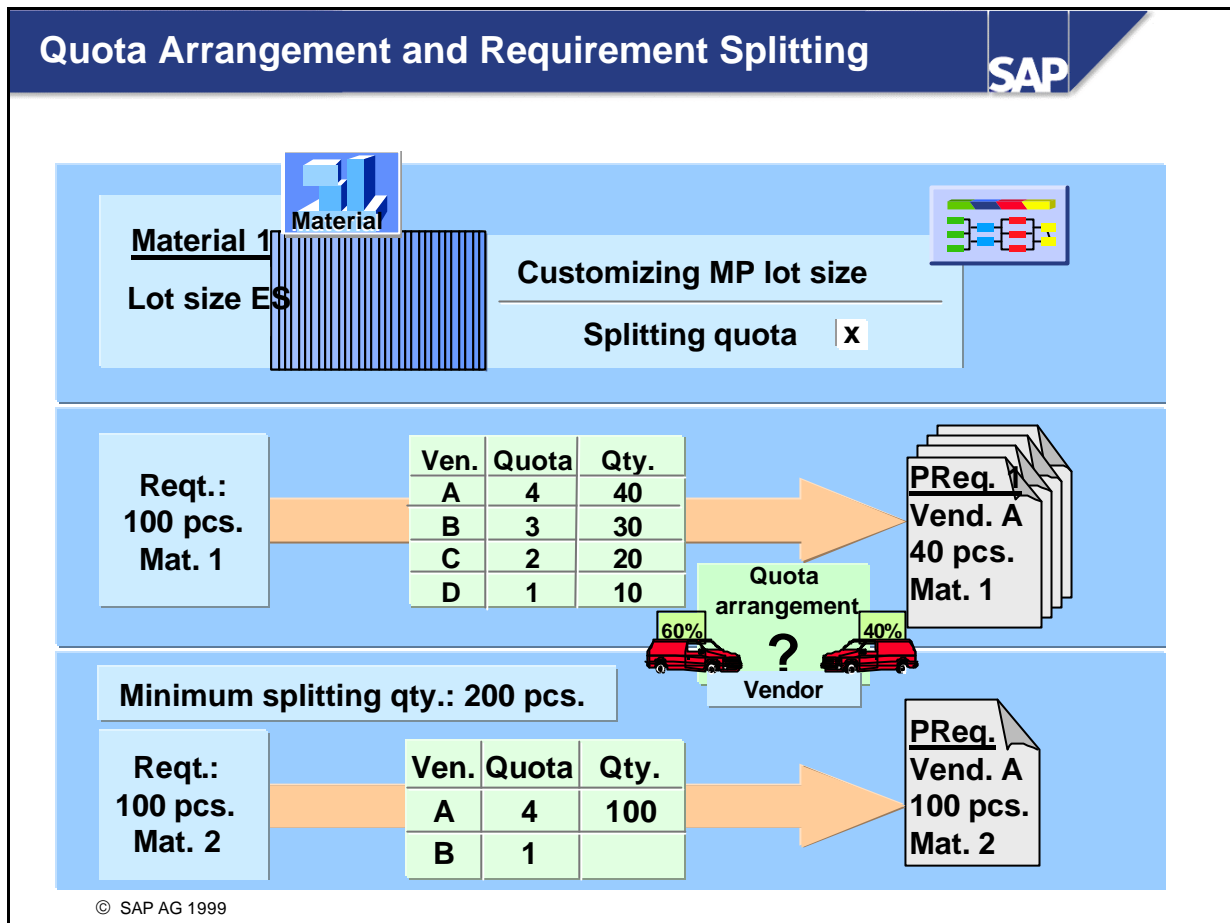
Quota arrangement			
Material	1	Valid from:	07.01
Plant	1000	Valid until:	12.31

Vendor	Quota	Quota-alloc. qty.
A	4	1000
B	1	100

**Quota rating =  
Quota-alloc qty./quota**

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- In the case of sources for which a quota has been defined in the current validity period, the system calculates which one is to be selected next to cover a requirement.
- The system calculates a quota rating for each source as follows:
  - $Quota\ rating = (quota\text{-}allocated\ quantity + quota\ base\ quantity) / quota$
- The source with the lowest quota rating represents the effective source, even in the case of a quota rating of zero (that is, the quota-allocated quantity and quota base quantity have the value 0). If more than one source has a quota rating of zero, the one with the highest quota is the effective source.
- The quota base quantity should be used if a new source is included in an existing quota arrangement. The quota base quantity enables you to prevent a situation in which the new source is assigned all requirements until its quota-allocated quantity exceeds the quota-allocated quantity of one of the old sources.
- You can instruct the R/3 System to calculate the quota base quantity for a new source within an existing quota arrangement.



- When manually created purchase requisitions are subjected to a quota arrangement, a requirement is not split. In the case of requisitions that are created automatically in the course of a planning run, you can choose between two procedures:
  - The entire quantity of a requisition is assigned to a single source of supply.
  - The total quantity of a requisition is split among different sources.
- Splitting among different sources is carried out if a lot-sizing procedure for which the *splitting quota* indicator has been set is assigned to the requested material in the latter's master record.
- The sources involved are taken into account in an order that results from their quota relationship. The order dictated by the quotas can be overridden by the prioritization.
- The quota-allocated quantity and the quota rating have no significance where a quota arrangement is applied with splitting.
- The lot quantities are calculated on the basis of the quotas.
- The minimum splitting quantity indicates from which quantity upward a (residual) requirement is to be split among different sources. If the quantity required is less than the minimum quantity, only one source is selected.

## Fine-Tuned Control of Quota Arrangements SAP

**1** Maximum quantity  
Requirement: 201 pcs.

Quota arrangement for material 1			
Vend.	Quota	Quot.-all. qty.	Max. quantity
A	2	4800	5000
B	1	3000	

**PReq**

201 pcs.  
Mat. 1  
Vend. B

**2** Maximum lot size  
Requirement: 1000 pcs.

Quota arrangement for material 2				
Vend.	Quota	Quot.-all. qty.	Max. lot size	1x
A	2	4800	800	x
B	1	3000		

**PReq 2**

**PReq 1**

800 pcs.  
Mat. 2  
Vend. A

**3** Minimum lot size  
Requirement: 200 pcs.

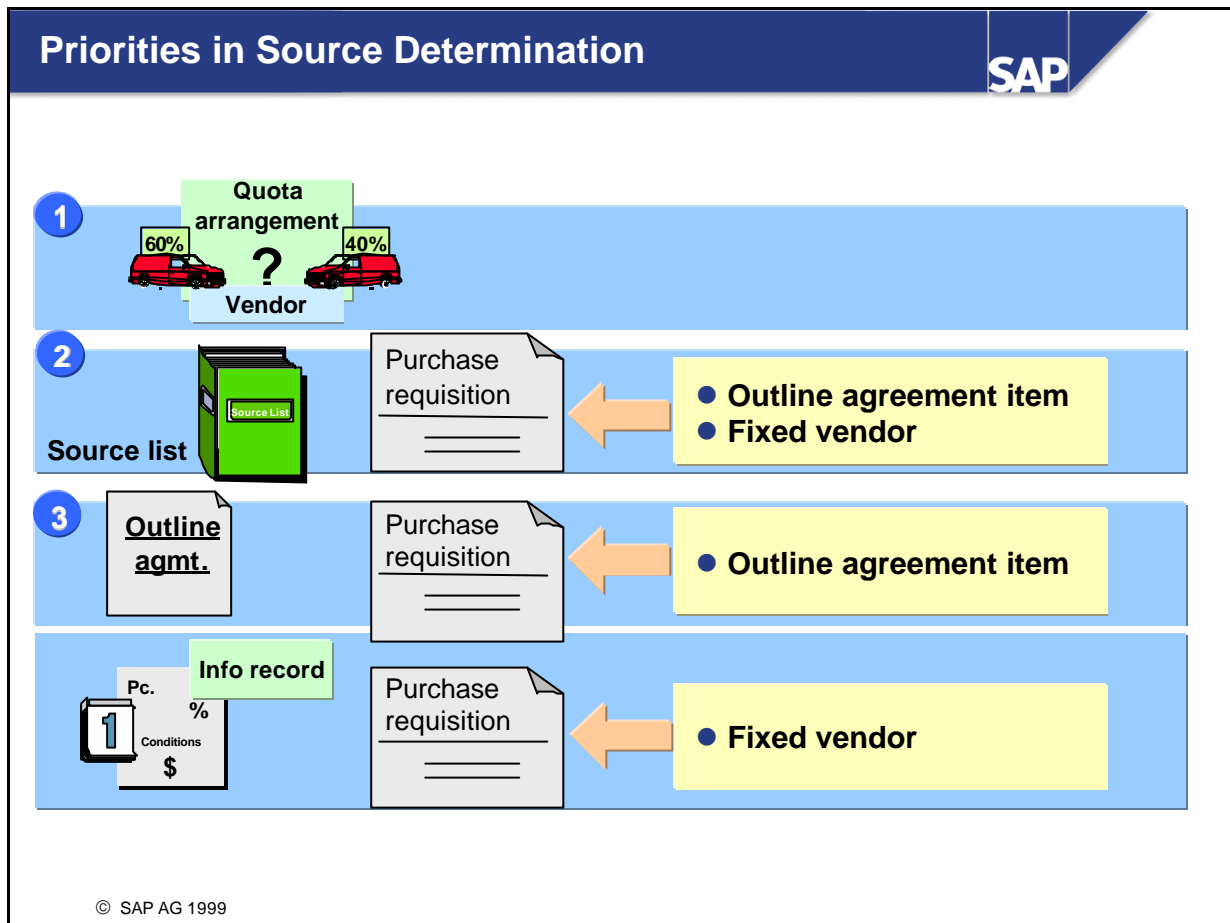
Quota arrangement for material 3			
Vend.	Quota	Quot.-all. qty.	Min. lot size
A	2	4800	250
B	1	3000	

**PReq**

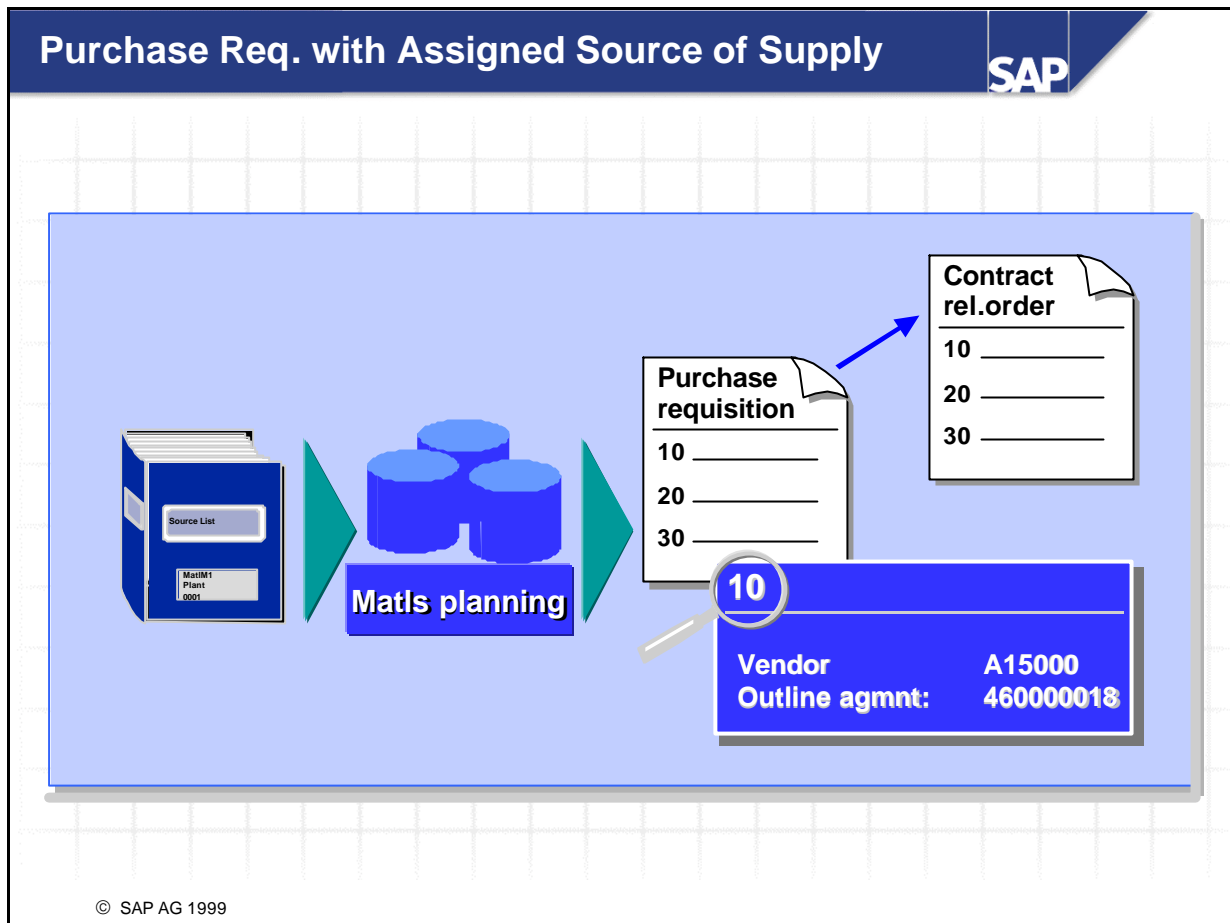
250 pcs.  
Mat. 3  
Vend. A

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- Minimum and maximum lot sizes are taken into account only in the case of requisitions that are generated automatically in the course of a planning run. The maximum quantity is also checked in the case of manually created requisitions.
- The maximum quantity represents a limit value allocated by quota to a source of supply. If this limit value is reached or exceeded, a quota arrangement item is no longer suggested as a source.
- The minimum lot size defines a minimum quantity for an order proposal. If, on the basis of the quota arrangement logic, a source is determined for which a minimum lot size has been entered, and if the quantity required is less than the minimum order quantity, the order proposal is generated with a quantity equal to the minimum lot size.
- The maximum lot size represents the greatest possible order proposal quantity. If a requirement exceeds the maximum lot size in the quota arrangement item, several order proposals are suggested with quantities equal to the maximum lot size, until the total quantity required is covered.
- The minimum or maximum lot sizes maintained in a quota arrangement item override the entries in the material master record and are valid solely for the assigned source. If the minimum or maximum lot sizes are maintained only in the material master record, the values entered there apply to all sources.

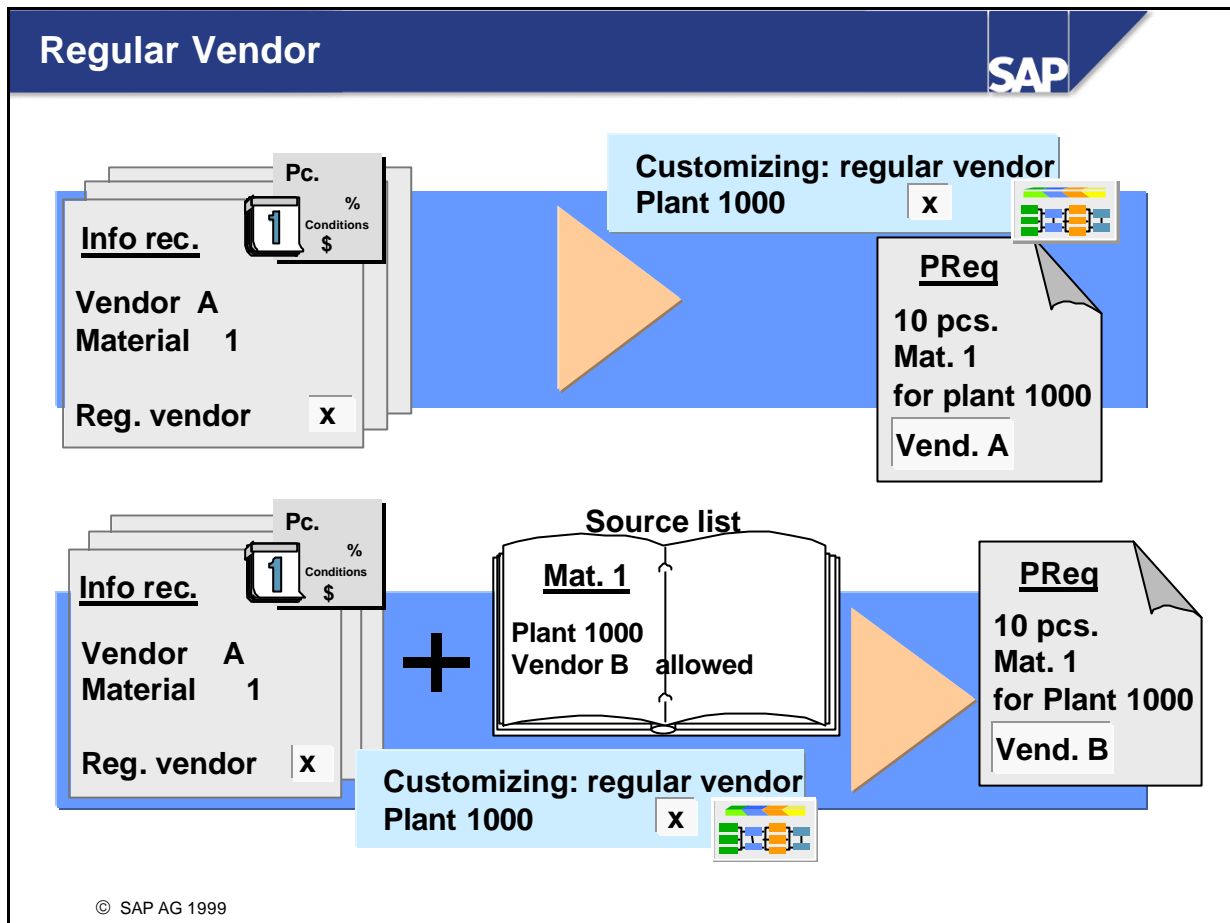


- Possible sources are determined and suggested by the system according to the following priorities:
  - The system first checks whether a quota arrangement whose validity period covers the delivery date in the purchase requisition exists for the material. If so, the system calculates from which vendor the material is to be procured on the basis of the quotas stipulated for the vendors.
  - If no quota arrangement exists, the system attempts to determine a suitable source on the basis of the source list.
  - If the source list contains neither a vendor nor an outline agreement item, the system attempts to find a contract or a scheduling agreement for the material. If outline agreements exist for the material, these will be suggested as possible sources. The system also searches for suitable info records and suggests these for the material.

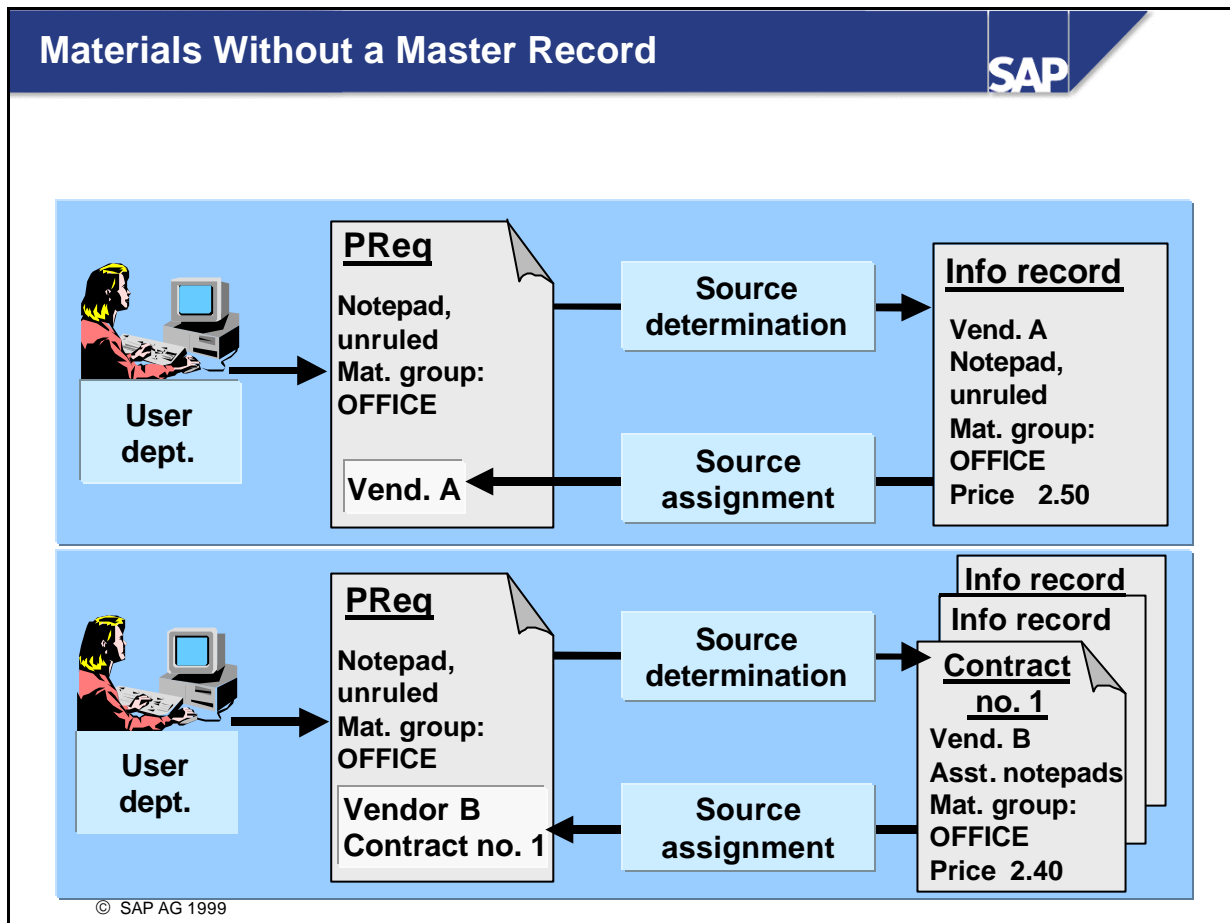


- The system can carry out source determination in a planning run. Outline agreements or vendors with a purchasing info record are possible sources of supply for external procurement. If the system determines a clearly defined source of supply (for example, from a contract entered in the source list), and a purchase requisition is created, the block for procurement options on the detail screen for purchase requisition items contains the source of supply.
- If a contract has been entered as a procurement option in the purchase requisition item, you change this item to a contract release order. This copies the conditions from the contract to the contract release order.
- Note: Purchase requisition items that have been assigned a source of supply can be converted to purchase orders with the function for automatic purchase order generation, provided that this is defined in the material master and vendor master record.

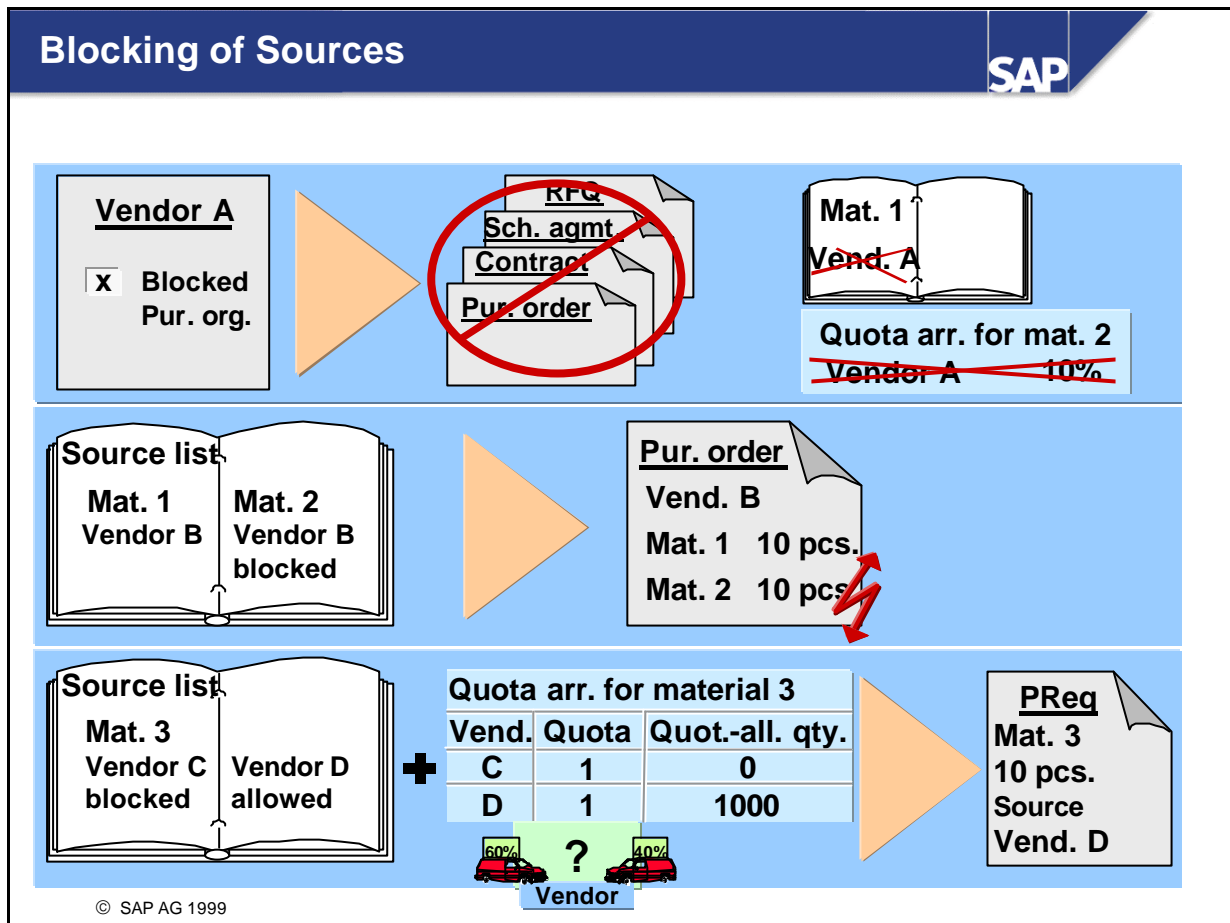




- The “regular vendor” is the supplier that serves as the source of a material for an entire corporate group (that is, at client level). The regular vendor is comparable with the so-called “fixed vendor” that can be specified in the source list for the lower organizational level of the plant.
- The regular vendor plays a part in source determination if the functionality has been activated in Customizing for the relevant plant.
- If several sources of supply are identified in the course of the source determination process, one of which is flagged as the regular vendor, the latter is suggested as the source for procurement purposes.
- A vendor counts as the regular vendor of a material if the *Regular vendor* indicator is set in the general data of the info record.
- If you enter a different vendor than the regular vendor in a source list or quota arrangement, a warning message appears.



- If there is a possible source of a material without a master record whose material group is identical to that of the requested material, you can instruct the R/3 System to find this source and assign it to the requisition.
- If there are several sources of a material without a master record whose material group is identical to that of the requested material, you can choose the source you want to use from the list.
- If a material-group contract and an info record without a material master record exist for a material without a master record, the contract is suggested as the preferred source.



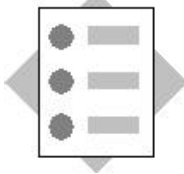
- In certain cases, you want to prevent materials from continuing to be procured from a particular vendor (for example, if the latter has recently supplied goods of unsatisfactory quality). You can block such a vendor for procurement purposes by making the appropriate entry in the vendor master record. The block applies to all purchasing organizations or to one selected purchasing organization.
- You can impose a block specifically for quality reasons from within *Quality Management*.
- You can impose a block on a vendor with respect to a single material in the source list.
- The block in the source list is taken into account when purchase requisitions are created manually. The blocked vendor or outline agreement is not suggested as the source of supply even if it happens to be the effective source according to the quota arrangement.
- Issuing purchase orders to blocked sources is not allowed.

## Exercises



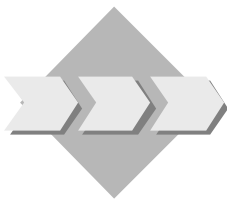
### Unit: Source Determination

### Topic: Source Determination for Purchase Requisitions



At the conclusion of this exercise, you will be able to:

- Describe the different kinds of master data for source determination
- Carry out maintenance of source lists and quota arrangements
- Demonstrate the process of automatic source determination



For some of your materials, there exists more than one possible source. In order to manage these sources, you will use source lists and quota arrangements. When a purchase requisition is created manually or by MRP, the SAP R/3 system can then determine the correct source.

1-1 Create a new material master with the following data:

Material number:	<b>T-REZ##</b>
Industry sector:	<b>Mechanical Engineering</b>
Material type:	<b>Raw material</b>
Views:	<b>Purchasing, MRP 1, MRP 2, Accounting 1</b>
Plant:	<b>1000</b>
Base unit of measure:	<b>PC</b>
Purchasing group:	<b>Z##</b>
Material group:	<b>LO520</b>
Purchasing value key:	<b>5</b>
MRP type:	<b>ND</b>
Planned delivery time:	<b>10</b>
Valuation class:	<b>3000</b>
Price control:	<b>V</b>
Moving average price:	<b>12</b>

- 1-2 Create a purchase requisition for your new material **T-REZ##**. Ensure that the source determination indicator is set on the initial screen. Assign the requirement tracking number **LO520** to your requisition.



You can enter the tracking number on the initial screen or on the item detail screen.

Plant: **1000**  
Quantity: **100 pc**  
Delivery date: in four weeks

Go to the item detail screen.

- 1-2-1 Was a source assigned by the system?
- 

Save your purchase requisition.

Requisition no.: \_\_\_\_\_

- 1-2-2 Add this task to your *Favorites*.

- 1-3 Create an info record for your new material:

Vendor: **T-L20A##**  
Material: **T-REZ##**  
Purchasing organization: **1000**  
Plant: **1000**  
Standard quantity: **100 pc**  
Purchasing group: **Z##**  
Net price: **12.20**

- 1-4 Create another purchase requisition for your material. Ensure that the source determination indicator is set on the initial screen. Assign the requirement tracking number **LO520** to this purchase requisition too.

Plant: **1000**  
Quantity: **100 pc.**  
Delivery date: in four weeks

1-4-1 Was a source assigned by the system? If so, which?

---

Save your purchase requisition.

Requisition no.: \_\_\_\_\_

1-5 Create a second info record for your new material.

Vendor: **T-L20B##**  
Purchasing organization: **1000**  
Plant: **1000**  
Standard quantity: **100 pc**  
Purchasing group: **Z##**  
Net price: **11.90**

1-6 Create another purchase requisition for your material. Ensure that the source determination indicator is set on the initial screen. Assign the requirement tracking number **LO520** to this purchase requisition too.

Plant: **1000**  
Quantity: **100 pc**  
Delivery date: in four weeks

1-6-1 Was a source assigned by the system? \_\_\_\_\_

Save your purchase requisition.

Requisition no.: \_\_\_\_\_

1-7 Create a source list for your material **T-REZ##** in plant **1000**.

1-7-1 The validity period of the source list records is to begin today and end on December 31 of next year.

1-7-2 Enter the vendors **T-L20A##** and **T-L20B##** as possible sources in purchasing organization **1000**. Set your vendor **T-L20B##** as a fixed source.

1-7-3 Add this menu to your *Favorites*.

- 1-8 Create another purchase requisition for your material. Ensure that the source determination indicator is set on the initial screen.

Quantity: **50 pc**  
Delivery date: in four weeks time

- 1-8-1 Was a source assigned by the system? If so, which?

---

Save your purchase requisition.

Requisition no.: \_\_\_\_\_

- 1-9 Change the material master record for material **T-REZ##** in plant **1000**.

Enter the quota arrangement usage indicator **3** on the purchasing view and save your change.

- 1-10 Maintain the quota arrangement for your material **T-REZ##** in plant **1000**.

1-10-1 The quota arrangement is to be valid until the end of next year.

1-10-2 Assign the quota **2** to your vendor **T-L20A##** and the quota **1** to your second vendor **T-L20B##**. The quota arrangement is to apply to external procurement.

1-10-3 Add this task to your *Favorites*.

- 1-11 Create another purchase requisition for your material. Ensure that the source determination indicator is set on the initial screen.

Quantity: **50 pc**  
Delivery date: in four weeks

- 1-11-1 Was a source assigned by the system? If so, which?

---

1-11-2 Why? \_\_\_\_\_

Save your purchase requisition.

Requisition no.: \_\_\_\_\_

- 1-12 Vendor **T-L20B##** should no longer be marked as a fixed vendor in the source list. Change the source list record by deselecting the *Fixed* indicator.

- 1-13 Create another purchase requisition for your material. Ensure that the source determination indicator is set on the initial screen.

Quantity: **10 pc**  
Delivery date: in four weeks

1-13-1 Was a source assigned by the system? If so, which?

---

Save your purchase requisition.

Requisition no.: \_\_\_\_\_

- 1-14 Display the quota arrangement for your material.

1-14-1 What is the quota-allocated quantity for your two vendors?

Vendor **T-L20A##**: \_\_\_\_\_

Vendor **T-L20B##**: \_\_\_\_\_

- 1-15 Create another purchase requisition for your material. Ensure that the source determination indicator is set on the initial screen.

Quantity: **1000 pc**  
Delivery date: in four weeks

1-15-1 Was a source assigned by the system? If so, which?

---

Save your purchase requisition.

Requisition no.: \_\_\_\_\_



\*1-16 In three weeks, you need the following materials for plant 1000:

<u>Material</u>	<u>Quantity</u>
<b>T-REA##</b>	<b>50 pc</b>
<b>T-REB##</b>	<b>80 pc</b>
<b>T-REC##</b>	<b>60 pc</b>
<b>T-RED##</b>	<b>10 pc</b>

1-16-1 Create a purchase requisition with automatic source determination.  
 Ensure that the source determination indicator is set on the initial screen.

Check the source determination for each item. If no source was suggested for a material, manually ask the system to propose a list of possible sources.



To ask the system to propose a list of sources, use **Edit** ® **Assign supply source**, and choose any source.

1-16-2 Record the suggested/chosen sources in the following table, by checking the item details screen for each item:

Material	Vendor	Contract/sch. agmt./info record?
T-REA##		
T-REB##		
T-REC##		
T-RED##		

Requisition no.: \_\_\_\_\_

\*1-17 In addition to your materials for production, you need the following non-stock materials in three weeks for plant **1000** and cost center **T-L20**

<u>Material</u>	<u>Quantity</u>	<u>Mat. group.</u>	<u>Price</u>
<b>T-ZN1##</b>	<b>10 cartons</b>		<b>30</b>
<b>Mechanical pencils 0.7mm</b>	<b>5 cartons</b>	<b>ZT##</b>	<b>60</b>
<b>Packing case, size 4</b>	<b>10 pc.</b>	<b>008</b>	<b>1</b>

1-17-1 Create a purchase requisition with automatic source determination. For all items, use account assignment category K, charging to G/L account **400000** and cost center **T-L20**



Only the first material has a master record.



Activate the *Repeat account assignment* function when you enter the account assignment data for the first item. Select *Repeat Acc. Ass. On.*

1-17-2 Check the results of the source determination process for each item. If no source was suggested for a material, have the system generate a list of possible sources.



To ask the system to propose a list of sources, use *Edit* ® *Assign supply source*, and choose any source.

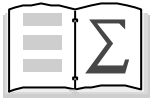
1-17-3 Note the suggested/chosen sources for the three items:

Material	Vendor	Contract/sch. agmt./info record?
T-ZN1##		
Mechanical pencil 0.7mm		
Packing case, size 4		

Requisition no.: \_\_\_\_\_

## Source Determination: Unit Summary

SAP



**You are now able to:**

- **Describe the different kinds of master data for source determination**
- **Carry out maintenance of source lists and quota arrangements**
- **Demonstrate the process of automatic source determination**

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## Solutions



### Unit: Source Determination

### Topic: Source Determination for Purchase Requisitions

1-1 *Favorites* ® *Material Master* ® *Material* ® *Create (general)* ® *Immediately*

1-2 *User menu* ® *Requisition* ® *Create*

1-2-1 A source was not assigned by the system.

1-2-2 *Favorites* ® *Add*

1-3 *Favorites* ® *Master Data* ® *Info Record* ® *Create*

1-4 *Favorites* ® *Requisition* ® *Create*

1-4-1 Yes. The info record for vendor **T-L20A##** is assigned by the system.

1-5 *Favorites* ® *Master Data* ® *Info Record* ® *Create*

1-6 *Favorites* ® *Requisition* ® *Create*

1-6-1 No, a source is not assigned by the system. Setting the source determination indicator on the initial screen will not suggest a source if more than one exists for a material. You could use the function *Edit* ® *Assign* supply source here.

1-7 *User menu* ® *Source list* ® *Maintain*

1-7-3 *Favorites* ® *Add*

1-8 *Favorites* ® *Requisition* ® *Create*

1-8-1 Yes, vendor **T-L20B##** is assigned by the system.

1-9 *Favorites* ® *Material Master* ® *Material* ® *Change* ® *Immediately*

1-10 **User menu ® Quota Arrangement ® Maintain**

Enter the material and plant and choose *Enter*. On the next screen, enter the *Valid to* date and select *Item*.

Enter **F** (external) in the *P* column. Enter the vendors and the quotas.

1-10-3 **Favorites ® Add.**

1-11 **Favorites ® Requisition ® Create**

1-11-1 Yes, the vendor **T-L20A##** is assigned by the system.

1-11-2 A quota arrangement has the higher priority in the source determination process.

1-12 **Favorites ® Source list ® Maintain**

1-13 **Favorites ® Requisition ® Create**

1-13-1 Yes, the vendor **T-L20B##** is assigned by the system.

1-14 **User menu ® Quota Arrangement ® Display**

Select the line and choose *Item*.

1-14-1 The quota-allocated quantity for the two vendors is:

Vendor T-L20A##: 50

Vendor T-L20B##: 10

1-15 **Favorites ® Requisition ® Create**

1-15-1 Yes, the vendor **T-L20B##** is assigned by the system due to the lower quota rating.

**\*1-16 Favorites ® Requisition ® Create**

1-16-2



Please note that participants' answers may vary based on completion of prior exercises.

Material	Vendor	Contract/sch. agmt./info record?
T-REA##	T-L20A##	Info Record
T-REB##	T-L20B##	Contract
T-REC##	T-L20B##	Scheduling agree
T-RED##	T-L20C##	Contract

**\*1-17 Favorites ® Requisition ® Create**

1-17-3



Please note that participants' answers may vary based on completion of prior exercises.

Material	Vendor	Contract/sch. agmt./info record?
T-ZN1##	T-L20E##	Info Record
Mechanical pencil 0.7mm	T-L20E##	Info Record
Packing case, size 4	T-L20C##	Contract

### Contents:

- **Optimized Purchasing**
- **User Parameters**
- **Automated Procurement**



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## Optimized Purchasing: Unit Objectives

SAP



**At the conclusion of this unit, you will be able to:**

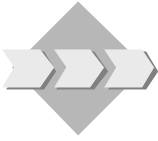
- **Define the prerequisites for optimized purchasing**
- **Recognize the differences between and the uses of the various functions for optimized purchasing**
- **Describe the importance of user parameters EVO and EFB**

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## Optimized Purchasing: Business Scenario

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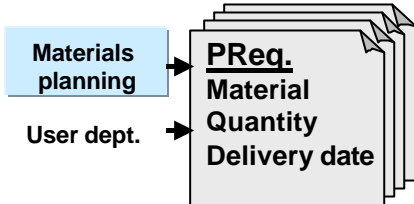


- In your organization, you wish to have purchase orders, release orders, and scheduling agreement delivery schedule lines generated with the least possible manual effort. Since both assigned and unassigned requisitions are created in your company, and some requirements are even reported by phone, you will need to make use of the different optimizing functions in R/3.

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## Optimized Purchasing (Purchase Requisition)

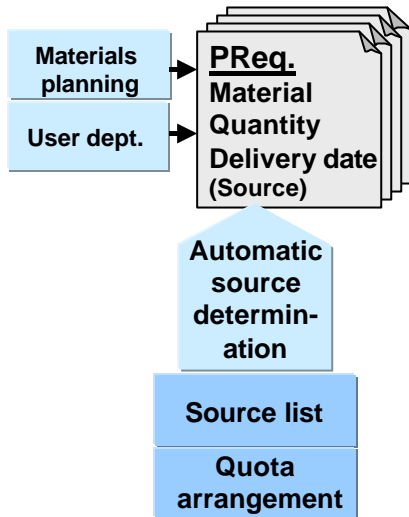
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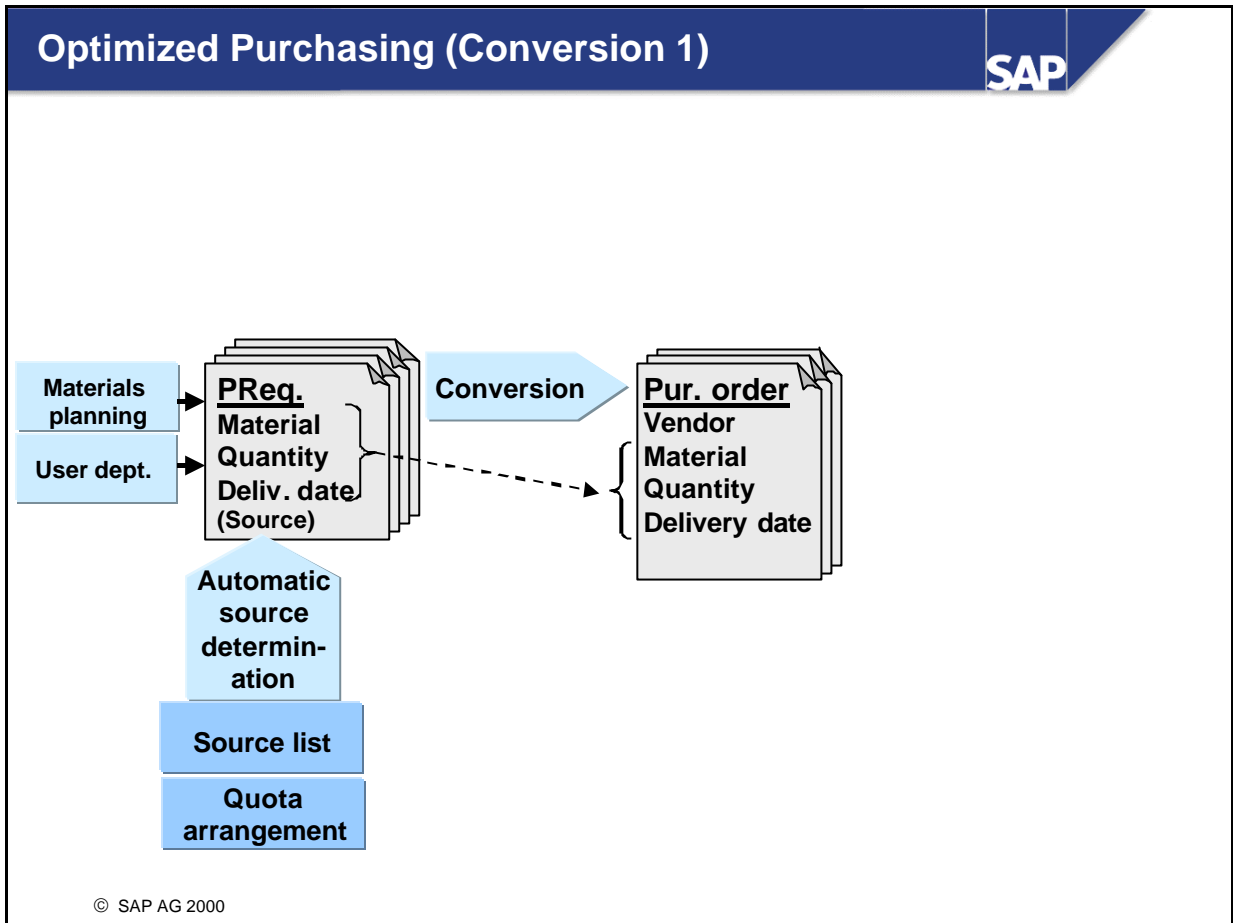
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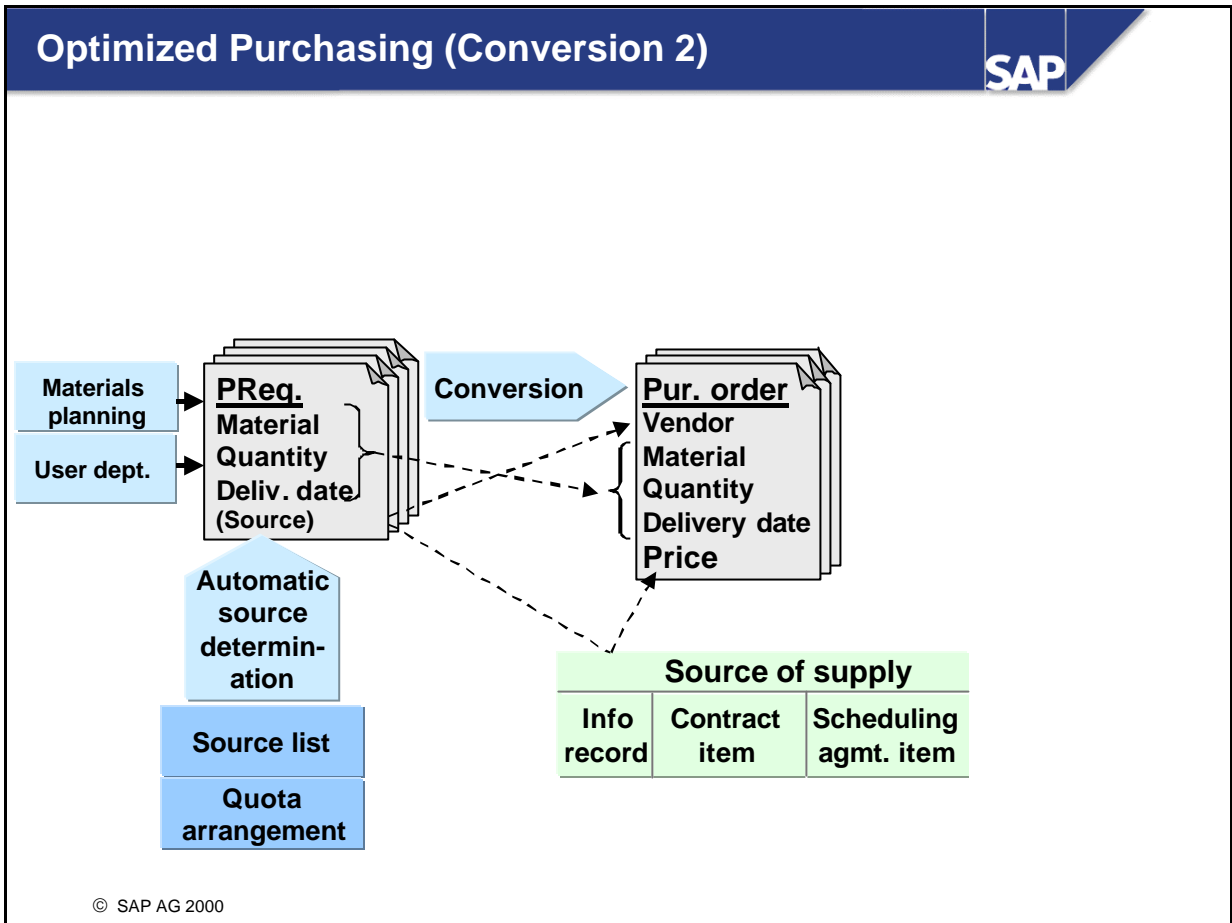
## Optimized Purchasing (Source Determination)

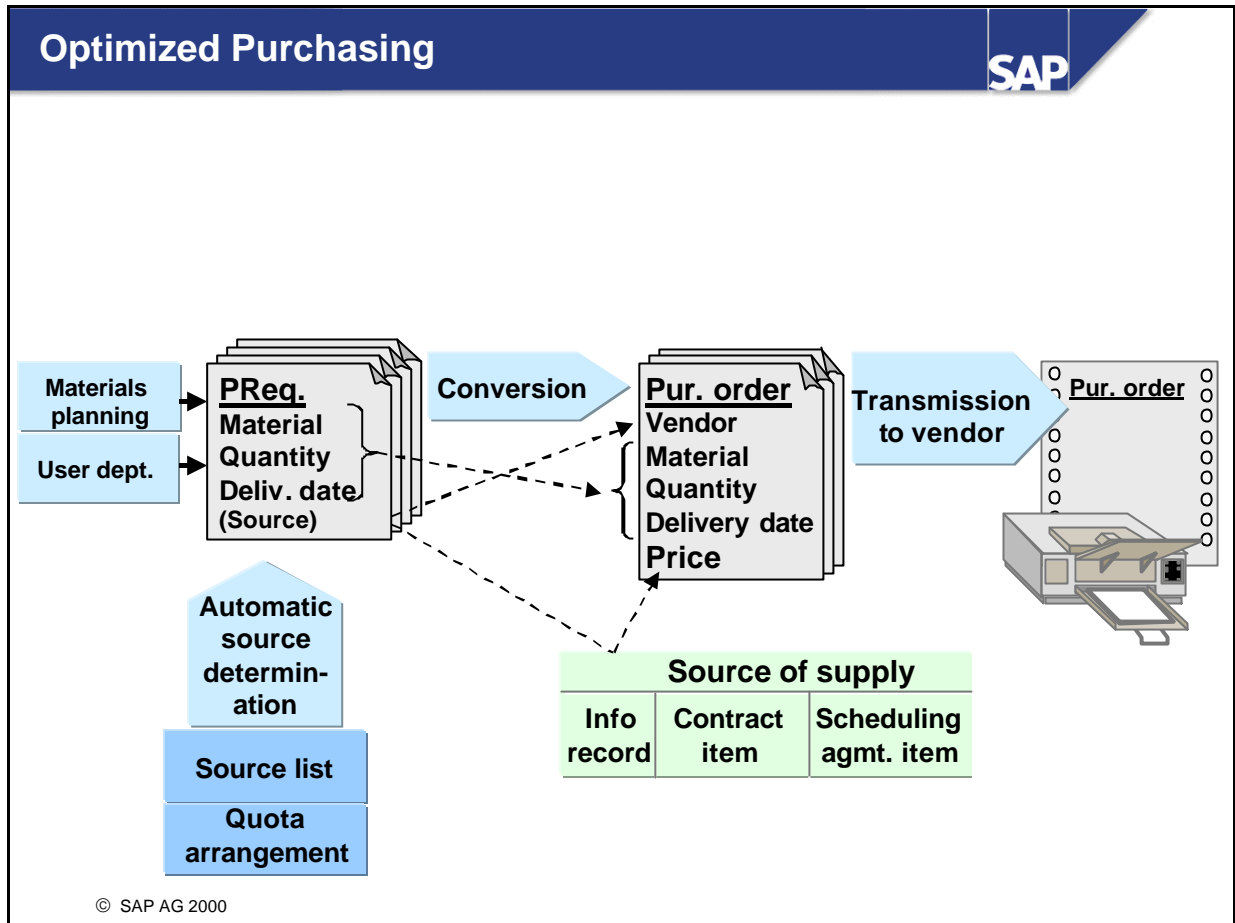
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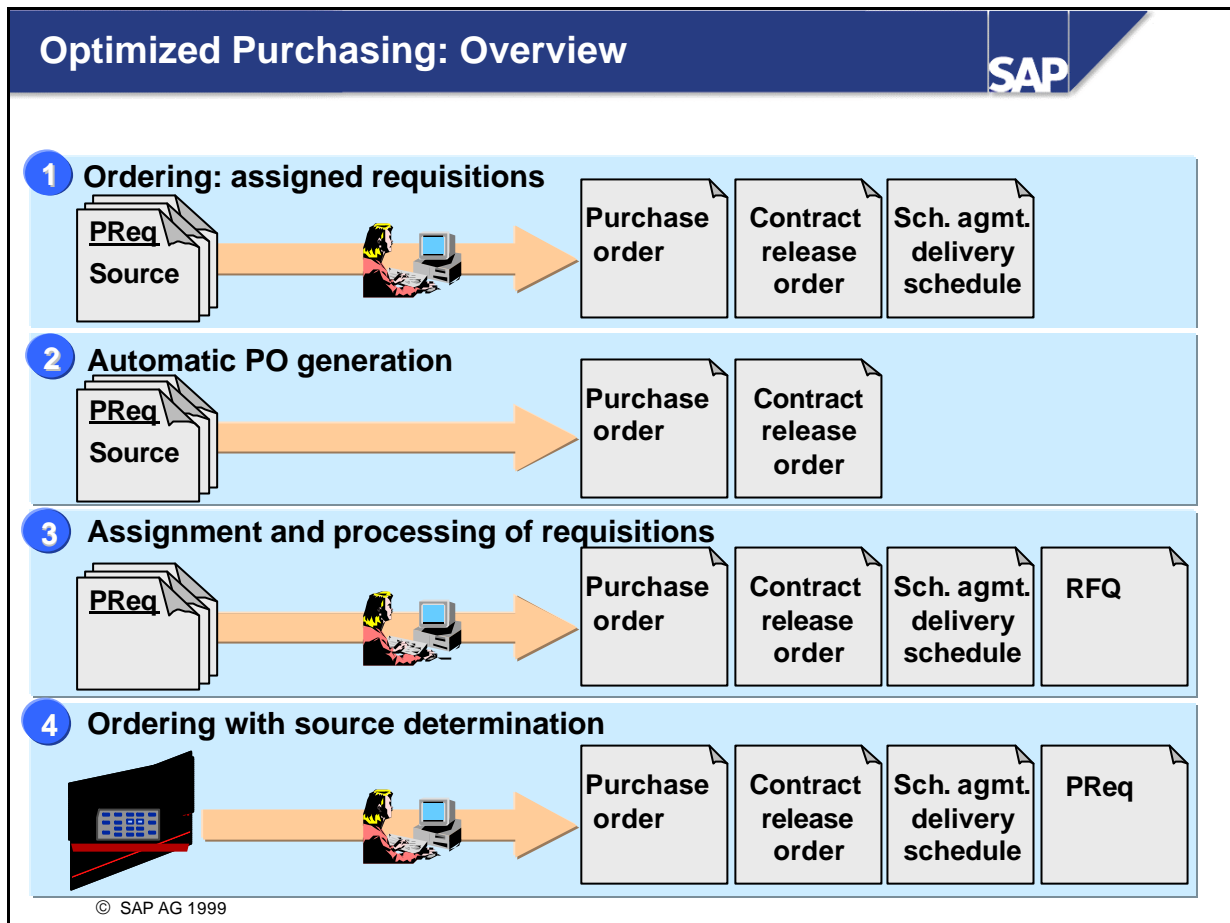


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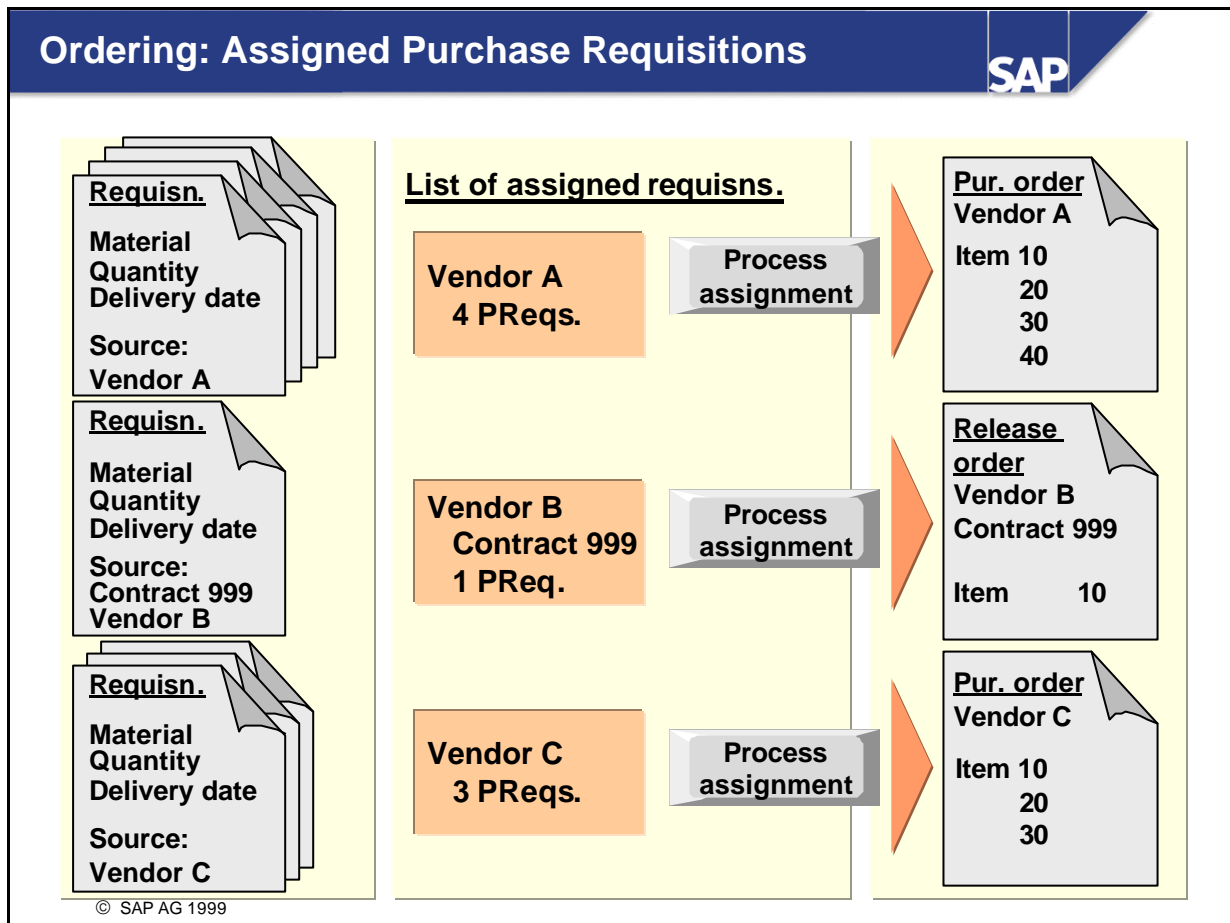






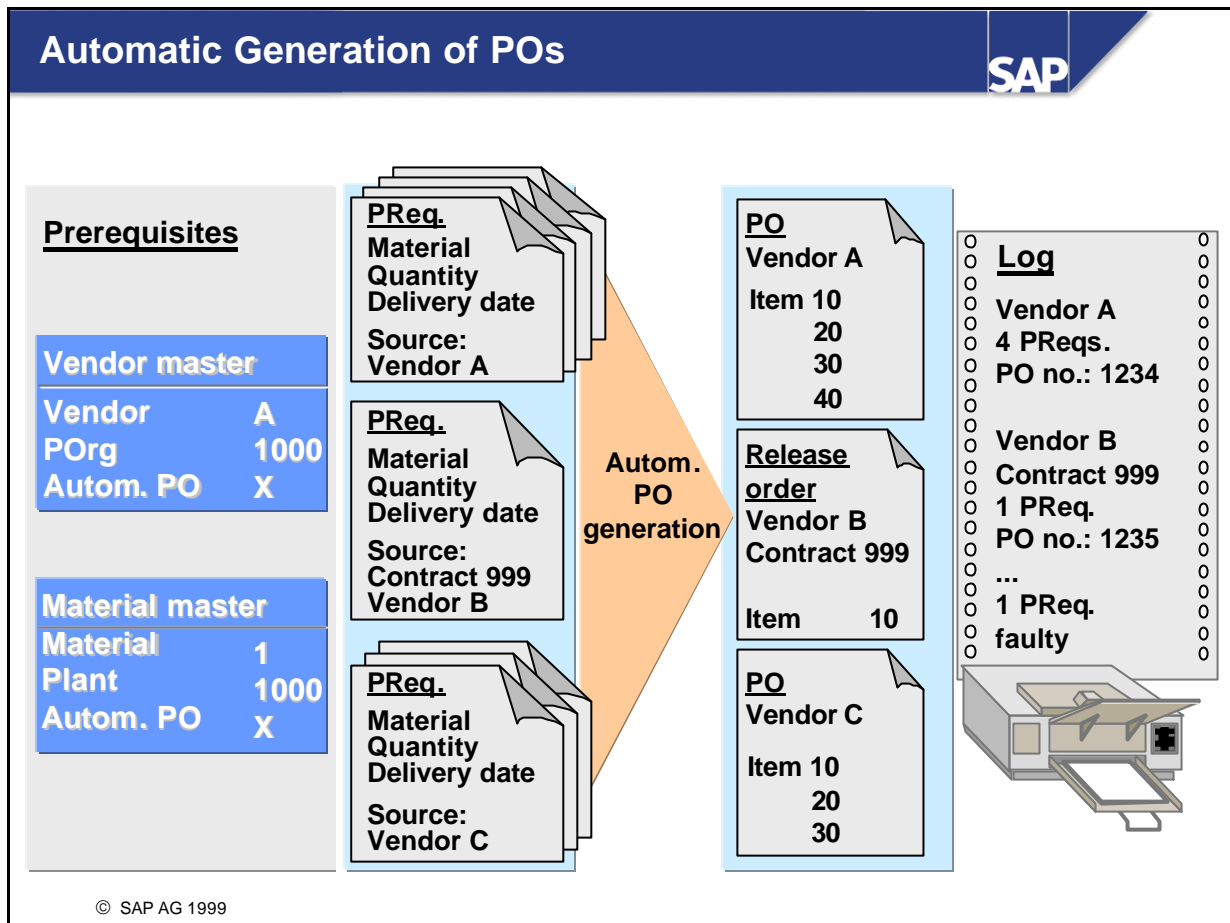


- Four functions are available for the purpose of optimized purchasing. They differ in the following respects:
  - Prerequisites
  - Manual effort
  - Result

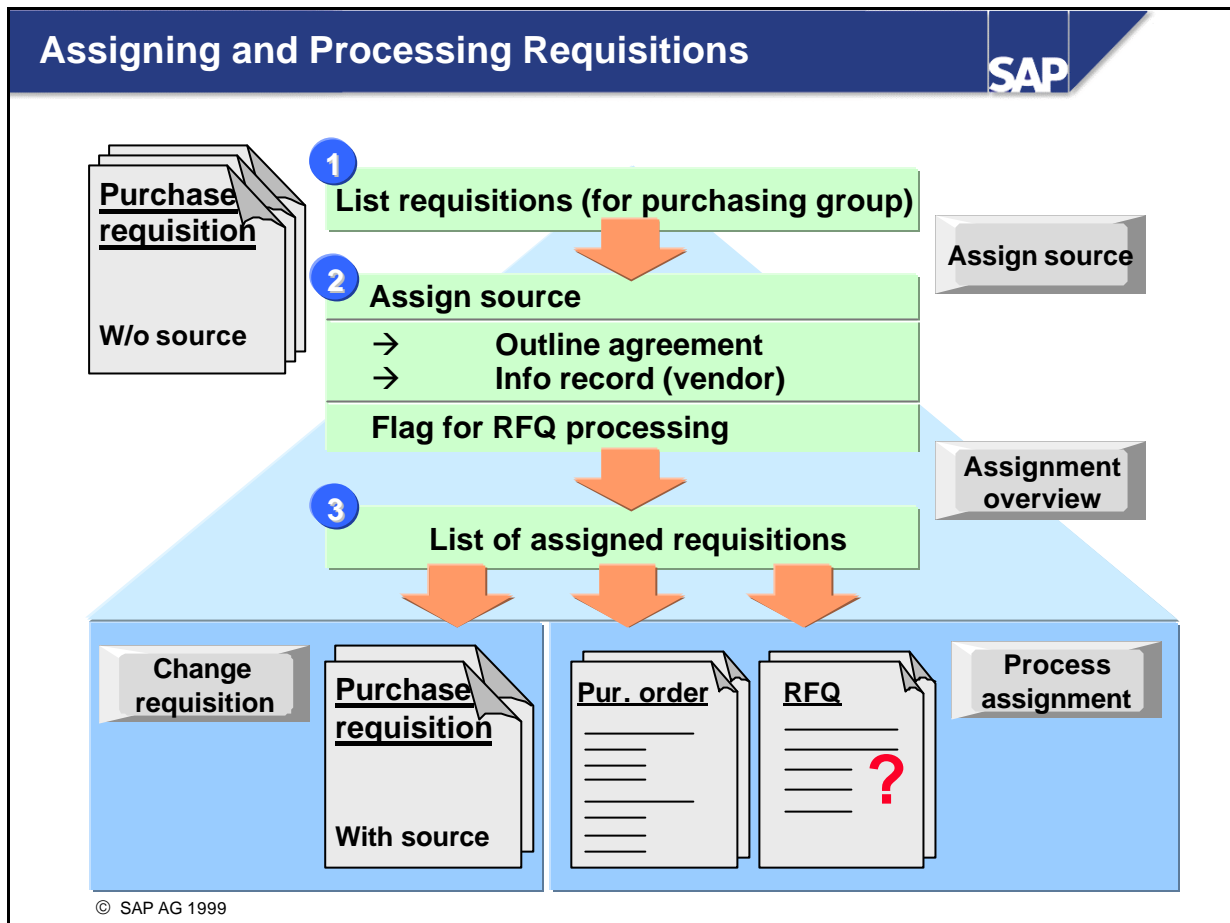


- A prerequisite for the function *Ordering: Assigned Purchase Requisitions* is the existence of requisitions that have been assigned to sources of supply. The R/3 System can assign sources if, for example, quota arrangements or source list records exist.
- You get a list showing the number of assigned purchase requisitions per source.
- You can convert all requisitions assigned to the same source into standard purchase orders, contract release orders or lines of delivery schedules (issued under scheduling agreements) in a single step.
- You cannot convert requisitions into RFQs using this function.

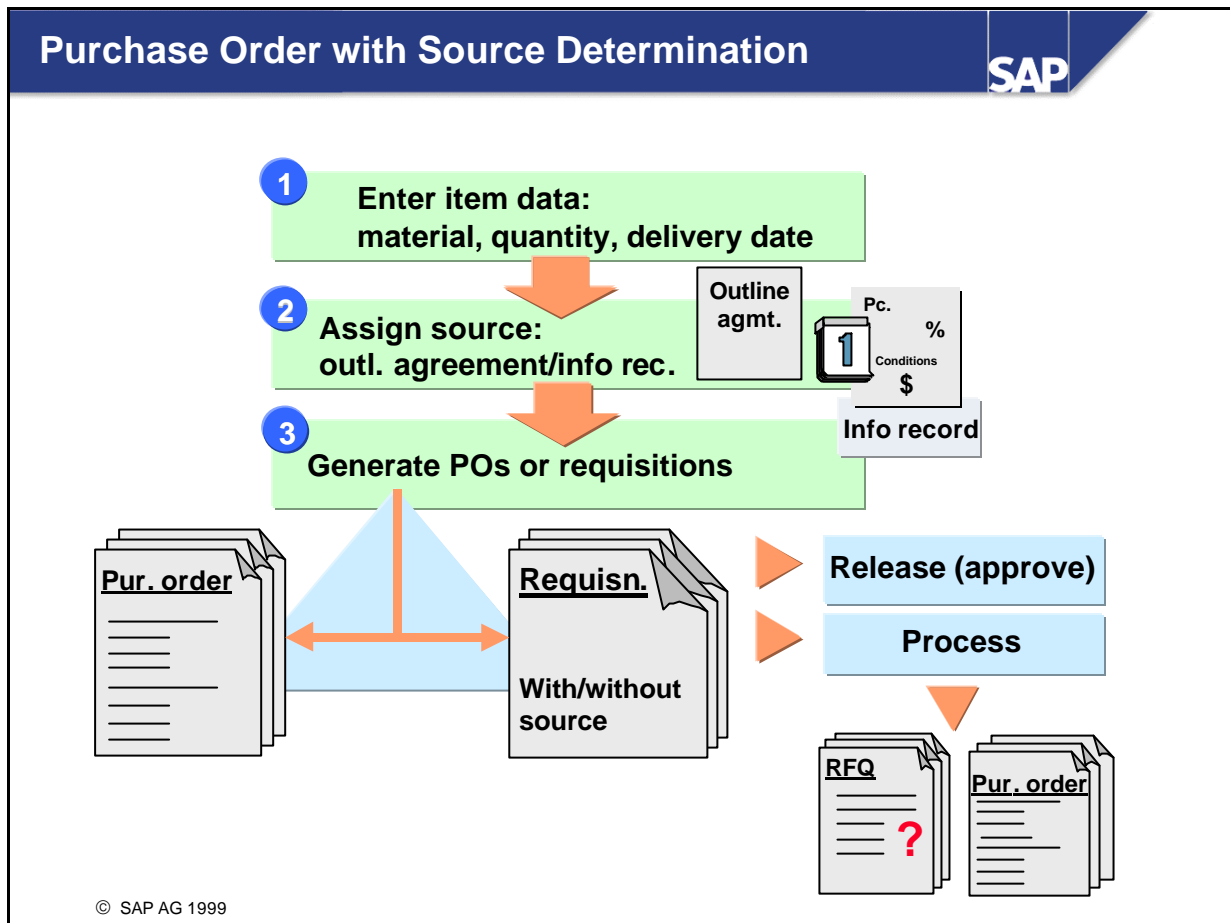




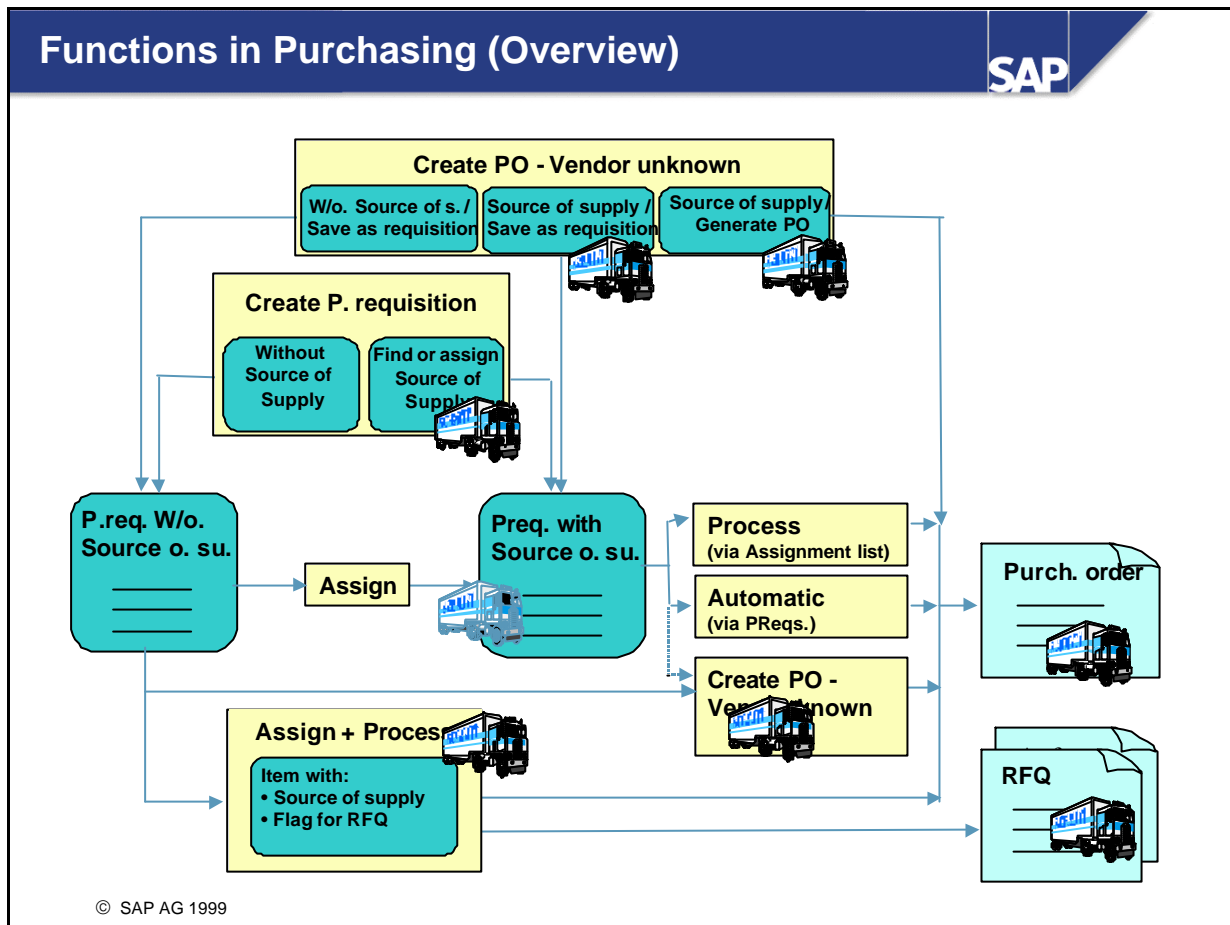
- You can have purchase orders generated automatically from requisitions to which a source has been assigned. You can perform the function either online or – in the case of large volumes of data – in the background.
- For the purposes of automatic PO generation, the R/3 System selects only those requisitions in respect of which the *Automatic PO* indicator has been set for the material and vendor.
- A log shows the purchase orders generated, indicates which ones are faulty, and provides detailed information on the source of the error for each faulty requisition item.
- The R/3 System cannot convert a requisition item if data is faulty or incomplete. Possible sources of errors include:
  - Master data is faulty or incomplete  
(For example, the vendor is blocked or the current order price is not available)
  - Input data is missing  
(For example, account assignment unknown)
- You cannot generate RFQs or scheduling agreement delivery schedules using this function.



- The *Assign and process purchase requisitions* function is a combination of the *Assign purchase requisitions* and *Ordering: Assigned Purchase Requisitions* functions.
- From a list of open requisitions, you can initiate the automatic assignment of sources for all selected requisition items. If there is more than one source for a requested material, you can choose your desired source from the list.
- If requisitions have already been assigned, the previous source is overwritten.
- You can flag for RFQ processing any requisitions for which no source is found.
- After the assignment phase, you can save your requisitions with the assigned sources or generate standard purchase orders, contract release orders, scheduling agreement delivery schedules or RFQs.
- Assignment and processing can take place as separate processes and be carried out by different people.



- The *Purchase order with source determination* (= PO with unknown vendor) function is a combination of the *Create purchase requisition* and *Create purchase order* functions.
- With this function, you:
  - First, enter the materials to be ordered,
  - Assign sources to the items.
  - Generate the purchase orders for the assigned items (or purchase requisitions for any items for which no sources can be determined or which must first be released).
- As in the case of requisitions, the R/3 System suggests possible sources of a material on the basis of existing quota arrangements, source list records, outline agreements and/or info records.



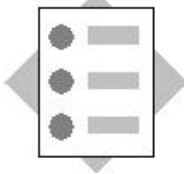
- The slide is showing an overview of some functions in purchasing: Creating and converting purchase requisitions, creating purchase orders and assigning of sources of supply.
- Each lorry symbolizes a source of supply.
- In the MM module, additional options to create and convert purchasing documents are available.

## Exercises



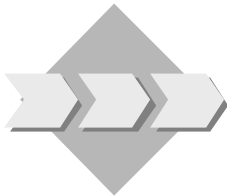
### Unit: Optimized Purchasing

### Topic: Optimized Purchasing



At the conclusion of this exercise, you will be able to:

- Define the prerequisites for optimized purchasing
- Recognize the differences between and the uses of, the various functions for optimized purchasing



In your organization, you wish to have purchase orders, release orders, and scheduling agreement delivery schedule lines generated with the least possible manual effort. Since both assigned and unassigned requisitions are created in your company, and some requirements are even reported by phone, you will need to make use of the different optimizing functions in the SAP R/3 system.

1-1 The plant manager has reported the following requirement to you by phone:

**10 pc.** of material **T-REB##**

**20 pc.** of material **T-REA##**

Both materials are needed by your plant **1000** in two weeks.

You want to record the requirement in the system, have the automatic source determination process carried out, and – if possible – generate a purchase order immediately, all in one operation. Therefore, you will create a purchase order with source determination.

1-1-1 How do you have the source determined automatically and (if possible) assigned to the item after you have entered the item data?

---

1-1-2 Enter the data for the two items.

1-1-3 Check the results of the source determination process for each item.



If no source has been suggested for a material, have the system generate a list of possible sources, by choosing **Edit** ® **Assign source** and choose any source from the list.

1-1-4 Generate a purchase order for each required item by selecting items one after the other and using the *Generate purchase order* function.

Purchase order no(s).: \_\_\_\_\_

1-2 In the system, there are already some assigned purchase requisitions. Convert these assigned requisitions into purchase orders, release orders, or lines of scheduling agreement delivery schedules depending on their sources.

1-2-1 Which menu path do you use? \_\_\_\_\_

Use your purchasing group **Z##** as the selection criteria.

1-2-2 How many requisition items have been assigned to your sources?

Vendor	Contract/sch. agmt./info record?	Number of requisitions

1-2-3 Convert the assigned purchase requisitions for each source into purchase orders.



You can choose *Enter* to acknowledge any warning messages you get.

1-2-4 How many purchase orders have you generated?  
\_\_\_\_\_

1-3 Finally, you must process your non-assigned requisitions. Choose the *Assign and process* function First have a source determined for each requisition and then convert the requisitions into purchase orders, release orders, or scheduling agreement delivery schedules.

1-3-1 Choose all the purchase requisitions of your purchasing group **Z##** for the plants **1000, 1100 and 1300**. Ensure that the *Released requisitions only* indicator is set.

1-3-2 How many requisition items does your list contain? \_\_\_\_\_

1-3-3 Select all the requisition items in the list one after the other. Try to assign a source to each item.



Choose: *Edit* ® *Source of supply* ® *Assign automatically*

1-3-4 Now generate the list of assignments.

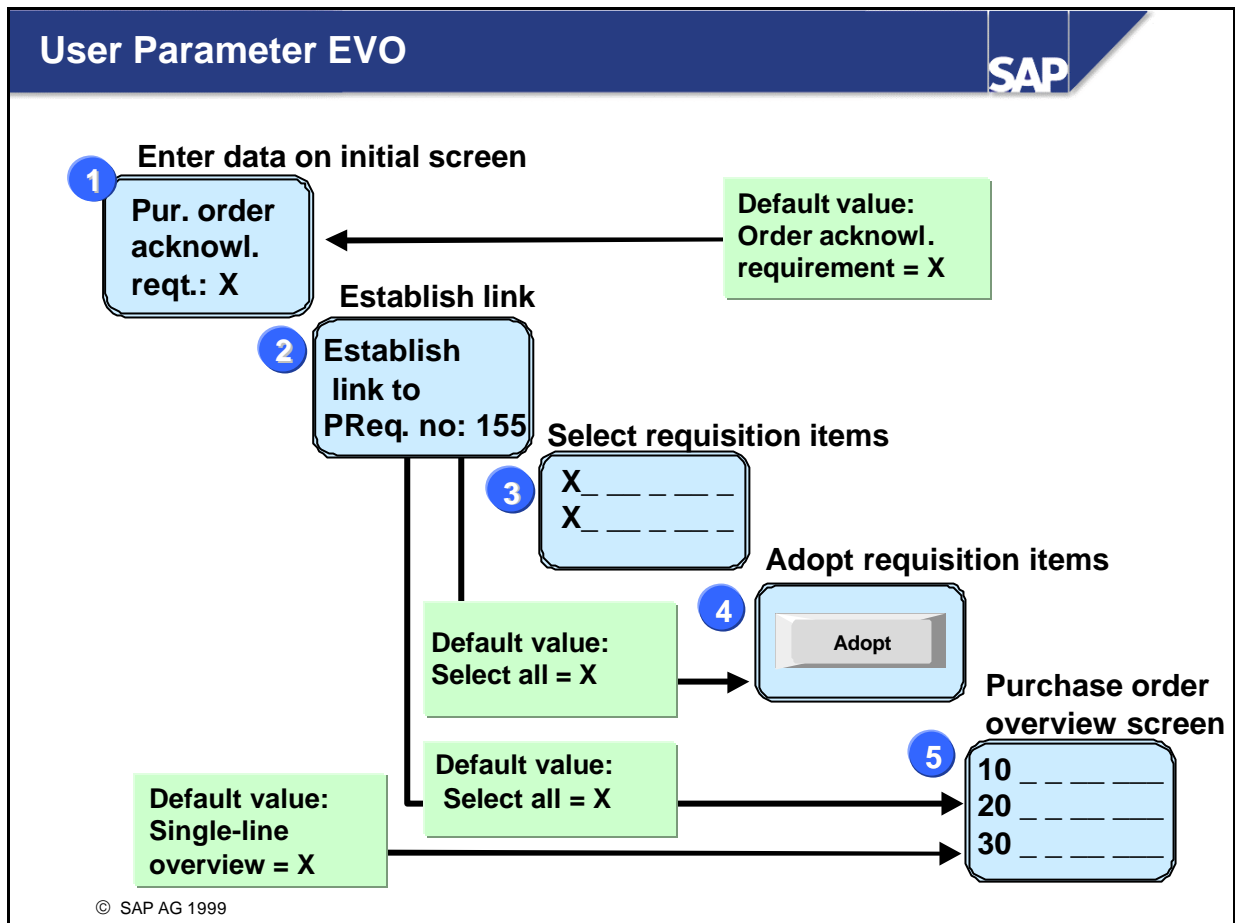


Choose: ***Goto*** ® ***Assignment overview***

How many requisition items are assigned to your sources?

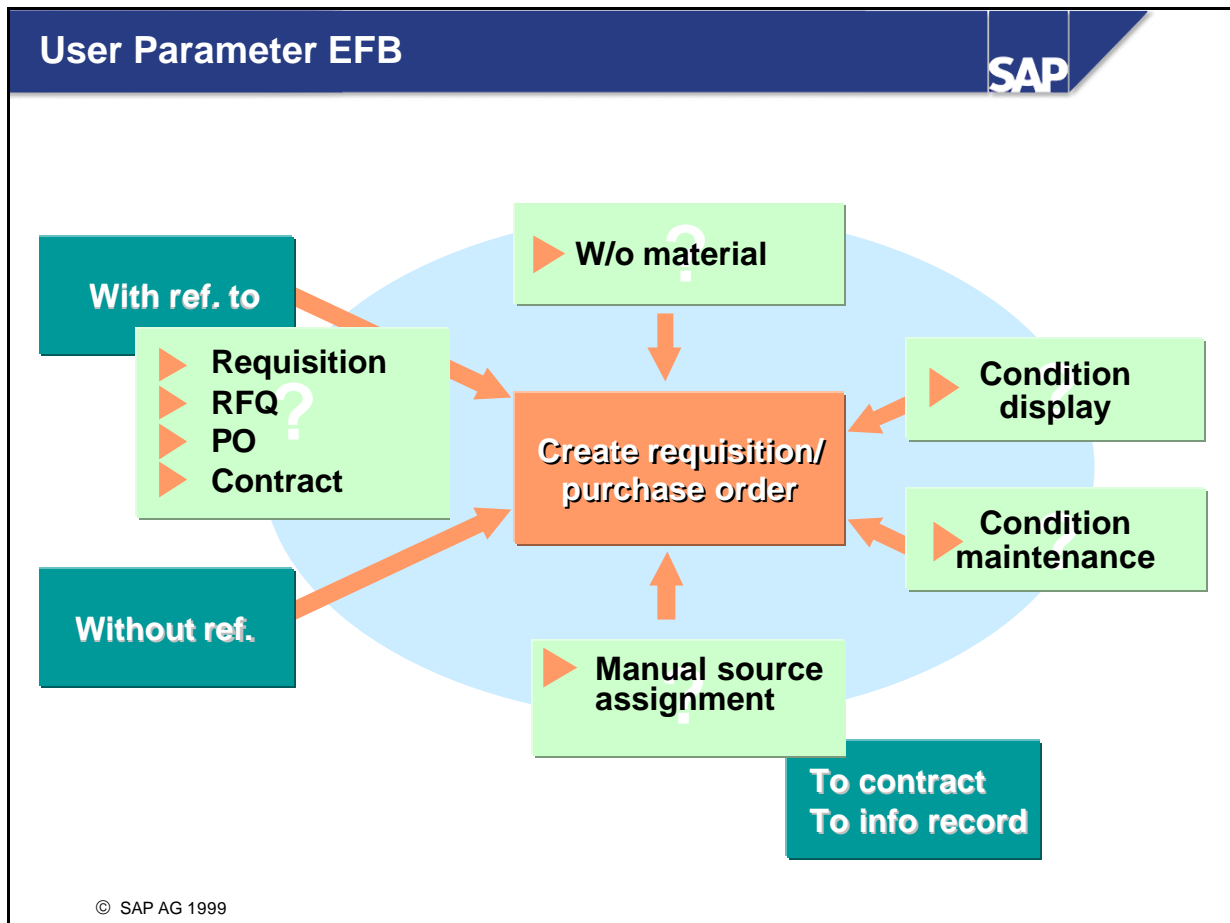
Vendor	Contract/sch. agmt./info record?	Number of requisitions

1-3-5 Convert the assigned requisitions for each source into purchase orders, release orders, or scheduling agreement delivery schedules.

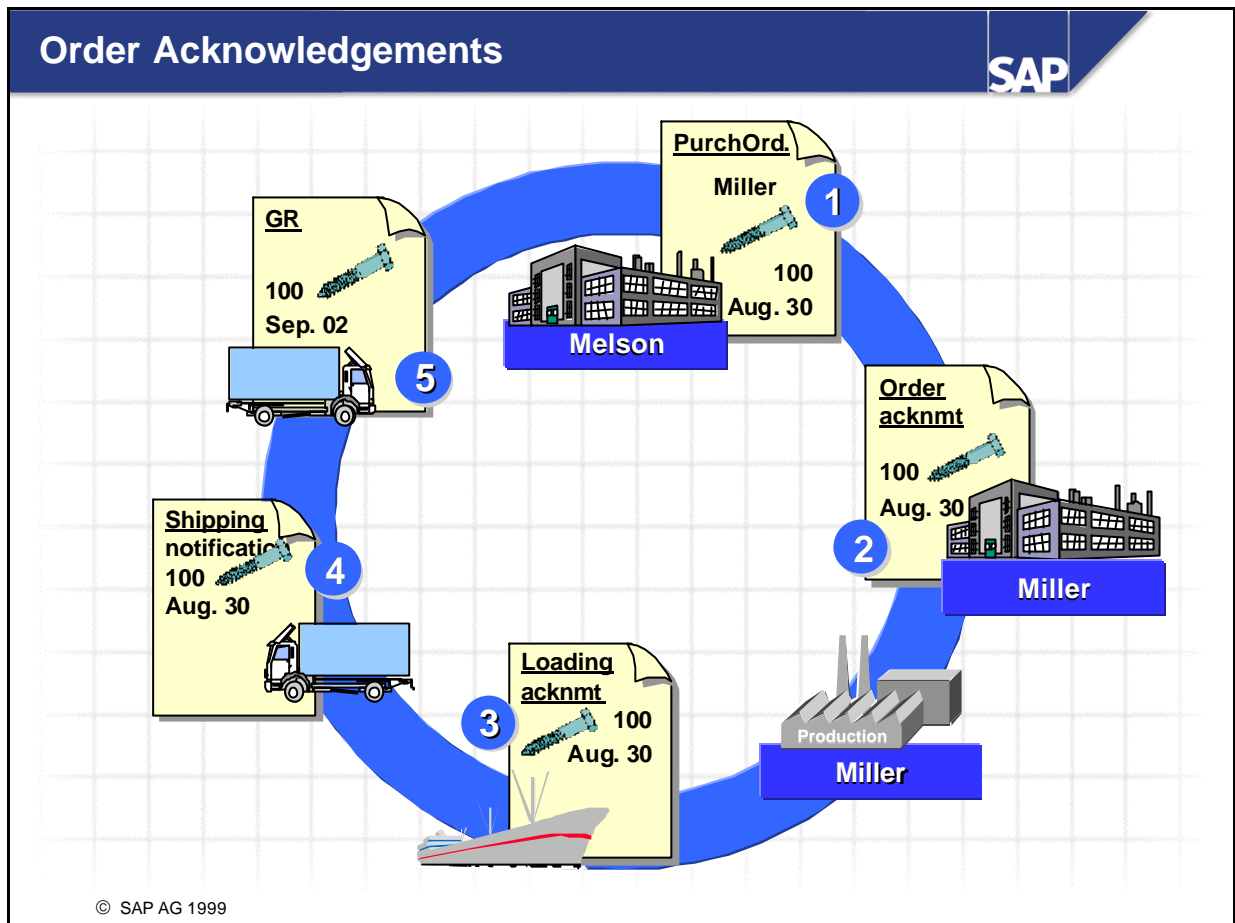


- The user parameter EVO allows you to specify default values for certain fields and functions for each user. For example, you can specify default values for:
  - Various indicators
  - The overview screen display
  - The fast entry functions
  - Whether or not delivery time is taken into account during source determination.
- You define the default values in Customizing and assign them to a user by entering the key for the default values in the user master record under the parameter ID EVO.
- User parameter EVO also has implications in price determination. This aspect is covered in detail in course LO521—*Pricing in Purchasing*.

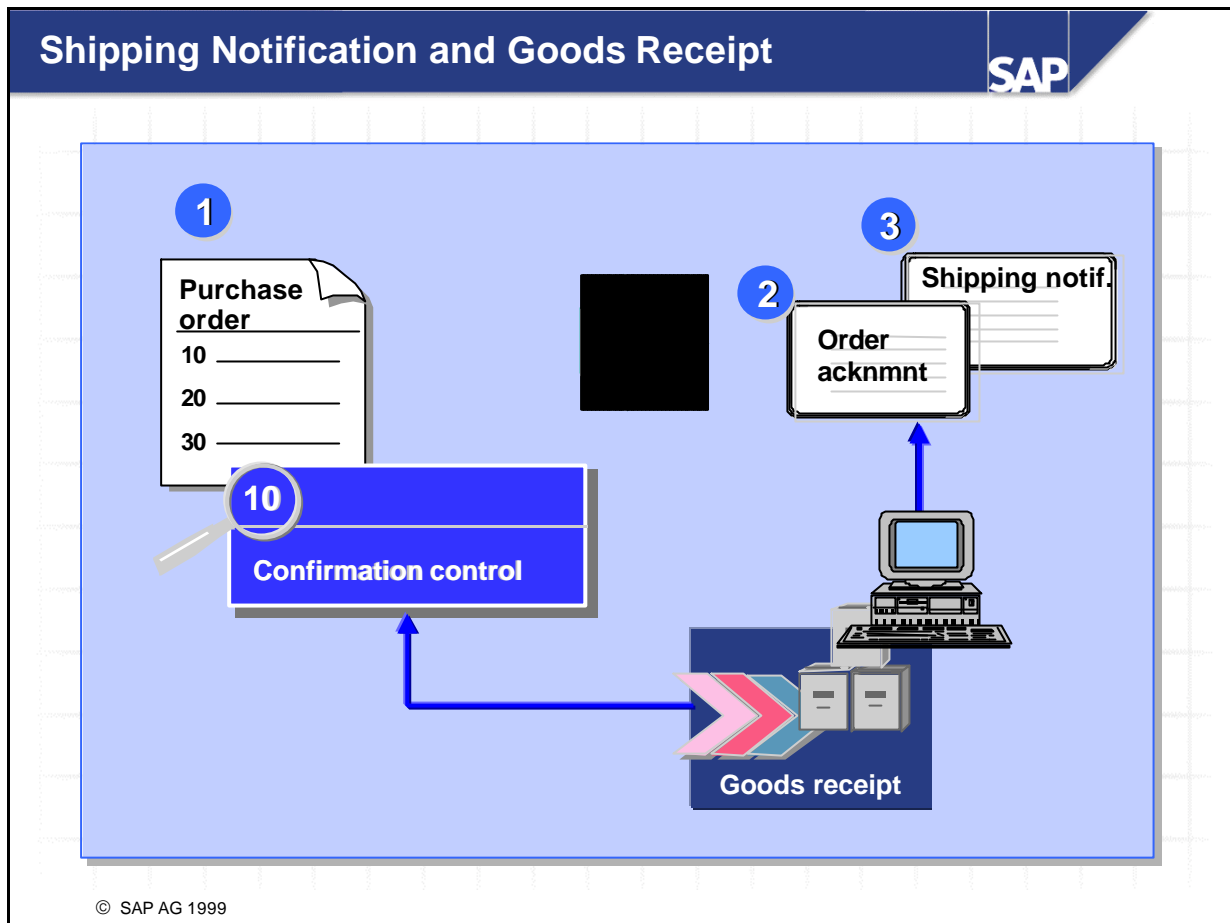




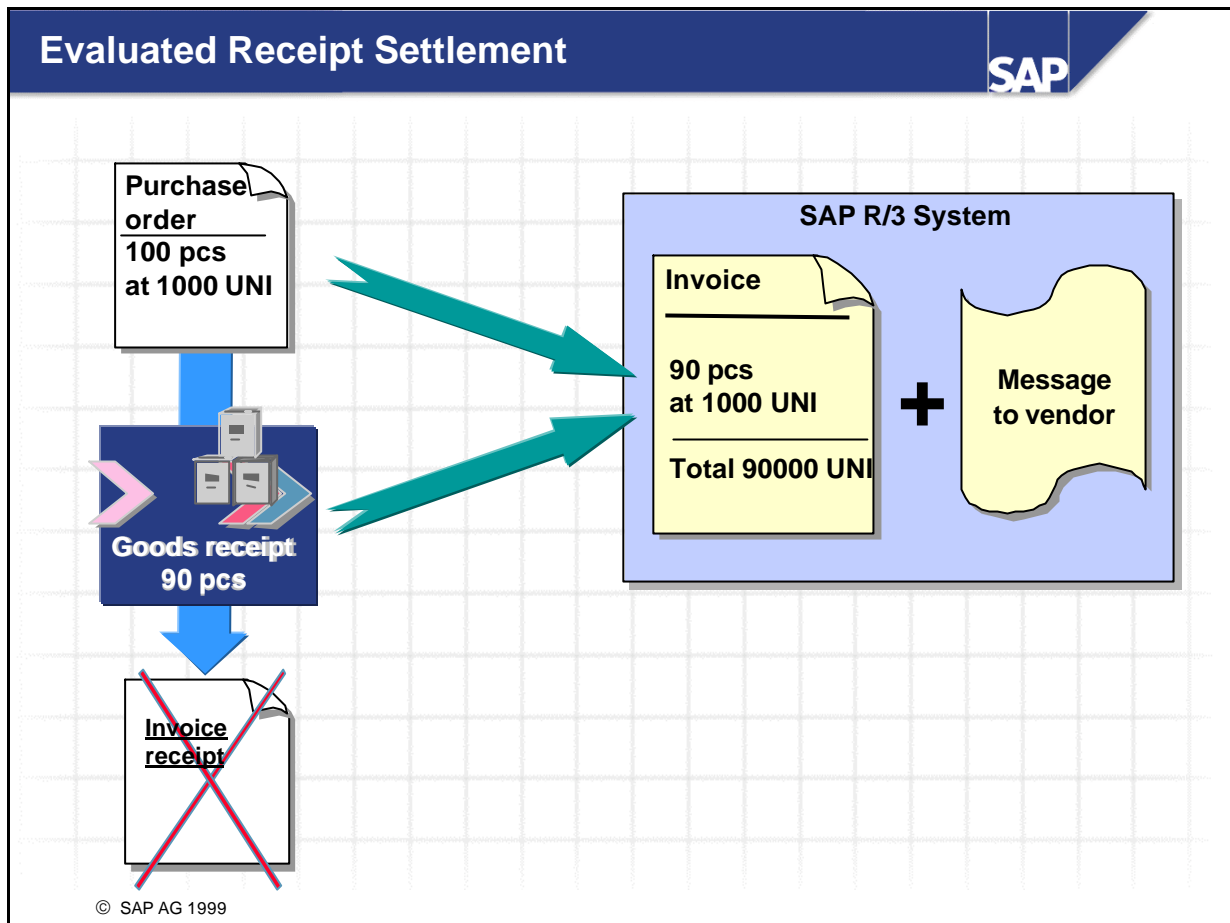
- User parameter EFB allows you to define the authorizations for certain functions that may be required during the processing of requisitions or purchase orders. For example, you can define the authorizations for:
  - Manual source assignment
  - Display and/or maintenance of conditions
  - Creating documents with reference to a certain existing document
  - Changing the source after creating a document by referencing a requisition
- You define the authorizations in Customizing and assign them to a user by entering the key for the authorizations in the user master record under the parameter ID EFB.
- User parameter EFB does not provide authorization protection but facilitates the control of complex purchasing functions.
- User parameter EFB enables you to implement delegated purchasing.



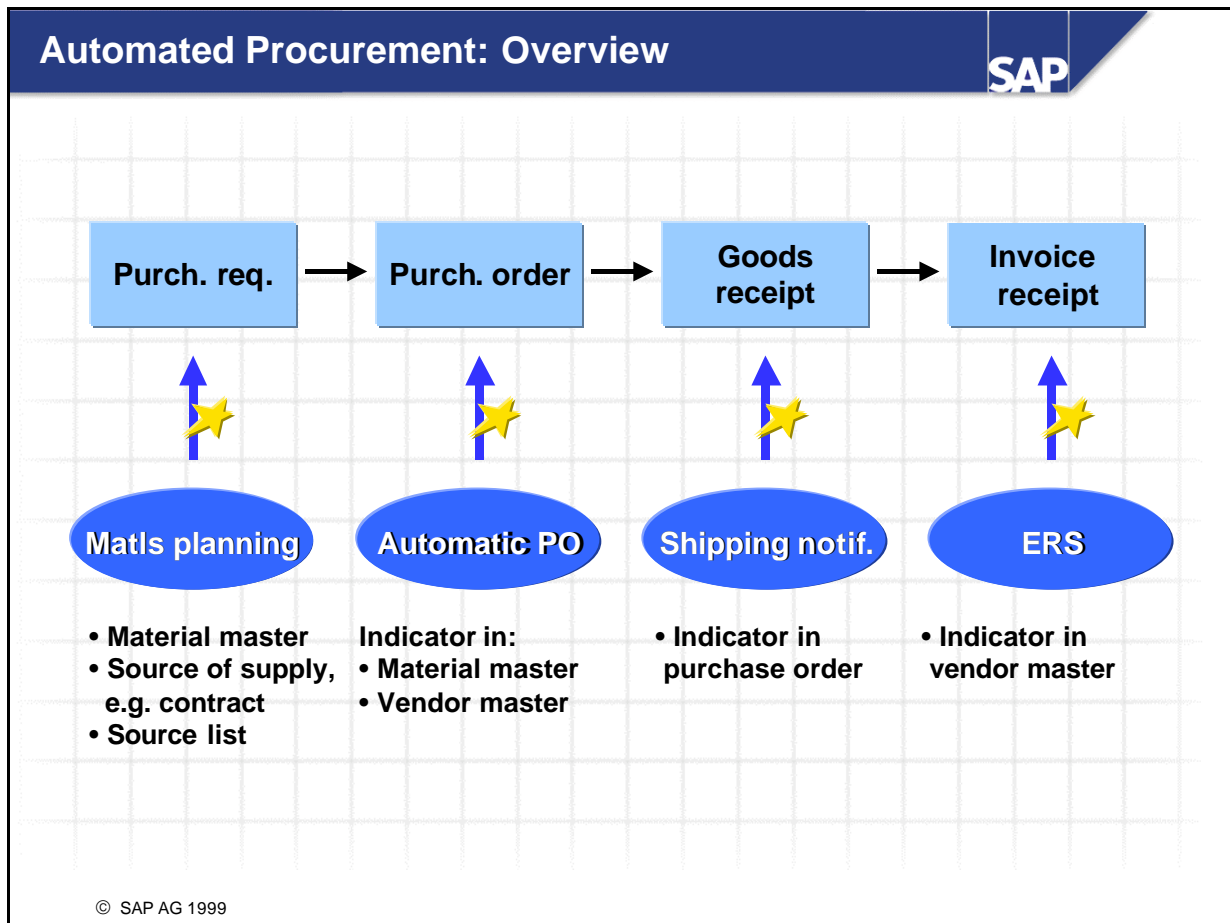
- You can enter vendor acknowledgements for purchase orders or delivery schedules.
- Acknowledgements are sent by the vendor to inform customers when ordered materials are expected to arrive (for example, order acknowledgements, loading or transport confirmations, and shipping notifications).
- If you do not use acknowledgements, Materials Planning can only go by the delivery dates and quantities in the purchase order. Acknowledgements enable you to plan more accurately by providing you with the actual delivery dates and quantities.



- If you expect an order acknowledgement for your purchase order, you can set a confirmation control key in the purchase order item. You can configure which type of order acknowledgements you expect to receive and whether these are relevant to Materials Planning and goods receipt.
- You configure your system so that a particular type of order acknowledgement is referenced (for example, a shipping notification) at goods receipt. The goods receipt cannot be posted without an order acknowledgement.
- You can post a goods receipt with reference to a shipping notification or purchase order. If you enter the goods receipt with reference to the purchase order, the system recognizes from the confirmation control key whether the one or more order acknowledgements are required, and whether acknowledgements have already been entered in the system. The goods receipt can be posted only for the quantities on the acknowledgement.



- In evaluated receipt settlement (ERS), you arrange with the vendor that he or she does not create an invoice for a purchase order transaction. Instead, the system automatically posts the invoice document on the basis of the data from the purchase order and goods receipts. This ensures that there are no discrepancies between the goods invoiced and the goods received.
- The system determines the amount invoiced for this purchase order from the order prices in the PO, the payment conditions, tax information, the delivery quantity entered at goods receipt, and the amount charged for this purchase order transaction.
- If you use the ERS procedure, the conditions arranged with the vendor must be clear and you have to continually update the purchase orders in the system.
- You cannot process planned delivery costs with the ERS procedure.
- In Logistics Invoice Verification, you can create a message for the vendor.



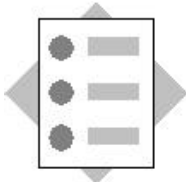
- If the material master record has been maintained accordingly, Materials Planning can create purchase requisitions automatically. If source lists with valid sources of supply exist, the system automatically assigns sources of supply to the items in the purchase requisitions, based on the source list.
- The system can automatically convert purchase requisitions to purchase orders if sources of supply are assigned to the requisitions. The “Automatically generated purchase order” indicator must also be set in the material master record and vendor master record.
- In the purchase order, you can enter that you expect an order acknowledgement and/or shipping notification from the vendor. If you have entered a shipping notification, you can reference it when you post the goods receipt.
- In evaluated receipt settlement (the ERS procedure), the vendor does not send us invoices. Instead, the R/3 System creates the invoice from the data in the purchase order and the goods receipt. You need the vendor's permission to use the ERS procedure and you have to allow it in the vendor master record.

## Exercises



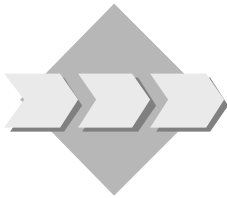
### Unit: Optimized Purchasing

#### Topic: Automatic Generation of Purchase Orders (optional)



At the conclusion of this exercise, you will be able to:

- Create a contract and enter it in the source list as a fixed source of supply
- Work with the stock/requirements list
- Carry out a manual single-item planning run for your material
- Generate purchase orders automatically via MRP



To make it easier to determine a source of supply, complete some contracts and define these in the system as fixed sources of supply. Set up your system, to ensure that purchase requisitions are created with an assigned source of supply with the help of the planning run. In addition it should be possible to convert requisitions into purchase orders .

**For these exercises you should have done the exercises from *Materials planning* section**

#### 2-1 Check Material master record

The material **Ballbearing, cylindrical-##** is used in production in plant **1000**. Requirements of this material are determined automatically by MRP (manual reorder point planning). In future, the generated purchasing requisitions should automatically be converted in purchasing orders. For this you have to check and, if necessary, to maintain the relevant settings.

2-1-1 Display the purchasing data for this material and determine whether the material is allowed for the “Automatically generated purchase order” function.

Data field: \_\_\_\_\_

2-1-2 You fill up your stock for this material with the ‘*Replenish to maximum stock level*’ lot-size procedure (HB). You increased the stock capacity for this material to 1000 pieces. Furthermore, in future, you want to initiate a procurement for your material when stock falls below the limit of 600 pieces. Maintain the relevant MRP data

Fields: \_\_\_\_\_

Which entries are made in *planned delivery time* and *GR processing time* fields?

Plnd delivery time: \_\_\_\_\_

GR processing time: \_\_\_\_\_

## 2-2 Check vendor master record

In the future, the ballbearing is to be procured by contract from the **company C.E.B Berlin Gr.##**. You have planned to automate the procurement process for this vendor and want to convert purchase requisitions into purchase orders automatically.

**Ensure that the relevant control data has been maintained in the vendor master record.** Display the vendor purchasing data for purchasing organization **1000**.

What is the relevant indicator?

\_\_\_\_\_

### 2-3 Create contract

Your Purchasing department has arranged a quantity contract (contract type \_\_\_\_\_) with the vendor **C.E.B Berlin Gr.##** (T-K12C##) for the material **Ballbearing, cylindrical-##** (T-HM1##). Create the contract for purchasing organization **1000** and purchasing group **T##**.

The validity period for this contract begins today and lasts until the end of next year. The contract is valid for plant **1000**. The target quantity is **100,000 pieces**. The price you have arranged is **10 UNI** per piece.

On the detail screen for the contract item, enter the confirmation control key **T-LA**.



Unlike the basic indicator for the order acknowledgement requirement, the confirmation control key allows you to configure the types of order acknowledgements you expect and which rules are valid for each. The key T-LA in the training system is set up in such a way that you cannot post a goods receipt unless you have received a shipping notification.

Contract number: \_\_\_\_\_

### 2-4 Maintain source list

You procure the material **T-HM1##** via contract release orders for your contract with vendor **T-K12C##**. Create a source list record for this contract and this material in plant **1000**. In the source list record, enter the same validity period as that in the contract (see above). The contract item is to be the fixed source of supply for purchasing organization **1000**. The contract should also be taken into account by Materials Planning.

Which indicator do you set? \_\_\_\_\_

### 2-5 Display stock/requirements list

You need information on the availability of material **T-HM1##**. Display the stock/requirements list for this material in plant **1000**. Which procurement elements are in the list?

\_\_\_\_\_



## 2-6 Carry out single-item planning run

Carry out a one-step, single-item planning run for this material for plant **1000** as a net change planning run using processing key **NETCH**. You want to create purchase requisitions. You also want to create an MRP list to document the result. Do not display the result.

## 2-7 Display stock/requirements list

Display the stock/requirements list for the material in plant **1000** again.

2-7-1 How has the available stock changed? Which procurement proposals does the system suggest?

---

---

2-7-2 Display the purchase requisition.

What is the delivery date? \_\_\_\_\_

Has a source of supply been entered? \_\_\_\_\_

## 2-8 Create purchase order automatically

Carry out online the function for automatically creating a purchase order for this purchase requisition.

Select the purchase requisitions for your purchasing group **LO020-##**, which have been assigned to vendor **T-K12C##** in plant **1000**.

You should create a new purchase order for each purchasing group. You need a detailed log. The “closed” indicator should be set for purchase requisitions.



This function is contained in the Purchasing menu under the follow-up functions for purchase requisitions.

What message does the system display when the function is complete?

---

**2-9 Display stock/requirements list**

Display the stock/requirements list for the material in plant 1000 again.

2-9-1 How has the available stock changed? Which procurement proposals does the system suggest?

---

---

2-9-2 Display the purchase order.

Has a confirmation control key been entered on the detail screen for the purchase order item? \_\_\_\_\_

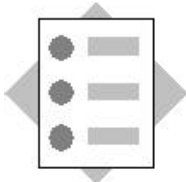
What is the delivery date for the purchase order item? \_\_\_\_\_

## Exercises



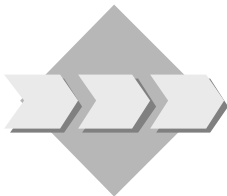
### Unit: Optimized Purchasing

#### Topic: Shipping Notification and Goods Receipt (optional)



At the conclusion of this exercise, you will be able to:

- Create a shipping notification with reference to a purchase order
- Post a goods receipt with reference to a shipping notification



So that you are always informed of actual delivery dates, you have arranged with several vendors that they send you a shipping notification as well as an order acknowledgement. This ensures that production is not held up because of unexpected shortages.

#### 3-1 Enter shipping notification

The vendor confirms that it will stage the complete ordered quantity one week late. The vendor's identification for the shipping notification is **LA1-##**.

Enter this shipping notification as an incoming delivery for your purchase order. Change the delivery date and enter the external identification number **LA1-##** for the shipping notification.

Number of shipping notification: \_\_\_\_\_

#### 3-2 Display purchase order

Can you tell from the purchase order that a shipping notification has been entered for an item?

If yes, where is this information stored and which data for the shipping notification can be taken from the purchase order.

\_\_\_\_\_

### 3-3 Display stock/requirements list

Display the stock/requirements list for the material for plant **1000** again.

How has the available stock changed? Which procurement proposals does the system suggest?

---

---

Display the purchase order. What is the delivery date in the purchase order item?

---

### 3-4 Enter goods receipt into stock

The vendor sends the material you ordered as stated on his or her order acknowledgement.

Post the goods receipt into storage location **0001** in plant **1000**.



You can reference the inbound delivery at goods receipt.  
You can search for your inbound delivery via the vendor or the external identification LA1-##.

Material document number: \_\_\_\_\_

### 3-5 Display stock/requirements list

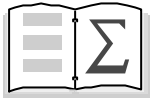
Finally, check again the available stock for material **T-HM1##** in plant **1000**. What is the actual available quantity and which MRP elements does the list still contain?

---

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## Optimized Purchasing: Unit Summary

SAP



**You are now able to:**

- **Define the prerequisites for optimized purchasing**
- **Recognize the differences between and the uses of the various functions for optimized purchasing**
- **Describe the importance of user parameters EVO and EFB**

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## Solutions



### **Unit: Optimized Purchasing**

### **Topic: Optimized Purchasing Functions**

#### **1-1 *User menu ® Purchase Order ® Create ® Vendor Unknown***

1-1-1 If you set the source determination indicator on the initial screen, a source of supply will be determined automatically (if possible).

#### **1-2 *User menu ® Purchase order ® Create ® Via req. assgt. List***

1-2-1 Enter purchasing group **Z##**.

1-2-2 Sources may vary by participant.

1-2-3 To convert each requisition, select the source and choose *Process Assignment*.

1-2-4 One for each source in the table.

#### **1-3 *User menu ® Requisition ® Follow on Functions ® Assign and Process***

1-3-2 Answers may vary by participant.

1-3-3 ***Edit ® Source of supply ® Assign automatically***

1-3-4 ***Goto ® Assignment overview***

1-3-5 Select each source assignment and then choose *Process Assignment*.

## Solutions



### Unit: Optimized Purchasing

### Topic: Automatic Generation of Purchase Orders (optional)

#### 2-1 Maintain materials planning data for a material

2-1-1 *Logistics* ® *Materials Management* ® *Material Master* ® *Material* ® *Display* ® *Display current*

Material	T-HM1##
Plant	1000 (New York)

View *Purchasing, General data* section, data field:

*Auto.PO*

2-1-2 *Logistics* ® *Materials Management* ® *Material Master* ® *Material* ® *Change* ® *Immediately*

Material	T-HM1##
Plant	1000 (New York)

<b>MRP 1</b>	
Reorder point	600
Lot size	HB
Maximum stock level	1000

<b>MRP 2</b>	
Plnd delivery time	7 days
GR processing time	1 day

#### 2-2 Check vendor master record

*Logistics* ® *Materials Management* ® *Purchasing* ® *Master data* ® *Vendor* ® *Purchasing* ® *Change (current)*

Determine the vendor number via F4 help.

<b>Initial screen</b>	
Vendor	<i>T-K12C##</i>
Purchasing organization	<i>1000</i>
<input checked="" type="checkbox"/>	<i>Purchasing data</i>

Indicator:  *Automatic purchase order*

### 2-3 Create contract

*Logistics ® Materials Management ® Purchasing ® Outline agreement ® Contract ® Create*

<b>Initial screen</b>	
Vendor	<i>T-K12C##</i>
Agreement type	<i>MK</i>
Purch. Organization	<i>1000</i>
Purchasing group	<i>T## (LO020-##)</i>
Plant	<i>1000</i>

<b>Header data</b>	
Validity period start date	<i>Current date</i>
Validity period end date	<i>12.31 next year</i>

<b>Item overview</b>	
Material	<i>T-HM1##</i>
Target qty	<i>100000</i>
Net price	<i>10</i>

Select the line and choose *Item ® Details*

<b>Item detail screen</b>	
ConfContrK	<i>T-LA</i>



**2-4 Maintain source list**

*Logistics ® Materials Management ® Purchasing ® Master data  
 ® Source list ® Maintain*

Material	<i>T-HM1##</i>
Plant	<i>1000</i>

<b>Overview screen</b>	
Valid from	<i>Today's date</i>
Valid to	<i>12.31 next year</i>
Agreement	<i>Number of your contract</i>
Itm	<i>0010</i>
Fixed	<input checked="" type="checkbox"/>
MRP	<i>1</i>

**2-5 Display stock/requirements list**

*Logistics ® Materials Management ® Material Requirements Planning (MRP)  
 ® MRP ® Evaluations ® Stock/Reqmts list*

<b>Initial entry tab page</b>	
Material	<i>T-HM1##</i>
Plant	<i>1000</i>

Which procurement elements are in the list?

The list contains your purchase order of 500 pieces (from MRP exercises).

**2-6 Carry out single-item planning run**

*Logistics* ® *Materials Management* ® *Material Requirements Planning (MRP)*  
 ® *MRP*® *Planning* ® *Single-Item, Single-Level*

Material	<i>T-HM1##</i>
Plant	<i>1000</i>
Processing key	<i>NETCH</i>
Create pur. req.	<i>1</i>
Create MRP list	<i>1</i>
<input type="checkbox"/>	Display the results before you save.

**2-7 Display stock/requirements list**

*Logistics* ® *Materials Management* ® *Material Requirements Planning (MRP)*  
 ® *MRP*® *Evaluations* ® *Stock/Reqmts list*

2-7-1 *Based on a (new) purchase requisition, a goods receipt of 500 pieces are expected after the replenishment lead time. Furthermore, based on the existing purchase order, a goods receipt of 500 pieces are expected after the replenishment lead time.*

2-7-2 [**Details for element**] icon (magnifying glass in the line for the required MRP element) or

select the required MRP element and choose the [**Display element**] icon (glasses below the list).

Delivery date: *Current date + replenishment lead time (=planned delivery time + GR processing time)*

Source: *Vendor T-K12C##, (contract number)*

## 2-8 Create purchase order automatically

*Logistics* ® *Materials Management* ® *Purchasing* ® *Requisition* ® *Follow-on functions* ® *Create purchase order* ® *Automat. via Preqs*

or:

*Logistics* ® *Materials Management* ® *Purchasing* ® *Purchase order* ® *Create* ® *Automat. via Preqs*

Purchasing group	T## (LO020-##)
Vendor	T-K12C##
Plant	1000
<input checked="" type="checkbox"/>	New purchase order per purchasing group
<input checked="" type="checkbox"/>	Detailed log
1	Set purchase requisition to closed

Message after completion of function:

*Purchase order 450000##### created.*

## 2-9 Display stock/requirements list

*Logistics* ® *Materials Management* ® *Material Requirements Planning (MRP)* ® *MRP* ® *Evaluations* ® *Stock/Reqmts List*

2-9-1 *The purchase order replaces the purchase requisition as the replenishment element in the stock/requirements list.*

2-9-2 Display the purchase order from the stock/requirements list by choosing **[Display element]**.

*The system has copied the confirmation control key from the contract item to the detail screen for the purchase order item.*

*The delivery date is consistent with the delivery date in the purchase requisition.*

## Solutions



### Unit: Optimized Purchasing

### Topic: Shipping Notification and Goods Receipt (optional)

#### 3-1 Enter shipping notification

*Logistics* ® *Materials Management* ® *Purchasing* ® *Purchase order* ® *Inbound delivery* ® *Create*

Purchase order	<i>PO number from exercise 2-8</i>
Delivery date	<i>Delivery date + 1 week</i>
Ext. identification	<i>LAI-##</i>

#### 3-2 Display purchase order

*Logistics* ® *Materials Management* ® *Purchasing* ® *Purchase order* ® *Display*

Item detail – tab page: *Confirmations*

You can take the following data for the shipping notification from the purchase order:

*Delivery date, confirmed quantity, number of ext. document, date created, and number of internal document*

#### 3-3 Display stock/requirements list

*Logistics* ® *Materials Management* ® *Material Requirements Planning (MRP)* ® *MRP* ® *Evaluations* ® *Stock/Reqmts List*

*The MRP element now displays ShipNt next to the Purchase Order in the stock/requirements list. The system now calculates the availability date from the delivery date specified in the shipping notification.*

*The purchase order item still contains the original delivery date.*

### 3-4 Enter goods receipt into stock

*Logistics* ® *Materials Management* ® *Inventory Management* ® *Goods Movement* ® *Goods Receipt* ® *For Purchase Order* ® *PO Number Known*

Enter the goods receipt into plant 1000, storage location 0001 for inbound delivery. To search for the shipping notification number via the external identification LA1-##, change the reference document to *Inbound Delivery*, then select the matchcode for the document number and enter LA1-## in the *External ID*.

### 3-5 Display stock/requirements list

*Logistics* ® *Materials Management* ® *Material Requirements Planning (MRP)* ® *MRP*

*Evaluations* ® *Stock/Reqmts List*

Available quantity: 500 pcs

MRP elements: *Available stock and the (old) purchase order (without GR)*

Section: Inventory Management/Physical Inventory



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## Content: Inventory Management/Physical Inventory



### Preface

---

Unit **Inventory Management:  
Overview**

Unit **Goods Receipts**

Unit **Reservations and Goods  
Issues**

Unit **Stock Transfers and  
Transfer Postings**

Unit **Consignment**

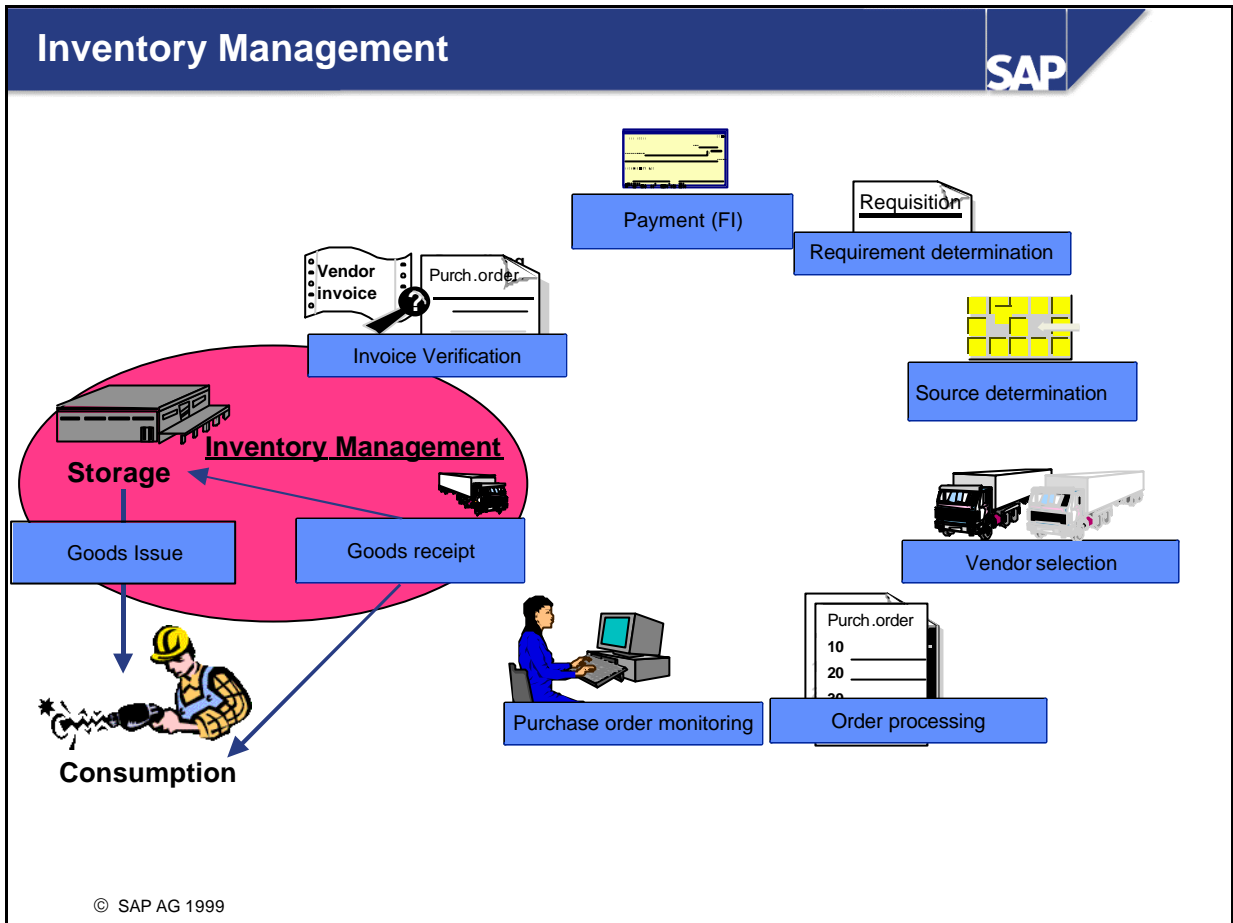
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Unit **Subcontracting**

Unit **Physical Inventory  
Management**

Unit **Cycle Counting**

Unit **Inventory Sampling**



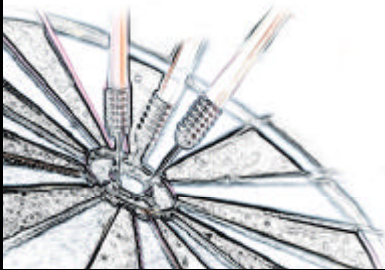


## Inventory Management: Section Goals

SAP

**This section will prepare you to:**

- **Familiarize yourself with the basic functions of Inventory Management & Physical Inventory and perform them in the R/3 System.**
- **Identify standard stock movements and their effects in the R/3 System.**



## Inventory Management/Physical Inventory: Section Objectives



**At the conclusion of this section, you will be able to:**

- **Perform goods receipts, goods issues and stock transfers**
- **Process stock reservations**
- **Explain the physical inventory process**
- **Carry out some physical inventory procedures**

### Contents:

- **Main Business Scenario**
- **Good Movements**
- **Movement Types**
- **Organizational Structur**

## Inventory Management Overview: Unit Objectives

SAP

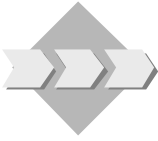


**At the conclusion of this unit, you will be able to:**

- **Understand the most important elements and terms of Inventory Management, especially:**
  - **The types of goods movements**
  - **The results of good movements (documents which are created)**
  - **Stock type**

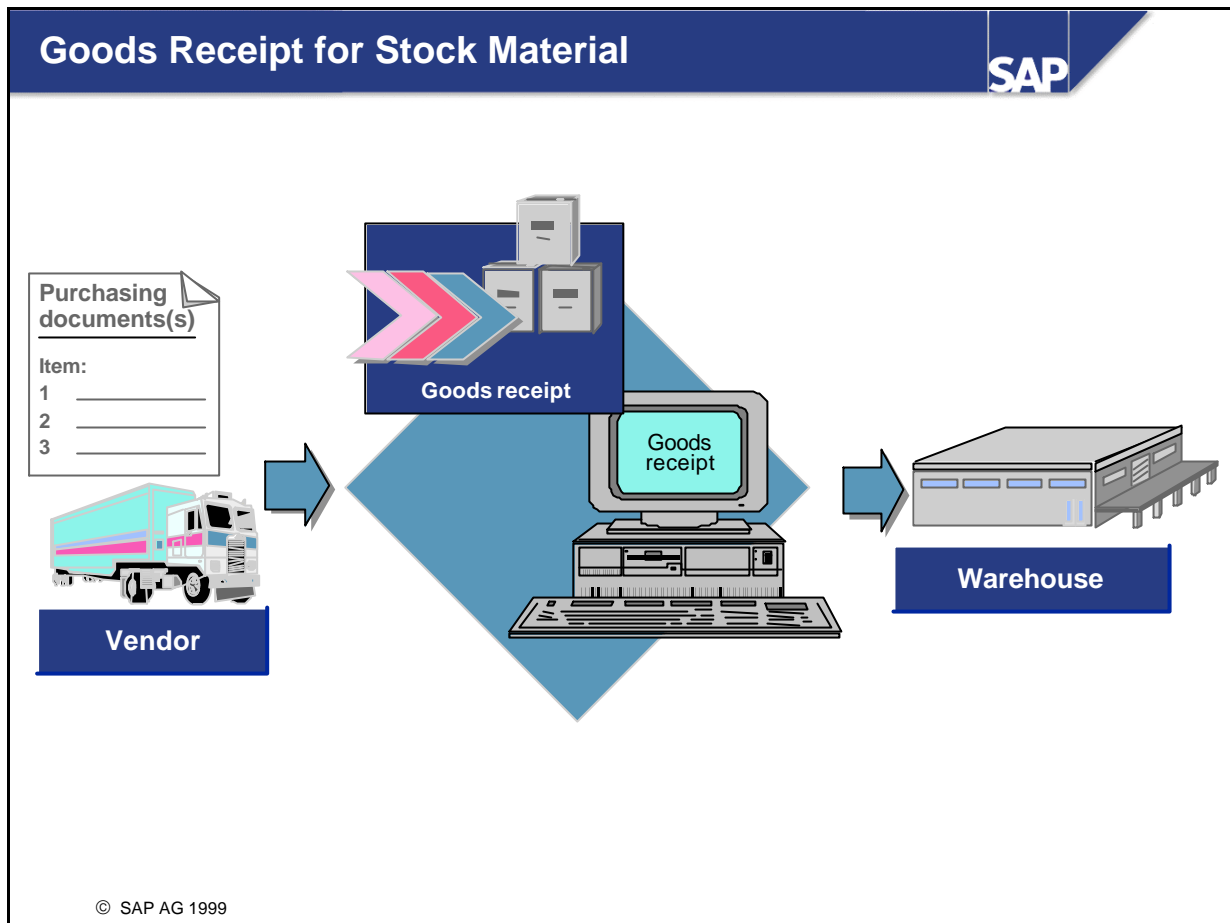
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## Inventory Management Overview: Main Business Scenario

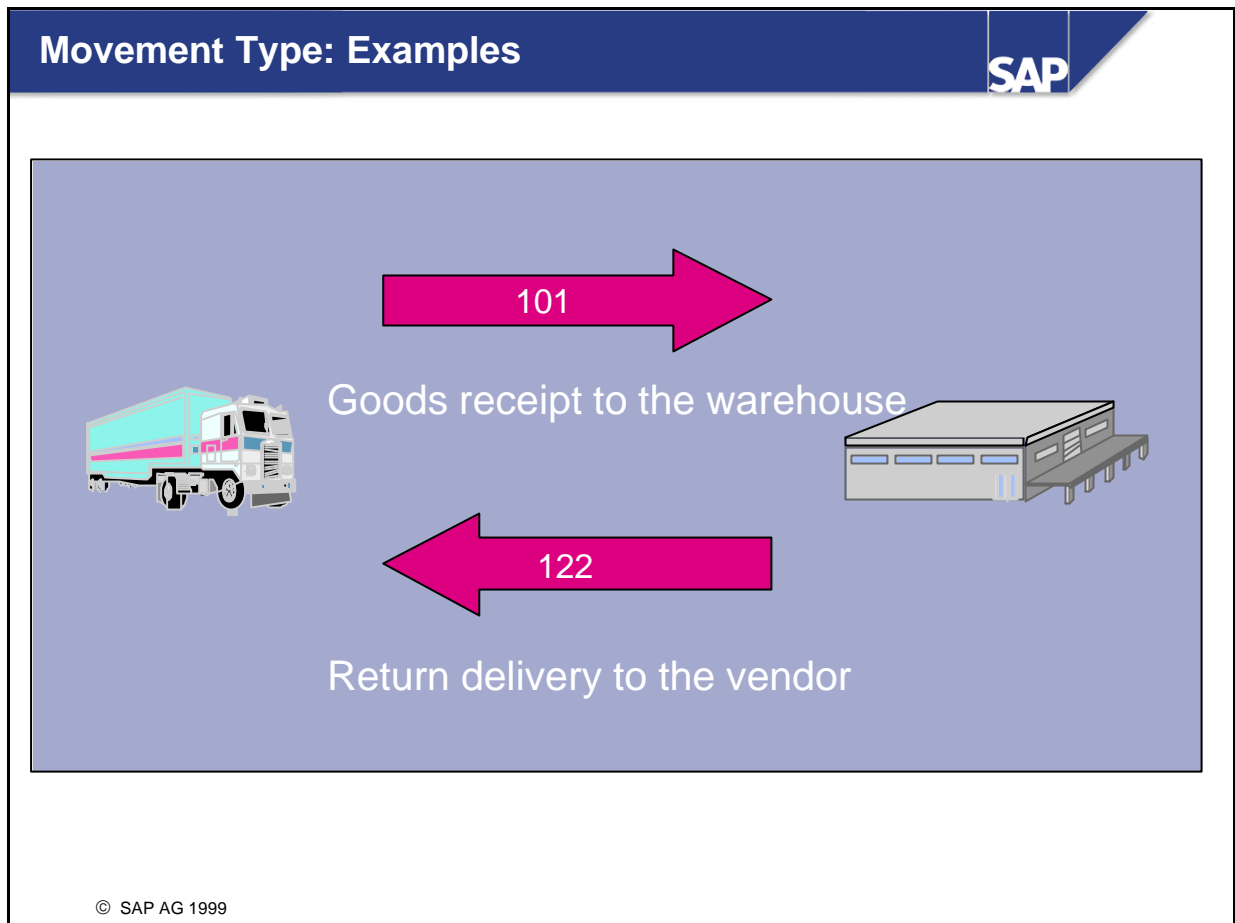


- **Inventory Management deals with the management of material stocks on a quantity and value basis, as well as the planning, entering, and proof of goods movements. It is part of the MM Materials Management module and is therefore integrated in Logistics.**
- **Based on the requirements determined by Materials Planning, a material can be procured either externally or internally. The delivery is entered in Inventory Management as a goods receipt, and material is stored until it is delivered to the customer or used for internal purposes.**
- **Inventory Management is directly linked with Materials Planning, Purchasing, and Invoice Verification.**
- **In the standard procurement process, you purchase a material from a vendor and it is then delivered to you. Once they have been delivered, the goods belong to the customer, i.e. your company. In special procurement, goods do not necessarily flow from the vendor to the customer. The R/3 System supports various forms of special procurement, such as, consignment, subcontracting, and pipeling handling.**

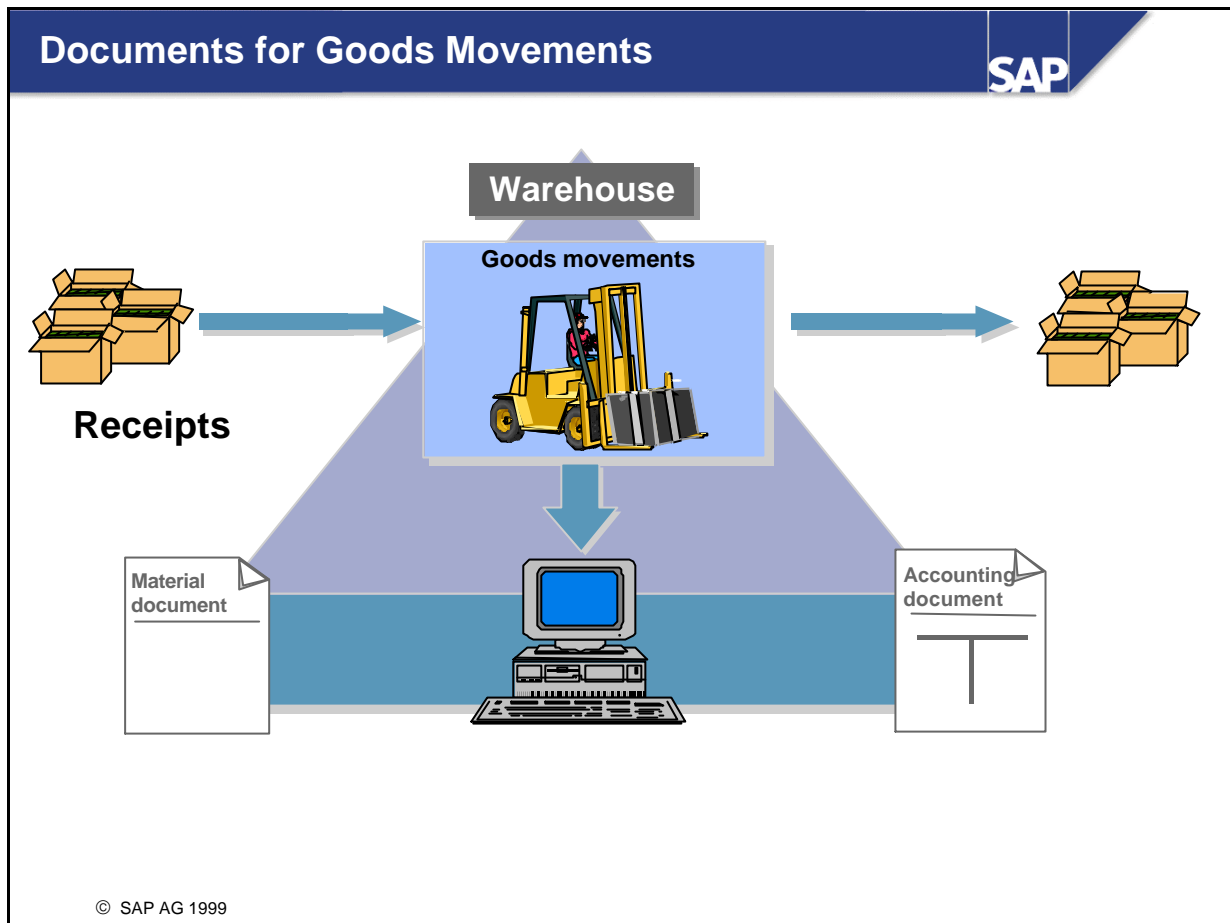
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- If you have created a purchase order to procure a material, it is important for all departments concerned that the goods receipt references this purchase order. The system can check, for example, whether the material delivered is the same as the material ordered, whether the purchase order quantity corresponds to the goods receipt quantity or whether the shelf life is still guaranteed for highly perishable goods (when the shelf life expiration date check is active for the associated material).
- The purchase order history for a purchasing document item is also updated when a goods receipt is posted with reference to a purchase order. This enables the buyer to send the vendor a reminder about outstanding deliveries, for example.
- Several goods receipt items can be entered for a purchase order item in one operation. This is advisable if, for example, the material is delivered in batches or is distributed between several storage locations. You enter the goods receipt data in a single material document.
- If the delivery note accompanying the goods receipt does not contain a purchase order number, you can, for example, use the material number or the vendor number to search for the corresponding purchase order number.

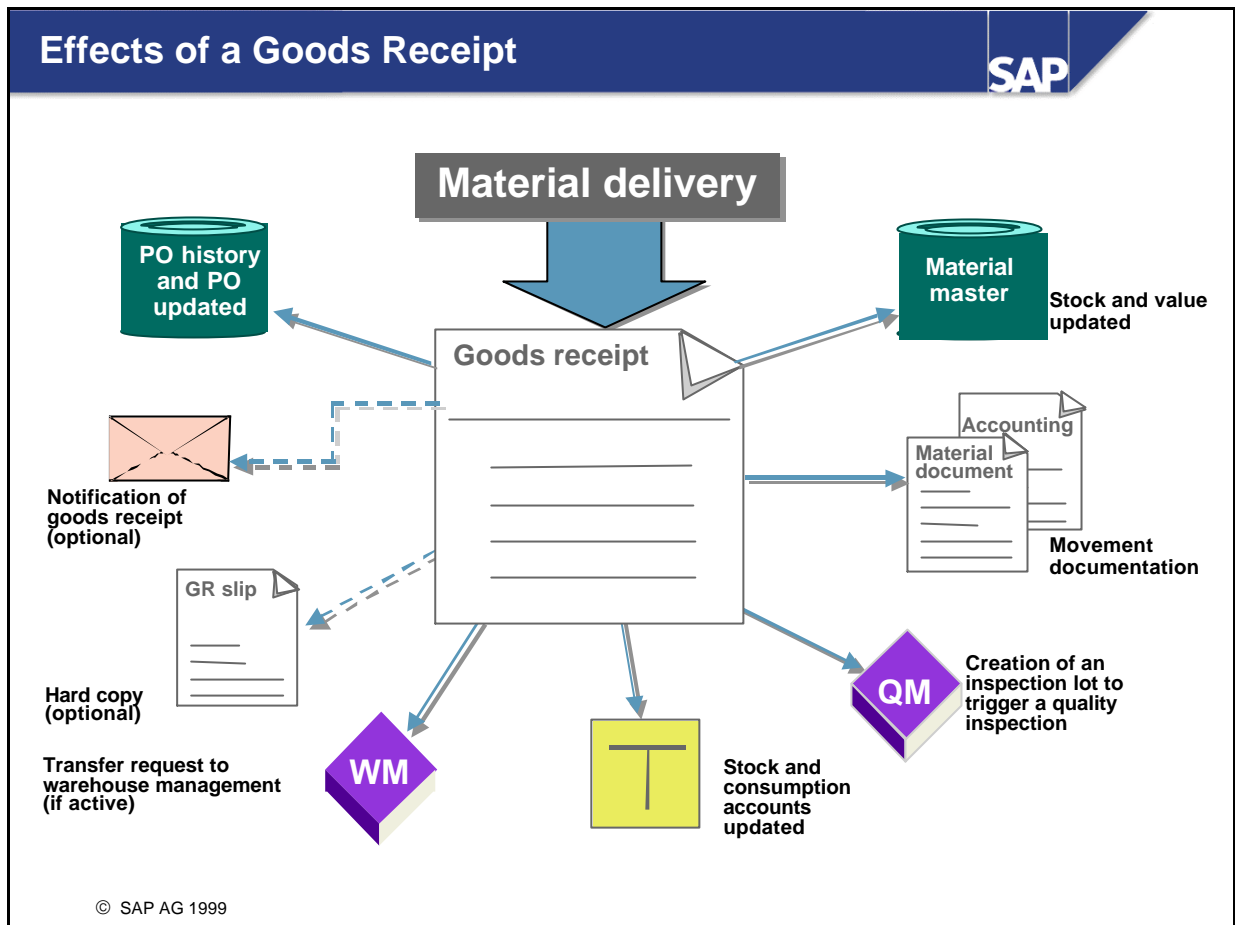


- The movement type is a three-digit key to differentiate between goods movements in the R/3 System. Examples of these goods movements are goods receipts, goods issues or transfer postings.
- The movement type takes over important control functions in Inventory Management. It plays a central role in automatic account determination in the R/3 System. Together with other influencing factors, the movement type determines, among other things, which stock or consumption accounts are updated in Financial Accounting. The movement type also determines the structure of the screen when you enter documents and the updating of the quantity fields.

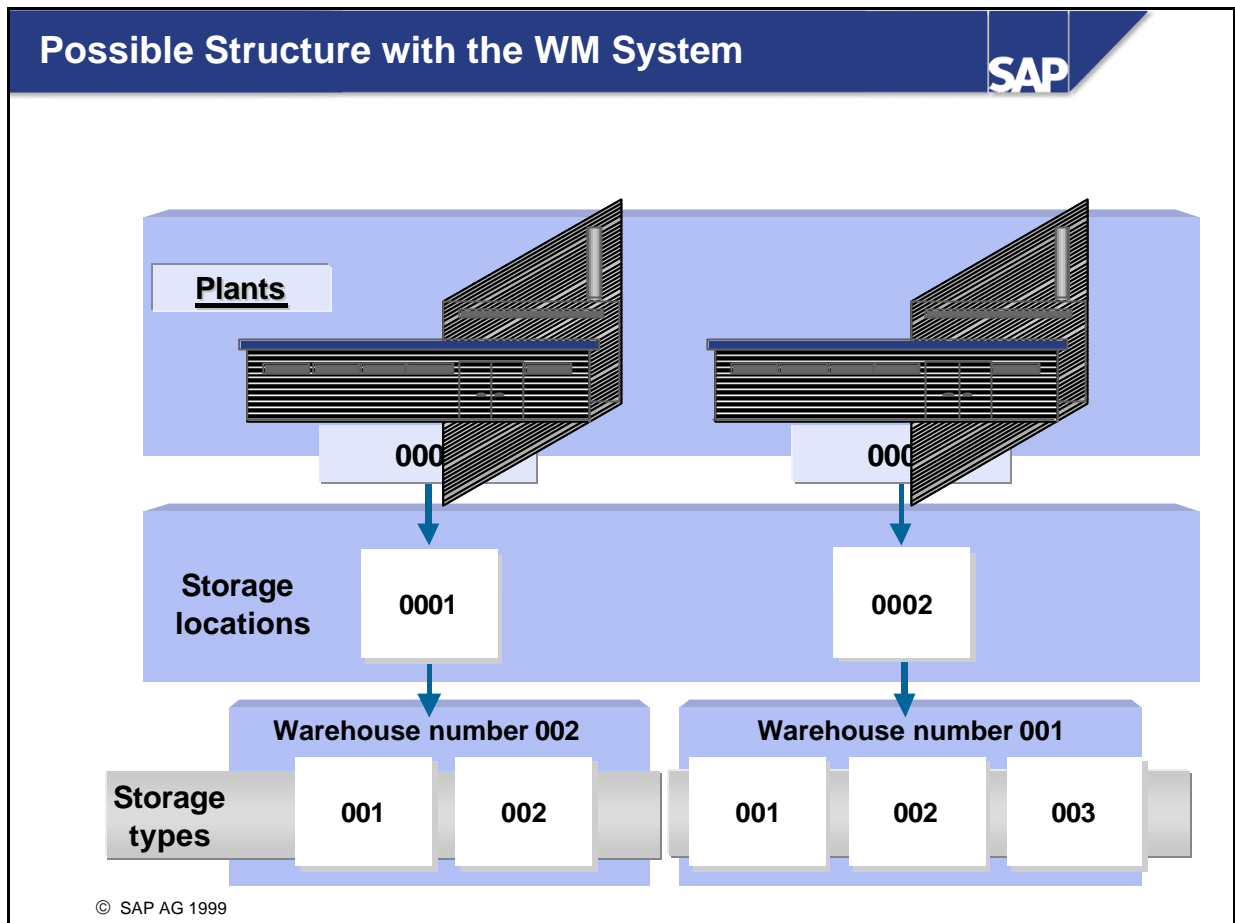


- The document principle also applies in IT-based Inventory Management. A document is the proof that a transaction involving stock changes has taken place. Documents are stored in the system.
- A material document is created in the R/3 System as proof of a transaction involving stock changes.
- If internal or external accounting are affected by the material movement, then at least one accounting document is created in addition to the material document.
- As soon as a goods movement is posted, the quantities, material, movement type and organization level can no longer be changed. You can only change the text. If you want to correct errors, you must create a new document. You can reverse or cancel the incorrect document.

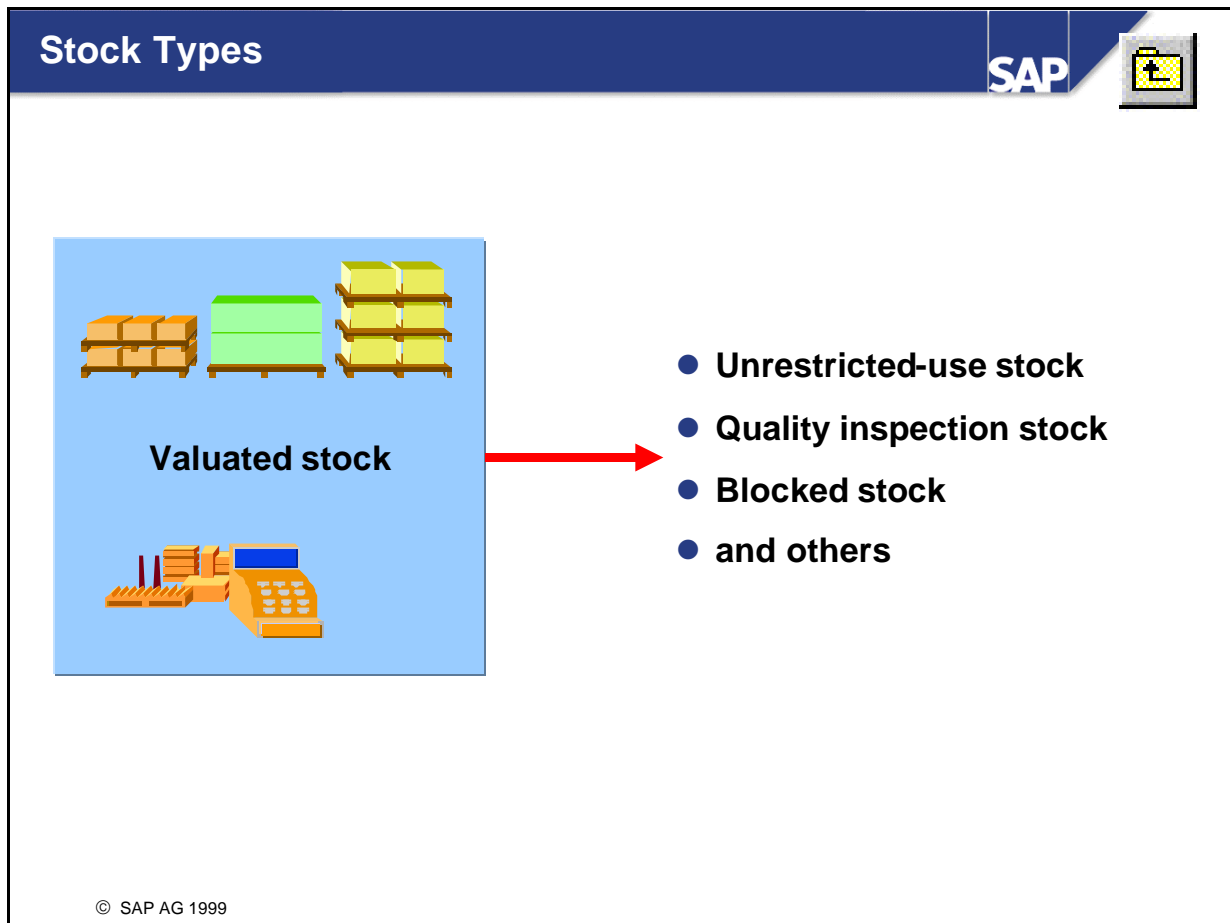




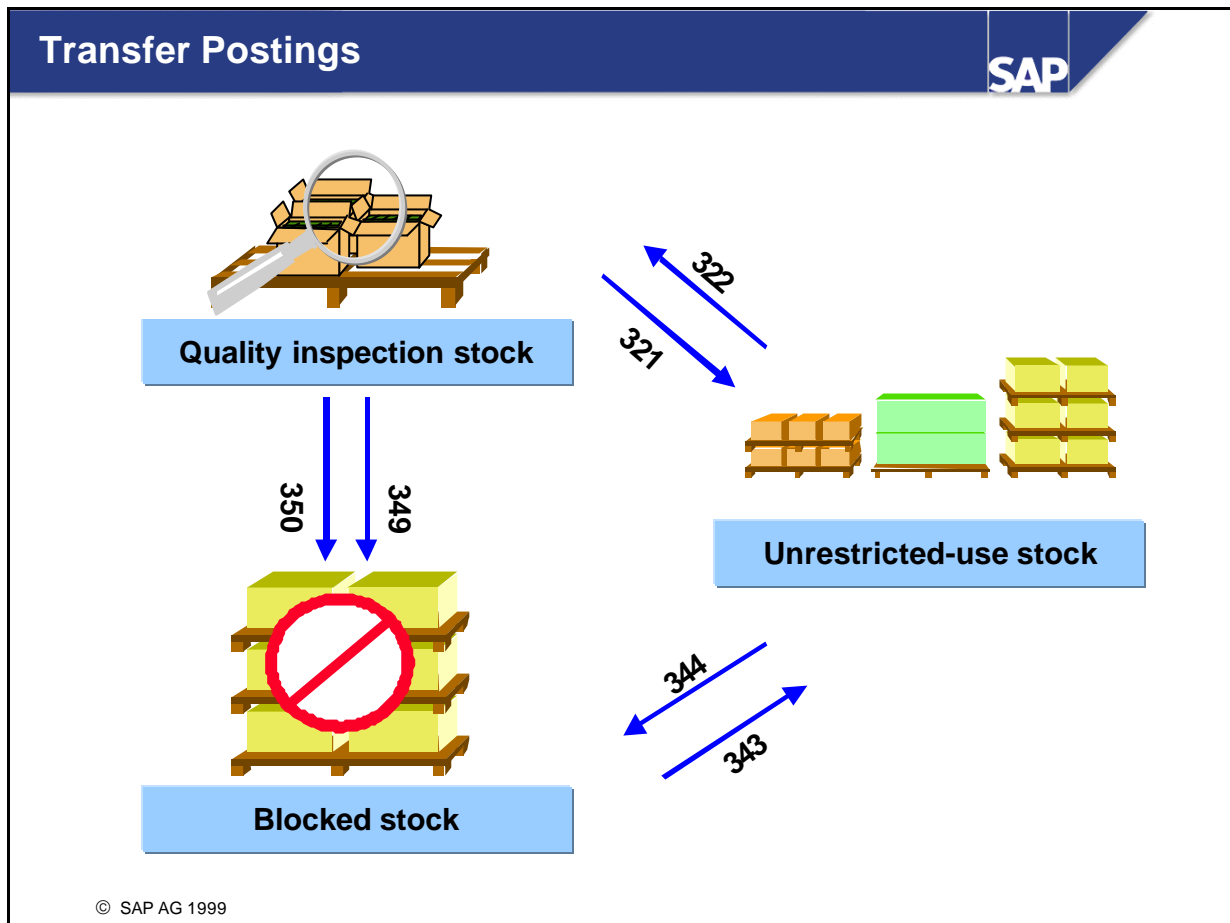
- The diagram shows once again an overview of all the key effects of a goods receipt referencing a purchase order.



- Example : One Storage Location per Plant in One Warehouse Number.
- In this example, each warehouse is assigned directly to one storage location and one plant.
- In each warehouse, the various storage areas are represented by storage types.



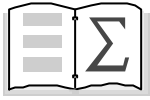
- In Inventory Management, there are three stock types that indicate a material's usability. If batch status management is active, the system supports another stock type; restricted-use stock.
- **Unrestricted-use stock:**  
A company's own stock that is physically located in the warehouse, is valuated, and is not subject to any restrictions on usage.
- **Quality inspection stock:**  
A company's own stock that is in quality inspection. Quality inspection stock is valuated, but is not for unrestricted use.
- **Blocked stock:**  
A company's own stock that is not to be used. It is not for unrestricted use in Inventory Management and may be configured as not available for Materials Planning.



- You can only post withdrawals for consumption from unrestricted-use stock. From quality inspection stock and blocked stock, you can only withdraw a sample, scrap a quantity, or post an inventory difference.
- If you want to withdraw goods from blocked stock or quality inspection stock, you have to carry out a transfer posting into unrestricted-use stock first. This also applies to stock transfers.
- When you carry out a transfer posting, the stock type, batch number, or material number is changed. A transfer posting may also involve an actual physical stock transfer.
- The system creates a material document so that the transaction can be entered. The system only creates accounting documents if a change in valuation is involved (for example, stock transfer from plant to plant).
- You use the movement type to control the stock types involved in the transfer.

## Inventory Management Overview: Unit Summary

SAP









- **You know the movement types**
  - **Goods Receipt**
  - **Goods issue**
  - **Transfer posting**
- **A goods movement is**
  - **Identified and controlled by the movement type**
  - **Tracked by a material document and accounting document(s)**
- **Stock types are used to separate stocks**

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## Exercise Data Sheet

### Key to Icons in Exercises and Solutions

	<b>Exercises</b>
	<b>Solutions</b>
	<b>Objectives</b>
	<b>Business Scenario</b>
	<b>Hints and Tips</b>
	<b>Warning or Caution</b>

### Data Used in Exercises

Type of Data	Data in Training System
Vendor	T-K10A## T-K10B## T-K10C##
Project	E-9990
Cost center	T-L##
Material	T-RN1##    T-RNA## T-RN2##    T-ZU1## T-RN3##    T-RNB## T-RN4##    T-ZP1## T-RN5##    T-RNC## T-RN6## T-RN7## T-RN8## T-RN9##
Purchasing organization	IDES Germany
Purchasing group	0##

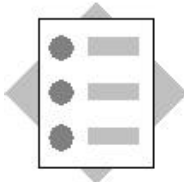


## Course Overview Exercises



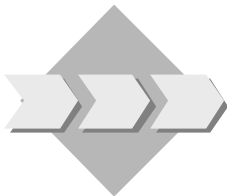
**Unit: Course Overview**

**Topic: Review of LO020 Concepts**



At the end of this exercise, you will be able to:

- Log on to the R/3 System and summarize the procurement cycle



A new member has joined the Materials Management project team. Show your colleague the basic procurement process by creating a material and a purchase order, and posting the goods receipt. Then display the purchase order and the stock situation.

**Since you are working through the complete procurement process, you cannot use a role-specific menu. Use the SAP menu to perform the following activities and add the activities used most often to your *Favorites* menu.**

- 1-1 Create a new material using the following data for the *Basic Data 1*, *Purchasing*, *Storage 1*, and *Accounting 1* views for plant **1000**, storage location **0001**.

*(Create Material – General: Initial Screen)*

Field	Value
Material number	T-RN0##
Industry sector	M
Material type	Raw material

*(Select view(s))*

Basic Data 1
Purchasing
General Plant Data/Storage 1
Accounting 1



*(Organizational levels)*

<b>Organizational Levels</b>	
Plant	1000
Storage location	0001

*(Material views)*

<b>Field</b>	<b>Value</b>
Material description	Standard rear light
Base unit of measure	Piece
Material group	009
Purchasing group	0##
Valuation class	3000
Price control	V
Moving average price	60.00

1-2 Create a purchase order for the new material using the following data:

*(Create Purchase Order)*

<b>Purchase Order</b>	
Vendor	T-K10A##
Purchasing organization	IDES Deutschland
Purchasing group	0##
Material	T-RN0##
Quantity	100
Delivery date	Today's date
Price	60.00
Plant	1000

Purchase order number: \_\_\_\_\_

- 1-3 Display the stock overview for material **T-RN0##** and write down the stock situation for the following stock types:

<b>Stock Overview</b>	
Unrestricted-use stock	
Quality inspection	
Open purchase order quantity	
Goods receipt blocked stock	
Blocked	

- 1-4 Post the goods receipt for material **T-RN0##** into unrestricted stock using the following data:

*(Goods Receipt for Purchase Order)*

<b>Field</b>	<b>Value</b>
Movement type	101
Purchase order number	See 1-2
Goods receipt quantity	100
Plant	1000
Storage location	0001

Material document number: \_\_\_\_\_

1-5 Check the stock situation for material **T-RN0##** and write down the details.

<b>Stock Overview</b>	
Unrestricted-use stock	
Quality inspection	
Open purchase order quantity	
Goods receipt blocked stock	
Blocked	

1-6 Display the purchase order statistics to see the effect of the goods receipt.

<b>PO Statistics</b>	
Ordered	
Delivered	
GR blocked stock in order units	
Invoiced	
Still to be delivered	

## Course Overview Solutions



**Unit: Course Overview**

**Topic: Review of LO020 Concepts**

- 1-1 *Logistics ® Materials Management ® Material Master ® Material ® Create (general)*
- 1-2 *Logistics ® Materials Management ® Purchasing ® Purchase order ® Create ® Vendor/supplying plant known*
- 1-3 *Logistics ® Materials Management ® Inventory Management ® Environment ® Stock ® Stock Overview*

<b>Stock overview</b>	
Unrestricted-use stock	0
Quality inspection	0
Open purchase order quantity	100
Goods receipt blocked stock	0
Blocked	0

- 1-4 *Logistics ® Materials Management ® Inventory Management ® Goods Movement ® Goods Receipt ® For Purchase Order ® PO Number Known*

1-5 **Logistics** ® **Materials Management** ® **Inventory Management** ® **Environment** ® **Stock** ® **Stock Overview**

<b>Stock overview</b>	
Unrestricted-use stock	100
Quality inspection	0
Open purchase order quantity	0
Goods receipt blocked stock	0
Blocked	0

1-6 **Logistics** ® **Materials Management** ® **Inventory Management** ® **Environment** ® **Information** ® **Purchase Order**

You select the purchase order item and choose **Item** ® **Statistics** ® **General**.

<b>PO statistics</b>	
Ordered	100
Delivered	100
GR blocked stock in order units	0
Invoiced	0
Still to be delivered	0

### **Contents:**

- **Special Features of Goods Receipts**

## Goods Receipts: Unit Objectives

SAP



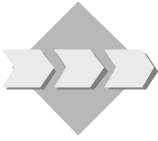
**At the conclusion of this unit, you will be able to:**

- **Enter a goods receipt into blocked stock and quality inspection stock**
- **Generate a purchase order automatically at goods receipt**
- **Describe various functions, such as shelf life expiration date check and unit of entry**
- **Identify other system settings for goods movements**

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## Goods Receipts: Business Scenario

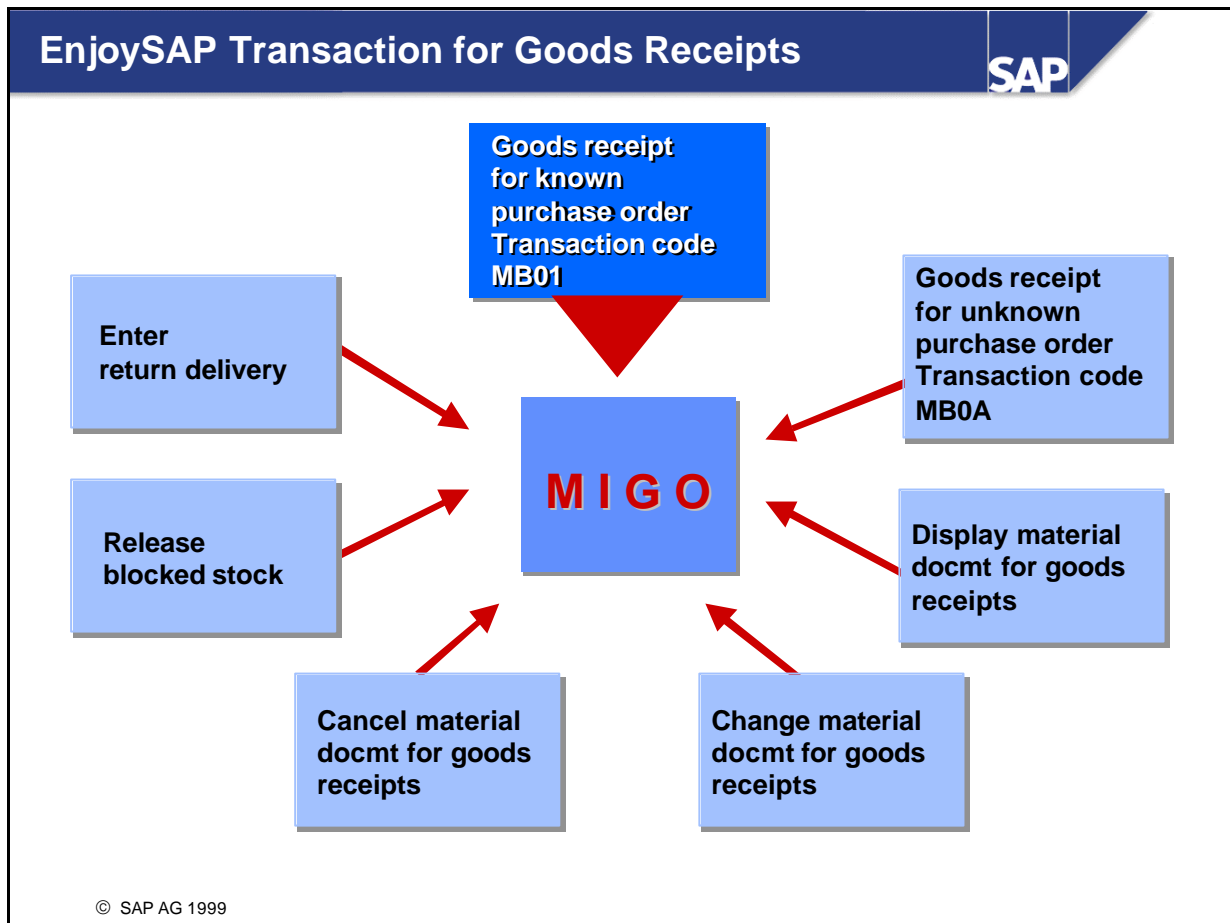
SAP



- You can enter goods receipts in your enterprise in several ways, depending on the material. You can transfer some materials directly to unrestricted-use stock. Others are subject to quality control and are posted to quality inspection stock first. If a material is already damaged at goods receipt, you can post it to blocked stock.

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- As of Release 4.6, you can post goods receipts with the EnjoySAP transaction MIGO.
- You can use this function instead of the following transactions:
  - Goods receipt for known purchase order (transaction code MB01)
  - Goods receipt for unknown purchase order (transaction code MB0A)
  - Enter return delivery (transaction code MBRL)
  - Release blocked stock (transaction code MBSF)
  - Enter subsequent delivery (transaction code MBNL)
  - Cancel material document for goods receipts (transaction code MBST)
  - Change and display material document for goods receipts (transaction code MB02 and MB03).
- These existing transactions will remain fully functional until the limitations of the MIGO transactions have been fully resolved.
- In Customizing for Inventory Management, you can define which fields appear on the transaction screen and how they appear, by choosing Goods Receipt → Define Field Selection for Header/Detail Fields and Table Columns. You can adjust the transaction to meet your specific requirements.

Goods Receipt Without Reference to PO

Preplanning

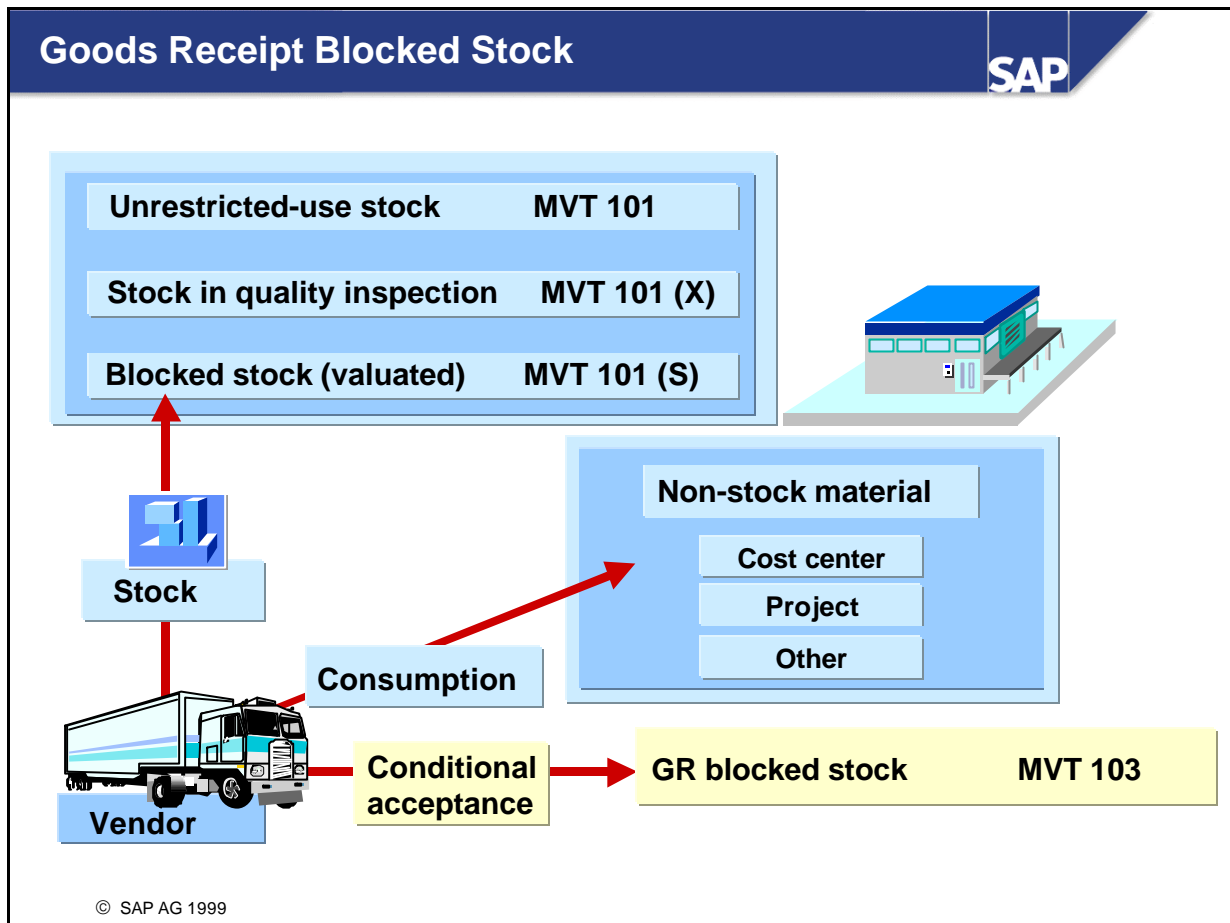
- Without purchase order
- Without production order

Goods receipt

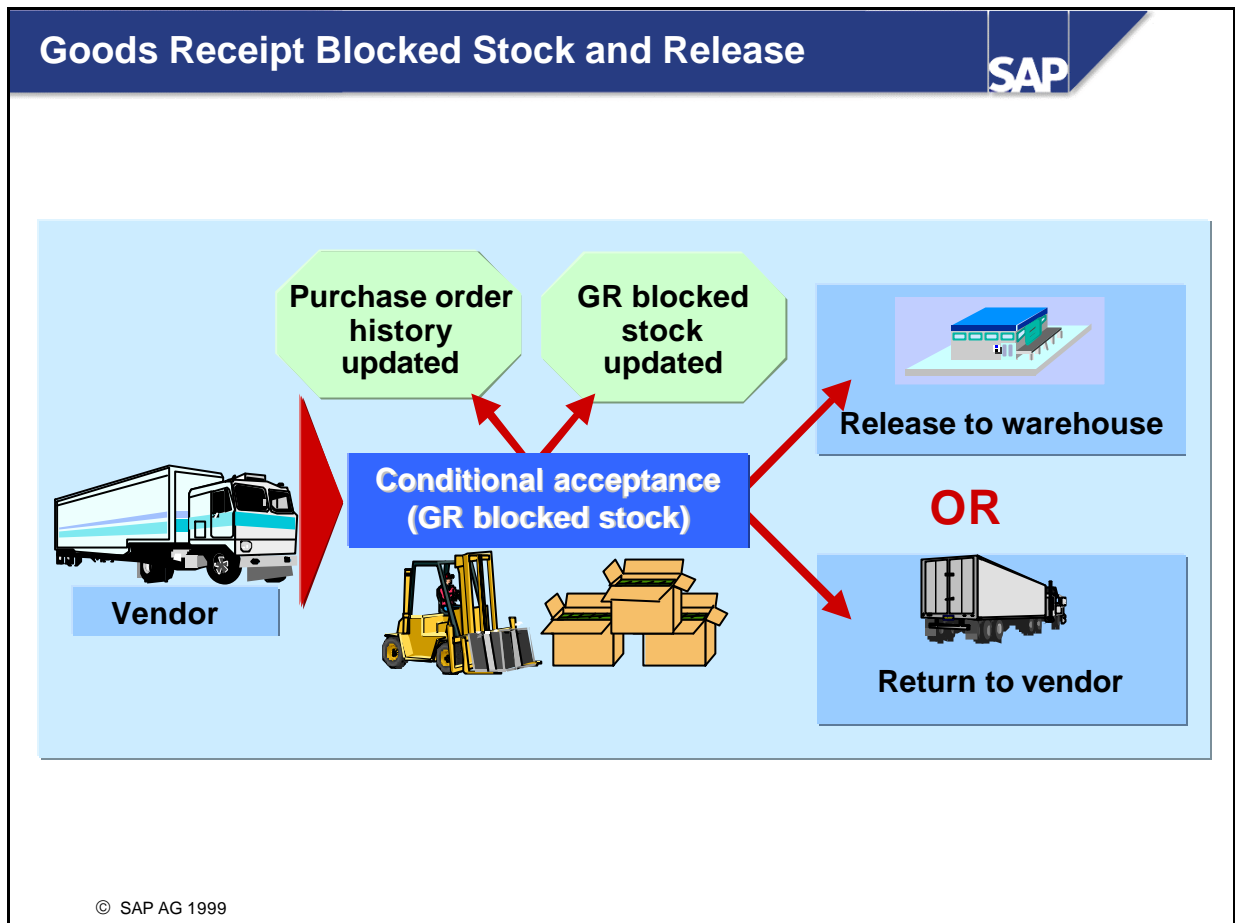
- Initial entry of stock balance
- Without purchase order
- Without production order
- Receipt of by-products
- Delivery free of charge
- Returns from customer

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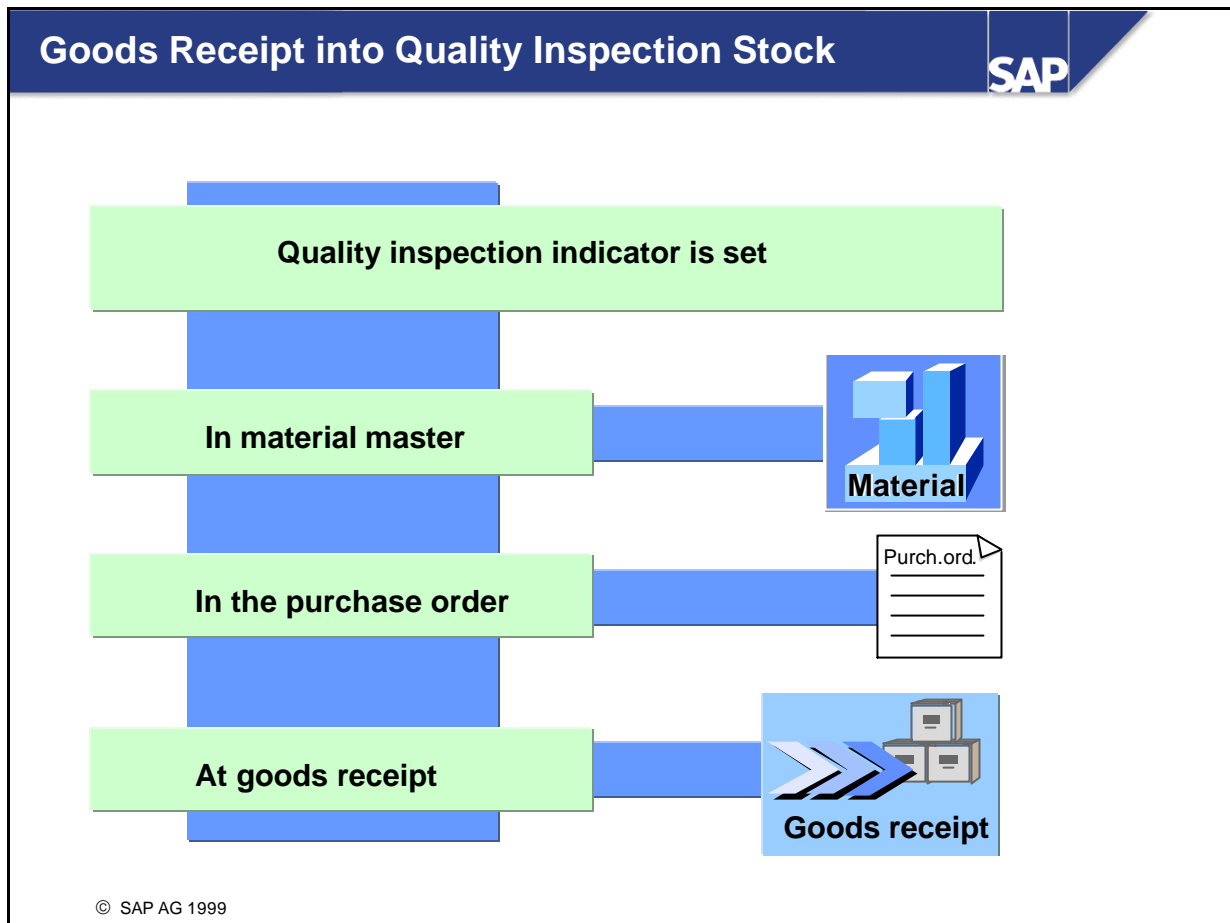
- With the initial entry of inventory data (movement type 561), you transfer the physical warehouse stocks or book inventory balances from a legacy system to the newly implemented SAP R/3 MM System. This initial inventory data entry is generally carried out via batch input.
- The valuation of the inventory data to be transferred is dependent on two factors:
  - The price control procedure and prices specified in the material master record from an accounting view
  - Whether you have entered a value for the quantity to be transferred
- If the material has a standard price, the valuation of initially entered inventory data will be based on this standard price. If you have entered a different value, this difference is posted to a price difference account.
- If the material has a moving average price, the initial inventory data is valued as follows:
  - If you entered a value for the initial inventory data entry, this value is used to value the quantity to be transferred. If the quotient of initial inventory value and initial inventory quantity differs from the moving average price, the moving average price is changed through the initial entry of inventory data.
  - If you have not entered a value for the initial entry of inventory data, the quantity to be transferred is valued according to the moving average price, and this price does not change in this case.



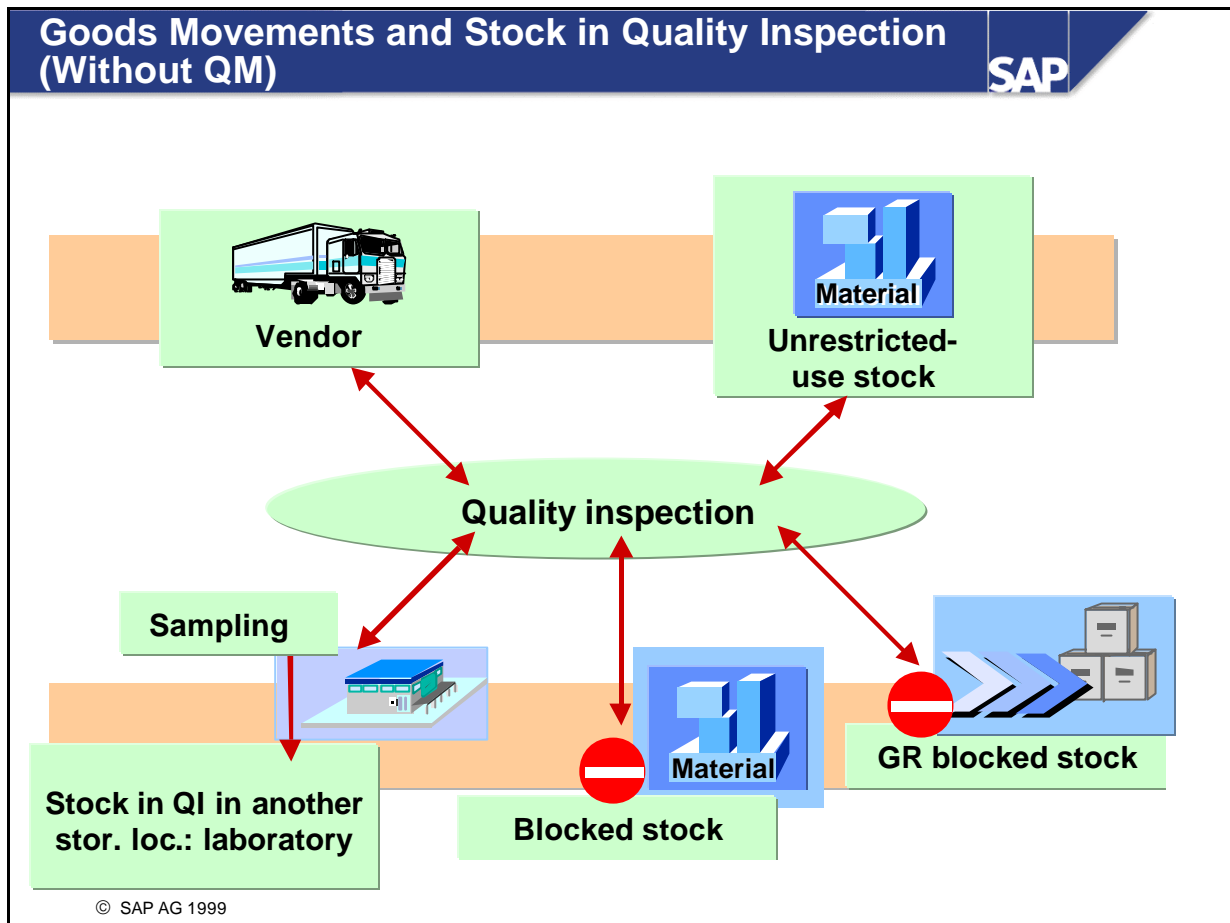
- At goods receipt, you can post a material for consumption or to stock. But you can also manage it as GR blocked stock.
- Goods that have been received subject to conditional acceptance (that is, damaged or unexpected deliveries) are posted to goods receipt blocked stock:
  - Quantities are posted to stock.
  - The material is not valuated.
  - The transaction is entered in the purchase order history.



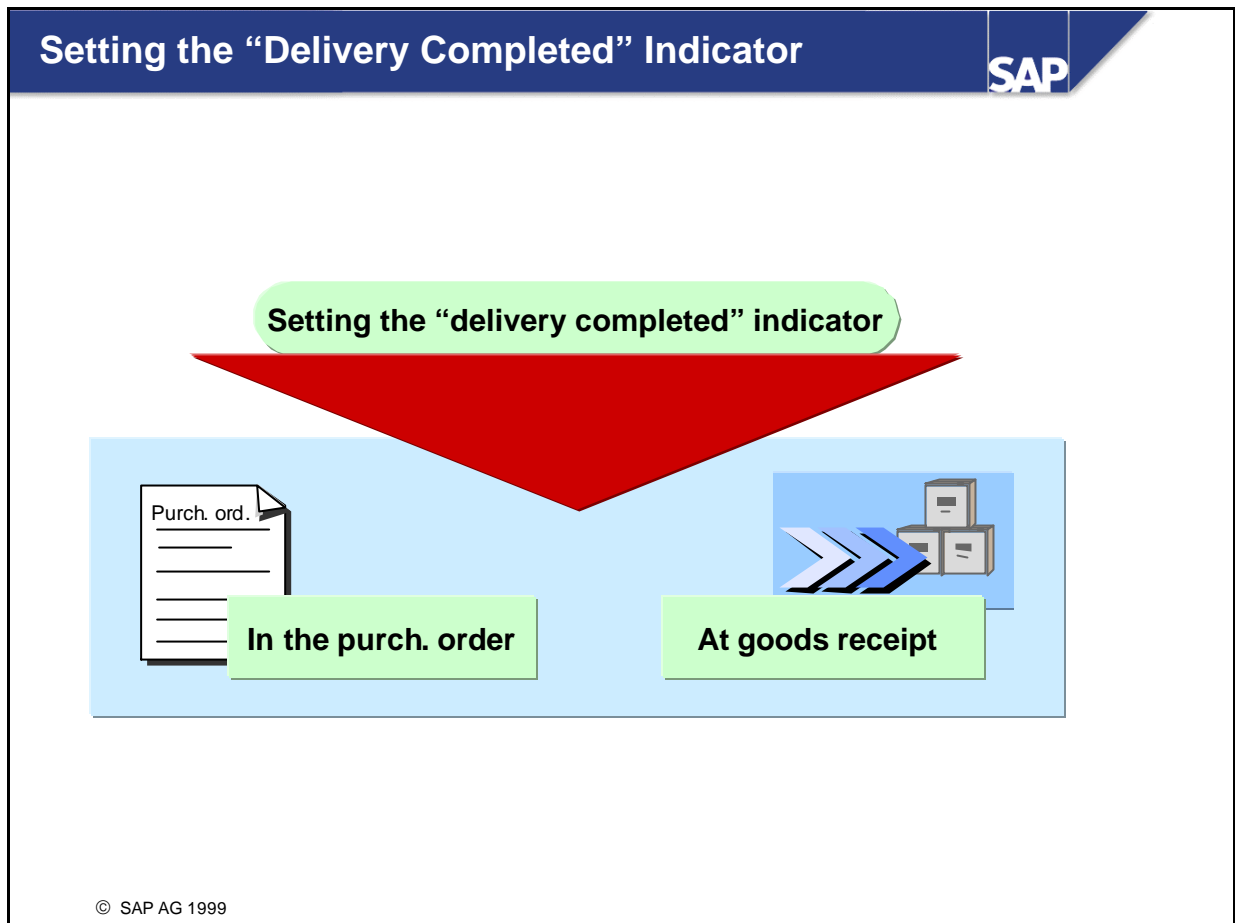
- Once a material has fulfilled the acceptance conditions, it can be released. It is then valuated automatically.
- If the goods are to be sent back to the vendor, you can send them back directly from GR blocked stock. This creates a material document and updates the purchase order history.
- When you release material from GR blocked stock, you can transfer it to the following stocks:
  - Unrestricted-use stock
  - Stock in quality inspection
  - Blocked stock (valuated)
- Effects of the release of material from GR blocked stock:
  - Material and financial accounting documents are created.
  - Total valuated stock is updated.
  - Purchase order and purchase order history are updated.
  - The G/L accounts are updated.



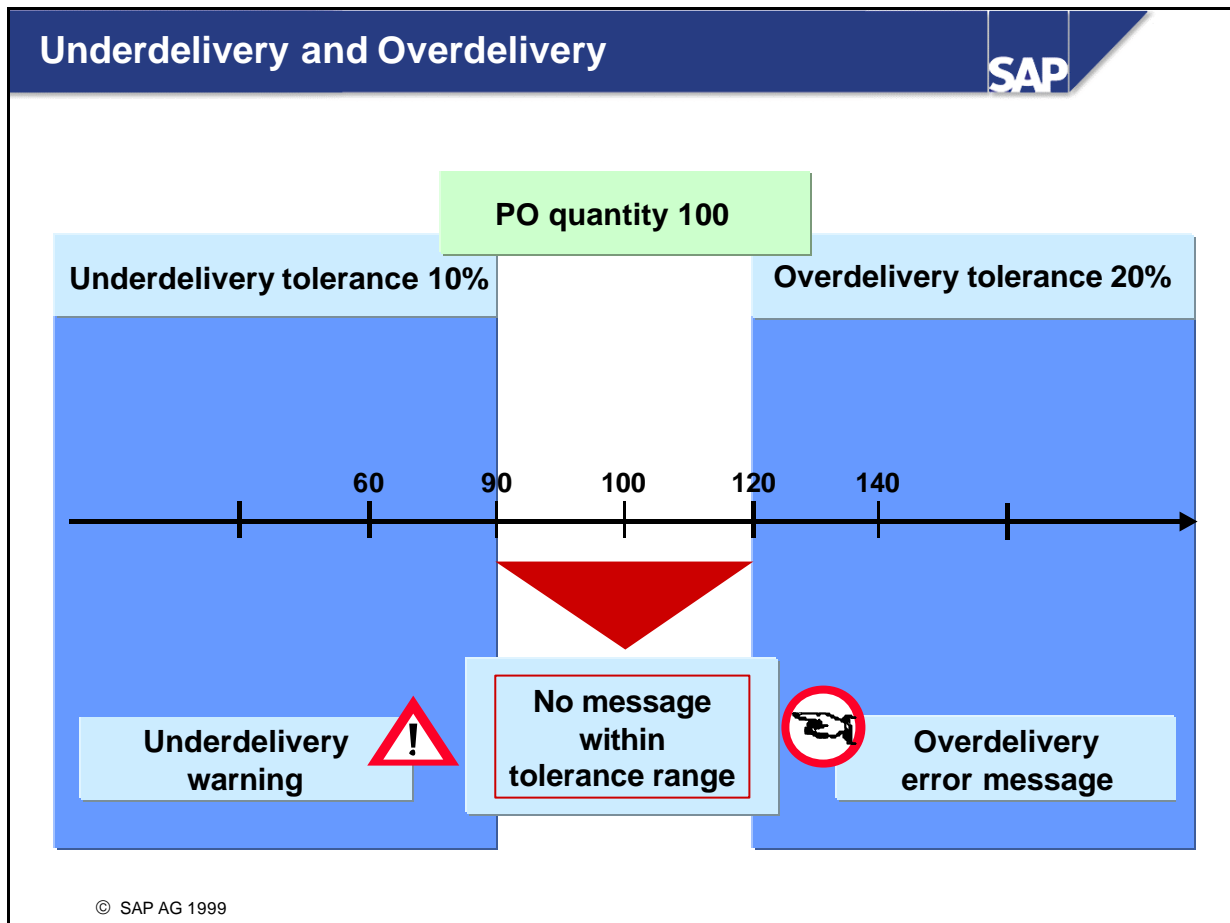
- You can post goods receipts from vendors to quality inspection stock for the following reasons:
  - If the material always has to undergo quality inspection before it is used. In this case, the employee responsible for the purchasing data in the material master record sets the quality inspection indicator in the material master record. When you order the material, the indicator is copied to the purchase order.
  - If the material is received from a particular vendor and has to undergo quality inspection first. For example, you must always test the quality of goods if they have been procured from a new vendor. The Purchasing department then sets the quality inspection indicator in the additional data for the purchase order.
  - If you decide at the time of goods receipt that the material has to undergo quality inspection, for example, because you established that the packaging is damaged and suspect that the goods were also damaged during transportation.
  - You set the quality inspection indicator in the goods receipt item.



- If necessary, goods receipts from vendors can undergo quality inspection. You post the receipt of this delivery to quality inspection stock.
- If you post a goods receipt directly to consumption (purchase order with account assignment), you cannot post the material to quality inspection subsequently, because the material is considered used at goods receipt.
- You can post goods receipts from GR blocked stock to quality inspection first, so that you can decide whether you want to accept or reject the whole delivery.
- If your warehouse sustained water damage, for example, some materials may have to undergo quality inspection again or for the first time. This is one of many possible reasons for posting material from unrestricted-use stock to quality inspection stock.
- One of your materials is in a storage location in quality inspection stock. You want to transfer it from there to a different storage location – for example, to the laboratory – but want it to remain part of quality inspection stock.
- To ensure that the partial quantity you are actually going to inspect is withdrawn from quality inspection stock during the inspection, you can post a sample withdrawal from quality inspection stock.

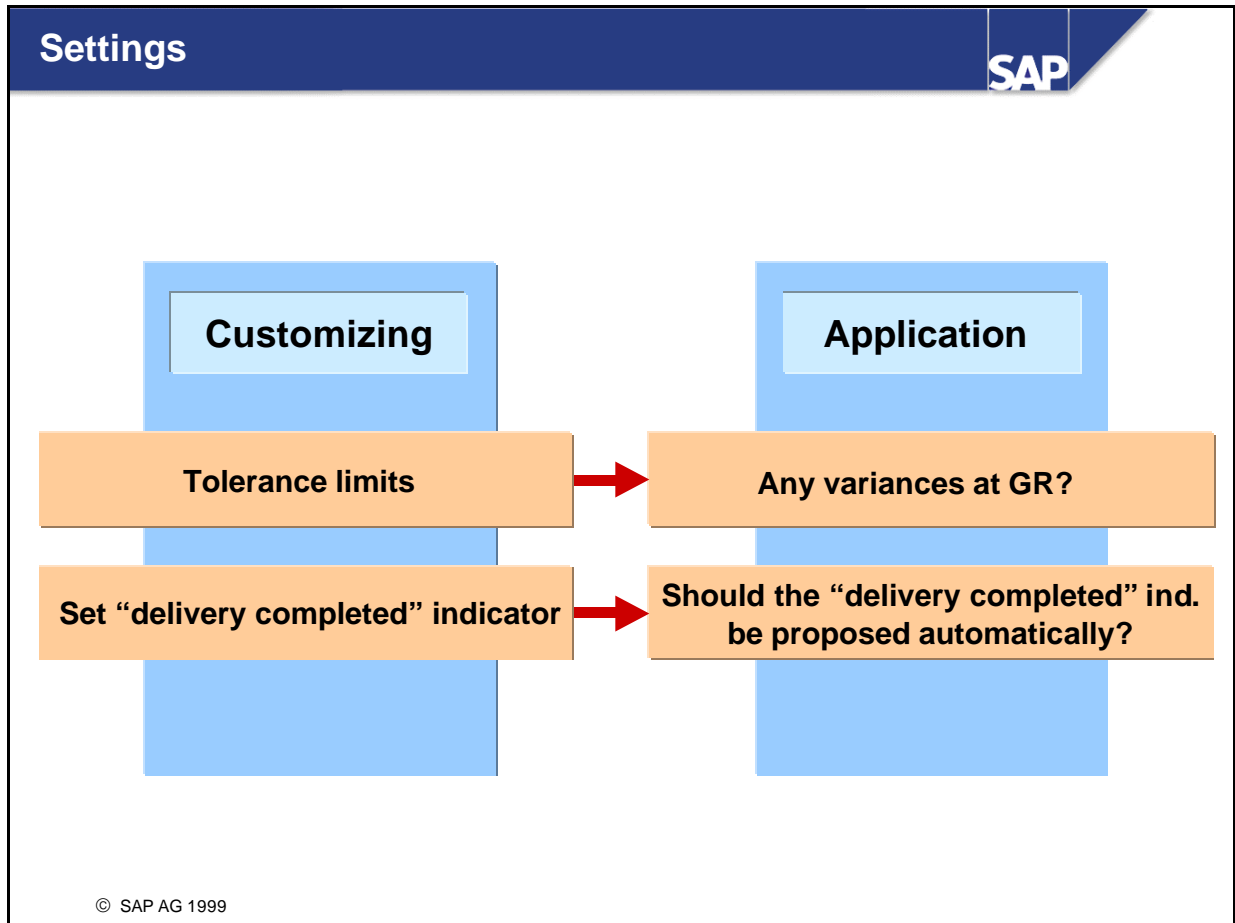


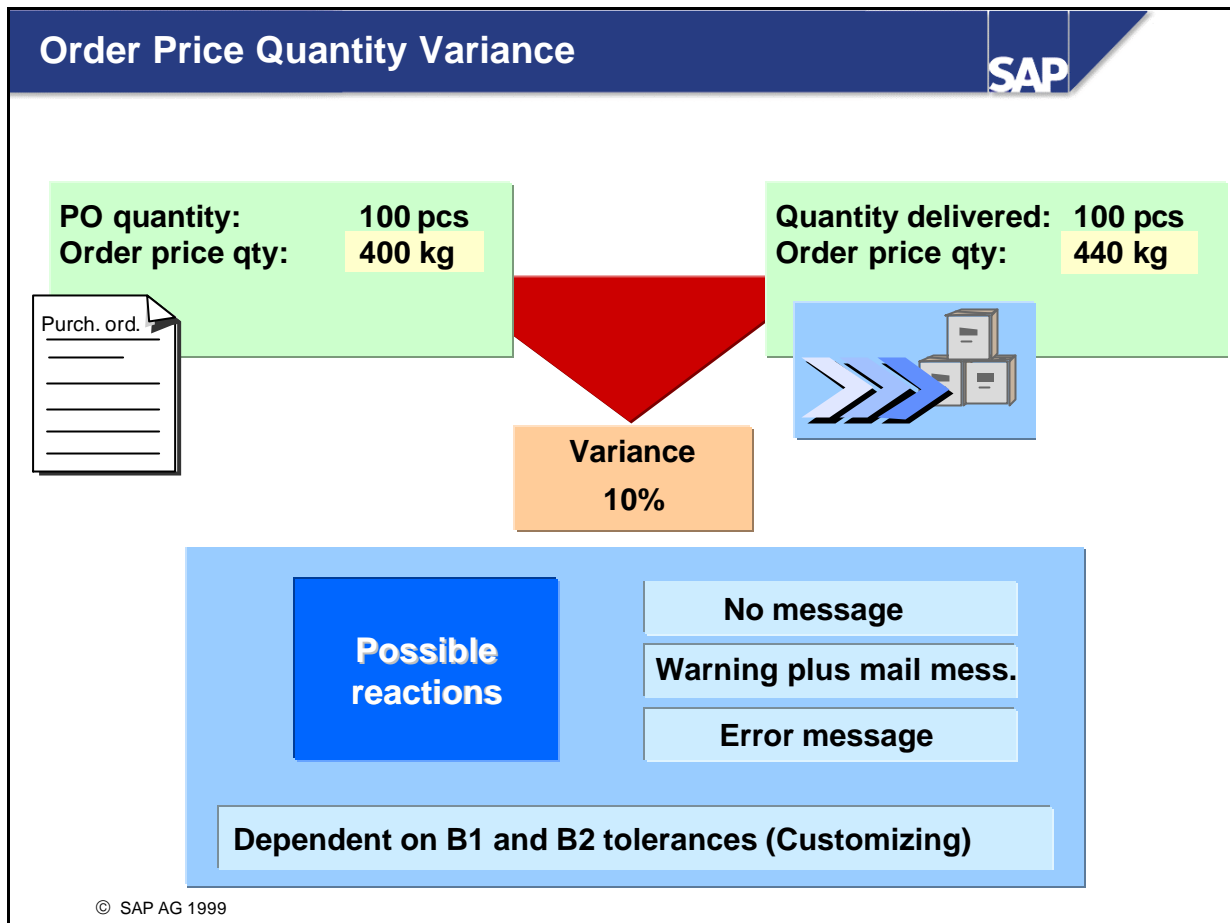
- The “delivery completed” indicator specifies whether a purchase order item is regarded as closed. This means that you do not expect any more goods receipts for this item. The open quantity is zero.
- You can still post goods receipts for any residual quantities, but these will not change the open order quantity.
- If you change the quantity of a delivery after it has been posted, the R/3 System does not cancel the “delivery completed” indicator automatically. It issues a warning message and you have to cancel it manually.
- If an order cancellation or return reduces the delivered quantity to an amount that is below the tolerance level, the R/3 System cancels the “delivery completed” indicator.
- In this case, it issues a warning message to inform you that the “delivery completed” indicator has been reset. If you do not expect any more deliveries, you can then enter the indicator again manually. It will not be changed automatically by the R/3 System thereafter.



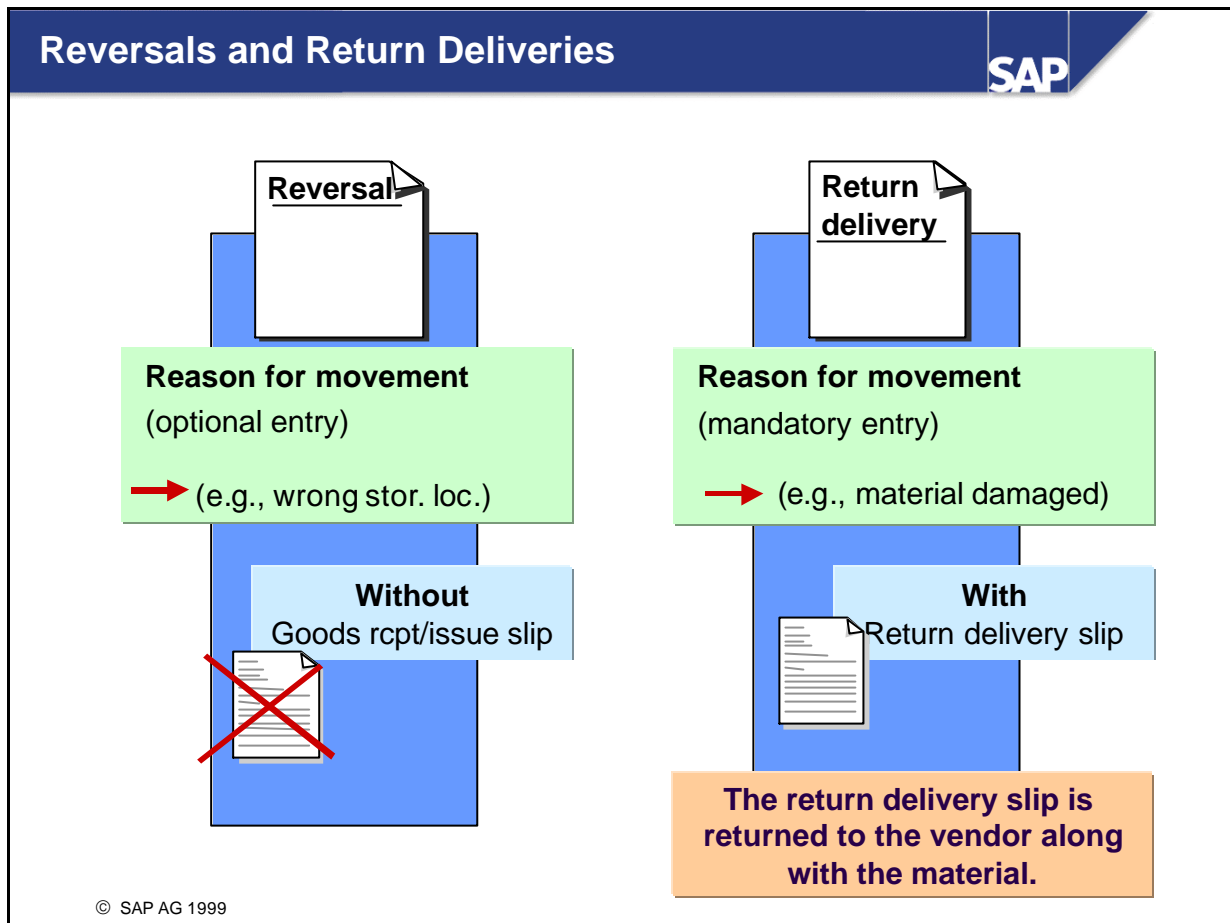
- When goods are received with reference to a purchase order, the R/3 System proposes the open purchase order quantity of each item for the goods receipt. You can change this quantity if the delivered quantity differs from this.
- When you enter a GR item, the R/3 System compares the GR quantity with the quantity in the open purchase order and thereby identifies underdeliveries or overdeliveries.
- As a rule, underdeliveries are allowed in the standard R/3 System. In the order item, you can also enter a percentage value for the underdelivery tolerance. If the quantity of goods received is smaller than the ordered quantity minus the underdelivery tolerance, this is interpreted and accepted as a partial delivery. The R/3 System points out the underdelivery to the user and also takes the underdelivery tolerance into account when issuing the dialog message.
- The standard R/3 System does not allow overdeliveries. If overdeliveries are to be allowed, you can specify a percentage overdelivery tolerance in the order item. You can switch off the overdelivery tolerance check in the order item. This means that an unlimited overdelivery amount is possible.



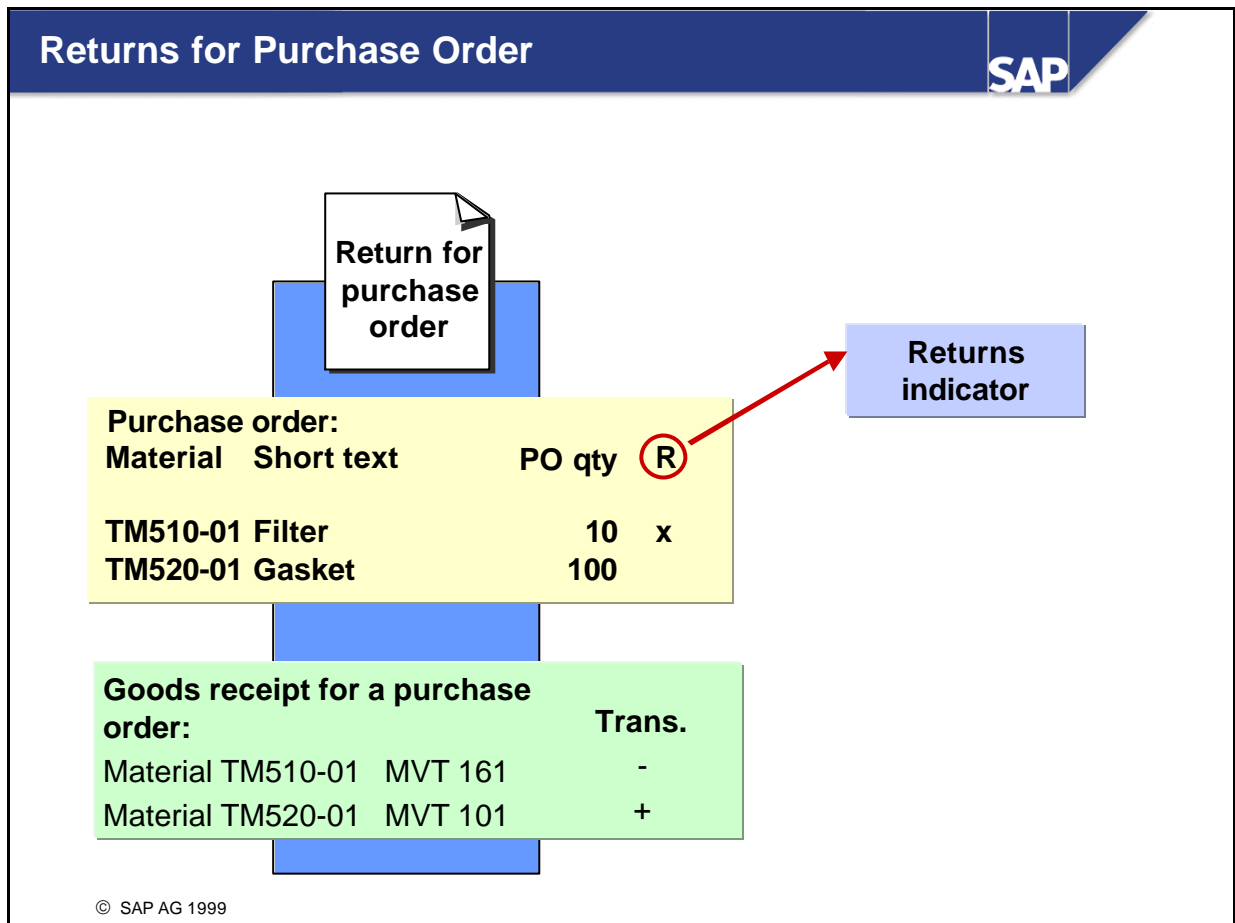




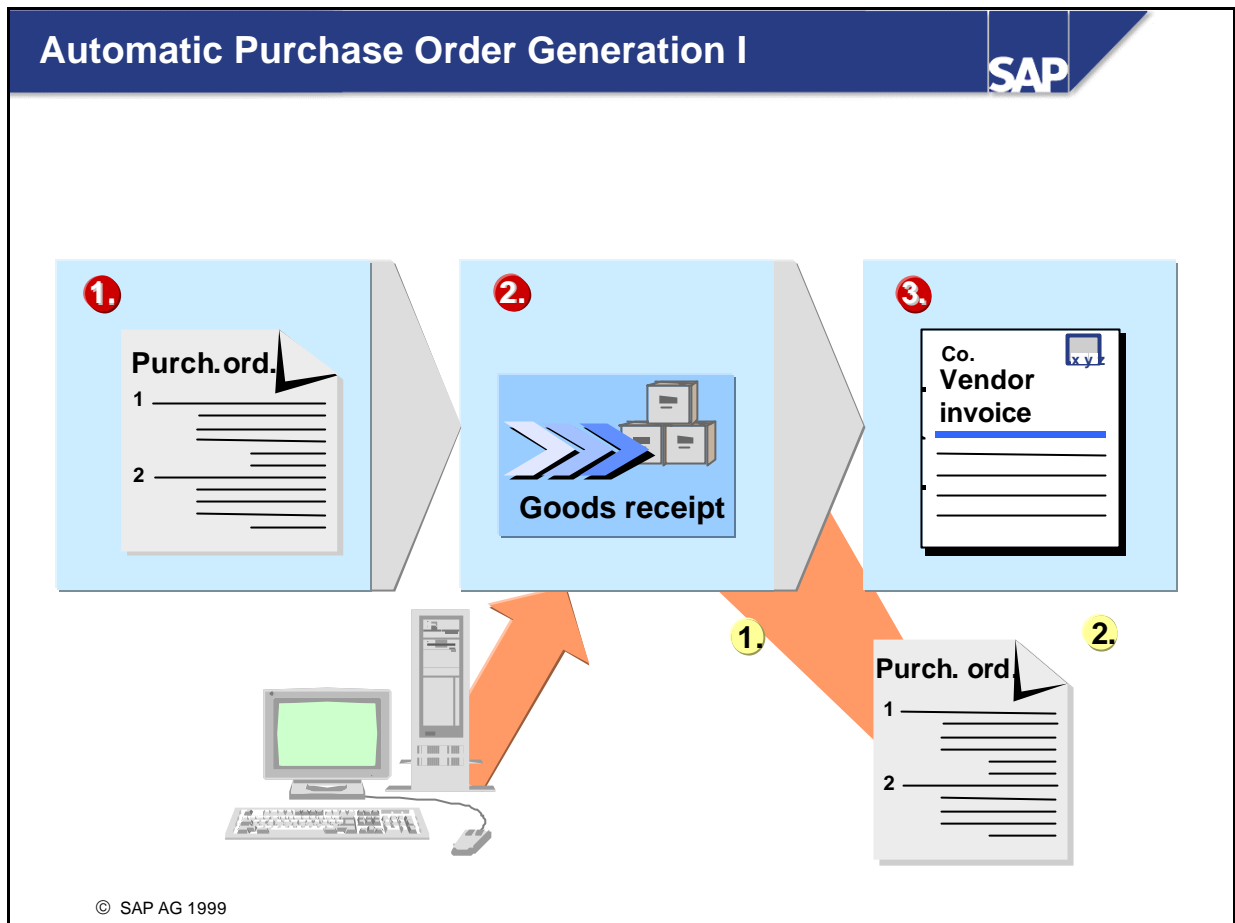
- Goods receipts are valued on the basis of the incoming quantities in the order price unit.
- Invoice verification is also based on the GR quantity in the order price unit.



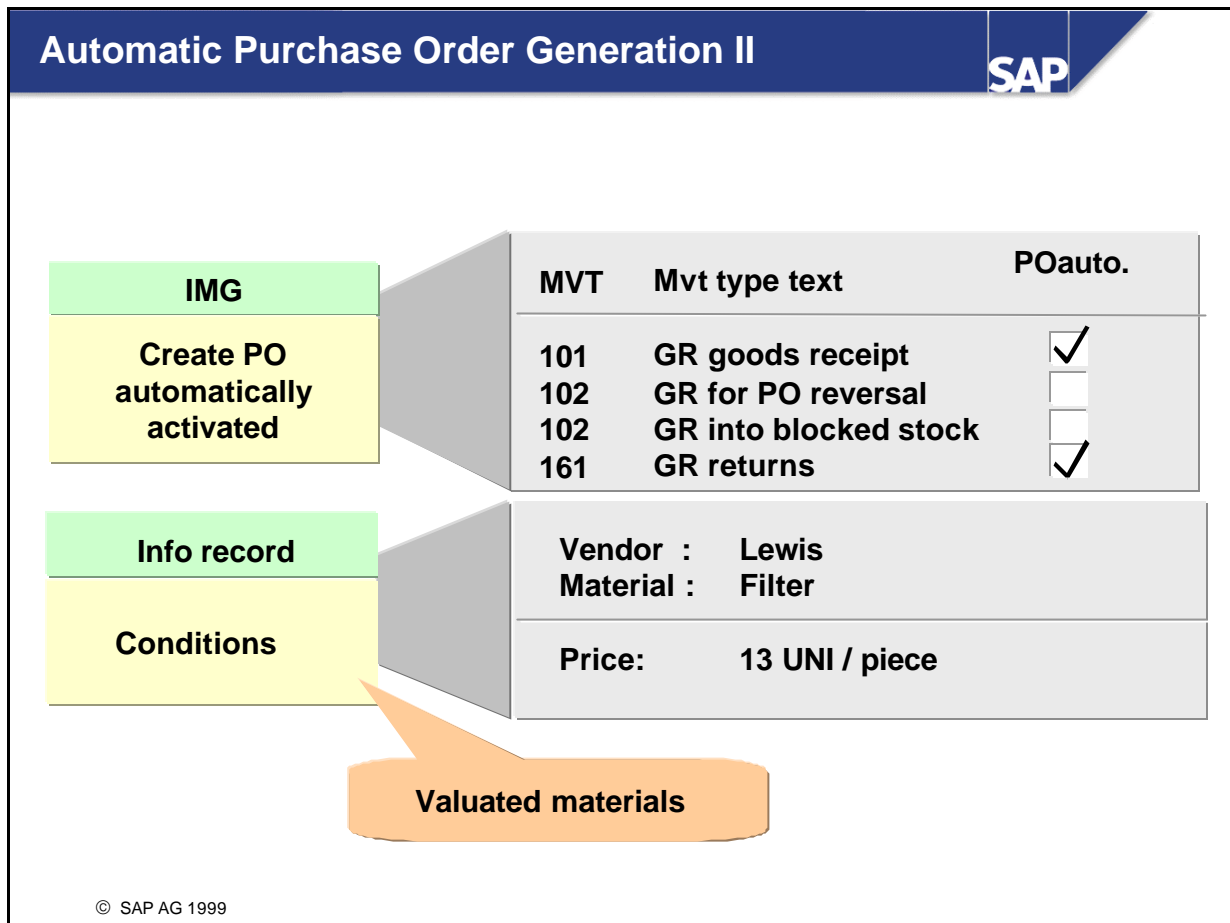
- Whether a goods receipt/issue slip or a return delivery slip is to be printed can be made dependent on the movement type.
- The “reason for movement” specified can also be determined per movement type. The “reason for movement” enables an analysis and display of vendor problems (for example, damaged packaging).
- When returning material to a vendor, you can specify a reason for movement individually for each item or enter a reason for movement on the initial screen for goods movements.



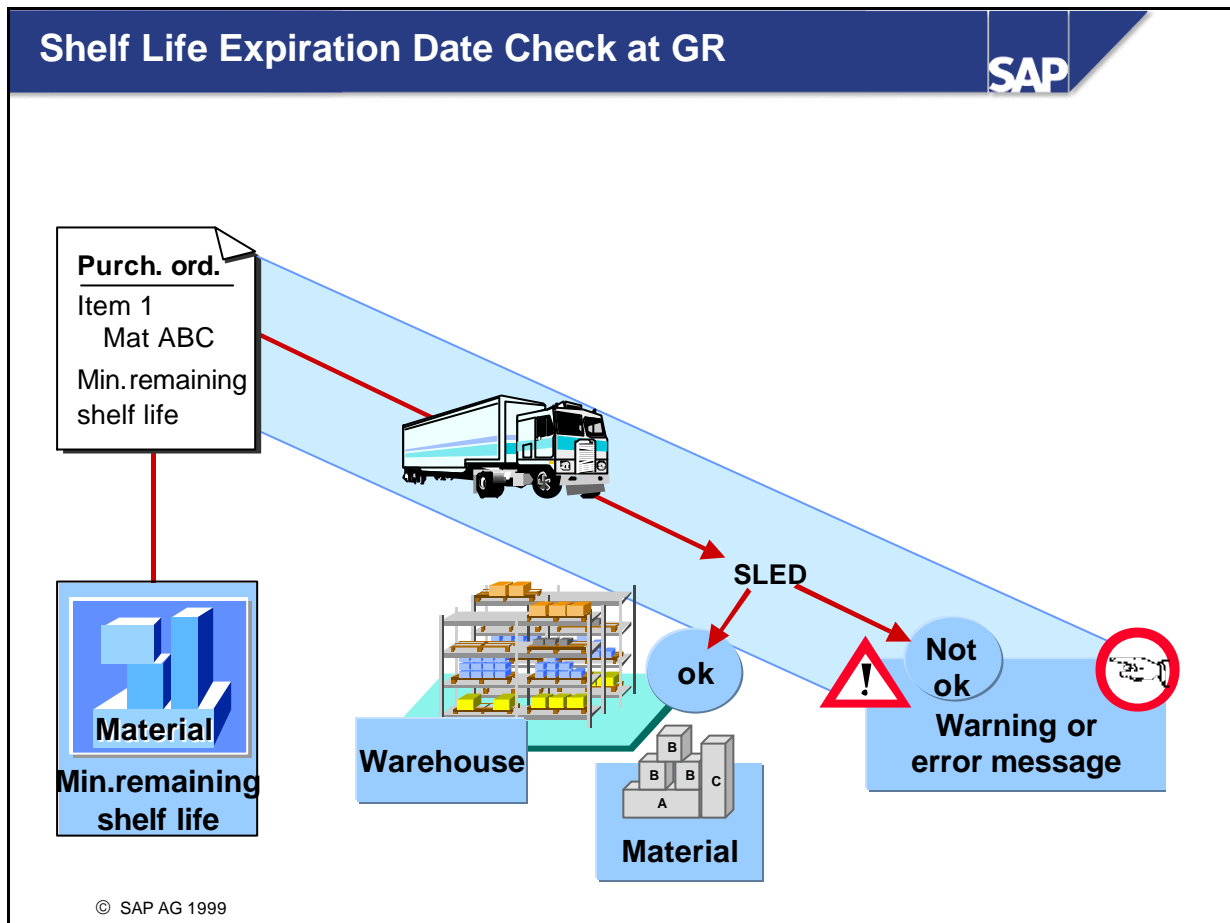
- Returns to vendor are return deliveries of material from a plant to an external vendor. You include these as returns order items in purchase orders by setting a “returns indicator” in the item overview of the purchase order. For returns to vendor, you do not have to reference the preceding document used to procure the material you are returning.
- For movement type 161, you can also set the indicator for the automatic generation of purchase orders.



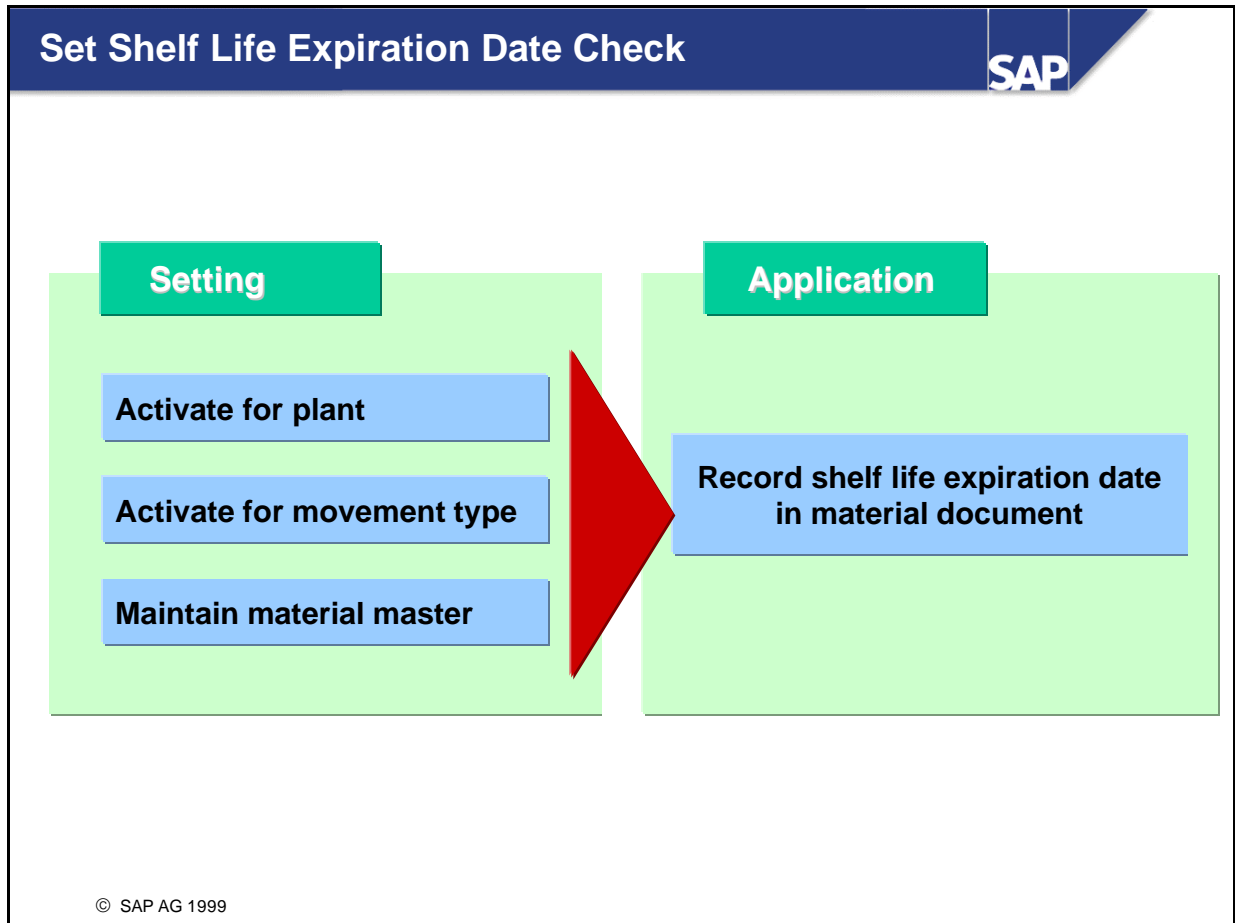
- You can configure Customizing in such a way that the R/3 System always creates a purchase order in the background after you receive goods for which no purchase order exists. You can also carry out invoice verification afterwards.



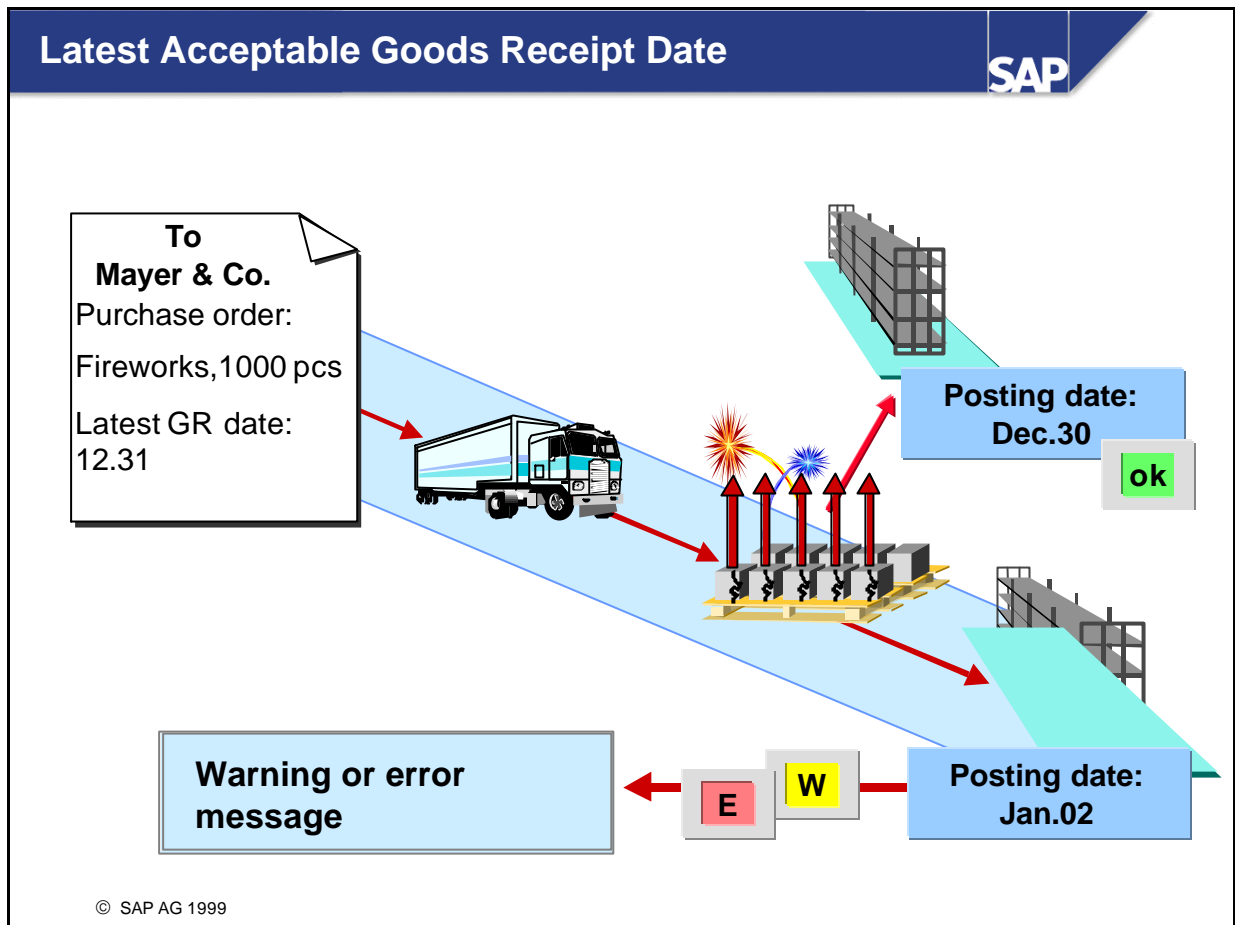
- In the step “Create purchase order automatically” in Customizing, you define for each movement type whether the R/3 System always creates a purchase order whenever you post a goods receipt. This means that you can also carry out invoice verification immediately after you have posted the goods receipt.
- The R/3 System values the goods receipt with the price defined in the purchasing info record.
- You can create purchase orders automatically only for valuated materials.



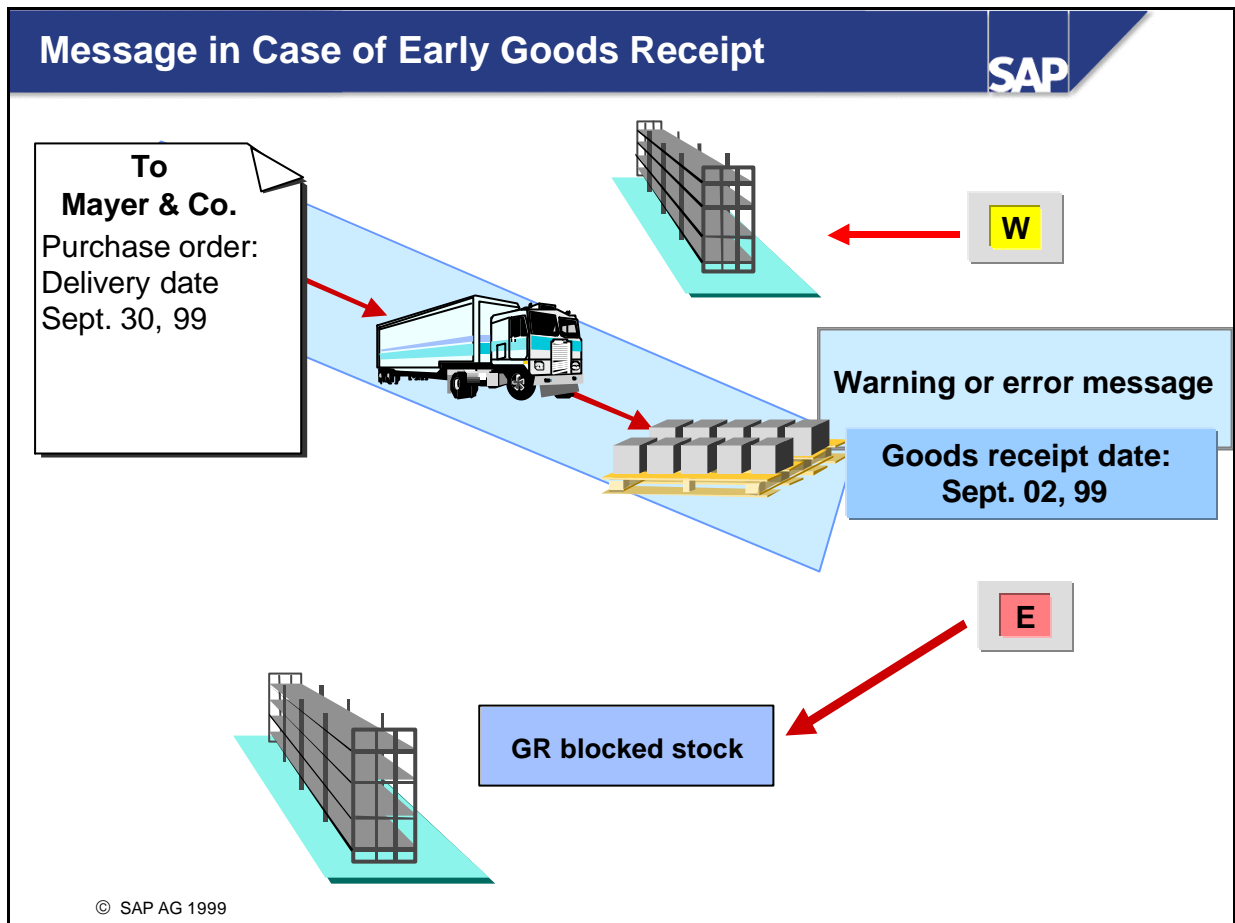
- The shelf life expiration date is checked only if the following conditions have been fulfilled:
  - The minimum remaining shelf life has been maintained in the material master or the purchase order.
  - The minimum remaining shelf life value is the number of days that a material has to be usable in order that the R/3 System will accept the goods receipt.
  - The shelf life expiration date check is active in the plant.
  - The shelf life expiration date check is activated for this movement type.
- If the shelf life expiration date check is activated, you have to enter the expiration date or production date of the material at the time of goods receipt.
- When the goods are received, the R/3 System checks whether the minimum remaining shelf life meets the requirements entered in the purchase order or the material master. If this is not the case, it issues a warning message or error message, depending on how it is configured.
- When the goods entry has been posted, the shelf life expiration date is recorded in the material document.
- The shelf life expiration date is printed on the goods receipt/issue slip.



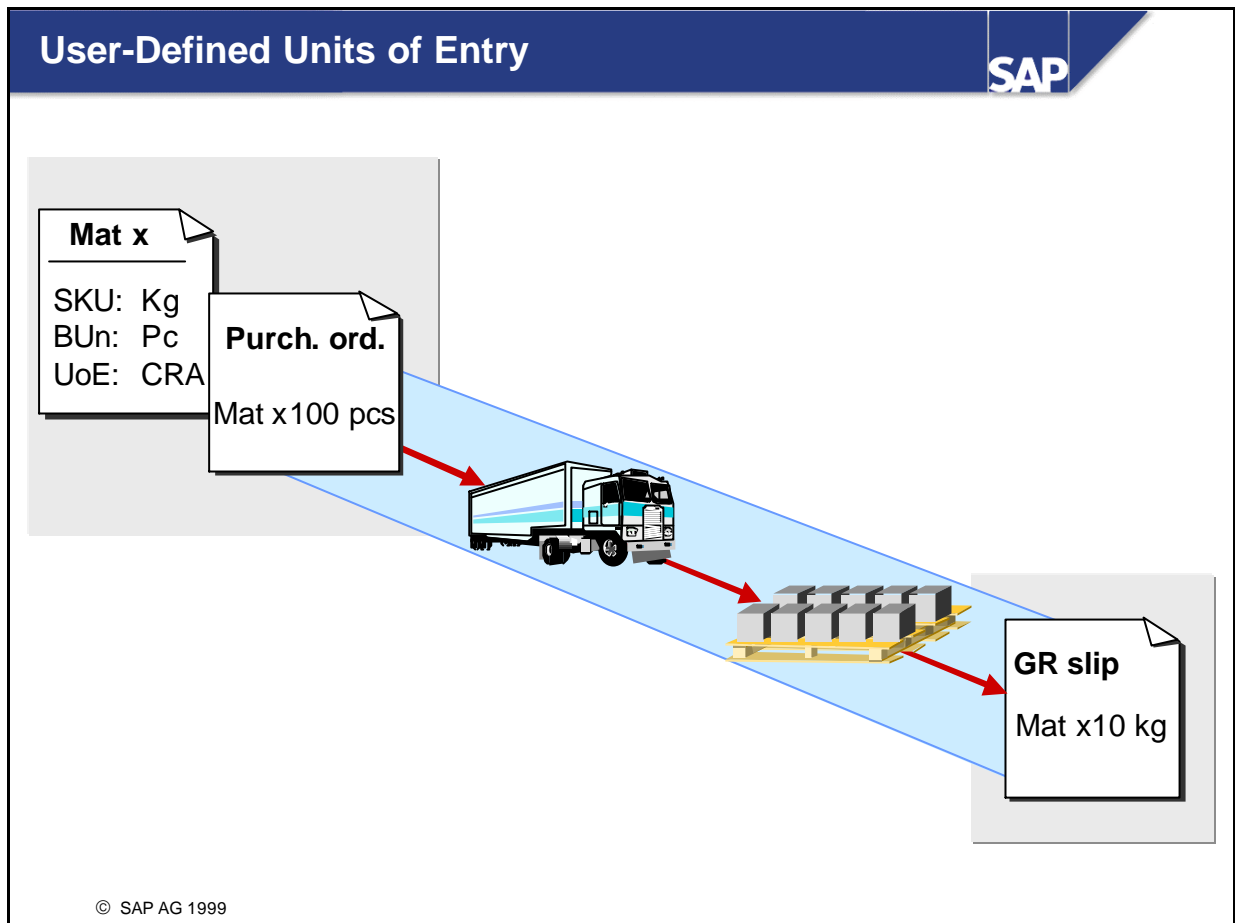




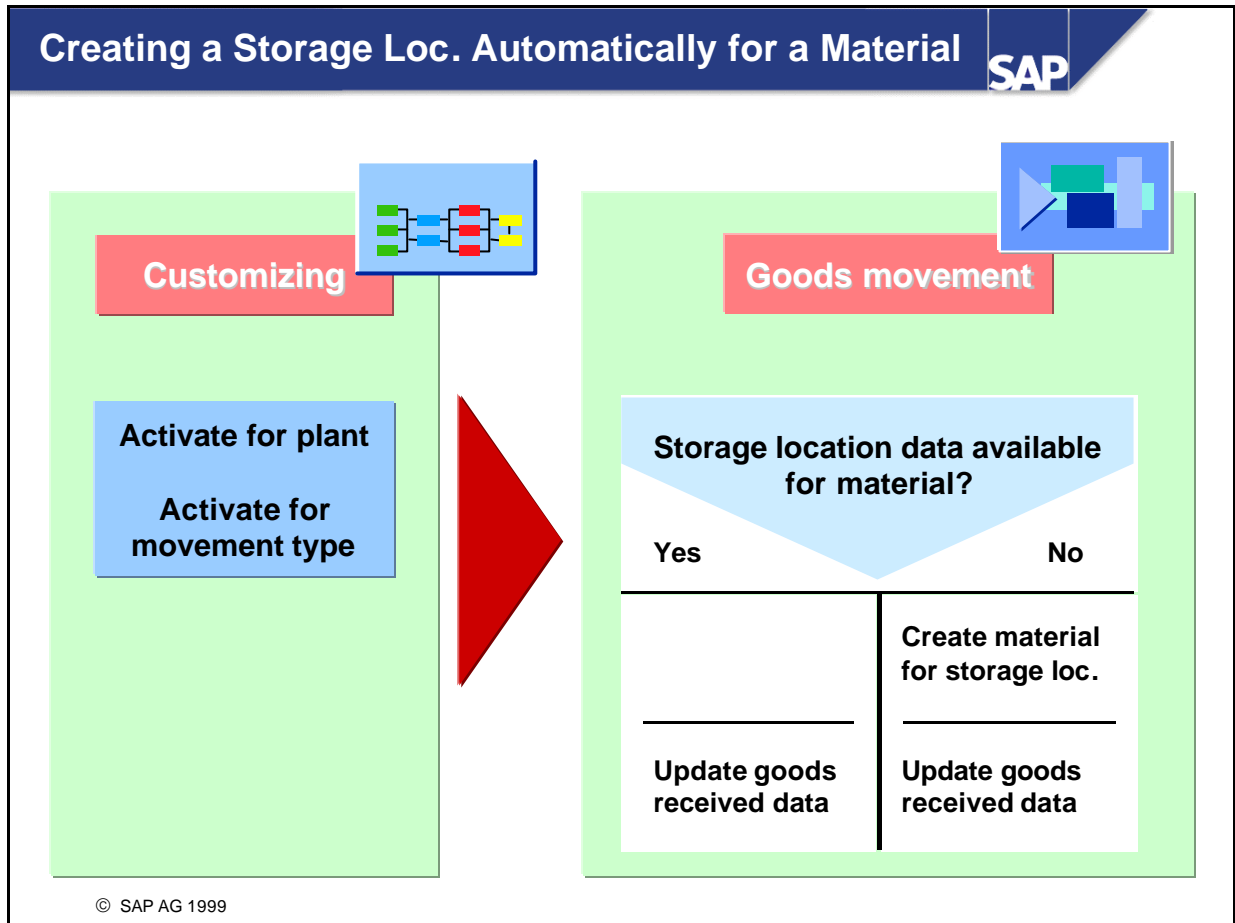
- If the latest acceptable goods receipt date has been entered in the purchase order, at goods receipt the R/3 System checks whether the posting date is after this date. If this is the case, it issues a warning message or error message, depending on how it is configured.

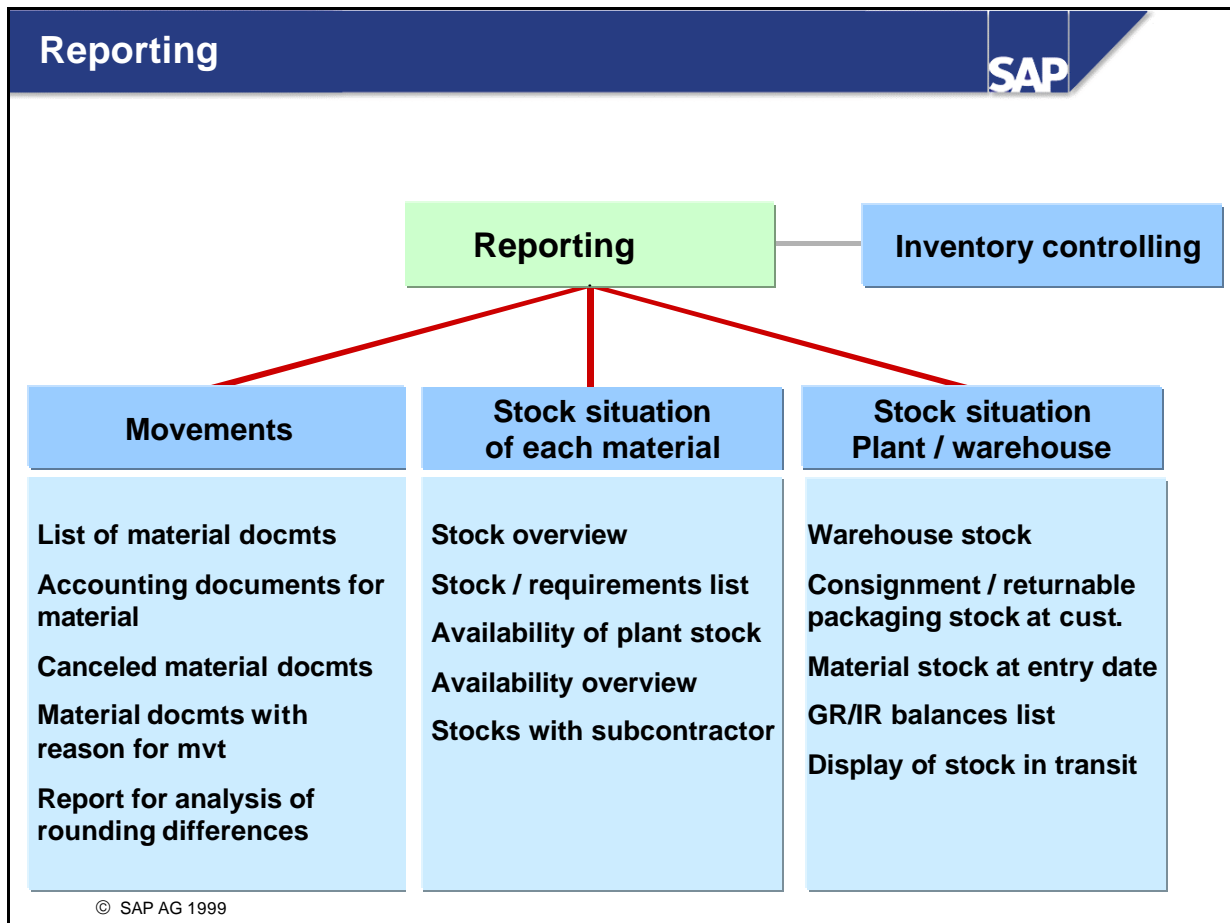


- As of Release 4.5, the R/3 System compares the goods receipt date with the planned delivery date from the purchase order. The user can configure whether it should issue a warning message or error message in the event of goods being received early.
- This function is useful if capacity in your warehouse is limited or if you want to prevent the invoice for the goods receipt being paid too early.
- If the message is configured as an error message, you can only post the goods receipt to GR blocked stock.

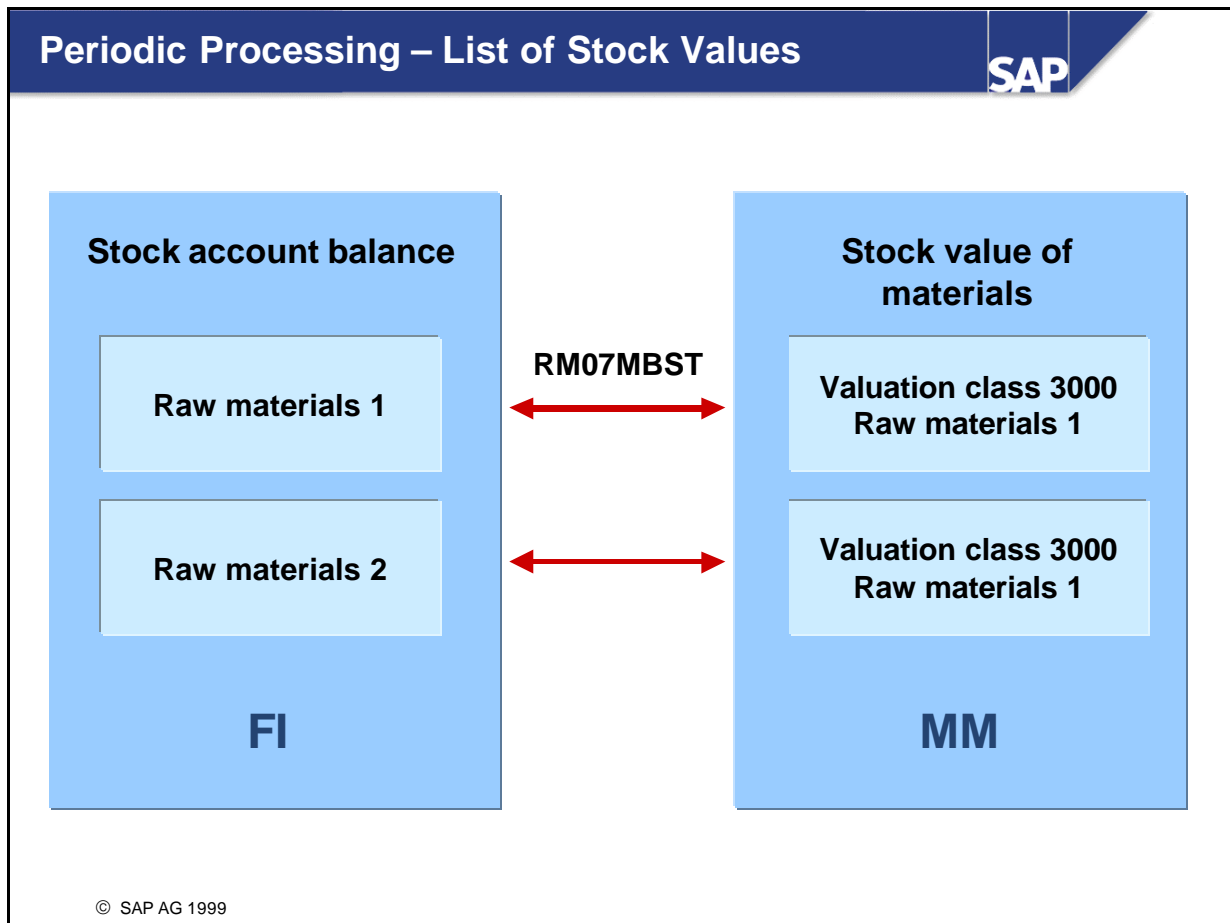


- You can define any unit of entry for a goods movement or reservation, provided that the unit of entry is defined in the material master record or can be converted using standard calculations (for example, g – kg).
- If you do not specify a unit of measure, the R/3 System uses the unit of measure that is intended for the relevant goods movement, that is the:
  - Order unit for goods receipt with reference to purchase order
  - Production unit for goods receipt for order
  - Unit of issue for other movements and reservations

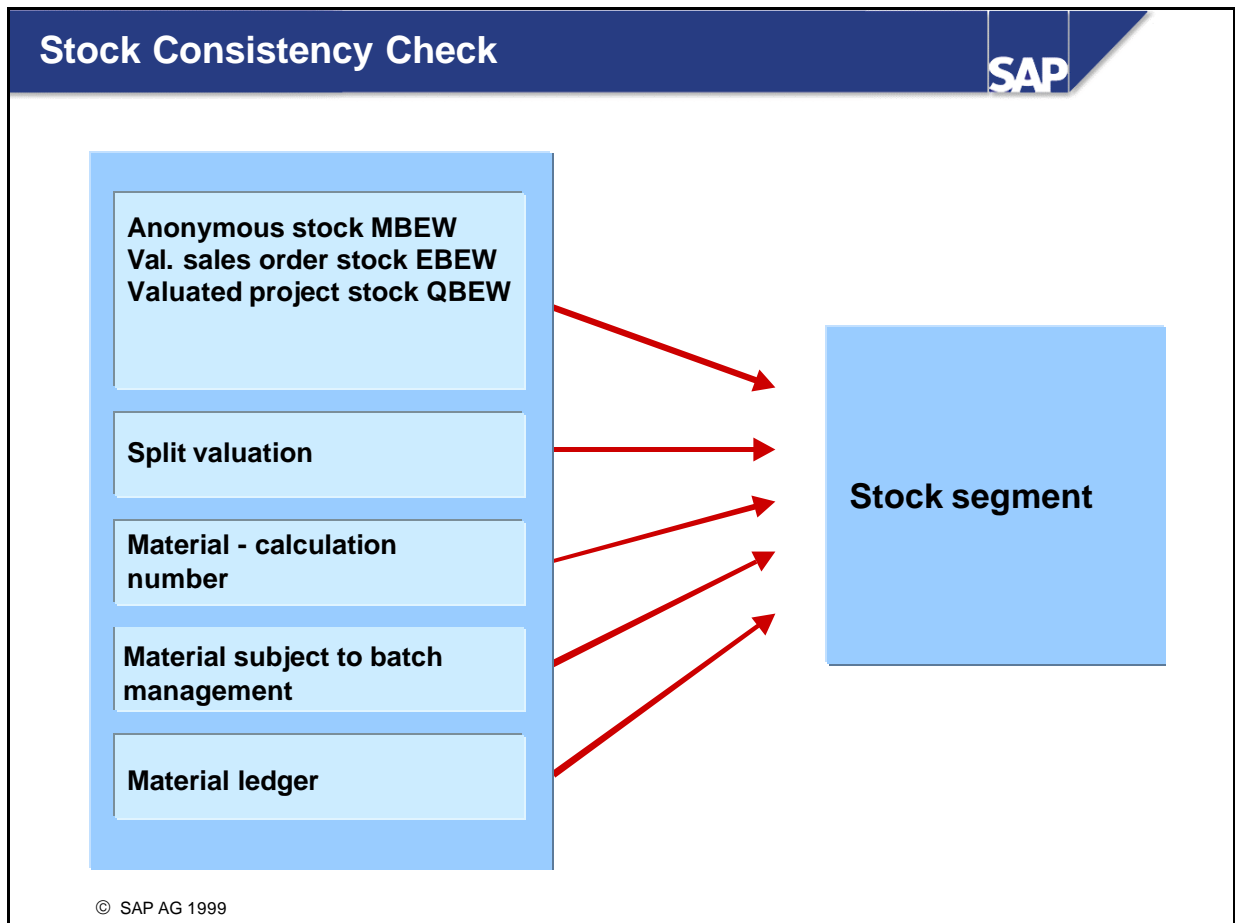




- All functions in Inventory Management and Physical Inventory are subject to an authorization check.
- If some users are no longer authorized to carry out certain analyses, assign them to the following authorization profile: M\_BEFU\_ANZ (all inventory management display authorizations).
- A system-wide list viewer is used to format some reports. You can now output application tables with any contents in a convenient list.
- Users can define and save their own display variants as well as choose their display variants on the initial screen for a report.
- For Release 4.6, the plant stock availability display was converted to the ABAP List Viewer.
- As of Release 4.6A, you can use the Analysis of Conversion Differences report to analyze the goods movements for a specified period of time for each material and plant. You can also determine the rounding differences separately for each stock type. The following stock types are listed individually:
  - Unrestricted-use stock, blocked stock, and stock in quality inspection
  - All of a material's special stocks
  - All of a material's batches



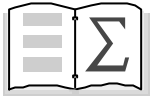
- You can use report RM07MBST to display the total stock quantity and total stock value for one or more materials. It also determines the stock account that is posted when you post a goods movement for the material specified.
- You can display the balance values for each company code and G/L account. The system compares the balance of the G/L account with the stock value of the specified material and displays the difference between the two.
- If you start the report without specifying a material, the balance of each stock account must correspond to the total valuated stock of all materials belonging to the relevant valuation class. Variances can result for the following reasons:
  - You made manual postings to the stock account.
  - Other postings as well as stock postings are made to the stock account. In this case, you have to check account determination in Customizing for valuation. Ensure that the stock accounts are used for transaction key BSX (stock postings) only.
  - Account determination for the stock accounts (transaction/event key) BSX were changed in the current operation, but the relevant stocks were not debited directly from the old account (MVT 562) and posted to the new one (MVT 561).



- As of Release 4.5A, a new report is available for checking the consistency of your stocks.
- To start the report, choose *Period. Processing @ Consistency check*.
- With this report, you can check that your stocks are consistent at company code level, valuation level, or material level. You can therefore determine possible errors in your stocks before they cause greater problems.

## Goods Receipts: Unit Summary

SAP



**You are now able to:**

- **Enter a goods receipt into blocked stock and quality inspection stock**
- **Generate a purchase order automatically at goods receipt**
- **Describe various functions, such as shelf life expiration date check and unit of entry**
- **Identify other system settings for goods movements**

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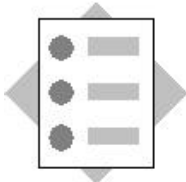


## Exercises



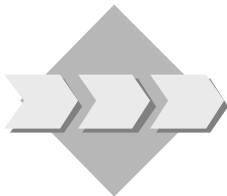
### Unit: Goods Receipts

### Topic: Goods Receipts



At the end of this exercise, you will be able to:

- Explain the difference between goods receipt blocked stock and blocked stock
- Post a goods receipt into blocked stock



Goods receipts in your company can be processed in a variety of ways depending on the material. If a material is damaged, it is received into blocked stock or GR blocked stock.

**In the exercises for the *Goods Receipts* unit, you are a storeperson and carry out the activities with the user menu.**

- 1-1 Display the stock overview for materials **T-RN1##** and **T-RN2##** in plant **1000** to see the initial stock balance for the following stock types. Use the options or arrows to display the right columns.

Plant 1000	T-RN1##	T-RN2##
Unrestricted-use stock		
Quality inspection		
Open purchase order quantity		
GR blocked stock		
Blocked		

1-2 You receive the material for items 1 and 2 in purchase order **415101-##** in **one goods receipt**, as outlined below:

1-2-1 In the **first** item for material **T-RN1##**, you are sure that the correct material has been delivered. Enter and post the receipt for the entire quantity of **10** into storage location 0001.

Movement type: \_\_\_\_\_

1-2-2 In the **second** item in purchase order **415101-##**, you are not sure the correct goods were delivered. Therefore, enter a conditional acceptance by receiving all **10** of **T-RN2##** into **GR blocked stock**.

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

1-3 Now display the material document. Is there an accounting document for this transaction?

\_\_\_\_\_

1-4 Now display the stock overview for materials **T-RN1##** and **T-RN2##** in plant **1000** to see what happened. Update the current stock situation in the table.

<b>Plant 1000</b>	<b>T-RN1##</b>	<b>T-RN2##</b>
Unrestricted-use stock		
Quality inspection		
Open purchase order quantity		
Goods receipt blocked stock		
Blocked		

1-5 Display the purchase order item general statistics and the purchase order history for purchase order **415101-##**.

1-5-1 What receipt quantity displays on the purchase order history for line 20, and why?

\_\_\_\_\_

1-5-2 Where can you display the quantity received into GR blocked stock?

\_\_\_\_\_

1-6 The **10** pieces of **T-RN2##** are deemed acceptable. Release the material from GR blocked stock into quality inspection stock in storage location **0001** with reference to the purchase order number from part **1-2**.

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_



Enter 'Quality inspection' in the *Stock Type* field.

1-7 You receive a delivery for purchase order **415102-##** for plant **1000**. It is not necessary to receive into GR blocked stock because you are sure the correct material has been delivered, but the material is damaged, so receive the total quantity into **blocked stock**.

Movement type: \_\_\_\_\_

Material document: \_\_\_\_\_



Use the *Stock Type* field to post to blocked stock.

1-8 Now display the material document for this receipt. Is there an accounting document?

---

1-9 Now display the stock overview for material **T-RN2##** in plant **1000** to see what happened.

*(Stock Overview)*

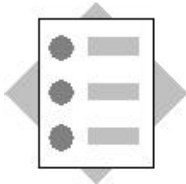
<b>Plant 1000</b>	<b>T-RN2##</b>
Unrestricted-use stock	
Quality inspection	
Open purchase order quantity	
GR blocked stock	
Blocked	

## Exercises



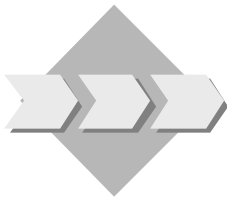
### Unit: Goods Receipts

### Topic: Reversals and Returns



At the end of this exercise, you will be able to:

- Identify the movement type for a reversal and a return to vendor
- Define the impact of tolerances at goods receipt and the “delivery completed” indicator
- Explain how to enter reason codes for a movement type
- Post a reversal and a return to vendor



You return material to the vendor if it is damaged or incomplete. The R/3 System is configured to require a reason code whenever you process a return to the vendor. This allows you to track the reasons why material is being returned. You use another transaction to reverse goods receipts that were entered with keystroke errors.

- 2-1 Display the stock overview for material **T-RN1##** in plant **1000** and write down the stock situation.

*(Stock Overview)*

<b>Plant 1000</b>	<b>T-RN1##</b>
Unrestricted-use stock	
Open purchase order quantity	

- 2-2 On purchase order **415103-##**, you have received a partial delivery of **40 pieces** for the **first** item and the total quantity for the **second** item. Post the goods receipt for this delivery.

Material document number: \_\_\_\_\_

- 2-3 You receive a second delivery of **55** pieces of **T-RN1##** for purchase order **415103-##**. On the delivery note, the vendor informs you that the remaining quantity for this item will not be delivered. Post the goods receipt to plant **1000**, storage location **0001**, and indicate that no further deliveries are expected for this purchase order by setting the *Delivery completed* indicator.

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

- 2-4 Display the stock overview for material **T-RN1##** in plant **1000**.

<b>Plant 1000</b>	<b>T-RN1##</b>
Unrestricted-use stock	
Open purchase order quantity	

- 2-5 On the second receipt of purchase order **415103-##**, **40** pieces of **T-RN1##** are incomplete. Return these 40 pieces from storage location **0001** to the vendor, and specify the reason for the return. You expect the vendor to make a subsequent delivery, so verify the status of the *Delivery completed* indicator.

2-5-1 What movement type is used?

\_\_\_\_\_

2-5-2 What is the reason code for *Incomplete*?

\_\_\_\_\_

2-5-3 Why not use movement type 102?

\_\_\_\_\_

\_\_\_\_\_

Material document number: \_\_\_\_\_

2-6 Display the stock overview for **T-RN1##** in plant 1000.

<b>Plant 1000</b>	<b>T-RN1##</b>
Unrestricted-use stock	
Open purchase order quantity	

2-7 Display the *Reason For Movement* report for material **T-RN1##**. You want to display the reasons why this material was returned.

2-8 The vendor now delivers another **50** pieces of **T-RN1##** on purchase order **415103-##**. Post the receipt into plant 1000 storage location 0001.

2-8-1 Can you post this overdelivery? \_\_\_\_\_

2-8-2 Why/Why not? \_\_\_\_\_

Material document number: \_\_\_\_\_

2-9 Display the item details and general statistics for purchase order **415103-##**, material **T-RN1##** (item 10).

<b>PO statistics for item 10</b>	<b>Quantity</b>
Ordered	
Delivered	
To be delivered	

<b>Item details for item 10</b>	<b>Quantity</b>
Underdelivery tolerance	
Overdelivery tolerance	

2-10 At the receiving dock, you realize the second line on purchase order **415103-##** was received by mistake. **Post a reversal** of line 20 with reference to the material document from step 2-2.

2-10-1 How do you proceed?

\_\_\_\_\_

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

2-11 Display the material and accounting documents for the reversal.

2-12 Display the purchase order history for material **T-RN2##** on purchase order **415103-##**.

2-12-1 How many transactions were posted against this item?

\_\_\_\_\_

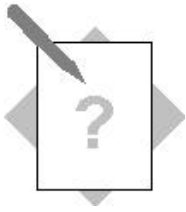
2-12-2 Does the reversal update the purchase order history?

\_\_\_\_\_

2-13 Now display the canceled material documents report. Use the material document number from **2-10**.

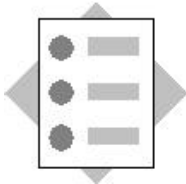


## Exercises



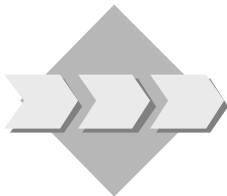
### Unit: Goods Receipts

### Topic: Automatic Generation of Purchase Order at Goods Receipt



At the end of this exercise, you will be able to:

- Create a purchase order at goods receipt
- Verify how the movement type can be configured to allow a purchase order to be created automatically at goods receipt



You have a vendor who delivers tanks for your motorbikes and sends a packing slip along with the receipt. You enter the goods receipt and have configured the R/3 System to create the purchase order automatically at the time of goods receipt. This allows you to use the information in invoice verification.

- 3-1 In Customizing, verify the settings required to create an automatic purchase at goods receipt. As you will be verifying other Customizing settings in the following exercises, add the Customizing display function to your list of favorites.



Please do not change the settings!

For Customizing, choose: ***Tools*** ® ***AcceleratedSAP*** ® ***Customizing*** ® ***Edit Project***, then choose ***SAP Reference IMG***, then ***Materials Management*** ® ***Inventory Management and Physical Inventory*** ® ***Goods Receipt*** ® ***Create Purchase Order Automatically***

- 3-1-1 Is movement type 101 configured to allow automatic purchase orders at the time of goods receipt?
-

3-1-2 What is the standard purchasing organization assigned to plant 1000?

For Customizing, choose: *Tools* ® *AcceleratedSAP* ® *Customizing* ® *Edit Project*, then choose *SAP Reference IMG*, then *Enterprise Structure* ® *Allocation* ® *Materials Management* ® *Assign standard purchasing organization to plant*

---

3-2 Display the purchasing info record for vendor **T-K10A##** and material **T-RN1##** for plant **1000** and purchasing organization **IDES Deutschland**. Use the SAP menu and include this activity in your list of favorites.

3-2-1 What price will be used to value the material at the time of goods receipt?

Price: \_\_\_\_\_

3-3 Use the automatic generation of purchase order function to post a goods receipt of **10** pieces for vendor **T-K10A##** and material **T-RN1##** into plant **1000**, storage location **0001**.



Configure your system settings in such a way that the R/3 System proposes movement type 101 for items that have not been ordered.

3-3-1 Movement type: \_\_\_\_\_

3-3-2 What message is issued on the log?

\_\_\_\_\_

Material document number: \_\_\_\_\_

3-4 Display the material document number that was created as a result of the receipt. What purchase order number was created automatically?

---

3-5 Display the purchase order that was created automatically at goods receipt.

3-5-1 Where can you display the user profile of the person who created the purchase order?

---

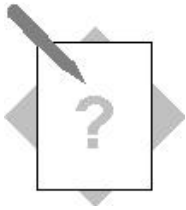
3-5-2 Who created the purchase order?

---

3-5-3 What is the status on the purchase order header?

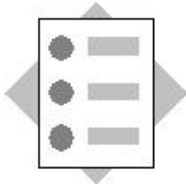
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## Exercises



### Unit: Goods Receipts

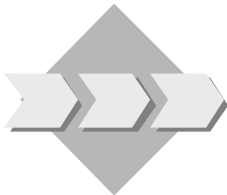
### Topic: Returns for Purchase Orders



At the end of this exercise, you will be able to:

- Explain the process of creating a purchase order and indicating a return
- Post a goods receipt and a return to the vendor on the same document

#### Optional Exercise\*



You purchase decorative calendars to give to your customers as gifts. You have a large quantity in stock and sometimes have some left over at the end of the year. Your supplier allows you to return the left over calendars and purchase new ones. You like to process this receipt and return in one transaction.

- 4-1 You receive the goods for purchase order **415100-##**. Post the goods receipt into plant **1000**, storage location **0001**.

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

- 4-2 Now you need to purchase 1000 calendars from vendor **T-K10C##** for the upcoming year. You have 200 calendars from the previous year that can be returned to the vendor. Add the activity to your list of favorites.

Create another purchase order for a quantity of **1000 T-RN3##** calendars and return a quantity of **200 T-RN4##** calendars 4 weeks from now. Make sure you mark the old calendar as a return to the vendor. Use vendor **T-K10C##**, purchasing organization **IDES Deutschland**, purchasing group **group##** and plant **1000**. The price of each calendar is 60.00 UNI.

Purchase order number: \_\_\_\_\_

- 4-3 Your purchase order is delivered. Enter the goods receipt into plant 1000, storage location 0001. How many line items are displayed and what is the movement type?

---

---

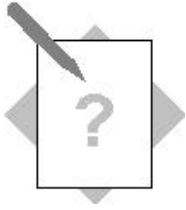
---

Material document number: \_\_\_\_\_

- 4-4 Display the material document and the accounting documents. What are the accounting entries for this transaction?

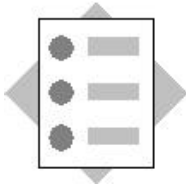
Account	Value

## Exercises



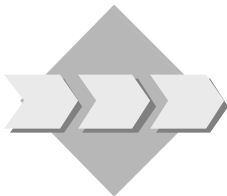
### Unit: Goods Receipts

### Topic: Settings



At the end of this exercise, you will be able to:

- Explain goods receipt in various units of measure
- Outline how to enter the latest acceptable delivery date for a purchase order
- Explain how to check the expiry date of a material at the time of goods receipt



Goods receipts in your company can be processed in a variety of ways depending on the material. Some goods have a limited lifespan, so you have to check the expiry date when you receive them.

5-1 Make the following changes to the material master for material **T-RN5##**. Start the activity from the SAP menu. Select the *Basic Data 1* and *Storage 1* views for plant **1000**:

5-1-1 On the *Basic Data 1* and *Additional Data* views, enter the following unit of measure conversion so that you can work with different units of measure in the system. 1 pair (pai) = 2 pieces (pc). Piece is the base unit of measure.

5-1-2 On the *Plant Data/Storage 1* view, enter **30** for the *Minimum remaining shelf life* so that the system checks the expiry date at goods receipt.

5-2 Display purchase order **415104-##** to see the minimum remaining shelf life for material **T-RN5##**. Where can you find this information?

---

5-2-1 You also want to check the latest acceptable delivery date for the second item on the purchase order. What is the latest acceptable date for goods receipt?

---

5-3 Now post a goods receipt for purchase order number **415104-##** in plant **1000**, storage location **0001**.

5-3-1 For the first item, **T-RN5##**, the vendor has delivered **30 pairs** (the sealing rings are packed in pairs). The vendor also informs you that the shelf life expiry date for material **T-RN5##** is two months from today. Enter the goods receipt and the expiry date information for this material.

5-3-2 The second item, **1** piece of **T-RN6##** is also delivered. Click “Check”. What message do you receive?

---

5-3-3 Can the goods receipt for the second item be accepted?  
Why or why not?

---

Material document number: \_\_\_\_\_

5-4 Display the material document and write down the unit of measure conversion.

---

## Solutions



### Unit: Goods Receipts

### Topic: Goods Receipts

- 1-1 **Logistics** ® **Materials Management** ® **Inventory Management** ® **Environment** ® **Stock** ® **Stock Overview**

Or, from the SAP\_MM\_GR\_CLERK role, choose:

**Environment** ® **Stock** ® **Stock Overview**

(Stock Overview)

Plant 1000	T-RN1##	T-RN2##
Unrestricted-use stock	0	0
Quality inspection	0	0
Open purchase order quantity	110	120
GR blocked stock	0	0
Blocked	0	0

- 1-2 **Goods Movement** ® **Goods Receipt** ® **For Purchase Order** ® **Goods Receipt from External Procurement**

1-2-1 Choose the goods receipt for purchase order option and enter the data for the first item.

Movement type: 101

1-2-2 Choose the same purchase order number from the overview again. The R/3 System creates a second item. You change the movement type in the item overview:

Movement type: 103

- 1-3 **Material Document** ® **Display**, then choose *Accounting docs...*

There is an accounting document for the first item, but not for the second item. At goods receipt, the second item was posted to goods receipt blocked stock and this stock type is not valuated.



1-4 **Inventory Management** ® **Environment** ® **Stock** ® **Stock Overview**

(Stock Overview)

<b>Plant 1000</b>	<b>T-RN1##</b>	<b>T-RN2##</b>
Unrestricted-use stock	10	0
Quality inspection	0	0
Open purchase order quantity	100	120
Goods receipt blocked stock	0	10
Blocked	0	0

1-5 **Environment** ® **Information** ® **Purchase Order**, then choose **Item** ® **Statistics** ® **General and PO history**

1-5-1 The R/3 System shows the quantity in the PO history as zero because the material was posted to goods receipt blocked stock.

1-5-2 On the *Purchase Order History* screen, choose *Blocked stock* to display the quantity of the goods receipts in goods receipt blocked stock.

1-6 **Goods Movement** ® **Goods Receipt** ® **For Purchase Order** ® **Goods Receipt from External Procurement**

Choose *Release GR blocked stock* and your purchase order. In the *Stock type* field, enter **Quality inspection**.

Movement type: 105

1-7 **Goods Movement** ® **Goods Receipt** ® **For Purchase Order** ® **Goods Receipt from External Procurement**

To receive the material to blocked stock, enter **Blocked** in the *Stock type* field.

Movement type: 101

1-8 **Material Document** ® **Display**, then choose *Accounting docs...*

Yes

1-9 **Environment** ® **Stock** ® **Stock Overview**

*(Stock Overview)*

<b>Plant 1000</b>	<b>T-RN2##</b>
Unrestricted-use stock	0
Quality inspection	10
Open purchase order quantity	100
GR blocked stock	0
Blocked	10

# Solutions



**Unit: Goods Receipts**  
**Topic: Reversals and Returns**

2-1 *Environment ® Stock ® Stock Overview*

(Stock Overview)

Plant 1000	T-RN1##
Unrestricted-use stock	10
Open purchase order quantity	100

2-2 *Goods Movement ® Goods Receipt ® For Purchase Order ® Goods Receipt from External Procurement* (movement type 101)



Do not forget to change the received quantity in the first line from 100 to 40.

2-3 *Goods Movement ® Goods Receipt ® For Purchase Order ® Goods Receipt from External Procurement.* Note: You change the received quantity from 60 to 55.

Movement type: 101

2-4 *Environment ® Stock ® Stock Overview*

(Stock Overview)

Plant 1000	T-RN1##
Unrestricted-use stock	105
Open purchase order quantity	0

2-5 **Goods Movement ® Goods Receipt ® For Purchase Order ® Goods Receipt from External Procurement**



Enter the transaction as a return delivery for the material document.  
You choose the first line only. Do not forget to change the quantity from 55 to 40.

2-5-1 122

2-5-2 0002

2-5-3 Movement type 102 is a reversal movement type. Movement type 122 is a return delivery. You use two different movement types so that you can distinguish between the two transactions. You might require a reason for movement code to carry out a return delivery but not for a reversal, or you can print a return delivery text with movement type 122.

2-6 **Environment ® Stock ® Stock Overview**

(Stock Overview)

<b>Plant 1000</b>	<b>T-RN1##</b>
Unrestricted-use stock	65
Open purchase order quantity	45

2-7 **Environment ® List Displays ® Reason for Movement**

2-8 **Inventory Management ® Goods Movement ® Goods Receipt ® For Purchase Order ® Goods Receipt from External Procurement**



You change the received quantity from 45 to 50.

2-8-1 Yes

2-8-2 You can receive all 50 pieces because an overdelivery tolerance has been entered on the item detail screen. If the delivery quantity had been higher than the delivery tolerance, the R/3 System would have issued an error message to prevent the goods receipt.

- 2-9 **Environment** ® **Information** ® **Purchase Order**, then choose **Item** ® **Statistics** ® **General**

<b>PO statistics for item 10</b>	<b>Quantity</b>
Ordered	100
Delivered	105
To be delivered	0

**Item** ® **Detail**

<b>Item details for item 10</b>	<b>Quantity</b>
Underdelivery tolerance	10%
Overdelivery tolerance	10%

- 2-10

- 2-10-1 **Material Document** ® **Cancel/Reverse** or

**Goods Movement** ® **Goods Receipt** ® **For Purchase Order** ® **Goods Receipt from External Procurement**. Then choose **Cancel**. The R/3 System proposes the reference to the material document. You extend the relevant document number.

Movement type: 102

- 2-11 **Material Document** ® **Display**, then choose **Accounting docs...**

- 2-12

2-12-1 2

2-12-2 Yes

**Inventory Management** ® **Environment** ® **Information** ® **Purchase Order**, then choose **Item** ® **Statistics** ® **Purchase Order History**

- 2-13 **Inventory Management** ® **Environment** ® **List Displays** ® **Cancelled Material Documents**

## Solutions



### Unit: Goods Receipts

### Topic: Automatic Generation of Purchase Order at Goods Receipt

3-1 **Tools** ® **AcceleratedSAP** ® **Customizing** ® **Project Management**, then choose **SAP Reference IMG**, then **Materials Management** ® **Inventory Management and Physical Inventory** ® **Goods Receipt** ® **Create Purchase Order Automatically**

3-1-1 Yes

3-1-2 1000

**Tools** ® **AcceleratedSAP** ® **Customizing** ® **Project Management**, then choose **SAP Reference IMG** ® **Enterprise Structure** ® **Allocation** ® **Materials Management** ® **Assign standard purchasing organization to plant**

3-2

3-2-1 **Logistics** ® **Materials Management** ® **Purchasing** ® **Master data** ® **Info record** ® **Display**, then choose **Purchasing organization data 1**.

Price: 90

3-3 **Goods Movement** ® **Goods Receipt** ® **For Purchase Order** ® **Goods Receipt from External Procurement**, then choose **Not ordered**.



You configure your system settings in such a way that the R/3 System proposes movement type 101 for items that have not been ordered.

3-3-1 Movement type: 101

3-3-2 Warning: The R/3 System creates the purchase order.

3-4 **Material Document** ® **Display**

3-5 **Environment** ® **Information** ® **Purchase Order**

3-5-1 On the **Display Purchase Order** screen: **Statistics header**  
**Header** ® **Statistics** ® **General**

3-5-2 LO510-##

3-5-3 C = purchase order from goods receipt

## Solutions



### Unit: Goods Receipts

### Topic: Returns for Purchase Orders

- 4-1 ***Inventory Management ® Goods Movement ® Goods Receipt ® For Purchase Order ® Goods Receipt from External Procurement***

Movement type: 101

- 4-2 ***Logistics ® Materials Management ® Purchasing ® Purchase order ® Create ® Vendor/supplying plant known***

- 4-3 ***Inventory Management ® Goods Movement ® Goods Receipt ® For Purchase Order ® Goods Receipt from External Procurement Known***

Two items are displayed. The first item is delivered with movement type 101; the second is returned to the vendor with movement type 161.

- 4-4 ***Inventory Management ® Material Document ® Display***. Then choose *Accounting docs...*

Account	Value
Stock	60000
GR/IR	60000
Stock	12000
GR/IR	12000

## Solutions



### Unit: Goods Receipts

### Topic: Settings

#### 5-1 *Logistics* ® *Materials Management* ® *Material Master* ® *Material* ® *Change* ® *Immediately*

5-1-1 On the *Basic Data* view, choose *Additional data*. Then choose the *Units of measurement* tab page.

5-1-2 On the *Plant data/Storage 1* view, enter **30 days** in the *Minimum remaining shelf life* field.

#### 5-2 *Purchasing* ® *Purchase order* ® *Change*. Choose item 10 and click the “delivery” tab.

5-2-1 You select item 20 and call up the delivery data using the item detail data. This contains the latest goods receipt date.

#### 5-3 *Goods Movement* ® *Goods Receipt* ® *For Purchase Order* ® *Goods Receipt from External Procurement*

Movement type: 101

5-3-1 Change the goods receipt quantity from 100 to 30 and the unit of measure to pairs.

5-3-2 To view the relevant messages, choose *Check*.

5-3-3 Yes, the goods receipt is allowed because the message is a warning message, not an error message.

#### 5-4 *Material Document* ® *Display*

30 pairs = 60 pieces



## Reservations and Goods Issues



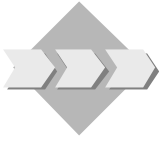
### Contents:

- Reservations
- Goods Issues

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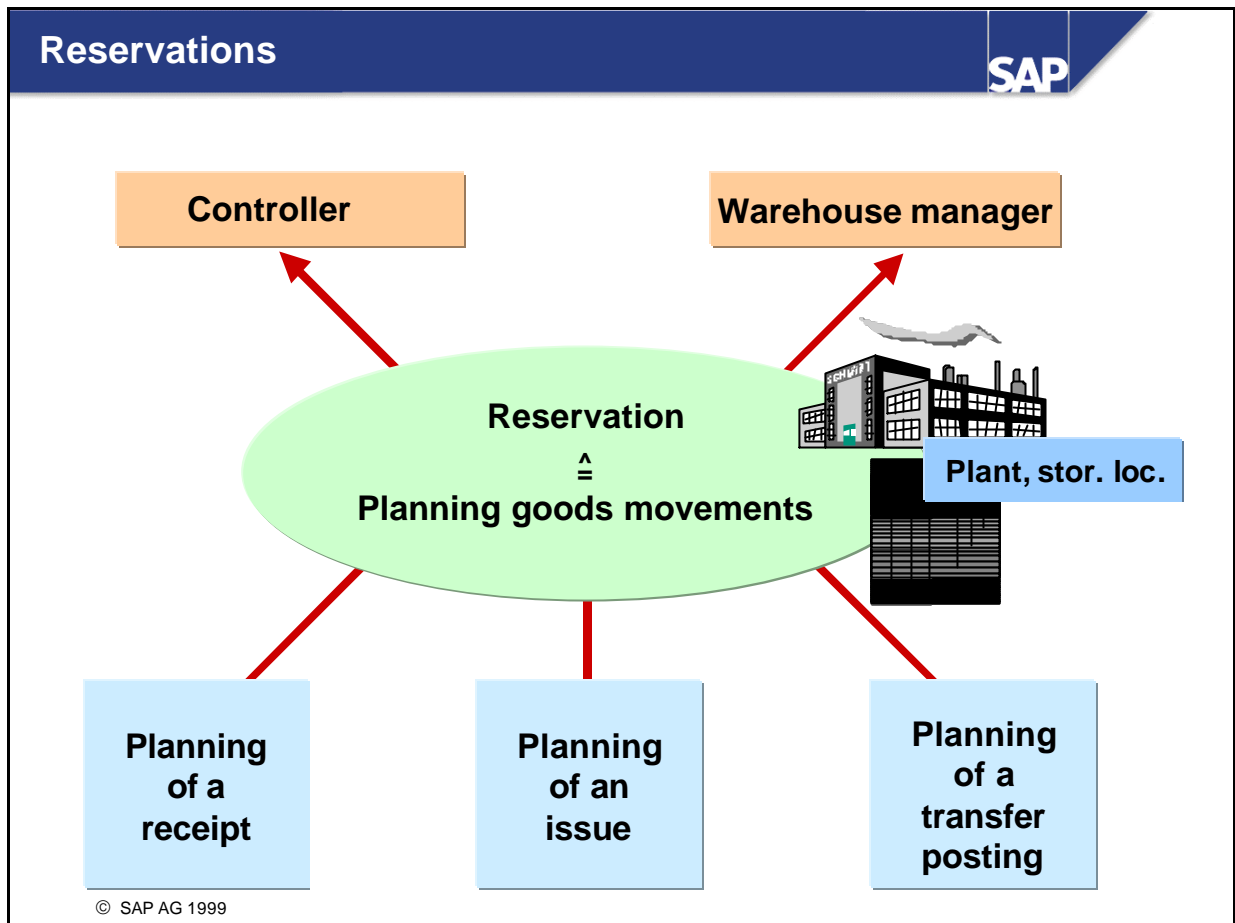
## Reservations: Business Scenario

SAP

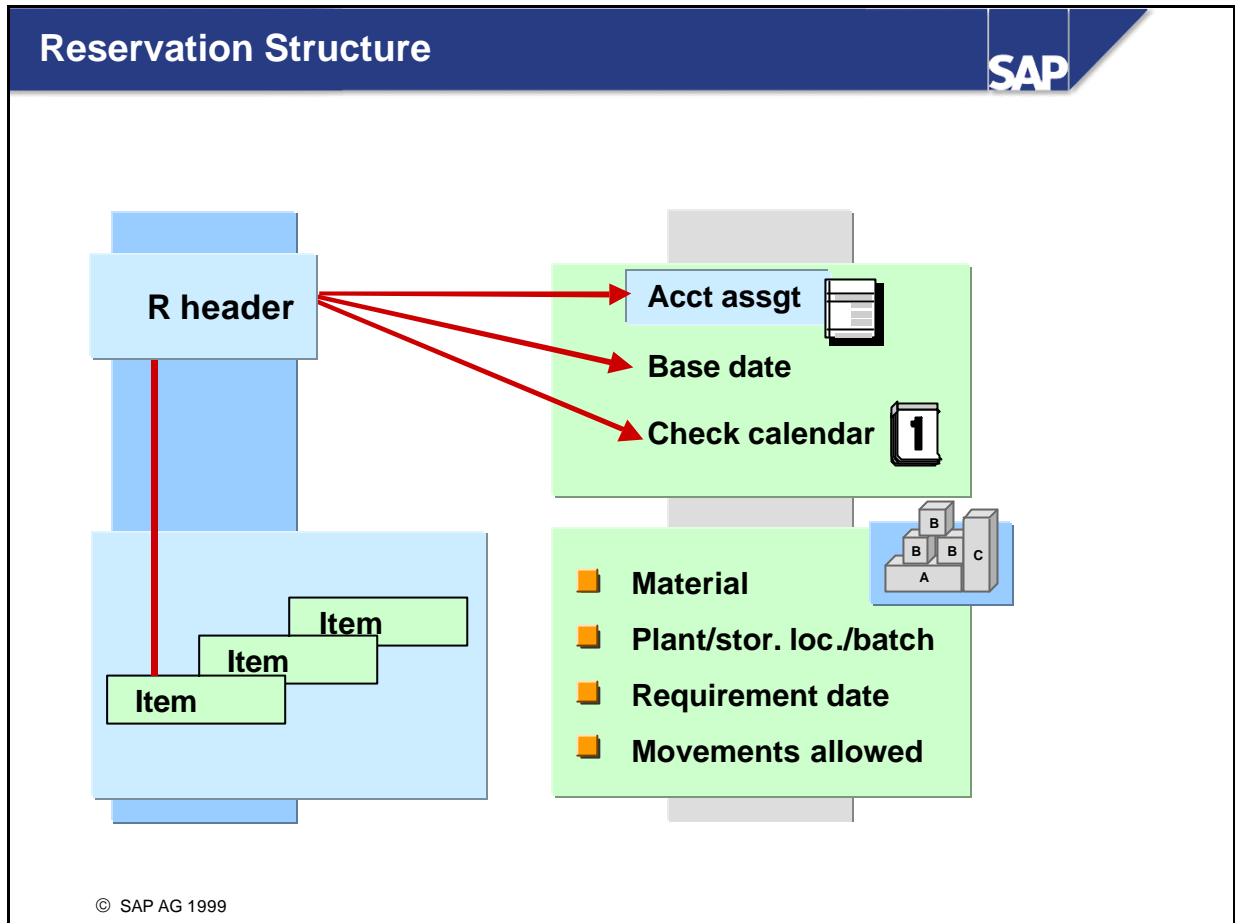


- **Your company is currently testing purchase and production order processing transactions in R/3. Until you go live with Materials Management, you intend to plan goods receipts from external vendors and production order issues through the R/3 reservation systems.**
- **Your company receives goods into stock and issues them to a consumption account (to a cost center in this case). The material manager responsible for the plant can analyze the stock situation by looking at stock overview and consumption statistics.**

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- Reservations are requests to the warehouse to have materials ready for issue at a later date and for a particular purpose.
- A reservation can also be used to plan an inward movement in advance.
- A reservation ensures that a material is available when it is needed.



- Analyses are available for material and account assignment.

## Creating Reservations

SAP

W/o reference



- Individual entry
- Collective entry

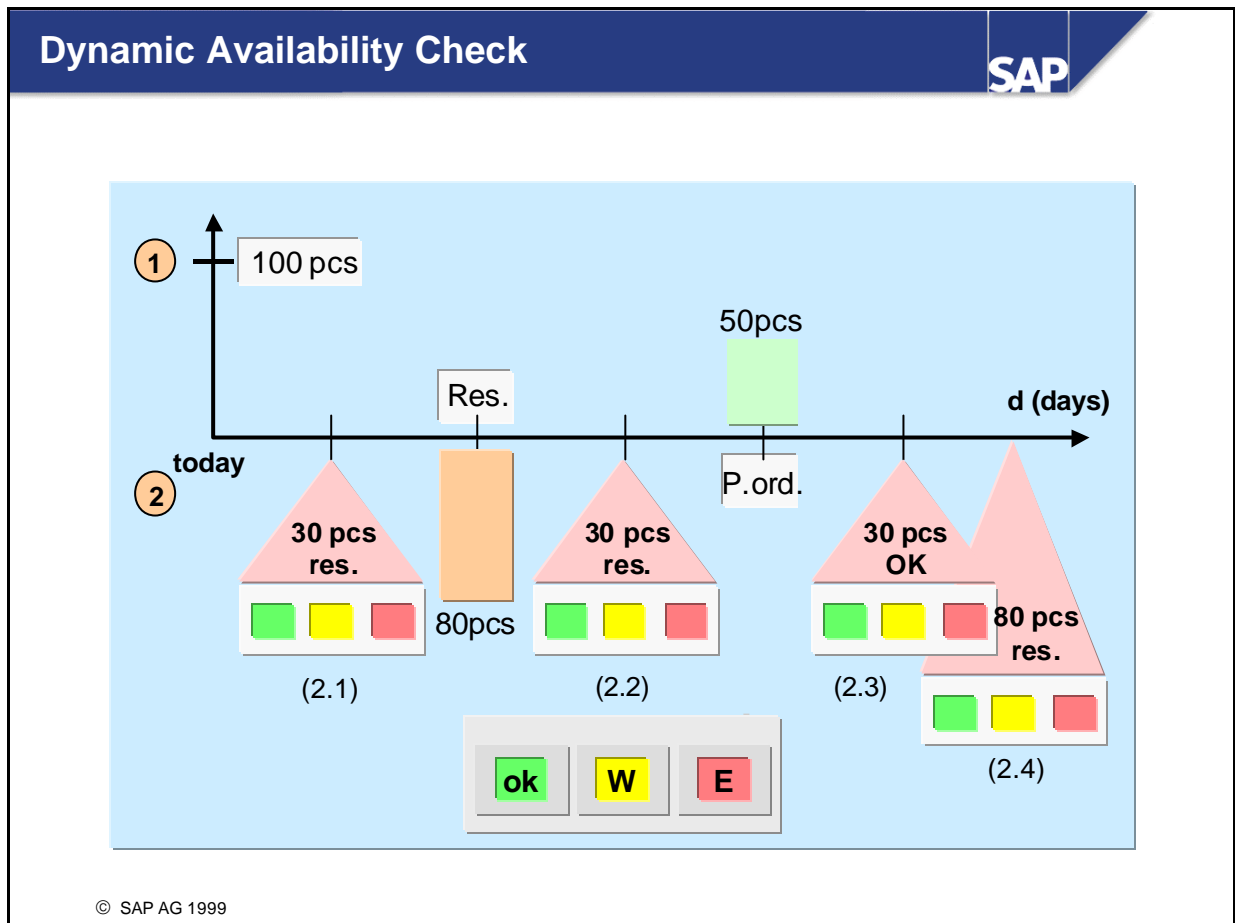
With reference



- With new base date
- Different acct assignment possible with same movement type

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- Important functions when creating or changing reservations:
  - Allow movement
  - Set deletion indicator
  - Change base date



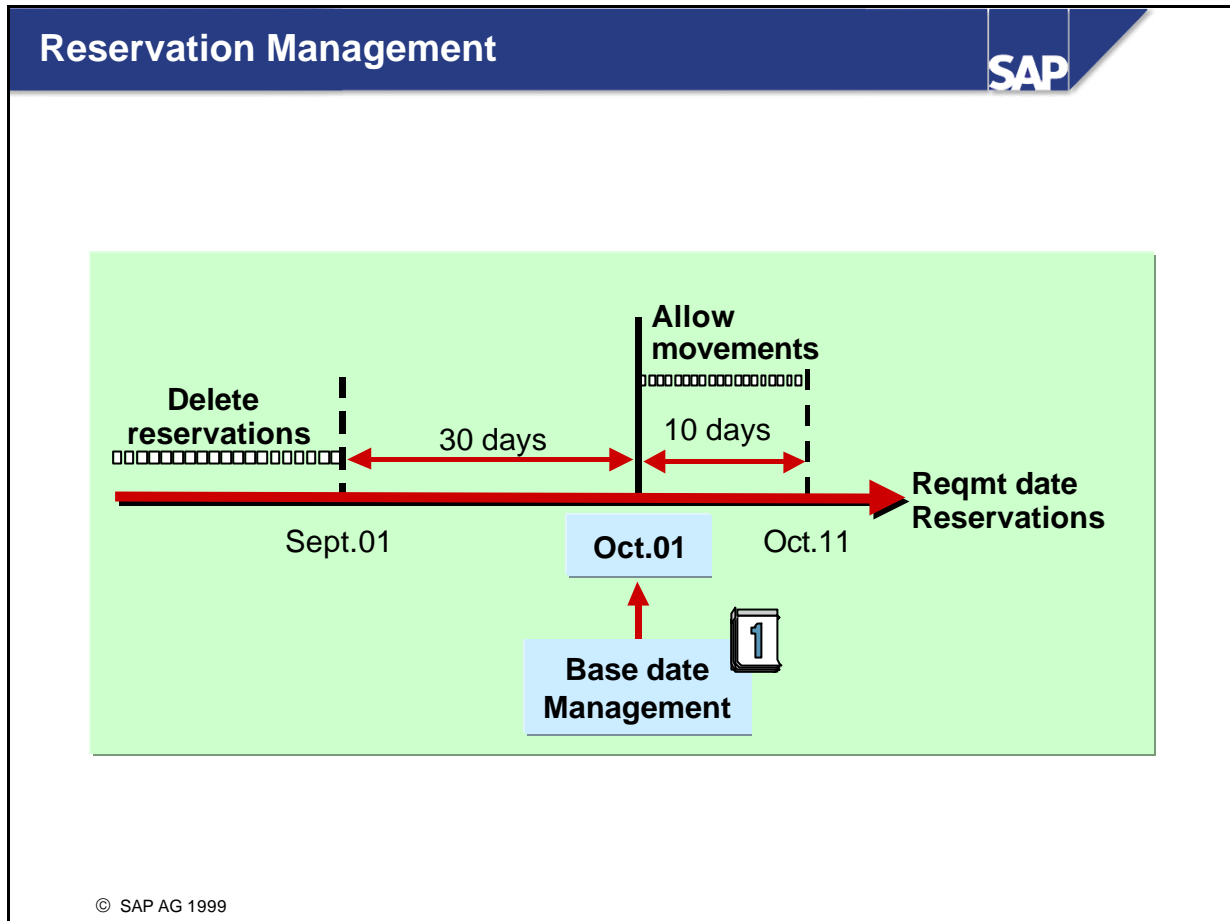
■ **Initial situation:**

- Stock 100 pcs
- 80 pcs reserved for today + 2d
- 50 pcs ordered for today + 4d

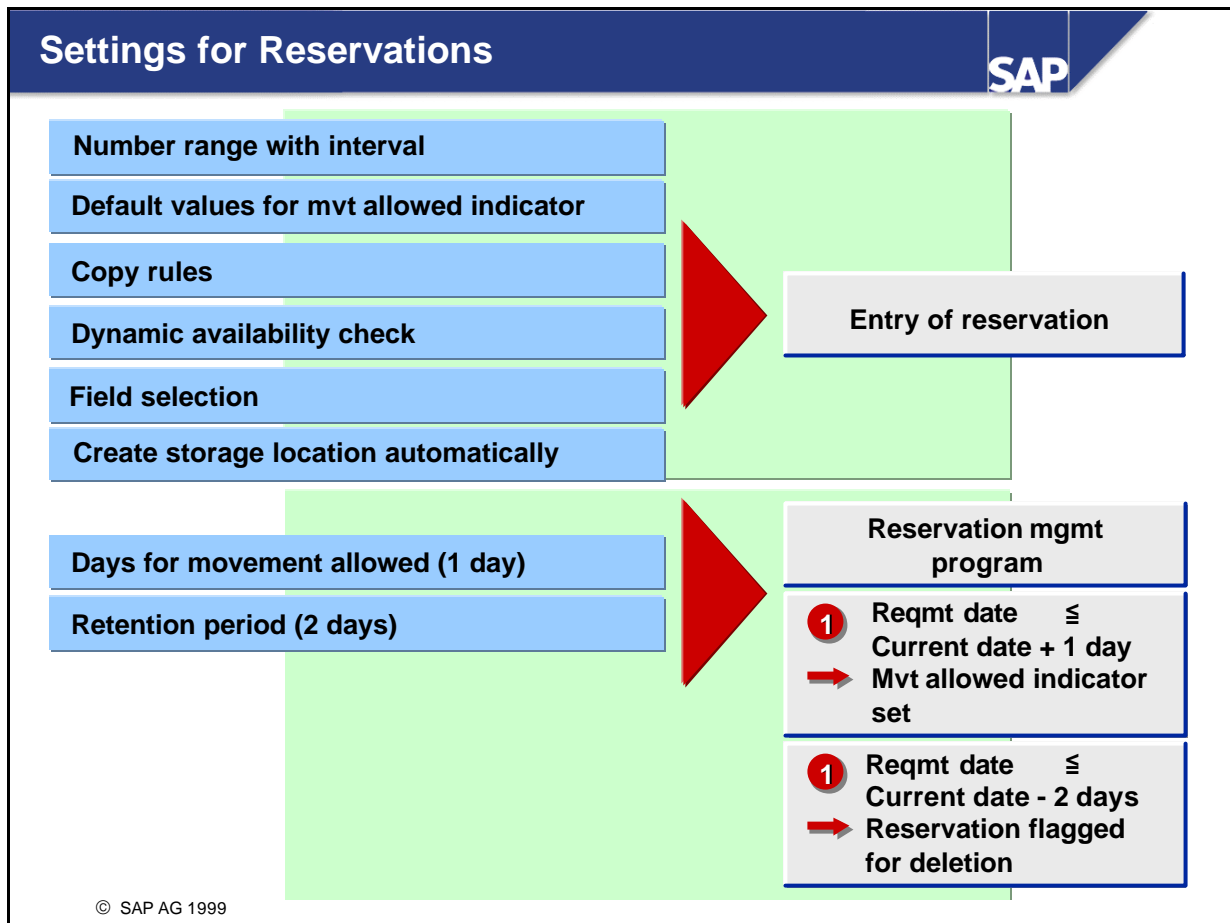
■ **New reservation:**

- 2.1 Reservation of 30 pcs for today + 1d → warning message
- 2.2 Reservation of 30 pcs for today + 3d → warning message
- 2.3 Reservation of 30 pcs for today + 5d → ok, no warning message
- 2.4 Reservation of 80 pcs for today + 5d → warning message

- If the dynamic availability check is actively set for a type of reservation, the R/3 System includes upcoming material requirements in the availability check.

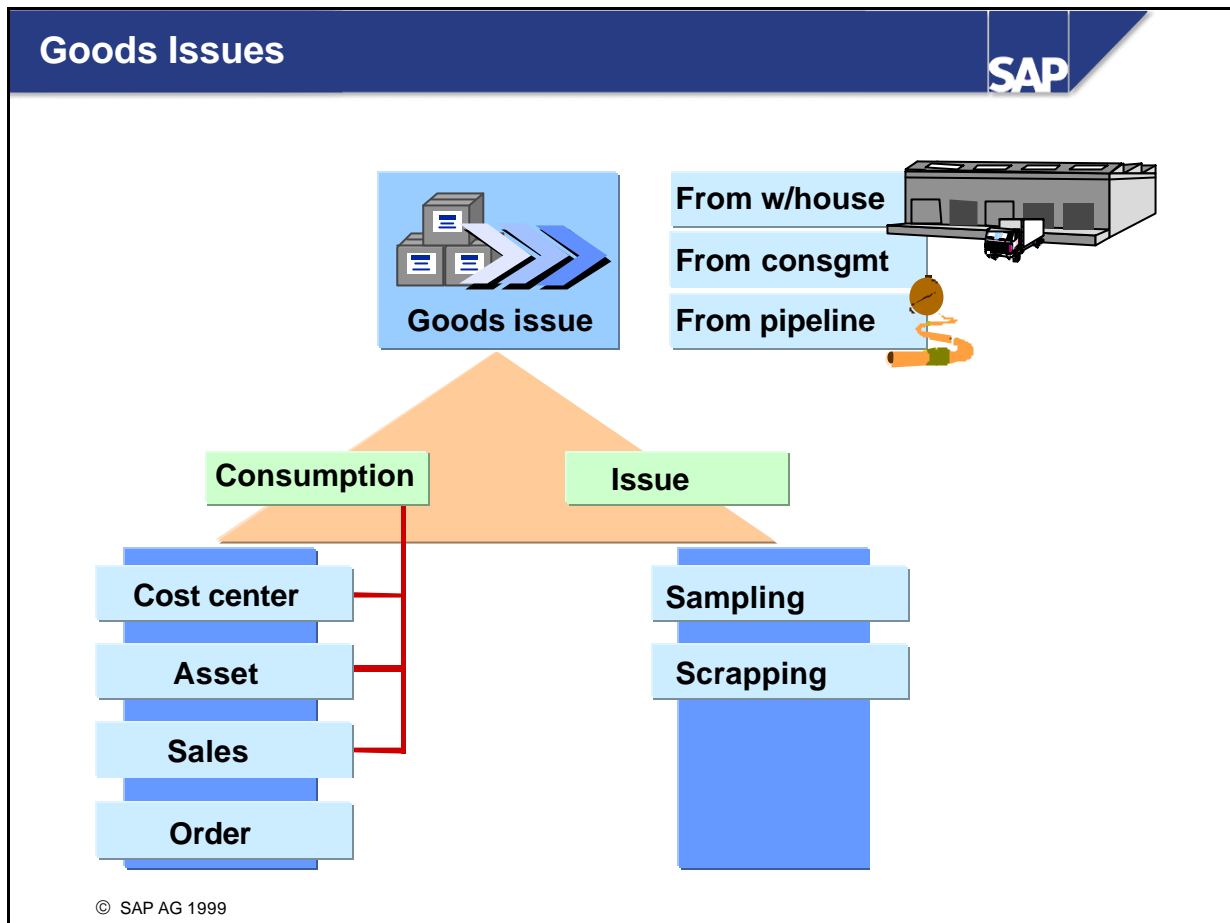


- The management program for reservations can both reorganize the reservation file and make mass changes to reservations.
- To do so, it:
  - Flags items for deletion
  - Deletes reservations (these are not archived)
  - Allows movements for reservation items
- The management program only includes reservations that have been manually created.




- You can change the field selection depending on the movement type.
- As of Release 4.5A, you can define per plant whether the R/3 System is allowed to create stock segments for reservations in a particular storage location automatically.





- Goods issues can be planned or unplanned. The data to be entered depends on the type of goods issue. The R/3 System prepares various account assignment fields, depending on the movement type and system configuration. It uses automatic account determination to determine the G/L account to which the movement is posted. You enter a G/L account only if you want to post the goods movement to another account.
- If a material is no longer of use, it is posted for scrapping. If a material is destroyed, this information must also be entered in the R/3 System. You can scrap material from unrestricted-use stock, stock in quality inspection, and blocked stock. When you post a material for scrapping, the R/3 System reduces the relevant stock, transfers the value of the scrapped material from the stock account to a scrap account, and debits the cost center entered.
- Sample withdrawal is a goods issue generally linked to a quality inspection. The SAP sampling procedure assures you that the sample for testing is taken from the existing stock. The sampled goods are treated as destroyed – in other words, the system assumes that the material can no longer be used after the quality inspection. In this way, sampling is the same as scrapping, with the exception that the value of the sampled material is posted from the material stock account to the quality inspection expense account.

## Goods Issue with Change of Movement Type



Enter Goods Issue			
Goods issue	Edit	Goto	Valuat.
Mvt type 201	New items		
	New item		
	Default values		
Cost center 1000			
itm	Mat	Quantity	
1	mat 1	10 pcs	

Maintain Default Values	
Movement type	241
Special stock	
Plant	1000
Storage location	0001
Cont.	New items
	New item

MVT 241  
 Material Mat 2  
 Quantity 505  
 Asset 1000A

Enter Goods Issue: Overview				
itm	Qty	Mat	Plnt/SLoc	MvT
1	10	Mat1	1000/0001	201
2	50	Mat2	1000/0001	241

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- You can change movement types while you enter a goods issue.

## Entering Goods Issues

**SAP**

**W/o reference**

- Individual entry
- Collective entry


**With reference**

- For reservation
- For order
- For bill of material (BOM)

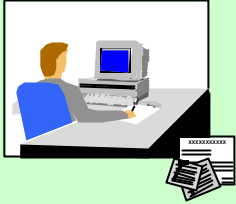
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- You can use a combination of all entry techniques.
- Movement types may vary for each item.
- Collective entry is possible, even if the material document items have different account assignments.

## Planned Goods Issue



**With reference...**



**... to reservation**


- Direct entry
- Search for material
- Search by acct assgmt




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- A prerequisite for goods issue is that the movement is allowed for the reservation item. You can:
- Restrict by storage location
- Extend selection regarding requirements date
- Distribute the proposed quantity
- The R/3 System updates the quantity withdrawn and the corresponding value in the reservation.
- You can set the final issue indicator. This means that the reservation item can be considered completed.

## Unplanned Goods Issue

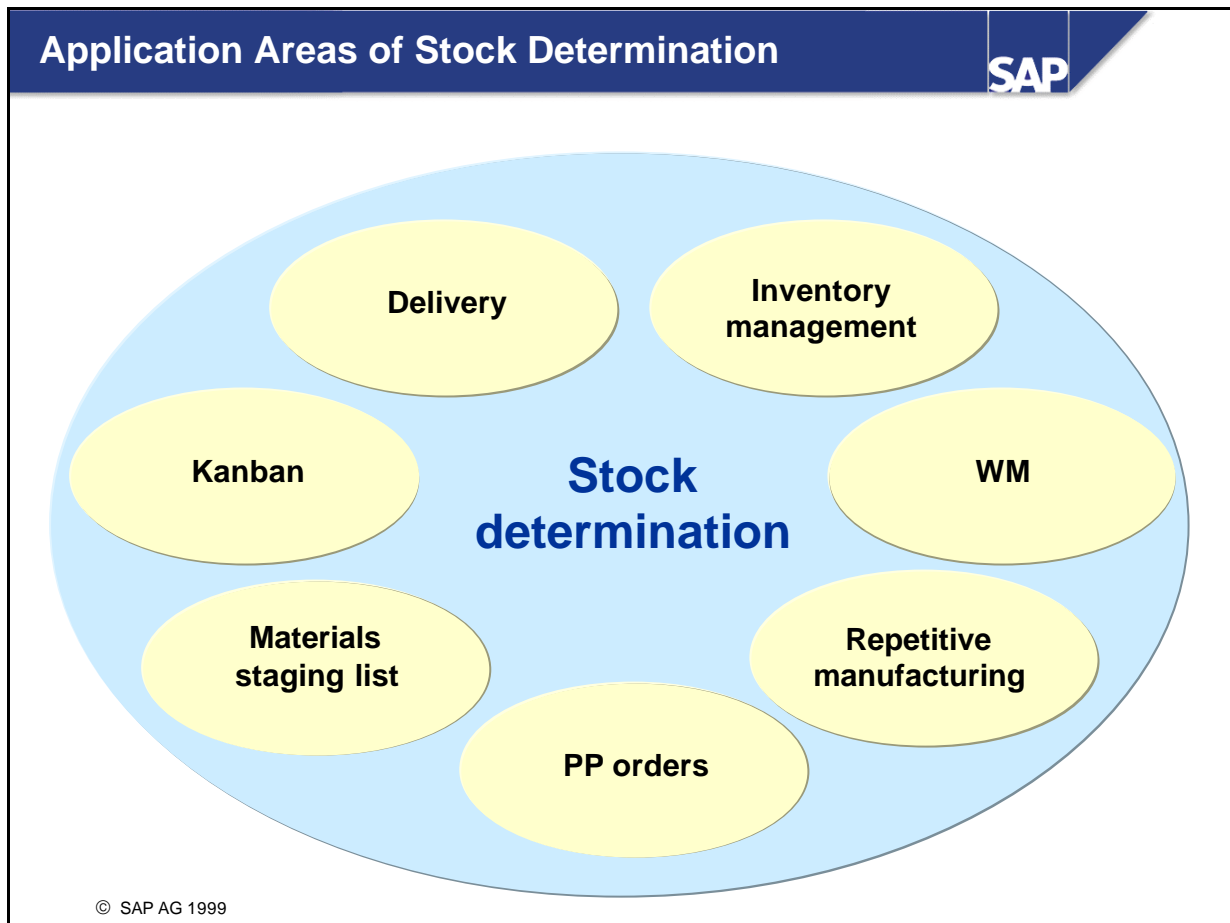
SAP



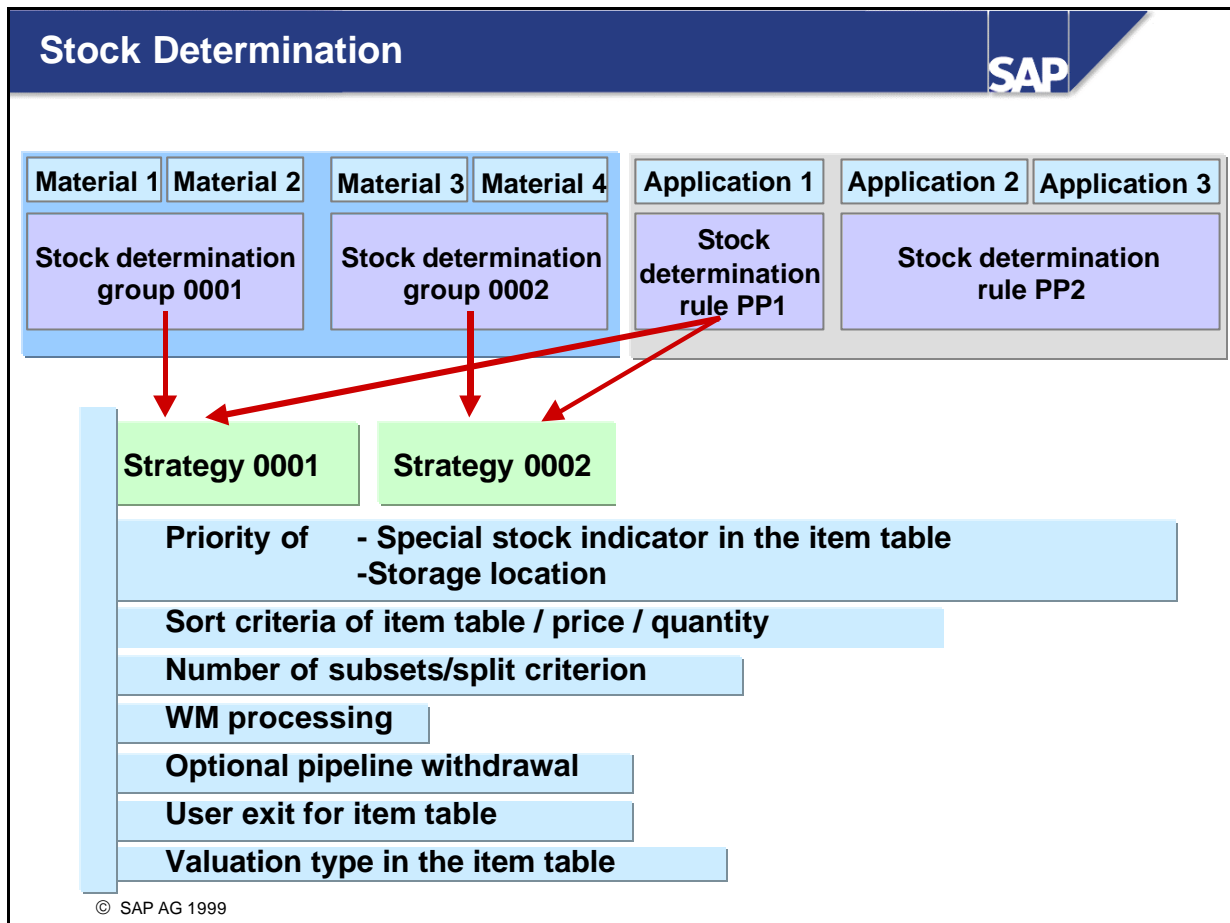
- Individual entry 
- Collective entry 
- Stor.loc./ Batch "\*" 

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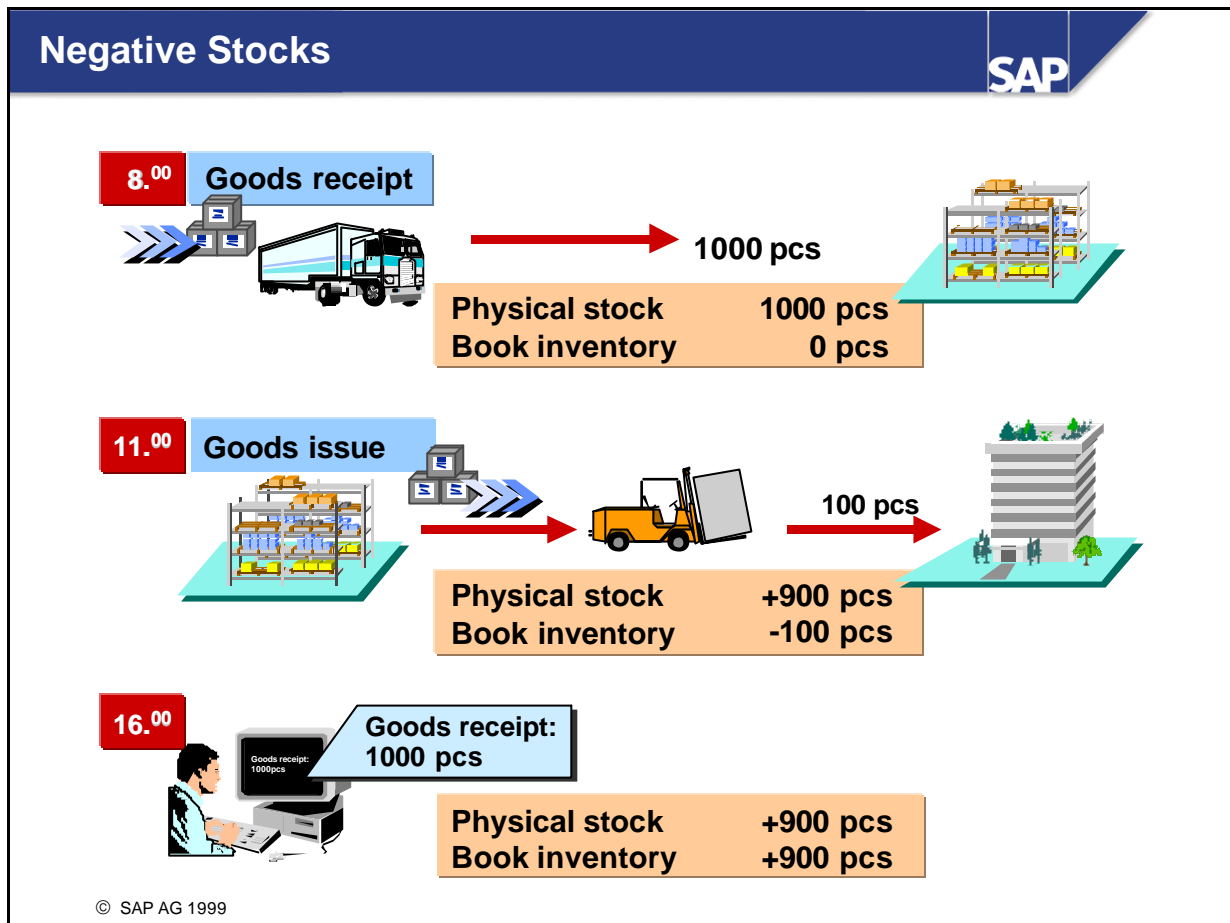
- You cannot make reference to the reservation. All data required for the goods issue is entered directly when the goods issue is posted.



- The withdrawal sequence function from Release 3.0 was replaced in 4.0A by the stock determination function. In Customizing for Inventory Management, there is a conversion report for copying the old withdrawal sequence groups to stock determination.
- Stock determination is a function that can be used on a cross-application basis. It enables you to determine the stock type from which materials should be removed for withdrawals, picking, and staging transactions.
- Stock determination allows you to lay down strategies for material withdrawals by using predefined settings. This function is used in several applications, and is therefore important to the integration of the R/3 System as a whole.

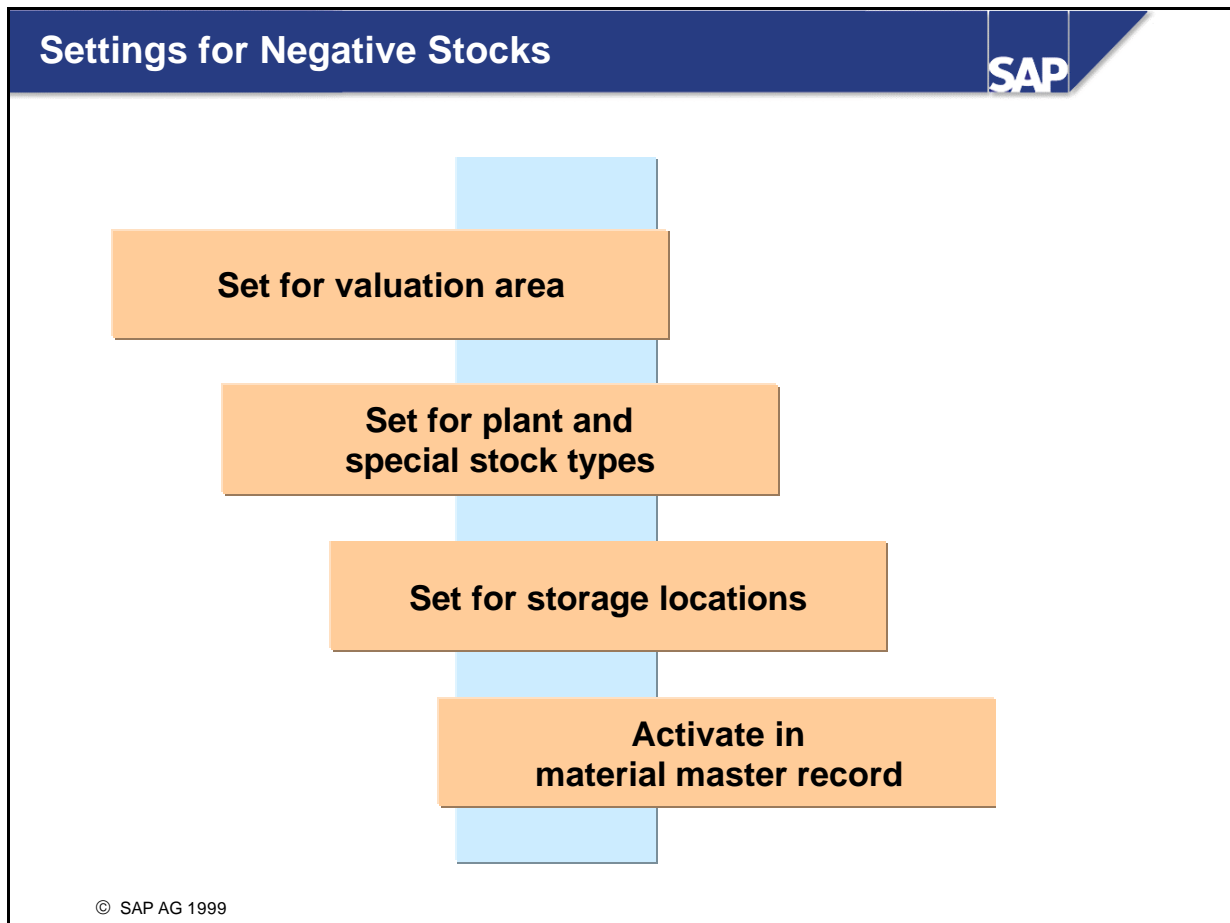


- You enter the stock determination group in the material master at plant level. It controls material-related stock determination.
- The stock determination rule is assigned by the application in which it is called.
- The stock determination group, along with the stock determination rule, forms the unique key for the stock determination strategy at plant level.
- The stock determination strategy defines which stocks can be considered for a transaction (special stock indicator, storage location), which preferences are to be included (sorting criteria), which priority these preferences should have when they are combined with other strategies, or whether stock determination is carried out online or in the background.
- As of Release 4.5A, you can enter a valuation type directly in the item table, enabling you to more conveniently determine stocks for withdrawal in the case of materials with split valuation.
- As of Release 4.5A, you can also include the special stocks E (sales order stock) and Q (project stock) in stock determination.



- You can also manage negative stock balances for materials with moving average price control and for special stocks, such as vendor consignment, material provided to vendor, sales order stock, and project stock.
- Negative stock balances are required if, for organizational reasons, goods issues are entered before the corresponding goods receipts, and the material is already physically located in the warehouse.
- Once you have posted the goods receipts, the book inventory balance should correspond with the physical stock again – in other words, it should no longer be negative. Negative stocks always indicate that physical movements have to be entered in the system at a later stage.
- If you work with negative stock balances, you have to ensure that you do not have negative stocks on the balance sheet key date or when you carry out a physical inventory.
- As of Release 4.6A, blocked stock can also be negative.

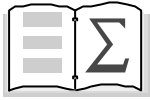




- To work with negative stock balances, you have to allow these for the relevant valuation area and storage locations in Customizing for Inventory Management.
- You make the settings for negative stocks in Customizing for Inventory Management by choosing *Inventory Management® Goods Issue / Transfer Postings® Allow Negative Stocks*.
- If the first movement of a material is an outward movement, you can define in Customizing that storage location data is created automatically for goods issues by choosing *Create Storage Location Automatically*.

## Reservations: Unit Summary

SAP

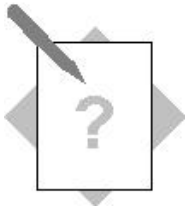


**You are now able to:**

- **Preplan goods movements with reservations and create a picking list**
- **Identify special goods issues, for example, inspection samples or scrapping**
- **Process different goods issue options, planned or unplanned, and their respective updates**
- **Create a goods issue using stock determination functionality**
- **Manage materials with negative stock**

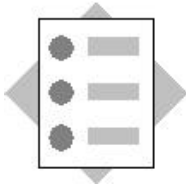
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## Exercises



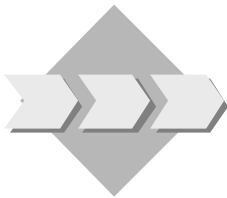
### Unit: Reservations and Goods Issues

#### Topic: Reservations



At the end of this exercise, you will be able to:

- Create and display reservations
- Identify the settings needed to manage reservations
- Explain the impact of the dynamic availability check



Your company is still testing purchasing and production order processing transactions in R/3. Until you go live with Materials Management, you intend to plan goods receipts from external vendors and production order issues through the R/3 reservations system. This ensures that MRP will have the necessary planning information.

**As a storeperson, use the user menu to carry out the following activities.**

- 1-1 Purchasing informs you that **500** pieces of material **T-RN1##** and **500** pieces of material **T-RN2##** are to be delivered to plant **1000**, storage location **0002** in two weeks time. Create a reservation for this planned delivery.

Movement type: \_\_\_\_\_

Reservation number: \_\_\_\_\_

- 1-2 Cost center **T-L##** informs you that it will require **100** pieces of material **T-RN1##** and **50** pieces of material **T-RN2##** in **four weeks**. The goods are to be withdrawn from storage location 0002. Enter the storage location in the reservation. Enter a reservation for these planned withdrawals and note as the goods recipient, the name of the person you spoke with, Mr. N. VanTory.

Movement type: \_\_\_\_\_

Reservation number: \_\_\_\_\_

- 1-3 In **eight** weeks, cost center **T-L##** will have the same material requirement again. The storage location for this withdrawal is not yet certain, so you cancel the storage location in the reference document. Create another withdrawal reservation with reference to the reservation from part 1-2 above.

Movement type: \_\_\_\_\_

Reservation number: \_\_\_\_\_

- 1-4 A colleague has just informed you that the materials in the reservation created in part 1-3 will now be required in **one week**. Therefore, you need to change the date for this reservation.

What menu path do you use?

\_\_\_\_\_

- 1-5 How can you display all of the reservations for materials **T-RN1##** and **T-RN2##**? What types of reservations are listed for each material?

\_\_\_\_\_

\_\_\_\_\_

- 1-6 Display the stock overview to see the reserved quantity for receipts and issues of materials **T-RN1##** and **T-RN2##**.

*(Stock Overview)*

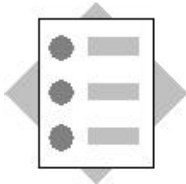
<b>Plant 1000</b>	<b>Reserved (issues)</b>	<b>Reserved (receipts)</b>
T-RN1##		
T-RN2##		

## Exercises



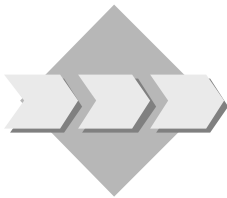
### Unit: Reservations and Goods Issues

#### Topic: Goods Issues



At the end of this exercise, you will be able to:

- Enter goods issues
- Outline the differences between planned and unplanned issues
- Explain the stock determination function



In your company, you receive goods into stock and issue them to a consumption account. In this case, it will be a cost center. The material manager responsible for the plant can analyze the stock situation by looking at the stock overview and consumption statistics.

**As a storeperson, use the user menu to carry out the following activities.**

- 2-1 Use the stock overview and the consumption statistics for materials **T-RN1##** and **T-RN2##** in plant **1000**.

*(Stock overview and consumption statistics)*

Plant 1000	Unrestricted-use stock	Reserved (issues)	Reserved (receipts)	Total consumption
T-RN1##				
T-RN2##				



**For consumption statistics from the stock overview report:** Position the cursor on the plant line. Choose *Extras* ® *Display Material*. Choose *Additional data* (then use the arrow to move right until you see *Consumption*). Choose *Consumption*.

- 2-2 The reservation for a **goods receipt without purchase order** for materials **T-RN1##** and **T-RN2##** created in part 1-1 of the previous exercise is to be received into unrestricted-use stock. Post this receipt with reference to the reservation.



Choose *Goods movement* ® *Goods receipt* ® *Others*. Then choose *For reservation* and enter or search for your reservation number. Select *Without account assignment*.

What movement type do you use? \_\_\_\_\_

Material document number: \_\_\_\_\_

- 2-3 A goods issue is to be carried out for cost center **T-L##** from the warehouse stock of material **T-RN1##**. At the time of goods issue, check if there are open reservations for this material and cost center. Use the pick list to do this.

- 2-3-1 Select the reservation that is **due first**. Then delete all other reservations from the picking list. The goods issue quantity equals the reserved quantity, so there is no need to change the quantity. To post the goods issue, save the list.

What movement type does the R/3 System propose? \_\_\_\_\_

Material document number: \_\_\_\_\_



Menu path: **Reservation** ® **Picking List**

Create the picking list by specifying the relevant material and cost center for selection.

- 2-4 You need to issue materials **T-RN1##** and **T-RN2##** to cost center **T-L##**. Run a reservation list display for these materials to determine if there is a reservation with open quantities for both of these materials. Use the *Goods Issue* menu rather than the picking list to do this.

Reservation number: \_\_\_\_\_

- 2-5 Issue out to cost center **T-L##** with reference to the open reservation from step 2-4. The cost center now requires a quantity different to that listed on the reservation. For material **T-RN1##**, issue **10 less** than the reserved quantity and close this reservation line by indicating a final issue, because the remaining quantity is no longer needed. For material **T-RN2##**, issue the quantity that is listed on the reservation. Issue the material from a storage location that has a sufficient quantity. You can search for a location by entering an asterisk (\*) in the *Storage location* field.

Material document number: \_\_\_\_\_

- 2-6 Another **80** pieces of material **T-RN2##** are to be issued to your cost center **T-L##**. Check whether there is a corresponding reservation. There is a reservation, but only for a quantity of 50 pieces. Enter the goods issue with reference to the reservation, change the quantity, and specify a storage location with enough stock.

Reservation number: \_\_\_\_\_

Material document number: \_\_\_\_\_

- 2-7 Cost center **T-L ##** returns **60** pieces of material **T-RN2##**. Enter this movement as a reversal of a goods issue with reference to the reservation from part 2-6 above. The material is placed in storage location 0001.

Material document number: \_\_\_\_\_



Choose *Goods issue* ® *Cancel with reference* ® *To reservation*

- 2-8 Cost center **T-L##** needs **10 pieces** of material **T-RN1##** immediately. There is no reservation for this transaction. Enter this unplanned goods issue for the cost center from plant **1000**. What menu path do you use?

\_\_\_\_\_

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

- 2-9 Cost center **T-L##** and project **E-9990** each need **10 pieces** of material **T-RN1##** immediately. There is no reservation for this transaction. Enter this unplanned goods issue for the cost center and the project on one material document. Use plant **1000**, storage location **0001**.



Enter the first issue. Then choose **Edit ® Default values** and enter the second movement type (221 for the project or 201 for the cost center) and select *New item* to enter the second issue.

Movement type for issue to cost center: \_\_\_\_\_

Movement type for issue to project: \_\_\_\_\_

Material document number: \_\_\_\_\_

- 2-10 Display the consumption statistics for materials **T-RN1##** and **T-RN2##** in plant 1000.

*(Stock overview and consumption statistics)*

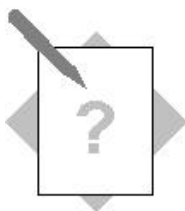
Plant 1000	Unrestricted -use stock	Reserved (issues)	Reserved (receipts)	Total consumption
T-RN1##				
T-RN2##				



**For consumption statistics from the stock overview report:** Position the cursor on the plant line. Choose *Extras ® Display Material*. Choose *Additional data* (then use the arrow to move right until you see *Consumption*). Choose *Consumption*.

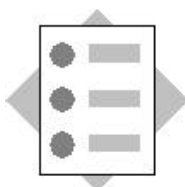


## Exercises



### Unit: Reservations and Goods Issues

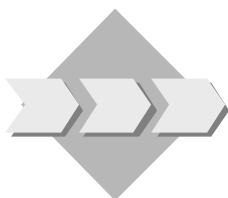
#### Topic: Negative Stock



At the conclusion of this exercise, you will be able to:

- Determine the Customizing settings that allow negative stock
- Define the organizational levels for negative stock configuration
- Post a goods issue to create negative stock

#### Optional Exercise\*



In your company, you sometimes need to allow negative stock for a material. Sometimes a delivery will arrive and you do not have time to process the receipt in the R/3 System. If a cost center needs the material right away, you post a goods issue, which leads to a negative stock balance. At the end of the day, you process the goods receipt in the system and this makes the inventory positive again.

- 3-1 Cost center **T-L##** needs 100 pieces of material **T-RN6##** immediately. Check the stock overview to see how much of material **T-RN6##** you have in stock. Write down the current stock situation.

Plant 1000	Unrestricted-use stock	Open purchase order quantity
T-RN6##		

- 3-2 The material manager confirms that a delivery has been received, but the receipt has not been entered into the R/3 System because the receiving dock is busy. Issue 100 pieces of material **T-RN6##** to cost center **T-L##**. The receiving department will process the receipt later when they have time. This transaction results in a negative stock balance.

Material document number: \_\_\_\_\_

3-3 Write down the result on the stock overview.

Plant 1000	Unrestricted-use stock	Open purchase order quantity
T-RN6##		

3-4 Verify the configuration settings that affect negative stock. Use the SAP menu to do this.



**Please do not change the settings!**

3-5 What is the menu path for negative stock configuration?

---



---

3-6 What are the organizational levels in the configuration table for negative stock?

---



---



---

3-7 Display the configuration for plant **1000** and answer the following questions. How many special stock types can be configured to allow negative stock?

---



---



---

3-7-1 Which storage locations within plant **1000** allow negative stock?

---

3-8 Check if material **T-RN6##** will allow negative stock. In which view of the material master can you set the indicator to allow negative stock?

---

# Solutions



## Unit: Reservations and Goods Issues

### Topic: Reservations

- 1-1 ***Inventory Management*** ® ***Reservation*** ® ***Create***, then choose ***Movement type*** ® ***Receipt*** ® ***From vendor w/o PO*** ® ***To unrestricted***

Movement type: 501

- 1-2 ***Inventory Management*** ® ***Reservation*** ® ***Create***, then choose ***Movement type*** ® ***Consumption*** ® ***For cost center***

Movement type: 201

- 1-3 ***Inventory Management*** ® ***Reservation*** ® ***Create***. In the *Ref. Reservation* field, enter the reservation from part 1-2.

Movement type: 201

- 1-4 ***Inventory Management*** ® ***Reservation*** ® ***Change***, then choose ***Goto*** ® ***Header***

- 1-5 ***Reservation*** ® ***By material***

You enter the material numbers in the *From* and *To* fields on the initial screen. Receipt (movement type 501) and issue (movement type 201) reservations are listed for each material.

- 1-6 ***Inventory Management*** ® ***Environment*** ® ***Stock*** ® ***Stock Overview***

(*Stock Overview*)

<b>Plant 1000</b>	<b>Reserved (issues)</b>	<b>Reserved (receipts)</b>
T-RN1##	200	500
T-RN2##	100	500

## Solutions



### Unit: Reservations and Goods Issues

### Topic: Goods Issues

- 2-1 For Plant Stock Availability, choose: **Environment** ® **Stock** ® **Plant stock availability**

For consumption statistics from the plant stock availability report: Enter the material, the plant, and select the automatic column selection. Choose *Execute*. Position the cursor on the plant line, then choose the option for consumption values.

Or:

For stock overview: **Inventory Management** ® **Environment** ® **Stock** ® **Stock Overview**

For consumption statistics from the stock overview report: Position the cursor on the plant line. Choose **Extras** ® **Display material**. Then choose *Additional data* and use the arrow to scroll to the right until *Consumption* appears. Choose *Consumption*.

(Stock overview and consumption statistics)

Plant 1000	Unrestricted use stock	Reserved (issues)	Reserved (receipts)	Total consumption
T-RN1##	125	200	500	0
T-RN2##	0	100	500	0

- 2-2 **Inventory Management** ® **Goods Movement** ® **Goods Receipt** ® **Others**, then choose *To reservation...*

Movement type: 501

- 2-3 **Inventory Management** ® **Reservation** ® **For picking**. You select the relevant item, delete all other items, and post the goods issue.

2-3-1 You do not have to change the quantity.

Movement type: 201

- 2-4 **Reservation** ® **By Material**

2-5 **Goods Movement** ® **Goods Issue**, then choose *For reservation*.



In line 1, you change the quantity to 90.

2-6 **Inventory management** ® **Goods movement** ® **Goods issue**, then choose *To reservation...*



You change the quantity from 50 to 80 and choose *Enter* to bypass the warning message regarding the change in quantity.

2-7 **Inventory Management** ® **Goods Movement** ® **Goods Issue**. Then choose **Goods issue** ® **Cancel with reference** ® **To reservation**.



You change the quantity from 80 to 60 only for material T-RN2##.

2-8 **Inventory Management** ® **Goods Movement** ® **Goods Issue**, then choose **Movement type** ® **Consumption** ® **To cost center** ® **From warehouse**.

Movement type: 201

2-9 **Inventory Management** ® **Goods Movement** ® **Goods Issue**, then choose **Movement type** ® **Consumption** ® **To cost center** ® **From warehouse**.

Movement type: 201



You enter the first issue and choose **Edit** ® **Default values** and enter the second movement type (221 for project or 201 for cost center). You choose **New item** to add the second issue.

Movement type for issue to cost center: 201

Movement type for issue to project: 221

2-10 *(Stock overview and consumption statistics)*

<b>Plant 1000</b>	<b>Unrestricted -use stock</b>	<b>Reserved (issues)</b>	<b>Reserved (receipts)</b>	<b>Total consumption</b>
T-RN1##	405	0	0	220
T-RN2##	430	30	0	70

## Solutions



**Unit: Reservations and Goods Issues**

**Topic: Negative Stock**

3-1 *Inventory Management* ® *Environment* ® *Stock* ® *Stock Overview*

Plant 1000	Unrestricted-use stock	Open purchase order quantity
T-RN6##	1	100

3-2 *Inventory Management* ® *Goods Movement* ® *Goods Issue*, then choose *Movement type* ® *Consumption* ® *To cost center* ® *From warehouse*.



You choose *Enter* to bypass the warning messages.

3-3 *Inventory Management* ® *Environment* ® *Stock* ® *Stock Overview*

Plant 1000	Unrestricted-use stock	Open purchase order quantity
T-RN6##	99-	100

3-4 *Tools* ® *AcceleratedSAP* ® *Customizing* ® *Project Management*.  
Then choose *Display SAP Reference IMG*.

3-5 *Materials Management* ® *Inventory Management and Physical Inventory* ® *Goods Issue/Transfer Postings* ® *Allow Negative Stocks*

3-6 Valuation area

Plant

Storage location

3-7 7

3-7-1 Storage location 0001

3-8 ***Inventory Management ® Environment ® Information ® Material***

General

Plant data/Storage 2.



## Stock Transfers/Transfer Postings

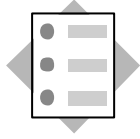
SAP

### Contents:

- Stock Transfer
- Transfer Posting

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## Stock Transfers/Transfer Postings: Unit Objectives



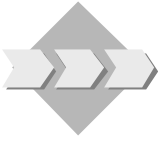
**At the conclusion of this unit, you will be able to:**

- **Explain the difference between physical and logical transfers**
- **Identify different ways to post inventory transfers using one and two-step movement types between companies, plants, and storage locations**
- **Post a stock transfer between plants and storage locations and display the stock overview**

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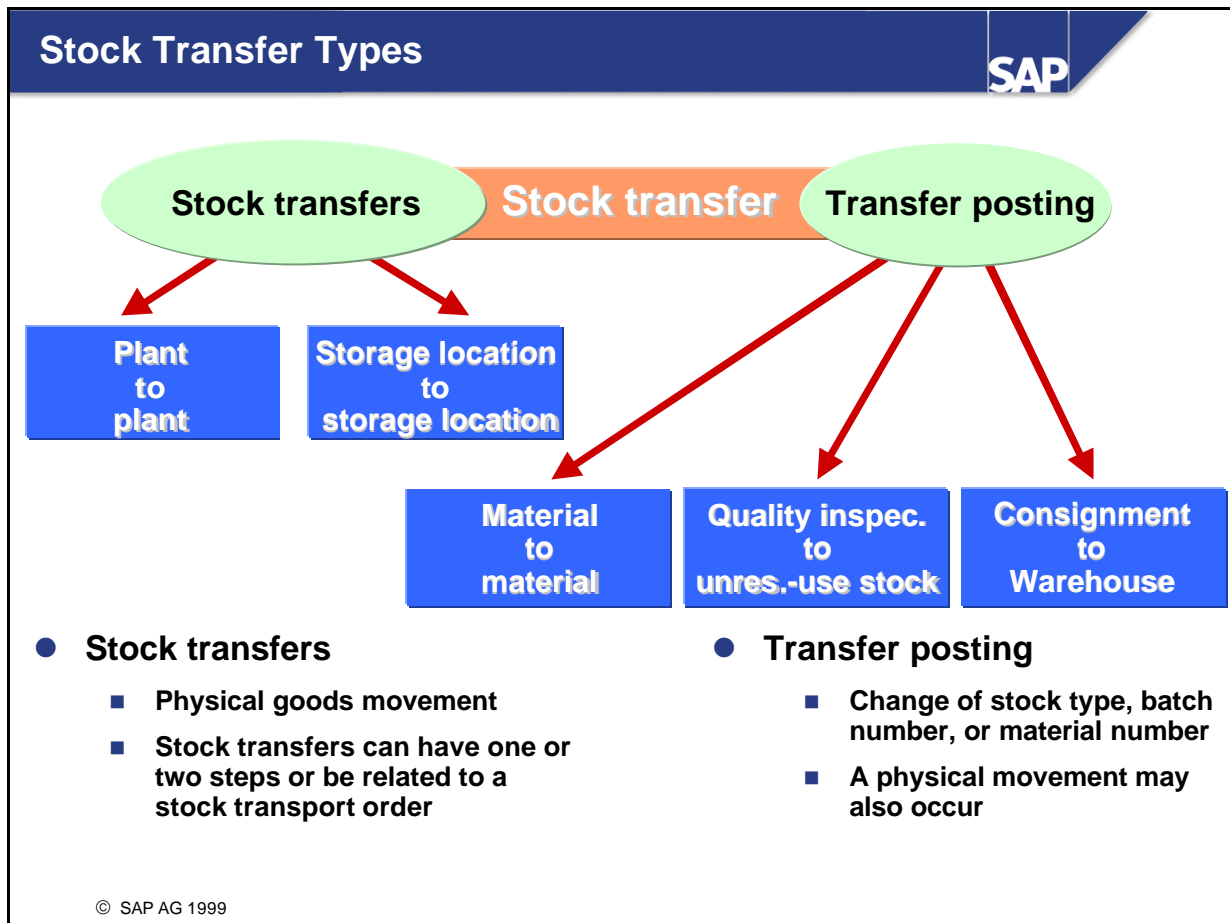
## Business Scenario

SAP

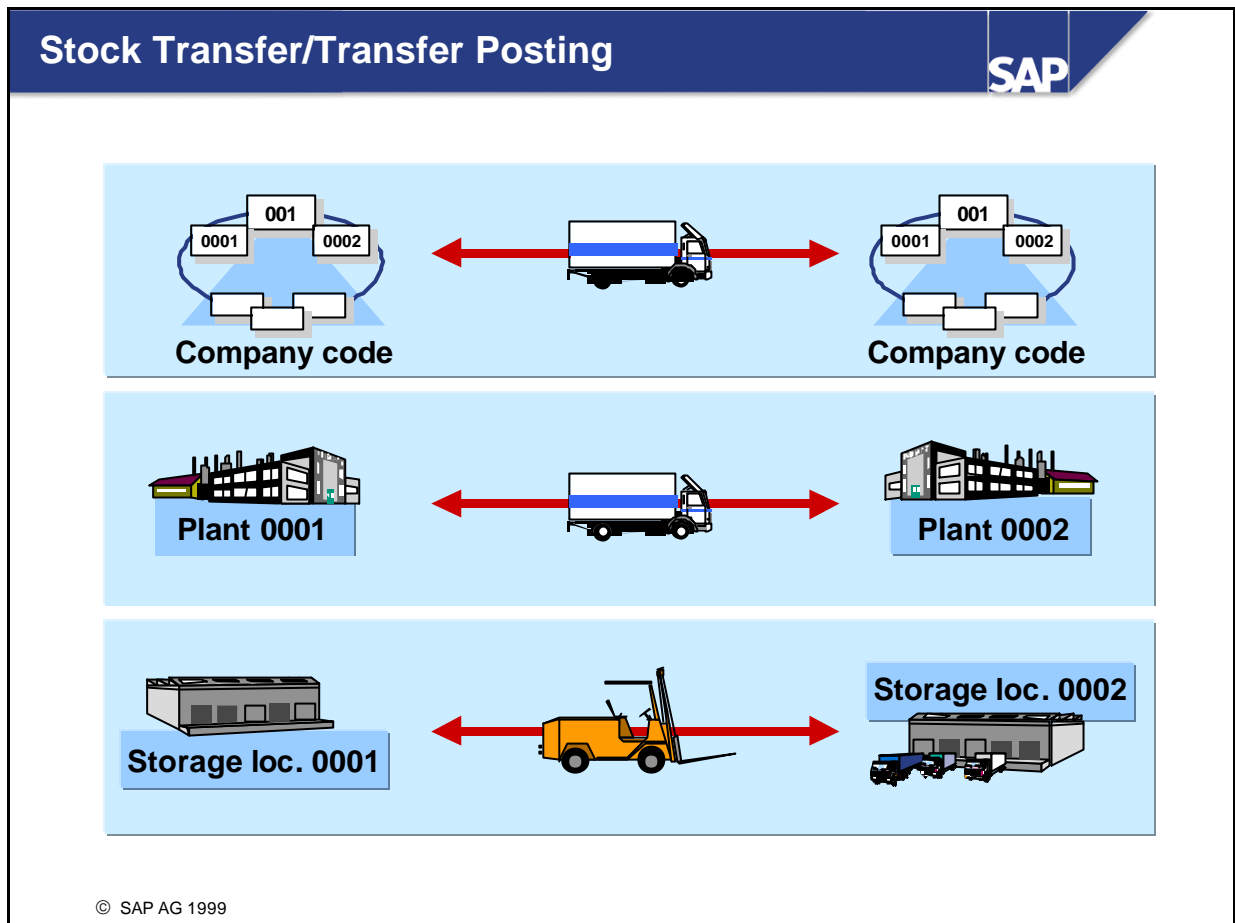


- In your company, you process stock transfers between plants using a two-step procedure because the plants are located in different towns.
- However, within the plant you use a one-step procedure to transfer material because the storage locations are located within the same building. You also have materials that change over time and lose the properties of the original material.

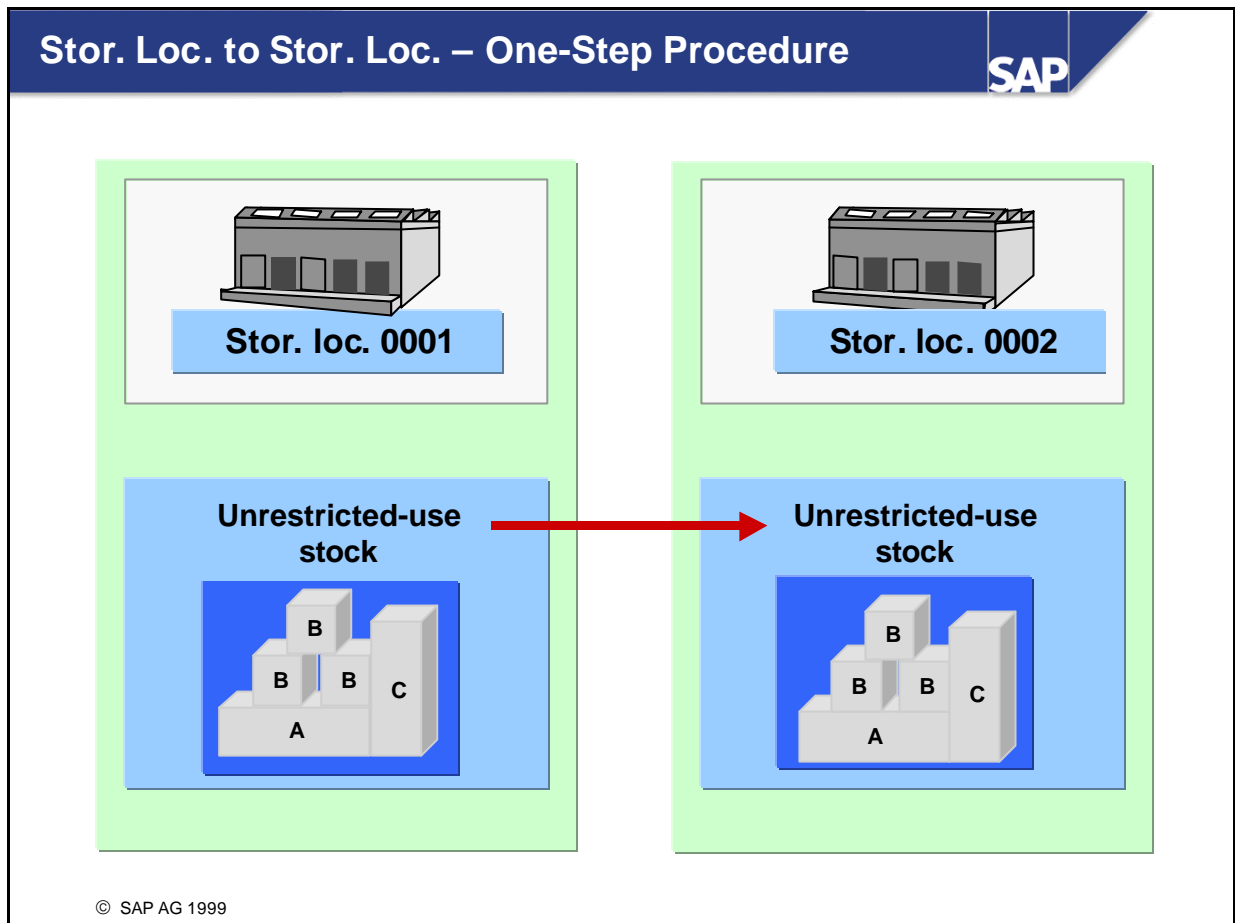
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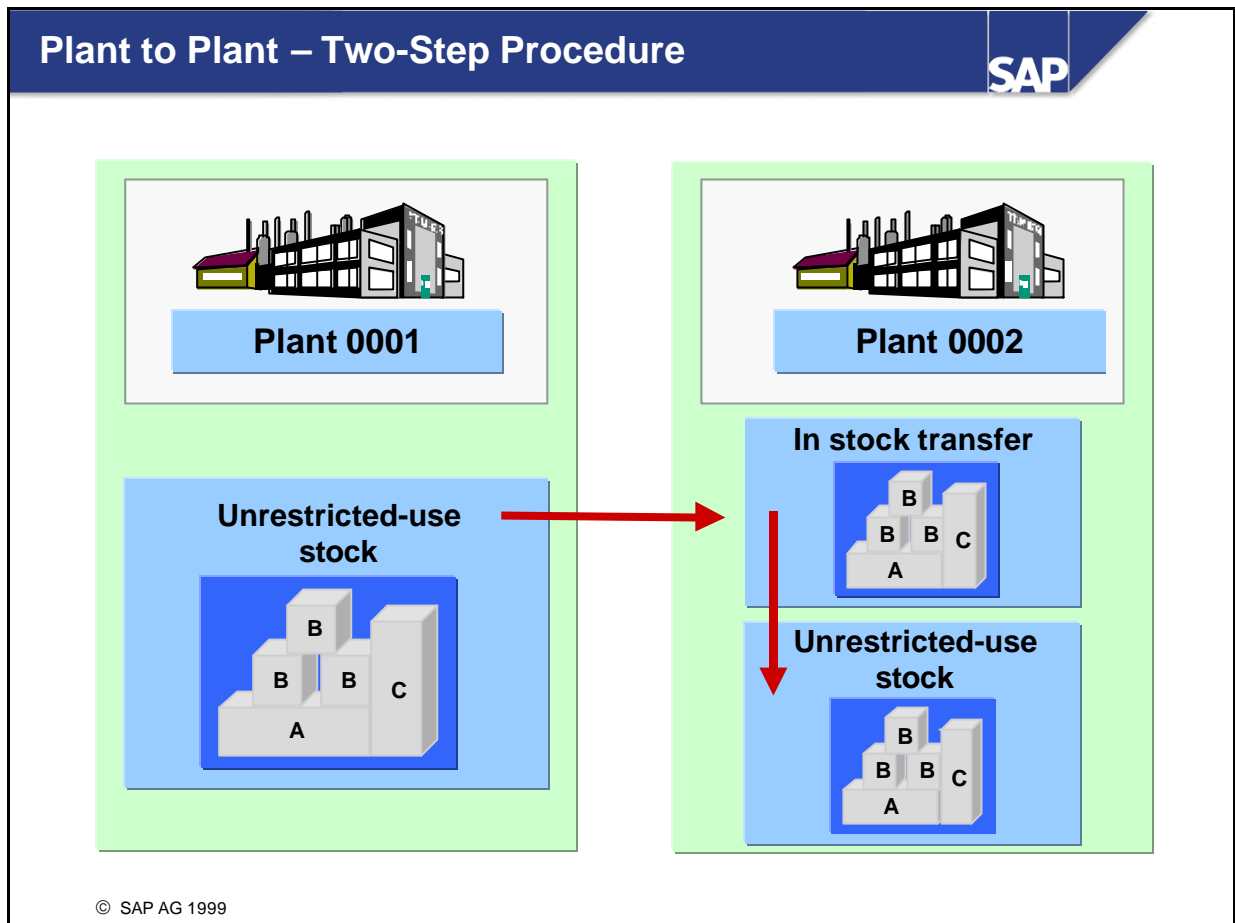
- Unlike stock transfers, transfer postings do not usually involve a physical goods movement, but a change in stock type, batch number, or material number.
- Examples of transfer postings include release from quality inspection or transfer from consignment material to your company's own stocks.
- The R/3 System creates a material document so that the transaction can be entered. Documents in Financial Accounting (FI, CO, CO-PC) are created only if there is a stock change involving valuation (for example, goods are transferred from one plant to another).
- You can also carry out stock transfers with reference to the purchase order. The entire process is explained in the training course LO925 *Cross-Application Business Processes in SD and MM*.



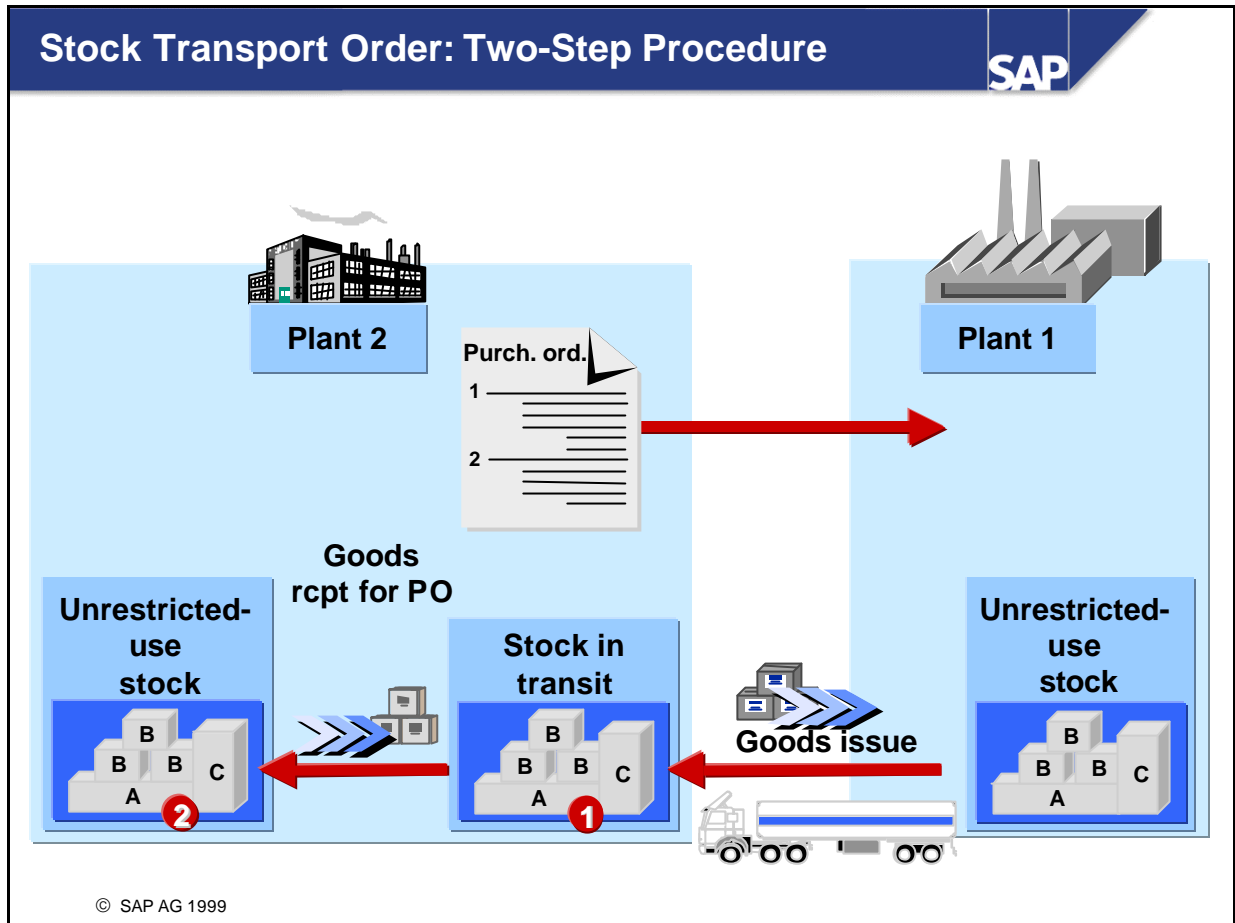
- Stock transfers can be carried out at three different levels:
  - Stock transfer from one company code to another
  - Stock transfer from one plant to another
  - Stock transfer from one storage location to another
- A stock transfer consists of a goods issue from the issuing point and a goods receipt in the receiving point. You can post stock transfers in one step or in two steps.



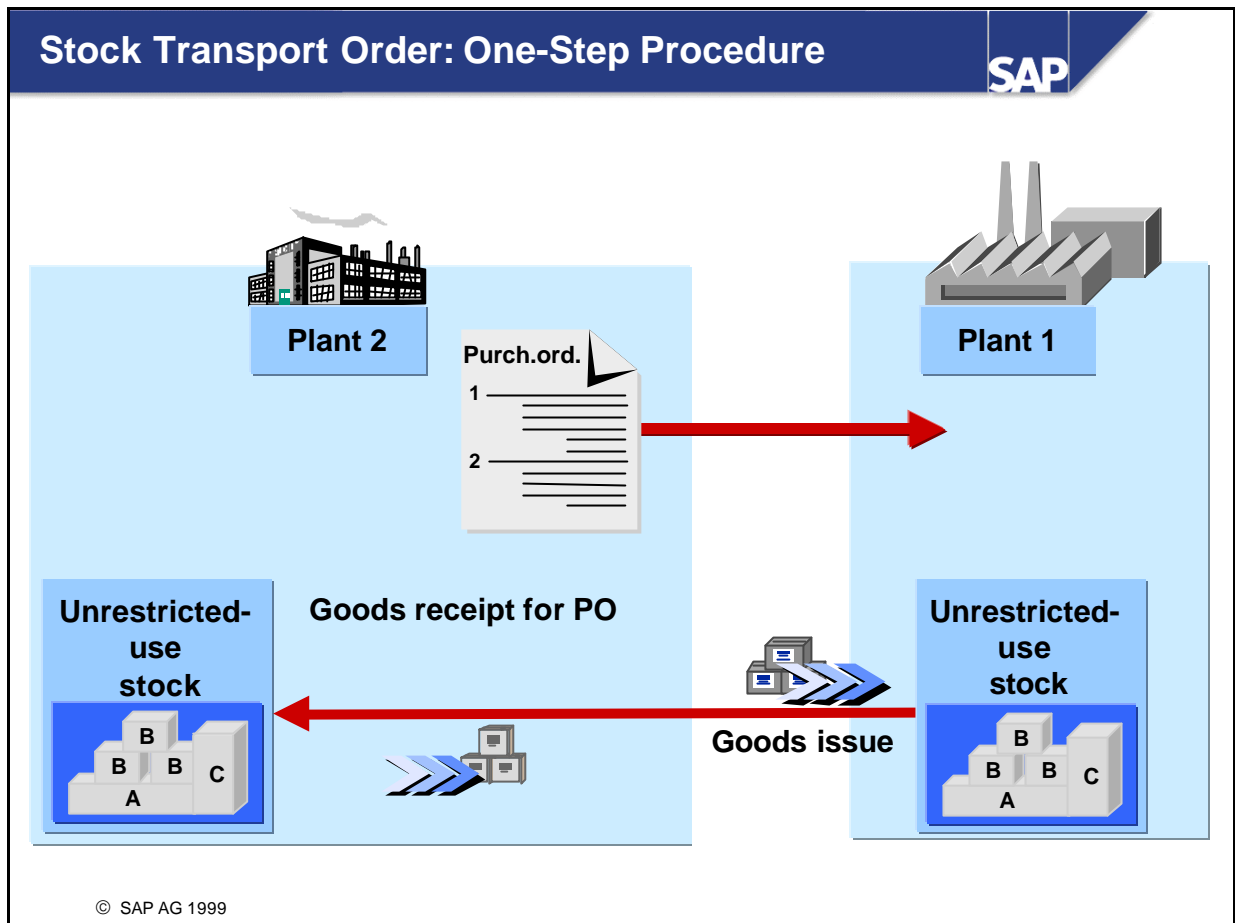
- A stock transfer from one storage location to another is carried out within one plant. As the material is transferred within the same plant, and is managed with the same valuation data as before, the transfer is not valued.
- The advantage of the one-step procedure is that you enter the stock transfer in a single transaction.



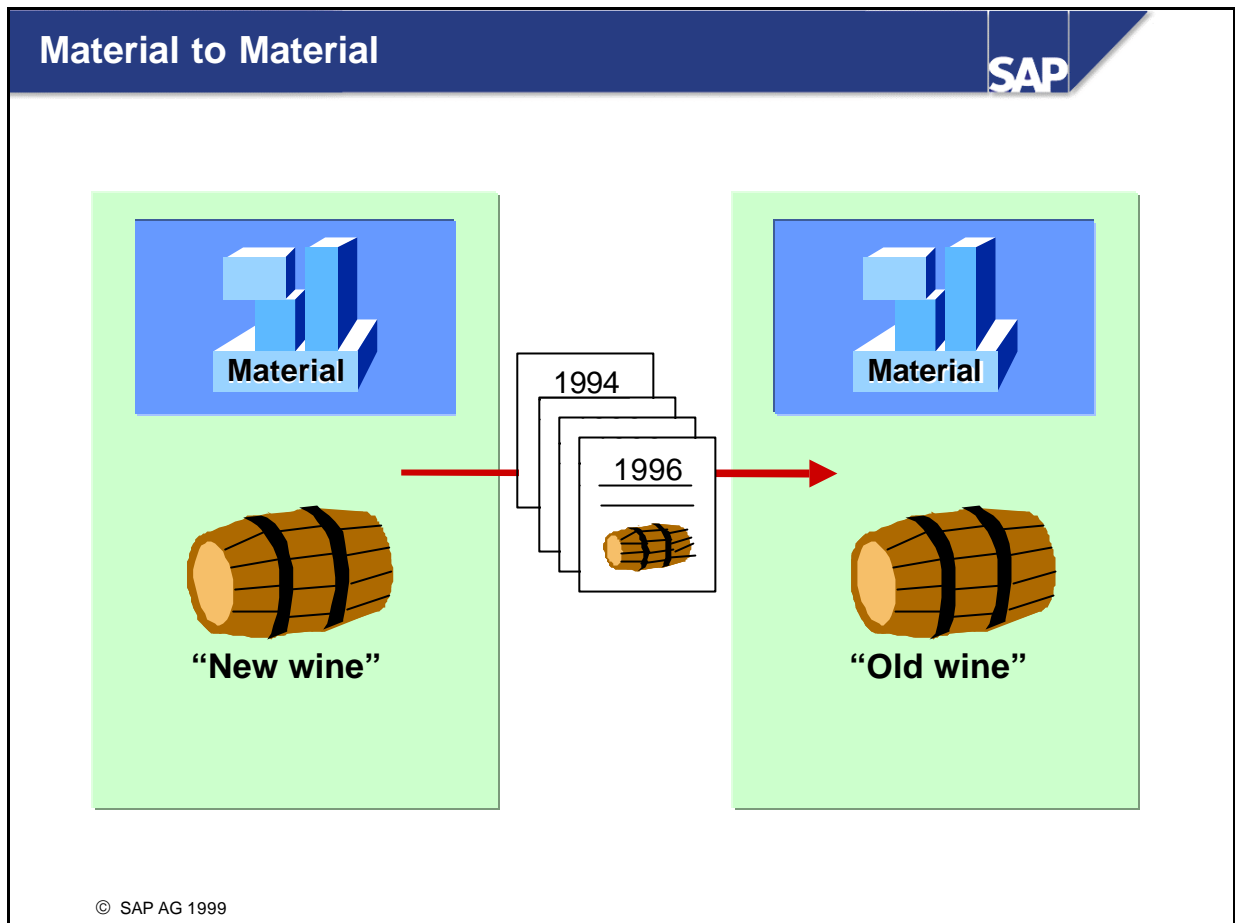
- If you use the two-step procedure, you can monitor stocks while they are in transit. Once you have posted the goods issue from the issuing point, the stock is located **in stock transfer** at the receiving point, and is managed as such in the system.



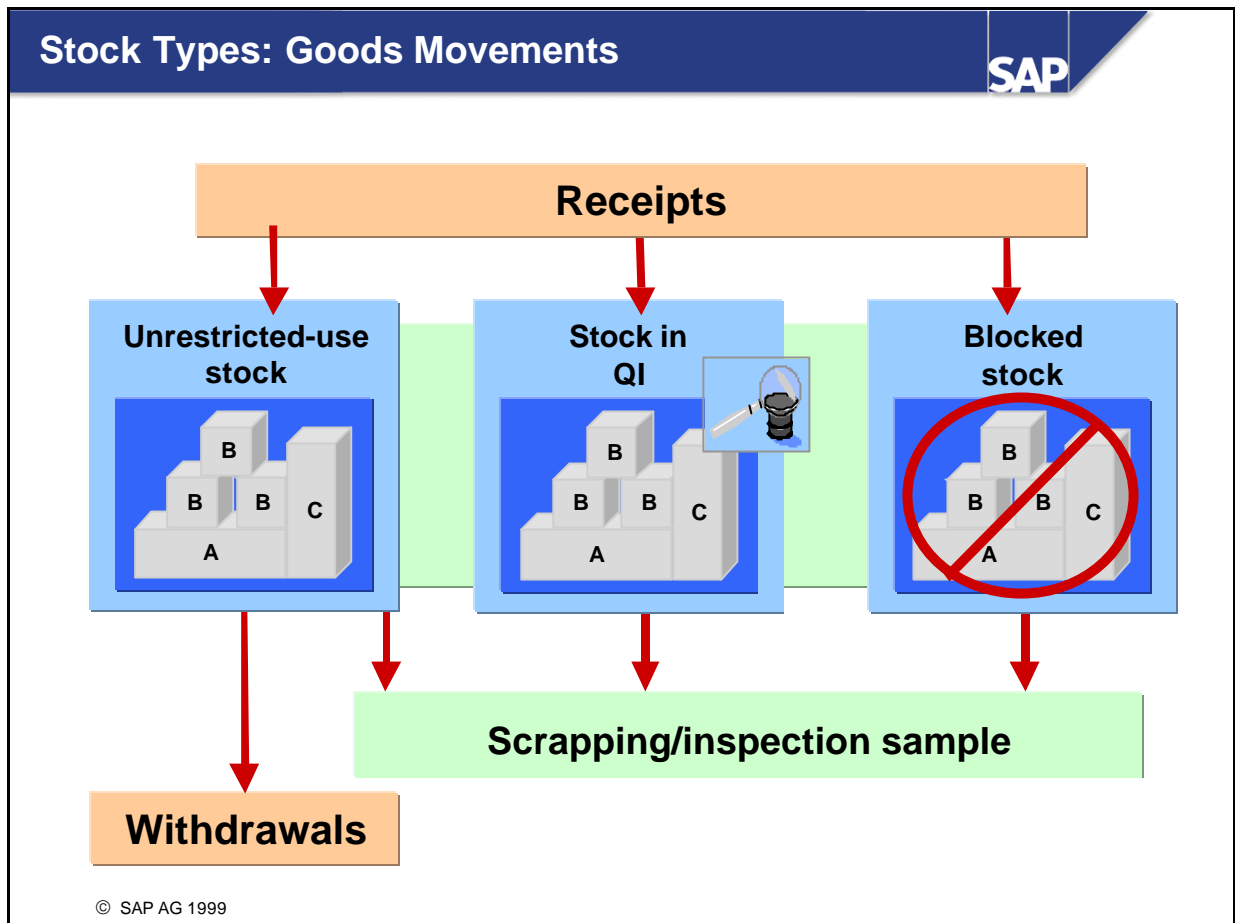




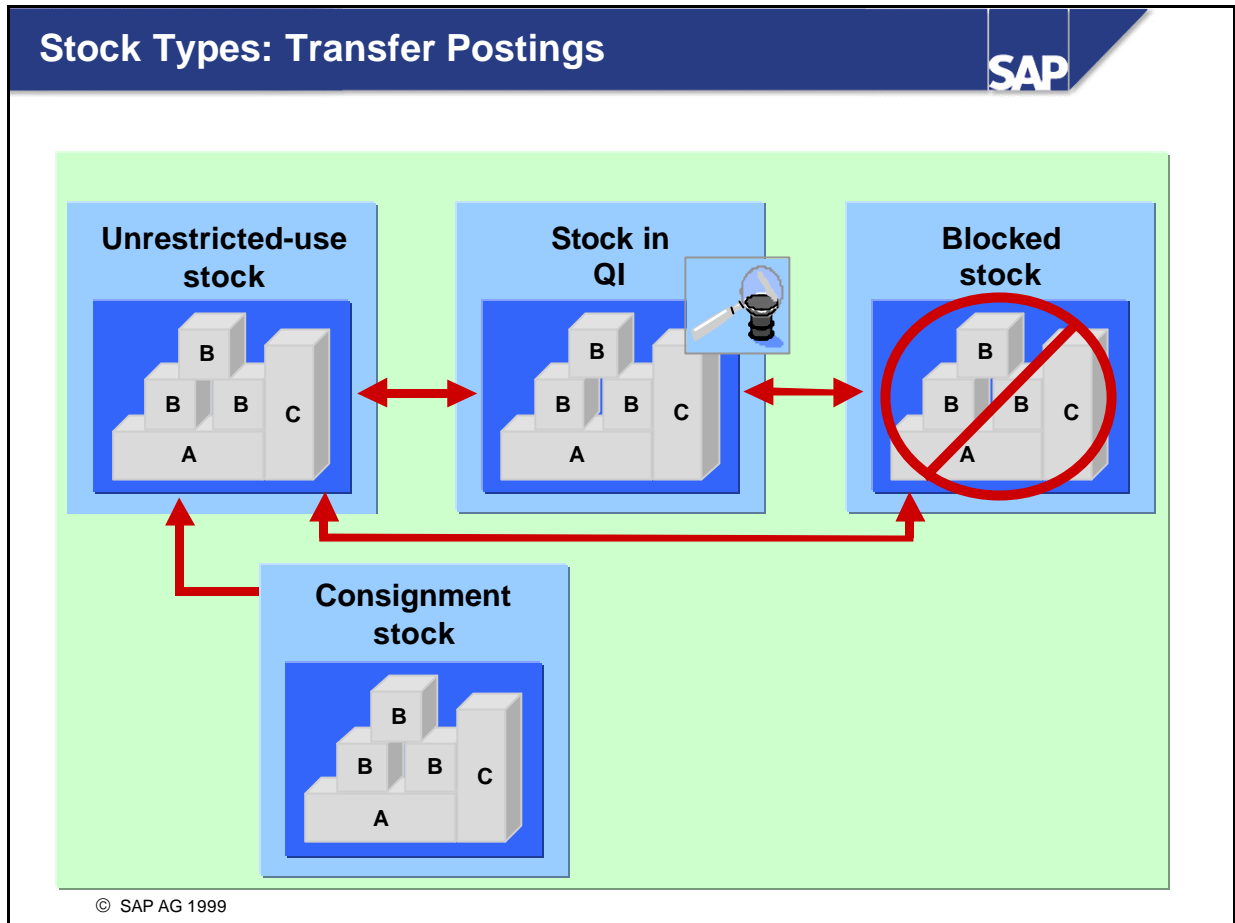
- You can also post stock transfers with reference to a stock transport order using a one-step procedure instead of the two-step procedure. This procedure does not involve stock in transit, and materials are posted directly to unrestricted-use stock in the receiving plant.



- A transfer posting from material to material requires that both materials are managed in the same unit of measure.
- A transfer posting from material to material may be necessary when a material changes over time, for example. It may then no longer have the characteristics defined in the material master record, but those of another material master number. This is often the case in the chemical and pharmaceuticals industry.



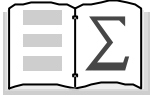
- At goods receipt, you choose the stock type into which you post the goods.
- You can post withdrawals for consumption only from unrestricted-use stock.



- If the usability of a material changes, you can transfer the material between the different stock types.

## Stock Transfers/Transfer Postings: Unit Summary

SAP



**You are now able to:**

- **Explain the difference between physical and logical transfers**
- **Identify different ways to post inventory transfers using one- and two-step movement types between companies, plants, and storage locations**
- **Post a stock transfer between plants and storage locations and display the stock overview**

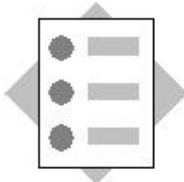
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## Exercises



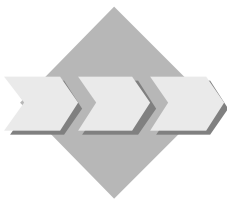
### Unit: Stock Transfers and Transfer Postings

#### Topic: Transfer Postings



At the end of this exercise, you will be able to:

- Explain the difference between stock transfers and transfer postings
- Identify different ways to post inventory transfers using one- and two-step procedures between companies, plants, and storage locations
- Post a stock transfer between plants and storage locations and display the stock overview
- Post logical movements of stock, such as stock in quality inspection to unrestricted-use stock



In your company, you process transfer postings between plants using a two-step procedure because the plants are located in different towns. However, within the plant you use a one-step procedure to transfer materials because the storage locations are located in the same building.

**As a storeperson, carry out the following activities with the user menu.**

- 1-1 Extend material master record **T-RN2##** to include plant **1100**. Enter the data for the *Purchasing*, and *Accounting 1* views using plant **1000** as a reference. Use the SAP menu.

*(Create Material – General: Initial Screen)*

Field	Value
Material number	T-RN2##
Industry sector	Mechanical engineering
Material type	Raw material
Copy from... Material	T-RN2##

(Select view(s))

Purchasing
Accounting 1

(Organizational levels)

Organizational levels	Copy from...
Plant 1100	1000

- 1-2 Display the stock overview for material **T-RN2##** in plant **1000** and plant **1100**. Update the current stock situation on the worksheet at the end of this exercise.

- 1-3 Post a stock entry for material **T-RN2##** into unrestricted-use stock to storage location **0001** for plant **1000** and plant **1100**. Use the correct quantity of receipts to end up with **500** pieces in plant **1000** and plant **1100** in storage location **0001**. Enter this as a goods receipt for external procurement using vendor **T-K10A##**.

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

Update the stock situation on your worksheet.

- 1-4 In plant **1100**, storage locations **0001** and **0002** are located in the same building. Therefore, you post stock transfers within plant **1100** using the one-step procedure.

Transfer **20** pieces of material **T-RN2##** from storage location **0001** to storage location **0002**.

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

Update the stock situation on your worksheet.

- 1-5 Due to the shipping duration, you enter stock transfers between plant 1000 and plant 1100 using the **two-step** procedure. Transfer **20** pieces of material **T-RN2##** **from plant 1100 to plant 1000**.

Enter the removal **from** plant **1100**, storage location **0001**, then update the stock situation on your worksheet:

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

Update the stock situation on your worksheet.

- 1-6 Material **T-RN2##** has now arrived at plant **1000**. Enter the receipt of **10** pieces in storage location **0001** and **10** pieces in storage location **0002**. Update the stock situation on your worksheet.

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

- 1-7 In Unit 1, you posted a goods receipt into blocked stock. The remaining pieces of material **T-RN2##** are deemed acceptable. Transfer this material from blocked stock into unrestricted-use stock in plant **1000**, storage location **0001**. Then update the stock situation on your worksheet.

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

- 1-8 Display all inventory transactions posted today for material **T-RN2##**. Why are some documents listed twice?

\_\_\_\_\_



- 1-9 Display the total value of material **T-RN2##** at plant level and storage location level by running the *Warehouse Stock Report*, which can be found by choosing **Environment ® Stock ® Warehouse Stock** in *Inventory Management*. Complete the information in the table.

<b>Plant</b>	<b>Material T-RN2##</b>	<b>Quantity</b>	<b>Value</b>
Plant 1000	Unrestricted-use stock storage location 0001		
	Unrestricted-use stock storage location 0002		
Plant 1100	Unrestricted-use stock storage location 0001		
	Unrestricted-use stock storage location 0002		

**Worksheet: Stock Transfers – Exercise 1-1**

**Material T-RN2##**

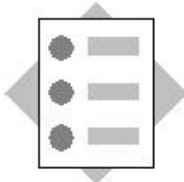
			<b>Plant 1000 Unrestricted-use stock</b>		<b>Plant 1100 Unrestricted-use stock</b>	
	Stock in transfer plant 1000	Blocked Plant 1000	Storage location 0001	Storage location 0002	Storage location 0001	Storage location 0002
1-2						
1-3						
1-4						
1-5						
1-6						
1-7						

## Exercises



### Unit: Stock Transfers and Transfer Postings

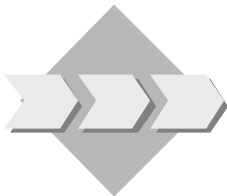
#### Topic: Material to Material Transfer



At the end of this exercise, you will be able to:

- Post a material to material transfer

Optional exercise\*



You have materials that change over time and lose the properties of the original material. This happens with chemicals you have in the warehouse. You use a material to material transfer to take a quantity of one material, and transfer it to another material.

Use the role **SAP\_MM\_GR\_CLERK** to carry out the activities in this exercise.

- 2-1 Display the stock overview for **T-RN7##** and **T-RN8-##** in plant **1000** and write down the current stock situation.

Plant 1000	Unrestricted-use stock
T-RN7##	
T-RN8##	

- 2-2 Display the material master views *Basic Data 1* and *Accounting 1* for **T-RN7##** and **T-RN8-##**. Answer the following questions by filling in the table.

- 2-2-1 What is the base unit of measure for each material?  
What is the standard price/moving average price for each material?

Plant 1000	Base unit of measure	Price
T-RN7##		
T-RN8##		

- 2-3 **T-RN7##** no longer has the characteristics associated with this material master record. Perform a material to material transfer and post a quantity of **100** pieces **from T-RN7## to T-RN8##**.

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

- 2-4 Display the stock overview for **T-RN7##** and **T-RN8-##** in plant **1000** and write down the current stock situation.

<b>Plant 1000</b>	<b>Unrestricted-use stock</b>
T-RN7##	
T-RN8##	

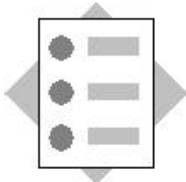
- 2-5 Display the material document. Is there an accounting document for this transaction? \_\_\_\_\_

## Exercises



### Unit: Stock Transfers and Transfer Postings

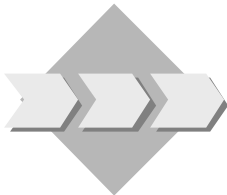
#### Topic: Stock Transport Orders with MM



At the end of this exercise, you will be able to:

- Explain how to post inventory transfers using a stock transfer order
- Transfer a material to another plant using a stock transfer order

Optional exercise\*



In your company, you transfer material between plants using stock transfer orders. This allows you to move stock between plants and see the effects the purchase order has on material availability on the stock/requirements list. This also allows you to add pricing conditions to the purchase order.

**Use the SAP menu for the activities in this exercise.**

- 3-1 Display the stock overview for material **T-RN2##** and write down the current stock situation in plant **1000** and plant **1100** for the following stock types.

Material T-RN2##	Unrestricted -use stock storage location 0001	Open purchase order quantity	Stock in transfer	Stock in transit
Plant 1000				
Plant 1100				

3-2 You need to transfer material **T-RN2##** to plant **1100**. Process this stock transfer by creating a stock transfer order.

STOCK TRANSPORT ORDER	
Supplying plant:	1000
Purchasing organization:	1000 IDES Deutschland
Purchasing group:	for group ##
Delivery date:	Today's date + 1 week
Receiving plant:	1100
Storage location:	0001
<u>Material</u>	<u>Quantity</u>
T-RN2##	40 pieces

3-2-1 What menu path do you use?

\_\_\_\_\_

Order number: \_\_\_\_\_

3-3 Display the stock overview for material **T-RN2##** and write down the change in the stock situation in plant **1000** and plant **1100**.

Material <b>T-RN2##</b>	Unrestricted -use stock storage location <b>0001</b>	Open purchase order quantity	Stock in transfer	Stock in transit
Plant 1000				
Plant 1100				

- 3-4 Display the stock/requirements list for plant **1000** and plant **1100** and analyze how the purchase order affects the stock situation in each plant. Which MRP element is used for the stock transfer order? What is the received quantity/required quantity? Which plant is listed in the *Delivery* field? Answer these questions by filling in the table below.

Material T-RN2##	MRP element for the stock transfer order	Received/ required quantity	Delivery
Plant 1000			
Plant 1100			

- 3-5 Process this stock transfer from plant 1000 by entering the transfer posting to stock in transit.

3-5-1 What menu path do you use?

\_\_\_\_\_

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

- 3-6 Display the material document and the accounting documents.

- 3-7 Display the stock overview and write down the changes in the stock situation.

Material T-RN2##	Unrestricted -use stock storage location 0001	Open purchase order quantity	Stock in transfer	Stock in transit
Plant 1000				
Plant 1100				

- 3-8 Enter the goods receipt for the purchase order in plant **1100** using movement type **101**.

Material document number: \_\_\_\_\_

3-9 Display the stock overview and note the change in the stock quantity in plant **1100**.

<b>Material T-RN2##</b>	<b>Unrestricted -use stock storage location 0001</b>	<b>Open purchase order quantity</b>	<b>Stock in transfer</b>	<b>Stock in transit</b>
Plant 1000				
Plant 1100				



## Solutions



### Unit: Stock Transfers and Transfer Postings

#### Topic: Transfer Posting

- 1-1 *Logistics* ® *Materials Management* ® *Material Master* ® *Material* ® *Create (special)* ® *Raw material*



You enter material **T-RN2##** and copy it.

- 1-2 *Inventory Management* ® *Environment* ® *Stock* ® *Stock overview*  
or with the user menu:  
*Environment* ® *Stock* ® *Stock Overview*

- 1-3 *Goods Movement* ® *Goods Receipt* ® *Others*, then choose *Movement type* ® *Receipt* ® *Init.stck entry (own)* ® *To unrestricted*.

Movement type: 501

- 1-4 *Goods Movement* ® *Transfer*, then choose *Movement type* ® *Transfer posting* ® *Stor. loc. to stor. loc* ® *Unrestr. to unrestr*.

You enter a transfer posting for **20** pieces of material **T-RN2##** from storage location **0001** to storage location **0002**.

Movement type: 311.

- 1-5 *Goods Movement* ® *Transfer*, then choose *Movement type* ® *Transfer posting* ® *Plant to plant* ® *Rem. fm. stor. to plant*.

Movement type: 303

- 1-6 *Goods Movement* ® *Transfer*, then choose *Movement type* ® *Transfer posting* ® *Plant to plant* ® *Pl. in. stor. in plant*.

Movement type: 305

1-7 **Goods Movement** ® **Transfer**, then choose **Movement type** ® **Transfer posting** ® **Stock to stock** ® **Blocked to unrestr.**

Movement type: 343

1-8 **Environment** ® **List Displays** ® **Material Documents**

Some material documents are listed more than once because the transaction involves more than one storage location or plant.

1-9 **Environment** ® **Stock** ® **Warehouse Stock** (you must use the standard menu).

<b>Plant</b>	<b>Material T-RN2##</b>	<b>Quantity</b>	<b>Value</b>
Plant 1000	Unrestricted-use stock storage location 0001	520	156000
	Unrestricted-use stock storage location 0002	380	114000
Plant 1100	Unrestricted-use stock storage location 0001	460	138000
	Unrestricted-use stock storage location 0002	20	6000

**Worksheet: Stock Transfers – Exercise 1-1**

Material T-RN2##

			<b>Plant 1000 Unrestricted-use stock</b>		<b>Plant 1100 Unrestricted-use stock</b>	
	Stock in transfer plant 1000	Blocked Plant 1000	Storage location 0001	Storage location 0002	Storage location 0001	Storage location 0002
1-2	0	10	60	370	0	0
1-3	0	10	500	370	500	0
1-4	0	10	500	370	480	20
1-5	20	10	500	370	460	20
1-6	0	10	510	380	460	20
1-7	0	0	520	380	460	20

## Solutions



### Unit: Stock Transfers and Transfer Postings

#### Topic: Material to Material Transfer

- 2-1 You display the stock overview for **T-RN7##** and **T-RN8-##** in plant **1000** and write down the current stock situation.

**Environment** ® **Stock** ® **Stock Overview**

Plant 1000	Unrestricted-use stock
T-RN7##	100
T-RN8##	250

- 2-2 **Logistics** ® **Materials Management** ® **Material Master** ® **Material** ® **Display**  
 ® **Display current**

Or, from the SAP\_MM\_GR\_CLERK role:

**Environment** ® **Information** ® **Material**

2-2-1

Plant 1000	Base unit of measure	Price
T-RN7##	KG	S = 2.20
T-RN8##	KG	S = 2.20

- 2-3 **Goods Movement** ® **Transfer**, then choose **Movement Type** ® **Transfer Posting**  
 ® **Material to material**.

Movement type: 309

- 2-4 **Environment** ® **Stock** ® **Stock Overview**

Plant 1000	Unrestricted-use stock
T-RN7##	0
T-RN8##	350

- 2-5 **Material Document** ® **Display**

Yes

## Solutions



### Unit: Stock Transfers and Transfer Postings

### Topic: Stock Transport Orders with MM

#### 3-1 *Inventory Management* ® *Environment* ® *Stock* ® *Stock Overview*

Material T-RN2##	Unrestricted -use stock storage location 0001	Open purchase order quantity	Stock in transfer	Stock in transit
Plant 1000	Various answers possible	100	0	0
Plant 1100	Various answers possible	0	0	0

#### 3-2

3-2-1 *Logistics* ® *Materials Management* ® *Purchasing* ® *Purchase order* ® *Create* ® *Vendor/supplying plant known*, then choose *Stock transport order*.

#### 3-3 *Inventory Management* ® *Environment* ® *Stock* ® *Stock Overview*

Material T-RN2##	Unrestricted -use stock storage location 0001	Open purchase order quantity	Stock in transfer	Stock in transit
Plant 1000	Various answers possible	100	40	0
Plant 1100	Various answers possible	40	0	0

#### 3-4 *Inventory Management* ® *Environment* ® *Stock* ® *Stock Overview*

Material T-RN2##	MRP element for the stock transfer order	Received/ required quantity	Delivery
Plant 1000	BS-ABR	40-	1100
Plant 1100	BS-EIN	40	1000

- 3-5 ***Movement type ® Transfer posting ® Plant to plant ® To stock in transit.***  
 Note: On the initial screen, you leave the *Plant* field blank, choose *Enter*, and enter the purchase order number in the dialog box.

Movement type: 351

- 3-6 ***Inventory Management ® Material Document ® Display***

- 3-7 ***Inventory Management ® Environment ® Stock ® Stock Overview***

Material T-RN2##	Unrestricted -use stock storage location 0001	Open purchase order quantity	Stock transport order	Stock in transit
Plant 1000	Various answers possible	140	0	40
Plant 1100	Various answers possible	0	0	0

- 3-8 ***Inventory Management ® Goods Movement ® Goods Receipt ® For Purchase Order ® Goods Receipt***

- 3-9 ***Inventory Management ® Environment ® Stock ® Stock Overview***

Material T-RN2##	Unrestricted -use stock storage location 0001	Open purchase order quantity	Stock transport order	Stock in transit
Plant 1000	Various answers possible	100	0	0
Plant 1100	Various answers possible	0	0	0

### **Contents:**

- **Price Data for Consignment Material**
- **Procurement of Consignment Material**
- **Consignment Stock Movements**
- **Settlement of Consignment Liabilities**

## Consignment: Unit Objectives

SAP



**At the conclusion of this unit, you will be able to:**

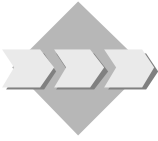
- **Post goods receipts into consignment stock**
- **Display consignment stock**
- **Post goods issues from consignment stock**
- **Transfer consignment stock**
- **Transfer consignment stock to another stock type**
- **Settle consignment material and/or transfer consignment stock to your company's own stock**

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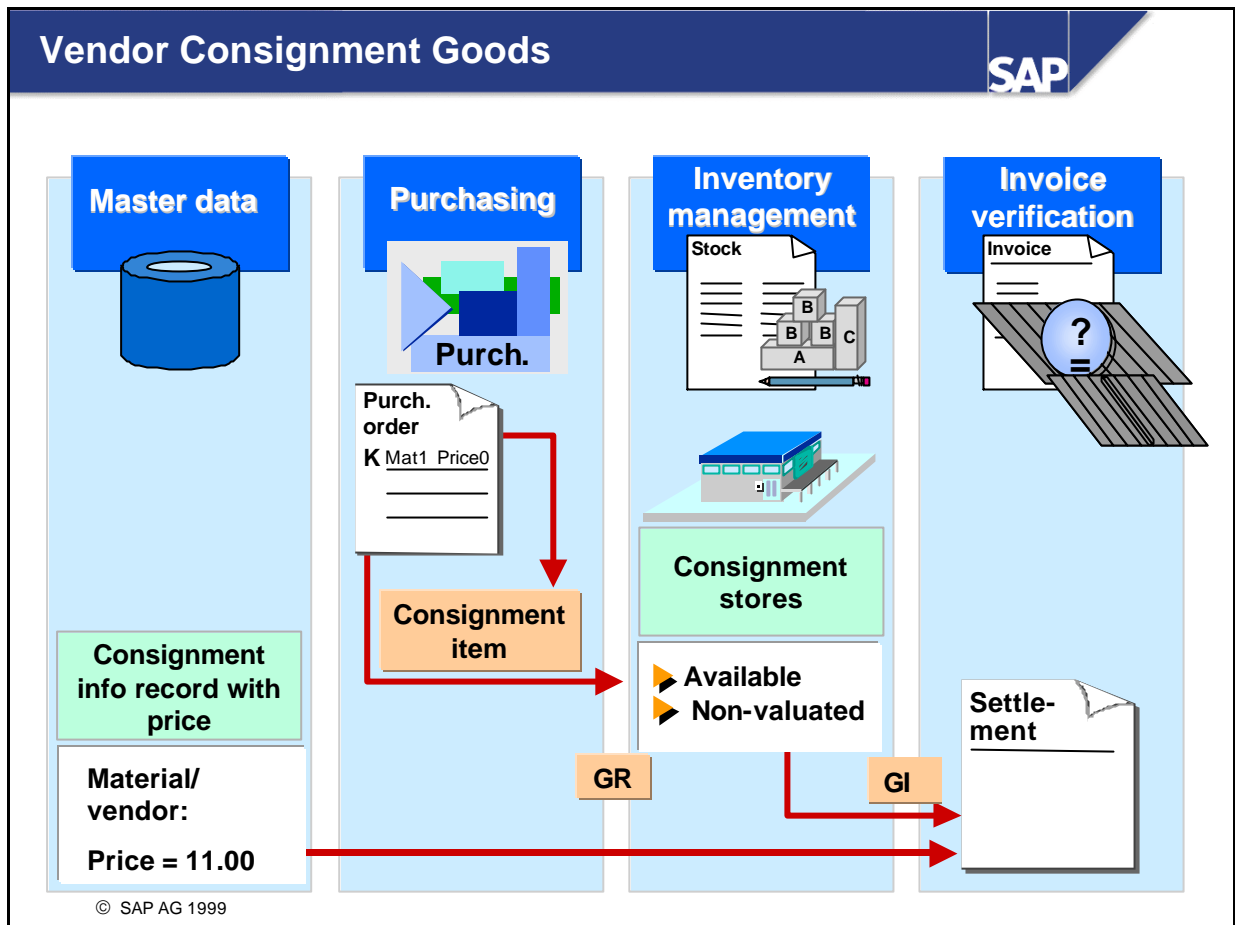
## Consignment: Business Scenario

SAP

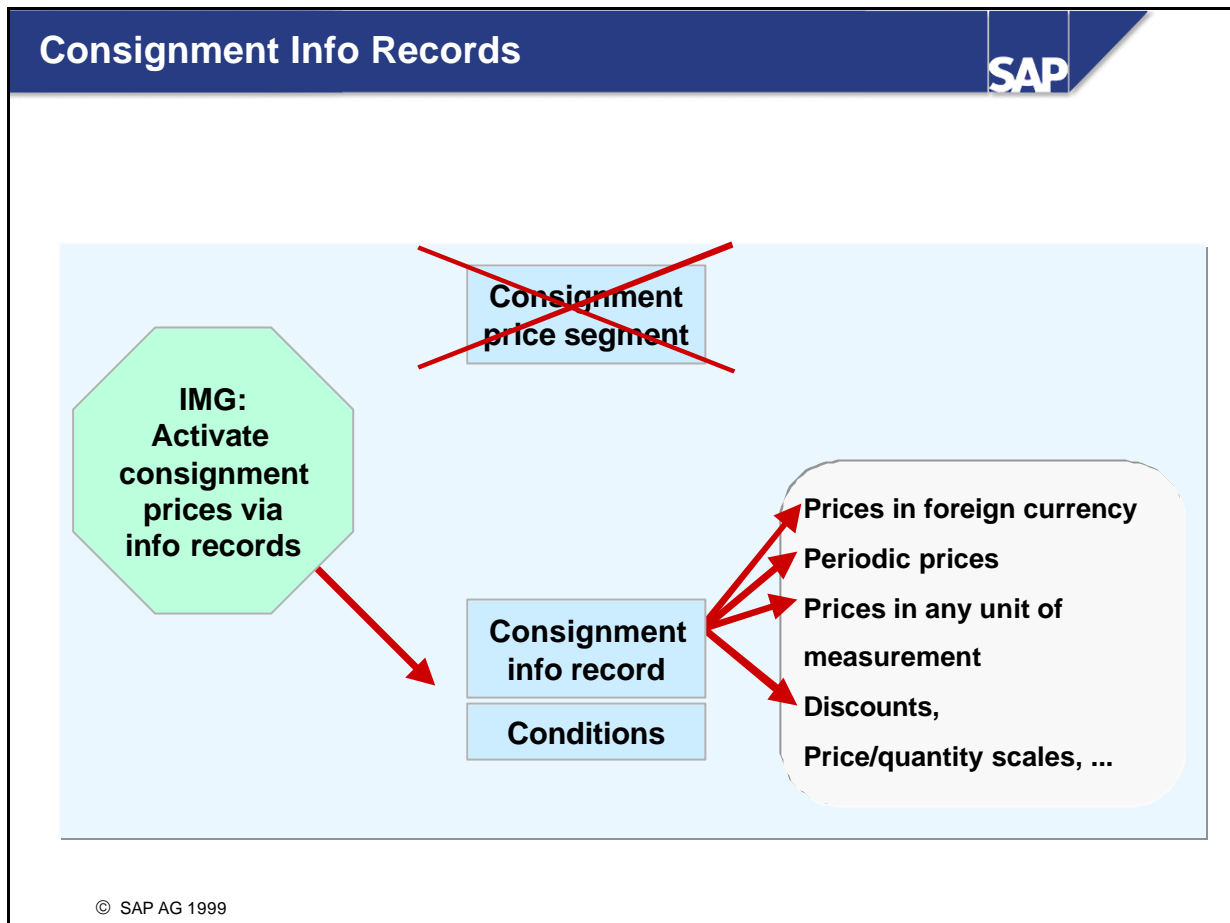


- You have an arrangement with two different vendors to supply consignment material to your company. The consignment material is considered available to MRP, however, it is not valued because it is still owned by the vendor. You take ownership of the material when you issue to a cost center or transfer it into your own stock. You settle your consignment liabilities with the vendor monthly.

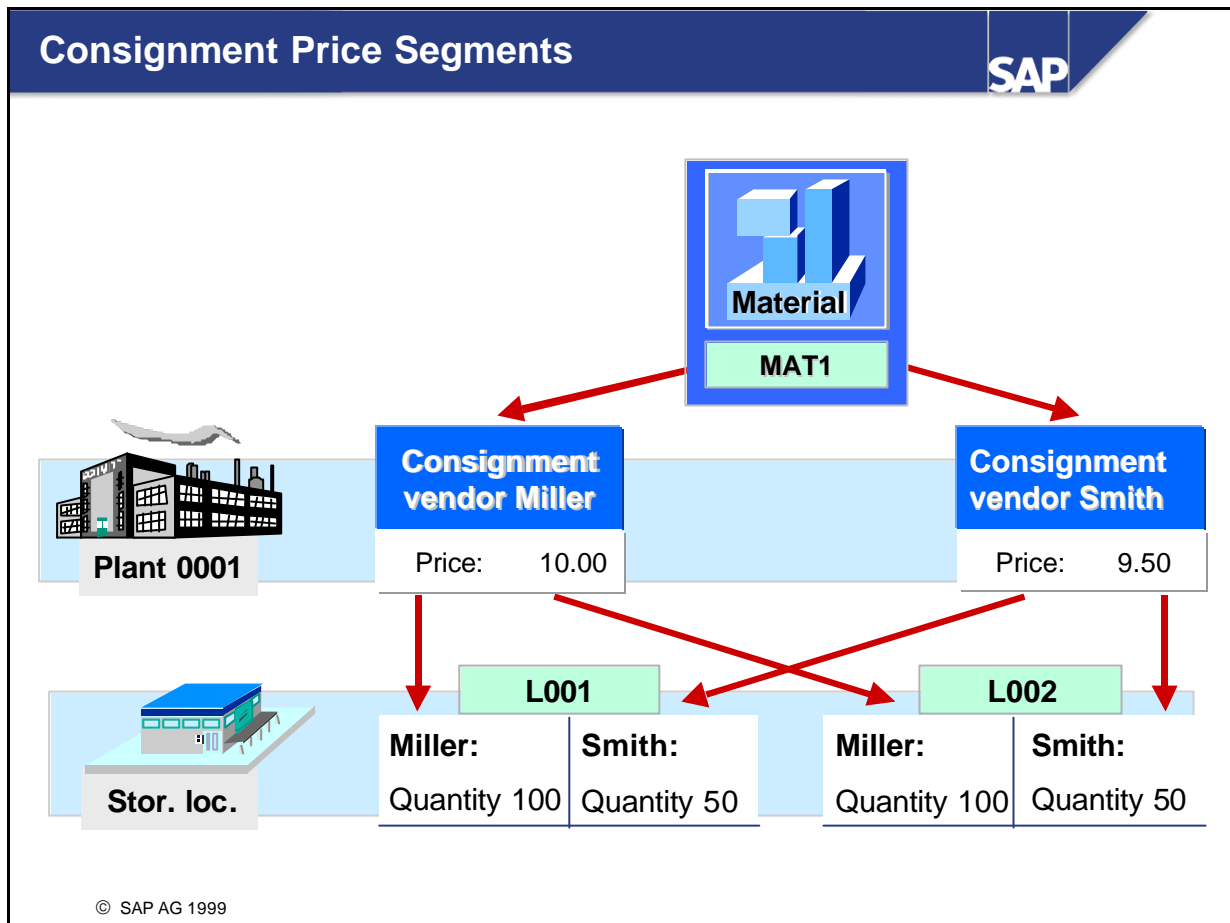
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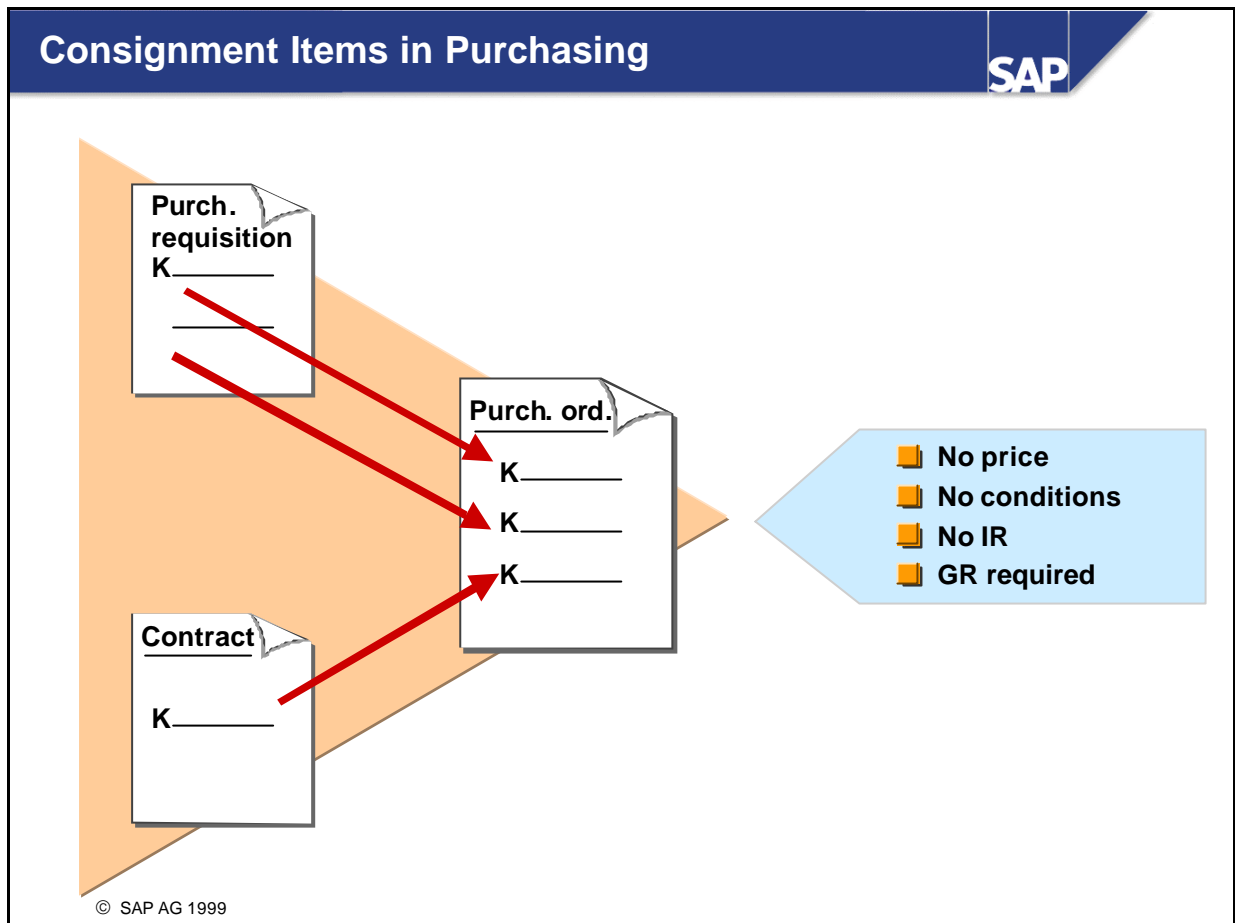
- The vendor provides goods that are stored in consignment stores. The vendor remains owner of the material until you withdraw materials from the consignment stores.
- The vendor is informed of material withdrawals on a regular basis.
- The quantity withdrawn is invoiced at certain time intervals.



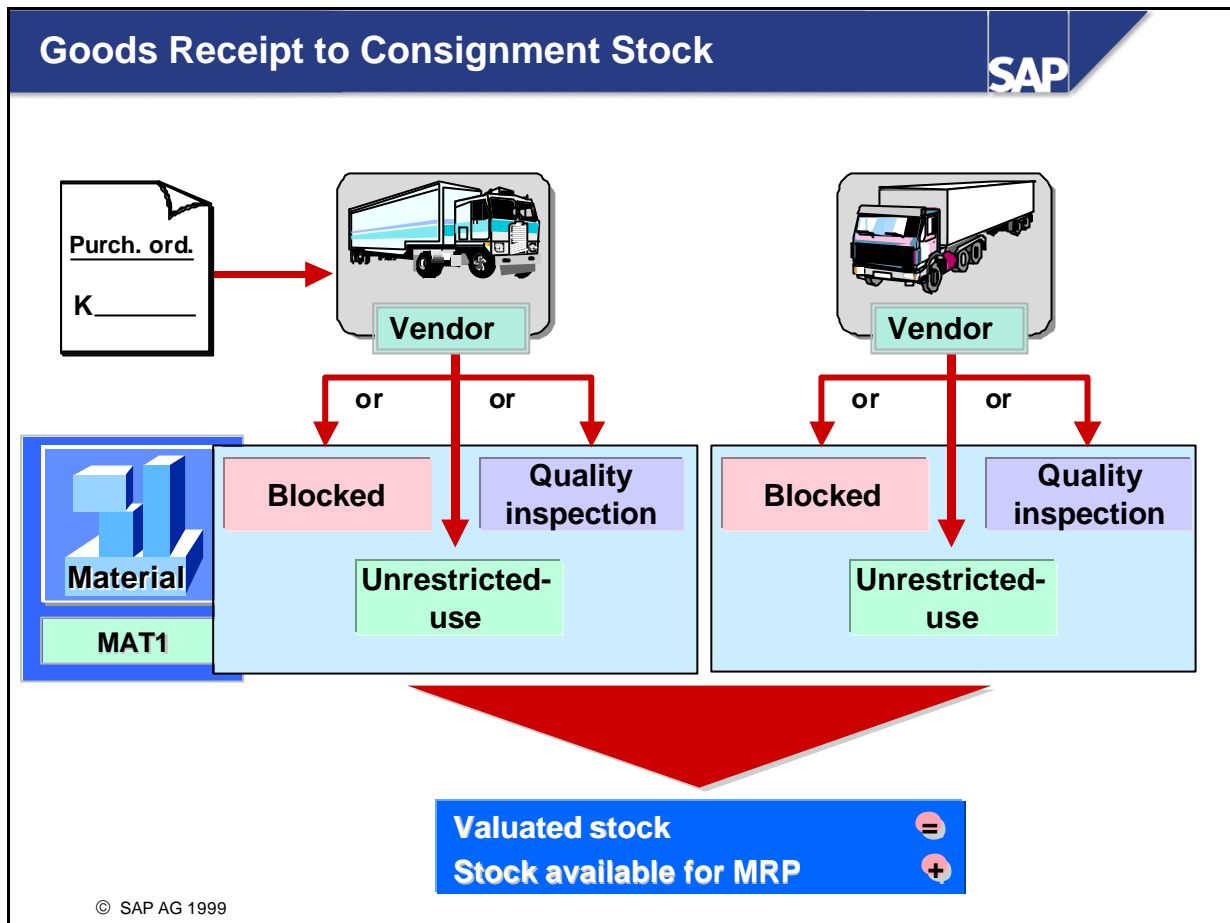
- The consignment price for procuring a consignment material from a vendor is stored in a consignment info record.
- In Release 4.0, consignment info records are supported alongside the old consignment price segments. In future releases, consignment price segments will no longer be supported and you will have to convert them into info records. You can convert them in Customizing at any time while using Release 4.0. You will no longer be able to maintain your consignment price segments after you have converted them.
- Using consignment info records, you can manage consignment prices in foreign currencies. The purchase order currency of the vendor is used for consignment withdrawals.
- Consignment prices can be defined periodically.
- You can specify the consignment price in any unit of measure. You define the conversion factor in the info record.
- You can also use conditions in Purchasing, as well as the definition of discounts and price/quantity scales.



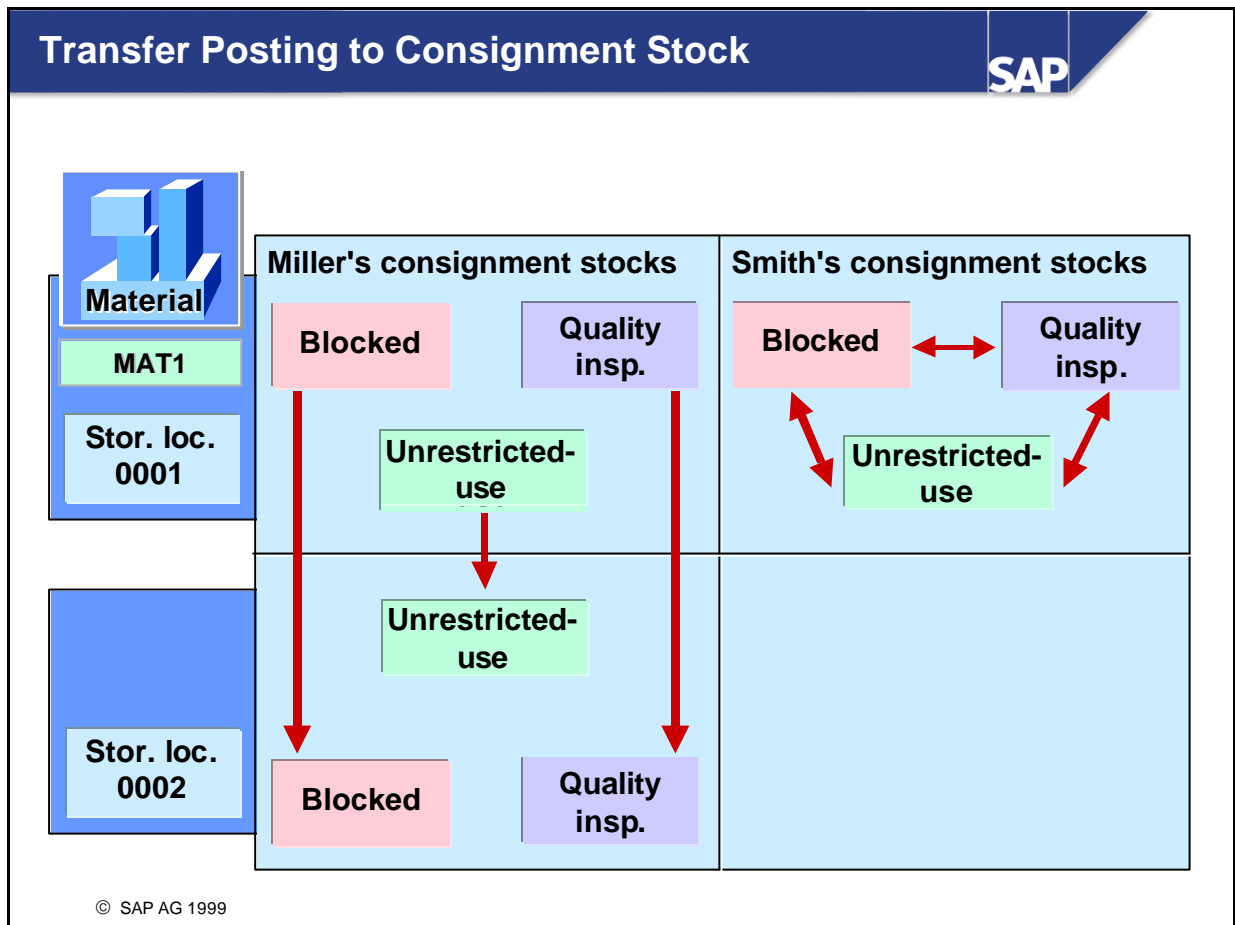
- A vendor's consignment price for a material is valid plant-wide.
- Consignment stocks of a material from one vendor are managed at storage location level.
- Your own stocks and consignment stocks of the same material in the same storage location are managed separately, under one material number.
- You can take inventory of a vendor's consignment material.



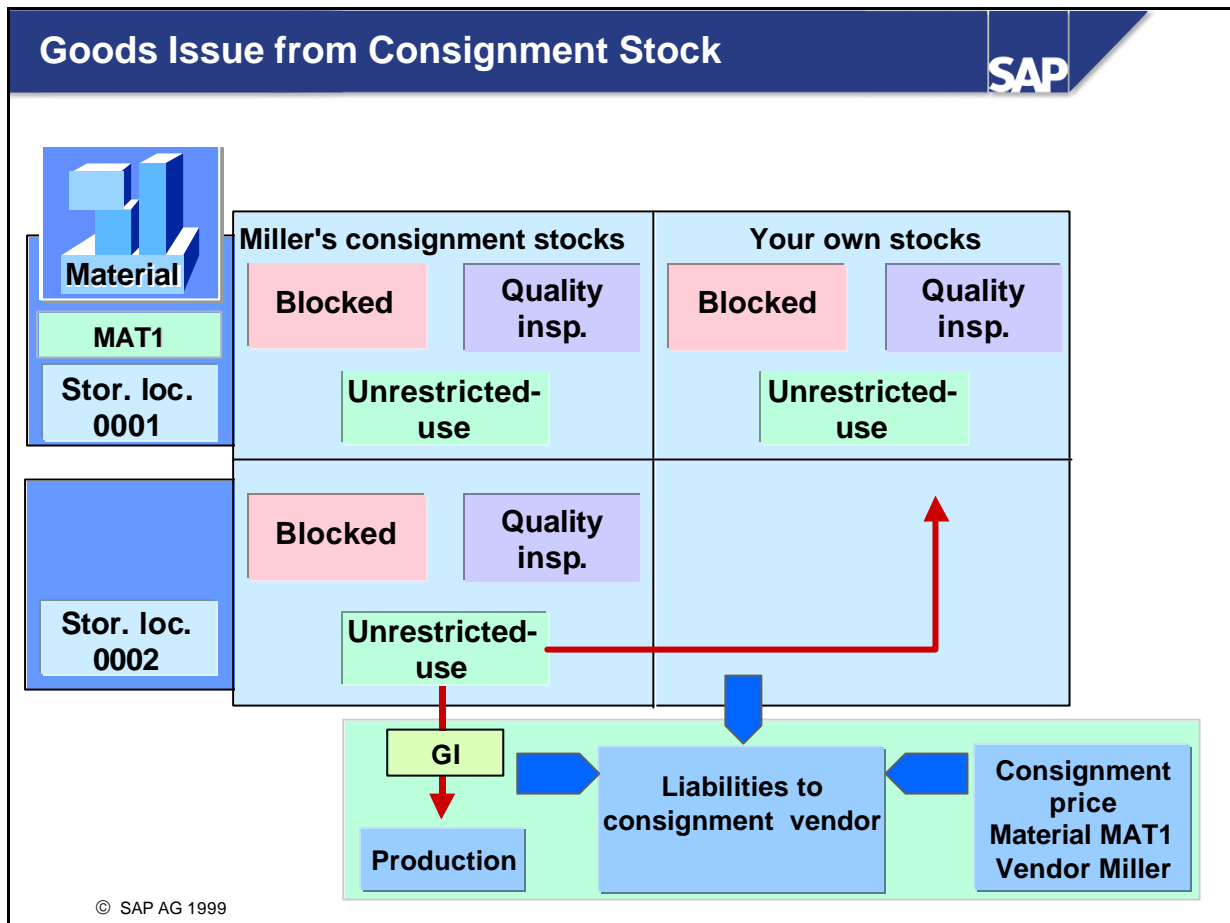
- A consignment item is a request to the vendor to deliver material to the consignment stores.
- A separate item category is assigned to a consignment item in Purchasing.
- For consignment items, you must select a material for consignment that has a material type that includes inventory management.
- You cannot specify a purchase price or conditions for consignment items.
- When posting an invoice receipt for consignment material, you do not make reference to the purchase item.
- Using a special procurement key (MRP data for a material), you can select a material in a plant for consignment procurement.
- You can specify consignment processing as a special procurement type for a quota arrangement item.



- You can enter goods receipts into your consignment stock with or without reference to a purchase order.
- The vendor's consignment price for a material must be determined before you post the goods receipt.
- A goods receipt to consignment stock does not change the valuated stock quantity, since the material still belongs to the vendor.

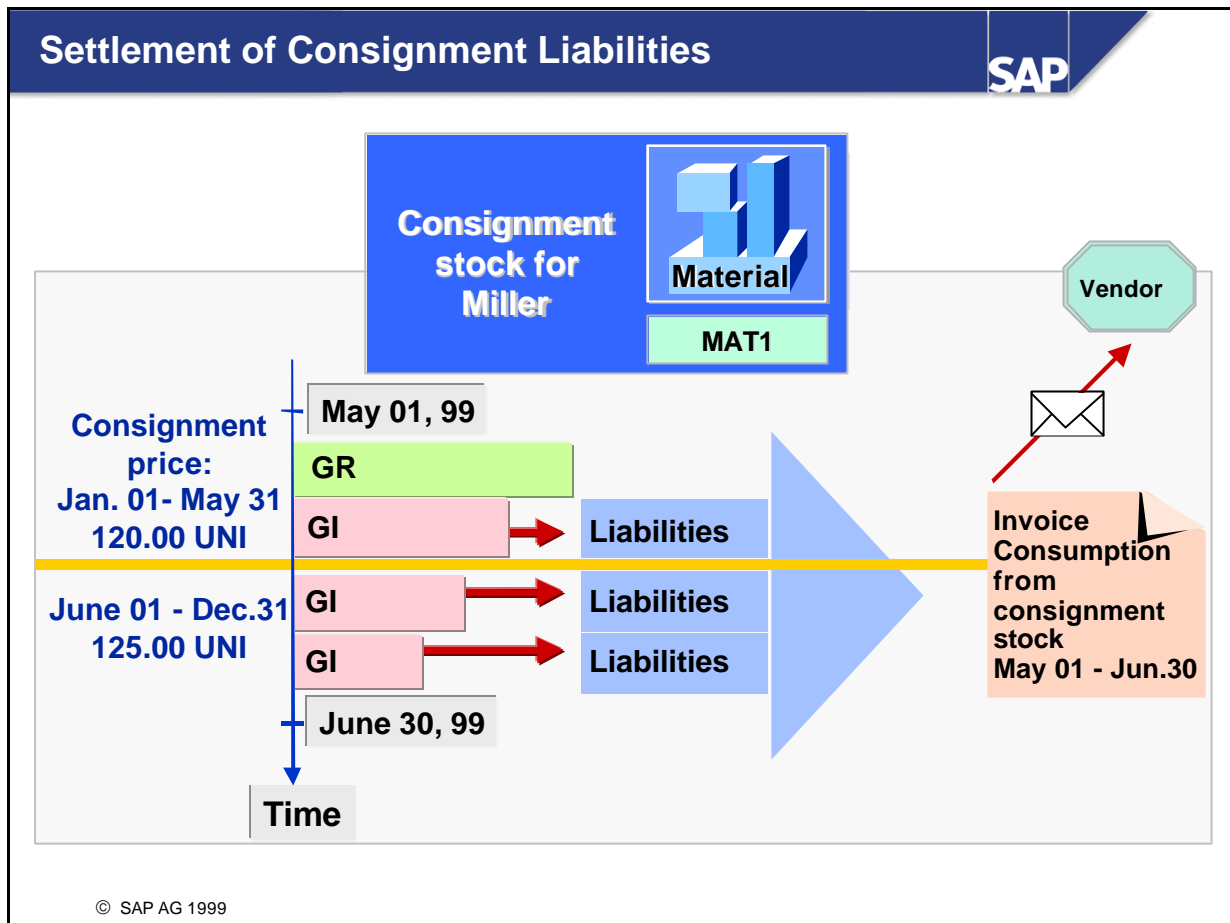


- Consignment stocks can be managed in the stock types “unrestricted-use stock”, “quality inspection stock”, and “blocked stock”.
- Transfer postings are not relevant for valuation.



- You can post goods issues only from the unrestricted-use consignment stock.
- When transferring goods from the consignment stock into your own stock, you can specify a receiving storage location. This also results in a stock transfer.
- A goods issue from consignment stock results in a liability to the consignment vendor.

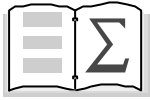




- You can settle consignment withdrawals online as well as on a batch basis.
- When processing online, you can define on the initial screen whether the withdrawals are to be settled or whether the withdrawals to be settled are just to be listed.
- You can inform the vendor periodically about issues from its consignment stocks. The list is restricted to goods issues that have not yet been settled.
- You enter the invoice for consignment liabilities without reference to a purchase order. Debits are posted to the **Liabilities from consignment stores** G/L account, to which the credits were posted upon goods issues from the consignment store.

## Consignment: Unit Summary

SAP

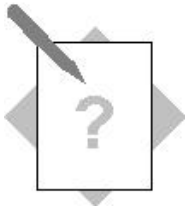


**You are now able to:**

- **Post goods receipts into consignment stock**
- **Display consignment stock**
- **Post goods issues from consignment stock**
- **Transfer consignment stock**
- **Transfer consignment stock to another stock type**
- **Settle consignment material and/or transfer consignment stock to your company's own stock**

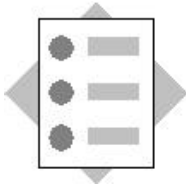
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## Exercises



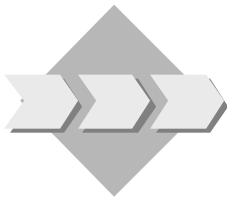
### Unit: Consignment

### Topic: Consignment Material



At the conclusion of this exercise, you will be able to:

- Maintain an info record for a consignment price
- Display a purchase order for a consignment material with item category K
- Post goods receipts into consignment stock
- Post stock transfers and transfer postings within consignment stock
- Post goods issues from consignment stock
- Settle consignment liabilities



You have an agreement with two different vendors to supply consignment material to your company. The consignment material is considered available for MRP purposes. However, it is not valued because it is still owned by the vendor. You take ownership of the material when you issue it to a cost center or transfer it into your own stock. You settle your consignment liabilities with the vendor monthly.

### Use the SAP menu for these activities.

1-1 Display the stock overview for your consignment material **T-RNC##** in plant 1000.

1-1-1 To which vendor does the consignment stock belong?

---

1-1-2 What consignment price has been negotiated with the vendor?

---



Double-click on the vendor in the stock overview to display the info record. The price can be found on the *Purch. Org. data 1* screen.

- 1-2 Write down the stock situation in the table below for your consignment material **T-RNC##** in plant **1000**.

*(Stock Overview)*

	<b>Storage location 0001</b>	<b>Storage location 0002</b>
Unrestricted-use stock		
Unrestricted-use consignment		
Quality inspection consignment		
Blocked consignment		

- 1-3 Display the *Accounting 1* view on the material master for material **T-RNC##** in plant **1000** and write down the following information.

1-3-1 What is the total stock quantity? \_\_\_\_\_

1-3-2 What is the total value of this unrestricted-use stock?

\_\_\_\_\_

- 1-4 Cost center **T-L##** requires **50** pieces of material **T-RNC##** in three weeks. Create a withdrawal reservation for plant **1000**. You do not know from which storage location the material will be taken, so you leave it blank.

Reservation number: \_\_\_\_\_

- 1-5 Display the stock/requirements list for **T-RNC##**. How does the reservation affect the available quantity during the next two months?

\_\_\_\_\_

1-6 Display consignment purchase order **415108-##**.

1-6-1 Which vendor is listed on the purchase order?  
\_\_\_\_\_

1-6-2 What is the item category?  
\_\_\_\_\_

1-6-3 What is the purchase order price?  
\_\_\_\_\_

1-7 The consignment material **T-RNC##** is supplied by vendor **T-K10B##**. Display the info record to see the consignment price that has been negotiated with the vendor for purchasing organization 1000 and plant 1000.

Price: \_\_\_\_\_



You find the price on the *Purch. Org. data 1* screen.

1-8 Vendor **T-K10B##** delivers the consignment material on purchase order **415108-##** to plant **1000**. The packaging is damaged, so you post a receipt of 10 pieces to blocked stock and send the remaining 90 pieces to quality inspection in storage location **0001**. Post this goods receipt using one material document.

1-8-1 What are the special stock types?  
\_\_\_\_\_

1-8-2 What menu path do you use to create the second item on the document?  
\_\_\_\_\_

Material document number: \_\_\_\_\_



Enter quality inspection stock in the *Stock type* field.

1-9 Display the material document. Is there an accounting document for the goods receipt?  
\_\_\_\_\_

1-10 Display the *Accounting 1* view on the material master for material **T-RNC##** in plant **1000**. Answer the following questions and compare to your results in part 1-3.

1-10-1 Has the total stock quantity changed?

\_\_\_\_\_

1-10-2 Has the total value of this unrestricted stock changed?

\_\_\_\_\_

1-10-3 Why? \_\_\_\_\_

\_\_\_\_\_

1-11 Display the stock overview for material **T-RNC##** in plant **1000** for all storage locations and write down the stock situation.

*(Stock Overview)*

	<b>Storage location 0001</b>	<b>Storage location 0002</b>
Unrestricted-use stock		
Unrestricted-use consignment		
Quality inspection consignment		
Blocked consignment		

1-12 The **90** pieces of material **T-RNC##** from vendor **T-K10B##** passed the quality inspection. Carry out the transfer from quality inspection consignment stock to unrestricted-use consignment stock within storage location **0001**.

1-12-1 Which special stock indicator is used?

\_\_\_\_\_

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

- 1-13 Display the stock overview for material **T-RNC##** for all storage locations in plant **1000** and write down the following information.

*(Stock Overview)*

	<b>Storage location 0001</b>	<b>Storage location 0002</b>
Unrestricted-use stock		
Unrestricted-use consignment		
Quality inspection consignment		
Blocked consignment		

- 1-14 Issue **50** pieces of material **T-RNC##** from consignment stock in storage location **0001** (vendor **T-K10B##**) with reference to the reservation for cost center **T-L##** from part 1-4.

1-14-1 Which special stock indicator do you use?

\_\_\_\_\_

Material document number: \_\_\_\_\_

- 1-15 Display the material document.

1-15-1 Is there an accounting document for this goods movement?

\_\_\_\_\_

1-15-2 Which G/L accounts have been updated?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- 1-16 You have agreed with vendor **T-K10B##** to regularly transfer unrestricted-use consignment stocks to your own stock at the end of the quarter. First, check the stock overview for material **T-RNC##** to see the quantity of unrestricted-use consignment stock remaining for vendor **T-K10B##**.

*(Stock Overview)*

<b>Vendor T-K10B##</b>	<b>Storage location 0001</b>	<b>Storage location 0002</b>
Unrestricted-use consignment		

- 1-17 Transfer this remaining quantity of unrestricted-use consignment material **T-RNC##** into unrestricted-use stock within the same storage location. Update the current stock situation in the table.

Movement type: \_\_\_\_\_

Material document number: \_\_\_\_\_

*(Stock Overview)*

<b>Vendor T-K10B##</b>	<b>Storage location 0001</b>	<b>Storage location 0002</b>
Unrestricted-use consignment		

- 1-18 What movements of **consignment stock** have taken place during the last two months for material **T-RNC##**? How can you display this information?

\_\_\_\_\_

- 1-19 What liabilities from vendor consignment accrued during the last two months for vendor **T-K10B##**?

Total value: \_\_\_\_\_

- 1-20 Settle your consignment liabilities with vendor **T-K10B##** by running the settlement program.

Invoice document number: \_\_\_\_\_



## Solutions



### Unit: Consignment

### Topic: Consignment Material

1-1 **Inventory Management ® Environment ® Stock ® Stock Overview.** To find out which vendor owns the stock, double-click the consignment line.

1-1-1 T-K10C##

1-1-2 16.00

1-2 **Inventory Management ® Environment ® Stock ® Stock Overview**

(Stock Overview)

	Storage location 0001	Storage location 0002
Unrestricted-use stock	110	0
Unrestricted-use consignment	15	0
Quality inspection consignment	0	0
Blocked consignment	0	0

1-3 **Logistics ® Materials Management ® Material Master ® Material ® Display ® Display Current**

1-3-1 110

1-3-2 1595

1-4 **Inventory Management ® Reservation ® Create**, then choose **Movement Type ® Consumption ® For Cost Center**.

1-5 **Inventory Management ® Environment ® Stock ® Stock/Requirements List**

The reservation reduces the available quantity.

1-6 **Logistics ® Materials Management ® Purchasing ® Purchase Order ® Display**

1-6-1 T-K10B##

1-6-2 K

1-6-3 Blank

1-7 **Logistics ® Materials Management ® Purchasing ® Master Data ® Info Record ® Display.** You find the price on the *Purch. Org. data 1* screen.

Price: 13.00

1-8 **Inventory Management ® Goods Movement ® Goods Receipt ® For Purchase Order ® PO Number Known**

Movement type 101. In line 1, change the quantity to 10 and choose the *Blocked* stock type to post the goods to blocked stock.

1-8-1 K

1-8-2 Choose the 'Distribute quantity' button and enter the relevant quantities and stock types.

1-9 **Inventory Management ® Material Document ® Display**, then choose *Accounting docs...*

No

1-10 **Logistics ® Materials Management ® Material Master ® Material ® Display ® Display Current**

1-10-1 No

1-10-2 No

1-10-3 Because the consignment stock is still owned by the vendor and therefore is not valued by the R/3 System.

1-11 **Inventory Management** ® **Environment** ® **Stock** ® **Stock Overview**

(Stock Overview)

	<b>Storage location 0001</b>	<b>Storage location 0002</b>
Unrestricted-use stock	110	0
Unrestricted-use consignment	15	0
Quality inspection consignment	90	0
Blocked consignment	10	0

1-12 **Inventory Management** ® **Goods Movement** ® **Transfer Posting**. Then choose **Movement Type** ® **Transfer Posting** ® **Vendor Consignment** ® **QI to Unrestricted**.

1-12-1 K

1-12-2 Movement type: 321

1-13 **Inventory Management** ® **Environment** ® **Stock** ® **Stock Overview**

(Stock Overview)

	<b>Storage location 0001</b>	<b>Storage location 0002</b>
Unrestricted-use	110	0
Unrestricted-use consignment	105	0
Quality inspection consignment	0	0
Blocked consignment	10	0

1-14 Choose **Inventory Management** ® **Goods Movement** ® **Goods Issue**. Then choose **To reservation...**

You enter the reservation number and **K** to indicate consignment stock.

1-14-1 K

1-15 You choose **Inventory Management** ® **Material Document** ® **Display**, then choose *Accounting docs...*

1-15-1 Yes

1-15-2 Accounts payable and Raw materials consumption

1-16 **Inventory Management** ® **Environment** ® **Stock** ® **Stock Overview**

(*Stock Overview*)

<b>Vendor T-K10B##</b>	<b>Storage location 0001</b>	<b>Storage location 0002</b>
Unrestricted-use consignment	40	0

1-17 **Inventory Management** ® **Goods Movement** ® **Transfer Posting**, then choose **Movement Type** ® **Transfer Posting** ® **Vendor Consignment** ® **Consignment to own**.

Movement type: 411

(*Stock Overview*)

<b>Vendor T-K10B##</b>	<b>Storage location 0001</b>	<b>Storage location 0002</b>
Unrestricted-use consignment	0	0

1-18 **Inventory Management** ® **Environment** ® **List Displays** ® **Material Documents for Material**

List displays material document for material. You enter **K** as the special stock indicator.

1-19 **Inventory Management** ® **Environment** ® **Consignment** ® **Consgnmt from Vendor** ® **Liability**

You select *Consignment* on the initial screen and choose *Display* from the *Processing* menu.

Total value: 1170

1-20 **Inventory Management** ® **Environment** ® **Consignment** ® **Consgnmt from Vendor** ® **Liability**

You select *Consignment* on the initial screen and choose *Settle* from the *Processing* menu.

### Contents:

- **Purchase Order**
- **Provision of components**
- **Goods Receipt and consumption of components**
- **Postings**
- **Scheduling Agreements with Subcontracting**

## Subcontracting: Unit Objectives

SAP



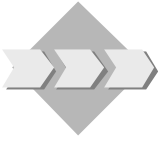
**At the conclusion of this unit, you will be able to:**

- **Be able to define in the system a business transaction with subcontracting**
- **Understand how the subcontracting functionality is integrated with the scheduling agreement**

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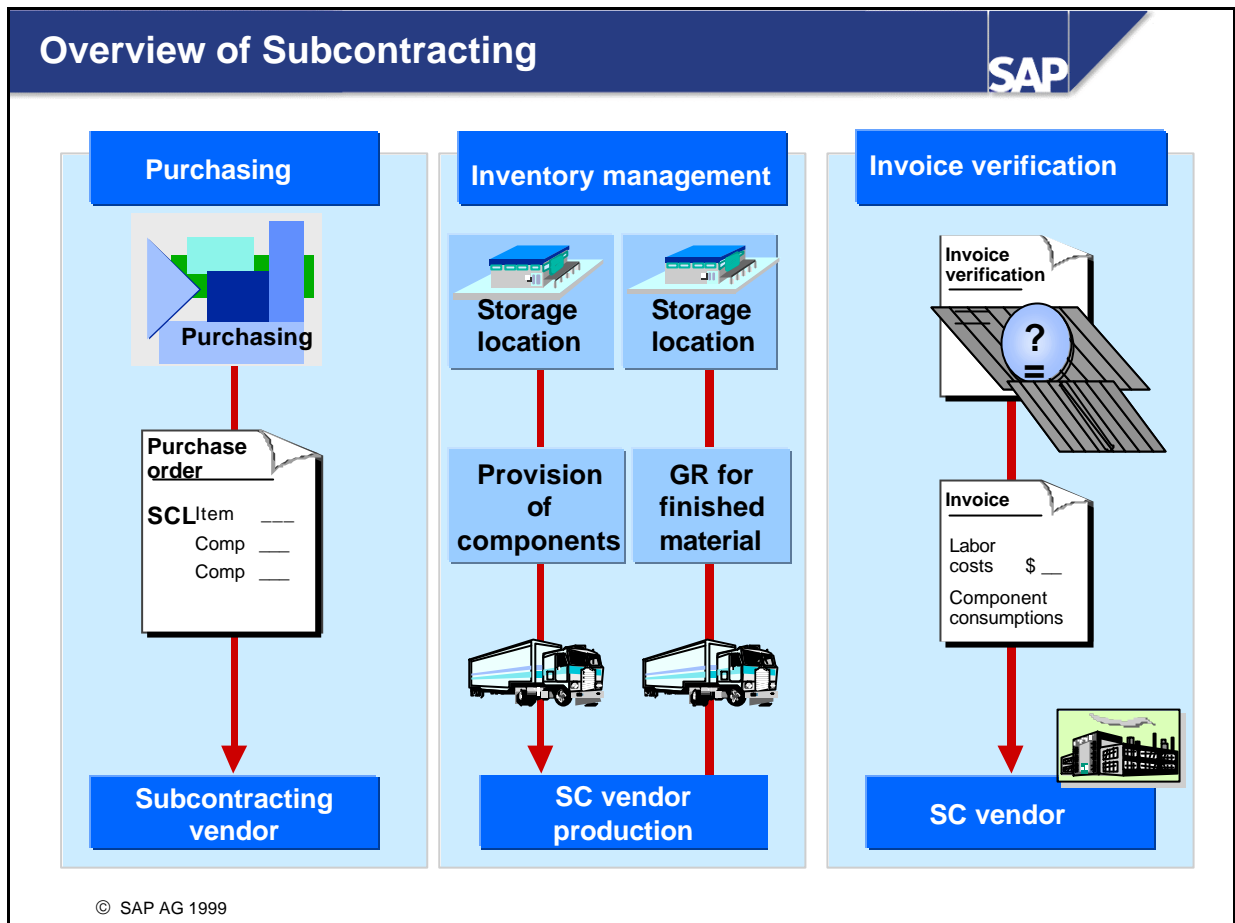
## Subcontracting: Business Scenario

SAP



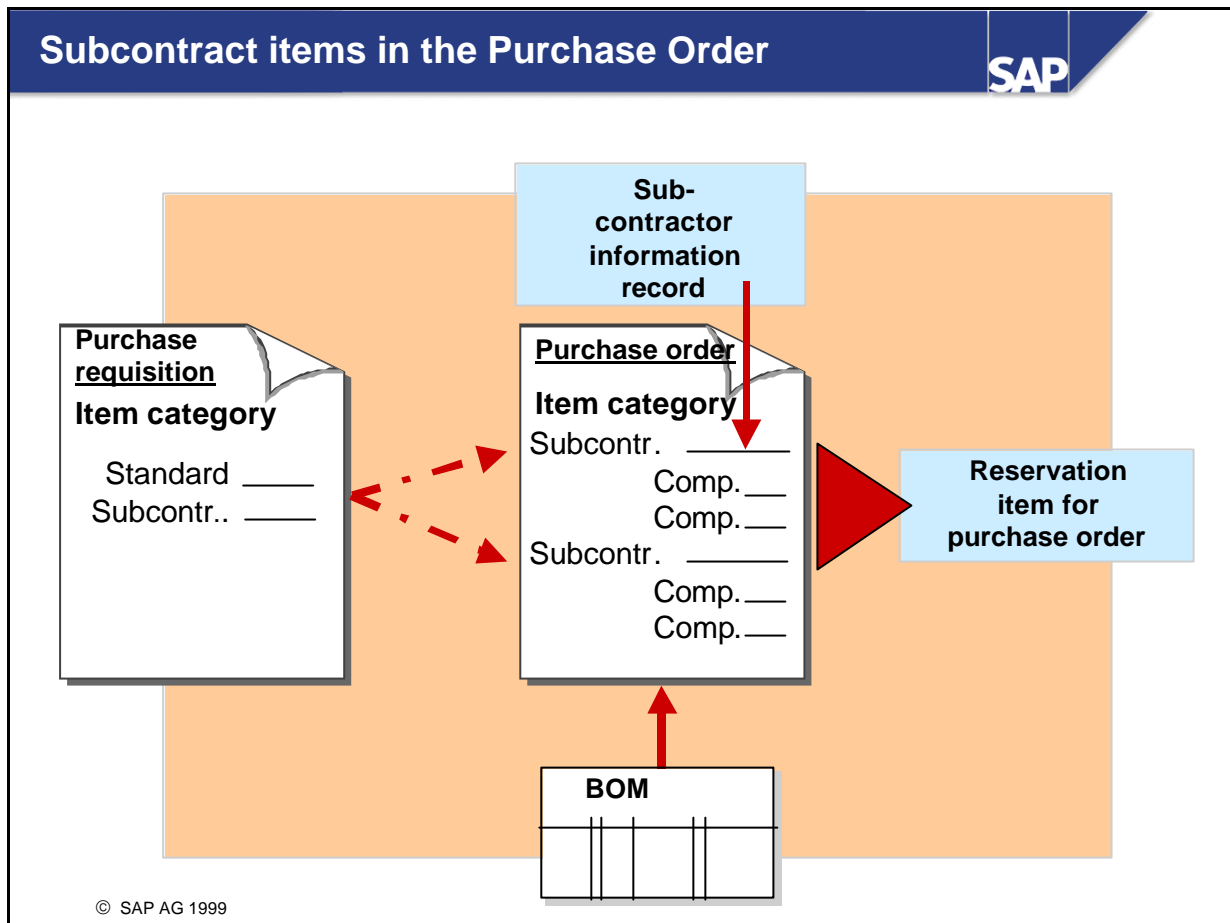
- **One of the things your enterprise manufactures is motor bikes. As you do not have the resources to assemble ignition systems, for example, you sent the parts to a subcontractor to manufacture the ignition systems for you.**

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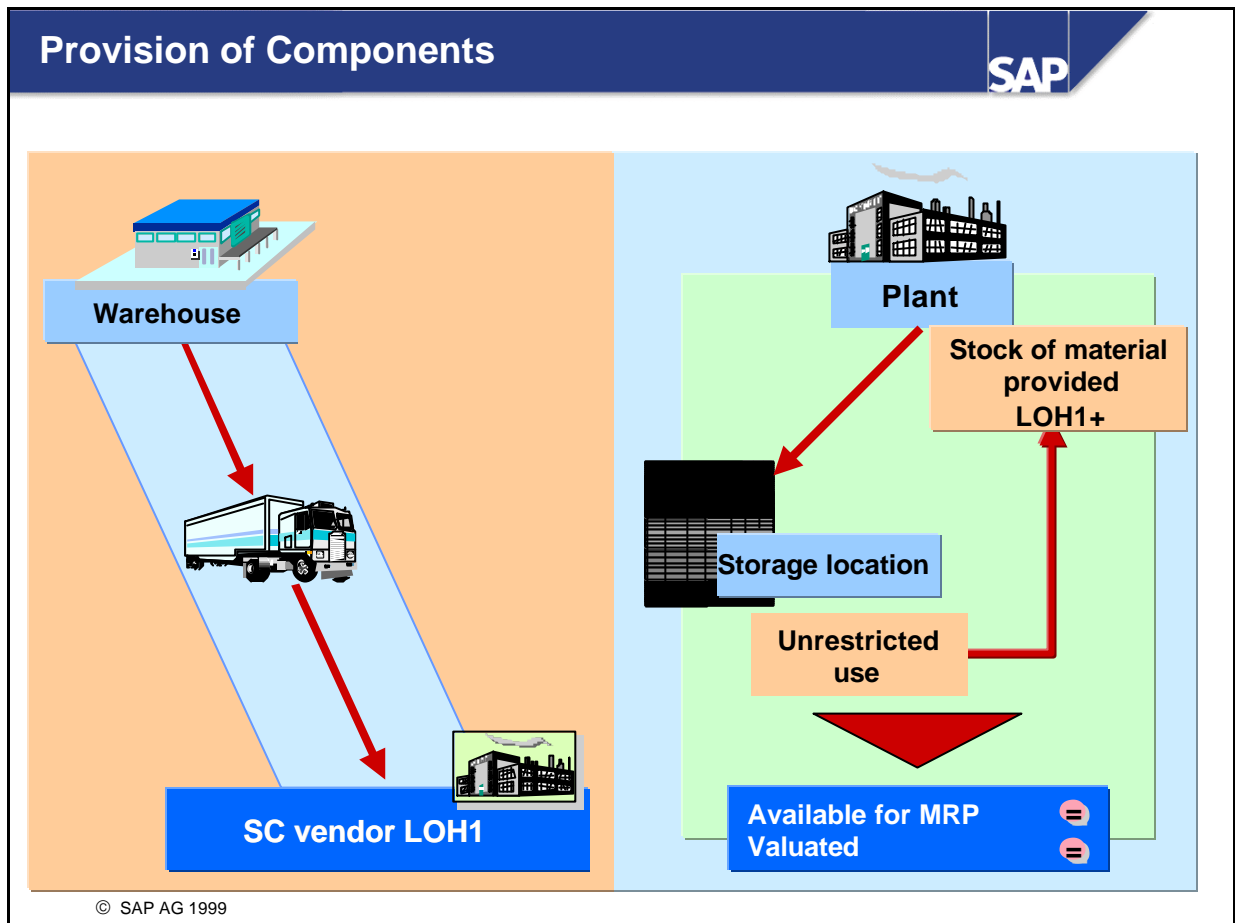


- You order the end product from a vendor, and specify in the purchase order which components you will send the vendor to manufacture the end product.
- You issue the components to the vendor, and create a goods receipt for the product manufactured by the vendor. At the same time, the consumption of the components is posted.
- The vendor's invoice is entered with reference to the purchase order. A subsequent adjustment for excess consumption or under-consumption of the components can also be made at the same time.

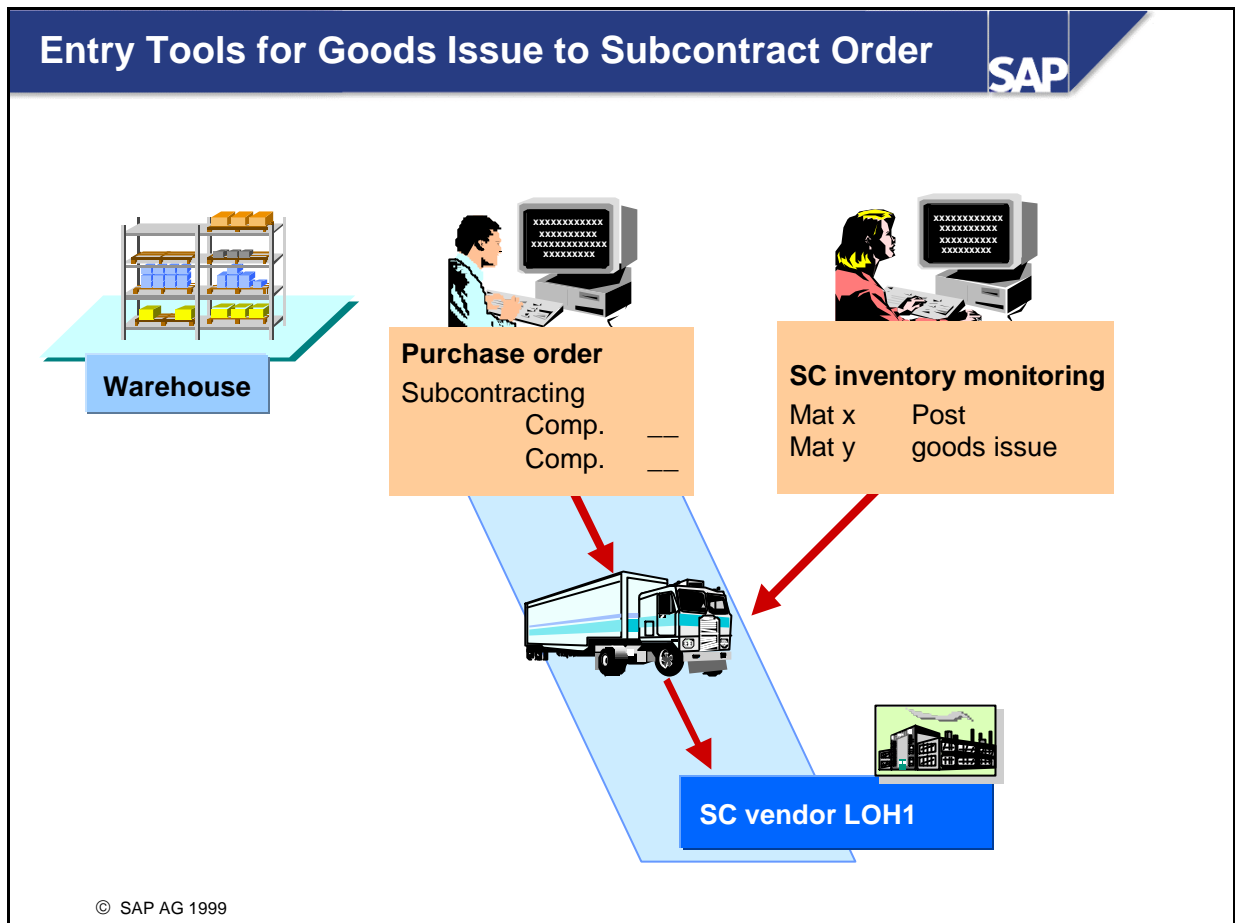




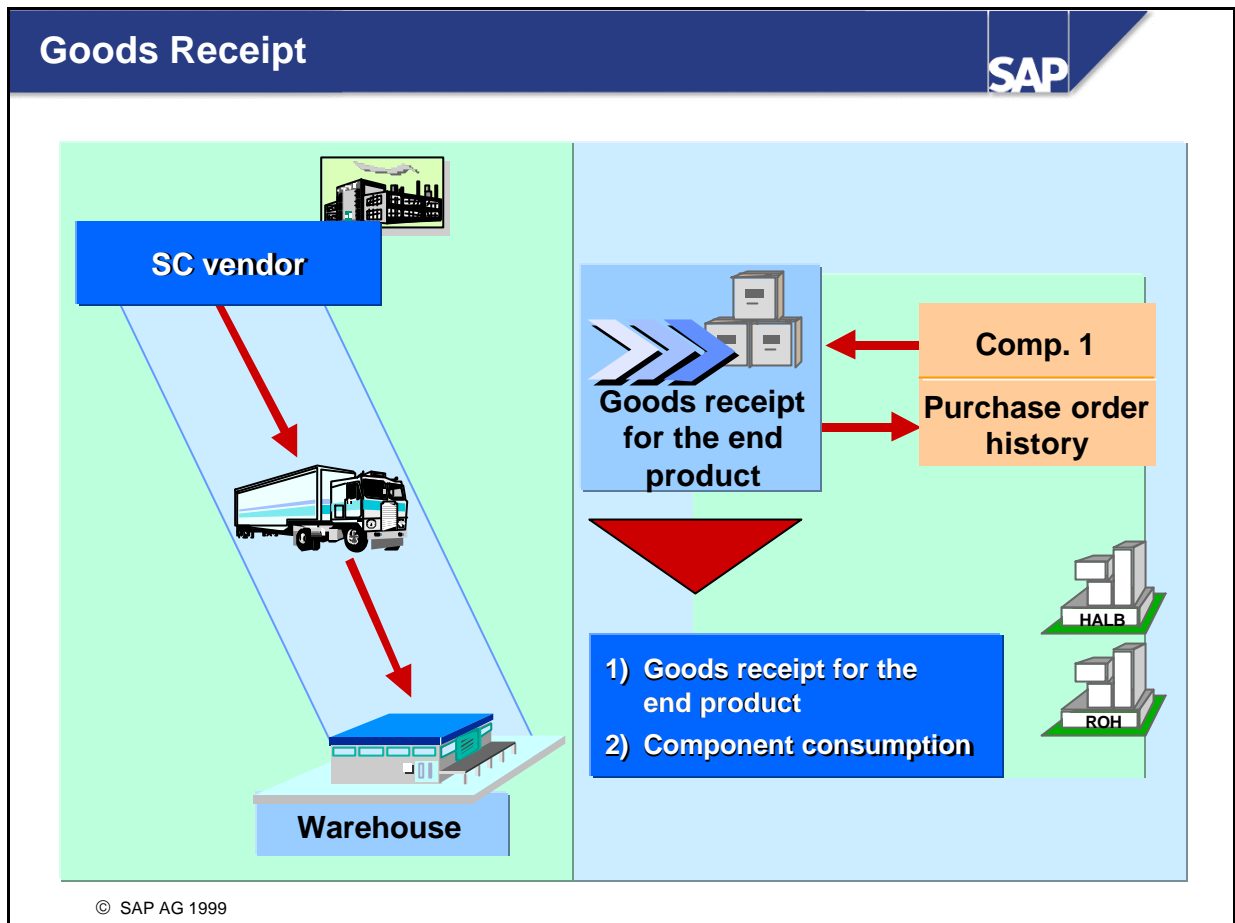
- The subcontract items in purchasing documents have their own item category. Each subcontract item has one or several sub-items which contain the components that are to be provided to the vendor.
- You can enter the components manually or determine the components using BOM explosion.
- The system automatically creates reservation items for MRP-relevant components.
- The purchase order price is the vendor's subcontracting service.
- Conditions for subcontract orders can be stored in a subcontractor purchasing info record.
- As of Release 4.0A, you can link service specifications for services to subcontract items. This means that you can provide the vendor with clearly laid out, detailed specifications about performance of the required services. Service specifications are only intended for information purposes, in other words, they do not have an effect on an item's value.



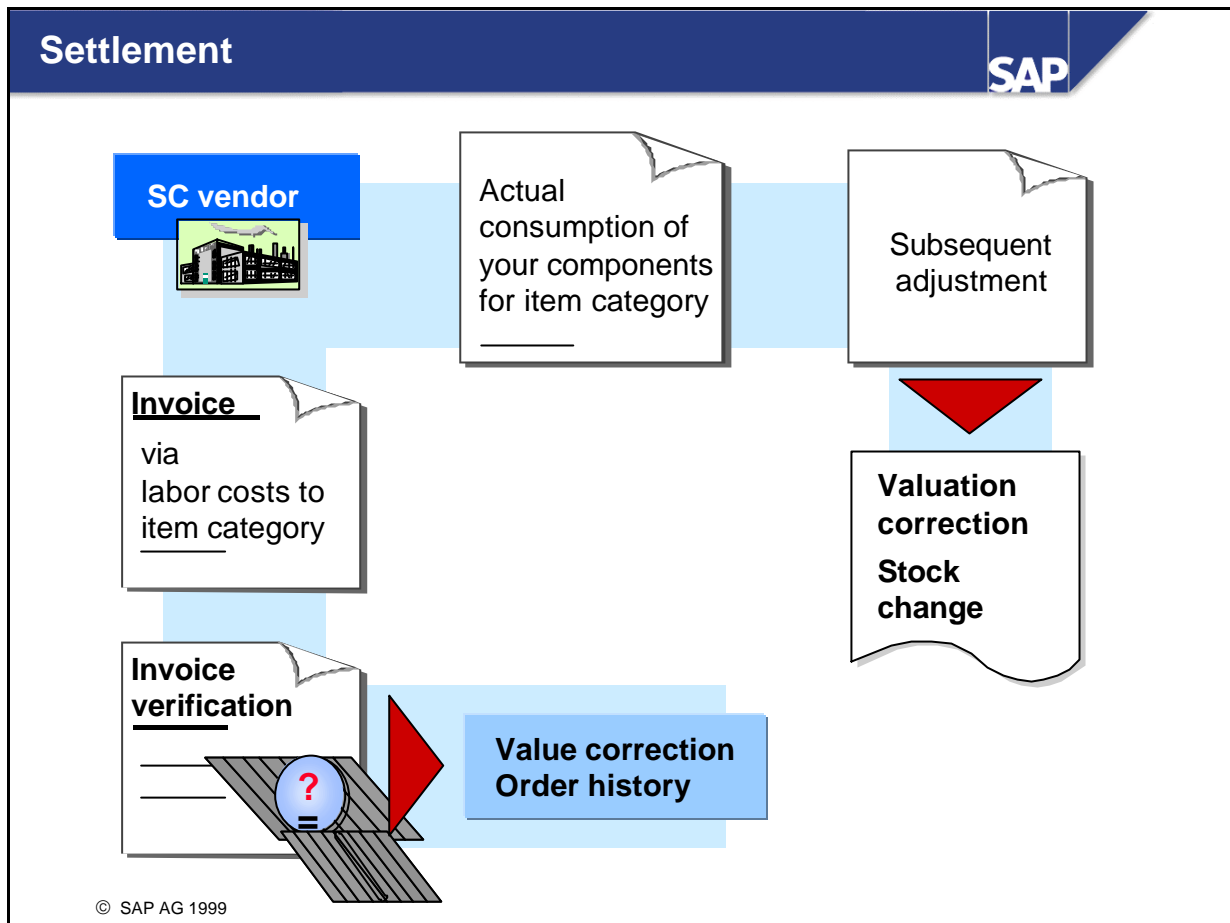
- The components at the subcontractor's site are managed in a special stock for the vendor. This stock is valuated and available for MRP. It is not allocated to a specific storage location.
- Components can only be withdrawn from the stock of material provided by the vendor.
- You can monitor the stocks of provided materials by means of evaluations.



- Goods issues for subcontract orders can be entered in two ways:
  - Goods issue with reference to purchase order
  - Goods issue entered from the list of all the materials of a subcontracting vendor
- As of Release 4.0, when you want to provide the subcontractor with material for subcontract orders, you can create an SD delivery from the list of stocks for the subcontractor. This provides you with shipping documents and delivery notes for shipping the material to be provided.



- The goods receipt is entered with reference to the SC order item.
- The consumption of the component items is posted at goods receipt. You can correct the proposed consumption quantity.



- If the vendor informs you of excess consumption or under-consumption after the goods receipt has been posted, you have to make a subsequent adjustment. This is entered with reference to the purchase order.
- Invoice verification for a subcontract item is done in the same way as invoice verification for a standard item.

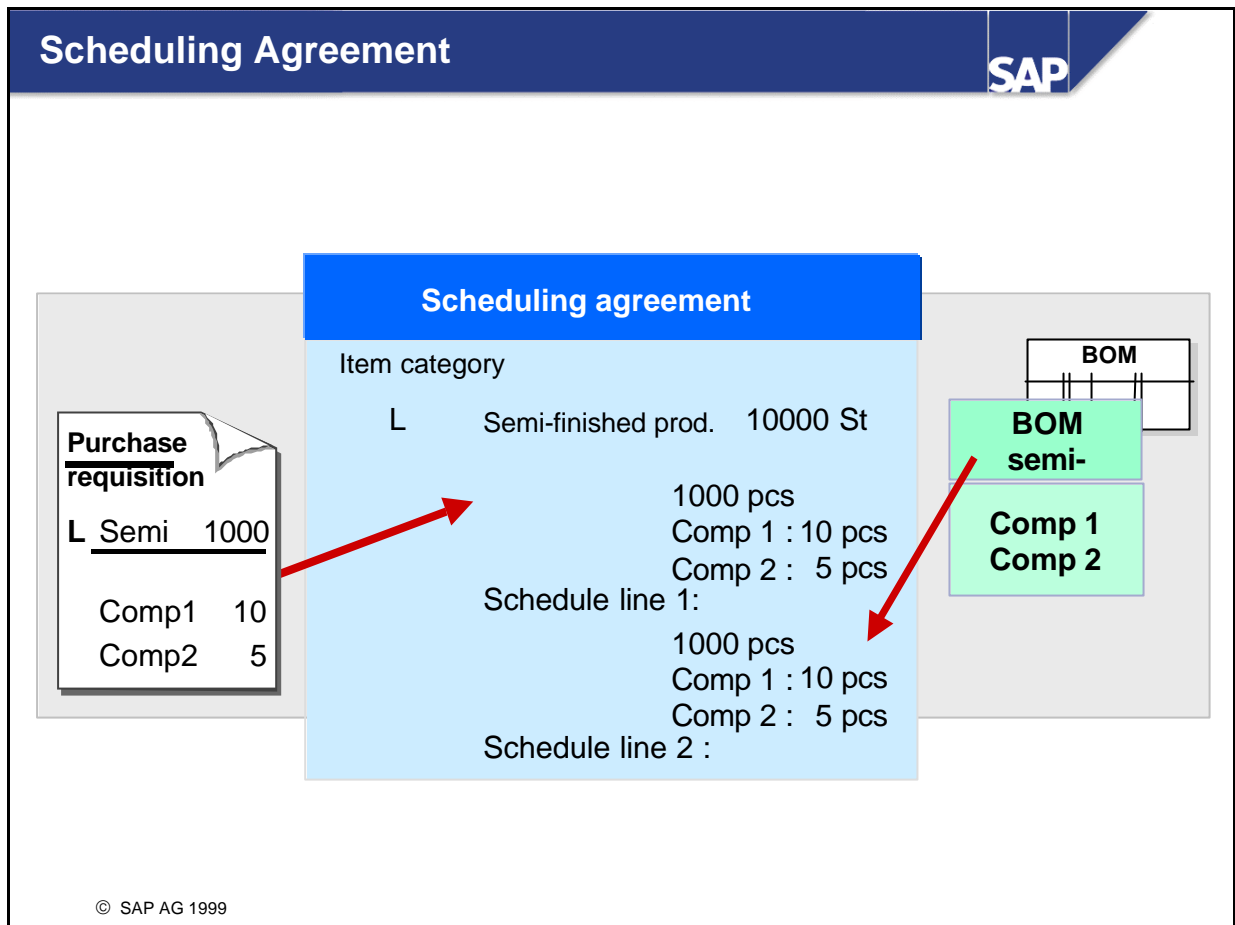
## Postings (Without Input Tax)



**Ordered: semi-finished product, Component: raw material**  
**OP = order price (labor costs), VP = Valuation price raw material**  
**Transaction (1): GR**  
**Transaction (2): IR; Invoice price: IP = OP + Dev (deviation)**

<b>Stock account for semi-finished product</b> (1) OP + VP (2) Dev	<b>Stock account for raw material</b> VP (1)	<b>GR/IR clearing</b> (2) OP    OP (1)	<b>Vendor</b> IP (2)
<b>Cost of goods manuf.</b> OP + VP (1) Dev (2)	<b>Consumption acct</b> (1) VP	<b>External labor account</b> (1) OP (2) Dev	

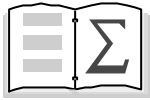
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- You enter the material that is to be produced as a subcontract item in the scheduling agreement item.
- You specify the components that are needed for the production of the scheduled quantities in the schedule lines. Reservation items are then created for these component quantities.

## Subcontracting: Unit Summary

SAP



- In subcontracting, your vendor (i.e. the subcontractor) receives components in order to manufacture a refined product for which your company has sent a purchase order. The components the vendor requires to produce the ordered product are listed in the purchase order and provided by you. The components can be defined in the system using a bill of materials.

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## Exercises

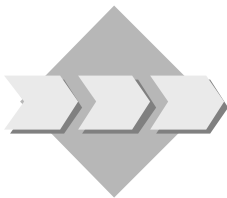


### Unit: Subcontracting

### Topic: Subcontract Material



- Outline the process for a subcontract material
- Explain item category L on the purchase order
- Explain the different ways to issue components to the vendor
- Perform a goods receipt for the final product
- Enter an invoice



In our company we produce an ignition module. We do not have the resources available to assemble the components, therefore we send the individual components to our subcontract vendor who then produces the final material.

- 1-1 Vendor **T-K12C##** produces material **T-B1##** under a subcontracting arrangement with you. You provide the vendor with the required components, as listed on the bill of material for this material.

Display the bill of material for material **T-B1##**, in plant **1000**, BOM usage **1**. What components and quantities have to be provided for material **T-B1##**?

**Menu path: Logistics ® Production ® Master Data ® Bills of Material ® Bill of Material ® Material BOM ® Display**

Component	Quantity

- 1-2 Display the stock overview for the components in plant 1000. What quantity of these materials is in unrestricted use in storage location 0001? What quantity does subcontractor **T-L10C##** have? Answer these questions by recording the current stock situation.

Plant 1000	Unrestricted Use	Material Provided to Vendor

- 1-3 Create a subcontract purchase order for subcontractor **T-K12C##**. Order 100 pieces of material **T-B1##** in plant 1000 with a delivery date of four weeks from now. The net price is UNI 100. Include “Payable immediately due net” as terms of payment on your purchase order.

1-3-1 Which item category do you use?

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1-3-2 Provide the components from the BOM of your material. Which materials are suggested?

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- 1-4 Display the SC stocks per vendor for your subcontract vendor **T-K12C##**. Which materials and quantities do you still have to send to the vendor so he can carry out your purchase order?

Material	Quantity Needed

- 1-5 You need to provide subcontractor **T-K12C##** with the components needed to produce material **T-B1##**. Transfer the components to the vendor, using the SC stocks per vendor report.

What is the movement type? \_\_\_\_\_

Where can you find the material document number that was created for this transaction?

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Material document \_\_\_\_\_

1-6 Display the material document.

What items does the material document contain? Why is each material listed twice?

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1-7 Display the stock overview for the materials provided and record the stock situation.

Plant 1000	Unrestricted Use	Material Provided to Vendor

Compared to the initial stock situation in question 1-2, what changes have occurred?

1-8 Perform an analysis of the stock of material provided to your vendor **T-K12C##**. What change has occurred in the required quantities?

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1-9 To be on the safe side, transfer another **10** pieces of material **T-T1##** and **T-T2##** from plant 1000, storage location 0001, to your subcontractor **T-K12C##**. Transfer these components to the vendor using a transfer posting from the inventory management system.

1-9-1 Which menu path do you use?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1-9-2 Movement type \_\_\_\_\_  
 Material document \_\_\_\_\_

1-10 Display the material document. Which items does it contain?

**Menu path: Logistics ® Materials Management ® Inventory Management ®  
 Material Document ® Display**

Component	Quantity	Movement	Stock Type

1-11 Vendor **T-K12C##** delivers ordered material **T-B1##**. Enter the goods receipt for your purchase order in plant 1000, storage location 0001.

Material document \_\_\_\_\_

1-12 Display the material document. Which items does it contain? Why do we have different movement types listed on this material document?

\_\_\_\_\_

\_\_\_\_\_

Component	Quantity	Movement	Stock Type

Which GL accounts have been updated for raw materials and semi finished goods?

Account	Account Description	Value

- 1-13 Your subcontractor informs you that he needed **one** extra piece of component **T-T1##** to be able to produce all the ignition devices. Enter the subsequent adjustment.

What is the menu path?

---



---



Key in your purchase order and press enter. Use the *Adopt* icon to display the material components.

Material document \_\_\_\_\_

- 1-14 Vendor **T-K12C##** sends the invoice for the subcontracting charges for the purchase order. For 100 pieces, he charges UNI 10,000 plus 10% tax. That comes to a total of **UNI 11,000.00**. Process the invoice from the vendor.

Invoice document number \_\_\_\_\_

- 1-15 Display the invoice and the accounting document. Which G/L accounts have been updated?

Account	Account Description	Value

- 1-16 Display the purchase order history for your subcontract purchase order.

## Solutions



### Unit: Subcontracting

### Topic: Subcontract Material

- 1-1 Bill of material for material **T-B1##** in plant **1000**, BOM usage **1**.

*Menu path: Logistics ® Production ® Master Data ® Bills of Material ® Bill of Material ® Material BOM ® Display*

Component	Quantity
T-T1## Slug for Cast Iron Spiral Casing	1 pc
T-T2## Flat Gasket	1 pc
T-T3## Hexagon Head Screw	8 pcs

- 1-2 Display the stock overview for the components in plant 1000.

*Menu path: Logistics ® Materials Management ® Inventory Management ® Environment ® Stock ® Stock Overview*

Plant 1000	Unrestricted Use	Material provided to Vendor
T-T1##	1000	0
T-T2##	1000	0
T-T3##	1000	0

- 1-3 Create a new subcontract purchase order.

*Logistics ® Materials Management ® Purchasing ® Purchase Order ® Create ® Vendor/Supplying Plant Known*

1-3-1 Item category: L - Subcontracting

1-3-2 Components provided

Material T-T1##, quantity 100 pcs.

Material T-T2##, quantity 100 pcs.

Material T-T3##, quantity 800 pcs.

- 1-4 Which materials and quantities do you still have to send to the vendor so he can carry out your purchase order?

**Menu path:** *Logistics* ® *Materials Management* ® *Purchasing* ® *Purchase Order* ® *Reporting* ® *SC Stocks per Vendor*

Material	Quantity Needed
T-T1##	100
T-T2##	100
T-T3##	800

- 1-5 Transfer the components to the vendor, using the SC stocks per vendor report.

**Menu path from the SC requirement per vendor report:** *Select the material and then choose the post goods issue pushbutton.*

What is the movement type? 541

Where can you find the material document number that was created for this transaction?

In the materials lists

**Menu path:** *Logistics* ® *Materials Management* ® *Inventory Management* ® *Environment* ® *List Displays* ® *Material Documents*.

Enter the material and click the *Execute* icon. Find the material document number with movement type 541.

Material document \_\_\_\_\_

- 1-6 Display the material document.

**Menu path:** *Logistics* ® *Materials Management* ® *Inventory Management* ® *Material Document* ® *Display*

Each material is listed twice because the material is moving from unrestricted stock to the material provided to vendor stock type. This stock type has an O in the stock type field.

1-7 Stock overview for the materials provided.

**Menu path: Logistics ® Materials Management ® Inventory Management ® Environment ® Stock ® Stock Overview**

Plant 1000	Unrestricted Use	Material Provided to Vendor
T-T1##	900	100
T-T2##	900	100
T-T3##	200	800

1-8 Analysis of the stock of material provided to your vendor

All of the components have been transferred to the vendor.

1-9 Transfer the components to the vendor using a transfer posting from the inventory management system.

1-9-1 Which menu path do you use?

**Logistics ® Materials Management ® Inventory Management ® Goods Movement ® Transfer Posting ® Movement type ® Transfer posting ® Stck w. subcontract ® From unrestricted**

1-9-2 Movement type 541

Material document \_\_\_\_\_

1-10 Display the material document. Which items does it contain?

**Menu path: Logistics ® Materials Management ® Inventory Management ® Material Document ® Display**

Component	Quantity	Movement	Stock Type
T-T1##	-	541	Leer
T-T1##	+	541	0
T-T2##	-	541	Leer
T-T2##	+	541	0

1-11 Goods receipt:

**Logistics ® Materials Management ® Inventory Management ® Goods Movement ® Goods Receipt ® For Purchase Order ® PO Number Known**

Material document \_\_\_\_\_



1-12 Material document

**Logistics ® Materials Management ® Inventory Management ® Material Document ® Display**

We have different movement types listed on the material document because we receive the final material and consume the components.

Components	Quantity	Movement	Stock Type
T-B1##	+	101	Blank
T-T1##	-	543	0
T-T2##	-	543	0
T-T3##	-	543	0

Which GL accounts have been updated for raw materials and semi finished goods?

Account	Account Description	Value
790000	Work in process inventory	
191100	GR/IR	
893010	Cost of goods sold	
417001	Purchased services	
300000	Inventory – raw materials	
400020	Raw materials consumed	

1-13 Your subcontractor informs you that he needed **one** extra piece of component **T-T1##** to be able to produce all the ignition devices. Enter the subsequent adjustment.

**Logistics ® Materials Management ® Inventory Management ® Goods Movement ® Subsequent Adjustment ® Subcontracting**



Key in your purchase order and press enter. Use the *Copy* icon to display the material components.

Material document \_\_\_\_\_

1-14 Invoice verification

**Menu path: Logistics ® Materials Management ® Invoice Verification ® Logistics Invoice Verification ® Document Entry ® Enter Invoice**

Invoice document number \_\_\_\_\_

- 1-15 Display the invoice and the accounting document. Which G/L accounts have been updated?

Account	Account Description	Value
T-K12C##	Vendor account	11,000.00
191100	GI/IR	10,000.00
154000	Input tax account	1,000.00

- 1-16 Display the purchase order history for your subcontract purchase order.

From the invoice document overview screen, position your cursor on the purchase order number, and then choose:

***Environment → Purchase order hist.***

*or*

***Logistics ® Materials Management ® Purchasing ® Purchase Order ® Display. Then click the PO history tab index***

### Contents:

- **The Physical Inventory Procedure**
- **Functions for Carrying out Physical Inventory**
- **Adjusting Inventory Differences**
- **Tools for Organizing Physical Inventory**

## Physical Inventory Management: Unit Objectives (1)

SAP



**At the conclusion of this unit, you will be able to:**

- **describe the physical inventory process**
- **describe the various methods of carrying out a physical inventory**
- **enter physical inventory documents**
- **identify various indicators and Customizing settings.**

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## Physical Inventory Management: Unit Objectives (2)

SAP



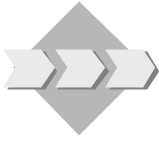
**At the conclusion of this unit, you will be able to:**

- **explain the purpose of the physical inventory number**
- **carry out standard reporting for physical inventory.**

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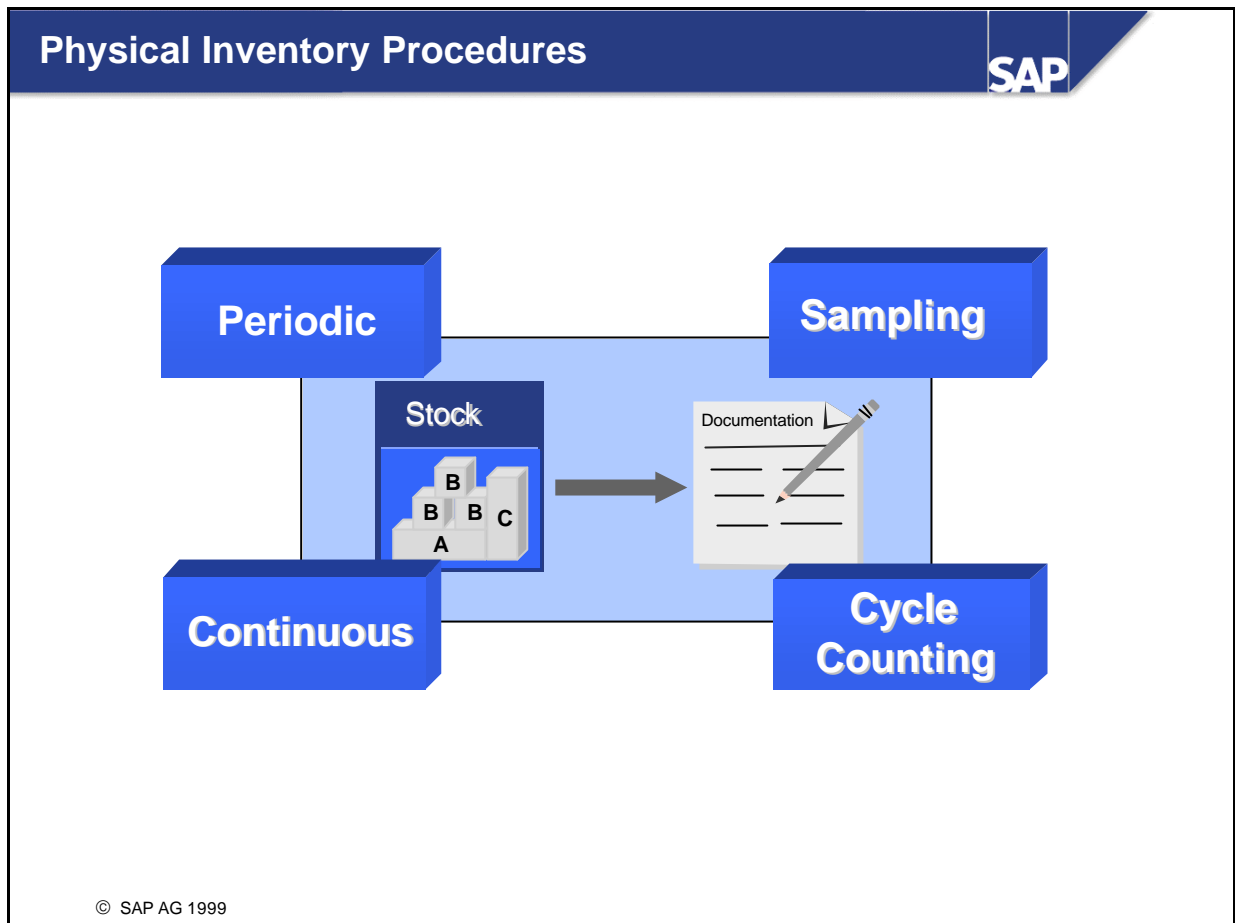
## Physical Inventory Management: Business Scenario

SAP

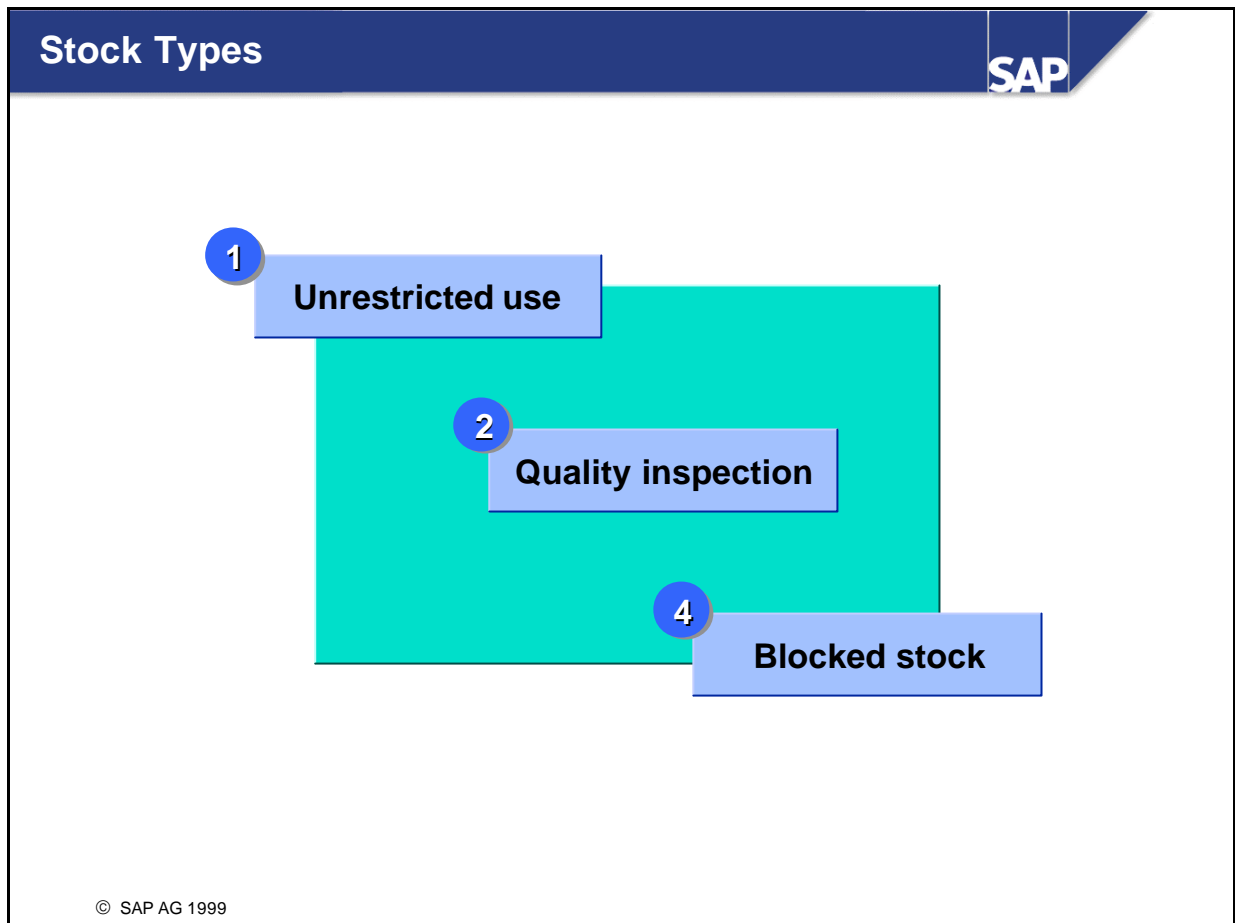


- **Your enterprise carries out a physical inventory for a particular key date. In this process, you check the stocks of material in the storage locations, counting the quantities in unrestricted-use stock as well as those in blocked and quality inspection stock. In some cases, you manually enter the physical inventory documents in the system, but you use the batch input function for most materials. If there is any doubt about a count result, you initiate a recount.**

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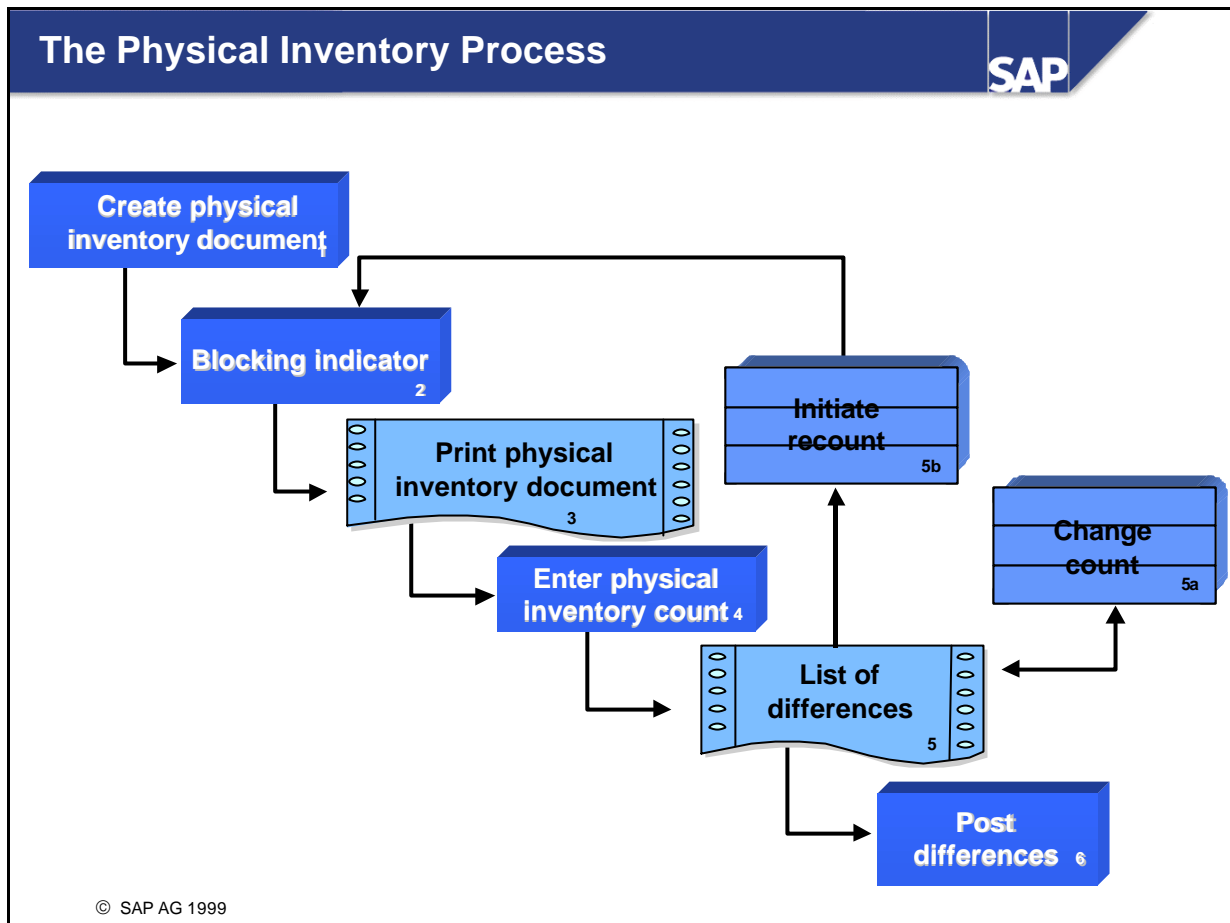


- In the R/3 System, you can carry out a physical inventory for special stocks as well as your own stocks. However, you have to inventory your own stock and each type of special stock (e.g. consignment stock at customer, or external consignment stock from vendor) separately, using different physical inventory documents.
- As of Release 4.0, physical inventory is linked with the Logistics Information System (LIS). When inventory differences are updated in the LIS, they are shown both in terms of quantity and value. The physical inventory items are aggregated to physical inventory number, plant, storage location, and material.



- The following stock types can be included in all physical inventory methods :
  - 1 Unrestricted use stocks in warehouse
  - 2 Quality inspection stocks
  - 4 Blocked stock





- Independent of the physical inventory procedure, the physical inventory process can be divided into three phases:

- Physical inventory preparation

This includes creating a physical inventory document, blocking materials for posting, as well as printing and distributing the physical inventory document.

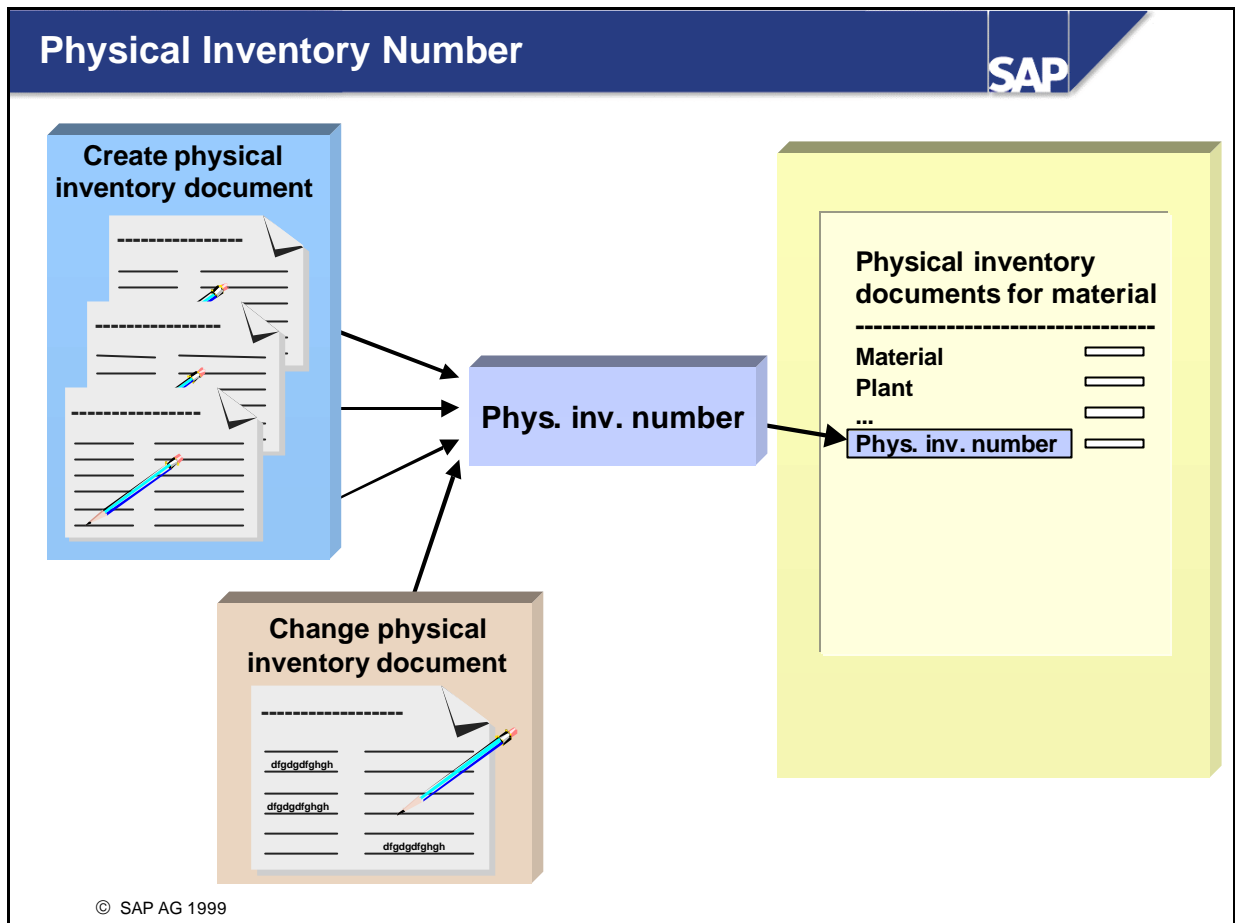
- Physical inventory count

Firstly, the stocks in the warehouse are counted and the count results are entered in the count list. These are then transferred from the count list to the system in the step “enter physical inventory count”.

- Physical inventory check

Using the list of inventory differences, you can check variances in the stocks. You should check whether the transferred count result is correct (change count) or whether you want to initiate a recount.

If the difference is accepted, it is posted and stock is corrected.



- The physical inventory number was created as an additional hierarchy above the physical inventory document number. You can use it to group together different physical inventory documents that belong together organizationally.
- You assign physical inventory numbers when you create and change physical inventory documents, and you can use them as an extra selection criterion for physical inventory reports. This enables you to directly display the physical inventory documents per storage location, customer, or vendor.

## Entering the Physical Inventory Count

SAP

**Freeze book inventory balance**

**Set zero count automatically**

**Tolerance for posting inventory differences**

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## Effects of Entering the Count Results

SAP

Posting block from **X** to **A**

→ Goods movements are re-allowed

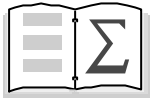
Determination of posting period **(\*)**

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- (\*)Differences are to be posted in this posting period.

## Physical Inventory Management: Unit Summary

SAP



- In a periodic inventory, all the enterprise's stocks are physically counted on the balance sheet key date. Every material has to be counted. During counting, the entire warehouse must be blocked for material movements.
- In the continuous inventory procedure, stocks are counted continuously throughout the entire fiscal year. In this case, it is important to ensure that every material is physically counted at least once during the fiscal year.

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# Exercises

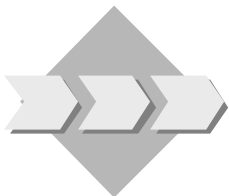


## Unit: Physical Inventory

### Topic: Physical Inventory



- Explanation of the physical inventory process
- Posting physical inventory documents
- Configuration and various settings for the physical inventory
- The physical inventory number and using it to group physical inventories
- Standard reports for the physical inventory



Your company carries out physical inventories periodically. You have to check the stock quantity in the plant. You sometimes use various stock types to manage a material, for example, blocked stock, stock in quality inspection, or unrestricted-use stock. You carry out the physical inventory manually or using the batch function. If a count result seems unlikely, you may carry out a recount.

#### 1-1 Physical inventory

- 1-1-1 Create a physical inventory document for plant 1000, storage location 0001. The count is supposed to take place in two days, so you do not have to set the posting block. For the physical inventory document, assign the physical inventory number G## to your group. The following materials and stock types are to be counted.

Material	Stock Type
T-AM1##	Unrestricted use
T-AM1##	Quality inspection
T-AM1##	Blocked stock

Number of physical inventory document \_\_\_\_\_

- 1-1-2 Enter the physical inventory count for the document. Enter a variance of 5% on the initial screen and use the values in the table for the items in your document. Remember to set the zero count indicator.

Material	Count
T-AM1## Unrestricted use	110
T-AM1## QI	48

T-AM1## Blocked	0
-----------------	---

1-1-3 Display the physical inventory document. Call up the history and statistics for the first material in the document and answer the questions below.

Who entered the count? \_\_\_\_\_

What is the physical inventory status? \_\_\_\_\_

What is the quantity? \_\_\_\_\_

What is the book quantity? \_\_\_\_\_

What is the difference quantity? \_\_\_\_\_

1-1-4 Create a list of differences and analyze the counts you have entered.

1-1-5 Choose the first item of your document for a recount and assign the physical inventory number G## again.

Physical inventory document \_\_\_\_\_

1-1-6 Enter the count for the recount document.

Material	Count
T-AM1## Unrestricted use	105

1-1-7 Post the differences from your two physical inventory documents.

\_\_\_\_\_

1-1-8 Display the material document number. Is there an accounting document?  
What is the accounting entry?

What is the quantity difference? \_\_\_\_\_

What is the value difference? \_\_\_\_\_

Material document number \_\_\_\_\_

1-1-9 Display the physical inventory data for your material. Has a physical inventory been carried out for the material in this fiscal year?

\_\_\_\_\_

Display the physical inventory documents for your material.

\_\_\_\_\_



## Unit: Physical Inventory

### Topic: Physical Inventory with Blocking Indicator

#### 2-1 Physical inventory with blocking indicator

- 2-1-1 The unrestricted-use stock for material T-AM2## in plant 1000, storage location 0001 is to be counted. Create a physical inventory document for the count. The count is to take place today, so the posting block has to be set for this material, as no goods movements should take place for this material during the count. Assign G## as the physical inventory number again.

Physical inventory document \_\_\_\_\_

- 2-1-2 Test the posting block by posting a goods issue for over 10 pieces from plant 1000, storage location 0001, to cost center T-L##.

Can you issue the material to the cost center?

\_\_\_\_\_

What message is displayed?

\_\_\_\_\_

- 2-1-3 Display the storage location stock view in material master T-AM2## for plant 1000 and storage location 0002. Is the blocking indicator set?

\_\_\_\_\_

- 2-1-4 Create a list of all the physical inventory documents you have created and processed.

\_\_\_\_\_

- 2-1-5 Enter the physical inventory count for your physical inventory document.

Material	Count
T-AM2## Unrestricted use	95



2-1-6 Is the blocking indicator in the material master still set?

---

2-1-7 Post the physical inventory difference for your physical inventory document

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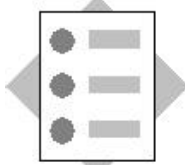
2-1-8 Is the blocking indicator in the material master still set?

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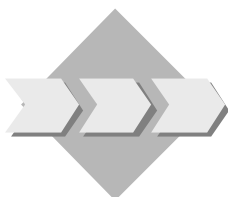


## Unit: Physical Inventory

### Topic: Physical Inventory Using the Batch Function



- Explanation of the physical inventory process
- Using a batch input session to create physical inventory documents
- Configuration and various settings for the physical inventory



Instead of entering each individual material in the physical inventory document, you can also create physical inventory documents using the batch function.

#### 3-1 Physical inventory documents using the batch function

##### 3-1-1 Create the physical inventory documents without special stock.

You want to create a physical inventory count for your raw materials in plant 1000, storage location 0001. The storage bin description for your materials is BL##. Use this storage bin description as a selection criterion as well as plant 1000, storage location 0001, material type ROH, and material group 0002. You only want to count the unrestricted-use stock. Select this on the selection screen under 'Stock types'.

*Logistics® Materials Management® Physical Inventory® Sessions®  
Create Phys.Inv.Docs® W/o Special Stock*

What session name was assigned automatically? \_\_\_\_\_

Process this session in the background.

Choose *System® Services® Batch input® Sessions*.

To display your session, select your user in the 'Created by' column.

Select your session and choose 'Process'.

*Note: Select the 'Display errors only' run mode and choose 'Process'.*

What physical inventory document(s) was/were created? (It may take a moment to complete this transaction). How many items does the physical inventory document contain?

\_\_\_\_\_

3-1-2 Enter the physical inventory counts manually for the physical inventory document that you created via the batch function

Material	Count
T-AM3##	28
T-AM4##	40
T-AM5##	51
T-AM6##	60
T-AM7##	69
T-AM8##	80

3-1-3 Use a batch input session to post the differences.

**Logistics ® Materials Management ® Physical Inventory ® Inventory Count ® Enter**

Enter your physical inventory document.

What is the name of the session? \_\_MB\_\_MI07\_\_\_\_\_

Process this session in the background.

Choose **System ® Services ® Batch input ® Sessions**. Select your session in the 'Created by' column.



Select the 'Display errors only' run mode and choose 'Process'.

What material document was created? (It may take a moment to complete this transaction.) \_\_\_\_\_



You find the material document by displaying the physical inventory document and choosing the physical inventory history at item level.

3-1-4 Display the physical inventory document and view the statistics and history for one of the materials.

Who entered the count results and posted the differences?

\_\_\_\_\_

Which material document was used to post the differences?

\_\_\_\_\_

3-1-5 Display the material document that was used to post the differences. Which movement type was used? Is there an accounting document? What is the accounting entry for this transaction?

---

# Solutions



## Unit: Physical Inventory

### Topic: Physical Inventory

#### 1-1 Physical inventory

##### 1-1-1 Inventory document for plant 1000, storage location 0001

**Menu path: Logistics ® Materials Management ® Physical Inventory ® Phys. Inventory Doc. ® Create**

Material	Stock Type
T-AM1##	Unrestricted use
T-AM1##	Quality inspection
T-AM1##	Blocked stock

*Use stock type 1 for stock material, 2 for quality inspection, and 4 for blocked stock*

→

Number of physical inventory document \_\_\_\_\_

##### 1-1-2 Physical inventory counts

**Logistics ® Materials Management ® Physical Inventory ® Inventory Count ® Enter**

Choose 'Set zero count' for items with a value of zero.

1-1-3 History and statistics of the physical inventory document

**Logistics** ® **Materials Management** ® **Physical Inventory** ® **Phys. Inventory Doc.** ® **Display**

Select the *Phys. Inv. History* button

Who entered the count?	Your user
What is the physical inventory status?	Counted
What is the quantity?	The counted quantity
What is the book quantity?	Book inventory at time of count
What is the difference quantity?	Difference quantity between the book inventory and the counted quantity

1-1-4 List of differences

**Logistics** ® **Materials Management** ® **Physical Inventory** ® **Difference** ® **Difference List**

*Enter your material number, plant, and storage location as selection criteria. Execute.*

1-1-5 Recount

Logistics → Materials Management → Physical Inventory → Phys. Inventory Doc. → Recount

Deselect all lines except the first line.

1-1-6 Enter count

**Logistics** ® **Materials Management** ® **Physical Inventory** ® **Inventory Count** ® **Enter**

1-1-7 Post the differences from your two physical inventory documents.

**Logistics** ® **Materials Management** ® **Physical Inventory** ® **Difference** ® **Post**

1-1-8 Display the material document number. Is there an accounting document?  
What is the accounting entry?

***Logistics ® Materials Management ® Physical Inventory ®  
Environment ® Mat.Doc.for Material***

What is the quantity difference? 2 pcs or 5 pcs

What is the value difference? UNI 1.60 or UNI 4

Material document numbers \_\_\_\_\_

1-1-9 Physical inventory data for your material

***Logistics ® Materials Management ® Physical Inventory ®  
Environment ® Phys.Inv.Data for Mat.***

Physical inventory carried out: Yes

Display the physical inventory documents for your material.

***Logistics ® Materials Management ® Physical Inventory ®  
Environment ® Phys.Inv.Doc.for Mat.***



## **Unit: Physical Inventory**

### **Topic: Physical Inventory with Blocking Indicator**

#### 2-1 Physical inventory with blocking indicator

##### 2-1-1 Physical inventory document with posting block

***Logistics ® Materials Management ® Physical Inventory ® Phys. Inventory Doc. ® Create***

Physical inventory document \_\_\_\_\_

##### 2-1-2 Test the posting block by posting a goods issue for over 10 pieces from plant 1000, storage location 0001, to cost center T-L##.

***Logistics ® Materials Management ® Inventory Management ® Goods Movement ® Goods Issue***

Can you issue the material to the cost center? No

What message is displayed? Material blocked due to physical inventory

##### 2-1-3 Display the storage location stock view in the material master T-AM2## for plant 1000 and storage location 0001.

***Logistics ® Materials Management ® Material Master ® Material ® Display ® Display Current***

*The physical inventory status is displayed in the view for plant or storage location stock.*

Physical inventory block: X (Material blocked for movement due to physical inventory)

##### 2-1-4 List all physical inventory documents

***Logistics ® Materials Management ® Physical Inventory ® Environment ® Phys.Inv.Data for Mat***

##### 2-1-5 Enter physical inventory count

***Logistics ® Materials Management ® Physical Inventory ® Inventory Count ® Enter***



2-1-6 The physical inventory field is in the storage location stock view in material master T-AM2##

***Logistics ® Materials Management ® Material Master ® Material ® Display ® Display Current***

Physical inventory block: A (Physical inventory for material is not yet completed)

2-1-7 Post the differences for your physical inventory document.

***Logistics ® Materials Management ® Physical Inventory ® Difference ® Post***

2-1-8 The physical inventory field is in the storage location stock view in material master T-AM2##

***Logistics ® Materials Management ® Material master ® Material ® Display ® Display Current***

Physical inventory block: \_ (No physical inventory transaction exists for the material)



## **Unit: Physical Inventory**

### **Topic: Physical Inventory Using the Batch Function**

#### 3-1 Physical inventory documents using the batch function

##### 3-1-1 Create the physical inventory documents without special stock

You want to create a physical inventory count for your raw materials in plant 1000, storage location 0001. The storage bin description for your materials is BL##. Use this storage bin description as a selection criterion as well as plant 1000, storage location 0001, material type ROH, and material group 0002. You only want to count the unrestricted-use stock. Select this on the selection screen under 'Stock types'.

***Menu path: Logistics ® Materials Management ® Physical Inventory ® Sessions ® Create Phys.Inv.Docs ® W/o Special Stock***

Restrict the physical inventory document using the storage bin description BL##

What session name was assigned automatically? MB\_MI01 \_\_\_\_\_

Process this session in the background.

Choose System → Services → Batch input → Sessions.

To display your session, select your user in the 'Created by' column.

Select your session and choose 'Process'.

Note: Select the 'Display errors only' run mode and choose 'Process'.

What physical inventory document(s) was/were created? (It may take a moment to complete this transaction). How many items does the physical inventory document contain?

5 items

##### 3-1-2 Enter the physical inventory counts manually for the physical inventory document that you created via the batch function

***Logistics ® Materials Management ® Physical Inventory ® Inventory Count ® Enter***

3-1-3 Use a batch input session to post the differences.

***Logistics ® Materials Management ® Physical Inventory ® Sessions ® Post Difference***

Enter your physical inventory document.

What is the name of the session? MB\_MI07

Process this session in the background.

*Choose System ® Services ® Batch input ® Sessions. (Select your session in the 'Created by' column.).*



*Select the 'Display errors only' run mode and choose 'Process'*

What material document was created? (It may take a moment to complete this transaction.) \_\_\_\_\_



*You find the material document by displaying the physical inventory document and choosing the physical inventory history at item level*

3-1-4 Statistics and history for the physical inventory document

***Logistics ® Materials Management ® Physical Inventory ® Phys. Inventory Doc. ® Display***

Who entered the count results and posted the differences? Your user

Which material document was used to post the differences?

---

3-1-5 Display the material document that was used to post the differences.

***Logistics ® Materials Management ® Physical Inventory ® Environment ® Material Document***

Movement type 701 or 702

Press the Accounting documents pushbutton to display the accounting document. Select the accounting document. The raw materials account is posted and, depending on the type of difference, the income or expenditure from inventory differences account is also posted.

### Contents:

- **Flagging materials for cycle counting**
- **Creating physical inventory documents for cycle counting**

## Cycle Counting: Unit Objectives

SAP



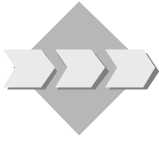
**At the conclusion of this unit, you will be able to:**

- **describe the cycle counting procedure**
- **describe the ways of assigning the cycle counting indicator in the material master record**
- **carry out a physical inventory using the cycle counting procedure**
- **list the most important indicators and Customizing settings.**

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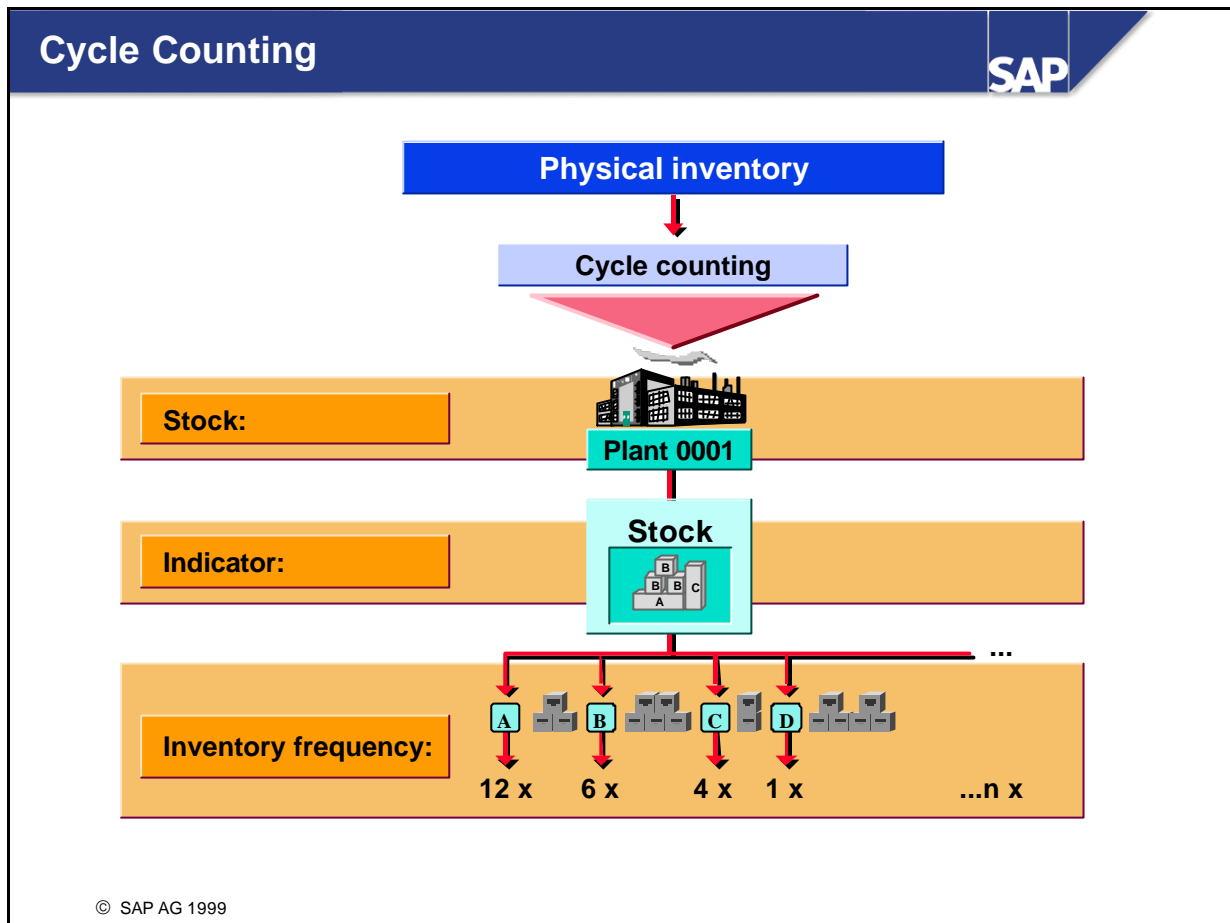
## Cycle Counting: Business Scenario

SAP

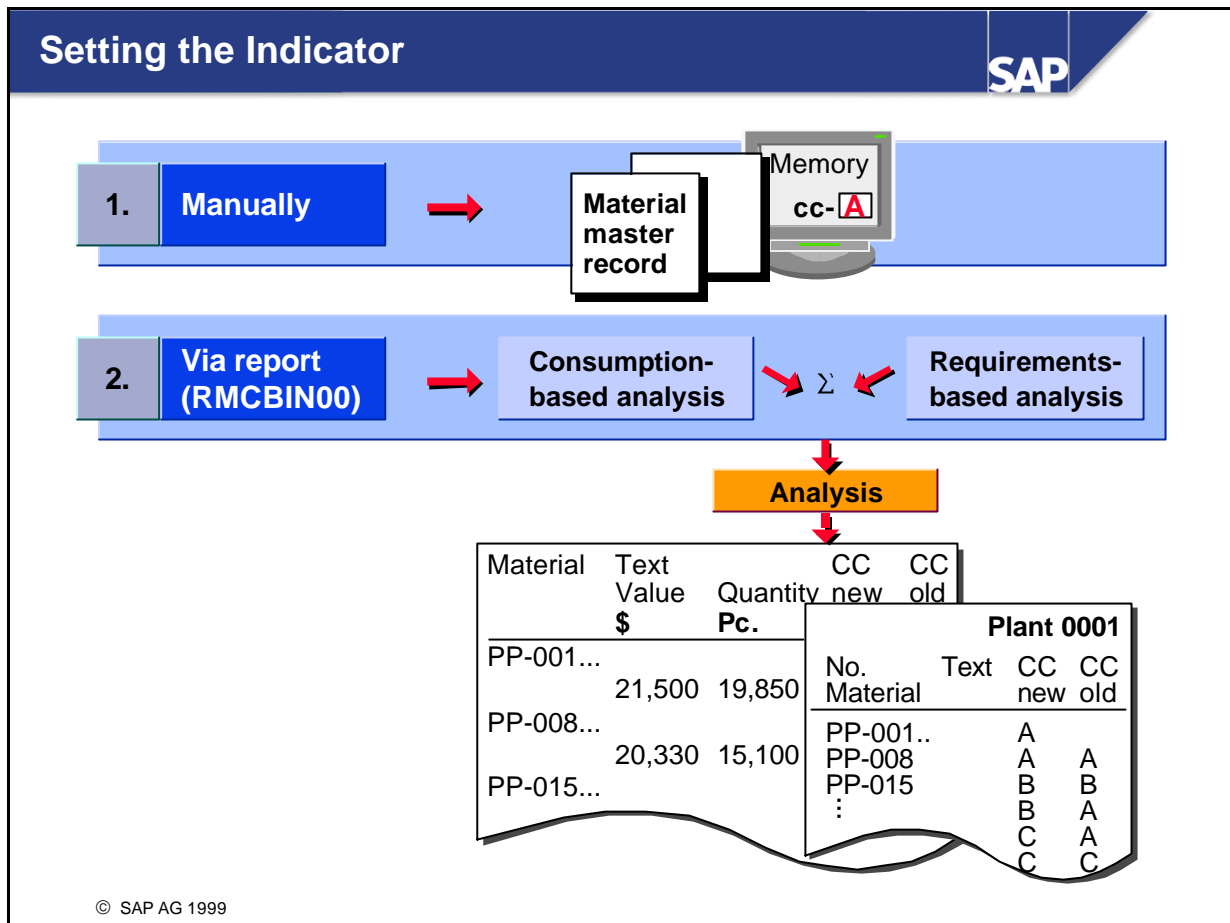


- **In your enterprise, you assign a cycle counting indicator to materials. These indicators are set in the material master record through an ABC analysis. You want to count your A materials every 30 days. In other cases, you manually assign a cycle counting indicator to the material master record. This indicator determines the intervals at which the physical inventory is carried out.**

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- Cycle counting is a method of physical inventory whereby material is counted at regular intervals within a fiscal year. These intervals (or cycles) depend on the cycle counting indicator set for each material.
- Cycle counting allows fast-moving items to be counted more frequently than slow-moving items, for example.
- All materials to be included in the cycle counting inventory are classified. This is done either manually, using a cycle counting indicator in the material master record (storage data), or automatically, by means of an ABC analysis. The cycle counting indicator allows you to classify materials into individual cycle counting categories (e.g.: A, B, C, D) In Customizing, you can then set different time intervals for inventory of different materials.
- This approach concentrates on items with the highest level of activity (A items) which only represent 20 % of the entire item base but are the items where discrepancies are most likely to occur.



- You can set the indicators for materials to be included in the cycle counting inventory method as follows:
  - manually in the material master record (storage data).
  - automatically with an ABC analysis for Physical Inventory (not to be confused with ABC indicator on MRP1 screen).
- The RMCBIN00 program allows you to carry out an ABC analysis to classify the materials according to either consumption or requirements. The analysis can be set to consider either only those materials with a cycle counting indicator, or all materials. The cycle counting indicator can be automatically updated during the cycle counting analysis.



## When is the next physical inventory?

SAP

Plant	CC Indicator	No.inv.	Interval	Buffer	Percent
*0001	A	12	20	5	50
0001	B	6	41	10	30
0001	C	3	82	20	15
0001	D	1	247		05

↓  
 No of inventories per year

↓  
 No. of workdays

↓  
 No. of workdays by which the count date may differ from the planned count date

**Σ = 100**

**\* All materials in plant 0001 with CC indicator must be counted 12 times per year (every 20 days)**

- For all new materials in stock, the date when the accounting view was initialized is relevant.
- Batches: The date when the batch was created is relevant.

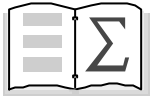
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- To plan the cycle counting inventories, start the RM07ICN1 cycle counting program at regular intervals. This program checks the due dates for inventories for all cycle counting materials.
- If it is time for an inventory for a certain material, use the program to create a batch input session to create physical inventory documents. Physical inventory documents are only created for stock type 1 (unrestricted use). The actual inventory count date is calculated as follows:
 

Date of last inventory + pre-defined interval
- The interval between inventories for each cycle counting indicator is set in Customizing.
- Use the batch input session to create the physical inventory documents.
- Now you can carry out the inventory. When the difference is posted, the actual inventory count date is recorded in the material inventory data as the date of the last inventory.

## Cycle Counting: Unit Summary

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- **Cycle counting is a method of physical inventory whereby material is inventoried at regular intervals within a fiscal year. These intervals or cycles depend on the cycle counting indicator set for the material.**

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# Exercises

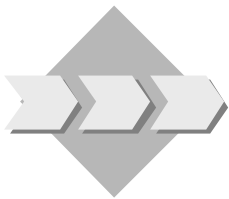


## Unit: Cycle Counting

### Topic: Cycle Counting



- Explanation of the cycle counting process
- Assigning a cycle counting indicator to a material
- Carrying out the cycle counting process
- Configuration and settings for cycle counting



The materials in your company are grouped into various cycle counting categories, either A, B, or C. Materials belonging to group A are the highest in value and are therefore counted every 30 days. In some cases, you manually assign a cycle count category to a material. In others, the cycle counting program assigns the indicator

#### 1-1 Cycle counting

1-1-1 Display the settings for cycle counting in Customizing and answer the following questions by filling out the table

What are the cycle counting indicators for plant 1000?

How many physical inventories are carried out? What is the percentage for each indicator?

Plant 1000

Cycle Count Indicator	Number of Physical Inventories	Percentage

1-1-2 In the material master, set the cycle counting indicator for material T-AM8## to C. Which view contains this field?

---

1-1-3 Determine cycle counting indicator

Carry out the analysis for previous consumption values (period of one year) for finished products in plant 1000. Process the results by displaying the list.

What is proposed as the new cycle counting indicator for your material T-AM8##? \_\_\_\_\_

Change the cycle counting indicator for your material T-AM8## only.

Save the ABC analysis.

# Solutions



## Unit: Cycle Counting

### Topic: Cycle Counting

#### 1-1 Cycle counting

##### 1-1-1 Customizing

**Tools** ® **AcceleratedSAP** ® **Customizing** ® **Project Management** ® **Goto** ®  
**SAP Reference IMG**

**Materials Management** ® **Inventory Management and Physical Inventory** ®  
**Physical Inventory** ® **Cycle Counting**

Plant 1000

Cycle Count Indicator	Number of Physical Inventories	Percentage
A	12	56
B	6	28
C	3	14
D	1	2

#### 1-1-2 In the material master, set the cycle counting indicator for material T-AM8## to C. Which view contains this field?

**Logistics** ® **Material Management** ® **Material Master** ® **Material** ®  
**Change** ® **Immediately**

General Plant data/Storage 1

#### 1-1-3 Determine the cycle counting indicator

Carry out the analysis for previous consumption values (period of one year) for finished products in plant 1000. Process the results by displaying the list.

**Physical Inventory** ® **Cycle Counting** ® **Set CC Indicator**

What is proposed as the new cycle counting indicator for your material T-AM8##? D

Change the cycle counting indicator for your material T-AM8## only.

Select material T-AM8## and choose 'Change CC indicator'.

Change the indicator to D.

Save the ABC analysis.



### **Contents:**

- **Inventory Sampling: Preparation**
- **Inventory Sampling: Procedure**

## Inventory Sampling: Unit Objectives

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**At the conclusion of this unit, you will be able to:**

- **Describe the inventory sampling procedure**
- **List the Customizing settings for the inventory sampling procedure**
- **Carry out inventory sampling in the system.**

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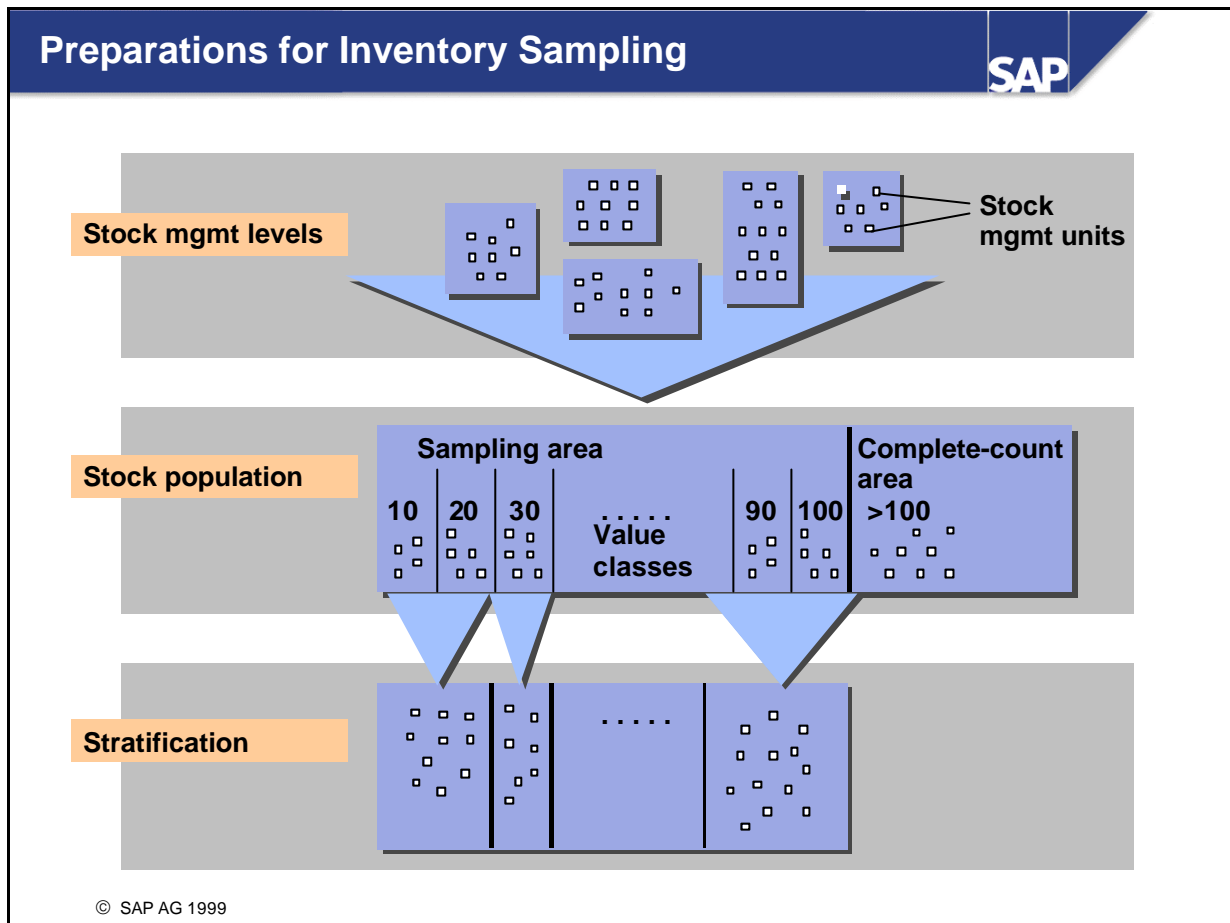
## Inventory Sampling: Business Scenario

SAP



- In your plants for raw materials, you use the inventory sampling procedure because you want to keep the number of materials to be counted as small as possible.

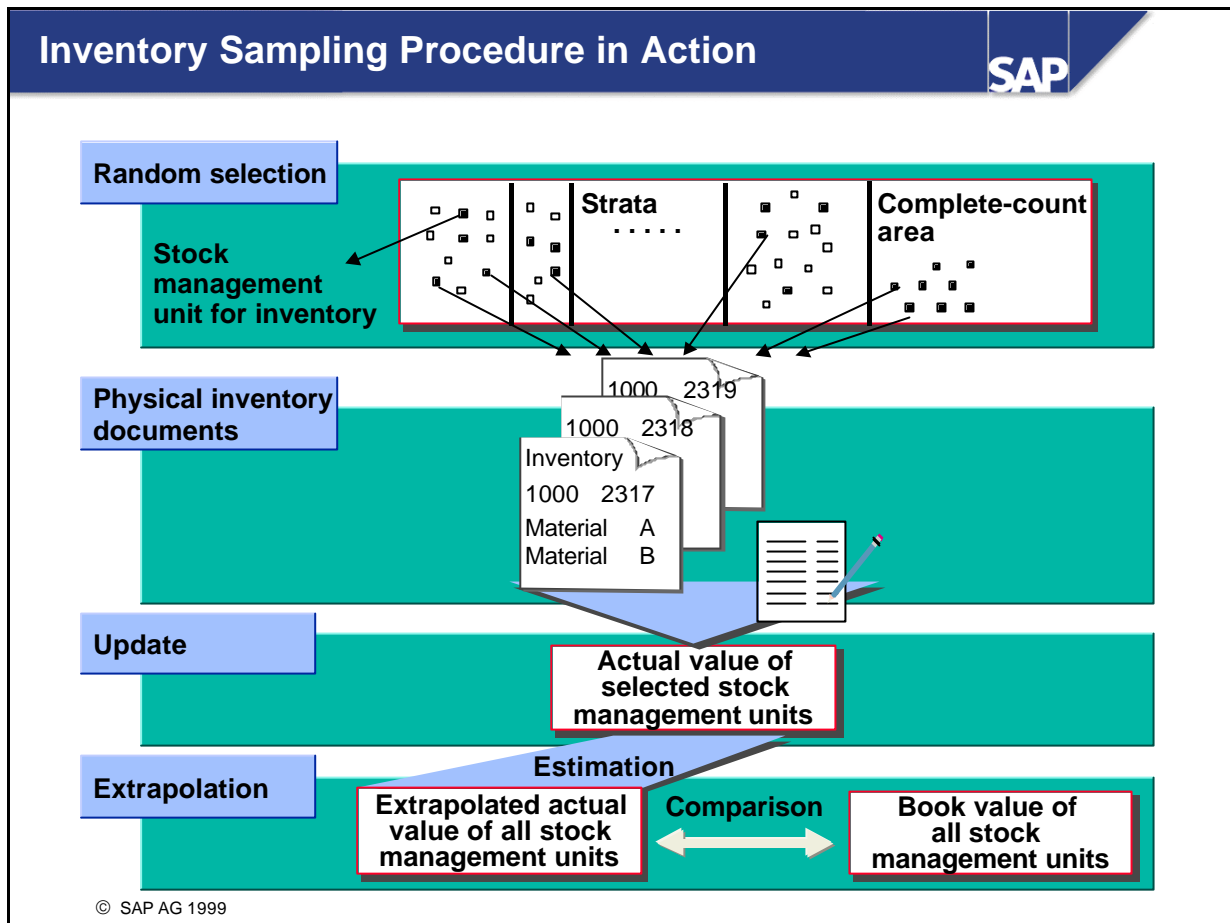
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- The inventory sampling procedure is based on statistical procedures.
  - A sample is randomly selected from the stock management units for which a physical inventory is to be carried out, and then counted. The sample size depends on the probable degree of confidence you require when using the data obtained from the sample to make inferences about the entire stock management units.
  - The data posted for the sample stock is extrapolated, and then applied to all the stock management units included in the inventory sampling procedure.
  - If the deviation between the extrapolated value and the book value is very small, and the probability is high that any error in the extrapolation results is only very small, then the inventory sampling procedure is considered to have been successful.
- In the preparation phase, you have to carry out the following steps:
  - Allocate stock management levels
 

You have to specify which stock management units are to be included in the inventory sampling procedure. To do this you do not assign individual stock management units to the sampling procedure, but rather you allocate quantities of stock management units, which are known as stock management levels.
  - Form stock population
 

The stock population is the total stock quantity in all stock management units included in the inventory sampling procedure.
  - Carry out stratification



■ The following steps have to be carried out during the active phase:

- Generate random selection

Random selection is carried out separately for each stratum of the stock management units to be counted.

- Create physical inventory documents
- Carry out update

The system performs these two initial actions during the update:

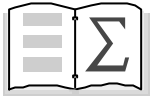
- It reads new count results.
- It reads changed book inventory balances and book values.
- Extrapolation

In the extrapolation, the physical inventory value of the sampling area is estimated, based on the latest count results. In each stratum an average physical inventory value is calculated per item, and this is multiplied by the number of items in that stratum. The total sum of these stratum values is the estimated value for the sampling area.

If the entire physical inventory value (estimated value for sampling area plus actual value for complete-count area) does not deviate from the book inventory value by more than 2% (standard system setting), the inventory sampling procedure is considered successful.

## Inventory Sampling: Unit Summary

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- In inventory sampling, randomly selected stocks of the company are physically counted on the balance sheet key date. If the variances between the result of the count and the book inventory balance are small enough, it is presumed that the book inventory balances for the other stocks are correct.

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## Exercises

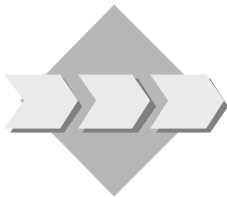


### Unit: Inventory Sampling

### Topic: Inventory Sampling



- Explanation of the inventory sampling procedure
- Configuration/settings for the inventory sampling procedure
- Carrying out an inventory sampling



Your company wants to minimize the number of materials that are counted. You use inventory sampling for the raw materials in your plant so that you can obtain an overview of the stock situation without having to count every material.

1-1 In Customizing, check the profile for inventory sampling.

For which currencies have profiles been created in Customizing?

---

Display profile 01 and check the following settings:

Are materials with an ABC indicator taken into account in inventory sampling?

---

As of which price limit are materials adopted into the complete-count area?

---

What is the minimum number of materials per stratum that must be included in the inventory sampling?

---

1-2 For which stock types is inventory sampling allowed in plant 1000, storage location 0001?

---

## Solutions



### Unit: Inventory Sampling

### Topic: Inventory Sampling

- 1-1 In Customizing, check the profile for inventory sampling.

*Tools → AcceleratedSAP → Customizing → Project Management → Goto → SAP Reference IMG → Materials Management → Inventory Management and Physical Inventory → Physical Inventory → Inventory Sampling → Create Inventory Sampling Profiles*

Currencies: Units and US dollars

Profile 01

Are materials with an ABC indicator taken into account in inventory sampling?  
Materials belonging to group A are assigned to the complete-count area

Price limit for complete-count area: above DEM 1000

What is the minimum number of materials per stratum that must be included in the inventory sampling? 30

- 1-2 For which stock types is inventory sampling allowed in plant 1000, storage location 0001?

*Tools → AcceleratedSAP → Customizing → Project Management → Goto → SAP Reference IMG → Materials Management → Inventory Management and Physical Inventory → Physical Inventory → Inventory Sampling ® Define Stock Management Levels*

For raw materials (ROH)

### Contents:

- **Procurement Processes**

## Hint: Exercise in the Appendix

SAP



**There is an optional exercise *Business Processes* in the Appendix.**

- **This exercise is intended to test and consolidate your knowledge.**
- **You should be able to practice this exercise by yourself.**
- **If necessary, use your course documents and the R/3 Online Help Library.**

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