SCM500

Processes in Procurement

PARTICIPANT HANDBOOK
INSTRUCTOR-LED TRAINING

Course Version: 15
Course Duration: 5 Day(s)
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Typographic Conventions

American English is the standard used in this handbook.

The following typographic conventions are also used.

This information is displayed in the instructor's presentation	
Demonstration	
Procedure	
Warning or Caution	
Hint	
Related or Additional Information	
Facilitated Discussion	
User interface control	*Example text*
Window title	*Example text*

Contents

Course Overview

TARGET AUDIENCE

This course is intended for the following audiences:

- Application Consultant
- Business Process Architect
- Business Process Owner/Team Lead/Power User
- Super / Key / Power User

UNIT 1 Procurement Processes

UNIT OBJECTIVES

- Describe the various external procurement processes
- Identify the relevant organizational levels for procurement
- Maintain purchase orders
- Execute print outputs for purchase orders
- Post a goods receipt
- Enter an invoice

Unit 1
Lesson 1

Defining Processes and Organizational Levels in Procurement

LESSON OVERVIEW

This lesson introduces the process of procurement and the organizational units used to build this process.

Business Example

In your company, materials are procured through various channels, including external vendors and other branches of your company. As a member of the project team, you examine how these procurement processes and the necessary company structure are represented in the SAP system. For this reason, you require the following knowledge:

- An understanding of the various external procurement processes
- An understanding of the processes and organizational levels in procurement

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Describe the various external procurement processes
- Identify the relevant organizational levels for procurement

External Procurement Process

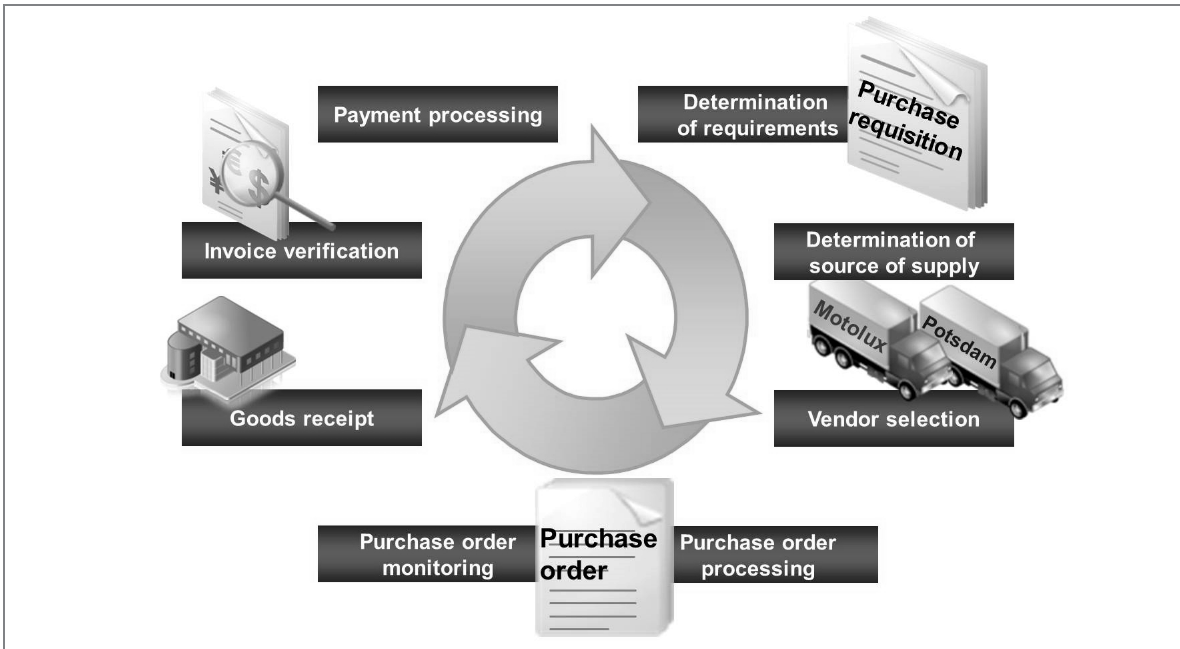

Figure 1: Procurement Cycle

The external procurement of materials is based on a cycle of dependent activities.

External Procurement Process - Phases

A typical procurement process includes the following phases:

- Determination of requirements

  Manually create a purchase requisition to inform the Purchasing department about material requirements. If you have set an MRP procedure for a material in the material master, the SAP system automatically generates a planned order or a purchase requisition. If the system generates a planned order, it can later be converted to a purchase requisition.

- Determination of supply source

  The system supports buyers in determining possible supply sources. You can use the source of supply determination to create requests for buyer quotations (RFQs). In addition, you can refer to purchase orders, contracts, and conditions that already exist in the system.

- Vendor selection

  Analyze price comparisons between various quotations to select vendors. Rejection letters can be sent automatically.

- Purchase order processing

  Create purchase orders manually, or let the system create them automatically. When you create purchase orders, you can copy data from other documents (such as purchase requisitions or quotations) to automatically populate general entries that need to be made. You can also work with outline agreements.

- Purchase order monitoring

  Monitor the processing status of the purchase orders in the system. For example, you can determine whether a delivery or invoice has already been received for a purchase order item. You can also remind vendors about outstanding deliveries.

- Goods receipt

  Enter inbound deliveries in the system by referring to the associated purchase order to reduce the number of entries that need to be made. Referring to the associated purchase order also allows you to check whether the goods and quantities delivered match the purchase order. The system updates the purchase order history.

- Invoice verification

  Enter invoices in the system by referring to the previous purchase order or delivery to check the calculations and accuracy of the invoice. The availability of purchase order and goods receipt data means that you can be informed of any differences in quantity and price.

- Payment processing

  Run the payment program to pay vendor liabilities. The accounting department is responsible for running this program on a regular basis.

A range of procurement processes are available to the user.

Stock Transfer with Stock Transport Orders

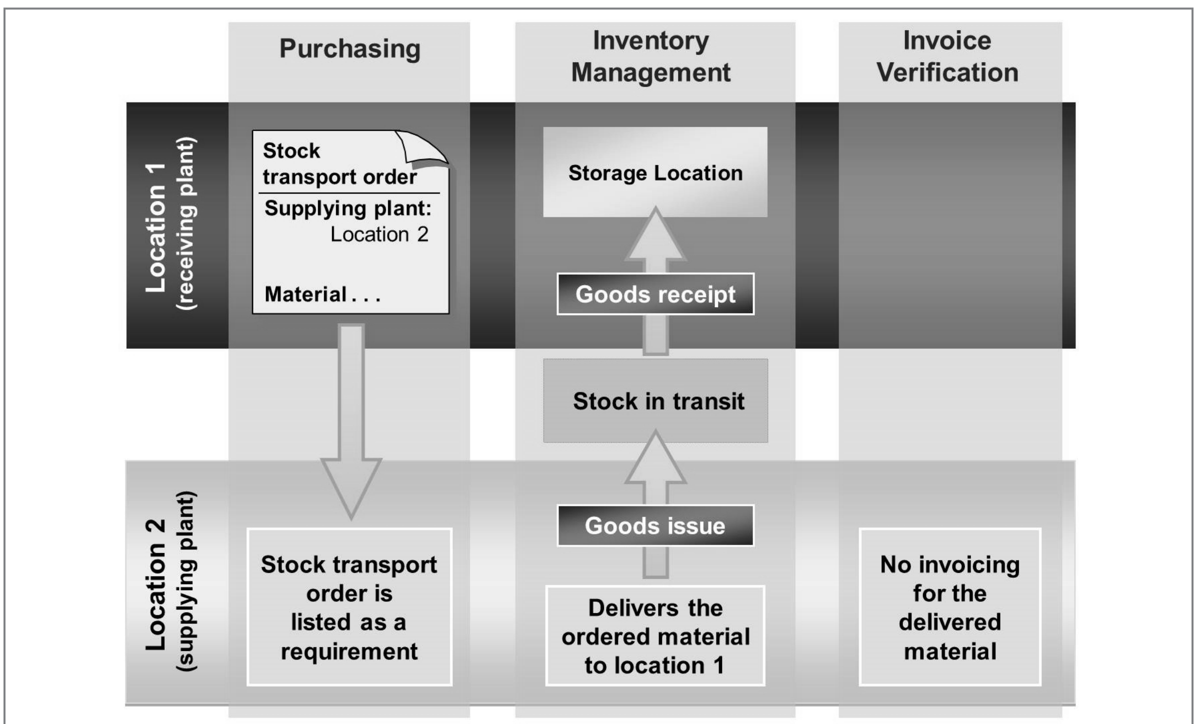

Figure 2: Stock Transfer with Stock Transport Order

When you use stock transport orders in the procurement process, goods are procured internally and delivered. The plant that requires the goods orders the materials from another plant. This procurement process involves managing inventory and purchasing in the receiving plant.

The following steps illustrate the stock transfer process:

1. Purchasing creates a stock transport order for the receiving plant.
2. In Inventory Management, a goods issue that references the stock transport order from the supplying plant is entered. The quantity is managed in a special stock (*Stock in transit*) of the receiving plant.
3. The goods receipt is posted to the stock transport order in the receiving plant.
4. The quantity is transferred from *Stock in transit* to the storage location stock of the plant.

> Hint:
> You can only use inventory management functions to map stock transfers of goods between plants without stock transport orders.

Subcontracting

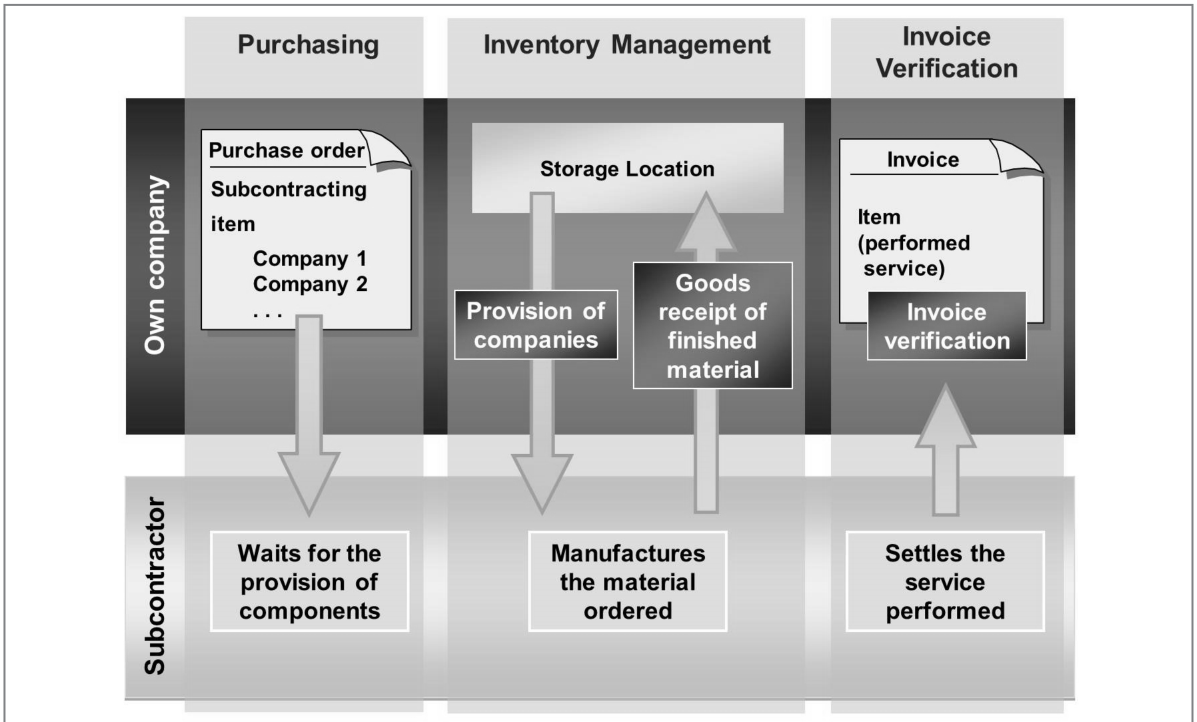

Figure 3: Subcontracting

In the subcontracting process, your company orders material or product from an external vendor. Unlike a normal external procurement process, in subcontracting, your company provides the vendor (subcontractor) with some or all of the components required to manufacture the material.

The following steps illustrate the subcontracting process:

1. The end product is ordered with a subcontract purchase order that contains details about the material to be delivered and the components to be made available to the subcontractor.
2. Components are provided to the subcontractor. This provision is mapped in the system by transfer posting. Although the components that have been provided are no longer physically in your company, they are managed in your stocks because they still belong to you. The information is shown under the special stock type *Stock of material provided to vendor*.
3. The finished or refined material is delivered by the subcontractor. The goods receipt is entered with reference to the (subcontract) order. The receipt for the end products and the consumption of components from the stock of material provided to the vendor are posted correctly. The subcontractor then raises an invoice for the service rendered.

Vendor Consignment

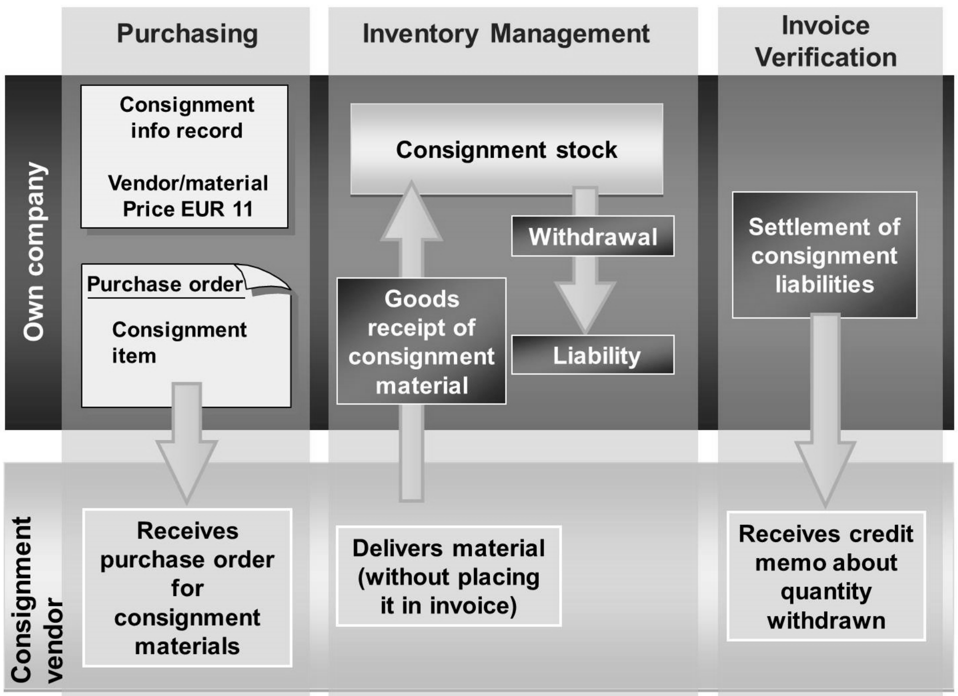

Figure 4: Vendor Consignment

When a vendor provides you with material that you store, but are not required to pay for immediately, this is called vendor consignment. The vendor remains the owner of the material until you remove some quantity from your consignment inventory. A liability arises for the vendor when you remove any quantity of the material from the consignment inventory. These withdrawals are settled in agreed periods.

Before you procure a material from a vendor for a consignment, you and the vendor need to agree on a price for the material. The price information is recorded in the system's consignment information record before the consignment inventory for the material is filled in your company.

The following steps illustrate the vendor consignment process:

1. Request the material from your vendor using a consignment order.

2. Post the goods receipt with reference to the consignment order when the material is delivered. This completes the procurement process, as payment is required for the material after withdrawal, not after supply.

3. The SAP system provides a special function for settling liabilities arising out of withdrawals from a consignment stock, through a credit memo. This credit memo is produced with an appropriate message for the vendor.

Hint:
You control the procurement process with a purchase order item using the *Item category* checkbox.

Hint:
You can set all the special procurement processes as the standard for a material so that purchase requisitions are produced automatically with the necessary item category using material requirements planning (MRP).

Organizational Levels in Procurement

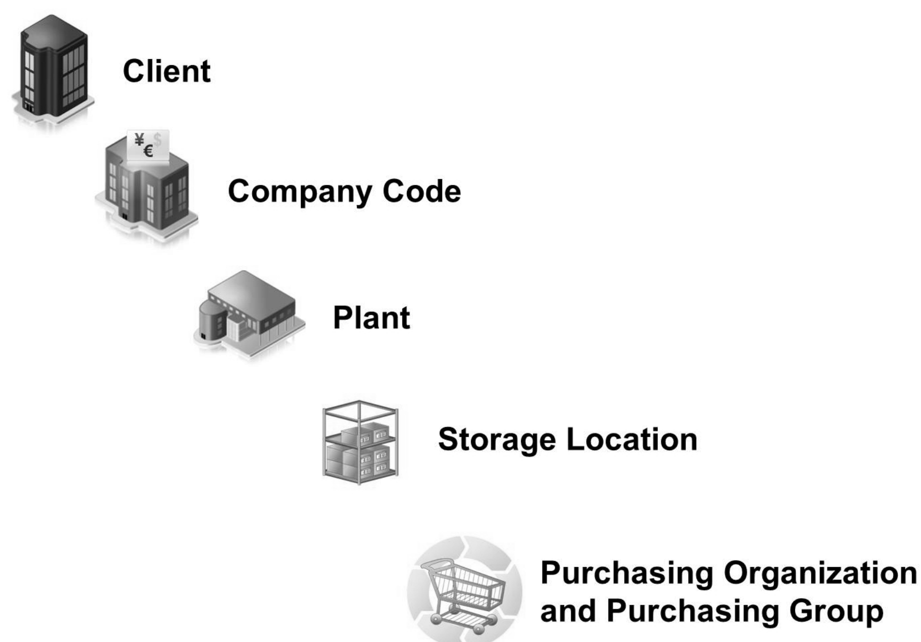

Figure 5: Organizational Levels in the Procurement Process

In the SAP system, organizational levels represent the legal or organizational structures of a company. The determination of organizational levels is an important procedure in your project, and is an essential prerequisite for all subsequent activities.

You can analyze structural and process organizations in your enterprise and then reconcile them with the SAP structures. It may be difficult to alter an organizational structure after it has been established.

> Note:
> The organizational levels are defined and assigned in Customizing for the enterprise structure.

Client, Company Code, Plant, and Storage Location

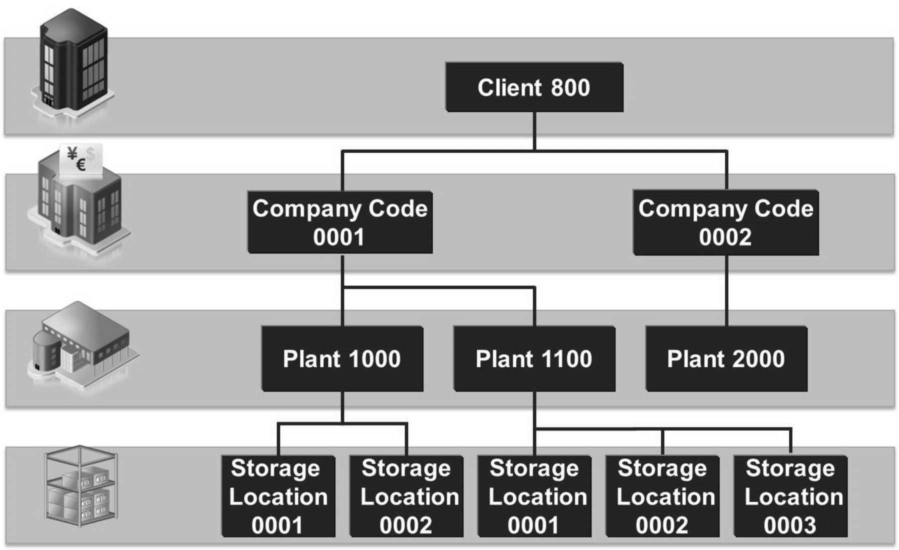

Figure 6: Organizational Levels in Inventory Management

The organizational levels in inventory management include client, company code, plant, and storage location.

Client

The client is a unit within an SAP system that is self-contained both in legal and organizational terms, and is represented as separate master records and an independent set of tables. For example, the client could represent a corporate group.

The client is the highest hierarchical level in the SAP system. Specifications or data that you make and enter at this level apply to all company codes and other organizational units. Therefore, you do not have to enter the specifications and data at the client level more than once in the system. This ensures a uniform data status.

Access authorization is assigned on a client-specific basis. A distinct user master record must be created between each user and the client. If the *Client* field has not been pre-populated, each user must specify a client key when logging onto the SAP system. In this way, the client with whom the user will work is specified. All user input is stored, processed, and evaluated on a client-specific basis.

A client is uniquely defined in the system by a three-digit numeric key.

Company Code

The company code is the smallest organizational unit in external accounting for which a complete, self-contained bookkeeping system can be maintained.

The company code tracks the entry of all events that require posting to the accounts, and creates a complete audit trail for balance sheets and profit and loss statements.

A company code represents an independent unit that produces its own financial statements, such as a company within the corporate group (a client).

You can set up several company codes for the same client to keep separate sets of accounts. Use the special Customizing function to copy company code-dependent specifications to a new company code.

A company code is defined in the system by means of a four-character alphanumeric key that is unique in the client.

Plant

The plant is an organizational unit within logistics that subdivides an enterprise from the viewpoints of production, procurement, plant maintenance, and materials planning.

A plant represents various entities within a firm, such as the following:

- Production facility
- Central issuing storage location
- Regional sales office
- Corporate headquarters
- Maintenance location

When creating a new plant, you can use the plant copy function. During the process, the system copies all data entries in the plant table, as well as all Customizing and related system tables in which the plant occurs as the key.

A plant is defined in the system by a four-character alphanumeric key that is unique to it in the client.

The enterprise structure is created by assigning organizational units to each other. A client may contain several company codes, and a company code may contain several plants. However, a plant can only belong to one company code.

Storage Location

The storage location is an organizational unit that facilitates the differentiation of stocks of materials within a plant. Inventory management on a quantity basis is carried out in the plant at the storage location level. The physical inventory is also carried out at this level.

A storage location is defined by a unique four-character alphanumeric key.

> Hint:
> The key of a plant is unique in a client, and a plant can only belong to one company code. Therefore, by specifying the plant, you simultaneously specify the company code.

The characteristics of storage locations are as follows:

- Several storage locations may be assigned to a plant, but a specific storage location can only belong to one plant.
- Storage locations are defined specifically for a plant and are therefore assigned accordingly.
- The key of a storage location is unique within a plant.
- Within a client level, the same key can be used for different storage locations because when you specify a storage location, you have to specify the plant as well.

Purchasing Group and Purchasing Organization

A purchasing group is a key organizational unit for a buyer, or group of buyers, responsible for certain purchasing activities. The purchasing group is internally responsible for the procurement of a material or class of materials. Externally, the purchasing group supplies the contact person for vendors. The purchasing group is not aligned to other units in the company structure.

> Note:
> Purchasing groups are not defined in Customizing for Enterprise Structure, but under *Materials Management → Purchasing → Create Purchasing Groups*.

A purchasing organization is an organizational unit within logistics that subdivides the enterprise according to the purchasing requirements.

A purchasing organization procures materials or services, negotiates terms and conditions of purchase with vendors, and assumes responsibility for the transactions.

Incorporate purchasing into the company structure by assigning a purchasing organization to a company code and plants. This allows you to take into account whether purchasing is centralized or decentralized in your company; a combination of these two organizational forms is possible.

Assign several purchasing organizations to one company code. However, a specific purchasing organization can only belong to one company code. You can decide not to assign a purchasing organization to a company code (cross-company-code purchasing). There is a many-to-many relationship between purchasing organizations and plants; one purchasing organization can be assigned to many plants, and vice versa.

The different assignment options between the company code, plant, and purchasing organization yield the following categories of a purchasing organization:

- Plant-specific purchasing organization
- Cross-plant purchasing organization

- Cross-company code purchasing organization

Plant-Specific Purchasing Organization

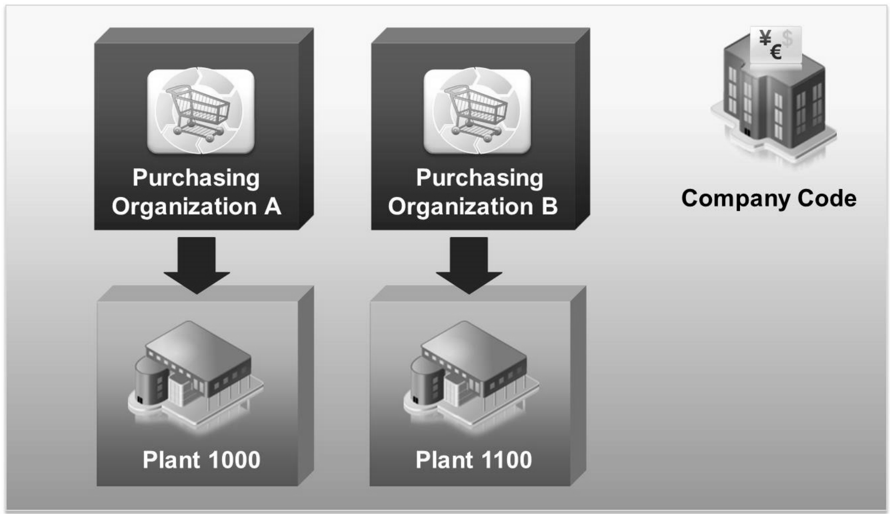

Figure 7: Plant-Specific Purchasing Organization

In a plant-specific procurement, a purchasing organization is responsible for procuring materials for a single plant.

> Note:
>
> **In a plant-specific procurement, you make the following assignments in Customizing for the Enterprise Structure:**
>
> - Assign a purchasing organization to a company code under *Assignment→Materials Management→Assign Purchase Organization to Company Code*.
> - Assign one plant of the company code to this purchasing organization under *Assignment→Materials Management→Assign Purchase Organization to Plant*.
>
> We do not learn about configuration in this course, but we examine this set-up in more advanced courses.

Cross-Plant Purchasing Organization

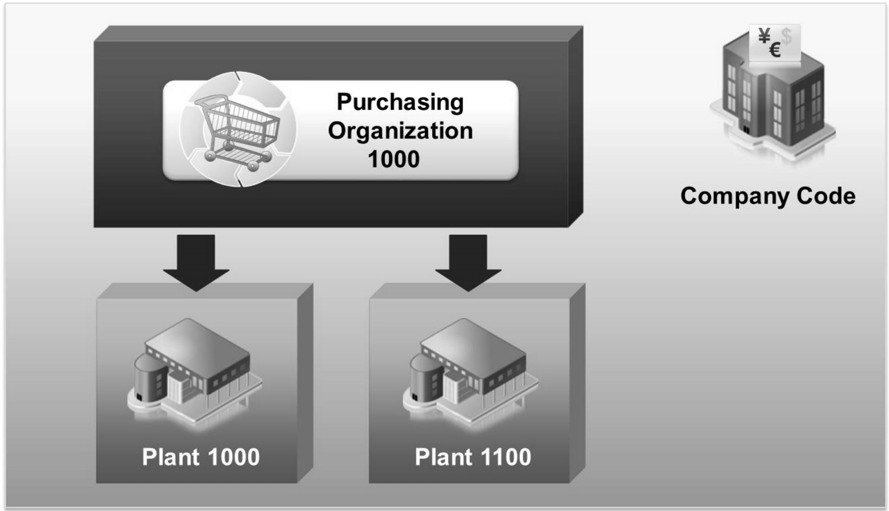

Figure 8: Cross-Plant Purchasing Organization

If a purchasing organization has to procure materials and services for several plants belonging to a company code, you can set up a cross-plant purchasing organization for each company code.

A company performs the following steps to set up cross-plant purchasing:

1. Assigns a purchasing organization to the desired company code.
2. Assigns the plants for which a purchasing organization is responsible.

Hint:
If a purchasing organization is responsible for all the plants of a company code, it is not enough to assign the company code and purchasing organization alone. You must also assign the plants to a purchasing organization that procures for them. However, assignment to a company code is not necessary if you use a cross-company-code purchasing organization.

Cross-Company-Code Purchasing Organization

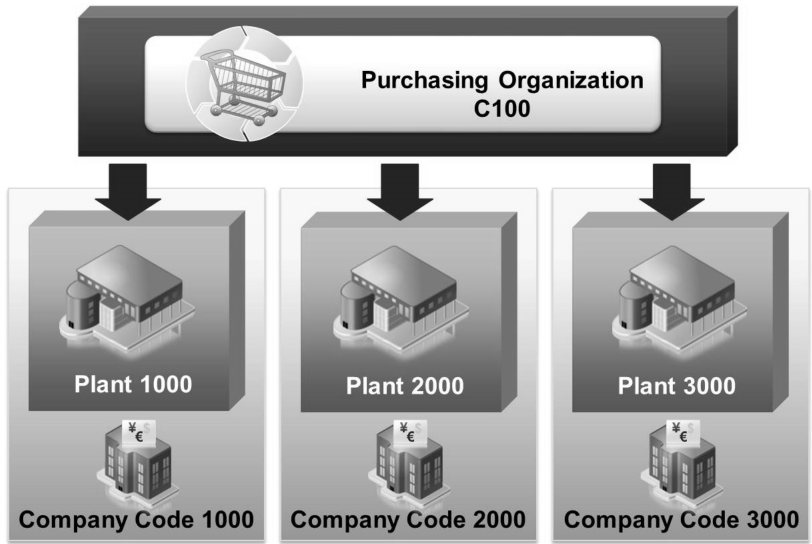

Figure 9: Cross-Company-Code Purchasing Organization

When setting up cross-company-code purchasing, the purchasing organization must not be assigned to any company code(s) in Customizing. When you create a purchase order, the system will ask you to enter the company code for which you want to procure the material.

LESSON SUMMARY

You should now be able to:

- Describe the various external procurement processes
- Identify the relevant organizational levels for procurement

Unit 1
Lesson 2

Maintaining Purchase Orders

LESSON OVERVIEW

This lesson introduces the purchase order as an important element of the external procurement process. It provides an introduction to the structure of purchase order documents, and how the SAP system handles the way purchase documents are created and issued.

Business Example

In your company, materials must be procured from external vendors. As an employee working in the purchasing department, you need to know about the procurement process, especially the purchase order. For this reason, you require the following knowledge:

- An understanding of the various documents that you can refer to when creating a purchase order
- An understanding of the most important elements of a purchase order
- How to enter and issue a simple purchase order

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Maintain purchase orders
- Execute print outputs for purchase orders

Purchase Order Details

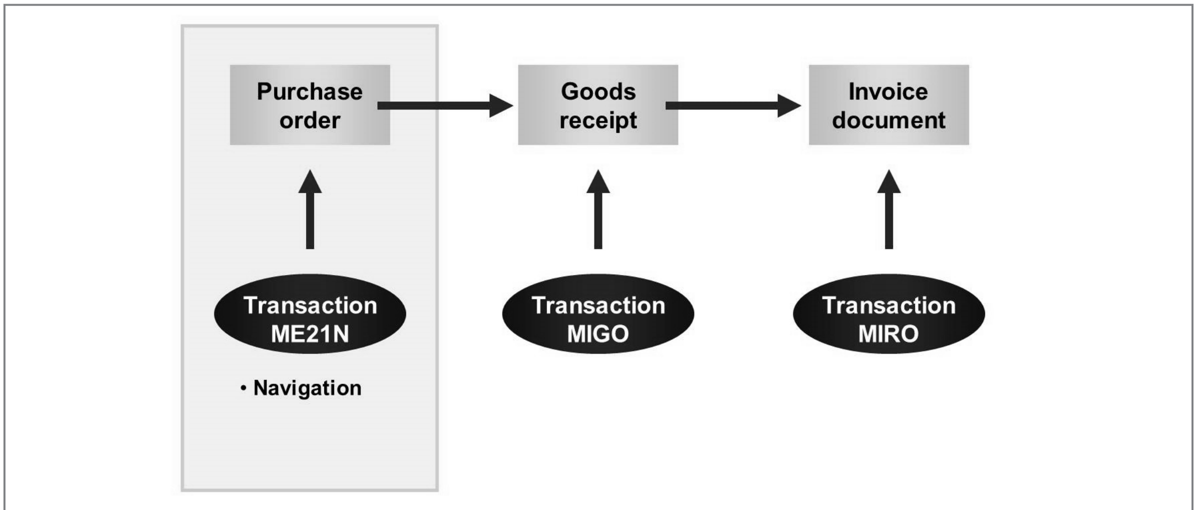

Figure 10: Basics of Procurement – Purchase Order

The figure explains the first step of a simple procurement process. The procurement process starts with the creation of a purchase order using transaction `ME21N`. In the procurement process you assume that important data, such as vendor and material data, already exists in the system.

A purchase order is a formal request to a vendor to supply goods or services with the conditions stated in the purchase order. You specify in the purchase order whether the material is intended for stock or for direct consumption (for example, cost center, asset, or project.) The goods receipt and invoice verification are usually carried out on the basis of a purchase order.

Purchase Order

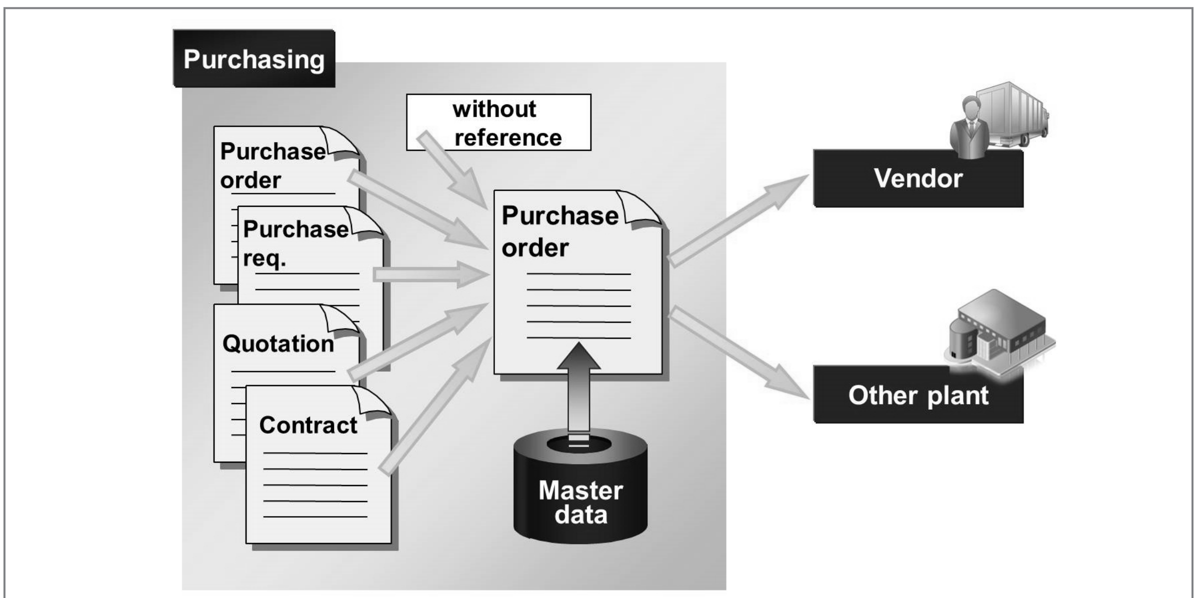

Figure 11: Purchase Order

You can minimize data-entry time by creating purchase order items with reference to an existing purchase order, purchase requisition, quotation or contract.

You can also enter a purchase order without referring to existing documents in the system. When you enter the purchase order data, the system suggests default values. For example, the system suggests the ordering address, as well as the terms of payment and freight (*Incoterms*) from the vendor master record. If a material master record exists, the material short text and the material group are transferred automatically.

If a purchasing information record already exists in the system, the system suggests a price from the purchasing information record in the purchase order.

After creating a purchase order, you can either send the purchase order to a vendor or carry out a stock transport order in another plant belonging to your company or group.

Purchase Order Format

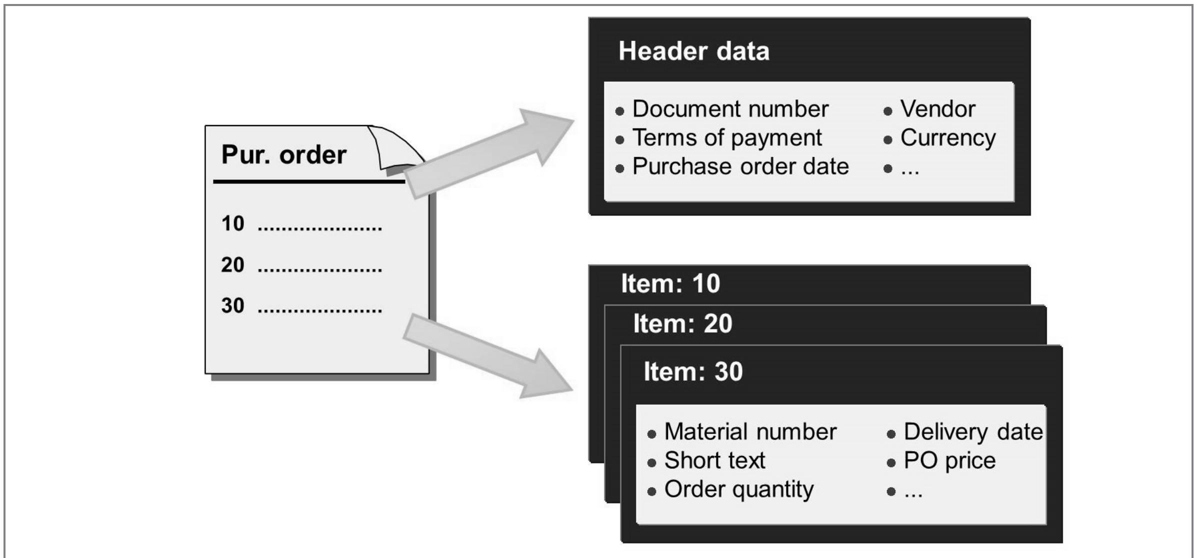

Figure 12: Purchase Order Format

A purchase order consists of the following sections:

- Document header

  The document header contains information that refers to the entire purchase order, such as currency, the document date and the terms of payment. Examples include the document currency, document date, and terms of payment.

- Items

  The items in a purchase order describe the materials or services ordered. You can maintain additional information for each item (for example, delivery schedules or item-based text).

With a single purchase order, you can procure materials or services for all plants associated with your purchasing organization.

Purchase Order Maintenance

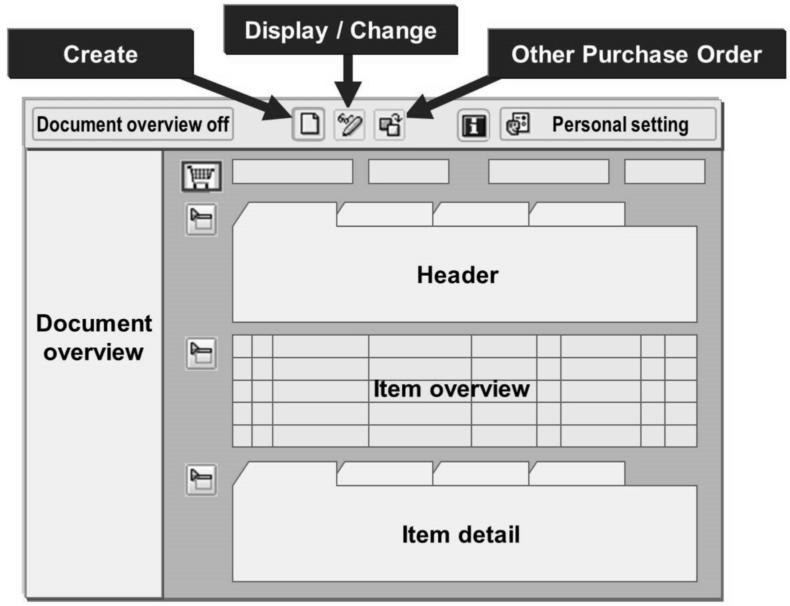

Figure 13: Purchase Order Transactions – ME21N, ME22N, ME23N

The purchase order transaction `ME21N` is a single-screen transaction where you can maintain all relevant data.

The single-screen transaction is divided into the following screen areas:

- Header

  In the header, you enter all data relevant for the entire order, such as the vendor address and organizational levels.

- Item overview

  In the item overview, you enter the items with the most important data, such as material, quantity, delivery date, price, and plant.

- Item detail

  In the item detail, you enter additional data for a particular item, if necessary, such as additional texts, account assignment specifications, and confirmations.

- Document overview

  In the document overview, you can display various purchasing documents, such as purchase orders, requests for quotations, and purchase requisitions.

As of Enhancement Package 4 of SAP ERP 6.0, it is possible to integrate web-based catalogs in purchasing. This means the item data can also be copied from a catalog. If you want to connect a catalog, the catalog needs to comply with the Open Catalog Interface (OCI) standard. Only one catalog can be integrated (see SAP Notes 1092922 and 1092923). For more information about catalog connections, see the SAP documentation under *SAP ERP Central Component → Logistics → Materials Management (MM) → Purchasing (MM-PUR) → Further Functions → Integration of Web-Based Catalogs in Purchasing*.

User-specific requirements can be taken into account with (*Personal settings*). Using *Personal settings*, you can set your own default settings and specify that the document overview is set automatically when the transaction is started.

In addition, a help function can be displayed in the same way as the document overview. You can display or hide this help area by choosing (*Help*). You can still work in the transaction whether the help area is open or closed.

Purchase Order Transaction – Navigation

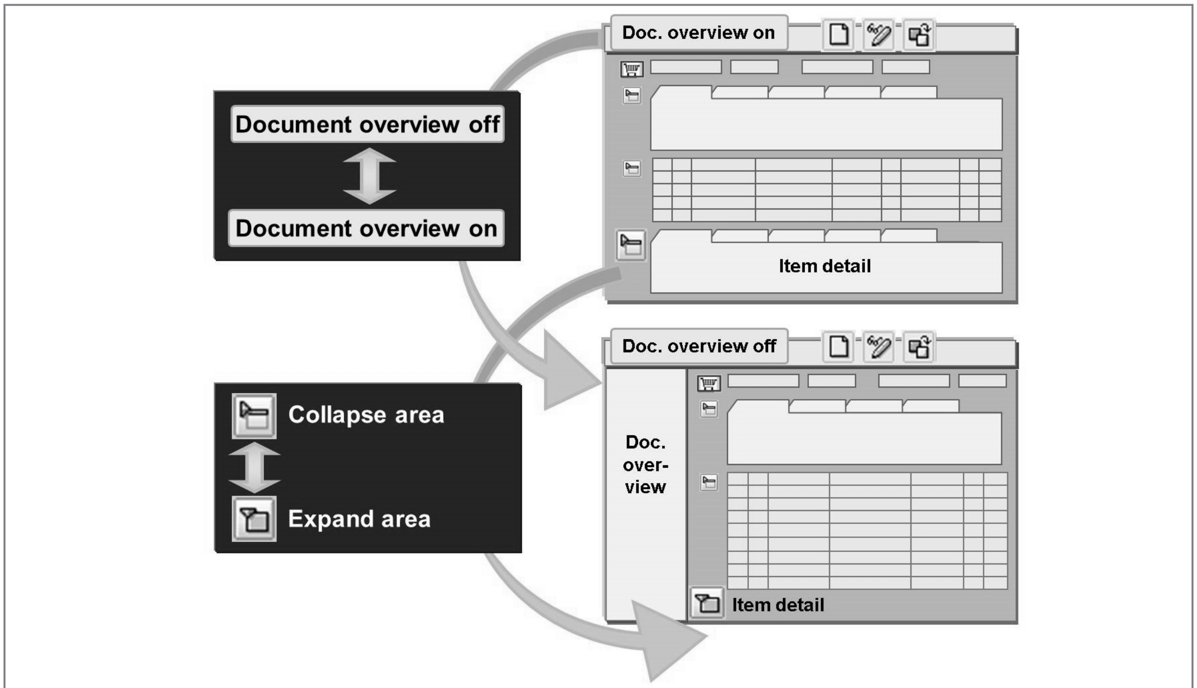

Figure 14: Purchase Order Transaction – Navigation

In the ordering transaction screen, you can open, close and adjust the size of all screen areas individually. For example, if you close the header and item detail, the size of the item overview is increased.

The change in screen size also applies to the following screens:

- Purchase order header
- Item overview
- Item details
- Document overview
- Help function

If you close the purchase order transaction, the same screen areas will be open when you re-enter the purchase order transaction. For example, if you closed the purchase order transaction when the document overview and the header were closed, then, when you re-open the purchase order the item overview and item detail will be open.

Regardless of the function that you use to access the purchase order (create, change, display), you can switch between functions by choosing (*Create*) or (*Display / Change*). By choosing the (*Other Purchase Order*) pushbutton, you can also branch directly to another purchase order or purchase requisition.

Entry of Names Instead of Numbers

For some fields in the purchase order, you can use both names and keys.

Using names and keys in the purchase order is valid for the following fields:

- *Vendor*
- *Material*
- *Material group*
- *Plant*
- *Storage location*

If you enter part of the name, the system displays the corresponding data.

If the system cannot determine the data based on your entry, you will receive a list of possible entries to choose from. For example, if you enter *son* in the *Vendor* field, the system would propose vendors such as Jackson, Johnson, Peterson and so on.

> Hint:
> For the *Vendor* and *Material* fields, you can deactivate search help under *Personal settings* on the *Basic settings* tab page.

Purchase Orders Held

You can use the *Hold* function to store incorrect or incomplete purchase orders in the SAP system and continue processing them later. The held purchase orders are not transmitted to the vendor, although they are relevant to materials planning and controlling.

The following functions are not possible in a held purchase order:

- Message output (printing or transmission of the PO in message form)
- Release (approval, clearance for issue)
- Posting of a goods receipt
- Posting of an invoice

As of Enhancement Package 5 of SAP ERP 6.0, you can *park* a purchase order. If you want to create a purchasing document, the document may include all materials management information, but some financial information may still be missing. If information is missing when a purchasing document is created, you can temporarily save (park) the document and continue processing it later.

The following functions are not possible in a parked purchase order:

- Posting of a goods receipt

- Posting of an invoice

> Hint:
> If you want to use the *Park* function, you must activate the business function LOG_MM_CI_3 on client level in *Customizing* under *Materials Management → Purchasing → Environment Data → Activate Hold and Park in Purchasing Documents*.

Purchase Order Creation Steps

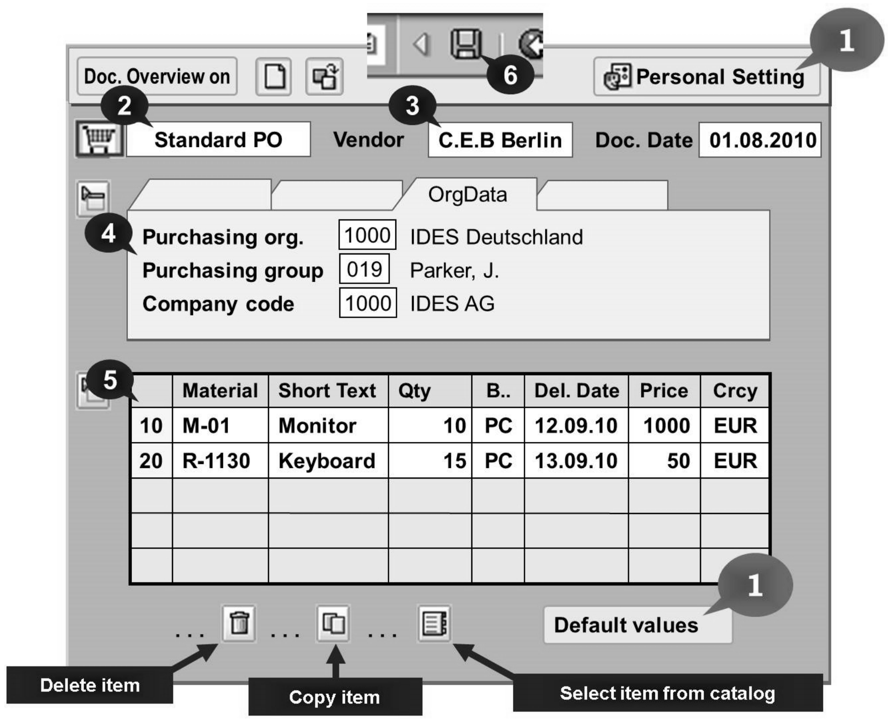

Figure 15: Enter Purchase Order

The figure shows the steps involved in creating a purchase order.

Unit 1
Exercise 1

Create and Display a Purchase Order

Business Example

You work in the purchasing department of your company. The process for procurement of stock material in your company includes creating a purchase order, posting the goods receipt, and processing the vendor invoice. Familiarize yourself with purchase order processing for stock material.

The warehouse stock of standard taillights T-M500A## must be replenished. Order 100 of these taillights from the vendor Motolux GmbH Gr.##.

> Note:
> In all the exercises, when the values include ##, replace the characters with the number that your instructor assigns you.

1. Maintain a list of favorites. Include transaction ME21N because you work frequently with purchase orders.

   Use one of the following actions to add a transaction to the list of favorites:

   - Drag and drop:

     Drag the required transaction from the menu to your list of favorites.

   - Right mouse button:

     Right-click the required transaction and choose *Add to Favorites*.

   - (*Add to Favorites*) in the toolbar:

     When you choose (*Add to Favorites*), the selected entry is copied.

   - Transaction code:

     Select *Favorites* in the standard toolbar, right-click and choose *Insert transaction*, and then enter transaction code `ME21N`.

   > Hint:
   > Note that the format of the list of favorites varies depending on the procedure you use.

2. Maintain personal settings.

Before you create the purchase order, maintain your personal default values in the purchase order transaction. Define the following default values for the organizational data and save these settings:

Field	Value
Purchasing Org.	**`IDES Deutschland`** (1000)
Purch. Group	**`SCM500-##`** (T##)
Company Code	**`IDES AG`** (1000)

Close the help area because you do not require the online help now.

3. Create a purchase order.

   Order 100 pieces of material T-M500A## (standard taillight-##) for immediate delivery from vendor T-K500A## (Motolux GmbH Gr.##).

   The material is required for plant 1000 (Hamburg plant) and is to be stored in storage location 0001.

   Accept the default purchase order price suggested by the system and note the purchase order number.

   Purchase order number: ____________________

4. Display the purchase order.

   Display your purchase order and check that you have entered the data correctly. Use the document overview and choose the selection variant, *My purchase orders*.

Unit 1
Solution 1

Create and Display a Purchase Order

Business Example

You work in the purchasing department of your company. The process for procurement of stock material in your company includes creating a purchase order, posting the goods receipt, and processing the vendor invoice. Familiarize yourself with purchase order processing for stock material.

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   - Transaction code:

     Select *Favorites* in the standard toolbar, right-click and choose *Insert transaction*, and then enter transaction code `ME21N`.

   > Hint:
   > Note that the format of the list of favorites varies depending on the procedure you use.

a) From the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create*

b) Add the transaction ME21N to your favorites using one of the methods described.

c) You can change the description of the entries in your list of favorites by selecting the relevant favorites and choosing *Favorites* → *Change Favorites*.

2. Maintain personal settings.

   Before you create the purchase order, maintain your personal default values in the purchase order transaction. Define the following default values for the organizational data and save these settings:

Field	Value
Purchasing Org.	**IDES Deutschland** (1000)
Purch. Group	**SCM500-##** (T##)
Company Code	**IDES AG** (1000)

   Close the help area because you do not require the online help now.

   a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known* (`ME21N`).

   b) Choose (*Personal settings*).

   c) Choose the *Default values* tab page, and then *PO header*. Enter the default values.

   d) Save your personal default values. These default values are used in the purchase order until you change them again.

   e) To close the help area, choose (*Close*).

> Note:
> Do not exit purchase order transaction `ME21N` after this step.

3. Create a purchase order.

   Order 100 pieces of material T-M500A## (standard taillight-##) for immediate delivery from vendor T-K500A## (Motolux GmbH Gr.##).

   The material is required for plant 1000 (Hamburg plant) and is to be stored in storage location 0001.

   Accept the default purchase order price suggested by the system and note the purchase order number.

   Purchase order number: ______________________

   a) Enter the following data:

Field	Value
Vendor	`T-K500A##`
Item Overview	
Material	`T-M500A##`
Quantity	`100`
Delivery Date	<Today's date>
Plant	`1000`
Stor. Location	`0001`

b) Save your data and make a note of the PO number.

> Note:
> Do not exit purchase order transaction `ME21N` after this step.

4. Display the purchase order.

   Display your purchase order and check that you have entered the data correctly. Use the document overview and choose the selection variant, *My purchase orders*.

   a) If the document overview is not displayed, choose *Document overview on*.

   b) Choose (*Selection variant*) and then *My purchase orders*.

   c) To display the purchase order, choose the document number for your purchase order in the document overview.

Messages

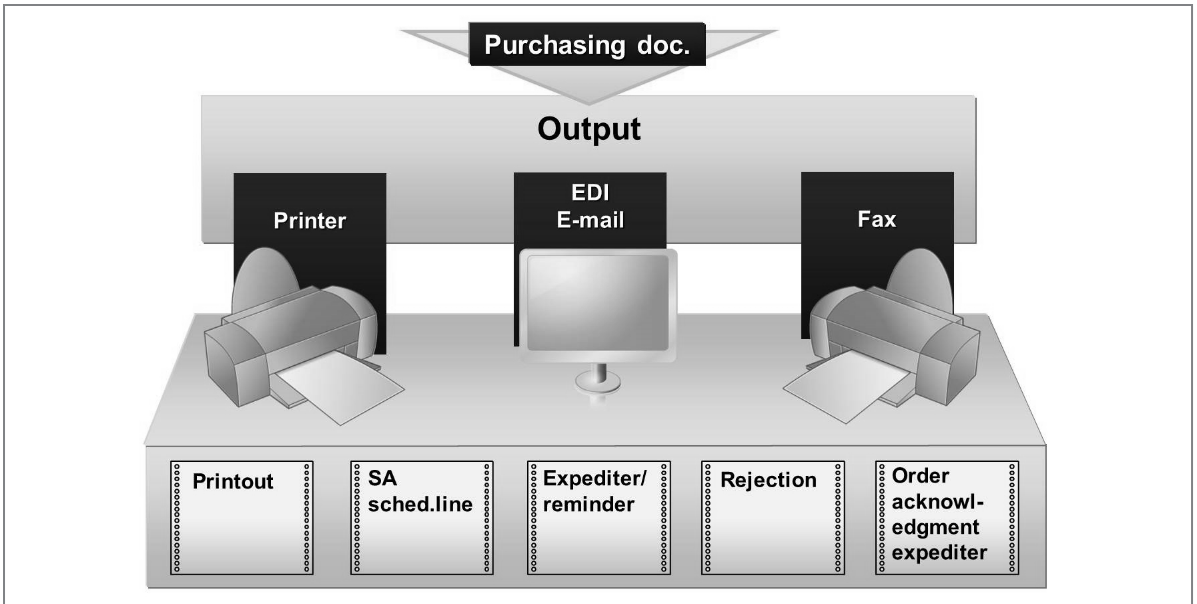


Figure 16: Issue a Message

You can issue all purchasing documents as messages. Each time you create an RFQ, a purchase order, a contract, or a scheduling agreement, you also create a system message from the document. This message is then placed in a message queue containing all messages that have not yet been transferred to the vendors.

To issue the message (through print, by e-mail, fax, or EDI) from the message queue, you have the following options:

- Issue immediately

  The system issues the message directly from the queue, that is, as soon as you save the document.

- Issue later

  You either schedule a background job (for the program RSNAST00) that processes the message queue at specific intervals, or you start the issue directly from the purchasing menu. You issue the messages by scheduling a background job. Start the issue manually only as needed (such as for rush orders).

For the message issue, you can specify the header texts and item-based texts the system issues. The header text contains general information and is printed at the top of the purchase order. Item texts describe a purchase order item in more detail.

You can also include and issue standard texts. In transaction `ME21N`, you can use the  (*Print Preview*) pushbutton to display a document on your screen before you print it.

> Note:
> For more information on issuing purchasing documents, see the SAP documentation under *SAP ERP Central Component → Logistics → Materials Management (MM) → Purchasing (MM-PUR) → Entering Text, Printing and Transmitting Documents*.

Unit 1
Exercise 2

Execute Print Outputs for Purchase Orders

Business Example

To issue purchasing documents as messages, you need to decide whether to issue the messages immediately or later. As an employee in the purchasing department, you must familiarize yourself with issuing messages manually for purchase orders.

1. Display your purchase order in the print preview. When you are sure you have selected the correct purchase order and that the data is correct, print the purchasing document. The system automatically selects the output device you set in the Message Determination (for example, printer or fax machine).

Unit 1
Solution 2

Execute Print Outputs for Purchase Orders

Business Example

To issue purchasing documents as messages, you need to decide whether to issue the messages immediately or later. As an employee in the purchasing department, you must familiarize yourself with issuing messages manually for purchase orders.

1. Display your purchase order in the print preview. When you are sure you have selected the correct purchase order and that the data is correct, print the purchasing document. The system automatically selects the output device you set in the Message Determination (for example, printer or fax machine).

   a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Messages* → *Print/Transmit* (`ME9F`).

   b) Adopt the selection criteria proposed by the system and choose the (*Execute*) pushbutton.

   c) In the overview, select your document and choose *Display Message*.

   d) Go back to display the list of messages to be issued.

   e) Select your document again and choose *Print*.

LESSON SUMMARY

You should now be able to:

- Maintain purchase orders
- Execute print outputs for purchase orders

Posting Goods Receipts

LESSON OVERVIEW

This lesson demonstrates how to enter a goods receipt against a purchase order, and introduces the term movement type.

Business Example

In your company, materials are procured from external suppliers. Delivered goods are usually stored in the warehouse. As a member of the warehouse staff, you examine how deliveries of the ordered materials are entered in the SAP system, and how goods receipts affect the purchase order. For this reason, you require the following knowledge:

- An understanding of the most important ways a goods receipt affects a purchase order
- How to enter a simple goods receipt with reference to a purchase order
- An understanding of the most important elements of a material document

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post a goods receipt

Goods Receipts in Procurement

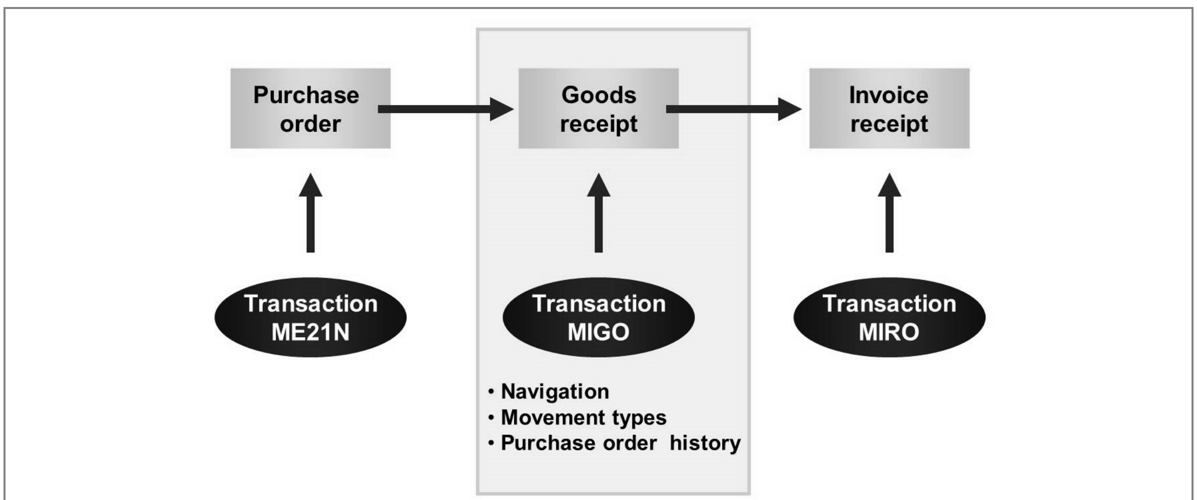


Figure 17: Basics of Procurement – Goods Receipt

The first step in a simple procurement process is the issue of a purchase order for the goods to a vendor. The second step is the goods receipt. Unlike the purchase order, the goods receipt may have accounting implications. Like the purchase order process, the goods receipt process is mapped in the SAP system with an Accounting document.

Goods Receipt

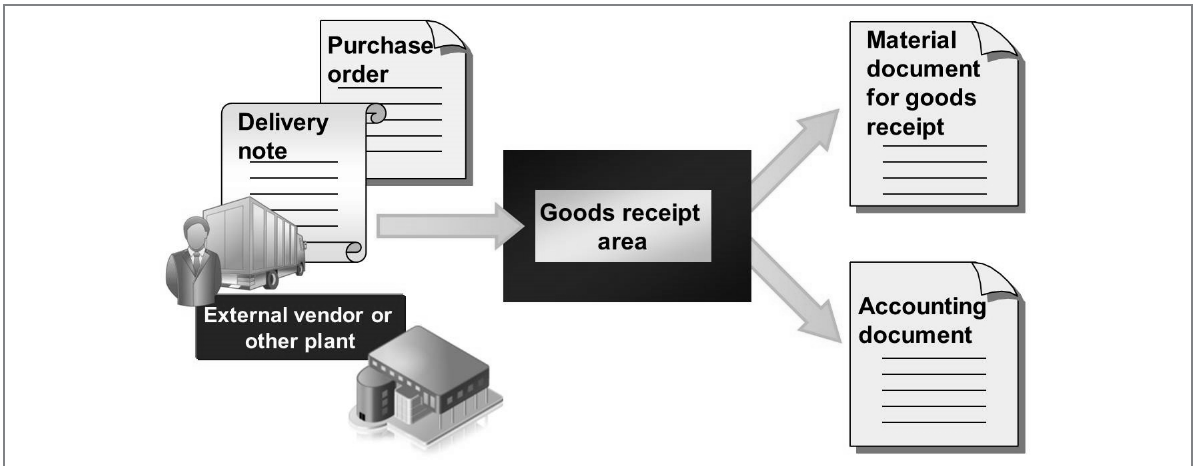


Figure 18: Goods Receipt

At the time of delivery, the following are some of the checks that are done:

- Whether the right material has been delivered
- Whether the right quantity has been delivered
- Whether perishable goods are within their minimum shelf life (the shelf-life expiration-date check must be active in this case.)

When goods are delivered against a purchase order, it is important that you enter the goods receipt with reference to the purchase order for all departments concerned. When you record the receipt of goods, the system suggests all open items from the purchase order which helps you enter and check all incoming goods.

You can enter several goods receipt items against a purchase order item in one operation. This means that you can enter multiple goods receipt items at once when material is delivered in several batches or is distributed to several storage locations.

When you post a goods receipt for a purchase order, the purchase order history of the relevant purchasing document items are updated automatically. This enables the buyer to identify outstanding deliveries.

When you post the receipt of goods into the warehouse or stores, the system generates a material document containing information on the material delivered and the quantity delivered. The system records the relevant plant and storage location where the material is stored. If the goods receipt is valuated, an accounting document is generated. This document contains details of the account effects of the material movement.

Goods Receipt Details

Figure 19: Movement Types – Examples

When entering a goods movement, you must indicate a movement type. The movement type is a three-character key used to differentiate between the various types of goods' movements. Examples of such goods movements are *Goods Receipts*, *Goods Issues*, and *Transfer Postings*.

The movement type field performs the following functions:

- Assumes important control functions in inventory management
- Plays a central role in automatic account determination in the SAP system
- Determines which stock or consumption accounts are updated in financial accounting, along with other influencing factors
- Affects the screen layout for document entry and the updating of quantity fields

Goods Movement – Transaction MIGO (Screen Items)

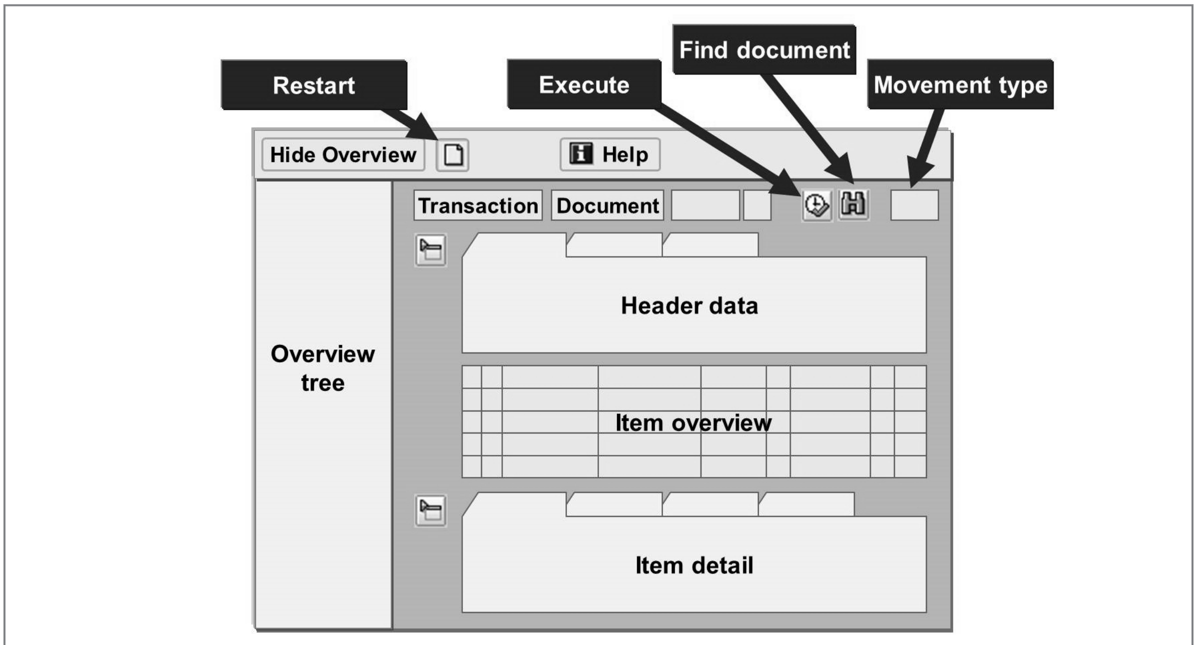


Figure 20: Goods Movement – Transaction MIGO

The transaction for entering goods movements (MIGO) is a single-screen transaction subdivided into the following screen areas:

- Overview tree

  Your last ten documents for purchase orders, orders, reservations, material documents, and held data are displayed in this area. The system automatically inserts these documents into the overview tree. These are documents referenced when posting a goods movement, as well as material documents generated in the process. The doocument overview cannot be influenced by the user.

  > Hint:
  > The document overview is not intended for document searches. You can use (*Search for Document*) for this purpose.

  > Hint:
  > From the document overview, you can only display material documents.

- Header data

  The header data contains information that refers to the complete material document, such as the document and posting date, the document header text, the user who created it, and the entry date. The information is grouped on individual tab pages. The accounting document is also accessible from the header data.

- Item overview and item detail

  The document items are listed in the item overview area. By clicking the number of an item in the overview, you open the detail data for the item. The details include information on reference documents and the account assignment. The information is grouped on individual tab pages.

With the exception of the item overview, you can open and close the screen areas individually. You can show or hide the overview tree using the *Show Overview* pushbutton or *Hide Overview* pushbutton. For the header data and item details, use the (*Head.data*) pushbutton or (*Detail Data*) pushbutton to open the screen areas. Use the (*Close Header Data*) pushbutton or (*Close Detail Data*) pushbutton to close them. You can open the detail data of an item by clicking the item number in the item overview.

> Note:
> Once you have opened the detail data for an item, you can only make changes to this item in the detail data.

Goods Movement - Transaction MIGO

Opening and closing screen areas influences the size of other areas. For example, if you close the header and detail data, the size of the item overview increases. Each time you invoke the transaction, the screen appears in the setting you chose in the last session prior to exiting the transaction.

To terminate processing in `MIGO`, you do not have to leave the transaction. Choose (*Restart*) to start the process again.

You can maintain personal default values for the entry of goods movements by choosing *Settings → Default Values*. A separate dialog box opens, in which you specify your personal default values (for the plant and storage location, for example).

When you use transaction `MIGO`, first specify which action you wish to perform in the *Transaction* field. If you are entering a goods movement, specify whether it is a goods receipt, goods issue, return delivery, or transfer posting. In transaction `MIGO`, you can display or cancel the material document from a posting you have made by choosing the transactions with the same name. For each chosen transaction, you can define the documents you need to refer to.

Entry of Goods Receipt against a Purchase Order

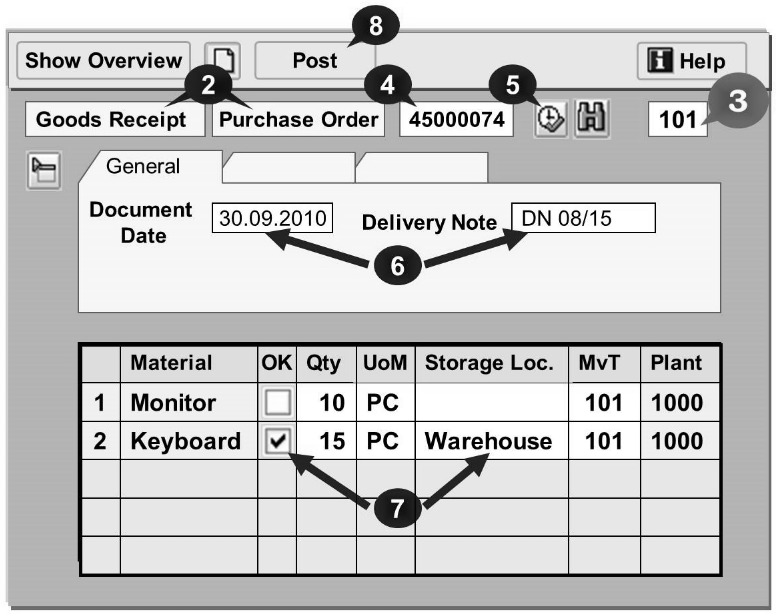


Figure 21: Enter GR for a Purchase Order

The figure shows how to enter a simple goods receipt against a purchase order. You can then display the material document generated in the process.

Unit 1
Exercise 3

Post a Goods Receipt

Business Example

As an employee in the warehouse, you are responsible for entering goods receipts in the SAP system. You enter the goods receipt with reference to your purchase order so that you can check whether the delivery matches with the purchase order. When you enter the goods receipt, the system updates the purchase order history, allowing the buyer to get information on the status of the delivery directly from the purchase order.

The ordered standard taillights T-M500A## are delivered in good condition by Motolux GmbH Gr.##. Enter the goods receipt for this delivery.

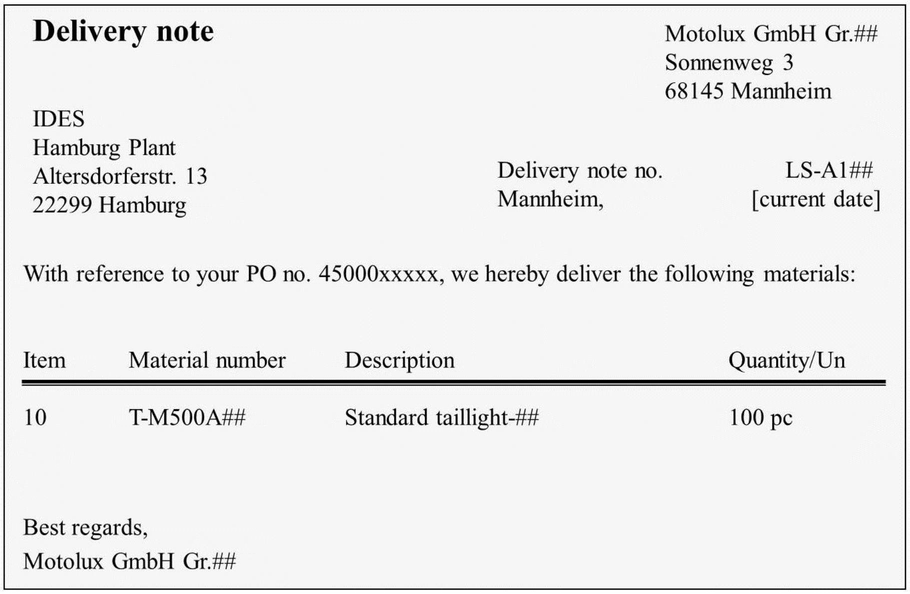
1. Post the goods receipt.

   When entering the goods receipt, reference the purchase order. Post the goods receipt to unrestricted-use stock at storage location 0001 (material stores) in plant 1000.

   Record the delivered quantity and the delivery note number from the delivery note.

   > Hint:
   > When searching for your purchase order, note that the purchase order number is not displayed in the overview for the goods receipt transaction prior to selection. Use the search function to find your purchase order.

   For example, search for your purchase order number for vendor T-K500A## and material T-M500A##.



Delivery note

Motolux GmbH Gr.##
Sonnenweg 3
68145 Mannheim

IDES
Hamburg Plant
Altersdorferstr. 13
22299 Hamburg

Delivery note no. LS-A1##
Mannheim, [current date]

With reference to your PO no. 45000xxxxx, we hereby deliver the following materials:

Item	Material number	Description	Quantity/Un
10	T-M500A##	Standard taillight-##	100 pc

Best regards,
Motolux GmbH Gr.##

Figure 22: Delivery Note LS-A1

Post the goods receipt and note the material document number.

Material document number: ____________________

2. Display the material document for the goods receipt.

3. Display the purchase order history for the purchase order against which you entered the goods receipt. Branch directly from the material document to the purchase order history, and check whether it has been updated by the goods receipt. Compare the material document number from the purchase order history with your material document number from step 1.

4. Include the transaction code MIGO for goods movements in the list of favorites.

Unit 1
Solution 3

Post a Goods Receipt

Business Example

As an employee in the warehouse, you are responsible for entering goods receipts in the SAP system. You enter the goods receipt with reference to your purchase order so that you can check whether the delivery matches with the purchase order. When you enter the goods receipt, the system updates the purchase order history, allowing the buyer to get information on the status of the delivery directly from the purchase order.

The ordered standard taillights T-M500A## are delivered in good condition by Motolux GmbH Gr.##. Enter the goods receipt for this delivery.

1. Post the goods receipt.

   When entering the goods receipt, reference the purchase order. Post the goods receipt to unrestricted-use stock at storage location 0001 (material stores) in plant 1000.

   Record the delivered quantity and the delivery note number from the delivery note.

   > Hint:
   > When searching for your purchase order, note that the purchase order number is not displayed in the overview for the goods receipt transaction prior to selection. Use the search function to find your purchase order.

   For example, search for your purchase order number for vendor T-K500A## and material T-M500A##.

Delivery note

Motolux GmbH Gr.##
Sonnenweg 3
68145 Mannheim

IDES
Hamburg Plant
Altersdorferstr. 13
22299 Hamburg

Delivery note no. LS-A1##
Mannheim, [current date]

With reference to your PO no. 45000xxxxx, we hereby deliver the following materials:

Item	Material number	Description	Quantity/Un
10	T-M500A##	Standard taillight-##	100 pc

Best regards,
Motolux GmbH Gr.##

Figure 22: Delivery Note LS-A1

Post the goods receipt and note the material document number.

Material document number: ____________________

a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Receipt* → *For Purchase Order* → *GR for Purchase Order* (`MIGO`).

b) Choose the transaction *Goods Receipt* and the reference document *Purchase Order*. Enter **`101`** as the default value for the movement type.

c) Choose (*Find Purch. Order*). Enter the following selection values:

Field	Value
Vendor	**`T-K500A##`**
Material	**`T-M500A##`**
Delivery Date	< today> - 7 days>

Alternatively, enter your purchase order number directly into the purchase order field if you wrote down the number in the previous exercise.

d) Choose (*Find*). A separate screen area with the search result appears.

e) Select your purchase order and choose (*Adopt*). Choose (*Close Search Result*).

f) Open the header data and enter **`LS-A1##`** in the *Delivery Note* field on the *General* tab page.

g) Select the *Item OK* checkbox for the item. You can select the checkbox in the detail data only if the detail data area is open.

h) Choose *Post* and make a note of the material document number.

2. Display the material document for the goods receipt.

   a) Choose the transaction *Display* to view your material documents. The system automatically displays *Material Document* as the reference document and proposes the number of your last material document.

   b) Choose (*Execute*).

   Hint:
   You can choose another material document by double-clicking a document from the overview, or by choosing (*Search for mat. document*).

3. Display the purchase order history for the purchase order against which you entered the goods receipt. Branch directly from the material document to the purchase order history, and check whether it has been updated by the goods receipt. Compare the material document number from the purchase order history with your material document number from step 1.

   a) Open the item detail data (by clicking the item number in the item overview, for example).

   b) Choose the *Purchase Order Data* tab page.

   c) Choose the (*History*) pushbutton. The material document numbers match.

4. Include the transaction code MIGO for goods movements in the list of favorites.

   a) Use one of the following options:

      - Drag and drop
      - Right mouse button
      - *Add to Favorites* pushbutton in the toolbar
      - Transaction code

LESSON SUMMARY

You should now be able to:

- Post a goods receipt

Unit 1
Lesson 4

Entering Invoices

LESSON OVERVIEW

This lesson deals with the checking and verification of a vendor's invoice for goods that have been supplied against a purchase order.

Business Example

The procurement process ends with the entry of the vendor's invoice. You are responsible for testing the functionality of *Logistics Invoice Verification* (LIV). For this reason, you require the following knowledge:

- An understanding of the most important information given in an invoice
- How to carry out a simple invoice verification process with reference to a purchase order
- An understanding of the most important effects of entering an invoice against a purchase order

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter an invoice

Invoice Receipt

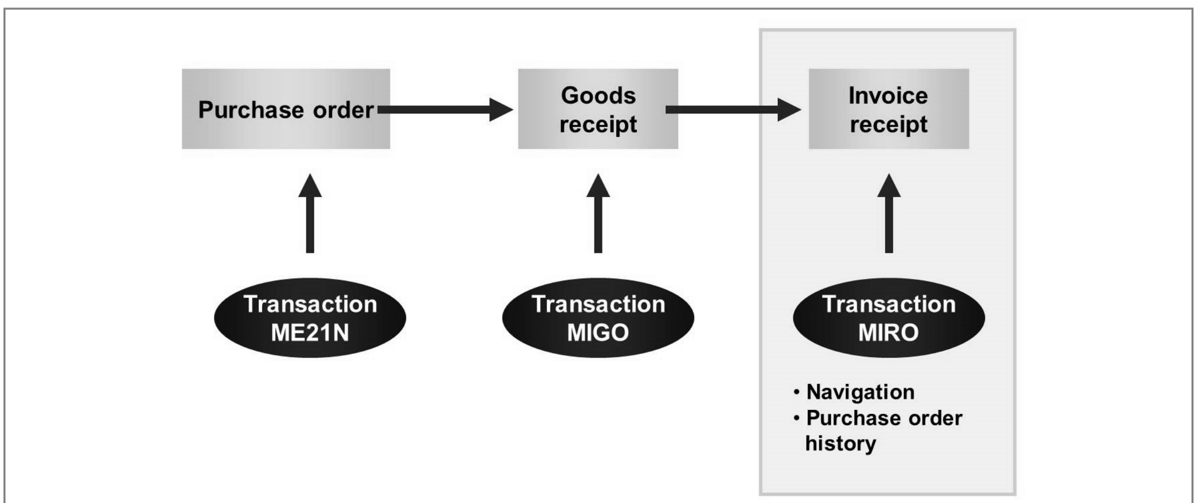


Figure 23: Procurement Basics – Invoice Receipt

The creation of an invoice completes the procurement process, which follows the processes of purchase order and goods receipt.

LIV is part of *Materials Management* (MM).

Use LIV to perform the following tasks:

- Enter invoices and credit memos
- Check invoices and credit memos for arithmetical correctness
- Confirm that you have been charged with the right price for the right material or service and for the right quantity

When you post an invoice, the system performs the following tasks:

- The data from the invoice is saved in the system.
- Invoice and accounting documents are generated.
- The saved data from the invoice documents is updated in materials management (for example, purchase order history) and in financial accounting.

The functions of LIV do not include the payment or evaluation of open liabilities. The relevant information for payment and evaluation of open liabilities is forwarded to other applications. Logistics Invoice Verification creates a link between materials management and external or internal accounting.

Invoice Receipt

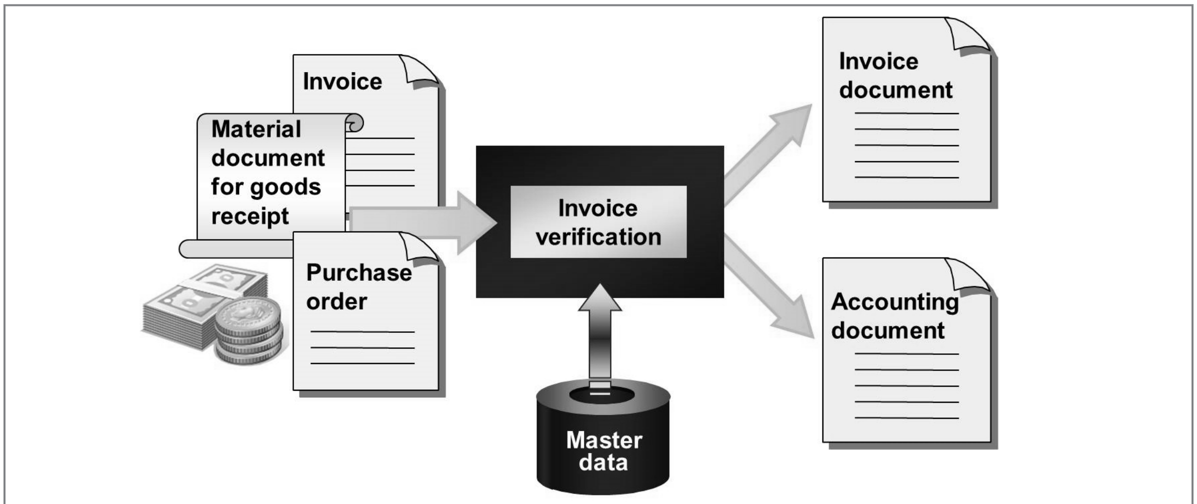


Figure 24: Invoice Receipt

When you enter an invoice with reference to a purchase order, the system proposes data from the purchase order and the goods receipts for the purchase order (for example, invoicing party, material, quantity to be invoiced, expected amount per item, and payment terms). It is possible to overwrite default values in an invoice submitted by the vendor. When attempting to overwrite default values, the system checks whether your input is permitted. In doing so, it may issue warning or error messages.

If there are discrepancies between the purchase order or goods receipt and the invoice (price or quantity differences, for instance), the system warns the user and, depending on the system settings, blocks the invoice so that it cannot be paid.

Information in an Invoice

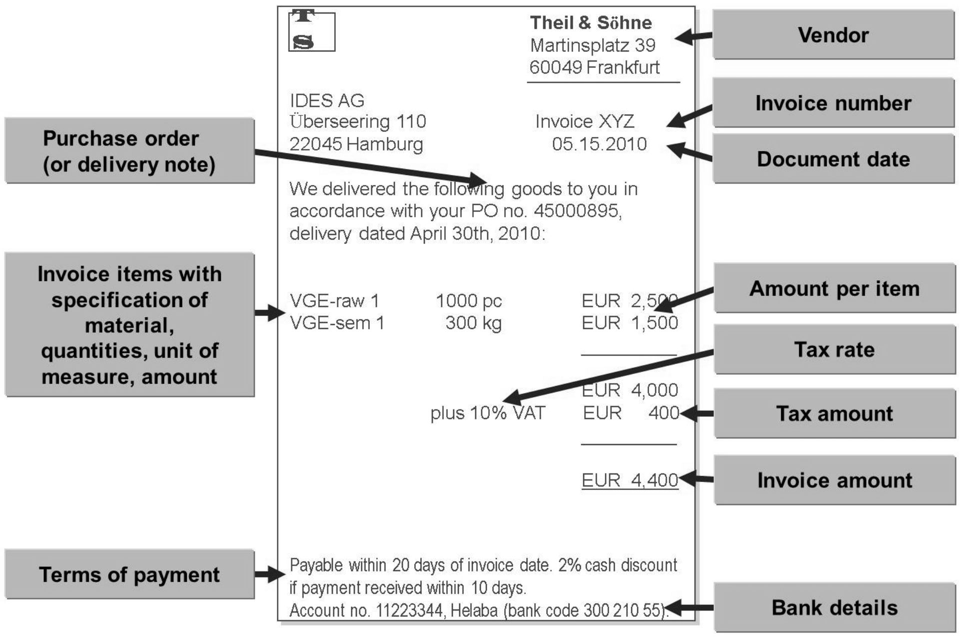


Figure 25: Information in an Invoice

In invoice verification, you initially enter all the relevant data from the vendor's (creditor's) invoice, such as the gross amount, value-added tax, invoice date, reference (vendor's invoice number), and terms of payment. In subsequent processing steps, the system checks for data accuracy and compares it with data that already exists in the system from the purchase order document.

Note:
The invoice document can be scanned and sent through workflow to the department responsible for invoice verification. This is an important step towards making the paperless office a reality.

Where possible, post invoices with reference to a purchase order so that the system suggests the order prices from the purchase order document, as well as the goods receipt quantities from the goods receipt documents relating to the purchase order.

Invoice Verification with Reference to a Purchase Order

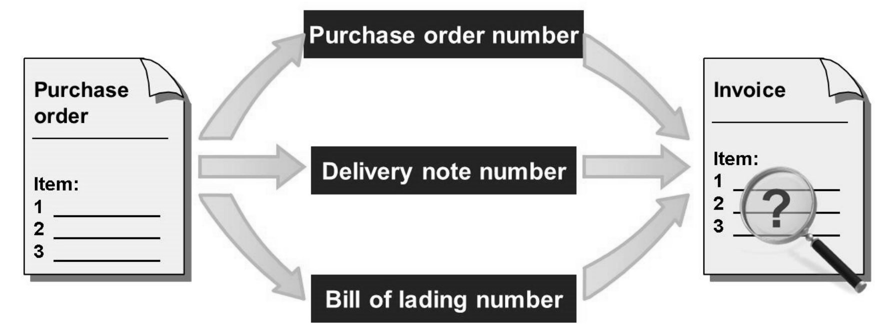


Figure 26: Invoice Verification with Reference to Purchase Order

You can assign the invoice items to a purchase order using the number of the delivery note or bill of lading, provided that these numbers were entered at the time of goods receipt.

If you enter an invoice with reference to a purchase order, the items from the purchase order are suggested with their quantities that are to be invoiced. The system calculates the quantities that are to be invoiced as the difference between the quantities delivered and the quantity already invoiced. For example, if 100 pieces have been delivered and 60 pieces have already been invoiced, 40 pieces remain to be invoiced. The system also suggests the expected amount for the items. This is the product of the quantity to be invoiced multiplied by the order price.

If the vendor invoice values are different from the suggested values, the user entering the data must overwrite the suggested values with the figures from the original invoice. If the discrepancies between the invoice values and the expected values exceed specified tolerances, the invoice is automatically blocked for payment.

Invoice Entry

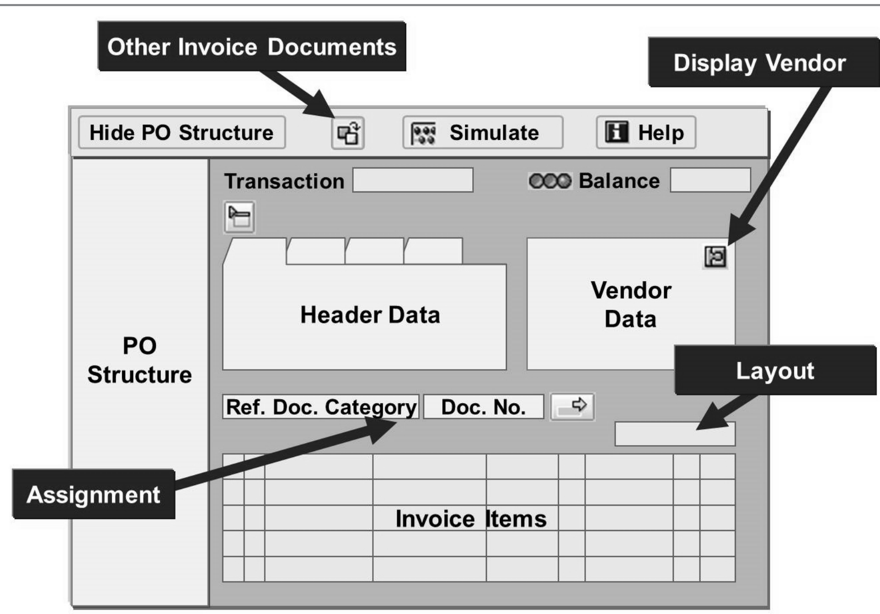


Figure 27: Invoice Entry – Transaction MIRO

Transaction `MIRO` for entering invoices and credit memos in LIV is a single-screen transaction. In this transaction, data is divided into header and item data. The figure shows the individual screen areas.

The description of Invoice Entry -Transaction MIRO is as follows:

Transaction:

In this field, indicate whether you are entering an invoice, credit memo, or subsequent debit or credit.

Header data:

In this area, enter the header data of an invoice (for example, the invoice number and date, gross invoice amount and tax amount, invoicing party, and terms of payment).

Assignment:

In this area, assign a reference document to the invoice so that the system proposes the invoice items to be processed.

Invoice items:

In this list, check the proposed invoice items and change them in line with the actual invoice. You can use different layouts to change the display of the columns and their sequence.

Vendor data:

In this area, the detail data pertaining to the invoicing party derived from the vendor master record is shown. Choose (*Display vendor*) to branch directly to the vendor master record.

> Hint:
> Vendor data is displayed only if you have entered an invoicing party or referenced (created a link to) a purchase order.

Balance:

In this area, the balance and invoice status are displayed (for example, whether an invoice can be posted - green light - or whether the invoice will be blocked for payment during posting - yellow light).

PO structure:

In this area, the user entering the invoice can see the purchase order histories for the purchase order items from the item overview.

Entry of an Invoice against a Purchase Order

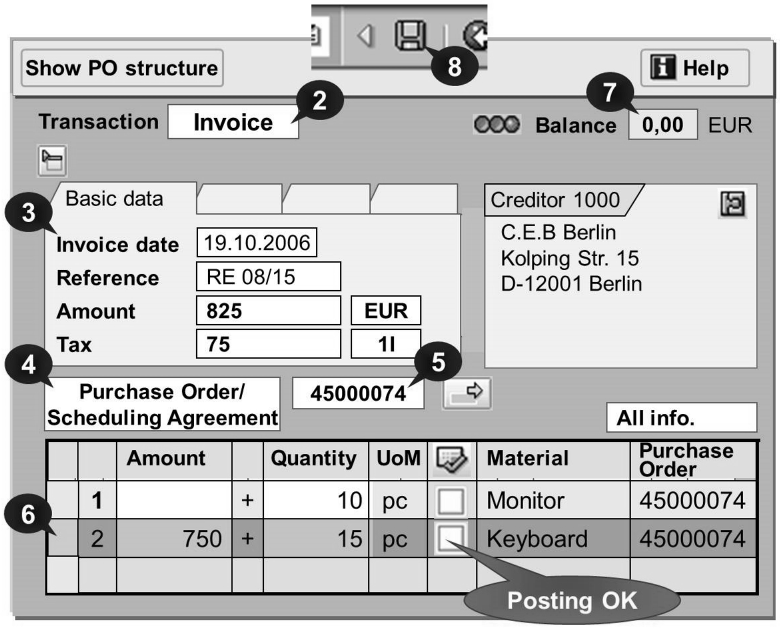


Figure 28: Entering an Invoice against Purchase Order

This figure shows how to enter an invoice against a purchase order.

Unit 1
Exercise 4

Enter an Invoice

Business Example

In invoice verification, you enter the invoice you have received from the vendor. You compare the purchase order and goods receipt data with the data in the vendor's invoice.

Vendor T-K500A## invoices you for delivery of the standard taillights-##. Enter the invoice using LIV.

1. Post the vendor invoice.

   Enter the invoice for company code 1000.

   Take the necessary data from the vendor's invoice (RE-A1 ##).

   Compare the invoice price and invoice quantity with the data proposed by the system.

Invoice

Motolux GmbH Gr.##
Sonnenweg 3
68145 Mannheim

IDES
Hamburg Plant
Altersdorferstr. 13
22299 Hamburg

Invoice no.: RE-A1##
Invoice date [current date]

With reference to your PO no. 45000xxxxx, we hereby invoice you for the following items:

Item	Quantity/Un	Material number	Description	Price
10	100 pc	T-M500A##	Standard taillight-##	EUR 5,000
			Total net value:	EUR 5,000
			plus 10 % VAT	EUR 500
			Invoice amount	**EUR 5,500**

Subject to the agreed terms of payment.

Kind regards, Motolux GmbH Gr.##

Figure 29: Invoice RE-A1##

   Post the invoice and note the number of the invoice document.

   Invoice document number: ____________________________.

2. Display the invoice document.

Display the invoice document that was generated when the invoice was posted. Analyze the purchase order history and make sure it has been updated correctly.

3. Extend the list of favorites.

   Add the transaction for invoice entry to your favorites.

Unit 1
Solution 4

Enter an Invoice

Business Example

In invoice verification, you enter the invoice you have received from the vendor. You compare the purchase order and goods receipt data with the data in the vendor's invoice.

Vendor T-K500A## invoices you for delivery of the standard taillights-##. Enter the invoice using LIV.

1. Post the vendor invoice.

   Enter the invoice for company code 1000.

   Take the necessary data from the vendor's invoice (RE-A1 ##).

   Compare the invoice price and invoice quantity with the data proposed by the system.

Invoice

Motolux GmbH Gr.##
Sonnenweg 3
68145 Mannheim

IDES
Hamburg Plant
Altersdorferstr. 13
22299 Hamburg

Invoice no.: RE-A1##
Invoice date [current date]

With reference to your PO no. 45000xxxxx, we hereby invoice you for the following items:

Item	Quantity/Un	Material number	Description	Price
10	100 pc	T-M500A##	Standard taillight-##	EUR 5,000
			Total net value:	EUR 5,000
			plus 10 % VAT	EUR 500
			Invoice amount	**EUR 5,500**

Subject to the agreed terms of payment.

Kind regards, Motolux GmbH Gr.##

Figure 29: Invoice RE-A1##

   Post the invoice and note the number of the invoice document.

   Invoice document number: ____________________________.

a) Choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Document Entry* → *Enter Invoice* (`MIRO`).

b) Enter the following data on the *Basic Data* tab page:

Field	Value
Invoice date	<Today's date>
Reference	**RE-A1##**
Amount	**5500**
Tax amount	**500**
Tax code	*1I (input tax (10%))*

c) On the *PO reference* tab page, choose *Purchase Order/Scheduling Agreement* as the reference document category and enter your purchase order number.

> Hint:
> To search for the purchase order using the F4 help, enter the following selection values and choose (*Execute*).
>
> | Field | Value |
> |---|---|
> | *Vendor* | **T-K500A##** |
> | *Plant* | **1000** |
> | *Material* | **T-M500A##** |
>
> Select the purchase order in the results list and choose (*Copy*).

d) Choose (*Enter*). The system proposes the data from the purchase order.

The default data agrees with that of the vendor invoice. The balance is zero.

> Hint:
> The item is pre-selected by the system.

e) Choose (*Post*) and note the number of the invoice document.

2. Display the invoice document.

Display the invoice document that was generated when the invoice was posted. Analyze the purchase order history and make sure it has been updated correctly.

a) To display the invoice directly from the transaction, enter *Invoice* (`MIRO`), choose *Invoice Document* → *Display*.

You can also choose (*Other Invoice Document*). In the *Choose Invoice Document* dialog box, the system proposes the last invoice you posted. Choose *Continue*.

b) Exit transaction `MIRO`.

c) Choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Further Processing* → *Display Invoice Document* (`MIR4`).

d) Choose the *Show PO structure* pushbutton, or double-click the purchase order number in the *Item overview*.

e) Choose the *Purchase Order History* tab page in the purchase order (item details).

The purchase order history shows the invoice for 100 pieces in addition to the goods receipt of 100 pieces.

3. Extend the list of favorites.

Add the transaction for invoice entry to your favorites.

LESSON SUMMARY

You should now be able to:

- Enter an invoice

Learning Assessment

1. A plant can be assigned to several company codes.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

2. A purchasing organization can act for several plants.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

3. A purchasing group must always be assigned to a purchasing organization.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

4. A purchasing organization must always be assigned to a company code.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

5. Purchase order transaction ME21N is divided into which of the following screen areas?

   Choose the correct answers.

   - [ ] A Header data
   - [ ] B Storage location
   - [ ] C Item overview
   - [ ] D Item details
   - [ ] E Document overview
   - [ ] F SAP Easy Access screen

6. Which of the following do you have to indicate when entering a purchase order?

   Choose the correct answers.

   - [ ] A Client
   - [ ] B Company code
   - [ ] C Plant
   - [ ] D Storage location
   - [ ] E Purchasing organization
   - [ ] F Purchasing group

7. Print and EDI are two possible message output types.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

8. Which of the following is the first step when entering a goods receipt with reference to a purchase order?

   Choose the correct answer.

   - [ ] A Choose transaction MIGO.
   - [ ] B Enter the purchase order number and choose Execute.
   - [ ] C Select the OK checkbox for the items and enter a storage location.
   - [ ] D Choose the transaction Goods Receipt and Purchase Order as the reference document.

9. What are the effects of the entry of a goods receipt against a purchase order in the SAP system?

   Choose the correct answers.

   - [ ] A The purchase order is deleted.
   - [ ] B An accounting document can be generated.
   - [ ] C A material document is generated for each item.
   - [ ] D The purchase order history is updated for each item of the purchase order.
   - [ ] E A material document is generated.
   - [ ] F A credit memo is automatically generated for the vendor for the amount of the delivery value.

10. You can enter a goods movement without indicating a movement type.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

11. Which of the following pieces of information are always found in a vendor invoice?

    Choose the correct answers.

    - [ ] A Invoicing party
    - [ ] B Invoice date
    - [ ] C Tax rate
    - [ ] D Delivery note number

12. When entering an invoice, you may reference a purchase order or a delivery note.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

13. The invoice is checked to ensure that it covers the right quantities of the right materials and services, that the price is as agreed upon, and that it is arithmetically correct.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

14. Which of the following can you enter using transaction MIRO?

    Choose the correct answers.

    - [ ] A Subsequent delivery
    - [ ] B Subsequent debit
    - [ ] C Invoice
    - [ ] D Subsequent adjustment
    - [ ] E Credit memo

Learning Assessment - Answers

1. A plant can be assigned to several company codes.

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   A plant can be assigned to only one company code. At the same time, this assignment is essential.

2. A purchasing organization can act for several plants.

   Determine whether this statement is true or false.

   [X] True

   [ ] False

   The plants for which a purchasing organization acts can belong to one company code or various company codes. If a purchasing organization is assigned to a company code, then it can only apply to plants from this company code.

3. A purchasing group must always be assigned to a purchasing organization.

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   There is no link between a purchasing group and a purchasing organization in the system. There is no assignment of purchasing groups to purchasing organizations.

4. A purchasing organization must always be assigned to a company code.

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   The assignment of a purchasing organization to a company code is optional.

5. Purchase order transaction ME21N is divided into which of the following screen areas?

   Choose the correct answers.

   - [x] A Header data
   - [ ] B Storage location
   - [x] C Item overview
   - [x] D Item details
   - [x] E Document overview
   - [ ] F SAP Easy Access screen

6. Which of the following do you have to indicate when entering a purchase order?

   Choose the correct answers.

   - [ ] A Client
   - [x] B Company code
   - [x] C Plant
   - [ ] D Storage location
   - [x] E Purchasing organization
   - [x] F Purchasing group

   You do not need to enter the client in the purchase order because you select the client when you log on to the SAP system. In the organizational data in the purchase order header, you must enter a purchasing organization, the purchasing group, and the company code. At item level, enter the plant. You can enter the storage location, but it is not required.

7. Print and EDI are two possible message output types.

   Determine whether this statement is true or false.

   - [x] True
   - [ ] False

   There are different ways of processing messages. You can issue messages as printout, EDI message, fax, or e-mail.

8. Which of the following is the first step when entering a goods receipt with reference to a purchase order?

Choose the correct answer.

- [X] A Choose transaction MIGO.
- [ ] B Enter the purchase order number and choose Execute.
- [ ] C Select the OK checkbox for the items and enter a storage location.
- [ ] D Choose the transaction Goods Receipt and Purchase Order as the reference document.

9. What are the effects of the entry of a goods receipt against a purchase order in the SAP system?

Choose the correct answers.

- [ ] A The purchase order is deleted.
- [X] B An accounting document can be generated.
- [ ] C A material document is generated for each item.
- [X] D The purchase order history is updated for each item of the purchase order.
- [X] E A material document is generated.
- [ ] F A credit memo is automatically generated for the vendor for the amount of the delivery value.

A material document and an accounting document are generated for each goods receipt (exceptions: cross-company-code postings and non-valuated goods receipts). The purchase order history for a purchase order item is updated when a goods receipt is entered with reference to this item. It is also updated when you enter a return delivery or a reversal for this purchase order item.

10. You can enter a goods movement without indicating a movement type.

Determine whether this statement is true or false.

- [ ] True
- [X] False

The movement type determines the kind of goods movement that is involved. It is also an important factor that influences the quantity update and the update in accounting.

11. Which of the following pieces of information are always found in a vendor invoice?

    Choose the correct answers.

    - [x] A Invoicing party
    - [x] B Invoice date
    - [x] C Tax rate
    - [ ] D Delivery note number

    In a vendor invoice, you can find information such as invoicing party, the reference, the invoice date, the terms of payment, the invoice amount, the tax amount, the tax rate, and the quantities and amounts for the individual items.

12. When entering an invoice, you may reference a purchase order or a delivery note.

    Determine whether this statement is true or false.

    - [x] True
    - [ ] False

13. The invoice is checked to ensure that it covers the right quantities of the right materials and services, that the price is as agreed upon, and that it is arithmetically correct.

    Determine whether this statement is true or false.

    - [x] True
    - [ ] False

14. Which of the following can you enter using transaction MIRO?

Choose the correct answers.

- [ ] A Subsequent delivery
- [x] B Subsequent debit
- [x] C Invoice
- [ ] D Subsequent adjustment
- [x] E Credit memo

You can enter invoices, credit memos, and subsequent debits and credits using transaction MIRO. Subsequent adjustment is an inventory management transaction that occurs in connection with the special procurement type, namely “subcontracting”. Subsequent delivery also counts as a goods movement.

UNIT 2 Master Data

UNIT OBJECTIVES

- Create a vendor master record
- Create a material master record
- Extend a material master record
- Create vendor master data with reference
- Maintain material master data using entry aids
- Execute mass maintenance

Unit 2
Lesson 1

Maintaining Vendor Master Records

LESSON OVERVIEW

This lesson introduces the vendor master record, which is important to both the ordering and invoice processing phases of procurement. This lesson explains the structure and the maintenance of the vendor master record.

Business Example

Your company has entered into a business relationship with a new vendor. To place frequent orders with this vendor in future, you need to create a new master record for the vendor. For this reason, you require the following knowledge:

- An understanding of the importance of vendor master records
- How to create and maintain vender records
- An understanding of the organizational levels that are important for vendor master record maintenance

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create a vendor master record

Master Data in the Procurement Process

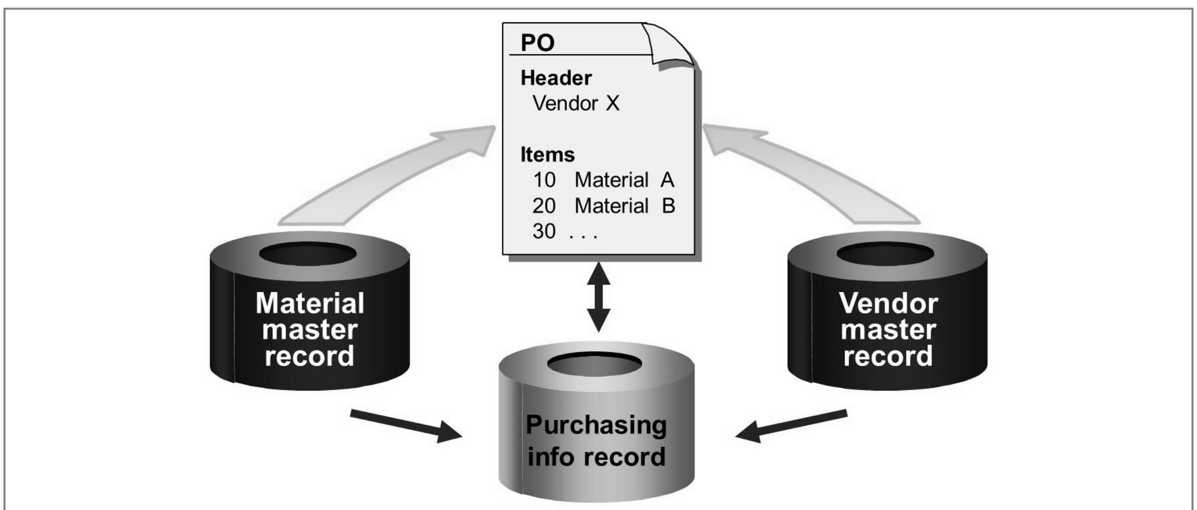


Figure 30: Master Data in the Procurement Process

Master data comprises data records that are stored in the database for a long period of time. These data records are stored in a central location, and are used and processed on a cross-application basis. This avoids multiple storage and redundancy of data.

The following records are part of the most important data in the procurement process:

- The vendor master record
- The material master record
- The purchasing info record

The purchasing info record is a connection between vendors and materials and is discussed later in this enablement. When purchasing documents are created, data is transferred by default from existing master records to the purchasing documents. This reduces the effort required to enter the data. Other data, such as units of measure, material short text, and the PO text, is also integrated from the material master record for the new document.

The data in the vendor master record includes address data and payment data. You can store vendor-specific data for a certain material, such as delivery time and purchase price, in purchasing info records.

Vendor Master Data

The vendor master data includes information about the vendors of a company. This information is stored in the individual vendor master records.

In addition to the vendor's name and address, a vendor master record includes the following data:

- Currency used for transactions with the vendor
- Terms of payment
- Names of important contacts, such as salespersons

Categories of Vendor Master Data

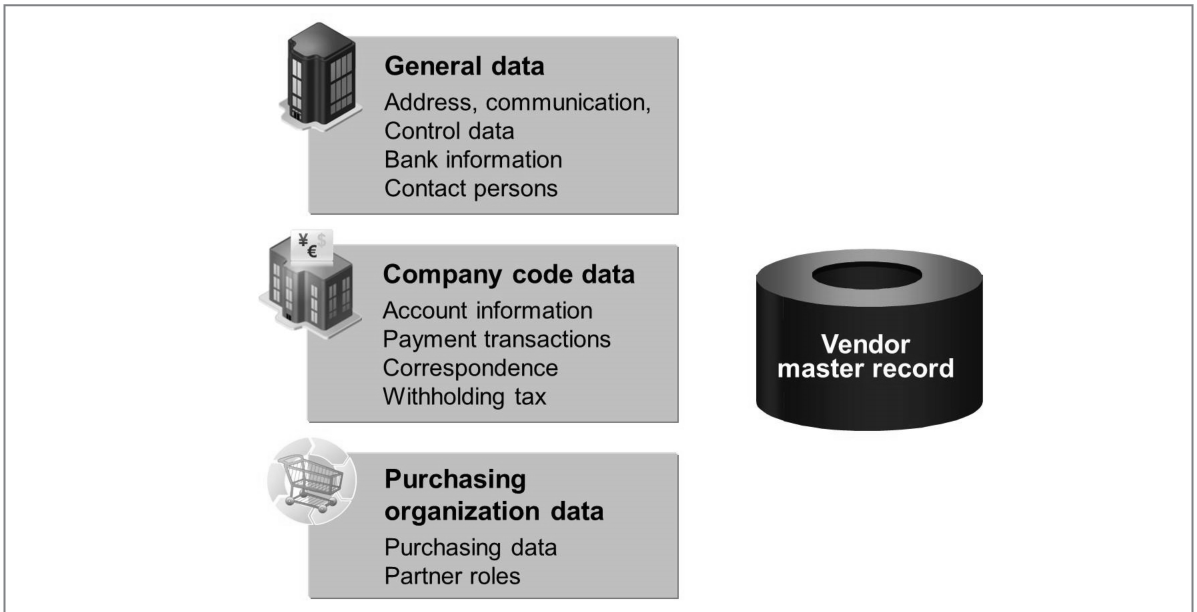


Figure 31: Categories of Vendor Master Data

For accounting purposes, the vendor is also a creditor of your company. Therefore, the vendor master record also includes accounting data, such as the reconciliation account from the general ledger. The vendor master record is maintained by both purchasing and accounting groups.

Data in the vendor master record is subdivided into various categories as follows:

- General data

  General data is valid for a single client. General data includes the vendor's address, control data, bank details, communication, and contact persons.

- Company code data

  Company code data is maintained at the company code level. Company code data includes the number of the reconciliation account, correspondence, withholding tax, and the payment methods for automatic payment transactions.

- Purchasing organization data

  Purchasing organization data is maintained for each purchasing organization. Purchasing organization data includes the purchase order currency, Incoterms, partner roles, purchasing data, and various controls pertaining to the vendor. You can also maintain different data for specific plants or for vendor subranges.

Vendor Master Data at Organizational Levels

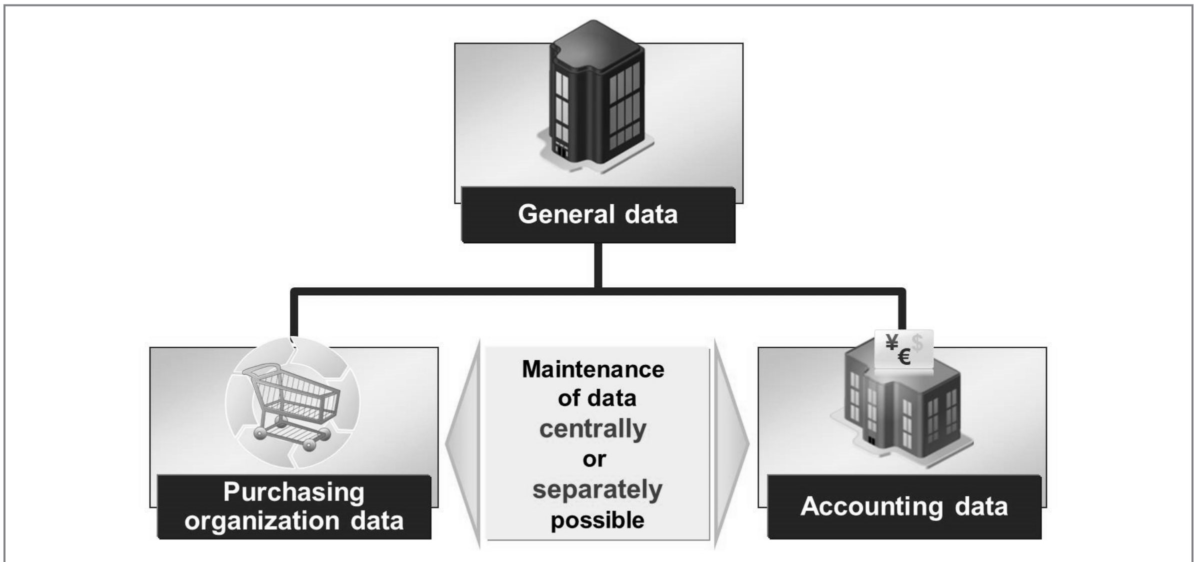


Figure 32: Vendor Master Record at Organizational Levels

You decide whether to maintain vendor master records in a central location (all data is maintained together) or on a decentralized basis (each department maintains its own data).

If you only give your purchasing staff the authorizations for transactions `MK01`, `MK02`, and `MK03` (*Logistics → Materials Management → Purchasing → Master Data → Vendor → Purchasing → Create/Change/Display*), it will allow them to maintain the general address and control data, and the purchasing-specific data. Authorized accounting personnel will have to enter the payment transaction data and the company-code-specific data.

If staff are authorized to maintain the vendor master data with transactions `XK01`, `XK02`, and `XK03` (*Logistics → Materials Management → Purchasing → Master Data → Vendor → Central → Create/Change/Display*), staff can edit all the data in the vendor master record.

> Hint:
> Before you can order anything from a vendor, you must have previously retained the purchasing data. To enter invoices, you need to create the accounting data beforehand.

Account Group

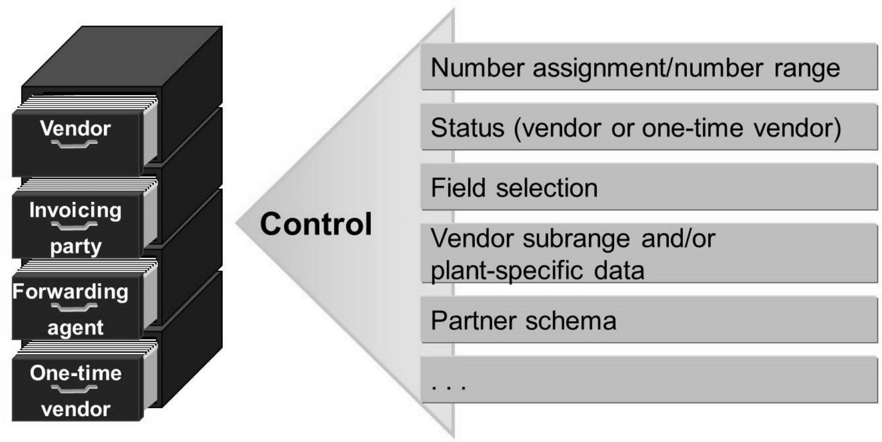


Figure 33: Account Group

When creating a vendor master record, you must decide the account group to which you are assigning this vendor. The account group has the functions to control the screens and fields relevant to your business partner that are displayed and are enabled for input.

Among other tasks, the account group performs the following functions:

- Determines the type of number assignment, such as internal or external
- Determines the number range. The system identifies the account number from this number range to be assigned to the vendor
- Determines the field selection, such as which fields are ready for input, which fields must be maintained, and which fields are hidden
- Determines the valid partner schema
- Determines the vendor's status, for example, if the vendor is a one-time vendor or a permanent vendor

> Note:
> You can maintain the account groups in Customizing by following this path: *Tools → Customizing → IMG → Execute Project → SAP Reference IMG → Logistics → General → Business Partner → Vendors → Control → Define Account Groups and Field Selection (Vendor)*.

As external procurement and invoice verification are not possible without a vendor master record, there are special account groups created for one-time vendors. A one-time vendor master record is used in purchasing documents and invoices for a rarely used vendor who has no separate master records. This enables you to work without a vendor-specific master record if you want to procure materials or services from a vendor only once.

Unlike other master records, you can use a one-time vendor master record for several different vendors. For this reason, no vendor-specific data, such as an address or bank details, are stored for one-time vendors. This data is recorded only in the relevant document.

When you create a purchasing or invoice document for a one-time vendor, the system automatically opens an additional data screen, where you can enter specific data, such as the vendor's name, address, and bank details.

Reconciliation Account

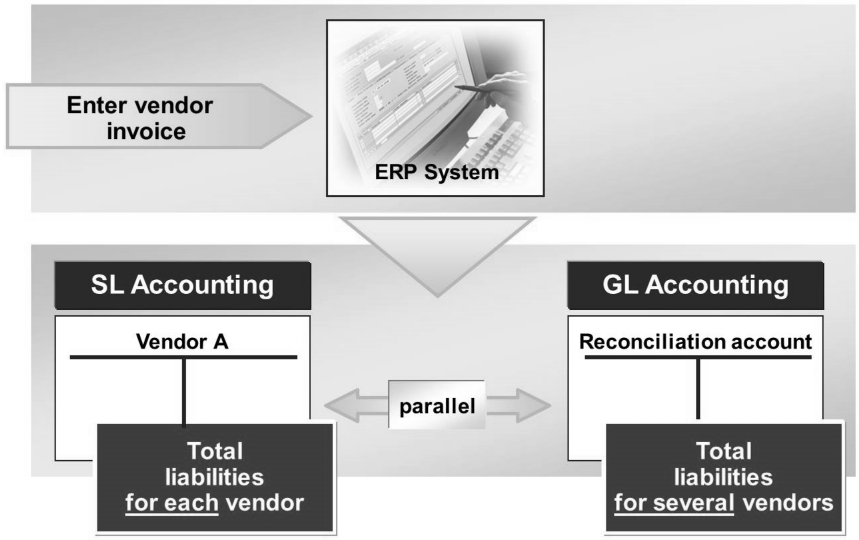


Figure 34: Reconciliation Account for Vendor Master Record

When you create a vendor master record, you need a unique number for the vendor, or creditor. This number is assigned either automatically by the system or manually by the administrator, depending on the account group. The creditor number is also used as the subsidiary ledger number in financial accounting. In subledger accounting, the total liabilities are updated for each vendor.

When creating a vendor master record, you must also create a reconciliation account. This account is a General Ledger (G/L) account in G/L accounting. A reconciliation account depicts a company's liabilities to numerous vendors in G/L accounting. When entering invoices, you enter the vendor and the system produces the reconciliation account from the vendor master record.

Partner Roles

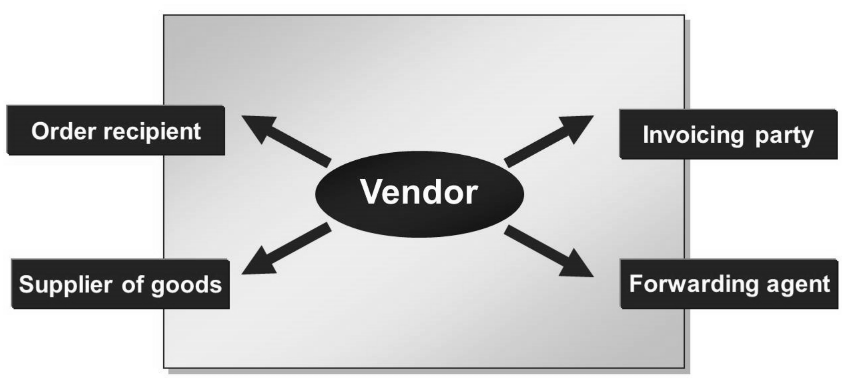


Figure 35: Partner Roles

The vendor can assume various roles within the business partners of your company. For example, during a procurement transaction, the vendor is first the order recipient, then the goods supplier, and finally the invoicing party.

The maintenance of partner roles in the vendor master record allows you to distribute one or more of these roles to different vendors. For example, using the partner role function, you can define a different creditor as a freight forwarder for a certain vendor.

Vendor Blocking

In some cases, you may no longer want to order goods from a particular vendor. This may happen when the vendor supplies products of deficient quality. In this case, you have the option of blocking the vendor in the vendor master record. Once you select the blocking checkbox, purchase orders can no longer be placed with this vendor. The block applies until you deselect the checkbox.

> Hint:
> If you want to stop ordering just one specific material from a vendor, block the vendor in the source list for the material, not in the vendor master record.

To block a vendor master record, choose *Purchasing → Master Data → Vendor → Purchasing → Block* (transaction `MK05`).

You can decide whether the vendor is to be blocked for just one purchasing organization, or for all purchasing organizations.

You also have the option of setting the Block for quality reasons checkbox. The Block for quality reasons checkbox is effective only for materials for which quality management is active in procurement. The blocking function used here determines which procurement function, such as RFQ or purchase order, is to be blocked for quality reasons.

Unit 2
Exercise 5

Create a Vendor Master Record

Business Example

Your company has entered into a business relationship with a new vendor. As a part of your job, you need to approve invoices for payment and carry out other processes to order from this vendor. For this reason, you must know how to create a new vendor master record.

Create a master record for a new vendor with the purchasing and accounting data.

The purchasing and accounting data for new vendor, **`Highspeed Gr.##,`** is available. Since your company will now purchase products or services from this source on a regular basis, create a master record for this vendor.

Maintain the Vendor Master Record

1. Vendor master record maintenance based on the organizational levels.

   You already know that vendor master data is maintained on the basis of organizational levels. For which organizational levels do you enter data in the vendor master record?

Create the Vendor Master Data

Creation of vendor master data is based on menu paths.

1. Which menu paths can you use to create a vendor master record in purchasing?

2. How do these differ?

Create the Vendor Master Record

Create vendor master record.

1. Create a vendor master record **`T-K500Y##`** centrally for the organizational levels *Company Code* **`1000`** and *PurchasingOrganization* **`1000`**. Create this vendor master record with the *Account group* **`ZTMM`**.

> Hint:
> You do not have to enter anything in the following views:
>
> - *General data*
> - *Company code data*
> - *Purchasing organization data*
> - *Control*
> - *Payment transactions*
> - *Correspondence*
> - *Withholding tax*
> - *Partner functions*

Change the Vendor Master Record

Change vendor master record.

1. The vendor master data for vendor **`T-K500Y##`** has been created. Now, requisitions for certain materials procured from this vendor can be automatically converted into purchase orders. To facilitate this change, set the necessary indicator in the vendor master record. Change the control data in the *Purchasing data* of the vendor master record accordingly.

   Entry in the field: ____

   The vendor has now informed you that **`Mr. Fred Fisher`** is the contact person for purchasing. His telephone number is **`089-123654`**. Enter this information in the *Purchasing data* specific to the *Purchasing Organization*.

> Hint:
> You can also enter the details of the sales person in the *Contact persons* data field. These details form part of the cross-client data. You can store additional information about your contact person here, such as department or material status. You can also enter more than one contact person from a department.

Unit 2
Solution 5

Create a Vendor Master Record

Business Example

Your company has entered into a business relationship with a new vendor. As a part of your job, you need to approve invoices for payment and carry out other processes to order from this vendor. For this reason, you must know how to create a new vendor master record.

Create a master record for a new vendor with the purchasing and accounting data.

The purchasing and accounting data for new vendor, **`Highspeed Gr.##,`** is available. Since your company will now purchase products or services from this source on a regular basis, create a master record for this vendor.

Maintain the Vendor Master Record

1. Vendor master record maintenance based on the organizational levels.

   You already know that vendor master data is maintained on the basis of organizational levels. For which organizational levels do you enter data in the vendor master record?

   a) You enter data for the organizational levels client, company code, purchasing organization, and plant/sub-range in the vendor master record.

Create the Vendor Master Data

Creation of vendor master data is based on menu paths.

1. Which menu paths can you use to create a vendor master record in purchasing?

   a) You can create vendor master data using the following menu paths:

      - *Logistics → Materials Management → Purchasing → Master Data → Vendor → Central → Create* (`XK01`).

      - *Logistics → Materials Management → Purchasing → Master Data → Vendor → Purchasing → Create* (`MK01`).

2. How do these differ?

   a) These approaches differ in the following way:

      - With transaction `XK01`, you can create all vendor master data. On the other hand with transaction `MK01`, you create only general data and data specific to purchasing. Company code-specific data can be created only with transaction `XK01`.

Create the Vendor Master Record

Create vendor master record.

1. Create a vendor master record **T-K500Y##** centrally for the organizational levels *Company Code* **1000** and *PurchasingOrganization* **1000**. Create this vendor master record with the *Account group* **ZTMM**.

Hint:
You do not have to enter anything in the following views:

- *General data*
- *Company code data*
- *Purchasing organization data*
- *Control*
- *Payment transactions*
- *Correspondence*
- *Withholding tax*
- *Partner functions*

a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Vendor* → *Central* → *Create* (XK01).

b) Enter the following data on the *Initial* screen and choose *Enter*.

Field	Value
Vendor	**T-K500Y##**
Company Code	**1000**
Purchasing Org.	**1000**
Account group	**ZTMM**

c) Enter the following data on the *Address* screen and choose *Enter*:

Field	Value
Title	**Company**
Name	**Highspeed Gr.##**
Search term 1/2	**SCM500-##**
Street/House number	**Lincolnstraße 99**
Postal Code/City	**81549 Munich**
Country	**DE (Germany)**
Region	**09 (Bavaria)**

Field	Value
Language	**`German`**

d) Enter the following data on the *Accounting information Accounting* screen and choose *Enter*:

Field	Value
Recon. account	**`160000`**

e) Enter the following data on the *Payment transactions Accounting* screen and choose *Enter*:

Field	Value
Payt Terms	**`0002`**

f) Enter the following data on the *Purchasing data* screen:

Field	Value
Order currency	**`EUR`**
Terms of paymnt	**`0002`**

Note:
There is no input required in the *Control*, *Payment transactions*, *Correspondence*, and *Partner functions* screens.

g) Save the data.

Change the Vendor Master Record
Change vendor master record.

1. The vendor master data for vendor **`T-K500Y##`** has been created. Now, requisitions for certain materials procured from this vendor can be automatically converted into purchase orders. To facilitate this change, set the necessary indicator in the vendor master record. Change the control data in the *Purchasing data* of the vendor master record accordingly.

   Entry in the field: ____

   The vendor has now informed you that **`Mr. Fred Fisher`** is the contact person for purchasing. His telephone number is **`089-123654`**. Enter this information in the *Purchasing data* specific to the *Purchasing Organization*.

   a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Vendor* → *Purchasing* → *Change (Current)* (`MK02`).

   b) Enter the following data on the *Initial* screen:

Field	Value
Vendor	**T-K500Y##**
Purchasing Organization	**1000**

c) Select the *Purchasing data* checkbox and choose *Enter*.

d) Enter the following data on the *Purchasing data* view:

Field	Value
Salesperson	**Mr. Fred Fisher**
Telephone	**089-123654**

e) Select the *Automatic purchase order* checkbox and save the data.

Hint:
You can also enter the details of the sales person in the *Contact persons* data field. These details form part of the cross-client data. You can store additional information about your contact person here, such as department or material status. You can also enter more than one contact person from a department.

LESSON SUMMARY

You should now be able to:

- Create a vendor master record

Unit 2
Lesson 2

Maintaining Material Master Records

LESSON OVERVIEW

This lesson introduces the material master record, which is one of the central master records in logistics. This lesson explains the structure and the maintenance (creation, extension, changing, and display) of the material master record.

Business Example

Various departments in your company access existing material master records. You need to create and extend material master records. For this reason, you require the following knowledge:

- An understanding of material master records
- How to create and maintain material master records
- An understanding of the organizational levels that are important to maintain material master records

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create a material master record
- Extend a material master record

Material Master Record

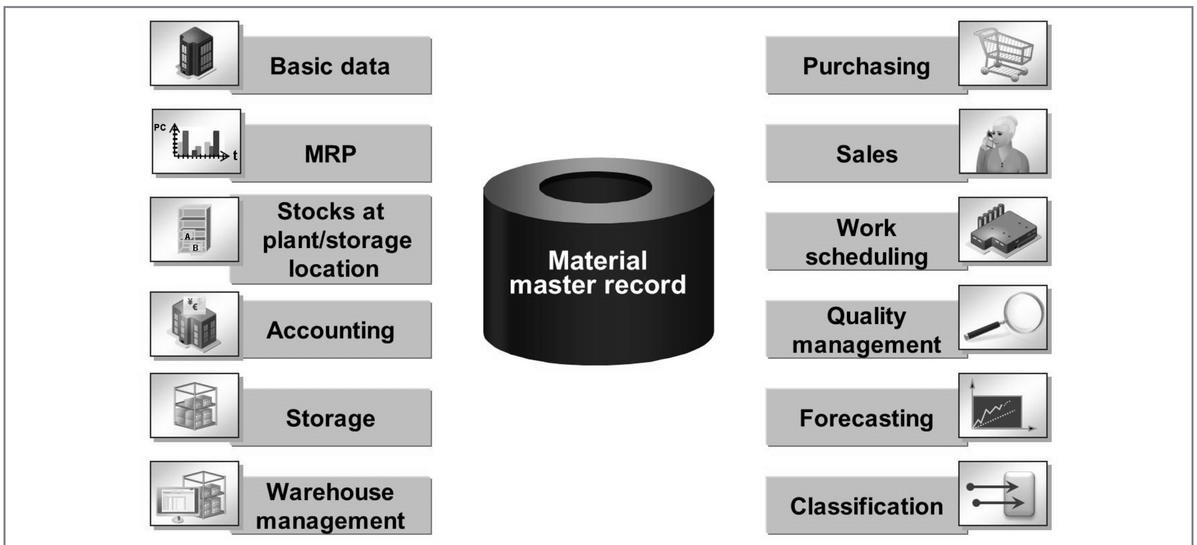


Figure 36: Material Master

The material master record is a company's central source of material-specific data. It is used in all areas of logistics. The integration of all material data in a single database object eliminates the problem of data redundancy. All areas, such as purchasing, inventory management, materials planning, and invoice verification, can jointly use the stored data.

The data stored in the material master is required for many activities, including the following:

- Purchasing, for ordering purposes
- Inventory management, for posting goods movements and physical inventory management
- Accounting, for material valuation
- Materials planning, for material requirements planning

Various user departments within a company work with material data, and each department stores different information relating to it. As a result, the data in a material master record is subdivided according to the specific user department. Therefore, each user department has its own view of a material master record and is responsible for maintaining this data.

Material Master Record Maintenance

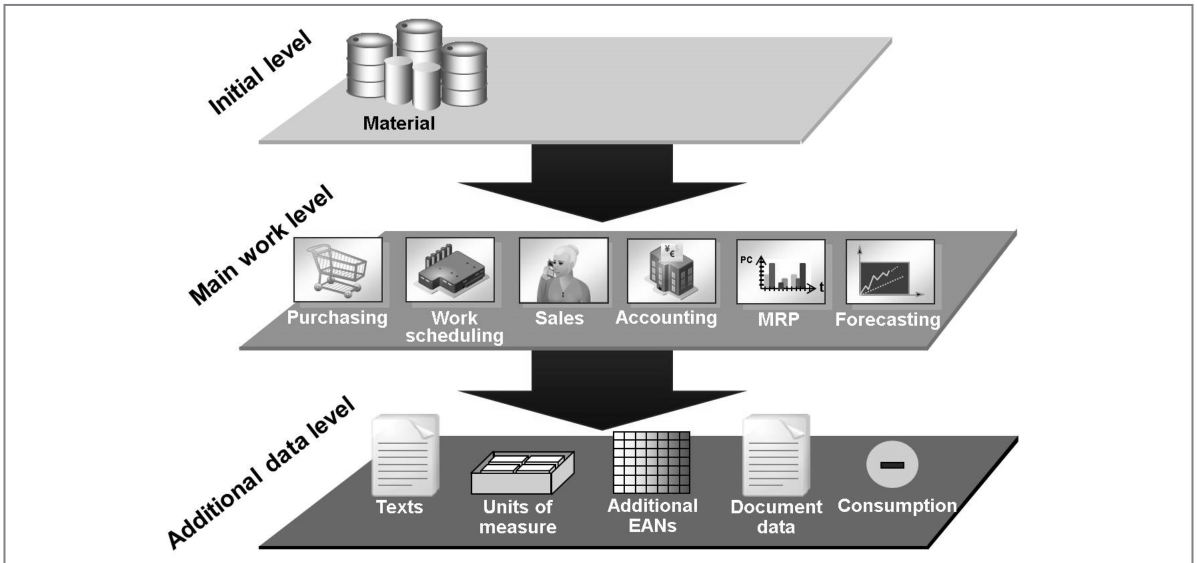


Figure 37: Data Screens in Material Master Record Maintenance

The data screens in material master record maintenance are subdivided into the following types:

- Main work level

  These are the screens for the individual user departments, such as basic data, materials planning, and so on.

- Additional data level

  On these screens you find additional information, such as alternative units of measure, material short descriptions, and consumption values.

The data retained within a view may be valid for different organizational levels.

Material Master at Organization Levels

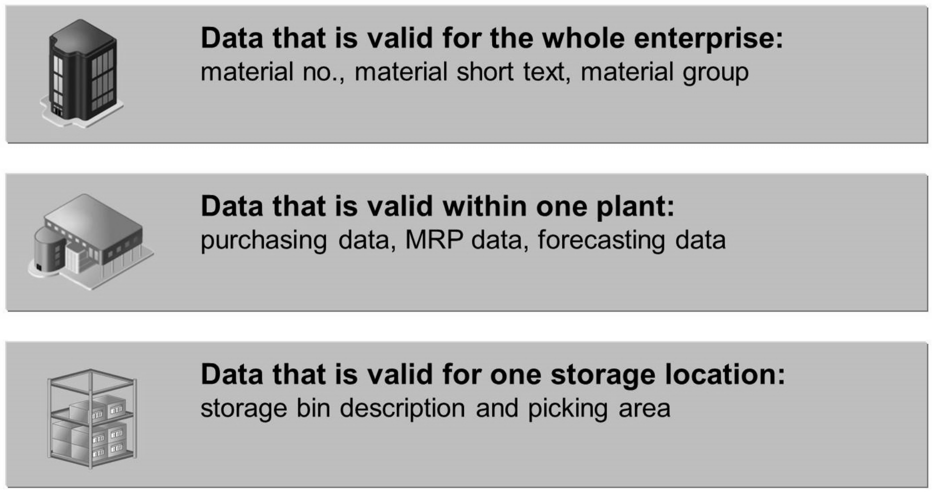


Figure 38: Material Master – Organization Levels

Some material data is valid for all organizational levels, while some material data is valid only for certain levels. To ensure that the material data can be administered centrally, without unnecessary load on the database due to redundant information, the material master is organized to reflect the structure of a company.

Material data is distinguished in the structure in the following ways:

- Data at client level

  General material data that is valid for the whole company is stored at client level.

- Data at plant level

  All data that is valid within a plant and for all storage locations belonging to it is stored at plant level.

- Data at storage location level

  All data that is valid for a particular storage location is stored at storage location level.

These organizational levels are relevant for the external procurement process. Client, plant, and storage location matter when you enter data for purchasing, inventory management, and accounting. Other organizational levels can be relevant for other departments. For example, the sales and distribution data is entered depending on the sales organization and the distribution channel. For the warehouse management data, you must specify a warehouse number and storage type.

Material Master Record Creation

Material master records are created based on the organization level using the following steps:

1. Choose *Logistics → Materials Management → Material Master → Material → Display → Display Current* (`MM03`).

2. Enter the Material Number **M-01** and choose *Enter*.
3. Select only *Basic Data 1* in the *Select View(s)* dialog box to demonstrate that the *Organizational Levels* dialog box is not displayed.
4. Return to the initial screen.
5. Now select *Basic Data 1* and *Purchasing* in the *Select View(s)* dialog box to demonstrate that you can now enter the *Plant* in the *Organizational Levels* dialog box.
6. Display the basic data without entering a *Plant*. All fields are displayed on the basic data screen.
7. Choose the purchasing data and display the individual data.
8. Choose *Org. Levels* and enter *Plant* **1000**. Now the plant-dependent purchasing data is displayed.

Maintenance of Material Master Records

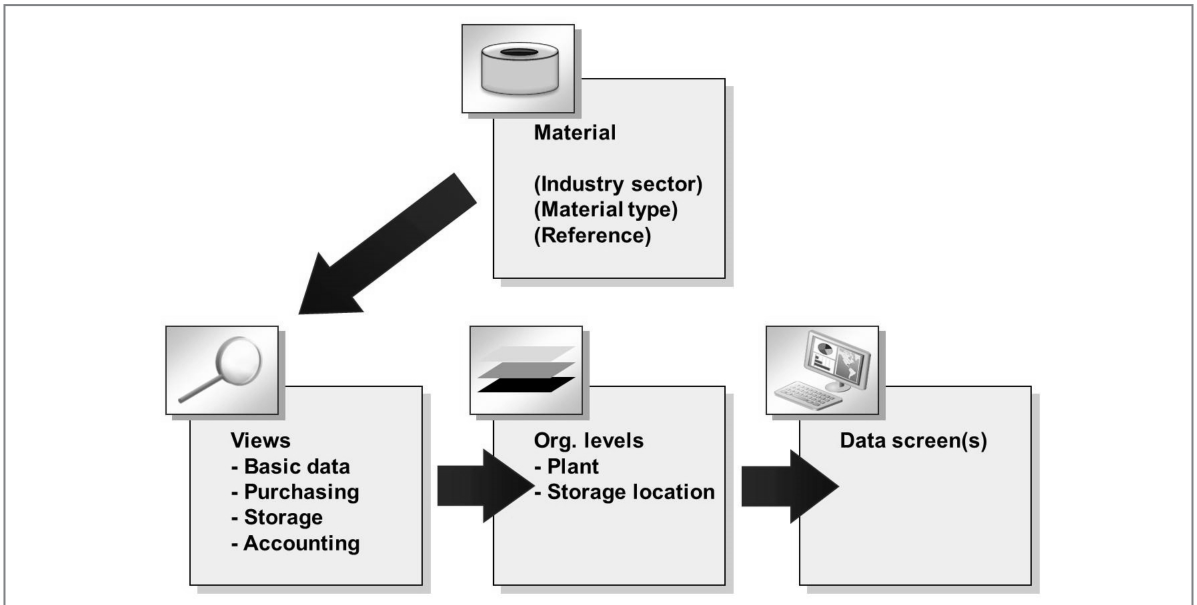


Figure 39: Maintaining a Material Master Record – Screen Sequence

Material data is structured by user department and organizational level and is also evident in material master record maintenance. When processing material master records, you have to pass through several dialog screens before you start to add or change data.

On the initial screen, you will see two successive dialog boxes. In the first dialog box, specify the views that you want to process. In the second dialog box, specify the relevant organization levels. Next, you will see the data screens. You can influence the default screen sequence by configuring the presettings.

Material Type

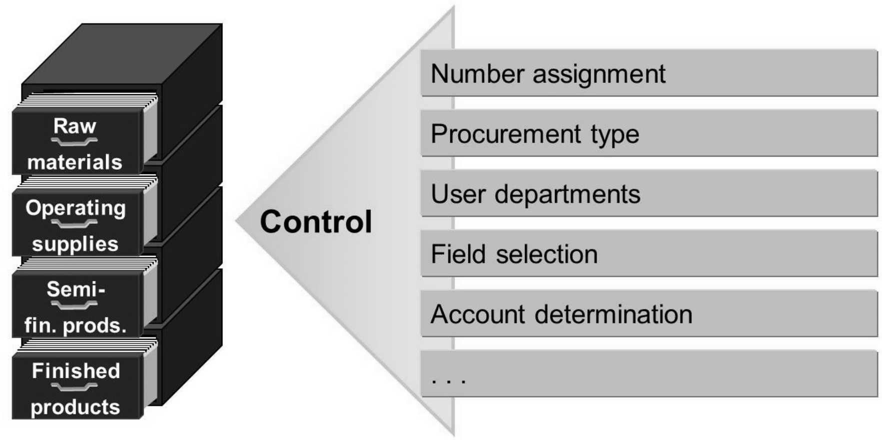


Figure 40: Material Type

When creating a new material master record, you must choose a material type and an industry sector to assign the material. Materials with the same properties are assigned to the same material type. Examples of material types are raw materials, semifinished products, and finished products.

The material type controls the following functions:

- The type of number assignment (internal or external)
- The permissible number range intervals
- The user department-specific view that is proposed for entry
- The procurement type that is allowed for a material (that is, whether the material is produced in-house, procured externally, or both)

Along with the plant, the material type determines the way a material is maintained in inventory management. This includes updating either the quantity changes in the material master record or the value changes in the stock accounts of financial accounting, or both.

Furthermore, the material type determines which accounts are updated when a receipt is posted to or an issue is posted from the warehouse for a material.

Various types of material are available for use in the standard SAP system. If your company needs additional material types, you can define these according to your requirements in *Customizing*.

Industry Sector

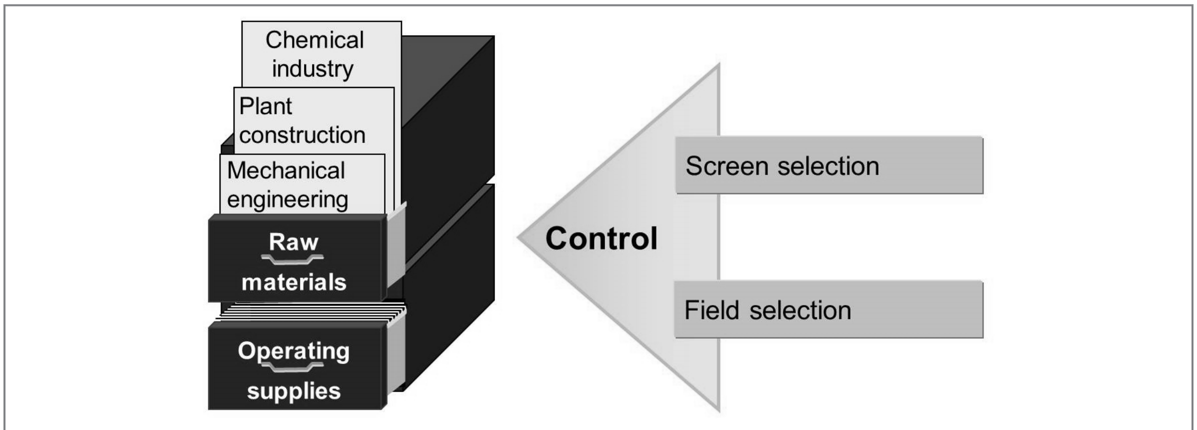


Figure 41: Industry Sector

Like the material type, the industry sector also has a control function.

When you create a material master record, the industry sector determines the following functions:

- Which screens are displayed and in which order
- Which industry-specific fields are displayed on each screen

The material you assign to an industry sector cannot be changed later.

In *Customizing*, you can define new industry sectors and maintain the field reference for field selection control according to your company-specific requirements. You can maintain most of the data in the material master record directly. However, some information is automatically updated by the system. When you enter goods movements, for example, the system updates the stock and consumption data. You can choose *Information on material*, to find the statistical information, such as the date of original creation and the date of the last change.

Some data in the material master is used for information purposes only, for example, description, size, and dimensions. Other material data has a control function in an application. For example, the valuation class determines what G/L accounts will be posted to.

Create a Material Master Record

Business Example

You are responsible for creating and maintaining material master records in your enterprise. For this reason, you must know how to create a material master record for a new headlight.

Create a new material master record with the data of the individual user departments.

A special type of headlight is needed for the manufacture of a new motorcycle model. This headlight is procured externally. After consulting the other departments involved, you create a material master record of the *Material Type Raw material* for the headlight. The material is initially to be used in *Plant* **1000**. It is necessary to create several views with the data of the individual user departments.

1. Create material master record.

   Create a new material master record with the number **T-M500Y##**. Choose the *Industry sector Mechanical Engineering* and the *Material Type Raw material*.

   Create the *Basic data 1*, *Purchasing*, *Purchase order text*, and *Plant data/stor. 1* views for *Plant* **1000** and *Stor. Location* **0001**.

   Enter the following data on the Basic Data view:

   The short description of the material is **Headlight ExtraBright-##**. The base unit of measure used for the headlight is piece (**PC**). The headlight is assigned to material group **003** (Bulbs). The gross weight is **4** kg and the net weight is **3.8** kg.

   Because you use the headlight in German-speaking countries, you also maintain the material description in German.

   German description: **Scheinwerfer Extrahell-##**.

   > Hint:
   > You can enter short descriptions in other languages in the additional data.
   > Choose *Additional data*.

   Enter the following data in the *Purchasing* view:

   Purchasing group **T##** is responsible for procuring the headlight. The goods receipt processing time for this material is **1** day. Reminder letters (expediters) regarding undelivered goods are to be sent 10, 20, and 30 days after the date on which delivery is due. Under or overdelivery of the material is not accepted. Choose the suitable purchasing value key.

   Enter the following data in the Purchase Order Text view:

   The purchase order text reads as follows: **The material supplied must be in accordance with our technical specification no. 65432**.

You can also enter the purchase order text in German: **Das gelieferte Material muss unsere technische Spezifikation Nr. 65432 erfüllen.**

Hint:
Choose (*Create text*) to create the purchase order text in other languages.

When you create a purchase order, the system uses the language from the vendor master record as the default purchase order language. The material short text and the purchase order text are adopted from the material master record and output in the purchase order document in the purchase order language.

The headlight is to be stored in storage bin **BL-01** at storage location **0001**.

When you have entered all the data, save your new material master record.

2. Display the material master record. Which views are proposed for display?

Unit 2
Solution 6

Create a Material Master Record

Business Example

You are responsible for creating and maintaining material master records in your enterprise. For this reason, you must know how to create a material master record for a new headlight.

Create a new material master record with the data of the individual user departments.

A special type of headlight is needed for the manufacture of a new motorcycle model. This headlight is procured externally. After consulting the other departments involved, you create a material master record of the *Material Type Raw material* for the headlight. The material is initially to be used in *Plant* **`1000`**. It is necessary to create several views with the data of the individual user departments.

1. Create material master record.

   Create a new material master record with the number **`T-M500Y##`**. Choose the *Industry sector Mechanical Engineering* and the *Material Type Raw material*.

   Create the *Basic data 1*, *Purchasing*, *Purchase order text*, and *Plant data/stor. 1* views for *Plant* **`1000`** and *Stor. Location* **`0001`**.

   Enter the following data on the Basic Data view:

   The short description of the material is **`Headlight ExtraBright-##`**. The base unit of measure used for the headlight is piece (**`PC`**). The headlight is assigned to material group **`003`** (Bulbs). The gross weight is **`4`** kg and the net weight is **`3.8`** kg.

   Because you use the headlight in German-speaking countries, you also maintain the material description in German.

   German description: **`Scheinwerfer Extrahell-##`**.

   > Hint:
   > You can enter short descriptions in other languages in the additional data.
   > Choose ➡ *Additional data*.

   Enter the following data in the *Purchasing* view:

   Purchasing group **`T##`** is responsible for procuring the headlight. The goods receipt processing time for this material is **`1`** day. Reminder letters (expediters) regarding undelivered goods are to be sent 10, 20, and 30 days after the date on which delivery is due. Under or overdelivery of the material is not accepted. Choose the suitable purchasing value key.

   Enter the following data in the Purchase Order Text view:

   The purchase order text reads as follows: **`The material supplied must be in accordance with our technical specification no. 65432`**.

You can also enter the purchase order text in German: **Das gelieferte Material muss unsere technische Spezifikation Nr. 65432 erfüllen.**

Hint:
Choose (*Create text*) to create the purchase order text in other languages.

When you create a purchase order, the system uses the language from the vendor master record as the default purchase order language. The material short text and the purchase order text are adopted from the material master record and output in the purchase order document in the purchase order language.

The headlight is to be stored in storage bin **BL-01** at storage location **0001**.

When you have entered all the data, save your new material master record.

a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Create (General)* → *Immediately* (MM01).

b) Enter the following data on the *Initial* screen and choose *Continue*:

Field	Value
Material	**T-M500Y##**
Industry sector	*Mechanical Engineering* (*M*)
Material Type	*Raw material* (*ROH*)

c) Select the following views on the *Select View(s)* screen and choose *Continue*:

- *Basic Data 1*
- *Purchasing*
- *Purchase Order Text*
- *General Plant Data / Storage 1*

Hint:
Select each function by clicking on the grey square at the beginning of each line. The line turns orange when selected.

-

d) Enter the following data in the *Organizational Levels* dialog box and choose *Continue*:

Field	Value
Plant	**1000**
Stor. Location	**0001**

e) Enter the following data on the *Basic data1* screen:

Field	Value
Material short text	**Headlight Extra Bright-##.**
Base Unit of Measure	**PC**
Material Group	**003**
Gross Weight	**4**
Weight unit	**KG**
Net Weight	**3,8**

f) Choose the *Additional Data* pushbutton and enter the following data:

Field	Value
Language	**DE**
Material Description	**Scheinwerfer Extrahell-##**

g) Choose the *Main data* pushbutton and click the *Purchasing* tab page to enter remaining values. Enter the following data in the remaining views selected:

Field	Value
Purchasing Group	**T##**
Purchasing value key	**1**
GR Processing Time	**1**

Note:
To get to the next view in each case, choose *Enter*.

h) Choose *Purchase order text* tab page and enter the following text:

Language	Text
English	**The material supplied must be in accordance with our technical specification no. 65432**

Hint:
You must click out of the text box in order to move forward to the next tab.

i) Choose the *Create Text* pushbutton and select the following data:

Field	Value
Create text in	*German*
Copy from	*English*

j) Enter the following data on the *Plant data / Stor. 1* screen and choose *Save*:

Field	Value
Storage Bin	**`BL-01`**

2. Display the material master record. Which views are proposed for display?

   a) Choose *Logistics → Materials Management → Material Master → Material → Display → Display Current* (*MM03*).

   b) Enter the *Material* **`T-M500Y##`**.

   c) Choose *Select View(s)*.

   d) The system proposes the following views: *Basic Data 1*, *Basic Data 2*, *Purchasing*, *Foreign Trade:Import Data*, *Purchase Order Text*, *General Plant Data / Storage 1*, *General Plant Data / Storage 2*, *Plant Stock*, and *Storage Location Stock*.

Material Master Record Extension

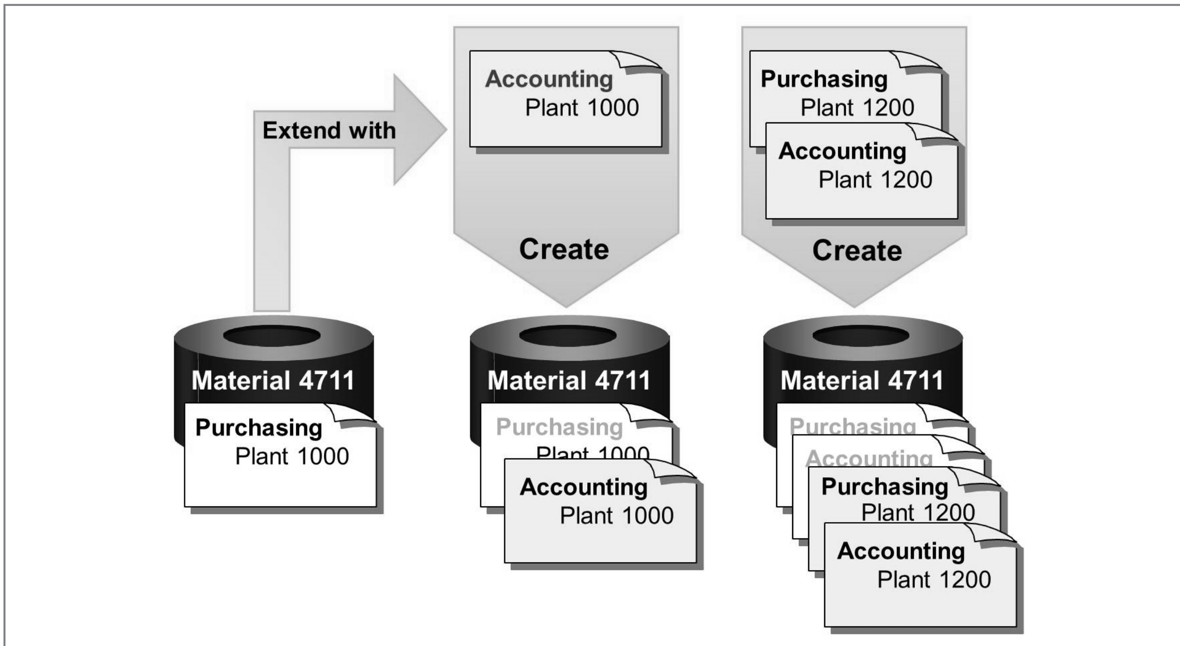


Figure 42: Extending a Material Master Record - Example

Once a department has created data for a material, the material master record exists in the database. If a user from another department wishes to enter data later, they do not have to create the material master record from the beginning, but only have to extend the existing record by adding the information from their department. The material master is also extended when data pertaining to the material is extended to further organizational levels.

You use the *Create* material master transaction (`MM01`) to extend a material master record by adding missing views or organizational levels.

> Caution:
> With the *Change* material transaction (`MM02`), you can only change the data of views and organizational levels that are already maintained.

Any changes you make to data in a material master record, such as creating or changing are logged in a change document. This means that you can trace the change history at any time.

Extend a Material Master Record

Business Example

As a part of your job, you are responsible for creating and maintaining the material master records in your enterprise. For this reason, you must know how to extend a material master record.

1. The accounting data has been provided for *Material* **T-M500Y##**. Extend the material master record by adding the accounting data for *Plant* **1000**. The material is assigned to the *Valuation Class Raw materials 1*. The material is valuated according to the *Moving average price* procedure. The valuation price amounts to *EUR* **80**.

Unit 2
Solution 7

Extend a Material Master Record

Business Example

As a part of your job, you are responsible for creating and maintaining the material master records in your enterprise. For this reason, you must know how to extend a material master record.

1. The accounting data has been provided for *Material* **T-M500Y##**. Extend the material master record by adding the accounting data for *Plant* **1000**. The material is assigned to the *Valuation Class Raw materials 1*. The material is valuated according to the *Moving average price* procedure. The valuation price amounts to *EUR* **80**.

   a) Choose *Logistics → Materials Management → Material Master → Material → Create (General) → Immediately* (MM01).

   b) Enter the following data on *Initial Screen*:

Field	Value
Material	**T-M500Y##**
Industry sector	*Mechanical Engineering* (optional)
Material Type	*Raw material* (optional)

   c) Choose *Continue*.

   d) Select the *Accounting 1* view in the *Select View(s)* dialog box.

   e) Choose *Continue*.

   f) Enter *Plant* **1000** in the *Organizational Levels* dialog box.

   g) Choose *Continue*.

   h) Enter the following data in the *Accounting 1* view:

Field	Value
Valuation Class	**3000** (*raw materials 1*)
Price control	**V** (*Moving average price*)
Moving price	**80**

   i) Choose *Save*.

LESSON SUMMARY

You should now be able to:

- Create a material master record
- Extend a material master record

Unit 2
Lesson 3

Using Entry Aids for Master Data Maintenance

LESSON OVERVIEW

For master data maintenance, different functions are used to simplify data entry. This lesson examines entry aids for the vendor master record and the material master record.

Business Example

You often need to process material and vendor master records. As a part of this job function, you test the entry aids that are provided for these master records. For this reason, you require the following knowledge:

- An understanding of the different entry aids for the maintenance of the vendor master record and material master record
- How to create a vendor master record with reference
- How to create a material master record with reference material
- How to use collective entry for storage location data in the material master record

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create vendor master data with reference
- Maintain material master data using entry aids

Entry Aids for Vendor Master Record

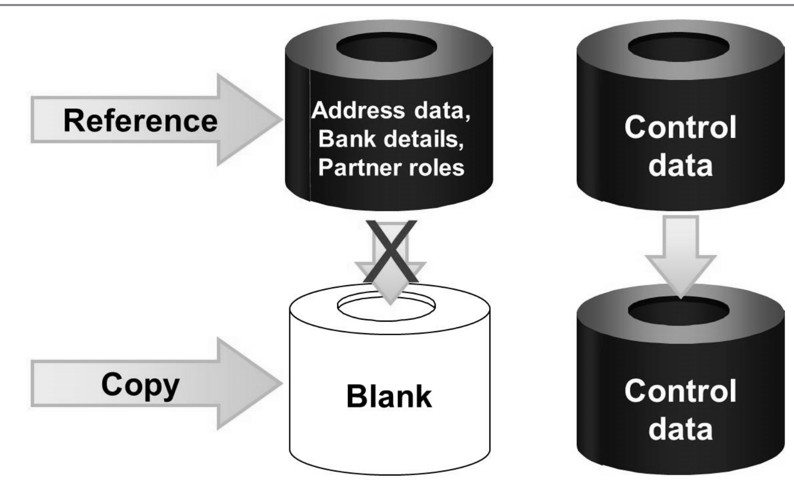


Figure 43: Creating a Vendor Master Record with Reference

To create a vendor master record, use an existing vendor as a reference. The system copies the general master data from the existing vendor. The control data is also copied from the reference, but you can overwrite it. However, the system does not copy all the data (for example, the address, bank information, and business partner). The system prompts you to maintain this data.

The transfer of information from the existing vendor depends on the following factors:

- When only copying data that is not vendor-specific, the address and the blocking indicator are not copied.
- When displaying data that you have already entered for your vendor, the saved data is not overwritten by the reference data.
- When you specify the areas to be transferred from the reference. you define the area that needs to be copied from the reference. For example, if you do not specify a purchasing organization, the system does not transfer the purchasing data.

The following are the two scenarios occurring during system transfer of data:

- General data created

  This depends on whether you have already created the general data, which includes name, address, and phone number. Only the company code data is transferred when you specify the reference company code. When you create the data for the purchasing organization, the system transfers only this corresponding data from the reference.

- General data not created

  Only the language and country from the reference address data is transferred.

Entry Aids for Material Master Record

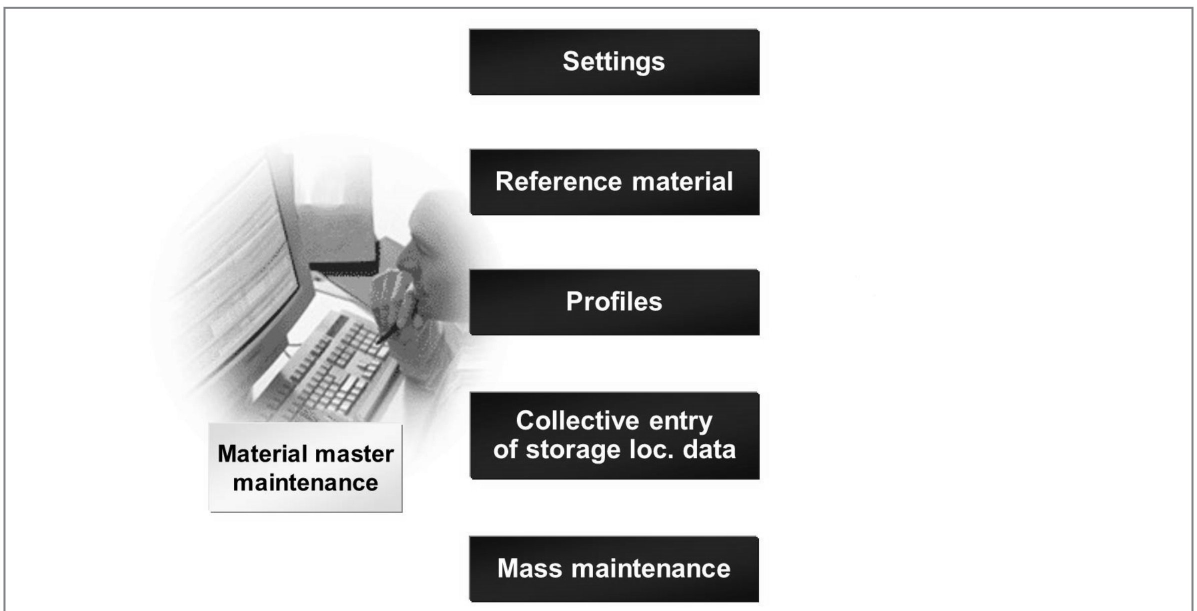


Figure 44: Entry Aids in Material Master Maintenance

The entry aids that facilitate material master maintenance are as follows:

- Settings
- Reference material
- Profiles
- Collective entry of storage location data
- Mass maintenance

Entry Aids in Material Master Maintenance – Settings, Reference Material, and Profiles

Settings

Use presettings to avoid entering or selecting the same data more than once. You can preset the screen views that you frequently manage in the *Select Views* dialog box. You can preset the dialog box to display only if you specifically request it. Similar presettings are possible for the *Organizational Levels* dialog box.

In *Create Material* (transaction `MM01`), choose *Defaults* → *Industry* Sector to specify the industry sector and then hide this field.

> Note:
> The default values specified in this section are user-specific and can be overwritten or reset at any time.

Reference Material

When you create a material master record, you can also copy the data from an existing master record. On the initial screen, enter the number of the reference material in the corresponding field. Then, a dialog box allows you to specify the organizational levels of the reference material in the additional fields.

To copy the purchasing data for a material, determine the following:

- That you only want to copy the purchasing data valid for a single client reference. In this case, do not enter a plant for the reference.
- That the plant-specific data also needs to be copied from the reference. In this case, you specify the plant for which the reference material has been created.

Profiles

To automatically plan or forecast a material, you must first create data for it in the material master record. To simplify entry of this data, you can use MRP and forecast profiles. Profiles are used to store MRP or forecast parameters independently of the material master record. A profile is a collection of information for the default values of a material master record. The information stored in a profile is standard information required for maintaining different materials repeatedly in the same or a similar group.

If you create MRP or forecast data for a material, you can enter the profiles in the *Organizational Levels* dialog box.

Entry Aids in Material Master Maintenance – Collective Entry of Storage Location Data and Mass Maintenance

Collective Entry of Storage Location Data

Material can be physically stored in various storage locations. To save storage location-specific data for a material master record, you must create or extend the material master record for each storage location that is affected.

If the material master record already exists, the storage location-specific data can be added manually or automatically as follows:

- Manually

  Manually enter the storage locations for a material master record using collective entry. This is much faster than entering the data individually for each storage location. In the Material Master menu, the function is under *Other → Enter Storage Locations* (transaction `MMSC`).

- Automatically

  The system automatically adds the storage location data to the material master record with the first goods receipt posting. All data that refers to the storage location affected is updated in the material master record. The system must be configured accordingly in Customizing for *Inventory Management and Physical Inventory* under *Create Storage Location Automatically*.

Mass Maintenance

You can use a special mass change function to change several material master records at once, for example, if existing data needs to be changed due to new circumstances. Only experienced users must execute this function.

Unit 2
Exercise 8

Maintain Material Master Data Using Entry Aids

Business Example

You are responsible for creating and maintaining material master records in your company. As a part of your job, you need to add data for another plant to the material master record for the headlights.

As a reference, use the data of the material that you have already entered for plant 1000.

Maintain material master data using entry aids.

The headlight is now also used in plant 1200. Extend the material master record with the data for this plant.

1. Copy material master record.

   Create the material master record T-M500Y## for plant 1200 and storage location 0001. As a reference, use the data from the material master record that has already been created for plant 1000 and storage location 0001. Use the same group number (##) when you create the copy of the material master record.

   Create the views Purchasing, Accounting 1, and General Plant Data/Storage 1.

   > Hint:
   > When working with reference materials, it is a good idea to select the *Create views selected* checkbox in the *Select Views* dialog box. If you select this checkbox, you can save your data immediately from the view copied first. Then you do not have to choose *Enter* to confirm each of the selected views.

   > Caution:
   > Remember to enter the organization levels (plant 1000, storage location 0001) as a reference.

   Save your entries and then make sure that all data is adopted correctly.

2. Change material master record.

   Change the purchasing and accounting data for material T-M500Y## for plant 1200. The data changes should update immediately.

   In plant 1200, the system should always propose that the material is posted to quality inspection stock when it is received. The material is also assigned to the valuation class 3001 in this plant, and is valuated with the standard price of EUR 80.

   Save your entries after the change.

3. Display change documents for a material.

   Find out when the accounting data for material T-M500Y## in plant 1200 was last changed.

   Date: ______________________________

4. Enter material data for several storage locations.

   You store material T-M500Y## in plant 1200 in several storage locations. Enter the data for these additional storage locations using collective entry for storage locations.

SLoc	Bin
0002:	**BL-02**
0003:	**AB-10**

5. Materials List.

   Check whether your material has been created for plants 1000 and 1200. Display the material list for material T-M500Y## and plants 1000 and 1200.

   It is particularly important to check if the valuation data is consistent with the information from the previous exercises.

> Hint:
> Try to limit the information you specify in the materials list as much as possible, so that the system does not have to search too many data records.

Maintain Material Master Data Using Entry Aids

Business Example

You are responsible for creating and maintaining material master records in your company. As a part of your job, you need to add data for another plant to the material master record for the headlights.

As a reference, use the data of the material that you have already entered for plant 1000.

Maintain material master data using entry aids.

The headlight is now also used in plant 1200. Extend the material master record with the data for this plant.

1. Copy material master record.

   Create the material master record T-M500Y## for plant 1200 and storage location 0001. As a reference, use the data from the material master record that has already been created for plant 1000 and storage location 0001. Use the same group number (##) when you create the copy of the material master record.

   Create the views Purchasing, Accounting 1, and General Plant Data/Storage 1.

   > Hint:
   > When working with reference materials, it is a good idea to select the *Create views selected* checkbox in the *Select Views* dialog box. If you select this checkbox, you can save your data immediately from the view copied first. Then you do not have to choose *Enter* to confirm each of the selected views.

   > Caution:
   > Remember to enter the organization levels (plant 1000, storage location 0001) as a reference.

   Save your entries and then make sure that all data is adopted correctly.

   a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Create (General)* → *Immediately* (`MM01`).

   b) On the *Create Material (Initial Screen)*, enter **`T-M500Y##`** value in the *Material* field and Copy from material field.

      Choose *Continue*. If necessary, confirm the message that the material type and industry sector will be copied from the material master record.

c) Select the following views:

- *Purchasing*
- *General Plant Data / Storage 1*
- *Accounting 1*

> Caution:
> Select the *Create views selected* checkbox.

Choose *Continue*.

d) Enter the following data in the *Organizational Levels* dialog box:

> Caution:
> Do not forget the entries for the reference.

Field	Value	Copy from
Plant	**1200**	**1000**
Stor. Location	**0001**	**0001**

e) Choose *Continue*.

f) Save your entries.

2. Change material master record.

Change the purchasing and accounting data for material T-M500Y## for plant 1200. The data changes should update immediately.

In plant 1200, the system should always propose that the material is posted to quality inspection stock when it is received. The material is also assigned to the valuation class 3001 in this plant, and is valuated with the standard price of EUR 80.

Save your entries after the change.

a) Choose *Logistics → Materials Management → Material Master → Material → Change → Immediately* (`MM02`).

b) Enter **`T-M500Y##`** in the *Material* field on the initial screen and choose (*Continue*).

c) Select the following views:

- *Purchasing*
- *Accounting 1*

Choose (*Continue*).

d) Enter **1200** in the *Plant* field in the *Organizational Levels* dialog box.

Choose *Continue*.

e) Select the *Post to insp. stock* checkbox on the *Purchasing* tab page.

f) Choose Enter.

g) Enter the following data on the *Accounting 1* tab page:

Field	Value
Valuation Class	**3001 (Raw materials 2)**
Price control	**S**
Moving price	<delete>
Standard price	**80**

h) Choose Enter and save your entries.

3. Display change documents for a material.

Find out when the accounting data for material T-M500Y## in plant 1200 was last changed.

Date: ______________________________

a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display Changes* → *Active Changes* (`MM04`).

b) Enter the following data on the initial screen:

Field	Value
Material	**T-M500Y##**
Plant	**1200**

c) Choose (*Execute*).

d) To display details of a change, place the cursor on the required line and click (*Choose*). Display the details of the change that was made with transaction `MM02`.

4. Enter material data for several storage locations.

You store material T-M500Y## in plant 1200 in several storage locations. Enter the data for these additional storage locations using collective entry for storage locations.

SLoc	Bin
0002:	**BL-02**
0003:	**AB-10**

a) Choose *Logistics* → *Materials Management* → *Material Master* → *Other* → *Enter Storage Locations* (`MMSC`).

b) Enter the following data on the initial screen:

Field	Value
Material	**T-M500Y##**
Plant	**1200**

c) Choose Enter.

d) Enter the following data and save your entries:

SLoc	Bin
0002:	**BL-02**
0003:	**AB-10**

5. Materials List.

   Check whether your material has been created for plants 1000 and 1200. Display the material list for material T-M500Y## and plants 1000 and 1200.

   It is particularly important to check if the valuation data is consistent with the information from the previous exercises.

> Hint:
> Try to limit the information you specify in the materials list as much as possible, so that the system does not have to search too many data records.

a) Choose *Logistics* → *Materials Management* → *Material Master* → *Other* → *Materials List* (`MM60`).

b) Enter the following data on the initial screen:

Field	Value
Material	**T-M500Y##**
Plant	**1000** *to* **1200**

c) Choose (*Execute*).

Material *T-M500Y##* is created in plants 1000 and 1200. In plant 1000, the material is valuated with a moving average price of EUR 80. In plant 1200, however, the material is valuated with a standard price of EUR 80.

LESSON SUMMARY

You should now be able to:

- Create vendor master data with reference
- Maintain material master data using entry aids

Unit 2
Lesson 4

Performing Mass Maintenance

LESSON OVERVIEW

This lesson shows you how to use the cross-application mass maintenance tool to change many objects simultaneously. These objects include material and vendor master data, info records, and purchasing documents. This lesson looks at the overview of the mass maintenance functions and explains it using a simple example of the process.

Business Example

The restructuring of your purchasing department changes the requirements of the individual buyers. To correctly document these new requirements for the procurement of materials, the purchasing group in the purchasing data must be changed in many material master records. To carry out this change using the mass maintenance tool, you require the following knowledge:

- An understanding of the objects that can be processed using the mass maintenance function
- An understanding of the flow of mass maintenance

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Execute mass maintenance

Overview of Mass Maintenance

Figure 45: Mass Maintenance for Data Objects

Mass maintenance is a generic cross-application tool that is used to change large quantities of data or to create a new data.

> Caution:
> With mass maintenance, you can change many objects simultaneously. This tool should only be used by persons having knowledge of tables and field names in the SAP system and their interdependencies.

This tool can be used by the applications listed in the figure Mass Maintenance for Data Objects.

The capabilities of the mass maintenance tool for data objects are as follows:

- You can change the data in the material master records quickly and easily in one simple step. For example, you have the option of changing the purchasing group or adjusting the Goods receipt (GR) processing time in several materials all at once.
- You can perform mass maintenance online or in the background. If you want to change many objects at the same time, choose background mode to avoid overloading the system. Upon completion, the system issues a log showing the executed changes and any errors that occurred.
- The system performs a consistency check for the changed data. The system does not make any changes that would lead to data inconsistencies. It flags these entries in the log.

Mass Maintenance Process Flow

You can find the mass maintenance tool under *Logistics → Central Functions*.

The following are the tips that are provided to help you use the mass maintenance tool:

- Use the object type to decide which application you want to use.
- Access mass maintenance from the menu of an application, so that the correct object type appears automatically. The menu path is *Logistics → Materials Management → Material Master → Material → Mass Maintenance*.

Mass Maintenance Execution Object type

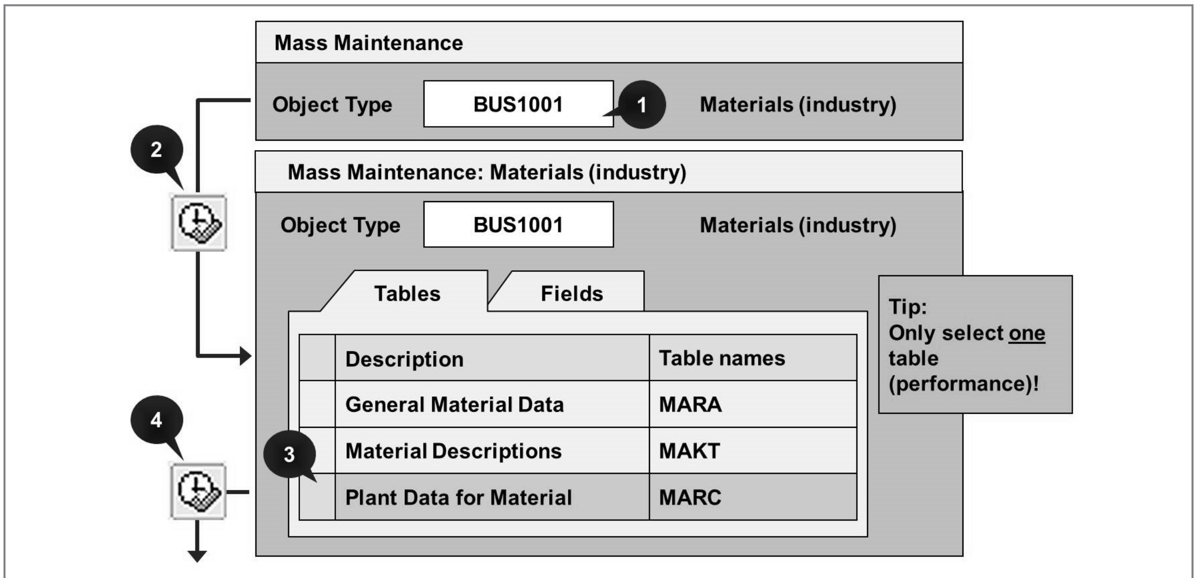


Figure 46: Perform Mass Maintenance (Step 1)

The steps to execute mass maintenance (1) are as follows:

1. Select the *Object Type* field. The system displays the relevant tables and fields.
2. Choose (*Execute*).
3. Select the tables in which you want to change data. Select several tables if you want to make the changes in all the tables at the same time for data consistency. Otherwise, edit the tables one at a time to avoid poor system performance.
4. Choose (*Execute*).

Mass Maintenance Execution - Data Records

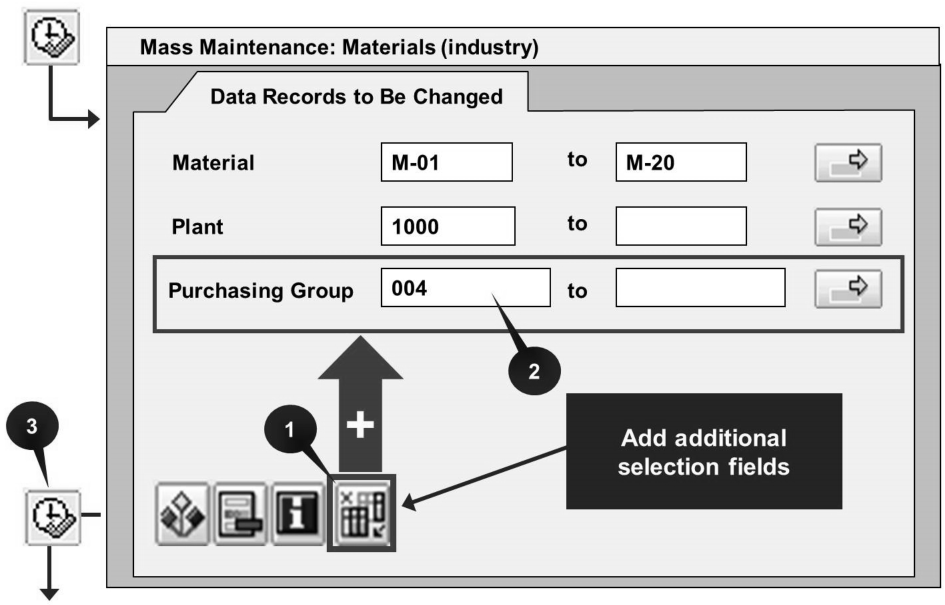


Figure 47: Perform Mass Maintenance (Step 2)

The steps to execute mass maintenance (2) are as follows:

1. Choose (*Select fields*) to select further fields.
2. Enter the data records to be changed in the *Purchasing Group* field.
3. Choose (*Execute)* to start the selection of data records.

> Note:
> To limit the number of objects to change, enter the required selection criteria. Depending on the number of selected data records, the system asks if you want to execute the changes online or in the background.

Mass Maintenance Execution – Plant Data

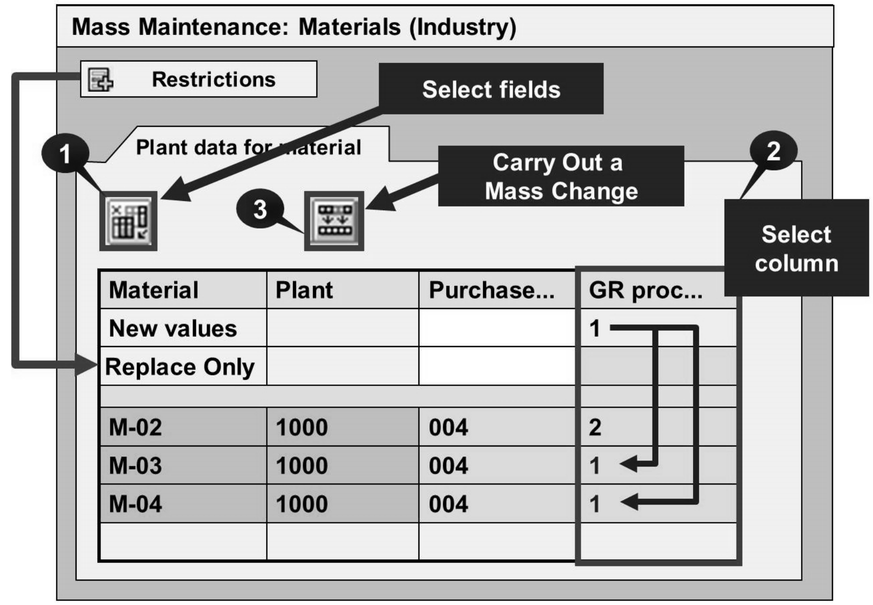


Figure 48: Perform Mass Maintenance (Step 3)

The steps to execute mass maintenance (3) are as follows:

1. Choose (*Select fields*) to select the fields you want to change and enter the new values in the corresponding columns.
2. Select the column header and the data records to be changed.
3. Choose the *Carry Out a Mass Change* pushbutton to execute a mass change.

> Note:
> You also have the option of changing a field entry only when it has a particular value. To do this, choose the *Restrictions* pushbutton and enter the new value in the first line and the value to be replaced in the second line.

4. Save your entries. The system performs a consistency check.

LESSON SUMMARY

You should now be able to:

- Execute mass maintenance

Learning Assessment

1. For which organizational levels do you enter data in the vendor master record?

   Choose the correct answers.

   - [ ] A Client
   - [ ] B Company code
   - [ ] C Purchasing organization
   - [ ] D Plant/sub-range
   - [ ] E One-time vendor

2. When you create a master record for a vendor, you must enter all relevant data for purchasing and accounting in one single step.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

3. When creating a vendor master record, you have to specify an account group.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

4. Which of the following are required for storing data in a material master?

   Choose the correct answers.

   - [ ] A Purchasing data for ordering purposes
   - [ ] B Inventory management data for posting goods movements
   - [ ] C Accounting data for material valuation
   - [ ] D Materials planning data for material requirements planning
   - [ ] E Purchasing requisition data

5. You wish to create a master record for a material you intend to procure externally for warehouse stock. Which views must you create (as a minimum) to be able to map this procurement process in the system?

   Choose the correct answers.

   - [ ] A Purchasing
   - [ ] B Accounting
   - [ ] C General plant / storage
   - [ ] D MRP

6. When creating a material master record, you have to specify a material type. Among other things, the material type controls:

   Choose the correct answers.

   - [ ] A The type of number assignment
   - [ ] B The permissible length of the material short text
   - [ ] C Whether a material may be ordered internally or externally
   - [ ] D Which views (user-department-specific data) can be maintained
   - [ ] E Whether a material may not be procured from certain vendors

7. All data that is valid within a plant and all storage locations belonging to it are stored at client level.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

8. Which organizational levels play a role in the maintenance of material master records?

   Choose the correct answers.

   - [ ] A Client
   - [ ] B Sales area
   - [ ] C Plant
   - [ ] D Storage location

9. Which of the following are three different entry aids that you can use for processing material master records?

   Choose the correct answers.

   - [ ] A Presettings for industry sector, views and organizational levels
   - [ ] B Collective entry of storage location data
   - [ ] C Use of reference material
   - [ ] D Use of user profiles

10. When creating a vendor master record with reference, you can decide whether or not the address data is to be copied from the reference.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

11. A profile is a key you can use to store MRP or forecast parameters independently of the material master record.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

12. Which of the following objects can be processed using the mass maintenance function?

    Choose the correct answers.

    - [ ] A Material master data
    - [ ] B Vendor master data
    - [ ] C Info records
    - [ ] D Purchasing documents
    - [ ] E Statement of work document

13. The cross-application mass maintenance tool can be used to change many objects simultaneously.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

14. You can perform mass maintenance online and in the background simultaneously.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

15. The users of the mass maintenance tool should have knowledge of the respective tables and field names and possible dependencies.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

Unit 2

Learning Assessment - Answers

1. For which organizational levels do you enter data in the vendor master record?

   Choose the correct answers.

   [X] A Client

   [X] B Company code

   [X] C Purchasing organization

   [ ] D Plant/sub-range

   [ ] E One-time vendor

2. When you create a master record for a vendor, you must enter all relevant data for purchasing and accounting in one single step.

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   That is correct. You can create vendors centrally (one step) or de-centrally (multiple steps) where each department enters their relevant data elements.

3. When creating a vendor master record, you have to specify an account group.

   Determine whether this statement is true or false.

   [X] True

   [ ] False

   That is correct. Account group determines the numbering system and field requirements for the vendor and as such is a required selection.

4. Which of the following are required for storing data in a material master?

   Choose the correct answers.

   - [x] A Purchasing data for ordering purposes
   - [x] B Inventory management data for posting goods movements
   - [x] C Accounting data for material valuation
   - [x] D Materials planning data for material requirements planning
   - [ ] E Purchasing requisition data

5. You wish to create a master record for a material you intend to procure externally for warehouse stock. Which views must you create (as a minimum) to be able to map this procurement process in the system?

   Choose the correct answers.

   - [x] A Purchasing
   - [x] B Accounting
   - [ ] C General plant / storage
   - [ ] D MRP

6. When creating a material master record, you have to specify a material type. Among other things, the material type controls:

   Choose the correct answers.

   - [x] A The type of number assignment
   - [ ] B The permissible length of the material short text
   - [x] C Whether a material may be ordered internally or externally
   - [x] D Which views (user-department-specific data) can be maintained
   - [ ] E Whether a material may not be procured from certain vendors

7. All data that is valid within a plant and all storage locations belonging to it are stored at client level.

   Determine whether this statement is true or false.

   - [ ] True
   - [x] False

8. Which organizational levels play a role in the maintenance of material master records?

   Choose the correct answers.

   - [x] A Client
   - [ ] B Sales area
   - [x] C Plant
   - [x] D Storage location

9. Which of the following are three different entry aids that you can use for processing material master records?

   Choose the correct answers.

   - [x] A Presettings for industry sector, views and organizational levels
   - [x] B Collective entry of storage location data
   - [x] C Use of reference material
   - [ ] D Use of user profiles

10. When creating a vendor master record with reference, you can decide whether or not the address data is to be copied from the reference.

    Determine whether this statement is true or false.

    - [ ] True
    - [x] False

    That is correct. Vendor-specific data is never copied from the reference into the new vendor master record. Address is part of client level data and is not copied to a new vendor. Only control data like accounting and purchasing can be copied over.

11. A profile is a key you can use to store MRP or forecast parameters independently of the material master record.

    Determine whether this statement is true or false.

    - [x] True
    - [ ] False

12. Which of the following objects can be processed using the mass maintenance function?

    Choose the correct answers.

    - [x] A Material master data
    - [x] B Vendor master data
    - [x] C Info records
    - [x] D Purchasing documents
    - [ ] E Statement of work document

13. The cross-application mass maintenance tool can be used to change many objects simultaneously.

    Determine whether this statement is true or false.

    - [x] True
    - [ ] False

14. You can perform mass maintenance online and in the background simultaneously.

    Determine whether this statement is true or false.

    - [ ] True
    - [x] False

15. The users of the mass maintenance tool should have knowledge of the respective tables and field names and possible dependencies.

    Determine whether this statement is true or false.

    - [X] True
    - [ ] False

UNIT 3 Stock Material Procurement

UNIT OBJECTIVES

- Apply conditions in purchase orders
- Create requests for quotations
- Enter incoming quotations
- Create purchase orders with reference
- Maintain purchasing info records
- Analyze material valuation
- Analyze the stock overview report
- Analyze the results of a goods movement
- Identify the postings for a procurement process with delivery costs
- Analyze the results of an invoice entry

Unit 3
Lesson 1

Applying Conditions in Purchasing

LESSON OVERVIEW

This lesson provides an introduction to the condition technique in purchasing.

Business Example

The prices negotiated with your vendors often consist of several components, such as material price, discounts, surcharges, and freight costs. As a member of the project team, determine whether the SAP system can process various conditions. For this reason, you require the following knowledge:

- An understanding of the documents and master data in which conditions are used
- An understanding of the difference between time-dependent and time-independent conditions

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Apply conditions in purchase orders

Purchasing Conditions

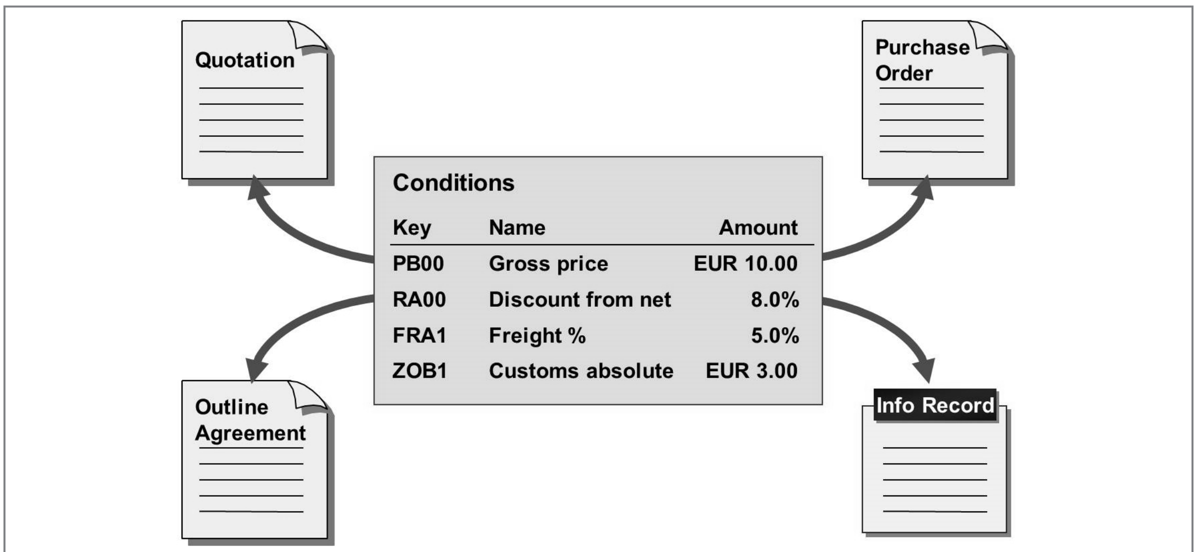


Figure 49: Conditions

Conditions are agreements with vendors regarding prices, surcharges, and discounts. Conditions determine net and effective prices in a purchasing document. Conditions are maintained while entering quotations, info records, outline agreements (contracts and scheduling agreements), and purchase orders. General conditions are stored at different levels, for example, at vendor level. These levels are used by the system for price determination.

The following types of conditions are used in purchasing:

- Conditions in a contract apply to all contract release orders created with reference to the contract.
- Conditions in a purchasing info record apply to all purchase order items that contain the material and vendor in the purchasing info record.
- With general conditions, you can also display price agreements that do not only apply to individual quotations, outline agreements, purchase orders, or info records, for example, if a vendor has a price reduction on all purchase orders as a two month special offer. You can enter general conditions in *Purchasing → Master Data → Conditions*.

Time Dependency of Conditions

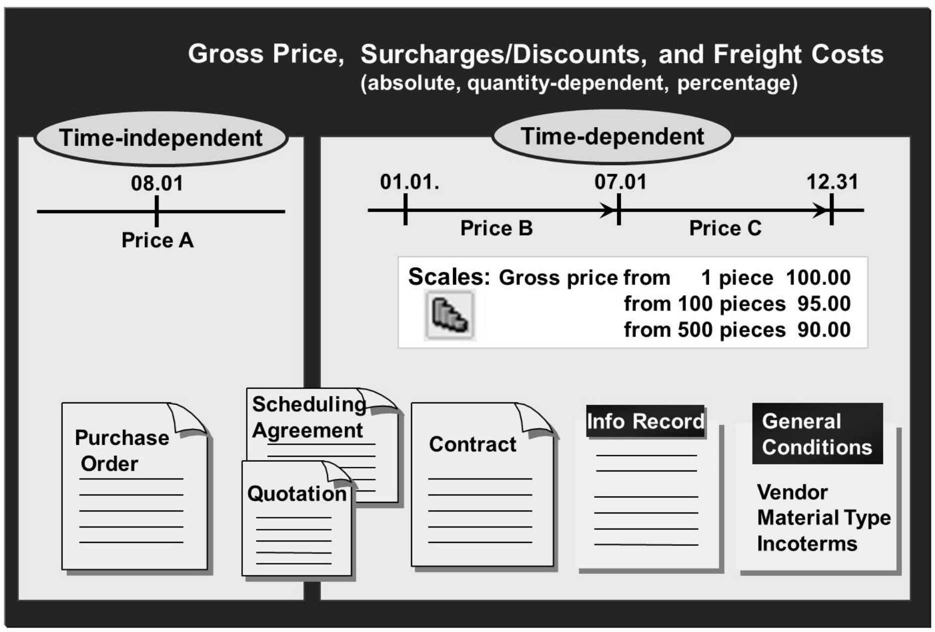


Figure 50: Conditions – Time Dependency

Conditions can be time-dependent or time-independent.

Time-dependent conditions are only valid during a specific time period, and include conditions in info records, contracts, and general conditions.

Conditions in purchase orders are time-independent. Validity in these conditions corresponds to that of the relevant purchasing document. (You cannot determine a validity period.)

You can use the document type to control whether time-dependent conditions are available for quotations and scheduling agreements using the *Time-dependent conditions* checkbox in Customizing.

You can define both time-dependent and time-independent conditions at header and item level. Header conditions apply to all items in the document. However, item conditions apply only to the respective item.

For time-dependent conditions, for example, you can create price scales and map the dependency of the price to the quantity.

> Hint:
> If the conditions show an exception in the info record, they are stored at info-record level.

Condition Type and Calculation Schema

Step	Counter	Condition type	Description	From	. . .
1	1	PB00	Gross price		
10	1	RB00	Absolute discount		
...	...	...			...
10	9	ZA01	Surcharge % of gross	1	
...	...	...			...
20	0		Net value including discounts		
...	...	...			...
31	1	FRA1	Freight %	20	
...	...	...			...
35	1	SKTO	Cash discount	20	
40	0		Effective price		

Figure 51: Calculation Schema

Price factors such as gross price, discounts, freight costs, customs, and taxes, are mapped using condition types.

The condition types determine how a price factor is calculated and are categorized as follows:

- Absolute
- Percentage
- Quantity-dependent

The system also uses condition types to define the reference magnitude for scales. The unit of scale value refers to quantity, item value, or weight.

You can assign an access sequence to a condition type. An access sequence is a search strategy that the system uses to define the sequence in which condition records for a condition type are read.

The condition types that play a role in price determination are grouped together in a calculation schema. The calculation schema provides a framework for price determination by defining the sequence in which the condition types are taken into account.

The calculation schema determines the following:

- Subtotals

> Hint:
> For time-dependent conditions, no subtotals (for example, net and effective price subtotals) are formed.

- Extent to which manual processing of price determination is possible
- Basis (reference level) on which the system calculates surcharges and discounts in percentages
- Prerequisites that must be fulfilled so that a particular condition type is taken into consideration

You can define different calculation schemes (for example, for individual purchasing organizations and vendors).

LESSON SUMMARY

You should now be able to:

- Apply conditions in purchase orders

Unit 3
Lesson 2

Handling Requests for Quotations and Quotation Processes

LESSON OVERVIEW

This lesson covers the transactions for entering a request for quotations (RFQs) and quotations. It provides an overview of how to request quotations from a vendor that does not have a specific master record in the system.

Business Example

To determine the most favorable terms and conditions, you request quotations from several vendors before you procure materials for the first time. As an employee in purchasing, you would also like to test request for quotation and quotation processing. For this reason, you require the following knowledge:

- How to create several RFQs for an RFQ activity
- How to enter the incoming quotations for your RFQs
- How to execute a price comparison for your quotations

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create requests for quotations
- Enter incoming quotations

Procurement Process: Requests for Quotations

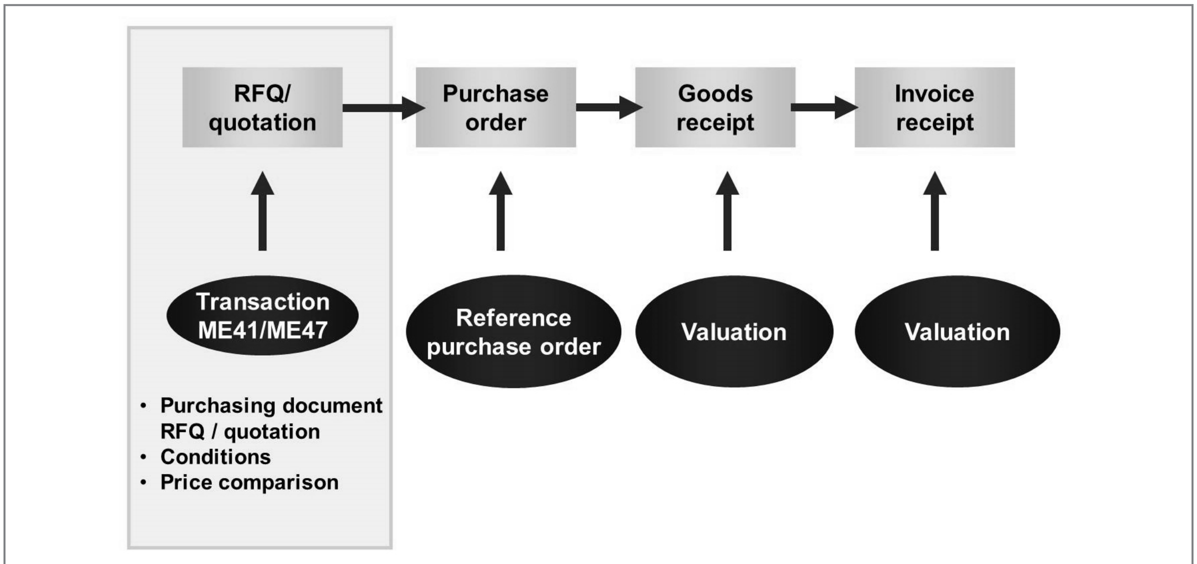


Figure 52: Stock Material Procurement – RFQ and Quotation

The first step of a procurement process consists of two activities, beginning with sending an RFQ to multiple vendors, followed by the comparison of incoming quotations in the system based on conditions of the individual vendor.

> Note:
> During the procurement process, use the data from the quotations already entered. You can create the purchase order with reference to one of the quotations; however, you must also update conditions from the quotation in a purchasing info record.

As a buyer, you have the task of converting requirements for materials or services into purchase orders.

An RFQ activity with various vendors is a means of determining a source of supply.

RFQ and Quotation

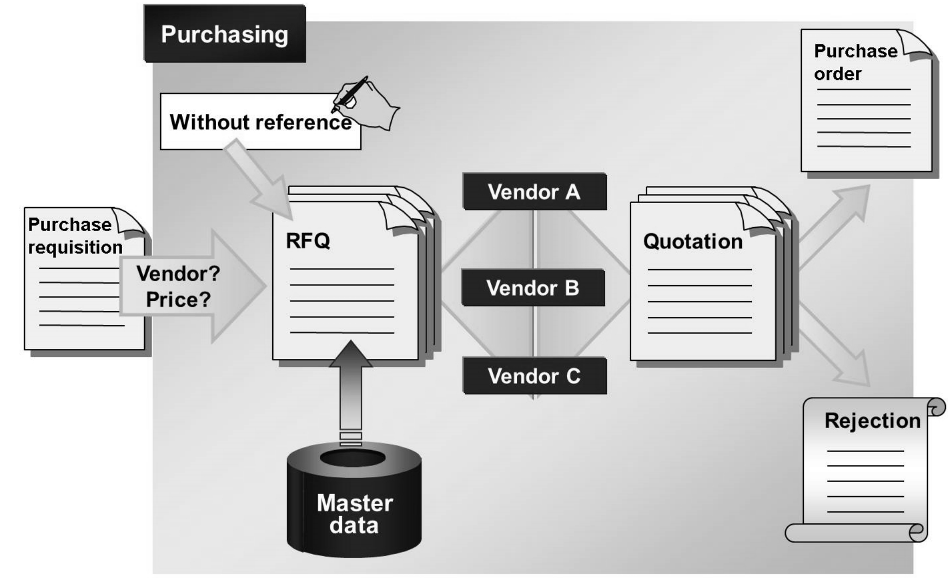


Figure 53: RFQ and Quotation

The steps in the RFQ and quotation process are as follows:

1. Enter an RFQ for the material or service that is to be procured. You can create RFQs manually, copy them from another RFQ, or use a purchase requisition or outline agreement as a reference. The advantage of using other purchasing documents as a reference is that you can adopt data from the reference instead of entering it manually. After creating the RFQs, you send them to the selected vendors.
2. The vendors send their quotations or rejections. The vendors' price and delivery date specifications are entered directly in the original RFQ in a transaction for quotation maintenance. In this way, an RFQ becomes a quotation.
3. Determine the most favorable items or quotation using a quotation comparison. You can also save the conditions for the shortlisted quotations in a purchasing info record.

Collective Number

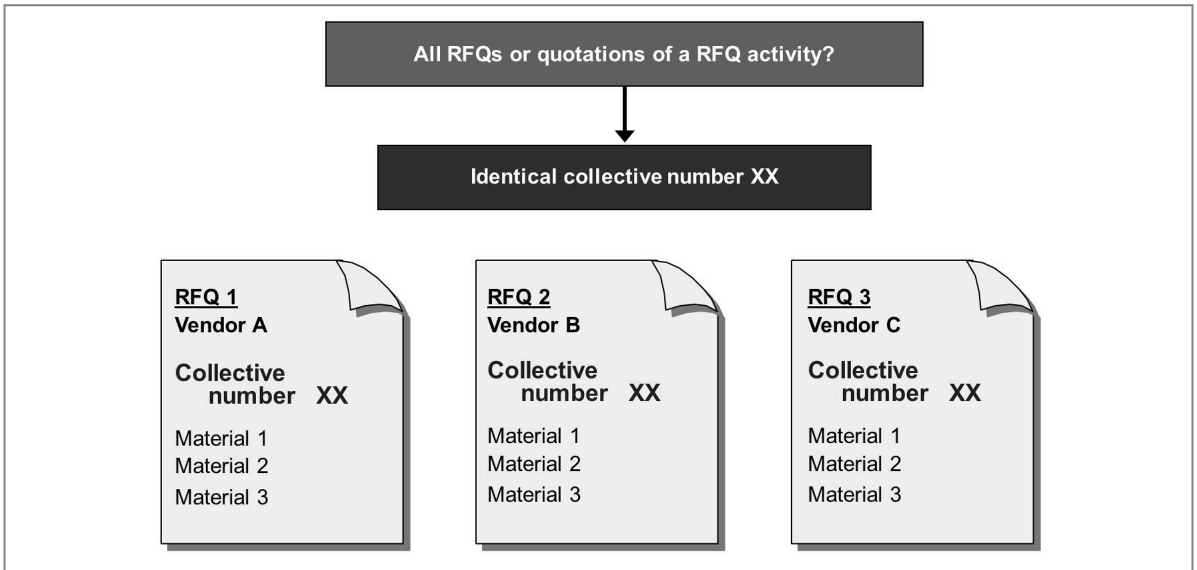


Figure 54: Collective Number

You can link several RFQs that belong to a group using a collective number that you enter in the header data of the RFQ. When analyzing RFQs and quotations, you can use the collective number as a selection criterion.

The collective number can have a maximum of ten characters and can be alphanumeric.

One-Time Vendor

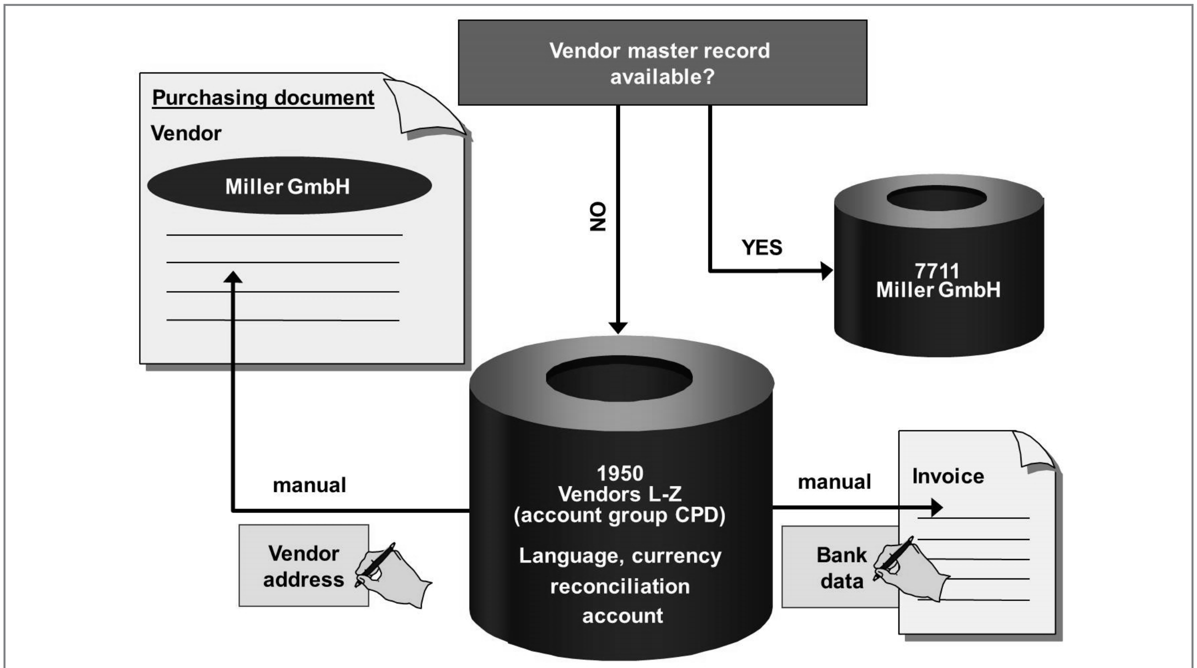


Figure 55: One-Time Vendor

You can create special master records for vendors from whom you request or procure materials infrequently. These are one-time vendor master records.

A one-time vendor master record is used to avoid creation of unnecessary master records. You cannot save vendor-specific data in the master record for one-time vendors. You use a one-time account group when creating a one-time vendor master record. This account group is used to hide the vendor-specific fields in the material master.

When creating a purchasing document with a one-time vendor, you must create the vendor address manually. If you enter an invoice with a one-time vendor as the invoicing party, you have to enter information such as missing bank data manually.

The vendor-specific data that you enter manually is saved only in the relevant documents and not in the one-time vendor master record. However, you can still execute evaluations for one-time vendors using the vendor name as the search term.

Function Process – RFQ Creation

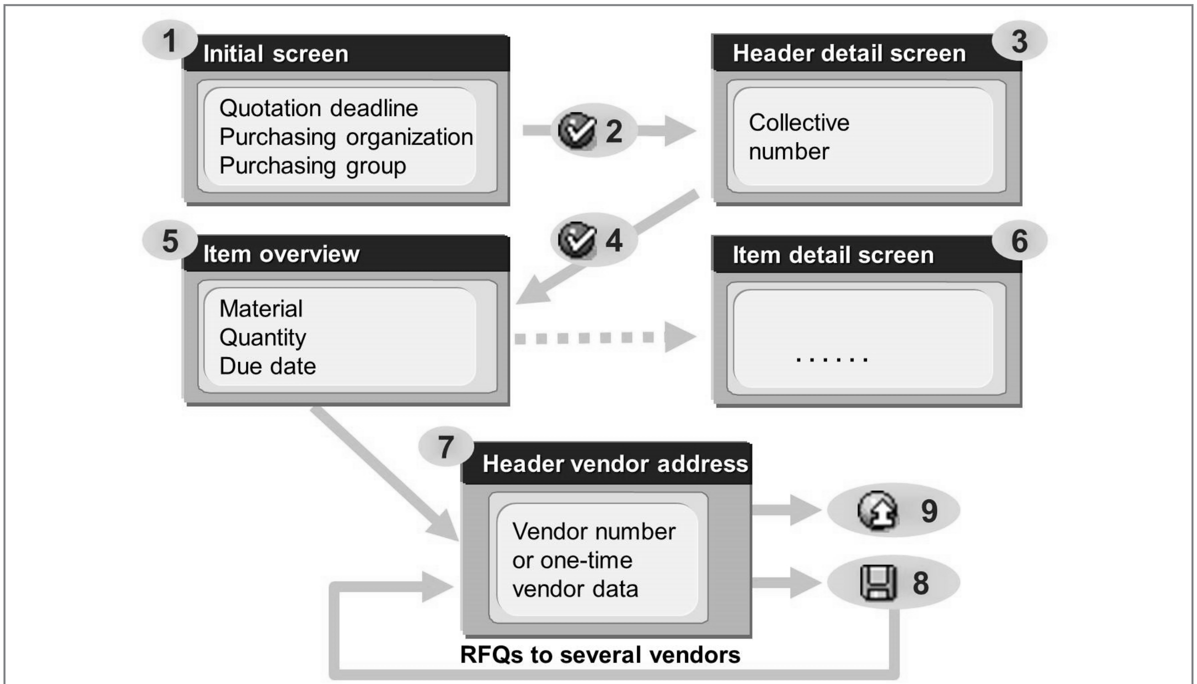


Figure 56: Function Process – Creating RFQs

The figure shows the procedure for creating RFQs and displays the most important steps for creating an RFQ manually.

Unit 3
Exercise 9

Create Requests for Quotations

Business Example

You have added a new material to your product range. Start an RFQ and quotation activity to determine from which vendor you can procure the material at the best price.

Create, display, and print request for quotations (RFQs).

RFQ Processing

To get the best purchase price for the Universal-taillight-##, California (material master record T-M500B##), send RFQs to multiple vendors.

1. Create RFQs

   Create RFQs for a base quantity of 100 pieces of material T-M500B## for three different vendors, and enter the RFQs for the collective number GR##. Do not specify a plant in the RFQ.

   > Hint:
   > If you create a purchase order with reference to a quotation, you can freely select the plant in the purchase order item only if no plant is specified in the RFQ item. If a plant is specified in the RFQ item, you can order for this plant only.
   >
   > You should therefore specify a plant for an RFQ only if you want to procure the material for this plant.

   You would like to transact with a prospective new vendor. To test the vendor's abilities, send an RFQ for the required headlight. Use the one-time vendor master record 1950 because you do not want to create an individual master record for the vendor. For further RFQs, contact vendors T-K500A## and T-K500B##.

   Create three RFQs using the entries above and below:

Field	Value
RFQ Date	<Current date>
Quotation Deadline	<Current date + 2 weeks>
Purch. Organization	**1000**
Purchasing Group	**T##**
Delivery Date	<Current date + 1 month>

Field	Value
Plant	Do not specify a plant

First vendor: 1950 (one-time vendor)

Enter a name and address for the one-time vendor.

RFQ number: ______________________

Second vendor: T-K500A## (Motolux GmbH Group##)

RFQ number: ______________________

Third vendor: T-K500B## (Rasch Group##)

RFQ number: ______________________ ______________________

2. Display and print the RFQ

   Print your three RFQs as messages. Select all messages for the RFQs in purchasing group T##. Before you print the messages, display the RFQ for main vendor T-K500A## as a print preview on your screen.

Unit 3
Solution 9

Create Requests for Quotations

Business Example

You have added a new material to your product range. Start an RFQ and quotation activity to determine from which vendor you can procure the material at the best price.

Create, display, and print request for quotations (RFQs).

RFQ Processing

To get the best purchase price for the Universal-taillight-##, California (material master record T-M500B##), send RFQs to multiple vendors.

1. Create RFQs

   Create RFQs for a base quantity of 100 pieces of material T-M500B## for three different vendors, and enter the RFQs for the collective number GR##. Do not specify a plant in the RFQ.

   > Hint:
   > If you create a purchase order with reference to a quotation, you can freely select the plant in the purchase order item only if no plant is specified in the RFQ item. If a plant is specified in the RFQ item, you can order for this plant only.
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   > You should therefore specify a plant for an RFQ only if you want to procure the material for this plant.

   You would like to transact with a prospective new vendor. To test the vendor's abilities, send an RFQ for the required headlight. Use the one-time vendor master record 1950 because you do not want to create an individual master record for the vendor. For further RFQs, contact vendors T-K500A## and T-K500B##.

   Create three RFQs using the entries above and below:

Field	Value
RFQ Date	<Current date>
Quotation Deadline	<Current date + 2 weeks>
Purch. Organization	**1000**
Purchasing Group	**T##**
Delivery Date	<Current date + 1 month>

Field	Value
Plant	Do not specify a plant

First vendor: 1950 (one-time vendor)

Enter a name and address for the one-time vendor.

RFQ number: ______________________

Second vendor: T-K500A## (Motolux GmbH Group##)

RFQ number: ______________________

Third vendor: T-K500B## (Rasch Group##)

RFQ number: ______________________ ______________________

a) Choose *Logistics* → *Materials Management* → *Purchasing* → *RFQ/Quotation* → *Request for Quotation* → *Create* (`ME41`).

b) Enter the following data on the *Initial* screen:

Field	Value
RFQ Date	<Current date>
Quotation Deadline	<Current date + 2 weeks>
Purch. Organization	**1000**
Purchasing Group	**T##**
Delivery Date	<Current date + 1 month>
Plant	<No entry>

c) Choose *Enter*.

d) On the *Header Data* screen, enter **GR##** in the *Coll.No.* field and choose *Enter*.

e) Enter the following data on the *Item Overview* screen:

Field	Value
Material	**T-M500B##**
RFQ Quantity	**100**

f) Choose *Header* → *Vendor Address*. Enter **1950** in the *Vendor* field and provide an address.

Note:
A dialog box may appear asking you to choose the RFQ Language. If this appears, choose the preferred language.

g) Save your entries and note the RFQ number.

h) Repeat steps f) and g) for vendors T-K500A## and T-K500B##. For these vendors, the system copies the address from the master record. Choose *Enter* each time you enter the vendor.

i) Exit the transaction.

2. Display and print the RFQ

Print your three RFQs as messages. Select all messages for the RFQs in purchasing group T##. Before you print the messages, display the RFQ for main vendor T-K500A## as a print preview on your screen.

a) Choose *Logistics → Materials Management → Purchasing → RFQ/Quotation → Request for Quotation → Messages → Print/Transmit* (`ME9A`).

b) Enter the following selection values:

Field	Value
Document Number	<delete>
Purchasing Organization	**`1000`**
Purchasing Group	**`T##`**

c) Choose *Execute* pushbutton.

d) Select the entry in the list for vendor T-K500A## and choose *Display Message*.

e) In the print preview, go back.

f) Choose *Select all* and then choose *Output Message*.

Quotation Entry and Price Comparison List

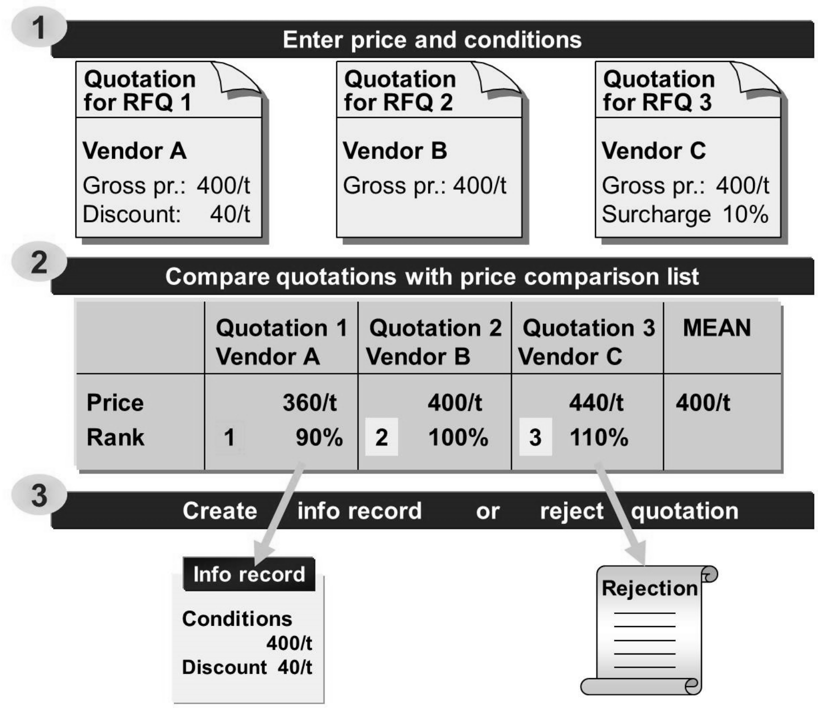

Figure 57: Quotation Processing

A quotation contains prices and conditions of a vendor for the materials or services specified in the RFQ. The RFQ and quotation are the same document in the system.

Use transaction *ME47 Maintain Quotation* to enter the quotation data in an RFQ.

Use the quotation price comparison list to enter and compare the information from multiple quotations at the same time. The price comparison list displays the best quotation for each material. The system also determines the best overall quotation.

You can save quotation data for a material in a purchasing info record. The info record can be created automatically by setting the *Info update* checkbox during quotation maintenance on the *Item Details* screen.

You can also set a rejection checkbox for quotation items. When the rejection checkbox is selected for a quotation item, the system generates a rejection letter for the vendors.

Enter Incoming Quotations

Business Example

You have received the quotations in response to your RFQs. Maintain the quotations in the system according to your requirements.

Quotation Processing

1. Entering quotations

   The vendors provided the following information about prices and delivery times for the Universal-Taillight-##, California. Enter the data in the RFQ and quotation document for the particular vendors.

   One-time vendor:

Pricing element	Value
Gross Price (PBXX)	EUR 79/ PC
Discount % on gross (RA01)	3 %
Freight value (FRB1)	EUR 100

   The delivery date is six weeks from the current date.

   Vendor T-K500A## (Motolux GmbH Group##):

Pricing element	Value
Gross Price (PBXX)	EUR 88/ PC
Discount % on gross (RA01)	15 %

   The delivery date is four weeks from the current date.

   Vendor T-K500B## (Rasch Group##):

Pricing element	Value
Gross Price (PBXX)	EUR 82/ PC
Discount % on gross (RA01)	10 %

   The delivery date is four weeks from the current date.

2. Compare prices.

To determine the most favorable supplier, execute a price comparison for the three quotations entered.

Select the quotations to be compared with the collective number GR## and purchasing organization 1000. Display the mean value quotation in the price comparison list and include the discount in the price calculation.

Determine the most reasonable quotation.

Name of the vendor with the most reasonable quotation: ______________________

Price of most reasonable quotation (less discount):______________________

3. Display the price comparison list in the Advanced List Viewer (ALV) grid control.

   To specify that the system must consider the delivery date and the payment terms when comparing the three quotations, go directly from the price comparison list to the individual quotation. You can also change how the price comparison list is displayed in the ALV grid control to ensure that the list displays the delivery date and the payment terms.

   To do this, set the user parameter *ME_USE_GRID* value to **x**, call the price comparison list for your quotations, and select layout */SCM500*. Then, undo the setting for the user parameter.

4. Print rejection letters.

   After you have checked the quotations again, select the most reasonable quotation. For the two quotations that you do not require, select the rejection checkbox.

   Send the two rejection letters. Select message type ABSA and purchasing group T##. Before printing the letter for vendor T-K500A##, ensure that it is marked as a rejection letter.

Unit 3
Solution 10

Enter Incoming Quotations

Business Example

You have received the quotations in response to your RFQs. Maintain the quotations in the system according to your requirements.

Quotation Processing

1. Entering quotations

   The vendors provided the following information about prices and delivery times for the Universal-Taillight-##, California. Enter the data in the RFQ and quotation document for the particular vendors.

   One-time vendor:

Pricing element	Value
Gross Price (PBXX)	EUR 79/ PC
Discount % on gross (RA01)	3 %
Freight value (FRB1)	EUR 100

   The delivery date is six weeks from the current date.

   Vendor T-K500A## (Motolux GmbH Group##):

Pricing element	Value
Gross Price (PBXX)	EUR 88/ PC
Discount % on gross (RA01)	15 %

   The delivery date is four weeks from the current date.

   Vendor T-K500B## (Rasch Group##):

Pricing element	Value
Gross Price (PBXX)	EUR 82/ PC
Discount % on gross (RA01)	10 %

   The delivery date is four weeks from the current date.

a) Choose *Logistics* → *Materials Management* → *Purchasing* → *RFQ/ Quotation* → *Quotation* → *Maintain* (`ME47`).

b) On the *Initial* screen, enter the *RFQ* number for the one-time vendor from the previous exercise (for vendor master record 1950) and choose *Enter*.

c) Change the *Deliv.Date* to <Current date + 6 weeks>.

d) Select the item and choose *Item Conditions*.

> Hint:
> If necessary, choose Enter to confirm the message for the statistically relevant delivery date. The statistically relevant delivery date is relevant for the vendor evaluation.

e) Enter the conditions specified above for the one-time vendor.

To add a condition, choose the input help in the CnTy column.

f) Go back to the *Item Overview* screen and save your entries.

g) Repeat steps b to f for the quotations of vendors T-K500A## and T-K500B##.

2. Compare prices.

To determine the most favorable supplier, execute a price comparison for the three quotations entered.

Select the quotations to be compared with the collective number GR## and purchasing organization 1000. Display the mean value quotation in the price comparison list and include the discount in the price calculation.

Determine the most reasonable quotation.

Name of the vendor with the most reasonable quotation: ______________________

Price of most reasonable quotation (less discount):______________________

a) Choose *Logistics* → *Materials Management* → *Purchasing* → *RFQ/ Quotation* → *Quotation* → *Price Comparison* (`ME49`).

b) Enter the following data on the selection screen:

Field	Value
Purchasing Organization	**1000**
Collective RFQ	**GR##**
Mean Value Quotation	Checked
Include Discounts	Checked

c) Choose *Execute*.

d) On the *Price Comparison List* screen, you can see that the vendor T-K500B## has the most reasonable quotation (less discount) with a price of EUR 71.59 per piece.

3. Display the price comparison list in the Advanced List Viewer (ALV) grid control.

   To specify that the system must consider the delivery date and the payment terms when comparing the three quotations, go directly from the price comparison list to the individual quotation. You can also change how the price comparison list is displayed in the ALV grid control to ensure that the list displays the delivery date and the payment terms.

   To do this, set the user parameter *ME_USE_GRID* value to **X**, call the price comparison list for your quotations, and select layout */SCM500*. Then, undo the setting for the user parameter.

   a) Choose *System* → *User Profile* → *Own Data*.

   b) Select the *Parameters* tab page and enter the value **X** (in uppercase) for parameter *ME_USE_GRID*.

   c) Save your entries.

   d) Choose *Logistics* → *Materials Management* → *Purchasing* → *RFQ/ Quotation* → *Quotation* → *Price Comparison* (`ME49`).

   e) Enter the following data on the selection screen:

Field	Value
Purchasing Organization	**1000**
Collective RFQ	**GR##**
Mean Value Quotation	Select
Include Discounts	Select

   f) Choose *Execute*. The price comparison list is displayed in the ALV grid control.

   g) Choose *Settings* → *Layout* → *Choose* and select layout*/SCM500*.

   The delivery date and payment terms are now displayed in the list.

   h) To undo the user parameter setting, proceed as described for steps a to c. Note that this action takes you back to the *SAP Easy Access* screen and should not be done before completing Step 4.

> Hint:
> Do not exit the price comparison list, because you can use it to process the following task.

4. Print rejection letters.

   After you have checked the quotations again, select the most reasonable quotation. For the two quotations that you do not require, select the rejection checkbox.

   Send the two rejection letters. Select message type ABSA and purchasing group T##. Before printing the letter for vendor T-K500A##, ensure that it is marked as a rejection letter.

a) On the *Price Comparison List* screen, go to the quotations to be rejected. Position the cursor on the quotation number.

b) Options for changing the quotation include the following:

- Choose *Quotation*.
- Choose *Edit → Maintain Quotation*.
- Double-click the number of the quotation item.

The system goes to the quotation, and you can select the rejection indicator checkbox in the quotation item.

c) On the *Item Detail* screen, select the *Rej.Ind.* checkbox and save your entries.

d) Repeat steps a to c to reject the second quotation.

e) Choose *Logistics → Materials Management → Purchasing → RFQ/Quotation → Request for Quotation → Messages → Print/Transmit* (`ME9A`).

f) Enter the following selection values:

Field	Value
Document Number	<delete>
Purchasing Organization	**1000**
Purchasing Group	**T##**
Message Type	ABSA

g) Choose *Execute*.

h) Select the entry in the list for vendor T-K500A## and choose *Display Message*. The message is marked as Rejection letter relating to RFQ.

i) In the print preview, go back. Choose *Select all*, and then *Output Message*.

LESSON SUMMARY

You should now be able to:

- Create requests for quotations
- Enter incoming quotations

Unit 3
Lesson 3

Creating Purchase Orders with Reference

LESSON OVERVIEW

This lesson describes how to create a purchase order with reference to another document.

Business Example

In your company, you often enter a purchase order with data copied from another document, such as a request for quotations (RFQ) or previous purchase order. As a buyer, you test the possibility of using the document overview of the purchase order transaction to simplify this process. For this reason, you require the following knowledge:

- How to use the document overview in transaction `ME21N`
- How to create purchase orders by referencing Requests for Quotation (RFQs)

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create purchase orders with reference

Purchase Orders with Reference

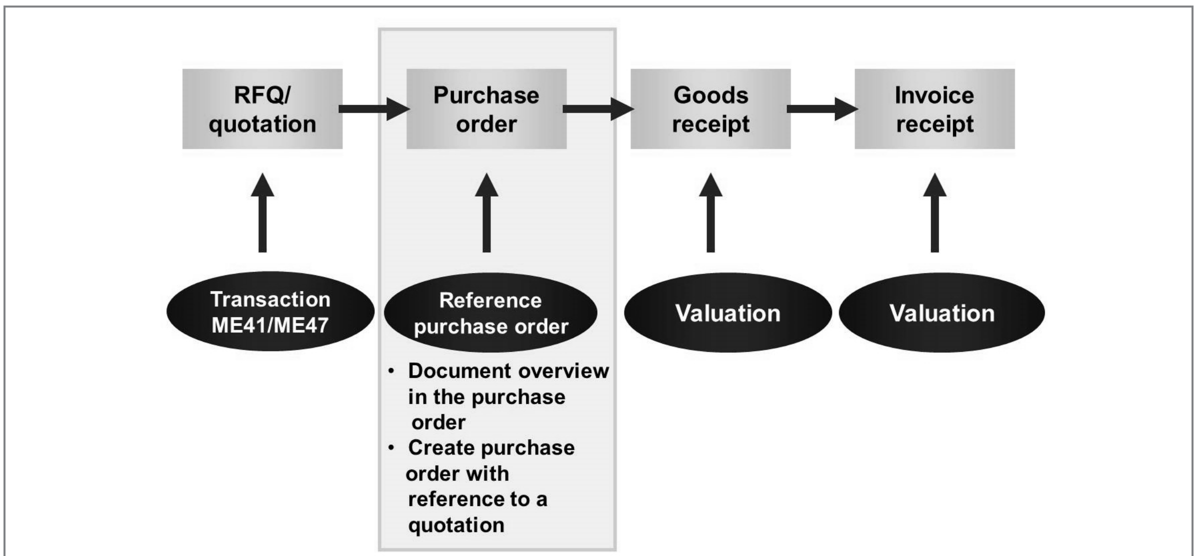

Figure 58: Stock Material Procurement – Purchase Order

While the procurement process generally consists of the creation of a purchase order, goods receipt (GR), and invoice receipt, in some cases purchase requisitions and determination of a source of supply in an RFQ and quotation may precede the creation of a purchase order.

This lesson uses the process as shown in the figure.

If you have a procurement process with the preceding documents for the purchase order, you should create the purchase order with reference to one of these documents. If reference is made to a purchase requisition, RFQ, or contract (in this case, a release order), item data and any existing header data is copied from the referenced document to the purchase order. This reduces the entry effort required and, therefore, reduces the possibility of entry errors. If necessary, you can change most of the copied data in the purchase order.

You can also copy an existing purchase order by using it as a template.

Creation of a Purchase Order with Reference

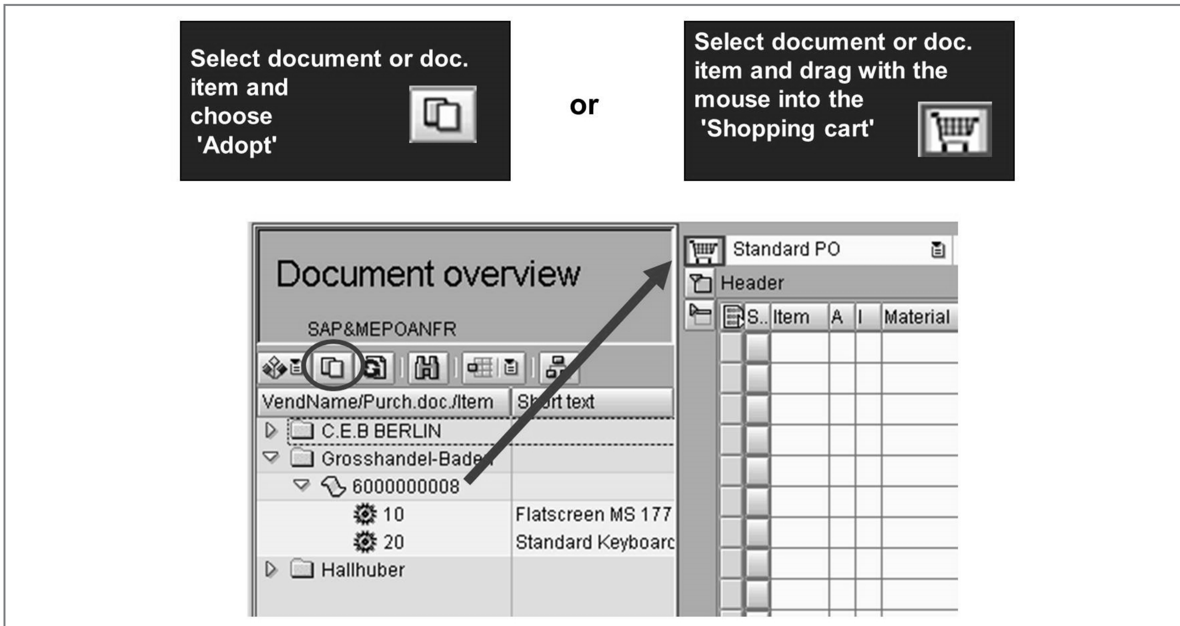

Figure 59: Creating a Purchase Order with Reference

In order transaction `ME21N`, the document overview is used to create a purchase order with reference.

If you have selected the preceding documents, then select the document or document item(s) and choose *Adopt*. You can also move the selected documents into the shopping cart by dragging and dropping them. You can also drag and drop the RFQ into the shopping cart to adopt it.

Hint:
If you double-click the purchase order or purchase requisition, the respective document is displayed without being copied.

For each item, the system updates the document and item number of the template item in the purchase order. You can therefore see whether the purchase order item was created with reference to another document item. You can find the number of the referenced document item for each purchase order item in the item overview.

To create a purchase order with reference to another document, you can also enter the number of the document and item directly in the corresponding fields in the item overview.

Document Overviews in Purchase Order Transactions

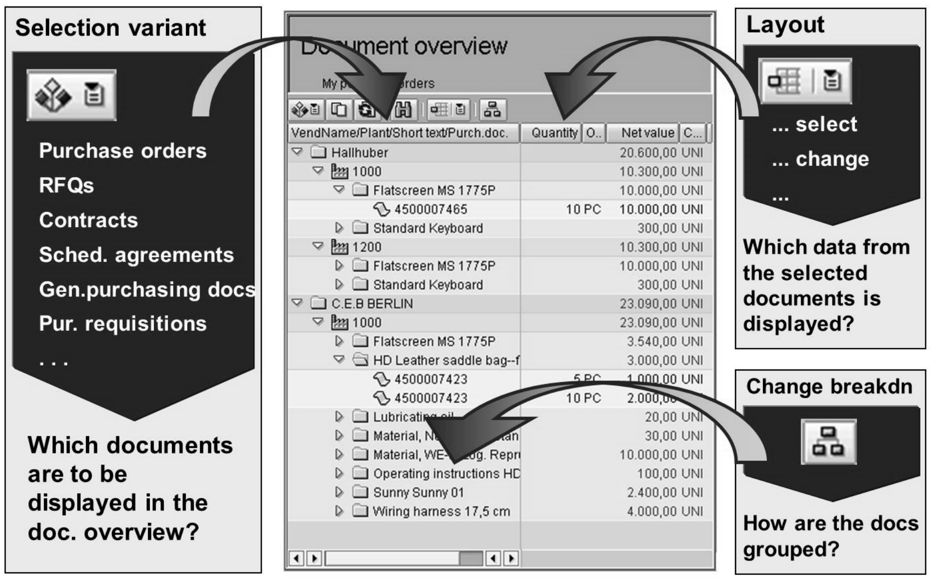

Figure 60: Document Overview in the Purchase Order Transaction

In the document overview, you can display the following purchasing documents:

1. *Purchase orders*
2. *Purchase Requisitions*
3. *Requests for quotations*
4. *Contracts*

At the same time that these documents are being displayed, you can process a purchase order or purchase requisition in the screen area to the right.

To display a purchase order or purchase requisition from the document overview, double-click the relevant item. For the other purchasing documents such as RFQ, scheduling agreement, and contract, it is not possible to call the display transaction by double-clicking the document number in the document overview.

Use the selection variant to decide which documents to select. On the selection screen, you can restrict the vendor, material, and time period of document creation. If you want to select only the purchase orders or purchase requisitions that you created, use selection variants *My purchase orders* and *My purchase requisitions*. You do not need to enter any further selection values here.

You may specify the selection time period for the selection variants *My purchase orders* and *My purchase requisitions* in *Personal Settings*.

In the breakdown, specify the criteria to be used for sorting the selected documents, and use the layout to determine the data to be displayed for the documents.

Layout in the Document Overview

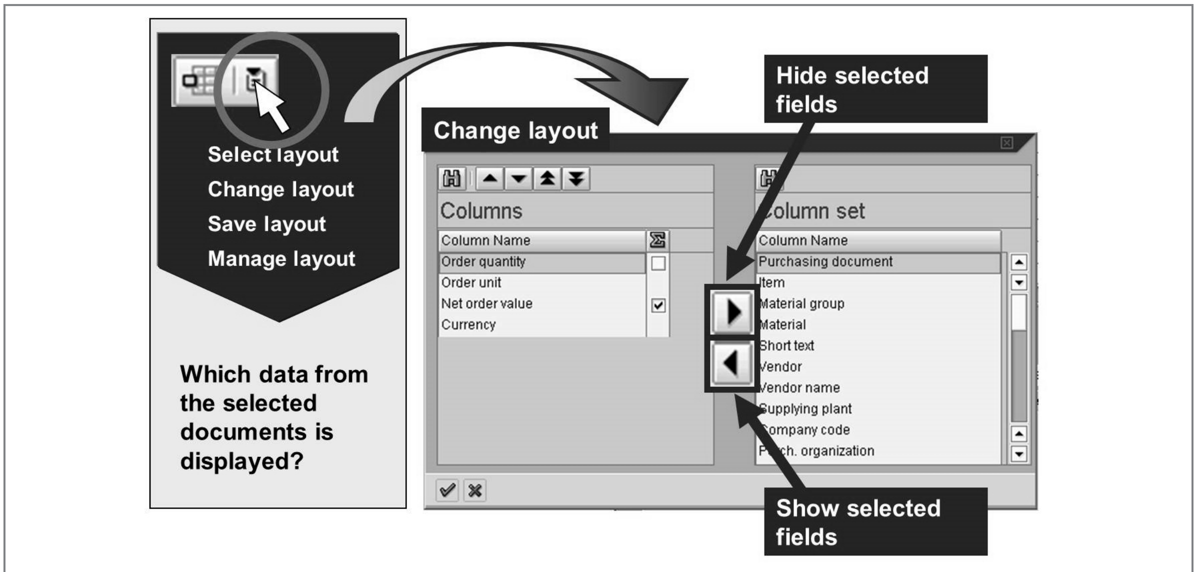

Figure 61: Layout in the Document Overview

After using the layout to change the document overview display, you can perform the following:

- Display additional fields from the column set or hide unwanted fields from the column selection.
- Arrange the fields.
- Create cross-user or user-specific layouts.
- Define one of your layouts as a default setting using the Manage layout function. This layout is automatically used when you open the document overview.

Hint:
Layouts differ depending on whether they are layouts for purchasing documents such as *Purchase orders*, *RFQs*, *Contracts* and *scheduling agreements* or *purchase requisitions*.

Unit 3
Exercise 11

Create a Purchase Order with Reference

Business Example

After an RFQ or quotation activity, you want to order the requested material from the supplier with the most favorable price. When creating the PO, use the document overview in the PO transaction to reference the vendor's quotation to minimize data entry time.

Create a purchase order with reference.

Purchase order entry

Order the Universal-taillight-##, California, from vendor Rasch Gr, which was proved to be the best supplier after the RFQ activity. When creating a purchase order, refer to the RFQ to reduce the entry load and avoid entry errors. To establish the reference to the RFQ, use the document overview in the purchase order transaction.

1. Configure the document overview.

   Select the RFQs for purchasing group T## and purchasing organization 1000. Save the selection as selection variant T## with the description RFQs Group ##. Execute the selection variant.

   Group your RFQs according to the vendor and purchasing document, and display the item and material numbers. Save these settings as layout L## with the description Layout Group ##.

2. Create a purchase order with reference to an RFQ.

   For plants `1000` (Hamburg) and 1200 (Dresden), you require 100 pieces of material T-M500B## (Universal-taillight-##, California).

   Create a purchase order for purchasing organization 1000 and purchasing group T## with two items. For each item, refer to the quotation of vendor T-K500B##. The system proposes data, such as quantities and conditions, from the quotation. (The system does not propose plant data here.)

   Save your purchase order and note the purchase order number.

   Purchase order number: ____.

3. Determine the status of the message.

   Display the purchase order and determine whether it has been issued as a message. If the message has not yet been processed, print the document and then recheck the status of the message.

4. Change the purchase order.

   A sales employee from vendor T-K500B## has informed you that the gross price for material T-M500B has been reduced for this purchase order to EUR 80. The remaining conditions are unchanged. Change the conditions for both order items accordingly. Save these changes. (Remain in the purchase order transaction after the changes have been saved.)

Do not leave the purchase order transaction.

5. Display the purchase order and answer the following questions.

   Which user created the purchase order?

   Which user changed the order item?

   When were the order items changed?

   What has been changed in the order item?

   Where is the RFQ number that refers to the purchase order items stored in the system?

   Is there a purchase order history for both items?

6. Display and output the changed purchase order as a message.

   Display a print preview (message) on your screen of the changed purchase order, and output the message.

   Is the message flagged as a change message? Are the changes listed in the document?

Create a Purchase Order with Reference

Business Example

After an RFQ or quotation activity, you want to order the requested material from the supplier with the most favorable price. When creating the PO, use the document overview in the PO transaction to reference the vendor's quotation to minimize data entry time.

Create a purchase order with reference.

Purchase order entry

Order the Universal-taillight-##, California, from vendor Rasch Gr, which was proved to be the best supplier after the RFQ activity. When creating a purchase order, refer to the RFQ to reduce the entry load and avoid entry errors. To establish the reference to the RFQ, use the document overview in the purchase order transaction.

1. Configure the document overview.

   Select the RFQs for purchasing group T## and purchasing organization 1000. Save the selection as selection variant T## with the description RFQs Group ##. Execute the selection variant.

   Group your RFQs according to the vendor and purchasing document, and display the item and material numbers. Save these settings as layout L## with the description Layout Group ##.

   a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known* (`ME21N`).

   b) Choose *Document Overview On* to open the document overview.

   c) Choose *Selection variant*, and then *Requests for quotations*.

   d) Enter **`1000`** in the *Purchasing Organization* field and **`T##`** in the *Purchasing Group* field, and then delete all other values from the selection.

      The *Document Category* field cannot be deleted.

   e) Choose *Save as Variant...*. Enter **`T##`** in the *Variant Name* field and **`RFQs Group ##`** in the *Description* field. Save your entries.

   f) Choose *Execute* to execute the selection.

      Your RFQs for purchasing group T## are displayed in the document overview.

   g) Choose *Change breakdown*. Select *Vendor* (*Column Set*) and *Purchasing Document* (*Sort criteria*) and choose *Add Sort Criterion*. Then, choose *Transfer*.

h) Choose the small list pushbutton on the right, next to (*Select layout*), and then *Change layout*. Select *Item* (*Column Set*) and choose (*Show Selected Fields*). Repeat the procedure for *Material* (*Column Set*). Then, choose *Transfer*.

i) Choose the small list pushbutton on the right, next to (*Select layout*), and then *Save layout*. Enter **L##** in the *Layout field* and **Layout Group##** in the *Description* field.

Select the *User-specific* checkbox and choose *Save*.

2. Create a purchase order with reference to an RFQ.

For plants 1000 (Hamburg) and 1200 (Dresden), you require 100 pieces of material T-M500B## (Universal-taillight-##, California).

Create a purchase order for purchasing organization 1000 and purchasing group T## with two items. For each item, refer to the quotation of vendor T-K500B##. The system proposes data, such as quantities and conditions, from the quotation. (The system does not propose plant data here.)

Save your purchase order and note the purchase order number.

Purchase order number: ____.

a) Select the RFQ of vendor *T-K500B##* in the document overview and choose *Adopt*.

b) Enter **1000** in the *Plnt* field for this item in the item overview.

c) Repeat step a and enter **1200** in the *Plnt* field for this item.

d) Save your entries and make a note of the purchase order number.

3. Determine the status of the message.

Display the purchase order and determine whether it has been issued as a message. If the message has not yet been processed, print the document and then recheck the status of the message.

a) After entering a purchase order, you can switch to the display mode using *Other Purchase Order*.

Continue through the dialog box that appears.

b) For information about the status of the purchase order, choose the *Status* tab in the header data. On this tab, you can also see whether the purchase order has been sent as a message.

c) For additional information on message development, choose *Goto* → *Messages*. You will reach a separate screen on which a list of messages for the purchase order is displayed. The status shows that the message has not yet been processed.

d) Terminate the purchase order transaction. Exit the transaction twice.

e) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Messages* → *Print/Transmit* (ME9F).

f) Accept the selection criteria proposed by the system and choose *Execute*.

g) Select your document and choose *Output Message*.

h) On the *SAP Easy Access* screen, enter the transaction code ME23N. Display the purchase order and choose Messages to recheck the status of the message. The message has now been processed.

4. Change the purchase order.

   A sales employee from vendor T-K500B## has informed you that the gross price for material T-M500B has been reduced for this purchase order to EUR 80. The remaining conditions are unchanged. Change the conditions for both order items accordingly. Save these changes. (Remain in the purchase order transaction after the changes have been saved.)

   a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Change* (`ME22N`).

      The purchase order you changed most recently is automatically displayed in change mode.

   b) Choose the *Conditions* tab page in the item details.

   c) For the first item, change the *Gross Price* (*PBXX*) to *EUR* **80**.

   d) Switch to the second item in the dropdown list and change the *Gross Price* (*PBXX*) for this item to *EUR* **80**.

   e) Save your entries.

   Do not leave the purchase order transaction.

5. Display the purchase order and answer the following questions.

   Which user created the purchase order?

   ___

   Which user changed the order item?

   ___

   When were the order items changed?

   ___

   What has been changed in the order item?

   ___

Where is the RFQ number that refers to the purchase order items stored in the system?

Is there a purchase order history for both items?

---

a) In the title bar, you can see which user created the purchase order.

b) To view additional information on the changes made to the order items, select the required items and choose *Environment → Document Item → Item Changes*. By choosing *Next item* or *Goto → Next item*, you receive information on the next selected item.

c) The RFQ number is stored in the item overview.

d) There is no purchase order history for either item, because no follow-on documents with reference to this purchase order have been posted. Also, no goods receipts or invoices have been entered for this purchase order item.

6. Display and output the changed purchase order as a message.

   Display a print preview (message) on your screen of the changed purchase order, and output the message.

   Is the message flagged as a change message? Are the changes listed in the document?

   a) Choose *Logistics → Materials Management → Purchasing → Purchase Order → Messages → Print/Transmit* (`ME9F`).

   b) Accept the selection criteria proposed by the system and choose *Execute*.

   c) In the overview, select your document and choose *Display Message*.

      On the screen output, the document is flagged as a changed document. The vendor is informed about which information has changed for each item.

   d) In the print preview, go back.

   e) Select your document and choose *Output Message*.

LESSON SUMMARY

You should now be able to:

- Create purchase orders with reference

Unit 3
Lesson 4

Maintaining Purchasing Info Records

LESSON OVERVIEW

This lesson examines the purchasing info record (PIR) master record. The purchasing info record helps to define and store vendor-specific information for a material for a long period. This lesson also focuses on various ways of creating and updating a purchasing info record.

Business Example

The purchasing department in your company saves data for material-vendor relationships. This is necessary because a material may be procured from multiple vendors, each with different prices, freight costs, and delivery terms. As a buyer, you can test how the purchase info record and automatic update of conditions work by using the InfoUpdate checkbox. For this reason, you require the following knowledge:

- An understanding of the organizational levels relevant for purchasing info records
- An understanding of the ways in which purchasing info records can be created
- How to maintain a purchasing info record

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Maintain purchasing info records

Purchasing Info Records

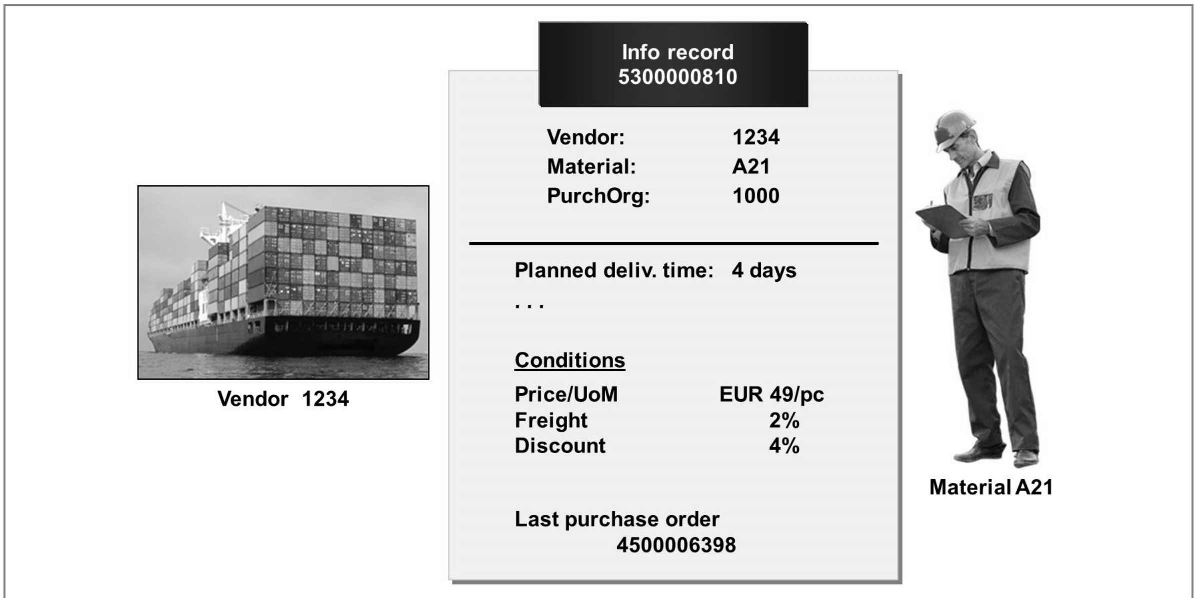

Figure 62: Purchasing Info Record

The purchasing info record, also known as the info record, provides the option of storing vendor and material information as the master data at purchasing organization and plant level.

You can define the following information in purchasing info records:

- Current and future prices and conditions (for example, freight and discounts)
- Delivery data (for example, planned delivery time and over-delivery, and under-delivery tolerances)
- Vendor data (for example, contact person) and vendor-specific data about the material (such as the vendor sub-range to which the material belongs and the vendor's description about the material)
- Number of the last purchase order (PO)
- Texts

The following text types are stored in the purchasing info record:

- Info record memo

  This is an internal comment that the system transfers to the purchase order item. This text is not printed.

- Purchase order text

  The system uses this text is to describe the purchase order item. The system transfers it to the purchase order item and prints.

The purchasing info record is an important source of information for the buyer. When creating the purchasing documents, the system transfers the data from the info record to the purchasing document as default values.

You can also use the list displays for the info records to determine which vendors offer a particular material.

The data for a purchasing info record is divided as follows:

- General (valid for a single client) and purchasing organization-specific data
- Purchasing organization-specific and plant-specific data

In addition, the selected info record category determines for which procurement process the data will be used. You can differentiate between a standard process and the special procurement categories, which include subcontracting, pipeline, and consignment.

Purchasing Info Record – Structure

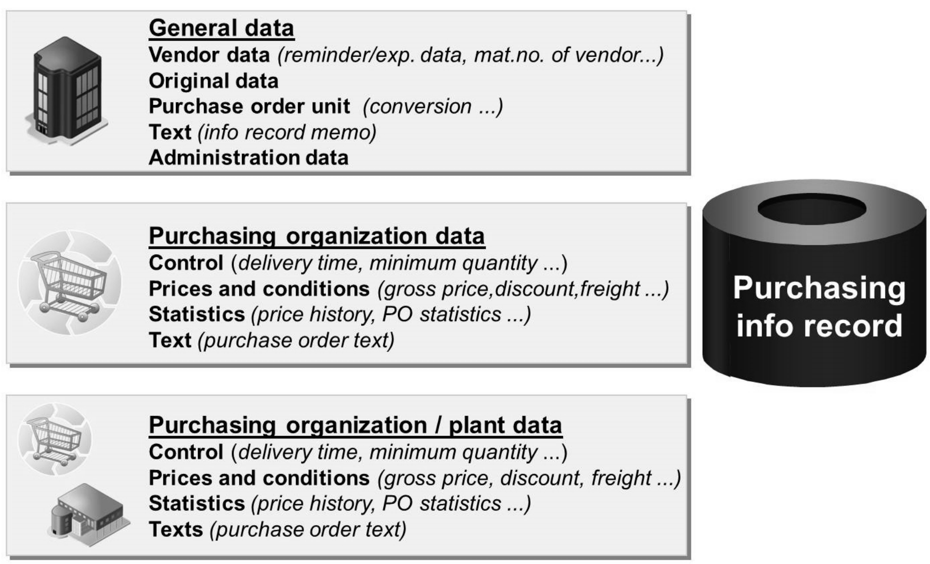

Figure 63: Purchasing Info Record – Structure

The figure shows the types of data that can be entered at each organization level.

> Hint:
> You must specify in Customizing to save conditions at plant level by choosing *Materials Management → Purchasing → Conditions → Define Condition Control at Plant Level.*

Price Determination

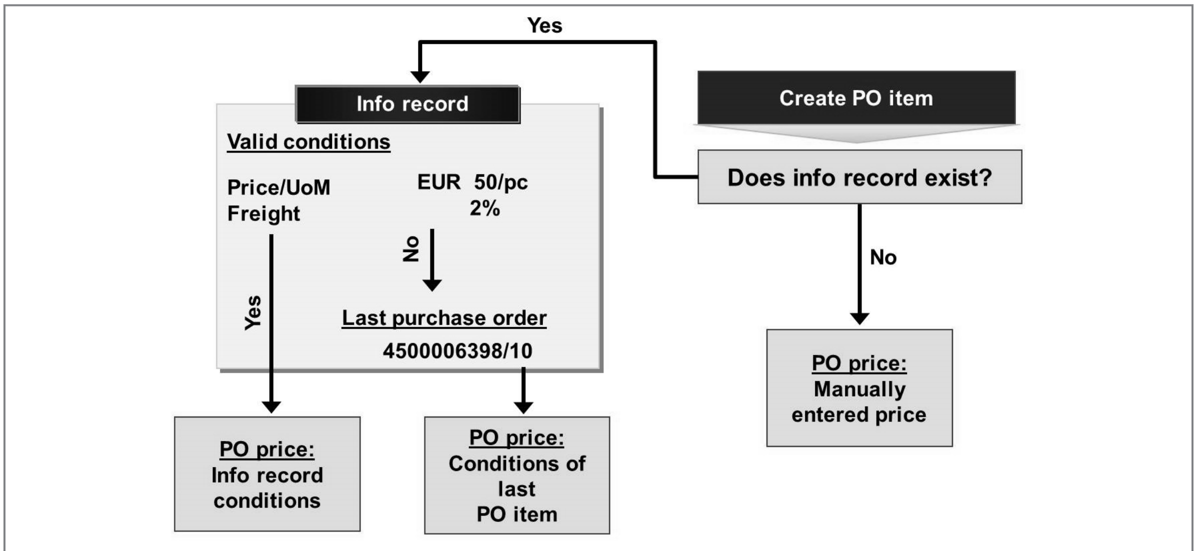

Figure 64: Info Records and Prices

When you create a purchasing document, the system attempts to find a price for the material to be procured. The system always searches from specific to general price categories.

When you create a purchase order, the system searches for an info record for the vendor or material combination at purchasing information and plant level. If there is no specific data for the purchasing organization and plant combination, the system searches at purchasing organization level. If there is no data at this level, you must enter the price manually.

Hint:
In the purchase order, the valuation price from the material master record is not proposed as the purchase order price.

If a purchasing info record exists, the system determines prices based on existing valid conditions take precedence. If an info record does not contain any conditions, or only contains invalid conditions, the system reads the number of the last purchasing document in the info record and proposes the price from this document. The buyer can change these default price values when creating the purchase order.

In the default values for buyers (Customizing), you can define how the system handles conditions from the last purchase order.

The following specifications are available when transferring conditions from the last purchase order:

- Conditions are always copied.
- Conditions are not copied if the price is entered manually.
- Conditions are never copied.

Purchasing Info Record Maintenance

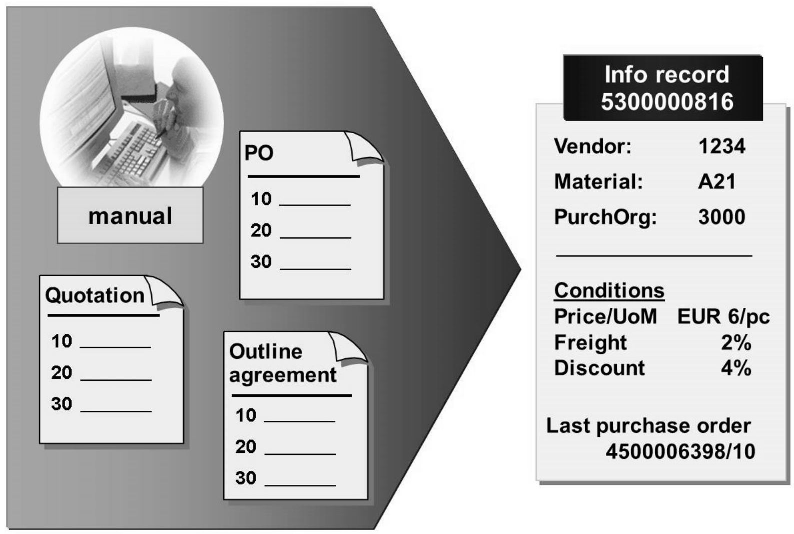

Figure 65: Options for Maintaining Info Records

You have various options for creating a purchasing info record.

You can manually create or change an info record for a purchasing organization and plant. In the purchasing menu, choose *Master Data* → *Info Record* → *Create* (or *Change*). On the initial screen, you must enter a vendor, material, and the organizational levels you require (purchasing organization, or purchasing organization and plant). On the following data screens, enter the necessary data (for example, planned delivery time, gross price, and conditions) manually.

You can also create and update purchasing info records automatically by setting the *InfoUpdate* checkbox when maintaining a quotation, purchase order, or outline agreement.

Info Record – Automatic Update

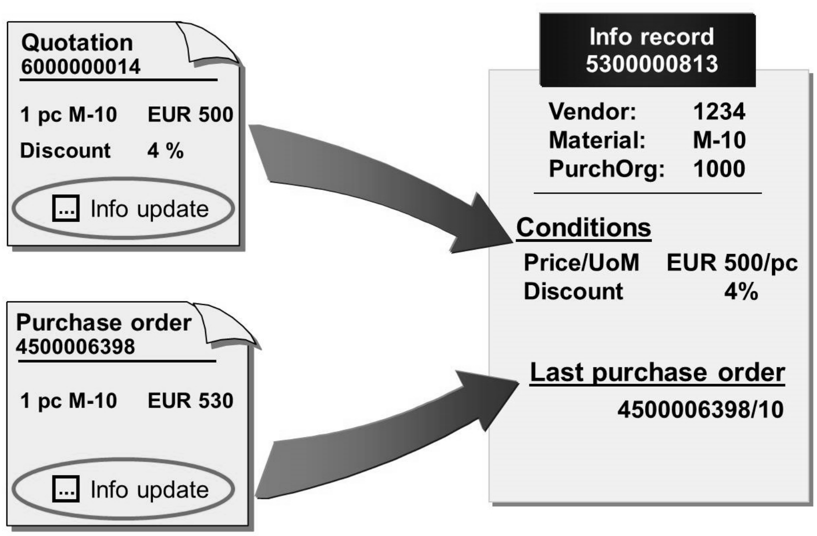

Figure 66: Info Record – Automatic Update

The following purchasing documents determine which updates are triggered by the InfoUpdate checkbox:

- Quotation:

  Conditions are transferred to the info record.

- PO:

  A contract release order or a scheduling agreement, the document and item number is updated as the last document.

- Contract

  It is important to know whether an info record already exists for the vendor-material combination. When you create or change a contract, the system creates an info record with the conditions from the contract if there are no existing info records for the combination of vendor, material, and organizational level. If an info record already exists, then it is not updated.

The characteristics of the *InfoUpdate* checkbox for updating the info record vary for each purchasing document. However, regardless of the purchasing document type, the Customizing settings for the conditions are significant during the update. You can set the conditions at plant level in Customizing for Materials Management under *Purchasing → Conditions → Define Condition Control at Plant Level*.

At plant level, you can specify whether or not plant-related conditions are allowed (plant requirement).

InfoUpdate Checkbox

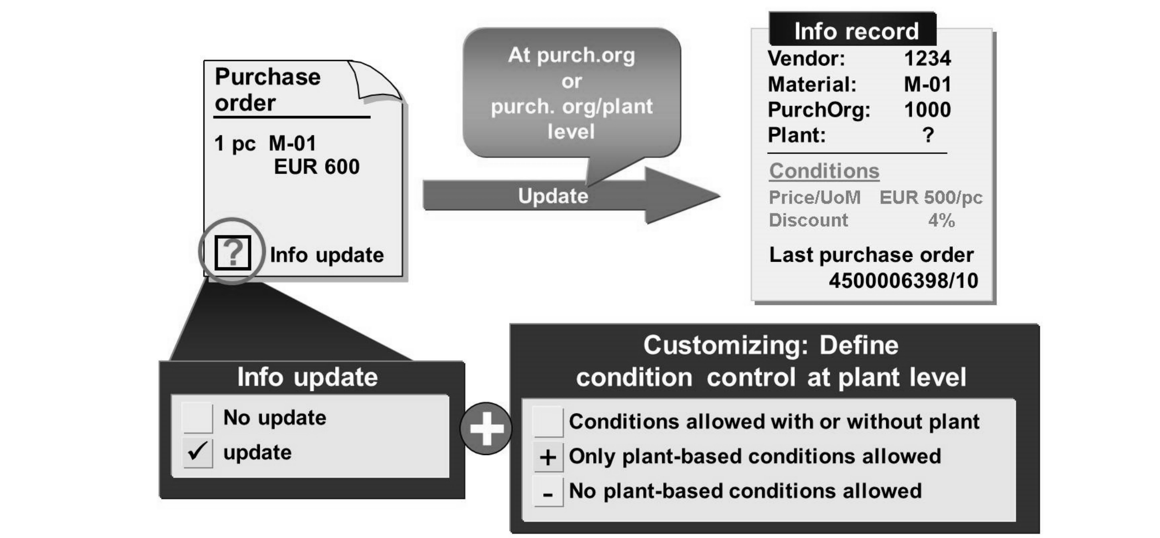

Figure 67: InfoUpdate Checkbox – Purchase Order

In the purchase order (transactions `ME21N`, `ME22N`, and `ME23N`), the *InfoUpdate* checkbox controls whether an info record is updated or created.

If the InfoUpdate checkbox is set, the following situations are possible:

- If an info record exists at purchasing organization level or purchasing organization and plant level, the info record is updated.
- If an info record exists with purchasing organization data or purchasing organization and plant data, the plant-specific data is updated.
- If no info record exists and the plant condition requirement has been specified in Customizing, the system creates an info record with a plant. Otherwise, the system creates an info record without a plant.

InfoUpdate Checkbox: Quotation and Outline Agreement

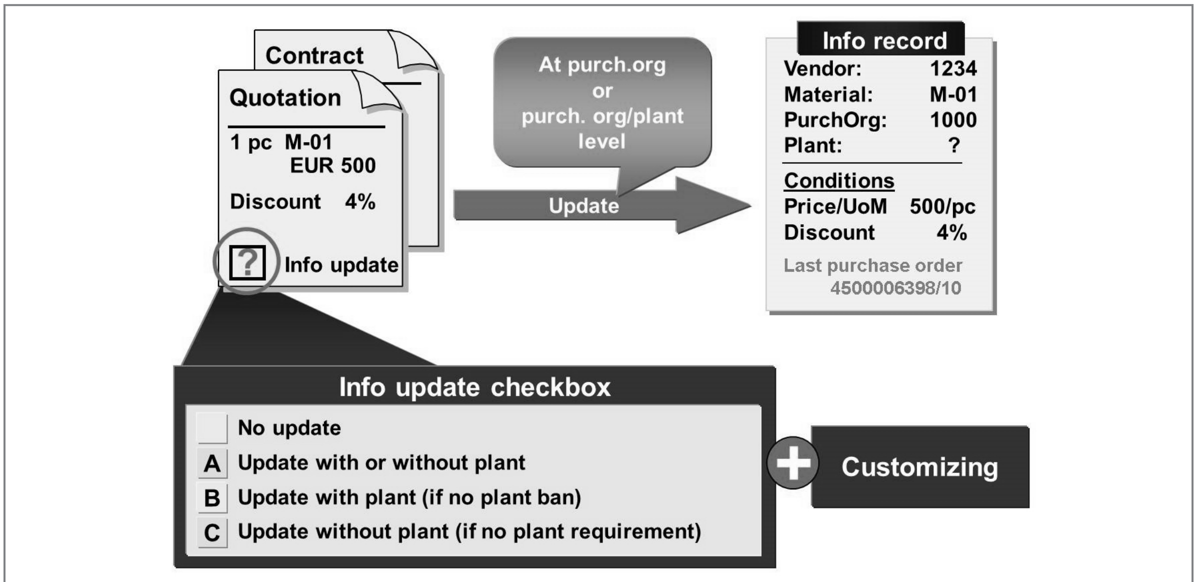

Figure 68: InfoUpdate Checkbox – Quotation and Outline Agreement

The InfoUpdate checkbox has the following attributes in the quotation, contract, scheduling agreement, and old purchase order (transactions ME21, ME22, and ME23):

- " "

  The info record is not updated or created.

- "A"

  If an info record exists at plant level, it is updated. Alternatively, an info record is updated at purchasing organization level. If an info record still does not exist at purchasing organization level, the system creates one.

- "B"

  If plant conditions are allowed for the plant, an info record at plant level is updated or created.

- "C"

  If plant conditions are not required for the plant, an info record at purchasing organization level is updated or created.

Maintain Purchasing Info Records

Business Example

To help you determine sources of supply and prices, you can store information for specific material-vendor relationships in the system. You can enter the conditions in the system and other price elements, such as freight costs and reductions for a material, depending on the vendor and purchasing organization. You can also enter planned delivery times, tolerances, and terms of delivery.

> Caution:
> You can carry out this exercise only if you have created a purchase order.

Maintain purchasing info records.

Display, change, and analyze info records.

You intend to use additional purchasing info records. Therefore, you want to update as much of the data as possible from the purchase orders and quotations in the Universal taillight-##, California info records.

1. Display the info record list.

   Display all info records saved in the system for material T-M500B## and purchasing organization 1000. On the selection screen, do not change the system default values for price calculation. The prices determined by the system are net prices.

2. Determine administrative data and prices.

   Display the purchasing info record for material T-M500B## and vendor T-K500B## and answer the following questions.

   What is the info record number? When and by whom was the info record created?

   Info record number: ______________________________

   Created on: ______________________________

   Created by: ______________________________

   Do conditions exist for this info record? Give reasons for your answer.

   ____

   ____

   ____

What is the number of the previous purchase order?

____

3. Copy conditions from quotations.

   For material T-M500B##, you used an RFQ and quotation activity to determine prices from various vendors. You would like to keep these conditions in the info records. Change all quotations for material T-M500B## and select C from the *InfoUpdate* checkbox.

> Hint:
> Use the price comparison list function for the most efficient way to select and change your quotations. The collective number of your quotations is GR##.

4. Display the info record list.

   Display all the info records saved in the system again for material T-M500B## and purchasing organization 1000. Note the info record numbers.

   Info record number(s): ______________________________

   Do conditions exist for these info records? Give reasons for your answer.

   ____

   ____

   ____

5. Change the info record.

   Vendor T-K500A## informs you about new purchasing data and conditions for material T-M500B##. Use this data to change the info record for this vendor and material.

   The average delivery time (planned delivery time) is ten days. Also, the vendor accepts only purchase orders that have a minimum quantity of 50 pieces.

   As of today, the following are valid for conditions:

Validity period:	1 year
Gross price:	EUR 85
Discount % on gross (RA01):	15% on 50 pieces or more, 18% on 200 pieces or more

6. Process quantity-dependent price.

   What net price would you have to pay per piece if you wanted to order the following quantities of material T-M500B## from vendor T-K500A##?

   Use the info record list by material to carry out the net price simulation.

20 pieces	50 pieces	150 pieces	320 pieces
NA	NA	NA	NA

Maintain Purchasing Info Records

Business Example

To help you determine sources of supply and prices, you can store information for specific material-vendor relationships in the system. You can enter the conditions in the system and other price elements, such as freight costs and reductions for a material, depending on the vendor and purchasing organization. You can also enter planned delivery times, tolerances, and terms of delivery.

> Caution:
> You can carry out this exercise only if you have created a purchase order.

Maintain purchasing info records.

Display, change, and analyze info records.

You intend to use additional purchasing info records. Therefore, you want to update as much of the data as possible from the purchase orders and quotations in the Universal taillight-##, California info records.

1. Display the info record list.

   Display all info records saved in the system for material T-M500B## and purchasing organization 1000. On the selection screen, do not change the system default values for price calculation. The prices determined by the system are net prices.

   a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Info Record* → *List Displays* → *By Material* (`ME1M`).

   b) Enter the following data:

Field	Value
Material	**T-M500B##**
Purchasing organization	**1000**

   c) Choose *Execute*.

   There is an info record for material T-M500B## and vendor T-K500B##.

2. Determine administrative data and prices.

   Display the purchasing info record for material T-M500B## and vendor T-K500B## and answer the following questions.

What is the info record number? When and by whom was the info record created?

Info record number: ______________________________

Created on: ______________________________

Created by: ______________________________

Do conditions exist for this info record? Give reasons for your answer.

____

What is the number of the previous purchase order?

____

a) Select the info record for T-K500B## in the list display.

b) Choose *Extras* → *Administrative Data*.

The administrative data contains information about when the info record was created, who created it, and the info record number.

> Note:
> The info record number is also specified in the *General data* and *Purchasing organization data* area.

c) Go back to display the *Purch. Org.Data 1* .

No conditions exist because the system automatically generated the info record when you created your previous purchase order. Conditions will not be copied from the purchase order to the info record.

d) Choose *Goto* → *Purch. Org. Data 2* to determine the number of the previous purchase order.

To display the previous purchase order, choose *Environment* → *Last Document*. In the *Item Detail* area for the purchase order item on the *Material Data* tab page. Note that the *InfoUpdate* checkbox is selected. The system automatically generates an info record without conditions.

e) Choose *Exit* four times to return to the *SAP Easy Access* screen.

3. Copy conditions from quotations.

For material T-M500B##, you used an RFQ and quotation activity to determine prices from various vendors. You would like to keep these conditions in the info records. Change all quotations for material T-M500B## and select C from the *InfoUpdate* checkbox.

> Hint:
> Use the price comparison list function for the most efficient way to select and change your quotations. The collective number of your quotations is GR##.

a) Choose *Logistics* → *Materials Management* → *Purchasing* → *RFQ/Quotation* → *Quotation* → *Price Comparison* (ME49).

b) Enter the following data:

Field	Value
Collective RFQ	**GR##**
Purchasing Organization	**1000**

c) Choose *Execute*.

d) Double-click the item number of a quotation to branch to the item details of this quotation item. Select *C* from the *InfoUpdate* checkbox and save your entries. Go back to the *Price Comparison List in Currency EUR* screen.

e) Repeat step c and d for all quotations.

4. Display the info record list.

Display all the info records saved in the system again for material T-M500B## and purchasing organization 1000. Note the info record numbers.

Info record number(s): ______________________________

Do conditions exist for these info records? Give reasons for your answer.

____

a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Info Record* → *List Displays* → *By Material* (ME1M).

b) Enter the following data:

Field	Value
Material	**T-M500B##**
Purchasing organization	**1000**

c) Choose *Execute*.

d) For material T-M500B##, there are now two info records: one for vendor T-K500A## and one for vendor T-K500B##. The system did not create info records for one-time vendors.

e) There are conditions in both info records. Because the *InfoUpdate* checkbox was set in the quotations purchasing document, these conditions were updated in the info record.

f) Choose *Exit* twice to return to the *SAP Easy Access* screen.

5. Change the info record.

Vendor T-K500A## informs you about new purchasing data and conditions for material T-M500B##. Use this data to change the info record for this vendor and material.

The average delivery time (planned delivery time) is ten days. Also, the vendor accepts only purchase orders that have a minimum quantity of 50 pieces.

As of today, the following are valid for conditions:

Validity period:	1 year
Gross price:	EUR 85
Discount % on gross (RA01):	15% on 50 pieces or more, 18% on 200 pieces or more

a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Info Record* → *Change* (`ME12`).

b) Enter the following data:

Field	Value
Vendor	**T-K500A##**
Material	**T-M500B##**
Purchasing Org.	**1000**

c) Choose *Enter*.

d) Choose the *Purch. Org. Data 1* toggle button and enter the following data:

Field	Value
Pl. Deliv. Time	**10** *Days*
Minimum Qty	**50** *PC*

e) Choose the *Conditions* pushbutton. In the *Validity Periods: Conditions* dialog box, select the Valid From field to activate it and choose *Choose*.

f) Enter the following values:

Field	Value
Valid From	<Current date>
Valid to	<Current date + 1year>

Condition Type	Amount
PB00 Gross Price	*EUR* 85
RA01 Discount % on Gross	15%

g) To enter the discount scale, select condition type *RA01* and choose *Scales,* or *Goto → Scales*.

Enter the following scale values on the *Scales Discount % on Gross (RA01)* screen:

Scale Quantity	Amount
50	**15**
200	**18**

h) Save your entries and exit the transaction.

6. Process quantity-dependent price.

What net price would you have to pay per piece if you wanted to order the following quantities of material T-M500B## from vendor T-K500A##?

Use the info record list by material to carry out the net price simulation.

20 pieces	50 pieces	150 pieces	320 pieces
NA	NA	NA	NA

a) Choose *Logistics → Materials Management → Purchasing → Master Data → Info Record → List Displays → By Material* (`ME1M`).

b) Enter the following data:

Field	Value
Vendor	**T-K500A##**
Material	**T-M500B##**
Purchasing organization	**1000**

c) Choose *Execute*.

d) Select the info record and choose the *Price simulation* pushbutton. In the *Price Simulation for Material T-M500B##* dialog box, enter the desired quantity.

e) Choose *Continue*. The determined price is then displayed in the list.

20 pieces	50 pieces	150 pieces	320 pieces
EUR 85	EUR 72.25	EUR 72.25	EUR 69.70

To view the results of the price simulation in detail, choose *Goto → Simulation Results.*

f) You can also create a purchase order for vendor T-K500A## and material T-M500B##. If you vary the purchase order quantity, the price is adjusted according to the conditions from the info record.

Net price per piece of material T-M500B## is based on the order quantity.

LESSON SUMMARY

You should now be able to:

- Maintain purchasing info records

Unit 3
Lesson 5

Analyzing Material Valuation

LESSON OVERVIEW

This lesson examines how to determine valuation levels for materials using the valuation area. It also explains the two possible procedures for material valuation.

Business Example

In your company, most of the externally procured materials are stored before they are required for production or sales. The quantity and value of the warehouse stocks of your materials must be updated. As a member of the project team, you must be aware of the possible material valuation procedures. For this reason, you require the following knowledge:

- An understanding of the significance of the valuation area
- An understanding of the function of the valuation class
- An understanding of material valuation with the moving average price and the standard price

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Analyze material valuation

Material Valuation

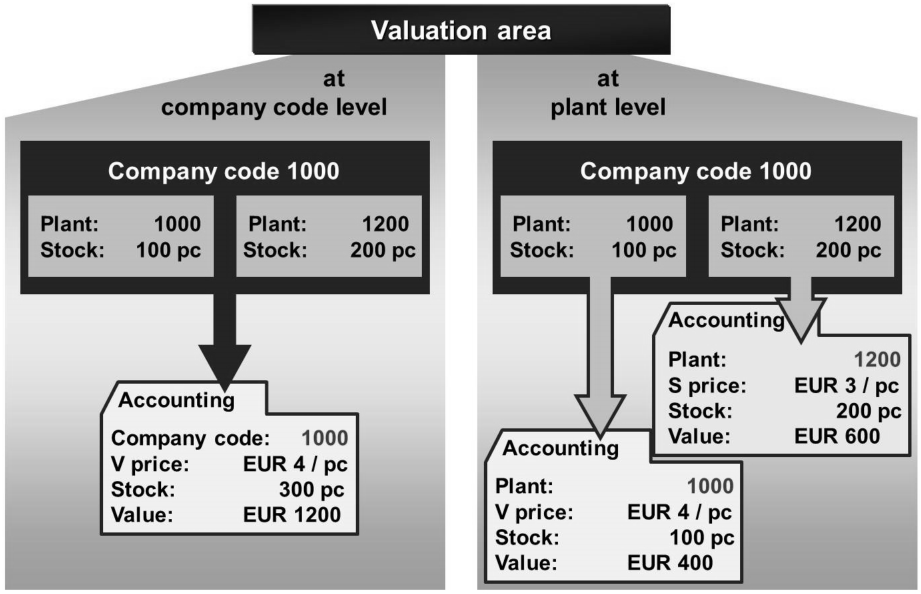

Figure 69: Material - Valuation Levels

In most goods movements in inventory management, stock quantity and value vary. In goods receipts, the stock value increases; and in goods issues, the stock value decreases. The quantity and value of the material stock and price (valuation price) are updated in the material master record. Therefore, you also need a material master record for inventory-managed material.

The material valuation determines and maintains the stock value of a material.

The stock value is calculated using the following formula:

Stock value = stock quantity * material valuation price

From this formula, it follows that the stock value changes when the stock quantity or valuation price changes.

During the valuation of a goods movement, not only are the total value and valuation price (if necessary) updated in the material master record, but also the accounts in Financial Accounting (FI). Material valuation demonstrates a connection between Materials Management (MM) and FI because material valuation accesses and updates general ledger (G/L) accounts in FI.

Material valuation is controlled by the following factors:

- System setting (Customizing)
- Material master record

Material valuation is adjusted to the requirements of your company using the system settings.

Material valuation answers the following:

- On which level are materials valuated?
- Which types of goods movements are relevant for valuation?

- Which accounts are posted to during a transaction?

The movement type and material determine which types of goods movements are relevant for valuation. The settings for automatic account determination establish which accounts are posted to during a transaction.

Valuation Area

The valuation area is the organizational level at which material is valued.

You can decide whether the valuation area is determined at company code or plant level based on the following condition:

- Valuation Area = Company Code

  At company code level, the valuation data of a material is created separately for each company code. The price control and valuation price of a material are valid for each company code, therefore, the material is valuated consistently in all plants sharing a company code.

- Valuation Area = Plant

  When the valuation area is determined at plant level, the valuation data of a material is created for each plant, and the price control and valuation price of a material are valid for each plant. Therefore, the same material can be valuated differently in each plant.

It is recommended that you valuate material at plant level. Valuation at plant level is mandatory if you want to use either of the Production Planning (PP) or product cost accounting components, or if your system is a *mySAP Retail system*.

> Caution:
> Defining the valuation level in Customizing is a fundamental setting and difficult to reverse (*Customizing → Enterprise Structure → Definition → Logistics - General → Define valuation level*).

Material Master Record – Accounting Data

In the material master record, enter the necessary valuation data for a material in the accounting data. Depending on the valuation area, you must specify either the company code or plant when maintaining the accounting data.

When entering the accounting data, you must answer the following questions:

- In which G/L account should the stock value of this material be managed?
- Is the stock of a material valuated at a constant price, or should the price be adjusted to match the fluctuations of the cost price?

Note:
The material type you selected when creating a material determines whether the material is to be valuated. The material type also controls whether the stock needs to be managed on quantity and value basis, or only on quantity basis. Whether this update can be controlled at valuation area level is also determined by the material type.

Valuation Class

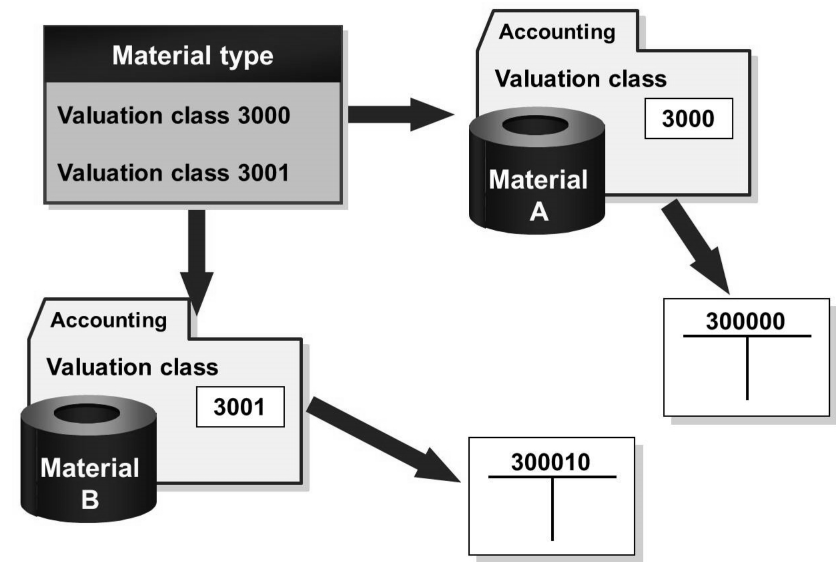

Figure 70: Valuation Class

In automatic account determination, the SAP system works with valuation classes.

Characteristics of the valuation classes are as follows:

- The valuation class is used to determine which stock account needs to be updated during the goods movement of a material.
- The valuation class combines materials for assigning G/L accounts so that you do not have to manage a separate stock account for each material. You maintain the valuation class in the FI view of the material master record.
- The valuation classes for a material depend on the material type, which is configured in Customizing. You can also assign a valuation class to multiple material types.

Procedures for Material Valuation

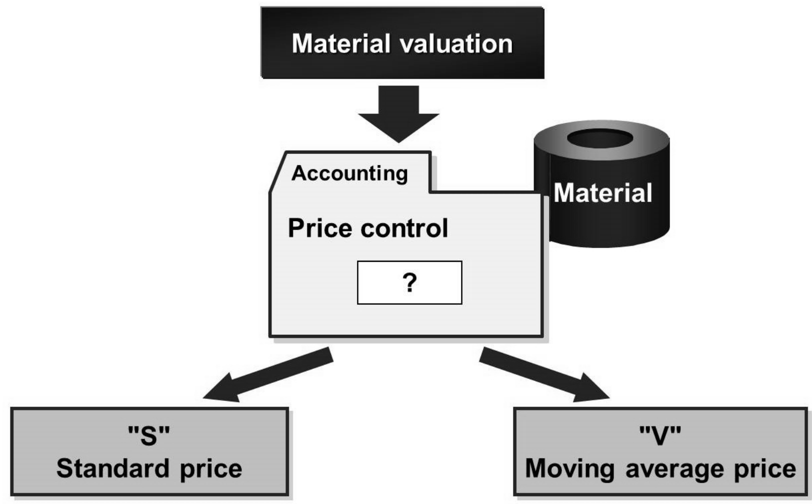

Figure 71: Procedures for Material Valuation (Price Control)

The price control procedure set in the material master record determines the value used to valuate the goods receipt of a material. Material valuation can be carried out according to the standard price (S price) or moving average price (V price).

Standard Price and Moving Average Price

During valuation using the standard price (price control "S"), there are multiple stock postings to a price, which are determined in the material master record. Variances to the standard price are posted to the price differences accounts.

For statistical purposes, the system calculates the moving average price for materials that are valuated at standard price in the material master record. This means that you can spot major differences between the current procurement price and the standard price.

The system calculates the total stock value for materials with the standard price control as follows:

Total value = standard price (per base unit of measure) * total stock

In valuation using the moving average price (price control "V"), the system valuates goods receipts with the purchase order price and goods issues with the current moving average price.

The system automatically calculates the moving average price for every goods movement as follows:

Total stock value / total stock quantity = moving average price

If there is sufficient stock coverage, differences between the purchase order price and the invoice are posted directly to the relevant stock account, changing the moving average price of the material.

Valuation of Goods Receipt

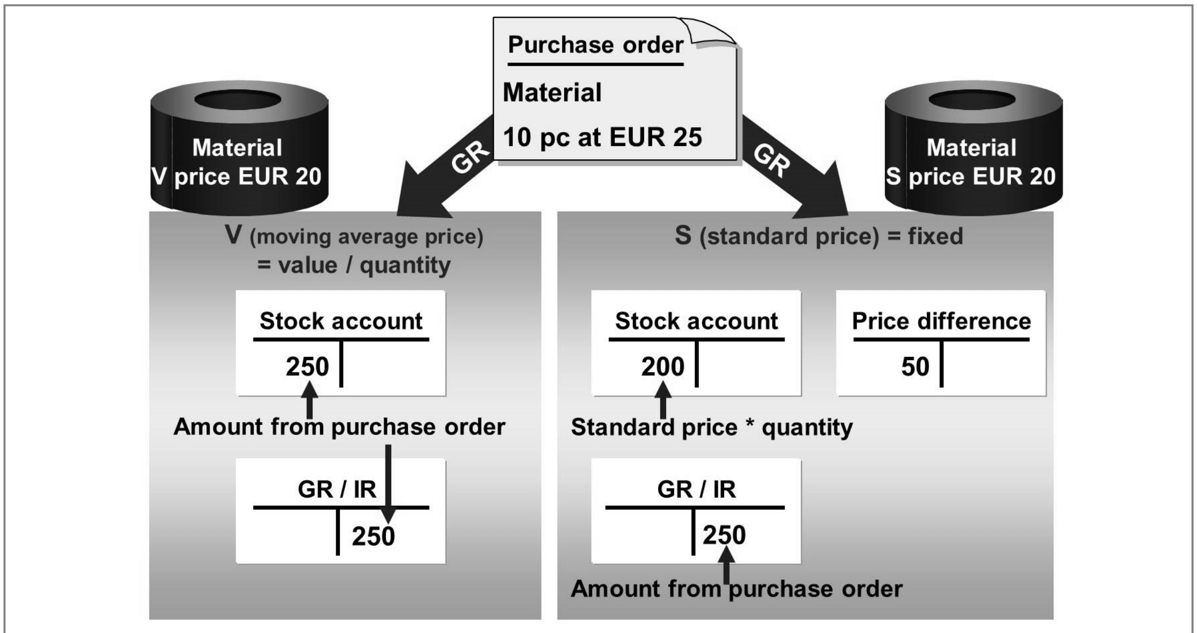

Figure 72: Valuation of Goods Receipt

The figure clarifies both valuation procedures in a single example.

Material - Moving Average Price EUR 20

The goods receipt for a purchase order of ten pieces at EUR 25 is valuated with a procurement price of EUR 25. An amount of EUR 250 (ten pieces at EUR 25) is posted to the stock account. The offsetting entry for the same amount is posted to the goods receipt / invoice receipt (GR/IR) clearing account.

Material - Standard Price EUR 20

The goods receipt quantity must be valuated with the standard price. The result of the goods receipt for the purchase order of ten pieces is an amount of EUR 200 (ten at EUR 20). This amount is posted to the stock account. The difference of EUR 50 from the actual procurement value (ten at EUR 25 = EUR 250) is posted to a price differences expense account. The offsetting entry with an amount of EUR 250 (ten at EUR 25) is posted to the GR/IR clearing account.

Material Valuation Scenarios

Material Master Record: Valuation Data

	Transaction	Stock	Total value	Moving average price	Standard price
(1)	Opening balance	100	200.00	2.00	2.00

Financial Accounting: Account Movements

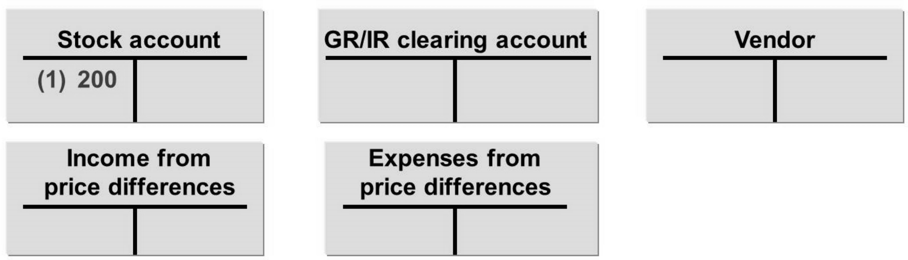

Figure 73: Standard Price (1) - Starting Situation

The figures in this section describe the postings in FI and the updates in the material master record for a simple procurement process, once for the moving average price control and once for the standard price control.

Standard Price – Goods Receipt

Material Master Record: Valuation Data

	Transaction	Stock	Total value	Moving average price	Standard price
(1)	Opening balance	100	200.00	2.00	2.00
(2)	Goods receipt for purchase order: 100 at 2.40	200	400.00	2.20	2.00

Financial Accounting: Account Movements

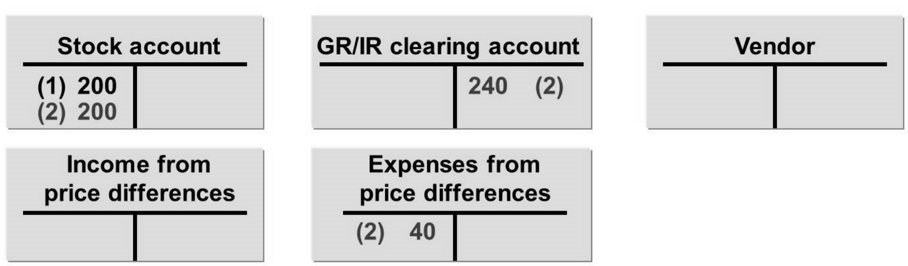

Figure 74: Standard Price (2) - Goods Receipt

The opening balance for stock quantity and total value are displayed in the first row. Then, a goods receipt is posted for a purchase order of 100 pieces at EUR 2.40. The process is completed with an invoice receipt (IR) of 100 pieces at EUR 2.20.

Standard Price - Invoice Receipt

Material Master Record: Valuation Data

	Transaction	Stock	Total value	Moving average price	Standard price
(1)	Opening balance	100	200.00	2.00	2.00
(2)	Goods receipt for purchase order: 100 at 2.40	200	400.00	2.20	2.00
(3)	Invoice receipt for purchase order: 100 at 2.20	200	400.00	2.10	2.00

Financial Accounting: Account Movements

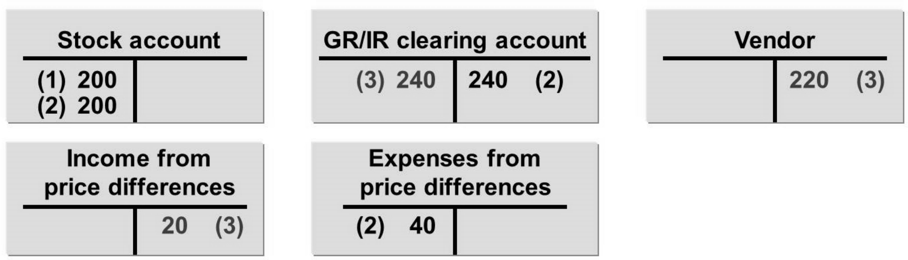

Figure 75: Standard Price (3) - Invoice Receipt

During goods receipt, the system updates the stock value and stock quantity at the standard price. It updates the GR/IR clearing account at the purchase order price. It posts the difference between the purchase order price and standard price to the price difference account.

When the incoming invoice is posted, the GR/IR clearing account is cleared at the order price. The vendor (creditor) account is updated at the invoice price. The incoming invoice posts the difference between the purchase order price and the invoice price to the "Income from price differences" account, but does not change the total stock value.

Moving Average Price (Example)

Material Master Record: Valuation Data

	Transaction	Stock	Total value	Moving Average price	Standard price
(1)	Opening balance	100	200.00	2.00	

Financial Accounting: Account Movements

Stock account		GR/IR clearing account		Vendor	
(1) 200					

Figure 76: Moving Average Price (1) - Starting Situation

The figure shows an example of the starting situation where the price control is “V” (moving average price).

Moving Average Price - Goods Receipt

Material Master Record: Valuation Data

	Transaction	Stock	Total value	Moving average price	Standard price
(1)	Opening balance	100	200.00	2.00	
(2)	Goods receipt for purchase order: 100 at 2.40	200	440.00	2.20	

Financial Accounting: Account Movements

Stock account		GR/IR clearing account		Vendor	
(1) 200 (2) 240			240 (2)		

Figure 77: Moving Average Price (2) - Goods Receipt

During goods receipt, the system updates the stock value, stock account, and GR/IR clearing account at the purchase order price.

The moving average price is recalculated based on the new stock value as follows:

Moving average price (for each base unit of measure) = total value / total stock

Moving Average Price - Invoice Receipt

Material Master Record: Valuation Data

	Transaction	Stock	Total value	Moving average price	Standard price
(1)	Opening balance	100	200.00	2.00	
(2)	Goods receipt for purchase order: 100 at 2.40	200	440.00	2.20	
(3)	Invoice receipt for purchase order: 100 at 2.20	200	420.00	2.10	

Financial Accounting: Account Movements

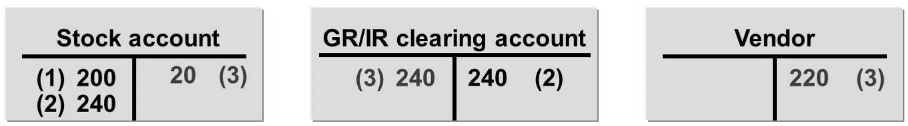

Figure 78: Moving Average Price (3) - Invoice Receipt

When the incoming invoice is posted, the effect on the system is as follows:

1. The GR/IR is cleared at the purchase order price.
2. The vendor (creditor) account is updated at the invoice price.
3. The difference between the purchase order price and invoice price is posted to the stock account.
4. The stock value is recalculated, if the invoice price is different from the purchase order price.
5. The moving average price is recalculated, if the invoice price is different from the purchase order price.

If the stock quantity in the invoice receipt is less than the invoice quantity, the system posts part of the difference to the "Expenditure/income from price differences" account instead of the stock account.

LESSON SUMMARY

You should now be able to:

- Analyze material valuation

Unit 3
Lesson 6

Posting Goods Receipts for Purchase Orders

LESSON OVERVIEW

This lesson looks at the goods receipt (GR) of ordered goods into the warehouse, as well as the effects of goods receipt on Inventory Management and Financial Accounting (FI). The lesson also covers use of the material document and accounting document, and briefly covers stock types, such as unrestricted-use, quality inspection stock, blocked stock, and transfer postings.

Business Example

Many of the goods delivered to your company are first posted after receipt into the quality inspection stock. After a successful quality check, the materials can be released. Use a concrete example to test this procedure and analyze the material valuation. For this reason, you require the following knowledge:

- How to display the stock overview
- An understanding of the various stock types
- How to enter a goods receipt in the quality inspection stock
- An understanding of the documents that are created during goods movement posting and their significance
- How to analyze the postings during goods receipt into the warehouse

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Analyze the stock overview report
- Analyze the results of a goods movement

Stock Overview and Stock Types

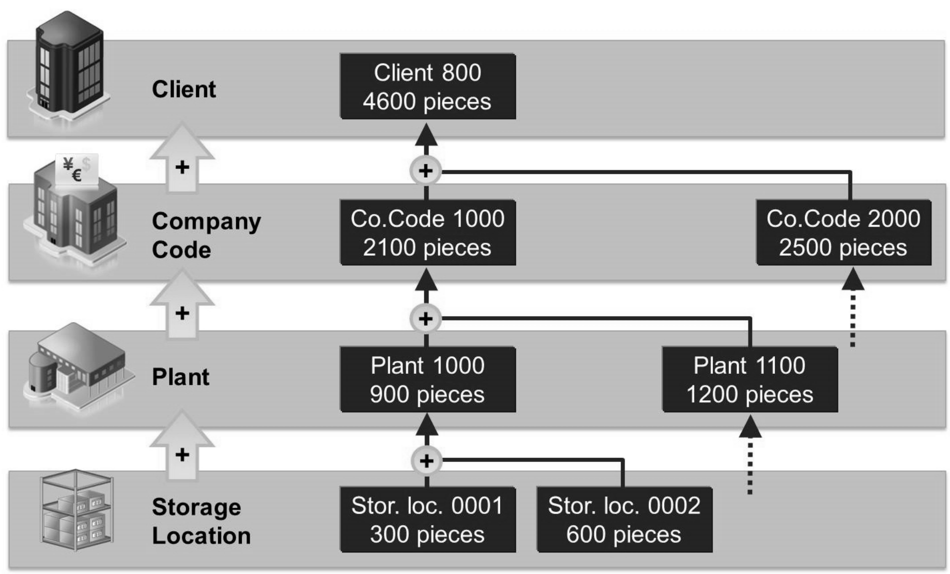

Figure 79: Stock Overview

To simplify Inventory Management, several functions and reports are used that contain detailed information about all the materials and their stock data. The functions and reports implemented in Inventory Management include the stock overview and stock type.

The stock overview is an analysis that delivers information about the stock situation of a material. In the stock overview report, the system displays the stocks of the material for each organizational level. Quantities posted for a particular stock type are calculated for each organizational unit.

You can display the stock overview for batches or valuation type and special stocks (for example, consignment material). You can also display the stock overview for organizational units, including client, company code, plant, and storage location.

To display the stock overview, choose between various display versions that differ in the listing and sequence of the individual stock types. In Customizing for Inventory Management, the system administrator defines which stocks are displayed in each column and the order in which they are displayed.

Valuated Goods Receipts

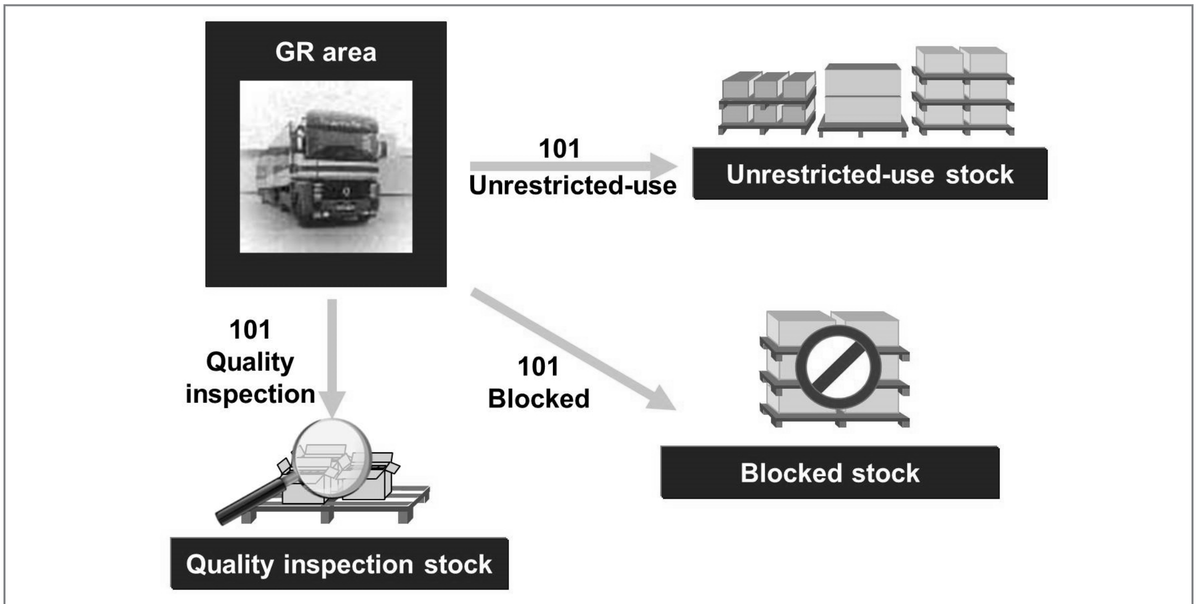

Figure 80: Valuated Goods Receipts

For goods receipts, you decide which stock type a quantity is posted to. The stock type is relevant for determining the stock available in materials planning and is used for withdrawals in Inventory Management.

You can post a goods receipt for the warehouse into the following stock types:

- Unrestricted-use stock (no usage restrictions)
- Quality inspection stock (available from a materials requirements planning (MRP) perspective, but no withdrawals are possible for consumption)
- Blocked stock (not usually available from an MRP perspective, and no withdrawals are possible for consumption)

> Caution:
> Do not confuse the stock type blocked stock with the goods receipt-blocked stock.

In the purchase order (PO), you can store a default value for the stock type during goods receipt. You can change this default value when you post the goods receipt as long as you are not using the Quality Management component.

Always use movement type 101 to post goods receipts for a purchase order to valuated stock. In addition, you enter a *stock type* checkbox at item level, which enables you to differentiate between stock types.

You can post withdrawals for consumption only from unrestricted-use stock. You can withdraw from one sample, scrap a quantity, or post an inventory difference from quality inspection and blocked stock.

Transfer Postings Stock to Stock

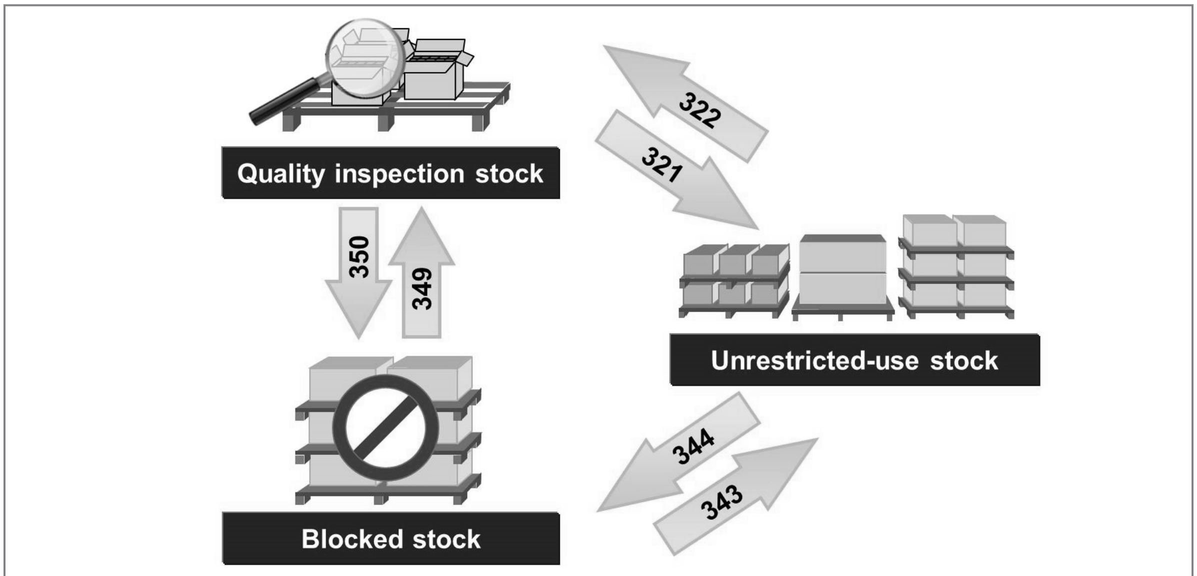

Figure 81: Transfer Postings Stock to Stock

To withdraw goods from blocked or quality inspection stock for consumption, you first have to carry out a transfer posting to unrestricted-use stock. The movement type controls the transfer posting that occurs between stock types. A physical transfer posting between two storage locations may be linked with a stock-to-stock transfer posting.

As for all goods movements, the system also creates a material document during transfer postings to show the transaction in the system. The system generates an accounting document only if the transfer posting is relevant and stock-to-stock postings are irrelevant for valuation. In contrast, the system generally links a material-to-material transfer posting (movement type 309) with a stock value change, and is therefore relevant for the update in Financial Accounting (FI).

Documents Generated at Goods Receipts

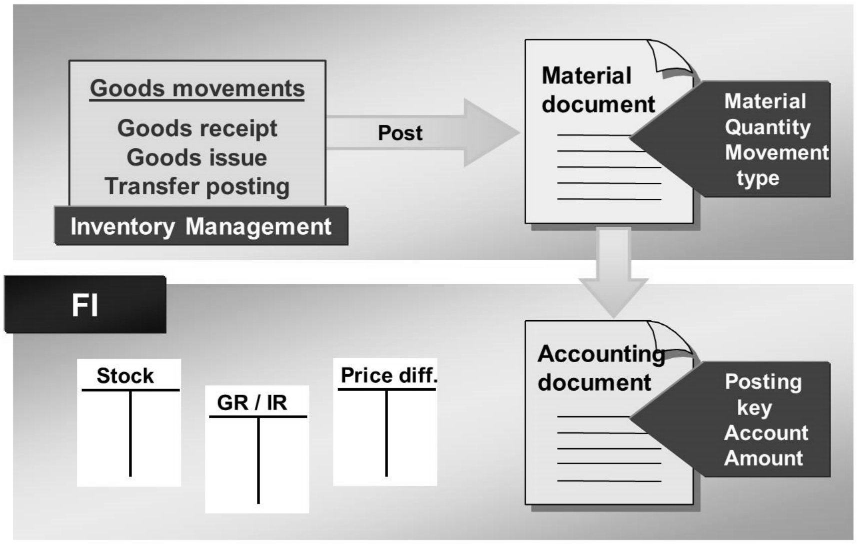

Figure 82: Documents for Goods Movements

In Inventory Management, a material document, which is stored in the system, is generated as proof that a transaction involving stock changes has taken place. This also applies to IT-based Inventory Management.

If the goods movement is relevant to valuation, the system creates at least one accounting document in addition to the material document.

Goods movements (goods receipts, goods issues or transfer postings) are relevant to valuation when your company's accounting department is affected by them. For example, a goods receipt posting of a raw material usually results in an increase in the stock value of your current assets. If the raw material is only transferred within one plant, no postings are made in FI.

As soon as a goods movement is posted, you cannot change the values of quantity, material, movement type, or organization level. If you want to correct errors, you must create a new document. To reverse the postings of the incorrect document, you must first cancel it.

Material and Accounting Documents

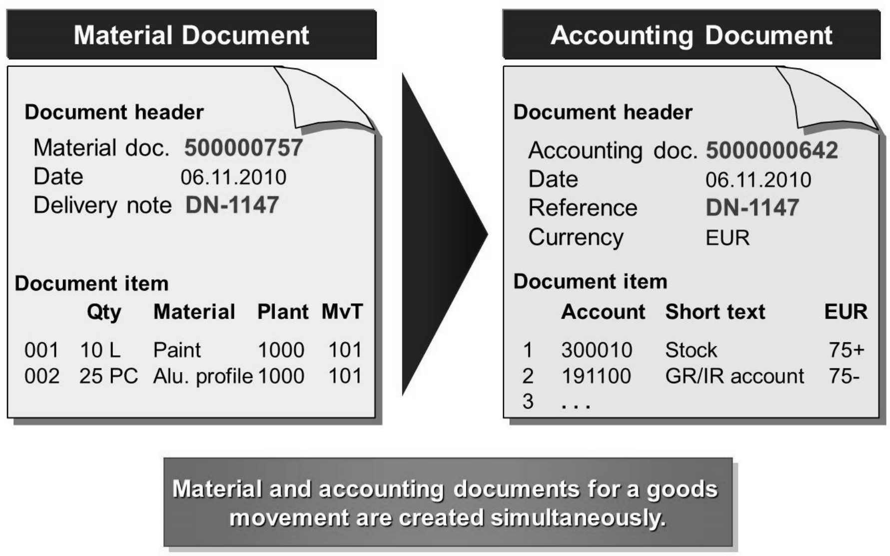

Figure 83: Material and Accounting Documents

The material document consists of a document header and at least one item. The header information includes the posting date and the name of the creator. The information at item level includes the material number, posted quantity, movement type, and plant and storage location.

The accounting document records the effects of material movements on the accounts. The document header contains applicable data, such as the document date, posting date, posting period, and document currency. The general ledger (G/L) account numbers and associated amount posted are recorded at item level.

The material and accounting documents are independent of one another. You can identify the material document by the material document number and year. The system identifies the accounting document by the company code, accounting document number, and fiscal year. The company code referred to in the accounting document posting is taken from the plant in which the goods movement takes place.

Key Effects of a Goods Receipt

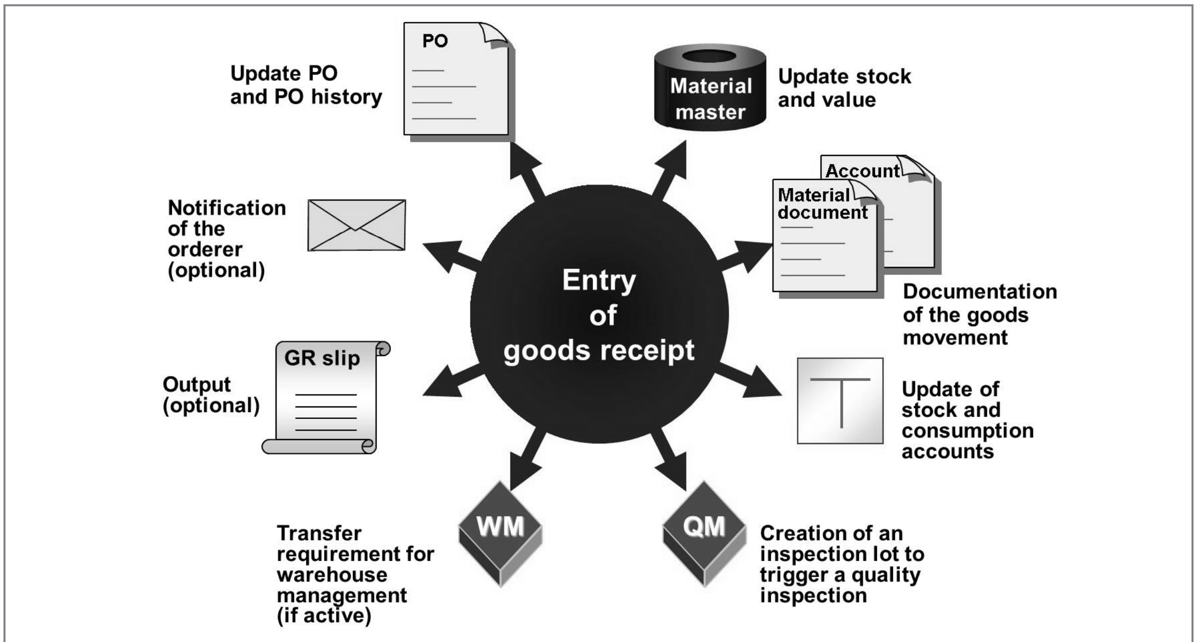

Figure 84: Effects of a Goods Receipt

The figure provides an overview of all the key effects of a goods receipt referencing a purchase order.

Post Goods Receipts for Purchase Orders

Business Example

You enter the goods receipts for your purchase order. You can see the effects of the various valuation procedures on how the accounts are updated in FI and how the material valuation prices are updated.

Post a goods receipt and examine the effects of a goods receipt.

In this exercise, you should make a note of, compare, and analyze the different data for the material stocks and valuation prices.

Work through the tasks in order, using the following tables:

Table 1: Stock Overview T-M500B## for Plant 1000 (Hamburg)

Task	Open Purchase Order Quantity	Unrestricted Use	Quality Inspection
Task 1 (before GR)	100	0	00
Task 9 (after GR)	0	100	0
Task 11 (after trans. post.)	0	100	0

Table 2: Stock Overview T-M500B## for Plant 1200 (Hamburg)

Task	Open Purchase Order Quantity	Unrestricted Use	Quality Inspection
Task 1 (before GR)	100	0	00
Task 9 (after GR)	0	0	100
Task 11 (after trans. post.)	0	100	0

Table 3: Accounting Data T-M500B##, Plant 1000, Price Control: V (Moving Average Price)

Task	Moving Average Price	Standard Price	Total Stock	Total Value
Task 2 (before GR)	80	0	0 piece	0
Task 4 (after GR)	72	0	100 pieces	7,200

Table 4: Accounting Data T-M500B##, Plant 1200, Price Control: S (Standard Price)

Task	Moving Average Price	Standard Price	Total Stock	Total Value
Task 2 (before GR)	0	80	0 piece	0
Task 6 (after GR)	72	80	100 piece	8,000

1. Stock overview

   Use display version 50 (version SCM500) to analyze the stock overview for material T-M500B## in plants 1000 and 1200. Note the stocks for the two plants in table 1 (stock overview T-M500B##). Do not leave the stock overview after this.

2. Display material master record.

   Display the *Accounting 1* tab page and the *Plant stock* tab page for material T-M500B## for plants 1000 and 1200.

   Compare the plant stock data with the data from Step 1.

   Use the data from the accounting view to fill tables 2 and 3 for the accounting data for plants 1000 and 1200.

3. Enter goods receipt for plant 1000.

   The delivery of material T-M500B## from vendor T-K500B## has entered plant 1000. Enter the goods receipt with reference to the purchase order, and post it in the unrestricted-use stock in storage location 0001. Refer to the delivery note for additional required data.

   Do not post the goods receipt for the second purchase order item for plant 1200 (Dresden).

> Hint:
> You can search for the purchase order item, if you miss the purchase order number. Choose (*Find purchase order*). Enter vendor **`T-K500B##`**, material **`T-M500B##`**, and plant **`1000`**.

Delivery note

Rasch Gr.##
Daimlerstraße 127
69134 Heidelberg

IDES
Hamburg Plant
Altersdorferstr. 13
22299 Hamburg

Delivery note no. LS-B1##
Heidelberg, [current date]

With reference to your PO no. 45000xxxxx, we hereby deliver the following materials:

Item	Material number	Description	Quantity/Un
10	T-M500B##	Universal taillight-##, California	100 pc

Best regards,
Rasch Gr.##

Figure 85: Delivery Note Number LS-B1##

Material document number: ______________________________

4. Display the documents.

   Display the material document and accounting document for the goods receipt.

   Which accounts are posted with which amounts?

Item	Account	Account Short Text	Amount
1	300000	Inventory – Raw material 1	7200
2	191100	Goods Rcvd or Invoice Rcvd (third party)	7200 (-)

   Exit the accounting document, and go directly from the material document to the material master record. Choose the *Accounting 1* view and complete table 2 with the current accounting data for plant 1000.

5. Enter goods receipt for plant 1200.

   The delivery of material T-M500B## from vendor T-K500B## has entered plant 1200. Enter the goods receipt with reference to the purchase order, and post it into the quality inspection stock in storage location 0001. Refer to the delivery note for additional required data.

> Hint:
> Make sure that you either leave the plant field blank or enter plant 1200 after the purchase order number.

Material document number: ________________________________

Delivery note

Rasch Gr.##
Daimlerstraße 127
69134 Heidelberg

IDES
Dresden Plant
Pillnitzer Strasse 241
01069 Dresden

Delivery note no. LS-B2##
Heidelberg, [current date]

With reference to your PO no. 45000xxxxx, we hereby deliver the following materials:

Item	Material number	Description	Quantity/Un
10	T-M500B##	Universal Taillight-##, California	100 pc

Best regards,
Rasch Gr.##

Figure 86: Delivery Note Number LS-B2##

6. Display the documents.

   Display the material document and accounting document for the goods receipt.

   Which accounts are updated with which amounts?

Item	Account	Account Short Text	Amount
1	300010	Inventory - Raw material 2	8000
2	191100	Goods Rcvd or Invoice Rcvd (third party)	7200 (-)
3	281000	Income - Price variances	800 (-)

   Exit the accounting document and go directly from the material document to the material master record. Choose the accounting view and enter the current accounting data for plant 1200 to table 3.

7. Compare posting results.

Look at tables 2 and 3 and Steps 4 and 6. Why do the accounting documents and the total value of material T-M500B## differ for each plant?

____

____

____

The new moving average price is calculated as follows:

Moving average price = total value/total stock

In plant 1200, the material is valuated using the standard price. Therefore, the stock value increases by the product of the goods receipt quantity and the standard price in the material master.

The GR/IR clearing account is posted with the amount of the expected liabilities (GR quantity * purchase order price) for both items.

For the standard price-controlled material, the difference between the result of the calculation (GR quantity * standard price) and the result of the calculation (GR quantity * PO price) is posted to a price difference account.

8. Display the purchase order.

   Check whether the purchase order history was updated for both items.

   Can you tell immediately whether the full quantity of your purchase order was delivered?

> Hint:
> The header details contain the *Status* tab page.

9. Stock overview

   Use display version 50 to analyze the stock overview for material T-M500B## in plants 1000 and 1200. Note the current stocks in the table.

   Display the material document for the last goods receipt again.

   In the material document, where does it tell you that goods were posted to stock in quality inspection?

   Where is this information derived from?

   Choose the *Delivery* tab page in the *Item Detail* screen area of item 20 in the purchase order. On this tab page, you will see the *Stock Type* field with the entry *Quality inspection*. This default value was copied from the material master record to the purchase order.

   In the material master record, you will see the *Post to insp. stock* checkbox on the *Purchasing* tab page. For material T-M500B##, the checkbox is only set for plant 1200.

10. Transfer material to unrestricted-use stock.

    The quality check for plant 1200 made a positive usage decision for the 100 pieces of material T-M500B##. Post the material from quality inspection stock to unrestricted-use stock.

    After being released, the material stays in storage location 0001.

    Which movement type is necessary?

    Movement type: ______________________________

Material document number: ________________________________

11. Display the document for transfer posting.

    Display the material document.

    Why is there no accounting document?

    Check whether the stock overview was correctly updated, and supplement the data in table 1. Use display version 50 in the stock overview.

Unit 3 Solution 13

Post Goods Receipts for Purchase Orders

Business Example

You enter the goods receipts for your purchase order. You can see the effects of the various valuation procedures on how the accounts are updated in FI and how the material valuation prices are updated.

Post a goods receipt and examine the effects of a goods receipt.

In this exercise, you should make a note of, compare, and analyze the different data for the material stocks and valuation prices.

Work through the tasks in order, using the following tables:

Table 1: Stock Overview T-M500B## for Plant 1000 (Hamburg)

Task	Open Purchase Order Quantity	Unrestricted Use	Quality Inspection
Task 1 (before GR)	100	0	00
Task 9 (after GR)	0	100	0
Task 11 (after trans. post.)	0	100	0

Table 2: Stock Overview T-M500B## for Plant 1200 (Hamburg)

Task	Open Purchase Order Quantity	Unrestricted Use	Quality Inspection
Task 1 (before GR)	100	0	00
Task 9 (after GR)	0	0	100
Task 11 (after trans. post.)	0	100	0

Table 3: Accounting Data T-M500B##, Plant 1000, Price Control: V (Moving Average Price)

Task	Moving Average Price	Standard Price	Total Stock	Total Value
Task 2 (before GR)	80	0	0 piece	0
Task 4 (after GR)	72	0	100 pieces	7,200

Table 4: Accounting Data T-M500B##, Plant 1200, Price Control: S (Standard Price)

Task	Moving Average Price	Standard Price	Total Stock	Total Value
Task 2 (before GR)	0	80	0 piece	0
Task 6 (after GR)	72	80	100 piece	8,000

1. Stock overview

   Use display version 50 (version SCM500) to analyze the stock overview for material T-M500B## in plants 1000 and 1200. Note the stocks for the two plants in table 1 (stock overview T-M500B##). Do not leave the stock overview after this.

   a) Choose *Logistics → Materials Management → Inventory Management → Environment → Stock → Stock Overview* (`MMBE`).

   b) Enter the following data:

Field	Value
Material	**`T-M500B##`**
Plant	**`1000`** to **`1200`**
Display version	*50* (version SCM500)

   c) Choose *Execute*.

   d) To display further stocks in the stock overview, scroll to the right in the list, or double-click the plant row.

   e) Note the unrestricted-use stock, quality inspection stock, and on-order stock in table 1, line for task 1 (before GR).

2. Display material master record.

   Display the *Accounting 1* tab page and the *Plant stock* tab page for material T-M500B## for plants 1000 and 1200.

   Compare the plant stock data with the data from Step 1.

Use the data from the accounting view to fill tables 2 and 3 for the accounting data for plants 1000 and 1200.

a) To branch from the stock overview to the material master record, place the cursor on the line for plant 1000.

b) Choose *Extras* → *Display Material*.

c) In the material master record, choose the *Accounting 1* tab page and note the price control, moving average price, total stock, and total value in table 2 (accounting data T-M500B##, plant 1000).

d) Choose the *Plant stock* tab page and compare the data with your entries for plant 1000 in table 1.

e) Choose *Edit* → *Organizational Levels*, enter **`1200`** in the *Plant* field in the *Organizational Levels* dialog box, and confirm your entry.

f) Compare the data on the *Plant stock* tab page for plant 1200 with your entries in table 1.

g) Choose the *Accounting 1* tab page and note the price control, standard price, total stock, and total value in table 3 (accounting data T-M500B##, plant 1200).

h) Choose Exit twice to return to the *SAP Easy Access* screen.

3. Enter goods receipt for plant 1000.

The delivery of material T-M500B## from vendor T-K500B## has entered plant 1000. Enter the goods receipt with reference to the purchase order, and post it in the unrestricted-use stock in storage location 0001. Refer to the delivery note for additional required data.

Do not post the goods receipt for the second purchase order item for plant 1200 (Dresden).

> Hint:
> You can search for the purchase order item, if you miss the purchase order number. Choose (*Find purchase order*). Enter vendor **`T-K500B##`**, material **`T-M500B##`**, and plant **`1000`**.

Delivery note

Rasch Gr.##
Daimlerstraße 127
69134 Heidelberg

IDES
Hamburg Plant
Altersdorferstr. 13
22299 Hamburg

Delivery note no. LS-B1##
Heidelberg, [current date]

With reference to your PO no. 45000xxxxx, we hereby deliver the following materials:

Item	Material number	Description	Quantity/Un
10	T-M500B##	Universal taillight-##, California	100 pc

Best regards,
Rasch Gr.##

Figure 85: Delivery Note Number LS-B1##

Material document number: ______________________________

a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Receipt* → *For Purchase Order* → *PO Number Known* (`MIGO`).

b) Choose *Goods Receipt* as the transaction and *Purchase Order* as the reference.

c) Enter your purchase order number.

d) In the *Header Data* screen area, choose the *General* tab page and enter **`LS-B1##`** in the *Delivery Note* field.

e) Enter **`0001`** in the *Storage Location* field and select the *Item OK* checkbox.

> Hint:
> If you have opened the detail data for the item, you can only enter the data for this item in the *Detail Data* screen area. The *Item OK* checkbox is on the *Detail Data* tab page, and the *Storage Location* field is on the *Where* tab page.

f) Choose the *Post* pushbutton and make a note of the material document number.

Do not exit transaction `MIGO` when this task is finished.

4. Display the documents.

Display the material document and accounting document for the goods receipt.

Which accounts are posted with which amounts?

Item	Account	Account Short Text	Amount
1	300000	Inventory – Raw material 1	7200

Item	Account	Account Short Text	Amount
2	191100	Goods Rcvd or Invoice Rcvd (third party)	7200 (-)

Exit the accounting document, and go directly from the material document to the material master record. Choose the *Accounting 1* view and complete table 2 with the current accounting data for plant 1000.

a) From the dropdown list, choose *Display* as the transaction and *Material Document* as the reference.

b) The default proposal is the number of the material document that you last edited. Choose *Execute*.

c) In the *Header Data* screen area, choose the *Doc. info* tab page and choose the *FI documents* pushbutton to branch to the accounting document.

d) In the *List of documents in Accounting* dialog box, select the *Accounting document* and choose the *Separate* pushbutton. Note the accounting document data in the table.

e) Go back to display the material document again and then exit the *List of Documents in Accounting* dialog box.

f) To branch to the material master record, double-click the *Mat. Short Text* in the *Item Overview* screen area.

g) Choose the *Accounting 1* tab page and note the moving average price, total stock, and total value in table 2 (accounting data T-M500B##, plant 1000).

h) Go back to display the material document again.

Do not exit transaction `MIGO` when task is finished.

5. Enter goods receipt for plant 1200.

The delivery of material T-M500B## from vendor T-K500B## has entered plant 1200. Enter the goods receipt with reference to the purchase order, and post it into the quality inspection stock in storage location 0001. Refer to the delivery note for additional required data.

> Hint:
> Make sure that you either leave the plant field blank or enter plant 1200 after the purchase order number.

Material document number: ____

Delivery note

Rasch Gr.##
Daimlerstraße 127
69134 Heidelberg

IDES
Dresden Plant
Pillnitzer Strasse 241
01069 Dresden

Delivery note no. LS-B2##
Heidelberg, [current date]

With reference to your PO no. 45000xxxxx, we hereby deliver the following materials:

Item	Material number	Description	Quantity/Un
10	T-M500B##	Universal Taillight-##, California	100 pc

Best regards,
Rasch Gr.##

Figure 86: Delivery Note Number LS-B2##

a) Choose *Goods Receipt* as the transaction and *Purchase Order* as the reference.

b) Enter the purchase order number or double-click the purchase order number in the overview tree.

> Hint:
> To search for the purchase order item, choose *Search for PO* and enter vendor **`T-K500B##`**, material **`T-M500B##`**, and plant **`1200`**.

c) In the *Header Data* screen area, choose the *General* tab page and enter **`LS-B2##`** in the *Delivery Note* field.

d) Enter **`0001`** in the *Storage Location* field and select the *Item OK* checkbox.

> Hint:
> If you have opened the detail data for the item, you can only enter the data for this item in the *Detail Data* screen area. The *Item OK* checkbox is on the *Detail Data* tab page, and the *Storage Location* field is on the *Where* tab page.

e) Choose the *Post* pushbutton and make a note of the material document number.

Do not exit transaction `MIGO` when this task is finished.

6. Display the documents.

Display the material document and accounting document for the goods receipt.

Which accounts are updated with which amounts?

Item	Account	Account Short Text	Amount
1	300010	Inventory - Raw material 2	8000
2	191100	Goods Rcvd or Invoice Rcvd (third party)	7200 (-)
3	281000	Income - Price variances	800 (-)

Exit the accounting document and go directly from the material document to the material master record. Choose the accounting view and enter the current accounting data for plant 1200 to table 3.

a) Choose *Display* as the transaction and *Material Document* as the reference.

b) The default proposal is the number of the material document that you last edited. Choose *Execute*.

c) In the *Header Data* screen area, choose the *Doc. info* tab page and choose the *FI documents* pushbutton to branch to the accounting document.

d) In the *List of documents in Accounting* dialog box, select the *Accounting document* and choose the *Separate* pushbutton. Note the accounting document data in the table.

e) Go back to display the material document again and then exit the *List of Documents in Accounting* dialog box.

f) To branch to the material master record, double-click the *Mat. Short Text* in the *Item Overview* screen area.

g) Choose the *Accounting 1* tab page and note the standard price, total stock, and total value in table 3 (accounting data T-M500B##, plant 1200).

h) Go back to display the material document again.

Do not leave transaction MIGO when this task is finished.

7. Compare posting results.

Look at tables 2 and 3 and Steps 4 and 6. Why do the accounting documents and the total value of material T-M500B## differ for each plant?

In plant 1000, the material is valuated using the moving average price. Therefore, the stock value increases by the product of the goods receipt quantity and the price of the purchase order item.

The new moving average price is calculated as follows:

Moving average price = total value/total stock

In plant 1200, the material is valuated using the standard price. Therefore, the stock value increases by the product of the goods receipt quantity and the standard price in the material master.

The GR/IR clearing account is posted with the amount of the expected liabilities (GR quantity * purchase order price) for both items.

For the standard price-controlled material, the difference between the result of the calculation (GR quantity * standard price) and the result of the calculation (GR quantity * PO price) is posted to a price difference account.

8. Display the purchase order.

   Check whether the purchase order history was updated for both items.

   Can you tell immediately whether the full quantity of your purchase order was delivered?

   > Hint:
   > The header details contain the *Status* tab page.

   a) To branch from the material document to the purchase order, choose the *Purchase Order Data* tab page in the *Item Detail* screen area.

   b) To display the purchase order, double-click the purchase order number.

   c) Choose the *Purchase Order History* tab page in the *Item Detail* screen area of the purchase order item.

      The purchase order history was correctly updated for both goods receipts. You will receive information about the transaction (goods receipt) with the relevant material document, quantity, and value of the posting.

   d) To check whether your purchase order is complete, choose the *Status* tab page in the *Header data* screen area. The status for the purchase order reads *Delivered*.

   e) Exit the transaction and return to the *SAP Easy Access* screen.

9. Stock overview

   Use display version 50 to analyze the stock overview for material T-M500B## in plants 1000 and 1200. Note the current stocks in the table.

   Display the material document for the last goods receipt again.

   In the material document, where does it tell you that goods were posted to stock in quality inspection?

   Where is this information derived from?

   a) Choose *Logistics → Materials Management → Inventory Management → Environment → Stock → Stock Overview* (`MMBE`).

   b) Enter the following data:

Field	Value
Material	**`T-M500B##`**

Field	Value
Plant	**1000** to **1200**
Display version	*50* (version SCM500)

c) Choose *Execute*.

d) Note the unrestricted-use stock, quality inspection stock, and on-order stock in table 1, line for task 9 (after GR).

e) Open a second session with *System* → *Create Session*.

f) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement* (`MIGO`).

g) Choose *Display* as the transaction and *Material Document* as the reference.

h) The default proposal is the number of the material document that you last edited. Choose *Execute*, and choose the *Where* tab page in the *Item Detail* screen area. On this tab page, you will see the *Stock Type* field with the entry *Quality inspection*. This value was copied from the purchase order.

i) In the *Item Detail* screen area, choose the *Purchase Order Data* tab page and double-click number *20* in the *Purchase Order* field.

Choose the *Delivery* tab page in the *Item Detail* screen area of item 20 in the purchase order. On this tab page, you will see the *Stock Type* field with the entry *Quality inspection*. This default value was copied from the material master record to the purchase order.

In the material master record, you will see the *Post to insp. stock* checkbox on the *Purchasing* tab page. For material T-M500B##, the checkbox is only set for plant 1200.

10. Transfer material to unrestricted-use stock.

The quality check for plant 1200 made a positive usage decision for the 100 pieces of material T-M500B##. Post the material from quality inspection stock to unrestricted-use stock.

After being released, the material stays in storage location 0001.

Which movement type is necessary?

Movement type: ____

Material document number: __________________________________

a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement* (`MIGO`).

b) Choose *Transfer Posting* as the transaction and *Other* as the reference.

c) In the Detail Data screen area, choose the Where tab and enter **321** in the *Movement Type* field and choose *Enter*.

d) On the *Transfer Posting* tab page, enter the following data:

Field	Value
Material	**T-M500B##**
Plant	**1200**
Stor. Loc.	**0001**
Qty in UnE	**100**

Confirm your entry.

e) Choose the *Post* pushbutton and make a note of the material document number.

11. Display the document for transfer posting.

Display the material document.

Why is there no accounting document?

Check whether the stock overview was correctly updated, and supplement the data in table 1. Use display version 50 in the stock overview.

a) Choose *Display* as the transaction and *Material Document* as the reference.

b) The default proposal is the number of the material document that you last edited. Choose *Execute*.

c) In the *Header Data* screen area, choose the *Doc. info* tab page, and then choose the *FI documents* pushbutton.

The system outputs the message *No subsequent document found in accounting*. During the transfer posting, no accounting document was created because this is a transfer posting within a valuation area (the valuation area is the plant). Quality inspection stock is already a part of the plant's valuated stock.

d) Exit the transaction.

e) To call the stock overview, choose *Logistics → Materials Management → Inventory Management → Environment → Stock → Stock Overview* (`MMBE`).

f) Enter the following data:

Field	Value
Material	**T-M500B##**
Plant	**1000** to **1200**
Display version	*50*

g) Choose *Execute*.

h) Note the unrestricted-use stock, the quality inspection stock, and the on-order stock in table 1, line for task 11 (after trans.post.).

LESSON SUMMARY

You should now be able to:

- Analyze the stock overview report
- Analyze the results of a goods movement

Unit 3
Lesson 7

Entering Invoices with Reference to Purchase Orders

LESSON OVERVIEW

This lesson deals with delivery costs in invoice verification, and explains the distinction between planned and unplanned delivery costs.

Business Example

When you receive an invoice from your company, you enter it in the system with reference to the relevant purchase order, making it possible for the materials, quantities, and prices shown in the invoice to be checked for accuracy. However, unplanned delivery costs have to be considered. As an employee in invoice verification, you need to be informed about the data entries for unplanned costs and the subsequent postings. For this reason, you require the following knowledge:

- How to enter an invoice with unplanned delivery costs in Logistics Invoice Verification (LIV)
- How to display the accounting document for an invoice
- An understanding of the postings in an invoice

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Identify the postings for a procurement process with delivery costs
- Analyze the results of an invoice entry

Delivery Costs

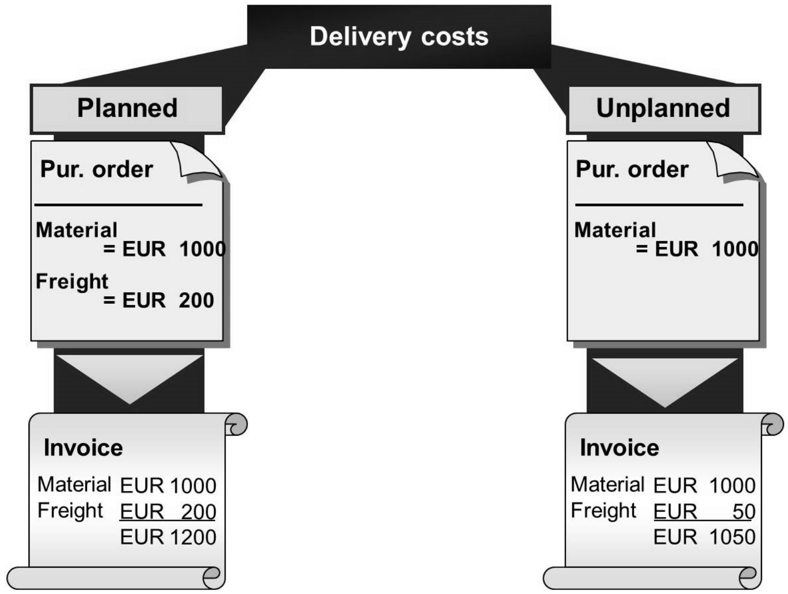

Figure 87: Delivery Costs

Planned delivery costs are costs that are agreed upon before delivery with the vendor, freight forwarder, or customs office. These costs are recorded using separate condition types when the purchase order is created. When you post the goods receipt (GR), the system simultaneously makes postings to special clearing accounts such as the freight clearing account. These entries are then cleared when the incoming invoice is posted. The advantage of planned delivery costs is that the system includes them in the valuation of the material at the time of goods receipt (or, in the case of purchase orders with account assignment, the costs can be charged to the account assignment object).

Unplanned delivery costs are costs that are not known at the time of ordering, and are not entered until the system posts an incoming invoice. If necessary, the system corrects the material valuation, which is carried out at the time of the goods receipt. When the delivery costs invoiced differ from those planned, the system carries out only the subsequent debit process at the time of invoice receipt.

Planned Delivery Costs

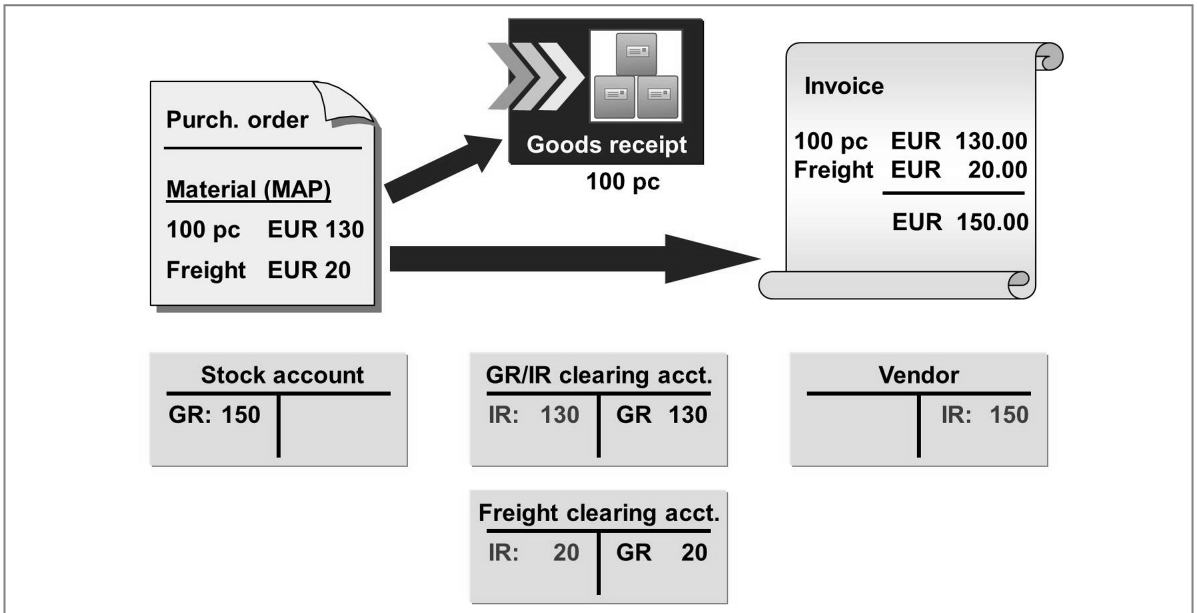

Figure 88: Account Movements in the Case of Planned Delivery Costs

The description of moving average price material and standard price material regarding planned delivery costs is as follows:

- Moving average price material

  When you post a goods receipt, the system valuates it at total procurement cost (that is, EUR 130 plus EUR 20 for freight). A posting of EUR 150 is thus made to the stock account. The offsetting entry is divided into EUR 130 to the goods receipt/invoice receipt (GR/IR) clearing account and EUR 20 to the freight clearing account.

  The system clears the clearing accounts when you post the incoming invoice. The system posts an offsetting entry for the entire invoice amount of EUR 150 to the vendor (creditor) account.

- Standard price material

  When you post a goods receipt, the system valuates the stock with the product of quantity multiplied by the standard price. Any difference in comparison to the total procurement cost of EUR 150 is posted to a price difference account. As in the case of the moving average price material, the offsetting entry is divided into EUR 130 to the GR/IR clearing account and EUR 20 to the freight clearing account.

  The system clears the clearing accounts when you post the incoming invoice. The system posts an offsetting entry for the entire invoice amount of EUR 150 to the vendor (creditor) account.

Unplanned Delivery Costs

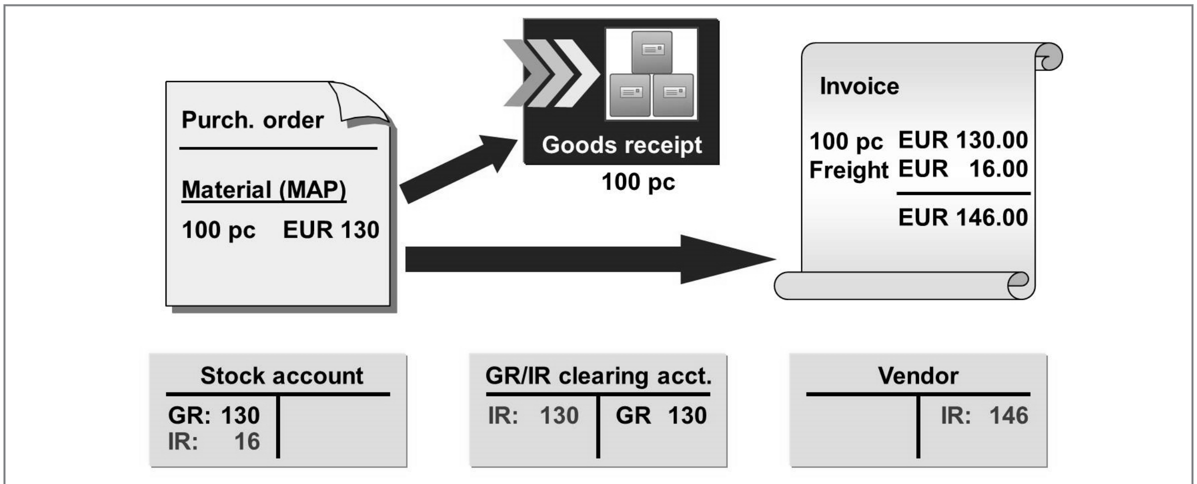

Figure 89: Account Movements in the Case of Unplanned Delivery Costs

The description of moving average price material and standard price material regarding unplanned delivery costs is as follows:

- Moving average price material

  When you post a goods receipt, the system valuates the stock at EUR 130. The system posts an offsetting entry to the GR/IR clearing account.

  When you post the incoming invoice, the system clears the GR/IR clearing account at the order price. The resulting difference between the order and invoice price of EUR 16 due to the unplanned costs is posted to the stock account. As a result, the total value of the stock changes, while the total quantity remains the same. In turn, this causes the moving average price to be determined again.

  If the stock quantity is less than the invoice quantity at the time of invoice entry, the system posts part of the difference to a price difference account instead of the stock account.

  The system updates the vendor (creditor) account at the invoice price.

- Standard price material

  When you post a goods receipt, the system valuates the stock with the product of quantity multiplied by the standard price. Any difference that occurs in comparison to the procurement cost of EUR 130 is posted to a price difference account. The offsetting entry for EUR 130 is posted to the GR/IR clearing account.

  When you post the incoming invoice, the system clears GR/IR clearing account at the order price. The resulting difference between the order and invoice price of EUR 16 due to the unplanned costs is posted to a price difference account.

Documents Generated at Invoice Receipt

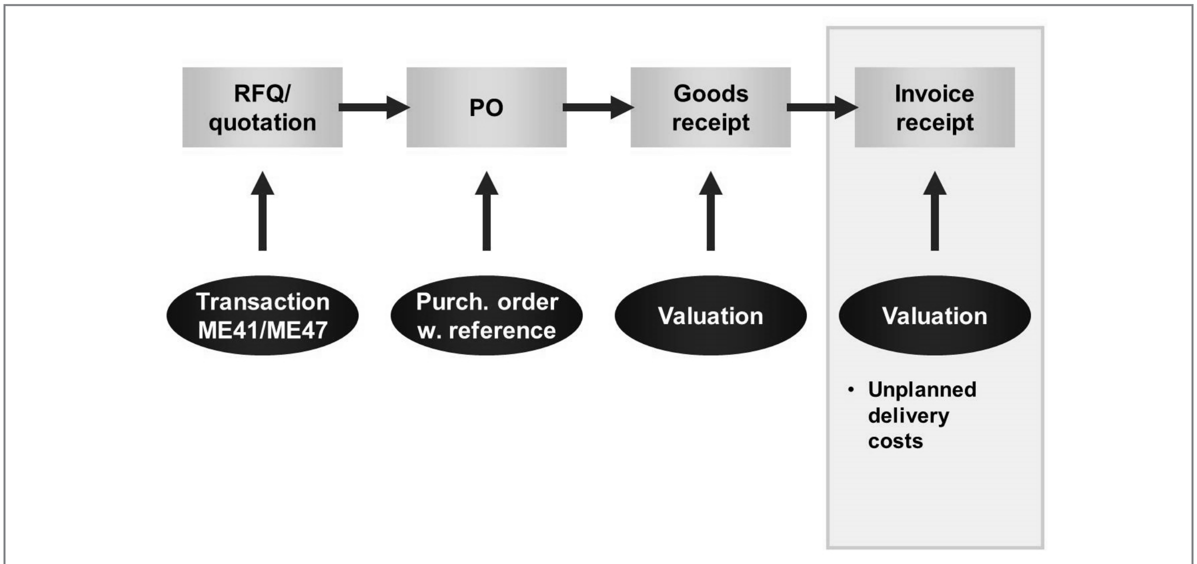

Figure 90: Procurement of Stock Material – Invoice Receipt

After the receipt of the ordered material has been posted, you have to enter the invoice to conclude this process.

When you enter an invoice using Logistics Invoice Verification, a separate Financial Accounting (FI) document is generated in addition to the invoice document in Materials Management (MM). In this way, when the invoice is posted, payment information is forwarded to FI and various accounts are updated. The system automatically determines which amounts are to be posted to which accounts.

> Note:
> The accounting document can also be processed further by distributed or external systems.

Documents in Invoice Verification

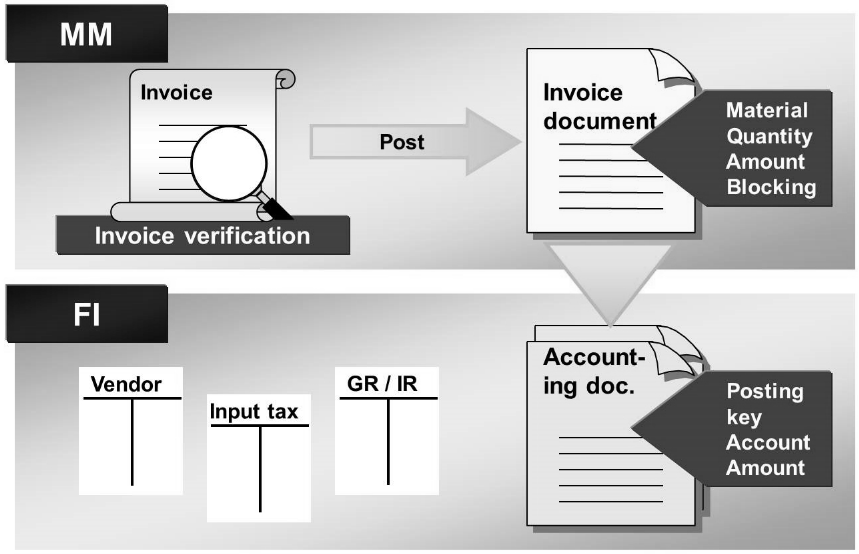

Figure 91: Documents in Invoice Verification

The invoice document consists of a document header and at least one item. The header data includes the vendor (invoicing party), posting date, and name of the person who created the document. The item data indicates which amount is charged for which quantity of a material.

The accounting document shows the bookkeeping effects of the entry of the invoice. The document header contains applicable data, such as the document date, posting date, posting period, and document currency. The G/L account numbers and associated amounts posted are recorded at item level.

Invoice and Accounting Documents

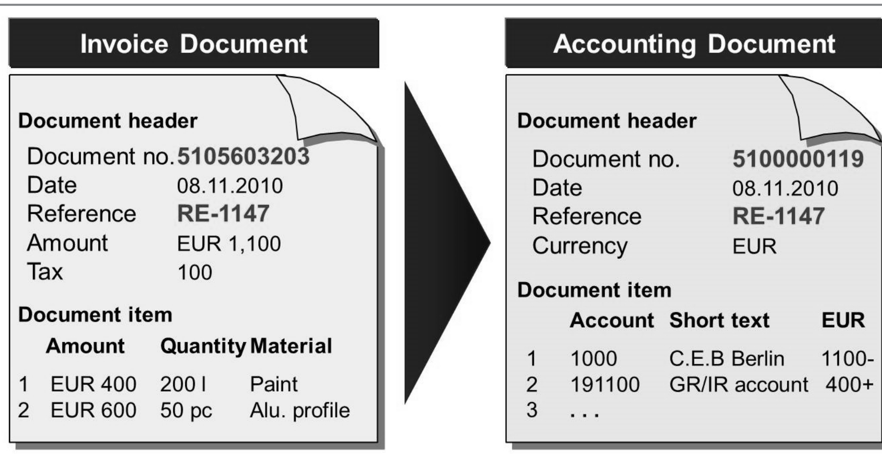

Figure 92: Invoice and Accounting Documents

The invoice and accounting documents are separate documents generated simultaneously when the invoice is posted. You can identify the invoice document by the document number and year.

The system identifies the accounting document by the company code, accounting document number, and fiscal year. When you enter the invoice, you must specify the company code. As long as it is not necessary to change the company code, the system suggests the company code that was last used. To change the company code in transaction `MIRO`, choose *Edit → Switch Company Code*.

> Hint:
> In the standard system, only the materials management document number (the number of the invoice document) is displayed when an incoming invoice is posted. As of SAP R/3 Enterprise, you can set the status bar to also display the number of the accounting document in FI. Enter the value X for the user in order to activate the display of MM and FI document numbers with user parameter IVFIDISPLAY.

Unit 3
Exercise 14

Enter an Invoice with Reference to a Purchase Order

Business Example

You are analyzing the updates in financial accounting that automatically occur when an invoice is posted. In particular, you are interested in the connection between the material valuation procedures and the updating of the accounts in financial accounting.

Enter an invoice with reference to a purchase order and examine invoice verification with unplanned delivery costs.

Vendor Rasch Gr.## has sent you the invoice for the delivery of 200 Universal taillights. In addition to charging you for the taillights, the vendor has included the freight costs in the invoice.

1. Enter an invoice.

   Enter the invoice from vendor T-K500B## against the purchase order for material T-M500B##. Use the following data from the vendor's invoice.

Invoice

Rasch Gr.##
Daimlerstraße 127
69134 Heidelberg

IDES AG
Central Purchasing Dept.
Altersdorferstr. 13
22299 Hamburg

Invoice number: RE-B1##
Invoice date [current date]

With reference to your PO no. 45000xxxxx, we hereby invoice you for the following items:

Item	Quantity/Un	Material number	Description	Price
10	100 pc	T-M500B##	Universal Taillight-##, California	EUR 7,200
20	100 pc	T-M500B##	Universal Taillight-##, California	EUR 7,200
			Plus freight charges	EUR 200
			Total net value:	EUR 14,600
			plus 10 % VAT	EUR 1,460
			Invoice amount	**EUR 16,060**

Subject to the agreed terms of payment.

Kind regards, Rasch Gr.##

Figure 93: Invoice RE-B1##

> Hint:
> Note that the invoice also includes freight costs. Enter these freight costs as unplanned delivery costs on the *Details* tab page.

Simulate posting the invoice and note the posting lines in the following table:

Item	General Ledger	Account Type (Material or Asset or Vendor)	Amount
1	160000	Rasch Gr.##	16060(-)
2	191100	Goods Rcvd or Invoice Rcvd (third party)	7200
3	300000	Universal taillight ## (stock account)	100
4	191100	Goods Rcvd or Invoice Rcvd (third party)	7200
5	231000	Loss-price variances	100
6	154000	Input tax	1460

Answer the following question:

Which postings are generated as a result of the unplanned delivery costs?

____

____

____

Post the invoice.

Invoice document number: ______________________________

2. Display the material master record.

   Display the accounting data for material T-M500B## for plant 1000 and plant 1200, and complete the following table:

Plant	Price Control	Moving Average Price	Standard Price	Total Stock	Total Value
Plant 1000	V	73	0	100 pieces	7300
Plant 1200	S	73	80	100 pieces	8000

Are there any differences in comparison to the results from goods receipt processing? If so, what and why?

3. Display the invoice document and purchase order history.

   Display the invoice document and go to the purchase order history. Determine what influence the entry of the invoice with unplanned delivery costs had on the updating of the purchase order history.

Unit 3
Solution 14

Enter an Invoice with Reference to a Purchase Order

Business Example

You are analyzing the updates in financial accounting that automatically occur when an invoice is posted. In particular, you are interested in the connection between the material valuation procedures and the updating of the accounts in financial accounting.

Enter an invoice with reference to a purchase order and examine invoice verification with unplanned delivery costs.

Vendor Rasch Gr.## has sent you the invoice for the delivery of 200 Universal taillights. In addition to charging you for the taillights, the vendor has included the freight costs in the invoice.

1. Enter an invoice.

   Enter the invoice from vendor T-K500B## against the purchase order for material T-M500B##. Use the following data from the vendor's invoice.

Invoice

Rasch Gr.##
Daimlerstraße 127
69134 Heidelberg

IDES AG
Central Purchasing Dept.
Altersdorferstr. 13
22299 Hamburg

Invoice number: RE-B1##
Invoice date [current date]

With reference to your PO no. 45000xxxxx, we hereby invoice you for the following items:

Item	Quantity/Un	Material number	Description	Price
10	100 pc	T-M500B##	Universal Taillight-##, California	EUR 7,200
20	100 pc	T-M500B##	Universal Taillight-##, California	EUR 7,200
			Plus freight charges	EUR 200
			Total net value:	EUR 14,600
			plus 10 % VAT	EUR 1,460
			Invoice amount	**EUR 16,060**

Subject to the agreed terms of payment.

Kind regards, Rasch Gr.##

Figure 93: Invoice RE-B1##

> Hint:
> Note that the invoice also includes freight costs. Enter these freight costs as unplanned delivery costs on the *Details* tab page.

Simulate posting the invoice and note the posting lines in the following table:

Item	General Ledger	Account Type (Material or Asset or Vendor)	Amount
1	160000	Rasch Gr.##	16060(-)
2	191100	Goods Rcvd or Invoice Rcvd (third party)	7200
3	300000	Universal taillight ## (stock account)	100
4	191100	Goods Rcvd or Invoice Rcvd (third party)	7200
5	231000	Loss-price variances	100
6	154000	Input tax	1460

Answer the following question:

Which postings are generated as a result of the unplanned delivery costs?

____

Post the invoice.

Invoice document number: ____________________________

a) Choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Document Entry* → *Enter Invoice* (`MIRO`).

b) Enter the following data on the *Basic Data* tab page:

Field	Value
Invoice date	<Current date>
Reference	**RE-B1##**
Amount	**16060**

Field	Value
Tax Amount	**1460**

c) Choose the *Details* tab page and enter the freight costs:

Field	Value
Unpl. Del. Csts	**200**

d) On the *PO Reference* tab page, choose *Purchase Order/Scheduling Agreement* as the reference document category and enter your purchase order number.

> Hint:
> To search for the purchase order using help, enter vendor **T-K500B##** and material **T-M500B##**. Choose *Execute*.

e) Choose *Simulate* to simulate your postings. Make a note of the accounts and amounts.

Postings 3 and 5 are caused by the unplanned freight charges. Posting 3 results in the debiting of the stock account Raw Materials 1 because the material is valuated according to the moving average price procedure in plant 1000.

In plant 1200, the material is valuated at the standard price. No subsequent debit posting is made to the stock account due to the unplanned delivery costs. Instead, a posting is made to the expenditure account for price differences.

f) Choose *Post* and make a note of the material document number.

g) Choose *Exit* to return to the *SAP Easy Access* screen.

2. Display the material master record.

Display the accounting data for material T-M500B## for plant 1000 and plant 1200, and complete the following table:

Plant	Price Control	Moving Average Price	Standard Price	Total Stock	Total Value
Plant 1000	V	73	0	100 pieces	7300
Plant 1200	S	73	80	100 pieces	8000

Are there any differences in comparison to the results from goods receipt processing? If so, what and why?

a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current* (`MM03`).

b) Enter **T-M500B##** in the *Material* field on the initial screen and confirm your entry.

c) Select the *Accounting 1* view and choose *Continue*.

d) Enter **1000** in the *Plant* field in the *Organizational Levels* dialog box and choose *Continue*.

e) Make a note of the *Price Control*, *Moving price*, *Standard price*, *Total Stock*, and *Total Value* for plant 1000.

   In comparison with the values from goods receipt processing, the total value and the moving average price have been adjusted in plant 1000, resulting in a total value increase.

f) Choose *Edit → Organizational Levels*, enter **1200** in the *Plant* field in the *Organizational Levels* dialog box, and choose *Enter*.

g) Make a note of the *Price Control*, *Moving price*, *Standard price*, *Total Stock*, and *Total Value* for plant 1200.

   The total stock, total value, and standard price in plant 1200 remain unchanged.

h) Choose *Exit* to return to the *SAP Easy Access* screen.

3. Display the invoice document and purchase order history.

   Display the invoice document and go to the purchase order history. Determine what influence the entry of the invoice with unplanned delivery costs had on the updating of the purchase order history.

   a) Choose *Logistics → Materials Management → Logistics Invoice Verification → Further Processing → Display Invoice Document* (`MIR4`).

   b) The number of the last invoice you entered is specified automatically. Choose *Enter* or *Display document* to display the invoice document.

   c) To branch to the purchase order, double-click the purchase order number in the *Item Overview* area.

   d) Choose the *Purchase Order History* tab page in the *Item Detail* area.

      Due to the unplanned freight costs, there are variances in the purchase order history attributable to the invoice received amounting to EUR 100 per item.

LESSON SUMMARY

You should now be able to:

- Identify the postings for a procurement process with delivery costs
- Analyze the results of an invoice entry

Learning Assessment

1. In which of the following documents and master records can you enter conditions?

   Choose the correct answers.

   - [ ] A Request for quotation (RFQ) (RFQ type AN)
   - [ ] B Quotation
   - [ ] C Material master record
   - [ ] D Purchasing info record
   - [ ] E Purchase order

2. Which purchasing document(s) allow(s) only time-independent conditions?

   Choose the correct answer.

   - [ ] A RFQ or quotation
   - [ ] B Contract
   - [ ] C Purchase order
   - [ ] D Scheduling agreement

3. If you request quotations for materials from multiple vendors, you must create a separate RFQ document in the system for each vendor.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

4. The vendor quotation resulting from an RFQ is displayed as an independent document in the SAP system.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

5. Which actions can you execute from or with the price comparison list?

   Choose the correct answers.

   - [ ] A Compare prices from quotations at item level.
   - [ ] B Generate more RFQs for an RFQ activity.
   - [ ] C Maintain (enter and change) prices in quotations.
   - [ ] D Issue rejection letters.
   - [ ] E Save market prices.

6. When creating a purchase order, you can refer to another purchase order, a purchase requisition, a request for quotation, or a contract.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

7. To create a purchase order with reference to another document, you can enter the number of the document and the number of the item directly in the corresponding fields in the item overview.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

8. Which of the following are the steps of the procurement process?

   Choose the correct answers.

   - [ ] A Purchase order
   - [ ] B Goods receipt
   - [ ] C Invoice receipt
   - [ ] D Purchase requisitions

9. Which of the following organizational levels are relevant for purchasing info records?

   Choose the correct answers.

   - [ ] A Client
   - [ ] B Company code
   - [ ] C Plant
   - [ ] D Storage location
   - [ ] E Purchasing organization

10. Conditions can be defined in info records only if the info record was created manually.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

11. If conditions are maintained in a purchasing info record, these conditions are always transferred to the purchase order.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

12. If no valid conditions are defined in an info record, the system never proposes a price in the purchase order.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

13. The valuation area can be set at which organizational levels?

    Choose the correct answers.

    - [ ] A Client
    - [ ] B Company code
    - [ ] C Purchasing organization
    - [ ] D Plant
    - [ ] E Storage location

14. You must determine the plant as the valuation area if you want to use either of the components Production Planning or Product Cost Accounting.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

15. Which of the following statements about the valuation class are correct?

    Choose the correct answers.

    - [ ] A The valuation class is a grouping key that controls the procedure used to valuate a material.
    - [ ] B Your choice of valuation class determines whether conditions at plant level are allowed for a material.
    - [ ] C The valuation class is used to determine which stock account is updated during the goods movement of a material.
    - [ ] D The valuation area controls which valuation classes are allowed for a material.
    - [ ] E The valuation class enables you to manage the stocks of multiple materials in a stock account.

16. For a material that is valuated according to the standard price (price control “S”), all goods movements are valuated with the same price. This price must be specified in the material master record. Variances from this standard price are posted to price difference accounts.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

17. In material valuation with the moving average price (price control “V”), the system valuates goods receipts with the current moving average price and goods issues with the purchase order price.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

18. The stock overview can only be used for one material at a time.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

19. You can use the stock overview to learn about the stock situation of one material in different plants.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

20. In which master records and documents can the checkbox or stock type quality inspection occur?

    Choose the correct answers.

    - [ ] A Material master record
    - [ ] B Vendor master record
    - [ ] C Purchasing info record
    - [ ] D Request for quotations
    - [ ] E Purchase order
    - [ ] F Material document

21. A material document is generated as proof of a process that has caused a change in stock. If the goods movement is relevant to valuation, the system creates at least one accounting document in addition to the material document.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

22. You can enter planned and unplanned delivery costs in Logistics Invoice Verification.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

23. The planned delivery costs are not shown in a separate line per condition.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

24. You can enter unplanned delivery costs on the Details tab page in the header data.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

25. You have mapped the following procurement process in the system: purchase order for stock material - goods receipt for purchase order - invoice receipt for purchase order with delivery costs that are 100% unplanned. Select all the accounts to which postings could be made within the framework of invoice entry.

Choose the correct answers.

- [ ] A Vendor account
- [ ] B GR/IR clearing account for external procurement
- [ ] C GR/IR freight clearing account
- [ ] D Stock account
- [ ] E Account for gain from price differences
- [ ] F Account for loss from price differences
- [ ] G Account for input tax

Learning Assessment - Answers

1. In which of the following documents and master records can you enter conditions?

   Choose the correct answers.

   - [ ] A Request for quotation (RFQ) (RFQ type AN)
   - [X] B Quotation
   - [ ] C Material master record
   - [X] D Purchasing info record
   - [X] E Purchase order

2. Which purchasing document(s) allow(s) only time-independent conditions?

   Choose the correct answer.

   - [ ] A RFQ or quotation
   - [ ] B Contract
   - [X] C Purchase order
   - [ ] D Scheduling agreement

3. If you request quotations for materials from multiple vendors, you must create a separate RFQ document in the system for each vendor.

   Determine whether this statement is true or false.

   - [X] True
   - [ ] False

   That is correct. The entire RFQ campaign is tracked by a collective number but each vendor has its own quotation number.

4. The vendor quotation resulting from an RFQ is displayed as an independent document in the SAP system.

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   That is correct. Although it is true that each vendor gets its own quotation doc number, all the vendors in a RFQ campaign are tracked by a collective number.

5. Which actions can you execute from or with the price comparison list?

   Choose the correct answers.

   [X] A Compare prices from quotations at item level.

   [ ] B Generate more RFQs for an RFQ activity.

   [X] C Maintain (enter and change) prices in quotations.

   [ ] D Issue rejection letters.

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6. When creating a purchase order, you can refer to another purchase order, a purchase requisition, a request for quotation, or a contract.

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   [X] True

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7. To create a purchase order with reference to another document, you can enter the number of the document and the number of the item directly in the corresponding fields in the item overview.

   Determine whether this statement is true or false.

   [X] True

   [ ] False

   That is correct. To create a purchase order with reference to another document, you can also enter the number of the document and the number of the item directly in the corresponding fields in the item overview of a purchase order.

8. Which of the following are the steps of the procurement process?

   Choose the correct answers.

   - [x] A Purchase order
   - [x] B Goods receipt
   - [x] C Invoice receipt
   - [ ] D Purchase requisitions

9. Which of the following organizational levels are relevant for purchasing info records?

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   - [x] E Purchasing organization

10. Conditions can be defined in info records only if the info record was created manually.

    Determine whether this statement is true or false.

    - [ ] True
    - [x] False

11. If conditions are maintained in a purchasing info record, these conditions are always transferred to the purchase order.

    Determine whether this statement is true or false.

    - [ ] True
    - [x] False

    That is correct. The buyer has the final authority to determine the prices that go into a purchase order.

12. If no valid conditions are defined in an info record, the system never proposes a price in the purchase order.

    Determine whether this statement is true or false.

    [ ] True

    [X] False

    That is correct. Prices for POs can come from info-records or contracts and other procurement documents.

13. The valuation area can be set at which organizational levels?

    Choose the correct answers.

    [ ] A Client

    [X] B Company code

    [ ] C Purchasing organization

    [X] D Plant

    [ ] E Storage location

14. You must determine the plant as the valuation area if you want to use either of the components Production Planning or Product Cost Accounting.

    Determine whether this statement is true or false.

    [X] True

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15. Which of the following statements about the valuation class are correct?

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    Determine whether this statement is true or false.

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    Determine whether this statement is true or false.

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20. In which master records and documents can the checkbox or stock type quality inspection occur?

Choose the correct answers.

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21. A material document is generated as proof of a process that has caused a change in stock. If the goods movement is relevant to valuation, the system creates at least one accounting document in addition to the material document.

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22. You can enter planned and unplanned delivery costs in Logistics Invoice Verification.

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- [ ] False

23. The planned delivery costs are not shown in a separate line per condition.

Determine whether this statement is true or false.

- [ ] True
- [x] False

24. You can enter unplanned delivery costs on the Details tab page in the header data.

Determine whether this statement is true or false.

- [x] True
- [ ] False

25. You have mapped the following procurement process in the system: purchase order for stock material - goods receipt for purchase order - invoice receipt for purchase order with delivery costs that are 100% unplanned. Select all the accounts to which postings could be made within the framework of invoice entry.

Choose the correct answers.

- [x] A Vendor account
- [x] B GR/IR clearing account for external procurement
- [ ] C GR/IR freight clearing account
- [x] D Stock account
- [ ] E Account for gain from price differences
- [x] F Account for loss from price differences
- [x] G Account for input tax

UNIT 4 Consumable Material Procurement

UNIT OBJECTIVES

- Examine the procurement of consumable materials
- Create purchase requisitions
- Create a purchase order with reference to a purchase requisition
- Enter an order acknowledgment for a purchase order
- Enter valuated and non-valuated goods receipts
- Create blanket purchase orders

Unit 4
Lesson 1

Purchasing Consumable Materials

LESSON OVERVIEW

This lesson provides an overview of the procurement of consumable materials. The lesson also introduces the account assignment category required for the procurement process.

Business Example

In your company, certain materials, such as office supplies, are procured directly for cost centers. These materials are not subject to inventory management at the storage location. As a member of the project team, you are going to check the procurement process for consumable materials. For this reason, you require the following knowledge:

- An understanding of the differences between procurement of consumable materials and stock materials
- An understanding of the account assignment category

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Examine the procurement of consumable materials

Consumable Material

Consumable material describes material that is not valuated in inventory and is normally charged to an expense account or an asset. Therefore, a consumable material is procured directly for an account assignment object. Examples of consumable materials are office supplies, computer systems, or machines.

When a material is procured directly for consumption, no material master record is necessary.

Examples of consumable materials are as follows:

- Consumable material without material master record
- Consumable material with material master record that is not subject to inventory management on either a quantity or a value basis
- Consumable material with material master record that is subject to inventory management on a quantity, but not a value basis

The following attributes describe the types of procurement for consumable materials:

Type of Procurement	Attributes
Without a material master record	Manually enter a short description, a material group, and a purchase order unit in the document because this data cannot be taken from a master record.
With a material master record	The material type controls whether inventory management for a material is to take place on a value basis.

The following material types exist by default for consumable materials:

- Non-valuated material (Material Type UNBW)

  This type of material is subject to inventory management on a quantity basis, but not on a value basis. This applies to low-value materials that have stocks which need to be monitored (for example, operating manuals).

- Non-stock material (NLAG) (Material Type NLAG)

  Inventory management is not possible for these materials either on a quantity or a value basis. For frequently required consumables, the use of this material type enables you to store the information required to create purchasing documents (such as texts and units of measure).

You can procure stock material for stock and for direct consumption. For example, purchasing trading goods for a particular customer sales order.

You can enter an account assignment for each item of a purchasing document or a purchase requisition if it is intended for direct consumption. In certain cases, however, account assignment is mandatory.

You must enter an account assignment for an item under the following circumstances:

- If you order a material that is not subject to value-based inventory management. In this case, you need to post the value of the material directly to consumption
- If you order an article that does not have a material master record
- If you order a service

Account Assignment Category

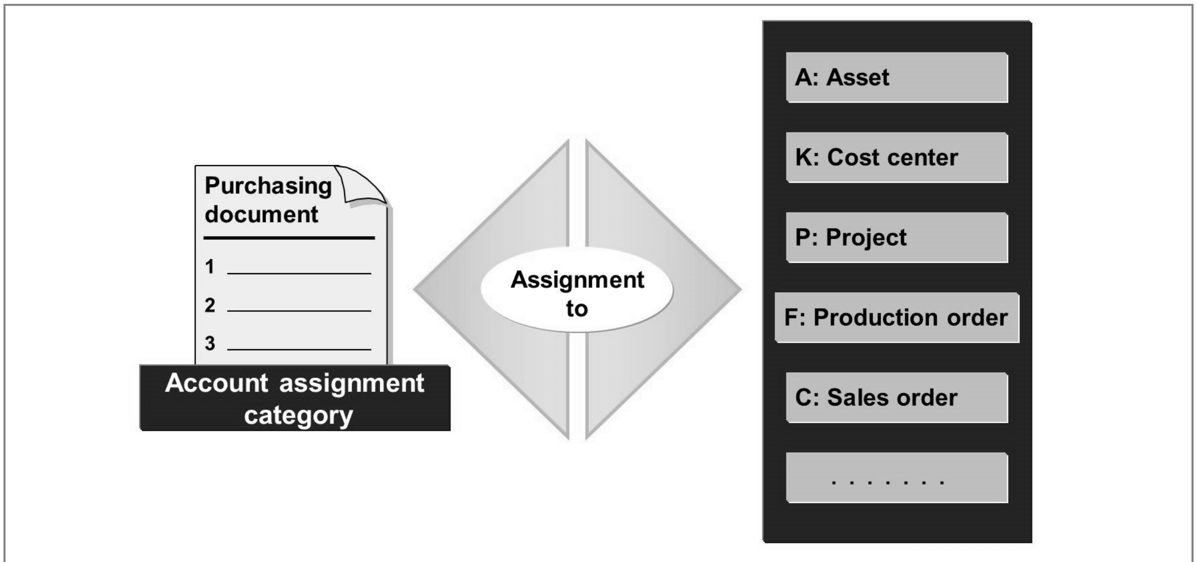


Figure 94: Account Assignment Objects

To procure a consumable material you must specify the following information in the purchasing document:

- Account assignment category
- Additional account assignment data

The account assignment category determines the following decisions:

- The account assignment object category that is charged
- The account assignment data that must be provided
- The accounts that are debited when the goods receipt or the invoice is posted

Examples of account assignment object cost center (account assignment category K) are as follows:

- When you make an account assignment to a cost center, you must enter, on the *Account Assignment Data* screen, the General Ledger (G/L) account number of the consumption account and the cost center for which the material is to be procured.
- You must specify in Customizing that the system automatically proposes the number of the G/L account to be charged.

Examples of account assignment object asset (account assignment category A) are as follows:

- If you use account assignment category A, you must enter the asset number on the account assignment data screen.
- The system automatically determines the G/L account to be charged from the asset number. You cannot enter it manually.

Note:
It is possible to define further account assignment categories or change existing ones in Customizing. (*Customizing → Materials Management → Purchasing → Account Assignment → Maintain Account Assignment Categories*)

Purchase Order with Account Assignment

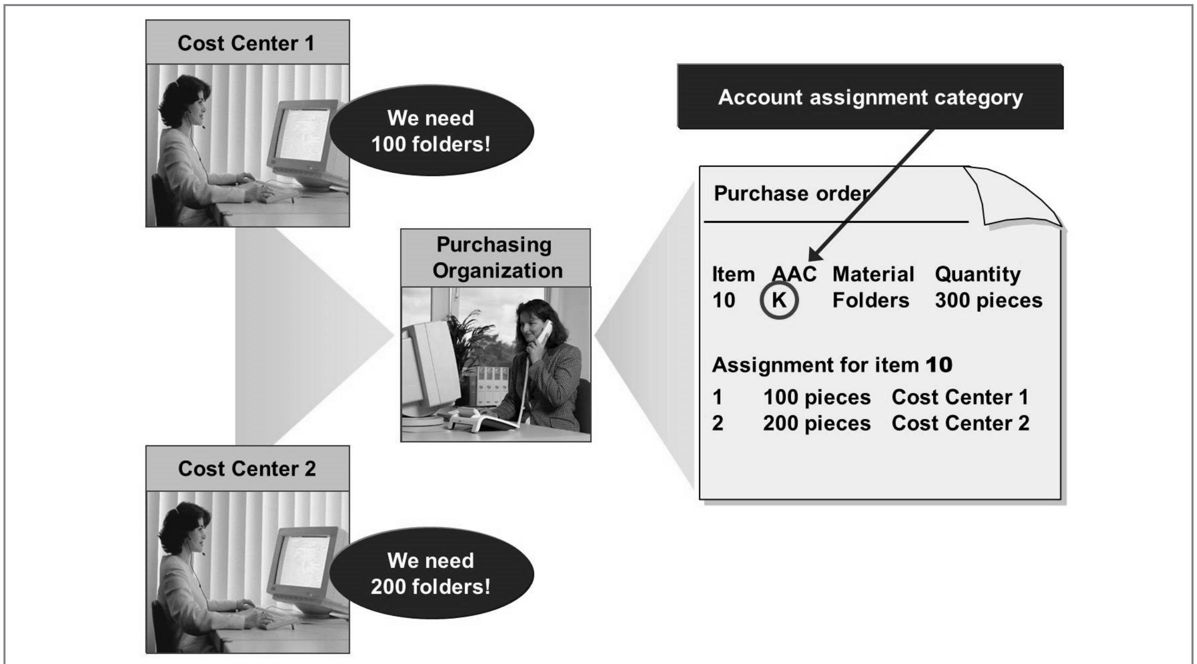


Figure 95: Purchase Order with Account Assignment

You can specify one or more account assignments for an item. If you specify multiple account assignments, you must also specify how the purchase order quantity is to be distributed among the individual account assignment objects.

Distribution can be on a quantity or percentage basis. If you enter a multiple account assignment for an item, the *Non-Valuated Goods Receipt (GR)* checkbox is automatically set for the item.

In addition, you must specify how the costs are to be distributed for the item if only part of the ordered quantity is initially delivered and invoiced.

The partial invoice amount can be distributed in the following ways:

- The amount can be distributed among the account assignment items of a purchase order item proportionally (in accordance with the distribution ratio).
- The amount can be distributed among the account assignment items of a purchase order item on a progressive fill-up basis (in sequence). In this procedure, account assignment item 1 is completed first, then account assignment item 2, and so on, until the invoice value is reached.

The *partial invoice* checkbox can also be derived automatically from the account assignment category if a *partial invoice* checkbox is specified in Customizing for the account assignment category.

Hint:
As of Enhancement Package 4 of SAP ERP 6.0, a valuated goods receipt can also be posted for purchase order items with multiple account assignment. To do this, you must activate the business function LOG_MM_MAA_1. You can use this business function to post a valuated goods receipt for multiple account assignment and to manage the distribution based on quantity, percentage, and value (new).

From an invoice, you usually cannot identify if the invoice relates to a purchase order with an account assignment. You can see this in the item list in *Logistics Invoice Verification*, where the *Account Assignment* column shows you if the purchase order has an account assignment. You can display the account assignment information and, under certain circumstances, change it.

Special display variants are available for the item list when you enter an invoice for a purchase order with account assignment.

Procurement Process for Consumption

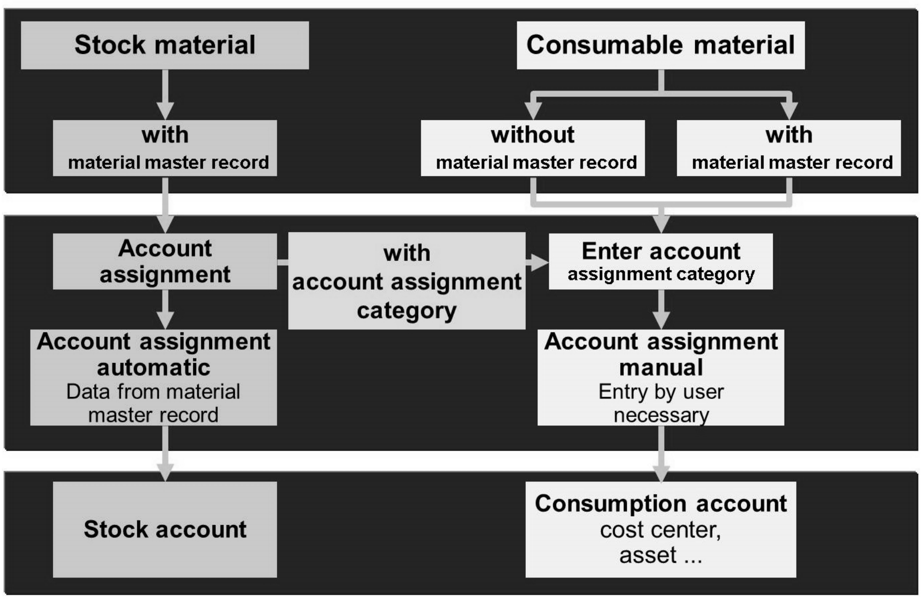


Figure 96: Procurement for Consumption (1)

A material master record is necessary for stock material. You do not specify an account assignment category in the purchase order. The system determines the account assignment data from the material master record using the valuation class. The system posts the stock value to a stock account during goods receipt. The system updates the stock value and stock quantity in the material master record.

When you procure a consumable material, the material may be a special consumable material with a master record or a material without a master record. However, you can procure stock material for consumption. In all cases, you must specify an account assignment category and other dependent account assignment data, such as an account assignment object and G/L account (consumption account). The system debits the consumption account that you have specified in the purchase order with the procurement value at the time of goods receipt and/or invoice receipt. The system updates the data for the account assignment object.

Stock Material and Consumable Material – Comparison

The following table shows the differences between stock material and consumable material:

Stock Material	Consumable Material
Necessary to enter material number	Entry of material not necessary but possible
No account assignment category	Account assignment category mandatory
Goods receipt mandatory	Goods receipt optional
Posting to stock accounts	Posting to consumption accounts
Quantity, value, and consumption updated in material master record	No value update; quantity and consumption update in material master record possible
Adjustment of moving average price	

LESSON SUMMARY

You should now be able to:

- Examine the procurement of consumable materials

Unit 4
Lesson 2

Creating Purchase Requisitions

LESSON OVERVIEW

This lesson introduces the purchase requisition as an in-house instrument for entering requirements. The creation of purchase requisitions is shown using an example of consumable material with and without a material master record.

Business Example

You regularly require spare parts in your plant maintenance department. You do not want to create material master records for these parts if the requirement is not recurring. You want to test how you can use a purchasing requisition to process the internal requirements of these materials directly for an account assignment object. For this reason, you require the following knowledge:

- How to use transaction `ME51N` for purchase requisitions
- How to create a purchase requisition with items with single and multiple account assignments
- How to request a material without a material master record

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create purchase requisitions

Purchase Requisitions in Procurement

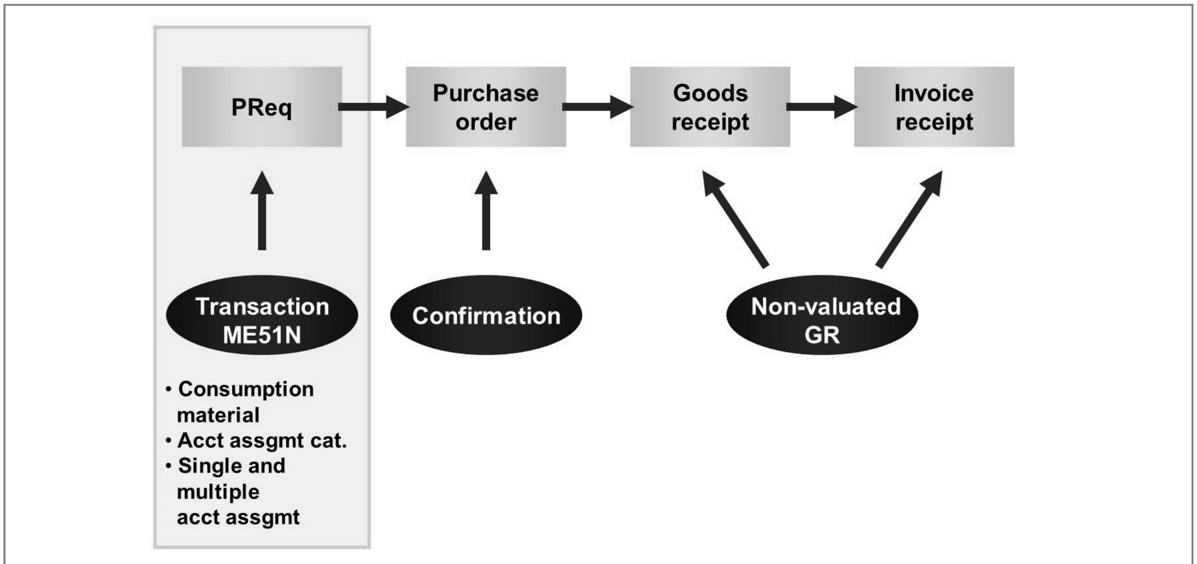


Figure 97: Consumable Material Procurement – Purchase Requisition

In procurement, the internal requisition for materials or services triggers a procurement process.

Purchase requisitions are used for internal requirements gathering and are eventually converted to purchase orders by the purchasing department.

A purchase requisition can be created directly or indirectly with the following characteristics:

- Direct

  The purchase requisition is created manually by a person from the requesting department. The person creating the requisition determines which material or service is ordered, the quantity, and the delivery date.

- Indirect

  The purchase requisition is initiated automatically from another SAP component

Indirect requisitions can be created in the following ways:

- Based on material requirements planning (MRP)
- Through maintenance orders
- Through production orders
- Through networks

Purchase requisitions can also come from *SAP Supply Chain Management (SAP SCM)* or *SAP Supplier Relationship Management (SAP SRM)*.

Purchase Requisitions

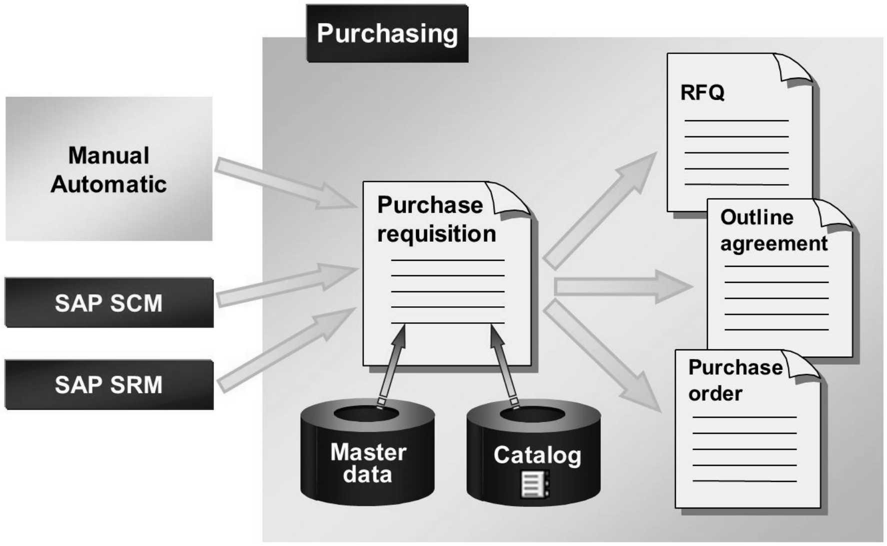


Figure 98: Purchase Requisitions

When you create a purchase requisition for materials that have a material master record, the system transfers data from the material master record to the purchase requisition. As of SAP ERP 6.0, you also have the option of selecting items from a Web-based catalog.

> Hint:
> For more information about the integration of catalogs in Purchasing, see the SAP documentation under *SAP ERP Central Component* → *Logistics* → *Materials Management (MM)* → *Purchasing (MM-PUR)* → *Further Functions* → *Integration of Web-Based Catalogs in Purchasing*.

You can convert purchase requisitions into Request for Quotations (RFQs), purchase orders, or outline agreements.

Purchase Requisition Creation

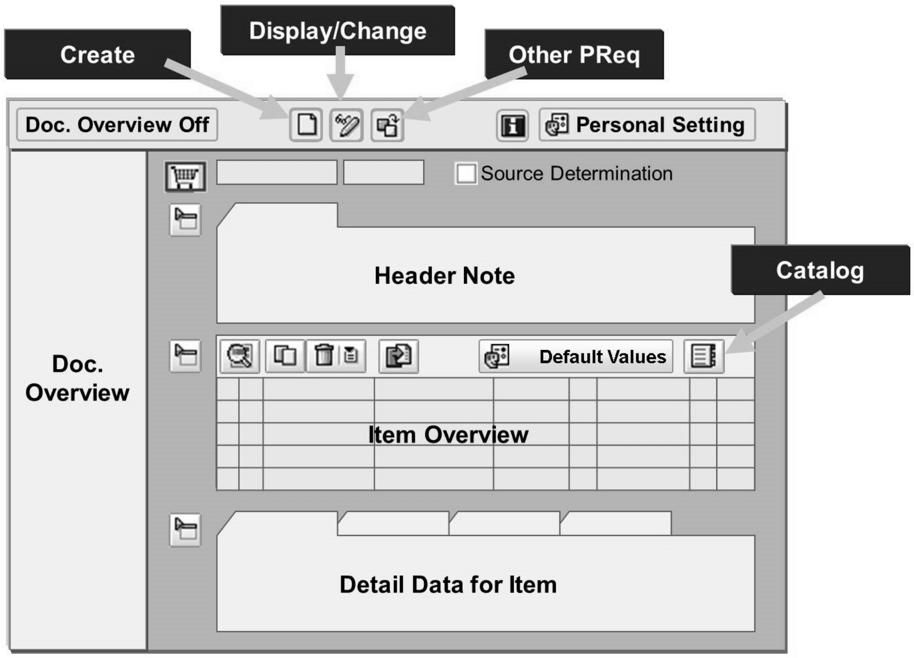


Figure 99: Purchase Requisition with ME51N, ME52N, ME53N

The transactions for creating, changing, or displaying a purchase requisition (`ME51N`, `ME52N`, `ME53N`) are single-screen transactions that are similar to the purchase order. The division into different screen areas (header data, item overview, item details, and document overview) and the operation correspond with the purchase order transaction.

The header data in the purchase requisition transactions consists only of an internal header memo.

Entering the Account Assignment

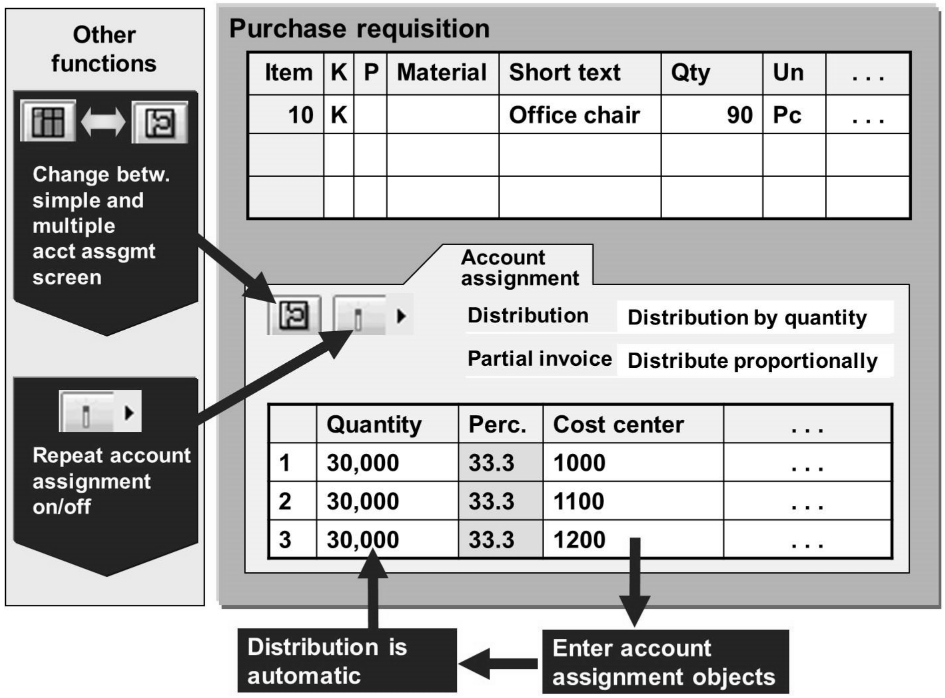


Figure 100: Single or Multiple Account Assignment

If you want to request materials or services directly for an account assignment object, specify the corresponding account assignment category in the item overview. For example, if you want to request materials or services for your cost center or for an asset, you must specify the account assignment category and data. This means that you have to enter additional account assignment data in the item detail on the *Account Assignment* tab page.

If you have the single account assignment screen displayed on the *Account Assignment* tab page, you can use (*Multiple Account Assignment*) to switch to the *Multiple Account Assignment* screen. On the *Multiple Account Assignment* screen, you choose (*Single account assignment*) to switch to the *Single Account Assignment* screen. The system makes a note of your last setting. On the *Multiple Account Assignment* screen, you can also create single account assignments.

With multiple account assignments, you can distribute the costs of one purchase order item among several cost centers. In this case, the created account assignment data represents individual account assignment items. With multiple account assignment for an item, you must decide whether the value of the item is to be distributed on a quantity basis or as a percentage, for example, 10 pieces or 10% of the purchase order value to cost center 1000.

Hint:
As of Enhancement Package 4 of SAP ERP 6.0, you can also split the value directly. To do this, you must activate the business function LOG_MM_MAA_1.

If there are partial invoices, you can decide from the following choices:

- Whether the partial invoice amount is distributed proportionally to the account assignment items

- Whether the partial invoice amount is distributed in sequence to the account assignment items

If you want to distribute the quantity in a purchase requisition item with account assignment to several account assignment items, you need to enter the account assignments, but not the proportional amounts. The system automatically distributes the requested quantity in equal parts to the existing account assignment items. If you change the requested total quantity in the *item overview* screen, the quantity is adjusted in the relevant account assignment items. As soon as you change the quantity or percentage of the account assignment item, the system can no longer execute an automatic distribution.

Here is an example of automatic account assignment distribution.

You have requested 90 office chairs and assigned them equally to three cost centers. However, since you require 120 office chairs, you change the requested quantity in the *item overview* screen. The system then automatically changes the distribution so that 40 office chairs are assigned to each cost center.

> Hint:
>
> The icons (*Multiple Account Assignment*) and (*Single account assignment*) are also used in the purchase order transaction `ME21N`. But in a purchase order item with a multiple account assignment, the system cannot automatically distribute the ordered quantity in equal parts to the existing account assignment items.

Purchase Requisition Features

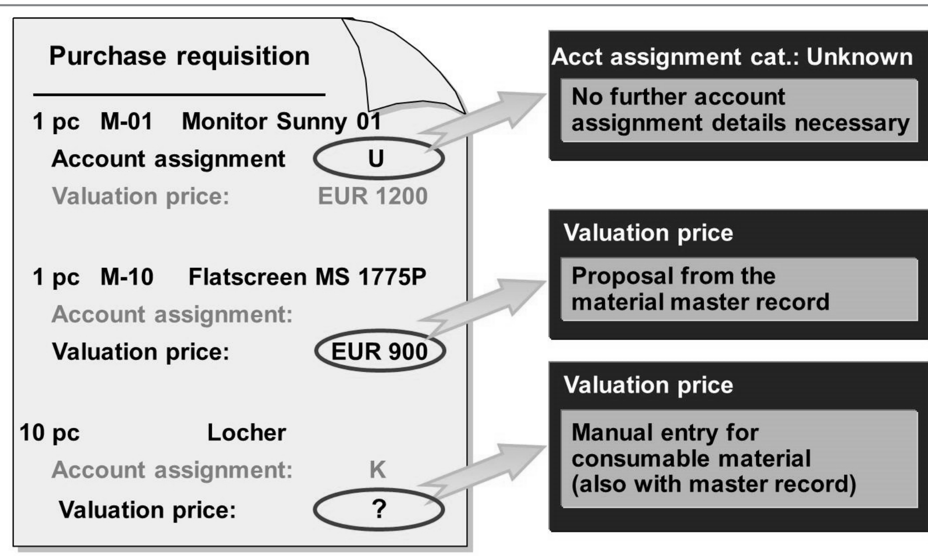


Figure 101: Features of Purchase Requisition

The most important characteristics of a purchase requisition are as follows:

- Account assignment category unknown

If you do not know the account assignment object for which the material is being procured when you create the purchase requisition, you can use account assignment category Unknown (*U)* in the purchase requisition item. Then you do not need to enter any more account assignment details. If you create a purchase order item with reference to this purchase requisition item, you must specify precise account assignment information because account assignment category *U* is not allowed in the purchase orders.

> Hint:
> Account assignment category *U* is allowed in purchase orders for external services and blanket purchase orders.

- Valuation price

  When you create a purchase requisition item for valuated material, the valuation price is taken from the material master record. For non-valuated material or material without a master record, you must manually enter the valuation price. You use this valuation price for a value-related release procedure. The release can refer to the value of the individual item or to the total value of the requisition. If a previously defined release strategy becomes effective, you can create a request or a purchase order with reference to a purchase requisition only after the system releases the purchase requisition.

> Hint:
> You can also dispense with the manual entry of a valuation price and use the fact that the valuation price is missing as a criterion for your release strategy.

Process Status and Creation Indicator

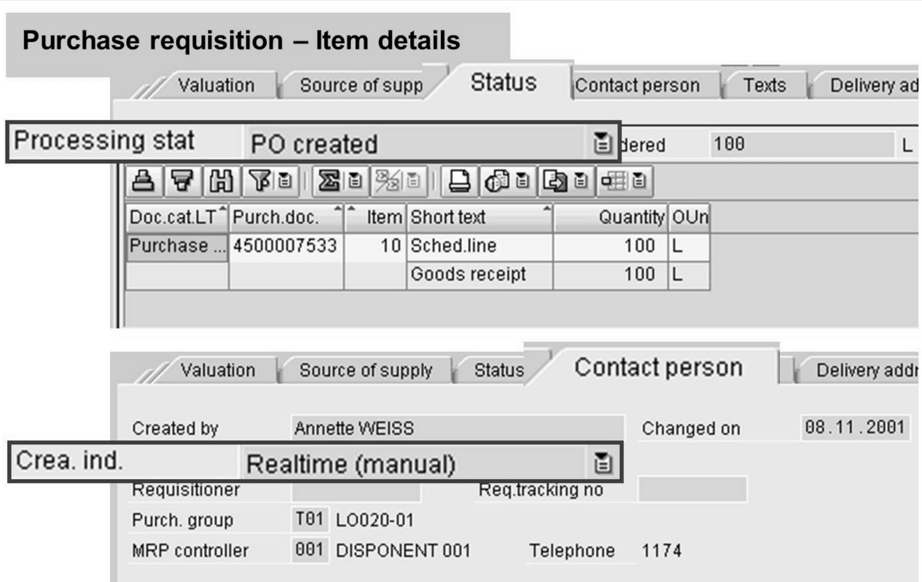


Figure 102: Processing Status and Creation Indicator

To trace if your purchase requisition item has been processed, evaluate the processing status of the purchase requisition item. You can see the processing status on the *Status* tab page in the item detail area. The processing status indicates if the item has been ordered, not ordered or requested, or if the item has been converted into an outline agreement.

The *Status* tab page lists the purchase order history of referenced purchasing documents (created with reference to the purchase requisition item). You can obtain information about previously posted goods receipts and invoices.

As a buyer, you can see how the system creates the purchase requisition manually or automatically, for example, through materials planning. In the item detail on the Contact person tab page, the Creation Indicator field can provide information.

Templates for Purchase Requisitions and Purchase Orders

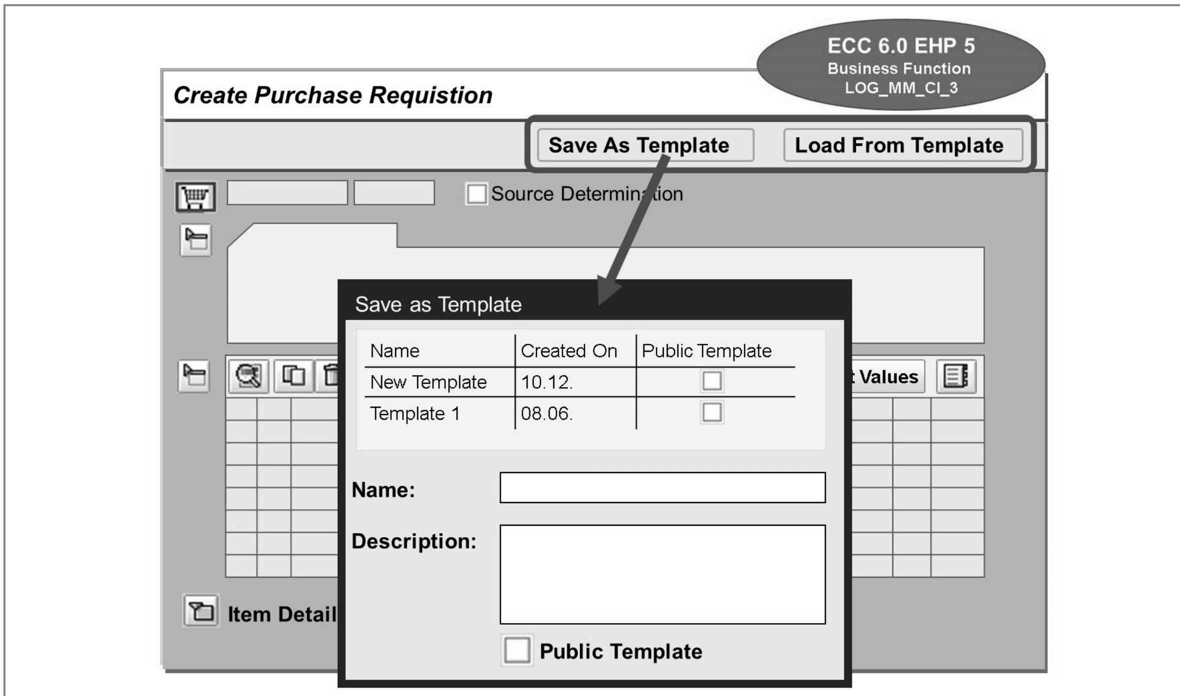


Figure 103: Templates for Purchase Requisitions

As of Enhancement Package 5 for SAP ERP 6.0, you can efficiently create purchase requisitions and purchase orders for materials that are requested or ordered frequently, thereby reducing the effort involved in data entry by using user-specific templates or public templates. The system makes public templates available to all users.

Templates can be used in the following transactions:

- To Create Purchase Requisition (`ME51N`) and Change Purchase Requisition (`ME52N`)
- To Create Purchase Order (`ME21N`) and Change Purchase Order (`ME22N`)

In these transactions, choose the *Save As Template* pushbutton or the *Load from Template* pushbutton. You see a dialog box in which you can save, load, or delete templates. When you save a template, you can define the template as a public template. When you load a template, you can decide whether you want to copy header and item data to the new purchasing document, or only the item data.

To save and delete public templates that are available to all users, you need the appropriate authorizations (authorization object create or change or delete Public Templates M_TEMPLATE). When you copy a user, the system copies the user-specific templates of the user to the new user master record.

> Hint:
> Before you can use the template function in purchase requisitions and purchase orders, you have to activate the business function LOG_MM_CI_3.

Unit 4
Exercise 15

Create Purchase Requisitions

Business Example

The various departments in your company report their material requirements to Purchasing using purchase requisitions. These purchase requisitions are then processed in the Purchasing department. To simplify processing, the Purchasing department provides a catalog containing the materials most frequently required by the other departments. This catalog contains both materials with master records and materials without master records. Each material in the catalog comes with a short text, vendor, price, and vendor material number. When a purchase requisition is created, items can be copied from the catalog.

Create a Purchase Requisition.

In the IT department, you need cordless optical mice, a stereo headset, and external hard disks. You can select the mice and the headset from the catalog. For the external hard disks, you need to enter all the relevant data manually.

1. Maintain personal settings.

   Before you create the purchase requisitions, maintain your personal default values. Enter the data for each item.

   Define the following values:

Field	Value
Pur. Group	**SCM500-## (T##)**
AcctAssCat	*Cost center* (K)
Delivery Date	<Today + 7 days>
Plant	**1000**
Tracking Number	**IT##**

2. Create purchase requisition with catalog items.

   Create a purchase requisition for a “Stereo Headset Basic X##” and 10 cordless mice of the model “Cordless Optical Mouse S##”.

   Use the catalog when you create the items for the headset and the mice. The purchasing organization for both items is 1000.

   Display the details of the catalog entries before you copy the items to your purchase requisition.

   Define the following values of account assignment for the individual items from the following list:

Material	Quantity	Cost Center	General Ledger (G/L) Account
Stereo Headset	1 piece	4100	400000
Cordless Optical Mouse	6 pieces	4100	400010
Cordless Optical Mouse	4 pieces	4110	400010

Hint:
To enter the multiple account assignment, go to the *Account Assignment* tab page and choose (*Multiple Account Assignment*).

This takes you from the single account assignment screen to the multiple account assignment screen.

When you have entered all the data in purchase requisition, check if a valuated goods receipt is provided for both items.

Save the purchase requisition.

Purchase requisition number: ____________________________

3. Create a purchase requisition for material without a master record.

   Create a purchase requisition for four external hard disks for plant 1000. Enter **`External Hard Disk 3.5”, 320 GB`** in the *Short Text* field. Enter **`PC`** in the *Unit of Measure* field and **`00208 (Hard Disks)`** in the *Matl Group* field. Enter **`EUR 85.00`** in the *Valuation Price* field and select the *GR Non-Val.* checkbox.

   Define the following values of the account assignment from the following table:

Material	Quantity	Cost Center	General Ledger (G/L) Account
External Hard Disks	1 piece	1000	400000
External Hard Disks	3 pieces	4100	400000

   Save your purchase requisition after you have entered all the data.

   Purchase requisition number: ____________________________

4. Display a list of the purchase requisitions for your requirement tracking number IT##.

Hint:
Use the general list display for purchase requisitions.

Choose *Purchasing* → *Purchase Requisition* → *List Displays* → *General* (`ME5A`).

Select the purchase requisition item from the list. What is the processing status of this item?

Status: ______________________________

Return to the list. This also shows the processing status of each requisition item.

Which items are assigned to a fixed vendor?

Items: ______________________________

Create Purchase Requisitions

Business Example

The various departments in your company report their material requirements to Purchasing using purchase requisitions. These purchase requisitions are then processed in the Purchasing department. To simplify processing, the Purchasing department provides a catalog containing the materials most frequently required by the other departments. This catalog contains both materials with master records and materials without master records. Each material in the catalog comes with a short text, vendor, price, and vendor material number. When a purchase requisition is created, items can be copied from the catalog.

Create a Purchase Requisition.

In the IT department, you need cordless optical mice, a stereo headset, and external hard disks. You can select the mice and the headset from the catalog. For the external hard disks, you need to enter all the relevant data manually.

1. Maintain personal settings.

   Before you create the purchase requisitions, maintain your personal default values. Enter the data for each item.

   Define the following values:

Field	Value
Pur. Group	**SCM500-## (T##)**
AcctAssCat	*Cost center* (K)
Delivery Date	<Today + 7 days>
Plant	**1000**
Tracking Number	**IT##**

   a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Requisition* → *Create* (`ME51N`).

   b) Choose the *Personal Setting* pushbutton.

   c) Choose the *Default Values* tab page.

   d) Choose *More Fields...* to add the plant and the purchasing group to the default values.

      In the *Change Layout* dialog box, select *Plant* and *Purchasing Group* from the *Hidden fields* list and choose (*Show selected fields*).

e) Choose ✔ (*Copy*).

f) Enter the following data on the *Default Values* tab page:

Field	Value
Pur. Group	**`SCM500-## (T##)`**
AcctAssCat	*Cost center* (K)
Delivery Date	Today + 7 days
Plant	**`1000`**
Tracking Number	**`IT##`**

g) Save your entries to save your personal default values. The system uses these default values in the purchase requisition until you change them again.

2. Create purchase requisition with catalog items.

   Create a purchase requisition for a "Stereo Headset Basic X##" and 10 cordless mice of the model "Cordless Optical Mouse S##".

   Use the catalog when you create the items for the headset and the mice. The purchasing organization for both items is 1000.

   Display the details of the catalog entries before you copy the items to your purchase requisition.

   Define the following values of account assignment for the individual items from the following list:

Material	Quantity	Cost Center	General Ledger (G/L) Account
Stereo Headset	1 piece	4100	400000
Cordless Optical Mouse	6 pieces	4100	400010
Cordless Optical Mouse	4 pieces	4110	400010

> Hint:
> To enter the multiple account assignment, go to the *Account Assignment* tab page and choose (*Multiple Account Assignment*).
>
> This takes you from the single account assignment screen to the multiple account assignment screen.

   When you have entered all the data in purchase requisition, check if a valuated goods receipt is provided for both items.

   Save the purchase requisition.

   Purchase requisition number: ______________________

a) Choose (*Catalog*). The system takes you to the catalog.

Use the description of the material, or part of the description, as the keyword for the selection. For example, you could enter Headset*## in the *Keyword* field when searching for the headset.

b) Select the required entry from the search result, enter the quantity you need, and choose the *Add to Cart* pushbutton.

c) Proceed as described under a) and b) for the material **Cordless Optical Mouse S##**. Choose the *View Cart* pushbutton.

d) To display the details for an item, select the *Short Description* column. You can use the *Next Item* pushbutton and the *Previous Item* pushbutton to switch between the detail views for the items. To return to the overview, choose the *Back to Cart Preview* pushbutton.

e) Choose the *Transfer All* pushbutton or the *Check out* pushbutton to copy the items from the catalog to the purchase requisition.

f) In the item detail for the first item, choose the *Account Assignment* tab page and enter **400000** in the *G/L account* field and enter **4100** in the *Cost Center* field. Choose the *Next item* pushbutton to open the details of the second item.

g) Choose (*Multiple Acct Assignment*) from the *Account Assignment* tab page and enter the account assignment data for the second item. Enter the following data for Quantity 6:

Field	Value
Quantity	**6**
Cost Ctr	**4100**
G/L Account	**400010**

h) On the second line, enter the following data on the *Account Assignment* tab page for *Quantity 4*:

Field	Value
Quantity	**4**
Cost Ctr	**4110**
G/L Account	**400010**

To check if a valuated receipt is provided for the item, choose the *Valuation* tab page in the item details. Ensure that the *Goods Receipt* checkbox is selected and the *GR NonVal*. checkbox is not selected for either item.

i) Save your entries and note the purchase requisition number.

3. Create a purchase requisition for material without a master record.

Create a purchase requisition for four external hard disks for plant 1000. Enter **External Hard Disk 3.5”, 320 GB** in the *Short Text* field. Enter **PC** in the *Unit of Measure* field and **00208(Hard Disks)** in the *Matl Group* field. Enter **EUR 85.00** in the *Valuation Price* field and select the *GR Non-Val*. checkbox.

Define the following values of the account assignment from the following table:

Material	Quantity	Cost Center	General Ledger (G/L) Account
External Hard Disks	1 piece	1000	400000
External Hard Disks	3 pieces	4100	400000

Save your purchase requisition after you have entered all the data.

Purchase requisition number: ____________________________

a) Enter the following data in the *Item Overview* area in the *Item 10* line:

Field	Value
Short Text	**External Hard Disk 3.5",320 GB**
Quantity/UoM	**4 PC**
Material Group	**00208(Hard Disks)**

b) Enter the following data on the *Account Assignment* tab page for *Quantity 1*:

Field	Value
Quantity	**1**
Cost Ctr	**1000**
G/L Acct	**400000**

c) Enter the following data on the *Account Assignment* tab page for *Quantity 3*:

Field	Value
Quantity	**3**
Cost Ctr	**4100**
G/L Acct	**400000**

d) Enter the following data in the *Item Detail* area on the *Valuation* tab page:

Field	Value
Valuation Price	**85**
Goods Receipt	**Checked**

Field	Value
GR Non-Val.	**Checked**

e) Save your entries and note the purchase requisition number.

4. Display a list of the purchase requisitions for your requirement tracking number IT##.

> Hint:
> Use the general list display for purchase requisitions.
>
> Choose *Purchasing* → *Purchase Requisition* → *List Displays* → *General* (`ME5A`).

Select the purchase requisition item from the list. What is the processing status of this item?

Status: ______________________________

Return to the list. This also shows the processing status of each requisition item.

Which items are assigned to a fixed vendor?

Items: ______________________________

a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Requisition* → *List Displays* → *General* (`ME5A`).

b) Enter **`IT##`** in the *Requirement tracking number* field and choose (*Execute*).

c) Double-click a purchase requisition item to branch to the purchase requisition.

d) Choose the *Status* tab page in the *Item Detail* area. The item has the status *Not edited*.

e) Go back to display the list again.

In the purchase requisitions list, the processing status *N* is in the third line for each item. If you select *N*, the F1 help and F4 help are available here. When you start the F4 help, you will receive the short description *Not edited*.

f) You can also see from the list that the vendor T-K500C## is already assigned to the two items that you selected from the catalog.

LESSON SUMMARY

You should now be able to:

- Create purchase requisitions

Unit 4
Lesson 3

Creating Purchase Orders with Reference to Purchase Requisitions

LESSON OVERVIEW

This lesson discusses the conversion of purchase requisitions into purchase orders. The lesson also introduces the confirmation categories that can be used for purchase orders. In addition, you will learn how to enter an order acknowledgment for a purchase order item.

Business Example

In your company, the material requirements reported internally by the cost center are converted into purchase orders by the purchasing department. For some of these purchase orders you want the vendors to send confirmations. For this reason, you require the following knowledge:

- How to create a purchase order with reference to a purchase requisition with account assignment
- How to enter an order acknowledgment for a purchase order

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create a purchase order with reference to a purchase requisition
- Enter an order acknowledgment for a purchase order

Conversion of Purchase Requisitions into Purchase Orders

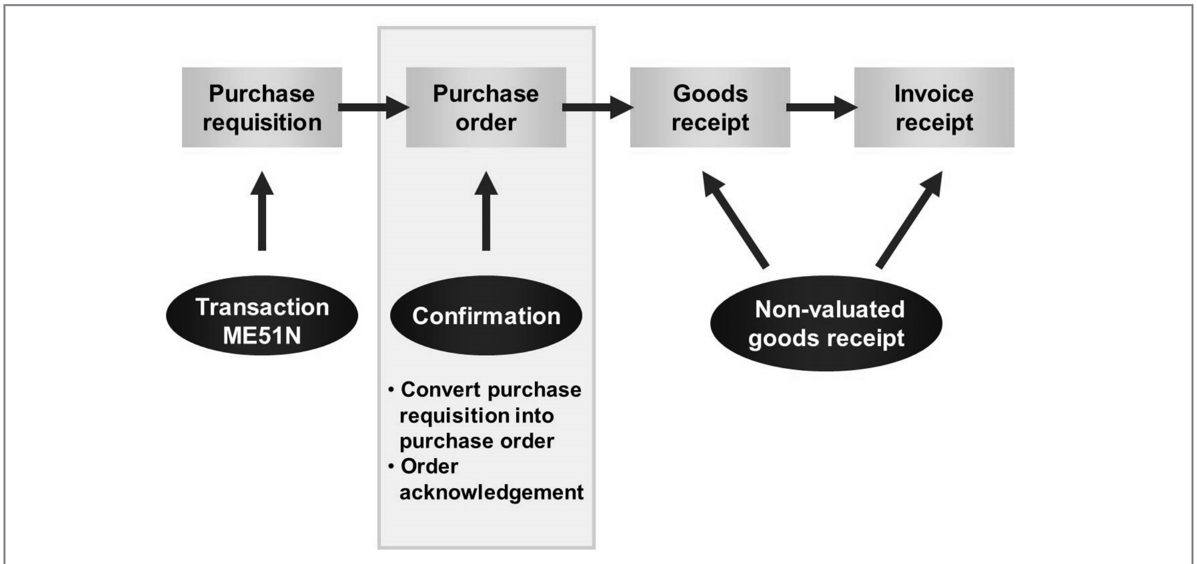


Figure 104: Consumable Material Procurement – Purchase Order

As a buyer, you must convert purchase requisitions created by the user department into purchasing documents. The purchasing document can be a purchase order, a contract release order, a scheduling agreement schedule line, or even a request for quotation (RFQ).

Various options are available for converting a purchase requisition to a purchase order. Before the actual conversion of a purchase requisition item, you can assign a source of supply (such as info record, outline agreement, or scheduling agreement) to the item.

> Hint:
> Sources of supply are assigned in the purchase requisition at item level, not at header level.

You can assign a source of supply to a purchase requisition item in different ways. For example, you can enter a source of supply when creating or changing a purchase requisition item on the *Source of Supply* tab page. You also can use the function source determination to let the system automatically determine the source of supply.

Purchase Requisition Conversion

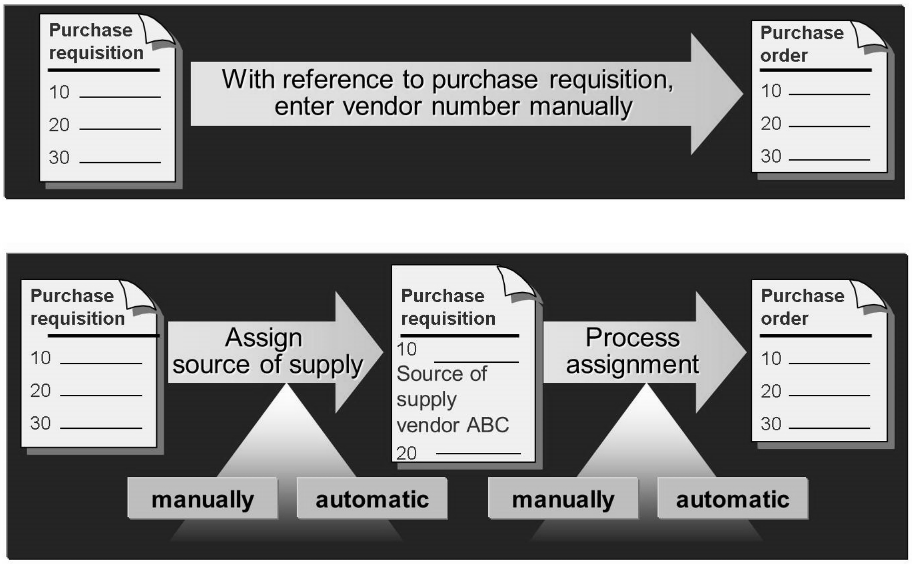


Figure 105: Converting Purchase Requisitions

You can manually or automatically convert a purchase requisition item with source of supply into a purchase order. The system copies the vendor information from the source of supply for the purchase requisition.

If you do not assign a source of supply in the purchase requisition item, you can still create a purchase order with reference to this purchase requisition item. In this case, you must manually enter the vendor information in the purchase order.

Special Features for Purchase Requisition Conversion

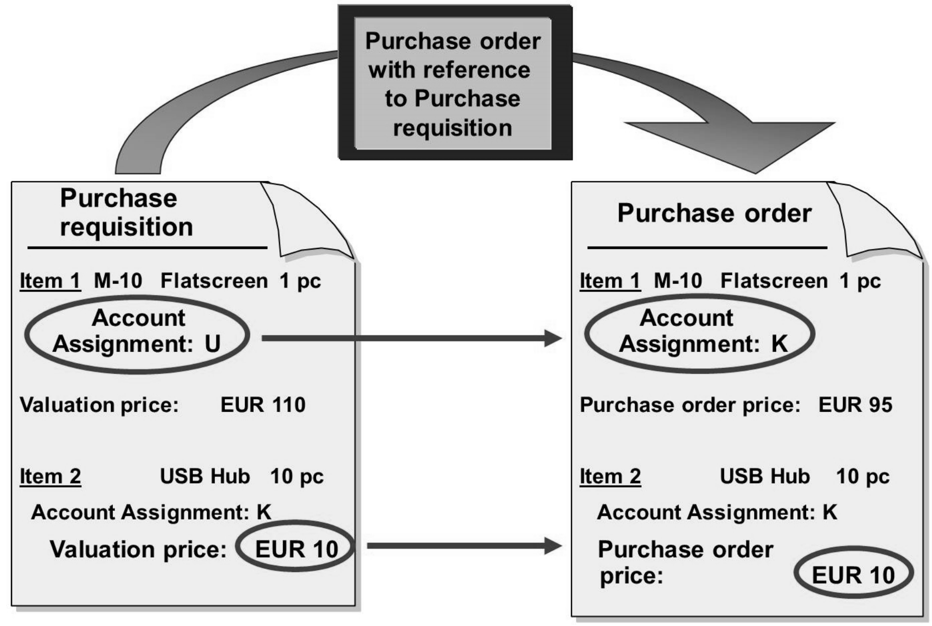


Figure 106: Copying Purchase Requisition Data to the Purchase Order

The following are special cases to be noted during conversion of purchase requisitions:

- Purchase requisition items with the account assignment category Unknown (*U*)

  The system only allows the account assignment category *U* in the purchase order in connection with the item categories Service and Limit. In all other situations, you must select a valid account assignment object and maintain the corresponding account assignment details when creating the purchase order.

- Purchase requisition items with material master record

  If an info record exists for the vendor and the material, the system proposes the purchase price from the info record when you create a purchase order with reference to a purchase requisition (without source of supply). If this is not the case, you must enter the price manually. The valuation price from the purchase requisition item is not transferred to the purchase order.

- Purchase requisition items without material master record

  If the system transfers a purchase requisition item without a material master to the purchase order, the system proposes the valuation price as the purchase price from the purchase requisition. The buyer can change this default price.

Create a Purchase Order with Reference to a Purchase Requisition

Business Example

As a member of the central Purchasing department, you are responsible for processing purchase requisitions for the different departments in your company. You will be able to create a purchase order with reference to a purchase requisition.

> Caution:
> You can do this exercise only if you created a purchase requisition earlier.

Create a purchase order with reference to a purchase requisition.

The purchase requisitions for the PC accessories need to be converted into purchase orders. Create a purchase order for each purchase requisition.

For the purchase requisition that contains catalog items, the vendor H.A.G. Potsdam Gr.## is already assigned as the source of supply for these items. The external hard disks are also ordered from the vendor H.A.G. Potsdam Gr.##.

1. Create a purchase order for the headset and the cordless optical mouse.

   Create a purchase order with reference to your first purchase requisition. The vendor T-K500C## (H.A.G. Potsdam Gr.##) will be adopted automatically from the purchase requisition.

   > Hint:
   > In the document overview, either choose the current purchase requisitions for your requirement tracking number IT## or choose the selection variant *My Purchase Requisitions*.

   Check whether the account assignment data and the control for the valuated goods receipt are adopted from the purchase requisition to the purchase order.

   Save your purchase order and make a note of the number.

   Purchase order number: ______________________________

2. Create a purchase order for external hard disks.

   Create a purchase order with reference to your second purchase requisition.

   Enter **`T-K500C##`** in the *Vendor* field for this purchase order.

After consultation with the vendor, the price for the hard disks is calculated at EUR 80 per piece. Adjust the purchase order price accordingly.

For this purchase order, check whether the account assignment data and the control for the non-valuated goods receipt have been adopted correctly from the purchase requisition.

You also want to receive an order acknowledgement from the vendor for the hard disks. Therefore, specify the confirmation control key Order Acknowledgement on the *Confirmations* tab page of the item detail.

Save your purchase order immediately after entering all the data.

Purchase order number: ________________________

3. Display the purchase requisition.

   Display one of your converted purchase requisitions. What is the processing status of the purchase requisition items?

   Status: ________________________________

4. Display purchase order for hard disks.

   Display your purchase order for the hard disks. Where do you look in the purchase order to find out whether a purchase order item was created with reference to a purchase requisition?

   Do not leave the purchase order transaction after this.

Unit 4
Solution 16

Create a Purchase Order with Reference to a Purchase Requisition

Business Example

As a member of the central Purchasing department, you are responsible for processing purchase requisitions for the different departments in your company. You will be able to create a purchase order with reference to a purchase requisition.

> Caution:
> You can do this exercise only if you created a purchase requisition earlier.

Create a purchase order with reference to a purchase requisition.

The purchase requisitions for the PC accessories need to be converted into purchase orders. Create a purchase order for each purchase requisition.

For the purchase requisition that contains catalog items, the vendor H.A.G. Potsdam Gr.## is already assigned as the source of supply for these items. The external hard disks are also ordered from the vendor H.A.G. Potsdam Gr.##.

1. Create a purchase order for the headset and the cordless optical mouse.

   Create a purchase order with reference to your first purchase requisition. The vendor T-K500C## (H.A.G. Potsdam Gr.##) will be adopted automatically from the purchase requisition.

   > Hint:
   > In the document overview, either choose the current purchase requisitions for your requirement tracking number IT## or choose the selection variant *My Purchase Requisitions*.

   Check whether the account assignment data and the control for the valuated goods receipt are adopted from the purchase requisition to the purchase order.

   Save your purchase order and make a note of the number.

   Purchase order number: ____________________________

   a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known* (`ME21N`).

b) If you have opened the document overview, choose the *Document Overview On* pushbutton.

c) Choose (*Selection Variants*) and select *My purchase requisitions* from the list.

You can also choose the selection variant *Purchase requisitions*. Enter **`IT##`** in the *Requirement tracking number* field, delete all the other selection values, and choose (*Execute*).

d) Select your purchase requisition with two items in the document overview and choose (*Adopt*).

Alternatively, you can drag the purchase requisition to the shopping cart.

e) Open the *Item Detail* area and check the data on the *Account Assignment* and *Delivery* tab pages for both items.

f) Choose (*Save*) and make a note of the purchase order number.

2. Create a purchase order for external hard disks.

Create a purchase order with reference to your second purchase requisition.

Enter **`T-K500C##`** in the *Vendor* field for this purchase order.

After consultation with the vendor, the price for the hard disks is calculated at EUR 80 per piece. Adjust the purchase order price accordingly.

For this purchase order, check whether the account assignment data and the control for the non-valuated goods receipt have been adopted correctly from the purchase requisition.

You also want to receive an order acknowledgement from the vendor for the hard disks. Therefore, specify the confirmation control key Order Acknowledgement on the *Confirmations* tab page of the item detail.

Save your purchase order immediately after entering all the data.

Purchase order number: ___________________________

a) Choose *Logistics → Materials Management → Purchasing → Purchase Order → Create → Vendor/Supplying Plant Known* (`ME21N`).

b) Enter **`T-K500C##`** in the *Vendor* field.

c) If you have not opened the document overview, choose the *Document Overview On* pushbutton.

d) Choose (*Selection Variants*) and select *My purchase requisitions* from the list.

You can also choose the selection variant *Purchase Requisitions*. Enter **`IT##`** in the *Requirement tracking number* field, delete all the other selection values, and choose (*Execute*).

e) Select your second purchase requisition (one item) in the document overview and choose (*Adopt*).

Alternatively, you can drag the purchase requisition to the shopping cart.

f) Change the price from EUR *85* (default value from the purchase requisition) to EUR **80**.

g) Open the *Item Detail* area for the hard disks item. Choose the *Confirmations* tab page and in the *Conf. Control* list, select *Confirmation SCM500 (T-AB)*.

h) Choose (*Save*) and make a note of the purchase order number.

3. Display the purchase requisition.

   Display one of your converted purchase requisitions. What is the processing status of the purchase requisition items?

   Status: ______________________________

   a) If you have opened the document overview with your purchase requisitions, double-click the purchase requisition number to display a purchase requisition.

   b) Open the *Item Detail* area.

   c) Choose the *Status* tab page.

   The processing status of the three items is that the purchase order is created.

4. Display purchase order for hard disks.

   Display your purchase order for the hard disks. Where do you look in the purchase order to find out whether a purchase order item was created with reference to a purchase requisition?

   Do not leave the purchase order transaction after this.

   a) In the document overview choose (*Selection Variant*) and select *My purchase orders* from the list. Double-click the number of your last purchase order to display it.

   b) The numbers of the reference documents are displayed in the item overview for each item. Scroll to the right until you see the columns *Purchase Req.* and *Requisn Item*.

   c) Keep the purchase order displayed and make a note of the purchase order.

Order Acknowledgment for a Purchase Order

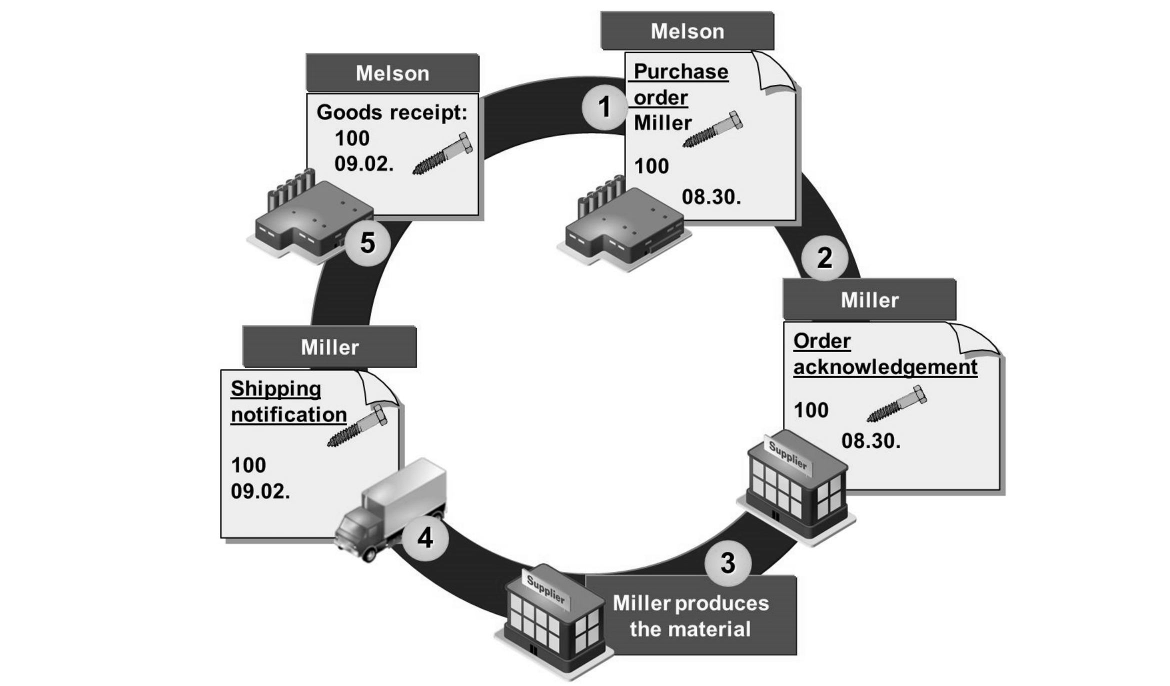


Figure 107: Order Acknowledgments

You can enter vendor acknowledgments for purchase orders or schedule agreement schedule lines. Confirmations are notifications that are sent to the vendors about the estimated arrival and quantity of ordered materials, such as order acknowledgment, loading or transportation confirmation, and shipping notification. You can manually enter confirmations that you receive, or receive them via Electronic Data Interchange (EDI) and have them processed automatically.

If you are using confirmations, you have the advantage that material requirements planning (MRP) does not exclusively depend on the vendor dates and vendor quantities in the purchase order or the schedule agreement schedule lines. Acknowledgments enable you to plan material requirements more accurately by providing reliable information about the delivery in the time span between the purchase order date and the expected delivery date. You can also monitor receipt of the required confirmations.

You must distinguish between confirmations that are entered directly in the purchasing document (order acknowledgment) and confirmations that represent individual documents (shipping notification).

If you need more than one confirmation category for a purchase document item, you use the confirmation control key. With this key you are able to build a chain of confirmations. For more detailed information, refer to the SAP Library under *Logistics → Materials Management → Purchasing → Confirmations.*

If you are expecting a confirmation for a purchase order item, enter a confirmation control key in the item detail area on the *Confirmations* tab page. If you want the vendor to submit outstanding order acknowledgments, you select the *Acknowl. Reqd.* checkbox.

When you receive the order acknowledgment from the vendor, you change your purchase order by entering the confirmation data (date, time, quantity, and number of order acknowledgment) in the purchase order on the *Confirmations* tab page.

> Note:
> You can only select the *Acknowl. Reqd.* checkbox without the confirmation control key. In this case you cannot enter the confirmed quantities and dates separately in the system. If the confirmed quantities and dates differ from the purchase order values, you have to change the original data in the purchase order.

Enter an Order Acknowledgment

Caution:
You need to have created a purchase requisition earlier before you can do this exercise.

Business Example

As a member of the central Purchasing department, you are responsible for processing purchase requisitions. You will enter an order acknowledgment.

Enter an order acknowledgment.

The order acknowledgment for the hard disks has been received and must be entered.

1. Enter the order acknowledgment in the purchase order.

   Display the purchase order in change mode and open the detail data for the external hard disks item. The *Confirmations* tab page includes a table in which you can enter the following vendor specifications.

Field	Value
Confirmation category	*AB (order acknowledgement)*
Delivery date	*Delivery date from purchase order*
Quantity	**`4 pieces`**
External document (reference)	**`AB-HAG##`**

   Save your changes.

   After you process the previous task, you will be able to display the purchase order for the hard disks.

Unit 4
Solution 17

Enter an Order Acknowledgment

Caution:
You need to have created a purchase requisition earlier before you can do this exercise.

Business Example

As a member of the central Purchasing department, you are responsible for processing purchase requisitions. You will enter an order acknowledgment.

Enter an order acknowledgment.

The order acknowledgment for the hard disks has been received and must be entered.

1. Enter the order acknowledgment in the purchase order.

   Display the purchase order in change mode and open the detail data for the external hard disks item. The *Confirmations* tab page includes a table in which you can enter the following vendor specifications.

Field	Value
Confirmation category	*AB (order acknowledgement)*
Delivery date	*Delivery date from purchase order*
Quantity	**4 pieces**
External document (reference)	**AB-HAG##**

   Save your changes.

   After you process the previous task, you will be able to display the purchase order for the hard disks.

   a) From the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/ Supplying Plant Known* **(ME12N)**

   b) Choose *Selection Variant* → *My purchase orders*

   c) Choose your purchase order for the external hard disks.

   d) Choose (*Display/Change*) to switch to change mode.

   e) Open the *Item Detail* area for the hard disks item.

f) Choose the *Confirmations* tab page and enter the data from the table above.

g) Save your entries.

LESSON SUMMARY

You should now be able to:

- Create a purchase order with reference to a purchase requisition
- Enter an order acknowledgment for a purchase order

Unit 4
Lesson 4

Entering Valuated and Non-Valuated Goods Receipts

LESSON OVERVIEW

This lesson examines the goods receipt (GR) and invoice receipt (IR). The posting in invoice verification is a focal point. For consumable material (in contrast to stock material), you can specify in the purchase order whether or not valuation is to take place at the time of the goods receipt. You can also completely dispense with the goods receipt entry.

Business Example

In your company, the costs of materials that are procured directly for a cost center are usually posted to consumption only when the invoice is entered. Therefore, you can learn about the valuation of goods receipts and invoice receipts for purchase orders with account assignments. For this reason, you require the following knowledge:

- How to differentiate between a valuated and a non-valuated goods receipt
- An understanding of the posting resulting from a non-valuated goods receipt during invoice entry

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter valuated and non-valuated goods receipts

Goods Receipt and Invoice Receipt for Consumable Material

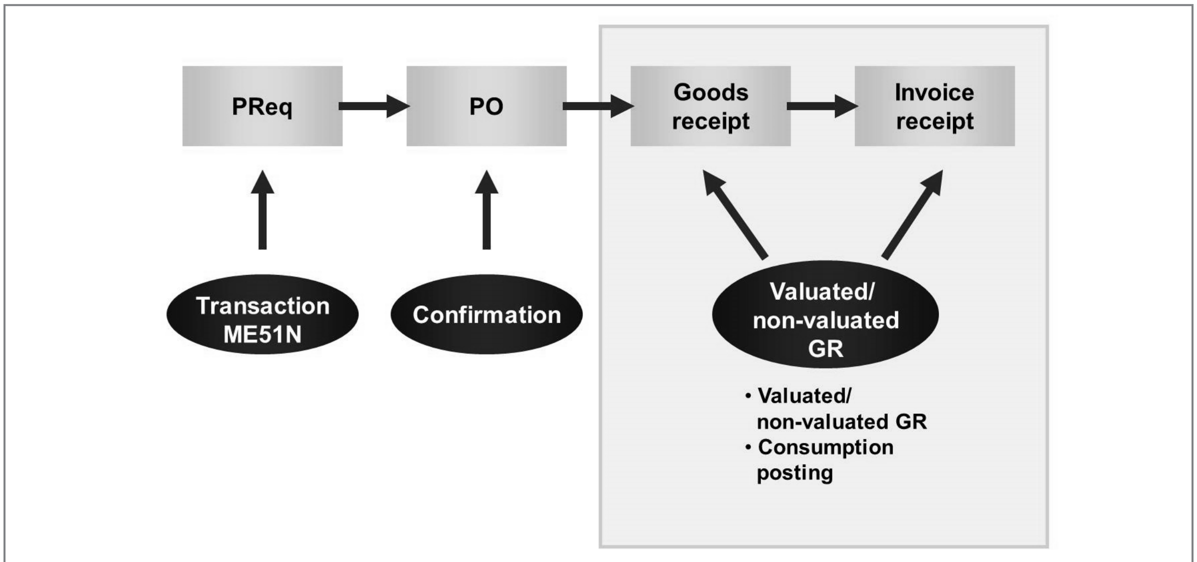


Figure 108: Consumable Material Procurement – Goods Receipt and Invoice Receipt

The account assignment entered in the purchase order affects how the procurement process functions. For example, a consumption account, and not a stock account is used for posting.

Procurement for Consumption

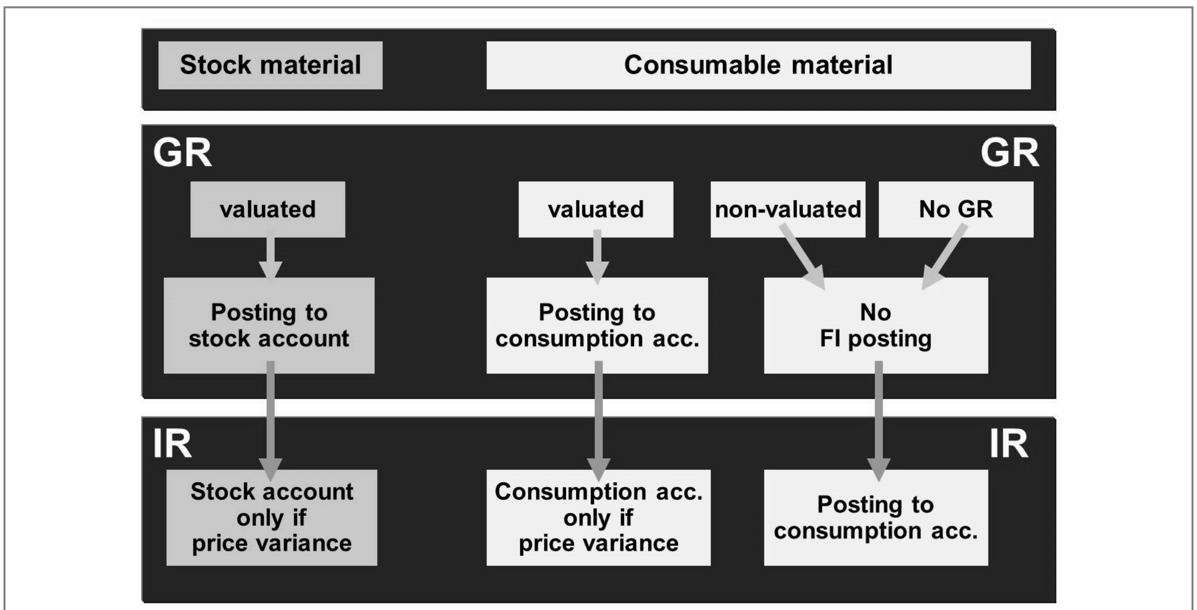


Figure 109: Procurement for Consumption

An important difference between the procurement of stock material and the procurement of consumable material is that in the latter, you can decide whether the goods receipt is to be valuated or non-valuated for order items with account assignments.

If you decide on a non-valuated goods receipt, no posting takes place in accounting at the time of the goods receipt. The value-based consumption posting does not take place until you post the invoice. The commitment, created by the purchase order item with account assignment, can be reduced only by entering an invoice.

Another alternative for purchase order items with account assignments is to perform without the goods receipt. In this case, Financial Accounting (FI) posting correspond to the posting of a non-valuated goods receipt.

The GR and GR Non-Val. checkboxes can be found in the following transactions:

- In the *Purchase Order* (either `ME21N` or `ME22N` or `ME23N`), in the *Item Detail* area on the *Delivery* tab page
- In the *Purchase Requisition* (either `ME51N` or `ME52N` or *ME53N*), in the *Item Detail* area on the *Valuation* tab page

If no updates have taken place in accounting at the time of the goods receipt, you can change the account assignment during invoice entry, if the account assignment category allows this.

Posting for Valuated or Non-Valuated Goods Receipt

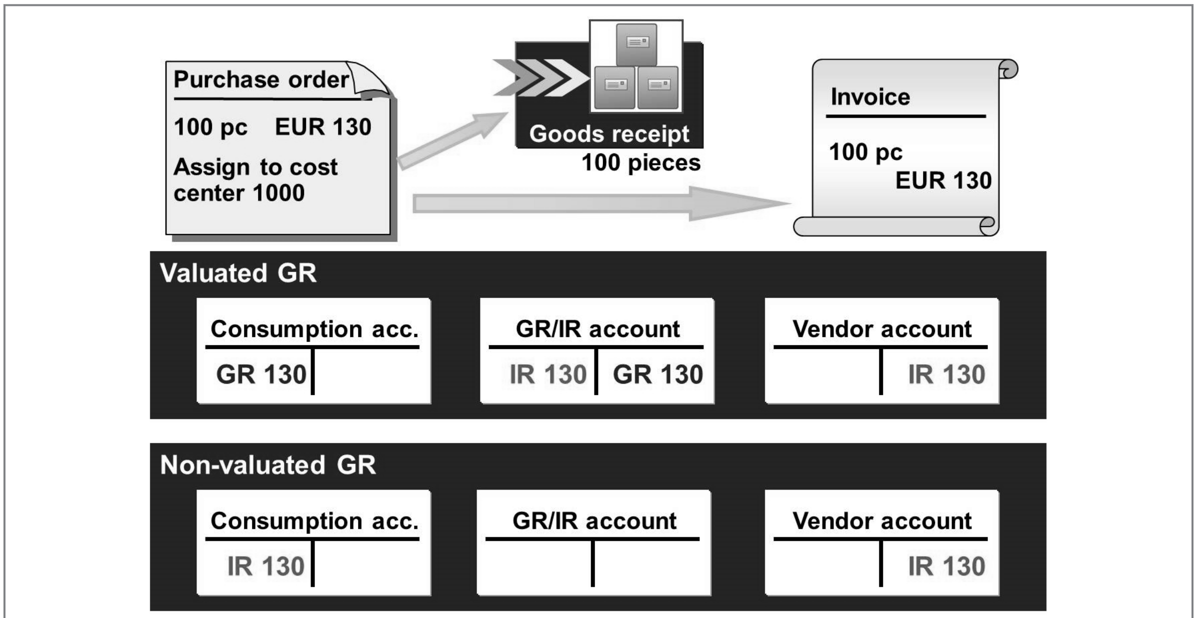


Figure 110: Posting for Valuated or Non-Valuated Goods Receipt

The figure shows the consumption account to be debited, as the purchase order item is assigned to an account assignment category. If the item were not assigned to an account assignment, it would have been debited to a stock account. For simplicity, the example does not include any taxes.

You can explain valuated goods receipt and non-valuated goods receipt as follows:

- Valuated Goods Receipt

At the time of the goods receipt, the system debits the consumption account that you specified in the purchase order item with the procurement price of EUR 130. The system posts an offsetting entry to the goods receipt/ invoice receipt (GR/IR) clearing account.

During invoice receipt, the system clears the GR/IR clearing account completely. The system posts an offsetting entry to the vendor account. If the invoice price varies from the order price, the corresponding difference will be posted to the consumption account.

- Non-valuated Goods Receipt

  At the time of the goods receipt, there are no posting to the consumption account. Therefore, posting to the GR/IR clearing account is not applicable.

  During IR, the system debits the consumption account with the invoice amount of EUR 130. The system posts an offsetting entry to the vendor account.

Unit 4
Exercise 18

Enter Goods Receipts for Consumable Materials

Business Example

The consumable materials you ordered are forwarded directly to the requesting department instead of being placed in storage.

Enter the valuated Goods Receipt (GR) and invoice entry and the non-valuated GR and invoice entry.

Valuated goods receipt and invoice entry

Vendor T-K500C## delivers the goods from the purchase order. The delivery contains the invoice in addition to the delivery note. Enter the goods receipt and the invoice for the purchase order, and check the correct update in accounting and purchase order history.

1. Enter goods receipt against the purchase order.

   Vendor T-K500C## delivers the headset and the optical mice to you. Enter the goods receipt for your relevant purchase order. Note the specifications of the delivery note.

   Post the goods receipt. Note the material document number.

   Material document number: ____________________________

   Do not leave the transaction after posting the goods receipt.

Delivery note

H.A.G. Potsdam Gr.##
Schopenhauer Str. 38
14467 Potsdam

IDES AG
Hamburg Plant
Altersdorfer Str. 13
22299 Hamburg

Delivery note number LS-C1##
Potsdam [Today's date]

With reference to your PO no. 45000xxxxx, we hereby deliver the following materials:

Item	Material number	Name	Quantity / UoM
10	--------------------	Stereo Headset Basic X##	1 pc
20	T-M500C##	Cordless Optical Mouse S##	10 pc

Sincerely,
H.A.G. Potsdam Gr.##

Figure 111: Delivery Note Number LS-C1##

2. Display the accounting document for the goods receipt.

Display the material document of the goods receipt you just entered.

Does an accounting document exist for this material document? Give reasons for your answer.

____

____

In the following table, check which accounts were posted with which amounts:

Item	Account	Account Short Text	Amount
1	400000	Consumption, raw material 1	24.00
2	191100	Goods Rcvd or Invoice Rcvd (third party)	24.00 (-)
3	400010	Raw materials consumed 2	108.00
4	191100	Goods Rcvd or Invoice Rcvd (third party)	108.00 (-)
5	400010	Raw materials consumed 2	72.00
6	191100	Goods Rcvd or Invoice Rcvd (third party)	72.00 (-)

3. Enter invoice.

   The vendor included the invoice with the goods delivery. Post the invoice. You can refer to the figure for the exact invoice data. Note the invoice document number.

Invoice

H.A.G. Potsdam Gr.##
Schopenhauer Str. 38
14467 Potsdam

IDES AG
Hamburg Plant
Altersdorfer Str. 13
22299 Hamburg

Invoice number: RE-C1##
Invoice date: [Today's date]

With reference to your PO no. 45000xxxxx, we hereby invoice you for the following materials:

Item	Qty / UoM	Material number	Name	Price
10	1 pc	--------------------	Stereo Headset Basic X##	EUR 24.00
20	10 pc	T-M500C##	Cordless Optical Mouse S##	EUR 180.00

Total net value	EUR 204.00
plus 10% VAT	EUR 20.40
Invoice amount	**EUR 224.40**

Subject to the agreed payment conditions.

Sincerely, H.A.G. Potsdam Gr.##

Figure 112: Invoice RE-C1##

Invoice document number: ______________________________

Do not leave the invoice entry transaction after you have posted the invoice.

4. Display the invoice accounting document.

   Display the accounting document for the invoice and check the posting in the following table:

Item	Account	Account Short Text	Amount
1	T-K500C##	H.A.G. Potsdam Gr.##	224.40 (-)
2	191100	Goods Rcvd or Invoice Rcvd (third party)	24.00
3	191100	Goods Rcvd or Invoice Rcvd (third party)	108.00
4	191100	Goods Rcvd or Invoice Rcvd (third party)	72.00
5	154000	Input tax	20.40

Which account is posted to the gross receipt and the invoice receipt?

After this task, do not leave the invoice document display.

5. Display the purchase order.

   Branch from the invoice document to the purchase order, and answer the following questions:

   Does the purchase order history have any special features that are not present when you procure stock material?

   Which checkbox in the purchase order controls whether the GR is valuated or non-valuated?

Enter Goods Receipt and Invoice for a Purchase Order

Non-valuated goods receipt and Invoice Entry

Vendor T-K500C## delivers the external hard disks, and the invoice. Enter the goods receipt and the invoice for the purchase order and check the correct update in accounting and the purchase order history.

1. Enter a Goods Receipt for a Purchase Order.

   Vendor T-K500C## delivers the four external hard drives. Enter the goods receipt for your relevant purchase order. Note the specifications of the delivery note.

   Post the goods receipt. Note the material document number.

   Material document number: ______________________________

   Do not leave the transaction after posting the GR.

Delivery note

H.A.G. Potsdam Gr.##
Schopenhauer Str. 38
14467 Potsdam

IDES AG
Hamburg Plant
Altersdorfer Str. 13
22299 Hamburg

Delivery note number LS-C2##
Potsdam [Today's date]

With reference to your PO no. 45000xxxxx, we hereby deliver the following materials:

Item	Material number	Name	Quantity / UoM
10	---------------	External Hard Disk 3.5", 320 GB, USB 2.0	4 pc

Sincerely,
H.A.G. Potsdam Gr.##

Figure 113: Delivery Note Number LS-C2##

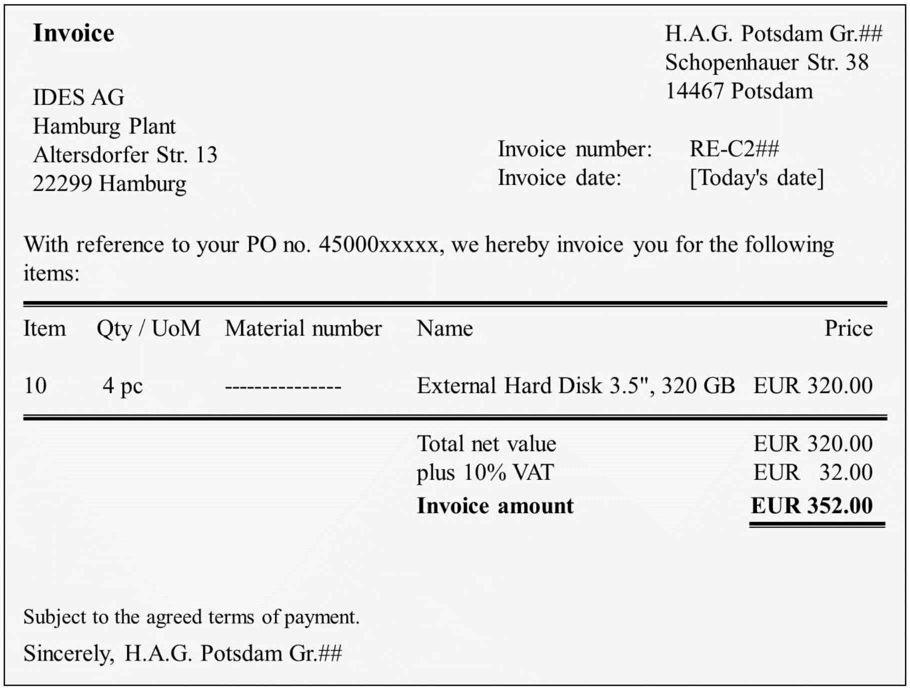
2. Display the accounting document for the goods receipt.

   Display the material document of the goods receipt you just entered.

   Does an accounting document exist for this material document? Give reasons for your answer.

3. Enter the invoice.

The vendor dispatched the relevant invoice with the second delivery. Post the invoice. You can refer to the following figure for the exact invoice data:



Invoice

H.A.G. Potsdam Gr.##
Schopenhauer Str. 38
14467 Potsdam

IDES AG
Hamburg Plant
Altersdorfer Str. 13
22299 Hamburg

Invoice number: RE-C2##
Invoice date: [Today's date]

With reference to your PO no. 45000xxxxx, we hereby invoice you for the following items:

Item	Qty / UoM	Material number	Name	Price
10	4 pc	---------------	External Hard Disk 3.5", 320 GB	EUR 320.00

Total net value	EUR 320.00
plus 10% VAT	EUR 32.00
Invoice amount	**EUR 352.00**

Subject to the agreed terms of payment.

Sincerely, H.A.G. Potsdam Gr.##

Figure 114: Invoice RE-C2##

Invoice document number: ______________________________

Do not leave the invoice entry transaction after you have posted the invoice.

4. Display the invoice accounting document.

   Display the accounting document for the invoice and note the posting in the following table:

Item	Account	Account Short Text	Amount
1	T-K500C##	H.A.G. Potsdam Gr.##	352.00 (-)
2	400000	Consumption, raw material 1	80.00
3	400000	Consumption, raw material 1	240.00
5	154000	Input tax	32.00

   Do not leave the invoice document display after this task.

5. Display the purchase order.

   Branch from the invoice document to the purchase order, and answer the following questions:

   Can you recognize from the purchase order history whether the goods receipt is valuated or non-valuated?

Which checkbox in the purchase order controls whether the GR is valuated or non-valuated?

Enter Goods Receipts for Consumable Materials

Business Example

The consumable materials you ordered are forwarded directly to the requesting department instead of being placed in storage.

Enter the valuated Goods Receipt (GR) and invoice entry and the non-valuated GR and invoice entry.

Valuated goods receipt and invoice entry

Vendor T-K500C## delivers the goods from the purchase order. The delivery contains the invoice in addition to the delivery note. Enter the goods receipt and the invoice for the purchase order, and check the correct update in accounting and purchase order history.

1. Enter goods receipt against the purchase order.

   Vendor T-K500C## delivers the headset and the optical mice to you. Enter the goods receipt for your relevant purchase order. Note the specifications of the delivery note.

   Post the goods receipt. Note the material document number.

   Material document number: ______________________________

   Do not leave the transaction after posting the goods receipt.

Delivery note

H.A.G. Potsdam Gr.##
Schopenhauer Str. 38
14467 Potsdam

IDES AG
Hamburg Plant
Altersdorfer Str. 13
22299 Hamburg

Delivery note number LS-C1##
Potsdam [Today's date]

With reference to your PO no. 45000xxxxx, we hereby deliver the following materials:

Item	Material number	Name	Quantity / UoM
10	--------------------	Stereo Headset Basic X##	1 pc
20	T-M500C##	Cordless Optical Mouse S##	10 pc

Sincerely,
H.A.G. Potsdam Gr.##

Figure 111: Delivery Note Number LS-C1##

a) Choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Receipt → For Purchase Order → PO Number Known* (MIGO).

b) Choose *Goods Receipt* as the transaction and *Purchase Order* as the reference. Enter **101** in the *GR Goods Receipt* field. Enter the purchase order number.

> Hint:
>
> Choose (*Find Purch. Order*). Enter **T-K500C##** in the *Vendor* field.
>
> Choose (*Find*). A separate screen area with the search result appears.
>
> Select the purchase order items for the headset and the optical mice, and choose (*Adopt*).
>
> Then, close the search result by choosing (*Close Search Result*).

c) Open the *Head. data* area and enter **LS-C1##** in the *Delivery Note* field on the *General* tab page.

d) Select the *Item OK* checkbox for the items. Note that you can select the checkbox in the *Detail data* area only if the *Detail data* area is open.

e) Choose *Post*, and make a note of the material document number.

Do not leave the transaction after posting the goods receipt.

2. Display the accounting document for the goods receipt.

Display the material document of the goods receipt you just entered.

Does an accounting document exist for this material document? Give reasons for your answer.

____

____

In the following table, check which accounts were posted with which amounts:

Item	Account	Account Short Text	Amount
1	400000	Consumption, raw material 1	24.00
2	191100	Goods Rcvd or Invoice Rcvd (third party)	24.00 (-)
3	400010	Raw materials consumed 2	108.00
4	191100	Goods Rcvd or Invoice Rcvd (third party)	108.00 (-)
5	400010	Raw materials consumed 2	72.00

Item	Account	Account Short Text	Amount
6	191100	Goods Rcvd or Invoice Rcvd (third party)	72.00 (-)

a) Choose *Display* as the transaction and *Material Document* as the reference.

b) The default proposal is the number of the material document you last edited. Choose (*Execute*).

c) Open the *Head. Data* area, choose the *Doc. info* tab page and the *FI Documents* pushbutton to branch to the accounting document.

d) In the *List of documents in Accounting* dialog box, double-click the accounting document number. Note the accounting document data in the table.

When you posted the GR, an accounting document was created because a valuated GR was provided for both purchase order items.

e) Go back to display the material document again.

3. Enter invoice.

The vendor included the invoice with the goods delivery. Post the invoice. You can refer to the figure for the exact invoice data. Note the invoice document number.

Invoice

H.A.G. Potsdam Gr.##
Schopenhauer Str. 38
14467 Potsdam

IDES AG
Hamburg Plant
Altersdorfer Str. 13
22299 Hamburg

Invoice number: RE-C1##
Invoice date: [Today's date]

With reference to your PO no. 45000xxxxx, we hereby invoice you for the following materials:

Item	Qty / UoM	Material number	Name	Price
10	1 pc	-------------------	Stereo Headset Basic X##	EUR 24.00
20	10 pc	T-M500C##	Cordless Optical Mouse S##	EUR 180.00
			Total net value	EUR 204.00
			plus 10% VAT	EUR 20.40
			Invoice amount	**EUR 224.40**

Subject to the agreed payment conditions.

Sincerely, H.A.G. Potsdam Gr.##

Figure 112: Invoice RE-C1##

Invoice document number: ____________________________________

Do not leave the invoice entry transaction after you have posted the invoice.

a) Choose *Logistics → Materials Management → Logistics Invoice Verification → Document Entry → Enter Invoice* (`MIRO`).

b) Enter the following data on the *Basic Data* tab page:

Field	Value
Invoice date	<Today's date>
Reference	**`RE-C1##`**
Amount	**`224.40`**
Tax amount	**`20.40`**
Tax code	*1I (input tax 10%)*

Note:
You may encounter a problem with the value amounts in this invoice. The values for the line items that are highlighted on the invoice must match the amount value in the *Basic Data* tab of the invoice. If your values do not match, manipulate them manually. You may also need to change the tax codes to *0I (Input tax 0%)* in the *Basic Data* tab and for the line item 10.

c) On the *PO Reference* tab page, choose *Purchase Order/Scheduling Agreement* as the reference document category and enter your purchase order number.

Hint:
If you want to search for the purchase order using help, enter **`T-K500C##`** in the *Vendor* field and then choose (*Execute*).

Select the purchase order in the results list and choose (*Copy*).

d) Choose (*Enter*) so that the system proposes the data from the purchase order.

e) If necessary, change the *Tax code* in the item to *1I (input tax for training purposes (10 %)*.

f) Choose (*Post*) and make a note of the number of the invoice document.
Do not leave the invoice entry transaction after you have posted the invoice.

4. Display the invoice accounting document.
Display the accounting document for the invoice and check the posting in the following table:

Item	Account	Account Short Text	Amount
1	T-K500C##	H.A.G. Potsdam Gr.##	224.40 (-)

Item	Account	Account Short Text	Amount
2	191100	Goods Rcvd or Invoice Rcvd (third party)	24.00
3	191100	Goods Rcvd or Invoice Rcvd (third party)	108.00
4	191100	Goods Rcvd or Invoice Rcvd (third party)	72.00
5	154000	Input tax	20.40

Which account is posted to the gross receipt and the invoice receipt?

After this task, do not leave the invoice document display.

a) To display the invoice document, choose (*Other Invoice Document*). The system populates the number of the invoice you last posted. Choose *Enter* to confirm this number.

b) Choose the *Follow-On documents* pushbutton.

c) In the *List of documents in Accounting* dialog box, double-click the accounting document number to display the accounting document.

Make a note of the posting in the table. The system posts data to the goods receipt/ invoice receipt (GR/IR) clearing account during gross receipt and invoice receipt.

d) Go back to display the invoice document again.

5. Display the purchase order.

Branch from the invoice document to the purchase order, and answer the following questions:

Does the purchase order history have any special features that are not present when you procure stock material?

Which checkbox in the purchase order controls whether the GR is valuated or non-valuated?

a) To branch to the purchase order, double-click the purchase order number in the item list of the invoice document.

b) Choose the *Purchase Order History* tab page in the *Item Details* area.

c) The purchase order history for this purchase order item with account assignment does not differ from the purchase order history for a stock material item.

d) Choose the *Delivery* tab page in the item detail data. The *GR non-valuated* checkbox is not selected. Therefore, the GR was valuated.

Enter Goods Receipt and Invoice for a Purchase Order

Non-valuated goods receipt and Invoice Entry

Vendor T-K500C## delivers the external hard disks, and the invoice. Enter the goods receipt and the invoice for the purchase order and check the correct update in accounting and the purchase order history.

1. Enter a Goods Receipt for a Purchase Order.

   Vendor T-K500C## delivers the four external hard drives. Enter the goods receipt for your relevant purchase order. Note the specifications of the delivery note.

   Post the goods receipt. Note the material document number.

   Material document number: ______________________________

   Do not leave the transaction after posting the GR.

Delivery note

H.A.G. Potsdam Gr.##
Schopenhauer Str. 38
14467 Potsdam

IDES AG
Hamburg Plant
Altersdorfer Str. 13
22299 Hamburg

Delivery note number LS-C2##
Potsdam [Today's date]

With reference to your PO no. 45000xxxxx, we hereby deliver the following materials:

Item	Material number	Name	Quantity / UoM
10	---------------	External Hard Disk 3.5", 320 GB, USB 2.0	4 pc

Sincerely,
H.A.G. Potsdam Gr.##

Figure 113: Delivery Note Number LS-C2##

a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Receipt* → *For Purchase Order* → *PO Number Known* (`MIGO`).

b) Choose *Goods Receipt* as the transaction and *Purchase Order* as the reference. Enter **`101`** in the *GR Goods Receipt* field. Enter the purchase order number.

> Hint:
>
> Choose (*Find Purch. Order*). Enter **`T-K500C##`** in the *Vendor* field.
>
> Choose (*Find*). A separate screen area with the search result appears.
>
> In the search result, select the purchase order item for the hard disks and choose (*Adopt*).
>
> Then, close the search result by choosing (*Close Search Result*).

c) Open the *Head. data* area and enter **`LS-C2##`** in the *Delivery Note* field on the *General* tab page.

d) Select the *Item OK* checkbox for the items. Note that you can select the checkbox in the *Detail data* area only if the *Detail data* area is open.

e) Choose *Post*, and make a note of the material document number.

Do not exit the transaction after posting the GR.

2. Display the accounting document for the goods receipt.

Display the material document of the goods receipt you just entered.

Does an accounting document exist for this material document? Give reasons for your answer.

a) Choose *Display* as the transaction and *Material Document* as the reference.

b) The default proposal is the number of the material document you last processed. Choose (*Execute*).

c) Open the *Head. Data* area, choose the *Doc. info* tab page and then the *FI Documents* pushbutton to branch to the accounting document.

The system issues the following message:

`No subsequent document found in Accounting.`

No accounting document was created during the goods receipt posting.

It was specified in the purchase order that the goods receipt is to be posted as non-valuated.

3. Enter the invoice.

The vendor dispatched the relevant invoice with the second delivery. Post the invoice. You can refer to the following figure for the exact invoice data:

Invoice

H.A.G. Potsdam Gr.##
Schopenhauer Str. 38
14467 Potsdam

IDES AG
Hamburg Plant
Altersdorfer Str. 13
22299 Hamburg

Invoice number: RE-C2##
Invoice date: [Today's date]

With reference to your PO no. 45000xxxxx, we hereby invoice you for the following items:

Item	Qty / UoM	Material number	Name	Price
10	4 pc	---------------	External Hard Disk 3.5", 320 GB	EUR 320.00

Total net value	EUR 320.00
plus 10% VAT	EUR 32.00
Invoice amount	**EUR 352.00**

Subject to the agreed terms of payment.

Sincerely, H.A.G. Potsdam Gr.##

Figure 114: Invoice RE-C2##

Invoice document number: ______________________________

Do not leave the invoice entry transaction after you have posted the invoice.

a) Choose *Logistics → Materials Management → Logistics Invoice Verification → Document Entry → Enter Invoice* (`MIRO`).

b) Enter the following data on the *Basic Data* tab page:

Field	Value
Invoice date	<Today's date>
Reference	**`RE-C2##`**
Amount	**`352 .00`**
Tax amount	**`32 .00`**
Tax code	*1I 1I (input tax 10%)*

c) On the *PO Reference* tab page, choose *Purchase Order/Scheduling Agreement* as the reference document category and enter your purchase order number.

> Hint:
> If you want to search for the purchase order using the F4 help, enter **T-K500C##** in the *Vendor* field and then choose (*Execute*).
>
> Select the purchase order in the results list and choose (*Copy*).

d) Choose (*Enter*) so that the system populates the data from the purchase order.

e) Choose (*Post*) and make a note of the number of the invoice document.
Do not leave the invoice entry transaction after you have posted the invoice.

4. Display the invoice accounting document.
Display the accounting document for the invoice and note the posting in the following table:

Item	Account	Account Short Text	Amount
1	T-K500C##	H.A.G. Potsdam Gr.##	352.00 (-)
2	400000	Consumption, raw material 1	80.00
3	400000	Consumption, raw material 1	240.00
5	154000	Input tax	32.00

Do not leave the invoice document display after this task.

a) To display the invoice document, choose (*Other Invoice Document*). The system populates the number of the last invoice you posted. Choose *Enter* to confirm this number.

b) Choose the *Follow-On documents* pushbutton.

c) In the *List of documents in Accounting* dialog box, double-click the accounting document number to display the accounting document.
Make a note of the posting in the table.

d) Go back to display the invoice document again.

5. Display the purchase order.
Branch from the invoice document to the purchase order, and answer the following questions:
Can you recognize from the purchase order history whether the goods receipt is valuated or non-valuated?
Which checkbox in the purchase order controls whether the GR is valuated or non-valuated?

a) To branch to the purchase order, double-click the purchase order number in the item list of the invoice document.

b) Choose the *Purchase Order History* tab page in the *Item Details* area.

The non-valuated GR can be recognized in the purchase order history because the amount in local currency for the *Goods Receipt* transaction is EUR 0.

c) Choose the *Delivery* tab page in the item detail data. You select the *GR non-valuated* checkbox. Therefore the GR was non-valuated.

LESSON SUMMARY

You should now be able to:

- Enter valuated and non-valuated goods receipts

Unit 4
Lesson 5

Creating Blanket Purchase Orders

LESSON OVERVIEW

This lesson discusses a simplified procurement process for consumable materials using the blanket purchase order. It allows you to eliminate the issue of individual release orders and the recording of goods receipts (GR) to minimize the costs of procuring materials, such as category C in ABC analysis.

Business Example

Your company procures all its office supplies from one specific retailer. It is not necessary to precisely monitor the issue of release orders and the delivery of materials in the system, so you test the blanket purchase order process. For this reason, you require the following knowledge:

- An understanding of the item category in purchasing documents
- An understanding of the special aspects of procuring materials using a blanket purchase order
- How to create a blanket purchase order
- How to enter invoices with reference to a blanket purchase order with *Logistics Invoice Verification*

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create blanket purchase orders

Blanket Purchase Order Creation

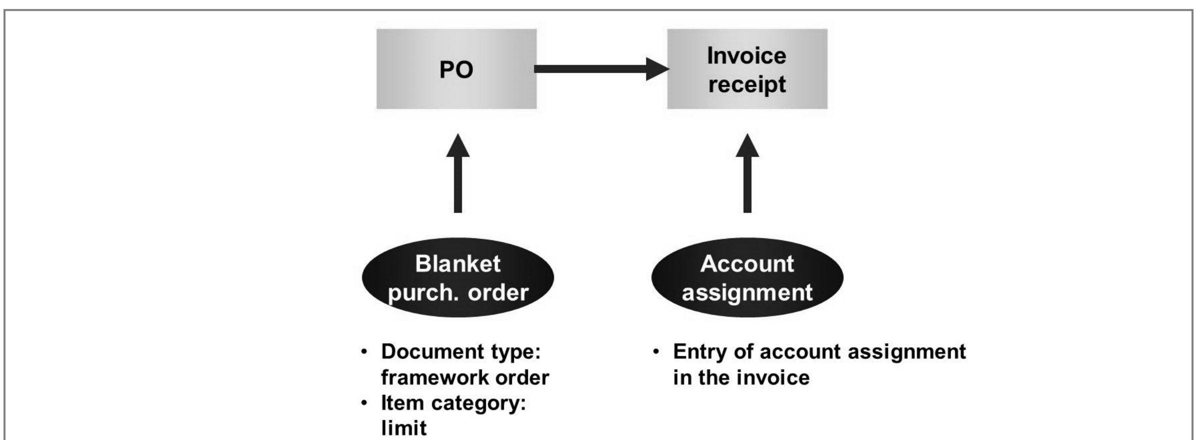


Figure 115: Blanket Purchase Order – Overview

In addition to browser-based applications, such as SAP SRM, the standard version of the SAP ERP Central Component offers you another possible option for handling procurement transactions for consumable materials using a lean process.

Standard Procurement of Consumable Materials

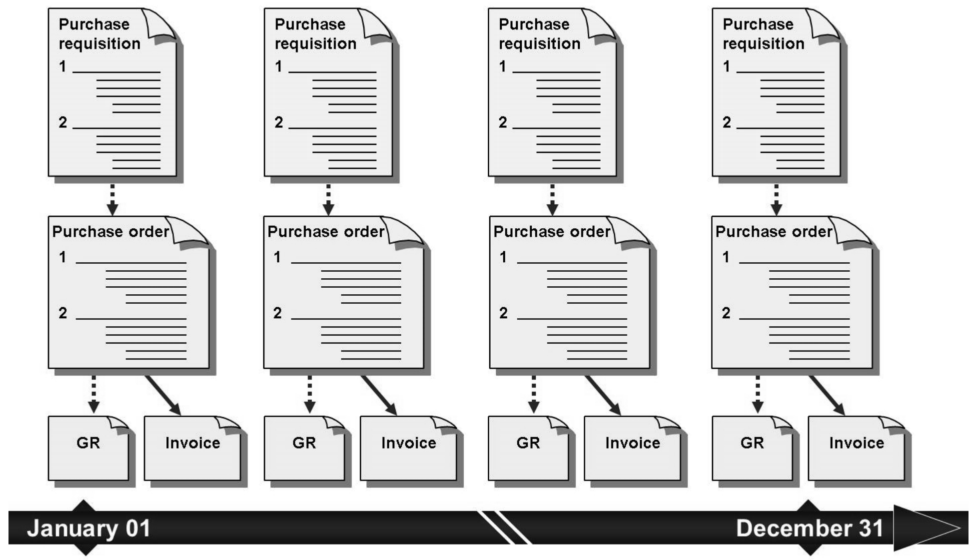


Figure 116: Standard Procurement of Consumable Materials

This process shows you how to use the blanket purchase order using an example.

In the standard procurement of consumable materials, you must create at least one purchase order for each procurement transaction. Use this purchase order as the basis for invoice verification.

You can also enter GR for the purchase orders. In some cases, preceding documents, such as purchase requisitions or quotations, exist.

A goods receipt is not mandatory in the case of a blanket PO. Most users prefer to use this type of PO when a GR is not preferable.

Procurement Process with Blanket Purchase Order

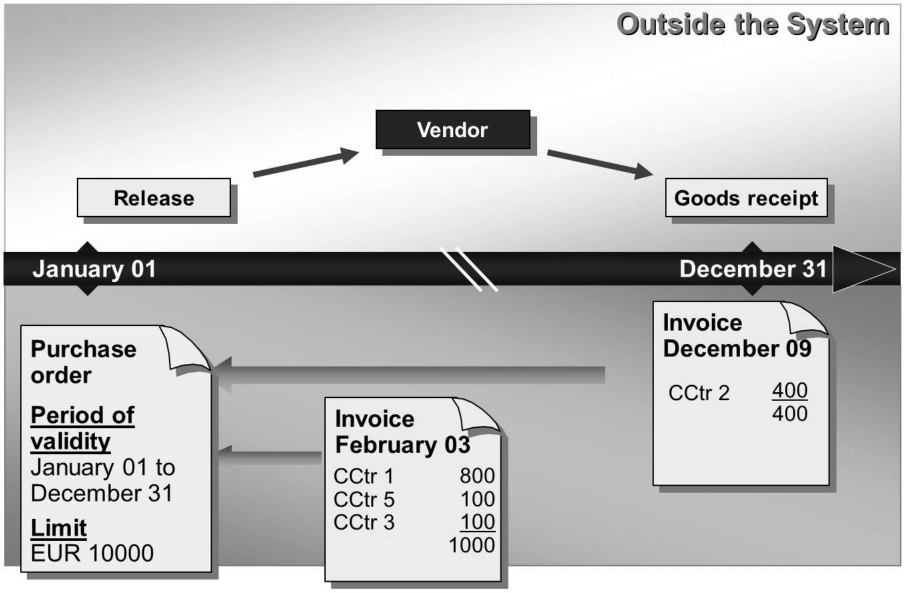


Figure 117: Procurement Process with Blanket Purchase Order

You can create a purchase order that has a longer validity period (for example, one year) and an item-specific value limit. Using such a blanket purchase order, you can procure different consumable materials or services, for which more-detailed individual processing (purchase order, GR, and invoice entry) is considered uneconomical. The materials or services are grouped under a heading or superordinate term (short text) and mapped in an item. In the purchase order, prices for the individual materials are not recorded, such as EUR 0.50/pc for a pencil, EUR 2.00/pc for a folder, and so on.

The main difference between this special procurement process and the standard process is that the system deliberately omits certain steps. Although you can use a purchase requisition as the document preceding the blanket purchase order, you cannot create Request for Quotations (RFQs) or contracts. In addition, you do not enter GR and performed services in the system. You post incoming invoices with reference to your blanket purchase order.

A key advantage of the blanket purchase order is the reduction in processing costs.

The cost saving is due to the following factors:

- The system uses the same purchase order item to procure different materials and/or services for a longer period of time.
- The system does not need to issue separate purchase orders for individual procurement transactions.
- There is no goods receipt or service entry process.

Invoice Entry for Blanket Purchase Order

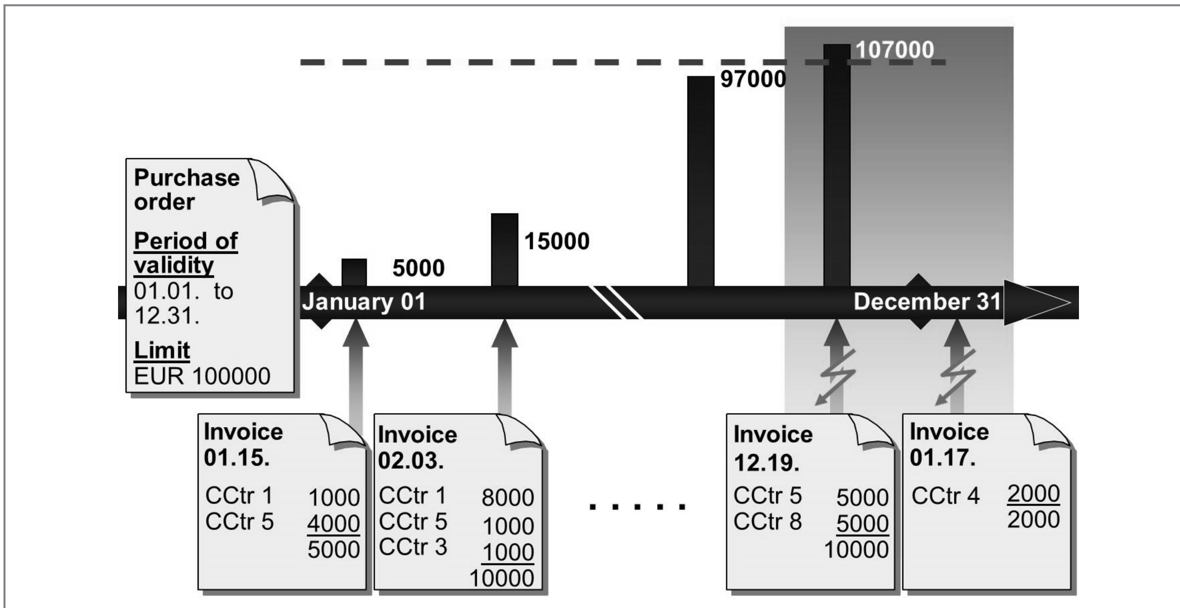


Figure 118: Invoice Entry for Blanket Purchase Order

When you enter an invoice with reference to a blanket purchase order, the system checks the following:

- Does the invoice lie within the validity period of the blanket purchase order?
- Will the overall limit of the purchase order item be exceeded because of posting the invoice?

You can change the account assignment when entering the invoice. You can also switch from single to multiple account assignment. If you have assigned the purchase order item to an unknown account, you must manually specify the account assignment data when entering the invoice.

Note:
You change the account assignment data in invoice verification if you define such a change as permissible in Customizing for the account assignment category *(Customizing → Materials Management → Purchasing → Account Assignment → Maintain Account Assignment Categories)*.

Characteristics of a Blanket Purchase Order

The most important characteristics of a blanket purchase order are as follows:

- *Order type* field and value *FO* (framework order)

  Validity period in the header of the purchase order (field selection)

- *Item category* field and value B (limit)

- Value limit for the item
- No material number allowed in the purchase order
- Account assignment category U is allowed
- No goods receipt or service entry is allowed

- Proposes data in the invoice if you specify account assignment in the purchase order
- Additional or multiple account assignment possible in invoice verification
- Checks on the validity period and limit in invoice verification

To work with validity periods and limits in a purchase order, you must use the document type FO and the item category B (limit). In the standard system, document type FO enables you to specify the validity period at purchase order header data level and use the item category B for limit items (limit items are referred to as blanket items).

You can only use a blanket order to procure consumable materials or services, so you must enter an account assignment for purchase order items with item category B. However, you do not need to specify the precise account assignment when you create the blanket purchase order. Instead, you can use the account assignment category Unknown (U).

You cannot specify a material number in a purchase order item with item category B. Describe the materials or services that you procure (such as office materials) using a short text. Specify a material group (if you are procuring a material) or a service group (if you are procuring a service).

Item Category in Purchasing

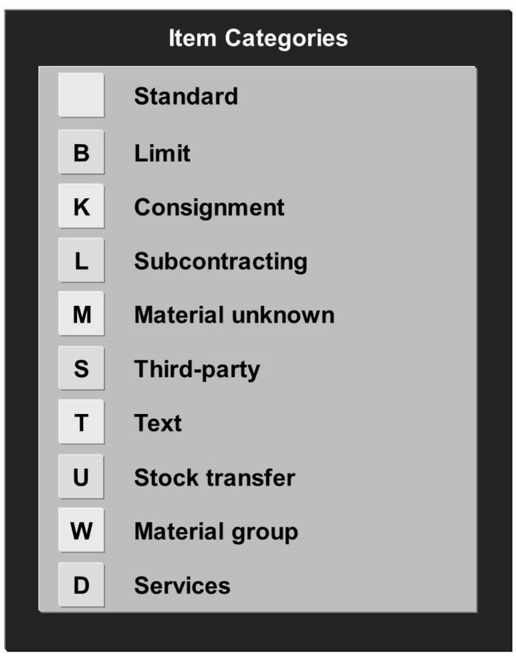


Figure 119: Item Category

The item category enables you to map different procurement processes. You use item categories in all purchasing documents. The document type determines which item categories are available for selection. You can use different item categories for individual items of a purchasing document.

You can change the short description of the individual item categories in Customizing for *Materials Management → Purchasing → Define External Representation of Item Categories*. You will also find the precise item category controls. However, you cannot change these.

The item category specifies whether a material number, an account assignment, a GR, and/or an invoice receipt are possible or required for an item.

Item Category – Control

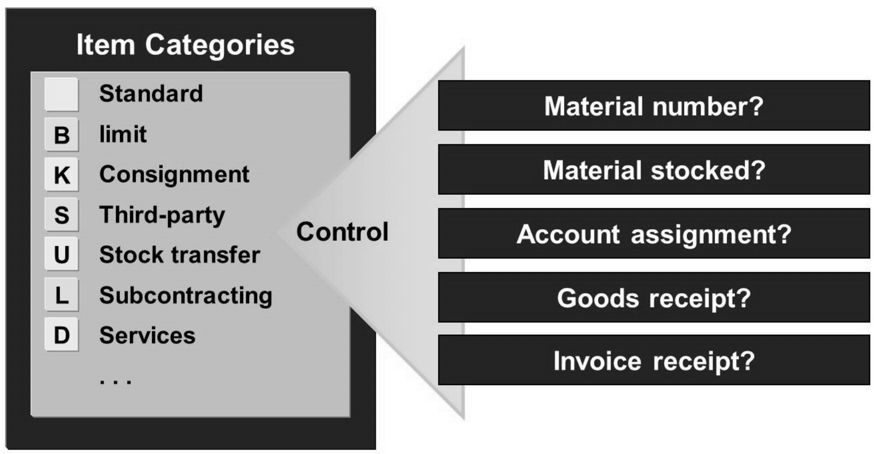


Figure 120: Item Category – Control

Item categories are predefined as follows:

- Standard

  This category is used for materials that you procure externally. This category has the following characteristics:

  - Material number is possible
  - Account assignment is possible
  - Goods receipt is possible (mandatory in case of stock materials)
  - Invoice receipt is possible

- Limit

  This category is used to procure materials or services with a value limit. This category has the following characteristics:

  - Material number is not possible
  - Goods receipt is not possible

- Account assignment is mandatory
- Invoice receipt is mandatory

- Consignment

  This category is used to procure materials from a vendor, which you then manage as consignment stock. The material belongs to the vendor until it is withdrawn. The placement of an ordered consignment material in storage does not immediately lead to the valuation of the material or the creation of a liability in relation to the vendor. A liability only arises when material is withdrawn from the vendor consignment store.

  This category has the following characteristics:

  - Non-valuated goods receipt is required
  - Invoice receipt is not possible

- Subcontracting

  In this category, the finished product is ordered from a vendor. The components that the vendor needs to manufacture are recorded as material to be provided.

- Stock transport orders

  In this category, the material is transferred from one plant to another.

- Third party order

  In this category, the vendor delivers the ordered material directly to a third party, for example, a customer. You receive the invoice for the material from the vendor.

> Hint:
> For more-detailed information on the topics of subcontracting, consignment, stock transport orders, and third party orders, refer to *SAP Library → Materials Management → Inventory Management → Special Stocks and Special Forms of Procurement*.

Unit 4
Exercise 19

Create a Blanket Purchase Order

Business Example

You are testing the use of blanket purchase orders to simplify the procurement of low-value consumable materials that are required at irregular intervals. Then you enter invoices relating to the blanket purchase orders.

Process blanket purchase orders.

Your Purchasing department has reached an agreement with the office supplies company, Office 4U Gr.##, from which plant 1000 (the Hamburg plant) procures office materials by fax.

1. Create a blanket purchase order.

   Create a framework order for Office 4U Gr.##.

   What is the number of the vendor master record for this company?

   ____

   ____

   ____

   If necessary, specify your purchasing group T## (SCM500-##) and purchasing organization 1000.

   The validity period starts today and ends on December 31 next year.

   Choose the item category for blanket purchase orders (_____).

   As this purchase order is used to procure office supplies for different cost centers, the account assignment category is not known at the time of ordering. Enter the relevant account assignment category (______).

   Enter **`office supplies`** in the *Short Text* field and **`006`** (office supplies) in the *Matl Group* field.

   You do not expect the value of the office supplies actually procured to exceed EUR 5000. In addition, stipulate that the overall limit for invoice verification purposes is to be EUR 6000.

   What is the purpose of the entry in the *Expected value* field?

   ____

   ____

   ____

   When you have entered all the data, save your purchase order.

   Note the purchase order number.

Purchase order number: ______________________

2. Enter an invoice for the blanket purchase order.

   The Office 4U Gr.## company sends you the invoice as shown. Enter the invoice and specify the missing account assignment information. Both invoice items are posted to G/L account 476000 (consumption of office supplies). The information about the cost center and distribution is as per the vendor's invoice RE-D1##.

   > Hint:
   > Choose the display variant (layout) *Acct Assignment – Cost Center* for the item overview. You can then branch to the account assignment screen with the *multiple account assignment switch*.

Invoice

Office 4U Gr.##
Lincolnstraße 3
20359 Hamburg

IDES AG
Hamburg Plant
Altersdorferstr. 13
22299 Hamburg

Invoice number: RE-D1##
Invoice date: [Today's date]

In acc. w. your fax dated . . . and your PO no. 45000xxxxx, we invoice you as follows:

Item	Quantity/UoM	Description	Unit price	Price
10	50 packs	White paper	EUR 10/pack	EUR 500
	Breakdown:	Cost center **T-L##**	10 packs **EUR 100**	
		Cost center **4100**	40 packs **EUR 400**	
			Total net value	EUR 500
			plus 10 % VAT	EUR 50
			Invoice amount	**EUR 550**

Subject to the agreed payment conditions.

Kind regards, Office 4U Gr.##

Figure 121: Invoice RE-D1## for Blanket Purchase Order

After you enter all the data, post the invoice. Note the document number.

Document number: ______________________________

3. Display the purchase order.

   Display your blanket purchase order. What is the actual value of the purchase order item?

   ____

   ____

   ____

Display the purchase order history. Select and display the invoice document.

Go to the accounting document. Which G/L accounts were posted?

Account	Short Text	Amount
T-K500D##	**Office 4U Gr.##**	**550.00**
476000	**Office supplies**	**100.00**
476000	**Office supplies**	**400.00**
154000	**Input tax**	**50.00**

4. Optional: Enter other invoices.

   Enter further invoices against your blanket purchase order. Choose an invoice amount that causes the purchase order limit to be exceeded.

   Were you able to post the invoice if the limit was exceeded?

Unit 4
Solution 19

Create a Blanket Purchase Order

Business Example

You are testing the use of blanket purchase orders to simplify the procurement of low-value consumable materials that are required at irregular intervals. Then you enter invoices relating to the blanket purchase orders.

Process blanket purchase orders.

Your Purchasing department has reached an agreement with the office supplies company, Office 4U Gr.##, from which plant 1000 (the Hamburg plant) procures office materials by fax.

1. Create a blanket purchase order.

   Create a framework order for Office 4U Gr.##.

   What is the number of the vendor master record for this company?

   ____

   If necessary, specify your purchasing group T## (SCM500-##) and purchasing organization 1000.

   The validity period starts today and ends on December 31 next year.

   Choose the item category for blanket purchase orders (_____).

   As this purchase order is used to procure office supplies for different cost centers, the account assignment category is not known at the time of ordering. Enter the relevant account assignment category (______).

   Enter **`office supplies`** in the *Short Text* field and **`006`** (office supplies) in the *Matl Group* field.

   You do not expect the value of the office supplies actually procured to exceed EUR 5000. In addition, stipulate that the overall limit for invoice verification purposes is to be EUR 6000.

   What is the purpose of the entry in the *Expected value* field?

   ____

   When you have entered all the data, save your purchase order.

   Note the purchase order number.

   Purchase order number: ________________________

a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known* (`ME21N`).

b) In the *Order Type* list, choose the *Framework order* entry and enter **`T-K500D##`** in the *Vendor* field.

> Hint:
> You can determine the number of the vendor master record using Help, for example. Search for your vendor by *Name*. You can search for Office*. Choose the vendor for your group number.

c) Enter the following data on the *Additional Data* tab page in the *Header* area:

Field	Value
Validity Start	**<Today’s date>**
Validity End	**<December 31 of next year>**

d) Enter the following data on the *Org. Data* tab page in the *Header* area:

Field	Value
Purch. Org.	**1000**
Purch. Group	**T##** *(SCM500-##)*

e) Enter the following data in the *Item Overview* area for *Item 10*:

Field	Value
A (account assignment category)	**U (unknown)**
I (item category)	**B (limit)**
Short Text	**Office supplies**
Matl Group	**006**
Plnt	**1000**

Choose *Enter*.

f) Enter the following data in the *Item Details* area on the *Limits* tab page:

Field	Value
Overall Limit	**6000**
Expected value	**5000**

The expected value is the value that the item is not likely to exceed. Among other things, it serves as a criterion for a possible release procedure. In addition (depending on the account assignment category), a commitment of this amount is created in Controlling (CO). This value is also printed in the purchase order.

g) Save your entries, and make a note of the purchase order number.

2. Enter an invoice for the blanket purchase order.

The Office 4U Gr.## company sends you the invoice as shown. Enter the invoice and specify the missing account assignment information. Both invoice items are posted to G/L account 476000 (consumption of office supplies). The information about the cost center and distribution is as per the vendor's invoice RE-D1##.

Hint:
Choose the display variant (layout) *Acct Assignment – Cost Center* for the item overview. You can then branch to the account assignment screen with the *multiple account assignment switch*.

Invoice

Office 4U Gr.##
Lincolnstraße 3
20359 Hamburg

IDES AG
Hamburg Plant
Altersdorferstr. 13
22299 Hamburg

Invoice number: RE-D1##
Invoice date: [Today's date]

In acc. w. your fax dated . . . and your PO no. 45000xxxxx, we invoice you as follows:

Item	Quantity/UoM	Description	Unit price	Price
10	50 packs	White paper	EUR 10/pack	EUR 500
	Breakdown:	Cost center **T-L##**	10 packs **EUR 100**	
		Cost center **4100**	40 packs **EUR 400**	
			Total net value	EUR 500
			plus 10 % VAT	EUR 50
			Invoice amount	**EUR 550**

Subject to the agreed payment conditions.

Kind regards, Office 4U Gr.##

Figure 121: Invoice RE-D1## for Blanket Purchase Order

After you enter all the data, post the invoice. Note the document number.

Document number: ______________________________

a) Choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Document Entry* → *Enter Invoice* (`MIRO`).

b) Enter 1000 in the Company Code. Enter the following data on the *Basic Data* tab page:

Field	Value
Invoice date	**<Today's date>**
Reference	**RE-D1##**
Amount	**550**
Tax Amount	**50**
Tax Code	*1I (Input tax 10%)*

c) On the *PO Reference* tab page, choose *Purchase Order/Scheduling Agreement* as the reference document category and enter your purchase order number.

d) Choose (*Enter*) so that the system proposes the data from the purchase order.

e) Choose *Acct Ass - Cost Center Training* from the *Layout* list.

f) In the *Item* line, choose (*Multi Acc. Ass.*) so that you can enter the account assignment data.

g) Enter the following data in the *Multiple Account Assignment for Item* dialog box:

Amount	G/L Account	Cost Center	Tax Code
100	**476000**	**T-L##**	*1I (Input tax 10%)*
400	**476000**	**4100**	*1I (Input tax 10%)*

Caution:
Ensure that the tax code is set to *1I (Input tax 10%)* in the second item. To do so, scroll to the right in the account assignment list.

h) Choose *Check*

i) Go back to post the invoice.

j) Choose (*Post*) and note the number of the invoice document.

3. Display the purchase order.

Display your blanket purchase order. What is the actual value of the purchase order item?

Display the purchase order history. Select and display the invoice document.

Go to the accounting document. Which G/L accounts were posted?

Account	Short Text	Amount
T-K500D##	**Office 4U Gr.##**	**550.00**
476000	**Office supplies**	**100.00**
476000	**Office supplies**	**400.00**
154000	**Input tax**	**50.00**

a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Display* (`ME23N`).

b) If your blanket purchase order does not display, choose (*Other Purchase Order*). Enter the number of the blanket purchase order, and choose the *Other Document* pushbutton.

c) Choose the *Limits* tab page in the *Item Details* area.

The actual value of the item is EUR 500.

d) Choose the *Purchase Order History* tab page in the *Item Details* area.

e) Click the number of the invoice to display the invoice.

f) Choose *Follow-On documents* and double-click the number of the accounting document.

Make a note of the data in the table.

4. Optional: Enter other invoices.

Enter further invoices against your blanket purchase order. Choose an invoice amount that causes the purchase order limit to be exceeded.

Were you able to post the invoice if the limit was exceeded?

a) Proceed as described in Step 2 (enter an invoice for the blanket purchase order), and select suitable data (such as amount 6600 and tax EUR 600). It is sufficient to make an assignment to just one cost center (for example, T-L##).

You can still post the invoice even if the limit is exceeded. However, the system blocks it for payment due to price variance.

LESSON SUMMARY

You should now be able to:

- Create blanket purchase orders

Learning Assessment

1. You post a goods receipt for a purchase order item with account assignment. Which of the following accounts may be updated in accounting?

   Choose the correct answers.

   - [ ] A Vendor account
   - [ ] B Consumption account
   - [ ] C Price difference account
   - [ ] D GR/IR clearing account

2. You want to procure material for consumption. Which of the following data must exist in the purchase requisition?

   Choose the correct answers.

   - [ ] A Material short text
   - [ ] B Account assignment category
   - [ ] C Material number
   - [ ] D Account assignment data
   - [ ] E G/L account
   - [ ] F Material group

3. Which of the following factors is used to determine that an account assignment category needs to be specified in a purchase order for a material with a material master record?

   Choose the correct answer.

   - [ ] A Material group
   - [ ] B Industry sector
   - [ ] C Material type
   - [ ] D Field selection

4. In which documents can you use the account assignment category Unknown (*U*)?

   Choose the correct answers.

   - [ ] A Request for Quotation(RFQ)
   - [ ] B Purchase requisition
   - [ ] C Purchase order
   - [ ] D Material document

5. If you create a multiple account assignment in an item, you can choose the following options for the distribution checkbox.

   Choose the correct answers.

   - [ ] A Quantity basis
   - [ ] B Proportional
   - [ ] C Percentage
   - [ ] D Sequential

6. Which of the following statements applies for the internal requisition of material without a material master record?

   Choose the correct answers.

   - [ ] A You do not enter a material description.
   - [ ] B You do not enter a material number.
   - [ ] C You must enter the unit of measure.
   - [ ] D You must enter an order price.
   - [ ] E You must always enter an account assignment category.
   - [ ] F You may only enter the account assignment category unknown.

7. Purchase requisitions are internal documents used to ask your purchasing department to procure a particular quantity of a material or a service for a particular date.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

8. The purchase requisition can only be created directly.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

9. When creating a purchase order with reference to a purchase requisition, note the following: If there is no purchasing info record with a valid price for a vendor and a material, then the valuation price is always populated from the purchase requisition as the order price.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

10. Which checkbox must be set in the purchase order item so that the GR/IR clearing account is not posted during invoice entry?

    Choose the correct answers.

    - [ ] A *Goods Receipt* checkbox: set / *GR Non-Val.* checkbox: set
    - [ ] B *Goods Receipt* checkbox: set / *GR Non-Val.* checkbox: not set
    - [ ] C *Goods Receipt* checkbox: not set / *GR Non-Val.* checkbox: not set
    - [ ] D *Goods Receipt* checkbox: not set / *GR Non-Val.* checkbox: set

11. You can enter a goods receipt against a purchase order item with the item category Limit (B).

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

12. A purchase requisition can be converted into a purchase order, a contract release order, a scheduling agreement schedule line, or even an RFQ.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

13. A difference between the procurement of stock material and the procurement of consumable material is that in the latter, you can decide whether the GR is to be valuated or non-valuated for order items with account assignments.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

14. Which of the following do you enter when you create a blanket purchase order?

    Choose the correct answers.

    - [ ] A Vendor
    - [ ] B Material
    - [ ] C Delivery date
    - [ ] D Short text
    - [ ] E Account assignment category
    - [ ] F Item category B
    - [ ] G Material group
    - [ ] H Quantity and unit of measure
    - [ ] I Plant

15. You can use different item categories for the individual items of a purchasing document.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

16. You procure consumable materials or services without a value limit.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

Learning Assessment - Answers

1. You post a goods receipt for a purchase order item with account assignment. Which of the following accounts may be updated in accounting?

   Choose the correct answers.

   - [ ] A Vendor account
   - [x] B Consumption account
   - [ ] C Price difference account
   - [x] D GR/IR clearing account

   If the goods receipt is posted as valuated for a purchase order item with account assignment, a consumption account and the GR/IR clearing account are updated for Financial Accounting (FI).

2. You want to procure material for consumption. Which of the following data must exist in the purchase requisition?

   Choose the correct answers.

   - [x] A Material short text
   - [x] B Account assignment category
   - [ ] C Material number
   - [ ] D Account assignment data
   - [ ] E G/L account
   - [x] F Material group

   For A and C: You can procure materials with and without master records for consumption. However, you must always specify a material short text. For B: The account assignment category determines that the material is procured for consumption. For D and E: If you have selected account assignment category U (unknown), you do not need to specify any account assignment data or a G/L account. For F: In the case of materials with master records, the material group is transferred from the material master record. For materials without a master record, you must specify the material group manually.

3. Which of the following factors is used to determine that an account assignment category needs to be specified in a purchase order for a material with a material master record?

   Choose the correct answer.

   - [ ] A Material group
   - [ ] B Industry sector
   - [x] C Material type
   - [ ] D Field selection

   The material type determines whether or not inventory management for a material is to take place on a value basis. All materials that are not subject to inventory management on a value basis can only be procured with account assignments.

4. In which documents can you use the account assignment category Unknown (*U*)?

   Choose the correct answers.

   - [ ] A Request for Quotation(RFQ)
   - [x] B Purchase requisition
   - [x] C Purchase order
   - [ ] D Material document

   The RFQ does not contain the field for the account assignment category. You cannot specify an account assignment regardless of whether it is known or unknown.

5. If you create a multiple account assignment in an item, you can choose the following options for the distribution checkbox.

   Choose the correct answers.

   - [x] A Quantity basis
   - [ ] B Proportional
   - [x] C Percentage
   - [ ] D Sequential

   To create a multiple account assignment in an item, you can choose whether the value of the item is to be distributed on a quantity basis or as a percentage.

6. Which of the following statements applies for the internal requisition of material without a material master record?

   Choose the correct answers.

   - [ ] A You do not enter a material description.
   - [x] B You do not enter a material number.
   - [x] C You must enter the unit of measure.
   - [ ] D You must enter an order price.
   - [x] E You must always enter an account assignment category.
   - [ ] F You may only enter the account assignment category unknown.

   For A and B: There are no material numbers for materials without master records; therefore, you must manually enter a short text that describes the material. For C: The unit of measure cannot be determined from the material master record, so you must enter it manually. For D: Do not enter an order price in the purchase requisition, enter the valuation price instead. For E and F: Items without a material master record must have account assignment, but there is no restriction on the possible account assignment categories.

7. Purchase requisitions are internal documents used to ask your purchasing department to procure a particular quantity of a material or a service for a particular date.

   Determine whether this statement is true or false.

   - [x] True
   - [ ] False

8. The purchase requisition can only be created directly.

   Determine whether this statement is true or false.

   - [ ] True
   - [x] False

9. When creating a purchase order with reference to a purchase requisition, note the following: If there is no purchasing info record with a valid price for a vendor and a material, then the valuation price is always populated from the purchase requisition as the order price.

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   The valuation price from the purchase requisition is adopted in the purchase order as the order price only for items without a material master record.

10. Which checkbox must be set in the purchase order item so that the GR/IR clearing account is not posted during invoice entry?

    Choose the correct answers.

    [X] A *Goods Receipt* checkbox: set / *GR Non-Val.* checkbox: set

    [ ] B *Goods Receipt* checkbox: set / *GR Non-Val.* checkbox: not set

    [X] C *Goods Receipt* checkbox: not set / *GR Non-Val.* checkbox: not set

    [ ] D *Goods Receipt* checkbox: not set / *GR Non-Val.* checkbox: set

    The GR/IR clearing account is not posted in the invoice if no goods receipt is planned or a non-valuated goods receipt is planned for the order item. This setting is not possible for D.

11. You can enter a goods receipt against a purchase order item with the item category Limit (B).

    Determine whether this statement is true or false.

    [ ] True

    [X] False

    The item category Limit determines that no GR can be entered for a purchase order item.

12. A purchase requisition can be converted into a purchase order, a contract release order, a scheduling agreement schedule line, or even an RFQ.

    Determine whether this statement is true or false.

    [X] True

    [ ] False

13. A difference between the procurement of stock material and the procurement of consumable material is that in the latter, you can decide whether the GR is to be valuated or non-valuated for order items with account assignments.

    Determine whether this statement is true or false.

    [X] True

    [ ] False

14. Which of the following do you enter when you create a blanket purchase order?

    Choose the correct answers.

    [X] A Vendor

    [ ] B Material

    [ ] C Delivery date

    [X] D Short text

    [X] E Account assignment category

    [X] F Item category B

    [X] G Material group

    [ ] H Quantity and unit of measure

    [X] I Plant

    When creating a blanket purchase order, you must enter the following: Order type framework order, vendor, validity period, account assignment category (where relevant, additional account assignment data), item category B, short text, material group, plant, and limit (overall value, expected value).

15. You can use different item categories for the individual items of a purchasing document.

    Determine whether this statement is true or false.

    [X] True

    [ ] False

16. You procure consumable materials or services without a value limit.

    Determine whether this statement is true or false.

    - [x] True
    - [ ] False

UNIT 5 External Services Procurement

UNIT OBJECTIVES

- Maintain master data for external services
- Create a purchase order for services
- Create and accept a service entry sheet
- Enter an invoice for a service purchase order

Unit 5
Lesson 1

Maintaining Master Data for External Services

LESSON OVERVIEW

This lesson examines the process of procuring externally provided services. It also introduces the master data for external services.

Business Example

Your company pays an external service provider to carry out maintenance work, such as the replacement of defective fluorescent tubes. You have maintained service master records and special conditions for this process. For this reason, you require the following knowledge:

- An understanding of the most important master data used in the procurement of external services
- An understanding of the basic procurement process for services and how to follow that process
- How to display a service master record and service conditions

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Maintain master data for external services

External Services in Procurement

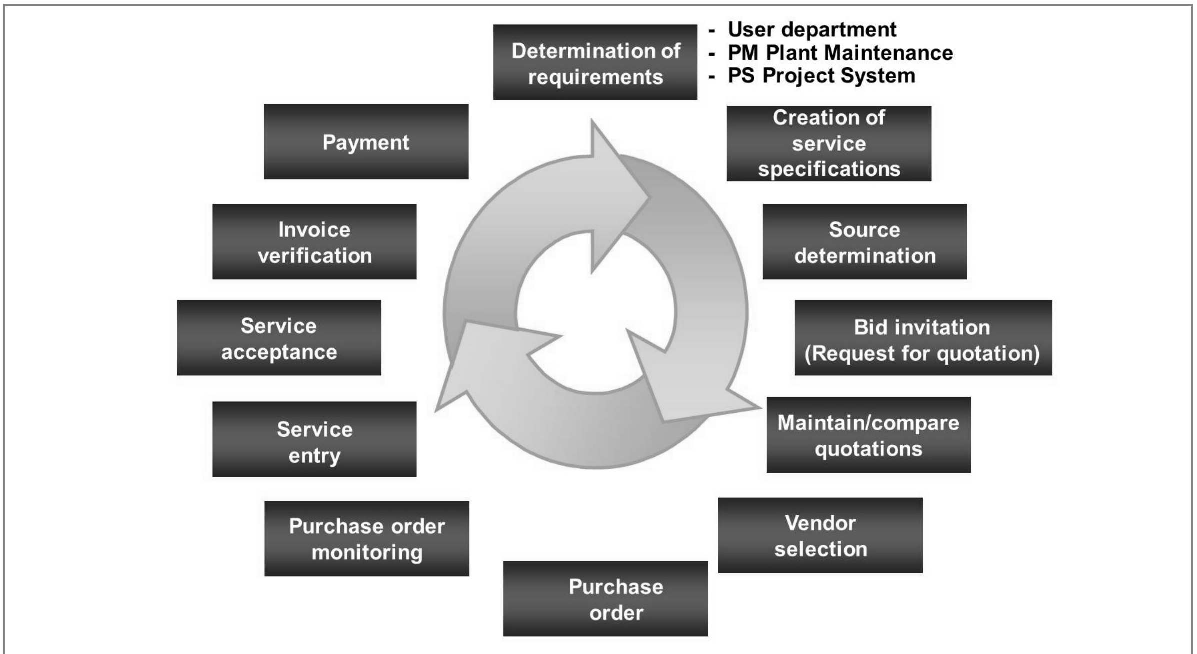


Figure 122: Process of External Service Procurement

The figure shows the steps in the process of procuring external services.

Process of External Service Procurement

The following steps are involved in procuring external services:

1. Determination of requirements

   A need for certain services may arise within a department of a company. It may involve a project (such as the translation of software documentation) or maintenance work (such as a repair that requires an industrial electrician)

2. Creation of service specifications

   When a requirement is established, a document (such as a purchase requisition) is created in the system that serves as the basis for the procurement process. The document can contain a set of service specifications listing the necessary services in detail. In this early phase of the procurement process, you also have the option of skipping service specifications and considering only the unplanned services by setting value limits.

3. Source determination for vendor selection

   To convert a requirement into a purchase order, you must determine a suitable provider for the necessary services. The system can help you find potential service providers in several ways. The source determination function analyzes and evaluates purchasing data that has already been entered in the system in the form of service conditions or contracts. If an entirely new service has been requested, and if no source is currently recorded in the system, a bid invitation process can be carried out. You can replicate this bid invitation process using the request for quotation (RFQ) or quotation facility for services.

4. Purchase order and purchase order monitoring

In addition to manual entry, you can create purchase orders with reference to purchase requisitions, RFQs, or contracts. During the phase of actual service performance, the actual values for services performed or work done are continuously updated in the underlying purchase order or contract release order. You can view how far a certain procurement project has progressed by referring to the purchase order history. You can also monitor the confirmations of work done for each individual service line.

5. Service entry and service acceptance

   Once the service is actually performed, the system records it in a service entry sheet. One or more persons responsible then review the service entry sheet and accept it. You can separate the tasks of service entry and service acceptance within the organization, in order to maintain the dual control principle. The same individual may carry out both service entry and acceptance but in that case, the individual is playing two different roles.

6. Invoice verification and payment

   The last step in the procurement process is the verification of the vendor invoice(s). The system checks the value, as calculated from the accepted service entry sheets, against the vendor's invoice. The system checks the taxes, as mentioned in the purchase order, with those mentioned in the vendor's invoice. If the values tally, the invoice is released to Finance for payment. If the values do not tally, the system issues a warning or error message (based on settings in Customizing).

Service Master Record

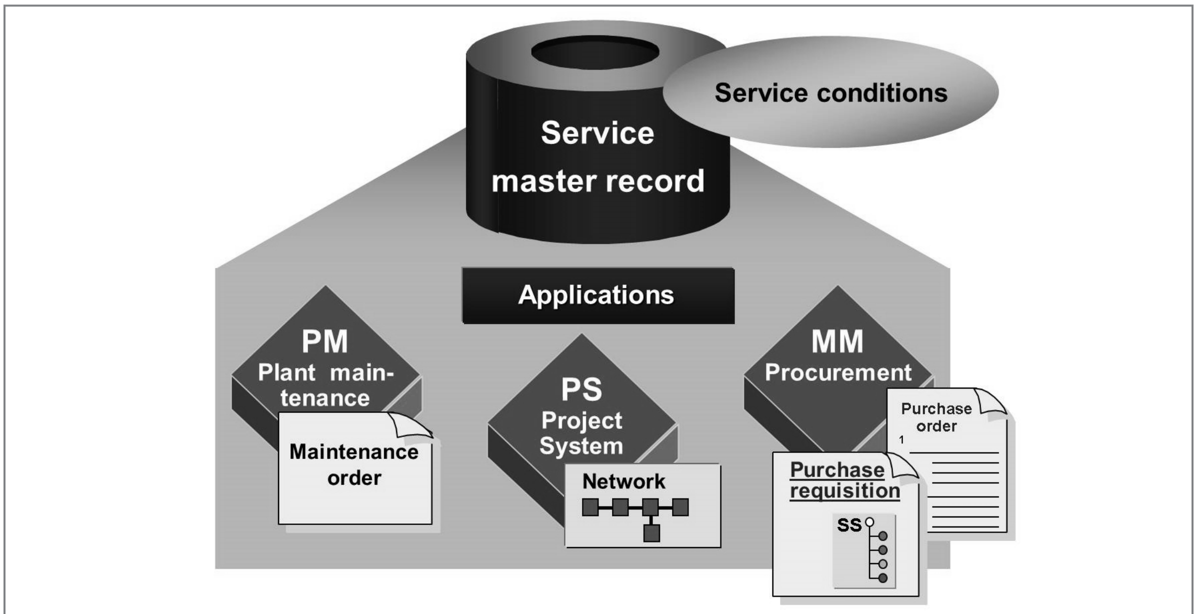


Figure 123: Service Master Record

The service master record provides a description of a service. The service master record counts as part of the master data and serves as a source of data while creating service specifications. Using service master records can help you avoid errors and reduce the amount of time spent on this activity, because you only need to enter the complete set of service specifications once.

A service master record contains the following principal information for the unique description of an external service:

- Service number
- Service category
- Descriptive texts (short and long text)
- Base unit of measurement
- Material group
- Valuation class

Service master records can be used by various applications. Besides *Purchasing (MM-PUR)*, service master records are also used in the *Project System (PS)*, *Plant Maintenance (PM)*, and *Customer Service (CS)*.

Service Master – Transaction AC03

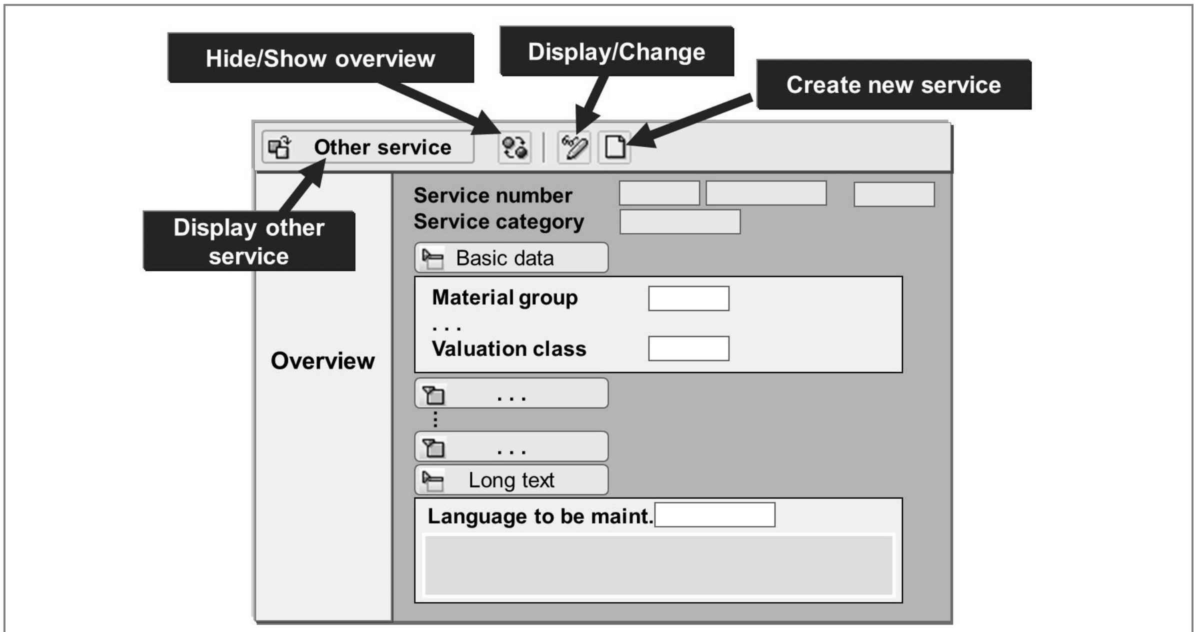


Figure 124: Service Master – Transaction AC03

The service master record transaction (`AC03`) is a single-screen transaction that helps you to create, change, and display services. When you invoke the function, you are initially in display mode. You can choose a specific service with the *Other Service* pushbutton or search for one in the overview. The overview is used in the same way as the document overview in the purchase order (selection, layout, and breakdown), and can be displayed or hidden in this transaction by choosing the *Show/Hide Overview* pushbutton.

To expand and collapse the data areas in the right-hand area of the screen, choose (*Open*) and (*Close*). The first time you call this screen, the data areas *Basic Data* and *Long Text* are open. Each time you call the screen after this, the screen settings and the data you selected or maintained before exiting the function are displayed.

Service Conditions

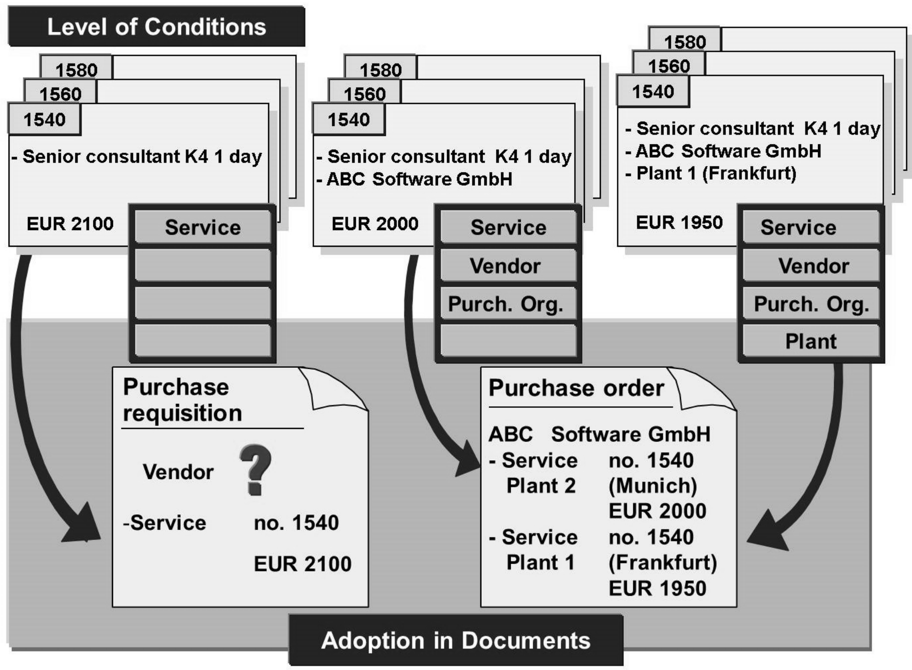


Figure 125: Service Conditions

Prices for valid external services that extend over a longer period can be recorded in the system in the form of service conditions. The system applies these conditions while determining the price in the purchasing document. You can enter further conditions in the purchasing document itself.

You can define service master conditions at several levels in the system as follows:

- At the level of service (market price or own estimate)
- At the level of service, vendor, and purchasing organization
- At the level of service, vendor, purchasing organization, and plant

> Note:
> For more information on service conditions, refer to the SAP Library, application component *External Services* (MM-SRV).

Maintain Master Data for External Services

Business Example

The fluorescent tubes in your office need to be replaced due to wear and tear. An external service provider will carry out this work. Test the procurement process for external services.

Display service master records and list the conditions for service master records depending on the vendor.

Service master records exist in the system for some regular maintenance work involving the replacement of worn-out fluorescent tubes on your company's premises. Review this master data and the conditions for these services. You need to create a new master record in the system for cleaning the reflective surface of the lamps.

1. Display a service master record.

   Display the service master records T-LM1## (this indicates removal of fluorescent tubes) and T-LM2## (this indicates installation of fluorescent tubes).

   > Hint:
   > Choose the *Other Service* pushbutton and then enter the service number.
   > You can close the service overview using (*Hide Overview*) pushbutton.

   Is there a long text describing the service in more detail in each case?

   What is the unit of measure for managing the services?

2. Display service conditions.

   Check whether conditions have been followed with vendor T-K500E## (Home-Electric Gr.##) in both of the aforementioned service master records for purchasing organization 1000 (without a plant).

   Note the prices of the service provider for each service.

   T-LM1##: ____

   T-LM2##: ____

3. Create a service master record.

   In addition to exchanging the fluorescent tubes, the reflective surfaces of the lamps must also be cleaned. Create a new master record for this service. Copy this service, because the service type, unit of measure, material group, and valuation class for the new service are identical to the values for the service T-LM2##.

   Change the number of the new service to T-LM3## and the short text to Cleaning of reflective surfaces for lamp. The surfaces must be cleaned with a special, environmentally friendly cleaning agent. Note this in the long text for the service.

4. Add conditions for the new service master record.

   You do not yet know the actual price charged by the service provider for cleaning the reflective surfaces. The approximate price for cleaning the lamps is EUR 3.00 for each lamp. Store this cost as your own estimate in the system. Your own estimate is only valid until the end of the year.

Unit 5
Solution 20

Maintain Master Data for External Services

Business Example

The fluorescent tubes in your office need to be replaced due to wear and tear. An external service provider will carry out this work. Test the procurement process for external services.

Display service master records and list the conditions for service master records depending on the vendor.

Service master records exist in the system for some regular maintenance work involving the replacement of worn-out fluorescent tubes on your company's premises. Review this master data and the conditions for these services. You need to create a new master record in the system for cleaning the reflective surface of the lamps.

1. Display a service master record.

   Display the service master records T-LM1## (this indicates removal of fluorescent tubes) and T-LM2## (this indicates installation of fluorescent tubes).

   > Hint:
   >
   > Choose the *Other Service* pushbutton and then enter the service number. You can close the service overview using (*Hide Overview*) pushbutton.

   Is there a long text describing the service in more detail in each case?

   What is the unit of measure for managing the services?

   a) Choose *Logistics* → *Materials Management* → *Service Master* → *Service* → *Service Master* (`AC03`).

   b) Choose the *Other Service* pushbutton and enter the **`T-LM1##`** in the *Activity Number* field in the *Display Other Service* dialog box.

   c) If the *Long text* data area is closed, choose the *Long Txt* pushbutton to view the text in question. A long text has been maintained for each of the two services.

   d) Both services are managed in the base unit of measure piece (pc).

2. Display service conditions.

   Check whether conditions have been followed with vendor T-K500E## (Home-Electric Gr.##) in both of the aforementioned service master records for purchasing organization 1000 (without a plant).

   Note the prices of the service provider for each service.

   T-LM1##: ____

T-LM2##: ________________________________

a) Choose *Logistics → Materials Management → Service Master → Service → Service Conditions → For Vendor Without Plant → Display* (`ML41`).

b) Enter the following data on the selection screen:

Field	Value
Purch. Organization	**`1000`**
Vendor	**`T-K500E##`**
Activity Number	<No input necessary>

c) Choose (*Execute*). The following services and prices are listed:

Field	Value
T-LM1##	*2.00*
T-LM2##	*4.50*

3. Create a service master record.

In addition to exchanging the fluorescent tubes, the reflective surfaces of the lamps must also be cleaned. Create a new master record for this service. Copy this service, because the service type, unit of measure, material group, and valuation class for the new service are identical to the values for the service T-LM2##.

Change the number of the new service to T-LM3## and the short text to Cleaning of reflective surfaces for lamp. The surfaces must be cleaned with a special, environmentally friendly cleaning agent. Note this in the long text for the service.

a) Choose *Logistics → Materials Management → Service Master → Service → Service Master* (`AC03`).

b) Choose the *Other Service* pushbutton and enter T-LM2## in the *Activity Number* field in the *Display Other Service* dialog box.

c) Choose (*Copy*).

d) Enter **`T-LM3##`** in the *Activity Number* field and **`Cleaning of reflective surfaces for lamps`** as the short text.

e) Delete the long text from the template and instead enter **`with environmentally friendly cleaning agent`**.

f) Save your entries.

4. Add conditions for the new service master record.

You do not yet know the actual price charged by the service provider for cleaning the reflective surfaces. The approximate price for cleaning the lamps is EUR 3.00 for each lamp. Store this cost as your own estimate in the system. Your own estimate is only valid until the end of the year.

a) Choose *Logistics* → *Materials Management* → *Service Master* → *Service* → *Service Conditions* → *For Service* → *Add* (`ML45`).

b) Enter the following data:

Field	Value
Activity	**T-LM3##**
Amount	**3**
Unit	**EUR**
Valid From	<Today’s date>
Valid to	<12/31 current year>

c) Save your entries.

LESSON SUMMARY

You should now be able to:

- Maintain master data for external services

Unit 5
Lesson 2

Ordering Services

LESSON OVERVIEW

This lesson discusses the special features of a service item in purchasing documents, using a purchase order as an example. For each service, enter a set of service specifications (SS) and limits for the item.

Business Example

In your company, many fluorescent tubes in the building are damaged and must be replaced. An external service provider will perform this maintenance work. As a buyer, you must create a purchase order with the corresponding SS and a limit for unexpected additional work. For this reason, you require the following knowledge:

- An understanding of the structure of the purchase order item for services
- How to create a purchase order item for services

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create a purchase order for services

Purchase Orders for Services

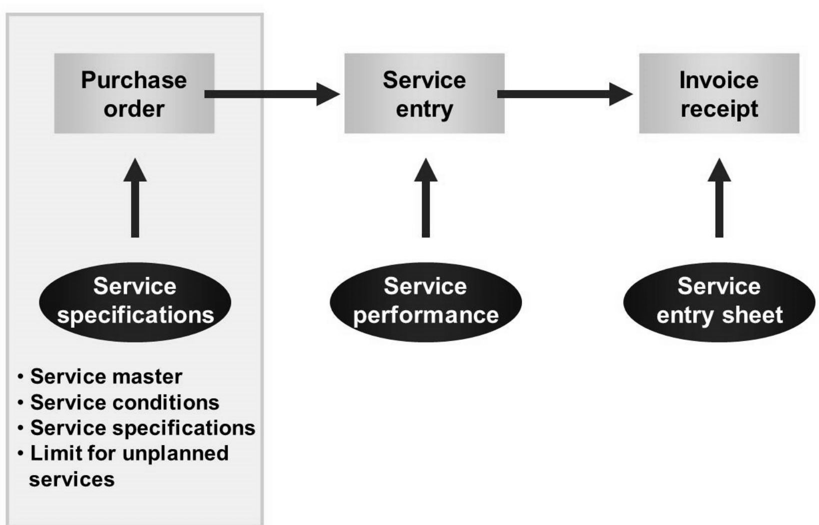


Figure 126: Service Procurement – Purchase Order

The figure shows a simple procurement process for services consisting of a purchase order, service entry and acceptance, and invoice entry. The process begins with the purchase order, in which the individual services are summarized in a service specification and forwarded to the service provider.

When you procure the material, you are aware of necessary information, such as the material to be procured and the quantity. When you procure the service, however, neither the exact service description nor the order quantity is clearly specified. For example, when a machine is undergoing maintenance work, you do not know whether the settings simply have to be adjusted or whether the parts have to be replaced.

You may only be able to estimate the amount of working hours, because you do not know exactly how long a maintenance task will take. By specifying a limit for unplanned services, you can control the costs of unexpected services and services that cannot be planned.

Purchase Order – Stock Material or Services

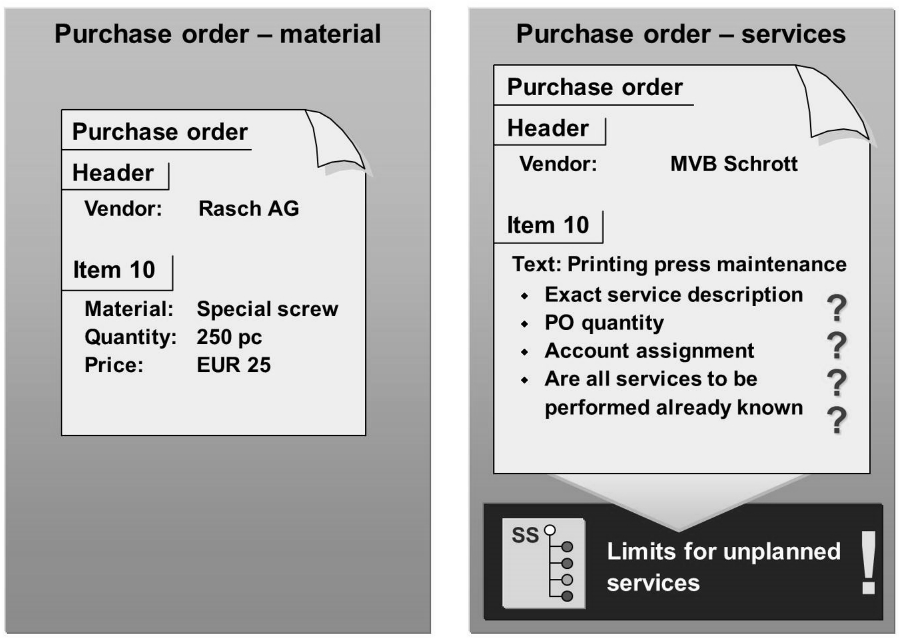


Figure 127: Purchase Order – Stock Material or Services

The work to be performed cannot be mapped in a single service master record. During machine maintenance, parts that may be wearing out need to be identified, examined, and replaced. The total work includes shutting down, removing and examining these parts, cleaning or replacing the worn-out parts, installation, and performing a function test. These individual services are consolidated in sets of SS.

Purchasing Document Structure

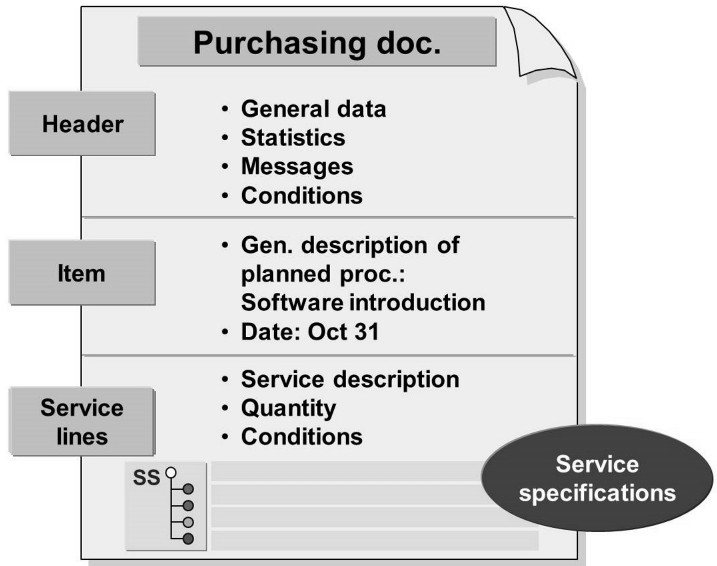


Figure 128: Purchasing Document Structure

You must always assign a service item to an account assignment object. Procurement for the warehouse, which is possible for materials, does not exist in service procurement. However, you can use account assignment category *U* (unknown) in connection with *Item category D* (service) because in some cases the account assignment has not been determined at the time of ordering.

When you procure the material, enter material type and the relevant data for each item. When you procure the service, the item contains only a short text to describe the general procurement project. To list the individual services with a description, quantity specification, prices, and other details, use the SS in the *Item Details* area. You can summarize both the services with master records and the services without master records in the SS.

Item category D (service) activates the service function, and enables you to create a service specification, and sets the value limits for unplanned services.

Service Specification in Purchasing Document

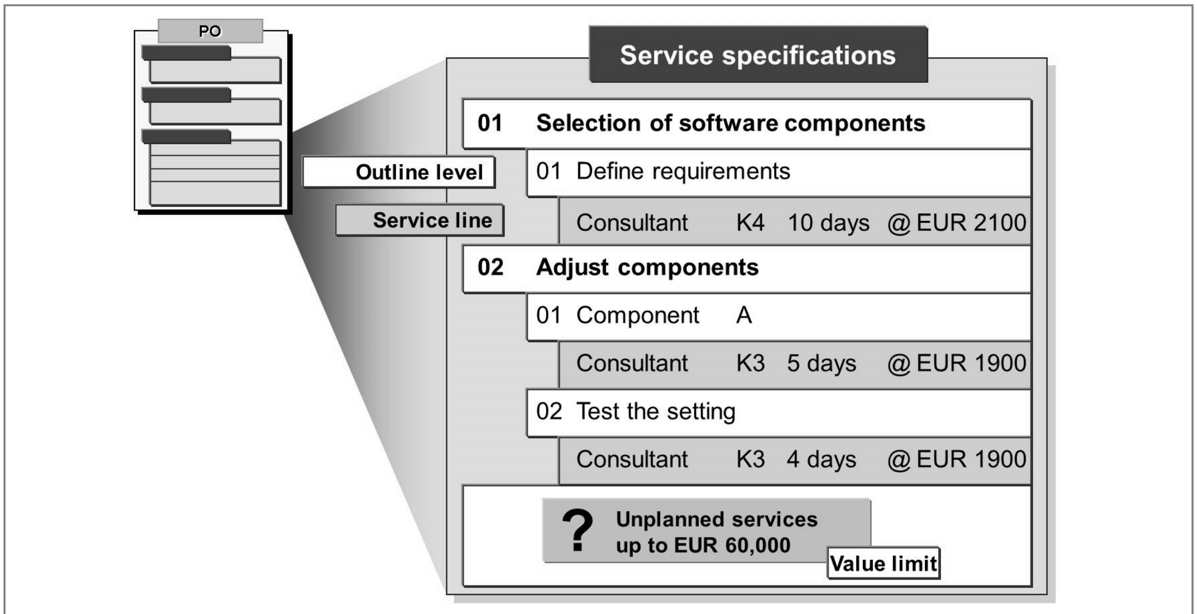


Figure 129: Service Specification in Purchasing Document

A set of service specifications can consist of any number of service lines. To maintain a clear overview of more extensive specifications, use the outline function to structure the services hierarchically. The outline is comparable to the table of contents in a book. A maximum of four hierarchy levels is possible. You can change the numbers of the outline levels and their short and long texts at any time. You can assign any number of service lines to each outline level.

Unit 5
Exercise 21

Create a Purchase Order for Services

Business Example

The fluorescent tubes in your office need to be replaced due to wear and tear. An external service provider will be carrying out this work. You need to create a purchase order for external services, taking into account value limits for unplanned services.

Purchase Order Handling for Services

A company called Elektroblitz is responsible for replacing the fluorescent tubes in your office buildings. Enter a purchase order for this upcoming maintenance work.

1. Create a purchase order for the replacement of fluorescent tubes in plant 1000 with vendor T-K500E##.

   In the item overview, enter a relevant short text that provides a general description of your SS.

   Do not forget to select the appropriate item category (______) and the material group for services (007). The cost of replacing the fluorescent tubes is to be charged to cost center T-L##.

   Maintain services T-LM1## and T-LM2## on the *Services* tab page in the item detail. Both services are required in quantities of 100 pieces.

   On the *Limit* tab page, determine an overall limit of EUR 200 for unplanned services. The expected value is also EUR 200.

   Use service-based invoice verification when entering the invoice. You must check whether the corresponding checkbox has been set on the *Invoice* tab page.

   Save your purchase order after you have entered all the data.

   Purchase order number: ______________________________

Unit 5
Solution 21

Create a Purchase Order for Services

Business Example

The fluorescent tubes in your office need to be replaced due to wear and tear. An external service provider will be carrying out this work. You need to create a purchase order for external services, taking into account value limits for unplanned services.

Purchase Order Handling for Services

A company called Elektroblitz is responsible for replacing the fluorescent tubes in your office buildings. Enter a purchase order for this upcoming maintenance work.

1. Create a purchase order for the replacement of fluorescent tubes in plant 1000 with vendor T-K500E##.

   In the item overview, enter a relevant short text that provides a general description of your SS.

   Do not forget to select the appropriate item category (______) and the material group for services (007). The cost of replacing the fluorescent tubes is to be charged to cost center T-L##.

   Maintain services T-LM1## and T-LM2## on the *Services* tab page in the item detail. Both services are required in quantities of 100 pieces.

   On the *Limit* tab page, determine an overall limit of EUR 200 for unplanned services. The expected value is also EUR 200.

   Use service-based invoice verification when entering the invoice. You must check whether the corresponding checkbox has been set on the *Invoice* tab page.

   Save your purchase order after you have entered all the data.

   Purchase order number: ________________________________

   a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known* (`ME21N`).

   b) Enter **`T-K500E##`** in the *Vendor* field.

   c) Enter the following data in the *Item Overview* area:

Field	Value
Itm (Item)	**`10`**
A (Acct Ass. Cat.)	**`K`** (cost center)
I (Item Cat.)	**`D`** (service)
Short Text	**`Replacement of fluorescent tubes`**
Matl Group	**`007`**

Field	Value
Plnt	**1000**

d) In the *Item Detail* area, enter the following data for the *Services* tab page in field *Line 10:*

Field	Value
Service No.	**T-LM1##**
Quantity	**100**
Cost Center	**4230**

e) In the *Item Detail* area, enter the following data for the *Services* tab page in field *Line 20:*

Field	Value
Service No.	**T-LM2##**
Quantity	**100**
Cost Center	**4230**

f) Enter the following data on the *Limits* tab page:

Field	Value
Overall Limit	**200**
Expected value	**200**
Cost Center	**4230**

g) Enter the data on the *Invoice* tab page:

Field	Value
S-Based IV	Checked

h) Enter your purchasing group Z##.

i) Save your purchase order and make a note of the purchase order number.

LESSON SUMMARY

You should now be able to:

- Create a purchase order for services

Unit 5
Lesson 3

Creating Service Entries and Verifying Invoices

LESSON OVERVIEW

This lesson examines the entry and acceptance of services performed by external service providers. In the case of external services, these two steps replace the goods receipt process that takes place with goods deliveries.

Business Example

The external service provider has informed you that the task of replacing depleted fluorescent tubes has been completed. The service provider advises you that the lamp ballasts also need to be replaced. You are responsible for ensuring that these services are performed and then entering the services in the system. You must also review the invoice. For this reason, you require the following knowledge:

- How to create a service entry sheet referencing a purchase order
- How to add unplanned services during the service entry process
- How to accept a service entry sheet
- How to check an invoice for a service purchase order

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create and accept a service entry sheet
- Enter an invoice for a service purchase order

Service Entry and Acceptance of Performed Services

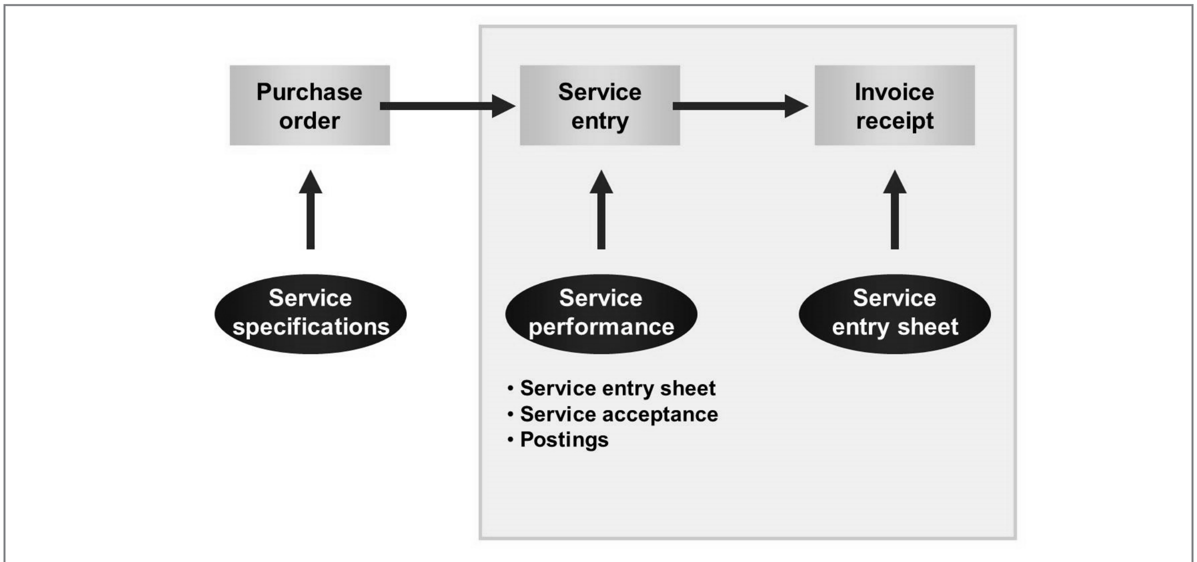


Figure 130: Procurement of External Services – Entry of Services Performed, Invoice Receipt

The process of procuring external services is similar to material procurement in that the issue of a purchase order is not followed by the receipt of goods. The purchase order is issued by entering the service that is actually performed on a service entry sheet. The service entry sheet is subsequently accepted and the incoming invoice is entered into the system.

Service Entry and Acceptance

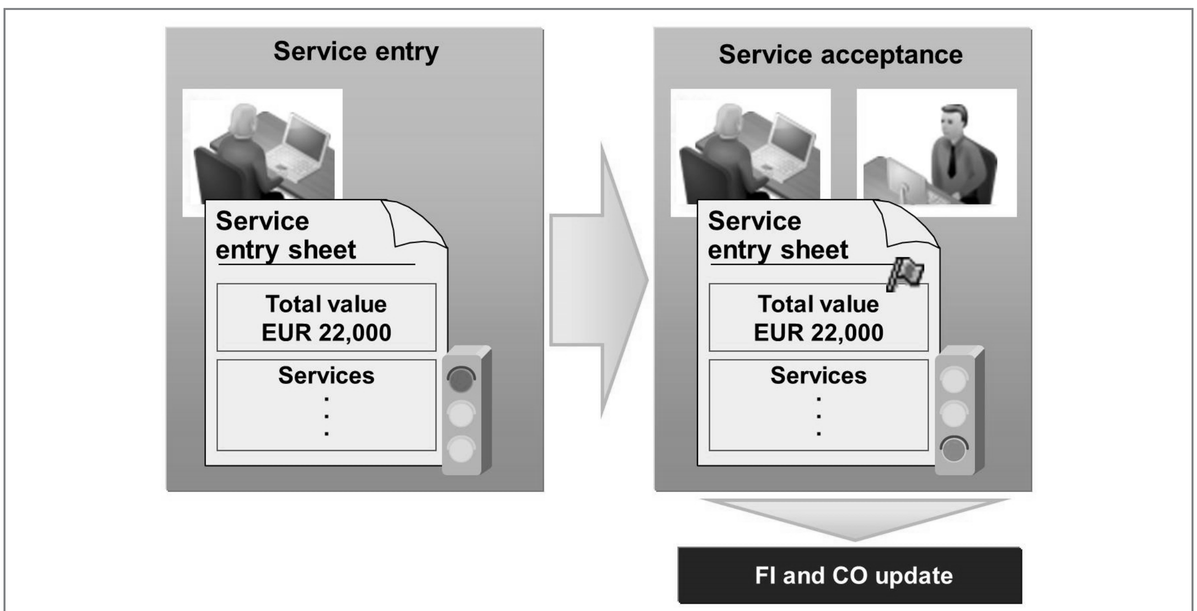


Figure 131: Service Entry and Acceptance

The system records the services that you perform in service entry sheets. When entering services, reference the purchase order. You can copy planned services directly from the purchase order to the service entry sheet. The system records the services actually performed but does not describe the unplanned services in detail. It neither specifies the quantity nor the prices until the completed work is recorded. The system verifies that the unplanned services do not exceed the limit set in the purchase order.

Saving a service entry sheet does not automatically post it in Financial Accounting. The relevant postings are not made in Financial Accounting and cost accounting until the system accepts the service entry sheets. Service entry sheets can be entered and accepted in one step or two, depending on user authorization.

You can set up release procedures for service entry sheets.

Entry of Services Performed – Transaction ML81N

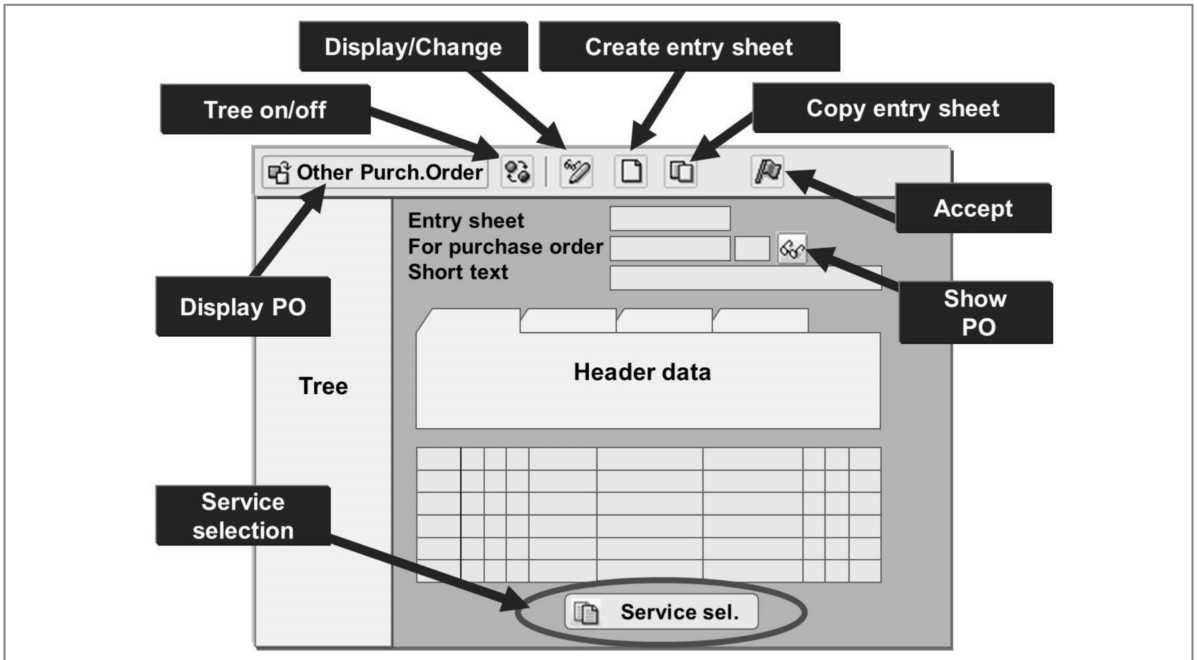


Figure 132: Entry of Services Performed – Transaction ML81N

In service entry transaction `ML81N`, all header and service data is maintained on one screen (this is called a single-screen transaction).

When you call the function, you are initially in display mode. Enter the purchase order for which the service entry sheet is to be created by choosing the *Other Purchase Order* pushbutton.

> Note:
> If the purchase order is already displayed in the overview, double-click on the document number to copy the data.

Choose (*Create Entry Sheet*) to start the entry process. You can enter the services manually in the service entry sheet, or choose the *Service Sel.* pushbutton from either the purchase order or a set of model service specifications. If you have defined a limit in the purchase order, you can also manually enter unplanned services up to that limit. You can print out service entry sheets if necessary.

You can also accept the services actually performed when you are creating an entry sheet, provided that separate acceptance is not required as part of a release strategy. To do so, choose (*Accept*) before saving the service entry sheet. Service entry sheets can also be accepted collectively (transaction `ML85`).

Click the *Tree On/Off* pushbutton to call the list of completed purchase orders for the list of completed services that have recently been entered in the left-hand side of the screen. You can also call the associated service entry sheets. Double-click a service entry sheet in this list to display, modify, or copy it.

Unit 5
Exercise 22

Create a Service Entry Sheet

Business Example

The Home Electric Company has been given the job of replacing the fluorescent tubes in your office building. You have just received a list of the actual services performed on each floor of the building. After completion of the maintenance work, you receive the invoice.

Create and accept service entry sheets.

1. Service entry sheet for the first floor

   Service provider T-K500E## sends you a service entry sheet for the first floor in which the maintenance personnel informs you that the fluorescent tubes have been replaced.

   Maintain the service entry sheet in the system and reference your purchase order in the process.

   > Hint:
   >
   > Choose the *Other Purchase Order* pushbutton in the service entry transaction and enter your purchase order number.
   >
   > Choose (*Create Entry Sheet*) to create a new service entry sheet.

   Enter **Service entry, 1st floor** in the *Short Text* field as a description of the service entry sheet. The number of the entry sheet used by the service provider is 4700##. Enter **4700##** in the *External Number* field.

   The service provider has carried out the following work:

Short Text Description	Quantity with Unit of Measure
Removed old fluorescent tubes	60 pieces at EUR 2.00
Delivered and installed new fluorescent tubes	60 pieces at EUR 4.50
Cleaned the reflective surfaces	20 pieces at EUR 2.50
Replaced lamp ballasts	2 pieces at EUR 35.00

   Enter the services that were performed. If possible, use a service master record to enter unplanned services too.

> Hint:
> You can also copy the planned services from the purchase order. To copy the services from the purchase order, choose the *Service Sel.* pushbutton. Then select the two items and choose (*Copy Entry Sheet*).
>
> Ensure that you modify the quantity by 60 pieces for each service.

Answer the following questions about unplanned services.

Is there a service master record?

Does the system propose a price, and if so, why?

Task	Cleaning the Reflective Surfaces	Replacement of Lamp Ballast
Service number	T-LM3##	<None>
Proposed price	3.00	<None>
Price origin	Own estimate (condition for service)	<None>

Do not exit the service entry transaction after this step.

Service entry sheet number: ________________________________

2. Purchase order history after creating service entry sheet

   Display the purchase order history from the service entry transaction. Check whether the service entry sheet is listed in the purchase order history.

   Do not exit the service entry transaction after this step.

3. Service acceptance for the first floor

   After you have reviewed the work performed by the service provider, accept the service entry sheet.

   Do not exit the service entry transaction after this step.

   Acceptance document: ____________________

4. Purchase order history after acceptance of the service entry sheet

   Display the purchase order history again. Check whether the acceptance document is listed in the purchase order history. Display the acceptance document too.

   What type of document is this?

   ____

Unit 5
Solution 22

Create a Service Entry Sheet

Business Example

The Home Electric Company has been given the job of replacing the fluorescent tubes in your office building. You have just received a list of the actual services performed on each floor of the building. After completion of the maintenance work, you receive the invoice.

Create and accept service entry sheets.

1. Service entry sheet for the first floor

   Service provider T-K500E## sends you a service entry sheet for the first floor in which the maintenance personnel informs you that the fluorescent tubes have been replaced.

   Maintain the service entry sheet in the system and reference your purchase order in the process.

   > Hint:
   >
   > Choose the *Other Purchase Order* pushbutton in the service entry transaction and enter your purchase order number.
   >
   > Choose (*Create Entry Sheet*) to create a new service entry sheet.

   Enter **`Service entry, 1st floor`** in the *Short Text* field as a description of the service entry sheet. The number of the entry sheet used by the service provider is 4700##. Enter **`4700##`** in the *External Number* field.

   The service provider has carried out the following work:

Short Text Description	Quantity with Unit of Measure
Removed old fluorescent tubes	60 pieces at EUR 2.00
Delivered and installed new fluorescent tubes	60 pieces at EUR 4.50
Cleaned the reflective surfaces	20 pieces at EUR 2.50
Replaced lamp ballasts	2 pieces at EUR 35.00

   Enter the services that were performed. If possible, use a service master record to enter unplanned services too.

> Hint:
> You can also copy the planned services from the purchase order. To copy the services from the purchase order, choose the *Service Sel.* pushbutton. Then select the two items and choose (*Copy Entry Sheet*).
>
> Ensure that you modify the quantity by 60 pieces for each service.

Answer the following questions about unplanned services.

Is there a service master record?

Does the system propose a price, and if so, why?

Task	Cleaning the Reflective Surfaces	Replacement of Lamp Ballast
Service number	T-LM3##	<None>
Proposed price	3.00	<None>
Price origin	Own estimate (condition for service)	<None>

Do not exit the service entry transaction after this step.

Service entry sheet number: ____

a) Choose *Logistics* → *Materials Management* → *Service Entry Sheet* → *Maintain* (`ML81N`).

b) Choose the *Other Purchase Order* pushbutton. Enter your purchase order number in the *Purchase Order* field in the *Select Purchase Order/Entry Sheet* dialog box and choose *Enter*.

> Hint:
> If you do not know the number of your purchase order, choose the input help for the *Purchase Order* field and search for *Purchasing Documents per Vendor* T-K500E##.

c) To create a new entry sheet, choose (*Create Entry Sheet*). Enter the following data:

Field	Value
Short Text	**`Service entry sheet, 1st floor`**

Confirm your entries.

d) Enter the following data on the *Basic Data* tab page:

Field	Value
External Number	**4700##**

e) Enter the following data in *Line 10*:

Field	Value
Service No.	**T-LM1##**
Quantity	**60**

f) Enter the following data in *Line 20*:

Field	Value
Service No.	**T-LM2##**
Quantity	**60**

g) Enter the following data in *Line 30*:

Field	Value
Service No.	**T-LM3##**
Quantity	**20**
Gross Price	**2,50**

h) Enter the following data in *Line 40*:

Field	Value
Short Text	**Replacement of lamp ballast**
Quantity	**2**
Un (Unit of Meas.)	**pc**
Gross Price	**35**

i) Save your entries and note the number of the service entry sheet.

2. Purchase order history after creating service entry sheet

   Display the purchase order history from the service entry transaction. Check whether the service entry sheet is listed in the purchase order history.

   Do not exit the service entry transaction after this step.

   a) Choose *Environment* → *Purchase Order History*.

   b) The service entry sheet is recorded in the purchase order history with the field *Short Text* in the line *Lerf*.

3. Service acceptance for the first floor

After you have reviewed the work performed by the service provider, accept the service entry sheet.

Do not exit the service entry transaction after this step.

Acceptance document: ______________________________

a) Choose (*Display* <-> *Change*).

b) Choose (*Accept*) to accept the service entry sheet.

c) Save your entries and note the number of the acceptance document.

4. Purchase order history after acceptance of the service entry sheet

   Display the purchase order history again. Check whether the acceptance document is listed in the purchase order history. Display the acceptance document too.

   What type of document is this?

   ____

   a) In the service entry transaction, choose *Environment* → *Purchase Order History*.

   b) The acceptance document is recorded in the purchase order history. Since this is a material document, the document is recorded in the purchase order history under the *Short Text* field *WE*.

   c) Double-click on the number of the *Material Document*. A separate line appears in the material document for each service line in the service entry sheet. This is due to the service-related invoice verification for the purchase order item. You will find the checkbox for service-related invoice verification in the purchase order item on the *Invoice* tab page. The checkbox was transferred from the vendor master record.

Invoice Entry and Purchase Order History

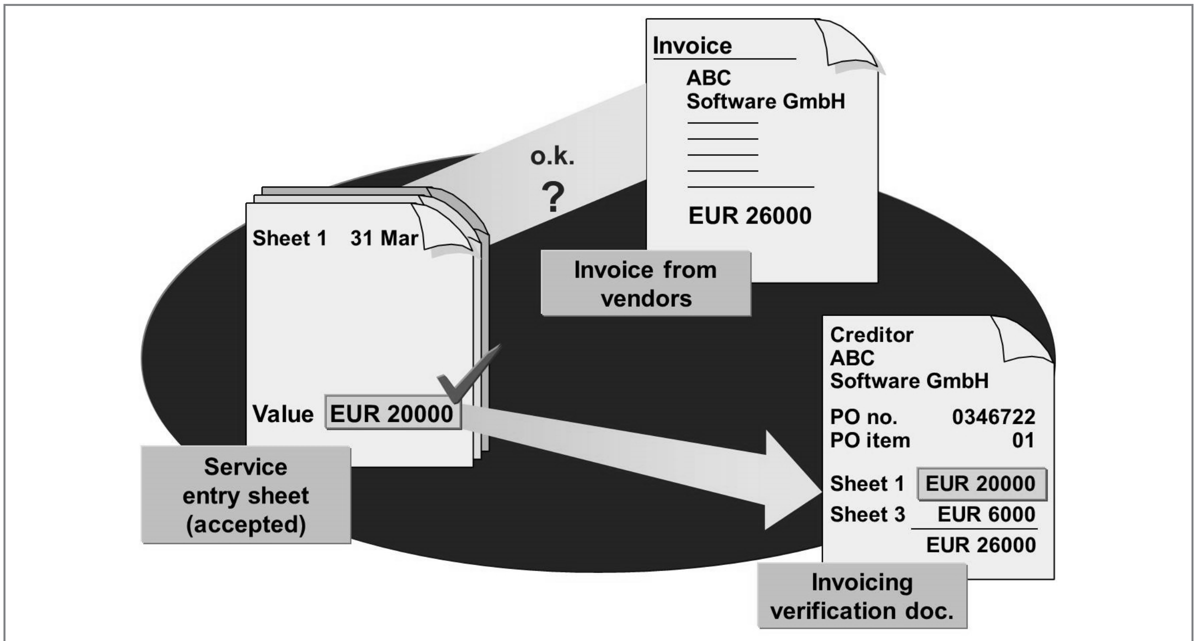


Figure 133: Invoice Verification for Entry Sheet

You can enter invoice verification for services for a purchase order only after the service entry sheet has been accepted.

When entering the invoice, you can reference the purchase order or the service entry sheets. If you specify the purchase order as the reference, the system proposes all of the accepted service entry sheets and accepted services for this purchase order.

The system compares the prices in the invoice with the prices from the service entry sheets. If there are no discrepancies, you can enter and post the invoice. If the system finds any discrepancies, it blocks the invoice for payment.

Purchase Order History

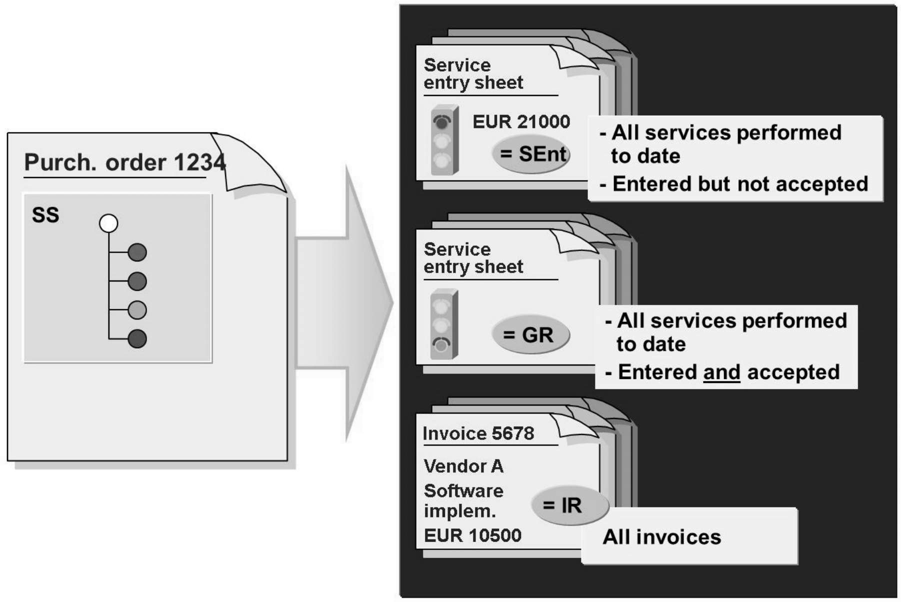


Figure 134: Purchase Order History

In the purchase order history, all follow-on activities relating to a purchase order item are listed. The activities listed are all of the services performed and entered on the service entry sheet, all of the accepted services entered on a material document, and all entered invoices.

The purchase order history is updated in the same way as the updates that are applied when the procurement of stock material takes place.

Unit 5
Exercise 23

Enter an Invoice for a Service Purchase Order

Business Example

You need to know how to use *Logistics Invoice Verification* to post a vendor invoice for external services.

1. Enter the vendor invoice.

   Enter the following invoice for your purchase order. Note that you can only settle services that have already been accepted. When you enter the invoice, choose the tax code *1I (input tax 10%)* for all of the items.

Invoice

Home-Electric Gr.##
Schillerstrasse 8
25451 Quickborn

IDES AG
Hamburg Plant
Altersdorferstr. 13
22299 Hamburg

Invoice number: RE-E1##
Invoice date: [Today's date]

With reference to purchase order no. 450000####, we hereby charge you for services rendered in accordance with the items in sheet no. 4700##:

Item	Quantity	Service number	Name	Price
10	60 pc	T-LM1##	Remove fluorescent tubes	EUR 120
20	60 pc	T-LM2##	Deliver and install fluorescent tubes	EUR 270
30	20 pc		Clean reflective surfaces	EUR 50
40	2 pc		Lamp ballast replaced	EUR 70
			Total net value	EUR 510
			plus 10% VAT	EUR 51
			Invoice amount	**EUR 561**

Subject to the agreed terms of payment.

Kind regards, Home-Electric Gr.##

Figure 135: Invoice RE-E1##

Invoice document number: ________________________

Enter an Invoice for a Service Purchase Order

Business Example

You need to know how to use *Logistics Invoice Verification* to post a vendor invoice for external services.

1. Enter the vendor invoice.

   Enter the following invoice for your purchase order. Note that you can only settle services that have already been accepted. When you enter the invoice, choose the tax code *1I (input tax 10%)* for all of the items.

Invoice

Home-Electric Gr.##
Schillerstrasse 8
25451 Quickborn

IDES AG
Hamburg Plant
Altersdorferstr. 13
22299 Hamburg

Invoice number: RE-E1##
Invoice date: [Today's date]

With reference to purchase order no. 450000####, we hereby charge you for services rendered in accordance with the items in sheet no. 4700##:

Item	Quantity	Service number	Name	Price
10	60 pc	T-LM1##	Remove fluorescent tubes	EUR 120
20	60 pc	T-LM2##	Deliver and install fluorescent tubes	EUR 270
30	20 pc		Clean reflective surfaces	EUR 50
40	2 pc		Lamp ballast replaced	EUR 70
			Total net value	EUR 510
			plus 10% VAT	EUR 51
			Invoice amount	**EUR 561**

Subject to the agreed terms of payment.

Kind regards, Home-Electric Gr.##

Figure 135: Invoice RE-E1##

   Invoice document number: ____________________________

   a) Choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Document Entry* → *Enter Invoice* (`MIRO`).

   b) Enter the following data on the *Basic Data* tab page:

Field	Value
Invoice date	<Current date>
Reference	**RE-E1##**
Amount	**561**
Tax amount	**51**

c) Enter the following data on the *PO Reference* tab page:

Field	Value
Purchase Order/Scheduling Agreement	<Your purchase order number>

d) Check the proposed items. In total, the proposed quantity and amount values correspond to those in the vendor invoice.

e) Check the tax codes for the items and change these if necessary to *1I (Input tax 10%)*.

f) Make sure your balance on the invoice is zero and the light in the top right hand corner of the screen is green.

g) Choose (*Post*) and note the number of the invoice document.

LESSON SUMMARY

You should now be able to:

- Create and accept a service entry sheet
- Enter an invoice for a service purchase order

Learning Assessment

1. Which of the following master data is relevant to the procurement of external services?

   Choose the correct answers.

   ☐ A Vendor master record

   ☐ B Material master record

   ☐ C Service master record

   ☐ D Purchasing info record

   ☐ E Bill of material

   ☐ F Service conditions

2. The individual steps in the procurement of services are similar to those in the procurement process for materials. Which of the following steps are specific to the process of procuring external services?

   Choose the correct answers.

   ☐ A The creation of a set of service specifications

   ☐ B The steps of service entry and acceptance

   ☐ C The creation of a purchase order

3. When you enter vendor-specific conditions, you create a separate service info record for each service and vendor (comparable to the purchasing info record for material).

   Determine whether this statement is true or false.

   ☐ True

   ☐ False

4. When services are procured, the item has only a short text to describe the general procurement project. The individual services are detailed in a service specification that can be maintained at item detail level.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

5. Which of the following statements are correct?

   Choose the correct answers.

   - [ ] A When procuring services, you can work with or without a service master record.
   - [ ] B The account assignment category unknown (U) is allowed only in purchase orders with item category D (service).
   - [ ] C You must specify a limit in a service item.
   - [ ] D The service specification of a service item can be structured in a maximum of four hierarchy levels.
   - [ ] E You cannot specify just one limit in a service item. A service specification with at least one service must exist.

6. You must always assign a service item to an account assignment object.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

7. Item category D (service) activates the service function and enables you to change a service specification and set value limits for unplanned services.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

8. Procurement for the warehouse, which is possible for materials, does not exist in service procurement.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

9. When the service entry sheets are saved, the postings are made in Financial Accounting. However, these postings are blocked and are not released until the service entry sheet is accepted.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

10. Which of the following sheets are used to record details of services rendered?

    Choose the correct answer.

    - [ ] A Service entry sheets
    - [ ] B Purchase orders
    - [ ] C Purchase requisitions

11. When entering the service, you can also always enter unplanned services.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

12. You can only enter a service provider’s invoice for a purchase order after the service entry sheet has been accepted.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

Learning Assessment - Answers

1. Which of the following master data is relevant to the procurement of external services?

   Choose the correct answers.

   [X] A Vendor master record

   [ ] B Material master record

   [X] C Service master record

   [ ] D Purchasing info record

   [ ] E Bill of material

   [X] F Service conditions

   For the procurement of external services, you need a vendor master record for the service provider. You can also use master records for services and service conditions. Bills of material, purchasing info records, and material master records are used for the procurement of materials.

2. The individual steps in the procurement of services are similar to those in the procurement process for materials. Which of the following steps are specific to the process of procuring external services?

   Choose the correct answers.

   [X] A The creation of a set of service specifications

   [X] B The steps of service entry and acceptance

   [ ] C The creation of a purchase order

3. When you enter vendor-specific conditions, you create a separate service info record for each service and vendor (comparable to the purchasing info record for material).

   Determine whether this statement is true or false.

   - [ ] True
   - [x] False

   Service conditions are entered for each vendor. You can enter conditions for several services for one vendor at the same time.

4. When services are procured, the item has only a short text to describe the general procurement project. The individual services are detailed in a service specification that can be maintained at item detail level.

   Determine whether this statement is true or false.

   - [x] True
   - [ ] False

5. Which of the following statements are correct?

   Choose the correct answers.

   - [x] A When procuring services, you can work with or without a service master record.
   - [ ] B The account assignment category unknown (U) is allowed only in purchase orders with item category D (service).
   - [ ] C You must specify a limit in a service item.
   - [x] D The service specification of a service item can be structured in a maximum of four hierarchy levels.
   - [ ] E You cannot specify just one limit in a service item. A service specification with at least one service must exist.

   For B: Account assignment category U is also allowed for item category B (Limit). For C and E: You can define limits for unplanned services but this is not required. You are also allowed to specify a single limit, but no services.

6. You must always assign a service item to an account assignment object.

   Determine whether this statement is true or false.

   - [x] True
   - [ ] False

7. Item category D (service) activates the service function and enables you to change a service specification and set value limits for unplanned services.

   Determine whether this statement is true or false.

   - [ ] True
   - [x] False

   That is correct. Although item category D does activate service functions, it does not set value limits for unplanned services.

8. Procurement for the warehouse, which is possible for materials, does not exist in service procurement.

   Determine whether this statement is true or false.

   - [x] True
   - [ ] False

9. When the service entry sheets are saved, the postings are made in Financial Accounting. However, these postings are blocked and are not released until the service entry sheet is accepted.

   Determine whether this statement is true or false.

   - [ ] True
   - [x] False

   That is correct. No FI postings are made when a service entry sheet is saved. The data is only updated in Financial Accounting when the service entry sheet is accepted.

10. Which of the following sheets are used to record details of services rendered?

   Choose the correct answer.

   - [x] A Service entry sheets
   - [ ] B Purchase orders
   - [ ] C Purchase requisitions

11. When entering the service, you can also always enter unplanned services.

    Determine whether this statement is true or false.

    - [ ] True
    - [x] False

    Unplanned services can be entered only if a limit has been specified in the purchase order item and the value of the unplanned services does not exceed this limit.

12. You can only enter a service provider's invoice for a purchase order after the service entry sheet has been accepted.

    Determine whether this statement is true or false.

    - [x] True
    - [ ] False

UNIT 6 Automated Procurement

UNIT OBJECTIVES

- Maintain data for material requirements planning
- Identify sources of supply in purchasing
- Create a contract
- Maintain source lists
- Execute an individual planning run
- Convert a purchase requisition into a purchase order automatically
- Post goods receipts automatically

Unit 6
Lesson 1

Maintaining Data for Material Requirements Planning (MRP)

LESSON OVERVIEW

This lesson provides an overview of the MRP procedure and introduces you to the procedure of manual reorder point planning. This lesson also examines the current stock or requirements list as an evaluation in MRP.

Business Example

Automate the determination of requirements for externally procured materials in your company. To do this, test the MRP with the manual reorder point planning procedure for a purchased material. For this reason, you require the following knowledge:

- An understanding of the principle of manual reorder point planning
- An understanding of the data necessary for manual reorder point planning in the material master record
- An understanding of simple static lot-sizing procedures
- How to use the current stock or requirements list (transaction `MD04`)

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Maintain data for material requirements planning

MRP in the Procurement Process

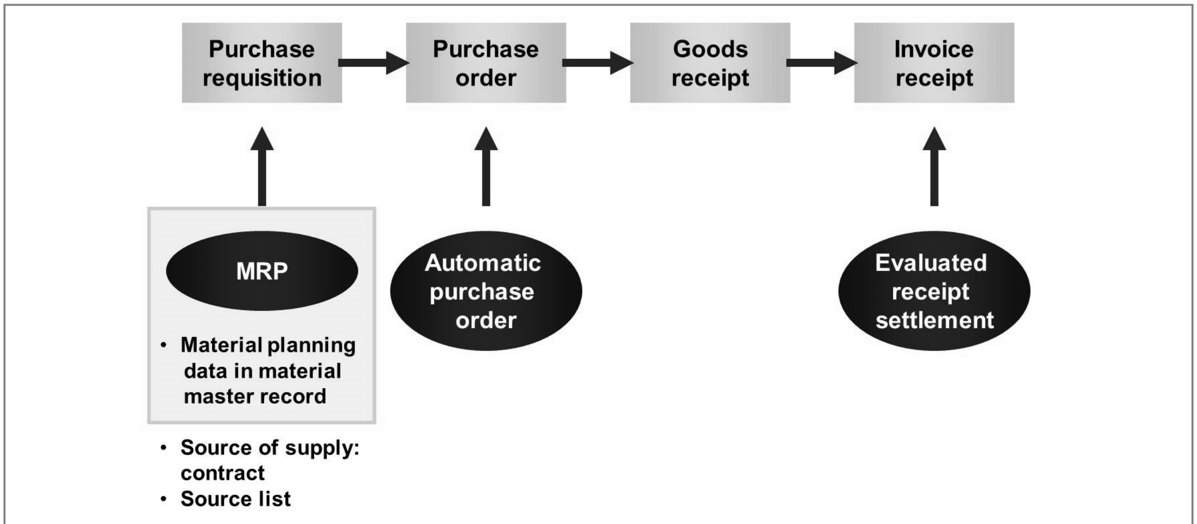


Figure 136: Automated Procurement – MRP

Simplify the procurement cycle at different points by automating the individual steps. This process starts with the determination of requirements. Then, create purchase requisitions with MRP so that you do not have to manually enter them in the system. Define the relevant data in the material master record of the material to be planned.

The main function of MRP is to ensure material availability. MRP ensures the timely procurement of the necessary requirement quantities for in-house production and sales. MRP helps to monitor stocks and automatically creates procurement proposals for purchasing and production.

The automatic planning run for requirements planning determines shortages and creates the corresponding procurement elements. The possible procurement elements of requirements planning include the planned order, the purchase requisition, and the scheduling agreement schedule lines.

For in-house production the system creates planned orders that are needed to plan production quantities. If planning is complete, the planned orders are converted into production orders for in-house production.

For external procurement, the system creates a planned order or a purchase requisition that is needed to plan the external procurement quantity. You can change, reschedule, or delete these internal planning elements, the planned order, and the purchase requisition at any time. The system creates the planned order. Purchasing orders the material only when the MRP controller has checked the planned order and converted it into a purchase requisition. Otherwise, the order proposal is immediately available to Purchasing.

If a scheduling agreement (SA) exists for a material and is indicated as MRP-relevant in the source list, create a scheduling agreement that will schedule lines directly during the requirements planning run. Scheduling agreement schedule lines, unlike planned orders and purchase requisitions, are fixed elements.

Various control parameters determine whether the planned orders, the purchase requisitions, or the scheduling agreement schedule lines are created. For example, in the planning run, these are the *Creation* checkboxes for purchase requisitions and automatic schedule lines.

Overview of Material Requirements Planning

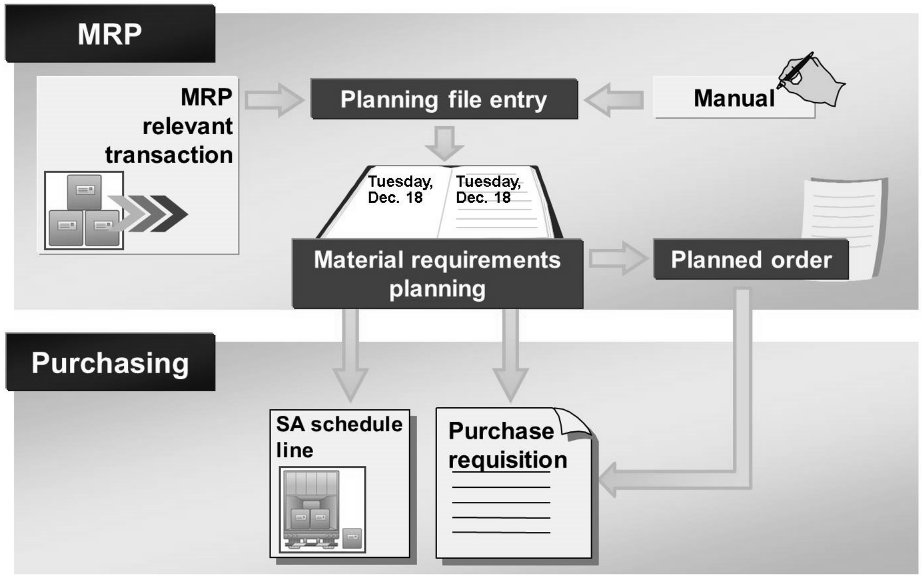


Figure 137: Overview of Material Requirements Planning

Requirements planning takes place at plant level (or for each MRP area). Activate requirements planning and maintain the requirements planning parameters for a particular plant, so that you can execute requirements planning for the plant. Maintain the MRP data of the materials to be planned automatically (material master record).

> Note:
> To activate MRP in Customizing, choose *Materials Management → Consumption-Based Planning → Planning → Activate Material Requirements Planning*.
>
> To set the plant parameters in Customizing, choose *Materials Management → Consumption-Based Planning → Plant Parameters → Carry Out Overall Maintenance of Plant Parameters*.

If you have fulfilled these prerequisites, the system automatically includes the planning file entries in MRP-relevant transactions, such as goods issues and reservations, which change the MRP data of a material, and the executing of a forecast, and so on. Alternatively, manually add planning file entries to the planning file.

To determine any shortages of individual materials, start a planning run. There are two different ways to execute planning runs: total planning or single-item planning.

Executing Material Requirements Planning

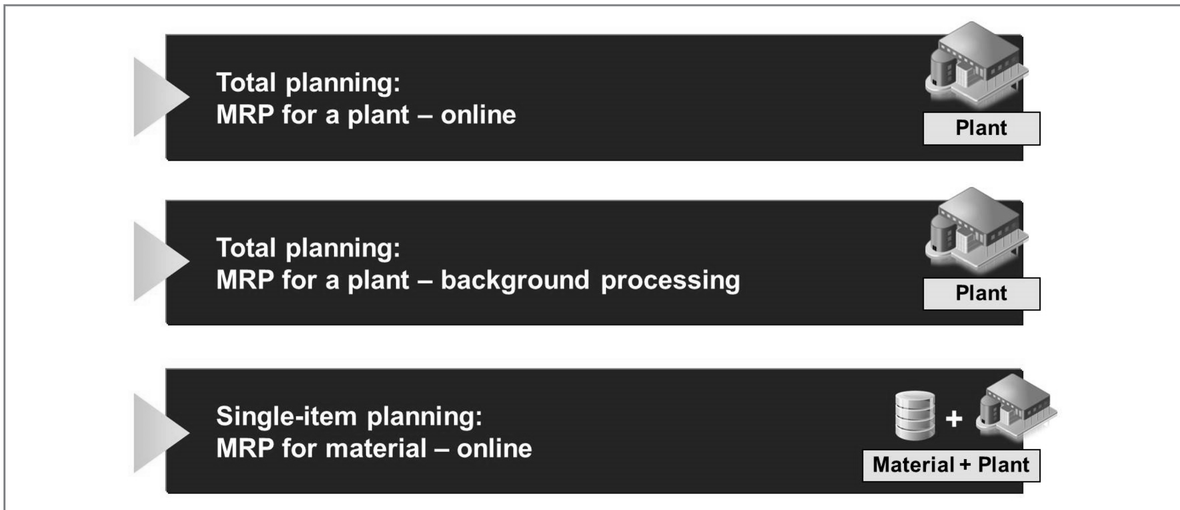


Figure 138: Executing Material Requirements Planning

Execute the requirements planning run as total planning for a particular plant (or MRP area). This procedure involves the planning of all materials that are MRP-relevant for a particular plant and includes the bill of material (BOM) explosion for materials with a BOM.

To execute total planning, on the *SAP Easy Access* screen, choose *Logistics → Materials Management → Material Requirements Planning (MRP) → MRP → Planning → Total Planning*.

Carry out the total planning run either online or as a background job, then schedule a total planning run in the background once or periodically. If you select *Schedule once*, the system executes the total planning run once on the date you specified with the control parameters that you define on the variant screen. If you have selected *Schedule periodically*, the system repeats the total planning run at regular intervals.

Also, execute the requirements planning run with single-item planning for an individual material. You can execute the planning run at single level or multi-level. Single-level, single-item planning plans only the BOM level of the selected material. Multilevel, single-item planning plans the BOM level of the selected material and all BOM levels beneath it.

To execute single-item, single-level planning, on the *SAP Easy Access* screen, choose *Logistics → Materials Management → Material Requirements Planning (MRP) → MRP → Planning → Single-Item, Single-Level*.

MRP Procedures and Lot Sizes

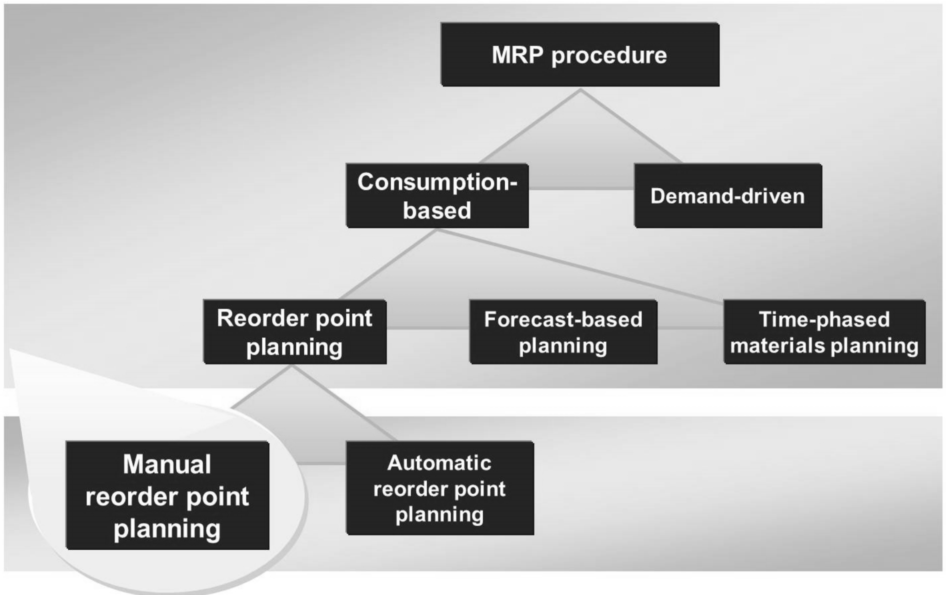


Figure 139: MRP Procedures

To plan a material automatically, determine the suitable MRP and lot-size procedures in the material master. Select the *MRP type* and *lot size* checkboxes. Depending on the selected procedure, maintain additional data in the material master record. Define different MRP procedures for the same material in different plants.

The planning procedure can be either consumption-based or demand-driven. Consumption-based planning is a procedure in MRP that is based on previous material consumption only. External requirements such as sales orders, planned independent requirements, and reservations, are generally not MRP-relevant. Use the consumption-based MRP procedure in areas without in-house production. Alternatively, use the consumption-based MRP procedure in manufacturing plants to plan class B and class C materials (based on ABC analysis) and operating supplies. Demand-driven planning is an MRP procedure that is especially useful for planning finished products and important assemblies and components (class A materials, as per ABC classification). The system directly plans the usage of demand-driven MRP procedure sales orders, planned independent requirements, reservations, and so on.

Consumption-based planning is divided into the following MRP procedures:

- Reorder point planning

  The system calculates the net requirement by checking whether the stock available at plant level (sum of plant stock and fixed receipts) falls short of the reorder point. The reorder point is determined for the material in the master record. If the available stock falls short of the reorder point, procurement must be initiated. In reorder point planning, there are two MRP types to be considered, the manual reorder point procedure and automatic reorder point. The MRP controller determines the manual reorder point whereas the system uses the forecast for the automatic reorder point procedure to calculate the reorder point.

- Forecast-based planning

The system calculates the future requirement using the forecasting program based on the consumption values. The forecast requirements have a direct effect in MRP. Execute the forecast calculation at regular intervals.

- Time-phased materials planning

  The system calculates the future requirement through estimation, using the forecasting program that is based on the consumption values. However, MRP is executed in this procedure only at determined points in time, in a particular planning cycle (rhythmic planning). If a vendor always delivers a material on a particular weekday, plan MRP in the same cycle, adjusted according to the delivery time.

Reorder Point Planning

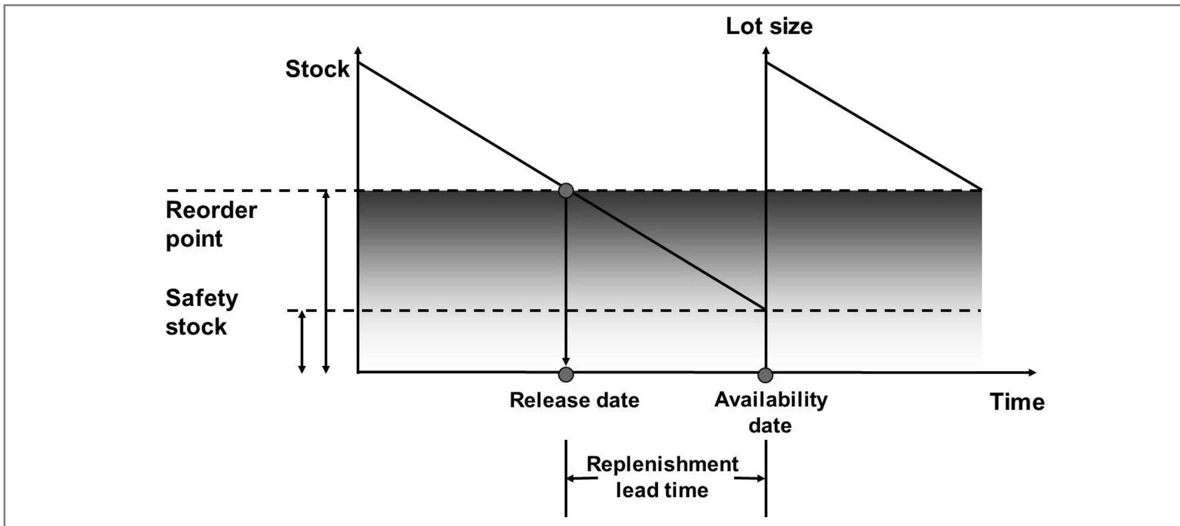


Figure 140: Reorder Point Planning

The manual reorder point procedure uses the value **VB** in the *MRP Type* field. The basis of the reorder point planning is the comparison of the available warehouse stock with the reorder point. If the quantity of available warehouse stock is less than the reorder point, the system triggers procurement.

The reorder point is composed of the estimated average material requirement during the replenishment lead time and the safety stock.

The following values must be considered when specifying the reorder point:

- Safety stock
- Present consumption or future requirement
- Replenishment lead time

Use safety stock to cover variability of consumption (consumption higher than planned or higher than average consumption) as well as variability of lead time (delivery later than planned).

The system executes the net requirement calculation during the planning run.

Net Requirements Calculation for Reorder Point Planning

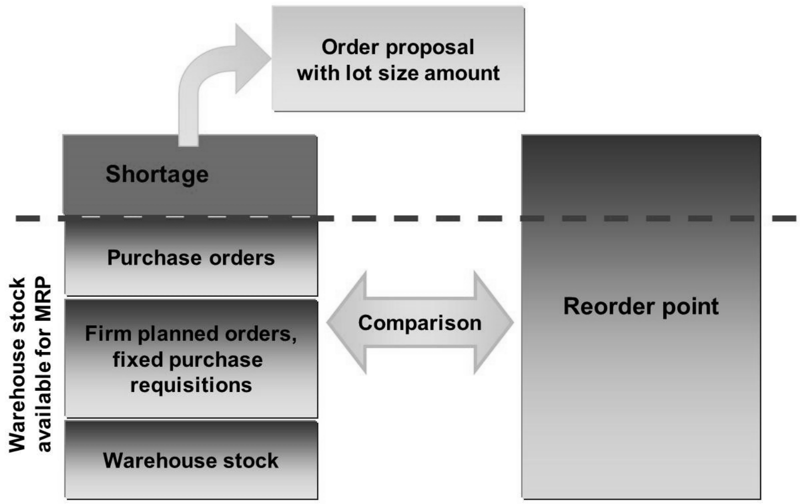


Figure 141: Net Requirements Calculation for Reorder Point Planning

During reorder point planning, the system calculates the warehouse (plant) stock available for MRP using the following formula:

Warehouse stock + On-order stock (purchase orders, firm planned orders, and fixed purchase requisitions)

If the available warehouse stock for MRP is less than the reorder point, there is a shortage. The shortage quantity is the difference between the reorder point and the available warehouse stock.

Static Lot-Sizing Procedures

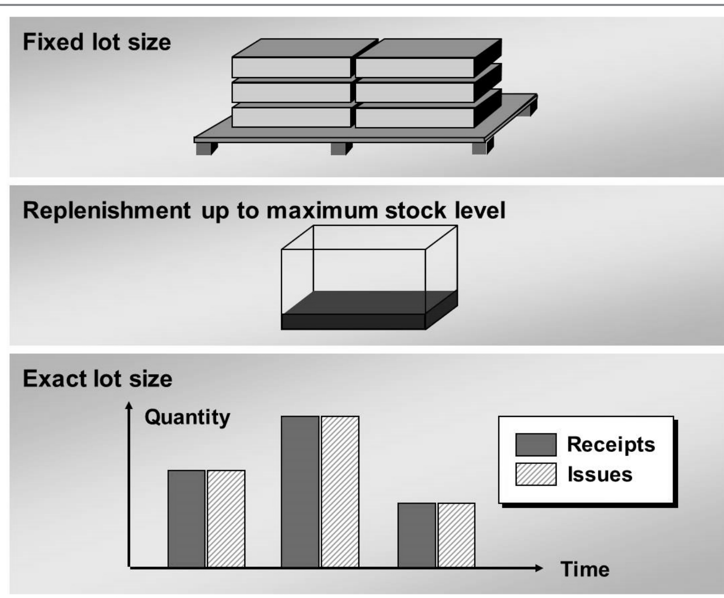


Figure 142: Static Lot-Sizing Procedures

The material's procurement quantity is determined by the lot-sizing procedure that is specified in the material master record.

The three groups of procedures in the lot-size calculation are as follows:

- Static lot-sizing procedures
- Period lot-sizing procedures
- Optimum lot-sizing procedures

This lesson only examines the static lot-sizing procedures.

In static lot-sizing procedures, the lot size is calculated for a material using the quantity specifications recorded in the material master record. The system does not consider future shortages.

If the system determines shortages, the system creates an order proposal for the quantity of the static lot size.

The lot size is calculated based on the following criteria:

- If you specify that the exact lot-size (lot-for-lot order quantity) is to be used, the system uses the exact shortage quantity as the order quantity if there is a material shortfall. If, on one day, there are several goods issues that cause a material shortfall, the system groups the shortage quantity from the same day in one order proposal, rather than creating an order proposal for each shortage.
- If you specify that the fixed lot-size is to be used, the system uses the fixed order quantity recorded in the material master record as the order quantity in case of a material shortfall. If this order quantity is not sufficient to cover the shortage, the system generates several order proposals for the same date until the shortage is covered.
- If you specify that the replenishment up to maximum stock level is to be used, the system creates an order proposal for the quantity that is calculated by finding the difference between the available plant stock and the maximum stock level defined in the material master record.

Calculation of Dates

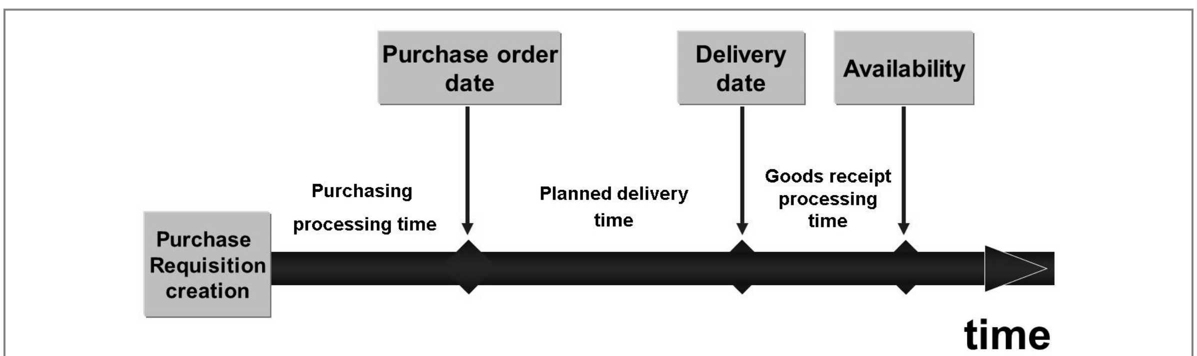


Figure 143: Forward Scheduling for External Procurement

After calculating the net requirements and lot-size, the system will schedule the procurement proposal during the planning run. The system calculates the date to send the purchase order and the date that the vendor must deliver the corresponding quantity.

From the date the purchase requisition is created, the system calculates the material's availability date by considering the following time components:

- Purchasing processing time

  This includes the time period (measured in workdays, according to the factory calendar) necessary for converting a purchase requisition into a purchase order and then outputting it. Depending on the plant, you determine this time in Customizing by choosing *Materials Management → Consumption-Based Planning → Plant Parameters → Carry Out Overall Maintenance of Plant Parameters*.

- Planned delivery time

  This is the timeframe from the message output for the purchase order to the receipt of goods from the vendor. The time is entered in calendar days in the material master record, info record, or contract.

- Goods receipt processing time

  This is the time required from the time of goods receipt until the material is available in the warehouse. The time is entered in the material master record and/or contract in working days, according to the factory calendar.

Stock/Requirements List

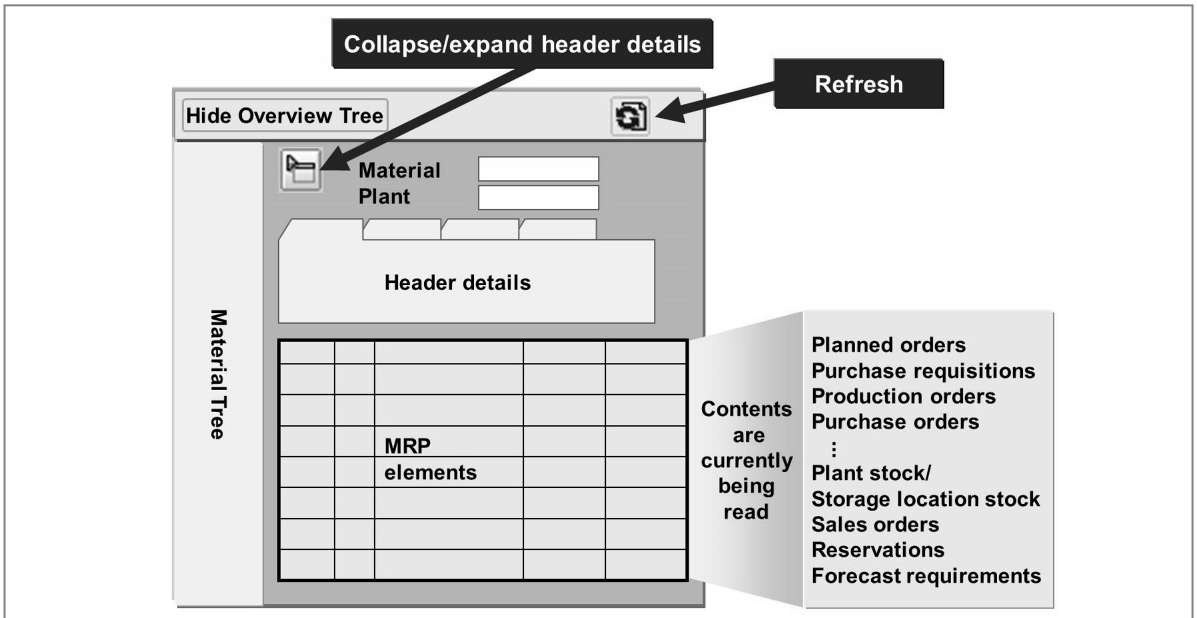


Figure 144: Stock/Requirements List (MD04)

Evaluate the planning situation using the current stock list or requirements list. This list shows the present stock and requirements situation of a material. Each time the list is set up, the system re-imports and displays the various MRP elements. You can, therefore, always see the current availability of the material. This is a dynamic list. To set up the list again, either restart the list or use (*Refresh*).

The stock or requirements list is divided into the following screen areas:

- Header

  In the header, find the material data, such as, the material number, plant, and MRP parameters. Use the variable header to display additional information.

- Items

  Items include the individual MRP elements, such as, planned order, purchase orders, and reservations with date and quantity specifications.

- Material tree

  The material tree is a structure tree consisting of the worklist of the materials. The MRP controller can choose to show or hide the work list.

The MRP list is another function used for evaluation in MRP. The list shows the result of the most-recent planning run and is, therefore, static. It does not show changes made after the planning run. During the planning run, you can decide whether you need to create an MRP list.

Unit 6
Exercise 24

Maintain Data for Material Requirements Planning

Business Example

Using materials planning, plan for one of your materials automatically. Extend the existing master record by creating views for MRP.

Display the material master record.

The material ball bearing, cylindrical-##, is used in production in plant 1000. Based on the MRP type, the system will plan automatically for this material in the future.

Before you create the material data that is necessary for MRP, display the material and determine some of the data.

1. Display the material ball bearing, cylindrical-##. To determine the material number, use F4 help to search for *Material number/description*.

> Hint:
> Make sure you enter the text correctly. You can also just enter a part of the text and then type an asterisk (*) as a placeholder.

   Make a note of the material number.

   Material number: ______________________________

2. Determine the views that were already created by the user departments for this material.

   ____

   ____

   ____

3. Display the basic data of the material and determine to which material type and industry the material is assigned. Can you also determine who first created the material?

4. Show the purchasing data for plant 1000 and determine whether the system has set the checkbox for automatic purchase order generation.

Enhance Material with MRP Data

Create the MRP data for material T-M500D## for plant 1000. You have decided that the material is planned using the manual reorder point procedure and that a fixed lot-size is to be procured for your company.

1. Enter the following data for manual reorder point planning on MRP views 1 and 2.

The reorder point for the material is 100 pieces, and you need to procure a fixed lot-size of 300 pieces. The MRP controller responsible for the material is 0##. The average delivery time is 7 days and a goods receipt processing time of 1 day is required for the placement in storage.

> Hint:
> To extend the material for MRP functions we must extend the material by using the *Create* transaction.

2. Would material T-M500D## be considered or planned in the next planning run for plant 1000? If so, why?

Unit 6
Solution 24

Maintain Data for Material Requirements Planning

Business Example

Using materials planning, plan for one of your materials automatically. Extend the existing master record by creating views for MRP.

Display the material master record.

The material ball bearing, cylindrical-##, is used in production in plant 1000. Based on the MRP type, the system will plan automatically for this material in the future.

Before you create the material data that is necessary for MRP, display the material and determine some of the data.

1. Display the material ball bearing, cylindrical-##. To determine the material number, use F4 help to search for *Material number/description*.

   > Hint:
   > Make sure you enter the text correctly. You can also just enter a part of the text and then type an asterisk (*) as a placeholder.

   Make a note of the material number.

   Material number: ______________________________

   a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current* (`MM03`).

   b) Choose *Input Help* (F4 help) for the *Material* field, and enter **`*bearing*##`** in the *Material description* field.

   c) Choose **`T-M500D##`** in the *Material* field.

2. Determine the views that were already created by the user departments for this material.

   ____

   a) Choose the *Select View(s)* pushbutton. This takes you to the corresponding dialog box. The system has already created the following views:

- *Basic Data 1*
- *Basic Data 2*
- *Purchasing*
- *Foreign Trade: Import Data*
- *Purchase Order Text*
- *Accounting 1*
- *Accounting 2*
- *Plant Stock*

3. Display the basic data of the material and determine to which material type and industry the material is assigned. Can you also determine who first created the material?

   a) In the *Select view(s)* dialog box, select *Basic Data 1* and choose *Enter*.

   b) Choose (*Information on material*).

   A dialog box displays the ID of the user who created the material originally next to the material type and the industry sector.

Field	Value
Material type	*Operating Supplies (HIBE)*
Industry sector	*Mechanical Engineering (M)*

4. Show the purchasing data for plant 1000 and determine whether the system has set the checkbox for automatic purchase order generation.

   a) Choose the *Purchasing* tab page.

   b) In the *Organizational Levels* dialog box, enter **1000** in the *Plant* field.

   In the purchasing data, you see the *Autom. PO* checkbox in the *General data* area. The checkbox is selected.

Enhance Material with MRP Data

Create the MRP data for material T-M500D## for plant 1000. You have decided that the material is planned using the manual reorder point procedure and that a fixed lot-size is to be procured for your company.

1. Enter the following data for manual reorder point planning on MRP views 1 and 2.

   The reorder point for the material is 100 pieces, and you need to procure a fixed lot-size of 300 pieces. The MRP controller responsible for the material is 0##. The average delivery time is 7 days and a goods receipt processing time of 1 day is required for the placement in storage.

   > Hint:
   > To extend the material for MRP functions we must extend the material by using the *Create* transaction.

a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Create (General)* → *Immediately* (`MM01`).

b) Enter **`T-M500D##`** in the *Material* field and choose *Select View(s)*. You do not need to enter the material type and industry because the material master data has already been created. The system has extended the material master record.

c) In the *Select view(s)* dialog box, select *MRP 1* and *MRP 2*.

d) In the *Organizational Levels* dialog box, enter **`1000`** in the *Plant* field.

e) Enter the following data on the *MRP 1* tab page:

Field	Value
MRP Type	**`VB`**
Reorder Point	**`100`**
MRP Controller	**`0##`**
Lot size	**`FX`**
Fixed lot size	**`300`**

f) Enter the following data on the *MRP 2* tab page:

Field	Value
Planned Deliv. Time	**`7`**
GR Processing Time	**`1`**

g) Save your entries.

2. Would material T-M500D## be considered or planned in the next planning run for plant 1000? If so, why?

The system plans the material in the next planning run because the creation of MRP data is an MRP-relevant transaction. A planning file entry was created for this material. The shortfall of the reorder point is not important in this case. In addition, a change to existing MRP data results in a planning file entry even though sufficient stock is available.

LESSON SUMMARY

You should now be able to:

- Maintain data for material requirements planning

Unit 6
Lesson 2

Maintaining Contracts and Source Lists

LESSON OVERVIEW

This lesson shows you the data necessary for the automatic conversion of requisitions into purchase orders. To begin this process, the system must assign a source of supply to the requisition. In this lesson, the contract is introduced at greater length as a potential source of supply. Furthermore, this lesson discusses the source list. A source list contains important information for the automatic source determination process.

Business Example

You use an automatic requirement determination process already. You now wish to automate the process of source determination. In your test scenario, you want to determine whether the outline agreement that you have already set up with the vendor is the source of supply during the requirement planning run. You analyze which system settings are required for this. For this reason, you require the following knowledge:

- An understanding of the overview of sources of supply in purchasing
- How to create a contract
- How to maintain a source list for a material

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Identify sources of supply in purchasing
- Create a contract
- Maintain source lists

Automatic Source Determination in the Procurement Process

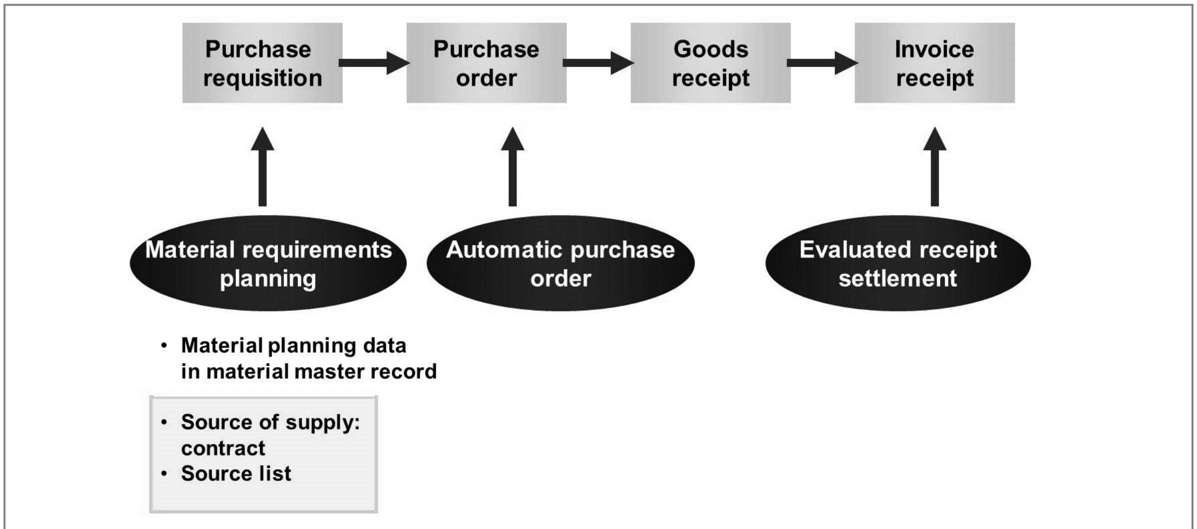


Figure 145: Automated Procurement – Source Determination

Automate various steps in the procurement process and determine material requirements through materials planning. This relieves the burden on user departments because you do not need to create purchase requisitions for required items manually. You can use the automatic conversion of requisitions into purchase orders to simplify the procurement process.

To convert an item of a purchase requisition into a purchase order item automatically, the system must know from which vendor and at what price the material is to be procured.

Explain the various options for assigning a source of supply to a requisition item.

Conversion of Requisition into a Purchase Order

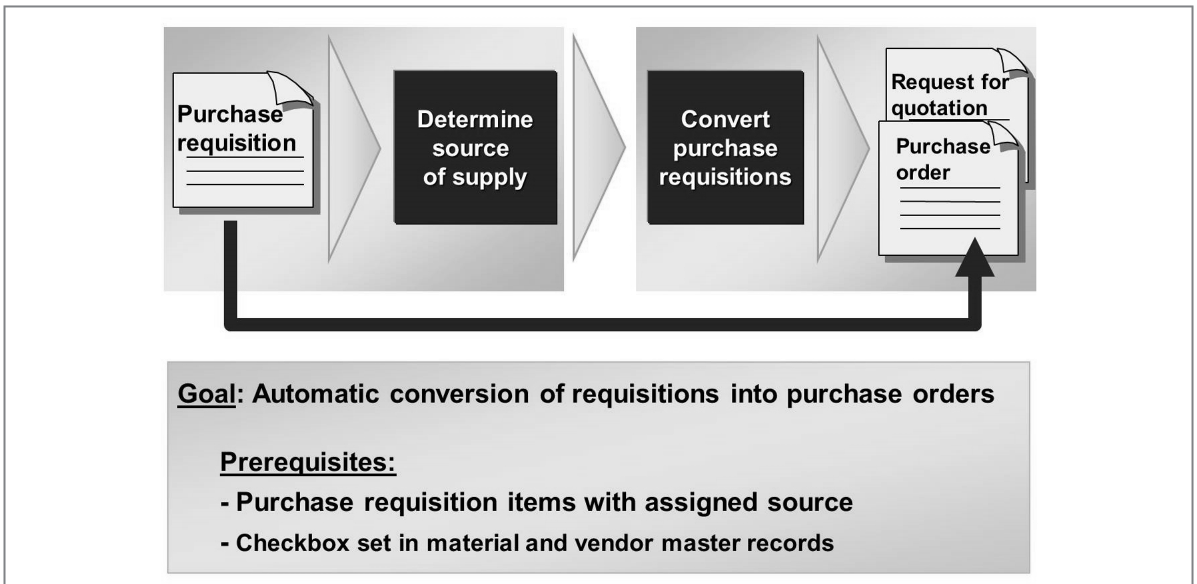


Figure 146: Conversion of Requisition into a Purchase Order

You can also carry out the source determination process automatically, for instance, during the requirements planning run. In such cases, the results of the planning run will include those purchase requisitions covering relevant material requirements, and then the system assigns sources of supply to the requisition items listed.

The system can only assign a source automatically if the source can be determined uniquely. For this purpose, you must define a source as one that is valid for a certain period. To do so, you use the source list for the material.

Use release procedures if you wish to check purchase requisitions for formal correctness and to ensure that you have specified the account assignment and source properly. Define the release procedures flexibly (for example, according to the criteria item value, requester, or account assignment).

> Note:
> For more information about individual topics, refer to the SAP documentation under
>
> *SAP ERP Central Component → Logistics → Materials Management → Purchasing → Purchase Requisition → Follow-on Functions → Assign Sources of Supply* and *SAP ERP Central Component → Logistics → Materials Management → Purchasing → Purchase Requisition → Release Procedure*.

Sources of Supply

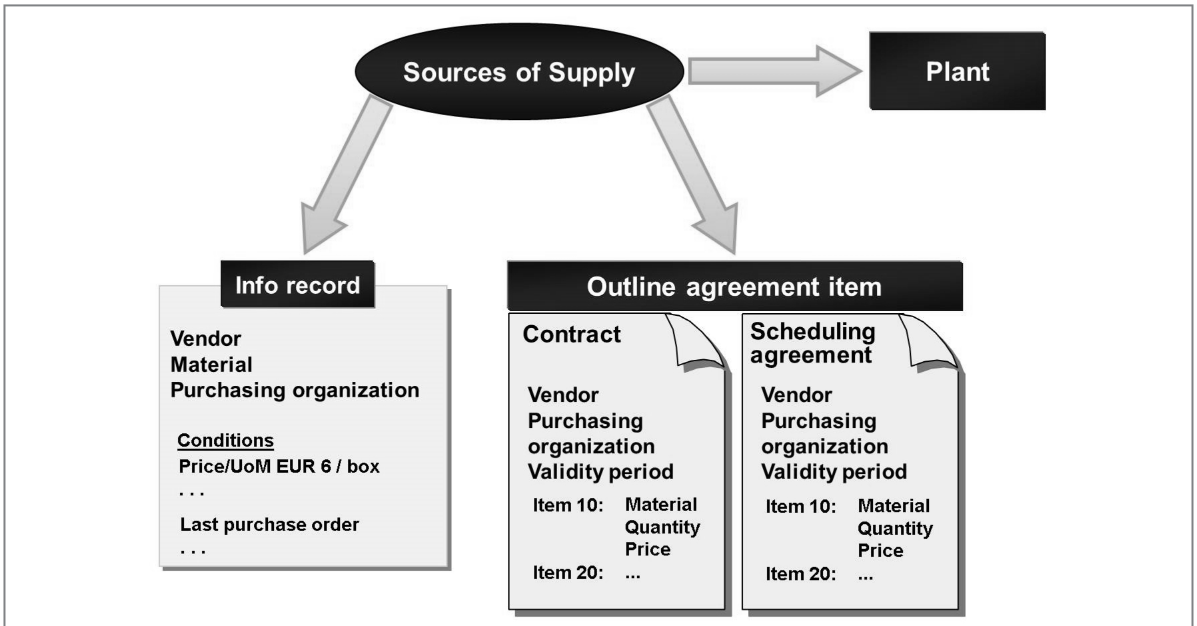


Figure 147: Overview of Sources of Supply

A source of supply can be both a vendor (external supplier) and one of the plants in your enterprise. The system identifies external supplier sources through purchasing info records and outline agreement items. For external sources of supply, the system can retrieve the vendor and price of the material from the respective info record or the outline agreement item.

A purchasing info record is a repository of information for Purchasing. It contains data on a certain material supplied by a certain vendor. The information may include the current vendor price, the vendor's planned delivery time, and the name by which the vendor refers to the material.

An outline agreement is a longer-term arrangement with a vendor for the supply of materials or provision of services based on predefined terms and conditions. This arrangement is valid for a certain period and for a predetermined total purchase quantity or value.

The following types of outline purchase agreement exist:

- Contract
- Scheduling agreement

An outline agreement does not contain specific delivery dates or quantities of individual deliveries. These are specified subsequently, in either a contract release order or a scheduling agreement delivery schedule, depending on the type of agreement.

Contract

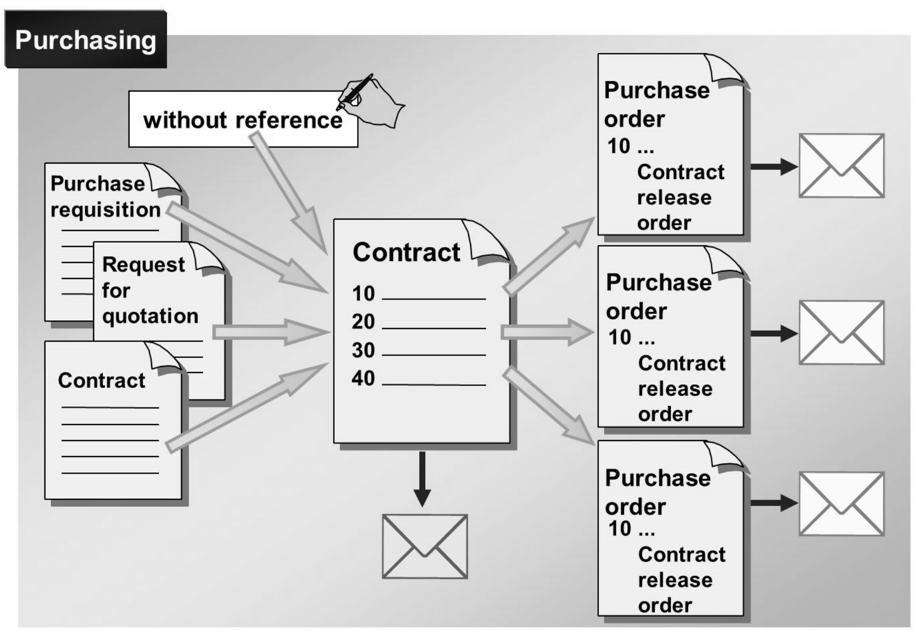


Figure 148: Contract

Either create a contract item manually without referencing another document, or by referencing a quotation or purchase requisition item. You can also reference an existing contract.

The structure of a contract (or of an outline agreement generally) consists of items defining the individual materials, material groups, or services with prices. A contract consists of two elements, namely the document header and document items.

A distinction is made between the document header and the document items as follows:

- The document header contains information relating to the entire agreement, such as, vendor data, agreement validity period, agreement type, and header conditions.

- The document item contains data specific to the goods or services to be procured, such as, material, agreed total purchase quantity, price, and texts. However, there is no specification of an exact quantity or delivery date.

Contract items can relate to an individual plant or to all the plants of a purchasing organization. A contract without plant information at item level is called an Enterprise Resource Planning (ERP) central contract.

Contract Types

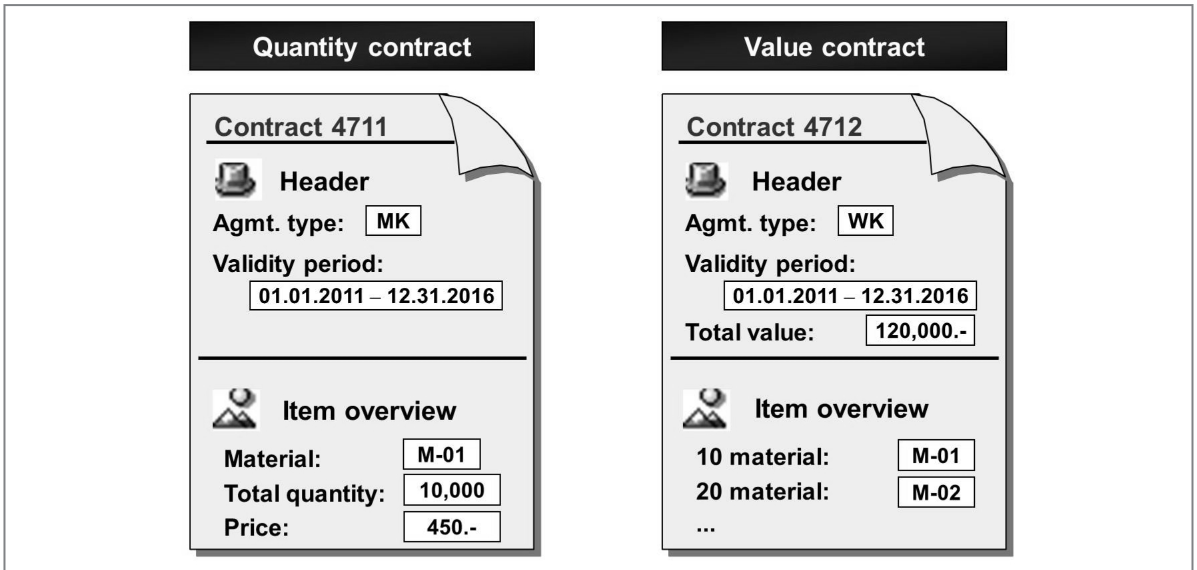


Figure 149: Contract Types

The two contract types are described as follows:

- Quantity contract

  Choose this contract type if you have already agreed on the total quantity you want to order over the duration of the agreement. When you fulfill the contract by placing orders, and if the agreed quantity has been reached, the contract release orders are issued. In a quantity contract, define the target quantity and conditions of ordering for each item (among other things).

- Value contract

  Choose this contract type if the total value of all contract release orders is not to exceed a certain amount. When the agreed value has been reached, the contract is counted as fulfilled through the issue of contract release orders.

To inform the vendor about the quantities needed on specific dates, enter purchase orders that reference the contract. Such purchase orders are known as contract release orders or contract releases. These contract release orders are recorded in the release documentation for the relevant contract item.

Release Documentation

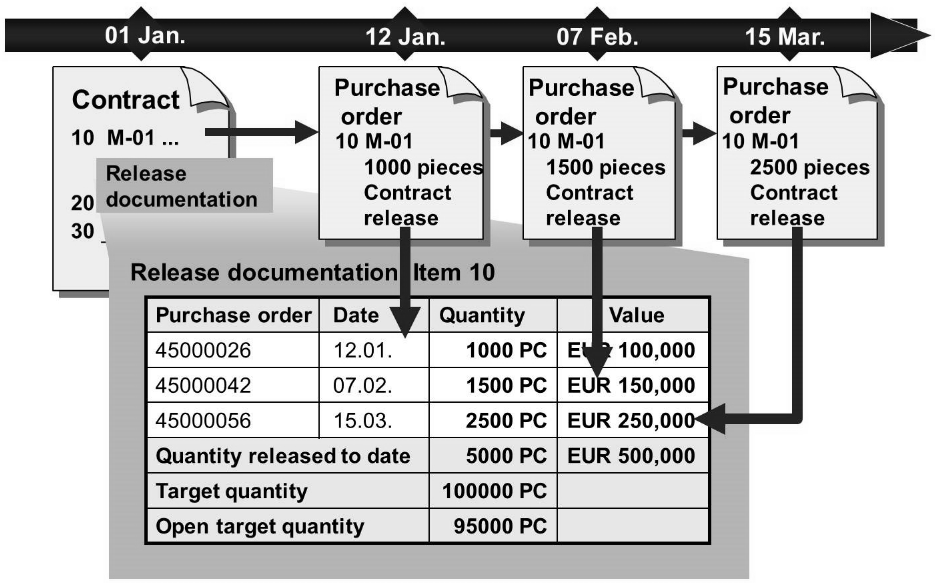


Figure 150: Release Documentation

The release (order) documentation comprises the details of the ordering activities of an item listed in the contract. The system automatically updates the release documentation when a release order is created. The release documentation contains information including the number of the release order, the purchase order date, the order quantity, and the order value for all release orders issued against the contract. It is the basis for monitoring the contract.

The release documentation specifies the statistical data on a contract item. To display the release documentation, select the required contract item and choose *Item → Statistics → Release Documentation*.

Hint:
You can enter a contract item as a source of supply in a purchase requisition item. This ensures that the system references the outline agreement when it converts the purchase requisition into a purchase order item. The resulting purchase order is a contract release order.

Unit 6
Exercise 25

Create a Contract

Business Example

You conclude a contract with your vendor for ball bearings. In the system, this contract represents a source of supply for these items. Automate the source determination process for this material.

Create a contract

You plan to automate most of the procurement process in purchasing organization 1000 with regard to the vendor H.A.G. Potsdam GR.##. You want to convert purchase requisitions involving this vendor into purchase orders automatically. Deliveries from this vendor will be settled automatically.

In future material ball bearing procurement, you want to procure cylindrical-## from this vendor under the terms of a contract. The system should determine the contract as the source of supply for this material automatically.

1. Change vendor master record.

   To achieve the required automation, you must set certain checkboxes in the purchasing data of the vendor master record. For the vendor H.A.G. Potsdam Gr.##, set all checkboxes that are necessary for the automatic conversion of requisitions into purchase orders and for automatic settlement with respect to deliveries of the material in question. Change the data in the vendor master record for purchasing organization 1000.

   > Hint:
   > Determine the vendor number using the input help.

   What are the names of the checkboxes that have to be set?

   ____

   ____

   ____

2. Create contract.

   Your purchasing department has entered into a quantity contract with the vendor H.A.G. Potsdam Gr.## (T-K500C##) for the material ball bearing, cylindrical-## (T-M500D##). Create the contract for purchasing organization 1000 and purchasing group T##.

   Which agreement type will you choose? ______________________________

The validity period of the contract starts on the first day of the previous month and ends on 12/31 of the following year. The contract is valid for plant 1000. The target quantity is 200,000 pieces and the agreed price is EUR 10/pc.

Select the tax code 1I from evaluated receipt settlement on the detail screen for the contract item. In addition, check whether the checkboxes for *GR-Based IV* (gross-receipt-based invoice verification) and evaluated receipt settlement have been set for the item. Note the contract number.

Contract number: ____

Unit 6
Solution 25

Create a Contract

Business Example

You conclude a contract with your vendor for ball bearings. In the system, this contract represents a source of supply for these items. Automate the source determination process for this material.

Create a contract

You plan to automate most of the procurement process in purchasing organization 1000 with regard to the vendor H.A.G. Potsdam GR.##. You want to convert purchase requisitions involving this vendor into purchase orders automatically. Deliveries from this vendor will be settled automatically.

In future material ball bearing procurement, you want to procure cylindrical-## from this vendor under the terms of a contract. The system should determine the contract as the source of supply for this material automatically.

1. Change vendor master record.

   To achieve the required automation, you must set certain checkboxes in the purchasing data of the vendor master record. For the vendor H.A.G. Potsdam Gr.##, set all checkboxes that are necessary for the automatic conversion of requisitions into purchase orders and for automatic settlement with respect to deliveries of the material in question. Change the data in the vendor master record for purchasing organization 1000.

   > Hint:
   > Determine the vendor number using the input help.

   What are the names of the checkboxes that have to be set?

   ---

   a) Choose *Logistics → Materials Management → Purchasing → Master Data → Vendor → Purchasing → Change (Current)* (`MK02`).

   b) Enter **`T-K500C##`** in the *Vendor* field.

Hint:
Press F4 for the *Vendor* field and enter **H.A.G.*Gr.##** in the *Vendor* field.

c) Enter **1000** in the *Purchasing Organization* field, select the *Purchasing data* checkbox, and choose *Enter*.

d) Select the following checkboxes:

GR-Based Inv.Verif. (GR-based invoice verification)

AutoEvalGRSetmt Del. (evaluated receipt settlement (ERS))

Automatic purchase order (Automatic Generation of Purchase Order Allowed)

e) Save your entries.

2. Create contract.

Your purchasing department has entered into a quantity contract with the vendor H.A.G. Potsdam Gr.## (T-K500C##) for the material ball bearing, cylindrical-## (T-M500D##). Create the contract for purchasing organization 1000 and purchasing group T##.

Which agreement type will you choose? ______________________________

The validity period of the contract starts on the first day of the previous month and ends on 12/31 of the following year. The contract is valid for plant 1000. The target quantity is 200,000 pieces and the agreed price is EUR 10/pc.

Select the tax code 1I from evaluated receipt settlement on the detail screen for the contract item. In addition, check whether the checkboxes for *GR-Based IV* (gross-receipt-based invoice verification) and evaluated receipt settlement have been set for the item. Note the contract number.

Contract number: ____

a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Contract* → *Create* (`ME31K`).

b) Enter the following data on the *Initial Screen*:

Field	Value
Vendor	**T-K500C##**
Agreement Type	**MK** (Quantity contract)
Purch. Organization	**1000**
Purchasing Group	**T##**
Plant	**1000**

c) Choose (*Enter*).

d) Enter the following data on the *Header Data* screen:

Field	Value
Validity Start	<First of last month>
Validity End	<12/31 of the following year>

e) Choose (*Enter*).

f) On the *Item Overview* screen, accept the messages regarding the validity start date and choose *Enter*.

g) Enter the following data on the *Item Overview* screen:

Field	Value
Material	**T-M500D##**
Targ. Qty	**200000**
Net Price	**10**

h) Select the *Item* and choose *Item* → *Details* to go to the *Item* screen.

Field	Value
Tax Code	*1I*
GR-BasedIV	Checked
ERS	Checked

i) Save the data and make a note of the contract number.

Source Determination and Source List Generation

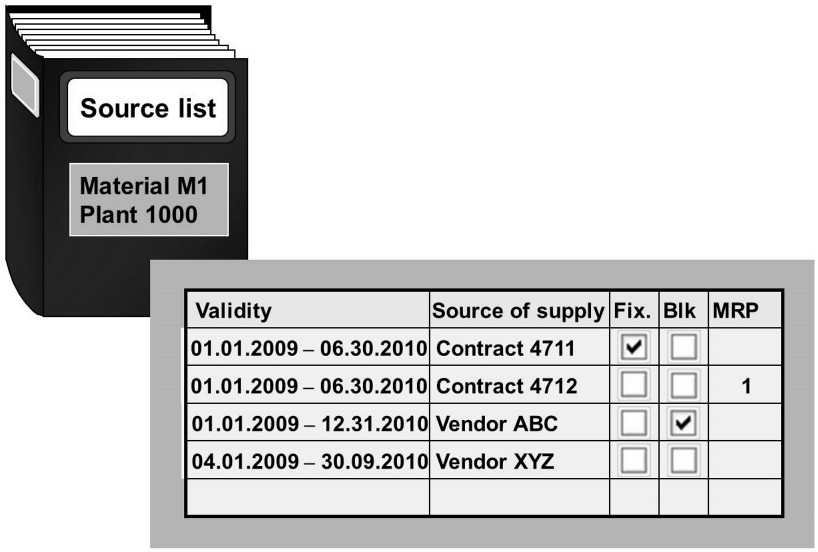


Figure 151: Source List

The source list aids in the administration of sources of a material at plant level. Specify which sources of a material are allowed and disallowed for a plant and the periods that these two statuses are valid. Take the source list entries into account for automatic source determination in purchasing and requirements planning.

You can decide that a source is preferable over a certain period (*Fixed* checkbox). If no procurement is to be allowed from a source of supply (or vendor) during a certain period, set the *Blocked* checkbox for the relevant source list entry.

In automatic requirements planning, generate a purchase requisition with a source of supply only if the source list for the material contains a valid entry when the *Use in materials planning (MRP)* checkbox is selected.

Stipulate a source list requirement for a material. This means that this material may only be procured from sources that have been entered as valid in the source list. Find the necessary checkbox in the purchasing data of the material master record.

Specify the source list requirement for a plant in Customizing. This means that you must maintain source lists for all the externally procured materials of a plant.

Maintaining Source Lists

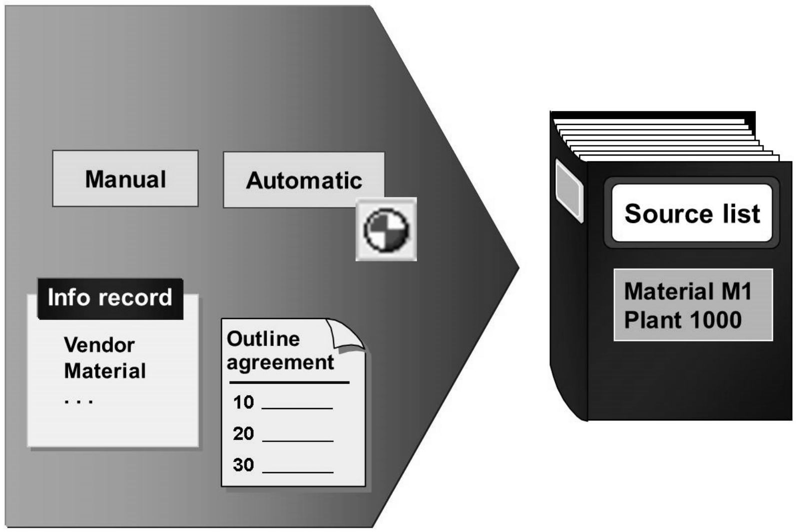


Figure 152: Maintaining Source Lists

You can choose from the following procedures to maintain the source list:

- Maintain the source list manually for each material and plant.
- Adopt an outline agreement item in the source list for the material when you create or change an outline agreement. To do so, select the item and choose *Item → Maintain Source List.* This is also possible when you create or change a purchasing info record.
- Create a source list automatically. The system provides the option of quickly entering or updating all the sources of a material in a source list.

With the automatic procedure, a source list record is created 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 the automatic generation of source lists. This allows you to simulate the results of the source list generation run.

Unit 6
Exercise 26

Maintain a Source List

Business Example

You conclude a contract with your vendor for ball bearings. To maintain the source list, define the contract as a fixed source in the source list.

1. Maintain source list.

   Procure the material T-M500D## with release orders issued against your contract with vendor T-K500C##. To ensure that this contract is automatically determined as the source of supply for the ball bearings, create a source list record for this contract for the material in plant 1000.

   > Hint:
   > In the maintain source list transaction, generate the source list record manually by entering the contract. Alternatively, you can choose (*Generate Records*) for the automatic generation of the records.

   In the source list entry, enter the same validity period as that of the contract. The contract item will act as the fixed source of supply for purchasing organization 1000. The contract should also be taken into account by materials planning. Set the necessary checkboxes for this.

Maintain a Source List

Business Example

You conclude a contract with your vendor for ball bearings. To maintain the source list, define the contract as a fixed source in the source list.

1. Maintain source list.

   Procure the material T-M500D## with release orders issued against your contract with vendor T-K500C##. To ensure that this contract is automatically determined as the source of supply for the ball bearings, create a source list record for this contract for the material in plant 1000.

   > Hint:
   > In the maintain source list transaction, generate the source list record manually by entering the contract. Alternatively, you can choose (*Generate Records*) for the automatic generation of the records.

   In the source list entry, enter the same validity period as that of the contract. The contract item will act as the fixed source of supply for purchasing organization 1000. The contract should also be taken into account by materials planning. Set the necessary checkboxes for this.

   a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Source List* → *Maintain* (`ME01`).

   b) Enter the following data on *Initial Screen*:

Field	Value
Material	**`T-M500D##`**
Plant	**`1000`**

   c) Choose (*Enter*).

   d) Choose *Edit* → *Generate Records* to maintain a source list entry. If you use the generate function, do not change the proposed validity period. The system will automatically adjust the validity period of the source list entry to the validity period of the contract. You only have to select the checkbox *Fixed* and set the *MRP* checkbox to 1. (Record relevant for MRP).

   Alternatively, you can enter the following data manually on the *Overview Screen*:

Field	Value
Valid from	<First of last month>
Valid to	<12/31 of the following year>
Agmt	<Number of contract from previous exercise>
Item	**10**
Fix	Checked
MRP	**1**

e) Save your entries.

LESSON SUMMARY

You should now be able to:

- Identify sources of supply in purchasing
- Create a contract
- Maintain source lists

Unit 6
Lesson 3

Performing Procurement Processes Automatically

LESSON OVERVIEW

In this lesson, you learn about automating the individual steps of a complete procurement process. Initiate this process when you create a purchase requisition as a result of the planning run. The system automatically converts the purchase requisition into a purchase order and automates the settlement of the delivery. You have to enter only the goods receipt manually.

Business Example

You want to test whether you have created all the settings for the relevant procurement automations. Execute all the planned steps, starting with a requirements planning run and including the conversion of the purchase requisitions, the goods receipt, and the delivery settlement. For this reason, you require the following knowledge:

- How to start an individual planning run and evaluate the result
- An understanding of the prerequisites of automatic purchase order generation
- How to create purchase orders automatically
- An understanding of the prerequisites of evaluated receipt settlement (ERS)
- How to settle goods receipts automatically

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Execute an individual planning run
- Convert a purchase requisition into a purchase order automatically
- Post goods receipts automatically

Determination of Requirements with Source Determination

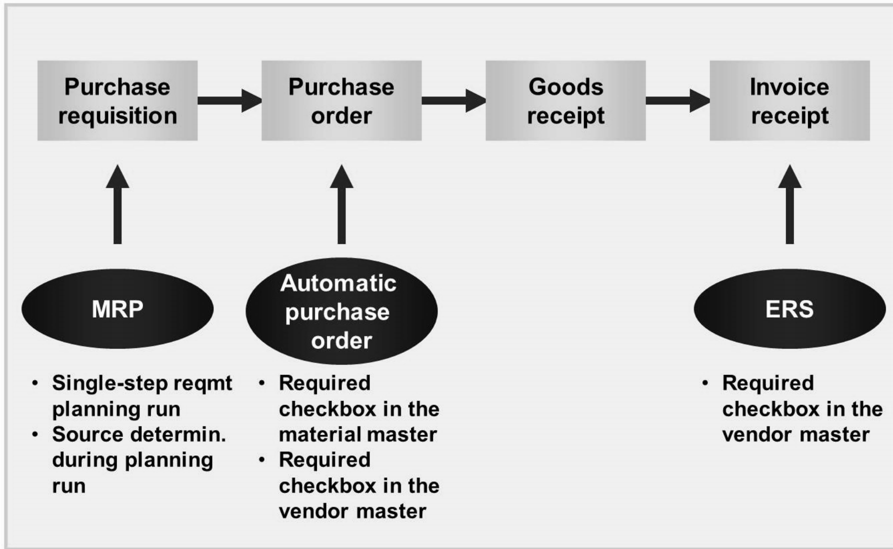


Figure 153: Automated Procurement

The figure shows the procurement process described in this lesson. The system runs three of the four steps automatically.

The automatic procurement of material requirements is determined by the results of material requirements planning (MRP). If all prerequisites are fulfilled, the planning run determines not only the requirements but also the source of supply of the material. The MRP data must exist in the material master record as a prerequisite for this automation step.

Purchase Requisition with an Assigned Source of Supply

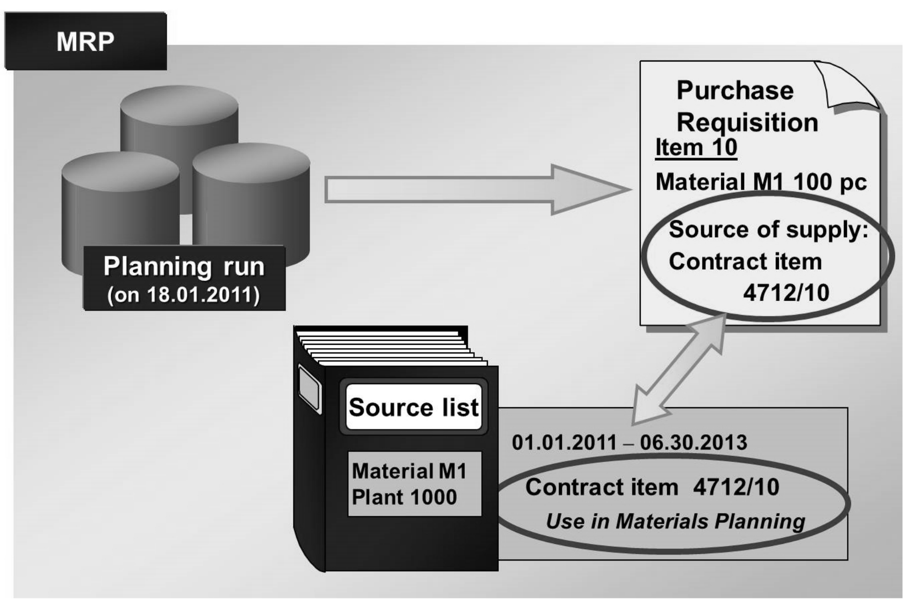


Figure 154: Purchase Requisition with an Assigned Source of Supply

For the material in the system there must be a valid source of supply present, such as, an outline agreement item or a purchasing info record. Enter the source of supply in the source list of the material and mark it as Use in Materials Planning (MRP), so that the system can determine this source of supply during the planning run.

If the planning run can determine the source of supply, you will find it in the Source of Supply tab page, located in the Item Details screen area of the purchase requisition.

Execute an Individual Planning Run

Business Example

Automatic requirements planning determines the demands of your material and assigns the indicated source of supply to it.

Execute an individual planning run.

Automatically determine requirements and generate purchase orders.

Determine the requirement for ball bearing T-M500D## using MRP and then immediately convert the created purchase requisition into a purchase order. To check the effects of these activities on the availability of the material, view the current stock and requirements list.

1. Display the stock and requirements list.

   You require information on the availability of material T-M500D##. Display the stock and requirements list for this material in plant 1000 and answer the following questions:

   - Which MRP elements are displayed for this material?
   - What is the available stock level?
   - Which MRP type is set for the material?
   - What is the reorder point?
   - What is the lot size procured?

   > Hint:
   > MRP type, reorder point, and lot size are in the header of the stock and requirements list.

Field	Value
MRP element	Stock
Available quantity	0
MRP type	VB
Reorder point	100
MRP lot size	FX
(Fixed) lot size	300

2. Carry out a 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. Create the purchase requisitions as well as an MRP list to document the result. Do not display the result.

3. Display the stock and requirements list.

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

   What MRP elements(s) are displayed in the list?

   ____

   ____

   ____

   Click on the following MRP element(s), one by one:

Field	Value
Quantity	300 (pieces)
Delivery date	<Current date + planned delivery time + purchasing department processing time>
Vendor	T-K500C##

Unit 6
Solution 27

Execute an Individual Planning Run

Business Example

Automatic requirements planning determines the demands of your material and assigns the indicated source of supply to it.

Execute an individual planning run.

Automatically determine requirements and generate purchase orders.

Determine the requirement for ball bearing T-M500D## using MRP and then immediately convert the created purchase requisition into a purchase order. To check the effects of these activities on the availability of the material, view the current stock and requirements list.

1. Display the stock and requirements list.

   You require information on the availability of material T-M500D##. Display the stock and requirements list for this material in plant 1000 and answer the following questions:

   - Which MRP elements are displayed for this material?
   - What is the available stock level?
   - Which MRP type is set for the material?
   - What is the reorder point?
   - What is the lot size procured?

   > Hint:
   > MRP type, reorder point, and lot size are in the header of the stock and requirements list.

Field	Value
MRP element	Stock
Available quantity	0
MRP type	VB
Reorder point	100
MRP lot size	FX
(Fixed) lot size	300

a) Choose *Logistics → Materials Management → Material Requirements Planning (MRP) → MRP → Evaluations → Stock/Reqmts List* (`MD04`).

b) Enter the following data on the *Individual access* tab page:

Field	Value
Material	**T-M500D##**
Plant	**1000**

c) Choose *Enter*.

The only MRP element displayed is *Stock*.

The MRP type is in the closed header data of the stock and requirements list. To determine the reorder point and lot size, open the header details.

d) Choose (*Expand header details*).

2. Carry out a 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. Create the purchase requisitions as well as an MRP list to document the result. Do not display the result.

a) Choose *Logistics → Materials Management → Material Requirements Planning (MRP) → MRP → Planning → Single-Item, Single-Level* (`MD03`).

b) Enter the following data:

Field	Value
Material	**T-M500D##**
Plant	**1000**
Processing Key	**NETCH**
Create Purchase Req.	**1**
Create MRP List	**1**
Display results before they are saved	<No entry>

c) Confirm your entries twice with *Enter* to execute the planning run.

3. Display the stock and requirements list.

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

What MRP elements(s) are displayed in the list?

Click on the following MRP element(s), one by one:

Field	Value
Quantity	300 (pieces)
Delivery date	<Current date + planned delivery time + purchasing department processing time>
Vendor	T-K500C##

a) Choose *Logistics → Materials Management → Material Requirements Planning (MRP) → MRP → Evaluations → Stock/Reqmts List*(`MD04`).

b) Enter the following data on the *Individual access* tab page:

Field	Value
Material	**`T-M500D##`**
Plant	**`1000`**

Choose *Enter*.

c) The list also displays MRP element, *PurRqs*. This is a purchase requisition for 300 pieces of material T-M500D##.

d) Position the cursor on the MRP element, *PurRqs* and choose (*Display element*) under the list. This displays the purchase requisition.

The *Fixed Vendor* is in the item details on the *Source of Supply* tab page.

Automatic Purchase Order Generation

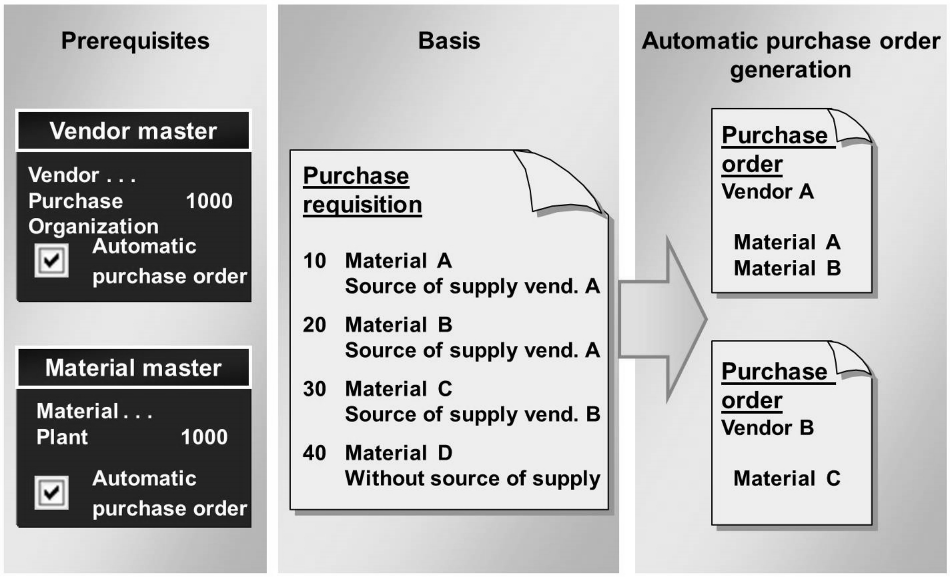


Figure 155: Automatic Generation of Purchase Orders

Using automatic generation of purchase orders, you can convert a purchase requisition item that is assigned to a source of supply into a purchase order. An assigned purchase requisition item contains all the information (such as vendor and price) that the system requires to convert it to the purchase order. The process of creating the purchase requisition and assigning the source of supply are not important for conversion to a purchase order.

The SAP system can execute, in the background, the program for the automatic conversion of purchase requisitions into purchase orders and the program for the planning run. Execute both programs one after the other to complete the automatic conversion of a requirement (a shortage) into a purchase order.

To execute the program online, choose *Purchasing* → *Purchase Order* → *Create* → *Automatically via Purchase Requisitions* or *Purchase Requisition* → *FollowOn Functions* → *Create Purchase Order* → *Automatically via Purchase Requisitions*.

For the automatic conversion of purchase requisitions into purchase orders, the following prerequisites must be fulfilled:

- In the material master record (purchasing view), select the *Automatic PO* checkbox.
- In the vendor master record (purchasing organization view), select the *Automatic PO* checkbox.
- The planning run should have assigned a source of supply to the item. If not, manually assign the source of supply.

Select the purchase requisition items for conversion according to several criteria, such as the purchasing group, the purchasing organization, the MRP controller, and the vendor. You can also decide that the system creates release orders for contracts. During selection, allow for the purchase requisition items with assigned contracts.

Decide how the system groups the purchase requisition items into purchase orders. You can specify, for example, the creation of a new purchase order for each purchasing group, plant, or delivery date.

Items with Errors

If an item in a purchase requisition contains errors, it is not possible to convert it into a purchase order.

An item is said to contain errors when the following conditions occur:

- The master data is incomplete or incorrect
- The selected vendor is blocked for purchasing
- The input data is missing, such as unknown account assignment or missing tax code (for ERS)

Before you execute the automatic generation of a purchase order, determine whether the following incorrect items have been left out during conversion:

- Exclude items with errors

  The system creates purchase orders from all correct purchase requisition items, according to your requirements. You can see the errors in a log and process the incorrect items again.

- Do not exclude items with errors

  The system creates all purchase orders by grouping together correct purchase requisition items only, according to your requirements. The system does not convert the other purchase requisition items.

If, for example, the system has to group together ten purchase requisition items into one purchase order and one of these items has an error, the purchase order cannot be created. None of the ten items is then ordered. This is useful if the contents of the purchase requisition items should also be in the purchase order.

Unit 6
Exercise 28

Create a Purchase Order Automatically

Business Example

You have agreed on ERS with your vendor because you do not need to enter invoices manually. Purchasing automatically creates the purchase orders using purchase requisitions.

1. Create a purchase order automatically.

   Carry out the function for automatically creating a purchase order for a purchase requisition online. Select the purchase requisitions for your purchasing group T##, which have been assigned to vendor T-K500C## in plant 1000. You require a detailed log with all messages. Always mark converted purchase requisitions as a set.

   > Hint:
   > The function for the automatic creation of purchase requisitions is under *Purchasing → Purchase Order → Create → Automatically via Purchase Requisitions*.

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

2. Display the stock or requirements list.

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

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

   ___
   ___
   ___

   Display the new MRP element.

Field	Value
Order quantity	300 (pieces)
Net price	10.00
Outline agreement	<Number of your contract>
Outline agreement item	10
Tax code	1I (10%)
GR-based IV	Checked

Field	Value
ERS	Checked

Create a Purchase Order Automatically

Business Example

You have agreed on ERS with your vendor because you do not need to enter invoices manually. Purchasing automatically creates the purchase orders using purchase requisitions.

1. Create a purchase order automatically.

   Carry out the function for automatically creating a purchase order for a purchase requisition online. Select the purchase requisitions for your purchasing group T##, which have been assigned to vendor T-K500C## in plant 1000. You require a detailed log with all messages. Always mark converted purchase requisitions as a set.

   > Hint:
   > The function for the automatic creation of purchase requisitions is under *Purchasing → Purchase Order → Create → Automatically via Purchase Requisitions*.

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

   a) Choose *Logistics → Materials Management → Purchasing →Purchase Order → Create → Automatically via Purchase Requisitions* (`ME59`).

   b) Enter the following data on the selection screen:

Field	Value
Purchasing Group	**T##**
Fixed Vendor	**T-K500C##**
Plant	**1000**
Detailed Log	Select
Set Requisitions to "Closed"	**2**

   c) Choose (*Execute*) to start the program.

   d) After the function is completed, the following message appears:

   "*Purchase order created*"

   The purchase requisition is converted successfully.

2. Display the stock or requirements list.

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

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

Display the new MRP element.

Field	Value
Order quantity	300 (pieces)
Net price	10.00
Outline agreement	<Number of your contract>
Outline agreement item	10
Tax code	1I (10%)
GR-based IV	Checked
ERS	Checked

a) Choose *Logistics → Materials Management → Material Requirements Planning (MRP) → MRP → Evaluations → Stock/Reqmts List* (`MD04`).

b) Enter the following data on the Individual access tab page:

Field	Value
Material	**T-M500D##**
Plant	**1000**

Choose *Enter*.

c) As a result of the automatic conversion of the purchase requisition into a purchase order, MRP element *PurRqs* is no longer displayed; instead, *PO item* is displayed for the purchase order.

d) Position the cursor on the MRP element and choose (Display element) under the list. This displays the purchase order.

In the item overview, you can see the entries for quantity, net price, outline agreement, and outline agreement item. The checkbox (*Tax Code*, *GR-Based IV*, *ERS*) is in the item detail data on the *Invoice* tab page.

Evaluated Receipt Settlement

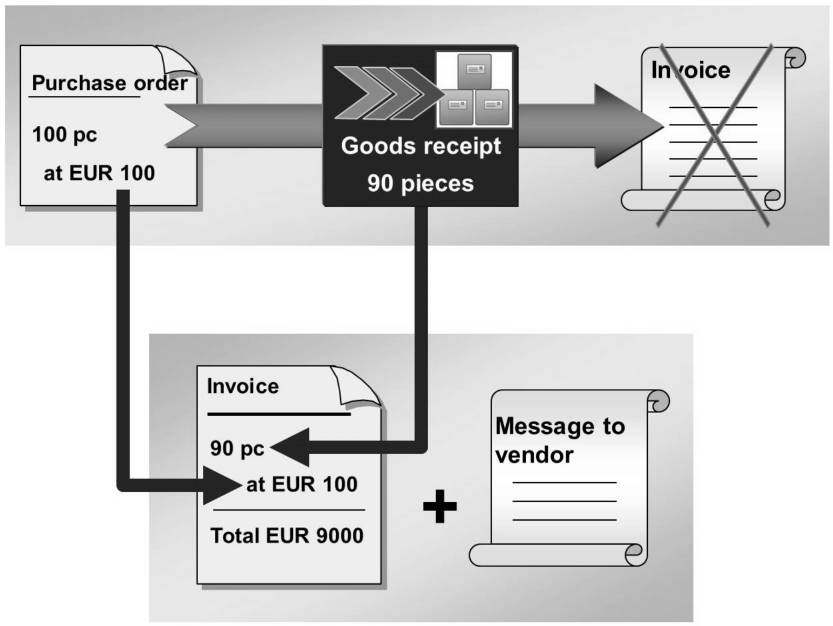


Figure 156: Evaluated Receipt Settlement

To use the ERS procedure, you must initially form an agreement specifying that the vendor does not create an invoice for an ordering transaction. Instead, you, as the goods recipient, let the SAP system automatically create the corresponding invoice for the goods receipt(s). In ERS, this invoice represents a credit memo for the vendor. The system informs the vendor with a message (credit memo) about the settlement of the deliveries.

Hint:
The system indicates ERS as a credit memo procedure.

The ERS procedure has the following advantages:

- Completes purchase-to-pay processes more quickly
- Avoids entry errors
- Prevents quantity and price variances in invoice verification

The basis for creating the invoice is the data from the purchase order and the relevant goods receipts.

The system calculates the amount that must be paid to the vendor using the following data:

- Payment conditions (terms of payment) from the purchase order header data
- Order price from the purchase order item

- Tax information from the purchase order item
- Delivered quantities from goods receipts that have not been invoiced yet (using the purchase order history for the purchase order item)

If you use the ERS procedure, the conditions arranged with the vendor must be clear, and you have to continuously update the purchase orders in the system.

If you have already returned settled goods to the vendor, the ERS automatically creates a credit memo with the value of the returned quantity. This credit memo represents a debit memo for the vendor.

> Caution:
> Up to and including *SAP ERP 5.0*, planned delivery costs cannot be settled using the ERS procedure.

Evaluated Receipt Settlement - Prerequisites

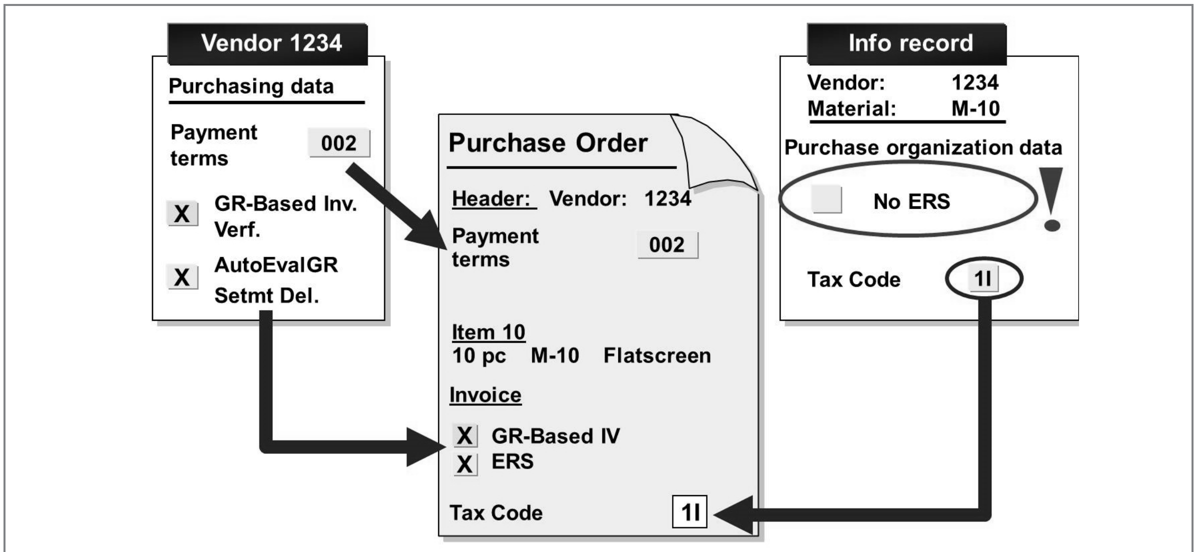


Figure 157: Evaluated Receipt Settlement - Prerequisites

To enable you to settle goods receipts for a vendor automatically, the following prerequisites must be met:

- In the vendor master record, the checkbox for the automatic settlement of goods received (*AutoEvalGRSetmt Del.* checkbox) must be selected.
- The *Terms of payment key* must be entered in the header data for the purchase order (*Delivery/Invoice* tab). Use a terms of payment key for which a default for the baseline date is set in Customizing. Define a default value for the terms of payment in the vendor master record in the purchasing organization data.
- The checkbox for automatic evaluated receipt settlement must be selected. The system proposes this checkbox in the purchase order item if it has been set in the vendor master record.

- The checkbox for goods-receipt-based invoice verification must be selected. The system proposes this checkbox from the purchasing organization data of the vendor master record or from the info record for the vendor, material, or purchasing organization combination.
- The *Tax code* checkbox must be selected in the purchase order item. The system proposes this checkbox from the info record for vendor, or material, or purchasing organization or it can be transferred from the contract item during contract releases.
- The price in the purchase order item must not be an estimated price. (The *Estimated price* checkbox is located in the purchase order item details on the *Condition control* tab.)
- The goods receipt must be entered with reference to the purchase order.
- The *No ERS* checkbox must not be set in the purchasing info record for the vendor and material. If you select this checkbox in the info record, you will prevent ERS for the material at this vendor.

To calculate delivery costs automatically, you also need to activate delivery costs in Customizing for Materials Management by choosing *Logistics Invoice Verification* → *Evaluated Receipt Settlement (ERS)* → *Specify Automatic Settlement of Planned Delivery Costs* for the combination of company code, purchasing organization, and vendor.

Executing the ERS

To execute ERS online, from the *Logistics Invoice Verification* menu, choose *Automatic Settlement* → *Evaluated Receipt Settlement (ERS)*. On the initial screen, you must first specify which transactions you want the system to settle.

To select these transactions, the following selection values are available:

- Company code
- Plant
- Posting date of goods receipt
- Goods receipt document
- Fiscal year of goods receipt
- Vendor
- Purchasing document
- Purchasing document item

> Hint:
> If you want to settle goods or service items and planned delivery costs in one step, you cannot select goods-receipt-related data (such as a goods receipt document).

Hint:
If you select only the material or service items, this restriction does not apply.

Evaluated Receipt Settlement - Execution

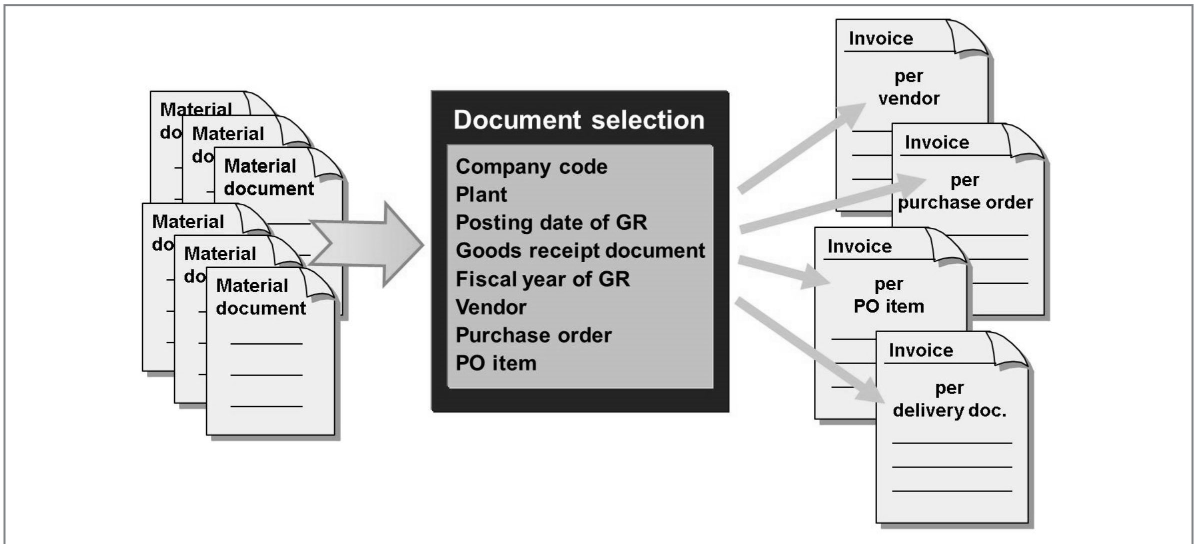


Figure 158: Evaluated Receipt Settlement - Execution

You must also specify the selection that the system uses to create the following invoice documents:

- Document selection per vendor
- Document selection per purchase order
- Document selection per (purchase) order item
- Document selection per delivery document or service entry sheet

Hint:
If you want to settle materials and planned delivery costs in one step, document selection per delivery document is not possible. The system does not support invoice verification for planned delivery costs.

Carry out a test run before you carry out an actual settlement. The system stores the results of the settlement in a log file that contains information about the successful and the unsuccessful transactions.

If you are settling only the delivery costs, use program RMMR1MRS or program RMMR1MDC to run the ERS in the background.

Unit 6
Exercise 29

Post Goods Receipts Automatically

Business Example

You need to settle goods receipts and evaluate receipt settlement.

Goods Receipt and Evaluated Receipt Settlement

The vendor delivers the ordered ball bearing T-M500D##. Enter the goods receipt and directly after that, automatically settle the delivery.

1. Enter the goods receipt.

   Vendor T-K500C## sends you the ordered material T-M500D##, according to the purchase order. Enter the goods receipt in storage location 0001 in plant 1000.

   Material document number: ______________________________

2. Display the stock and requirements list.

   Check again the available stock for material T-M500D## in plant 1000. What is the actual available quantity and which MRP elements does the list still contain?

   ____

3. Settle a goods receipt automatically.

   Settle the goods receipts you entered today and yesterday for creditor H.A.G. Potsdam Gr.## (T-K500C##) in company code 1000. Create a separate invoice for each order item. Use the test mode first to make sure that you have selected the correct goods receipts. Then, execute automatic settlement and note the document number.

   Invoice document: ______________________________

   Hint:
   Do not leave the list when this process is finished.

4. Display the invoice document.

   Display the invoice document and the corresponding accounting document.

   Make a note of the vendor account number and the amount in liabilities incurred toward the vendor.

   Account number: ______________________________

   Amount: ______________________________

5. Display the purchase order.

   Finally, check the purchase order history of the order item. What transactions does the purchase order history list?

The purchase order history lists the goods receipt document and the invoice verification document from the ERS settlement.

Unit 6
Solution 29

Post Goods Receipts Automatically

Business Example

You need to settle goods receipts and evaluate receipt settlement.

Goods Receipt and Evaluated Receipt Settlement

The vendor delivers the ordered ball bearing T-M500D##. Enter the goods receipt and directly after that, automatically settle the delivery.

1. Enter the goods receipt.

   Vendor T-K500C## sends you the ordered material T-M500D##, according to the purchase order. Enter the goods receipt in storage location 0001 in plant 1000.

   Material document number: ______________________________

   a) Choose *Logistics → Materials Management → Inventory Management → Goods Movement → Goods Receipt → For Purchase Order → MIGO_GR-GR for Purchase Order (MIGO)*.

   b) Choose the transaction *Goods Receipt* and the reference document *Purchase Order*.

   c) Enter **101** in the *Movement Type* field and choose *Enter*.

   d) Enter the purchase order number created earlier, and confirm your entries with *Enter*.

      You can also search for the purchase order.

   e) Choose (*Search for PO*) and enter the following data:

Field	Value
Vendor	**T-K500C##**
Material	**T-M500D##**

   f) Choose (*Find*) to start the search. Double-click the search result on the purchase order to copy the data.

   g) Select the *Item OK* checkbox.

   h) Choose the *Where* tab and enter 0001 in the *Storage Location* field.

   i) Choose (*Post*).

2. Display the stock and requirements list.

   Check again the available stock for material T-M500D## in plant 1000. What is the actual available quantity and which MRP elements does the list still contain?

a) Choose *Logistics → Materials Management → Material Requirements Planning (MRP) → MRP → Evaluations → Stock/Reqmts List*(`MD04`).

b) Enter the following data on the *Individual access* tab page:

Field	Value
Material	**T-M500D##**
Plant	**1000**

c) Choose *Enter*.

The list only displays *MRP element Stock* still. The available stock is *300* pieces.

3. Settle a goods receipt automatically.

Settle the goods receipts you entered today and yesterday for creditor H.A.G. Potsdam Gr.## (T-K500C##) in company code 1000. Create a separate invoice for each order item. Use the test mode first to make sure that you have selected the correct goods receipts. Then, execute automatic settlement and note the document number.

Invoice document: ______________________________

> Hint:
> Do not leave the list when this process is finished.

a) Choose *Logistics → Materials Management → Logistics Invoice Verification → Automatic Settlement → Evaluated Receipt Settlement (ERS)*(`MRRL`).

b) Enter the following data on the initial screen:

Field	Value
Company Code	**1000**
Goods Receipt Posting Date	**<yesterday> to <today>**
Vendor	**T-K500C##**
Doc. selection	**3**
Test Run	**Checked**

c) Choose (*Execute*).

The system selects an item for settlement. From the overview, you can see that the system can post the item.

d) Go back to the initial screen.

e) Deselect the *Test Run* checkbox.

f) Choose (*Execute*) to execute the settlement.

4. Display the invoice document.

   Display the invoice document and the corresponding accounting document.

   Make a note of the vendor account number and the amount in liabilities incurred toward the vendor.

   Account number: ______________________________

   Amount: ______________________________

   a) If you still have the result list of the ERS displayed, click the document numbers (*DocNo* and FI *Document fields*) to display the invoice document and the accounting document. This displays the following data:

      Vendor: T-K500C##

      Amount: EUR 3,300

   b) Choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Further Processing* → *Display Invoice Document* (`MIR4`).

      Enter the invoice number from the last task and the document year, and choose *Enter*.

      Choose *Follow-On Documents ...* to display the *Accounting document*.

5. Display the purchase order.

   Finally, check the purchase order history of the order item. What transactions does the purchase order history list?

   a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Display* (`ME23N`).

   b) Choose (*Other purchase order*) and enter the purchase order number created earlier in the *PO* field. Choose *Other Document*.

   c) Choose the *Purchase Order History* tab page in the item detail data.

   The purchase order history lists the goods receipt document and the invoice verification document from the ERS settlement.

LESSON SUMMARY

You should now be able to:

- Execute an individual planning run
- Convert a purchase requisition into a purchase order automatically
- Post goods receipts automatically

Unit 6

Learning Assessment

1. In the material master record, which of the following data must be specified if the material is to be planned with the manual reorder point planning procedure?

   Choose the correct answers.

   - [ ] A MRP type VB
   - [ ] B MRP controller
   - [ ] C Safety stock
   - [ ] D Fixed lot-size
   - [ ] E Reorder point
   - [ ] F Planned delivery time

2. Manual reorder point planning is based on the comparison of the available warehouse (plant) stock with the reorder point. The reorder point is determined manually by the MRP controllers. If the available warehouse stock is less than the reorder point, then procurement is triggered.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

3. Which of the following are static lot-sizing procedures?

   Choose the correct answers.

   - [ ] A Lot-for-lot order quantity
   - [ ] B Fixed lot-size
   - [ ] C Replenish to maximum stock level
   - [ ] D MRP lot-size

4. The MRP list is a dynamic list that displays the currently valid stock or requirements condition of a material.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

5. Which of the following objects are sources of supply in the SAP ERP Central Component?

   Choose the correct answers.

   - [ ] A Plant
   - [ ] B Purchasing info record
   - [ ] C Contract
   - [ ] D Release order
   - [ ] E Scheduling agreement
   - [ ] F Source list

6. Which of the following data must you specify when creating a quantity contract

   Choose the correct answers.

   - [ ] A Vendor
   - [ ] B Material
   - [ ] C Agreement type MK
   - [ ] D Delivery date
   - [ ] E Price
   - [ ] F Purchasing organization

7. Which of the following procedures can be used to maintain a source list?

   Choose the correct answers.

   - [ ] A Manually, per material and plant
   - [ ] B Automatically by the system, per material and plant, or for several materials and plants
   - [ ] C When creating or changing an outline agreement or a purchasing info record, per material and plant
   - [ ] D By creating contract and scheduling agreement

8. Which of the following checkbox options must be set in the source list for a source of supply to ensure that it is taken into account in requirements planning?

   Choose the correct answer.

   - [ ] A Deleted
   - [ ] B Fixed
   - [ ] C Blocked
   - [ ] D MRP-relevant
   - [ ] E Source list requirement

9. You can convert a purchase requisition item assigned to a source of supply into a purchase order with the automatic generation of purchase orders.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

10. If you automatically convert purchase requisition items into purchase orders, you can specify, in the new purchase order area, how the system groups the purchase requisition items into purchase orders. Choose the appropriate settings from the following options.

    Choose the correct answers.

    - [ ] A per purchasing group
    - [ ] B per delivery date
    - [ ] C per account assignment category
    - [ ] D per plant
    - [ ] E per purchasing organization
    - [ ] F per storage location

11. Invoices that were created by ERS are generally blocked for payment and are released automatically when the message is issued.

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

12. Select the prerequisites that must be fulfilled for the evaluated receipt settlement.

    Choose the correct answers.

    - [ ] A The purchase order must be created automatically.
    - [ ] B The AutoEvalGrSetmt Del. checkbox must be set in the vendor master record.
    - [ ] C In the purchase order, the ERS checkbox must be set.
    - [ ] D In the order item, a tax code must be specified.
    - [ ] E Freight conditions cannot be included in the purchase order price.
    - [ ] F In the vendor master record, the GR-Based IV checkbox must be set.
    - [ ] G In the purchase order item, the GR-Based IV checkbox must be set.
    - [ ] H The ERS cannot be excluded for the material and vendor in the info record.

Learning Assessment - Answers

1. In the material master record, which of the following data must be specified if the material is to be planned with the manual reorder point planning procedure?

   Choose the correct answers.

   - [X] A MRP type VB
   - [X] B MRP controller
   - [ ] C Safety stock
   - [ ] D Fixed lot-size
   - [X] E Reorder point
   - [X] F Planned delivery time

   For C: It is possible, but not necessary, to specify the safety stock. For D: You must specify a lot-sizing procedure, but it does not have to be the fixed lot-size procedure (FX).

2. Manual reorder point planning is based on the comparison of the available warehouse (plant) stock with the reorder point. The reorder point is determined manually by the MRP controllers. If the available warehouse stock is less than the reorder point, then procurement is triggered.

   Determine whether this statement is true or false.

   - [X] True
   - [ ] False

3. Which of the following are static lot-sizing procedures?

   Choose the correct answers.

   [X] A Lot-for-lot order quantity

   [X] B Fixed lot-size

   [X] C Replenish to maximum stock level

   [ ] D MRP lot-size

4. The MRP list is a dynamic list that displays the currently valid stock or requirements condition of a material.

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   The list described above is not an MRP list but the current stock or requirements list. The MRP list is a static list that shows only the result of the last planning run.

5. Which of the following objects are sources of supply in the SAP ERP Central Component?

   Choose the correct answers.

   [X] A Plant

   [X] B Purchasing info record

   [X] C Contract

   [ ] D Release order

   [X] E Scheduling agreement

   [ ] F Source list

6. Which of the following data must you specify when creating a quantity contract

   Choose the correct answers.

   - [x] A Vendor
   - [x] B Material
   - [x] C Agreement type MK
   - [ ] D Delivery date
   - [x] E Price
   - [x] F Purchasing organization

   That is correct. For a quantity contract, you must enter the vendor, material, agreement type MK, price, purchasing organization, total quantity, and validity period. For the individual contract items, you need data on the material, quantity, and price. It is possible, but not necessary, to specify the plant. If no plant is specified, a centrally agreed contract is involved.

7. Which of the following procedures can be used to maintain a source list?

   Choose the correct answers.

   - [x] A Manually, per material and plant
   - [x] B Automatically by the system, per material and plant, or for several materials and plants
   - [x] C When creating or changing an outline agreement or a purchasing info record, per material and plant
   - [ ] D By creating contract and scheduling agreement

8. Which of the following checkbox options must be set in the source list for a source of supply to ensure that it is taken into account in requirements planning?

   Choose the correct answer.

   - [ ] A Deleted
   - [ ] B Fixed
   - [ ] C Blocked
   - [x] D MRP-relevant
   - [ ] E Source list requirement

9. You can convert a purchase requisition item assigned to a source of supply into a purchase order with the automatic generation of purchase orders.

   Determine whether this statement is true or false.

   - [x] True
   - [ ] False

10. If you automatically convert purchase requisition items into purchase orders, you can specify, in the new purchase order area, how the system groups the purchase requisition items into purchase orders. Choose the appropriate settings from the following options.

    Choose the correct answers.

    - [x] A per purchasing group
    - [x] B per delivery date
    - [ ] C per account assignment category
    - [x] D per plant
    - [ ] E per purchasing organization
    - [x] F per storage location

    The following options complete the list above: per vendor subrange, per purchase requisition, per item category, per purchase requisition item, per company code. Selection per vendor and per purchasing organization is not available because a purchase order always refers to just one vendor and one purchasing organization.

11. Invoices that were created by ERS are generally blocked for payment and are released automatically when the message is issued.

    Determine whether this statement is true or false.

    - [ ] True
    - [x] False

    The system creates the invoices with the ERS procedure. These invoices are not blocked for payment. Blocking typically happens when amounts or conditions on the invoice do not match the PO.

12. Select the prerequisites that must be fulfilled for the evaluated receipt settlement.

Choose the correct answers.

- [ ] A The purchase order must be created automatically.
- [x] B The AutoEvalGrSetmt Del. checkbox must be set in the vendor master record.
- [x] C In the purchase order, the ERS checkbox must be set.
- [x] D In the order item, a tax code must be specified.
- [ ] E Freight conditions cannot be included in the purchase order price.
- [ ] F In the vendor master record, the GR-Based IV checkbox must be set.
- [x] G In the purchase order item, the GR-Based IV checkbox must be set.
- [x] H The ERS cannot be excluded for the material and vendor in the info record.

For A: The purchase order creation is irrelevant for evaluated receipt settlement. For B and C: The checkbox can be set in a purchasing document only if it is also set in the vendor master record. For E: Freight conditions are allowed, but cannot be settled with ERS. For F and G: The GR-Based Inv. Verif. checkbox can always be set in a purchase order item. If it is set in the vendor master record, it is set as the default value in the purchase order item.

UNIT 7 Reporting and Analytics

UNIT OBJECTIVES

- Run lists in SAP ERP Logistics
- Run standard reports in purchasing
- Run standard reports in inventory management
- Run standard reports in Logistics Invoice Verification
- Perform standard analyses in the Logistics Information System

Unit 7
Lesson 1

Using Standard Reports

LESSON OVERVIEW

This lesson introduces you to SAP ERP reports. It also introduces the SAP List Viewer and the Advanced List Viewer (ALV) grid control, and reviews individual reports and analyses from the areas of purchasing, inventory management, and invoice verification.

Business Example

As a buyer, you are responsible for monitoring your purchase orders. It is therefore necessary that you are able to analyze and evaluate purchase orders based on various criteria. For example, you need a list of all open purchase orders for a certain period. You must determine which functions that the SAP system provides can support this activity. For this reason, you require the following knowledge:

- How to use standard reports and analyses in purchasing
- How to search for material documents using the material document list
- How to display a list of your manually created invoices
- An understanding of the most important functions of the SAP List Viewer and the Advanced List Viewer grid control

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Run lists in SAP ERP Logistics
- Run standard reports in purchasing
- Run standard reports in inventory management
- Run standard reports in Logistics Invoice Verification

Reporting in Logistics

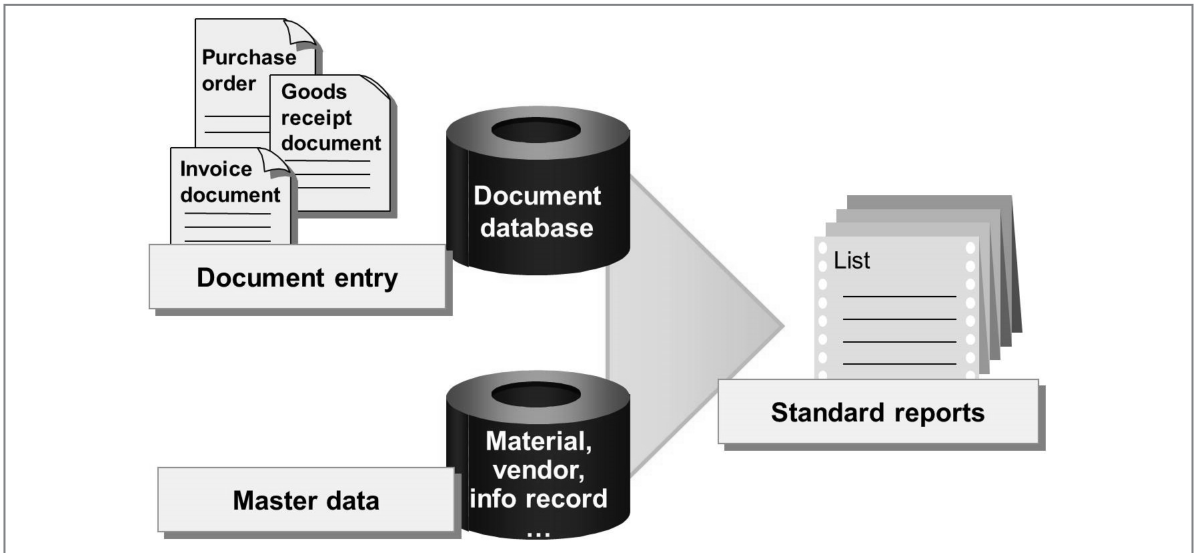


Figure 159: Standard Reports

In a production operation, you generate the following documents:

- Purchasing documents
- Material documents
- Invoice documents
- Accounting documents

The documents are posted and stored in database tables. Standard reports enable you to furnish reports based on this document information.

In addition to running analyses of documents, you can also run analyses of master data. For example, you can output a list of all purchasing information records for a material or vendor, or obtain an overview of the material master records for a certain material type.

SAP List Viewer and ALV Grid Control

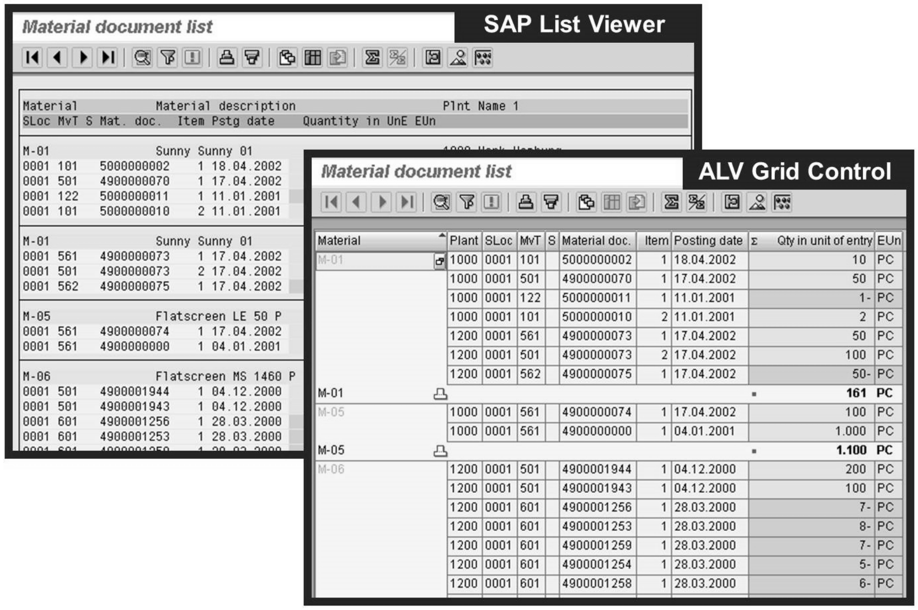


Figure 160: SAP List Viewer and ALV Grid Control

The SAP List Viewer and the Advanced List Viewer (ALV) grid control standardize and simplify the handling of lists in SAP systems. There is a uniform user interface and a list format, which prevents the use of redundant functions. You use the ALV grid control in list displays (for example, the list of material documents) and in other transactions (for example, a purchase requisition).

Notice that not all lists use the full range of *SAP List Viewer* functions. Some lists offer special functions that are beyond the scope of the *SAP List Viewer*. You can change the appearance and content of the lists using the layout (formerly known as display variant).

The key elements of the SAP List Viewer and the ALV grid control are as follows:

- Uniform design of all lists and tables
- Cross-application and standardized functions with uniform icons
- Simple creation and changing of layouts (display variants)

> Note:
> For more information on the SAP List Viewer and the ALV grid control, choose *SAP Library → Getting Started → Using SAP Software → Working with Tools and Features → Working with Lists*.

Functions of the SAP List Viewer and ALV Grid Control

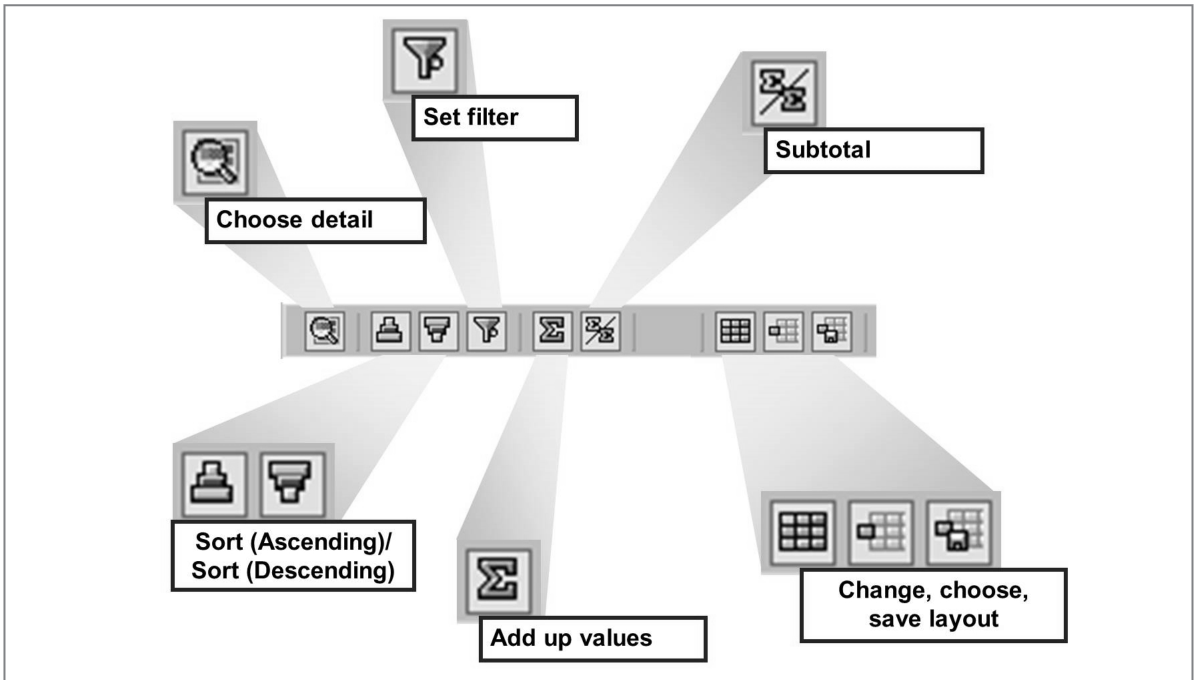


Figure 161: Functions of the SAP List Viewer and ALV Grid Control

SAP List Viewer and the ALV grid control provide the following functions:

- Choose detail

  The choose detail function provides additional information about a selected line, including information that is not shown in the list.

- Set filter

  Using the filter function, you can only display those lines that satisfy certain criteria in one or more columns. To set a filter, select one or more columns by clicking on the column header, and choose (*Set filter*). In the dialog box, enter the desired restrictions for the chosen columns. To delete the filter criteria, choose *Edit* → *Delete filter*.

- Sort

  You can sort lists in ascending or descending order. Select the column with the desired sort criterion and choose one of the sort functions *Sort* (*Ascending*) or *Sort* (*Descending*).

- Display total

  Within a list, you can create totals from the data in one or more selected columns. You can total both value and quantity columns.

- Display subtotals

  If you have created a total for at least one column within a list, you can create additional subtotals. You can generate subtotals in a list for one or more selected columns without value or quantity columns.

- Layout

  You can change the appearance of your list with layouts (or display variants).

> Note:
> The individual list determines whether you can work with a layout or display variant in the list.

Layout (Display Variant)

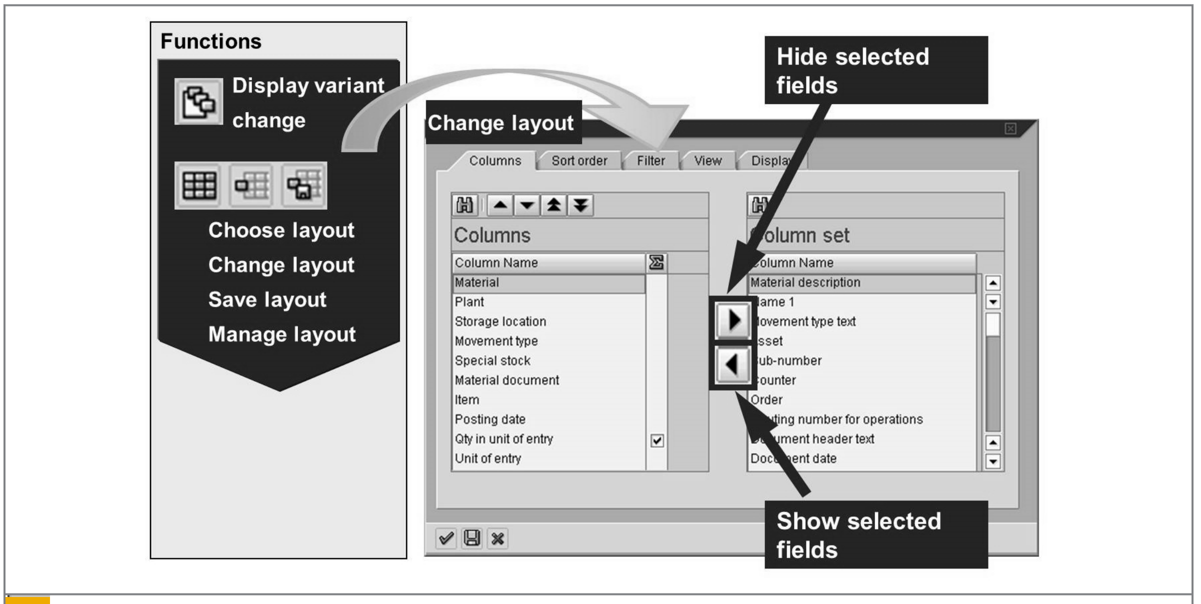


Figure 162: Layout (Display Variant)

You can perform the following actions with the layout:

- Change the appearance of many lists, using layout or change variants
- Display additional fields from the column set or hide unwanted fields from the column selection
- Arrange the fields in any order and generate totals
- Adjust the size of the columns

You have the option of saving these changes as your own layout. You can create your own variants on a multi-user or user-specific basis. SAP supplies standard layouts for some lists.

> Note:
> The figure shows the *Change Layout* dialog box for the detailed version of the list of material documents (`MB51`).

Selection Variants

If you are required to run reports or analyses with the same selection values at regular intervals, you use variants. Using variants saves time and enables you to avoid input errors. You can define your own variants and also make use of existing ones.

To create a variant for a report, do the following:

1. Enter the desired selection values on the initial screen for the report.
2. Choose *Goto* → *Variants* → *Save as Variant...* or (*Save as Variant*).
3. On the next screen, enter a *Variant Name* and a description of the variant, and save your entries.

> Note:
> If you wish to use a variant when running a report or analysis, choose *Goto* → *Variants* → *Get...* or (*Get Variant...*) on the initial screen of the report.

Reporting and Analyses Functions in Purchasing

As the responsible employee in the Purchasing department,, you wish to obtain an overview of the working routines for your department from time to time.

To obtain the overview, you must have the following information:

- Which purchase orders were created for a particular vendor over a certain period?
- How many purchase orders have resulted in goods delivery? For how many purchase orders were goods receipts posted? How many purchase orders have the relevant goods receipt transactions still pending?
- Do the goods and invoices received agree with the purchase order data?
- Which purchase requisitions were created during the last month for materials of a specific material group?
- Which purchasing information records exist for a material?

The Purchasing menu includes various reporting and analysis functions that can help you to answer these questions. There are reporting and analysis functions for either master data or documents.

In addition to list displays for documents and master data, the Purchasing menu contains general analyses, the purchase order value analysis, and goods receipt forecast.

Reports in Purchasing

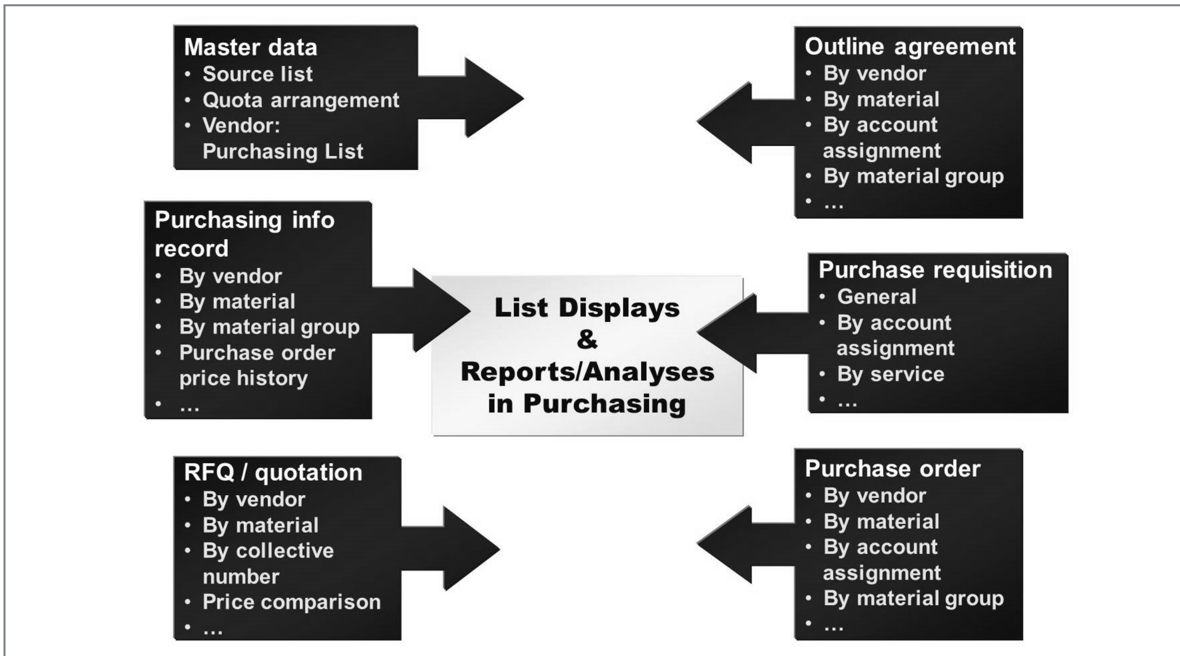


Figure 163: Reporting in Purchasing

To run reports and analyses for a document category, perform the following activities:

1. Open the *Purchasing* menu.
2. Choose the submenu of the purchasing document that contains the data you must evaluate.

To analyze purchase orders, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *List Displays* or *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Reporting*.

There are various reports and analyses to choose from (for example, by vendors, materials, material groups, and so on). The system adjusts the selection options to suit the relevant purchasing document. Therefore, the lists for each document category can vary.

You can find reports and analyses for the master data in purchasing under *Logistics* → *Materials Management* → *Purchasing* → *Master Data*.

When you run a report or analysis, decide which information you need. Use the selection criteria to narrow the focus of your report so that the result is clear and informative. In Purchasing, the selection parameter determines which purchasing documents are analyzed by the report. For example, you can generate reports that select only open purchase orders, or purchase orders for which no invoice has yet been received, or those with expired scheduling agreements.

Scope-of-List and Selection Parameter

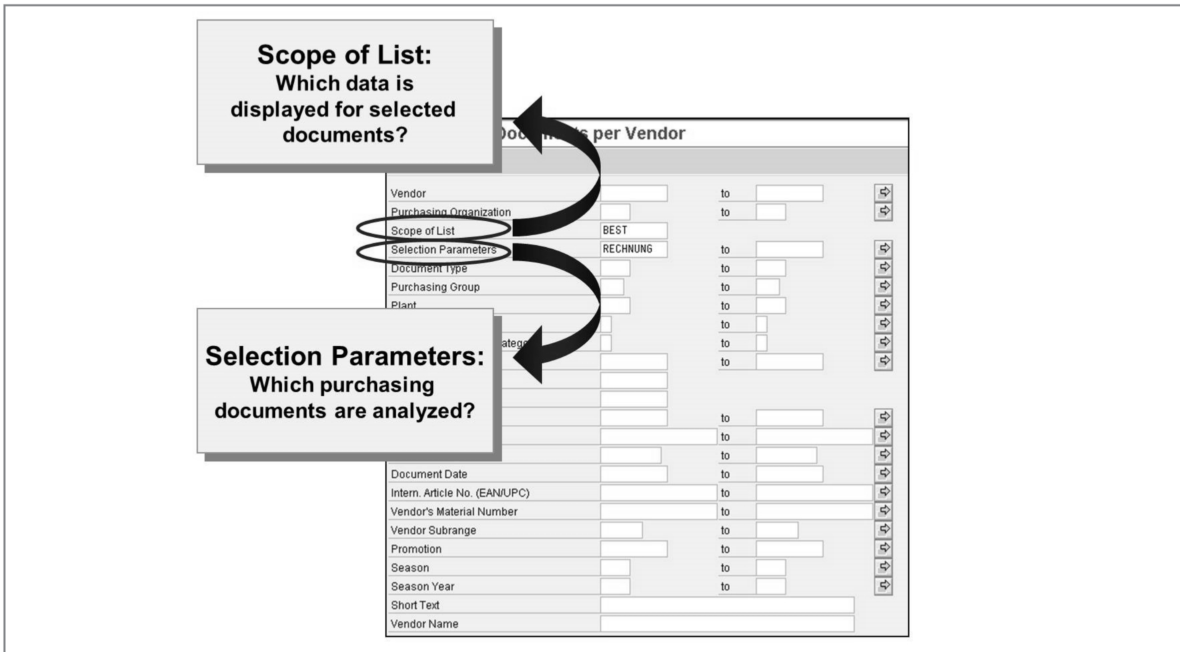


Figure 164: Scope of List and Selection Parameter

The scope-of-list parameter influences how your result list is displayed. The scope-of-list parameter determines which data is displayed for a selected document (for example, which lines appear in your report). You can decide to generate a list in short form or to generate a list that contains more information, for example, lines for the open purchase order quantity and value, or the validity period of outline agreements.

You can also display the purchase order history in additional lines in the list. As of SAP Enterprise, the scope-of-list parameter determines whether the list is output using the ALV grid control.

In Customizing, you can create your own selection and scope-of-list parameters for Materials Management as follows:

- Choose *Purchasing* → *Reporting* → *Maintain Purchasing Lists* → *Selection Parameters* → *Define Selection Parameters*.
- Choose *Purchasing* → *Reporting* → *Maintain Purchasing Lists* → *Scope of List* → *Define Scope of List*.

In Customizing, you also set the scope-of-list parameter by specifying whether the system uses the ALV grid control to output the list. Depending on the selection parameter, you can decide whether the system also selects documents on hold.

> Hint:
> For purchasing lists that do not use the scope-of-list parameter, you can use the user parameter ME_USE_GRID to ensure that the system outputs the list using the ALV grid control. To do this, choose *System → User profile → Own data*. On the *Parameters* tab page, make a new entry with the parameter ID **`ME_USE_GRID`** in the *Set/Get parameter ID* field and **`X`** in the *Parameter value* field. Save your changes.

Run List Displays for Purchase Orders

Business Example

To optimize internal processes, you regularly create list displays to inform yourself about the status of your purchase orders, information records, and other documents in the system.

Create list displays for various purchase orders.

As a buyer in plant 1000, you check the purchase orders issued over the past 24 months. You are interested in purchase orders against which no goods receipts have been entered.

1. Open goods receipts.

   Display a list of all purchase orders for purchasing organization 1000 and plant 1000 for which no goods have yet been received. Select all purchase orders with a document date within the last 24 months.

   Enter the **BEST_ALV** from the *Scope of List*, so that the system displays the list of selected purchase orders with ALV grid control.

2. Sort list

   The system sorts the list by vendor and purchasing document. However, you require a list sorted by vendor and material. Change the sort order and save this setting as a user-specific layout SCM500-## under the name Layout SCM500-##.

3. Save changes to layout.

   The purchasing document number is displayed as the first column in the list. The *Quantity still to be delivered* and *Value still to be delivered* for the individual items are displayed directly after the material group. You also want the list to include the total value of the materials that await delivery.

   To change the order of the columns, create the desired total and save these changes to your layout SCM500-##.

Run List Displays for Purchase Orders

Business Example

To optimize internal processes, you regularly create list displays to inform yourself about the status of your purchase orders, information records, and other documents in the system.

Create list displays for various purchase orders.

As a buyer in plant 1000, you check the purchase orders issued over the past 24 months. You are interested in purchase orders against which no goods receipts have been entered.

1. Open goods receipts.

   Display a list of all purchase orders for purchasing organization 1000 and plant 1000 for which no goods have yet been received. Select all purchase orders with a document date within the last 24 months.

   Enter the **BEST_ALV** from the *Scope of List*, so that the system displays the list of selected purchase orders with ALV grid control.

   a) Choose *Logistics → Materials Management → Purchasing → Purchase Order → List Displays → By Vendor* (ME2L).

   b) Enter the following data on the initial screen:

Field	Value
Vendor	<No entry>
Purchasing Organization	**1000**
Scope of List	**BEST**
Selection Parameters	**WE101**
Purchasing Group	<No entry>
Plant	**1000**
Document Date	<today - 24 months> *to* <today>

   c) Choose  (*Execute*).

2. Sort list

   The system sorts the list by vendor and purchasing document. However, you require a list sorted by vendor and material. Change the sort order and save this setting as a user-specific layout SCM500-## under the name Layout SCM500-##.

a) Choose *Settings* → *Layout* → *Change...*.

b) Choose the *Sort Order* tab page.

c) In the *Change Layout* dialog box, position the cursor on *Purchasing Document* in the *Sort criteria/Subtotals* area and choose (*Remove sort criterion*).

d) In the *Change Layout* dialog box, position the cursor on *Material* in the *Column Set* area and choose (*Add sort criterion*).

e) Choose (*Save Layout*). Choose the *Save As...* tab page.

f) Enter the following data on the *Save as...* tab page of the *Save as...* dialog box:

Field	Value
Layout	**SCM500-##**
Name:	**Layout SCM500-##**
User-Specific	Select
Default setting	Select

g) Choose (*Adopt*) to save the new layout.

h) The *Change Layout* dialog box reappears. Choose Adopt to display the list with the new layout.

3. Save changes to layout.

The purchasing document number is displayed as the first column in the list. The *Quantity still to be delivered* and *Value still to be delivered* for the individual items are displayed directly after the material group. You also want the list to include the total value of the materials that await delivery.

To change the order of the columns, create the desired total and save these changes to your layout SCM500-##.

a) Choose *Settings* → *Layout* → *Change...*.

b) Choose the *Displayed Columns* tab page.

c) Place the cursor on *Purchasing Document* in the right window area (*Column Set*), select the first entry *Item* in the left window area (*Displayed Columns*), and choose (*Show selected fields*).

d) Choose (*Adopt*).

e) Select the *Still to be delivered (value)* column and move the column to the right of, and next to the *Matl Group* column.

f) Repeat the procedure for the *Still to be delivered (qty)* column.

g) Select the *Still to be delivered (value)* column and choose (*Total*).

h) Choose (*Save Layout...*). Select your *Layout SCM500-##*, and choose (*Adopt*) to copy the proposed values to the layout.

i) In the *Layout SCM500-## Save* dialog box, choose *Yes* to confirm the message “ *Layout already exists!*”.

Inventory Management Reporting

Figure 165: Reporting in Inventory Management

The reports and analyses in inventory management can be divided into the following groups:

- Analyses of stock situation
- Analyses of goods movements
- Analyses that serve to identify inconsistencies in stock data

For an overview of the posted goods movements, choose *Logistics → Materials Management → Inventory Management → Environment → List Displays*. A list showing the various types of analyses associated with material and accounting documents relating to goods movement appears on the screen.

The document lists of the reports and analyses includes the following:

- Material Documents (MB51)
- Accounting Document for Material (MR51)
- Cancelled Material Documents (MBSM)
- Reason for Movement (MBGR)

To access the reports and analyses for stocks, choose *Logistics → Materials Management → Inventory Management → Environment → Stock*.

The following documents contain the Stock lists:

- Stock Overview (MMBE)
- Stock/Requirements List (MD04)

- Plant Stock Availability (MB53)
- Warehouse Stock (MB52)
- Stock for Posting Date (MB5B)

You can find the analyses for determining inconsistencies in the *Inventory Management → Periodic Processing*.

Unit 7
Exercise 31

Run the List of Material Documents

Business Example

In your department, you have the task of monitoring the movements of certain materials. For this purpose, you regularly display the material documents posted for these materials each week.

Display the list of material documents.

1. Enter Goods movements.

   Generate a list of all material documents for the materials T-M500A##, T-M500B##, T-500C##, and T-M500D## that were posted this week.

2. Display the detail list.

   To work with a more flexible display, switch from the hierarchical to the non-hierarchical display.

3. Release quality inspection stock.

   Determine for which materials stock in quality inspection was transferred to the unrestricted-use stock this week. Remember to take into account any possible reversals for goods receipt.

Unit 7
Solution 31

Run the List of Material Documents

Business Example

In your department, you have the task of monitoring the movements of certain materials. For this purpose, you regularly display the material documents posted for these materials each week.

Display the list of material documents.

1. Enter Goods movements.

   Generate a list of all material documents for the materials T-M500A##, T-M500B##, T-500C##, and T-M500D## that were posted this week.

   a) Choose *Logistics → Materials Management → Inventory Management → Environment → List Displays → Material Documents* (`MB51`).

   b) To restrict the selection to these four materials, choose (*Multiple selection*) on the right next to the material fields. In the *Multiple Selection for Material* dialog box, enter the four materials **T-M500A##**, **T-M500B##**, **T-M500C##**, and **T-M500D##**. Transfer this selection by choosing (*Copy*).

   > Hint:
   > If you want to select all materials with the material number T-M500<any>##, you can also enter T-M500*## as the selection value for the material on the initial screen.

   c) As a restriction for the *Posting Date*, enter <today - 7 days> *to* <today>.

   d) Choose (*Execute*).

2. Display the detail list.

   To work with a more flexible display, switch from the hierarchical to the non-hierarchical display.

   a) Choose (*Detail List*).

3. Release quality inspection stock.

   Determine for which materials stock in quality inspection was transferred to the unrestricted-use stock this week. Remember to take into account any possible reversals for goods receipt.

   a) Select the *Movement type* column and choose (*Set Filter*).

b) In the *Determine values for filter criteria* dialog box, enter **321** to **322** in the field *Movement Type* and choose (*Execute*).
A transfer posting has occurred for material T-M500B## in plant 1200.

Invoice Verification Reporting

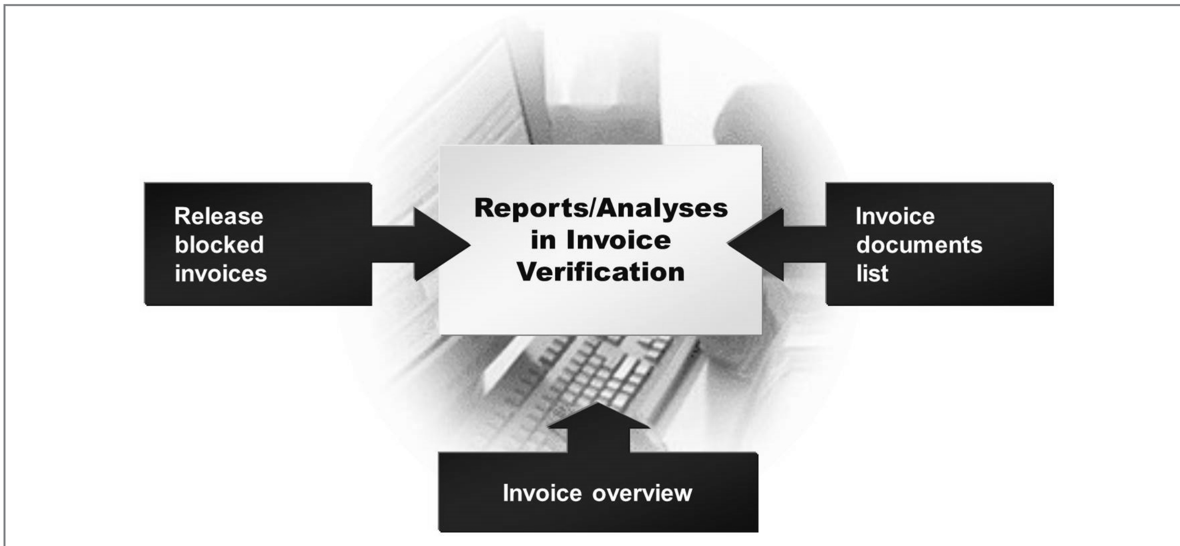


Figure 166: Reporting in Invoice Verification

In Logistics Invoice Verification, there is a general analysis of invoice documents called the Invoice Overview (`MIR6`). You can use this function to generate a list of invoices, for example, to check which documents have been entered manually by a certain user or for a certain invoicing party over a specific period. Apart from invoices posted online, you can select invoices generated by a Business Application Programming Interface (BAPI) or by the process of Evaluated Receipt Settlement (ERS). The report also serves to select parked, held, or canceled documents. From the list, you can branch to the documents and, if possible, process them further.

The list of invoice documents displays the following information:

- Name of the person who entered the invoice
- Document date
- Posting date
- Invoice document number
- Associated accounting document number
- Status of invoice (for example, posted, parked, and on hold)

Beginning with SAP ERP 5.0, there is another report that you can use to display a list of invoice documents called Display List of Invoice Documents (`MIR5`). In addition to Invoice Overview, the system provides extended selection criteria and display options.

However, you cannot perform changes to invoice documents in the list. A third analysis in invoice verification facilitates the selection and release of invoices that have been blocked for payment.

LESSON SUMMARY

You should now be able to:

- Run lists in SAP ERP Logistics
- Run standard reports in purchasing
- Run standard reports in inventory management
- Run standard reports in Logistics Invoice Verification

Unit 7
Lesson 2

Performing Standard Analyses in the Logistics Information System

LESSON OVERVIEW

This lesson examines the SAP Logistics Information System (LIS). The lesson introduces the basic structure of the Logistics Information System and explains the information structures involved in the data updating process, and gives you an overview of the analysis tools.

Business Example

You are head of the purchasing department and must soon negotiate end-of-period volume rebates. At this point, you want to run an analysis to identify the vendors with whom you achieved the highest business volumes last year. Therefore, you must determine whether the SAP system is capable of quickly providing you with aggregate key figures on relevant business transactions. For this reason, you require the following knowledge:

- An understanding of the basic features of the Logistics Information System
- How to perform standard analyses in the Logistics Information System

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Perform standard analyses in the Logistics Information System

The Logistics Information System

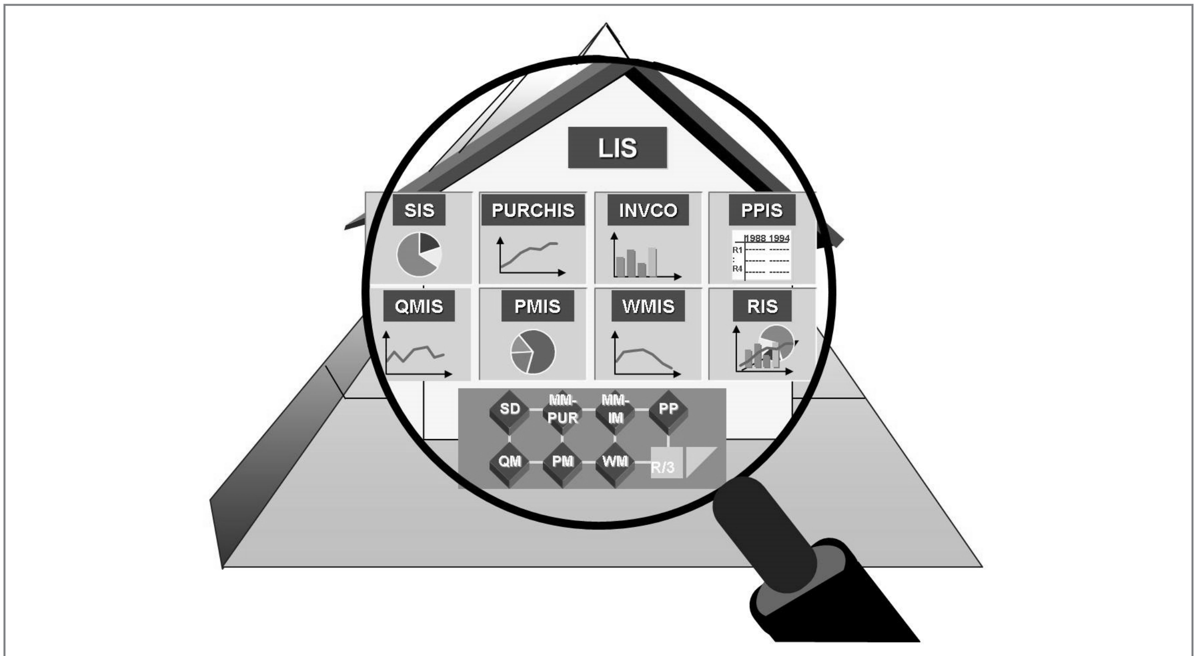


Figure 167: SAP Logistics Information System

SAP Logistics Information System offers a range of application-related (modular) information systems. All systems have a standard interface and provide similar, basic functions. At the same time, the modular structure of the system supports special aspects in each information system.

The type of data retention is identical in all information systems within logistics. A number of special tools and working methods emphasize the typical character of a data warehouse in the Logistics Information System (LIS).

In the Logistics Information System, you can distinguish between the following information systems:

- Sales Information System (SIS)
- Purchasing Information System (PURCHIS)
- Inventory Controlling (INVCO)
- Warehouse Management Information System (WMIS)
- Shop Floor Information System (SFIS)
- Quality Management Information System (QMIS)
- Plant Maintenance Information System (PMIS)
- Retail Information System (RIS)
- Production Planning Information System (PPIS)

Logistics Data Warehouse

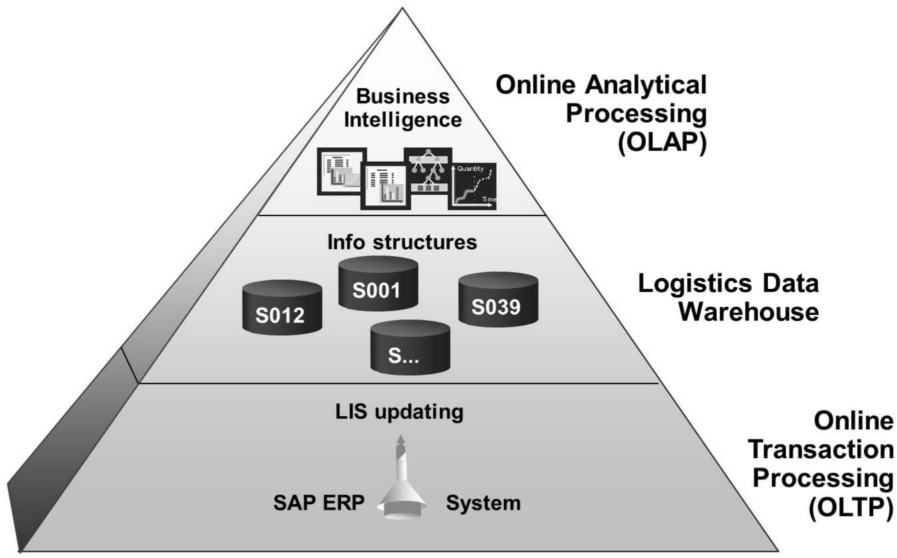


Figure 168: Logistics Data Warehouse

Logistics Data Warehouse comprises the following levels:

- Online Transaction Processing (OLTP)

  The operative applications such as Sales and Distribution, Purchasing, Production, and Plant Maintenance continuously supply the information systems of the LIS with data. This level information is also known as OLTP. The data is derived from documents from the *SAP ERP* system or external or non-SAP systems.

- Logistics Data Warehouse

  The Logistics Data Warehouse is present above the OLTP level. For each business transaction within the operative application, separate databases of the Logistics Data Warehouse, which is parallel to the OLTP level, store important information in aggregated form. In the process, the system quantitatively reduces the data volume because of the period-wise updating. The system then qualitatively reduces the information to the statistically relevant portions.

  The databases of the Logistics Data Warehouse are known as information structures. Information structures constitute the data basis of the LIS.

- Online Analytical Processing level (OLAP)

  Data is evaluated at OLAP level. Various reporting and analysis tools are available at this level.

Information Structures

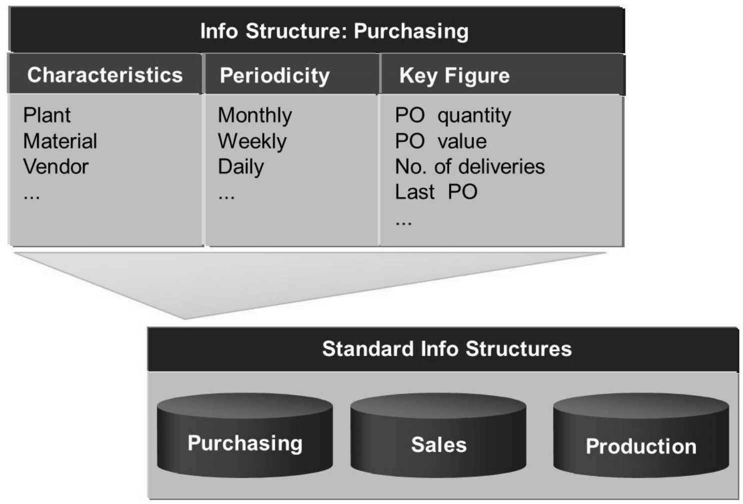


Figure 169: Information Structures

The individual physical tables of the Logistics Data Warehouse are termed information structures.

Information (info) structures have a typical form containing the following types of information:

- Characteristics

  Characteristics describe information that is suitable for aggregation. The analysis objects of the real business world are therefore included in info structures as classification keys in the form of characteristics. The system updates statistical information on characteristics such as vendor, customer, or material in aggregated form. Organizational elements, such as purchasing group, material group, valuation area, plant, or storage location, are also used as characteristics in info structures. The time base gives another option for aggregation.

- Periodicity (time base)

  The system also cumulates the data per period. Possible periods are day, week, month, and posting period.

- Key figures

  The system updates key figures for each characteristic combination and periodicity. Key figures are quantitative values providing information on measurable facts. You can derive key figures for each classification key by cumulation (for example, purchase or production order quantity). However, key figures can also be simple counters, such as the number of deliveries or the number of purchase orders. The standard SAP ERP system contains various information structures for different application areas. Using available tools, you can group characteristics and key figures into individual info structures to meet your own, specific requirements. You can also use separate update programs to supply these info structures with data.

Information Structures – Data Updating

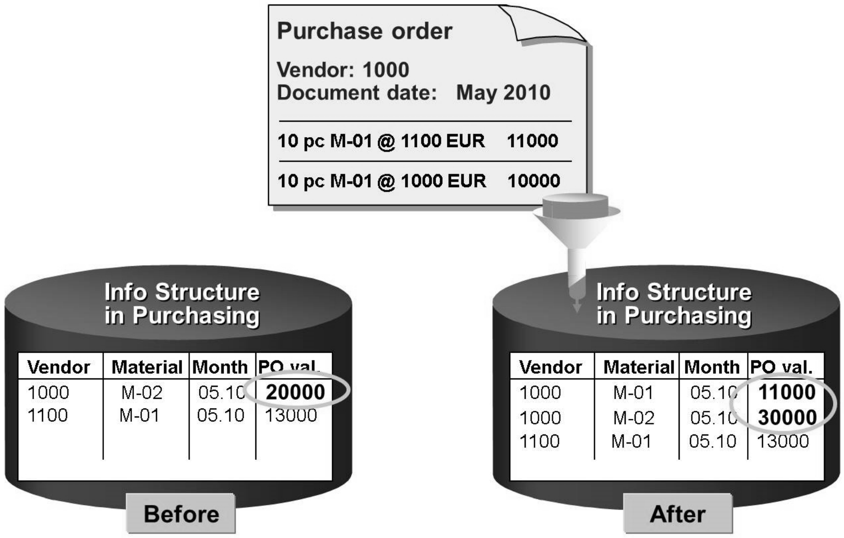


Figure 170: Information Structures – Data Updating

When you post a document, the system updates key figures of the info structures for the relevant characteristic combinations.

When no data record exists in the information structure for the characteristic combination in the document, the system generates a new data record and the characteristics and key figures are entered. In the figure shown, the generation of a new data record is applied to the purchase order item for material M-01.

In the figure, the concept of the system generating a new data record in the information structure is explained by the following information:

- Characteristics combination: Vendor 1000, material M-01
- Period: Month 05.2010
- Key figure: Purchase order value 11000

When the characteristic combination already exists in the info structure, the system increases or reduces the key figures in the data line by the relevant values. In the example shown in the figure, the increase or reduction of key figures is applied to the purchase order item for material M-02.

The system updates the relevant data record with the following information:

- Characteristics combination: Vendor 1000, material M-02
- Period: Month 05.2010
- Key figure: 20000 (old order value) + 10000 (document order value) = 30000 (new order value)

Information Structures – Evaluation

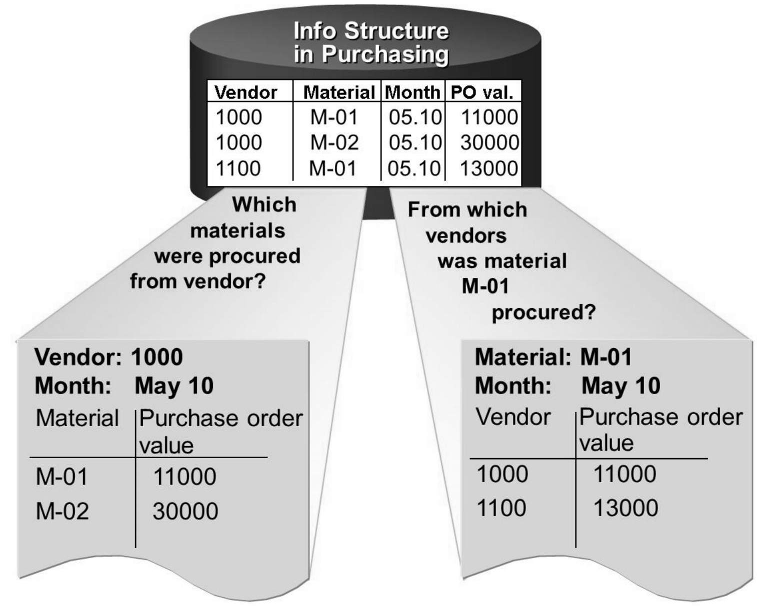


Figure 171: Information Structures – Evaluation

In the various analyses, you can create lists for all possible characteristic combinations based on the data in the info structures.

Logistics Information System Functions

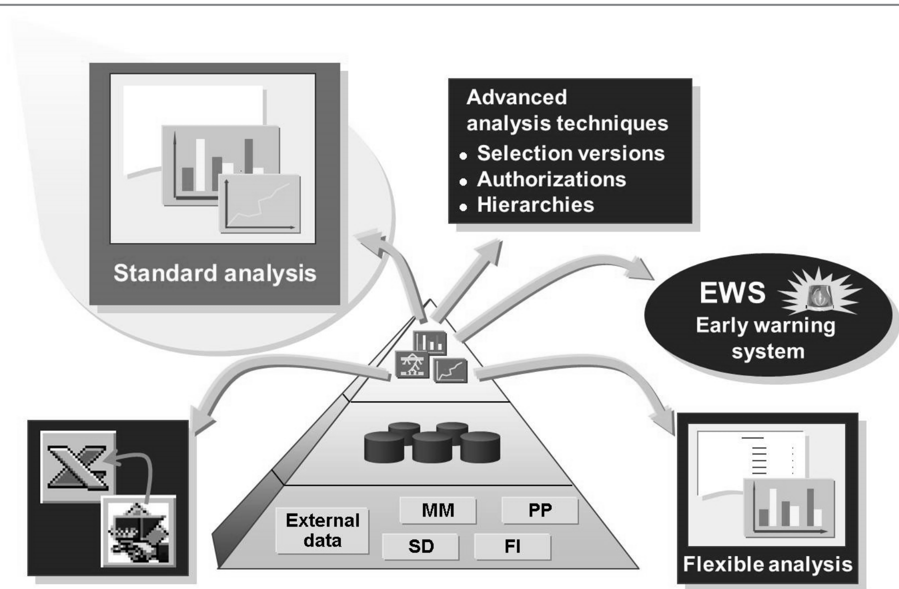


Figure 172: Reporting in the LIS

The following reporting tools and their individual functions are available at the OLAP level of the LIS:

- Standard analyses

  The standard analyses in the LIS provide comprehensive data evaluation options based on the data in the standard info structures. Standard analyses provide a multitude of functions to facilitate a detailed and targeted evaluation of the data.

  In each standard analysis, you can use various selection options to define the scope of the data to be evaluated. The selection of key figures to be evaluated can be preset or made interactively during the analysis.

- Flexible analyses

  The flexible analyses enable you to compile and aggregate key figures on an individual basis, which facilitates the structuring of your report layout.

  For reports, you can also define key figures whose content is derived from existing key figures by calculation formulae. For example, you can multiply key figures or calculate the quotient of two key figures. The data in the list can be depicted in the form of a figure.

- Early Warning System (EWS)

  The EWS enables you to search for unusual patterns. You can then react to previously defined exception situations in time and correct them.

The Logistics Data Warehouse is open and, therefore, allows you to run analyses using external programs, such as a spreadsheet application.

Standard Analyses Functions

The data basis for a standard analysis is established by specifying the object you want to analyze, for example, purchasing group, vendor, or material group, and by selection. You can then display this dataset structured in different ways. You can also store the selected data of a standard analysis for later analyses.

Some of the functions available when performing standard analyses include the following:

- Drilldown function
- Choosing key figures and changing their order
- Sorting lists
- Creating a ranking sequence
- ABC analysis

In standard analyses, the system makes a distinction between the basic list and a drilldown list. The basic list provides an overview of the characteristic values of the key figures in accordance with the selection criteria that you chose earlier.

With the aid of the drilldown function, you can vary the depth of information by displaying the data that appears in a list in greater detail, based on certain criteria. You can either determine the order in which the information is broken down or follow a predefined analysis path, which is the standard drilldown.

Reporting in Standard Analyses

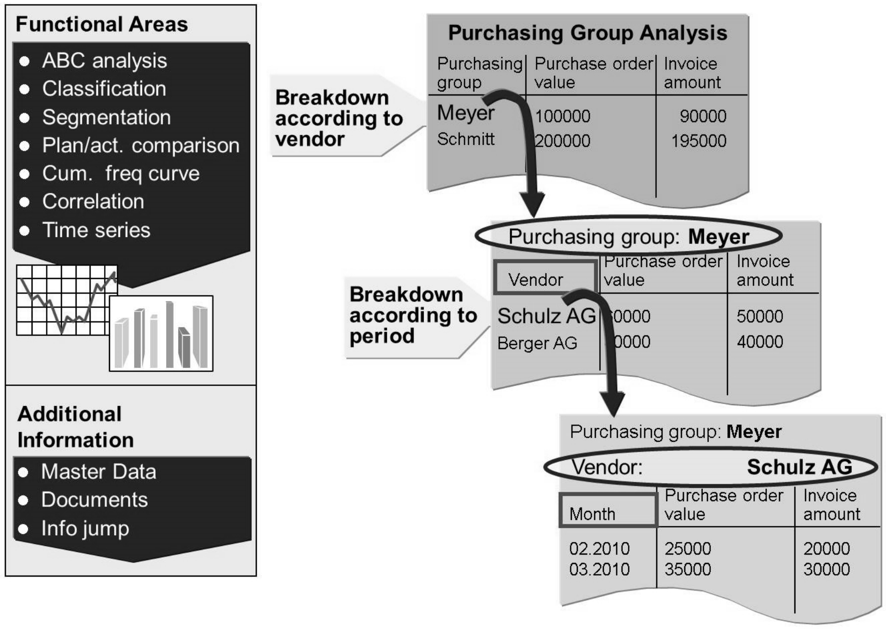


Figure 173: Reporting in Standard Analyses

For all list levels, you can perform the following additional functions:

- Cumulative frequency curve
- Correlation
- ABC analysis
- Classification
- Segmentation
- Ranking lists

All results can be presented in the form of figures. You can also display the complete master record and document information using the standard transactions of the application from within the various breakdown levels.

Perform Standard Analyses in the Logistics Information System

Business Example

As head of the purchasing department, you require a basic understanding of the activities of your buyers. In particular, you must determine the total value of the purchase orders issued by the individual buyers.

As an exception, you also require an overview of the stock situation at individual storage locations because there have recently been numerous incorrect postings resulting from incorrect storage location data in purchase orders.

To perform analyses of both requirements, you use standard reports from the Logistics Invoice Verification (LIV), since you do not want to evaluate the data at the document level.

Analyze purchasing values for purchasing groups and storage locations.

You must use the Purchasing Information System to determine a standard analysis of the procurement volume of several purchasing groups for purchasing organization 1000.

1. Perform standard analysis for purchasing group

   Invoke the standard analysis for purchasing groups T00 to T30 for the procurement transactions of purchasing organization 1000. Limit your analysis period to the current and previous month. Select EUR as the analysis currency.

2. Change the characteristic display.

   In addition to the name of the purchasing group, you must show the appropriate characteristic. Choose the relevant characteristic display.

3. Add key figures.

   You require information about the number of purchase order items and the number of deliveries. Add these two key figures to the basic list. In the following table, make a note of the total order value, the total number of Purchase Order (PO) items, the number of deliveries, and the amount already invoiced for your purchasing group T##.

Field	Value
PO value	
Invoice Amount	
PO items	
Deliveries	

4. Perform standard drilldown.

   What are the steps in the standard drilldown in the purchasing group analysis?

5. Display vendors for a purchasing group.

   To which vendors have you issued purchase orders for your purchasing group T##?

6. Determine the top five purchasing groups.

   Which purchasing groups had the five highest purchase order values over the analysis period?

7. Perform an ABC analysis.

   Determine the most important vendors with regard to order value for purchasing organization 1000 and purchasing groups T01 to T18. To do so, perform an ABC analysis for the 'purchase order value' key figure. As the analysis strategy, choose the percentage total of the purchase order value. The size of segment A is 70%, segment B is 20%, and segment C is 10%. See the complete list for the ABC analysis of the purchase order value.

   Which vendor has achieved the highest purchase order value?

   Vendor: ________________________________

   > Hint:
   > Before you perform the ABC analysis, make sure you are in the basic list. Then, switch from the basic list to the drilldown by vendor.

8. Display the selection log.

   To understand the result of your analysis, you must know which selection criteria you have used. Look at the selection log for the purchasing group analysis. What is the key and description of the info structure for this analysis?

   Info structure: ________________________________

Analyze the Storage Location

Analyze the storage location.

You must use Inventory Controlling to analyze your storage location stocks and transfer any materials that do not belong there to another location. Check which stocks are located in storage location 0001 of plant 1000.

1. Perform standard analysis of storage location.

   Call up the standard analysis for storage location 0001 of plant 1000 for the period between the current month and 12 months prior to it.

2. Drilldown by material group.

   Choose drilldown by material group. Display the receipt quantity per material group as a figure.

3. Sort the material groups in descending order, according to quantity received.

   Expand the material group with the largest quantity received to show individual months and display the relevant materials for the month in which the largest quantity was received.

Hint:
Close the figure before working on this task.

Unit 7
Solution 32

Perform Standard Analyses in the Logistics Information System

Business Example

As head of the purchasing department, you require a basic understanding of the activities of your buyers. In particular, you must determine the total value of the purchase orders issued by the individual buyers.

As an exception, you also require an overview of the stock situation at individual storage locations because there have recently been numerous incorrect postings resulting from incorrect storage location data in purchase orders.

To perform analyses of both requirements, you use standard reports from the Logistics Invoice Verification (LIV), since you do not want to evaluate the data at the document level.

Analyze purchasing values for purchasing groups and storage locations.

You must use the Purchasing Information System to determine a standard analysis of the procurement volume of several purchasing groups for purchasing organization 1000.

1. Perform standard analysis for purchasing group

   Invoke the standard analysis for purchasing groups T00 to T30 for the procurement transactions of purchasing organization 1000. Limit your analysis period to the current and previous month. Select EUR as the analysis currency.

   a) Choose *Logistics* → *Logistics Controlling* → *Purchasing Information System* → *Standard Analyses* → *Purchasing Group* (`MCE1`).

   b) Enter the following values on the selection screen:

Field	Value
Purch. Organization	**`1000`**
Purchasing Group	**`T00`** *to* **`T30`**
Month	<Last month> *to* <Current month>

   c) Choose (*Execute*).

   The basic list of the purchasing group analysis is displayed according to your selection values.

2. Change the characteristic display.

   In addition to the name of the purchasing group, you must show the appropriate characteristic. Choose the relevant characteristic display.

a) Choose *Settings* → *Characteristic display* → *Key and description*.

If the column is not wide enough, you can increase it by double-clicking the column header and entering a higher value for the width.

3. Add key figures.

You require information about the number of purchase order items and the number of deliveries. Add these two key figures to the basic list. In the following table, make a note of the total order value, the total number of Purchase Order (PO) items, the number of deliveries, and the amount already invoiced for your purchasing group T##.

Field	Value
PO value	
Invoice Amount	
PO items	
Deliveries	

a) Choose *Edit* → *Choose key figures...* . The *Choose Key figures* dialog box appears.

b) In the *Pool* list, select the key figures *PO items* and *Deliveries* and choose ◀ (*Choose*) pushbutton.

Confirm your choice.

The *POs*, *Order items*, and *Deliveries* columns are also displayed on the *Basic List* screen.

4. Perform standard drilldown.

What are the steps in the standard drilldown in the purchasing group analysis?

a) Choose *Extras* → *Display Standard Drilldown*. The *Display standard drill-down* screen shows the sequence *Purchasing Group – Vendor – Month*.

5. Display vendors for a purchasing group.

To which vendors have you issued purchase orders for your purchasing group T##?

a) Select the *Purch. Group* field and the value *T## SCM500-##* and choose *View* → *Drilldown by* → *Vendor*.

Alternatively, you can double-click the *Purch. Group* field and then follow the standard drilldown.

6. Determine the top five purchasing groups.

Which purchasing groups had the five highest purchase order values over the analysis period?

a) Choose *View* → *Basic List* to return to the basic list of the analysis.

b) Mark the *PO value* column and choose *View* → *Top N...* . Enter **5** in the *Number* field and confirm your entry.

7. Perform an ABC analysis.

Determine the most important vendors with regard to order value for purchasing organization 1000 and purchasing groups T01 to T18. To do so, perform an ABC analysis for the 'purchase order value' key figure. As the analysis strategy, choose the percentage total of the purchase order value. The size of segment A is 70%, segment B is 20%, and segment C is 10%. See the complete list for the ABC analysis of the purchase order value.

Which vendor has achieved the highest purchase order value?

Vendor: ________________________________

> Hint:
> Before you perform the ABC analysis, make sure you are in the basic list. Then, switch from the basic list to the drilldown by vendor.

a) Choose *View* → *Basic List* to return to the basic list of the analysis.

b) Choose *View* → *Switch Drilldown...* .

c) Choose the *Vendor* in the *Switch Drilldown* dialog box. The list now displays all the vendors.

d) Position the cursor on the *PO value* column and choose *Edit* → *ABC Analysis...* .

e) In the *ABC analysis: Choose strategy* dialog box, select *Total PO Value (%)* and confirm your choice.

f) Accept the suggested *Segment sizes*.

g) In the figure displayed, choose the *Total list* pushbutton to show the complete list of the ABC analysis.

8. Display the selection log.

   To understand the result of your analysis, you must know which selection criteria you have used. Look at the selection log for the purchasing group analysis. What is the key and description of the info structure for this analysis?

   Info structure: _______________________________

   a) Exit the function to exit the list for the ABC analysis and to display the original list.

   b) Choose *Extras* → *Selection Log...* . A dialog box with the selection values appears. The *Info structure* is *S011 – Purchasing groups*.

Analyze the Storage Location

Analyze the storage location.

You must use Inventory Controlling to analyze your storage location stocks and transfer any materials that do not belong there to another location. Check which stocks are located in storage location 0001 of plant 1000.

1. Perform standard analysis of storage location.

   Call up the standard analysis for storage location 0001 of plant 1000 for the period between the current month and 12 months prior to it.

   a) Choose *Logistics* → *Logistics Controlling* → *Inventory Controlling* → *Standard Analyses* → *Storage Location* (`MCBC`).

   b) Enter the following values on the selection screen:

Field	Value
Plant	`1000`
Storage Location	`0001`
Month	<Current month – 12 months> to <Current month>

c) Choose (*Execute*).

The basic list of the storage location is displayed according to your selection values.

2. Drilldown by material group.

Choose drilldown by material group. Display the receipt quantity per material group as a figure.

a) Choose *View* → *Switch Drilldown...* .

b) Choose the *Material Group* in the *Switch Drilldown* dialog box.

The list now displays the material groups.

c) Choose *Goto* → *Graphics...* .

d) In the *Graphic: Choose Key Figures* dialog box select the key figure *Val. stock receipts*. Confirm your entry.

3. Sort the material groups in descending order, according to quantity received.

Expand the material group with the largest quantity received to show individual months and display the relevant materials for the month in which the largest quantity was received.

Hint:
Close the figure before working on this task.

a) Position the cursor on the *Val. Stk rec qty* column and choose (*Sort in Descending Order*).

b) Position the cursor on the first entry (the materials group with the largest receipt quantity) and choose *View* → *Breakdown by* → *Month*.

c) Position the cursor on the *Val. Stk rec qty* column and choose (*Sort in Descending Order*).

d) Position the cursor on the first entry (the month with the largest receipt quantity) and choose *View* → *Breakdown by* → *Material*.

LESSON SUMMARY

You should now be able to:

- Perform standard analyses in the Logistics Information System

Unit 7

Learning Assessment

1. Which of the following are the names of the two SAP tools for presenting lists?

   Choose the correct answers.

   - [ ] A SAP List Viewer
   - [ ] B ALV grid control
   - [ ] C SAP ERP
   - [ ] D Logistics Information System

2. The scope-of-list parameter determines which purchasing documents are analyzed by the report.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

3. Which of the following are the functions of SAP tools for presenting lists?

   Choose the correct answers.

   - [ ] A Sorting
   - [ ] B Totaling
   - [ ] C Subtotals
   - [ ] D Filtering
   - [ ] E Layout
   - [ ] F Deleting

4. Which of the following are analyses of stocks (inventories) and documents within inventory management?

   Choose the correct answers.

   - [ ] A Stock overview
   - [ ] B Stock or requirements list
   - [ ] C Storage location stock
   - [ ] D List of material documents
   - [ ] E Canceled material documents
   - [ ] F Delivery costs

5. Document date, posting date, and invoice document number are displayed in the list of invoice documents.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

6. Which of the following are the types of information that an info structure contains?

   Choose the correct answers.

   - [ ] A Characteristics
   - [ ] B Period
   - [ ] C Key figures
   - [ ] D Invoicing date

7. In a standard analysis, you can perform an ABC analysis.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

8. Which of the following reporting tools are available at the OLAP level of the LIS?

   Choose the correct answers.

   - [ ] A Standard analyses
   - [ ] B Flexible analyses
   - [ ] C Early warning system
   - [ ] D Drilldown function

9. Which of the following functions are available when performing standard analyses?

   Choose the correct answers.

   - [ ] A Drilldown function
   - [ ] B Choose key figures and change their order
   - [ ] C Sort list
   - [ ] D Create ranking sequence
   - [ ] E ABC analysis
   - [ ] F Segmentation

Learning Assessment - Answers

1. Which of the following are the names of the two SAP tools for presenting lists?

   Choose the correct answers.

   - [x] A SAP List Viewer
   - [x] B ALV grid control
   - [ ] C SAP ERP
   - [ ] D Logistics Information System

2. The scope-of-list parameter determines which purchasing documents are analyzed by the report.

   Determine whether this statement is true or false.

   - [ ] True
   - [x] False

3. Which of the following are the functions of SAP tools for presenting lists?

   Choose the correct answers.

   - [x] A Sorting
   - [x] B Totaling
   - [x] C Subtotals
   - [x] D Filtering
   - [x] E Layout
   - [ ] F Deleting

   That is correct. Reports are generally not used for deleting anything but simply analyzing data.

4. Which of the following are analyses of stocks (inventories) and documents within inventory management?

   Choose the correct answers.

   - [x] A Stock overview
   - [x] B Stock or requirements list
   - [x] C Storage location stock
   - [x] D List of material documents
   - [x] E Canceled material documents
   - [ ] F Delivery costs

5. Document date, posting date, and invoice document number are displayed in the list of invoice documents.

   Determine whether this statement is true or false.

   - [x] True
   - [ ] False

6. Which of the following are the types of information that an info structure contains?

   Choose the correct answers.

   - [x] A Characteristics
   - [x] B Period
   - [x] C Key figures
   - [ ] D Invoicing date

7. In a standard analysis, you can perform an ABC analysis.

   Determine whether this statement is true or false.

   - [x] True
   - [ ] False

   To perform a standard analysis, choose *Edit → ABC analysis* ... in the analysis.

8. Which of the following reporting tools are available at the OLAP level of the LIS?

   Choose the correct answers.

   - [x] A Standard analyses
   - [x] B Flexible analyses
   - [x] C Early warning system
   - [ ] D Drilldown function

   That is correct. OLAP or Online Analytical Processing type reports are used for trend analysis and summary level information.

9. Which of the following functions are available when performing standard analyses?

   Choose the correct answers.

   - [x] A Drilldown function
   - [x] B Choose key figures and change their order
   - [x] C Sort list
   - [x] D Create ranking sequence
   - [x] E ABC analysis
   - [ ] F Segmentation

UNIT 8

Introduction to the SAP Buyer Role

Lesson 1

UNIT OBJECTIVES

- Assess the Buyer role

Unit 8
Lesson 1

Assessing the Buyer Role

LESSON OVERVIEW

This lesson provides you with an overview of SAP Business Package for Buyers and the Buyer role that is delivered with it.

Business Example

You want to test the functions of the Buyer role that was delivered with Business Package for Buyers. For this reason, you require the following knowledge:

- An understanding of the special functions of the Buyer role
- How to map a procurement process in the portal with the Buyer role

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Assess the Buyer role

The Buyer Role

SAP delivers the portal role, Buyer, along with Business Package for Buyers. This business package is for specialists. The Buyer role can be run by the SAP Enterprise Portal or the SAP NetWeaver Business Client (NWBC).

The Business Package for Buyer defines the tasks of a buyer and is used by employees in the purchasing department who are responsible for the external procurement of goods and services.

The Buyer role includes all the following activities used in monitoring purchase orders during the daily operations:

1. Creation of purchase requisitions with determination of the source of supply
2. Generation of purchase orders
3. Confirmation of goods receipt, and invoice entry

With the aid of worklists, the user can easily access frequently used purchasing objects, such as purchase requisitions, purchase orders, vendors, and materials. In addition, the user can call and execute the relevant Enterprise Resource Planning (ERP) transactions in the backend system.

Buyer Role in Service Map

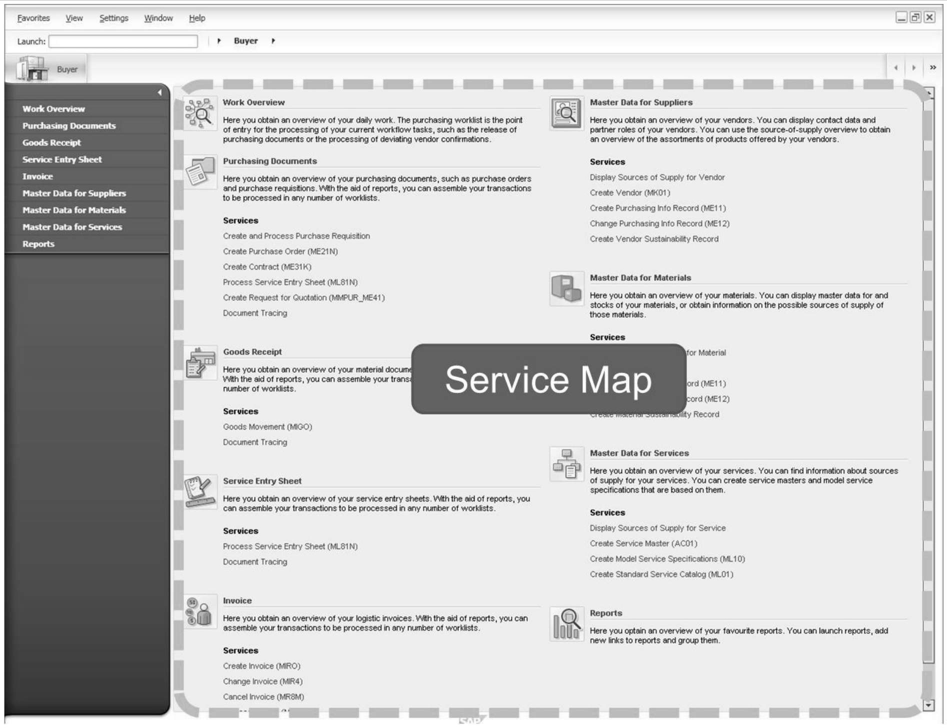


Figure 174: Buyer Role in Service Map

The Service Map provides an overview of all services that can be called up by users through the Buyer role along with brief explanations of the functions of all worksets included in the role. The links enable users to jump directly to the individual services. The Service Map form of access is aimed at users who are new to or who infrequently work in the procurement environment.

Buyer Role and Relevant Worksets

Figure 175: Buyer Role and Relevant Worksets

The Buyer role includes multiple worksets on the personal object worklists and access to a wide range of services and reports to simplify and accelerate the steps of the procurement process.

The following worksets are included in the Buyer role on the Service Map:

- Work Overview
- Purchasing Documents
- Goods Receipt
- Service Entry Sheet
- Invoice
- Master Data for Suppliers
- Master Data for Materials
- Master Data for Services
- Reports

Each workset offers a centralized point of access for the tasks linked to a specific area of operations. The workset includes a summary of the information that is relevant to the user in the particular work environment, and it can be customized to meet personal requirements in order to effectively carry out the tasks.

Purchasing Documents Workset

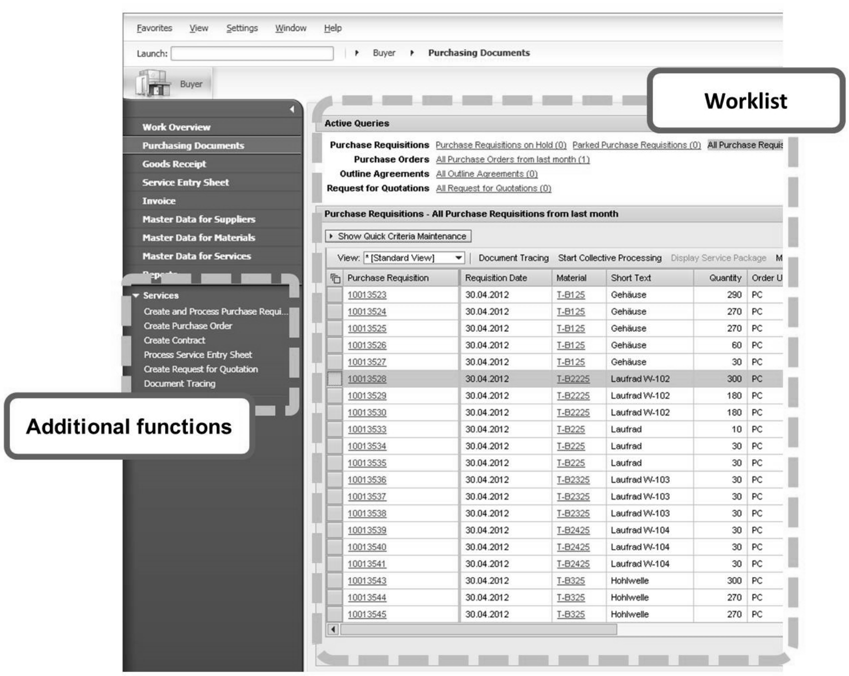


Figure 176: Purchasing Documents Workset

Each workset includes a worklist. There are a number of customization options that enable users to adjust worklists. For example, you can create queries and change the display options. Furthermore, the applications and functions can be accessed in the work center.

Worklists

A worklist is the point of entry for processing documents or master data. A worklist provides various options for the further processing of selected objects. The objects can be displayed, changed, or follow-on functions for these objects can be started. For example, you can use the My Purchasing Documents worklist to assign purchase requisitions to sources of supply using collective processing, and then convert them into purchase orders.

If the user has the requisite authorization, new queries to the worklist can be defined. A wizard takes the user step by step through the definition of new queries, and an existing query can be used as a template. The user-defined categories enable users to customize the grouping of queries.

The user can also customize the display of the output list and adjust the layout of lists using a procedure that is similar to the SAP system.

Portal-Specific Functions in Purchasing

Similar to worklists in various application areas, the Purchasing portal application includes functions specific to the tasks involved in procurement.

The specific functions in Purchasing are as follows:

- Creation and processing of purchase requisitions for materials

  This function allows you to save a purchase requisition as a template. This template can then be used to create a new purchase requisition. This considerably reduces the time required to enter regularly occurring, extensive procurement transactions. You can also create templates for account assignment data.

- Collective processing of purchase requisitions

  When the relevant purchase requisitions are selected in the worklist and the source of supply assignments are started for the items, the system automatically generates a list of possible available sources of supply. If several sources of supply are available, you can compare vendors before proceeding to assign the source of supply. After you have assigned the source of supply, you can group the purchase requisition items and create purchase orders.

- Document tracing

  This analysis tool is available in every work center. The preceding and follow-on documents for a specific document can be selected and displayed.

In addition, there are many specialized functions in the Purchasing portal, such as displaying expected contract release orders for a contract item. Specifically, purchase requisitions from a contract item can be extracted to identify the source of supply.

Creation of a New Query for a Worklist

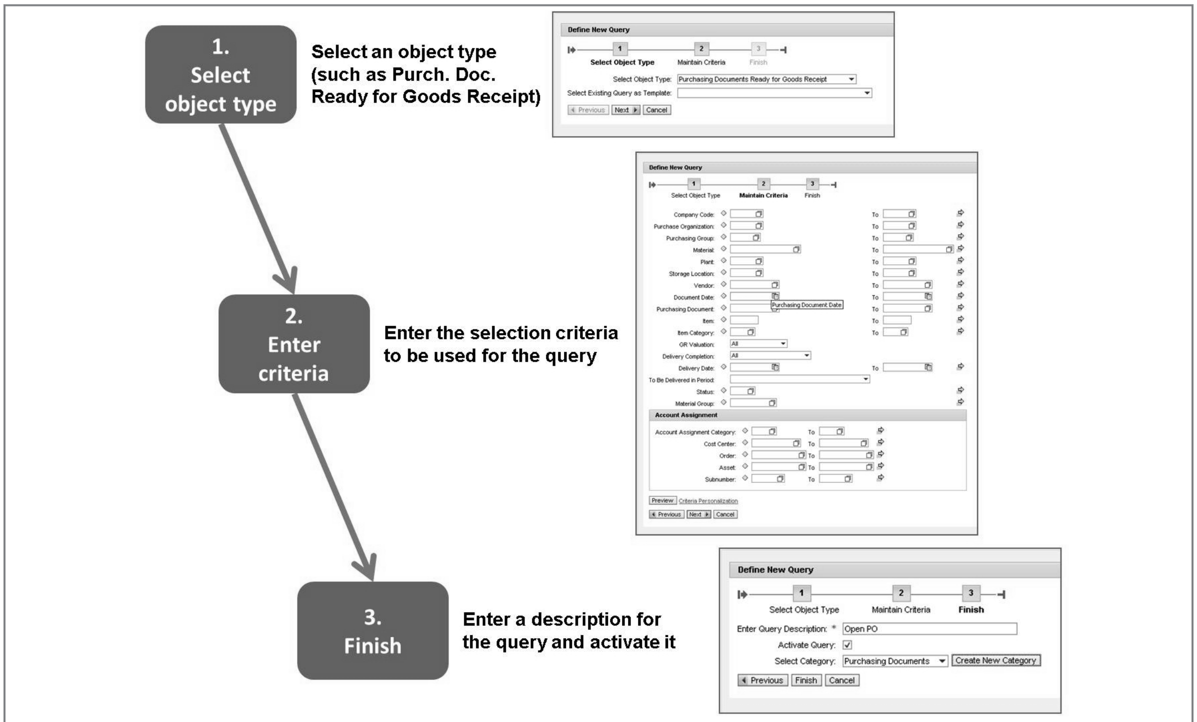


Figure 177: Steps for Creating a New Query

To create a new query, perform the following steps:

1. Select object type

   Select the desired object type for the individual query (for example, incomplete sales documents).

2. Enter criteria

   Enter the criteria to be used in the query.

3. Finish

   Enter a description of the query and activate it.

Unit 8
Exercise 33

Assess the Buyer Role

Business Example

You want to test the functions of the Buyer role that is delivered with Business Package for Buyers.

> Caution:
> Perform all tasks described in this exercise in SAP NetWeaver Business Client.

Carry out collective processing for purchase requisitions.

Process Purchase Requisitions

Process purchase requisitions.

To replenish the warehouse stock of the materials **T-M500A##** and **T-M500B##**, procure **200** pieces of each material. Because you want the system to help you determine possible sources of supply, first create two purchase requisition items. Assign sources of supply to each collective processing operation and convert the items into a purchase order.

1. Log on to SAP NetWeaver Business Client.

   Log on to SAP NetWeaver Business client for HTML through transaction NWBC. Use the role **SAP_SR_Buyer_6**.

   You are now logged on to SAP NetWeaver Business client for HTML.

2. Create purchase requisition.

   Create a purchase requisition for two items without account assignment for the materials **T-M500A##** and **T-M500B##**. You want to procure **200** pieces of each material. The warehouse stock for plant **1000** in storage location **0001** is to be replenished.

   > Note:
   > If the Acct Assgt Cat. column is populated with K (cost center), delete the value from the cell when you are creating both purchase requisitions. Enter a delivery date in the future also.

3. Define queries for open purchase requisitions.

   Create a new query for purchase requisitions for the *Purchasing Documents* worklist under the title **Open Purchase Requisitions T##**. You want to select all open purchase requisition items that have not been processed for your purchasing group **T##** with a date within this week.

Both your purchase requisition items should now appear in the worklist.

4. Collective processing of Purchase requisition items.

   Select both items in the worklist and use collective processing to assign them to the vendor **T-K500A##** as the source of supply. Then convert the purchase requisition into a purchase order. When you have done this, update the worklist.

5. Analysis of the purchase orders for the previous month.

   In the worklist, display all the purchase orders from the previous month. The selection shows all purchase orders with a document date within one month from today's date. Refresh the list to ensure that the correct documents are displayed. Filter out the purchase orders for purchasing group **T##**.

   Your purchase order items should be displayed.

Query Open Purchase Orders

Create goods receipt and invoice entry.

The 200 pieces of the material **T-M500A##** were delivered. The vendor included the invoice with the goods delivery. Enter the goods receipt and the invoice.

1. Query for open purchase orders

   Create a new query in the worklist of the *Goods Receipt* work center. The query should select all open purchase orders for the vendor **T-K500A##** and the purchasing organization **1000**. Choose **Open PO T-K500A##** as the description and assign the query to a new category **GR##** expected.

   Your purchase order from the last task should now be displayed in the worklist.

Unit 8
Solution 33

Assess the Buyer Role

Business Example

You want to test the functions of the Buyer role that is delivered with Business Package for Buyers.

> Caution:
> Perform all tasks described in this exercise in SAP NetWeaver Business Client.

Carry out collective processing for purchase requisitions.

Process Purchase Requisitions

Process purchase requisitions.

To replenish the warehouse stock of the materials **T-M500A##** and **T-M500B##**, procure **200** pieces of each material. Because you want the system to help you determine possible sources of supply, first create two purchase requisition items. Assign sources of supply to each collective processing operation and convert the items into a purchase order.

1. Log on to SAP NetWeaver Business Client.

   Log on to SAP NetWeaver Business client for HTML through transaction NWBC. Use the role **SAP_SR_Buyer_6**.

   a) On the *SAP Easy Access* screen, enter the NWBC transaction code.

   b) Confirm your entries.

   c) Enter **SAP_SR_BUYER_6** in the textbox.

   d) Choose the *Start NetWeaver Business Client for HTML* pushbutton.

   You are now logged on to SAP NetWeaver Business client for HTML.

2. Create purchase requisition.

   Create a purchase requisition for two items without account assignment for the materials **T-M500A##** and **T-M500B##**. You want to procure **200** pieces of each material. The warehouse stock for plant **1000** in storage location **0001** is to be replenished.

> Note:
> If the Acct Assgt Cat. column is populated with K (cost center), delete the value from the cell when you are creating both purchase requisitions. Enter a delivery date in the future also.

a) In the SAP Business Client, choose *Purchasing Documents* workset.

b) Choose the *Create and Process Purchase Requisitio*n service.

c) Enter the data for the first item of your purchase requisition as follows:

Field	Value
Material	**`T-M500A##`**
Quantity	**`200`**
Plant	**`1000`**
Stor. Loc.	**`0001`**

d) Enter the data for the second item of your purchase requisition as follows:

Field	Value
Material	**`T-M500B##`**
Quantity	**`200`**
Plant	**`1000`**
Stor. Loc.	**`0001`**

e) Save your entries and exit the function.

3. Define queries for open purchase requisitions.

   Create a new query for purchase requisitions for the *Purchasing Documents* worklist under the title **`Open Purchase Requisitions T##`**. You want to select all open purchase requisition items that have not been processed for your purchasing group **`T##`** with a date within this week.

   a) In the *Purchasing Documents* tab page, choose *Define New Query* link. To do this, scroll to the right of the worklist. You will find the *Define New Query* link above the list.

   b) From the object type dropdown list, choose **`Purchase Requisitions for Assignment`** from the list.

   c) Choose the *Next* pushbutton.

   d) Enter the following data as criteria (for all the other fields, accept the value that the system proposes):

Field	Value
Purchasing Group	**T##**
Requisition Date	<Monday to Sunday of the current week>

e) Choose the *Next* pushbutton.

f) Enter **Open PReqs T##** in the *Enter Query Description* field and select the *Activate Query* checkbox.

g) Choose **Purchase Requisitions** from the dropdown list for the *Select Category* field.

h) Choose the *Finish* pushbutton.

Both your purchase requisition items should now appear in the worklist.

4. Collective processing of Purchase requisition items.

   Select both items in the worklist and use collective processing to assign them to the vendor **T-K500A##** as the source of supply. Then convert the purchase requisition into a purchase order. When you have done this, update the worklist.

   a) To select both items at the same time, keep the shift key pressed down when you choose the items.

   b) Choose *Start Collective Processing*.

   c) In the *Not Assigned Purchase Requisition Items* screen area, select the first item. Select the entry in the *Available Sources of Supply* list for vendor **T-K500A##** and choose *Assign to Selected PR Item*.

   d) Repeat step c for the second item.

   e) Save your entries.

   f) Choose *Select All* and *Bundle and Create PO* pushbutton.

   g) In the *Bundle and Create PO* dialog box, choose the *Select All* and *Create Purchase Order(s) for all Bundles* functions in sequence.

   h) Exit the collective processing function.

   i) Refresh your worklist for the *Open PReqs T##* query. Your worklist should now be empty.

5. Analysis of the purchase orders for the previous month.

   In the worklist, display all the purchase orders from the previous month. The selection shows all purchase orders with a document date within one month from today's date. Refresh the list to ensure that the correct documents are displayed. Filter out the purchase orders for purchasing group **T##**.

   a) In the *Purchase Orders* worklist, choose the *All Purchase Orders from last Month* query.

   b) Choose the *Show Quick Criteria Maintenance* pushbutton.

   c) Enter **T##** in the *Purchasing Group* field.

d) Choose the *Apply* pushbutton.

Your purchase order items should be displayed.

Query Open Purchase Orders

Create goods receipt and invoice entry.

The 200 pieces of the material **T-M500A##** were delivered. The vendor included the invoice with the goods delivery. Enter the goods receipt and the invoice.

1. Query for open purchase orders

   Create a new query in the worklist of the *Goods Receipt* work center. The query should select all open purchase orders for the vendor **T-K500A##** and the purchasing organization **1000**. Choose **Open PO T-K500A##** as the description and assign the query to a new category **GR##** expected.

   a) In the detailed navigation, choose the *Goods Receipt* workset.

   b) Choose the *Define New Query* function.

   c) For the object type, choose **Purchasing Documents Ready for Goods Receipt** from the list.

   d) Choose the *Next* pushbutton.

   e) Enter the following data as criteria (for all other prefilled fields, accept the values):

Field	Value
Purchasing Organization	**1000**
Vendor	**T-K500A##**
Delivery Completion	**Delivery not completed**

   f) Choose the *Next* pushbutton.

   g) For the query description, enter **Open PO T-K500A##** in the *Enter Query Description:* field and select the *Activate Query* checkbox to activate the query.

   h) Choose the *Create New Category* pushbutton and enter **GR ## expected** in the *Enter Category Description* field in the *Enter Category Description* dialog box and choose the *OK* pushbutton.

   i) Choose the *Finish* pushbutton.

   Your purchase order from the last task should now be displayed in the worklist.

LESSON SUMMARY

You should now be able to:

- Assess the Buyer role

Learning Assessment

1. Which of the following worksets are included in the role of a Buyer?

   Choose the correct answers.

   - [ ] A Document overview
   - [ ] B Purchasing documents
   - [ ] C Purchasing requisition
   - [ ] D Document release
   - [ ] E Master data for materials

Learning Assessment - Answers

1. Which of the following worksets are included in the role of a Buyer?

   Choose the correct answers.

   - [ ] A Document overview
   - [x] B Purchasing documents
   - [ ] C Purchasing requisition
   - [ ] D Document release
   - [x] E Master data for materials

UNIT 9 Self-Service Procurement and Ariba

Lesson 1

UNIT OBJECTIVES

- Analyze the functions of self-service procurement
- Examine Ariba procurement solutions

Examining the Functions of Self-Service Procurement

LESSON OVERVIEW

This lesson introduces self-service procurement with SAP Supplier Relationship Management (SAP SRM) as part of the SAP ERP application.

Business Example

Your company is planning to have individual employees procure consumable materials, such as office materials, for their own use on a self-serve basis. Employees will be able to request the item by describing it and then selecting from an electronic catalog. For this reason, you require the following knowledge:

- An understanding of how to integrate SAP SRM into SAP ERP
- An understanding of the functions of self-service procurement

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Analyze the functions of self-service procurement
- Examine Ariba procurement solutions

Self-Service Procurement

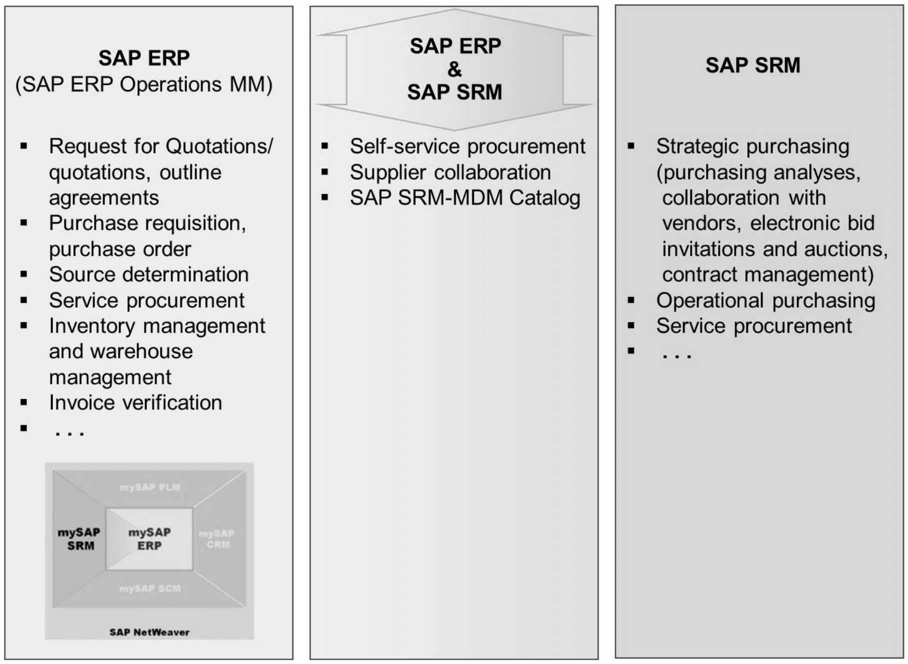


Figure 178: Distinction between SAP ERP and SAP SRM

SAP ERP has links to several function packages. Function packages include functions that support the logistics process and belong to the SAP ERP Operations package. End-user services are another group of functions. End-user services include employee self-services (ESS). Employee self-services (ESS) provides employees with easy access to information and functions such as the purchasing function. The purchasing function is called self-service procurement.

To use self-service procurement, you need to implement SAP SRM Server. SAP SRM Server is the central component of the SAP SRM application and is included in the license for SAP SRM.

SAP ERP 6.0 lets you run SAP SRM as an add-on in SAP ERP. In this case, the entire range of functions for SAP SRM are not available. For further information, see the SAP documentation under *SAP Business Suite → SAP SRM as Add-On for ECC* on SAP Service Marketplace at service.sap.com/srm.

Self-Service Procurement

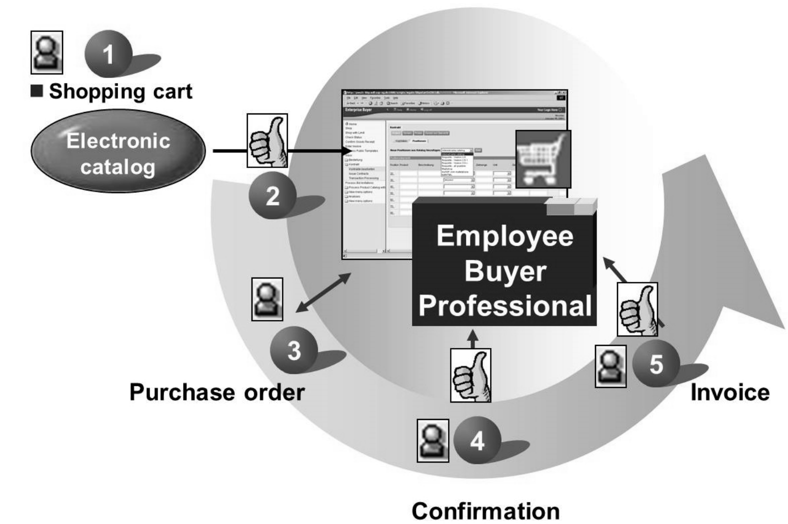


Figure 179: The Process of Self-Service Procurement

The figure shows the self-service procurement process. The employee creates a shopping cart in SAP SRM Server for goods or services procured for direct consumption or stock. You use self-service procurement frequently to procure everyday consumables; this type of procurement is indirect procurement. You can also procure stock materials, such as components for production, using self-service; this type of procurement is direct procurement.

The process of procurement through self-service consists of the following steps:

- Create a shopping cart by choosing the required articles or services from catalogs, by entering product IDs, or by describing the articles or services using free text.

> Hint:
> The SAP SRM, MDM catalog is provided in conjunction with both the SAP SRM license and the SAP ERP license. You can also connect to a large number of catalogs from other providers.

- Depending on system configuration, employees need authorization from a manager or higher-level user to fulfill their requests. If a shopping cart requires approval, the system uses a workflow to inform the employee responsible for releasing. Approvals are based on the value of the shopping cart and the account assignment. The approval process may be a single stage or a multi-stage process, based on the organizational processes.
- The system processes the shopping cart after it has been approved. If the shopping cart is complete, the system converts it into a purchase order. Conversion to a purchase order depends on the data available in the system. If the shopping cart is incomplete, the system converts it into a purchase requisition and transmits it to the backend SAP system for completion.

- The entry of a confirmation in SAP SRM Server corresponds to the entry of a goods receipt (GR) for materials or the creation of a service entry sheet for externally provided services. The requester or another user, such as a vendor or a goods recipient, can enter confirmations directly in SAP SRM Server. It is also possible to enter data about goods receipt or services rendered in the backend (SAP ERP) system. Depending on the purchase order data and the person entering the confirmation, you may need approval for the purchasing document.
- You enter invoice data in the same way as the confirmation process either in SAP SRM Server or in the backend (SAP ERP) system. You require an approval for the invoice as part of the workflow.

Typical Roles in SAP SRM

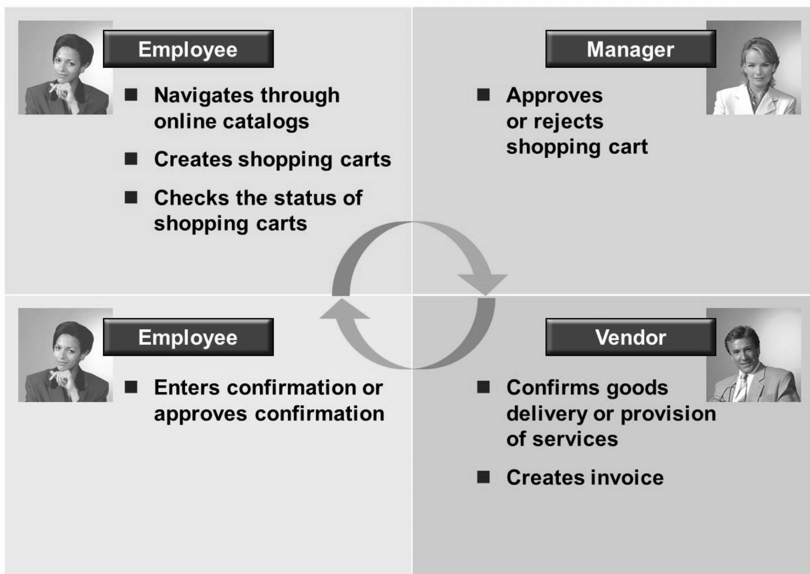


Figure 180: Typical Roles in SAP SRM

In SAP SRM, the system provides separate roles for individual user groups according to the process outlined. The roles incorporate the functions and authorizations that employees or other users need to perform their tasks.

The typical roles in a self-service scenario are as follows:

- Employees

  The employee creates shopping carts, enters confirmations, and if the vendor requests, approves confirmations.

- Managers

  In addition to employee functions, the manager must approve the shopping carts created by the employees.

- Vendors

  The vendor can enter confirmations and invoices relating to goods and services.

The integration scenarios describe the document flow between SAP SRM Server and the SAP system using integration scenarios. Procurement by self-service is completed using the classic scenario.

Classic Scenario

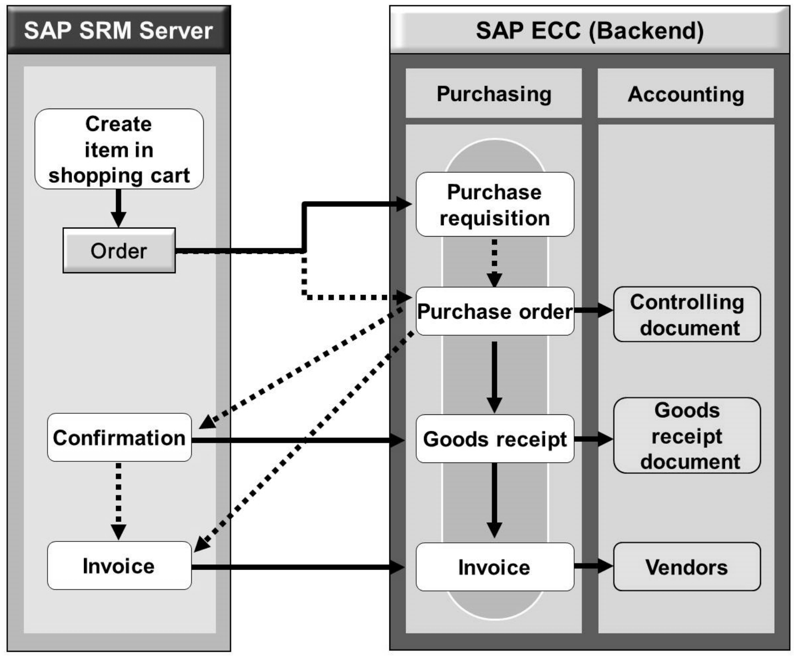


Figure 181: Classic Scenario

In the classic scenario, one or more documents in the SAP system (known as backend documents) originate from a shopping cart in SAP SRM Server. These may be reservations, purchase requisitions, or purchase orders. The system outputs all messages in the backend system.

In SAP SRM Server or in the backend (SAP ERP) system, the system can enter and process follow-on documents like goods receipt, service entry, and invoice receipt. These follow-on documents are updated both in the shopping cart and the backend purchase order.

Regardless of whether the confirmations and invoices are entered in SAP SRM or SAP system, the purchase order history is consistent because the system updates it in both SAP SRM and SAP systems.

The system requires the Materials Management (MM) application in the backend (SAP ERP) system for the classic scenario. As a result, stock material procurement (direct procurement) is possible with the classic scenario.

Hint:
The documents in the backend (SAP ERP) system update the data for external and internal accounting. SAP SRM Server supports the procurement process only. You need a backend (SAP ERP) system for inventory management and accounting.

Self-Service Procurement Process

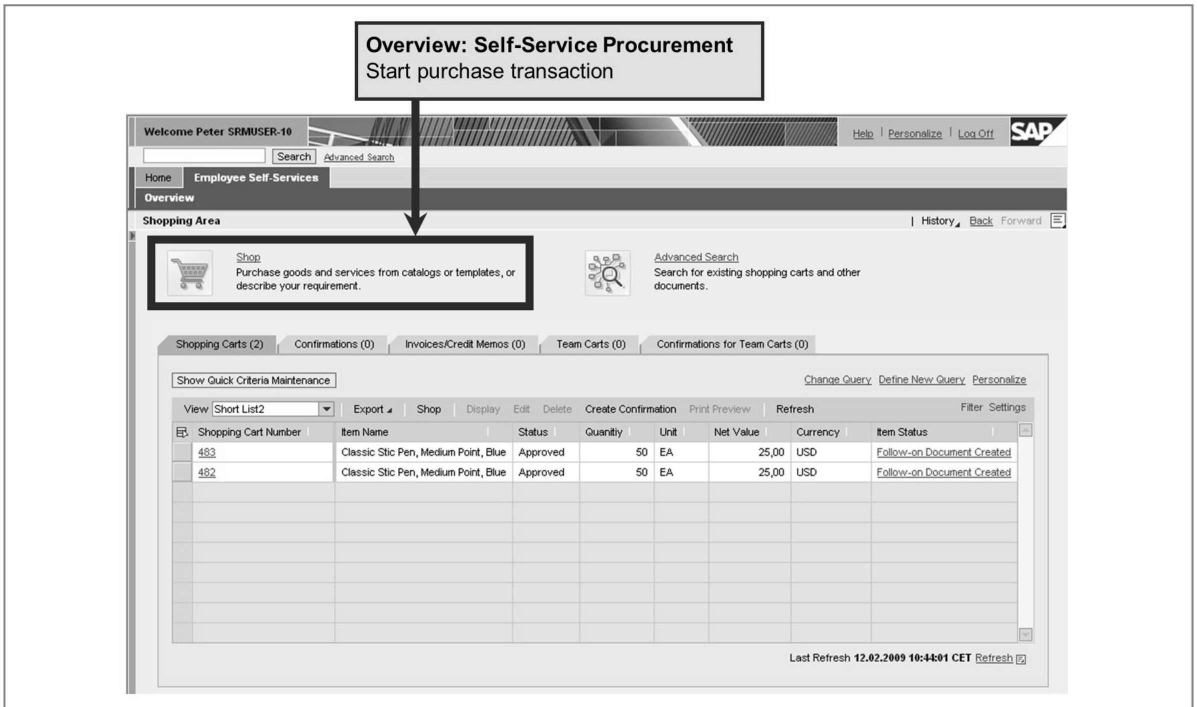


Figure 182: Access to Employee Self-Service

The procurement process consists of creating a shopping cart and confirming the goods delivery.

As of SAP SRM 7.0, you access the SRM system using SAP Enterprise Portal. A special role assigns one or more employee self-service(s) to a user. If the role contains the self-service procurement function, you see the *Shop* function when you log on.

When creating a shopping cart, the shopping cart wizard guides you through the necessary steps. This wizard is the standard navigation interface for the user in the self-service scenario. The wizard walks you through the process of finding goods and services quickly and simply, then placing them in your shopping cart.

The process of creating a shopping cart is as follows:

- Select Goods/Services
- View Item details
- Complete and Order
- Confirm order

Shopping Cart Wizard

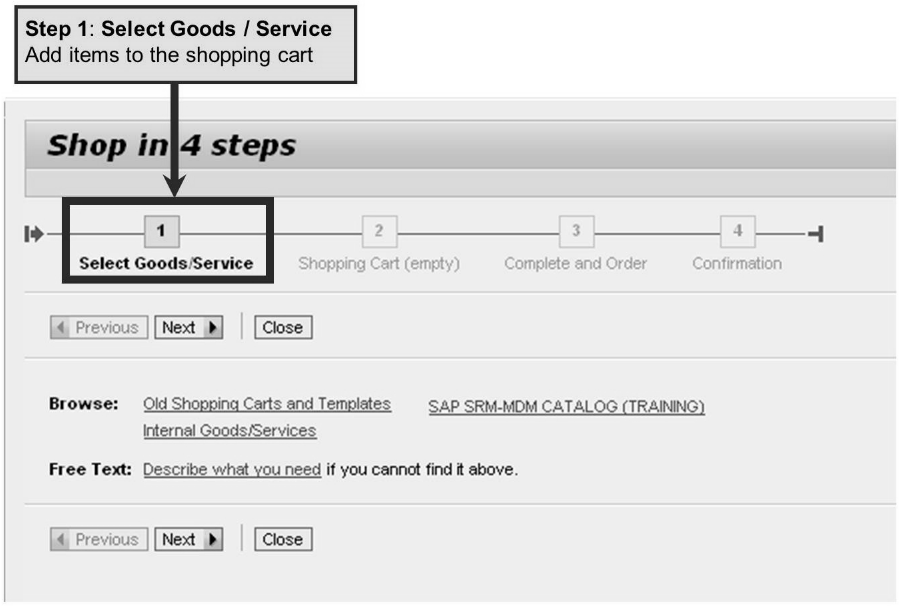


Figure 183: Shopping Cart Wizard

You add a goods item or service to the shopping cart by choosing *Select Goods/Service* in the shopping cart wizard. Repeat this step to add another item to the shopping cart. When you enter the goods or services for ordering, different options are available.

Selecting Items

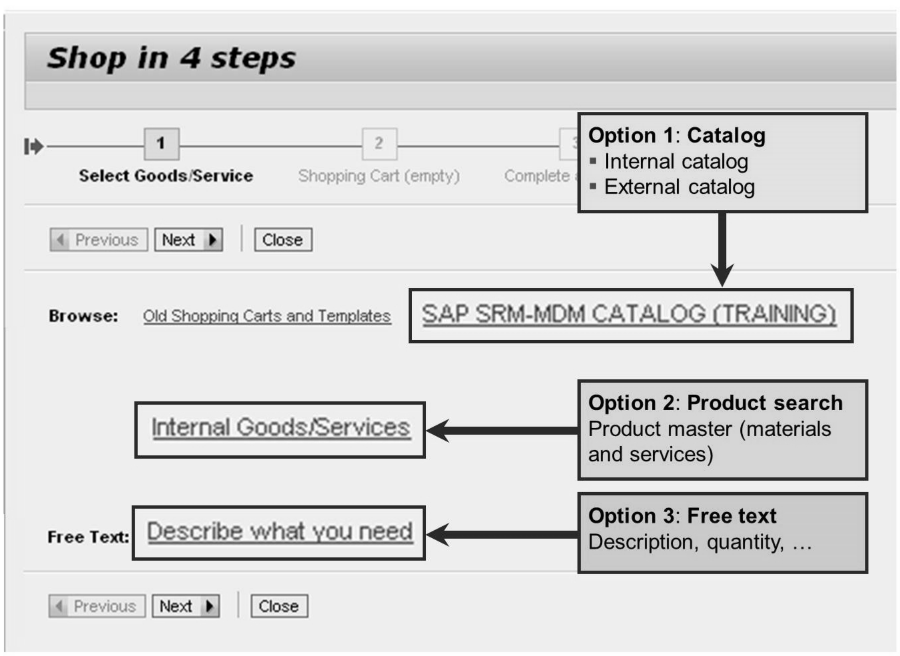


Figure 184: Selecting Items

You can select from the following options when you create an item:

- If you choose an item from a catalog, the catalog provides the description and, if available, the product number. In addition, the system adopts the vendor and price information from the catalog.
- You can select a product directly for which a product master record exists in SAP SRM Server by using the corresponding entry screen. The entry screen offers you the option of entering the product number directly or carrying out a search for the product number using the product description. A product can be either a material or a service.
- If no product master record or catalog entry is available for the required material or service, you can also create a free-text item. In such cases, you enter a description, quantity, unit of quantity, and any other information manually.
- Use a previously created shopping cart or a saved template of a shopping cart to select goods or services used frequently.

Shopping Cart Wizard – Overview

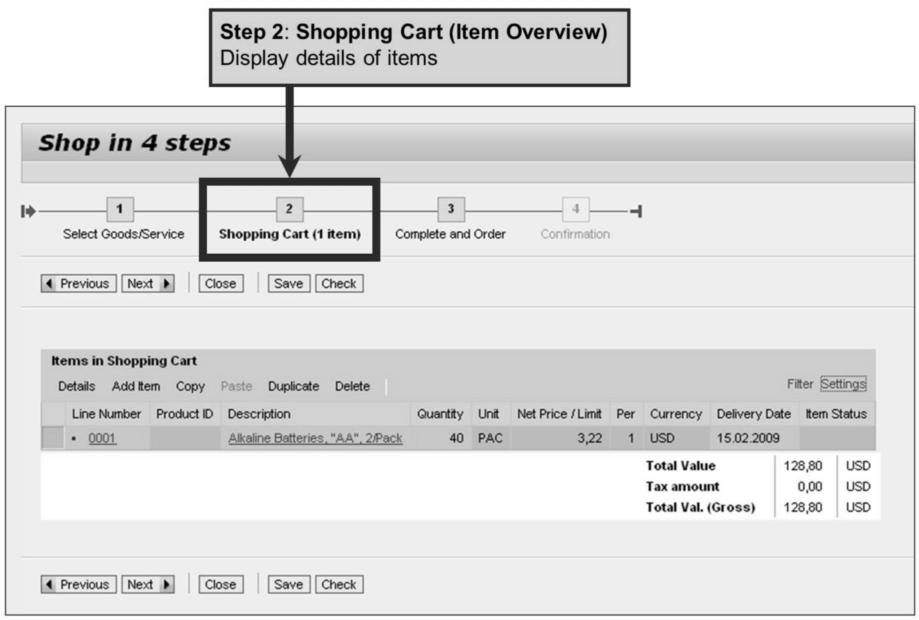


Figure 185: Shopping Cart Wizard – Overview

The shopping cart is displayed in the overview. You can view further information using item details.

Shopping Cart – Item Details

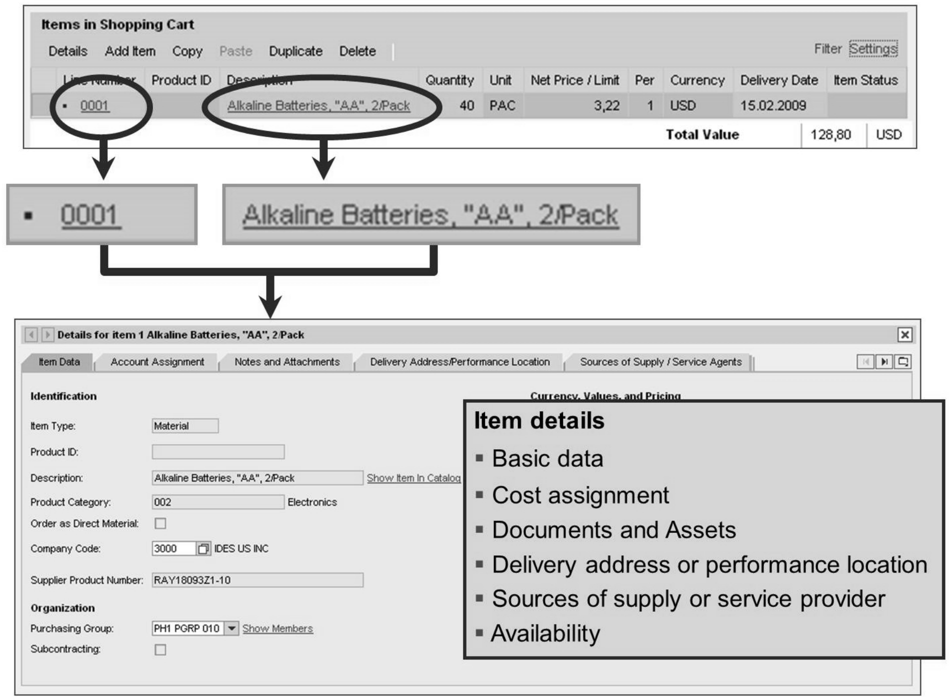


Figure 186: Shopping Cart – Item Details

The detailed view of an item contains the following additional information:

- Basic data (for example, product number, purchasing group, quantity to be ordered, price, and goods recipient)
- Cost assignment, for example, cost distribution, account assignment object, and General Ledger (G/L) account
- Documents and assets, for example, purchase order text and internal memo
- Delivery address or performance location
- Sources of supply or service provider (If the system cannot determine a source of supply, you can enter a preferred vendor.)
- Availability (If the required product is a material that you keep in the warehouse, an availability check can take place in the backend system.)

You can continue in two different ways after the shopping cart is displayed in the overview. If you require more goods, return to Step 1: Select goods and services. Otherwise, continue with Step 3: Complete and Order.

Shopping Cart Wizard – Complete and Order

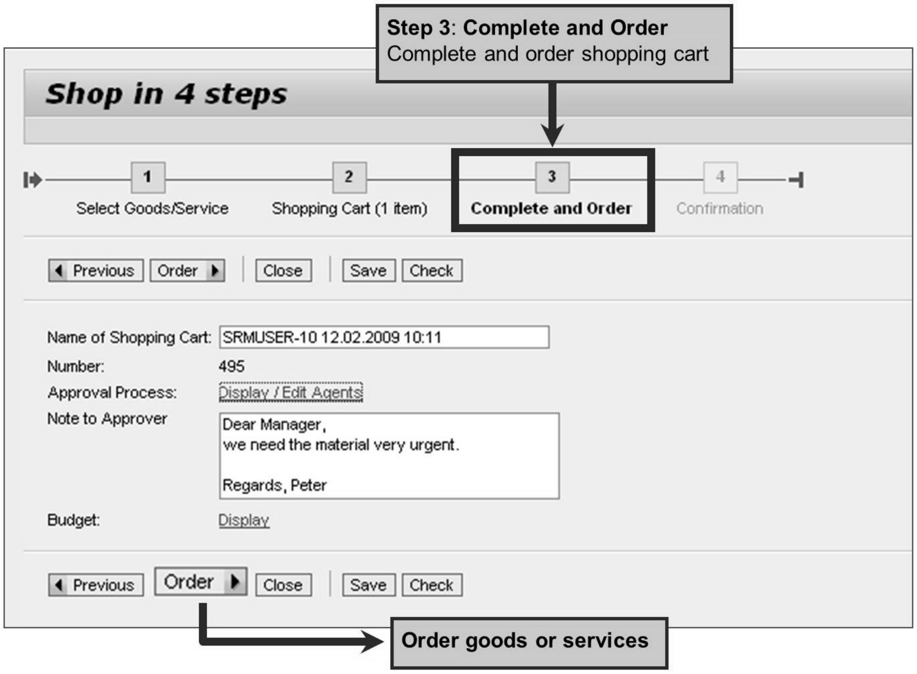


Figure 187: Shopping Cart Wizard – Complete and Order

You complete the shopping cart by calling the approval preview and entering an approval memo. To complete, click on the *Order* button.

Note:
In SAP SRM Server, the system implements various approval scenarios for shopping carts and other documents using standard workflows.

The system creates the shopping cart successfully and confirms this in the fourth step. You have the option of printing the document from your shopping cart.

Shopping Cart Wizard – Confirmation

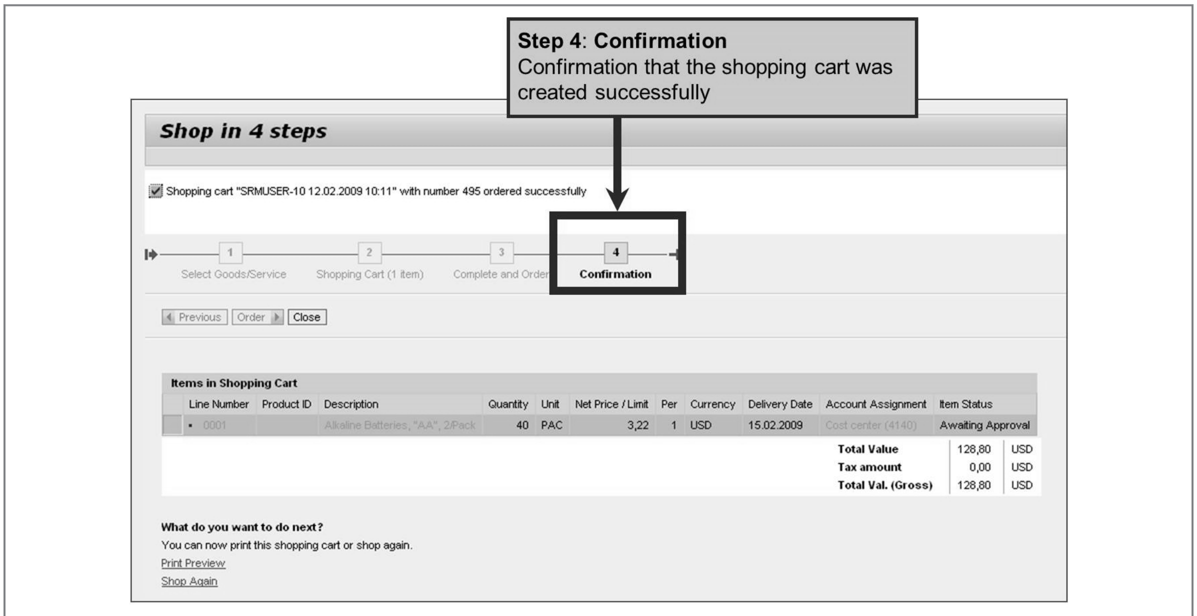


Figure 188: Shopping Cart Wizard – Confirmation

The shopping cart is not in itself a purchase order. Depending on how much data is available (vendor, price) and the system configuration, a shopping cart item may result in a purchase requisition, a purchase order, or a reservation in the backend system.

Confirmation Entry

Using a central work list, you can track and continue processing the shopping cart you created or enter a confirmation for it.

To enter a goods receipt or a performed service in SAP SRM Server, choose the Confirm Goods/ Services transaction. The Goods/Services transaction serves both for entering confirmations and for displaying or processing confirmations. You can also enter return deliveries and reversal postings.

Hint:
The goods receipt or service entry can also take place in SAP ERP.

Item Confirmation

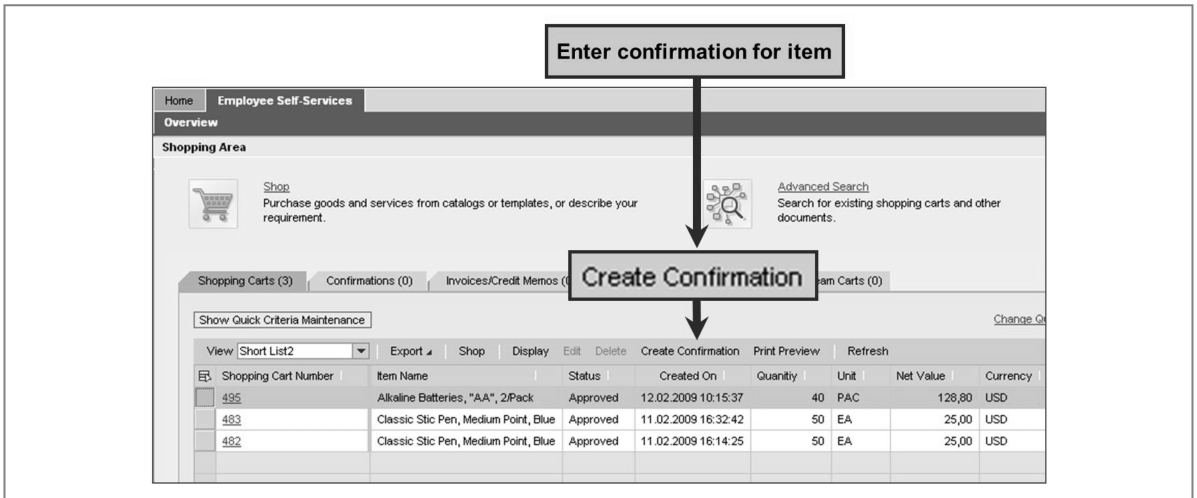


Figure 189: Entering Confirmation (1)

Either the requester or the vendor can enter the confirmation in SAP SRM Server.

Goods and Service Confirmation

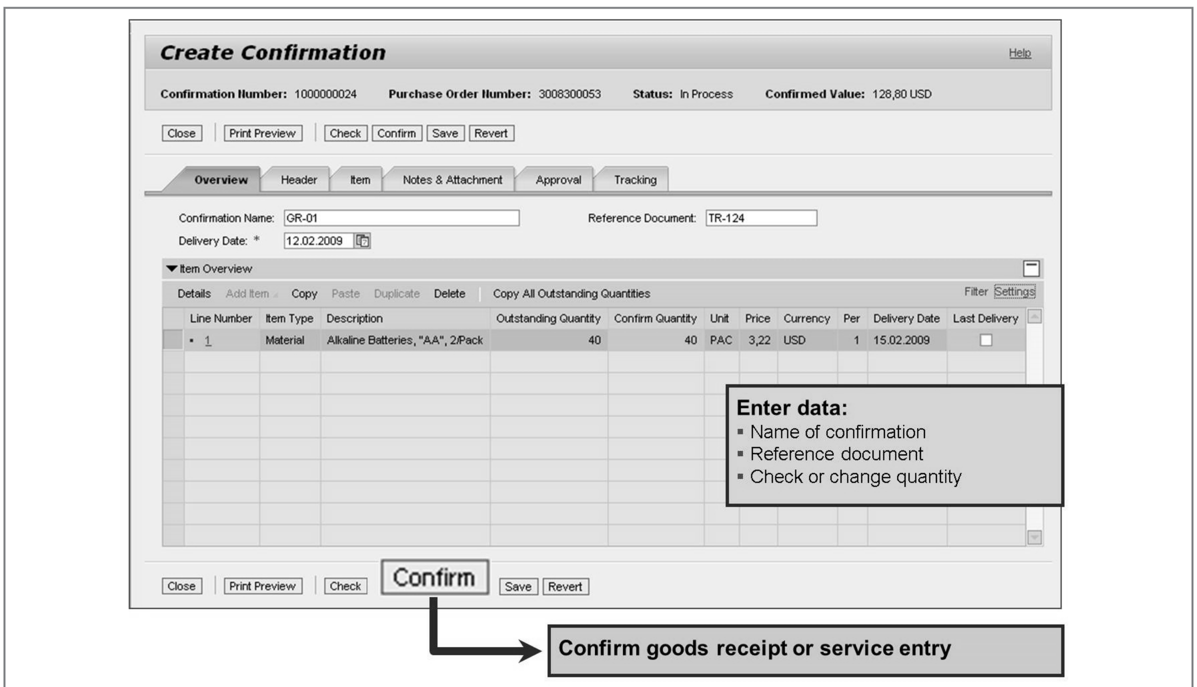


Figure 190: Entering Confirmation (2)

After you have chosen an item, enter the item details (for example, the delivery note number) and then confirm the goods receipt or the service entry.

The closing invoice entry usually occurs in SAP ERP.

Ariba Procurement Solutions

Ariba Network is an e-commerce network that connects buyers and suppliers through a Software-as-a-Service based platform. It extends most back-end systems for business commerce collaboration. It aims to automate e-commerce collaboration and transaction processing from source to settlement for buyers, and from order to cash for suppliers.

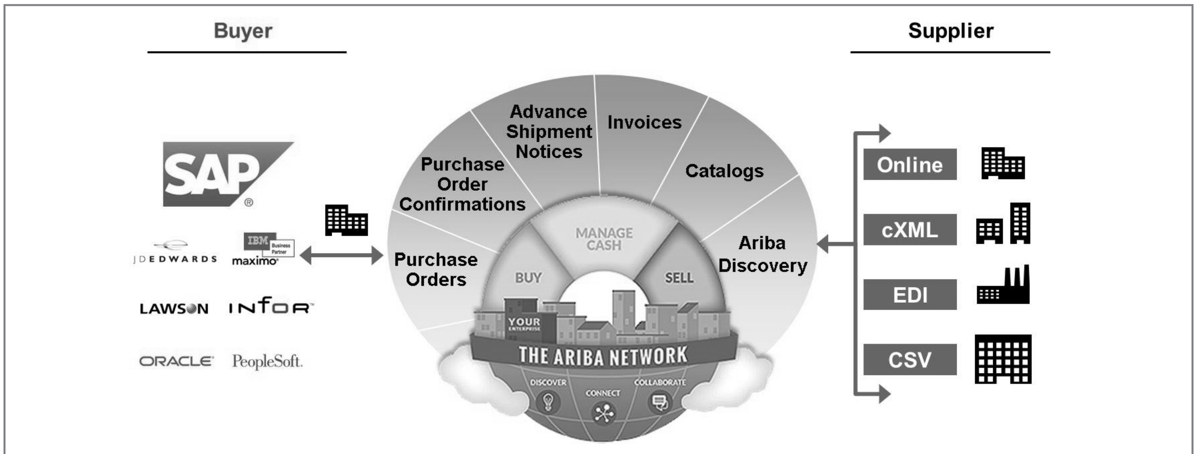


Figure 191: Ariba Network: Connecting Buyers and Suppliers

Advantages for Buyers

There are a number of advantages for buyers:

- Enhanced shopping experience for employees
- Increased accuracy of supplier responses and invoices
- Improved supplier enablement and support

Advantages for Suppliers

There are also a number of advantages for suppliers:

- Opportunity for growth of customer base
- Increased accuracy of orders and invoices
- Reduced sales costs and improved visibility

Ariba Network: Procurement Cycle

The following figure shows a procurement cycle on the Ariba network:

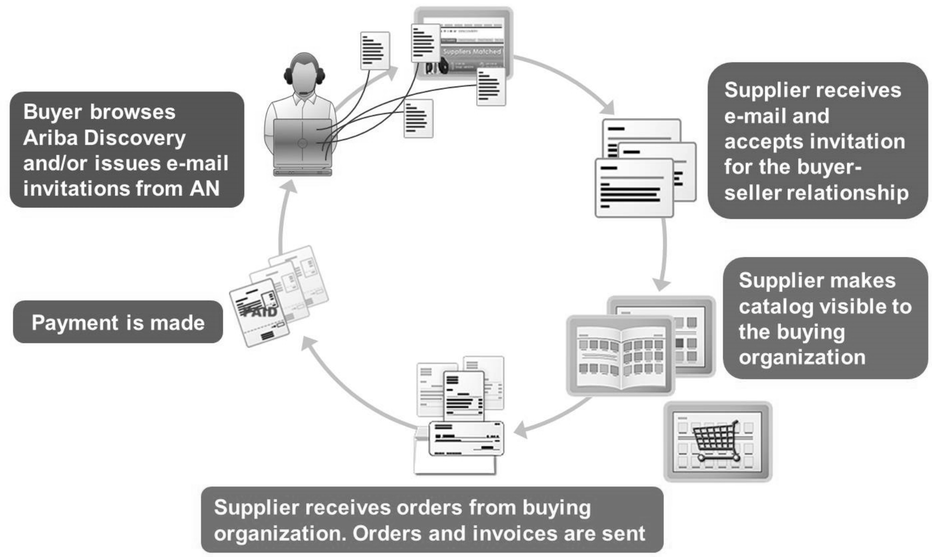


Figure 192: Ariba Network: Procurement Cycle

The following steps describe the procurement cycle:

1. The buyer creates a profile and identifies suppliers they would like to enable on the Network.
2. The buyer sends an e-mail to invite the supplier.
3. The supplier receives this invitation via e-mail to join and register on the Ariba Network.
4. The supplier can create buyer-specific catalogs and post them to the Ariba Network so the buyer can create accurate POs.
5. The buyer generates a PO and routes it electronically through the Ariba Network to the supplier.
6. The supplier generates an invoice and routes it to their customer electronically for approval.
7. The buyer makes the payment. The supplier has visibility into when the invoice is approved and knows that payment is on its way.

Ariba On-Demand Solutions

Every company aims to maintain visibility over their business spend and establish controls to manage their business in the most effective way. While this lesson focuses on procurement administration, there are many other areas and processes that influence procurement, from sourcing, to contracts, to supplier interfaces, and ultimately to payment and cash management. These processes become inefficient when different systems all have to be created individually and tested to work together. Ariba On-Demand offers solutions that can do all of these related activities in a single integrated cloud based model. This model allows you to start with one aspect, and expand to the others over time.

The figure shows the high level activities and related solutions involved in managing the full procurement lifecycle.

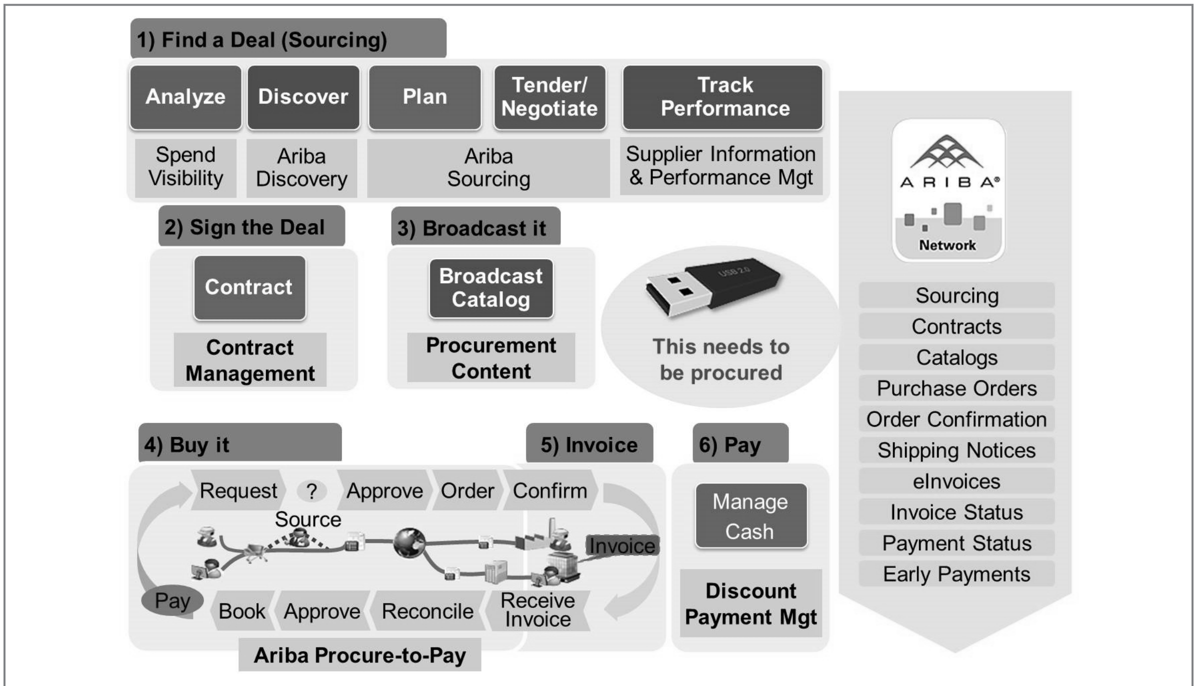


Figure 193: Ariba On Demand Solutions: From Discovery to Settlement

Note: You may not have all the components shown in the figure, depending on your configuration.

Process Flow

The figure shows the Ariba procure to pay functional process flow:

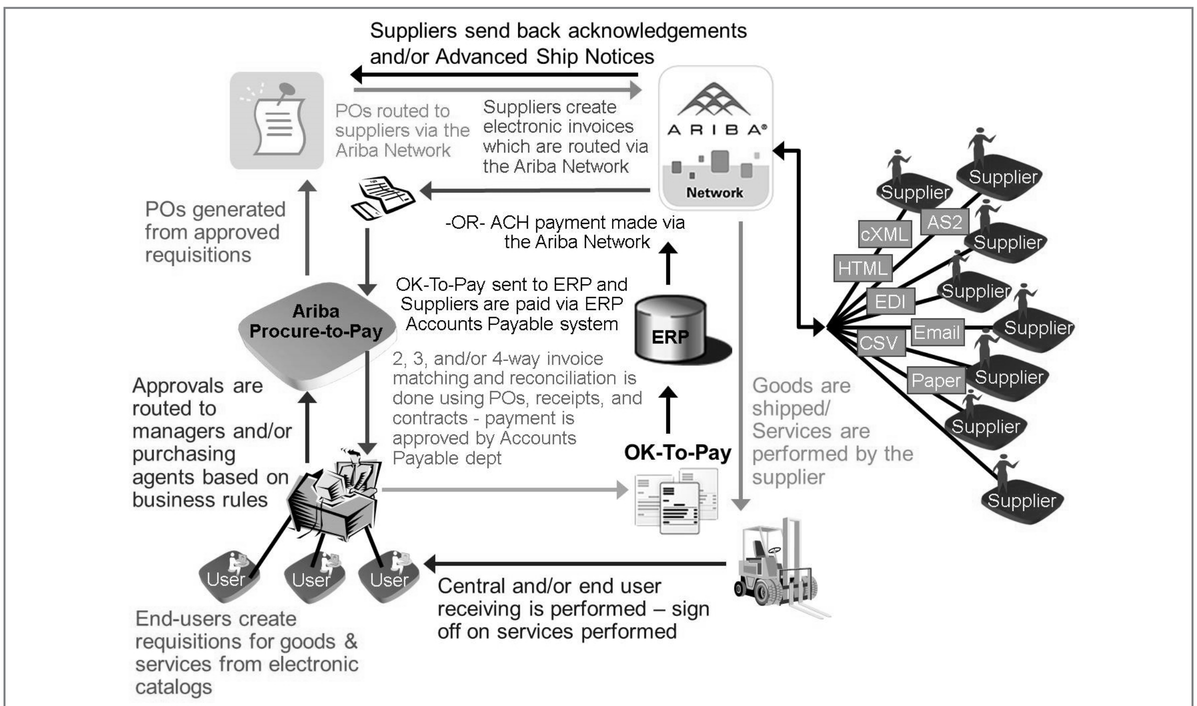


Figure 194: Ariba Procure to Pay Process Flow

LESSON SUMMARY

You should now be able to:

- Analyze the functions of self-service procurement
- Examine Ariba procurement solutions

Learning Assessment

1. The employee creates a shopping cart in SAP SRM Server for goods or services that are procured for direct consumption or for stock.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

2. You enter invoice data in the same way as the confirmation process either in SAP SRM Server or in the backend system. You do not require an approval for the invoice as part of the workflow.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

3. Which of the following are the typical roles in a self-service scenario?

   Choose the correct answers.

   - [ ] A Employees
   - [ ] B Managers
   - [ ] C Vendors
   - [ ] D Supervisors

4. Classic is one of the implementation scenarios for SRM.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

Learning Assessment - Answers

1. The employee creates a shopping cart in SAP SRM Server for goods or services that are procured for direct consumption or for stock.

   Determine whether this statement is true or false.

   [X] True

   [ ] False

2. You enter invoice data in the same way as the confirmation process either in SAP SRM Server or in the backend system. You do not require an approval for the invoice as part of the workflow.

   Determine whether this statement is true or false.

   [ ] True

   [X] False

3. Which of the following are the typical roles in a self-service scenario?

   Choose the correct answers.

   [X] A Employees

   [X] B Managers

   [X] C Vendors

   [ ] D Supervisors

4. Classic is one of the implementation scenarios for SRM.

   Determine whether this statement is true or false.

   [X] True

   [ ] False