

TSCM52

Procurement II, Part 2 of 2

mySAP ERP Procurement and Logistics Execution

Date _____
Training Center _____
Instructors _____

Education Website _____

Instructor Handbook

Course Version: 2006 Q2
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Owner: Winfried Wuerzer (D036695)



An SAP Compass course - use it to learn, reference it for work

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About This Handbook

This handbook is intended to complement the instructor-led presentation of this course, and serve as a source of reference. It is not suitable for self-study.






Typographic Conventions

American English is the standard used in this handbook. The following typographic conventions are also used.

Type Style	Description
<i>Example text</i>	Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths, and options. Also used for cross-references to other documentation both internal (in this documentation) and external (in other locations, such as SAPNet).
Example text	Emphasized words or phrases in body text, titles of graphics, and tables
EXAMPLE TEXT	Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example SELECT and INCLUDE.
Example text	Screen output. This includes file and directory names and their paths, messages, names of variables and parameters, and passages of the source text of a program.
Example text	Exact user entry. These are words and characters that you enter in the system exactly as they appear in the documentation.
< Example text >	Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.

Icons in Body Text

The following icons are used in this handbook.

Icon	Meaning
	For more information, tips, or background
	Note or further explanation of previous point
	Exception or caution
	Procedures
	Indicates that the item is displayed in the instructor's presentation.

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Course Overview

This course introduces the functions of Logistics Invoice Verification. It covers invoice entry and document parking, as well as automatic invoice creation. You will learn how to enter taxes and terms of payment, and about invoice blocks, invoice release, and invoice reduction. The course also summarizes the relevant Customizing settings for Logistics Invoice Verification.

Target Audience

This course is intended for the following audiences:

- Solution Consultants responsible for implementing procurement using mySAP ERP or mySAP SCM.

Course Prerequisites

Required Knowledge

- Basic knowledge and experience of procurement
- TSCM50
- TSCM52 Part 1

Recommended Knowledge

- SAP01 (SAP Overview) or
- SAPSCM (mySAP SCM Overview)

Course Duration Details

Unit 1:

Organizational Levels in MM

Organizational Levels in MM	120 Minutes
Exercise 1: Settings for Enterprise Structure from the Materials Management Viewpoint	35 Minutes

Unit 2: Master Data for Materials Management

Vendor Master Record	60 Minutes
Exercise 2: Vendor Master Record	35 Minutes
Settings for Material Types	90 Minutes
Exercise 3: Material Type	30 Minutes
Field Selection Control	90 Minutes
Exercise 4: Field Selection	30 Minutes

Unit 3: Valuation and Account Assignment

Introduction to Automatic Account Determination	45 Minutes
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Exercise 5: Automatic Account Determination	10 Minutes
Influence of Company Code and Valuation Area	45 Minutes
Exercise 6: Influence of Valuation Level and Valuation Area	15 Minutes
Influence of Material and Material Type	60 Minutes
Exercise 7: Influence of Material and Material Type	20 Minutes
Business Transactions and Their Influence on the Account Determination Process	135 Minutes
Exercise 8: Checking and Completing the Settings for Account Determination	40 Minutes
Exercise 9: Account Grouping Code	20 Minutes
Special Cases of Account Determination	30 Minutes
Exercise 10: Automatic Account Determination for Delivery Costs and in Purchasing	5 Minutes
Unit 4: Self Study - Additional Topics	
Material Types UNBW and NLAG	40 Minutes
Exercise 11: Material Type UNBW	20 Minutes
Invoicing Plan	45 Minutes
Exercise 12: Invoicing Plan	30 Minutes
Purchase Order Monitoring	30 Minutes
Exercise 13: Optional: Purchase Order Monitoring	15 Minutes
Subcontracting	45 Minutes
Exercise 14: Subcontracting	30 Minutes
Split Valuation	45 Minutes
Exercise 15: Split Valuation	30 Minutes
Unit 5: Appendix – Additional Topics (Not Relevant for Certification)	
Inventory Sampling	60 Minutes
Cycle Counting	XX Minutes
Exercise 16: (Optional) Cycle Counting	10 Minutes
Customizing Settings for the MB* Transactions	20 Minutes
Version Management in Purchasing	30 Minutes
Configuring the Material Master	90 Minutes
Exercise 17: Configuration of Material Master	45 Minutes



Course Goals

This course will prepare you to:

- Make Customizing settings for the materials management master data
- Configure the enterprise structure from a materials management perspective
- Make the settings for automatic account determination



Course Objectives

After completing this course, you will be able to:

- Describe and influence control of material types and account groups
- Define the field selection for material master records and vendor master records
- Set up automatic account determination
- Set up the split valuation facility
- Configure the logistics organizational levels
- Describe the special procurement processes subcontracting and vendor consignment
- Work with invoicing plans

SAP Software Component Information

The information in this course pertains to the following SAP Software Components and releases:



CATTs

For this course there is a CATT **ZT_TSCM52** that must have run before the course starts. This CATT generates the master data (materials, vendors, info records) and changes Customizing settings. The CATT is run automatically for groups 00 to 30 (or 20) prior to the start of the course. (If this should not be the case, please contact the CATT group.) It takes about 30 minutes to run the CATT. If you need the CATT to be run in a system at short notice, tell the CATT group how many groups are required, as a lower number of groups reduces the runtime.

The CATT team requires the following information in order to process your request quickly:

- System and client in which the CATT is to be run
- Name of the CATT (ZT_TSCM52)
- Course for which this CATT is required (TSCM52). If you do not enter the course name, you cannot check whether the system is booked for this course.
- Number of groups required (maximum 00 through 30)

The ISM Homepage in the Corporate Portal contains a CATT request , “Request for CATT Execution”, that you can use to request a CATT execution.

Users

Create the user master records for the participants and for your own user, if necessary:

User for the instructor:

- If you have not specified an own user in the training system, then logon for the first time with the user **TRAINING**. The password changes monthly: you will receive the new one in the mail for the week, which will be sent to you automatically before the course begins.
- With transaction SU01, you can then create your own user. Copy the reference user **SCM5XX-99** or manually enter all necessary data (user group TRAINING, profile SAP_ALL and SAP_NEW).



Caution: The TRAINING user cannot be used as a reference.


User for the course participants:

- Use transaction ZUSR (user maintenance for SAP courses) to copy the template user ID **SCM5XX-99**.



Caution: The reference user has authorizations SAP_ALL and SAP_NEW. The course participants therefore have all authorizations, for Customizing changes too. Point this out to participants at the start of the course and ask them not to make any changes in the training system unless explicitly requested to do so in an exercise. Point out that a thoughtless change can “disrupt” the system.

Previous experience has shown that the participants use their authorizations responsibly and there are therefore no problems.

- Enter the following data in the relevant fields and choose  *Execute*:

Copy reference	SCM5XX-99
Course code	TSCM52
Number of training groups	(according to demand)
Initial password	initial (or another password)

- In the window that subsequently appears, choose the *Create* button and answer the question regarding the uniqueness of the group numbers with No. Finally, choose *Create* again.

The instructor must run program **ZSENQOFF** (transaction SA38), so that all course participants can work in Customizing simultaneously.



Caution: System data is specified for trainer demos and exercises in the instructor handbook. TSCM52-## should always be used for the **user ID**.

Exercises and Demos

If possible, explain to the participants before the first exercise that the character string “##” corresponds with the group numbers attached to the monitors in the training classrooms. Enter these group numbers instead of “##” in the exercises.

A “facilitated discussion” has been included in some lessons for purely formal reasons, where exercises are either not possible for technical reasons involving the system, or they have no sensible purpose. You should think carefully before expressly stimulating discussion, since experience shows that lively debates are liable to break out during the course anyway.

In many lessons, a detailed description of the demonstration has been dispensed with. In such lessons, the instructor should orientate him- or herself on the exercises when performing the demo. When preparing for the course, the instructor is advised to go through **all** demonstrations and exercises at least once and, of course, to read the course documentation carefully.

Other

The times specified in the “course duration details” are only general guide values. Previous experience has shown that the time requirement for the contents of this course varies according to participant interest and previous knowledge. You will therefore need much more time than planned for some lessons, and much less time for other lessons.

Some lessons do not include a detailed description of the demonstration. In these lessons, the instructor should refer to the exercises for the demonstration. It is generally recommended that the instructor run through **all** demonstrations and exercises before taking the course.

Unit 1



Organizational Levels in MM



At the beginning of this unit, it is advisable to ask participants which organizational levels they know. The instructor can then make a note of them and use them in the course of the unit. The end result is then a complete organizational structure.

Unit Overview

This unit is concerned with the organizational levels of Materials Management. The organizational levels play a role both in master data maintenance and in procurement processes. New organizational levels may thus necessitate a whole series of further actions before they can be used productively.



Unit Objectives

After completing this unit, you will be able to:

- Identify the relationships between the organizational levels of MM and their environment
- Explain the significance of the purchasing organization and the reference purchasing organization
- Create a plant and storage locations with several addresses
- Use the plant copy and check function

Unit Contents

Lesson: Organizational Levels in MM	2
Demonstration: Organizational Levels in the SAP System	18
Exercise 1: Settings for Enterprise Structure from the Materials Management Viewpoint	21

Lesson: Organizational Levels in MM



Lesson Duration: 120 Minutes

Lesson Overview

This lesson covers the definition of the various organizational levels in materials management and provides an overview of the relationships between them.

The possible constellations of the purchasing organization within a client are outlined. In addition, you will learn about the various options that are available when you create a new plant.



Lesson Objectives

After completing this lesson, you will be able to:

- Identify the relationships between the organizational levels of MM and their environment
- Explain the significance of the purchasing organization and the reference purchasing organization
- Create a plant and storage locations with several addresses
- Use the plant copy and check function



The instructor should also demonstrate the reference relationships between purchasing organizations using an example. When demonstrating the Customizing for the plant, the procedure set out in the exercise should be followed: create general data and assignments for the new plant manually and copy all other table entries from an existing plant.

Business Example

A new production location is to be represented as a separate plant.

Initially, the new plant is not to have its own purchasing department. For this reason, the purchasing organization of your existing plant will also create purchase orders for the new plant.

In addition, however, the existing contracts and conditions negotiated by a central purchasing organization are also to apply to the new plant.

Organizational Units in Accounting

In the SAP System, you must also set up the organizational levels for accounting even if your enterprise uses a different system for this function. You need to set up a controlling area and must set up separate company codes in the SAP System for each autonomous company within the corporate group. In addition, you can set up business areas for internal balance sheets.

Company Code

The company code is the smallest organizational unit in external accounting for which a complete, self-contained bookkeeping system can be replicated. This includes the recording of all accounting-relevant events and the production of all legally required final statements of accounts, such as balance sheets and profit and loss (P&L) statements.

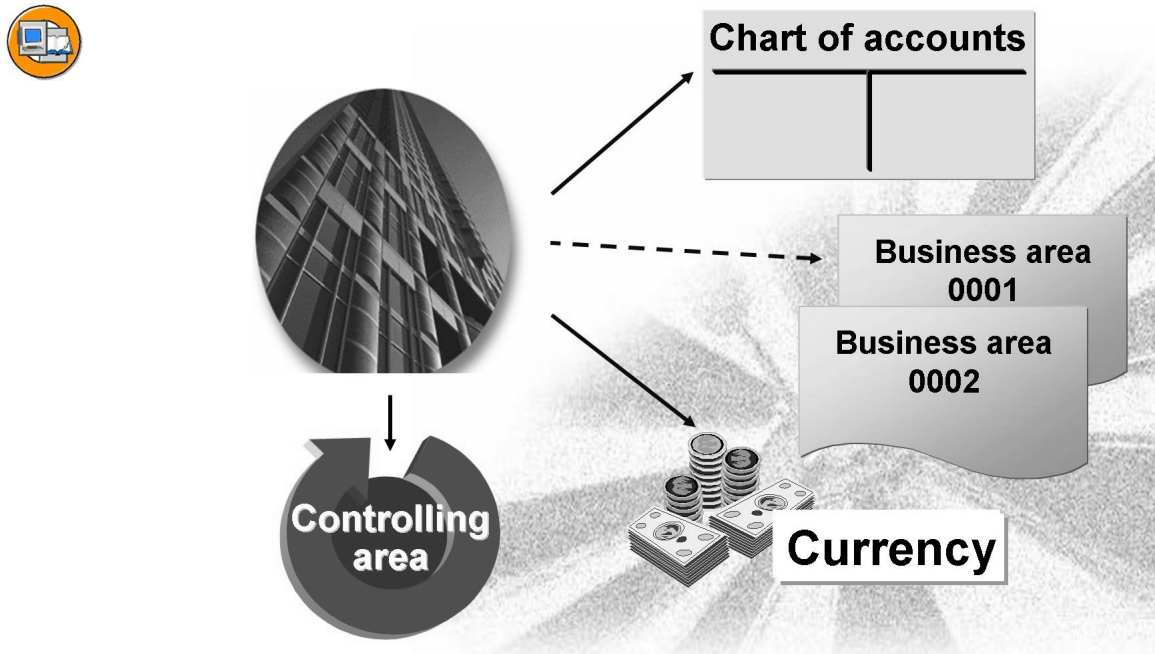


Figure 1: Company Code

Among other things, the following are specified for each company code:

- The company address
- The chart of accounts (list of G/L accounts)
- The local currency (the currency used in a company code in which the local books are kept, usually the national currency)
- The fiscal year variant (specification of the periods and special periods of a fiscal year)
- The controlling area
- Whether balance sheets are also to be produced at business area level

You define the company code in the IMG under the node **Enterprise Structure** → **Definition** → **Financial Accounting**. You also specify the company address, the country, the language, and the currency of the company code there.

You assign the chart of accounts in the IMG activity **Financial Accounting** → **Financial Accounting Global Settings** → **Company Code** → **Enter Global Parameters**.

You can set up business areas within your enterprise to differentiate between various fields of activity or areas of responsibility. You define the business areas via the IMG activity **Enterprise Structure** → **Definition** → **Financial Accounting** → **Define Business Area**.

Controlling Area

The controlling area is an organizational unit within an enterprise for which complete, self-contained cost accounting can be carried out. A controlling area can cover one or more company codes. The associated company codes must all use the same operative chart of accounts.

You assign a company code to a controlling area via the IMG activity **Enterprise Structure** → **Assignment** → **Controlling** → **Assign company code to controlling area**.

Purchasing Organizations

A purchasing organization is an organizational unit within logistics that subdivides an enterprise according to the requirements of purchasing. A purchasing organization procures materials or services, negotiates conditions of purchase with vendors, and assumes responsibility for such business.

You specify the form of procurement by assigning purchasing organizations to company codes and plants. There are the following forms of procurement:

- Corporate-group-wide
A purchasing organization procures for all the company codes of a client.
- Company-specific
A purchasing organization procures for just one company code.
- Plant-specific
A purchasing organization procures for one plant.

There can also be mixed forms.

When organizing your purchasing function, you should take not only responsibilities into account, but also the necessary data maintenance:

- Each purchasing organization has (in the standard SAP System) its own info records and conditions for price determination.
- Each purchasing organization has its own vendor master data (only *Purchasing* data and partner roles).
- Each purchasing organization evaluates its vendors separately with *MM Vendor Evaluation*.
- Authorizations for the processing of the relevant purchase transactions can be granted for each purchasing organization.
- All the items of a purchasing document, such as an RFQ, a PO, a contract, or a scheduling agreement, are assigned to the same purchasing organization.
- The purchasing organization is the highest summation level for purchasing statistics after the organizational level *Client*.
- The purchasing organization serves as a selection criterion for lists of all purchasing documents.

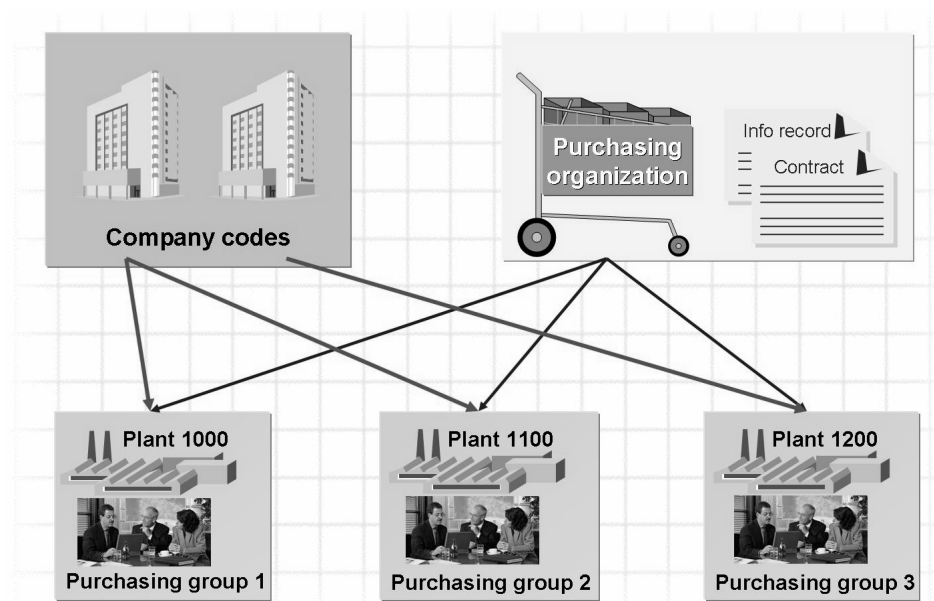


Figure 2: Purchasing Organization

The purchasing organization is functionally responsible for purchase transactions and the negotiation of conditions of purchase.

A purchasing organization **can** be assigned to a company code. In addition, it **must** be assigned to all plants for which it is to be active. Once you have assigned the purchasing organization to a company code, you can assign it only to the plants of this company code.

Therefore, as a rule, the central purchasing department (as the purchasing organization) of a corporate group is not assigned to a company code.

In the standard system, all the conditions that exist in the system are entered with reference to a purchasing organization (for example, info records).

Purchasing Group

The purchasers perform the activities of the purchasing organizations. A key - the *Purchasing Group* - is assigned to every purchaser or every group of purchasers. The purchaser group is internally responsible for the procurement of a material or a class of materials, and externally it usually supplies the contact person for vendors.

However, a purchasing group is assigned neither to a purchasing organization nor a plant. A purchasing group can thus be active for all purchasing organizations and all plants if no restrictions have been imposed through authorization management.

Reference Purchasing Organization

You can use a reference purchasing organization to facilitate cross-purchasing-organization procurement transactions. You can thus agree on more advantageous conditions, and use centrally agreed contracts based on larger purchase quantities, or you can simplify condition maintenance.

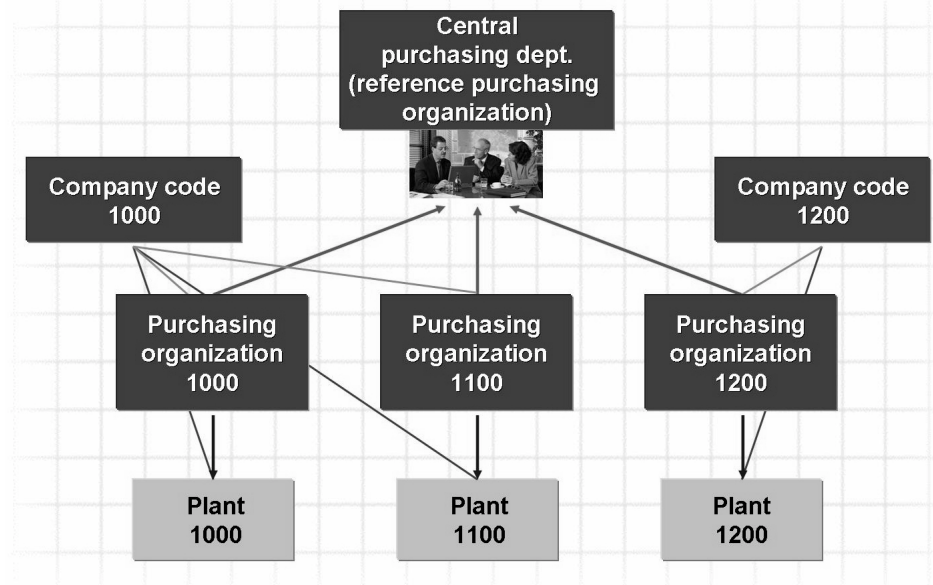


Figure 3: Reference Purchasing Organization

It is possible for other purchasing organizations to use the conditions of a reference purchasing organization for price determination purposes. Similarly, it is also possible for several purchasing organizations to be allowed access to the contracts of a certain reference purchasing organization. In addition to the reference relationship itself, you can also specify in Customizing which of this data (contracts and conditions) a purchasing organization can access.

A multilevel reference relationship is not possible.

Because the reference purchasing organization is treated as a normal purchasing organization, the vendor master record for the procurement processes must also be maintained for the reference purchasing organization.

Standard Purchasing Organization

If several purchasing organizations procure for a certain plant, you can designate one of them as the standard purchasing organization for the transactions pipeline procurement, consignment, and stock transfer. In the source determination process for stock transfers and consignment, the system then automatically pulls this

standard purchasing organization. In the case of goods issues of consignment and pipeline materials, the purchasing info records of the standard purchasing organization are read.

These purchasing info records of the standard purchasing organization are likewise applied to value the receipt when a PO is automatically created through a goods receipt posting.

Valuation Area and Plant

Valuation Area

The valuation area is an organizational unit within logistics that subdivides an enterprise for the purpose of uniform and complete valuation of material stocks.

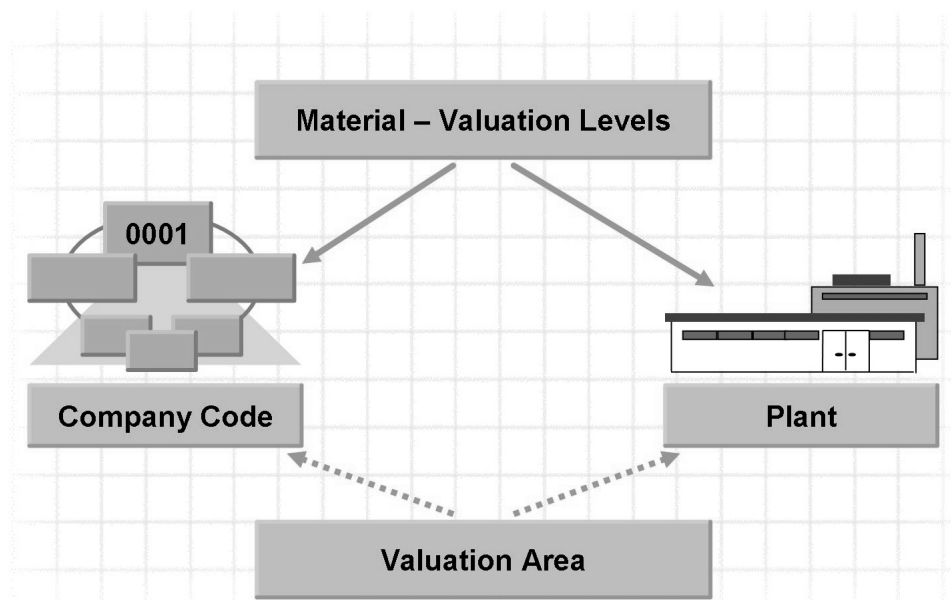


Figure 4: Valuation Area

You define the valuation area by specifying the level at which stocks of materials are to be valued. This specification applies for the entire client.

Option 1: Valuation area = company code:

The valuation data of a material is created **for each company code**. Price control and the price of a material apply per company code. The material is thus valued uniformly in all the plants belonging to a company code.

Option 2: Valuation area = plant:

The valuation data of a material is created **for each plant**. Price control and the price of a material apply per plant. The same material can thus be valued differently in different plants.

In a production system, the valuation area cannot be simply switched from plant to company code or vice versa. In such a case, it is necessary for existing data to be converted.

The valuation level **plant** is mandatory for production planning (PP) and for product costing. The same applies if your system is a mySAP Retail system.



Hint: As a rule, the SAP training systems have the valuation level **plant**.

Plant

The plant is an organizational unit within logistics that subdivides the enterprise for the purposes of production, procurement, maintenance, and materials planning. In a plant, materials are produced and/or goods and services made available.

The plant is an operational unit or branch in a company with the following characteristics:

- Just one business area is assigned to a plant and a division.
- A plant can be assigned to several sales organization/distribution channel combinations.
- A plant can have several shipping points. A shipping point can be assigned to several plants.
- A plant has an address and a language, and belongs to a country.
- A plant has its own material master data. In particular, you can maintain data at plant level for the following views of the material master record: MRP, Purchasing, Storage, Work Scheduling, Production Resources/Tools, Forecast, Quality Management, Sales and Distribution, Costing.

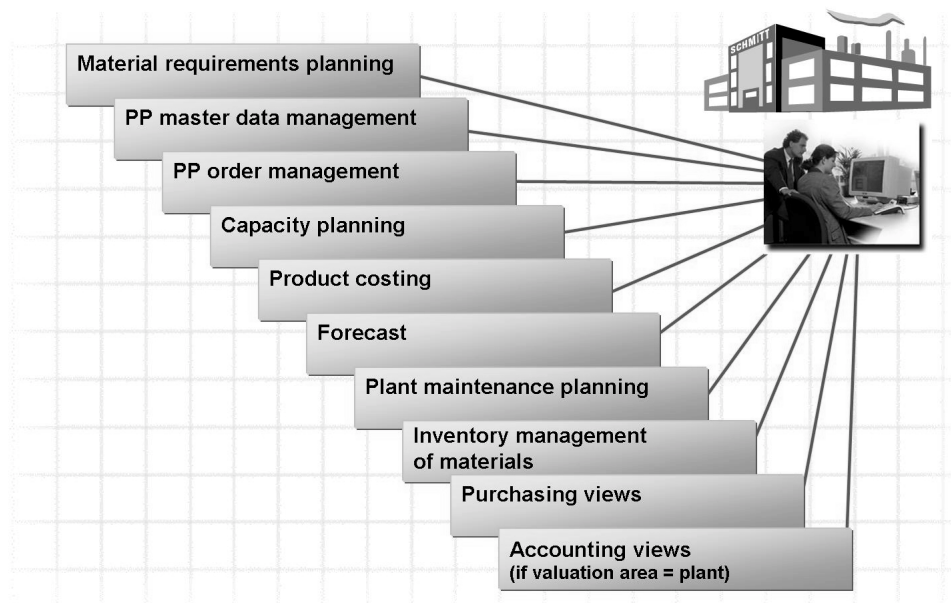


Figure 5: Plant

- In general, production planning and production are carried out on a plant-specific basis.
However, certain applications can work on a cross-plant basis.
 - Requirements planning and forecasting can also be carried out for MRP areas.
 - For capacity planning purposes, you can also define pooled capacities.
 - Product costing can also be carried out on a cross-plant basis.
 - A plant can also be defined as a maintenance planning plant. You can do this via: **IMG** → **Enterprise Structure** → **Definition** → **Plant Maintenance** → **Maintain Maintenance Planning Plant**.
- A plant can **simultaneously** be a production plant and a maintenance planning plant.

Storage Location



- The storage location is the level at which the stocks of materials of a plant are physically managed.
- The physical inventory takes place at storage location level. (Exception: physical inventory within the Warehouse Management system).
- The stocks are managed at storage location level on a quantity basis only, not on a value basis.
- A storage location is always defined as belonging to a certain plant.
- A storage location can have different addresses (for example, for the delivery of general cargo and bulk material)



Figure 6: Storage Location

The storage location key only has to be unique within a plant. That is to say, you can use the same storage location keys in each plant. You can thus define the storage location key according to the function of the storage location and set up a uniform storage location structure for all plants.

You can maintain one or more addresses for each storage location. These can differ from the plant address. If you maintain a storage location address and specify this storage location in a purchase order, the associated address will be outputted as the delivery address.

Relationships Between the Various Organizational Levels

The following overview shows possible relationships between company codes, purchasing organizations, and plants.

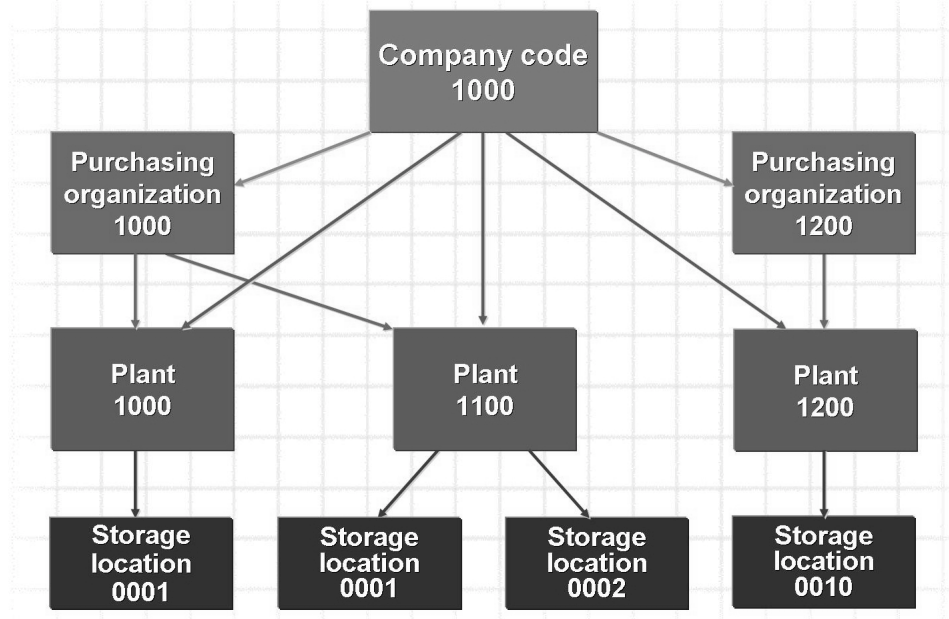


Figure 7: Organizational Levels in Materials Management

A plant must always be assigned to one company code. However, a company code can comprise several plants.

Several storage locations in which stocks of materials are managed can belong to a plant. A storage location is always assigned to just one plant.

Purchasing organizations can be responsible for one or more plants. However, a number of purchasing organizations can be assigned to a plant. For example:

- A local purchasing organization, a cross-plant purchasing organization and a cross-company-code purchasing organization
- Two purchasing organizations with different work center operation sets such as *Procuring Materials* and *Procuring Services*

The following figure shows the interrelationships between the organizational levels of materials management and those of sales and distribution.

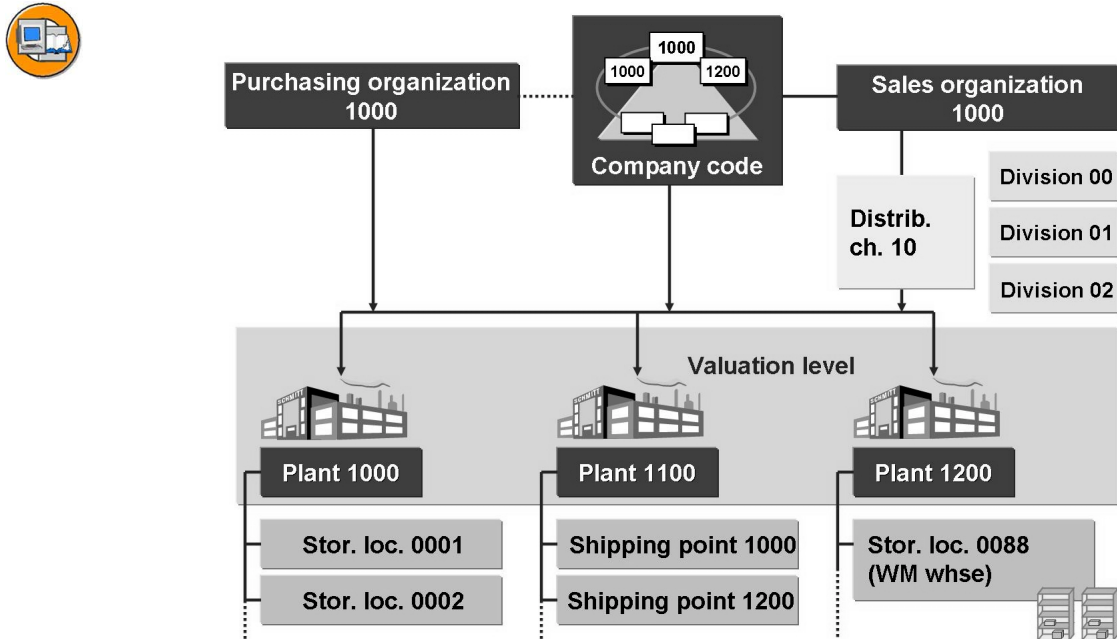


Figure 8: Organizational Levels in Logistics

Purchasing organizations can be assigned to a company code. However, you can also work with purchasing organizations that are not assigned to any company code (for example, centralized purchasing).

Purchasing organizations can be responsible for one or more plants.

In contrast, sales organizations are always assigned to one company code.

Sales organizations can be responsible for one or more plants. Sales organization, distribution channel, and product division constitute a *sales area*.

The valuation level can be a single plant, as shown in the figure, or it can encompass all the plants of a company code.

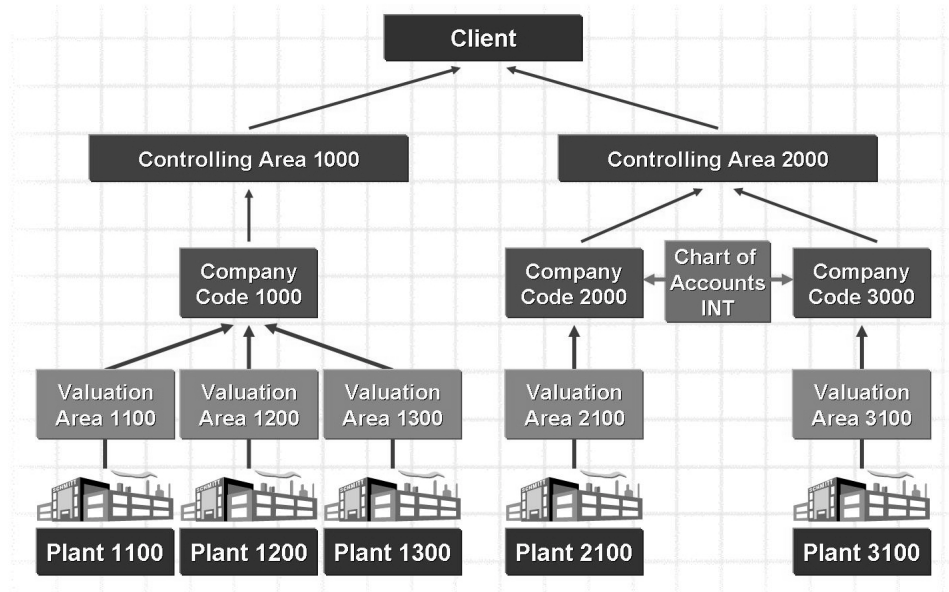


Figure 9: Organizational Levels for MM und RW

The SAP System differentiates between various organizational units that have special significance within the relevant application.

Controlling areas are defined in controlling. Several company codes that use the same chart of accounts can be assigned to a controlling area (*IMG* → *Enterprise Structure* → *Assignment* → *Controlling* → *Assign company code to controlling area*).

Valuation can take place at plant or company code level. The figure shows valuation at plant level, which SAP recommends. The key of the valuation area thus corresponds to the key of the plant.

For product costing and for production planning (PP), the existence of a separate valuation area for each plant is mandatory.

Value-based inventory management of materials always takes place at the level of the valuation area.



Hint: In addition, sub-stocks of a material may be subject to split valuation (for example, stocks of a material produced in-house may be valued at a different price than stocks of the same material that is, however, procured externally). This is controlled via the valuation category and the valuation type.

Setting Up a New Plant

Extended functions are available for setting up a (new) plant, which you invoke via *Define, Copy, Delete, Check Plant*. These functions are used to process the entry in the plant table and all dependent Customizing tables and system tables in which the plant appears as a key. For more details, refer to the Implementation Guide documentation for this IMG activity.

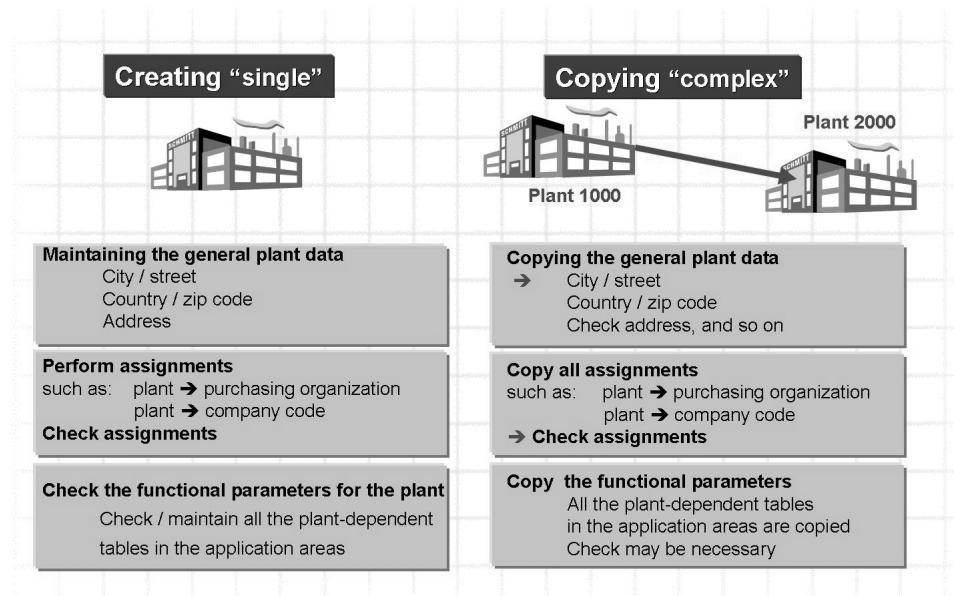


Figure 10: Creating a New Plant

The option of using entity copying to create complex organization units such as *company code, sales organization* and *plant* often lessens the work involved for you in maintaining new entities in Customizing.

The following excerpt from the SAP System Customizing shows you details on the definition of a plant. The data in the middle block can only be entered or changed through maintenance of the plant address.








Change View "Plants": Details	
      	
Plant	3000
Name 1	New York
Name 2	New York
Detailed information	
Language Key	EN English
House number/street	691 Broadway
PO Box	5454545
Postal Code	10001
City	NEW YORK
Country Key	US United States
Region	NY New York
County code	001 County in NY
City code	0001 City code in NY
Tax Jurisdiction	3306120101
Factory calendar	US Factory calendar US standard
Note:	<p>The address fields Name1 and Name2 are not copied from the address screen and you must maintain them separately.</p> <p>All other addr. data can only be maintained in addr. screen.</p> <p>The changes can only be seen in the overview and detail view after they have been saved.</p>

Figure 11: Definition of a Plant

The data that you can maintain with the address tool is shown in the following excerpt from the SAP System Customizing. The two fields *Search Term 1/2* enable you to store suitable information for quickly accessing (any) addresses for the different applications.

The screenshot shows the 'Edit address: 3000' dialog box in SAP. It is divided into several sections:

- Name:** Title (empty), Name (New York).
- Search terms:** Search term 1/2 (empty).
- Street address:** Street/House number (Broadway 691), District (NEW YORK), Postal Code/City (10001 NEW YORK), Country (US United States), Region (NY New York), Time zone (CST), Jurisdict. code (3306120101).
- PO box address:** PO Box (5454545), Postal Code (empty), Company postal code (empty).
- Communication:** Language (EN English), Telephone (001-9287-34571), Mobile Phone (empty), Fax (001-9287-34573), E-Mail (empty), Standard Comm.Method (empty).

Figure 12: The Plant Address Data

The following excerpt from the SAP System Customizing shows the definition of storage locations with the option of maintaining your own storage location addresses.

The screenshot shows the 'Change View "Storage locations": Overview' dialog box. It includes a 'Dialog Structure' tree on the left with 'Addresses of storage' selected. The main area shows 'Plant 3000' and a table of storage locations:

SLoc	Description
0001	Warehouse 0001
0002	Warehouse 0002
0003	HUM Not WSE MGT
0010	Multimode SLOC
0050	HUM Warehouse
0051	HUM Partner Loc
0055	HUM WHSE YM
0088	Centr. Warehouse

At the bottom, there is a 'Position...' button and the text 'Entry 1 of 27'.

Figure 13: Definition of Storage Locations for a Plant

Use the following extended functions to process organizational units:

- Copy
- Delete
- Check
- Generate and process project IMG view

These functions enable you to maintain further plant-dependent table entries in addition to the general plant data (consisting of key, description, address, country, language, factory calendar, and so on).

Project IMG

When you first invoke the *IMG Activities* function within the activity *Define, Copy, Delete, Check Plant*, you generate a new project view for an existing Customizing project.

This view contains all the worksteps that are necessary to process the organizational unit **plant** within the framework of the Customizing project.

The *check plant* function is carried out in two steps:

- In the first step, the system checks whether the entry exists in all tables in which the table key contains the specified organizational unit.
- In the second step, the system checks whether the specified entry also exists in the dependent tables for which validation is carried out against the table key.

Among other things, the organizational unit *plant* is used as a key in the table containing the plant parameters for inventory management. This table is checked to determine whether an entry exists for the plant being checked.

For each material type, you can specify per valuation area whether the material master records of this material type are to be updated on a quantity basis (stock materials) or also on a value basis (valuated materials). These details are similarly to be found in a table with the organizational unit *plant* as the table key.

This table also contains the table key *material type*. The program not only checks whether this table contains entries for the plant being checked, but also whether all material types used (still) exist.



Demonstration: Organizational Levels in the SAP System

Purpose

This demonstration shows how to make Customizing settings and thus introduces the options customers have for adjusting the SAP System to their specific company requirements.

System Data

System: Training system
Client: Training client
User ID: Own user ID
Password: User password
Set up instructions: No additional

1. Choose: *IMG* → *Enterprise Structure* → *Definition* → ... and... → *Assignment*

Show and explain:

- Where controlling areas are defined (without details)
- Where company codes are defined (without details)
- The specification for the valuation level
- Definition of a new plant (single)
- Definition of storage locations for this new plant
- Assignment of the new plant to company code 1000
- Assignment of the new plant to purchasing organization 1000
- Test in purchasing:
Creation of a PO item with account assignment for consumption material for the new plant
- Complete the new plant with the aid of the complex copying function
Discuss the function of transaction EC02 and show the large amount of additional information.



You can also discuss the terms *standard purchasing organization* and *reference purchasing organization* and their content when going through the exercise tasks.



Exercise 1: Settings for Enterprise Structure from the Materials Management Viewpoint

Exercise Duration: 35 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Define the organizational structures relevant to materials management
- Explain the reference purchasing organization and its use in support of the purchasing function
- Configure a new plant with storage locations and maintain the assignment to the company code and the relevant purchasing organizations
- Use the plant copy functions
- Explain the organizational units of financial accounting - company code and controlling area - and how they relate to the plant

Business Example

Your tasks in the implementation team include replicating the organizational structures of your enterprise for the logistics applications in the SAP System. Further plants need to be created for the implementation. It has also been deemed advantageous for the new plants to be able to make use of existing purchase agreements and price conditions negotiated by the central purchasing organization. To achieve this goal, the necessary organizational assignments must be made for the new plants.

Task 1:

General relationships

During the discussion on the replication of organizational structures, the following statements are made. Check these statements and give reasons for your answers:

1. A plant can be assigned to several company codes.
Determine whether this statement is true or false.
 - True
 - False

Continued on next page

2. A purchasing organization must always be assigned to a company code.
Determine whether this statement is true or false.
 - True
 - False

3. The storage location key 0001 may be used multiple times.
Determine whether this statement is true or false.
 - True
 - False

Task 2:

Organizational units in MM: Considerations

You support the configuration of the organizational units based on the current organizational structure of your enterprise. What, in your view, are the central criteria for the definition ...

1. ... of a new company code?

2. ... of a new plant?

3. ... of a new storage location?

Continued on next page

4. ... of a new purchasing organization?

5. ... of a new purchasing group?

Task 3:

Definition of organizational units

Following approval of the organizational structures by the project steering committee, it is necessary to set up a new plant with the key **TR##**.

In the exercise, initially work without the copy function even though it is advisable to use it in practice.

1. Define a new plant **TR##**. Specify **DE** as the country for this plant and assign the factory calendar **01 (Germany, standard)** (or your new factory calendar) to the plant.
2. Create the storage locations **0001, 0002, and 0003** for this plant.

Optional

Maintain two different addresses for storage location 0001.

3. Assign plant **TR##** to **company code 1000**.
4. **Purchasing organization 1000** is responsible for plant **TR##**. In addition, however, it should be possible to create purchase orders referencing contracts set up by the **central purchasing organization C100**. Configure this assignment.

Continued on next page

5. Can **purchasing organization 0001** also be assigned to plant TR##? Why or why not?

6. Check out the significance of the **standard purchasing organization** by referring to the Implementation Guide. For which transactions is it used? Assign purchasing organization 1000 to your plant TR## as the standard purchasing organization.

7. Check out the significance of the **reference purchasing organization** by referring to the Implementation Guide. Has a reference purchasing organization been defined for purchasing organization 1000?

8. Which relationship between **purchasing groups** and **purchasing organizations** is there in Customizing? Interpret the result.

9. *Optional*

Define a new purchasing organization **EK##**. This is to be active for your new plant **TR##** and for plants **0001** and **1200**.

Are you allowed to assign purchasing organization **EK##** to a company code in this case? Justify your answer.

Make all necessary assignments for your new purchasing organization **EK##**.

Continued on next page

10. Check whether plant TR## is assigned to controlling area 1000. Is there a direct assignment?

11. Complete your plant TR## by adding the further settings using the **copy function**. Use the completely set up plant 1200 as a template for copying purposes.

12. *Optional*

Check whether the plant parameters of inventory management have been maintained for your new plant.

13. Create the first material master record for your new plant TR## and storage location 0001. Extend the raw material R-T1##. Also use this material, which was already created for plant 1000, as a reference material.

Create the views *Purchasing*, *Gen. Plant Data/Storage 1* and *Accounting 1*. The material shall be valuated in plant TR## with the standard price of 10.00 EUR per unit.

Solution 1: Settings for Enterprise Structure from the Materials Management Viewpoint

Task 1:

General relationships

During the discussion on the replication of organizational structures, the following statements are made. Check these statements and give reasons for your answers:

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

Answer: False

Each plant can be assigned to only one company code.

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

Answer: False

A purchasing organization does not have to be assigned to any company code if the organization in question acts as a central purchasing organization. If a purchasing organization is not assigned to a company code, plants from different company codes can be assigned to this purchasing organization.

3. The storage location key 0001 may be used multiple times.

Answer: True

You can use the storage location key 0001 multiple times because you define the storage locations per plant. You can assign the same key to the raw material stores in all plants, for example.

Task 2:

Organizational units in MM: Considerations

You support the configuration of the organizational units based on the current organizational structure of your enterprise. What, in your view, are the central criteria for the definition ...

1. ... of a new company code?

Answer: The company code represents an independent organizational unit of accounting.

You create a new company code if you wish to define a new company in the SAP System.

Continued on next page

2. ... of a new plant?

Answer: The plant is an organizational unit within logistics that subdivides the enterprise for the purposes of production, procurement, maintenance, and materials planning.

You create a new plant if you wish to carry out logistical business processes such as materials planning or production control at a new site independently of other sites.

3. ... of a new storage location?

Answer: The storage location is an organizational unit facilitating differentiation between stocks of materials within a plant.

You create a new storage location if you wish to define a new area with separate, quantity-based inventory management.

4. ... of a new purchasing organization?

Answer: The purchasing organization is an organizational unit within logistics facilitating the subdivision an enterprise according to purchasing requirements.

You create a new purchasing organization if you wish to set up a central purchasing department or create separate outline purchase agreements and conditions for a certain area.

5. ... of a new purchasing group?

Answer: A purchasing group represents an individual or group of individuals responsible for certain purchasing activities.

You create a new purchasing group if a new employee assumes responsibility for purchasing activities.

Continued on next page

Task 3:

Definition of organizational units

Following approval of the organizational structures by the project steering committee, it is necessary to set up a new plant with the key **TR##**.

In the exercise, initially work without the copy function even though it is advisable to use it in practice.

1. Define a new plant **TR##**. Specify **DE** as the country for this plant and assign the factory calendar **01 (Germany, standard)** (or your new factory calendar) to the plant.
 - a) Choose: *IMG* → *Enterprise Structure* → *Definition* → *Logistics - General* → *Define, copy, delete, check plant*

 - b) Choose *Define Plant*.
Choose *New Entries*.
Enter plant *TR##* and the factory calendar *01*.
Choose *Address*.
Enter a name for your plant, the country key *DE* and further address data.
Save your input.

2. Create the storage locations **0001**, **0002**, and **0003** for this plant.
Optional

Continued on next page

Maintain two different addresses for storage location 0001.

- a) Choose: **IMG** → **Enterprise Structure** → **Definition** → **Materials Management** → **Maintain Storage Location**
- b) Enter plant **TR##** and choose *Continue*.
Choose *New Entries*.
Enter the new storage locations 0001, 0002, and 0003. Enter a name for each storage location.
Save your input.
- c) Go to the overview of the new storage locations, select storage location 0001, and choose *Addresses of Storage Locations* in the dialog structure.



Hint: In the SAP system, you can use several addresses for a storage location. You do not maintain these addresses directly, but via a *sequential number*.

Choose *New Entries*.

Enter any address numbers (such as 10 and 20) and then choose *Address* in the toolbar. Enter any address data.

Save your input.

3. Assign plant **TR##** to **company code 1000**.
 - a) Choose: **IMG** → **Enterprise Structure** → **Assignment** → **Logistics - General** → **Assign Plant to Company Code**
 - b) Select *company code 1000*.
Choose *Assign*.
Select your plant, **TR##**, and choose *Copy*.
Save your input.
4. **Purchasing organization 1000** is responsible for plant **TR##**. In addition, however, it should be possible to create purchase orders referencing contracts set up by the **central purchasing organization C100**. Configure this assignment.

Continued on next page

- a) Choose: *IMG* → *Enterprise Structure* → *Assignment* → *Materials Management* → *Assign purchasing organization to plant*
- b) Plant TR## must be assigned to purchasing organizations 1000 and C100.
Select *purchasing organization 1000*.
Choose *Assign*.
Select your plant TR## and choose *Copy*.
Repeat the assignment for purchasing organization C100.
Save your input.
5. Can **purchasing organization 0001** also be assigned to plant TR##? Why or why not?
Answer: No.
Choose: *IMG* → *Enterprise Structure* → *Assignment* → *Materials Management* → *Assign purchasing organization to company code*
Purchasing organization 0001 is assigned to company code 0001. However, you have already assigned your plant TR## to company code 1000. Assignment to plant TR## would be possible only if purchasing organization 0001 were also assigned to company code 1000 or to no company code.
6. Check out the significance of the **standard purchasing organization** by referring to the Implementation Guide. For which transactions is it used?
Assign purchasing organization 1000 to your plant TR## as the standard purchasing organization.
Answer:
Choose: *IMG* → *Enterprise Structure* → *Assignment* → *Materials Management* → *Assign standard purchasing organization to plant*
Invoke the documentation for the IMG activity.
Among other things, the standard purchasing organization is needed to valuate consumption postings for consignment and pipeline material. It is also used for the automatic generation of purchase orders at the time of goods receipt, since the system is only able to find unique conditions via the info record of the standard purchasing organization.
Invoke the activity. Enter purchasing organization 1000 for your plant TR##.
Save your input.

Continued on next page

7. Check out the significance of the **reference purchasing organization** by referring to the Implementation Guide. Has a reference purchasing organization been defined for purchasing organization 1000?

Answer:

Choose: *IMG* → *Enterprise Structure* → *Assignment* → *Materials Management* → *Assign purch. organization to reference purch. organization*

A reference relationship between purchasing organizations enables you to work with conditions and contract release orders on a cross-purchasing-organization basis.

Purchasing organization C100 has been assigned as reference purchasing organization for purchasing organization 1000.

8. Which relationship between **purchasing groups** and **purchasing organizations** is there in Customizing? Interpret the result.

Answer: There are no relationships in Customizing.

Purchasing groups are not assigned to purchasing organizations. The two objects are independent of each other. Purchasing groups are created for individual employees to allow user-specific settings for activities (such as printer for PO printouts, telephone and fax numbers on purchasing documents). Purchasing groups are assigned to materials via the material master record. A purchasing group can be used in combination with any purchasing organization provided that this is allowed by the user authorizations.

Purchasing organizations are set up as a level for the definition of conditions (price determination) and the conclusion of outline agreements.

9. *Optional*

Define a new purchasing organization **EK##**. This is to be active for your new plant **TR##** and for plants **0001** and **1200**.

Are you allowed to assign purchasing organization EK## to a company code in this case? Justify your answer.

Continued on next page

Make all necessary assignments for your new purchasing organization EK##.

- a) Choose: **IMG** → **Enterprise Structure** → **Definition** → **Materials Management** → **Maintain purchasing organization**

Choose *New Entries*.

Enter EK## and a name for your purchasing organization.

Save your input.

- b) Since the three plants 0001, 1200, and TR## belong to different company codes, the new purchasing organization may not be assigned to a company code, but only to the three plants.

- c) Choose: **IMG** → **Enterprise Structure** → **Assignment** → **Materials Management** → **Assign purchasing organization to plant**

Select purchasing organization EK##.

Choose *Assign*.

Select plants 0001, 1200, and TR##, and choose *Adopt*.

Save your input.

10. Check whether plant TR## is assigned to controlling area 1000. Is there a direct assignment?

Answer: There is no direct assignment. You must therefore check the assignment in two steps via the company code.

Choose: **IMG** → **Enterprise Structure** → **Assignment** → **Logistics - General** → **Assign plant to company code**

Plant TR## is assigned to company code 1000.

Choose: **IMG** → **Enterprise Structure** → **Assignment** → **Controlling** → **Assign company code to controlling area**

Select controlling area 1000 and choose *Assignment of Company Code(s)* from the dialog structure.

Company code 1000 is assigned to controlling area 1000. Therefore, plant TR## is likewise assigned to controlling area 1000.

Continued on next page

11. Complete your plant TR## by adding the further settings using the **copy function**. Use the completely set up plant 1200 as a template for copying purposes.
 - a) Choose: **IMG** → **Enterprise Structure** → **Definition** → **Logistics - General** → **Define, copy, delete, check plant**
 - b) Choose *Copy, delete, check plant*.
Choose *Copy organizational object*.
Copy from plant 1200 to plant TR## and select *Continue*. Answer the subsequent question with **Yes** to complete the whole object.

12. *Optional*
Check whether the plant parameters of inventory management have been maintained for your new plant.
 - a) Choose, for example: **IMG** → **Materials Management** → **Inventory Management and Physical Inventory** → **Plant Parameters**
The plant parameters of inventory management have been maintained for plant TR## because these parameters have also been maintained for plant 1200.

13. Create the first material master record for your new plant TR## and storage location 0001. Extend the raw material R-T1##. Also use this material, which was already created for plant 1000, as a reference material.
Create the views *Purchasing, Gen. Plant Data/Storage 1* and *Accounting 1*. The material shall be valued in plant TR## with the standard price of 10.00 EUR per unit.
 - a) On the screen, choose *SAP Easy Access*:
Logistics → *Materials Management* → *Material Master* → *Material* → *Create (General)* → *Immediately*
 - b) Enter the material number *R-T1##* both for creating the new data and as a reference material.
Select the views *Purchasing, Gen. Plant Data/Storage 1* and *Accounting 1*.
Select *Org. Levels* and enter your new plant TR## and also plant 1000 for the template.
Choose *Continue*. Maintain the material data. Save your entries.



Lesson Summary

You should now be able to:

- Identify the relationships between the organizational levels of MM and their environment
- Explain the significance of the purchasing organization and the reference purchasing organization
- Create a plant and storage locations with several addresses
- Use the plant copy and check function



Unit Summary

You should now be able to:

- Identify the relationships between the organizational levels of MM and their environment
- Explain the significance of the purchasing organization and the reference purchasing organization
- Create a plant and storage locations with several addresses
- Use the plant copy and check function

Unit 2



Master Data for Materials Management



The material and vendor master records are sources of data that is needed in many procurement processes. They should therefore always be well maintained. In this unit, participants are introduced to the topics of field selection and number assignment for the first time. In this connection, the instructor can outline the different procedures for these two topics in the SAP system.

Unit Overview

If you wish to minimize the cost of carrying out your procurement processes, a key prerequisite is adequate master data maintenance. This unit introduces you to selected settings for the maintenance of material and vendor master records.



Unit Objectives

After completing this unit, you will be able to:

- Make the necessary settings for the vendor master record
- Create new material types
- Set up material number assignment
- Determine the field selection control and name its influencing factors

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Lesson: Vendor Master Record



Lesson Duration: 60 Minutes

Lesson Overview

All key settings in the vendor master record are controlled via the account group. This lesson outlines these key settings and the settings for partner roles and partner determination.



Lesson Objectives

After completing this lesson, you will be able to:

- Make the necessary settings for the vendor master record



At the start of this lesson, the instructor should ask participants the reasons for which they could imagine they might have to create new account groups.

Possible reasons are: Origin (domestic/foreign), function (goods supplier/forwarder/service provider), or use (purchasing/accounting).

Business Example

To be able to differentiate better between your vendors, you wish to create a new account group. In the case of vendors belonging to this group, it is required that the contact person always be specified when a new master record is created. You have been asked to create the new account group.

Overview of Settings for the Vendor Master Record

Just as the material type is the controlling element for the material master record, the account group determines all the key properties for the vendor master record. You can change the field selection for the maintenance of vendor master records according to the specific requirements of your enterprise. You can also maintain vendor data on a plant-dependent or vendor subrange-dependent basis.

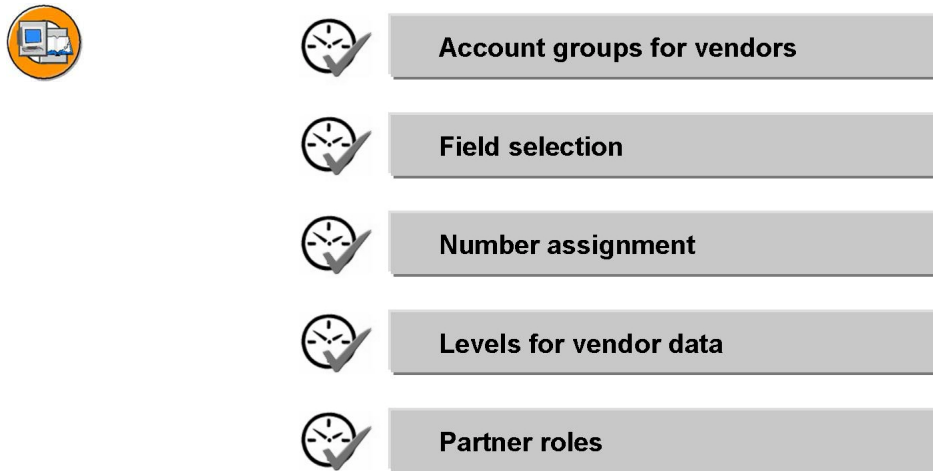


Figure 14: Settings for Vendor Master Records

Account Groups for the Vendor Master Record

The account group represents a collection of attributes that control the creation of master records. In the SAP system there are account groups for the vendor master, for example, but also for the customer master and the G/L account master. Among other things, the account group determines which data is relevant to the master record, and the number range from which numbers for the master records are to be taken. You can use different settings for the number assignment for each account group to ensure, for example, that different business partners in the system are managed in different number ranges.

The relevant Customizing settings for the vendor master records also include the settings for partner determination, because different partner roles can already be stored in the vendor master record.

Control via the Account Group

Every business partner whose data is created in the SAP system must be assigned to an account group. The desired account group is assigned when a new vendor master record is created. You can change the account group (with restrictions).

The account group is used to control the business usage of the business partner. In the standard system, for example, there are different account groups for vendors, manufacturers, freight forwarders and invoicing parties. You can define new account groups in Customizing.

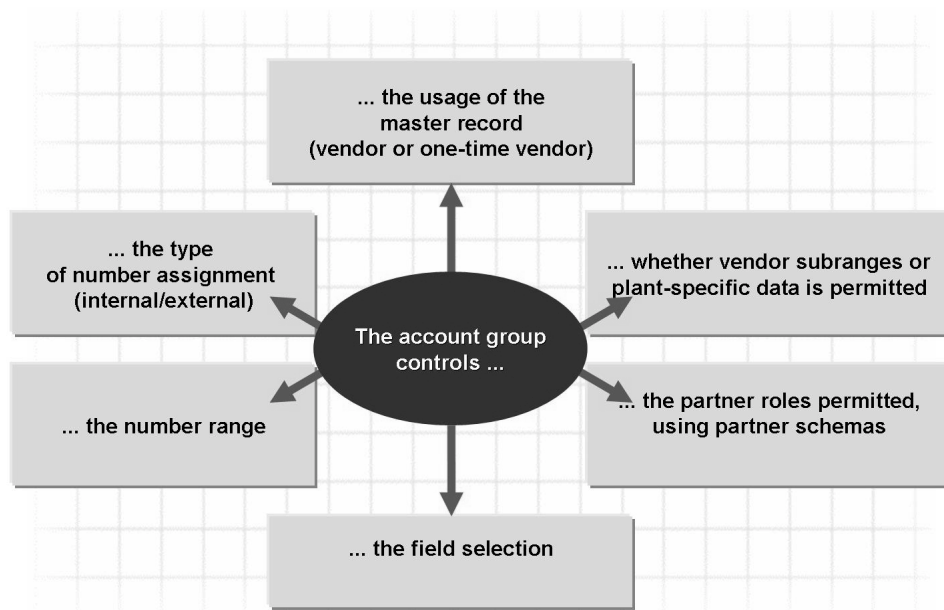


Figure 15: What the Account Group Controls: Vendor Master Record

You use account groups to classify vendors according to certain criteria (for example, domestic or foreign origin). Via the account group, you specify:

- Which fields are ready to accept input or must be filled when master records are created or changed (field selection)
- Whether a “one-time account” (collective account for one-time vendors) is involved, or whether the account group provides for complete vendor master records
- Whether the data retention levels *sub range* and *plant* can be directly called for a vendor master record (if you do not wish to generally allow these levels, you must change the field selection accordingly)



Hint: The account group is not used to control the option of using the additional data retention levels (plant and/or vendor subrange), but merely assists in the creation of alternative data.

Independently of the account group, you can always create alternative data by setting the relevant indicators for the desired data retention level(s) under

Extras → Additional Purchasing Data

Set the relevant indicators for the desired data retention level(s).

- Which number range interval an account group should have
In contrast to the numbering of material master records, only a single interval can be assigned to an account group. This interval can allow either internal or external number assignment. Via the number range of this interval, you also determine whether the number assignment for vendor master records is numeric or alphanumeric.
- The partner roles allowed for the account group
Via partner schemas, which can be assigned to the account group, you specify which partner roles can be maintained in the vendor master records, depending on the data retention level.

The following excerpt from the SAP system Customizing shows you the different settings for account groups.

Account Group	
LIEF	
General Data	
Name	Vendors
Number Range	XX
One-Time Account	<input type="checkbox"/>
Field Status	
General Data	
Company Code Data	
Purchasing Data	
Purchasing Sub-Range	
Purchasing Plant	
Data Retent. Levels: Purchasing	
<input checked="" type="checkbox"/> Vendor sub-range relevant	
<input checked="" type="checkbox"/> Plant level relevant	
Default Values	
Do not transfer any data	
PartnerDetermProced.	
Partner schema, purch. org.	IDE1
Partner schema, sub-range	IDE2
Partner schema: plant level	IDE3

Figure 16: Settings for Account Groups

The *Number Range* field is here not ready for input because a separate IMG activity exists for the assignment of the number ranges in conjunction with interval maintenance.

Since the vendor master record is not as large as the material master, here the settings for field selection - dependent on the account group - are included in the same activity as the definition of the account group itself. In the block at center left (see the figure *Settings for Account Groups*), you can select the data retention level for which you wish to check or set up the field selection.

Influencing Factors for Field Selection

The account group is just one of four influencing factors that define the field selection.



Hint: You are not provided with a screen in the maintenance of the data for the vendor master record if all the fields it contains are hidden.

You use the field status to specify:

- In which fields data must be entered (mandatory)
- In which fields data can be entered (optional)
- Which fields should not be displayed (hide)
- Which fields should only be displayed, but should not be ready for input (display)

As in the case of the material master record, there are a number of different factors of influence that control field selection for the vendor master. The field status can be controlled via the transaction used, the account group, the purchasing organization or the company code. Comparison of the field selection settings for these various influencing factors is not as well supported as for the material master record because these settings (field selection references) do not always affect the sum of all the vendor data and are therefore stored in different tables.

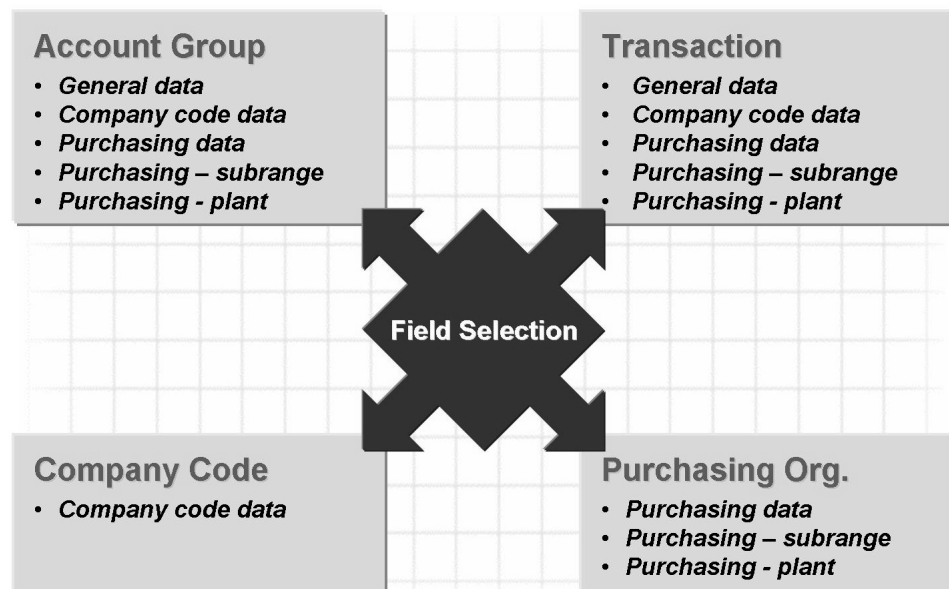


Figure 17: Vendor Master Record Field Selection: Influencing Factors

The fields to be defined are subdivided into the following reports:

- General data
- Company code data
- Purchasing data
- Purchasing data on vendor subrange level
- Purchasing data on plant level

The individual influencing factors control different areas. The company code, for example, can only influence the group of the company code data. The transactions used, on the other hand, can control the status of all fields.

You specify the field selection for the vendor master records - depending on the account group - in the same IMG activity in which the account groups are defined. These field selection specifications affect all vendor master record data.

There are separate IMG activities for transaction-dependent and purchasing organization-dependent field selection. At present, you cannot change the field selection for all the fields in the vendor master record here.

At purchasing organization level, you can only specify the field selection for the purchasing data, vendor subrange data, and plant-dependent data. The entry *asterisk (*)* in the Customizing table applies to all purchasing organizations that are not listed individually in the table.

You maintain the field selection for the accounting data of the individual company codes (accounting information, payment transactions etc.) in Customizing for FI under the IMG activity *Define Screen Layout per Company Code (Vendors)*.

Because the field status depends on a number of influencing factors, link rules are necessary. These rules control the characteristic value a field status has when the different influencing factors have different effects. The link rules for the individual field selection settings for the vendor master record correspond to those that apply to material master records.

Characteristic	<i>Hide</i>	<i>Display</i>	<i>Mandatory</i>	<i>Optional</i>
<i>Hide</i>	Hide	Hide	Hide	Hide
<i>Display</i>	Hide	Display	Display	Display
<i>Mandatory</i>	Hide	Display	Mandatory	Mandatory
<i>Optional</i>	Hide	Display	Mandatory	Optional

The following excerpt from the SAP system Customizing shows the settings for field selection for vendor master records: *General Data* for the account group *LIEF*.

General Data Page 1 / 2

Account Group LIEF

Vendors

General Data

Address

	Suppress	Req. Entry	Opt. entry	Display
Name 1	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Form of address	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Search term	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Name 2	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Name 3, name 4	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Postal code, city	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Street	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
District	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Region	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
PO Box	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
P.O. box postal code	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
P.O. Box city	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Search term B	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c/o name	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Street 2	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Street 3	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 18: Field Selection *General Data*

Number Assignment

When a vendor master record is being created, a number is assigned which uniquely identifies the master record. This number is derived from the number range (numeric or alphanumeric) that is assigned to the account group. There are two options for assigning the number:

- **Internal number assignment**
The system automatically assigns a sequential number from the defined number range. The last number assigned is logged in the number level.
- **External number assignment**
In the external number assignment, when creating the vendor master record, the user must assign a number from the defined number range. This number must be within the defined number range.

To create a new number range, you perform the following steps:

1. Adding a new number range interval

The individual number range intervals must not overlap, which means that each vendor number can only occur once. If a number range is to be used for the external number assignment, the appropriate indicator must be set.

2. Assignment to an account group

In a second step, you assign the account group to the new number range.



Hint: In the standard SAP system, the numbers for vendor master records are buffered with the number 5.

Partner Roles for the Vendor Master Record

The business partner can have different roles with respect to the company. For example, during a procurement process a business partner is first the ordering address of a company, then the goods supplier, then the invoicing party, and finally the payee. Often it is not one and the same business partner who assumes these roles, but rather different business partners who take on different tasks. Therefore, you can store corresponding partner roles in the vendor master record, across purchasing organizations, and dependent on the plant. These partners appear as default values in the respective documents. Thus, a different invoicing party is transferred from the vendor master record into the purchase order, and it appears as a default when you are posting an invoice.

Partner roles (also referred to as partner functions) define the rights, duties, and tasks of each partner in processing a business transaction. You can use such roles to replicate the relationships between different business partners, with customers, vendors, and freight forwarders, for example.

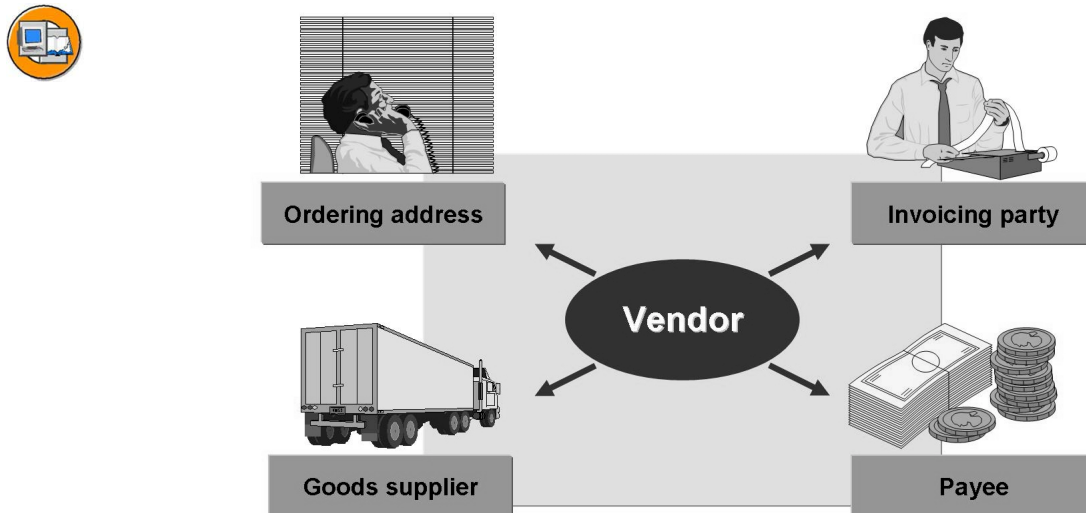


Figure 19: Partner Roles

The following partner roles are predefined in the standard SAP system:

- Vendor (VN)
- Ordering address (OA)
- Goods supplier (GS)
- Invoicing party (IP)
- Different payee (AZ)
- Contact person (CP)
- Employee responsible (ER)



Hint: Note that you usually have to create a separate master record for each partner that is to be used via a partner role in the master data and in documents. Exceptions are, for example, the partner roles *Contact Person* and *Employee Responsible*.

You define the partner roles you wish to use in your company in Customizing and specify which of them are to be optional and which are to be mandatory (required entry). For each partner role, you can specify that it must also be *unique*, which means that it can only be used once for each vendor master record and for each level.

If have not maintained any or all partner roles in a vendor master record, the data of the role *Vendor* or the vendor master record itself is used for the “missing” partner roles.

Funct	Name	NoTpe	Unique	HigherPar.Role
AD	Additional	LI	<input type="checkbox"/>	
CP	Contact persons	AP	<input type="checkbox"/>	
AZ	A. payment recipient	LI	<input checked="" type="checkbox"/>	
OA	Ordering Address	LI	<input type="checkbox"/>	
BU	Buyer	AP	<input type="checkbox"/>	
ET	Label service agent	LI	<input type="checkbox"/>	
HR	Manufacturer	LI	<input type="checkbox"/>	
MP	Manufacturing plant	LI	<input type="checkbox"/>	
VN	Vendor	LI	<input type="checkbox"/>	
DP	Delivering plant	LI	<input type="checkbox"/>	
IP	Invoice presented by	LI	<input type="checkbox"/>	
ZL	Client Contact	PE	<input type="checkbox"/>	

NoTy.	Description
A	Work center
AP	Contact Persons
KU	Customer
LI	Vendor
LS	Logical system
MA	Mail Address
MP	Mail Partner
O	Organizational Unit
PE	Personnel Number
S	Position
US	User
VS	Shipping Point
WK	Plant

Figure 20: Definition of Partner Roles

Partner roles are used in message determination and payment processing, for example.

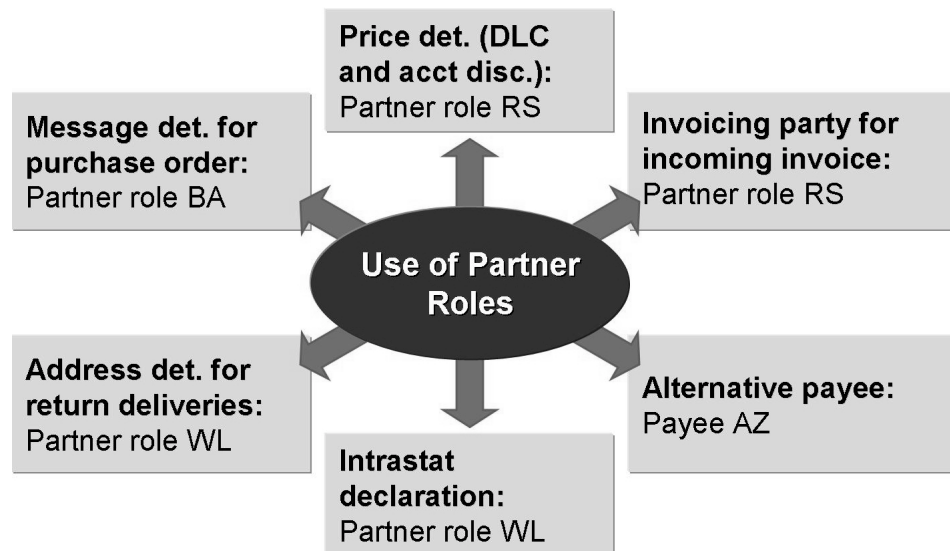


Figure 21: Use of Partner Roles

You use a partner schema to assign the partner roles you wish to use in vendor master records and at other points such as purchasing documents.

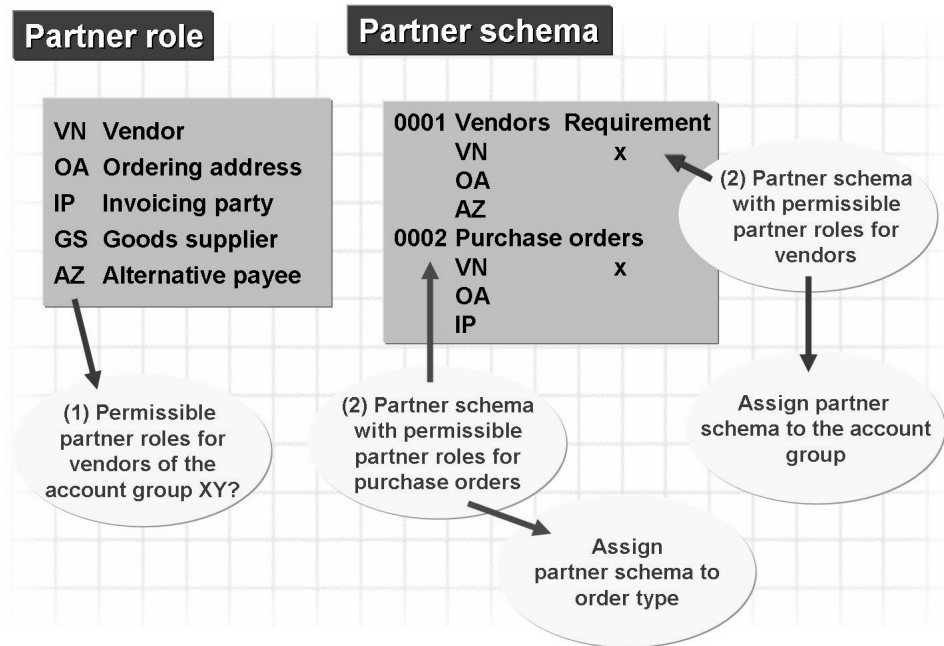


Figure 22: Partner Roles - Partner Schemas

Partner roles can be defined in any way you wish.

Choose: *IMG* → *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Roles* → *Define Partner Roles*.

For each partner role, you first specify the account group with which a master record can be created for the role (see figure *Partner Roles - Partner Schemas* (1)): *IMG* → *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Roles* → *Define Permissible Partner Roles per Account Group*.

Example: Vendor number 1000 (account group LIEF) should be entered in another vendor master record with the partner role OA. In this case, the account group LIEF must be allowed for the role OA for vendors.

Funct	Name	Group	Name
OA	Ordering Address	0001	Vendors
OA	Ordering Address	0006	Ordering address
OA	Ordering Address	KRED	Vendors
OA	Ordering Address	LIEF	Vendors
IP	Invoice presented by	0001	Vendors
IP	Invoice presented by	0004	Invoice presented by
IP	Invoice presented by	KRED	Vendors
IP	Invoice presented by	LIEF	Vendors

Figure 23: Example of Partner Roles Permitted

You then specify the permissible partner roles for vendor master records, purchasing documents, and volume rebate arrangements. You use partner schemas (see figure *Partner Roles - Partner Schemas(2)*): *IMG → Materials Management → Purchasing → Partner Determination → Partner Settings in the Vendor Master Record → Define Partner Schemas*.

For each schema, you specify which roles are to be allowed in it, whether a partner role is mandatory, and whether the partner role can be changed subsequently in documents.

You can assign partner schemas for the data retention levels *purchasing organization*, *vendor subrange*, and *plant* to the account groups: *IMG → Materials Management → Purchasing → Partner Determination → Partner Settings in the Vendor Master Record → Assign Partner Schemas to Account Groups*. In this way, you specify which partner roles are allowed in vendor master records.

You can use a separate partner schema for each data retention level.

If, for example, partner schema L1 has been assigned to the account group LIEF at the purchasing organization level and if the partner schema L1 contains the partner role OA, you can enter one or more partners with the role OA at purchasing organization level in each vendor master record belonging to account group LIEF. For purchasing documents and rebate arrangements, you assign partner schemas depending on the document or arrangement type in each case.

You will find all Customizing activities for partner roles in the IMG for purchasing under the ***Partner Determination*** node.

The following excerpt from the SAP system Customizing shows a partner schema for vendor master records.

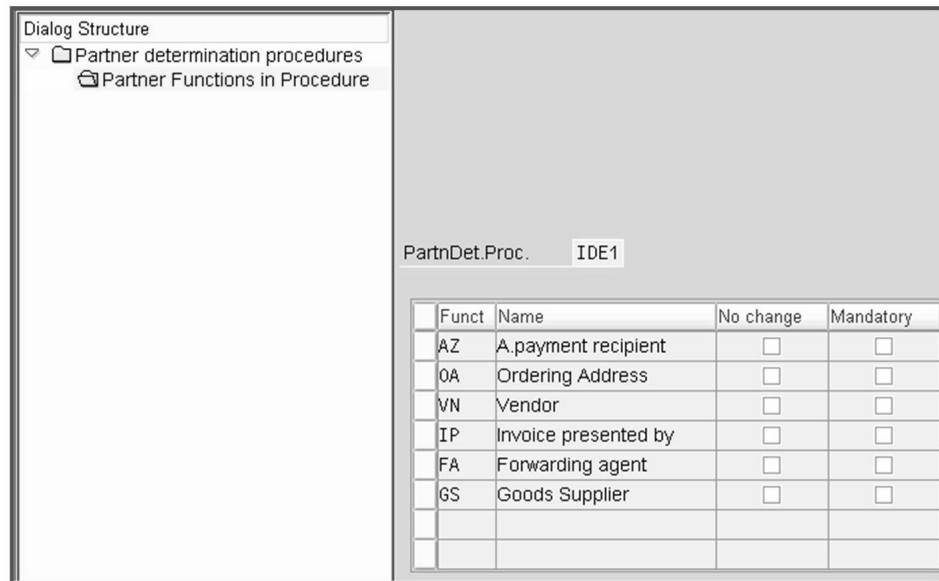


Figure 24: Partner Schema for Vendor Master Records

You can assign this partner schema to an account group for vendor master records – for the levels *purchasing organization*, *plant* or *vendor subrange*.

You maintain the partner schemas for the purchasing documents in the same way and assign them to the document types for purchase orders and contracts.

If this schema is assigned to an account group, you can make one or more entries in a vendor master record in this account group for the six partner roles listed. The partner role *VN* can only be used once. For all others, several entries are allowed in the standard system.



Objective: For purchase orders for vendor L1000, it should be possible to use an alternative ordering address if necessary.

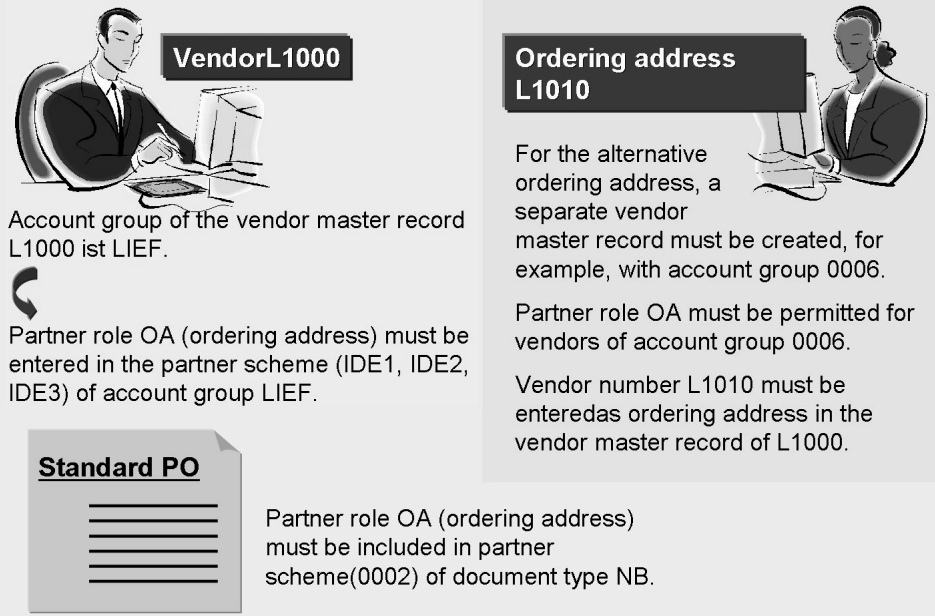


Figure 25: Example: Partner Role OA



Demonstration: Settings for the Vendor Master Record

Purpose

This demonstration shows how to make Customizing settings and thus introduces the options customers have for adjusting the SAP system to their specific company requirements.

System Data

System:	Training system
Client:	Training client
User ID:	Own user ID
Password:	User password
Set up instructions:	No additional

1. Choose: *IMG* → *Logistics - General* → *Business Partner* → *Vendors* → *Control* → *Define Account Groups and Field Selection (Vendor)*

Show and explain the specifications for the account group *LIEF*, for example.

2. Choose: *IMG* → *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Roles* and → *Partner Settings in Vendor Master Record*.

Show and explain the activities for the partner roles. Refer to a possible use of partner roles in message output in purchasing (see the “*Message Determination and Output Control*” lesson).

You can use vendor master record *SCM550* as an example.



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Exercise 2: Vendor Master Record

Exercise Duration: 35 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Set up a new account group for vendor master records
- Define partner roles and make the settings for partner determination

Business Example

Some of your main vendors have several distribution plants, for each of which you wish to use a separate vendor master record in your enterprise (in the central purchasing department). All purchase transactions are to be assigned to the central purchasing department. You nevertheless wish to send your purchasing documents (such as POs) directly to the nearest distribution plant.

You now have the task of analyzing and replicating this process.

System Data

System:	Training system
Client:	Training client
User ID:	SCM550-##
Password:	User password
Set up instructions:	IDES

Task:

Create a new account group for vendors. Use an existing partner schema for this account group.

1. Create a new account group *ZV##* for vendors. To do so, copy account group *ZTMM*.

Enter *Central Vendors ##* as the title. The vendors are not to be regarded as one-time vendors.

The fields *Purchase Order Currency*, *Terms of Payment*, and *Name, Tel. (Salesperson)* in the *Purchasing Data* view are to be *mandatory fields*. Make the relevant field status settings.

Vendors belonging to this account group are to use partner schema L1 for the maintenance of partner roles at purchasing organization level, L2 for the vendor subrange level, and L3 for the plant level.

Continued on next page

2. Vendors belonging to the account group *ZV##* are to have external, alphanumeric vendor numbers. Can you make the relevant settings while creating the account group?
3. Specify that partner role *VN* is allowed for account group *ZV##*.
4. Create a vendor master record with your new account group *ZV##* for company code 1000 and purchasing organization 1000.

Give the vendor the designation **T-K550##**. Enter 160000 as reconciliation account.

The PO currency is EUR. Enter the terms of payment key 0001.

Maintain the following partner roles:

Vendor **T-K550##** as regular vendor (partner role VN),

Vendor **T-K500A##** as ordering address (partner role OA), and

Vendor **T-K500C##** as invoicing party (partner role IP).

Specify that the two last-mentioned vendors are to be adopted as default values.

5. Create a purchase order for your new vendor **T-K550##**. Use purchasing organization 1000.

Check whether the partners **T-K500A##** and **T-K500C##** have been adopted in the document header of your PO. If not, find out why.

Solution 2: Vendor Master Record

Task:

Create a new account group for vendors. Use an existing partner schema for this account group.

1. Create a new account group *ZV##* for vendors. To do so, copy account group *ZTMM*.

Enter *Central Vendors ##* as the title. The vendors are not to be regarded as one-time vendors.

The fields *Purchase Order Currency*, *Terms of Payment*, and *Name, Tel. (Salesperson)* in the *Purchasing Data* view are to be *mandatory fields*. Make the relevant field status settings.

Vendors belonging to this account group are to use partner schema L1 for the maintenance of partner roles at purchasing organization level, L2 for the vendor subrange level, and L3 for the plant level.

- a) Choose: **IMG** → **Logistics - General** → **Business Partner** → **Vendors** → **Control** → **Define Account Groups and Field Selection (Vendor)**

Select *ZTMM*.

Choose *Copy as*.

Enter *ZV##* as the new account group and *Central Vendors ##* as the title.

Do not select the *One-Time Account* field.

To maintain the field selection, choose *Purchasing Data* by double-clicking, or *Expand Field Status*.

Under *Select Group*, choose the entry *Purchasing Data* (by double-clicking).

Change the attribute of the *Purchase Order Currency*, *Terms of Payment* and *Name, Tel. (Salesperson)* fields to *mandatory (required entry)*.

Go back to the detail screen for account group *ZV##* and enter the partner schemas L1 for the purchasing organization, L2 for subrange, and L3 for plant.

Save your input.

Continued on next page

2. Vendors belonging to the account group *ZV##* are to have external, alphanumeric vendor numbers. Can you make the relevant settings while creating the account group?
 - a) During the creation of an account group, the *Number Range* field is not ready to accept input. You must thus maintain and assign the number ranges separately.
 - b) Choose: ***IMG*** → ***Logistics - General*** → ***Business Partners*** → ***Vendor*** → ***Control*** → ***Define Number Ranges for Vendor Master Records***
Choose *Intervals*.
Interval *XX* is available for external alphanumeric number assignment.
Return to the previous screen and choose *Number Range*.
For account group *ZV##*, number range *XX* has already been entered by copying *ZTMM*. Therefore, you do not have to change anything.
3. Specify that partner role *VN* is allowed for account group *ZV##*.
 - a) Choose: ***IMG*** → ***Materials Management*** → ***Purchasing*** → ***Partner Determination*** → ***Partner Roles*** → ***Define Permissible Partner Roles per Account Group***
Choose *New Entries*.
Make an entry comprising the role *VN* and account group *ZV##*.
Save your input (acknowledge any message about the namespace that may appear with *Continue*).
4. Create a vendor master record with your new account group *ZV##* for company code 1000 and purchasing organization 1000.
Give the vendor the designation ***T-K550##***. Enter 160000 as reconciliation account.
The PO currency is EUR. Enter the terms of payment key 0001.
Maintain the following partner roles:
Vendor ***T-K550##*** as regular vendor (partner role *VN*),
Vendor ***T-K500A##*** as ordering address (partner role *OA*), and
Vendor ***T-K500C##*** as invoicing party (partner role *IP*).

Continued on next page

Specify that the two last-mentioned vendors are to be adopted as default values.

- a) On the screen, choose *SAP Easy Access*:

Logistics → *Materials Management* → *Purchasing* → *Master Data*
→ *Vendor* → *Central* → *Create*

Enter T-K550## as the vendor, company code 1000, purchasing organization 1000, and account group ZV##.

Enter any address data of your choice.

Enter the reconciliation account 160000 on the *Accounting Information* screen.

On the *Partner Roles* screen, enter the partners T-K550## as regular vendor (partner role VN), T-K500A## as ordering address (partner role OA), and T-K500C## as invoicing party (partner role IP).

In the case of the partner roles OA and IP, select the *DP* (default partner) field.

Save your input.

5. Create a purchase order for your new vendor T-K550##. Use purchasing organization 1000.

Continued on next page

Check whether the partners T-K500A## and T-K500C## have been adopted in the document header of your PO. If not, find out why.

- a) On the screen, choose *SAP Easy Access*:

Logistics → *Materials Management* → *Purchasing* → *Purchase Order*
→ *Create* → *Vendor/Supplying Plant Known*

Enter vendor T-K550## and choose *Continue*.

Choose the *Partners* tab page in the PO header.

Only the partners OA and VN are displayed.

Create an item without account assignment for any material (for example, M-01) at a price of your choice for plant 1000.

Then choose *Check*.

Now the partner role IP is also displayed in the header.

Reason: The *End* indicator has been set for role IP in the partner schema.

Choose: ***IMG*** → ***Materials Management*** → ***Purchasing*** → ***Partner Determination*** → ***Partner Settings in Purchasing Documents*** → ***Define Partner Schemas***

Select the partner schema 0002 (standard purchase orders), and choose *Partner Functions in Procedure* in the dialog structure.

This means that partner determination for this role does not take place until the purchase order is checked or saved. The other partner roles were determined as soon as you entered the vendor and chose *Continue*.



Lesson Summary

You should now be able to:

- Make the necessary settings for the vendor master record

Lesson: Settings for Material Types



Lesson Duration: 90 Minutes

Lesson Overview

You can use the material types to define important control parameters for the material master. This lesson introduces the options available to you to define a material type according to your requirements.



Lesson Objectives

After completing this lesson, you will be able to:

- Create new material types
- Set up material number assignment



Not every customer wishes to use the material types supplied in the way they have been set up by SAP. However, the instructor should point out in this lesson, too, that it is better not to change the SAP material types. Instead, you should create new ones and change them according to your requirements.

Business Example

One of the plants belonging to your company produces a lot of different materials which are then transported to other plants for use in the manufacture of other products.

The master records for these materials are to be created with their own material type. The new material type is to be defined as a combination of the types ROH and HALB.

Your project team has also decided to use a separate number range for the new material type.

Overview of Settings for Material Master Records

The Customizing activities are subdivided in the Implementation Guide as follows:

You can adjust the material master dialog (screen layout, order of screens etc.) in accordance with the specific requirements of your enterprise under **Configuring the Material Master**.

The IMG node **Field Selection** covers all activities by means of which you can specify which material master fields are to be ready for input (mandatory or optional entry), displayed only, or suppressed.

You can make all settings for the material types and number assignment for material master records under the IMG node **Basic Settings**.

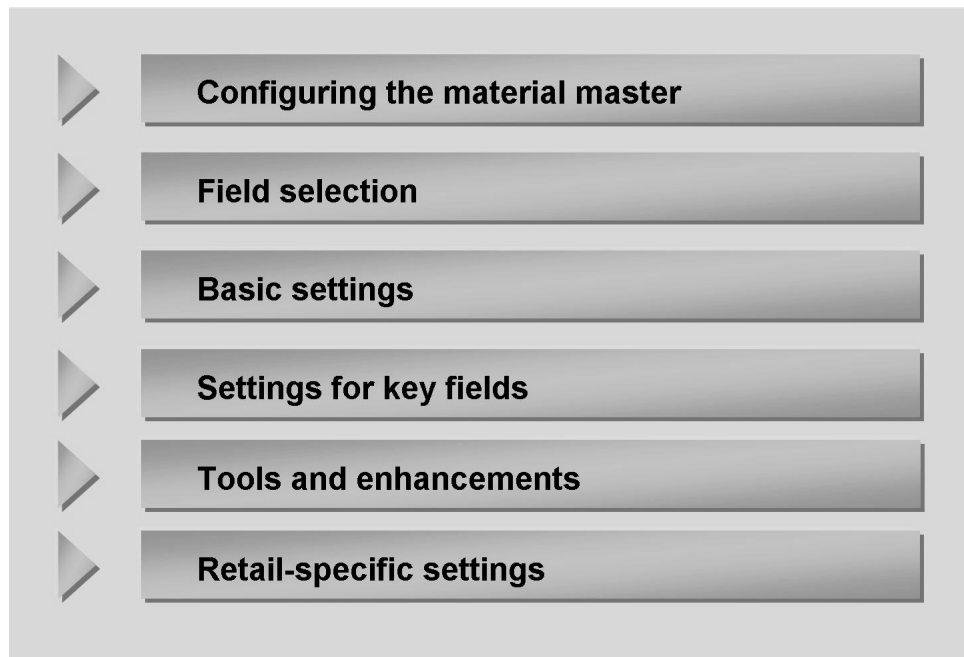


Figure 26: Settings for Material Master Records

Under the IMG node **Settings for Key Fields** you specify the following (among other things):

- Which material groups and divisions you use in your company
- Which material statuses you wish to use
- Which storage and temperature conditions are to be adhered to in the case of certain materials

The IMG node **Tools** contains activities enabling you to:

- Define authorizations and authorization profiles for the maintenance of material master records
- Organize the transfer of data for material master records
- Specify the start times of background jobs
- Maintain search helps
- Reset test data
- Initialize the periods for the individual company codes

Under the IMG node **Enhancements** you will find the documentation and options for using enhancements and **Business Add-Ins** to adapt, for example, the number assignment and the default values for the material master maintenance for your company.

A separate IMG node **Retail-Specific Settings** enables you, for example, to enter retail-specific settings for central fields and for material discontinuation.



Define output format of material numbers



Make global settings



Maintain company codes for Materials Management



Material types




Define attributes of system messages

Figure 27: Basic Settings

Under the IMG node **Global Settings** you specify the following (among other things):

- The type of update of the administrative data for technical data (table MSTA) during the processing of material master records:

Material administration data is updated when material master records are created or changed. (If you call the  quick info *Information on Material* in a material master record, you will see the relevant information.)

You can choose whether:

- The update is to take place at table level only (for example, client level, plant level)
- The update is to be dependent on the status (for each maintenance status *Materials Planning, Purchasing, ...*) and data retention level (client, plant, ...).
- No data update is to take place

- The standard document type for engineering/design drawings, if your company uses the document management system.

You can activate certain special applications of reference materials, such as using follow-up materials or manufacturer part numbers, by means of an indicator.

Maintenance of Company Codes for Materials Management

With the initialization, you specify for the first time the current posting period and the fiscal year for the material master records (accounting data) belonging to a company code.

CoCd	Company name	Year	Pe	FYr	MP	FYr	LM	ABp	DBp
2300	IDES España	2005	6	2005	5	2004	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2400	IDES Filiale 1 IT Ko...	2005	6	2005	5	2004	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2500	IDES Netherlands	2005	6	2005	5	2004	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2600	IDES IDES Italia				0		0	<input type="checkbox"/>	<input type="checkbox"/>
2700	IDES Schweiz	2005	6	2005	5	2004	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2800	China				0		0	<input type="checkbox"/>	<input type="checkbox"/>
3000	IDES US INC	2005	6	2005	5	2004	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3010	Euro Subsidiary - Be...	2005	6	2005	5	2004	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3050	IDES Subsidiary UK	2005	6	2005	5	2004	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3500	IDES Cons. Integrati...	2005	6	2005	5	2004	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4000	IDES	2005	6	2005	5	2004	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Figure 28: Maintaining Company Codes for Materials Management

You can also initialize a company code in Customizing under *IMG* → *Logistics - General* → *Material Master* → *Tools* → *Initialize Period*.

For additional information about initializing a company code, see SAP Note 487381.

Initialize Period for Material Master Records

From company code

To company code

Enter next period (including fiscal year) or a relevant date
(but not both)

Period

Fiscal year

or

Date

Figure 29: Initialization of a Company Code

For the monthly closing of the accounting period in Materials Management, you use the period closing program. You call this program from the *SAP Easy Access* screen: **Logistics** → **Materials Management** → **Material Master** → **Other** → **Close Period**.

Material Types

The material type is a means of grouping materials that have the same basic properties, such as raw materials, semi-finished products, and finished products. When you create a material master record, you assign the material to a material type. The material type belongs to the general data on the material. It controls important processes in individual applications. In Customizing for Production Planning (PP), for example, you can specify just for your company the material types, depending on usage, for which the creation of bills of material and routings is allowed or precluded.

Among other things, the chosen material type controls the following:

- Whether the material is intended for a certain purpose
- Whether the material number is assigned internally or externally
- The number range interval from which the material number is assigned
- Which screens appear during material master maintenance, and in what order
- Which user department data can be entered
- Which procurement type(s) the material can have

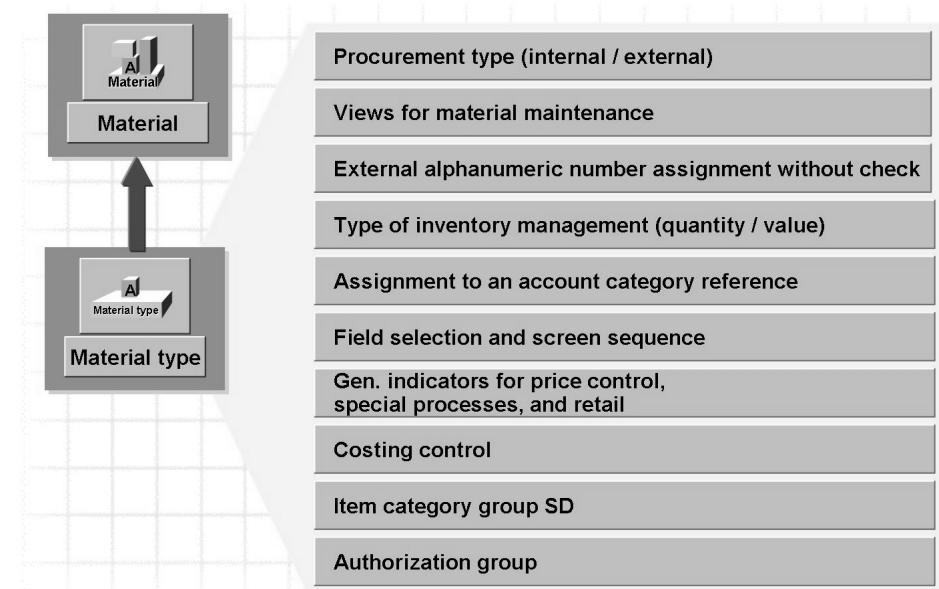


Figure 30: Control of Material Type: Material Master

The user departments (maintenance status) defined for a certain material type determine which views can be maintained for a material of this type. In turn, this determines which applications can use the material.

Via the entries for *external* and *internal orders*, you specify how materials of a certain type can be procured. In addition, you can use special procurement keys in the material master record to restrict the procurement type for each material and plant.

The type of inventory management (quantity- or value-based) can be defined for a material type on a valuation area-dependent basis.

The indicator for the price control can be defined as an overwritable default value or as a mandatory preset value.

The stock and consumption accounts are assigned via the valuation classes. The link between valuation classes and the material type is established via the account category reference.

You can specify which material types can be maintained with the special creation transactions that you can call from the *SAP Easy Access* screen: **Logistics** → **Materials Management** → **Material Master** → **Material** → **Create (Special)**.

Individual indicators that you can set for material types (such as *Material Type ID* and *Time Till Deleted*) are only used in an SAP Retail.



Hint: The material type can only be subsequently changed for a material subject to certain restrictions. Either the old and new material types must be assigned to the same account category reference or there must be no stocks, purchase orders, or reservations for this material.

The maintenance status of a material is a key showing which user departments have already maintained the material master record.

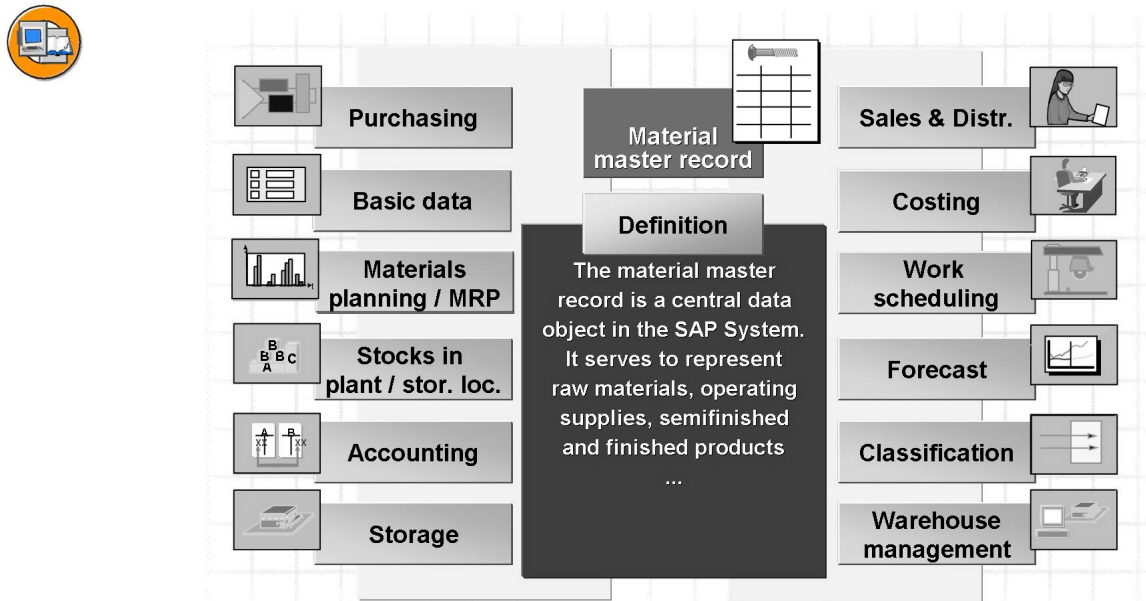


Figure 31: The Maintenance Statuses for Material Master Records

You can use a material in the individual Logistics functions only if the material has certain maintenance statuses. A valued material that you wish to purchase for receipt into stock, for example, must have at least the maintenance statuses E (purchasing) and B (accounting).

Each user department has its own views of a material master record.

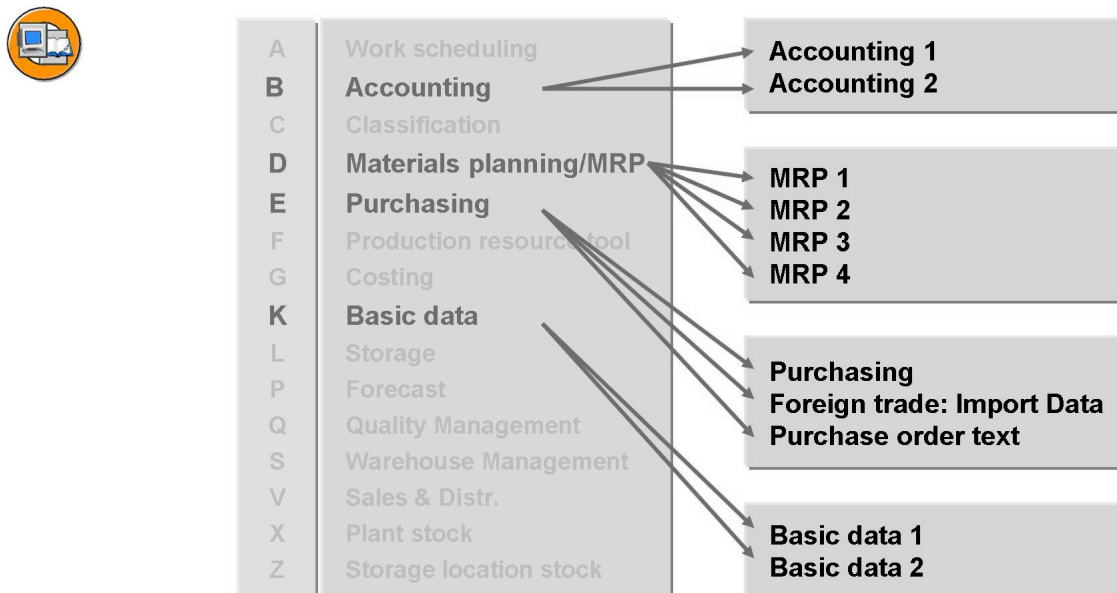


Figure 32: Maintenance Status and Views

You can look at the assignment of the individual views for the maintenance status in Customizing, under *Configuring the Material Master* → *Define Structure of Data Screens for Each Screen Sequence*.

For BOM and routing management, you must create at least one view at the plant level.

If you wish to check whether there are still any materials to be maintained by your user department, you can call the *Extendable Materials* function from the *SAP Easy Access* screen as follows: *Logistics* → *Materials Management* → *Material Master* → *Other* → *Extend Material Views*. There you enter the maintenance status corresponding to your user department and any other relevant selection criteria. You can then enhance the material master record directly from the overview list of materials.

The following excerpt from the SAP system Customizing shows you the specifications for the material type ROH.

Figure 33: Display Material Types

Number Assignment for Material Master Records

Material numbers in the SAP system uniquely identify individual materials. As a rule, a material master record must exist for each material used by your company. This is stored under the material number.

You can create material master records with internal or external number assignment. In the case of internal number assignment, the material is assigned by the SAP system when a material master record is first created. If you wish to extend an existing material master record, you must quote the number of the material in the creation transactions.

In the case of internal number assignment during material master record creation, the number is assigned at the start of the transaction. Material master records differ in this respect from documents and other master data in the SAP system.

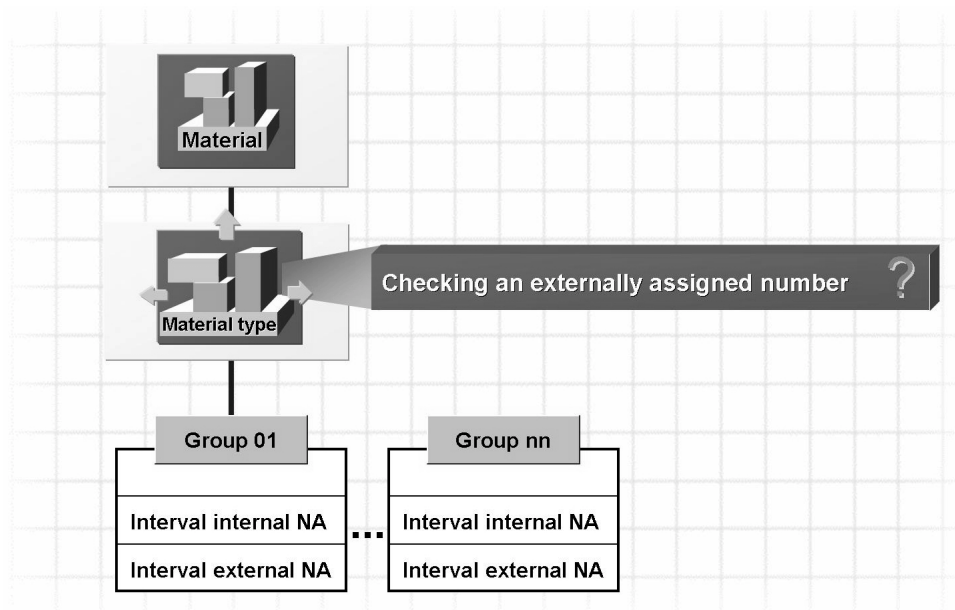


Figure 34: Number Assignment for Materials

The number ranges for material master records are administered via groups.

First you have to maintain the groups and the group intervals. Then you assign the material types to the groups.

You can assign an interval to one group only. However, you can assign one interval for the internal number assignment and one for the external number assignment to each group.

You can manually change the current number level of an interval.

In the control indicators for the material type, you can specify whether or not the number is to be checked for whether it belongs to the number range in the case of external number assignment. If you do not set the indicator for this check, then every externally assigned material number (for this material type) must be alphanumeric. In this case, you need not assign an external number range interval for the group of this material type.

In the standard system, a buffering system is used for number assignment in the case of material master records (there are 10 numbers for buffering). As a result of this buffering and the assignment of the material number before a new material master record is saved, gaps in number assignment are liable to occur. If you reset the current number level of an interval to the starting value of ZERO, these gaps will be closed when new materials are created.



Hint: You can view the specifications for number assignment for material master records from the *SAP Easy Access* screen under **Tools** → **ABAP Workbench** → **Development** → **More Tools** → **Number Ranges**. The object name is *MATERIALNR*.

Any change to the buffering counts as a modification.

You can use a user exit to use your own program for the number assignment for material master records in accordance with the specifications in your company.

Output Format of Material Number

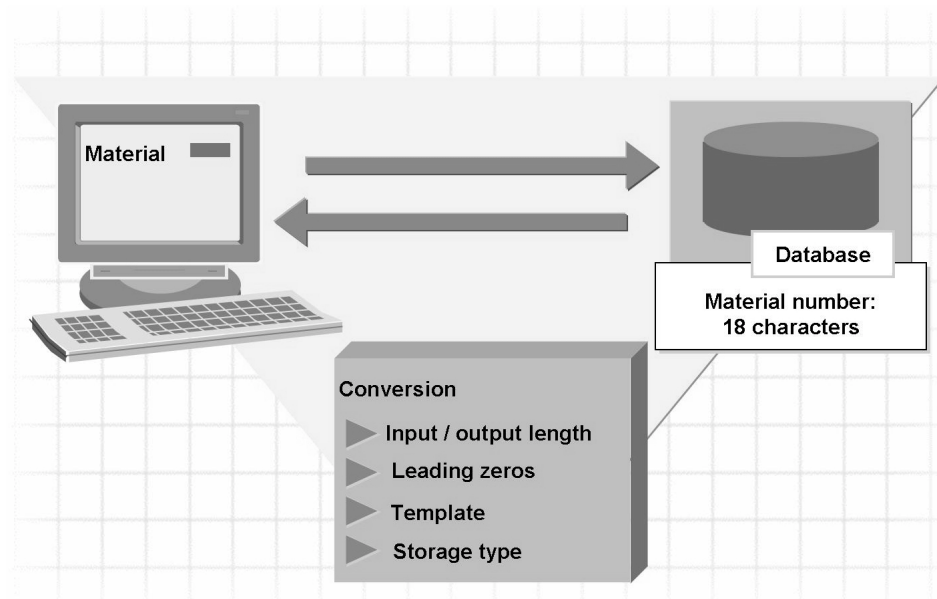


Figure 35: Material Number Format

The specifications for input/output length, for the output of the leading zeroes, and for the template settings, apply to online and print activities only.

The material number in the SAP system has a maximum of 18 characters.

You can use a template to change the format of the material number. You can thus ensure a clearer presentation for larger material numbers. You can use special characters for the template, but they may not be part of a material number. The special characters in the template are not stored with the material number.

Example:

Template	---	----	----	----	----
Material number and its format					
123456					123.456
123456XY					12.345.6XY

If you wish to interpret numeric material numbers not as numbers but as labels, you can select the lexicographical format. You must specify this before you create the first material master record.

Material Status



Material status field		Control		
Application	Application	No dialog	Warning	Error
	Purchasing			x
	BOM header	x		
	BOM item	x		
	Routing	x		
	Indep. requirements		x	
	Forecast		x	
	Materials Planning / MRP	x		
	Production order header	x		
	Production order item	x		
	PRT			x
	Plant maintenance			x
	Inventory management	x		

Figure 36: Material Status

The material status determines how a material is treated in different applications and in business transactions (such as purchasing, MRP, and use in bills of material). The material status thus enables you to restrict the usability of selected materials for the various business applications.

You can set a status in the relevant master record for each material. If a material status has been set for a material, the SAP system issues a warning or error message (according to the properties of the status) if the material is used. In the

basic data view, you can enter a **cross-plant** material status. This then applies to all plants. You can specify the material status on a **plant-specific basis** in the purchasing or MRP views, for example.



Hint: You can maintain a distribution chain-specific or cross-distribution chain material status for the sale and distribution of materials in the *Sales: Sales Org. 1* view. You specify this status in Customizing for Sales and Distribution.

The following excerpt from the SAP system Customizing shows the definition of a status for materials for which no provision has been made for either forecasting or requirements planning and neither purchasing activities nor goods movements are allowed.

The screenshot shows the SAP Customizing interface for defining a material status. The status is 'BP Blocked for Purchasing'. The interface is divided into several sections:

- Plant-specific settings:**
 - Purchasing:** Purchasing msg. is set to 'B'.
 - Production resources/tools:** PRT message is unchecked.
 - BOMs:** BOM header msg. and BOM item message are unchecked.
 - Plant maintenance:** Plant maint. message is unchecked.
 - Routing/recipe:** Routing/master recipe message is unchecked.
 - Inventory management:** Inventory mgmt msg. is unchecked.
 - Material requirements:** Ind. reqmt msg., Forecasting message, MRP message, and LT planning message are all unchecked.
 - Warehouse management:** Transfer requirement msg. and Transfer order message are unchecked.
 - Cost estimate with quantity structure:** Mat. Cost Estimate Procedure is unchecked.
 - Production:** POrder header msg. and PO/network item msg. are unchecked.
- Cross-plant settings:**
 - ALE distribution:** Distr. lock is unchecked. Profile name is empty.

A pop-up window titled 'Pu Short text' is visible, showing the following options:

Short text
No message
A Warning
B Error message

Figure 37: Define Material Status

The entry *B* for the application *Purchasing* causes an error message to be issued in the event of a purchase transaction for a material with this status 01, for example. If just a warning message is to be issued in the case of purchase transactions (instead of the error message), you must enter a material status *A* for the application *Purchasing* in the material master record.



Demonstration: Settings for Material Types

Purpose

This demonstration shows how to make Customizing settings and thus introduces the options customers have for adjusting the SAP system to their specific company requirements.

System Data

System:	Training system
Client:	Training client
User ID:	Own user ID
Password:	User password
Set up instructions:	No additional

1. Choose: *IMG* → *Logistics - General* → *Material Master* → *Basic Settings* → *Material Types* → *Define Attributes of Material Types*

Show and explain the specifications for the material type ROH.

Copy material type ROH to create a new material type for office supplies, for example, for which significantly fewer views are allowed for maintenance (the maintenance statuses *Purchasing* and *Accounting* suffice).

Create a material master record with your new material type (views *Purchasing* and *Accounting 1*).

Create another material master record with your new material type (only *Purchasing* view).

Using transaction MM50, show that no unnecessary MRP or forecast data can be maintained for either of these material master records.

2. Choose: *IMG* → *Logistics - General* → *Material Master* → *Basic Settings* → *Material Types* → *Define Number Ranges for Each Material Type*

Show the number assignment for material master records (standard setting).

Set up a separate number range for the materials of your new material type. Allow internal number assignment only and demonstrate this setting by creating new material master records.

Show the changed current number level following creation of new material master records. Show the specifications for the buffering (transaction SNRO) and name the advantages of and reasons for buffering.

3. Choose: *IMG* → *Logistics - General* → *Material Master* → *Settings for Key Fields* → *Material Types* → *Define Material Status*

Show the specifications for the material status BP.

Change the material R-T119, for example. Assign material status BP and show the effects.



Exercise 3: Material Type

Exercise Duration: 30 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Check the attributes of material types
- Define a new material type
- Configure number assignment for material master records

Business Example

It has been established that many of the products needed in the organizational units of your company are manufactured in other organizational units and can, therefore, be procured internally. To take account of the special aspects of such an internal procurement chain, your implementation team decides to create a new material type.

Many of the materials are manufactured in one plant and are then supplied to another plant for the manufacture of a different material. Your new material type will thus combine the attributes of the standard material types ROH and HALB.

System Data

System:	Training system
Client:	Training client
User ID:	SCM550-##
Password:	User password
Set up instructions:	IDES

Task 1:

Define a new material type

1. Note down in keywords the controls that you can influence with the material type. Name possible reasons or different examples that, in your opinion, justify a separate material type.

2. Define a new material type **GR##** with the designation **Material Type ##**. Choose the material type **ROH** as the template from which to copy your new material type.

Define the following attributes for the new material type. Note how you achieve these attributes.

Specify that both **external** and **internal procurement** are allowed for the new material type.

Specify that the material number may only be assigned **internally** (by the system) for materials of the new type.

Specify that the following user departments and work areas are allowed to maintain the master records of materials belonging to the new material type:

- Work Scheduling
- Accounting
- MRP
- Purchasing
- Costing
- Basic Data
- Storage
- Forecasting
- Sales

Continued on next page

— Plant and Storage Location Stocks

Specify that only price control **S** is allowed and is mandatory for the new material type.

All other settings are to be identical to those for the material type **ROH** and thus need not be changed.

Task 2:

Number assignment

1. You wish to use the internal number range interval **200000000 – 299999999** for your material type. Check whether this interval already exists.
-
-

2. Define the correct number range group for your material type in such a way that the numbers for the group can only be assigned *internally* from the number range interval *from 200000000 to 299999999*.

3. Test your settings by creating a new material master record with your material type **GR##** for plant 1000. Check the special attributes that you have defined for your material type.

Number assignment:

Is external number assignment possible for your material type? Test this using any numeric or alphanumeric number.

Views:

Which views are offered to you for creation?

Select only the following views:

Basic Data 1, MRP 1, MRP 2, and Accounting 1.

Enter the following data:

Basic Data 1: Name your material **SCM550-##**. Use **pc** as the base unit of measure and **001** as the material group.

Continued on next page

MRP 1: The MRP type for the new material is **ND**.

MRP 2: Which procurement type is suggested, and why?

Do not make any changes to this view.

Accounting 1: Which kind of price control is suggested? Can you change the price control?

Which valuation classes are possible?

Choose the valuation class 3000 and enter a standard price of 10 EUR/pc.

Material number: _____

Solution 3: Material Type

Task 1:

Define a new material type

1. Note down in keywords the controls that you can influence with the material type. Name possible reasons or different examples that, in your opinion, justify a separate material type.

Answer: Among other things, the material type controls:

- The procurement type
- The allowed views
- Quantity and value updating
- Account determination
- Number assignment
- Field selection

You thus create a new material type if you wish to specify that fewer views can be maintained, postings are to be made to different accounts via automatic account determination, or a different field selection is to be used for certain materials, for example.

2. Define a new material type **GR##** with the designation **Material Type ##**. Choose the material type **ROH** as the template from which to copy your new material type.

Define the following attributes for the new material type. Note how you achieve these attributes.

Specify that both **external** and **internal procurement** are allowed for the new material type.

Specify that the material number may only be assigned **internally** (by the system) for materials of the new type.

Specify that the following user departments and work areas are allowed to maintain the master records of materials belonging to the new material type:

- Work Scheduling
- Accounting

Continued on next page

- MRP
 - Purchasing
 - Costing
 - Basic Data
 - Storage
 - Forecasting
 - Sales
 - Plant and Storage Location Stocks
-
-

Specify that only price control **S** is allowed and is mandatory for the new material type.

Continued on next page

All other settings are to be identical to those for the material type **ROH** and thus need not be changed.

- a) Choose: *IMG* → *Logistics - General* → *Material Master* → *Basic Settings* → *Material Types* → *Define Attributes of Material Types*

- b) Select *ROH*.
Choose *Copy as*.
Enter the material type *GR##* and the description *Material Type ##*.
Choose *Continue*. This causes material type ROH to be copied.

- c) Select your new material type and choose *Details*. Maintain the special attributes:
Enter **2** for *External Purchase Orders*.
Enter **2** for *Internal Purchase Orders*.
Deselect the *External Number Assignment Without Check* indicator.
Select the following user departments/work areas: *Basic Data, Accounting, Sales, Costing, MRP, Purchasing, Work Scheduling, Storage, Plant Stocks, Storage Location Stocks, and Forecasting*.
You have to scroll down to see all user departments. Deselect any non-relevant user departments.
Change the default for price control to *standard price* and select the *Price Control Mandatory* field.
Save your entries.

Task 2:

Number assignment

1. You wish to use the internal number range interval **20000000** – **29999999** for your material type. Check whether this interval already exists.
-

Continued on next page

- a) Choose: *IMG* → *Logistics - General* → *Material Master* → *Basic Settings* → *Material Types* → *Define Number Ranges for Each Material Type*

Choose *Overview*.

The following groups already exist:

Intervals for ...	internal Number assignment		external Number assignment	
Description	from	to	from	to
Group 1:		1 9999999	A	ZZZZZZZZ
CRM products:	100000000	199999999		
SCM:	200000000	299999999		

The desired interval thus already exists and has been assigned to the group **SCM**.

2. Define the correct number range group for your material type in such a way that the numbers for the group can only be assigned *internally* from the number range interval *from 200000000 to 299999999*.

- a) Choose: *IMG* → *Logistics - General* → *Material Master* → *Basic Settings* → *Material Types* → *Define Number Ranges for Each Material Type*

- b) Choose *Maintain Groups*.

Select the group *SCM*.

Position your cursor on your material type GR## and choose *Select Element*.

Choose *Assign Element Group*.

Save your input.

3. Test your settings by creating a new material master record with your material type GR## for plant 1000. Check the special attributes that you have defined for your material type.

Number assignment:

Is external number assignment possible for your material type? Test this using any numeric or alphanumeric number.

Continued on next page

Views:

Which views are offered to you for creation?

Select only the following views:

Basic Data 1, MRP 1, MRP 2, and Accounting 1.

Enter the following data:

Basic Data 1: Name your material **SCM550-##**. Use **pc** as the base unit of measure and **001** as the material group.

MRP 1: The MRP type for the new material is **ND**.

MRP 2: Which procurement type is suggested, and why?

Do not make any changes to this view.

Accounting 1: Which kind of price control is suggested? Can you change the price control?

Which valuation classes are possible?

Choose the valuation class 3000 and enter a standard price of 10 EUR/pc.

Continued on next page

Material number: _____

- a) On the *SAP Easy Access* screen, choose:
Logistics → *Materials Management* → *Material Master* → *Material*
→ *Create (General)* → *Immediately*

- b) If you enter a number externally (for example, R-##), you should get the system message 'No external number assignment possible for material type "Material Type-##" when you select *Continue*.



Hint: However, if you get to the view selection screen, recheck the attributes of your material type to see whether the indicator for *Ext. Number Assignment Without Check* is still set.

- c) The following views should be allowed: Basic Data 1 and 2, Sales: Sales Org. Data 1 and 2, Sales and Distribution: Gen./Plant Data, Foreign Trade: Export Data, Sales Text, Purchasing, Foreign Trade: Import Data, Purchase Order Text, MRP 1, 2, 3, and 4, Forecasting, Work Scheduling, Gen. Plant Data/Storage 1 and 2, Accounting 1 and 2, Costing 1 and 2.

- d) Enter the above-mentioned data in the following views.

Basic Data 1: Description *SCM550-##*, base unit of measure *pc*, and material group *001*

MRP 1: MRP type *ND*

MRP 2: The default procurement type is **X**, since both in-house production and external procurement are possible.

Accounting 1: Price control *S* (standard price) should be the default value. In addition, it should not be possible to change this value.

You can view the allowed valuation classes via the *possible entries* for the *Valuation Class* field (F4 help). The valuation classes 3000, 3001, 3002, and 3003 are offered to you. The allowed valuation classes are dependent on the account category reference in the material type (see the lesson "Valuation and Account Assignment"). Choose the valuation class 3000 and enter the standard price of 10 EUR/pc.

Save your material master record.



Lesson Summary

You should now be able to:

- Create new material types
- Set up material number assignment

Lesson: Field Selection Control



Lesson Duration: 90 Minutes

Lesson Overview

For some materials, it can make sense to define certain fields of the material master record as mandatory (required-entry) fields. Conversely, it is better to suppress (hide) other fields that are not needed. Field selection control is the means by which you can achieve these objectives. This lesson gives you an overview of possibilities and interrelationships in the definition of field attributes.



Lesson Objectives

After completing this lesson, you will be able to:

- Determine the field selection control and name its influencing factors



In field selection, we are concerned with field attributes. The instructor should point out that the combination of the attributes “hide” and “required entry” for a field makes little sense, since these are contradictory specifications. In field selection control, you can only specify field attributes - not field content. For this reason, in this lesson it may be useful to refer participants to the profiles (MRP profile/forecast profile).

Business Example

For your new material type, it is necessary to maintain certain fields in the material master record. You wish to ensure that these fields are always populated with data.

Overview of Settings for Field Selection

The Customizing activities for *field selection* allow you to specify for a particular enterprise whether or not a field is to be hidden, displayed only, or ready to accept input during material master record maintenance and, in the latter case, whether user input is mandatory or optional.

Different “areas of validity” are taken into account via the various influencing factors. Thus, for example, you can change the field selection for materials of a certain material type or belonging to a certain industry sector.

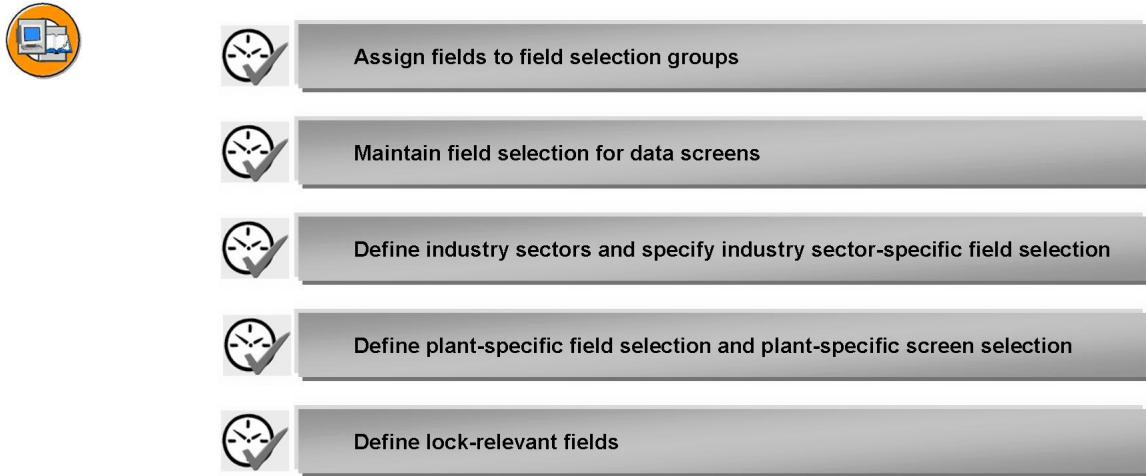


Figure 38: Material Master Record: Field Selection

Field Selection Groups and Field References

When you process a material master record, several Customizing settings are applied to determine the concrete field selection.

Field Selection Groups

In contrast to many other settings for field selection in the SAP System, you cannot make the field selection settings for material master records for each field individually, but only for a group of fields in each case.

In material master record maintenance, the field selection is performed by using field selection groups, which are assigned to the individual fields of the master record. For each field selection group, you can specify which attribute the fields of this group are to have:

- **Hide** means that the fields are suppressed (invisible) during maintenance of the relevant material master record.

This attribute is appropriate for fields that are not needed in your enterprise.

- **Display** means that the fields appear on the screen but are not ready to accept input.

This attribute is appropriate for fields that you have populated in your enterprise (at the time of data transfer, for example) and whose values are not to be changed.

- **Required entry** means that user input in these fields is mandatory.

This attribute is appropriate for fields that you always want to have populated with user-provided data in your enterprise.



Hint: When making any changes, note that there are individual fields in the SAP System for which input is demanded by the program. You should not suppress such fields!

- **Optional entry** means that user input is possible but not mandatory.

This attribute is appropriate for fields that you wish to use for certain information if necessary, but for which input is not an absolute must.

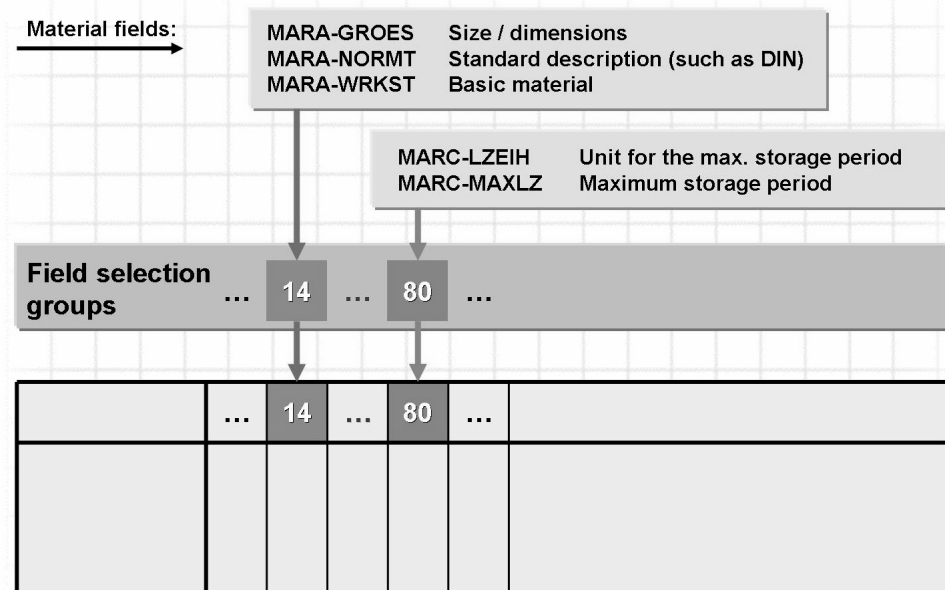


Figure 39: Assigning Fields to Field Selection Groups

You can change the assignment of the *fields for material master records* to the field selection groups. You will make use of this option in cases where not all fields of the same field selection group are to be controlled uniformly. In the current SAP release, there are 240 field selection groups that are not all used in the standard system and which can be used for customer-specific changes. Further details are provided in the documentation for the Implementation Guide.

Influencing Factors

Field selection is influenced by various factors, such as the material type and the industry sector. These influencing factors are derived from the special business process of the material master record maintenance.

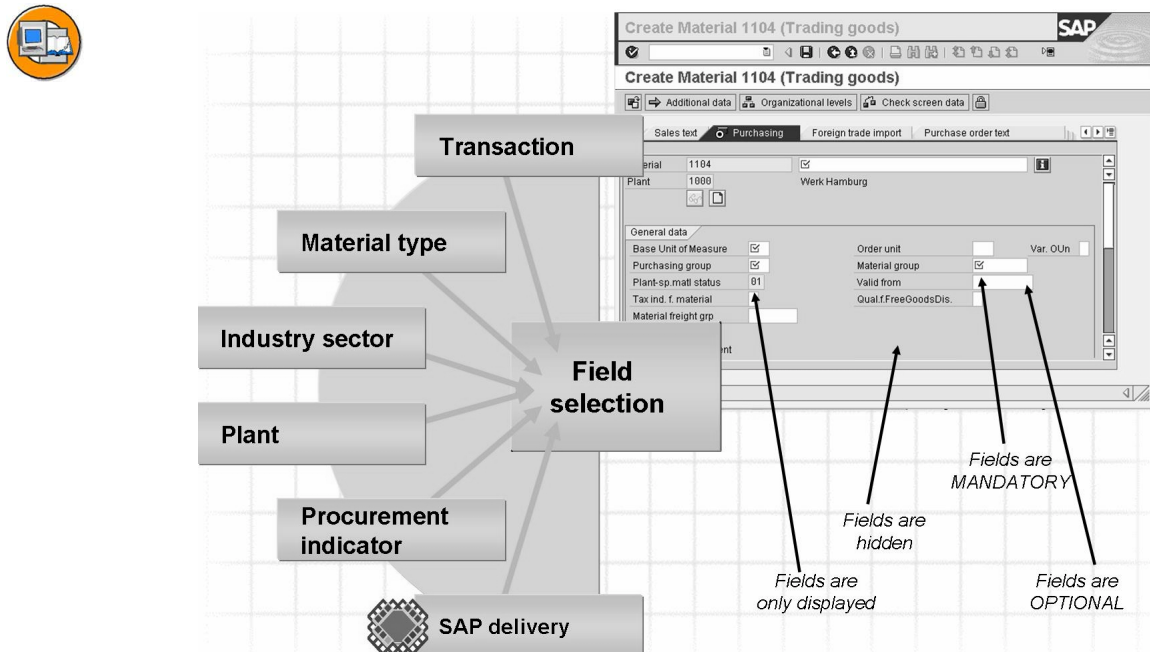


Figure 40: Material Master Record Field Selection: Influencing Factors

Field selection for material master records depends on:

- The concrete **transaction** that the user invokes
A different field selection applies when a material master record is created than when one is merely displayed.
- The **procurement type E or F** of the concrete material
The field selection for material master records with in-house production differs from that for master records with external procurement.
- The concrete **material type**
- The concrete **plant** for which you are maintaining material data
You can thus control field selection for the maintenance of material master records on a plant-specific basis.
- The concrete **industry** you have assigned to the material
You can thus make different specifications for field selection for materials belonging to the *chemical* and *mechanical engineering* industries.
- The concrete SAP System
The field references of the **SAP delivery**, which are always applied, take into account the SAP solution (industry, retail, business solution) and the release level.

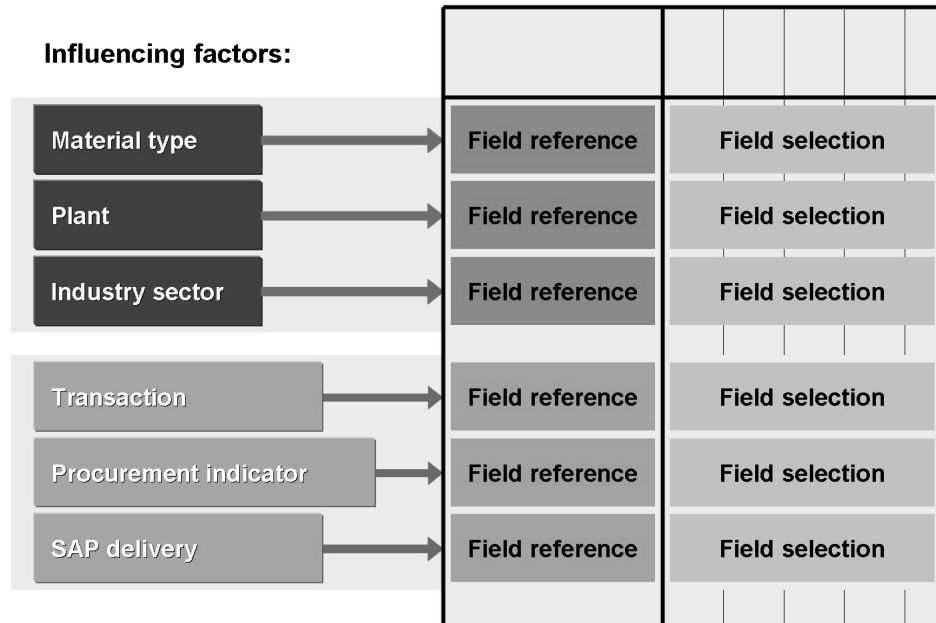


Figure 41: Field References

Field selection is controlled by field references. You can assign field references to the influencing factors *material type*, *plant* and *industry sector* in Customizing. SAP maintains the assignment of the field reference to the transaction codes, to the procurement types, and for the SAP delivery. You cannot change this assignment of these field references in Customizing.



Hint: You should only create customer-specific (new) field references for material master record field selection for the influencing factors **material type**, **plant**, and **industry sector**.

In the standard system, the designations of the keys for the field references match up with those of the influencing factor. Examples:

- Material type:
Field reference ROH for material type ROH (raw material)
- Plant:
Field reference 0001 for plant 0001
- Industry sector:
Field reference M for industry M (mechanical engineering)
- Transaction:
Field reference MM01 for the transaction *Create Material* (transaction MM01)
- Procurement type:
Field reference E for materials with procurement type E (in-house production)

If you have to change the field selection, it may be necessary to assign individual fields to other field selection groups.

You change the field selection control itself via field references. Which field reference you have to change in the process depends on the “desired area of validity”. You will thus change the field reference M, for example, if your change is to affect all materials of industry sector M.

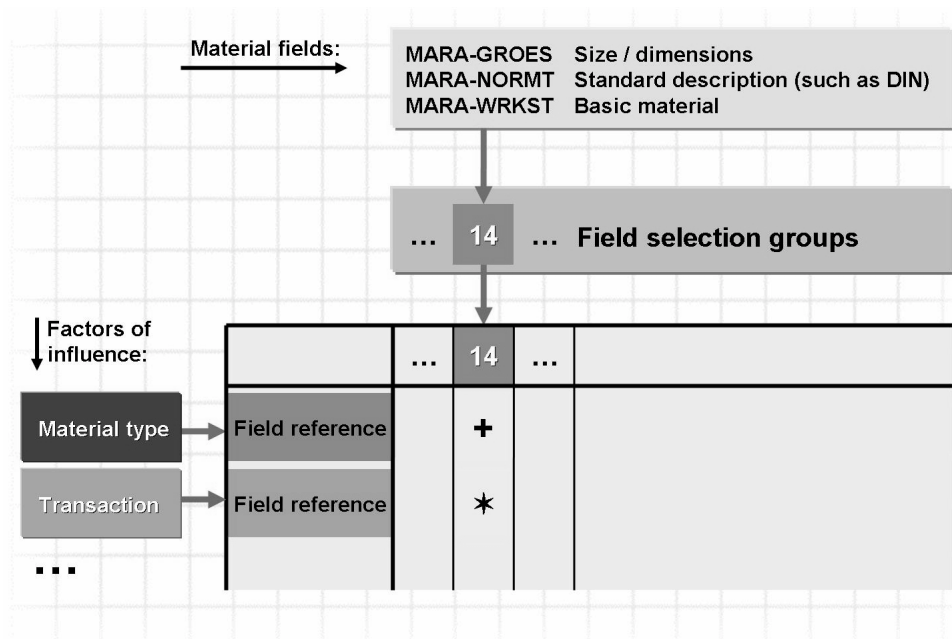


Figure 42: Field Selection Groups and Field References



Hint: Note that several field references are effective in controlling field selection. The system links together the entries of all field references applicable to the relevant transaction.

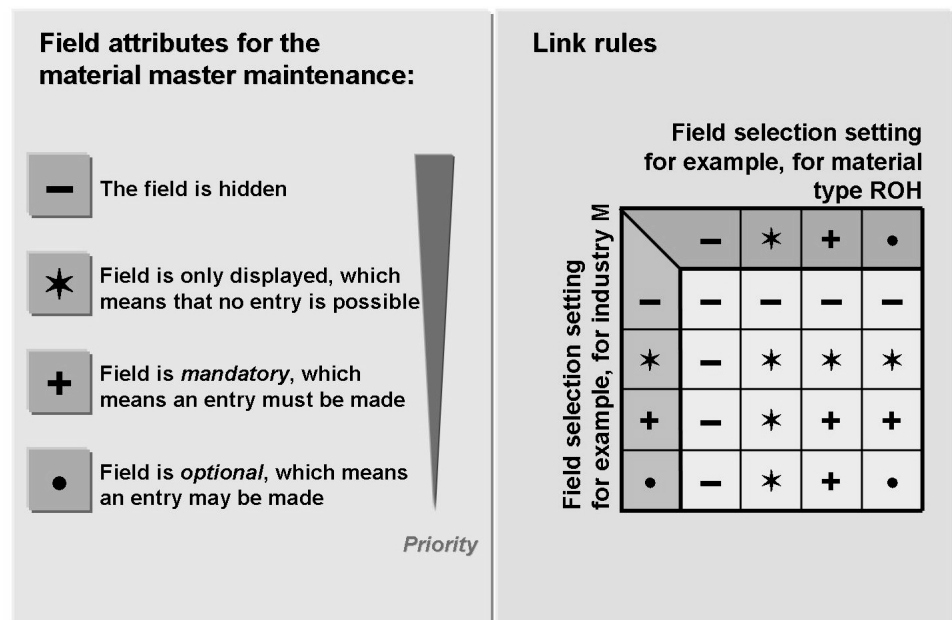


Figure 43: Field Attributes and Link Rules

The link rules shown in the figure determine the result of field selection for each field selection group. The link rules are predefined by SAP and cannot be changed.

The symbols have the following meanings:

- Hide
- * Display
- + Required entry
- . Optional entry

As you can see in the table, if the specifications diverge, the attribute with the highest priority always applies to each field selection group.

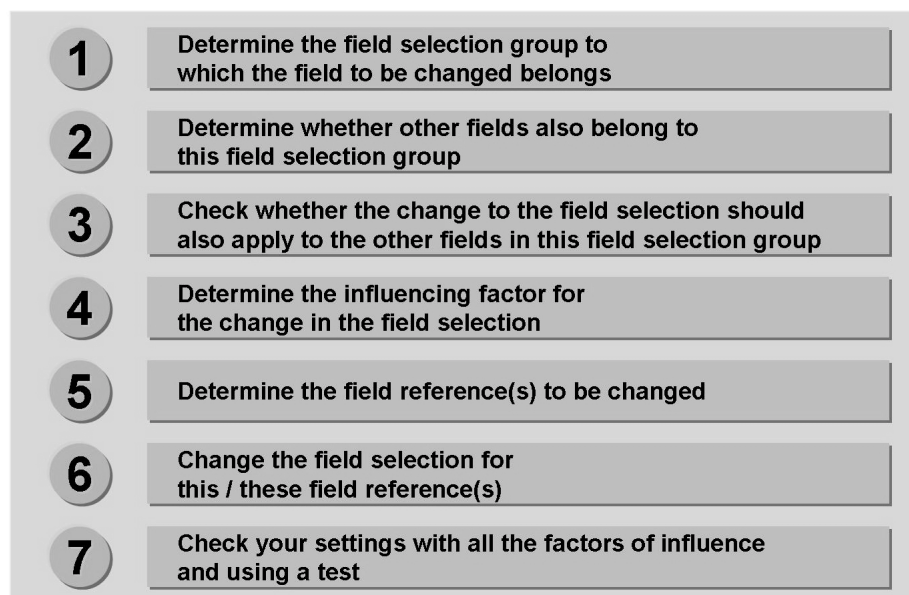


Figure 44: Material Master Record Field Selection: Procedure

Settings for Field Selection in the SAP System

The following excerpt from the SAP System Customizing shows the assignment of field selection groups to material master record fields.

Change View "Field Groups": Overview

New Entries

Field name in full	Short Text	Sel. gr...	
MARA - AESZN	Document change number (without document management system)	12	↔
MARA - BEGRU	Authorization Group	36	↔
MARA - BEHVO	Container requirements	87	↔
MARA - BISMT	Old material number	11	↔
MARA - BLANZ	Number of sheets (without Document Management system)	12	↔
MARA - BLATT	Page number of document (without Document Management system)	12	↔
MARA - BMATN	Number of firm's own (internal) inventory-managed material	123	↔
MARA - BREIT	Width	18	↔
MARA - BRGEW	Gross weight	16	↔
MARA - BSTME	Order unit	21	↔
MARA - BWSCL	Source of Supply	158	↔
MARA - BWVOR	Procurement rule	158	↔


Sort and position

Field name Field name Entry 98 of 856

Field sel. group Field sel. group

Figure 45: Assign Fields to Field Selection Groups

You can use the functions at the bottom to re-sort the table entries or quickly position the cursor on a certain table entry. Before changing the grouping, you should get an overview of the current grouping. To do so, you can also use the print and display function, which you can invoke from the menu bar via *Table View* → *Print*.

You can also use the  with quick info (*To Field Selection Maintenance*) function to go directly to field selection maintenance for the fields in this field selection group.

The following excerpt from the SAP System Customizing shows the maintenance of the fields belonging to field selection group 14. You see the fields assigned to this group in the upper block.

Field ref.	Hide	Display	Reqd entry	Opt. entry
0001	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
DIEN	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
F	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
FERT	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
HALB	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
KB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
M	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
MM02	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
MM03	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
SAP1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
SAP2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>


Figure 46: Maintain Field References

In the middle part of the screen, you can choose whether the fields of the field selection group shown are to be suppressed or displayed only, or whether these fields are to be ready to accept input as *optional* or *mandatory* fields. The priority of these four variants decreases from left to right. This means that the suppression of fields has the highest priority.

Here too, you can use the functions at the bottom to re-sort the table entries or quickly position the cursor on a certain table entry.

The SAP System contains field references that apply to the entire client. The field references SAP1 and SAP2 apply to the standard SAP System (industry solutions). SAPR applies to mySAP Retail clients. You should not change these field references.

The SAP System contains the field reference KB, which is valid for all types of client. If the field selection is to be changed at client level, you can adjust this field reference according to the requirements of your enterprise.

Use the  quick info function (*Where-Used List*) to view the “area of validity” of the selected field reference:

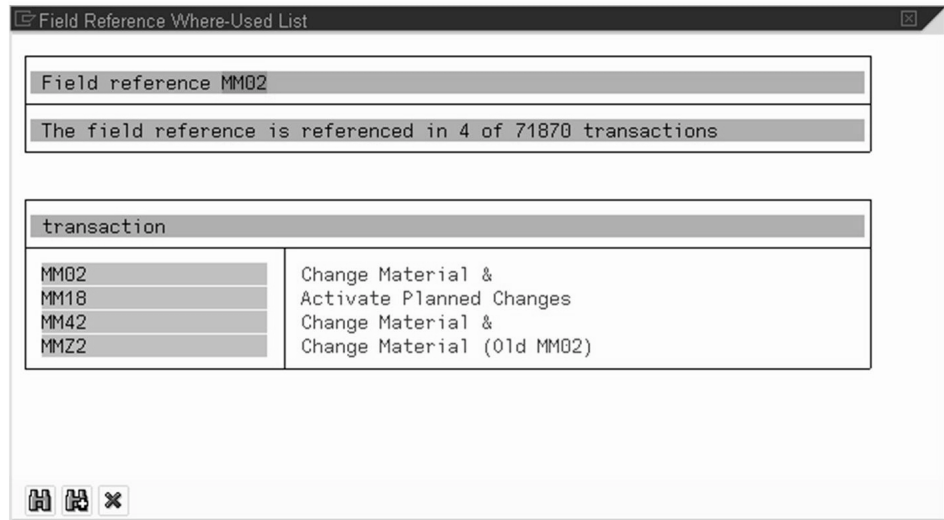


Figure 47: Where-Used List for Field Reference

The field reference MM02, for example, is a valid influencing factor when each of the transactions *MM02*, *MM18*, *MM42*, and *MMZ2* is invoked.

The following excerpt from the SAP System Customizing shows the assignment of field references to individual plants.

Change View "Field Selection at Plant Level": Overview				
Plant	Name 1	Maintenance status	Field reference	
2500	Rotterdam Distribution Center	KDEVALBPQSZXCFCG	0001	
2505	Rotterdam Port DC	KDEVALBPQSZXCFCG	0001	
3000	New York	KDEVALBPQSZXCFCG	0001	
3050	UK	KDEVALBPQSZXCFCG	0001	
3100	Chicago	KDEVALBPQSZXCFCG	0001	
3105	Chicago	KDEVALBPQSZXCFCG	0001	
3110	Auto Supplier US	KDEVALBPQSZXCFCG	0001	
3111	Auto OEM US	KDEVALBPQSZXCFCG	0001	
3112	Auto Wholesale US	KDEVALBPQSZXCFCG	0001	
3200	Atlanta	KDEVALBPQSZXCFCG	0001	
3300	Los Angeles	KDEVALBPQSZXCFCG	0001	
3350	San Francisco	KDEVALBPQSZXCFCG	0001	

Figure 48: Assignment of Field Reference and Plant

Further Factors Influencing Field Selection

There are further dependencies in addition to the specifications for field selection that you can make in Customizing. If you enter the value *FX* (indicator for fixed lot size) in the *MRP Lot Size* field in the standard view MRP 1, for example, the *Fixed Lot Size* field becomes mandatory. This is controlled by the program you invoke when you maintain material master records.

This program also causes the *Material Group* field in the *Basic Data 1* view to become a *mandatory (required-entry) field* whenever you also select purchasing data for the creation of a material master record.

You can define *lock-relevant fields* for the material master record. You can use this function only in material master records for industry, not in master records for mySAP Retail. You specify in Customizing which fields of the material master record are lock-relevant. These fields cannot subsequently be changed if a material is locked (fixed, frozen) during maintenance of the master record.

You can lock (fix or freeze) a material at any time during material master maintenance. However, the material can be unlocked only with special authorization.



Demonstration: Field Selection for Material Master Records

Purpose

This demonstration shows how to make Customizing settings and thus introduces the options customers have for adjusting the SAP System to their specific company requirements.

System Data

System:	Training system
Client:	Training client
User ID:	Own user ID
Password:	User password
Set up instructions:	No additional

1. Invoke material master maintenance (for example, transaction MM02 for material M-01) and show which fields in the Basic Data 1 view are *mandatory* and which are *optional* in the standard SAP System.

Goal: show changed specifications for field selection for the new material type (GR00 = copy of participants' material types).

Suggestion: *Gross Weight*, *Net Weight*, and *Unit of Weight* fields.

Show the field label for one of these fields (F1 → technical information: MARA-BRGEW)

2. Choose: *IMG* → *Logistics - General* → *Material Master* → *Field Selection* → *Assign Fields to Field Selection Groups*

Show and explain these specifications.

All three fields (and others) belong to field selection group 16.

Assumption: field selection should and can be controlled on a uniform basis for all 11 fields.

3. Choose: *IMG* → *Logistics - General* → *Material Master* → *Field Selection* → *Maintain Field Selection for Data Screens*

Show and explain this activity and its “handling”. Note the customer namespace (see transaction SE11 for the table → delivery class G).

Define a suitable field reference ZM00 for the new material type, via which the aforementioned fields become mandatory fields. Assign this field reference to material type GR00.

Create a new material master record with the material type GR00. Show that the three fields *Gross Weight*, *Net Weight*, and *Unit of Weight* are now mandatory, along with certain others such as the *Source List Requirement* field.

4. Choose: *IMG* → *Logistics - General* → *Material Master* → *Field Selection* → *Assign Fields to Field Selection Groups*

Assign the field selection group 102 to the three fields *Gross Weight*, *Net Weight*, and *Unit of Weight*, because it is “empty”.

Show that all settings for field selection group 016 must be transferred for the selection group 120 (example: field reference DIEN).

Change the field reference ZM00 (field selection group 016 = optional field and field selection group 120 = required-entry field). Show that the field selection specifications for material type GR00 are now “as desired”.

5. *Possibly not until after the exercise in connection with the discussion:*

Choose: *IMG* → *Logistics - General* → *Material Master* → *Field Selection* → *Define Industry Sectors and Industry-Sector-Specific Field Selection*

Show and explain this activity.

Choose: *IMG* → *Logistics - General* → *Material Master* → *Field Selection* → *Define Plant-Specific Field Selection and Plant-Specific Screen Selection*

Show and explain this activity. Point out the significance of the indicators in the *Maintenance Status* column (and “danger involved in changing them”).

Define a field reference ZW00 of your own for your new plant - along the lines of the exercise.

6. Choose: *IMG* → *Logistics - General* → *Material Master* → *Field Selection* → *Maintain Field Selection for Data Screens*

Select the following field references in accordance with the figure “Material Master Record Field Selection: Field Reference”:

- ZM00 for the materials belonging to your material type GR00
- ZW00 for the maintenance of plant-dependent data in your plant
- M for the maintenance of materials belonging to the mechanical engineering industry
- MM01 for the *Create Material* transaction
- Possibly E or F or “neither”, depending on which procurement type has been defined for your material type
- SAP1 and SAP2 and KB, because these field references apply to the whole client

Choose: *Selection Criteria* → *All Selected Entries* and show the “result” of all specifications for selected field selection groups.



Exercise 4: Field Selection

Exercise Duration: 30 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Name the influencing factors that are available to control field selection for material master records
- Configure field selection for material master records

Business Example

In order that users do not forget to maintain the *Old Material Number* field, it has been decided to make this field **mandatory**. However, this field attribute may only be effective for your new material type **GR##**.

In the case of material type **ROH**, this field must remain an **optional entry** field.

System Data

System:	Training system
Client:	Training client
User ID:	SCM550-##
Password:	User password
Set up instructions:	See IDES

Task 1:

Field selection settings for materials of the new material type

1. Before making the required Customizing settings for field selection, note which steps and entries are necessary. Tip: The steps are listed on one of the slides for this lesson.

Step 1:

Step 2:

Step 3:

Step 4:

Continued on next page

Step 5:

Step 6:

Step 7:

2. After considering the matter, configure the *Old Material Number* field as a *mandatory* (required entry) field. In doing so, use a new field reference with the key **ZM##**.

Note that your Customizing changes are only to apply to the new material type **GR##**.

Do not change any settings that might affect the other exercise groups!



Caution: It is not necessary to assign the *Old Material Number* field to a different field selection group!

Task 2:

Plant-dependent settings

1. How do you make the *Availability Check* field (this field is located on the MRP 3 view) a *mandatory field* for all material master records of your new plant TR##?

Change the field selection control for this field and the influencing factor *plant* using the same procedure as in the previous exercise.

Are any other fields affected by a change in the field selection? (Please DO NOT assign this field to another field selection group!)

Make the settings. Use the key **ZW##** as the new field reference.

2. Test your settings:
Extend the material master record from the lesson “Settings for Material Types”, task 2, subtask 3, by adding the *MRP 3* view for your new plant TR##. Enter the value **01** (= daily requirement) in the *Availability Check* field.

Continued on next page

3. *Optional*

How can you prevent the unnecessary creation of storage and sales data for the materials in plant 1400?

Is it possible to make this setting dependent on the *procurement type* or *material type*?

Do not make this change!

Solution 4: Field Selection

Task 1:

Field selection settings for materials of the new material type

1. Before making the required Customizing settings for field selection, note which steps and entries are necessary. Tip: The steps are listed on one of the slides for this lesson.

Step 1:

Step 2:

Step 3:

Step 4:

Step 5:

Step 6:

Step 7:

Continued on next page

-
- a) For the Customizing settings for field selection, you must follow the following steps:

Step 1

You have to determine the field selection group to which this field belongs.

Step 2

Check whether there are further fields in this field selection group.

Step 3

If there are other fields in this field selection group, you must decide whether the field selection is also to apply to the other fields of the field selection group concerned, since field selection can only be specified for field selection groups. If the answer is *YES*, you need take no further action. If the answer is *NO*, you must assign the field to another (if possible, a free) field selection group in the customer name range. You can assign several fields from the various field selection groups to a free field selection group.

Step 4

Determine the influencing factor for field selection.

Step 5

Determine the current field reference for the desired influencing factor.

Step 6

Change the field reference thus determined, or create a new one with the desired field attributes. In the latter case, you must then assign the new field reference to the material type.

Step 7

Finally, check whether your field selection shows the desired result.



Hint: If you are not satisfied with the result of the field selection settings, check the other influencing factors and find out whether the problem stems from the linkage of the individual field references. If, for example, you change a field previously defined as mandatory into an optional one in a field reference (for the material type, for instance), but the field is defined as mandatory in another field reference (for the transaction, for instance), the attribute *mandatory* is retained.

Continued on next page

2. After considering the matter, configure the *Old Material Number* field as a *mandatory* (required entry) field. In doing so, use a new field reference with the key **ZM##**.

Note that your Customizing changes are only to apply to the new material type **GR##**.

Do not change any settings that might affect the other exercise groups!



Caution: It is not necessary to assign the *Old Material Number* field to a different field selection group!

- a) Step 1:

Determine field selection group:

On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Material Master* → *Material*
→ *Display* → *Display Current ..*

Enter any material number (for example, M-01) and choose the *Basic Data 1* view. Use the **F1** key to call up the help text for the *Old Material Number* field.

Choose *Technical Information* in the Performance Assistant.

The label of the *Old Material Number* field is *MARA-BISMT*.

To which field selection group does this field belong?

Choose: *IMG* → *Logistics - General* → *Material Master* → *Field Selection* → *Assign Fields to Field Selection Groups*

Position the cursor on the field label *MARA-BISMT*.

You get the information that this field is assigned to *field selection group 11*.

- b) Steps 2 and 3:

To find out whether any other fields belong to this group, choose *Sort by Field Selection Group* and position the cursor on *Field Selection Group 11*.

The only field belonging to field selection group 11 is the *Old Material Number* field. You therefore do not need to move this field into a different field selection group. (Please do not change the field selection group, either for this field or for any other, in the course of this exercise.)

- c) Step 4:

Continued on next page

The scenario specifies that the influencing factor for this change in the field selection is the *material type GR##*.

d) Step 5:

Determine the current field reference for the influencing factor *material type*.

Choose: **IMG** → **Logistics - General** → **Material Master** → **Basic Settings** → **Material Types** → **Define Attributes of Material Types**

Material type GR## has automatically acquired the *field reference ROH* through the copying of material type ROH.

Because the field selection is to apply only to the new material type GR##, you must create a new field reference. You must then enter this new field reference in the attributes of the material type.

e) Step 6:

To create the new field reference, choose: **IMG** → **Logistics - General** → **Material Master** → **Field Selection** → **Maintain Field Selection for Data Screens**

Select (e.g.) field reference *ROH* and choose *Copy as*.

Enter *ZM##* as the new field reference and change the setting for *field selection group 11* from *optional* to *Reqd entry*.

Save your new field reference.



Hint: You can also branch directly from the activity *Assign Fields to Field Selection Groups* to field selection. To do so, choose the *To Field Selection Maintenance* button next to the field selection group determined.

To assign the field reference to the material type GR##, choose: **IMG** → **Logistics - General** → **Material Master** → **Basic Settings** → **Material Types** → **Define Attributes of Material Types**.

Select *GR##* and choose *Details*.

Change the field reference from *ROH* to *ZM##*.

Save your entries.

You need not take the other influencing factors into consideration. This is because in the standard system the field is *optional* (that is, neither hidden nor display only).

f) Step 7:

Continued on next page

Check that the new field selection is working:

On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Material Master* → *Material*
→ *Create General* → *Immediately*.

Choose an industry sector (e.g. M), material type GR##, and the view *Basic Data 1*.

The *Old Material Number* field should now be *mandatory*.

Exit the transaction and create a material with the material type ROH.

The *Old Material Number* field should now be *optional*.

Task 2:

Plant-dependent settings

1. How do you make the *Availability Check* field (this field is located on the MRP 3 view) a *mandatory field* for all material master records of your new plant TR##?

Change the field selection control for this field and the influencing factor *plant* using the same procedure as in the previous exercise.

Are any other fields affected by a change in the field selection? (Please DO NOT assign this field to another field selection group!)

Make the settings. Use the key *ZW##* as the new field reference.

- a) The procedure is the same as in the previous exercise.

Step 1

Determine field selection group

On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Material Master* → *Material*
→ *Display* → *Display Current ..*

Enter any material number (for example, M-01) and choose the *MRP 3* view for plant 1000.

Call the help text for the *Availability Check* field using the F1 key. Choose *Technical Information* in the Performance Assistant.

The label of the *Availability Check* field is *MARC-MTVFP*.

To which field selection group does this field belong?

Continued on next page

Choose: **IMG** → **Logistics - General** → **Material Master** → **Field Selection** → **Assign Fields to Field Selection Groups**

Position the cursor on the field label *MARC-MTVFP*. This field is assigned to *field selection group 92*.

b) Steps 2 and 3:

To find out whether any other fields belong to this field selection group, choose *Sort by Field Selection Group*. Position the cursor on *field selection group 92*.

Availability Check and *Description* are the only fields belonging to *field selection group 92*.



Hint: You can ignore the *Description* field. It is not necessary to assign the *Availability Check* field to a different field selection group.

c) Step 4:

The influencing factor here is plant TR##.

d) Step 5:

Check whether a plant-dependent field reference has already been copied as a result of the copying of plant 1200.

Choose: **IMG** → **Logistics - General** → **Material Master** → **Field Selection** → **Define Plant-Specific Field Selection and Plant-Specific Screen Selection**

The field reference 0001 has been entered for plant TR##. Since the change in the field selection is only to apply to the new plant TR##, you must create a new field reference and then enter it in this table in this task too.

e) Step 6:

To create a new field reference, choose: **IMG** → **Logistics - General** → **Material Master** → **Field Selection** → **Maintain Field Selection for Data Screens**.

Select field reference 0001 and choose *Copy as*.

Enter *ZW##* as the new field reference and change the setting for *field selection group 92* from *optional* to *mandatory*.

Save your new field reference.

Continued on next page

To enter the field reference for plant TR##, choose: **IMG** → **Logistics - General** → **Material Master** → **Field Selection** → **Define Plant-Specific Field Selection and Plant-Specific Screen Selection**.

Change the field reference for plant TR## from 0001 to ZW## and save your entry.

f) Step 7:

Check that the new field selection is working:

On the *SAP Easy Access* screen, choose:

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

Choose an industry sector (for example, M), material type (such as GR##), and the view *MRP 3* for plant TR##.

The *Availability Check* field should be mandatory.

Exit the transaction and create a material for plant 1000.

The *Availability Check* field should still be optional.

2. Test your settings:

Extend the material master record from the lesson “Settings for Material Types”, task 2, subtask 3, by adding the *MRP 3* view for your new plant TR##. Enter the value **01** (= daily requirement) in the **Availability Check** field.

a) **SAP Menu: Logistics** → **Materials Management** → **Material Master** → **Material** → **Create (General)** → **Immediately (transaction code MM01)**

Enter your material number and choose the *MRP 3* view for plant TR##.

The *Availability Check* field is mandatory for plant TR##.

Enter the value 01. If you are asked to enter an MRP type in the *MRP 1* view when you save, use MRP type *ND*.

Continued on next page

3. *Optional*

How can you prevent the unnecessary creation of storage and sales data for the materials in plant 1400?

Is it possible to make this setting dependent on the *procurement type* or *material type*?

Do not make this change!

Answer: You could prevent the maintenance of storage and sales data for the materials in plant 1400 by deleting these maintenance statuses for plant 1400.

Choose: **IMG** → **Logistics - General** → **Material Master** → **Field Selection** → **Define Plant-Specific Field Selection and Plant-Specific Screen Selection**

Please do not make this setting.

You must remove the letters **L** and **V** in the *Maintenance Status* field for plant 1400. However, this setting depends neither on the procurement type nor on the material type.



Lesson Summary

You should now be able to:

- Determine the field selection control and name its influencing factors



Unit Summary

You should now be able to:

- Make the necessary settings for the vendor master record
- Create new material types
- Set up material number assignment
- Determine the field selection control and name its influencing factors

Unit 3



Valuation and Account Assignment



Account determination has many dependencies. At the beginning of this unit, the instructor could ask participants to state the factors upon which the account determination can depend. He or she can then illustrate how the influencing factors thus identified are handled in practice in SAP R/3.

Unit Overview

When you post transactions (such as goods receipts or incoming invoices) in the training system and then view the accounting document generated, you see that the SAP system has assigned various G/L accounts to these transactions. This unit describes how this happens and what goes on in the background when such a transaction or event is posted.



Unit Objectives

After completing this unit, you will be able to:

- List the various factors influencing automatic account determination
- Explain simple accounting transactions from inventory management and invoice verification
- Determine the chart of accounts used in your company code
- Name the conditions enabling a plant-specific assignment of G/L accounts
- Explain the significance of the valuation grouping code
- Implement account determination for new plants
- Outline the relationship between the material master record and the account determination process
- Take the account determination process into consideration when defining new material types
- Describe what is meant by a value string and how such strings are determined for goods movements
- Explain the significance of the account grouping code
- Set up and verify the account determination process for individual transactions

- Assign the accounts for planned delivery costs
- Name the dependencies for a default account in purchasing
- Name the dependencies for input tax accounts

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Lesson: Introduction to Automatic Account Determination



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Lesson Duration: 45 Minutes

Lesson Overview

This lesson gives you some insight into the process of automatic account determination in materials management. The significance of automatic account determination and the influencing factors are discussed on the basis of examples.



Lesson Objectives

After completing this lesson, you will be able to:

- List the various factors influencing automatic account determination
- Explain simple accounting transactions from inventory management and invoice verification



Draw upon the experience and extensive prior knowledge of the participants from preceding courses when dealing with the inventory management and invoice verification transactions. Have participants quote and discuss examples of different transactions relevant to accounting and the associated postings.

Business Example

You wish to gain an overview of the options for automatic account determination in Materials Management (MM).

What is Automatic Account Determination?

Different transactions in inventory management and invoice verification are relevant to accounting. These transactions must be recorded in an accounting document containing the postings to the FI G/L accounts. As far as possible, the G/L accounts to which the postings are made in such a document are to be determined automatically by the program.

Example:

In the event of an issue of a raw material for a production order, posting lines are generated in the following accounts (among others):

Stock account	300 000	200,00-	EUR
Consumption account	400 000	200,00	EUR

Automatic account determination is a procedure applied in the case of transactions relevant to accounting. The system uses it to identify the G/L accounts to which postings are to be made without any user intervention. For this reason, these accounts must be entered in a special table in Customizing for the transactions in inventory management and invoice verification.

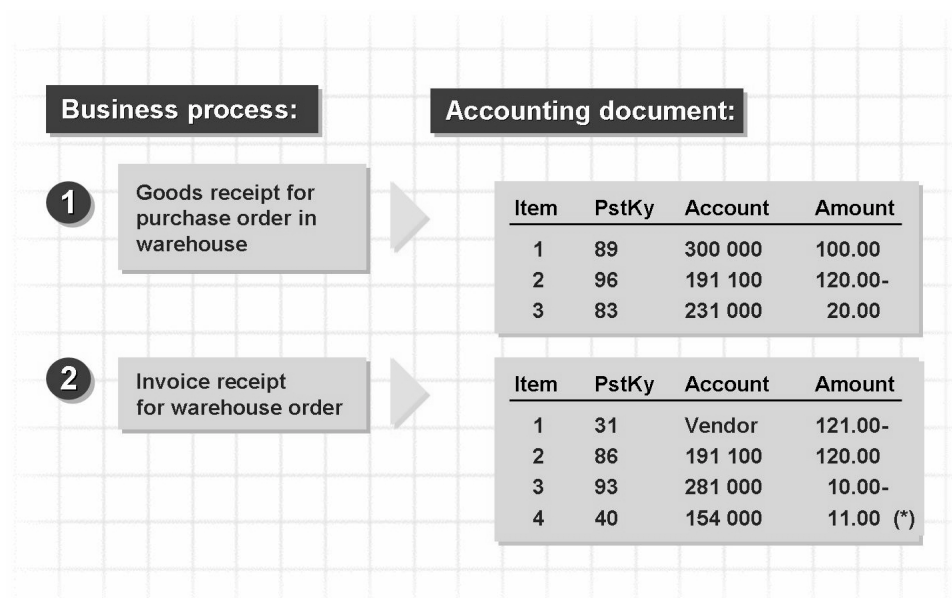


Figure 49: Automatic Postings at GR and IR with Reference to PO

A goods receipt into the warehouse or stores is posted. The receipt of 10 pieces at an order price of 12.00 EUR/pc is posted for a material with a standard price of 10.00 EUR/pc.

The invoice receipt is posted at the invoice price of 11.00 EUR/pc. In the invoice, the tax rate of 10% is used for the input tax (*).



Operation / Type of Acct. Assgmt.	GR	IR	G/L account	Comments
Stock posting	X	X	300 000	Automatic account determination
GR/IR clearing	X	X	191 100	Automatic account determination
Price difference	X	X	231 000	Automatic account determination
Creditor/reconciliation account		X	160 000	Account in vendor master
Input tax		X	154 000	Automatic account determination

The relevant G / L accounts should be determined automatically by the system for every operation in MM.

A transaction in MM (for example, goods receipt for purchase order)

consists of a number of accounting operations, such as

- stock posting (transaction key BSX),
- GR / IR clearing posting (transaction key WRX)

Figure 50: Posting Transactions: GR for PO into Warehouse and for IR

This figure shows the G/L postings that occur in the event of a goods receipt into the warehouse or stores or an invoice receipt for a PO item of the category *standard* without account assignment.

The postings marked with X can occur in the event of a goods receipt or invoice receipt against a PO.

Where is Automatic Account Determination Used?

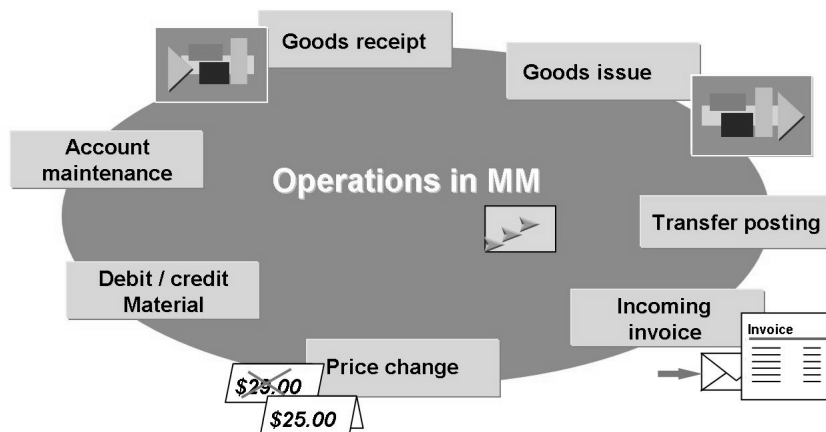


Figure 51: Automatic Account Determination in MM

The materials management transactions for which automatic postings can be set up occur in the areas of inventory management, invoice verification, and material valuation. They include goods movements triggered by transactions or events in PP or SD.

Which Influencing Factors Determine the Accounts of the Accounting Document?

In Customizing for financial accounting, you can specify the chart of accounts for each company code. The chart of accounts contains the G/L accounts that are to be used for stock and expense postings, for example. Because the meaning of the individual G/L accounts depends on the chart of accounts, you must then set up account determination for each chart of accounts separately.

Valuation Area

In addition, you can set up the automatic postings as a function of the valuation area for which the transaction is recorded. In the following example, it is assumed that the valuation level is the plant. Only in this case is it possible also to assign G/L accounts on a plant-dependent basis.

Through a plant-dependent account number assignment, you can post transactions or events relating to the production process in plant 1 to different G/L accounts and cost elements than those relating to the production process in plant 2, for example.



Goods issue for production order for raw material MAT1 in plant 1000		
300000 (BSX)	400000 (GBB)	“Consump. raw mats. plant 1000” <i>to</i> “Stock raw materials plant 1000” 100.00
100.00	100.00	
Goods issue for production order for raw material MAT1 in plant 1100		
300010 (BSX)	400010 (GBB)	“Consump. raw mats. plant 1100” <i>to</i> “Stock raw materials plant 1100” 100.00
100.00	100.00	

Figure 52: Example 1: Influencing Factor Organizational Level

The figure shows that postings can be made to different stock and expense accounts for the same material and the same transaction or event (in plant 1000 in one case and plant 1100 in the other).

Material

You can also set up automatic postings as a function of the material and the relevant material type for which the transaction is recorded. Above all, you will analyze the various material types in your enterprise for the stock postings. Depending on the procurement type, you will need one or more stock accounts to be able to differentiate between materials produced in-house and those that are procured externally.



Goods issue for production order for raw material MAT1 in plant 1000		
<u>300000 (BSX)</u>	<u>400000 (GBB)</u>	"Consumption raw materials_1 plant 1000" <i>to</i> "Stock raw materials_1 plant 1000" 100.00
100.00	100.00	
Goods issue for production order for raw material MAT2 in plant 1000		
<u>300010 (BSX)</u>	<u>400010 (GBB)</u>	"Consumption raw materials_2 plant 1000" <i>to</i> "Stock raw materials_2 plant 1000" 100.00
100.00	100.00	
Goods issue for production order for spare part MAT3 in plant 1000		
<u>304000 (BSX)</u>	<u>404000 (GBB)</u>	"Consumption spare parts plant 1000" <i>to</i> "Stock spare parts plant 1000" 100.00
100.00	100.00	

Figure 53: Example 2: Influencing Factor Material/Material Type

The above example shows that postings can be made to different accounts for the same transaction in the same plant, depending on the material type and the specific material.

Business Process

You can and must set up automatic postings dependent on the specific transaction or event that leads to an update in the accounting system. In the SAP System, certain transactions may involve the receipt value being posted to a stock account, for example, while in the case of other transactions this value is posted to an expense account.

The following illustration shows you the postings for two different business processes.

The upper block shows the postings for a goods receipt into the warehouse for a purchase order item without account determination and with the item category *standard*.

In the event of a price change, an accounting document is generated (provided that stock exists). In the lower block, the posting for a price increase is shown.



Goods receipt for NB purchase order for raw material MAT1 in plant 1000		
300000 (BSX)	191100 (WRX)	“Stock raw material_1 plant 1000” <i>to</i> “GR/IR clearing” 100.00
100.00	100.00	
Price change for raw material MAT1 in plant 1000		
300000 (BSX)	282500 (UMB)	“Stock raw material_1 plant 1000” <i>to</i> “Gain from revaluation” 100.00
100.00	100.00	

Figure 54: Example 3: Influencing Factor MM Transaction/Event

Movement Type

When you record various goods movements in the SAP System, you stipulate which business process you wish to post by specifying the movement type (MvT). You can post an issue of material for a production order with MvT 261, for example. In contrast to this consumption posting, you will almost certainly wish to post any differences arising from a physical inventory to a different expense account.



Goods issue for production order for raw material MAT1 in plant 1000		
<u>300000 (BSX)</u>	<u>400000 (GBB 1)</u>	“Consumption raw materials_1 plant 1000” <u>to</u> “Stock raw materials_1 plant 1000” 100.00
100.00	100.00	
Goods issue due to scrapping for raw material MAT1 in plant 1000		
<u>300000 (BSX)</u>	<u>400001 (GBB 2)</u>	“Expenses scrapping plant 1000” <u>to</u> “Stock raw materials_1 plant 1000” 100.00
100.00	100.00	
Goods issue due to inventory adjustment for raw material MAT1 in plant 1000		
<u>300000 (BSX)</u>	<u>233000 (GBB 3)</u>	“Expenses inventory adjustment plant 1000” <u>to</u> “Stock raw materials_1 plant 1000” 100.00
100.00	100.00	

Figure 55: Example 4: Influencing Factor MM Transaction/Event

To be able to show expenditure for production and expenditure due to inventory differences separately in financial accounting and cost accounting, for example, difference accounts are set up and assigned to the two corresponding types of goods withdrawal posting.

How Does the System Determine the G/L Accounts?

When entering a goods movement, you do not have to enter a G/L account because the SAP System finds it automatically on the basis of the following data:

Organizational Level

You specify the plant(s) for the goods movement directly or indirectly. The system determines the following from this data:

- The company code to which the plant belongs, and thus the chart of accounts for this company code
- The valuation area to which the plant is assigned, and thus a constant (the valuation grouping code) defined for differentiated account number assignment per valuation area

Material

You specify directly or indirectly the material for which the goods movement is to be entered. The system determines the following from this data:

- The material type of the material, and thus also the indicators showing whether quantity- and/or value-based updating has been defined for it.
- The valuation class of the material, which is entered in the accounting data of the material master record and which is responsible for differentiated account number assignment depending on the material and material type.

Business Transaction

You specify directly or indirectly a movement type with which the goods movement is to be posted. The movement type allows differentiation between the various goods movements (for example, goods receipt, goods issue, transfer posting). The movement type symbolizes the concrete business transaction or event represented by the goods movement. The system determines the following from this data (among other things):

- The specifications for postings to accounts in FI (for example, stock accounts, consumption accounts) – the posting rule (also known as the *value string*)
- The specifications for updating stock and value fields in the material master record.



Exercise 5: Automatic Account Determination

Exercise Duration: 10 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Explain the postings made for goods movements

Business Example

As a member of the project team, you are also responsible for the settings for automatic account determination. Since some other members of the team are not very experienced in this field, you explain to them the postings that take place with respect to a goods receipt (GR) against a purchase order (PO).

Task:

1. An accounting document is not generated for every GR posting referencing a PO.
Determine whether this statement is true or false.
 - True
 - False
2. In the case of goods receipts into the warehouse or stores against a standard purchase order and against a stock transport order (for the same material and in the same plant), postings are always made to the same accounts.
Determine whether this statement is true or false.
 - True
 - False
3. Each receipt against a purchase order is posted to a stock account.
Determine whether this statement is true or false.
 - True
 - False

Continued on next page

4. Does the movement type with which a goods receipt is recorded have any influence on the G/L accounts of the GR posting?

Solution 5: Automatic Account Determination

Task:

1. An accounting document is not generated for every GR posting referencing a PO.

Answer: True

For example, no accounting document is generated in respect of a GR entered against a PO item of the category 'consignment'. This is because in such a case the material remains the property of the vendor even after it has entered your warehouse or stores, and does not become part of your own valuated stock.

An accounting document may not have to be created for a GR against a PO item with account assignment either. This is because it is possible to have non-valuated 'goods receipts to consumption'.

2. In the case of goods receipts into the warehouse or stores against a standard purchase order and against a stock transport order (for the same material and in the same plant), postings are always made to the same accounts.

Answer: False

The receipt is posted to the same stock account in both cases. However, in general, an invoice is always expected with respect to a delivery of goods from a vendor (triggered by a standard purchase order). For this reason, when a goods receipt is posted against a standard PO, a posting is usually made to the GR/IR clearing account (among others). In contrast, there is no goods invoice for a stock transport order and thus no posting to a GR/IR clearing account.

3. Each receipt against a purchase order is posted to a stock account.

Answer: False

In the case of a PO item with account assignment, the GR value is posted to an expense or asset account.

4. Does the movement type with which a goods receipt is recorded have any influence on the G/L accounts of the GR posting?

Answer: Yes, because postings are made to different accounts depending on the transaction involved. Examples: initial entry of stock balances (movement type 561) or GR for production order (movement type 101).



Lesson Summary

You should now be able to:

- List the various factors influencing automatic account determination
- Explain simple accounting transactions from inventory management and invoice verification

Related Information

- Detailed documentation on automatic account determination is available in the Implementation Guide (IMG) under:

*IMG → Materials Management → Valuation and Account Assignment
→ Account Determination → Account Determination Without Wizard →
Configure Automatic Postings*

Lesson: Influence of Company Code and Valuation Area



120

Lesson Duration: 45 Minutes

Lesson Overview

This lesson outlines how automatic account determination depends on the company code and the valuation area.



Lesson Objectives

After completing this lesson, you will be able to:

- Determine the chart of accounts used in your company code
- Name the conditions enabling a plant-specific assignment of G/L accounts
- Explain the significance of the valuation grouping code
- Implement account determination for new plants



Review the significance of the valuation level and how it is defined. Show how to assign the chart of accounts to a company code. Discuss the possibilities of using the same accounts in your new plant as in plant 1000 or assigning separate accounts.

Business Example

You have decided that postings made in your new plant are to be made to different G/L accounts than those in your existing plants. You are to make the necessary preparations to facilitate this.

Levels for Account Determination

You can define the G/L accounts to which postings are to be made with respect to accounting-relevant transactions in the SAP system according to different levels:

- Chart of Accounts
You must set up the account determination process separately for each chart of accounts.
- Valuation Area
You can make account determination for individual transactions (such as consumption postings) dependent on the valuation area.
- Valuation type
If you use split valuation for individual materials, you can also set up account determination dependent on the movement type. For more information on this topic, refer to the lesson “Split Valuation”.

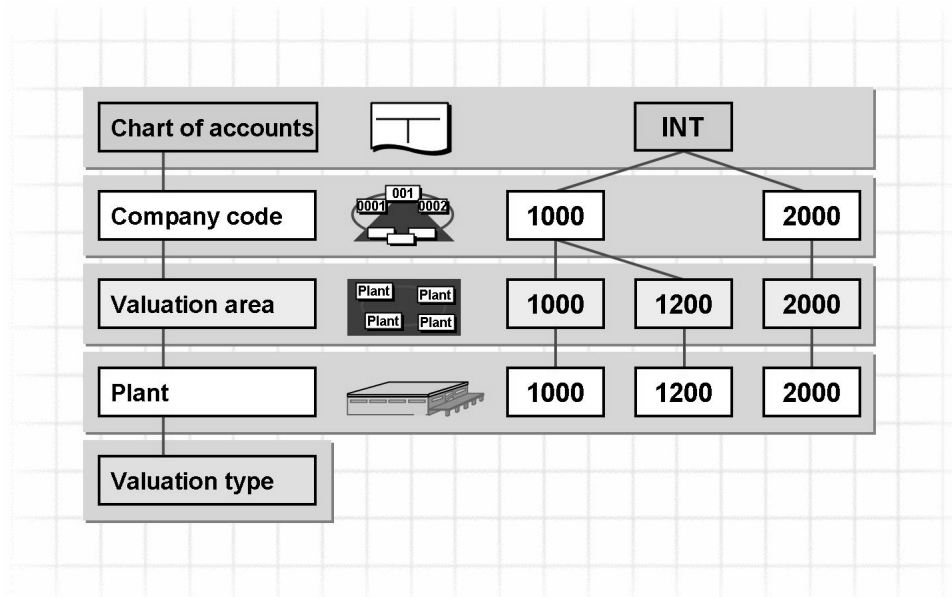


Figure 56: Valuation and Account Determination Levels in MM

The assignment of G/L account numbers (account determination) always depends on the chart of accounts. You assign the chart of accounts to a company code in Customizing for FI.

When the MM business processes are entered, the valuation area (plant or company code) is known in each case. In Customizing, you can choose whether the valuation area is to be the same as the company code or the same as the plant. This setting must be made before materials are created and before the MM inventory management transactions are entered. G/L account number assignment can be defined as a function of the valuation area.

If a material is subject to split valuation, you can value different stocks of the same material differently and also manage them in different accounts.

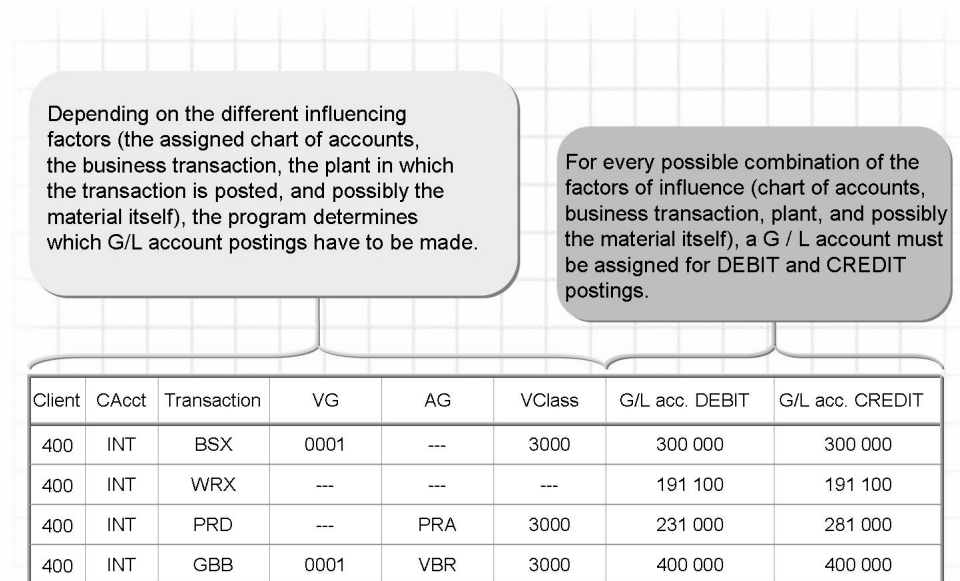


Figure 57: Overview of the Assignment of G/L Account Numbers for Automatic Account Determination

The abbreviations have the following meanings:

Client	=	Client
CAacct	=	Chart of accounts
VG	=	Valuation grouping code
AG	=	Account grouping code (<i>gen. acct. modif. code/modifier</i>)
VClass	=	Valuation class



Note: The Implementation Guide documentation contains an exact description of the automatic account determination process: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination Without Wizard** → **Configure Automatic Postings**

In the following, the influence of the chart of accounts and the valuation area on the process of automatic account determination is discussed in more detail.

Chart of Accounts

The chart of accounts is a list of all G/L accounts that are jointly used by one or more company codes. It specifies the number and name of each G/L account, as well as information controlling the function of the account and its creation within the company code.

The chart of accounts forms part of the key in the table for automatic account determination. This is because the meaning of a G/L account may differ from one chart to another. This means that you must assign the individual G/L accounts for automatic account determination separately for each chart of accounts.



Client	CAcct	Transaction	VG	AG	VClass	G/L acc. DEBIT	G/L acc. CREDIT
400	INT	BSX	0001	---	3000	300 000	300 000
400	INT	WRX	---	---	---	191 100	191 100
400	CAFR	BSX	FR01	---	3000	311 000	311 000
400	CAFR	WRX	---	---	---	408 120	408 120

Figure 58: Influencing Factor Chart of Accounts

A chart of accounts must be assigned to each company code. This is the operative chart of accounts that is used by both Financial Accounting and Costing.

The items of a chart of accounts can be used simultaneously to create a revenue and expenditure account in Financial Accounting and as a cost or revenue element in Cost and Revenue Accounting.

The following charts of accounts may exist in addition to the operative chart:

- Another, country-specific chart of accounts that takes into consideration the specific legal requirements of the country in question and
- A group chart of accounts that applies to the entire corporate group and takes special consolidation aspects into consideration.

Valuation Area

The valuation area is an organizational unit within Logistics that subdivides a company for the purpose of uniform and complete valuation of material stocks.

In the SAP system, you specify for your company the level at which your stocks of materials are to be valued:

- At company code level
- At plant level

If you have selected the plant as the valuation level, each plant then represents a valuation area. In this case, the key for the valuation area is identical to the key for the plant.

You can assign the G/L accounts for automatic account determination (indirectly) dependent on the valuation area. To minimize the necessary effort involved, valuation areas with the same account number assignment can be grouped together. This is done through the **valuation grouping code**. The valuation grouping code is then used to assign the G/L account numbers.



Valuation Grouping Code

- Key for the account determination that enables a differentiation for the G / L account assignment within a chart of accounts based on valuation areas.
- By activating/deactivating the valuation grouping codes, you can switch the dependency of the account determination on the valuation area on or off.
- If the valuation grouping code is activated, then a code must be assigned to each valuation area.
- The automatic account determination must be defined separately for each valuation grouping code within a chart of accounts.

Client	CAcct	Transaction	VG	AG	VClass	G/L acc. DEBIT	G/L acc. CREDIT
400	INT	BSX	0001	---	3000	300 000	300 000
400	INT	GBB	0001	VBR	3000	400 000	400 000
400	INT	BSX	0001	---	3012	300 120	300 120
400	INT	GBB	0001	VBR	3012	400 120	400 120

Figure 59: Influencing Factor Valuation Area

The **valuation grouping code** (dependent on the valuation area) helps you to configure automatic account determination with the minimum possible effort. Within a chart of accounts, valuation areas that are to be treated equally in terms of account assignment are assigned to the same valuation grouping code.

Valuation grouping codes are either used for fine differentiation within a chart of accounts or correspond exactly to a chart of accounts.

In contrast to the chart of accounts itself, you can specify for your company that automatic account determination is to be set up independently of the valuation grouping code, either generally or only for individual transactions. In the former

case, you deactivate the valuation grouping code. In the latter, you adjust the rules accordingly for individual transactions (see the lesson “Business Transactions and Their Influence on the Account Determination Process”).

The following two figures consider the two variants of the valuation area.

Valuation Level: Company Code

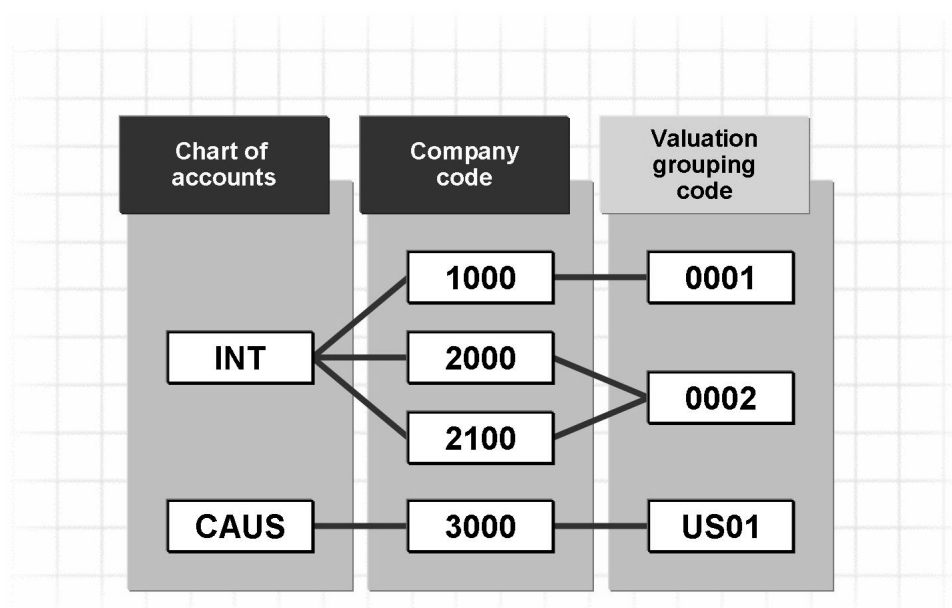


Figure 60: Case 1: Valuation Area = Company Code

This figure shows a company in which several company codes use the same chart of accounts and one company code works with a different one. Automatic account determination must be set up separately for each chart of accounts at least.

In this case, the valuation areas (that is, the level at which material valuation takes place) are the company codes. If the valuation area has been fixed at company code level, G/L accounts **cannot be assigned differentiated by plant**.

For the company in this figure, you can:

- Deactivate the **valuation grouping code**

As a result, the three company codes (1000, 2000, 2100) to which the same chart of accounts INT has been assigned would be treated identically in terms of account assignment.

- Activate the **valuation grouping code**

In this case, you would have to assign a valuation grouping code to **all** company codes (1000, 2000, 2100, 3000). In doing so, you would assign the same code to the company codes that are assigned to the same chart of accounts INT and which are to be treated identically in terms of account assignment.

If you use different valuation grouping codes for the company codes of the same chart of accounts, you can then also assign different G/L accounts for the same business processes in these company codes.

Valuation Level: Plant

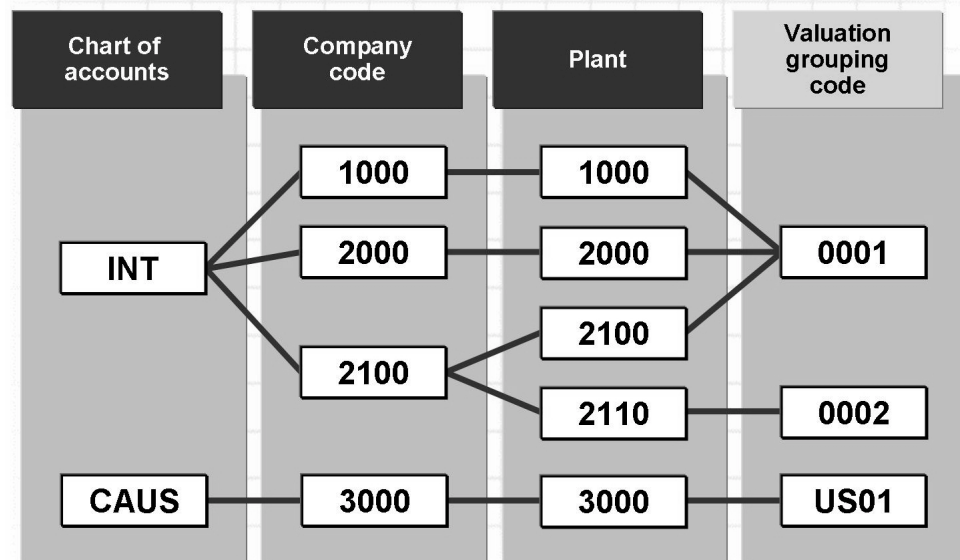


Figure 61: Case 2: Valuation Area = Plant

This figure shows a company in which several company codes use the same chart of accounts and one company code works with a different one. Automatic account determination must be set up separately for each chart of accounts at least.

In this case, the valuation areas (that is, the level at which material valuation takes place) are the plants. If the valuation area has been fixed at plant level, G/L accounts can also be assigned **differentiated by plant**.

For the company in this figure, you can:

- Deactivate the **valuation grouping code**

As a result, the four plants (1000, 2000, 2100, 2110) that (indirectly) use the same chart of accounts INT would be treated identically in terms of account assignment.

- Activate the **valuation grouping code**

In this case, you would have to assign a valuation grouping code to **all** plants (1000, 2000, 2100, 2110, and 3000). In doing so, you would assign the same code to the plants of the same chart of accounts INT that are to be treated identically in terms of account assignment.

If you use different valuation grouping codes for the plants of the same chart of accounts, you can then also assign different G/L accounts for the same business processes in these plants.

Grouping of the Valuation Areas

The following excerpt from the SAP system Customizing shows the grouping of valuation areas.

Val. area	CoCode	Company Name	Chrt/Accts	Val.Grpg Code
1000	1000	IDES AG	INT	0001
1100	1000	IDES AG	INT	0001
1200	1000	IDES AG	INT	0001
1300	1000	IDES AG	INT	0001
1400	1000	IDES AG	INT	0001
2000	2000	IDES UK	INT	0001
2010	2000	IDES UK	INT	0001
2200	2200	IDES France	CAFR	FR01
3000	3000	IDES US INC	CAUS	US01
3100	3000	IDES US INC	CAUS	US01
3200	3000	IDES US INC	CAUS	US01
3300	3000	IDES US INC	CAUS	US01
3400	3000	IDES US INC	CAUS	US01
3500	3000	IDES US INC	CAUS	US01

Figure 62: Grouping of Valuation Areas

Company codes 1000 und 2000 use the same chart of accounts INT. Account determination is uniform for plants 1000, 1100, and so on of company code 1000 and for plants 2000 and 2010 of company code 2000.



Goods issue for production order for raw material MAT1 in plant 1000			
<u>300000 (BSX)</u>	<u>400000 (GBB)</u>	“Consump. raw mats. plant 1000” <u>to</u> “Stock raw materials plant 1000” 100.00	
100.00	100.00		

Goods issue for production order for raw material MAT1 in plant 1100			
<u>300010 (BSX)</u>	<u>400010 (GBB)</u>	“Consump. raw mats. plant 1100” <u>to</u> “Stock raw materials plant 1100” 100.00	
100.00	100.00		

The valuation grouping code must be activated.
 Different valuation grouping codes are assigned to plants
 1000 and 1100.

Figure 63: Realization: Example 1



Demonstration: Analogously to Slide Content and Exercises

Purpose

This demonstration shows how to make Customizing settings and thus introduces the options customers have for adjusting the SAP system to their specific company requirements.

System Data

System:	Training system
Client:	Training client
User ID:	Own user ID
Password:	User password
Set up instructions:	No additional

1. Show the most important Customizing settings for the individual slides and associated details in the application. In doing so, use the exercises as a guide.



Exercise 6: Influence of Valuation Level and Valuation Area

Exercise Duration: 15 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Determine the valuation level
- Set up valuation control
- Group the valuation areas

Business Example

As the person responsible for the Logistics part of the implementation project, you also are responsible for the settings for account determination. You must ensure that the G/L accounts specified by the accounts department are actually assigned for the automatic postings as prescribed.

First of all, the organizational structure for automatic postings has to be taken into account.

System Data

System: Training system
Client: Training client
User ID: SCM550-##
Password: User password

Set up instructions:

A separate (new) plant TR## must exist for each exercise group.

A separate (new) material type GR## must exist for each exercise group.

Task 1:

During the discussion on the replication of organizational structures, the following statements are made. Decide whether they are true or false and give reasons for your answers.

1. The levels of material valuation can be changed at will in the production system.

2. To be able to use production planning (component PP), material valuation must be set up at company code level.

3. Account determination always takes place on a plant-dependent basis.

4. Only one chart of accounts can be assigned to each company code.

5. Explain the term **valuation grouping code** and how such a code is used.

Continued on next page

Task 2:

Check settings in Customizing

1. Find out whether the valuation level is set at company code level or plant level in the training client.

What are the consequences of this setting?

Which valuation area is assigned to **plant 1000**?

2. Find out which chart of accounts is used in company code 1000.

3. Find out whether the valuation grouping code is active in the training client.
What are the consequences of this setting?

4. Which valuation grouping code is assigned to **valuation area 1000** ?
Make a note of this valuation grouping code for valuation area (plant) 1000:

Continued on next page

5. Are there any other valuation areas to which this valuation grouping code has also been assigned? What is the result?

Task 3:

What do you have to do if, for your new plant TR##,

1. ... you want to use the same G/L account assignment as for plant 1000?

2. ... you want to use a different G/L account assignment than in plant 1000 for selected business transactions?

3. Set up automatic account determination for your new plant TR##. Set up a different account determination process than the one for plant 1000.

Assign a new valuation grouping code to your plant TR##. Use the valuation grouping code VG##.

Solution 6: Influence of Valuation Level and Valuation Area

Task 1:

During the discussion on the replication of organizational structures, the following statements are made. Decide whether they are true or false and give reasons for your answers.

1. The levels of material valuation can be changed at will in the production system.

Answer: False

Changing the valuation level may result in inconsistencies. If the valuation level were to be changed, a great deal of time and effort would have to be expended *converting* all inventory accounting data and documents.

2. To be able to use production planning (component PP), material valuation must be set up at company code level.

Answer: False

The use of production planning requires that the valuation area be set at plant level. Only in this case can the program access the accounting data for the material (for the purpose of determining costs in connection with a production order, for example).

3. Account determination always takes place on a plant-dependent basis.

Answer: False

The accounts can be assigned on a plant-dependent basis only if the following conditions are satisfied:

- The valuation level is the plant.
- The valuation grouping code is active.
- A separate valuation grouping code has been assigned to each plant.

4. Only one chart of accounts can be assigned to each company code.

Answer: True

No more and no less than one chart of accounts can be assigned to each company code. For the program, it must be clearly specified which chart of accounts is to be used.

Continued on next page

5. Explain the term **valuation grouping code** and how such a code is used.

Answer:

The valuation grouping code facilitates differentiation by valuation area during the process of automatic account determination. It allows the grouping and consolidation of valuation areas for the determination of the G/L accounts for each business process.

Task 2:

Check settings in Customizing

1. Find out whether the valuation level is set at company code level or plant level in the training client.

What are the consequences of this setting?

Which valuation area is assigned to **plant 1000**?

Answer:

Choose: *IMG* → *Enterprise Structure* → *Definition* → *Logistics - General* → *Define Valuation Level*.

The valuation level is defined at plant level and cannot be changed.

This means that material valuation is plant-dependent and automatic account determination can thus be configured on a plant-dependent basis.

If the valuation level is the plant, the key for the valuation area is always identical with the plant key. **Valuation area 1000** is thus assigned to **plant 1000**.

2. Find out which chart of accounts is used in company code 1000.

Answer:

Choose: *IMG* → *Financial Accounting* → *Financial Accounting Global Settings* → *Company Code* → *Enter Global Parameters*.

Select company code 1000 and choose *Details*.

Company code 1000 uses chart of accounts INT.

3. Find out whether the valuation grouping code is active in the training client.

What are the consequences of this setting?

Answer:

Choose: *IMG* → *Materials Management* → *Valuation and Account Assignment* → *Account Determination* → *Account Determination Without Wizard* → *Define Valuation Control*.

Yes, the grouping code is active. This means that a valuation grouping code must be assigned to each valuation area, that is, to every plant in the training client.

Continued on next page

4. Which valuation grouping code is assigned to **valuation area 1000** ?

Make a note of this valuation grouping code for valuation area (plant) 1000:

Answer:

Choose: *IMG* → *Materials Management* → *Valuation and Account Assignment* → *Account Determination* → *Account Determination Without Wizard* → *Group Together Valuation Areas*.

Valuation grouping code 0001 is assigned to valuation area 1000.

5. Are there any other valuation areas to which this valuation grouping code has also been assigned? What is the result?

Answer:

Yes, valuation areas (plants) 1100, 1200, 1300, for example. The same account number assignments apply to these valuation areas (plants) as to plant 1000.

Task 3:

What do you have to do if, for your new plant TR##,

1. ... you want to use the same G/L account assignment as for plant 1000?

Answer: The valuation grouping code 0001 must be assigned to plant TR##.

2. ... you want to use a different G/L account assignment than in plant 1000 for selected business transactions?

Answer: A different valuation grouping code must be assigned to plant TR##.

3. Set up automatic account determination for your new plant TR##. Set up a different account determination process than the one for plant 1000.

Assign a new valuation grouping code to your plant **TR##**. Use the valuation grouping code **VG##**.

- a) Choose: *IMG* → *Materials Management* → *Valuation and Account Assignment* → *Account Determination* → *Account Determination Without Wizard* → *Group Together Valuation Areas*.
- b) Assign the valuation grouping code **VG##** to plant TR##.



Lesson Summary

You should now be able to:

- Determine the chart of accounts used in your company code
- Name the conditions enabling a plant-specific assignment of G/L accounts
- Explain the significance of the valuation grouping code
- Implement account determination for new plants

Lesson: Influence of Material and Material Type



137

Lesson Duration: 60 Minutes

Lesson Overview

This lesson shows how the automatic account determination process depends on the material type and the material master record itself.



Lesson Objectives

After completing this lesson, you will be able to:

- Outline the relationship between the material master record and the account determination process
- Take the account determination process into consideration when defining new material types



Show the Customizing settings on the basis of your new material type.

Business Example

You are investigating whether it is possible to use a different account determination process for certain materials or material types than for others.

Material Type and Account Determination

You can define automatic account determination on a material-dependent basis. This would enable you to post the receipt of a raw material to a different stock account than that of a trading good, for example. Your company may wish to have different stock accounts for different materials depending only on the procurement type (manufactured in-house or procured externally), however.

The following figure shows different variants of the relationships between the material types and the account determination process.

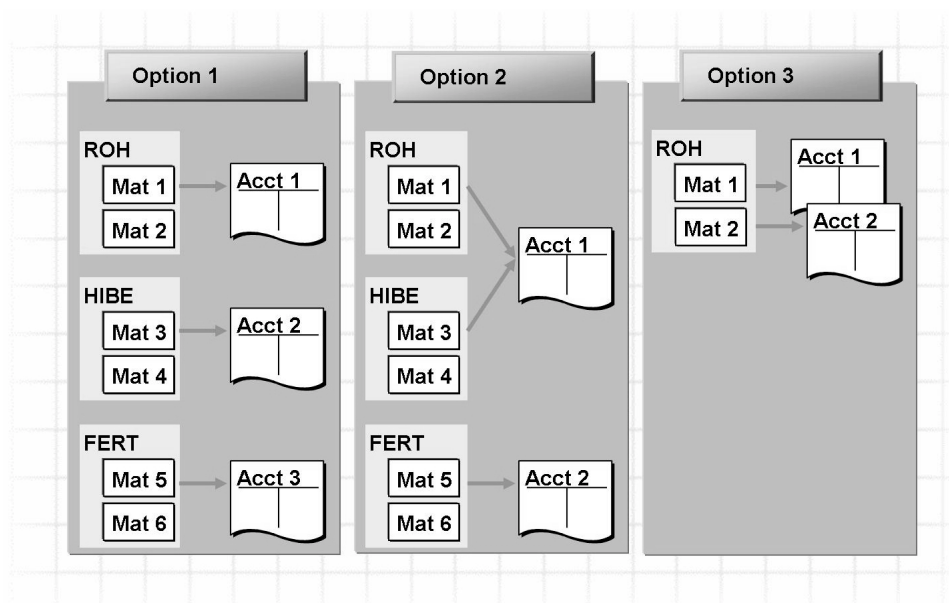


Figure 64: Grouping of Materials

You can set up uniform G/L account determination for all materials of a certain type or even for several material types.

You can also specify that different G/L accounts are to be determined for different materials of a certain material type.

You can also combine options 2 and 3, that is:

- Group several material types
- Define different G/L accounts for different materials within this group

Valuation Class

In the SAP System, the **valuation class** is used to achieve automatic account determination that varies depending on the material. The valuation class is a key used to group together materials with the same account determination.

You enter the valuation class in the accounting data for a material.



Valuation class

- Key for the account determination that enables a differentiation for the G / L account assignment dependent on the material.
- Materials are assigned to a valuation class for each valuation area in the accounting view.
- The assignment of the permitted valuation classes to the material type (indirect) can be used to apply limitations.

Client	CAcct	Transaction	VG	AG	VClass	G/L acc. DEBIT	G/L acc. CREDIT
400	INT	BSX	0001	---	3000	300 000	300 000
400	INT	GBB	0001	VBR	3000	400 000	400 000
400	INT	BSX	0001	---	7900	790 000	790 000
400	INT	GBB	0001	VBR	7900	890 000	890 000

Figure 65: Influencing Factor Material/Material Type

You assign the G/L accounts to the valuation classes taking the other influencing factors into consideration. If a transaction is to be posted to different accounts depending on the valuation class, the account determination process for this transaction must be defined as being *dependent on the valuation class*.

The permissible valuation classes depend on the material type. Several valuation classes can be allowed for a certain material type.

Conversely, a certain valuation class can be allowed for several material types.

The relationship between valuation classes and material types is established with the aid of the account category reference. The account category reference is a grouping of valuation classes used by the system to check whether the valuation class entered is allowed when you maintain accounting data in the material master record. This account category reference is assigned to the material types. Only one account category reference can be assigned to a material type.

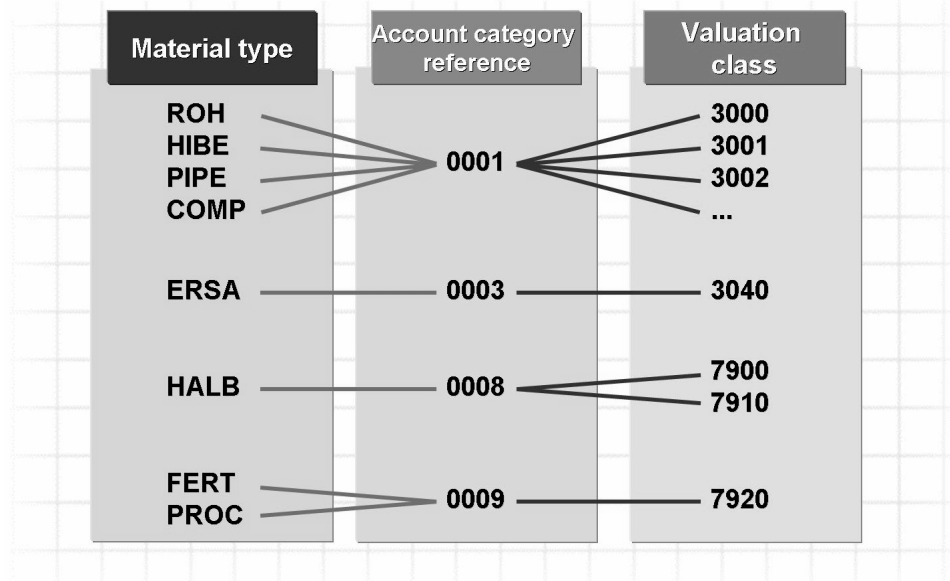


Figure 66: Material Type and Valuation Class

The account category reference is the grouping term for account determination depending on the material type.

Several valuation classes can be assigned to an account category reference.

Each material type for which quantity- and value-based inventory management has been defined is assigned to an account category reference (mandatory).

When maintaining the accounting data for a material of this material type, you can choose one of the valuation classes that have been defined for the relevant account category reference. G/L account determination for this material is then carried out according to the settings for this valuation class.

If a material is subject to split valuation, the account determination process is carried out with the valuation class of the valuation type record (see the lesson “Split Valuation”).

The following excerpt from the SAP system Customizing shows the definition of valuation classes and their assignment to the account category reference.

VaICI	Description	Acct cat. ref.	Description
<input type="checkbox"/> 1210	Low-value assets RU	0002	Ref. for operating supplies
<input type="checkbox"/> 3000	Raw materials 1	0001	Reference for raw materials
<input type="checkbox"/> 3001	Raw materials 2	0001	Reference for raw materials
<input type="checkbox"/> 3002	Raw materials 3	0001	Reference for raw materials
<input type="checkbox"/> 3003	Raw materials 4	0001	Reference for raw materials
<input type="checkbox"/> 3030	Operating supplies	0002	Ref. for operating supplies
<input type="checkbox"/> 3040	Spare parts	0003	Reference for spare parts
<input type="checkbox"/> 3050	(Returnable) packaging	0004	Reference for packaging
<input type="checkbox"/> 3100	Trading goods	0005	Reference for trading goods
<input type="checkbox"/> 3200	Services	0006	Reference for services
<input type="checkbox"/> 3300	Non-valuation material	0007	Ref. for non-valuation material
<input type="checkbox"/> 7900	Semifinished products	0008	Ref. for semifinished products
<input type="checkbox"/> 7910	Semi-finished (external)	0008	Ref. for semifinished products
<input type="checkbox"/> 7920	Finished products	0009	Ref. for finished products

Figure 67: Grouping of Valuation Classes

The valuation classes 3000, 3001, 3002, and 3003 have been grouped together. This group of valuation classes has been assigned to the account category reference 0001.

You can see the assignment of account category references to material types in the following extract from the Customizing of the SAP system. For example, the same account category reference 0001 was assigned to the material types COMP, CONT, and ROH.

MTyp	Material type description	Acct cat. ref.	Description
<input type="checkbox"/> COMP	Prod. alloc., purchased	0001	Reference for raw materials
<input type="checkbox"/> CONT	KANBAN Container	0001	Reference for raw materials
<input type="checkbox"/> DIEN	Service	0006	Reference for services
<input type="checkbox"/> ERSA	Spare parts	0003	Reference for spare parts
<input type="checkbox"/> FERT	Finished product	0009	Ref. for finished products
<input type="checkbox"/> HALB	Semi-finished product	0008	Ref. for semifinished products
<input type="checkbox"/> HAWA	Trading goods	0005	Reference for trading goods
<input type="checkbox"/> HERS	Manufacturer parts		
<input type="checkbox"/> HIBE	Operating supplies	0002	Ref. for operating supplies
<input type="checkbox"/> NLAG	Non-stock material		
<input type="checkbox"/> PROC	Process material	0009	Ref. for finished products
<input type="checkbox"/> ROH	Raw material	0001	Reference for raw materials
<input type="checkbox"/> UNBW	Non-valuation material	0007	Ref. for non-valuation material
<input type="checkbox"/> VERP	Packaging	0004	Reference for packaging

Figure 68: Material Type and Account Category Reference



Goods issue for production order for raw material MAT1 in plant 1000			
<u>300000 (BSX)</u>	<u>400000 (GBB)</u>	“Consumption raw materials_1 plant 1000” to “Stock raw materials_1 plant 1000” 100.00	
100.00	100.00		

Goods issue for production order for raw material MAT2 in plant 1000			
<u>300010 (BSX)</u>	<u>400010 (GBB)</u>	“Consumption raw materials_2 plant 1000” to “Stock raw materials_2 plant 1000” 100.00	
100.00	100.00		

(At least) two valuation classes are to be allowed for material type ROH. Different valuation classes are assigned to the two materials MAT1 and MAT2.

Figure 69: Realization: Example 2 (Part 1) with Materials of the Same Material Type



Goods issue for production order for raw material MAT1 in plant 1000			
<u>300000 (BSX)</u>	<u>400000 (GBB)</u>	“Consumption raw materials_1 plant 1000” to “Stock raw materials_1 plant 1000” 100.00	
100.00	100.00		

Goods issue for production order for spare part MAT3 in plant 1000			
<u>304000 (BSX)</u>	<u>404000 (GBB)</u>	“Consumption spare parts plant 1000” to “Stock spare parts plant 1000” 100.00	
100.00	100.00		

A different (third) valuation class is assigned to the spare part MAT3 than to the raw material MAT1. A separate account category reference can also be set up for spare parts.

Figure 70: Realization: Example 2 (Part 2) with Materials of Different Material Types



Demonstration: Analogously to Slide Content and Exercises

Purpose

This demonstration shows how to make Customizing settings and thus introduces the options customers have for adjusting the SAP system to their specific company requirements.

System Data

System:	Training system
Client:	Training client
User ID:	Own user ID
Password:	User password
Set up instructions:	No additional

1. Show the most important Customizing settings for the individual slides and associated details in the application. In doing so, use the exercises as a guide.
-



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Exercise 7: Influence of Material and Material Type

Exercise Duration: 20 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Check the groupings of material types for account determination and the assigned valuation classes
- Set up new account category references and valuation classes for your own material types

Business Example

After taking account of the organizational structure for automatic postings, you next investigate the extent to which you will have to group the various material types and material master records in order to satisfy the requirements of your financial and cost accounting departments.

System Data

System:	Training system
Client:	Training client
User ID:	SCM550-##
Password:	User password
Set up instructions:	See IDES

Task 1:

In order to implement the overall concept of value flow, you have to train the project members responsible for Logistics and Financial Accounting. To enable these individuals to acquire a basic understanding of the automatic account determination process, you have to explain the two terms *account category reference* and *valuation class*.

1. Explain the term *account category reference*.

2. Explain the term *valuation class*.

3. Make a note of the account category references and allowed valuation classes for the following **material types** in the training system.

Material type	Account category reference	Allowed valuation classes
ROH		
FERT		
HALB		
NLAG		

Continued on next page

4. Is it possible to use these valuation classes for materials belonging to **other material types** as well?

5. Can several account category references be assigned to **one material type**?

Task 2:

Make settings for automatic account determination for the new material type

1. What would have to be done if you wished to post the costs associated with issues (to a cost center) of the materials of your **material type GR##** to a separate consumption account? This consumption account should be suggested through the automatic account determination process. Name the necessary steps for this.

2. How can you ensure that only a certain valuation class can be used for the materials of your material type **GR##**?

3. Configure this option 2 by creating a new account category reference **AR##**. Create the new valuation class **VC##** for this new account category reference.

Continued on next page

4. Test your settings by creating a material of your **material type GR##** with the views **Basic Data 1**, **Purchasing**, and **Accounting 1** for **plant 1000** (price control **S**, valuation price **10.00 EUR/pc**).



Hint: You may have to maintain the *Old Material Number* field, since this was defined as a mandatory field for material type GR## in a previous exercise.

Does the system suggest the new valuation class VC##? Why or why not?

Note the material number: _____

Extend this material master record by adding the Purchasing and Accounting 1 views for **plant TR##**.



Hint: Note that the internal material number assigned by the system has to be entered manually when the material master record is extended.

Solution 7: Influence of Material and Material Type

Task 1:

In order to implement the overall concept of value flow, you have to train the project members responsible for Logistics and Financial Accounting. To enable these individuals to acquire a basic understanding of the automatic account determination process, you have to explain the two terms *account category reference* and *valuation class*.

1. Explain the term *account category reference*.

Answer:

Choose: *IMG* → *Materials Management* → *Valuation and Account Assignment* → *Account Determination* → *Account Determination Without Wizard* → *Define Valuation Classes*.

For detailed information, call the documentation for this activity.

The account category reference facilitates assignment of the allowed valuation classes to a material type. It is thus the link between the material type and the allowed valuation classes.

2. Explain the term *valuation class*.

Answer:

The valuation class facilitates the material-dependent assignment of G/L accounts. Together with other factors, the valuation class determines the G/L accounts that are updated as a result of a valuation-relevant transaction.

3. Make a note of the account category references and allowed valuation classes for the following **material types** in the training system.

Material type	Account category reference	Allowed valuation classes
ROH		
FERT		
HALB		
NLAG		

Continued on next page

a) Choose: *IMG* → *Materials Management* → *Valuation and Account Assignment* → *Account Determination* → *Account Determination Without Wizard* → *Define Valuation Class*.

b) Choose *Material Type/Account Category Reference*.

Determine the account category references assigned to the material types.

c) Choose *Valuation Class*.

Determine the allowed valuation classes for each account category reference.

Material type	Account category reference	Allowed valuation classes
ROH	0001	3000, 3001, 3002, 3003
FERT	0009	7920, 7925
HALB	0008	7900, 7910
NLAG	_____	_____

4. Is it possible to use these valuation classes for materials belonging to **other material types** as well?

Answer:

Yes, as long as the material types are assigned to the same account category reference. You can assign several material types to the same account category reference.

5. Can several account category references be assigned to **one material type**?

Answer:

No, you can assign only one account category reference to a material type (this is determined by the table definition).

Continued on next page

Task 2:

Make settings for automatic account determination for the new material type

1. What would have to be done if you wished to post the costs associated with issues (to a cost center) of the materials of your **material type GR##** to a separate consumption account? This consumption account should be suggested through the automatic account determination process. Name the necessary steps for this.

Answer:

Separate valuation classes must be specified for the materials of type GR##. This can be done in two ways:

1. Definition of a new valuation class that is assigned to the existing account category reference for raw materials (0001). Since this account category reference is also (still) assigned to the new material type, this new valuation class is available for the material master records for the new material type.

However, the selection of this new valuation class in the accounting view of the material master record cannot be forced because with this option several valuation classes are allowed for account category reference 0001. In addition, the new valuation class can also be selected for other material types (for example, raw materials).

2. To ensure that only this new valuation class is available for the accounting view for the new material type, a new account category reference must be created. The next step is to define a new valuation class that must be assigned to the new account category reference. Finally, this new account category reference must be assigned to the material type GR##.

If you use this option, the new valuation class **must** be used for each material assigned to material type GR##. This is even suggested as the default value (when material master records are created without reference material) because it is unique.

With both options, you assign the G/L accounts in dependence on the new valuation class.

2. How can you ensure that only a certain valuation class can be used for the materials of your material type **GR##**?

Answer: This can only be realized via a separate account category reference (option 2).

3. Configure this option 2 by creating a new account category reference **AR##**.

Continued on next page

Create the new valuation class **VC##** for this new account category reference.

a) Choose: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination Without Wizard** → **Define Valuation Class**.

b) Choose *Account Category Reference*.

Create a separate account category reference for material type **GR##**.
Make a new entry **AR##** and enter a name.

c) Choose *Valuation Class*.

Make a new entry **VC##**, enter a name, and assign the account category reference **AR##** to this valuation class.

d) Choose *Material Type/Account Category Reference*.

By assigning this account category reference **AR##** to your material type **GR##**, you now allow only the new valuation class **VC##** for the materials of your material type **GR##**. Replace the account category reference 0001 by **AR##** for the material type **GR##**.

4. Test your settings by creating a material of your **material type GR##** with the views **Basic Data 1**, **Purchasing**, and **Accounting 1** for **plant 1000** (price control **S**, valuation price **10.00 EUR/pc**).



Hint: You may have to maintain the *Old Material Number* field, since this was defined as a mandatory field for material type **GR##** in a previous exercise.

Does the system suggest the new valuation class **VC##**? Why or why not?

Note the material number: _____

Extend this material master record by adding the Purchasing and Accounting 1 views for **plant TR##**.



Hint: Note that the internal material number assigned by the system has to be entered manually when the material master record is extended.

a) On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Material Master* → *Material* → *Create (General)* → *Immediately*

b) Once you have defined your own account category reference and assigned it to your material type, the only allowed valuation class **VC##** is immediately suggested by the system (appears as the default value).



Lesson Summary

You should now be able to:

- Outline the relationship between the material master record and the account determination process
- Take the account determination process into consideration when defining new material types

Lesson: Business Transactions and Their Influence on the Account Determination Process



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Lesson Duration: 135 Minutes

Lesson Overview

In this lesson, you learn about the influence of business transactions on the process of automatic account determination. Key aspects are goods movements and the control function exercised by the movement type. You discover the options available for the individual configuration of the account determination process for movement types.



Lesson Objectives

After completing this lesson, you will be able to:

- Describe what is meant by a value string and how such strings are determined for goods movements
- Explain the significance of the account grouping code
- Set up and verify the account determination process for individual transactions



Build on participants' prior knowledge of goods movements and get them to explain the postings for various movements (such as a goods receipt into warehouse/stores for an NB purchase order or a goods receipt into warehouse/stores for a UB purchase order).

Business Example

You wish to familiarize yourself with the scope of the account determination functionality for the processes in your company.

You wish to complete the settings for account determination for your new material type.

Business Processes and Account Determination

In the SAP system, the corresponding posting transactions for each accounting-relevant transaction in Materials Management are predefined. Since the many individual companies using SAP employ different charts of accounts, generalized posting records are assigned to each transaction in a so-called value string.

Instead of specific G/L account numbers, the value string contains the transaction/event key for the relevant posting transaction. The first transaction/event key of a posting rule generally stands for the debit posting.



Transaction/event

- Key for account determination, symbolizing the business transaction or event.
- Posting transactions for MM are predefined. The transaction/event key determines whether a posting is made to a stock account, price difference account, GR/IR clearing account, and so on.

Client	CAcct	Transaction /event	VG	AG	VClass	G/L acc. DEBIT	G/L acc. CREDIT
400	INT	BSX	0001	---	3000	300 000	300 000
400	INT	WRX	---	---	---	191 100	191 100
400	INT	PRD	---	PRA	3000	231 000	281 000
400	INT	GBB	0001	VBR	3000	400 000	400 000

Figure 71: Influencing Factor Business Transaction (1)

The posting transactions for accounting-relevant transactions in inventory management and invoice verification are predefined and cannot be changed.

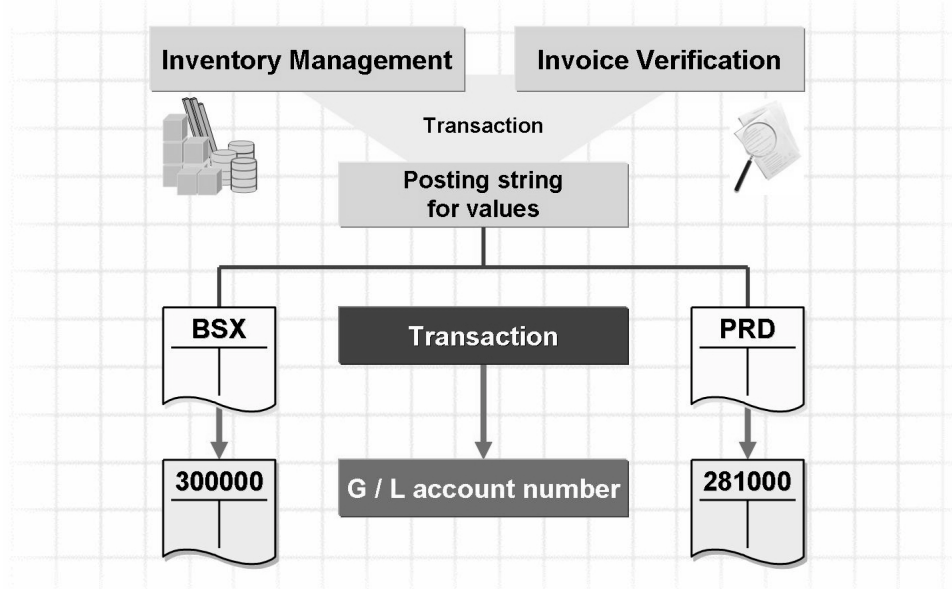


Figure 72: Account Determination Process in MM

Posting records generalized in a value string (posting rule) are assigned to each relevant movement type in inventory management and each transaction in invoice verification. Instead of specific G/L account numbers, this value string contains keys for the relevant posting transactions (for example, BSX for a stock posting and PRD for a price difference posting).

You do not have to define these transaction/event keys. They are determined automatically in the SAP system from the specific transaction in invoice verification or from the transaction and movement type in inventory management. You need only assign the G/L account to which postings are to be made to each posting transaction (taking into account the other influencing factors).

The assignments of the value strings to the goods movements and the breakdowns of the value strings into transaction/event keys can be found in Customizing for inventory management and physical inventory. However, you can change neither the value strings nor their assignments in Customizing.

You assign the relevant G/L accounts to the corresponding posting transactions in Customizing for valuation and account assignment.

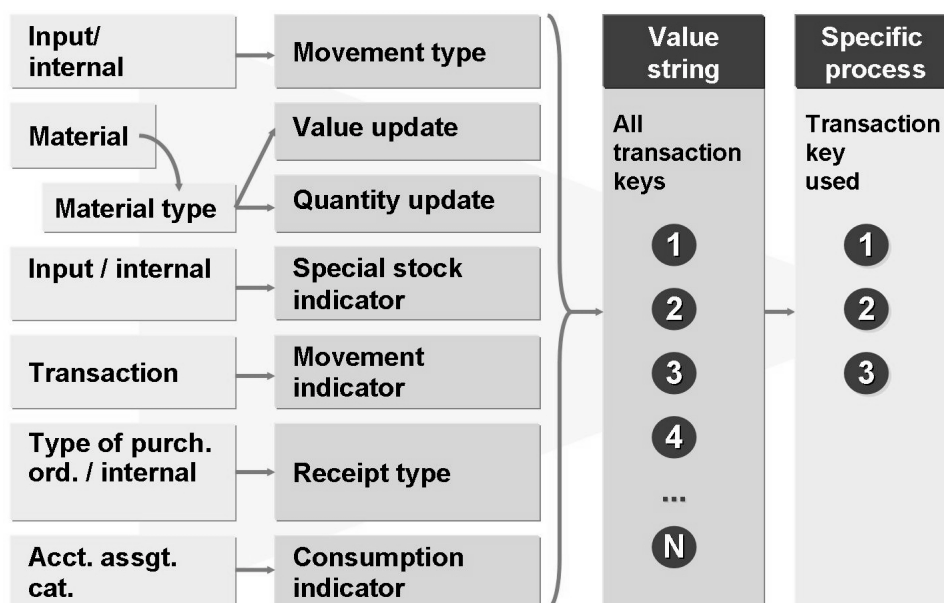


Figure 73: Determination of the Value String for Goods Movements

The value string assigned to a specific transaction is determined automatically. It depends partly on manually entered parameters and partly on parameters derived internally by the system.

The value string contains the maximum possible posting transactions for a certain transaction. Which of these posting transactions lead to G/L postings in individual cases is decided by the program and cannot be defined in Customizing.



Goods receipt for NB purchase order for raw material MAT1 in plant 1000		
<u>300000 (BSX)</u>	<u>191100 (WRX)</u>	“Stock raw material_1 plant 1000” <i>to</i> “GR/IR clearing” 100.00
100.00	100.00	
Price change for raw material MAT1 in plant 1100		
<u>300000 (BSX)</u>	<u>282500 (UMB)</u>	“Stock raw material_1 plant 1000” <i>to</i> “Gain from revaluation” 100.00
100.00	100.00	
<p>Different value strings (WE01 and RE05) are assigned to the two transactions.</p> <p>Value string WE01 (for the goods receipt for an NB purchase order to the warehouse) contains the transactions BSX and WRX. Value string RE05 contains the operations BSX and UMB.</p>		

Figure 74: Realization: Example 3

The goods receipt posting in the example shown in this figure represents a goods receipt against an NB purchase order into the warehouse or stores. The relevant PO item has no account assignment and is of the category *standard*. The value string WE01 has been assigned to this business transaction for materials subject to value-based (and quantity-based) inventory management. The next figure contains the transaction/event keys assigned to this value string.

These include:

- BSX for (all) postings to stock accounts
- WRX for postings to the GR/IR clearing account following goods and invoice receipts relating to NB purchase orders
- UMB for the offsetting entry in the case of a price change (accounts for loss or gain from revaluation)

The documentation for the Customizing activity *Configure Automatic Postings* contains more detailed information on all SAP transaction/event keys.



WE01	BSX	Inventory posting
	WRX	GR / IR clearing
	PRD	Price differences
	KDM	Materials Management: Exchange rate differences
	EIN	Purchase account
	EKG	Purchase offsetting account
	BSV	Change in stock account
	FRL	External service
	FRN	Incidental costs of external services
	BSX	Inventory posting
	UMB	Gain / loss from revaluation

Figure 75: Example of Value Strings (1): WE01

In the standard system, the value string WE01 is assigned to goods receipts for standard purchase orders (and corresponding reversals and return deliveries) with items that have no account assignment and are of the categories *standard* or *subcontracting* for valuated material into the warehouse/stores.

For a (valuated) goods receipt against a PO item without account assignment, a posting is always made to a stock account with the transaction/event code BSX. The offsetting entry is made to the GR/IR clearing account with the transaction/event key WRX.

A price difference posting (transaction/event key PRD) is only made if the valuated material is valuated at a standard price and if the PO price (or the invoice price) varies from the standard price.

The transaction/event key KDM is needed in Materials Management for exchange rate differences involving POs in foreign currencies due to differences in exchange rates at the times of goods receipt and invoice receipt if the material cannot be debited or credited due to standard price control or lack of stock.

The transaction/event keys EIN and EKG (as well as, perhaps, FRE - see account determination for delivery costs) are only considered in company codes in which purchase account management is active (as is legally required in France or Belgium, for example).

The transaction/event keys BSV, FRL, and FRN are used only in connection with the item category *subcontracting*.

For an explanation of why the transaction/event key BSX is included twice, and the meaning of the key UMB, please refer to the following figure.

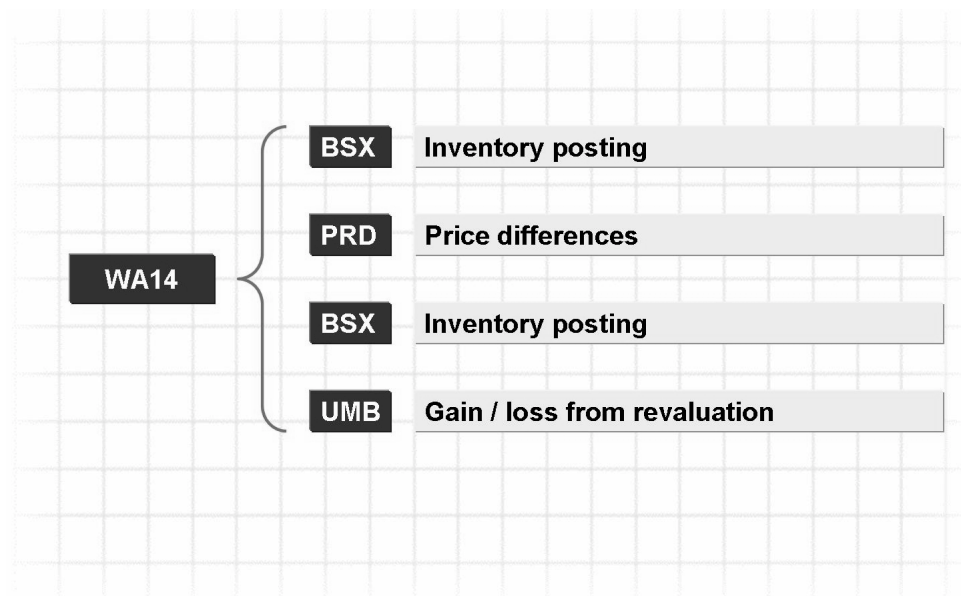


Figure 76: Example of Value Strings (2): WA14

The value string WA14 is provided for the goods movement *free-of-charge delivery* (movement type 511) for materials with value-based inventory management.

The following cases are possible:

1. Free delivery of a material with price control V:

No accounting document is generated because the receipt is valued at zero. Only the stock quantity is increased.

2. Free delivery of a material with price control S (and, if the posting date lies in the previous period: Standard price in the posting period = standard price in the current period):

An accounting document containing a stock posting for the receipt at standard price (transaction BSX) and a posting to a revenue account for price differences (transaction PRD) is generated.

3. Free delivery of a material with price control S and a posting date in the previous period, whereby the standard price in the posting period differs from the standard price in the current period:

An accounting document for the previous period and an accounting document for the current period (adjustment posting) are generated.

The accounting document for the previous period contains the receipt to the stock account at the standard price of the previous period (transaction BSX) and the price difference posting (transaction PRD) with the same amount.

The accounting document of the current period takes into consideration the variance between the standard prices of the previous period and the current period. A price change is carried out for the quantity posted retrospectively to the previous period. This accounting document (posting date = 1st day of the current period) contains the stock adjustment posting (2nd transaction BSX) and a posting to a Gain/Loss from Revaluation account (transaction UMB).

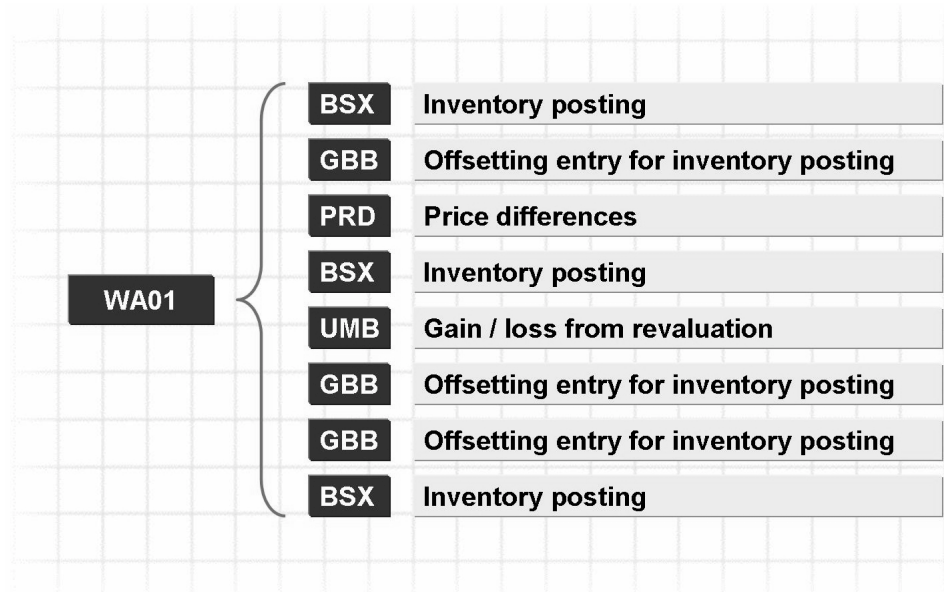


Figure 77: Example of Value Strings (3): WA01

In the SAP system, the value string WA01 is assigned to various goods issues and *other goods receipts*. Further differentiation in the automatic account determination process for these different movements is accomplished via the account grouping code.

The necessary accounts must be preassigned for each transaction belonging to this value string that occurs when a business process is posted in your company. You can reduce the effort involved if the G/L accounts do not depend on all three influencing factors in the case of individual transactions. Before assigning the G/L accounts, define the rules for each transaction and chart of accounts according to your requirements.

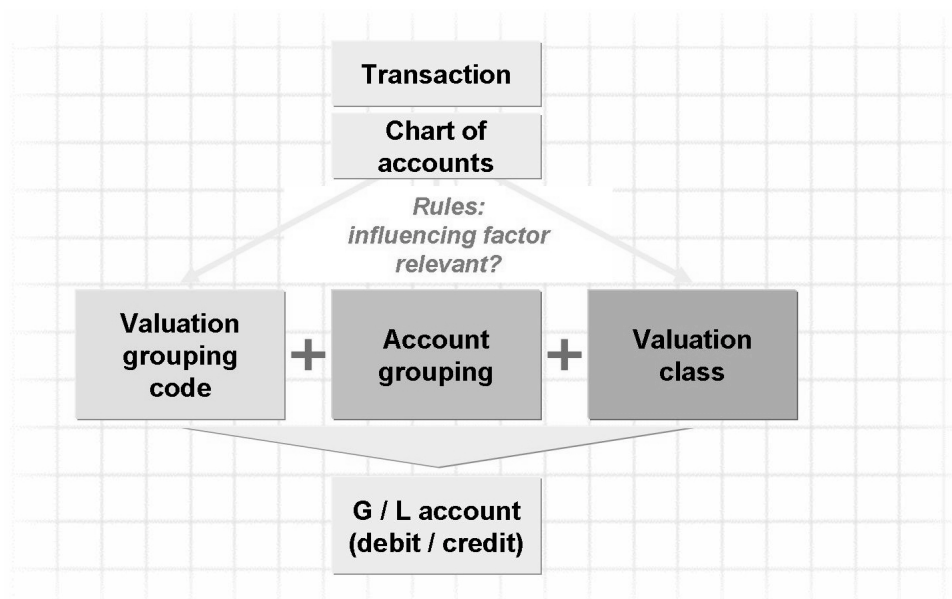


Figure 78: Assignment of G/L Account Number

Using rules, you can specify whether the assignment of the G/L accounts for a transaction involving automatic account determination depends on:

- The valuation grouping code
- The account grouping code (not possible for every posting key)
- The valuation class

By means of a further indicator, you specify for each posting transaction whether different G/L accounts are to be assigned for the debit posting and the credit posting (not possible for stock accounts).

The following excerpt from the SAP system Customizing illustrates the assignment of stock accounts, that is, the assignment of G/L accounts to the transaction BSX. This assignment applies only within the chart of accounts INT. For the transaction BSX (for the chart of accounts INT), the dependency on the valuation grouping codes and the valuation class has been defined under *Rules*.



Account Grouping Code

- Key for the account determination that enables the differentiation of the G / L account assignment for the offsetting entry to the inventory posting (transaction BSX) and possible other transactions.
- For individual transactions (such as GBB, PRD, ...) any account grouping code can be assigned, dependent on the transaction type and the special stock indicator.

Client	CAcct	Transaction	VG	AG	VClass	G/L acc. DEBIT	G/L acc. CREDIT
400	INT	PRD	---	---	3000	231 100	281 100
400	INT	PRD	---	PRA	3000	231 500	281 500
400	INT	GBB	0001	BSA	3000	399 999	399 999
400	INT	GBB	0001	VBR	3000	400 000	400 000

Figure 80: Influencing Factor Business Transaction (2)

The account grouping code enables you to differentiate the assignment of G/L accounts by transaction/event key during account determination. In materials management, you can thus assign G/L accounts to individual transactions depending on the movement type of a goods movement.

In the standard system, the account grouping code is active only for the transaction/event key GBB (offsetting entry for inventory posting) in the MM area. However, if necessary, you can also use account grouping for other transactions in your company (for price differences, for instance).

For goods movements, you can assign the account grouping code to the posting transaction *Offsetting Entry for Inventory Posting* in dependence on the movement type and other indicators.

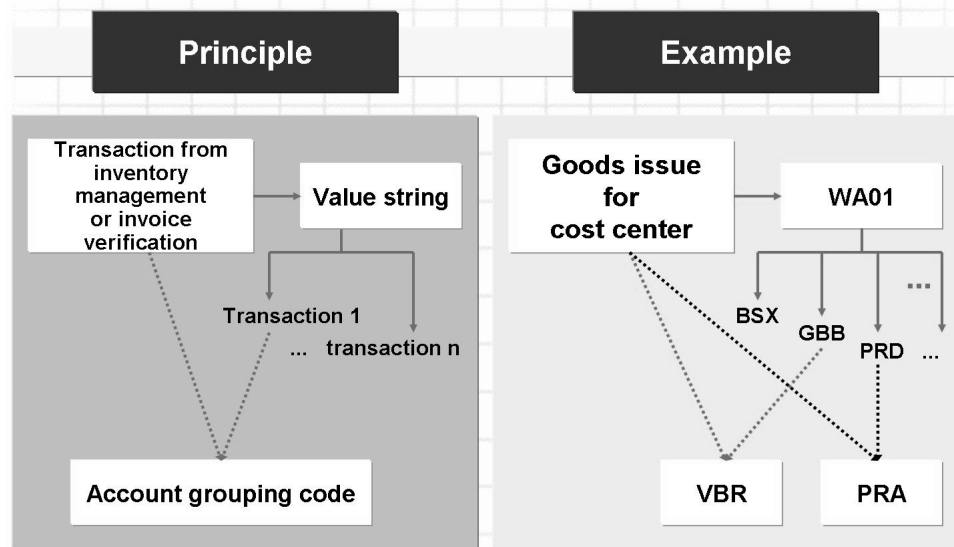


Figure 81: Transaction/Event Key and Account Grouping Code

The value strings contain keys for the posting transactions that can lead to G/L account updates in the case of an FI-relevant posting. These value strings are predefined by SAP. You cannot change value strings or the transactions they comprise in Customizing.

For each of these posting transactions, you can set up automatic postings dependent on the other influencing factors.

Certain posting transactions can be differentiated on a transaction-specific basis by the use of an account grouping code.

In the case of inventory management transactions, the account grouping (or modification) code can be changed dependent on the movement type and other indicators (such as the special stock indicator).

The account grouping code cannot be changed in the case of invoice verification transactions.

The following excerpt from the SAP system Customizing shows the assignment of G/L accounts for the transaction *Offsetting Entry to Stock Posting* for different account grouping codes and valuation classes.

Chart of Accounts		INT	Chart of accounts - international	
Transaction		GBB	Offsetting entry for inventory posting	
Account assignment				
General modification	Valuation class	Debit	Credit	
VBO	3100	400020	400020	
VBO	7900	893020	893020	
VBO	7920	893020	893020	
VBR		400000	400000	
VBR	1210	400000	400000	
VBR	3000	400000	400000	
VBR	3001	400010	400010	
VBR	3002	400000	400000	
VBR	3003	400000	400000	
VBR	3030	403000	403000	
VBR	3040	404000	404000	
VBR	3050	405000	405000	
VBR	3100	410000	410000	
VBR	3200	417000	417000	
VBR	3300	400000	400000	
VBR	7900	890000	890000	
VBR	7910	891000	891000	
VBR	7920	892000	892000	
VKA	3000	894010	894010	

Figure 82: Assignment of G/L Accounts for the Transaction GBB

The fourth table entry you see in this excerpt is not used for any goods movements. This entry is only used for the default account for items with account assignment in purchasing documents (see lesson “Special Cases of Account Determination”).



Goods issue for production order — BWA 261 Account grouping code VBR is assigned to BWA 261.		
<u>300000 (BSX)</u>	<u>400000 (GBB VBR)</u>	“Consumption raw materials_1 plant 1000” <i>to</i> “Stock raw materials_1 plant 1000” 100.00
100.00	100.00	
Goods issue due to scrapping — BWA 551 Account grouping code VNG is assigned to BWA 551.		
<u>300000 (BSX)</u>	<u>400001 (GBB VNG)</u>	“Expenses scrapping plant 1000” <i>to</i> “Stock raw materials_1 plant 1000” 100.00
100.00	100.00	
Goods issue due to inventory differences — BWA 702 Account grouping code INV is assigned to BWA 702.		
<u>300000 (BSX)</u>	<u>233000 (GBB INV)</u>	“Expenses inventory adjustment plant 1000” <i>to</i> “Stock raw materials_1 plant 1000” 100.00
100.00	100.00	

Figure 83: Realization: Example 4

This illustration shows various account grouping codes that are assigned as standard in the SAP system to the movement types listed - irrespective of further indicators.

However, you can assign different consumption accounts to one and the same movement type (for example, a goods issue for a production order) depending on whether the withdrawal is made from your own stock or consignment stock.

The following illustration summarizes all the factors influencing automatic account determination.

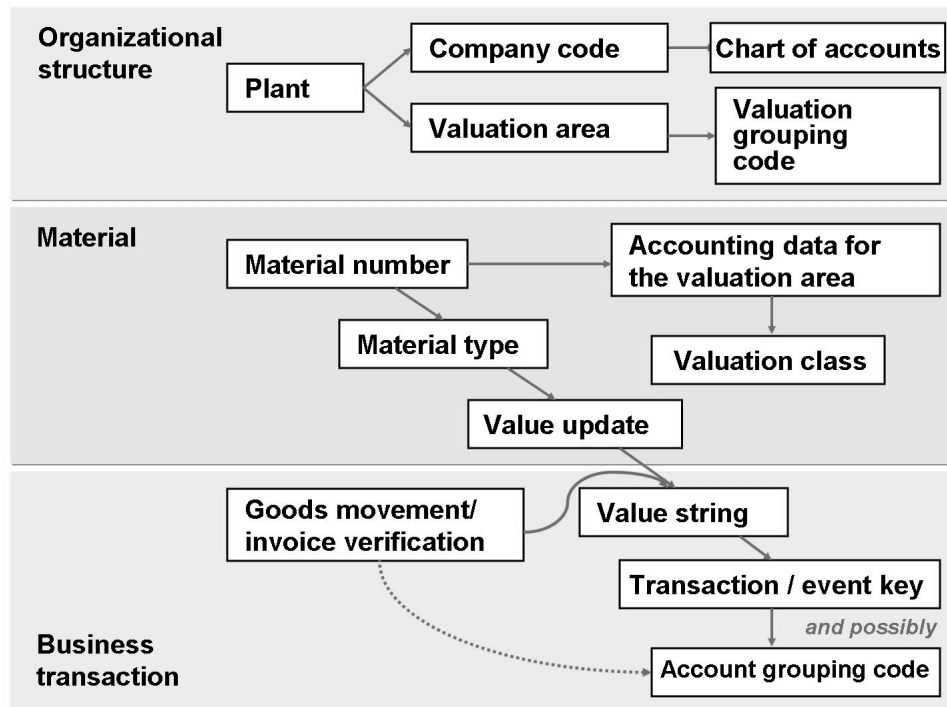


Figure 84: Summary of Influencing Factors

The system parameters (influencing factors) you have to take into account when setting up automatic account determination are as follows:

- Chart of accounts of the company code
- Valuation grouping code of the plant or company code
- Valuation class of the material
- Transaction/event key from the value string, possibly with account grouping code

You can assign the G/L accounts for your business processes in dependence on these parameters.

Simulation of Account Assignment

A simulation function is available, enabling you to check the settings for automatic account determination. This function outputs all the factors that influence account determination, plus additional information.

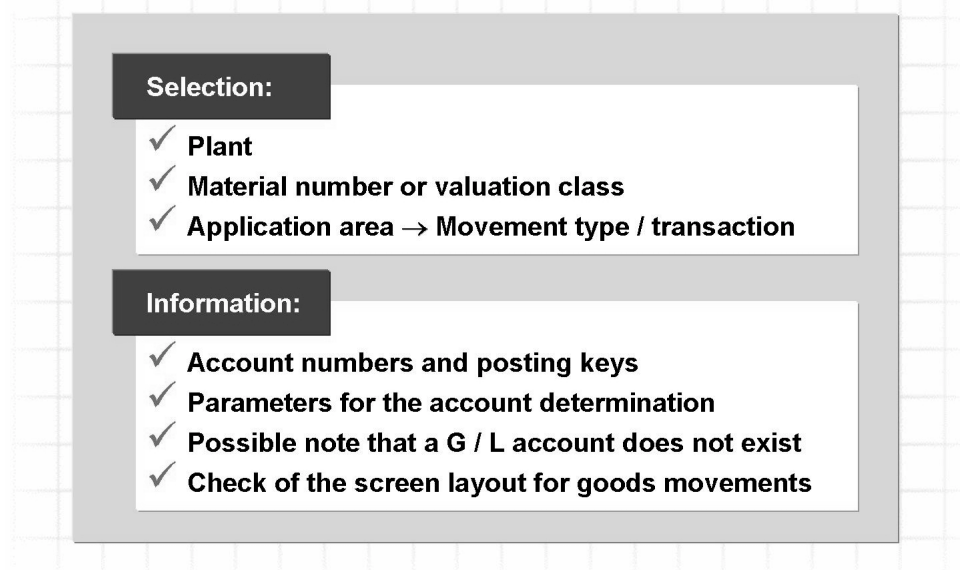


Figure 85: Simulation

The simulation, which you can call for the activity *Configure Automatic Postings*, shows you the G/L accounts that have been assigned according to the following aspects:

- For specified material or valuation class
- For specified plant
- For specified inventory management or invoice verification transaction

You can choose between the following options:

- Input of material number or valuation class (input mode)
- Transaction in inventory management or invoice verification (application area)

In addition, the SAP system can check whether the assigned accounts actually exist, depending on your setting when you call the simulation function.

During the simulation, all transaction/event keys for the relevant value string are taken into account, irrespective of whether or not they are of any significance to your company code (for example, EIN, EKG, FRE).

Within the simulation for inventory management transactions, you can check the compatibility of the field selection for the selected movement type and the field selection for the assigned accounts (report RM07CUFA).



Caution: Of decisive importance is the account for the offsetting entry.

In the following excerpt from the SAP system Customizing, you see the simulated account determination for movement type *free-of-charge delivery* (MvT 511) for a raw material.

Organization					
Plant	1000	-> Company Code	1000	-> Chart of Accounts	INT
		-> Valuation area	1000	-> Valuation Grpg Code	0001
Valuation					
Material	R-T100			-> Valuation Class	3000
		Material Type	R0H	-> <input checked="" type="checkbox"/> Value updating	
Movement					
Movement Type	511	GI deliv. w/o charge			
Posting Lines					
Posting Lines Text	VIGCd	AGC	VC1	PK Acct D	PK Acct Cr
Gain/loss from revaluation	-e-	-e-	3000	83 232500	93 282500
Inventory posting	0001	-e-	3000	89 300000	99 300000
Cost (price) differences	-e-	PRA	3000	83 231000	93 281000
Inventory posting	0001	-e-	3000	89 300000	

Figure 86: Simulation of Account Assignment

The four posting lines displayed in the lower block correspond to the four transaction/event keys listed for the value string WA14 in a previous illustration. The entry - e - means that this transaction does not depend on the relevant influencing factor of the column.

The Account Determination Wizard

The account assignment wizard helps you to set up the accounts for your materials management postings quickly and straightforwardly.

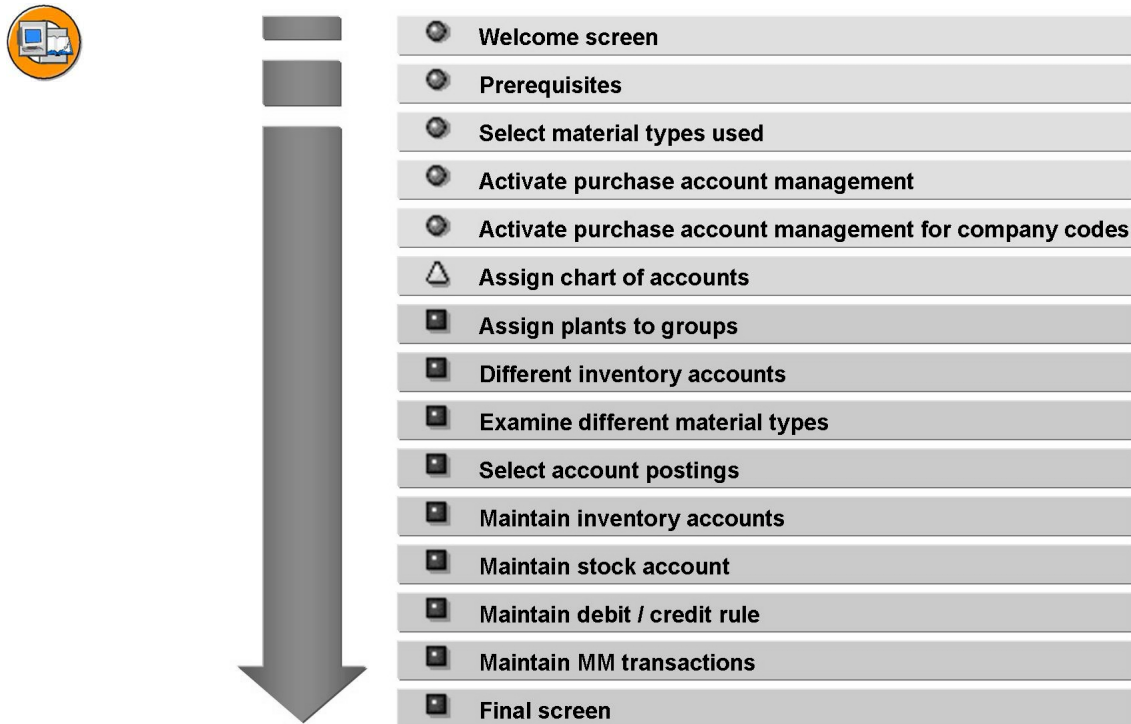


Figure 87: Account Determination Wizard

If you work with the wizard, you can quickly make the system settings for automatic account determination by answering a series of questions. You can call up further information to get recommendations and hints. Depending on your answers, the relevant Customizing tables are then called.

Apart from a few restrictions (discussed in the wizard), you can call up the following functions via the account assignment wizard:

- Display/maintain company codes, plants, and material types (prerequisite)
- Choose the material types to be used
- Set up purchase account management (necessary for certain countries only - such as France, Belgium, Spain)
- Group together valuation areas
- Define the rules for stock postings and other postings
- Define valuation classes
- Assign stock accounts
- Assign the other G/L accounts depending on the business transaction in question



Demonstration: Analogously to Slide Content and Exercises

Purpose

This demonstration shows how to make Customizing settings and thus introduces the options customers have for adjusting the SAP system to their specific company requirements.

System Data

System:	Training system
Client:	Training client
User ID:	Own user ID
Password:	User password
Set up instructions:	No additional

1. Show the most important Customizing settings for the individual slides and associated details in the application. In doing so, use the exercises as a guide.
-



Exercise 8: Checking and Completing the Settings for Account Determination

Exercise Duration: 40 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Check the rules used to define the various dependencies in the account determination
- Determine the G/L accounts assigned to individual transactions and assign further G/L accounts
- Check the settings for automatic account determination using the simulation function

Business Example

Before making the settings for automatic postings in your system, you want to get a clearer picture of the navigation within the account determination facility. You do this taking an accounting transaction for plant 1000 in the IDES system as an example.

System Data

System:	Training system
Client:	Training client
User ID:	SCM550-##
Password:	User password
Set up instructions:	IDES system

Task 1:

To post a valuated goods receipt in the warehouse for a purchase order of the type NB with the item category *standard*, you need account assignments for the following transactions (among other things):

- Inventory posting (**BSX**)
- GR/IR clearing (**WRX**)

1. Take a look at the rules for these two transactions for the chart of accounts **INT**. Do not change **any** of these rules. Which dependencies have been defined for the transactions **BSX** and **WRX**?

2. Determine which G/L accounts are assigned to these transactions for goods movements in plant 1000. Enter the G/L account numbers in the following table:

Valuation class:	3000	3001	3030	7900
Transaction BSX				
Transaction WRX				

Continued on next page

Task 2:

Assign the necessary G/L accounts for goods receipt postings with reference to a PO for materials of your new material type. In this task, consider goods movements in plant 1000 only.



Hint: The accounts for any postings for price differences will be assigned in a later exercise.

1. Can you immediately post a goods receipt against a standard purchase order in the warehouse in plant 1000 for your material from the previous exercise (material type GR##)? Why or why not?

2. Assign the same **stock account** (transaction **BSX**) for automatic postings **in plant 1000** for materials with your new valuation class **VC##** as to the valuation class **3000**.

In doing so, can you copy existing entries?

3. Using the simulation function, check that the same accounts are used for material **R-T1##** and for your new material with valuation class **VC##** (from the exercise for lesson 3, Influence of Material and Material Type) in the case of a **goods receipt for a purchase order** into the warehouse in plant **1000**.



Hint: Note only the transactions BSX and WRX mentioned and ignore the other transactions that are displayed! Ignore any messages about G/L accounts that do not exist.

4. Check that the GR posting is carried out correctly. To do so, create a standard purchase order without account assignment for your material with the material type GR## and the valuation class VC##.

Continued on next page

Use vendor **T-K500A##**, purchasing organization **1000 (IDES Deutschland)**, purchasing group **L##**, and plant **1000**. Order **10** pc at a unit price of **10 EUR** each. Enter **today's date** as the delivery date.

Note the purchase order number: _____

Next post the goods receipt for this purchase order to the warehouse (storage location 0001).

Note the material document number: _____

In the accounting document, check that a posting was actually made to the stock account assigned in task 2-2.

Task 3:

Optional:

Assign the G/L accounts required for the goods receipt postings in plant TR#. In this task, consider only goods receipts for standard purchase order to the warehouse for the materials for your new material type and for raw materials with valuation class 3000.

1. Can you already post a goods receipt for a standard purchase order to the warehouse in plant TR## for your raw material (material R-T1##)? Why or why not?

2. *Optional:*

In a previous exercise, you have established that account determination can be set up for plant **TR##** without changing the account determination for plant 1000. Check again where and how this is defined.

Which valuation grouping code is assigned to your plant TR##?

3. Assign the **stock account 300550** (transaction **BSX**) for the automatic postings **in plant TR##** for materials with your new valuation class **VC##** and for raw materials with valuation class **3000**.

Continued on next page

4. Using the simulation function, check whether, in the case of a **goods receipt for a standard purchase order** to the warehouse in plant **TR##**, account 300550 is always used for the stock posting for raw material **R-T1##** and for your new material with valuation class **VC##** (from the exercise from lesson 3, Influence of Material and Material Type).



Hint: Note only the transactions BSX and WRX mentioned and ignore the other transactions that are displayed!

5. Check that the GR posting is carried out correctly. To do this, add the following to your purchase order from task 2: A standard item without account assignment for both your material with material type **GR##** and valuation class **VC##** and for material **R-T1##**.

Order **10** pieces at a price of **EUR 10** for both materials and for your plant **TR##**. Enter **today's date** as the delivery date.

Post the goods receipt to the warehouse (storage location 0001) for these new purchase order items.

Note the material document number: _____

In the accounting document, check whether the goods receipt value was posted to stock account 300550.

Solution 8: Checking and Completing the Settings for Account Determination

Task 1:

To post a valuated goods receipt in the warehouse for a purchase order of the type NB with the item category *standard*, you need account assignments for the following transactions (among other things):

- Inventory posting (**BSX**)
- GR/IR clearing (**WRX**)

1. Take a look at the rules for these two transactions for the chart of accounts **INT**. Do not change **any** of these rules. Which dependencies have been defined for the transactions **BSX** and **WRX**?

Answer:

Choose: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination Without Wizard** → **Configure Automatic Postings**.

If a dialog box 'Valuation grouping code not defined for valuation area ...' appears, choose *Cancel*.

Choose *Account Assignment*.

Choose the desired transaction (BSX or WRX) by positioning the cursor appropriately in each case.

Choose: **Goto** → **Rules**.

Note: You can also choose the desired transaction by double-clicking and branch from the account overview to the rules.

If necessary, enter the chart of accounts **INT**.

- **BSX** – Dependent on the valuation grouping code and the valuation class
 - **WRX** — Dependent on the chart of accounts only. Not dependent on the valuation grouping code and the valuation class
2. Determine which G/L accounts are assigned to these transactions for goods movements in plant 1000. Enter the G/L account numbers in the following table:

Continued on next page

Valuation class:	3000	3001	3030	7900
Transaction BSX				
Transaction WRX				

- a) To determine the accounts that are updated for movements in plant 1000, you must first determine the valuation grouping code for plant 1000. This was done in exercise 1 of lesson 2, Influence of Company Code and Valuation Area. The valuation grouping code for plant 1000 is 0001.

Choose: *IMG* → *Materials Management* → *Valuation and Account Assignment* → *Account Determination* → *Account Determination Without Wizard* → *Group Together Valuation Areas*.

- b) Next determine the accounts that are assigned to these two transactions for valuation grouping code 0001.

Choose: *IMG* → *Materials Management* → *Valuation and Account Assignment* → *Account Determination* → *Account Determination Without Wizard* → *Configure Automatic Postings*.

If a dialog box 'Valuation Area ...' appears, choose *Cancel*.

Choose *Account Assignment*.

Choose the desired transaction in each case (BSX or WRX) by double-clicking. If necessary, enter the chart of accounts INT.

- c) The following accounts are used:

Valuation class:	3000	3001	3030	7900
Transaction BSX	300000	300010	303000	790000
Transaction WRX	191100	191100	191100	191100

Continued on next page

Task 2:

Assign the necessary G/L accounts for goods receipt postings with reference to a PO for materials of your new material type. In this task, consider goods movements in plant 1000 only.



Hint: The accounts for any postings for price differences will be assigned in a later exercise.

1. Can you immediately post a goods receipt against a standard purchase order in the warehouse in plant 1000 for your material from the previous exercise (material type GR##)? Why or why not?

Answer: No, because no stock account has been assigned in plant 1000 for the valuation class VC##.

2. Assign the same **stock account** (transaction **BSX**) for automatic postings **in plant 1000** for materials with your new valuation class **VC##** as to the valuation class **3000**.

In doing so, can you copy existing entries?

Answer:

Choose: *IMG* → *Materials Management* → *Valuation and Account Assignment* → *Account Determination* → *Account Determination Without Wizard* → *Configure Automatic Postings*.

If a dialog box 'Valuation grouping code not defined for valuation area ...' appears, choose *Cancel*.

Choose *Account Assignment*.

Choose the transaction **BSX**.

You can copy the complete entries for a chart of accounts via *Edit* → *Copy* ...

You can copy an individual entry (which you can choose by positioning the cursor appropriately) via *Copy (Ctrl+F5)*.

Place the cursor on the entry with valuation grouping code 0001 and valuation class 3000.

Choose *Copy*. The selected line is duplicated.

Replace valuation class 3000 in this line by **VC##**.

Save your entries.

Continued on next page

3. Using the simulation function, check that the same accounts are used for material **R-T1##** and for your new material with valuation class **VC##** (from the exercise for lesson 3, Influence of Material and Material Type) in the case of a **goods receipt for a purchase order** into the warehouse in plant **1000**.



Hint: Note only the transactions **BSX** and **WRX** mentioned and ignore the other transactions that are displayed! Ignore any messages about G/L accounts that do not exist.

- a) Choose: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination Without Wizard** → **Configure Automatic Postings**.
- b) Choose *Simulation*.

Enter plant 1000 and the material number. Choose movement type 101 and select *GR goods receipt* (double-click).

Choose *Account Assignments*.

The following appears in the last two lines:

Stock posting	(BSX)	300000
GR/IR clearing account	(WRX)	191100

4. Check that the GR posting is carried out correctly. To do so, create a standard purchase order without account assignment for your material with the material type **GR##** and the valuation class **VC##**.

Use vendor **T-K500A##**, purchasing organization **1000 (IDES Deutschland)**, purchasing group **L##**, and plant **1000**. Order **10 pc** at a unit price of **10 EUR** each. Enter **today's date** as the delivery date.

Note the purchase order number: _____

Next post the goods receipt for this purchase order to the warehouse (storage location 0001).

Note the material document number: _____

Continued on next page

In the accounting document, check that a posting was actually made to the stock account assigned in task 2-2.

- a) On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Purchasing* → *Purchase Order*
→ *Create* → *Vendor/Supplying Plant Known*

Create a new purchase order.

- b) On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Purchasing* → *Purchase Order*
→ *Follow-On Functions* → *Goods Receipt*

Choose the *Goods Receipt for Purchase Order* function .

Enter the goods receipt for your purchase order.

- c) Choose the *Display Material Document* function.

Take a look at the accounting document for your material document and check the account determination for valuation class VC##.

Inventory posting:	300000
GR/IR clearing account:	191100

Task 3:

Optional:

Assign the G/L accounts required for the goods receipt postings in plant TR#. In this task, consider only goods receipts for standard purchase order to the warehouse for the materials for your new material type and for raw materials with valuation class 3000.

1. Can you already post a goods receipt for a standard purchase order to the warehouse in plant TR## for your raw material (material R-T1##)? Why or why not?

Answer: No, because no stock account has been assigned for plant TR## and for the valuation class **3000**.

2. *Optional:*

In a previous exercise, you have established that account determination can be set up for plant **TR##** without changing the account determination for plant 1000. Check again where and how this is defined.

Continued on next page

Which valuation grouping code is assigned to your plant TR##?

- a) Choose: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination without Assistant** → **Define Valuation Control**.

The valuation grouping code is active.

- b) Choose: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination without Assistant** → **Group Valuation Areas**

Different valuation grouping codes have been assigned to plants 1000 and TR##. Valuation grouping code VG## is assigned to plant TR## and code 0001 to plant 1000.

3. Assign the **stock account 300550** (transaction **BSX**) for the automatic postings **in plant TR##** for materials with your new valuation class **VC##** and for raw materials with valuation class **3000**.

- a) Choose: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination without Assistant** → **Create Automatic Postings**.

If a dialog box 'Valuation grouping code not defined for valuation area ...' appears, choose *Cancel*.

Choose *Account Assignment*.

Choose only transaction **BSX**.

Make new entries for the transaction **BSX** with your valuation grouping code **VG##** and the two aforementioned valuation classes **3000** and **VC##**.

Save your entries before choosing another transaction.

Note: No new entry is necessary for the transaction **WRX** because the account determination rules have been defined in such a way that the GR/IR clearing account is not dependent on the valuation grouping code.

Continued on next page

4. Using the simulation function, check whether, in the case of a **goods receipt for a standard purchase order** to the warehouse in plant **TR##**, account 300550 is always used for the stock posting for raw material **R-T1##** and for your new material with valuation class **VC##** (from the exercise from lesson 3, Influence of Material and Material Type).



Hint: Note only the transactions BSX and WRX mentioned and ignore the other transactions that are displayed!

- a) Choose: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination without Assistant** → **Configure Automatic Postings**.
- b) Choose *Simulation*.

Enter plant TR## and your material numbers. Choose movement type 101 and select *GR goods receipt* (double-click).

Choose *Account Assignments*.

The following accounts should be displayed (among others):

Stock posting	(BSX)	300550
GR/IR clearing account	(WRX)	191100

5. Check that the GR posting is carried out correctly. To do this, add the following to your purchase order from task 2: A standard item without account assignment for both your material with material type GR## and valuation class VC## and for material R-T1##.

Order **10** pieces at a price of **EUR 10** for both materials and for your plant TR##. Enter **today's date** as the delivery date.

Post the goods receipt to the warehouse (storage location 0001) for these new purchase order items.

Note the material document number: _____

Continued on next page

In the accounting document, check whether the goods receipt value was posted to stock account 300550.

- a) On the *SAP Easy Access* screen, choose:

Logistics → Materials Management → Purchasing → Purchase Order → Change

Choose *Other Purchase Order* and enter your purchase order number.
Choose *Other Document*.

Enter two further purchase order items for your plant TR##.

Note: The purchase order price for each item must be the same as the standard price in the material master record.

- b) On the *SAP Easy Access* screen, choose:

Logistics → Materials Management → Purchasing → Purchase Order → Follow-On Functions → Goods Receipt

Choose the *Goods Receipt for Purchase Order* function .

Enter the goods receipt for your purchase order.

- c) Choose *Display Material Document*.

Take a look at the accounting document for your material document and check the account determination for goods receipt posting.

The following accounts should appear for both GR items:

Stock posting:	300550
GR/IR clearing account:	191100



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Exercise 9: Account Grouping Code

Exercise Duration: 20 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Determine which account grouping codes are used for a business transaction in inventory management
- Check which G/L accounts are assigned to which goods movements (goods issues, other receipts)

Business Example

You have been checking various business transactions in the IDES system. When booking various goods withdrawals, you noticed that not every goods issue for your example material was posted to the same expense account. You wish to analyze more closely the options for assigning different accounts depending on the movement type.

System Data

System:	Training system
Client:	Training client
User ID:	SCM550-##
Password:	User password
CATT:	ZT_SCM550
Set up instructions:	IDES system

Task:

Familiarize yourself with the term *account grouping code*. Set up automatic account determination for transactions using an account grouping code.

1. In contrast to the receipt and issue postings to a stock account that are clearly defined in business terms, the offsetting entries can be made to different expense and revenue accounts. How is this realized in the SAP system?
2. Which account grouping code is used for the offsetting entry to a stock posting in the case of goods issues for a cost center?



Hint: In this and the next tasks, process only settings for goods withdrawals from your company's own valuated stock, that is, entries for which the indicators for **value and quantity update** have been set and **no special stock indicator** has been set.

Continued on next page

3. Are there any other transactions in connection with this movement type for which an account grouping code has been defined?

4. Assign the consumption account **400550** for the offsetting entry to the stock posting for goods issues with movement type **201** (goods issue for cost center) for materials with the valuation class **VC##** — for both debit and credit postings.

5. Assign expense account no. 231000 (debit posting) and revenue account 281000 (credit posting) for price differences that may arise when a goods or invoice receipt is posted against a purchase order for materials with valuation class **VC##**.

Which account grouping code must you use in this case?

6. *Optional:*

Assign expense account no. 231500 (debit posting) and revenue account 281500 (credit posting) for price differences that may arise when a goods issue is posted with movement type **201** (goods issue for cost center) for materials with valuation class **VC##**.

7. Check the automatic account determination process using the simulation function. Simulate a goods issue for cost center (movement type 201) for your material with valuation class **VC##** in plant **1000**.

Stock posting: _____

Offsetting entry: _____

Price differences: _____

8. Post a goods issue of 2 pc of your material with valuation class **VC##** from plant 1000, storage location 0001, for cost center 1000.
9. Extend your purchase order from the previous exercise by adding a further item for your material with the valuation class **VC##**. Order 10 pieces for plant 1000. Use item category *Standard* and the individual price of **EUR 12**.

Continued on next page

Post the goods receipt for this PO item and take a look at the accounting document. To which account was the price difference posted?

10. Add an item with account assignment for your material with the valuation class VC##. Order 10 pieces for plant 1000. Use item category *Standard* and the account assignment category **K**. Enter cost center **1000** as the (preliminary) account assignment.

Does the system suggest a G/L account for the consumption posting?

Solution 9: Account Grouping Code

Task:

Familiarize yourself with the term *account grouping code*. Set up automatic account determination for transactions using an account grouping code.

1. In contrast to the receipt and issue postings to a stock account that are clearly defined in business terms, the offsetting entries can be made to different expense and revenue accounts. How is this realized in the SAP system?
 - a) For the transaction *Offsetting Entry to Stock Posting*, the accounts are assigned dependent on the account grouping code. This account grouping code is assigned to the movement types (considering further dependencies such as the special stock indicator).
2. Which account grouping code is used for the offsetting entry to a stock posting in the case of goods issues for a cost center?



Hint: In this and the next tasks, process only settings for goods withdrawals from your company's own valuated stock, that is, entries for which the indicators for **value and quantity update** have been set and **no special stock indicator** has been set.

- a) Choose: *IMG* → *Materials Management* → *Valuation and Account Assignment* → *Account Determination* → *Account Determination Without Wizard* → *Define Account Grouping for Movement Types*.

The movement type for a goods issue for a cost center is 201. Place the cursor on movement type 201 in the table. Choose the line with value and quantity updates and without the special stock indicator. The account grouping code for the offsetting entry (GBB) is VBR.

3. Are there any other transactions in connection with this movement type for which an account grouping code has been defined?

Answer: Yes. An account grouping code can also be used for the postings to a price difference account. In the standard system, the account grouping code PRA is defined for the transaction PRD in the case of goods issues.

Continued on next page

4. Assign the consumption account **400550** for the offsetting entry to the stock posting for goods issues with movement type **201** (goods issue for cost center) for materials with the valuation class **VC##** — for both debit and credit postings.
- a) Choose: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination Without Wizard** → **Configure Automatic Postings** .

If a dialog box 'Valuation grouping code not defined for valuation area ...' appears, choose *Cancel*.

Choose *Account Assignment*.

Choose the transaction **GBB**.

Choose *New Entries*.

This entry is to be made for the transaction/event key **GBB** using the account grouping code **VBR**.

Make a new entry with account grouping **VBR**, valuation class **VC##**, and account **400550** for the debit and credit posting.

Save your entries.

5. Assign expense account no. **231000** (debit posting) and revenue account **281000** (credit posting) for price differences that may arise when a goods or invoice receipt is posted against a purchase order for materials with valuation class **VC##**.

Which account grouping code must you use in this case?

Answer:

The account grouping code '' (blank) is predefined for goods or invoice receipts against a purchase order.

Choose: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination Without Wizard** → **Configure Automatic Postings** .

If a dialog box 'Valuation grouping code not defined for valuation area ...' appears, choose *Cancel*.

Choose *Account Assignment*.

Choose the transaction **PRD**.

Choose *New Entries*.

Make a new entry for account grouping code '' (blank), valuation class **VC##**, and the accounts **231000** (debit) and **281000** (credit).

Save your entries.

6. *Optional:*

Continued on next page

Assign expense account no. 231500 (debit posting) and revenue account 281500 (credit posting) for price differences that may arise when a goods issue is posted with movement type **201** (goods issue for cost center) for materials with valuation class **VC##**.

- a) Choose: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination Without Wizard** → **Configure Automatic Postings** .

If a dialog box '*Valuation grouping code not defined for valuation area ...*' appears, choose *Cancel*.

Choose *Account Assignment*.

Choose the transaction **PRD**.

Choose *New Entries*.

Make a new entry for account grouping code PRA, valuation class VC##, and assign the accounts 231500 (debit) and 281500 (credit).

Save your input.

7. Check the automatic account determination process using the simulation function. Simulate a goods issue for cost center (movement type 201) for your material with valuation class **VC##** in plant **1000**.

Continued on next page

Stock posting: _____
 Offsetting entry: _____
 Price differences: _____

- a) Choose: **IMG** → **Materials Management** → **Valuation and Account Assignment** → **Account Determination** → **Account Determination without Assistant** → **Configure Automatic Postings**.

If a dialog box 'Valuation grouping code not defined for valuation area ...' appears, choose *Cancel*.

Choose *Simulation*.

Enter the plant and material number.

Enter movement type 201.

Choose *Continue*.

Select *GI* for cost center.

Choose *Account Assignment*.

Inventory posting:	300000
Offsetting entry:	400550
Price differences	231500 / 281500

The price difference accounts are displayed only if you have made the optional setting.

8. Post a goods issue of 2 pc of your material with valuation class VC## from plant 1000, storage location 0001, for cost center 1000.

- a) On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.

Choose the *Goods Issue, Other* function.

Enter the goods issue for your material with movement type 201.

- b) Choose *Display Material Document*.

Take a look at the accounting document for your material document and check the account determination for valuation class VC##.

Inventory posting:	300000
Offsetting (consumption) posting:	400550

Continued on next page

9. Extend your purchase order from the previous exercise by adding a further item for your material with the valuation class VC##. Order 10 pieces for plant 1000. Use item category *Standard* and the individual price of **EUR 12**.

Post the goods receipt for this PO item and take a look at the accounting document. To which account was the price difference posted?

- a) On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Purchasing* → *Purchase Order* → *Change*

Add a new item to your purchase order.

- b) On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Purchasing* → *Purchase Order* → *Follow-On Functions* → *Goods Receipt*.

Choose the *Goods Receipt for Purchase Order* function.

Enter the goods receipt for your new purchase order item.

- c) Choose *Display Material Document*.

Take a look at the accounting document for your material document and check the account determination for valuation class VC##.

Inventory posting:	300000
GR/IR clearing account:	191100
Price difference:	231000

10. Add an item with account assignment for your material with the valuation class VC##. Order 10 pieces for plant 1000. Use item category *Standard* and the account assignment category **K**. Enter cost center **1000** as the (preliminary) account assignment.

Does the system suggest a G/L account for the consumption posting?

- a) On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Purchasing* → *Purchase Order* → *Change*

Add a new item to your purchase order.

- b) Enter account assignment category **K** plus your material in the new item.

The system should propose G/L account 400550.



Lesson Summary

You should now be able to:

- Describe what is meant by a value string and how such strings are determined for goods movements
- Explain the significance of the account grouping code
- Set up and verify the account determination process for individual transactions

Lesson: Special Cases of Account Determination



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Lesson Duration: 30 Minutes

Lesson Overview

This lesson introduces account determination for postings involving planned delivery costs and the options available for specifying a default account for purchasing document items with account assignment. The lesson also provides you with information on the account determination for tax accounts.



Lesson Objectives

After completing this lesson, you will be able to:

- Assign the accounts for planned delivery costs
- Name the dependencies for a default account in purchasing
- Name the dependencies for input tax accounts



Show the account determination process for the additional posting items in the case of planned delivery costs, first using an example and then in Customizing (depending on the time available).

Define one or two valuation classes that are not assigned to an account category reference and which are intended for material groups (such as chemicals and office supplies). Assign the G/L accounts 400444 and 400666 for debit and credit to these two valuation classes under GBB with VBR.

Caution: You may have to maintain the account names in your language.

Assign your new valuation classes to the material groups *Chemicals* and *Office Supplies*. Enter two PO items with account assignment. The account assignment category is K.

Business Example

In your company, delivery costs are very often taken into consideration in purchasing documents. The members of your project team cannot agree whether the planned delivery costs are to be posted to a single account or to several different ones at the time of goods receipt.

Your buyers – and the employees responsible for entering requisitions or purchase orders in the user departments – would like to have special accounts proposed by the system in the case of items with account assignment for various groups of materials.

You want to familiarize yourself with the dependencies for the assignment of input tax accounts.

Accounts for Delivery Costs

You can plan delivery costs in the various purchasing documents. In doing so, you can use various condition types (for example, FRA1, FRB1, FRC1).

For these condition types, it has been specified in Customizing for Purchasing that the system is to post the planned delivery costs to a separate account (clearing account or provision account) at the time of goods receipt.

You make the offsetting entry to this clearing or provision account when you enter the invoice for the planned delivery costs.

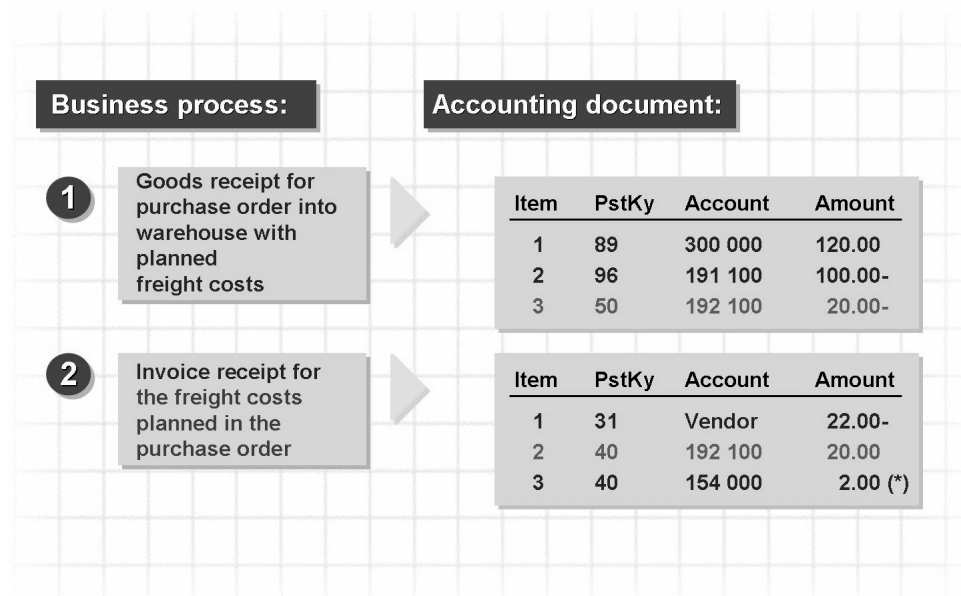


Figure 88: Example: Accounts for Planned Delivery Costs

In the above example, the tax rate 10% was used for the input tax (*) when the incoming invoice was posted.

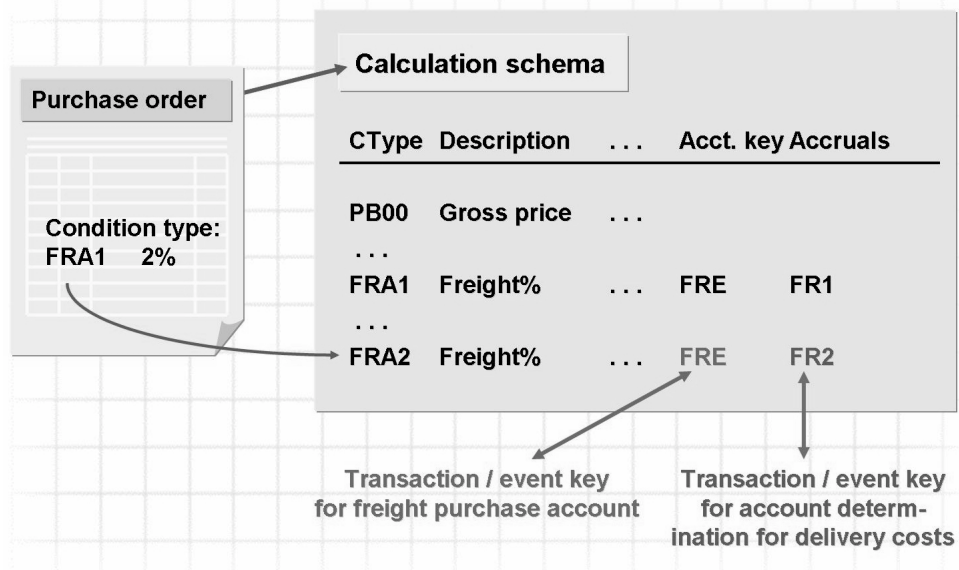


Figure 89: Determination of Accounts for Delivery Costs

The transaction/event keys (account keys) for delivery cost postings come not from the value string but from the calculation schema for purchasing. If required, you can define further account keys for new condition types in Customizing for price determination and use them for additional clearing or provision accounts.

The following excerpt from the SAP system Customizing shows you details of the calculation schema for purchasing.

Change View "Control data": Overview of Selected Set

Procedure: RM0000 Purchasing Document (Big)

Step	Cntr	CType	Description	Fro	To	Man.	Mdt	Stat	P.	SubTo	Reqd	AltCTy	AltCBV	ActKy	AccrIs
1	1	PB00	Gross Price			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	9					
1	2	PBXX	Gross Price			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	9	6				
2	0	VAB0	Variants/Quantity			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X						
3	0	VAB1	Variants %			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X						
10	1	RB00	Discount (Value)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X						
10	2	RC00	Discount/Quantity			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X						
10	3	RA00	Discount % on Net			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X						
10	5	HB00	Header Surch.(Value)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X						
10	6	ZB00	Surcharge (Value)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X						
10	7	ZC00	Surcharge/Quantity			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X						
10	8	ZA00	Surcharge % on Net			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X						
10	11	RL01	Vendor Discount %	1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X						
10	13	RGR0	Group Discount %	1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X						
20	0		Net incl. disc.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	7					
31	1	FRA1	Freight %	20		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						FRE	FR1
31	10	FRA2	Freight %	20		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						FRE	FR2
40	0		Actual Price	22	39	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		S					

Figure 90: Account Key in Purchasing

This illustration only contains a few selected condition types of the standard calculation schema. Before you can assign new provision keys for posting the planned delivery costs, you first have to define them in a separate Customizing activity. Choose: *IMG* → *Materials Management* → *Purchasing* → *Conditions* → *Define Price Determination* → *Define Transaction/Event Keys*.

Default Account in Purchasing

The transaction/event key GBB and the account grouping code (account modification) of the account assignment category are used for automatic determination of the default account in purchasing documents. You can define further account assignment categories in Customizing for Purchasing and assign new account grouping codes to them. You assign the G/L accounts in the activity *Configure Automatic Postings*.

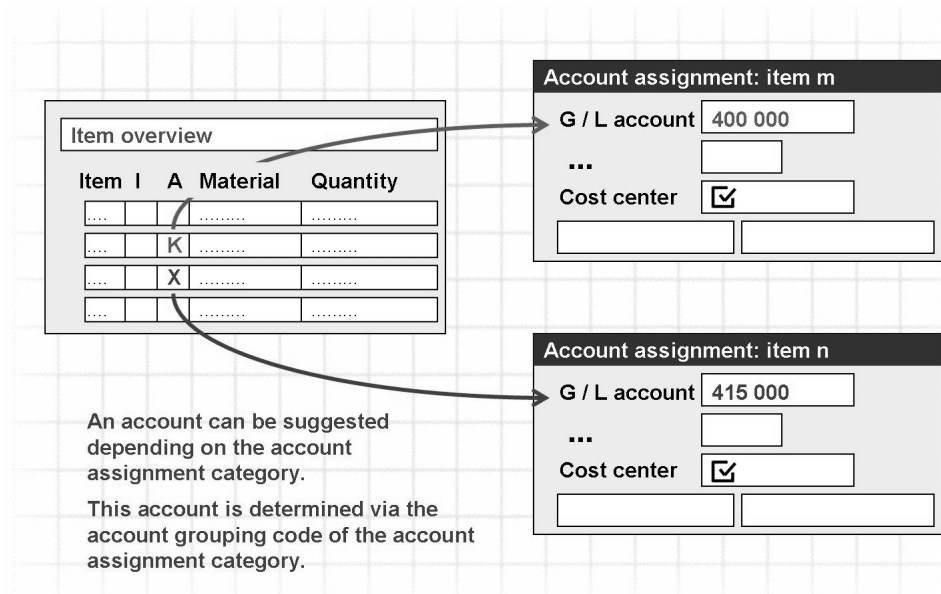


Figure 91: Default Account in Purchasing

In the case of items with account assignment with a material master record, the valuation class from the accounting view is used.

In the case of items with account assignment without a material master record, the valuation class of the material group (see following graphic) or the valuation class ' ' is used.

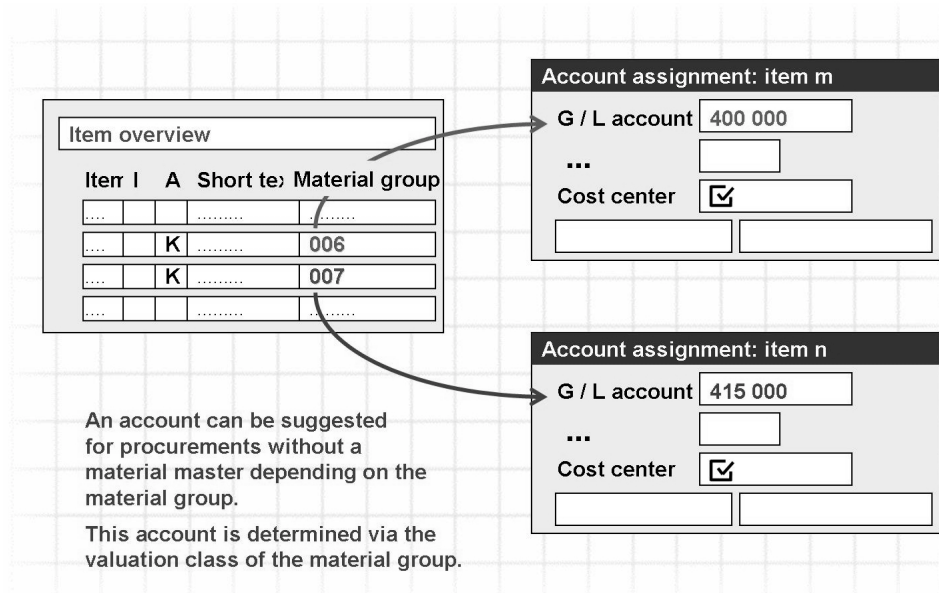


Figure 92: Default Accounts According to Material Groups

The transaction/event key GBB and the account grouping code (account modification) of the account assignment category are used to determine the default account.

You can assign a valuation class to the individual material groups in Customizing for purchasing under *Entry Aid for Items Without Material Master*. The account is then determined via this class.

Tax Accounts

The assignment of the G/L accounts for the tax postings is similar to the setting for the automatic account determination.

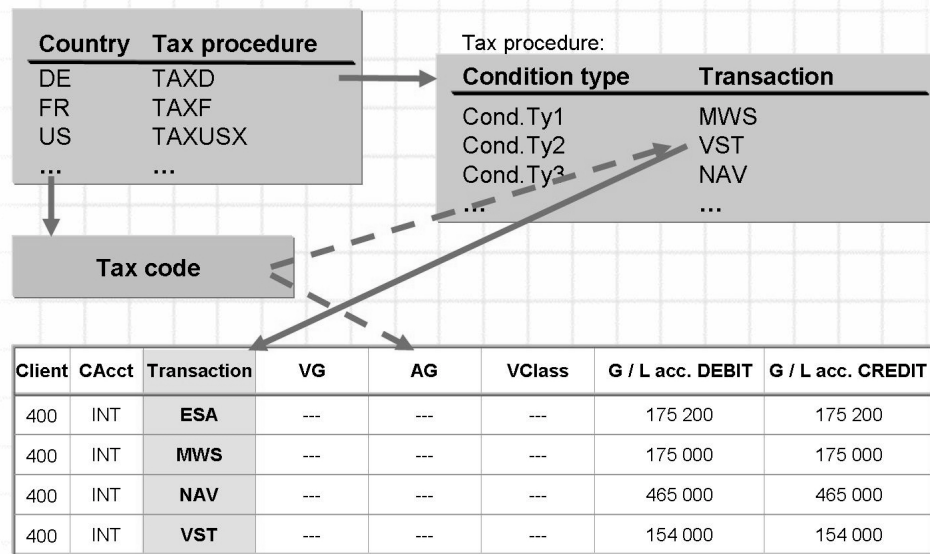


Figure 93: Tax Accounts

In the Customizing of Financial Accounting, you assign a tax determination procedure to the country in which your company code is located. This tax determination procedure contains different condition types for calculating the tax amounts and transaction keys for the different tax accounts.

The following excerpt from the SAP system Customizing shows you a tax determination procedure with condition types and assigned account keys (transactions).

Change View "Control Data": Overview

Procedure: TAXUS Sales Tax - USA

Step	Cntr	CType	Description	Fro	To	Man.	Mdt	Stat	P.	SubTo	Reqd	AltCTy	AltCBV	ActKy
100	0	BASB	Base Amount			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
200	0		A/P Distributed			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
210	0	AP1I	A/P Sales Tax 1 Inv.	100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						NVV
220	0	AP2I	A/P Sales Tax 2 Inv.	100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						NVV
230	0	AP3I	A/P Sales Tax 3 Inv.	100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						NVV
240	0	AP4I	A/P Sales Tax 4 Inv.	100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						NVV
300	0		A/P Undistributed			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
310	0	AP1E	A/P Sales Tax 1 Exp.	100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						VS1
320	0	AP2E	A/P Sales Tax 2 Exp.	100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						VS2
330	0	AP3E	A/P Sales Tax 3 Exp.	100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						VS3
340	0	AP4E	A/P Sales Tax 4 Exp.	100		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						VS4
400	0		A/P Use Tax Distributed			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
410	0	AP1U	A/P Sales Tax 1 Use	210		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						MW1
420	0	AP2U	A/P Sales Tax 2 Use	220		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						MW2
430	0	AP3U	A/P Sales Tax 3 Use	230		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						MW3
440	0	AP4U	A/P Sales Tax 4 Use	240		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						MW4
500	0		A/R Sales Tax			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						

Figure 94: Example of a Tax Determination Procedure

By specifying the country (and thus with reference to the tax determination procedure), you define your tax code. You assign the tax rate to a condition type and thus to an account key.

Maintain Tax Code: Tax Rates

Properties | Tax accounts | Deactivate line

Country Key: US United States
 Tax Code: V1 Input tax
 Procedure: TAXUSX
 Tax type: V Input tax

Percentage rates

Tax Type	Acct Key	Tax Percent. Rate	Level	From Lvl	Cond. Type
Base Amount			100	0	BASB
Calculated Call			105	0	
Shared with G/L			200	0	
A/P Sales Tax 1 Inv.	NVV	10,000	210	100	XP1I
A/P Sales Tax 2 Inv.	NVV		220	100	XP2I
A/P Sales Tax 3 Inv.	NVV		230	100	XP3I
A/P Sales Tax 4 Inv.	NVV		240	100	XP4I
A/P Sales Tax 5 Inv.	NVV		250	100	XP5I
A/P Sales Tax 6 Inv.	NVV		260	100	XP6I
Expensed			300	0	
A/P Sales Tax 1 Exp.	VS1		310	100	XP1E

Figure 95: Maintaining Tax Codes

When assigning G/L accounts for the tax postings (that is, tax accounts), you can specify rules to set the dependency on the tax code.

Maintain FI Configuration: Automatic Posting - Rules

Accounts | Posting Key

Chart of Accounts: INT Chart of accounts - international
 Transaction: VST Input tax

Accounts are determined based on

Debit/Credit Not changeable
 Tax code

Figure 96: Rules for the Assignment of the Tax Accounts



Demonstration: Analogously to Slide Content and Exercises

Purpose

This demonstration shows how to make Customizing settings and thus introduces the options customers have for adjusting the SAP system to their specific company requirements.

System Data

System:	Training system
Client:	Training client
User ID:	Own user ID
Password:	User password
Set up instructions:	No additional

1. Show the most important Customizing settings for the individual slides and associated details in the application. In doing so, use the exercises as a guide.
-



Exercise 10: Automatic Account Determination for Delivery Costs and in Purchasing

Exercise Duration: 5 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Assign the accounts for planned delivery costs
- Name the dependencies for a default account in purchasing

Business Example

Your enterprise requires that delivery costs be taken into account in the valuation of materials. For this reason, anticipated delivery costs are to be planned in the purchase orders wherever possible, and posted to special accounts at the time of goods receipt.

Furthermore, in your enterprise a large number of requisitions for consumable materials and services are created manually in the individual user departments. You have been asked to check whether this work could be simplified by using suitable default accounts.

System Data

System:	Training system
Client:	Training client
User ID:	SCM550-##
Password:	User password
Set up instructions:	See IDES

Task 1:

Decide which statements are true. Justify your answer.

1. Delivery costs cannot be planned in a purchase order. Therefore you do not need an account for delivery costs.

Determine whether this statement is true or false.

- True
- False

Continued on next page

2. When a goods receipt is posted against a purchase order, the values of all planned delivery costs are always posted to a single collective account.
Determine whether this statement is true or false.
- True
 - False

Task 2:

Enhance your knowledge of default accounts in purchasing. Check the correctness of the following statements on the expense account that is to be proposed by the SAP System as the default value in requisition and PO items with account assignment.

1. The default account in purchasing can vary depending on the account assignment category used.
Determine whether this statement is true or false.
- True
 - False
2. In purchasing, a default account can be determined only for items with a material number.
Determine whether this statement is true or false.
- True
 - False
3. The default account in purchasing depends on the material group from the material master record.
Determine whether this statement is true or false.
- True
 - False
4. Only a single account can be suggested for items without a material master record.
Determine whether this statement is true or false.
- True
 - False
5. For items without a material master record, the system can suggest an account dependent on the material group of the item.
Determine whether this statement is true or false.
- True
 - False

Solution 10: Automatic Account Determination for Delivery Costs and in Purchasing

Task 1:

Decide which statements are true. Justify your answer.

1. Delivery costs cannot be planned in a purchase order. Therefore you do not need an account for delivery costs.

Answer: False

In the standard SAP System, delivery costs can be planned in a purchase order. Therefore, special accounts are needed for delivery costs.

This depends on the calculation schema and the condition types it contains.

2. When a goods receipt is posted against a purchase order, the values of all planned delivery costs are always posted to a single collective account.

Answer: False

Depending on requirements, a calculation schema can contain several condition types with different account keys for the provision postings.

Task 2:

Enhance your knowledge of default accounts in purchasing. Check the correctness of the following statements on the expense account that is to be proposed by the SAP System as the default value in requisition and PO items with account assignment.

1. The default account in purchasing can vary depending on the account assignment category used.

Answer: True

Different account grouping codes can be assigned to the individual account assignment categories — with the exception of the account assignment categories A (asset) and U (unknown). Depending on the account grouping code (and the other influencing factors), different accounts can then be assigned.

Continued on next page

2. In purchasing, a default account can be determined only for items with a material number.

Answer: False

For items with a material number, the default account is determined with the valuation class from the material master record (and the other influencing factors). For materials without a valuation class (for example, materials of material type NLAG), the valuation class '' (blank) is used. This valuation class '' (blank) or the valuation class of the material group is applied in the process of account determination for items without a material number.

3. The default account in purchasing depends on the material group from the material master record.

Answer: False

The default account in requisition or PO items with account assignment and a material number depends not on the material group but on the valuation class of the material (and the other influencing factors). However, it is possible to assign the valuation classes in dependence on the material group.

4. Only a single account can be suggested for items without a material master record.

Answer: False

For items without a material number, you can assign a default account with the valuation class '' (blank) or make use of the option of assigning the default accounts in dependence on the material group.

5. For items without a material master record, the system can suggest an account dependent on the material group of the item.

Answer: True

In this case, you must assign valuation classes to the material groups that are to be used in Customizing for purchasing. The default accounts can then be assigned in dependence on these valuation classes (and the other influencing factors).



Lesson Summary

You should now be able to:

- Assign the accounts for planned delivery costs
- Name the dependencies for a default account in purchasing
- Name the dependencies for input tax accounts



Unit Summary

You should now be able to:

- List the various factors influencing automatic account determination
- Explain simple accounting transactions from inventory management and invoice verification
- Determine the chart of accounts used in your company code
- Name the conditions enabling a plant-specific assignment of G/L accounts
- Explain the significance of the valuation grouping code
- Implement account determination for new plants
- Outline the relationship between the material master record and the account determination process
- Take the account determination process into consideration when defining new material types
- Describe what is meant by a value string and how such strings are determined for goods movements
- Explain the significance of the account grouping code
- Set up and verify the account determination process for individual transactions
- Assign the accounts for planned delivery costs
- Name the dependencies for a default account in purchasing
- Name the dependencies for input tax accounts



Test Your Knowledge

1. Name various dependencies that have an influence on the accounts of an accounting document for goods movements.

2. Each company code can use a separate chart of accounts.
Determine whether this statement is true or false.
 - True
 - False

3. The valuation grouping code 0001 can be assigned to each plant of company code 1000.
Determine whether this statement is true or false.
 - True
 - False

4. A valuation class can be assigned to several account category references.
Determine whether this statement is true or false.
 - True
 - False

5. Value strings can be changed and extended in each company according to particular requirements.
Determine whether this statement is true or false.
 - True
 - False

6. In the SAP system, it is _____ (*possible/not possible*) to record the consumption of your own materials and that of consignment materials in different cost elements.
Fill in the blanks to complete the sentence.

7. Account keys are special keys for provisions that are made available for the different types of G/L account (such as for delivery accounts).

Determine whether this statement is true or false.

- True
 False

8. You can assign a _____ to a material group. Through the assignment of a _____ to a material group, the system can determine different _____ for the individual material groups.

Fill in the blanks to complete the sentence.



Answers

1. Name various dependencies that have an influence on the accounts of an accounting document for goods movements.

Answer: The following have an influence on account determination:

- The chart of accounts for the company code in which a transaction is posted
- The material for which a transaction is posted
- The actual business transaction that is being posted
- Possibly also the plant in which a transaction is posted

2. Each company code can use a separate chart of accounts.

Answer: True

Just one chart of accounts (argument) is assigned to each company code (key).

3. The valuation grouping code 0001 can be assigned to each plant of company code 1000.

Answer: True

The assignment of the same valuation grouping code 0001 causes the same G/L accounts to be used (for the same business processes) in all plants of company code 1000.

4. A valuation class can be assigned to several account category references.

Answer: False

A valuation class can be assigned to not more than one account category reference.

5. Value strings can be changed and extended in each company according to particular requirements.

Answer: False

Value strings cannot be changed in the SAP system Customizing.

6. In the SAP system, it is _____ (*possible/not possible*) to record the consumption of your own materials and that of consignment materials in different cost elements.

Answer:

In the SAP system, it is possible to record the consumption of your own materials and that of consignment materials in different cost elements.

7. Account keys are special keys for provisions that are made available for the different types of G/L account (such as for delivery accounts).

Answer: True

8. You can assign a valuation class to a material group. Through the assignment of a valuation class to a material group, the system can determine different accounts for the individual material groups.

Answer: valuation class, valuation class, accounts

Unit 4



Self Study - Additional Topics



The following lessons cannot be covered in the courses TSCM50 and TSCM52 due to time constraints. Since they are relevant for the certification, participants must cover these topics themselves.

These topics are covered in greater detail with exercises in the case study.

Unit Overview

This unit provides you with information on additional materials management processes, which are relevant for the case study and for your certification.

The areas involved here are:

- Subcontracting Process
- Vendor Consignment
- Material Types UNBW and NLAG
- Split Valuation
- Invoicing Plans
- Purchase Order Monitoring



Unit Objectives

After completing this unit, you will be able to:

- Name the features of material types UNBW and NLAG
- Explain procurement and inventory management of these materials
- Differentiate between periodic and partial invoicing plans
- Create periodic and partial invoicing plans
- Carry out the automatic settlement of invoicing plan items
- Monitor order confirmations
- Expedite purchasing documents
- Make the settings for confirmation control
- Explain the procurement process with subcontracting

- Provide the components required for subcontracting to the subcontractor
- Post a goods receipt (GR) for a subcontract order (subcontract PO) and explain the effects
- Specify examples for using split valuation
- Recognize the Customizing settings for split valuation
- Create a material with split valuation
- Outline the procurement process for a material subject to split valuation

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Lesson: Material Types UNBW and NLAG



211

Lesson Duration: 40 Minutes

Lesson Overview

In *SAP* systems, you can manage materials in stock on a quantity basis, but not on a value basis. This lesson explains how you control this and which special features there are for these materials.



Lesson Objectives

After completing this lesson, you will be able to:

- Name the features of material types UNBW and NLAG
- Explain procurement and inventory management of these materials



For inventory management, only the materials with material type UNBW are relevant, as these are updated on a quantity-basis in the stock. In this connection, you should also mention material type NLAG, to explain that these materials are not managed on a value-basis nor a quantity-basis.

Business Example

Your advertising department is responsible for the procurement of advertorials and carries the costs incurred. These brochures should not be stored in the advertising department; they should be stored in the material warehouse. Only quantity-based, not value-based inventory management is necessary. These materials are therefore created with the material type for non-valuated materials (UNBW).



Demonstration:

Purpose

UNBW

CATT: CATT exercise

System Data

System:	Training System
Client:	8xx
User ID:	Own user ID or SCM510-00
Password:	Ask the instructor
Set up instructions:	None

1. Demonstrate the process with the entries from the exercise (group 00).

Material Type UNBW



Material type **UNBW** Non-Valuated Material

Quantity / value updating

Quantity updating

In all valuation areas

In no valuation area

By valuation area

Value updating

In all valuation areas

In no valuation area

By valuation area

Quantity / value updating for valuation areas						
Val...	Mat.	Quantity u...	Value upd.	Pipe Mand.	Pipe A..	
0001	UNBW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
0099	UNBW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1000	UNBW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1100	UNBW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Figure 97: Material Type UNBW

Material type UNBW stands for **non-valuated material**. You can specify that quantities are updated, but values are not for this material type in Customizing for *Logistics - General* by choosing *Material Master* → *Basic Settings* → *Material Types* → *Define Attributes of Material Types*. This means that no accounting data is maintained in the material master record for materials of this material type, and stock values are therefore not updated. These materials can therefore only be procured with account assignments.



	UNBW	ROH	
Purchase order	With acct assgt	Without acct assgt	With acct assgt
Goods receipts for purchase order			
Quantity	Warehouse +	Warehouse +	Consumption +
Value	Consumption acct	Stock account	Consumption acct
Goods issue			
Quantity	Warehouse -	Warehouse -	
	Consumption +	Consumption +	
Value		Consumption acct	

Figure 98: GR for Valuated and Non-Valuated Material

For materials that are managed both on a quantity and value basis (for example, material type ROH), the goods receipt for a purchase order with account assignment has the following effects:

- The **quantity** is posted to consumption. The consumption statistics are updated in the material master record.
- The **value** is posted to a consumption account. The costs are debited to the account assignment.
- The total quantity and total value of the warehouse stock remain unchanged.

For materials with material type UNBW, on the other hand, the goods receipt for a purchase order with account assignment has the following effects:

- The **quantity** is posted to stock and the stock data is then updated in the material master record.
- The **value** is posted to a consumption account. The costs are debited to the account assignment.



Caution: The consumption statistics in the material master record are not updated after the goods receipt!

- The total quantity of the warehouse stock is increased.

For other goods receipts, transfer postings, or goods issues, postings are not created in Financial Accounting. The field control of a movement type may make it necessary to specify an account assignment, but there are still no postings in accounting. If you enter a goods issue for consumption, the consumption statistics are updated in the material master record.

Material Type NLAG

Material type NLAG stands for **non-stock material**. You can specify that neither quantities nor values are updated for this material type in Customizing for *Logistics - General* by choosing *Material Master* → *Basic Settings* → *Material Types* → *Define Attributes of Material Types*. This means that no accounting data is maintained in the material master record for materials of this material type, and stock values are therefore not updated. These materials can therefore only be procured with account assignments.



Material type		NLAG	Non-stock material
Quantity/value updating			
Quantity updating		Value updating	
<input type="radio"/>	In all valuation areas	<input type="radio"/>	In all valuation areas
<input checked="" type="radio"/>	In no valuation area	<input checked="" type="radio"/>	In no valuation area
<input type="radio"/>	By valuation area	<input type="radio"/>	By valuation area

Figure 99: Material Type NLAG

For materials with material type NLAG, the goods receipt for a purchase order with account assignment has the following effects:

- The **quantity** is posted to consumption and the consumption statistics are then updated in the material master record.
- The **value** is posted to a consumption account. The costs are debited to the account assignment.



Caution: An update of the total quantity and total value in the material master record is not intended for non-stock material.



Exercise 11: Material Type UNBW

Exercise Duration: 20 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Create a purchase order with non-valuated material
- Enter a goods receipt of non-valuated material

Business Example

For operating manuals, you have selected material type UNBW. A value trace is not necessary for these materials. However, the stock quantity is necessary for production.

System Data

System: Training System
Client: 8xx
User ID: Ask the instructor
Password: Ask the instructor
CATT: ZT_SCM510
Set up instructions: None

Task:

Create a purchase order for operating manuals. Enter the goods receipt for the purchase order, then a goods issue. Determine when an update in the consumption data of the material master record takes place.

In the exercise steps 1, 4, and 6, check the total stock and total consumption in the material master record for plant 1000. Make a note of these values for material **T-M510L##** in the following table.

Exercise step	Total stock	Total consumption
1: Display material	_____	_____
4: After goods receipt	_____	_____
6: After goods receipt	_____	_____

1. Display material **T-M510L##** and note the material type.

Material type: _____

Make a note of the total stock and total consumption in the table.

Continued on next page

2. Create a purchase order for vendor **T-K510A##**. Order 100 pieces of material **T-M510L##** for plant 1000, storage location 0001, with a delivery date in 4 weeks. The net price is 1 euro. Post the costs of the purchase order to account assignment **T-L##**.

In the header data on the *Org. Data* tab page, enter the purchasing organization 1000, the purchasing group **T##**, and the company code 1000.

3. Vendor **T-K510A##** delivers the instruction manuals. Enter a goods receipt in plant 1000, storage location 0001.

Then display the accounting document and make a note of the updated accounts.

Debit	Credit
_____	_____

4. Display material **T-M510L##**. Make a note of the total stock and total consumption of the material in the table.
5. Enter a goods issue of 25 pieces of material **T-M510L##** from plant 1000, storage location 0001, for cost center 1000. Check whether the system has generated an accounting document for this material document.
6. Display material **T-M510L##**. Make a note of the total consumption of the material in the table.




Solution 11: Material Type UNBW

Task:

Create a purchase order for operating manuals. Enter the goods receipt for the purchase order, then a goods issue. Determine when an update in the consumption data of the material master record takes place.

In the exercise steps 1, 4, and 6, check the total stock and total consumption in the material master record for plant 1000. Make a note of these values for material **T-M510L##** in the following table.

Exercise step	Total stock	Total consumption
1: Display material	<u>0</u>	<u>0</u>
4: After goods receipt	<u>100</u>	<u>0</u>
6: After goods receipt	<u>75</u>	<u>25</u>

1. Display material **T-M510L##** and note the material type.
 Material type: _____
 Make a note of the total stock and total consumption in the table.
 - a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current*.
 - b) Enter the *Material Number* **T-M510L##**.
 - c) Choose *Select View(s)*, select *Plant Stock*, and choose *Organizational levels*.
 - d) Enter *plant 1000* and choose  *Enter*.
 - e) Choose , with the quick info text *Information on material*. The material type **UNBW** (non-valuated material) is displayed in the dialog box. Close the dialog box.
 - f) Choose  *Additional Data* and choose the *Consumption* tab page.
2. Create a purchase order for vendor **T-K510A##**. Order 100 pieces of material **T-M510L##** for plant 1000, storage location 0001, with a delivery date in 4 weeks. The net price is 1 euro. Post the costs of the purchase order to account assignment **T-L##**.

Continued on next page

In the header data on the *Org. Data* tab page, enter the purchasing organization 1000, the purchasing group T##, and the company code 1000.


- a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known (ME21N)*.
- b) Enter *Vendor T-K510A##*.
- c) In the header details on the *Org. Data* tab page, enter the following data:

Purchasing Organization 1000

Purchasing Group T##

Company Code 1000



Hint: To open the header data, choose  *Expand Header*.

- d) Enter the following data in the item overview:

Account assignment category K

Material T-M510L##


Quantity 100 pc

Delivery Date <Today+4 weeks>


Net price 1

Plant 1000

Storage Location 0001

- e) Enter *cost center T-L##* on the *Account assignment* tab.
- f) Choose  *Save*.









Hint: To display the purchase order, choose  *Other Purchase Order* and then *Other Document*.

3. Vendor **T-K510A##** delivers the instruction manuals. Enter a goods receipt in plant 1000, storage location 0001.






Then display the accounting document and make a note of the updated accounts.

Continued on next page

Debit	Credit
<u>Consumption 400000</u>	<u>GR/IR 191100</u>

- a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Choose the transaction *Goods Receipt* and, as reference, *Purchase Order*.
 - c) Enter the purchase order number of the order you just created and choose , with the quick info *Execute*.
 - d) Set the *Item OK* indicator.
 - e) Choose  with the quick info text *Post*.
 - f) Choose *Display*, and *Material Document* as the reference.
 - g) Choose  with the quick info text *Execute*.
 - h) In the header data, choose the *Document Info* tab page, and choose  *FI Documents*.
 - i) To display the *accounting document*, double-click the document number.
4. Display material **T-M510L##**. Make a note of the total stock and total consumption of the material in the table.
- a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current (MM03)* .
 - b) Enter the *Material Number T-M510L##*.
 - c) Choose *Select View(s)*, select *Plant Stock*, and choose *Organizational levels*.
 - d) Enter *plant 1000* and choose  *Enter*.
 - e) Choose  *Additional Data* and choose the *Consumption* tab page.

Continued on next page

5. Enter a goods issue of 25 pieces of material **T-M510L##** from plant 1000, storage location 0001, for cost center 1000. Check whether the system has generated an accounting document for this material document.
 - a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Choose *Goods Issue* and, as the reference, *Other*.
 - c) Enter *movement type 201*, delete the special stock indicator if necessary, and confirm your entries with *Enter*.
 - d) Enter the following data:
 - Material* tab page: *Material T-M510L##*
 - Quantity* tab page: *Quantity 25 pc*
 - Where* tab page: *Plant 1000, Storage Location 0001*
 - Account assignment* tab page: *Cost center 1000*
 - e) Set the *Item OK* indicator.
 - f) Choose  *Post*.
 - g) Choose *Display* and, as the reference *Material Document*.
 - h) Choose  with the quick info text *Execute*.
 - i) Choose the *Document Info* tab page, and choose  *FI Documents*.
No accounting documents have been created.
6. Display material **T-M510L##**. Make a note of the total consumption of the material in the table.
 - a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current (MM03)*.
 - b) Enter the *Material Number T-M510L##*.
 - c) Choose *Select View(s)*, select *Plant Stock*, and choose *Organizational levels*.
 - d) Enter *plant 1000* and choose  *Enter*.
 - e) Choose  *Additional Data* and choose the *Consumption* tab page.



Lesson Summary

You should now be able to:

- Name the features of material types UNBW and NLAG
- Explain procurement and inventory management of these materials

Lesson: Invoicing Plan



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Lesson Duration: 45 Minutes

Lesson Overview

This lesson outlines how both regularly recurring payments and procurement transactions with a fixed payment plan can be handled using invoicing plans.

Particularly advantageous is the automatic settlement option, which allows you to generate invoices automatically in the background on the relevant due dates.



Lesson Objectives

After completing this lesson, you will be able to:

- Differentiate between periodic and partial invoicing plans
- Create periodic and partial invoicing plans
- Carry out the automatic settlement of invoicing plan items



The emphasis of this unit should lie squarely on periodic invoicing plans. In most cases, the partial invoicing plan is not flexible enough to take account of changes in costs for example. The exercise for participants is thus limited to the use of periodic invoicing plans.

When carrying out the system demonstration, you should make sure that the validity start date of the framework order is earlier than the current date in order to be able to generate invoicing plan items whose invoice date lies in the past.

Additional system demonstration:

- Create partial invoicing plan (for example, with invoicing plan type M2)
- Customizing for invoicing plan type (for example, invoicing plan type MM used by participants in exercise)

Time needed for exercise: approx. 30 min.

Business Example

Through the use of invoicing plans for leasing agreements and suchlike, your enterprise aims to considerably reduce the manual data entry effort in the purchasing and invoice verification departments. You intend to have the invoices generated automatically in the background on the relevant due dates.

Invoicing Plans

The invoicing plan is not an independent document type, but a particular type of purchase order. The invoicing plan enables you to schedule the desired dates for the creation of invoices relating to the planned procurement of materials or services independently of the actual receipt of the goods or actual performance of the services. It lists the dates on which you wish to create and then pay the invoices.

You have the system create the invoices automatically on the basis of the data in the purchase order, thereby triggering payment of the vendor. It is also possible to enter the invoice for an invoicing plan manually. Automatic settlement is carried out using the transaction *Logistics Invoice Verification* → *Automatic Settlement* → *Invoicing Plan Settlement*.



Periodic Invoicing Plan	Partial Invoicing Plan
<ul style="list-style-type: none"> ● Vehicle leasing payments (monthly) EUR 600 ● Ground lease 2,200 EUR ● Rental for photocopier EUR 150 ● Gardener, monthly EUR 1,500 	<ul style="list-style-type: none"> ● Market survey EUR 20,000 ➢ Conclusion of contract EUR 2,000 ➢ First analysis EUR 3,000 ➢ Survey, evaluation of Results, interim report EUR 7,500 ➢ Final report, plan/actual comparison EUR 7,500
Payment of total amount effected at regular intervals.	Total amount paid in instalments

Figure 100: Invoicing Plans

There are two kinds of invoicing plan: **periodic invoicing plans** and **partial invoicing plans**.

To be able to create an invoicing plan in a purchase order item

- A goods receipt or unvaluated goods receipt may not be provided for the purchase order item
- The purchase order item must have an account assignment.

Before you can use automatic settlement, you and the vendor must have agreed to use the automatic invoice creation facility. The *AutoEvalGRSetmt Del.* indicator must be selected in the vendor master record.

If the indicator is not set in the vendor master record, it cannot be set in the purchase order item either.

For periodic invoicing plans you should use a document type in which a validity period must be entered in the header of the purchase order.

Periodic Invoicing Plan

The periodic invoicing plan can be used for regularly recurring procurement transactions, such as rental and lease installment payments. In the case of the periodic invoicing plan, the net value of the PO item is invoiced on each due date.



FO Purchase order	Example
Validity: 01/01/ - 12/31/ optional	Invoicing plan type: 07 <i>periodic</i>
Account assignment K 123 mandatory	General data
Item 10: Rental of training room 500.00 per	Start date: 02 <i>Start of agreement</i>
invoicing plan	End date: 09 <i>End of agreement</i>
Periodic Invoicing Plan	Horizon: 10 <i>Agmt start + 1 year</i>
March 30, 500	Invoice data
April 30, 500	Invoice date: 11 <i>monthly</i>
May 31, 500	Tax data
June 30, 500	Dialog purchase order: <input checked="" type="checkbox"/>
...	In advance: <input checked="" type="checkbox"/>
...	
Invoice	
03/30/ EUR 500	
Invoices generated automatically.	
Invoices generated automatically.	

Figure 101: Periodic Invoicing Plan

Example of a periodic invoicing plan:

The monthly rental for a training room is 500 EUR. This is charged to cost center 123. The rental agreement with the landlord is valid for five years. The monthly rental is renegotiated annually at the beginning of the year.

You create an appropriate invoicing plan type in Customizing. The invoicing plan type determines that the invoicing dates for one year are generated automatically when the invoicing plan is created. The dates are calculated in such a way that the rent can be paid at the end of the month for the forthcoming month in each case.

You can specify in Customizing for Purchasing whether the dates are to be maintained manually or whether the system is to put forward date proposals according to the specified rules.

To create a periodic invoicing plan, proceed as follows:

1. Create a purchase order with document type FO (Framework Order) if possible or enter the validity period in the document header. If the invoicing plan is to be unlimited, leave the validity period end unfilled. You can fill this in later in the case of a magazine subscription if you cancel this at some point for instance.
2. Maintain the desired material or service, its quantity and price, and the account assignment category. In the item details, enter the relevant account assignment data for the item.



Caution: The account assignment category cannot be changed once you have created the item. Only the detailed data dependent on the account assignment category, such as the specification of the cost center in the case of account assignment category K, can be changed at any time.

3. Ensure that the indicators for GR and IR control are set correctly on the item detail screen. The *Goods Receipt* indicator may only be set in combination with the *Goods Receipt Non-Valuated* indicator. The *InvoiceReceipt* indicator must be set. For the automatic creation of invoices, the *ERS* (evaluated receipt settlement) indicator (indicator for automatic settlement) must be set. A further prerequisite for automatic settlement is that a tax code and payment conditions must be entered in the purchase order.
4. Choose the *Invoicing Plan* button in the item details on the *Invoice* tab page. A window appears in which you can choose the desired invoicing plan type from those predefined in Customizing.

If the *Dialog Pur. Order* indicator is set in Customizing for the invoicing plan type, you obtain an overview of the invoicing dates determined by the system on the basis of the settings. The invoicing date and the value to be invoiced are displayed for each settlement period (for example, month). In the case of the periodic invoicing plan, the value is the net value of the PO item.

You can change the date proposals and, if necessary, block individual invoicing dates with regard to automatic invoice creation.

The *Dates From* and *Dates To* fields determine the period for the automatic generation of invoicing dates.

If a horizon is specified in Customizing, it overrides the invoicing date proposals stemming from the aforementioned fields.

With the *In Advance* indicator, you specify whether the invoice is to be created for a period in advance or in arrears.

Partial Invoicing Plan

You can use the partial invoicing plan to invoice consumption material or service items that are settled in stages (for example, in plant construction) or to invoice the individual phases of a building project upon completion of each phase.

In a partial invoicing plan, you can designate certain dates as dates for down payments for instance (billing rule 4 or 5). The amounts for these dates are not taken into account in the sum total of the invoice items.

With the partial invoicing plan, the total value of the PO item is split over the individual dates of the plan.

The partial invoicing plan is only of limited use for items where payment due dates are event-dependent (such as building projects).



FO Purchase order optional

Validity: 01/01/ - 12/31/

Account assignment K 123 mandatory

Item 10: Market survey
20,000 UNI total

Invoicing plan

Partial Invoicing Plan Maintain data

Analysis/plan	Jan. 20	5000
Data collection/evaluation	15. March	4000
Final report	30. April	6000

Invoice
20/01/ EUR 5000

Invoices generated automatically.

Example

Invoicing plan type: 08 *Partial invoice*

General data

Start date: 02 *Start of agreement*

Reference IP: 000047

Tax data

Dialog purchase order:

Figure 102: Partial Invoicing Plan

Example of a partial invoicing plan:

A total budget of 20,000 EUR has been provided for a market survey. 5,000 EUR is to be paid upon completion of the initial analysis, 4,000 EUR after the survey has been carried out, and the rest, amounting to 6,000 EUR, upon submission of the final report.

If you intend to have this survey carried out on a regular basis in future, it makes sense to create a reference invoicing plan for partial invoicing plans in Customizing. This can then be used as a template for the automatic generation of the appropriate invoicing dates. Without a reference invoicing plan, you must specify the invoicing dates in the invoicing plan manually.

The procedure for creating a partial invoicing plan is similar to that for creating a periodic invoicing plan. In the case of a partial invoicing plan, too, specification of an account assignment category is mandatory. The materials or services procured using an invoicing plan cannot be procured for stock.

After maintaining the data in the PO item overview, choose a partial invoicing plan type on the *Invoice* tab page in the item details. You obtain a date overview, in which you can enter the desired dates manually. If a reference invoicing plan has been created in Customizing, the system generates the relevant date proposals.

When creating a partial invoicing plan, you can flag a date as a date for a down payment in the field *B* (billing/invoicing plan rule).



Caution: Once you have assigned an invoicing plan type to an item (for example, partial invoicing plan), you cannot subsequently change it. If you wish to assign a different invoicing plan type, you must delete the item and create a new one.

Settlement



FO Purchase order	
Item 10: K <i>Rental for training room</i> 500 EUR per month	
Item: [10], Rental, training room	
Invoice	Delivery
<input checked="" type="checkbox"/> IR Invoicing plan <input checked="" type="checkbox"/> Evaluated receipt settlement (ERS) <input type="text" value="11"/> Tax code	<input type="checkbox"/> GR <input type="checkbox"/> GR non-valuated <i>or</i> <input checked="" type="checkbox"/> GR <input checked="" type="checkbox"/> GR non-valuated

Figure 103: GR/IR Control

GR/IR control must be set up in such a way that only receipt of an invoice is expected rather than a valuated goods receipt (or, in the case of services, rather than a valuated service entry). Only a non-valuated goods receipt is possible. With regard to goods receipt control, you can thus choose between two alternatives:

- Set both the *Goods Receipt* indicator **and** the *GR Non-Valuated* indicator
- Deactivate the *Goods Receipt* indicator

If you wish to use automatic settlement, the *Evaluated Receipt Settlement* indicator must be set in addition to the Invoice indicator. The former indicator, which must already have been set in the vendor master record, then appears as the default when a purchase order is created for the vendor in question.

A further prerequisite for automatic settlement is the tax code, which must be set in the item detail for an invoicing plan item.

The documents for settlement must also contain payment terms.

If, in the system, you have several PO items with invoicing plans that are set to generate invoices on a variety of different dates, it is advisable to carry out a settlement run for your invoicing plans on a daily basis.

To carry out automatic settlement with regard to invoicing plans, proceed as follows:

1. After entering the selection criteria for invoicing plans requiring settlement (company code, plant, vendor, purchasing document and item) on the selection screen for automatic invoicing plan settlement, you can specify (as a processing option) which rule the system is to apply when generating invoice documents against the invoicing plan.
 - Per vendor
 - Per purchase order
 - Per PO item
2. You can set the *Test Run* indicator to simulate the results of the settlement (invoice generation) run.

On completion of the settlement run, you obtain a log listing the invoiced transactions and drawing your attention to any errors that may have occurred. The invoices generated through the automatic invoicing plan settlement run are then processed further in Financial Accounting.



Hint: The invoicing plan settlement run can be carried out either online or in the background.

You can generate a message for the invoice documents you have generated and then send this to the vendor.

You can also settle invoicing plans manually if vendors create invoices and send these to you.

Automatic settlement with regard to invoicing plans:

SAP Menu → Logistics → Materials Management → Logistics Invoice Verification → Automatic Settlement → Invoicing Plan Settlement

Customizing settings for invoicing plans:

SAP Customizing Implementation Guide → Materials Management → Purchasing → Purchase Order → Invoicing Plan



Hint: Further information on problems with invoicing plans can be found in Note 499523.



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Exercise 12: Invoicing Plan

Exercise Duration: 30 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Create invoicing plans and carry out automatic settlement

Business Example

The use of invoicing plans can considerably reduce the manual data entry effort within the purchasing department.

Task:

Create periodic invoicing plan.

1. You wish to record a rental agreement in the system in the form of a periodic invoicing plan. For this purpose, the following data on the landlord must be stored in a vendor master record:

Vendor number	T-K520C##
Company code	1000
Purchasing organization	1000
Account group	ZTMM
Search term	SCM520
Country	DE
Language	DE
Reconciliation account	160000
Currency	EUR
Terms of payment (purchasing)	0002

The rent is to be settled (invoiced and paid) automatically. Which indicator must be set in the vendor master record for this purpose?

Set the relevant indicator in vendor master record T-K520C## and acknowledge the message re GR-based invoice verification.

Continued on next page

2. Create the rental agreement with vendor **T-K520C##** as a purchase order of **document type FO** (framework order).

The rental agreement begins on the first day of the current month and is valid for 12 months.

Enter the following item data:

Account assignment category	K
Short text	Office rent
Quantity	1
Unit of measure	Month (Mon)
Price	4000 EUR per month
Material group	SCM520
Plant	1000
GL account	400000
Cost center	1000

Since you do not expect a goods receipt for this item, change the relevant settings regarding goods receipts on the *Delivery* tab page.



Hint: Check the settings for automatic settlement on the *Invoice* tab page. Has the *AutoEvalGRSetmt Del.* indicator been adopted from the vendor master record? If necessary, deselect the *GR-Based Invoice Verification* indicator.

For the invoice to be generated automatically, a tax code (for example, **11**) must have been defined in the purchase order.

To create the invoicing dates, assign the invoicing plan type **Period**. **Training MM** to the item. To do so, choose *Invoicing Plan* on the *Invoice* tab page.

What is the invoicing date of the first rental payment, and what status does this date have?

Go back to the item overview and save the invoicing plan.

3. Generate the invoice that is due according to the invoicing plan. Use the following selection criteria for this purpose:

Continued on next page

Company code	1000
Plant	1000
Vendor	T-K520C##

Make sure the *Test run* indicator is not set.

Display the invoicing plan by branching from the payroll log display to the purchase order.

Is invoicing complete for the first invoicing date? Check the invoice status.

4. Display the settings in Customizing for the periodic invoicing plan type **MM** (Period. Training MM).

According to which date rule are the default values for the invoicing date calculated?

Do invoice amounts for a settlement period become due for payment in advance or in arrears?

Are the invoicing dates proposed automatically in the purchase order?

5. Unset the indicator for automatic settlement in vendor master record **T-K520C##**.

Solution 12: Invoicing Plan

Task:

Create periodic invoicing plan.

1. You wish to record a rental agreement in the system in the form of a periodic invoicing plan. For this purpose, the following data on the landlord must be stored in a vendor master record:

Vendor number	T-K520C##
Company code	1000
Purchasing organization	1000
Account group	ZTMM
Search term	SCM520
Country	DE
Language	DE
Reconciliation account	160000
Currency	EUR
Terms of payment (purchasing)	0002

The rent is to be settled (invoiced and paid) automatically. Which indicator must be set in the vendor master record for this purpose?

Set the relevant indicator in vendor master record T-K520C## and acknowledge the message re GR-based invoice verification.

- a) *SAP Menu* → *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Vendor* → *Central* → *Create*

To enable the rental payments to be settled automatically, the *AutoEvalGRSetmt Del.* indicator must be set in the vendor master record.

2. Create the rental agreement with vendor **T-K520C##** as a purchase order of **document type FO** (framework order).

The rental agreement begins on the first day of the current month and is valid for 12 months.

Enter the following item data:

Continued on next page

Account assignment category	K
Short text	Office rent
Quantity	1
Unit of measure	Month (Mon)
Price	4000 EUR per month
Material group	SCM520
Plant	1000
GL account	400000
Cost center	1000

Since you do not expect a goods receipt for this item, change the relevant settings regarding goods receipts on the *Delivery* tab page.



Hint: Check the settings for automatic settlement on the *Invoice* tab page. Has the *AutoEvalGRSetmt Del.* indicator been adopted from the vendor master record? If necessary, deselect the *GR-Based Invoice Verification* indicator.

For the invoice to be generated automatically, a tax code (for example, **II**) must have been defined in the purchase order.

To create the invoicing dates, assign the invoicing plan type **Period**. **Training MM** to the item. To do so, choose *Invoicing Plan* on the *Invoice* tab page.

What is the invoicing date of the first rental payment, and what status does this date have?

Go back to the item overview and save the invoicing plan.

- a) *SAP Menu* → *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known*

Change the document type from standard purchase order to framework order. Specify the validity period of the rental agreement in the *Validity Start* and *Validity End* fields.

The invoicing dates are generated on the basis of the invoicing plan type defined in Customizing. The invoice date of the first rental payment is the last day of the previous month. The status of this date is A (not processed).

Continued on next page

3. Generate the invoice that is due according to the invoicing plan. Use the following selection criteria for this purpose:

Company code	1000
Plant	1000
Vendor	T-K520C##

Make sure the *Test run* indicator is not set.

Display the invoicing plan by branching from the payroll log display to the purchase order.

Is invoicing complete for the first invoicing date? Check the invoice status.

- a) *SAP Menu* → *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Automatic Settlement* → *Invoicing Plan Settlement*

The first invoicing date has the status C (completely processed).

4. Display the settings in Customizing for the periodic invoicing plan type **MM** (Period. Training MM).

According to which date rule are the default values for the invoicing date calculated?

Do invoice amounts for a settlement period become due for payment in advance or in arrears?

Are the invoicing dates proposed automatically in the purchase order?

Continued on next page

-
- a) *SAP Menu → Tools → Customizing → IMG → Execute Project*

Choose *SAP Reference IMG*.

SAP Customizing Implementation Guide → Materials Management → Purchasing → Purchase Order → Invoicing Plan → Invoicing Plan Types → Maintain Periodic Invoicing Plan Types

Select invoicing plan type MM and choose *Goto → Details*.



Hint: You can also call data from the purchase order by double-clicking on the invoicing plan type.

The Invoice Date field in the invoicing plan contains the date rule 50, meaning the invoice date is the last day of the month.

The invoice amounts are due in advance because the *In Advance* indicator has been set.

The invoicing dates are proposed automatically because the *Dialog Purchase Order* indicator has been set.

5. Unset the indicator for automatic settlement in vendor master record **T-K520C##**.

- a) *SAP Menu → Logistics → Materials Management → Purchasing → Master Data → Vendor → Central → Change*

In vendor master record T-K520C##, unset the *AutoEvalGRSetmt Del.* indicator.



Lesson Summary

You should now be able to:

- Differentiate between periodic and partial invoicing plans
- Create periodic and partial invoicing plans
- Carry out the automatic settlement of invoicing plan items

Lesson: Purchase Order Monitoring



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Lesson Duration: 30 Minutes

Lesson Overview

One of the tasks of the purchaser or MRP controller is the monitoring of purchase orders. The system provides support for this.

Confirmation control can be used to determine which follow-on activities are required for a purchase order. For example, it can be defined that an inbound delivery (shipping notification) is required for each purchase order.



Lesson Objectives

After completing this lesson, you will be able to:

- Monitor order confirmations
- Expedite purchasing documents
- Make the settings for confirmation control



Emphasize the importance of monitoring purchase documents to the course participants. Show them the monitoring and creation of reminders transactions.

Inform the participants of the option of presetting the order acknowledgment requirement indicator.

In addition, participants should be made aware of the difference between a simple order confirmation requirement and the confirmation control key. Creating a new confirmation control key is not necessary.

Business Example

You wish to ensure that all purchasing documents that you send to your suppliers are confirmed. To do this you request an order confirmation. You would like to monitor receipt of confirmations in a simple manner.

After you have checked and recorded the confirmations, you would like to monitor delivery dates and, if necessary, send delivery reminders or expeditors to your vendors.

Monitoring Order Confirmations

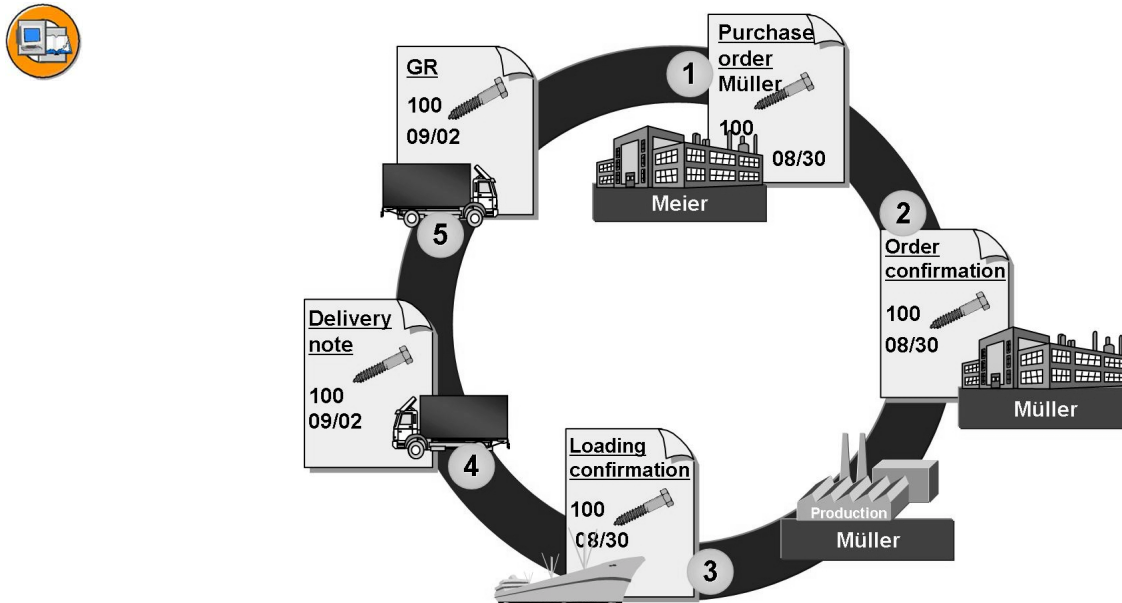


Figure 104: Confirmations in the Purchasing Process

When working with confirmations, the following possibilities are available:

- You only work with order confirmations:
In this case, the confirmation is solely for informational purposes. You cannot record the confirmed dates and quantities separately. If a material is also used in MRP, it cannot be seen if a receipt from a vendor has been confirmed or not.
- You work with several confirmation types (order confirmation / loading confirmation / inbound delivery, etc.):
In this case, you can record the confirmed dates and quantities in the system. If a material is also used in MRP, it is possible to see which quantities have been confirmed on which dates.

Working Only with Order Confirmations

In this case, when creating the purchasing document you select the field **Order Acknowledgement reqd.** This suffices to be able to issue an expediter in respect of outstanding order acknowledgment.

If you have received the order confirmation from your vendor, you enter the confirmation number in the item screen.

The system checks if an entry is present or not in the Order Confirmation field. If there is no entry, you can generate an order acknowledgment expediter.



Hint: If you wish to enter the same confirmation number for all items of a purchase order, you can do this with the fast change. The corresponding symbol is located in the purchase order below the item overview.

Working with Different Confirmation Types

In this case, when creating the purchasing document you have to enter the confirmation key in the item detail. The key determines which confirmations you expect from vendors and in which sequence.

The key also controls which confirmation types are relevant for MRP planning and goods receipt.



Hint: If a confirmation control key is present in a purchasing info record, this is suggested in the purchasing document. You can also preset the *Acknowledgment requirement* indicator in the purchasing info record.

You have the following options for entering the confirmation:

- Entering the confirmation in the purchasing document
- Generating an independent document – an inbound delivery. Prerequisite for this is that you have used a confirmation type that permits a confirmation request. The data of the inbound delivery is entered in the purchasing document in the corresponding confirmation fields. You can then enter the goods receipt with reference to a purchasing document or inbound delivery.

The system checks in the entire ordered quantity has been confirmed. If the quantity has not been confirmed or has only been partially confirmed, you can generate an acknowledgement expediter.

Generating Order Acknowledgment Expeditors

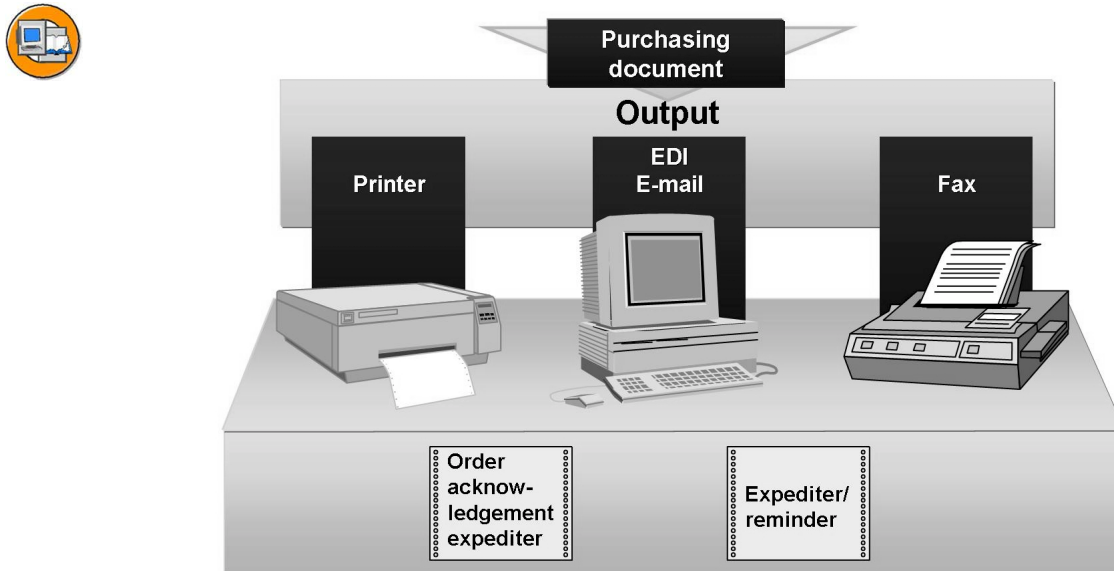


Figure 105: Message Output

The following preconditions must be satisfied to generate order acknowledgment expeditors:

- The *Acknowledgment requirement* field must be selected
- No confirmation number should be entered for items without a confirmation control key
- For items with a confirmation control key the ordered quantity has not been confirmed or only partially confirmed



Hint: Only confirmations are considered that are assigned to the internal confirmation type 1 (order confirmation).

- The document is output
- The message determination for order acknowledgment expeditor is set
- Message records for the order acknowledgment expeditor are present in the master data of the purchase

You generate the messages with the message transaction for the corresponding document type: *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order/Contract/Scheduling Agreement* → *Messages* → *Monitor Order Acknowledgments*

Enter the selection criteria for the purchasing documents and start the program.

The results lists enables you to decide for which documents you wish to generate messages. After storing you can output the documents with the standard transaction for message output for the purchasing documents. If the message record contains transmission time-spot 4 (immediate), the messages are output automatically on storing.



Hint: If you do not wish to generate expediters, you can also check confirmations with the simple monitoring transaction. Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order/Outline Agreement* → *Reporting* → *Monitor Acknowledgments*.

Expediters and Reminders

You can issue an expeditor for due and overdue purchase orders and RFQs. The following prerequisites must be satisfied:

- You have entered one or several dunning levels in the line item
- The document has been output
- The message determination for delivery expeditor is set
- Message records for the delivery expeditor are present in the master data of the purchase

You generate the messages with the message transaction for the corresponding document type: *Logistics* → *Materials Management* → *Purchasing* → *RFQ/Purchase Order* → *Messages* → *Urging/Reminders*

Enter the selection criteria for the purchasing documents and start the program.

The results lists enables you to decide for which documents you wish to generate messages. After storing you can output the documents with the standard transaction for message output for the purchasing documents. If the message record contains transmission time-spot 4 (immediate), the messages are output automatically on storing.

On the basis of the reference date entered, the system checks for which documents expediters can be issued. It also considered confirmations if these have been flagged as relevant for expediters in Customizing.

For RFQs, the quotation deadline is considered rather than the delivery date.



Hint: If you have not entered reminder/expeditor days in your purchasing documents, you can use the list display of open purchasing documents. *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *List Displays* → *By Material/By Vendor* ...

Use the selection parameter WE101 and restrict the delivery date to the period you would like to monitor.

Setting Confirmation Control Keys

Confirmation control keys are set in Customizing.

First you have to define external and internal confirmation types. The external types can be assigned to internal types.

SAP Customizing Implementation Guide → Materials Management → Purchasing → Confirmations → Define External Confirmation Categories

SAP Customizing Implementation Guide → Materials Management → Purchasing → Confirmations → Define Internal Confirmation Categories

Then you can define the confirmation control key:

SAP Customizing Implementation Guide → Materials Management → Purchasing → Confirmations → Set Up Confirmation Control



Conf. control	Description	Create inbound delivery	DelConfRel.
0001	Confirmations	<input type="checkbox"/>	Not rel.
0002	Rough GR	<input type="checkbox"/>	Not rel.
0003	Shipping notification / rough GR	<input type="checkbox"/>	Not rel.
0004	Delivery note	<input type="checkbox"/>	Not rel.

Figure 106: Defining Confirmation Control Keys

The *Create Inb. Delivery* indicator sets whether you can create an inbound delivery from a purchase order.

You enter an inbound delivery with

SAP Menu → Logistics → Materials Management → Purchasing → Purchase Order → Inbound Delivery → Create

In addition you can also decide if a confirmation control key is to be relevant for the proof of delivery.

You can use the proof of delivery to inform your vendors of goods receipts by means of EDI.

After you have defined the confirmation control key, you can determine the confirmation sequence.



Confirmation control 0004 shipping notification									
Confirmation sequence									
R	B	Description	MRP. rel.	GR rel.	GR assgt.	U	Ref. date	Expd rel.	
1	LA	Delivery note	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	Delivery date minus over-w time	<input type="checkbox"/>	

Figure 107: Confirmation Sequence

One or several confirmations may be required.

For each confirmation you define the following:

- MRP-relevant: The confirmation is displayed in the stock/requirements list and considered in the planning run
- GR-relevant: The confirmation (e.g. inbound delivery) is cancelled by a goods receipt for the corresponding purchase order item. If the confirmation sequence contains several confirmations, this indicator can only be set for one confirmation.
- GR assignment: Only the confirmed quantity is suggested when posting a goods receipt. Posting a goods receipt without a prior confirmation is not possible. This indicator can only be used in conjunction with the GR-relevant indicator.
- Monitoring period / reference date: Controls up to what point a confirmation must be made. The period can be defined with reference to the order date or the delivery date. If no confirmation has been recorded within this period, an expediter can be issued automatically as long as the *Sbj to Rem* indicator has been set.

Expediters for confirmations cannot be issued unless the subject to reminder indicator has been set.



Exercise 13: Optional: Purchase Order Monitoring

Exercise Duration: 15 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Issue expeditors for order confirmations
- Issue expeditors for deliveries

Business Example

You would like to check if all purchase orders have been confirmed by your vendors. An expeditor is to be issued for the confirmed purchase orders if the delivery is overdue.

In both cases, messages are to be sent to the vendors.

Task:

Monitor a purchase order

1. Create a purchase order. Order 10 pc of material **T-M520A##** from vendor **T-K520A##** for delivery the next day. You expect a confirmation for this item. Set the required indicators.

As you wish to monitor the delivery, enter the reminder/expeditor days: The first expeditor is to be issued two days before the delivery date, the second expeditor one day before the delivery date.

Copy the item entered in this way.

Change the delivery date for the second item. The delivery note is to be made in one week.

Use the **Order confirmation** confirmation control key for this item.

Store the order and output it.

2. Check if the order confirmations are present for your order and issue an expeditor if the confirmations are still outstanding.
3. Enter the confirmations. The vendor confirms both items at the desired date/time and in the required quantity. The order confirmation has the number **AB##**.
4. Check if delivery expeditors can be issued for your order and output these if required.

Solution 13: Optional: Purchase Order Monitoring

Task:

Monitor a purchase order

1. Create a purchase order. Order 10 pc of material **T-M520A##** from vendor **T-K520A##** for delivery the next day. You expect a confirmation for this item. Set the required indicators.

As you wish to monitor the delivery, enter the reminder/expediter days: The first expediter is to be issued two days before the delivery date, the second expediter one day before the delivery date.

Copy the item entered in this way.

Change the delivery date for the second item. The delivery note is to be made in one week.

Use the **Order confirmation** confirmation control key for this item.

Store the order and output it.

- a) *SAP Menu: SAP Menu → Logistics → Materials Management → Purchasing → Purchase Order → Create → Vendor/Supplying Plant Known.*

Enter the data as specified in the task. The *Acknowledgment requirement* field is located in the item detail on the *Confirmations* tab. The reminder/expediter days can be entered on the *Delivery* tab. In the *1st expediter field* enter the value **2-** and in the *2nd expediter* field enter the value **1**.

Select the item in the item overview and choose *Copy item*.

Change the delivery date for the second item as described in the task.

On the *Confirmations* tab in the item detail enter the confirmations control key *Order confirmation*.

Save the purchase order.

SAP Menu: Logistics → Materials Management → Purchasing → RFQ/Purchase Order → Messages → Print/Transmit

Enter your order number and start the program with *Execute*.

Select your order and choose *Output Message*.

Continued on next page

2. Check if the order confirmations are present for your order and issue an expediter if the confirmations are still outstanding.
 - a) *SAP Menu: Logistics → Materials Management → Purchasing → RFQ/Purchase Order → Messages → Monitor Order Acknowledgments*

Enter your order number and start the program with *Execute*. Both purchase order items are suggested for expeditors. Select your order and choose *Generate Messages*.

Then choose *Save*.

You can output the messages with *SAP Menu: Logistics → Materials Management → Purchasing → RFQ/Purchase Order → Messages → Print/Transmit*. The generated message has the message type **AUFB**.

3. Enter the confirmations. The vendor confirms both items at the desired date/time and in the required quantity. The order confirmation has the number **AB##**.

- a) *SAP Menu: Logistics → Materials Management → Purchasing → Purchase Order → Change*

Call up your order and go to the *Confirmations* tab in the item detail.

For the first item enter the confirmation number **AB##** in the *Order confirmation* field.

For the second item leave the *Order confirmation* field empty. Instead, enter the following confirmation data: *Confirmation type (CT)* **AB**, *Delivery Date* Current date + 1 week, *Quantity* 10, *External document* **AB-##**

Save the purchase order.



Hint: If you perform step 2 again, no documents will be offered for expeditors.

Continued on next page

4. Check if delivery expediters can be issued for your order and output these if required.

- a) *SAP Menu: Logistics → Materials Management → Purchasing → Purchase Order → Messages → Urging/Reminders*

Enter your order number and choose *Execute*.

Only the first item is suggested for an expediter as the second item is only due in one week.

Select your order and choose *Generate Messages*.

Then choose *Save*.

You can output the messages with *SAP Menu: Logistics → Materials Management → Purchasing → RFQ/Purchase Order → Messages → Print/Transmit*. The generated message has the message type **MAHN**.



Lesson Summary

You should now be able to:

- Monitor order confirmations
- Expedite purchasing documents
- Make the settings for confirmation control

Lesson: Subcontracting

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Lesson Duration: 45 Minutes

Lesson Overview

This lesson will give you an overview of the subcontracting procedure from the Inventory Management point of view. A brief explanation of the subcontracting item in a purchase order will help you gain a better understanding of the procedures.

**Lesson Objectives**

After completing this lesson, you will be able to:

- Explain the procurement process with subcontracting
- Provide the components required for subcontracting to the subcontractor
- Post a goods receipt (GR) for a subcontract order (subcontract PO) and explain the effects



In order to be able to explain the sections of the subcontracting process relevant in Inventory Management, you must introduce the process as a whole. The instructor should take care not to go into too much detail from the Purchasing and Invoice Verification points of view.

Business Example

One of the things your enterprise manufactures is motorcycles. Because you do not have the resources to assemble the ignition systems, send the individual parts to a subcontractor who will manufacture the ignition systems for you.

**Demonstration:****Purpose**

Subcontracting process

CATT: CATT from the exercise

System Data

System:	Training System
Client:	8xx
User ID:	Own user ID or SCM510-00
Password:	Ask the instructor
Set up instructions:	None

1. Demonstrate the process with the entries from the exercise (group 00).
2. Create an info record for subcontracting under

SAP menu *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Info Record* → *Create*.

Use purchasing organization 1000, material and vendor from the exercise, price = 10 euros.

Special Procurement Subcontracting

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

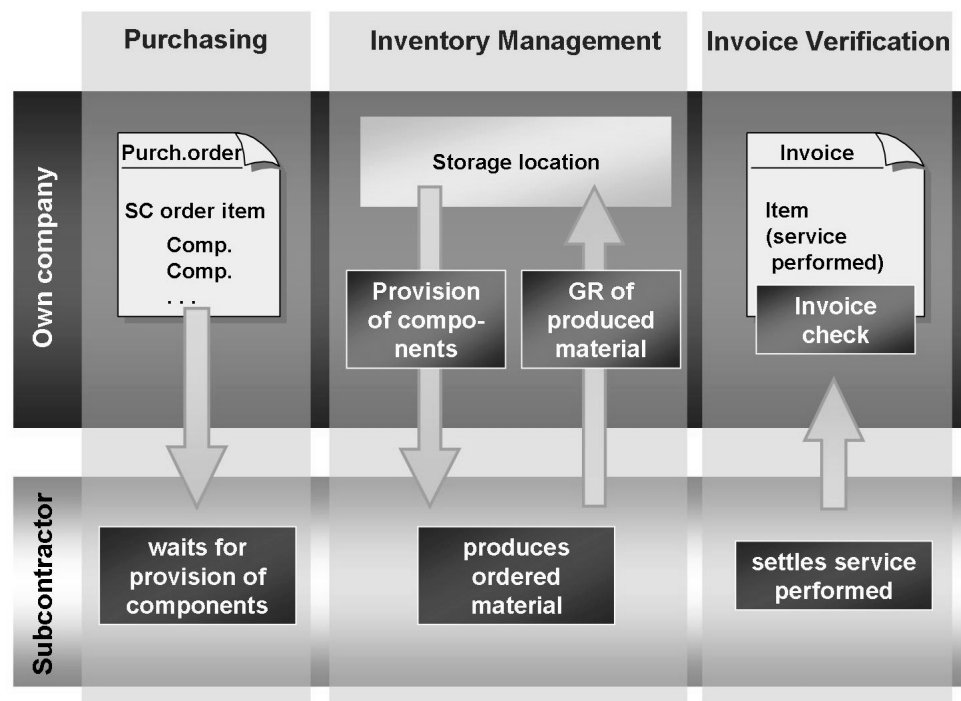


Figure 108: Subcontracting: Overview

The processing has the following characteristics:

- You order the finished product with a subcontract order that also contains entries about the components to be provided for the subcontractor.
- In Inventory Management, the components are posted/provided in the stock of material provided to vendor.
- The subcontractor supplies his service and delivers the manufactured or processed material. The goods receipt for the finished product is entered in Inventory Management. The consumed components are cleared from the stock of material provided to vendor.
- If the subcontractor reports an excess consumption or underconsumption of components after the goods receipt posting, this can be corrected with a subsequent adjustment.
- The subcontractor shows the service actually planned in the invoice. The invoice is entered in Logistics Invoice Verification (LIV).

Subcontracting in Purchasing

The subcontracting items (SC items) in purchasing documents are represented with a special **item category**. This means that for each SC item, one or several sub-items have to be entered for the components to be provided. If there is a bill of material (BOM) with the components for the material to be procured, then the components are copied from this BOM into the subcontract item. You can also enter the component(s) manually or add the components from the BOM.

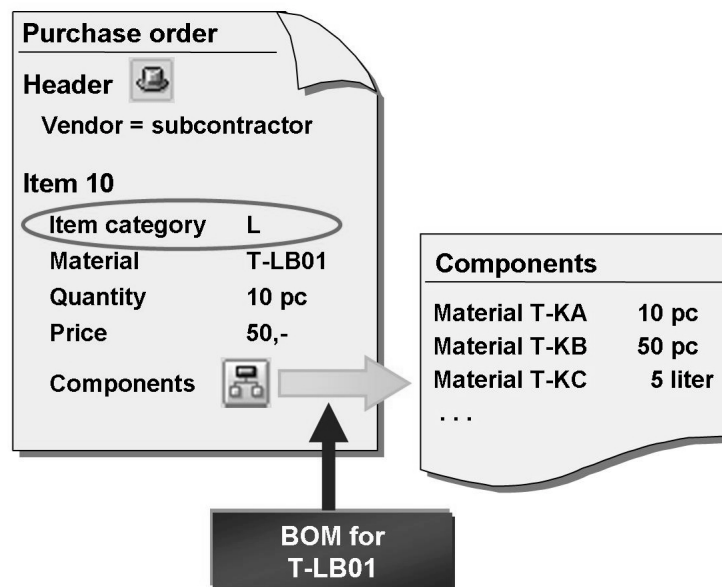


Figure 109: SC Item in Purchasing Document

The purchase order price is the price of the vendor subcontracting work and the materials provided by the subcontractor. You can define conditions for subcontracting in a subcontracting purchasing info record.



Hint: For more information on subcontracting in purchasing, refer to the SAP Library under *SAP ERP Central Component (or SAP R/3 Application Components) → Logistics → Materials Management (MM) → Inventory Management (MM-IM) → Special Stocks and Special Procurement Types (MM-IM) → Subcontracting.*

Subcontracting in Inventory Management

Inventory Management supports the following functions within subcontracting:

- Provision of components, special stock form: stock of material provided by vendor
- Goods receipt for finished product with consumption of components
- Subsequent adjustment if excess consumption or underconsumption of components
- Transfer postings (material to material, stock to stock, plant to plant)

Stock of Material Provided to Vendor

The components that you provide for a vendor are managed in a vendor-related special stock, **O** (stock of material provided to vendor). This special stock is updated at plant level, because the material is not actually in your own company, but is stored at the vendor. However, this special stock is valued and available for planning.

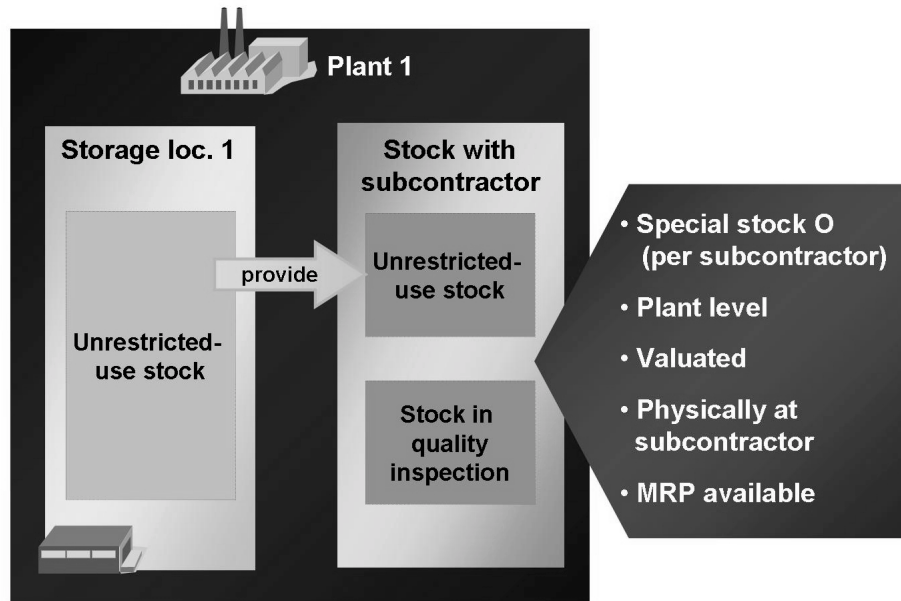


Figure 110: Special Stock: Stock of Material Provided



Hint: In materials planning, you can work with subcontractor MRP areas. This has the advantage that the stock of material provided can be planned separately for the individual subcontractors, and that the provided material quantities are not in the available plant stock, so can be included in materials planning at plant level.

For the stock of material provided to vendor, the available stock types are **unrestricted-use** and **in quality inspection**. The quantities consumed by the subcontractor can only be withdrawn from the unrestricted-use stock. You can also execute an inventory for the stock of material provided.

Provision of Components

When you post a provision of components in Inventory Management, this corresponds with a transfer posting from unrestricted-use stock to the stock of material provided to vendor (movement type 541).

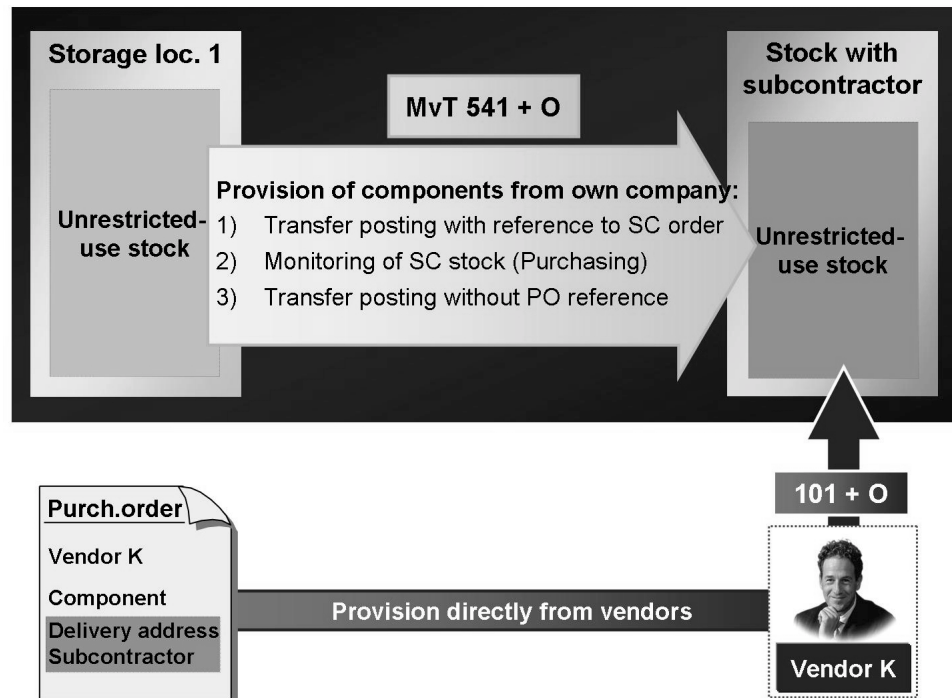


Figure 111: Provision of SC Components

There are different options available for providing components.

- In Inventory Management, you can refer to the SC item in the purchase order when entering a transfer posting. The components and quantities from this item are then proposed. You can change the proposed quantities of the materials to be provided.
- In Purchasing, you can post from the *Monitoring of subcontracting stock for vendors* list from a goods issue (GI) for the components. From the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Reporting* → *SC Stocks per Vendor*. As the selection criteria, you can enter, for example, the vendor, the component provided, or the material to be produced. You will then receive a list containing the requirements and stocks of the components and the pegged requirements. To post a provision for a component, select it and choose *Edit* → *Post goods issue*.



Hint: With the *SC stock monitoring for vendor* list, you can also create a delivery from shipping, assuming the necessary data has been maintained in the system. For more information, see the SAP Library under *Managing Special Stocks and Special Procurement Types* → *Subcontracting*.

- You can also provide components without reference to an SC order by entering another transfer posting with movement type 541 and manually entering the requested materials, quantities, and subcontractor.
- If you have to procure the components from a second vendor, you can have them delivered directly to the subcontractor. To do this, the number of the subcontractor must be specified and the *Subcontracting vendor* indicator must be set in the component order on the *Delivery address* tab.

If you then receive the information from your subcontractor that the components have arrived, enter the goods receipt for the component order. In this goods receipt, the components are posted directly into the subcontractor stock of the material provided.

You can evaluate the stocks of material provided in the *Inventory Management menu* under *Environment* → *Stock* → *Stock with Subcontractor (MLB)*. You can then select with both the name of the subcontractor (vendor) and with the plant, material, or company code.

Goods Receipt for Finished Product

If the subcontractor delivers the ordered material (finished product), you then post the goods receipt for the SC order as you would post a goods receipt for a normal purchase order (movement type 101). For the subcontract order item, the system determines the components and creates a goods issue item internally for each component. The material document therefore consists of the following items:

- Goods receipt item(s) for the material delivered by the vendor
- Goods issue item(s) for the components

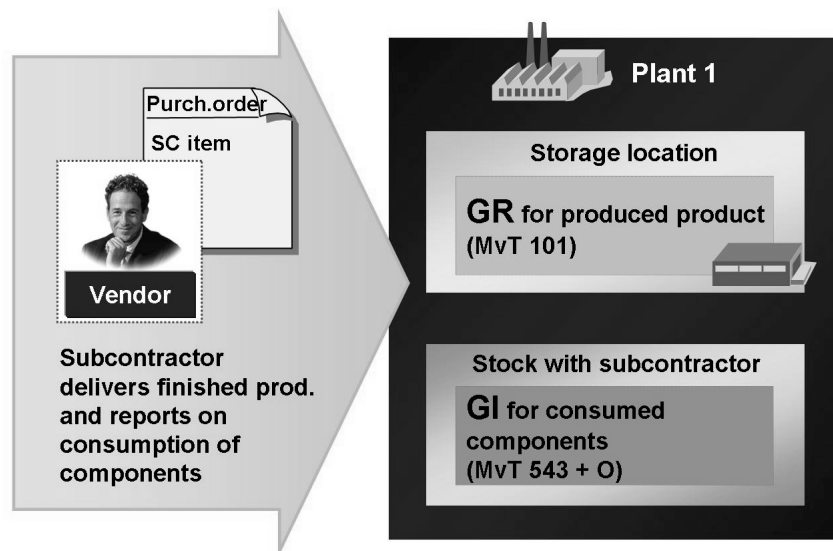


Figure 112: Goods Receipt for SC Order

After you have copied over a purchase order item, you can still change the component quantities manually in the goods issue items. These changes are necessary if the vendor informs you of an excess consumption or underconsumption of components in the delivery.

The goods receipt is valued with the price of the subcontracting service and the value of the consumed components.

Subsequent adjustment

If the subcontractor reports an excess consumption or underconsumption of subcontracting components after delivery of the finished product, you have to post a subsequent adjustment to correct the component consumption.

In the transaction for goods movement, MIGO, choose *Subsequent Adjustment* from the list of business transactions. As a reference document, the system automatically chooses *Purchase Order*. Enter the document number of the purchase order and the item number for which you want to post a subsequent adjustment. For the selected item, enter the difference quantity specified

by the vendor and use the *Underconsumption/Short receipt* indicator to determine whether it is a receipt or issue. If you set the indicator, it is then an underconsumption or short receipt. If you do not set the indicator, it is then an excess consumption or excess receipt.



Hint: It is an underconsumption/short receipt when you have planned the receipt of by-products from subcontracting as negative components in the subcontract order. In the goods receipt to the subcontract order, the by-products are then posted with movement type 544 into the stock of material provided to the vendor.

Transfer Postings of Stock of Material Provided

The following transfer postings are allowed for the stock of material provided to vendor special stock:

- Plant to plant in the one-step procedure (movement type 301)
- Material to material (movement type 309)
- Stock in quality inspection to unrestricted-use stock (movement type 321)

To execute these transfer postings for the stock of material provided to the vendor, you have to specify the special stock indicator **O**. Otherwise, the transfer postings do not differ from normal transfer postings.



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Exercise 14: Subcontracting

Exercise Duration: 30 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Describe the procurement process for subcontracting material
- Explain item category L in the purchase order
- Provide components to a subcontractor
- Enter the goods receipt for a finished product
- Enter a subsequent adjustment

Business Example

In your company, the pump casings required for the production are procured through subcontracting. The gaskets and screws required for production of the pump casing are provided to the subcontractor in large quantities. The slug for the casing is made available to the subcontractor only as required.

System Data

System:	Training System
Client:	8xx.
User ID:	Ask the instructor
Password:	Ask the instructor
CATT:	ZT_SCM510
Set up instructions:	None

Task 1: Providing Components Without a Purchase Order

Vendor **T-K510A##** manufactures material **R-B1## (casing)** within subcontracting. You provide the required components, as listed on the bill of material for this material.

1. Display the bill of material (usage **1**) for material **R-B1##** in plant 1000. Note the listed components and the component quantity.

Component	Component quantity
_____	_____
_____	_____
_____	_____

Continued on next page

2. Display the stock overview for the components. Note the unrestricted-use stock and the stock of these materials provided to the vendor in plant 1000, storage location 0001.



Hint: Stocks of provided material with stock level 0 are not shown in the stock overview.

Material	Unrestricted-use stock	Vendor provision
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Vendor **T-K510A##** receives flat gaskets and hexagon head screws in large quantities. Provide 250 pieces of material **R-T2##** and 800 pieces of material **R-T3##** to the vendor in plant 1000 and storage location 0001. Which movement type is used?

Movement type	_____
---------------	-------

4. Is a transfer posting into stock of material provided relevant for posting in Logistics Invoice Verification?

Task 2: Purchase Order and Analysis of Subcontracting Stocks

Create a subcontract order. Analyze the stock of material provided to vendor to ascertain whether all components for production are available to the subcontractor.

1. Create a subcontract order for subcontractor **T-K510A##**. Order 100 pieces of material **R-B1##** in plant 1000 with a delivery date in 4 weeks. The net price is 100 euros. You work for purchasing organization 1000 and purchasing group **T##**.

Which item category do you use? Display the components for the assembly in the purchase order and note the requirement quantities of the individual components.

Continued on next page

Item category	_____
---------------	-------

Component/material	Requirement quantity
R-T1##	_____
R-T2##	_____
R-T3##	_____

2. Analyze the subcontract order for vendor **T-K510A##** in plant 1000. Check whether the necessary components and the correct quantities have been made available to the vendor for the production of your assembly **R-B1##**. How high is the requirement from the purchase order, and what quantities of the components are available to the subcontractor? Make a note of the purchase order number.

Material	Requirement	Available SC quantity
R-T1##	_____	_____
R-T2##	_____	_____
R-T3##	_____	_____

Purchase order	_____
----------------	-------

3. You must provide component **R-T1##** for subcontractor **T-K510A##**, as it is necessary for the manufacture of material **R-B1##**. Post the component from plant 1000, storage location 0001 to the vendor. Use analysis *SC stocks per vendor*. Note the posted movement type.

Movement type	_____
---------------	-------

4. Display the material document.

Task 3: Goods Receipt and Subsequent Adjustment

The vendor delivers the ordered material. He needed more hexagon head screws for production than planned.

1. The vendor delivers the manufactured casing **R-B1##**. Enter the goods receipt for your purchase order into plant 1000, storage location 0001.
2. Display the material document and note the posted goods movements.

Continued on next page

Material	Movement type	Direction
R-B1## (casing)	_____	_____
R-T1## (slug for spiral casing)	_____	_____
R-T2## (flat gasket)	_____	_____
R-T3## (hexagonal head screw M10)	_____	_____

3. The vendor informs you that during production of the 100 casings, 10 additional hexagonal head screws **R-T3##** were consumed. Enter the subsequent adjustment for the subcontract order. Display the material document and note the posted movement type.

Movement type	_____
---------------	-------

4. (Optional) With movement type 541, which of the following transactions are posted (transaction - reference document)?

Choose the correct answer(s).

- A Unplanned provision of components (transfer posting - others)
- B Goods receipt of finished assemblies (goods receipt for purchase order)
- C Planned provision of components with reference to the purchase order (from SC stocks for vendor)
- D Transfer postings to stock of material provided, for example, quality inspection to unrestricted-use (transfer posting – others)
- E Goods withdrawals from the stock of material provided (goods issue - others)

Task 4: (Optional) Transfer Posting

Post a transfer of material **R-T3##** from unrestricted-use subcontract stock of vendor **T-K510A##** into stock in quality inspection.

- Enter a transfer posting in plant 1000 for 10 pieces of **R-T3##** from the unrestricted-use stock of material provided to the vendor into stock in quality inspection at subcontractor **T-K510A##**.
- Display the stock overview and make a note of how many pieces of the stock of material provided to the vendor are in quality inspection.

Stock of material provided to vendor in quality inspection	_____
--	-------


Solution 14: Subcontracting

Task 1: Providing Components Without a Purchase Order

Vendor **T-K510A##** manufactures material **R-B1##** (**casing**) within subcontracting. You provide the required components, as listed on the bill of material for this material.

1. Display the bill of material (usage **1**) for material **R-B1##** in plant 1000. Note the listed components and the component quantity.

Component	Component quantity
<u>R-T1##</u>	<u>1</u>
<u>R-T2##</u>	<u>1</u>
<u>R-T3##</u>	<u>8</u>




- a) Choose *Logistics* → *Production* → *Master Data* → *Bills of Material* → *Bill of Material* → *Material BOM* → *Display (CS03)*.
 - b) Enter the following data:
 - Material R-B1##*
 - Plant 1000*
 - BOM Usage 1*
 - c) Choose  *Continue*.
 - d) Make a note of the three components with the appropriate quantities in the list.
2. Display the stock overview for the components. Note the unrestricted-use stock and the stock of these materials provided to the vendor in plant 1000, storage location 0001.



Hint: Stocks of provided material with stock level 0 are not shown in the stock overview.


Continued on next page

Material	Unrestricted-use stock	Vendor provision
<u>R-T1##</u>	<u>1000</u>	<u>0</u>
<u>R-T2##</u>	<u>1800</u>	<u>50</u>
<u>R-T3##</u>	<u>1000</u>	<u>400</u>

- a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Environment* → *Stock* → *Stock Overview (MMBE)*
 - b) Select the *Material R-T1##*, the *Plant 1000*, and the *Storage Location 0001*.
 - c) Choose  with the quick info text *Execute*.
 - d) Note the stock quantities you are asked for.
 - e) Enter *Material R-T2##* and choose , with the quick info text *New Selection*.
 - f) Enter *Material R-T3##* and choose , with the quick info text *New Selection*.
3. Vendor **T-K510A##** receives flat gaskets and hexagon head screws in large quantities. Provide 250 pieces of material **R-T2##** and 800 pieces of material **R-T3##** to the vendor in plant 1000 and storage location 0001. Which movement type is used?

Continued on next page


Movement type	<u>541</u>
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- a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
- b) Choose *Transfer Posting* and the reference *Other*.
- c) Enter the movement type **541** (*Transfer Posting to Stock with Subcontractor from Unrestricted-Use Stock*), and choose .
- d) Enter the following data on the *Transfer Posting* tab page:

From area

Material R-T2##
Plant 1000
Storage Location 0001


Dest area

Plant 1000
Vendor (below special stock O) T-K510A##
Unit of Entry 250 pc
- e) Set the *Item OK* indicator.
- f) Choose , with the quick info text *Next Item*.
- g) Enter the following data for the second item on the *Transfer Posting* tab page:

From area

Material R-T3##
Plant 1000
Storage Location 0001

Dest area

Plant 1000
Vendor (below special stock O) T-K510A##
Unit of Entry 800 pc
- h) Set the *Item OK* indicator.
- i) Choose  *Post*.

Continued on next page

4. Is a transfer posting into stock of material provided relevant for posting in Logistics Invoice Verification?

Answer: The stock of material provided is an own valuated stock. The transfer posting is only posting-relevant when you transfer between plants.

Task 2: Purchase Order and Analysis of Subcontracting Stocks

Create a subcontract order. Analyze the stock of material provided to vendor to ascertain whether all components for production are available to the subcontractor.

1. Create a subcontract order for subcontractor **T-K510A##**. Order 100 pieces of material **R-B1##** in plant 1000 with a delivery date in 4 weeks. The net price is 100 euros. You work for purchasing organization 1000 and purchasing group **T##**.

Which item category do you use? Display the components for the assembly in the purchase order and note the requirement quantities of the individual components.


Item category	<u>L</u>
---------------	----------




Continued on next page

Component/material	Requirement quantity
R-T1##	<u>100</u>
R-T2##	<u>100</u>
R-T3##	<u>800</u>

- a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Vendor/Supplying Plant Known (ME21N)*.
- b) Enter *Vendor T-K510A##*.
- c) Enter the following in the header data on the *Org. Data* tab page:
Purchasing Organization 1000
Purchasing Group T##




Hint: To open the header data, choose  *Expand Header*.

- d) Enter the following data in the item overview:
Item category L
Material R-B1##
Quantity 100 pc
Net price 100 EUR
Delivery Date <Today+4 weeks>
Plant 1000
Storage Location 0001
 - e) Choose  *Save*.
 - f) To display the purchase order, choose  *Other Purchase Order* and then *Other Document*.
 - g) In the item details, choose the *Material Data* tab page, and choose  *Components*.
2. Analyze the subcontract order for vendor **T-K510A##** in plant 1000. Check whether the necessary components and the correct quantities have been made available to the vendor for the production of your assembly **R-B1##**. How high is the requirement from the purchase order, and what quantities of the components are available to the subcontractor? Make a note of the purchase order number.

Continued on next page

Material	Requirement	Available SC quantity
R-T1##	<u>100</u>	<u>0</u>
R-T2##	<u>100</u>	<u>300</u>
R-T3##	<u>800</u>	<u>1200</u>

Purchase order	
----------------	--



- a) Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Reporting* → *SC Stocks per Vendor (ME20)*.
- b) Enter *Vendor T-K510A##*, *Assembly R-B1##*, and *Plant 1000*.
- c) Choose  *Execute* and note the relevant data in the table.



Hint: For the following exercise step, stay in the analysis.

3. You must provide component **R-T1##** for subcontractor **T-K510A##**, as it is necessary for the manufacture of material **R-B1##**. Post the component from plant 1000, storage location 0001 to the vendor. Use analysis *SC stocks per vendor*. Note the posted movement type.



Movement type	<u>541</u>
---------------	------------

- a) Select the item for material R-T1## and choose *Post goods issue*.
 - b) Enter *Storage Location 0001*, and choose  *Enter*.
4. Display the material document.
 - a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Choose *Display* and reference *Material Document*.
 - c) Choose , with the quick info text *Find Material Doc..*
 - d) Select *Material R-T1##*, *Plant 1000*, and *Movement Type 541*.
 - e) In the search results, double-click the document number to display the material document.



Continued on next page

Task 3: Goods Receipt and Subsequent Adjustment

The vendor delivers the ordered material. He needed more hexagon head screws for production than planned.




1. The vendor delivers the manufactured casing **R-B1##**. Enter the goods receipt for your purchase order into plant 1000, storage location 0001.
 - a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Choose the transaction *Goods Receipt* and, as reference, *Purchase Order*.
 - c) Enter the purchase order number of the order you just created and choose , with the quick info *Execute*.
 - d) Set the *Item OK* indicator and choose  *Post*.
2. Display the material document and note the posted goods movements.

Material	Movement type	Direction
R-B1## (casing)	<u>101</u>	±
R-T1## (slug for spiral casing)	<u>543</u>	=
R-T2## (flat gasket)	<u>543</u>	=
R-T3## (hexagonal head screw M10)	<u>543</u>	=

- a) Choose *Display* and reference *Material Document*.
 - b) Choose  with the quick info text *Execute*.
 - c) If the components are not displayed, choose .
3. The vendor informs you that during production of the 100 casings, 10 additional hexagonal head screws **R-T3##** were consumed. Enter the subsequent adjustment for the subcontract order. Display the material document and note the posted movement type.

Continued on next page

Movement type	543
---------------	-----


- a) Choose the transaction *Subsequent Adjustment* and, as reference, *Purchase Order*.
 - b) Enter the purchase order number and choose , with the quick info *Execute*.
 - c) Set the *Item OK* indicator and choose .
 - d) For the hexagonal head screw R-T3##, enter *quantity 10 pc*.
 - e) Choose  with the quick info text *Post*.
4. (Optional) With movement type 541, which of the following transactions are posted (transaction - reference document)?

Answer: A, C

With movement type 541, materials from unrestricted-use stock are posted into the special stock of the vendor. This can be entered with reference to the purchase order and can be unplanned.


Task 4: (Optional) Transfer Posting

Post a transfer of material **R-T3##** from unrestricted-use subcontract stock of vendor **T-K510A##** into stock in quality inspection.

1. Enter a transfer posting in plant 1000 for 10 pieces of **R-T3##** from the unrestricted-use stock of material provided to the vendor into stock in quality inspection at subcontractor **T-K510A##**.
 - a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Choose *Transfer Posting* and the reference *Other*.
 - c) As the default value, enter *movement type 322* and the *special stock indicator 0*. Confirm these entries with *Enter*.
 - d) On the *Transfer* tab, enter *Material R-T3##* and *Plant 1000*. Enter *Vendor T-K510A##*.
 - e) Enter *Qty in Unit of Entry 10 pc*.
 - f) Choose  with the quick info text *Post*.
2. Display the stock overview and make a note of how many pieces of the stock of material provided to the vendor are in quality inspection.

Continued on next page

Stock of material provided to vendor in quality inspection	<u>10</u>
---	-----------

- a) Choose *Display* and reference *Material Document*.
- b) For plant 1000, choose , with the quick info text *Stock Overview*.



Lesson Summary

You should now be able to:

- Explain the procurement process with subcontracting
- Provide the components required for subcontracting to the subcontractor
- Post a goods receipt (GR) for a subcontract order (subcontract PO) and explain the effects

Lesson: Split Valuation



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Lesson Duration: 45 Minutes

Lesson Overview

In this lesson, you will learn how to configure split valuation for materials.



Lesson Objectives

After completing this lesson, you will be able to:

- Specify examples for using split valuation
- Recognize the Customizing settings for split valuation
- Create a material with split valuation
- Outline the procurement process for a material subject to split valuation



As an extra for this topic, the instructor is to give some examples to clarify that material is managed with one material number, but the valuation will not be the same for the entire stock.

An example could be the difference between in-house-produced and external parts, or the difference between new and changed, or according to quality.

Business Example

In your company, some materials are both produced in-house and procured externally. As you have to differentiate on a value basis between in-house and external parts, split valuation should be set up for these materials.



Demonstration:

Purpose

Split Valuation

System Data

System:	Training System
Client:	8xx
User ID:	Own user ID or SCM510-00
Password:	Ask the instructor
Set up instructions:	None

1. Create a new material:

Logistics → Materials Management → Material Master → Material → Create General → Immediately (MM01)

Free choice of material name, for example T-M510Z50

Sector: Mechanical Engineering, Material type: Raw Material

Views: Purchasing, Plant Data/Storage 1, Accounting 1

Organizational level: Plant 1000, storage location 0001

Free choice of short text

Use the following data:

Base unit of measure: PC

Material group: 001

Valuation category: **H** on the Accounting 1 tab page

Valuation class: **3000** on the Accounting 1 tab page

Moving valuation price: 100 on the Accounting 1 tab page

2. Create the **Valuation type domestic**:

Logistics → Materials Management → Material Master → Material → Create General → Immediately (MM01)

Material name as above, for example T-M510Z50

Choose the Accounting 1 view.

Organizational level: Plant 1000, valuation type domestic

Valuation class: **3000**,

Price control: **S**; standard price: 95

3. Create the **Valuation type foreign**:

Logistics → Materials Management → Material Master → Material → Create General → Immediately (MM01)

Material name as above, for example T-M510Z50

Choose the Accounting 1 view.

Organizational level: Plant 1000, valuation type foreign

Valuation class: **3001**

Price control: **V**; moving price: 105

4. Create a purchase order in transaction ME21N with the following data.

Vendor: 1000


Purchasing organization: 1000

Purchasing group: 000

Company code: 1000
Material as above, for example T-M510Z50
Quantity: 100
Delivery date: today + 1 week
Price: 102 Euro
Plant: 1000
Storage location 0001
Funds center 9993
Commitment item 1131

On the Delivery tab, show the proposed valuation type foreign.

Create a second item with 50 pieces for 90 Euro. Delete the foreign entry here.

5. Post the goods receipt in the MIGO transaction: transaction goods receipt with reference purchase order. On the Material tab, show the foreign entry is copied from the purchase order and cannot be changed. For the second item, choose Domestic. Finally, show the stock overview. Choose transaction Display and reference Material Document. On the *Where* tab page, choose  Stock Overview.

Show in the accounting document that due to the different valuation classes, different accounts can also be posted.

6. Enter a goods issue to the cost center. Choose the transaction Goods receipt and reference Other, movement type 201.

Material: As above
Quantity: 5
Plant: 1000
Storage location: 0001
Cost center: 1000

Display the material before posting (double click on Material Short Text). In order for the system to be able to determine the price, the valuation type must have been entered. Domestic and foreign trade are valued differently. Choose the Accounting 1 tab in the material master. Switch the valuation type with *OrgLevels*.

Return to the goods receipt entry, choose a valuation type and post the document.

With split valuation, you have the option of differentiating between partial stocks of a material according to particular criteria and handling them differently, regarding the valuation, within a plant. A split valuation may be necessary in the following cases:

- When the stock of material from in-house production has a different valuation price to the stock of the same material from external procurement
- When the stock of a material is to be distinguished by quality and the value is determined depending on the quality
- When the different batch stocks of a material have different valuation prices

Settings for Split Valuation in Customizing

If you want to use split valuation, activate the settings found in Customizing for *Materials Management* under *Valuation and Account Assignment* → *Split Valuation* → *Activate Split Valuation*.



Hint: In the SAP standard system, split valuation is set as *Active*. If you generally allow split valuation, this does not mean that you have to value every material separately. You only determine split valuation for those materials where it is required.

If you subsequently want to activate split valuation, it is only possible with considerable effort.

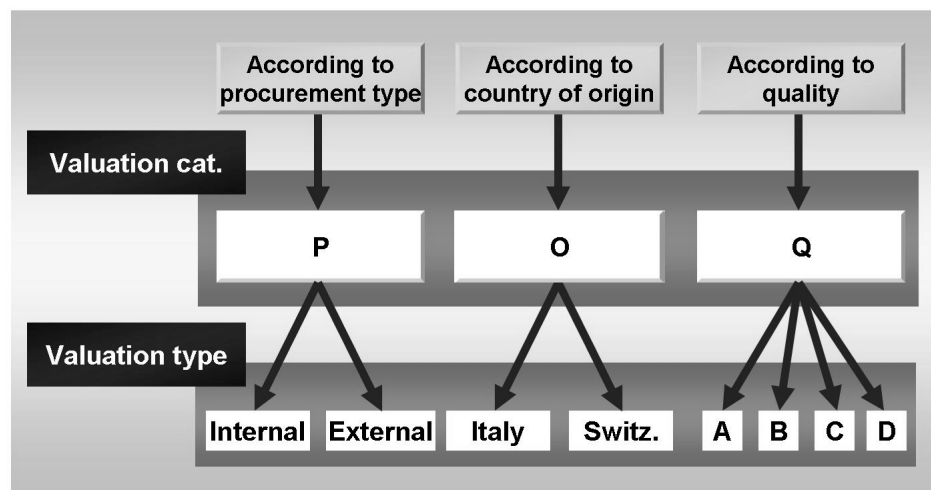


Figure 113: Split Valuation

To differentiate between material stocks, you must define a valuation category and a valuation type. The **valuation category** determines the criteria for distinguishing between stocks. The **valuation types** describe the possible features of the partial stocks.

Example: You want to differentiate between your stocks according to the procurement type for in-house and externally-procured parts. The criterion in this case is the procurement type. The possible attributes are **in-house** and **external**.

You define the valuation categories, valuation types, and the assignment of types to categories in Customizing for *Materials Management* under *Valuation and Account Assignment* → *Split Valuation* → *Configure Split Valuation*.

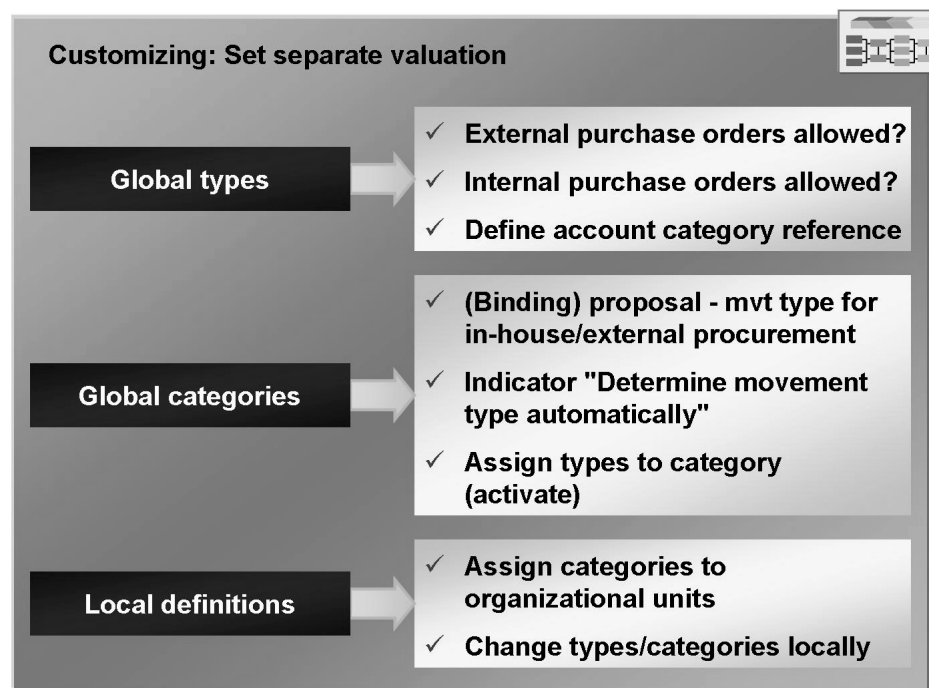


Figure 114: Settings for Split Valuation

The following steps are required:

- Global definition of valuation categories, independently of the valuation area
- Global definition of valuation types, independently of the valuation area
- Assignment of the relevant valuation type to the corresponding valuation category
- Determination of which globally defined valuation categories can be used in a valuation area; these are called local definitions.

For the individual valuation types, you can determine whether they can be used in an internal and/or external procurement process. The valuation categories control whether a valuation type is binding for a transaction. For differentiation according

to procurement type, it therefore makes sense that for externally-procured parts of the material, only the valuation type **external** is allowed, and for in-house-produced quantities, only the valuation type **in-house**.

With the valuation type, you also have the option of influencing the account determination by specifying different account class references for the valuation types. For the example, this means that the stock of the material produced in-house can be managed on a different stock account to the externally-procured stock of material.

Settings for Split Valuation in the Material Master Record

If split valuation is required for a material, enter a valuation category in the valuation area accounting data of the material and choose price control indicator V (moving average price).



Note: For a material whose stocks are valued separately, you can only create one valuation header record with price control V because the individual stock values are cumulated and the total value is updated in the valuation header record.

For all characteristics (in other words, all valuation types possible for this material) you also need to create accounting data for the valuation area and the valuation type. At this level, you can choose between price control with the standard or the moving average price, and between different valuation classes.



Hint: If a valuation category specifies that the *SAP system* creates valuation type (records), then a valuation record is automatically created for this valuation type during the first receipt. Such a valuation category is useful for materials that are handled in batches if the individual batch valuation is to be used.

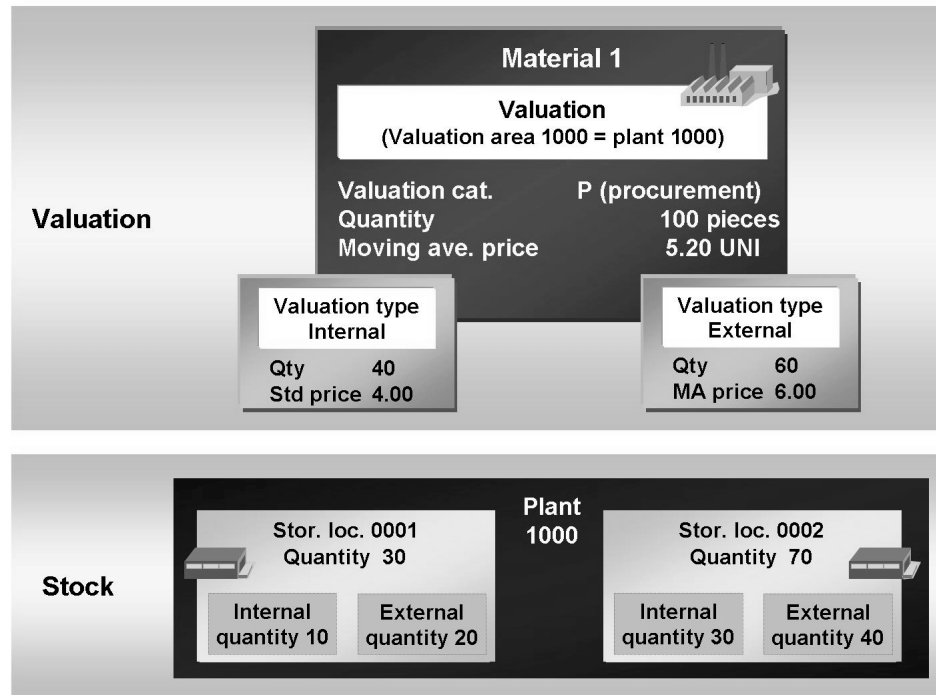


Figure 115: The Split Valuation Procedure

Effects of Split Valuation in the Application

Every valuation-relevant transaction, whether it is a goods receipt, goods issue, invoice receipt, or physical inventory, is executed at the partial stock level; when you process these transactions, you must always specify which partial stock is affected. Only one value change may occur for the partial stock affected. The other partial stocks remain unaffected. In addition to the partial stocks, the total stock is also updated. The value of the total stock is calculated from the sum of the stock values and the stock quantities of the individual partial stocks.



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Exercise 15: Split Valuation

Exercise Duration: 30 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Explain the terms valuation category and valuation type
- Explain the structure of the material master record
- Display the stock overview for a material subject to split valuation
- Outline a procurement process for a material subject to split valuation

Business Example

In your company, you have a raw material that is available as a domestic product and as an imported product. The imported product costs more than the domestic product. You have established two different valuation types with a different price for each type.

System Data

System: Training System
Client: 8xx
User ID: Ask the instructor
Password: Ask the instructor
CATT: ZT_SCM510
Set up instructions: None

Task:

Material **T-M510H##** is valued separately according to whether it is domestic or foreign. Display the accounting data of the material master record. Then enter the goods receipt for a purchase order.

1. Display the accounting data for material **T-M510H##** in plant 1000 and note the following values.

Field	Value
Valuation category	_____
Total stock	_____
Total value	_____
Moving average price	_____

Continued on next page

2. Display the accounting data for material **T-M510H##** in plant 1000 for valuation types **Domestic** and **Foreign** and note the following values.

Field	Domestic	Foreign
Valuation price	_____	_____
Total stock	_____	_____
Total value	_____	_____

3. Enter the receipt of material **T-M510H##** for purchase order **4151-10##** in plant 1000, storage location 0001.

Note the valuation type for the purchase order.

Valuation type	_____
----------------	-------

4. Display the stock overview of the material from the material document. Note the stocks.

Plant total	_____
Foreign	_____
Domestic	_____

5. In cost center **T-L##**, you require 10 pieces of material **T-M510H##**. Enter a goods issue for the cost center and choose valuation type **Foreign**.
6. Display the accounting data again for material **T-M510H##** in plant 1000 and for the movement types **Domestic** and **Foreign**. Make a note of the following values.

Field	Plant 1000	Domestic	Foreign
Price	_____	_____	_____
Total stock	_____	_____	_____
Total value	_____	_____	_____


Solution 15: Split Valuation

Task:

Material **T-M510H##** is valued separately according to whether it is domestic or foreign. Display the accounting data of the material master record. Then enter the goods receipt for a purchase order.


1. Display the accounting data for material **T-M510H##** in plant 1000 and note the following values.

Field	Value
Valuation category	<u>O (origin)</u>
Total stock	<u>100</u>
Total value	<u>200,00</u>
Moving average price	<u>2,00</u>

- a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current (MM03)*.
 - b) Enter the *Material Number* **T-M510H##**.
 - c) Choose *Select View(s)*, select the *Accounting 1* view, and choose *Organizational levels*.
 - d) Enter *plant* **1000** and choose  *Continue*.
 - e) Note the values in the table above.
2. Display the accounting data for material **T-M510H##** in plant 1000 for valuation types **Domestic** and **Foreign** and note the following values.



Continued on next page

Field	Domestic	Foreign
Valuation price	<u>2.00 (MA price)</u>	<u>2.60 (S price)</u>
Total stock	<u>100</u>	<u>0</u>
Total value	<u>200.00</u>	<u>0.00</u>

- a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current (MM03)*.
 - b) Enter the *Material Number T-M510H##*.
 - c) Choose *Select View(s)*, select the *Accounting 1* view, and choose *Organizational levels*.
 - d) Enter *plant 1000* and *valuation type Domestic*.
 - e) Choose  with the quick info text *Continue*, and make a note of the values for the *movement type INLAND*.
 - f) Choose *Edit* → *Organizational Levels* and enter the *valuation type Foreign* in the dialog box. Also note the values for this *valuation type*.
3. Enter the receipt of material **T-M510H##** for purchase order **4151-10##** in plant 1000, storage location 0001.




Note the valuation type for the purchase order.

Valuation type	<u>Foreign</u>
----------------	----------------

- a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Choose the transaction *Goods Receipt* and, as reference, *Purchase Order*.
 - c) Enter the *movement type 101* and confirm with *Enter*.
 - d) Enter the *purchase order number 4151-10##* and choose  with the quick info text *Execute*.
 - e) Set the *Item OK* indicator.
 - f) The valuation type *Foreign* is on the *Material* tab.
 - g) Choose  with the quick info text *Post*.
4. Display the stock overview of the material from the material document.
Note the stocks.



Continued on next page

Plant total	<u>300</u>
Foreign	<u>200</u>
Domestic	<u>100</u>

- a) In the transaction for goods movements MIGO, choose *Display* and *Material Document* as the reference.
 - b) Choose  with the quick info text *Execute*.
 - c) In the item details, choose the *Where* tab page and choose  with the quick info text *Stock Overview*.
5. In cost center **T-L##**, you require 10 pieces of material **T-M510H##**. Enter a goods issue for the cost center and choose valuation type **Foreign**.
- a) Choose *Logistics* → *Materials Management* → *Inventory Management* → *Goods Movement* → *Goods Movement (MIGO)*.
 - b) Choose *Goods Issue* and, as the reference, *Other*.
 - c) Enter the *movement type* **201** and confirm with *Enter*.
 - d) Enter the following data:
 - Where tab page: *Plant 1000, Storage Location 0001*
 - Material tab: *Material T-M510H##, Valuation type Foreign*
 - Quantity tab page: *Qty in Unit of Entry 10 pc*
 - Account Assignment tab page: *Cost Center T-L##*
 - e) Set the *Item OK* indicator.
 - f) Choose  with the quick info text *Post*.
6. Display the accounting data again for material **T-M510H##** in plant 1000 and for the movement types **Domestic** and **Foreign**. Make a note of the following values.

Continued on next page

Field	Plant 1000	Domestic	Foreign
Price	<u>2.39 (MA price)</u>	<u>2.00 (MA price)</u>	<u>2.60 (S price)</u>
Total stock	<u>290</u>	<u>100</u>	<u>190</u>
Total value	<u>694.00</u>	<u>200.00</u>	<u>494.00</u>

- a) Choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current (MM03)*.
- b) Enter the *Material Number T-M510H##*.
- c) Choose *Select View(s)*, select the *Accounting 1* view, and choose *Organizational levels*.
- d) Enter *plant 1000* and choose  *Enter*. Note the values for plant 1000.
- e) Choose *Edit* → *Organizational Levels* and enter the *movement type Domestic*. Choose  and make a note of the values.
- f) Repeat step e) for the *movement type Foreign*. Also note the values for this *valuation type*.



Lesson Summary

You should now be able to:

- Specify examples for using split valuation
- Recognize the Customizing settings for split valuation
- Create a material with split valuation
- Outline the procurement process for a material subject to split valuation



Unit Summary

You should now be able to:

- Name the features of material types UNBW and NLAG
- Explain procurement and inventory management of these materials
- Differentiate between periodic and partial invoicing plans
- Create periodic and partial invoicing plans
- Carry out the automatic settlement of invoicing plan items
- Monitor order confirmations
- Expedite purchasing documents
- Make the settings for confirmation control
- Explain the procurement process with subcontracting
- Provide the components required for subcontracting to the subcontractor
- Post a goods receipt (GR) for a subcontract order (subcontract PO) and explain the effects
- Specify examples for using split valuation
- Recognize the Customizing settings for split valuation
- Create a material with split valuation
- Outline the procurement process for a material subject to split valuation



Test Your Knowledge

1. For materials for which you only want to use quantity-based inventory management and not value-based inventory management, use material type _____.

The consumption values in the material master record for these materials are updated in the _____, and not in the _____. For materials with material type _____, there is no _____.

Fill in the blanks to complete the sentence.

2. Which operations are periodic invoicing plans suitable for?

Choose the correct answer(s).

- A Rental payments
- B Magazine subscriptions
- C Telephone bills
- D Credit card settlements

3. Which statements about the subcontracting process are correct:

Choose the correct answer(s).

- A You must set the special stock indicator O in the purchase order.
- B You order material for a customer, which is then delivered directly to the customer by the vendor.
- C The vendor must be entered in the material master record as an eligible manufacturer.
- D The vendor must be entered in the BOM as an eligible manufacturer.
- E In the purchase order, use item category L.
- F You deliver components of the ordered material to the subcontractor.

4. In split valuation, you distinguish between materials by the valuation categories. You can define valuation types for this valuation category. For each material, you must then create an accounting view for each valuation type in which you want to use the material.

Determine whether this statement is true or false.

- True
- False



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Answers

1. For materials for which you only want to use quantity-based inventory management and not value-based inventory management, use material type UNBW (non-valuated material). The consumption values in the material master record for these materials are updated in the goods issue, and not in the goods receipt. For materials with material type NLAG, there is no value and quantity-based inventory management.

Answer: UNBW (non-valuated material), goods issue, goods receipt, NLAG, value and quantity-based inventory management

For non-valuated material, the stocks are managed without value update. During the goods receipt, the quantities are updated as they are for stock material. With a goods issue, the consumption data in the material master record is updated according to the movement type.

2. Which operations are periodic invoicing plans suitable for?

Answer: A, B

Periodic invoicing plans are not suitable for telephone bills and credit card settlements as these are for a different amount each month.

3. Which statements about the subcontracting process are correct:

Answer: E, F

For the components, you can use materials in the BOM.

4. In split valuation, you distinguish between materials by the valuation categories. You can define valuation types for this valuation category. For each material, you must then create an accounting view for each valuation type in which you want to use the material.

Answer: True

Unit 5



Appendix – Additional Topics (Not Relevant for Certification)



No topics in this unit are certification-relevant.

The participants can do the exercises if interested. The necessary data is included in the training system.

Unit Overview

This chapter should help you to provide additional information for your project work. However, the contents of these subjects are not relevant for certification.



Unit Objectives

After completing this unit, you will be able to:

- Describe the inventory sampling procedure
- List the Customizing settings for the inventory sampling procedure
- Carry out inventory sampling in the system
- Describe the cycle counting procedure
- Give possibilities for setting the cycle counting indicator in the material master record
- Explain the creation of inventory documents with a batch input session
- List the most important settings for the old goods movement transactions
- Describe the advantages of using version management
- Use version management in purchasing
- Describe the settings that can or must be made for version management in Customizing for purchasing
- Make simple changes to the material master configuration

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Lesson: Inventory Sampling



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Lesson Duration: 60 Minutes

Lesson Overview

This lesson introduces an inventory procedure with which you can considerably reduce the time and cost effort of an inventory. During inventory sampling, only a part of the stock is actually counted. The inventory count result for all stock management units is extrapolated.



Lesson Objectives

After completing this lesson, you will be able to:

- Describe the inventory sampling procedure
- List the Customizing settings for the inventory sampling procedure
- Carry out inventory sampling in the system



This lesson deals with the basics of the inventory sampling. The method describes how samples are pulled from stock elements. The inventory documents are created with batch input sessions. A complete demonstration is not possible in an IDES system with the time restrictions of the course. There would be too many stock units to count (=enter).

Business Example

You want to keep the number of materials to be counted in your company as low as possible. You therefore want to test inventory sampling in your plants for raw materials.

Calculation Basis

The inventory sampling procedure is not a complete inventory. A sampling area, in which only some of the stock units are inventoried is formed from the total stock. The result of this sample is extrapolated to the value of the total stock.

This procedure only makes sense if the statement value of the inventory set up in this way matches the value of a physical inventory. This means that an inventory sampling must have the same value and same error as a complete inventory.

Each inventory shows errors. Errors may be due to counting errors and input errors.

During an inventory sampling, the counting error is smaller than it is in a complete inventory, as only a particular part of the stock units is inventoried. An error occurred during inventory sampling due to the count extrapolation on the complete

stock. During an inventory sampling, the sum of these two errors (counting and extrapolation errors) cannot exceed the total error of an equivalent complete inventory.

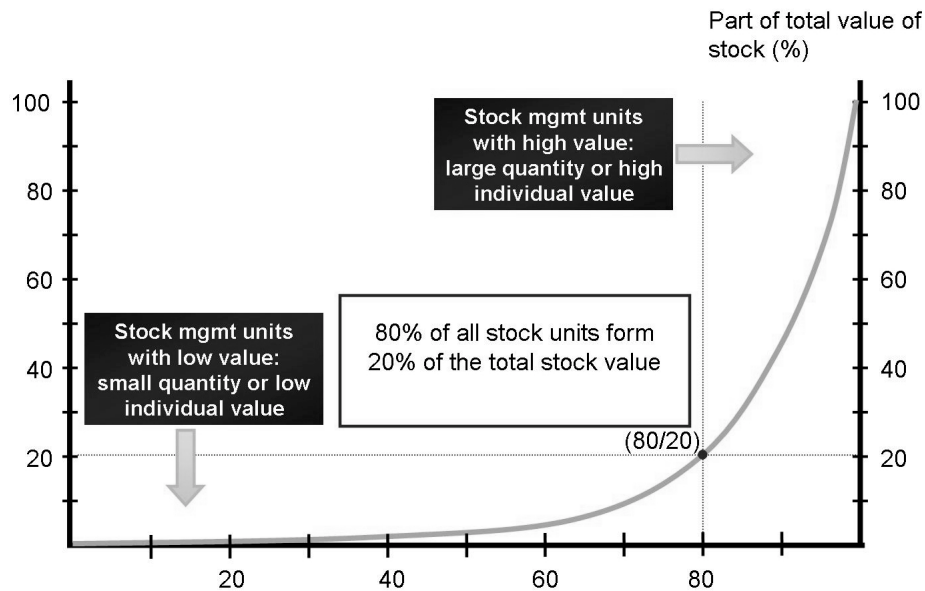


Figure 116: Lorenz Distribution of the Value of the Stock Units

An ideal value distribution of the stock units for an inventory sampling corresponds with the Lorenz distribution. If you added all values of the stock units in ascending order for the total value of the stock, then there would be 80 percent of the stock units and 20 percent of the total values in the time period. This period may be a plant or particular stock management levels. Stock management levels that lie under this 20 percent line, either have a low quantity or a low material valuation price. An error in this area has few consequences on the total error of the stock. The stock management units in this area are used for sampling.



Demonstration: Inventory Parameters

Purpose

Profile definition and execution of the sample selection.

System Data

System:	Training System
Client:	8xx
User ID:	Own user ID or SCM510-00
Password:	Ask the instructor
Set up instructions:	None

1. From the IMG menu, choose: *Materials Management → Inventory Management and Physical Inventory → Physical Inventory → Inventory Sampling → Create Inventory Sampling Profiles.*
 2. Display profile 01.
 3. From the IMG menu, choose: *Materials Management → Inventory Management and Physical Inventory → Physical Inventory → Inventory Sampling → Define Stock Management Levels.*
 4. Show that stocks management units for unrestricted use stock and for the quality inspection stock can be activated. Blocked stock cannot be inventoried with the inventory sampling.
 5. Create an inventory sampling. In the SAP Easy Access menu, choose: *Logistics → Materials Management → Physical Inventory → Special Procedures → Inventory Sampling → Create → R/3 System*
 6. Choose profile 01 and save the inventory.
 7. Change the inventory:
Logistics → Materials Management → Physical Inventory → Special Procedures → Inventory sampling → Change.
 8. Enter the number and choose *Enter.*
 9. Select the stock management units. Choose *Transaction → Stock mgmt levels → Selectable.*
 10. Select the stock management levels of plant 1100 and choose *Copy.*
 11. To form the stock population, choose *Transaction → Stock Population.*
 12. Choose *Copy.*
 13. To show the Lorenz curve, choose *Goto → Lorenz curve → Stock population.*
 14. Choose *Transaction Stratification*
 15. Show the strata with *Goto → List → Stratification → All variants.*
 16. In random selection, you can no longer change the data. Choose *Transaction → Random Selection.*
 17. To show the extrapolation, choose *Transaction/Event → Update* then *Transaction → Extrapolation* and confirm all warnings.
 18. Choose *Goto → List → Extrapolation.*
-

Inventory sampling

In inventory sampling, the extrapolation error is minimized. This is achieved by parameters that you define in a special profile. From the Customizing menu, choose *Inventory Management and Physical Inventory Physical Inventory → Inventory Sampling → Create Inventory Sampling Profiles*.



The definition of the inventory parameter must be discussed with the company's external auditor.

After creating an inventory sampling with a separate document, the stock management units are grouped, the samples are taken, and the batch input session is created, step by step. When the batch input session is run, the system creates the inventory documents. After you enter and post the counts, extrapolations can be created in the system and checked for recount.

The selection of stock management units of an inventory sampling to be physically counted takes place in several steps. (The individual steps are described in greater detail in the sections that follow.)

1. Select the stock management levels
2. Form the stock population and group of stock management units of the stock population in value classes
3. Form the strata
4. Randomly select stock management units to be inventoried from the strata.

Form the Stock Population from Stock Management Levels

A **stock management level** is the quantity of all stock management units that match in plant, storage location, material type and stock type, from the warehouse management, warehouse number and storage type perspectives.

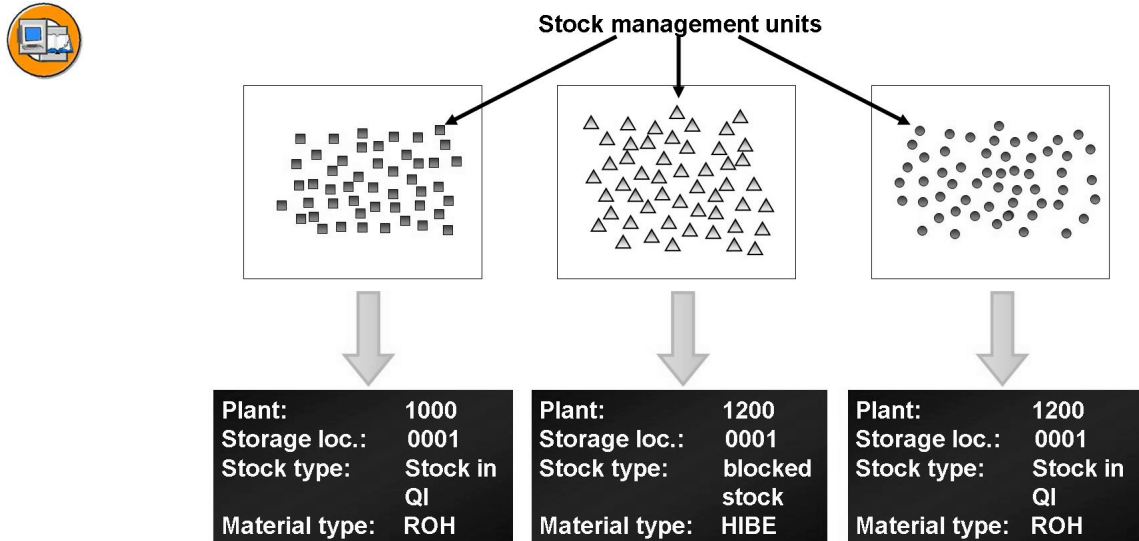


Figure 117: Stock Management Levels

All stock management units of the selected stock management level take part in the created inventory sampling.



Caution: Stock management units from the selected stock management levels, for which an inventory is already active, are **not** involved in the inventory sampling.

In Customizing for *physical inventory* under *Inventory Sampling* → *Define Stock Management Levels*, you define which stock management levels can take place in an inventory sampling. You then define in the application which of the stock management units defined actually take place in the inventory sampling.

The total quantity of stock management units from an inventory sampling is indicated as the **stock population**. The results of the inventory sampling refer to the stock population. The stock population is divided into the sampling area and the complete-count area. As high values of stock management levels unnecessarily increase the error value during samples, an upper limit for the complete-count area is defined. Samples are only taken when stock management units lie below this threshold value. The threshold value can be specified absolutely and relatively to the stock population. After the Lorenz distribution, it lies at approximately 20 percent of the total value of the stock population.

You can set five parameters that control whether a complete-count area is scheduled for a stock management unit:

- In the material master record for this stock management unit, a deletion flag is set.
- The book inventory of this stock management unit is zero.
- The stock management unit shows a particular ABC indicator.
- The price of the material lies above a particular limit.
- The value of the stock management unit (material price * quantity) lies above a particular limit.

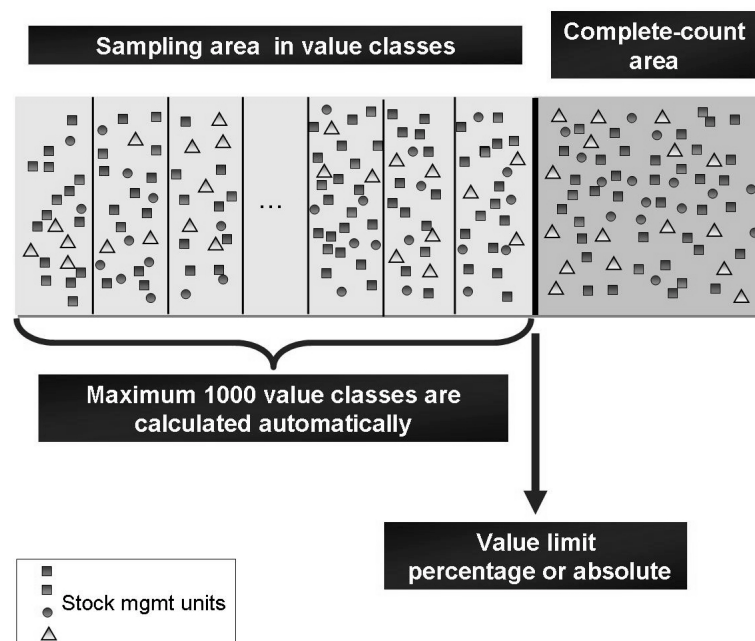


Figure 118: Stock Population

When forming the stock population, the system attempts to group the stock management units in 1000 classes. Later in the process, this prevents a large bandwidth of stock values in the sample drawing. A high bandwidth creates a larger error than a sample from a quantity of stock management units with approximately the same value.

The system calculates the class interval from the set upper value limit:

class interval = upper value limit / 1000, rounded up to the next whole number

On the basis of the class interval, classes are formed until the upper value limit is reached. The process of rounding up generally causes fewer than 1000 classes. The last class ends with the upper value limit.

Forming Strata and Drawing Samples

To reduce the number of required counts, the random selection and extrapolation take place in individual strata. Forming the stratification is based on the class division; individual subsequent classes are grouped together into strata. The system calculates the stratification with the Dalenius Hodges procedure; the following information is necessary for this:

How many elements are included in a class?

How many strata are to be formed?



Hint: For a more detailed description of the calculation methods according to Dalenius Hodges, see the SAP Library under Inventory Sampling.

You can display all strata or just the optimum stratification in the inventory sampling.

The number of samples pulled is an important parameter for stratification. For an accurate prediction of the total value of the stratum using extrapolation, the sample quantities should be as big as possible. However, so that the inventory counting effort is decreased, a smaller number of samples is advantageous. You should determine the minimum sample quantity and the resulting stratification together with an external auditor.

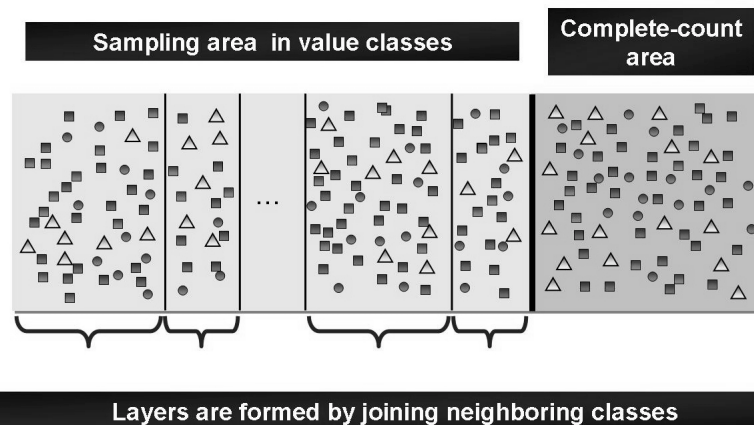


Figure 119: Stratification

In random selection, the elements of the strata to be counted are chosen at random for each strata. If you execute random selection, the transactions already executed are binding. Stock management levels, stock population, and stratification can no longer be changed. The random selection does not automatically create physical inventory documents. You have the option of choosing whether the inventory is to be executed. Random selection takes place with random numbers that are

created in the system with an internal random number generator. This random number generator works with the linear congruency method and corresponds with the research status on this area.

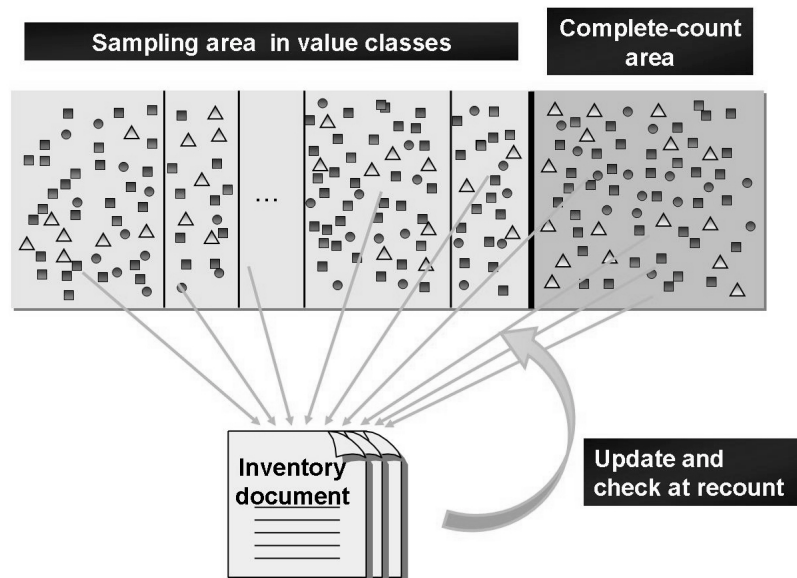


Figure 120: Sample Selection

With a batch input session, the system creates the physical inventory documents for this inventory sampling. This is executed in the system in three steps:

- Create and print physical inventory documents
- Enter count in the system
- Post differences

Update

During the update, the system performs the following actions:

- Read extra posted count results
- Determine changed book inventories and values
- Determine any necessary subsequent random selections

If a count is entered or a difference is posted for an inventory document of an inventory sampling, this is retained in the physical inventory document. The information is not automatically updated in the inventory sampling. This only happens during the update. Stock management units that have already been counted and for which differences have been posted are no longer updated in value.

A posting block for stock management units to be counted exists - if planned in the inventory documents - only in the period between creation of the inventory document and entry of the physical inventory count; stock postings are allowed

beforehand and afterwards. For stock management units that do not have to be counted, postings can take place during the entire inventory sampling without restriction. As a result, this may cause changes to the book inventories or book values during an inventory sampling. In this case, it is a permanent inventory sampling. During the update, the system determines these changes. These are taken into consideration in extrapolation.

In the permanent inventory sampling, there may be changes to the book inventories and values. This may mean that a stock management unit at the current point in time belongs to a different strata than the one it belonged to at the planning time. Changes between the sampling area and complete-count area are also possible. If a stock management unit switches to the complete-count area, this must be counted. The system proposes a subsequent random selection for the complete-count area.

Extrapolation

There are two different types of extrapolation:

- A **provisional extrapolation** exists when differences were posted only for some of the stock management units to be counted. Any number of provisional extrapolations can be created; only the most recent one is actually saved.
- A **final extrapolation** exists when all differences are posted, all count results are entered in the calculation, and a subsequent random selection is not necessary. A final extrapolation can only be executed once as no new results can be added.

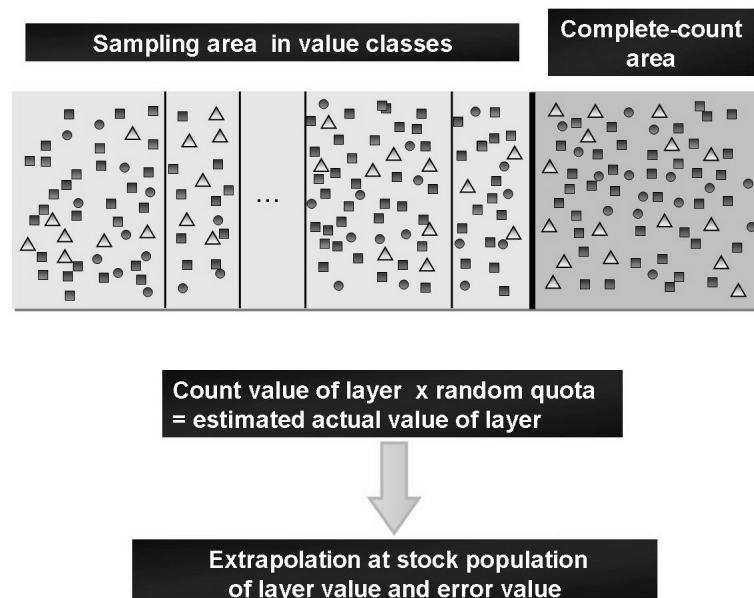


Figure 121: Extrapolation

Various mathematical procedures are possible for extrapolation. The SAP system currently supports the mean-value estimation with strata procedure.

The result of the extrapolation is divided into the following areas:

- Grouping the entered parameters
- Information about each of the individual sampling strata
- Extrapolation result for the entire sampling area
- Information about the complete-count area and extrapolation result for the complete area

You can only follow the results of the inventory sampling if the complete printout of extrapolations from the *SAP* system is available.



Facilitated Discussion

Inventory sampling

Discussion Questions

Use the following questions to engage the participants in the discussion. Feel free to use your own additional questions.

For which materials can you execute the physical inventory?

What is the advantage of the inventory sampling?



Lesson Summary

You should now be able to:

- Describe the inventory sampling procedure
- List the Customizing settings for the inventory sampling procedure
- Carry out inventory sampling in the system

Lesson: Cycle Counting



Lesson Duration: XX Minutes

Lesson Overview

This lesson introduces physical inventory by cycle counting. Cycle counting is a method of physical inventory whereby material is inventoried at regular intervals within a fiscal year.



Lesson Objectives

After completing this lesson, you will be able to:

- Describe the cycle counting procedure
- Give possibilities for setting the cycle counting indicator in the material master record
- Explain the creation of inventory documents with a batch input session



A physical inventory with the cycle counting method is a full physical inventory. Disadvantage: Particularly high costs due to a large amount of time and effort in counting and number of staff required; Advantage: Minimizes errors in inventory management due to a higher number of physical inventories.

Business Example

In your company, some materials have a very high turnover value. The large number of goods movements causes a large source of error for stock postings, so errors in Inventory Management are therefore highly likely. You want to inventory the stocks of some materials several times, at regular intervals within a fiscal year. The length of the time intervals will be adapted to match the material movement rate. For some materials, you want to manually determine the number of inventories.

Cycle Counting Method

Cycle counting is an inventory procedure whereby selected materials are inventoried several times within a fiscal year. The cycle counting procedure is a complete inventory. All stock units are inventoried at least once a year.

With the cycle counting method, you can include stock units of the following stock types:

- Unrestricted-use stock
- Stock in quality inspection
- Blocked stock

With a cycle counting indicator, the relevant materials for each plant are grouped into categories. For each of these categories, the number of inventories per year is defined.

The inventory document creation takes place with a batch input session. From the cycle counting indicator of the material and the last inventory date, the system can determine the due date of the inventory stock unit and creates a batch input session. When the session is run, the inventory documents are created.

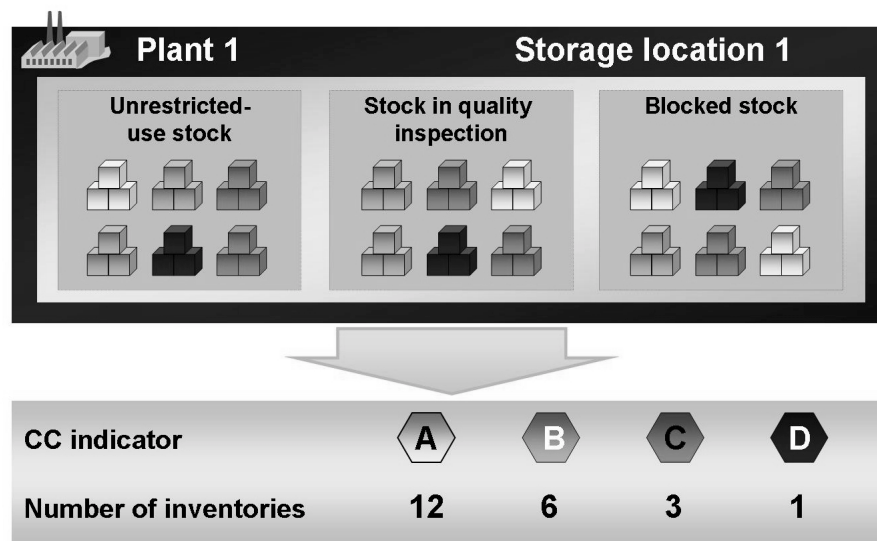


Figure 122: Cycle Counting Method



Demonstration: Cycle Counting Indicator in Customizing

Purpose

To use the cycle counting inventory, cycle counting indicators must be defined in Customizing for each plant.

System Data

System: Training System
Client: 8xx
User ID: Own user ID or SCM510-00
Password: Ask the instructor
Set up instructions: None

1. *IMG* → *Materials Management* → *Inventory Management and Physical Inventory* → *Physical Inventory*

2. Choose  *Cycle Counting*

Definition of the Cycle Counting Indicator

In Customizing for *Inventory Management and Physical Inventory* under *Physical Inventory* → *Cycle Counting*, define the physical inventory cycle for each indicator of the cycle counting inventory.

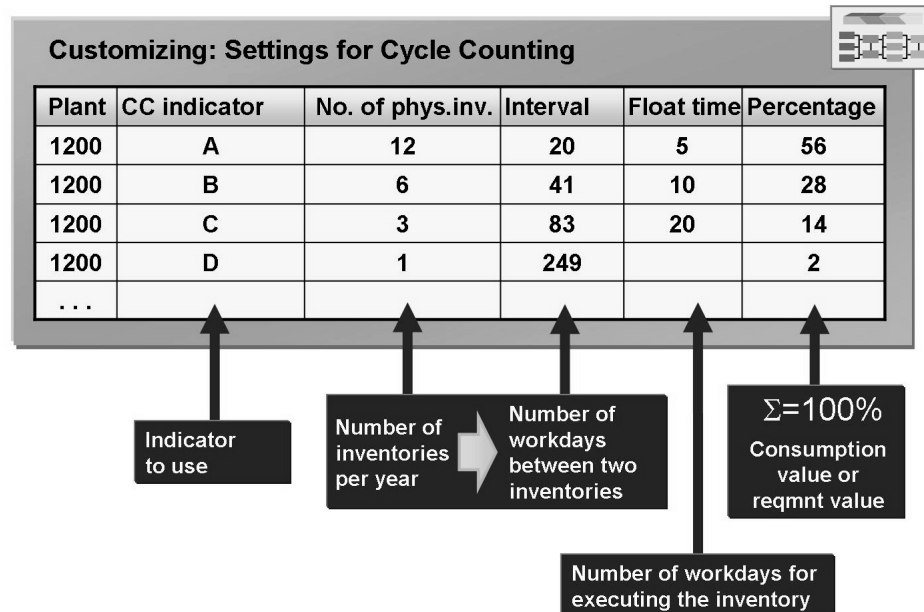


Figure 123: Definition of the Cycle Counting indicator

You must define the following values for each indicator to be used:

Inventories per year

With the number of inventories per year, the system calculates the number of workdays between the inventories (interval).

Float Time

The time buffer is the time interval within which the inventory of a stock unit must be executed.

Percentage of the total value

The cycle counting indicator is determined with an ABC analysis.

For each plant, you must define cycle counting indicators for the inventory. You can define different strategies in different plants. For calculating the number of workdays between two inventories, the system refers to the assigned factory calendar of the plant. If the calendar is changed, the indicators must be reentered.



Note: SAP Note 518418 contains a list of frequently asked questions about the Cycle Counting inventory.



The system calculates the interval length in workdays when entering the cycle counting indicator. To do this, the system accesses the calendar assigned to the plant. A change to the plant calendar no longer influences the interval that has already been calculated. To create the inventory documents, the system uses the interval length and not the number of inventories. If you change the plant calendar, you therefore have to delete the indicator and reenter it.




Demonstration: Report for Determining the Cycle Counting Indicator

Purpose

Determine the Cycle Counting indicator

System Data

System: Training System
Client: 8xx
User ID: Ask the instructor
Password: Ask the instructor
Set up instructions: None

1. Choose *Logistics* → *Materials Management* → *Physical Inventory* → *Special Procedures* → *Cycle Counting* → *Set Cycle-Counting Indicator*
2. Enter the following data:
Plant: 1200 (Dresden),
Material type: ROH (Raw material).
3. Choose  *Execute*.
4. To change the indicator for a material, place the cursor on the item and choose *Change CC Indicator* on the application toolbar.
5. You can restart the calculation for the selected materials with changed percentage rates: Choose *New Analysis* on the application toolbar.

Determining the CC Indicator

The cycle counting indicator can be assigned manually and with report RMCBIN00. Set inventory indicators can be manually fixed in order to prevent an automatic change by the report. The manually fixed indicator in the material master is visible in green in the report.

Report RMCBIN00 provides a material selection for each plant and material type. Materials with and without a cycle counting indicator can be analyzed. For the selected stock, consumption or requirement values in a particular time period are considered.

The report issues a list in the standard system, with the following information:

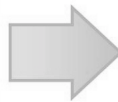
- Material number with short text
- The cycle counting indicator resulting from the analysis
- The old cycle counting indicator
- The value of the requirement or consumption in the selected time period
- The part of the material in the total value
- The cumulated value



Material	Material description	Total stock BUn	CC new %	CC old cum%
PUMP 1	Pump with		A	A
	1625.00	425 PC	8.00	8.00
PUMP 2	Pump with		A	B
	1608.75	400 PC	7.92	15.92
	...			
PUMP 9	Pump with		A	A
	792.19	390 PC	3.90	56.16
PUMP 10	Pump with		B	C
	650.00	425 PC	3.20	59.14
PUMP 11	Pump with		A	A
	631.12	425 PC	3.11	62.25

fixed

Counting effort		
A	12	144
B	8	168
C	4	204



New analysis:
 Determine indicators and counter effort with other percentages for the selected materials

Figure 124: ABC Analysis of the Cycle Counting Inventory

The new cycle counting indicators are determined using an ABC analysis. The system totals the particular parts at the total consumption value or total requirement value of the materials.

Example: 200 materials (pumps) are inventoried in the storage location. The CC indicators are set in Customizing as follows:

- A = 12 inventories (56%).
- B = 8 inventories (28%).
- C = 4 inventories (14%).
- D = 1 inventory (2%).

The pumps are analyzed in the ABC analysis of the cycle counting according to consumption.

- The first 9 materials have indicator A. They use 56% of the consumption (sorted in descending order).
- For pump 11, the cycle counting indicator is maintained and fixed manually so that it is no longer possible to change it with a cycle counting report.
- 21 materials have indicator B. This part is 28% of the total consumption value.
- 51 materials have indicator C. This part is 14% of the total consumption value.
- 118 materials have indicator D. This part is 2% of the consumption value.

From 200 materials, there is an inventory counting effort of 634 counts.

You can change individual values manually using the report for non-fixed indicators. The value is not fixed, but can be changed by the report.

Consumption analysis: The system uses the consumption quantities updated in the material master. The consumption value is determined from the corrected quantity of the total consumption and the valuation price of the specified plant.

Requirement analysis: The system determines the value of the total requirement of the material from independent requirements, sales orders, dependent requirements, requirements from stock transport orders, and the valuation price of the material.



Demonstration: Selection of Materials for Cycle Counting Inventory

Purpose



Planning of the next cycle counting inventory

System Data

System:	Training System
Client:	8xx
User ID:	Ask the instructor
Password:	Ask the instructor

Set up instructions: None

1. Choose *Logistics* → *Materials Management* → *Physical Inventory* → *Special Procedures* → *Cycle Counting* → *Create Physical Inventory Documents*.
2. Enter the following data:
 - Material* **XX-110** to **XX-220**
 - Plant*: **1200** (Dresden),
 - Storage Location*: **0001** (material warehouse),
 - Material Type*: **ROH** (Raw material),
 - Planned Count Date*: **Today to today + 2 months**.

Generate Batch Input is not selected, the session is not to be created.
3. Choose  *Execute*.
4. Choose *Generate Session*.
5. Choose *System* → *Services* → *Batch Input* → *Sessions*
6. Enter: *Created by*: **<your user ID>**.
7. Select the entry with creation program RM07ICN1.
8. Choose  *Process*.
9. Choose *Background* and *Extended log*.
10. Choose *Process*.
11. Choose *Goto* → *Logs*.
12. Select the last entry and choose *Log* → *Display*.
13. Make a note of the physical inventory document number.
14. Choose *Logistics* → *Materials Management* → *Physical Inventory* → *Physical Inventory Document* → *Display*.
15. Display the physical inventory document you just created.

Creation of Physical Inventory Documents

To plan the cycle counting inventory, start program *Create Physical Inventory Documents for Cycle Counting* (report RM07ICN1) to check all materials for the due date.

A material is due for inventory if the following conditions apply:

- The *Date of the last inventory* regarding the predefined interval of the indicator has been exceeded.
- The time buffer has been exceeded. If an existing inventory with existing physical inventory documents is not executed within the time buffer, the material is flagged again for inventory.
- The *Creation date of accounting view* regarding the predefined interval of the indicator has been exceeded (see SAP Note 33018).
- The *Creation date of batch* regarding the predefined interval of the indicator has been exceeded (see SAP Note 33018).

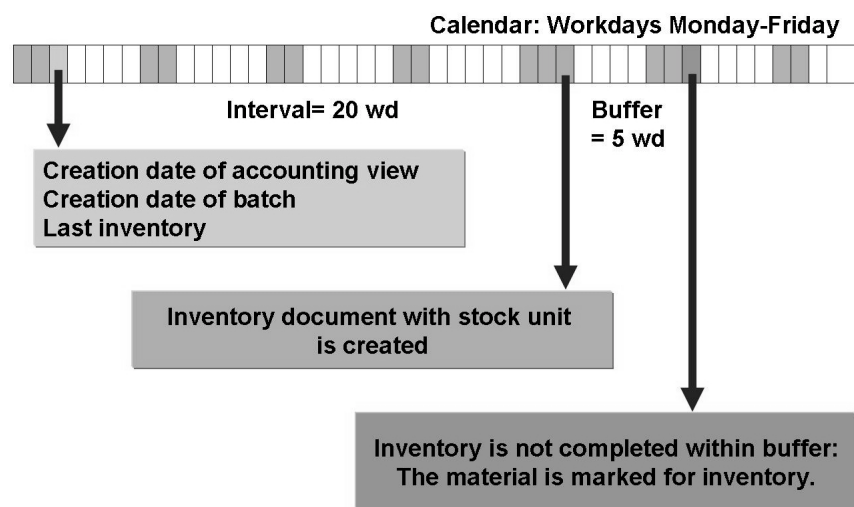


Figure 125: Material Due Date

The material due date is determined using the planned count date. You cannot use a date in the past for this selection (see Notes 518418, 75006).

You can generate a batch input session directly when executing the selection, or you can first execute the selection, and then -- after checking the list -- generate the session. The inventory documents are created when the session is run. You can create them as blocked physical inventory documents, or block them later. The subsequently executed inventory is a complete inventory, which should be taken at the end of the fiscal year.



Exercise 16: (Optional) Cycle Counting

Exercise Duration: 10 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Set the CC indicator in the material master record using ABC analysis

Business Example

In your company, some materials have a high turnover rate. To minimize possible errors in Inventory Management, you have decided to inventory materials with a particularly high turnover rate more frequently within the fiscal year.

System Data

System:	Training System
Client:	8xx
User ID:	Ask the instructor
Password:	Ask the instructor
CATT:	ZT_SCM510
Set up instructions:	None

Task:

You want to inventory your finished products with cycle counting. You assign the CC indicator using an ABC analysis of the consumption values.

1. In the report for assigning the CC indicator, select all materials kept in stock with the material type Finished Product in plant 1000. Determine the indicators using the consumption values since the start of 2003. You want to display the result of the analysis first, to make manual changes.

Assign the CC indicator C manually for the material **T-INV8##** and determine the inventory counting effort.



Solution 16: (Optional) Cycle Counting

Task:

You want to inventory your finished products with cycle counting. You assign the CC indicator using an ABC analysis of the consumption values.

1. In the report for assigning the CC indicator, select all materials kept in stock with the material type Finished Product in plant 1000. Determine the indicators using the consumption values since the start of 2003. You want to display the result of the analysis first, to make manual changes.

Assign the CC indicator C manually for the material **T-INV8##** and determine the inventory counting effort.

- a) Choose *Logistics* → *Materials Management* → *Physical Inventory* → *Special Procedures* → *Cycle Counting* → *Set Cycle-Counting Indicator*.
- b) Enter the following data:
Plant 1000,
Material type FERT (Finished product)
Consumption/usage 01.01.2003 to <today>
Set the *All stock materials* indicator.
Choose *Display list first*.
- c) Choose  with the quick info text *Execute*.
- d) Place the cursor on the material line **T-INV8##** and choose *Change CC Indicator*.
- e) Enter indicator **C**.
- f) To determine the inventory counting effort, choose *Goto* → *Counting Effort*, or scroll to the end of the list.
- g) Choose  with the quick info text *Post*.



Lesson Summary

You should now be able to:

- Describe the cycle counting procedure
- Give possibilities for setting the cycle counting indicator in the material master record
- Explain the creation of inventory documents with a batch input session

Lesson: Customizing Settings for the MB* Transactions



310

Lesson Duration: 20 Minutes

Lesson Overview

This lesson gives you a short overview of the Customizing settings for the old goods movement transactions (such as MB01 (GR for Purchase Order), MB1A (Goods Issue), MB1B (Transfer Posting), MB1C (GR Other)). These settings differ in some places from the settings for the enjoy transactions.



Lesson Objectives

After completing this lesson, you will be able to:

- List the most important settings for the old goods movement transactions



[Describe the information that the instructor should give course participants on the context of the course.]

Business Example

Some users at your company are still using the old transactions for goods movements. You should therefore also view the Customizing settings for field selection for these transactions.

Screen Layout According to Movement Type

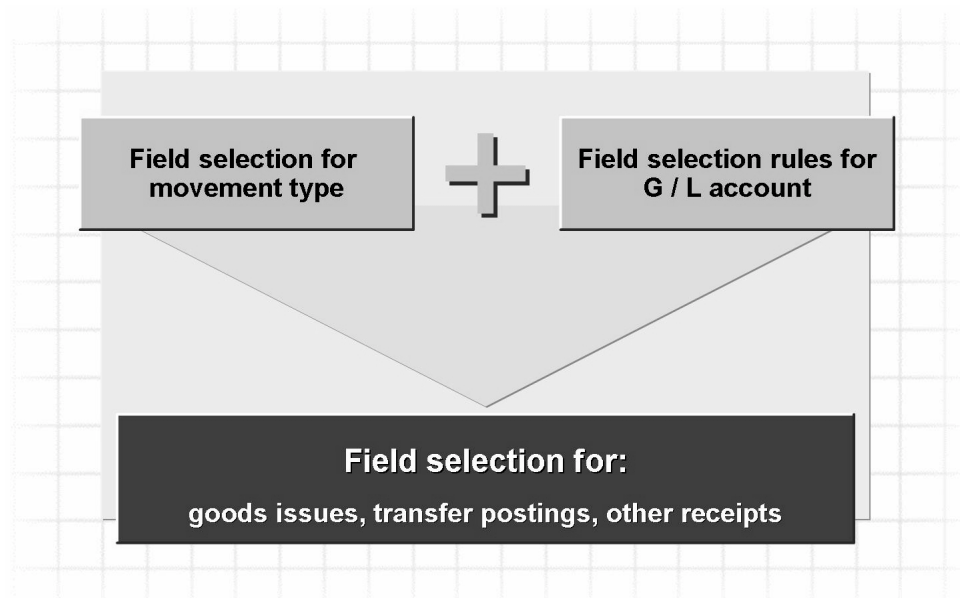


Figure 126: Screen Layout for Movement Types

The settings made for field selection for the movement type under the activity *Define Screen Layout* apply to goods movements and reservations.

You use separate activities to define the field selection for the *G/L Account* and *Reason for Movement* fields. The field selection for the movement type must not conflict with the settings for field selection for the G/L account to be posted to or the settings made for the reason for the movement.



Caution: This also applies if you are using the new transaction MIGO.

You define field selection depending on the G/L account via the field status group in the G/L account master. The G/L account-dependent field selection is assigned to the company code via the field status variant.

In addition, the system checks whether the field selection for the G/L accounts matches the field selection for the relevant posting key of the transaction. You can specify the field selection for posting keys and the various field status groups in Customizing for Financial Accounting.

In particular, note that a required entry field in the G/L account must likewise be made a required entry field for the movement type.

You can use report RM07CUFA to check whether the field selection settings for the movement type and the G/L account contradict each other. Lines marked in red indicate the fields whose settings contradict each other. (A contradiction exists, for example, if the movement type field is defined as *mandatory* and the G/L account field has the attribute *hide*.)

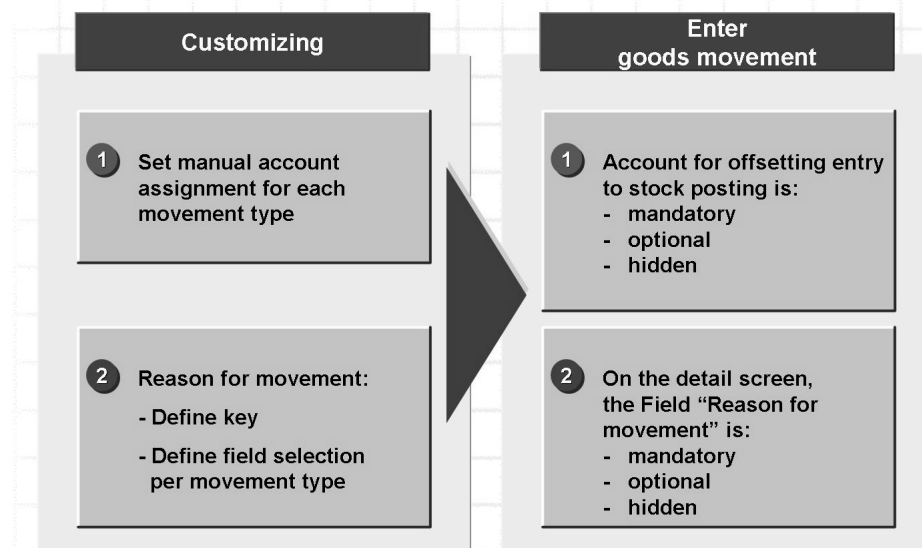


Figure 127: Field Selection for Goods Movements: Individual Issues

In the standard system, you can enter the account for the offsetting entry to the stock posting manually when recording goods movements. By doing so, you change the G/L account number assignment predefined in account determination. You specify the movement types for which the G/L account is to be made available for the manual entry of the offsetting account for the stock posting under the activity Set Manual Account Assignment.

When entering goods movements (for example, for the return delivery of material to a vendor), you can specify the reason for the movement (quality defects, perhaps). The system stores the reason for the movement in the material document. In inventory management, you can use a report to evaluate the material documents for which a reason for the movement has been specified.

In Customizing, you can specify per movement type whether the *Reason* field is mandatory or optional or is suppressed. You can also define the possible reasons (for example, reason for return in the case of a return delivery). When recording goods movements, you can only enter reasons that have been predefined here for the movement type.

Field Selection for Initial and Header Screens



Modifiable fields	Entry	Mand	Disp	Hide	Foregr
Document date	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Doc. header text	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Posting date	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Bill of lading	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
Reason for movement	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
Del. note number	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
Material slip	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="checkbox"/>

Definitions always apply to all initial/header screens (1) such as

Definitions can be applicable based on certain influences (2) such as

Figure 128: Field Selection for Initial/Header Screens

For the modifiable fields, you specify via indicators how the individual fields are to be presented on the screen. The following options are available:

- The field is ready for input (standard setting).
- The field requires an entry (mandatory input).
- The field is displayed only.
- The field is suppressed (hidden).
- The field is highlighted.

These settings can either apply to the entire client or be restricted through the influencing fields. Thus, for instance, the requirement to enter data in a field (mandatory input) can be specified depending on the SAP transaction or the document type.

1. When you call up this activity, you get a list of all modifiable fields. The settings made in this list apply to the entire client if there are no restrictions or if the conditions influencing such restriction have not been defined.
2. You make the settings for influenced fields on a separate screen.



Facilitated Discussion

Discussion Questions

Use the following questions to engage the participants in the discussion. Feel free to use your own additional questions.



Lesson Summary

You should now be able to:

- List the most important settings for the old goods movement transactions

Lesson: Version Management in Purchasing



315

Lesson Duration: 30 Minutes

Lesson Overview

This unit gives you an overview of version management in purchasing. Version management is available within purchasing as of SAP R/3 Enterprise. The principal advantage of using this facility is that it enables you to track changes made to requisitions and external purchasing documents in the course of time.



Lesson Objectives

After completing this lesson, you will be able to:

- Describe the advantages of using version management
- Use version management in purchasing
- Describe the settings that can or must be made for version management in Customizing for purchasing



System demonstration:

After pointing out the advantages of using version management, it is advisable to show participants the Customizing settings for this facility. After this, you should go through an example of the use of versions in purchase orders. If there is sufficient time, you can then demonstrate how versions of purchase requisitions are generated and used.

Business Example

In your enterprise, requisitions and other purchasing documents are subject to frequent revision. For this reason, you wish to keep track of all changes made to documents after their initial creation.

Version Management in Purchasing

As of SAP R/3 Enterprise, it is possible to generate versions of requisitions and external purchasing documents using the version management facility. A version represents a collection of change documents generated through the further processing of an existing requisition or purchasing document. It indicates the status of such a document and extends any previously existing change documentation.

Version management affords the following advantages for procurement:

- Changes can be tracked easily.
- Data transmitted to the vendor can be checked at any time.
- Communication with the vendor is made easier. You can now refer to a certain version of a purchase order when speaking to a vendor's representative on the phone for instance.
- Changes to long texts are documented. Previously, it was not possible to track changes to long texts. Version management enables you to compare different editions of a text with each other.

Version Management in Purchase Requisitions

As of SAP R/3 Enterprise, you can generate versions of purchase requisitions in transaction ME51N. A version comprises the change documents generated as a result of subsequent changes made to the original requisition.



Purchase requisition

Item	A	I	Material	Short text	Quantit	UoM	...
10	K		99-100	Lubricating oil	100 00	L	...

Complete **Versions** **Cancel version**

Changes **Texts for version**

Status	Version	Ready	Reason	Value change	Created by
	1	<input type="checkbox"/>	01	50.00	Müller
	0	<input checked="" type="checkbox"/>		0	Meier

Figure 129: Version Management in Purchase Requisitions (ME51N)

In Customizing, you can specify which changes to a field in a purchase requisition are version-relevant. Only a change to a version-relevant field results in the generation of a new version. Version-relevant fields are defined as a function of the document type.

Not until a version has been flagged as **Completed** can the requisition be converted into a purchase order. The processor of a requisition can manually flag versions as **Completed**. However, you also have the option of having the first version (version 0, which is created automatically when a requisition is initially created) flagged as **Completed** by the system.

Version Management in External Purchasing Documents

In addition to versions of requisitions, as of SAP R/3 Enterprise, you can also generate versions of other purchasing documents, such as POs. A version represents a collection of change documents generated through the further processing of an existing purchasing document.



Purchase order

Versions

Status	Version	Ready	Reason	Value change	Created by
	1	<input type="checkbox"/>	01	50.00	Müller
	0	<input checked="" type="checkbox"/>		0	Meier

Item	A	I	Material	Short text	Quantit	UoM	...
10	K		99-100	Lubricating oil	700 90	L	...

Figure 130: Version Management in Purchase Orders (ME21N)

If a version of a purchase order has been created, for instance, the message for the PO is generated immediately. However, this message cannot be outputted until the version has been flagged as **Completed**.

In contrast to versions of requisitions, you do not have the option of defining version-relevant fields for versions of external purchasing documents in Customizing.

Customizing for Version Management

To be able to use version management, you must first activate it in the Customizing for Purchasing under Version Management

- For Purchase Requisitions - depending on the document type
- For External Purchasing Documents - depending on the document category, document type, and purchasing organization

(You thus have to bear in mind the distinction between internal and external purchasing documents.)

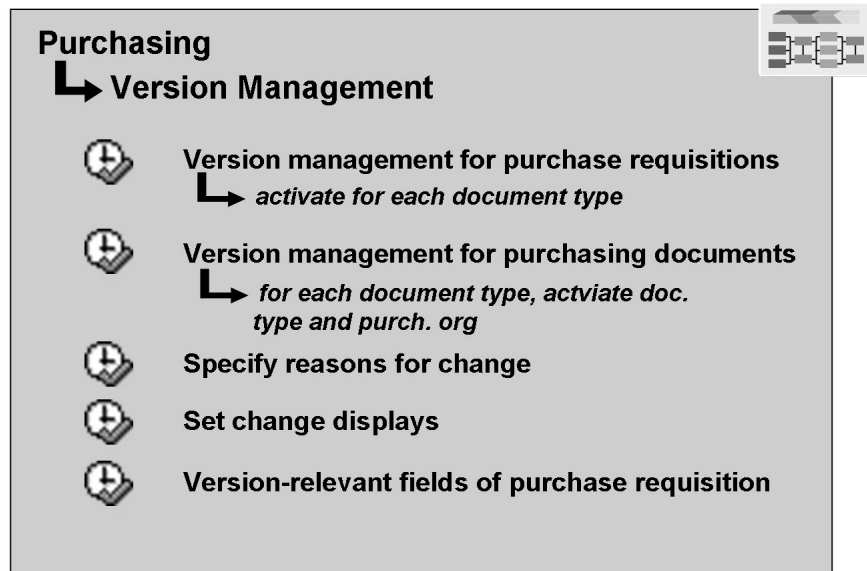


Figure 131: Customizing Settings for Version Management

Via field selection, you can stipulate for both requisitions and external purchasing documents whether a reason has to be recorded for each relevant change, for instance.

Set up version management:

SAP Customizing Implementation Guide → Materials Management → Purchasing → Version Management → Set Up Version Management for Purchase Requisitions/External Purchasing Documents



Facilitated Discussion

Optional: Check participants' knowledge of the subject Version Management.

Discussion Questions

Use the following questions to engage the participants in the discussion. Feel free to use your own additional questions.



Lesson Summary

You should now be able to:

- Describe the advantages of using version management
- Use version management in purchasing
- Describe the settings that can or must be made for version management in Customizing for purchasing

Lesson: Configuring the Material Master



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Lesson Duration: 90 Minutes

Lesson Overview

The material master record contains data for several user departments (for example, purchasing, MRP, accounting). One or more views are available to each user department for master record maintenance.

If you do not wish to use all the views, you can configure your own material master dialog (that is, your own screen sequences for maintaining material master records). You can use these screen sequences dependent on various influencing factors.

This lesson gives you an overview of possible settings.



Lesson Objectives

After completing this lesson, you will be able to:

- Make simple changes to the material master configuration



The instructor should point out to participants that in practice you can run into trouble if you create a separate screen sequence for material master maintenance for every user. It is better to configure the Customizing settings for groups of users or for the entire company.

Business Example

Your users wish to have a material master dialog that is easier to follow. You have been asked to make the necessary settings.

Material Master Configuration: Overview

You can adjust the material master and its maintenance to suit the particular needs of your company. You have the following options:

- Specify structure of data screens

A data screen is composed of several individual subscreens. You can remove any subscreens that you do not need from a data screen. You can also replace subscreens with ones from other data screens or with subscreens of your own.
- Link screens together in sequences

A screen sequence is a series of individual data screens that follow each other. Data screens are subdivided into main and additional screens. For example, you can create your own screen sequences for your various user groups.
- Specify the order of the main screens and additional screens

You can adapt the order of the main screens, and also the order of the additional screens, individually for each screen sequence. You can adapt them to your user groups, for example.
- Specify user settings for the maintenance of material master records

Here you can specify for the individual end users that a certain industry is to appear as the default value. Depending on the user and the screen sequence, you can also assign default values for the views selected in the *View Selection* dialog box and for the organizational levels.

The following figure gives you an overview of the Customizing activities for material master configuration.

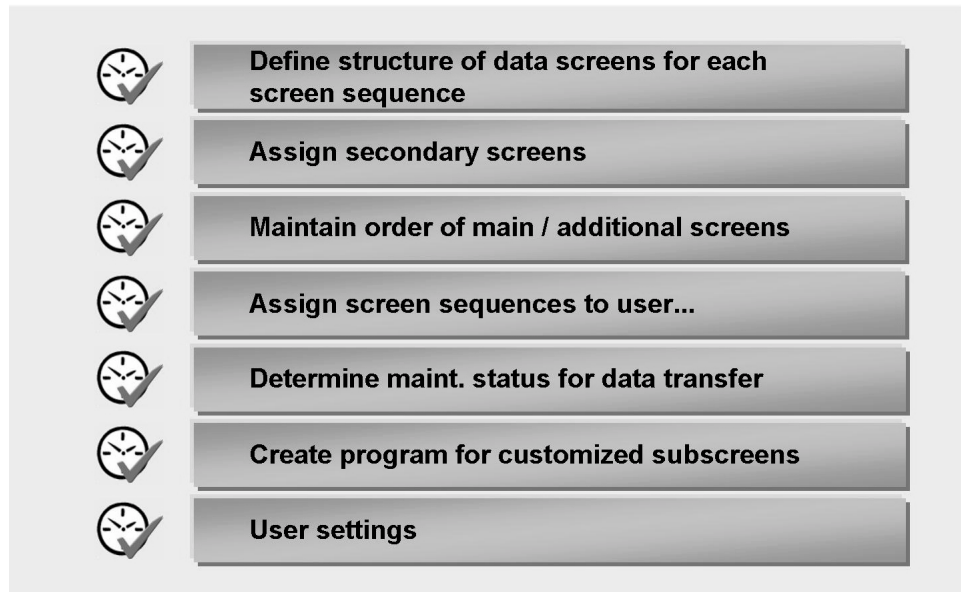


Figure 132: Configuration of Material Master

In addition to the documentation on the individual activities, you will find an example of the procedure for individual configuration at the beginning of the *Configuring the Material Master* node in the Implementation Guide (**Here's How**).

The following figure shows that the *Basic Data 1* screen consists of several subscreens (framed blocks of fields, for example). You can view detailed information via *FI Help* → *Technical Information* or via *System* → *Status*.

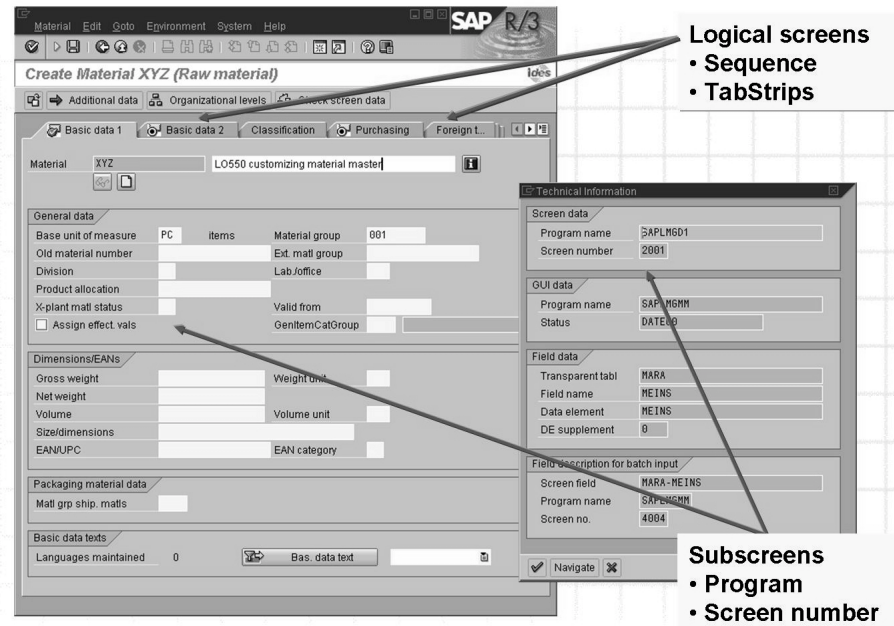


Figure 133: Example: Configuration of Material Master Dialog

Logical Screens

A logical screen is a screen that you can choose from the view selection dialog box. A subscreen container is assigned to each logical screen. A logical screen is composed of a number of individual building blocks known as subscreens.

When designing your own logical screens, you can use either your own subscreens or the existing standard ones.

Subscreens

Subscreens usually correspond to the individual frames of a logical screen. They are the program screens that are processed in the course of the material master dialog.

You need to use your own subscreens if you wish to have different field groupings or if new (own) fields are to be used. You can create these subscreens using the *Screen Painter*, which you can call as follows in the SAP *Easy Access* menu:

Tools → *ABAP Workbench* → *Development* → *User Interface* → *Screen Painter*

For more information on this topic, see the documentation for the IMG activity *Create Program for User-Dependent Subscreens*.

Append structures are available in the Data Dictionary (DDIC) for the insertion of your own fields.

Customers have to use their own programs to insert fields from their own tables and their own subscreen containers for material master record maintenance.

Screen Sequences

A screen sequence is a series of linked data screens for the maintenance of material master records. You can set up your own screen sequences for different user groups or for the processing of materials of different types or belonging to different industries.

SAP supplies a number of standard screen sequences. These include the sequences 01, 11, and 21, for example, which differ in the number of data screens and the layout (in the form of tab pages, for instance).

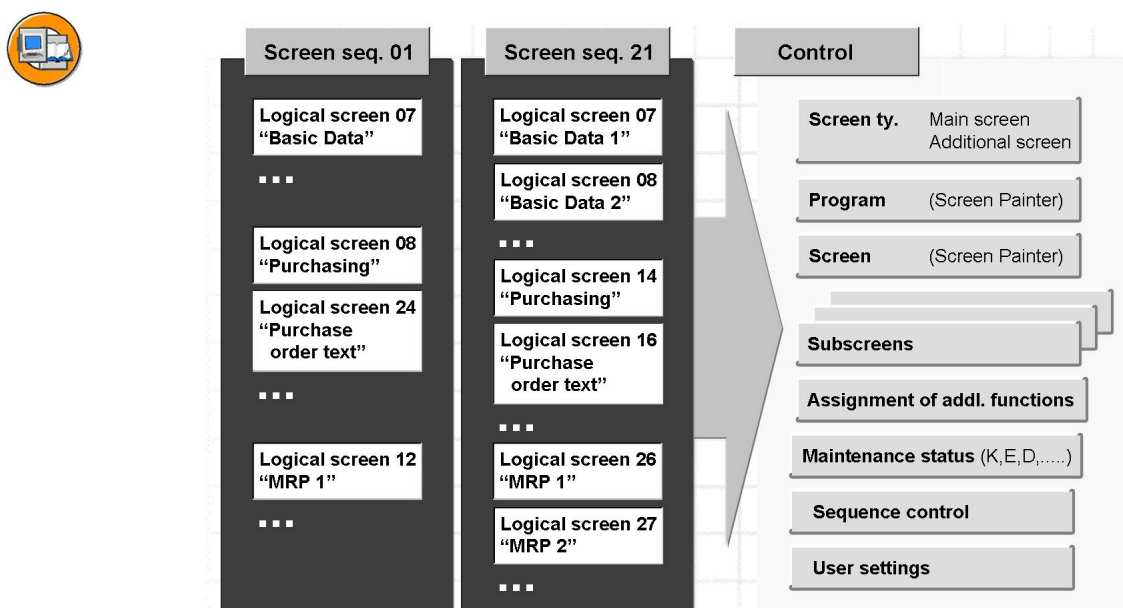


Figure 134: Configuring the Material Master: Screen Sequence

The screen sequence is a freely definable two-character key. Customers have their own namespace.

A screen sequence comprises several logical screens.

Each logical screen consists of a subscreen container with its associated subscreens. The number of subscreens depends on the selected subscreen container. If fewer subscreens are needed than the subscreen container allows, the SAP system uses the dummy subscreen 0001 as a filler.

There are subscreen containers for:

- **Main screens** (that is, the screens that appear at the principal work level)
- **Additional screens** (screens that are called via the additional data)
- **Other** screens (non-configurable, for example, initial screens)

Standard subscreens (program SAPLMGD1) have a maximum of 10 rows and exactly 83 columns. They can have a frame and a short description.

The **maintenance status** of the relevant logical screen must agree with the maintenance status of the fields the logical screen contains (for example: 'EL' - only purchasing and storage data is allowed).

You can assign function codes **PBxx** to the **additional or secondary screens**, so that they can be called from a main screen using a button. You integrate the buttons into the main screens using the **Screen Painter**.

Definition of Screen Sequences

The following excerpt from the SAP system Customizing shows an overview of data screens for standard screen sequence 21.

S...	S...	Screen description	T	SCon	Maint. status	GUI status	TT	Alt. screen descrip.
21	07	Basic Data 1	1	4004	K	DATE00	2	Basic data 1
21	08	Basic Data 2	1	4004	K	DATE00	2	Basic data 2
21	09	Sales: Sales Org. Data 1	1	4000	V	DATE00	2	Sales: sales org. 1
21	10	Sales: Sales Org. Data 2	1	4000	V	DATE00	2	Sales: sales org. 2
21	11	Sales: General/Plant Data	1	4000	V	DATE00	2	Sales: general/plant
21	12	Foreign Trade: Export Data	1	4004	V	DATE00	2	Foreign trade export
21	13	Sales Text	1	4040	V	DATELT00	2	Sales text
21	14	Purchasing	1	4000	E	DATE00	2	Purchasing
21	15	Foreign Trade: Import Data	1	4000	E	DATE00	2	Foreign trade import
21	16	Purchase Order Text	1	4040	E	DATELT00	2	Purchase order text
21	17	Production Resources/Tools	1	4000	F	DATE00	2	Prod.resources/tools
21	18	General Plant Data / Storage 1	1	4000	L	DATE00	2	Plant data / stor. 1
21	19	General Plant Data / Storage 2	1	4000	L	DATE00	2	Plant data / stor. 2

Figure 135: Screen Sequences

The following excerpt shows details of data screen 14 (purchasing):

S...	Scrn	Ss	Program	Scr.
21	14	1	SAPLMGD1	1001
21	14	2	SAPLMGD1	2301
21	14	3	SAPLMGD1	2302
21	14	4	SAPLMGD1	2313
21	14	5	SAPLMGD1	0001
21	14	6	SAPLMGD1	0001

Figure 136: Data Screens

Subscreen container 4000, assigned to data screen 14, allows a maximum of six subscreens. Because the standard system provides only four subscreens for the *Purchasing* data screen, the last two rows contain the empty subscreen 0001 (as a placeholder).

Assignment of Screen Sequences for Material Master

The screen sequence used in material master maintenance is determined by a variety of influencing factors.

Influencing Factors

You can assign screen sequences (indirectly) to any combination of one or more transactions, users, material types, or industry sectors. A certain screen sequence then appears automatically when the users in question choose the relevant transaction, material type, and industry. The assignment of the screen sequences is effected via a grouping of transactions, users, material types, and industry sectors: The screen references. You use these groups when assigning the screen sequence.

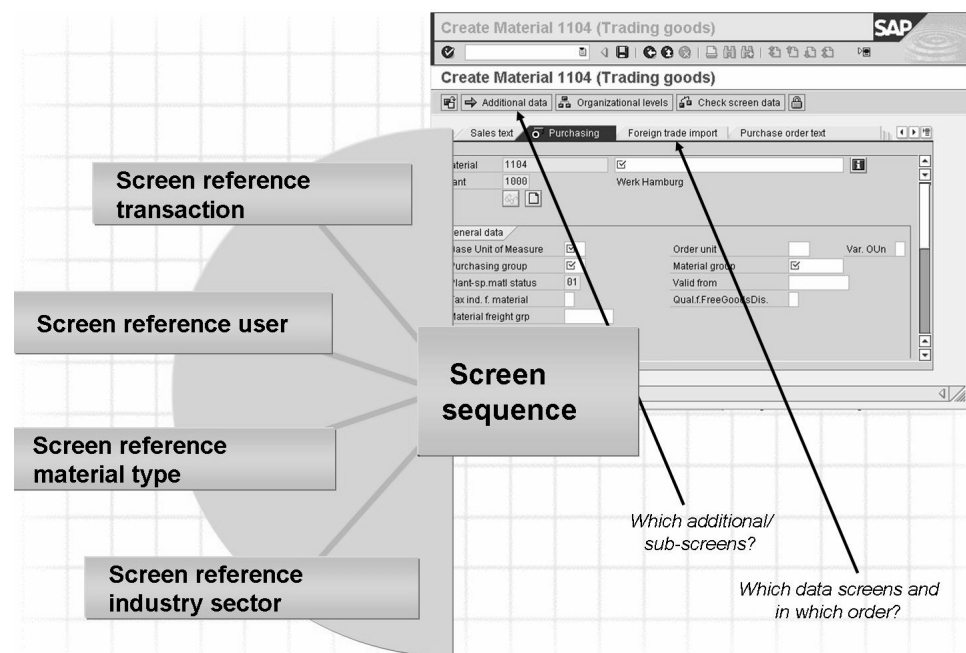


Figure 137: Influencing Factors: Screen References

Screen Reference Transaction

By assigning the same freely selectable screen reference to various transactions, you can create a transaction group. In the standard SAP system, the transactions for the standard material master for **industry** are grouped under screen reference 01. The transactions for the standard article master for **mySAP Retail** are assigned to screen reference 03.

Screen Reference User

By assigning the same freely selectable screen reference to various users, you can create a grouping of users.

Screen Reference Material Type

You can also form groups of material types by assigning them the same freely selectable screen reference. The screen reference you enter here for a material type can also be maintained under *Define Attributes of Material Types*. Thus, for example, a separate screen reference is assigned for manufacturer parts in the standard SAP system to thereby call a special screen sequence 12.

Screen Reference Industry Sector

Finally, you can also form groups of several industries in the same way. Here, too, the short description of the screen reference is freely definable.

Assignment of Screen Sequences

You assign screen sequences via the screen references. You can assign a standard screen sequence or one of your own to any combination of screen reference *SAP Transaction*, screen reference *User*, screen reference *Material Type*, and screen reference *Industry Sector*. You can reduce the number of table entries to a minimum by using a wildcard function featuring the asterisk (*).

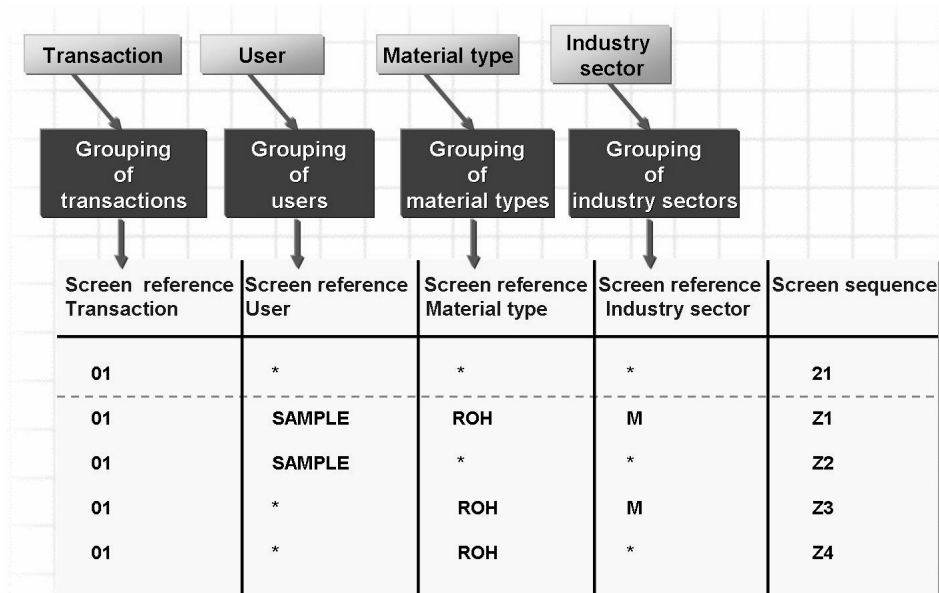


Figure 138: Screen Sequence: Influencing Factors

After grouping the transactions, users, material types and industry sectors, you must specify the prerequisites and conditions under which each screen sequence is to be used.

You can assign a screen sequence to a combination of the screen references of transactions, users, material types, or industry sectors. This screen sequence is then called automatically when the users in question choose the relevant transaction, material type, and industry.

The first table entry in the figure (if it is the only entry) means that the standard screen sequence 21 is to be used for all transactions and all users irrespective of the material type and industry sector (standard in an SAP industry system).

If further table entries exist, the first entry has the lowest priority. The asterisk (*) stands for any screen reference and is used to determine the screen sequence if no precise specifications have been made.

The assignment of the screen sequences Z1 to Z4 in the figure reflects the different priorities of the table entries. In the example shown in the upper figure, screen sequence Z1 is called under the following conditions:

1. The user has been assigned to the user screen reference MUSTER **and**
2. The material type that he or she uses has been assigned to the material type screen reference ROH **and**
3. The industry that he or she uses has been assigned to the industry sector screen reference M.

If all four conditions are not fulfilled simultaneously, the screen sequences are called using the wildcard function (*):

- If conditions 2 or 3 are not fulfilled but condition 1 is fulfilled, the screen sequence Z2 is used.
- If condition 1 is not fulfilled, but conditions 2 and 3 are fulfilled, the screen sequence Z3 is used.
- If only condition 2 is fulfilled, the screen sequence Z4 is used.
- If none of the three conditions is fulfilled, the screen sequence Z1 is called.



Demonstration: Configuration of Material Master

Purpose

This demonstration shows how to make Customizing settings and thus introduces the options customers have for adjusting the SAP system to their specific company requirements.

System Data

System:	Training system
Client:	Training client
User ID:	Own user ID
Password:	User password
Set up instructions:	No additional

1. Taking the *Purchasing* view of the *Change Material* transaction (MM02) for material M-01 as an example, show that the logical screen comprises a number of subscreens.

Explain your goal: During maintenance of the purchasing data for materials belonging to your material type GR00, for example, the environment data (subscreen 2010 from the standard view *Basic Data 2*) and the shelf life data (subscreen 2702 from the standard view *General Plant Data/Storage I*) is to be offered for maintenance.

2. Define a new screen sequence X0 by copying screen sequence Z1.

On the *Purchasing* data screen, there are two placeholders (subscreen 0001). Replace these with the above-mentioned subscreens. Change the title of this data screen to *Purchasing/Environment*, for example.

Show the individual specification of the sequence of main and additional screens (by moving the *Consumption* tab page “to the top”, for example, making it the first additional screen).

3. To prevent the new screen sequence X0 from continually being called during the rest of the course, specify that this screen sequence is only valid for your user name, your material type (create own screen sequence), and the industry sector C (create own screen reference).

4. Create a new material master record with the above-mentioned conditions (user name, material type, and industry sector C) (*Purchasing* view).

The environment data (subscreen 2010) should now be visible, whereas the shelf life data (subscreen 2702) should not be. Show why the second subscreen does not appear:

In the standard system, each field in subscreen 2702 has only the maintenance status L. Choose: *IMG* → *Logistics - General* → *Material Master* → *Field Selection* → *Assign Fields to Field Selection Groups*.

5. Assign the additional maintenance status L to the *Purchasing/Environment* data screen (that is, EL).

With the conditions *your user name*, *material type GR00*, and *industry sector C*, create a new material master record (only the *Basic Data 1* and *Purchasing/Environment* views). Both new subscreens should be visible. Save your entries.

Change the new material master record. Show via *View Selection* that not only the basic and purchasing data, but also **the storage data** has been created.



Exercise 17: Configuration of Material Master

Exercise Duration: 45 Minutes

Exercise Objectives

After completing this exercise, you will be able to:

- Check the layout of the data screens for screen sequences
- Specify the order of main and additional screens
- Assign screen sequences to a user for all or for specific material types and industry sectors

Business Example

An analysis and comparison of your master data and processes revealed that it would be advantageous to be able to display or maintain the *Environmentally Relevant* and *DG Indicator Profile* indicators together with the purchasing data for materials of your new material type.

Since the individual user departments have different tasks to complete and maintain different data in the material master record, it is important that these special changes only become effective for your own material type GR## and for selected users (your exercise group SCM550-##).

System Data

System:	Training system
Client:	Training client
User ID:	SCM550-##
Password:	User password
Set up instructions:	IDES

Task 1:

Preparatory work

1. Take a look at the *DG Indicator Profile* and *Environmentally Relevant* fields in the material master record.

Continued on next page

In the standard system, you will find these fields in the *Basic Data 2* view. Find out the number of the subscreen that contains these fields. How do you proceed?

2. *Optional*

What would you have to do if you wanted not all but only individual fields of this subscreen to appear in the *Purchasing* view?

3. *Optional*

What would you have to do if you wanted all the fields of this subscreen to be displayed only in the *Purchasing* view (that is, they should appear without being ready for input)?

4. How can you ensure that the subscreen with the *Environmentally Relevant* and *DG Indicator Profile* fields in the *Purchasing* view is displayed or can be maintained only in the case of your material type GR## and only by certain users (your exercise group SCM550-##)?

Describe the Customizing settings necessary to achieve this.

Continued on next page

Task 2:

Define a new screen sequence.

1. Carry out all necessary activities on the basis of your description. Name your new screen sequences as follows:

Groups	00 – 09:	X#	(X0, X1, X2, ..., X9)	“X” instead of	“0”
Groups	10 – 19:	Y#	(Y0, Y1, Y2, ..., Y9)	“Y” instead of	“1”
Groups	20 – 29:	Z#	(Z0, Z1, Z2, ... , Z9)	“Z” instead of	“2”
Group	30:		ZA		

Create a new screen sequence by copying the existing screen sequence 21 (tab pages), for example. Name the screen sequence as indicated above. Enter a description for your new screen sequence.

2. Change the data screen for purchasing so that it contains the fields of subscreen 2010 (Environment).
3. Define a screen sequence for your user name. Use your two-character group number (##) as the key.
4. Define a screen sequence for your material type. Use M## as the key.
5. Assign your new screen sequence to the screen references for your user and your material type. Create a new entry in accordance with the following table:

Groups	0 – 9:	01	##	M##	M	X#
Groups	10 – 19:	01	##	M##	M	Y#
Groups	20 – 29:	01	##	M##	M	Z#
Group	30:	01	##	M##	M	ZA

Task 3:

Testing the new screen sequence

1. Check the configuration of your screen sequence.

Test your settings for the new material type. To do this, change the master record for the material you created in the lesson “Settings for Material Types, task 2, subtask 3” for your material type GR##.

Check whether you can maintain the *DG Indicator Profile* and *Environmentally Relevant* fields in the *Purchasing* view.

Continued on next page

2. Is the configuration of the material master record plant-dependent?

3. Test your settings for the material type ROH.

Check whether the *DG Indicator Profile* and *Environmentally Relevant* fields can be maintained in the *Purchasing* view for material R-T1## in plant 1000.

Solution 17: Configuration of Material Master

Task 1:

Preparatory work

1. Take a look at the *DG Indicator Profile* and *Environmentally Relevant* fields in the material master record.

In the standard system, you will find these fields in the *Basic Data 2* view. Find out the number of the subscreen that contains these fields. How do you proceed?

Answer:

On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Material Master* → *Material* → *Display* → *Display Current*

Call the *Basic Data 2* view for any material (for example, M-01).

Position the cursor on the *Environmentally Relevant* field. Call the F1 help, and display the *Technical Information*.

The Environment subscreen has the number 2010.

Instead of using the F1 help, you could determine the screen number via *System* → *Status*. Here it is called *dynpro number* instead of screen number. You must take the number of the subscreen for the program SAPLMGD1.

2. *Optional*

What would you have to do if you wanted not all but only individual fields of this subscreen to appear in the *Purchasing* view?

Answer:

If not all but only individual fields of this subscreen are to appear in the *Purchasing* view, the module (with subprogram SAPLMGD1) must be copied and then a new subscreen defined. The new subscreen can be adjusted (fields deleted and so on) using Screen Painter.

Continued on next page

3. *Optional*

What would you have to do if you wanted all the fields of this subscreen to be displayed only in the *Purchasing* view (that is, they should appear without being ready for input)?

Answer:

If all the fields of this subscreen are always only to be displayed in the *Purchasing* view, you must use a new subscreen and extend the *Purchasing* view by adding this subscreen. You must set the attribute *Output Only* for all fields of the new subscreen using the Screen Painter facility. (You must not use the field selection here, since otherwise you would not be able to maintain the data in the Basic Data 2 view either.)

4. How can you ensure that the subscreen with the *Environmentally Relevant* and *DG Indicator Profile* fields in the *Purchasing* view is displayed or can be maintained only in the case of your material type GR## and only by certain users (your exercise group SCM550-##)?

Describe the Customizing settings necessary to achieve this.

Answer:

1. Copy an existing screen sequence
2. Adjust this new screen sequence
3. You must assign a separate screen reference (for example, M##) to the new material type in order to be able to distinguish it from the other material types.
4. You must assign a separate screen reference to your user group SCM550-## to distinguish it from the other user groups.
5. In this case, for the assignment of the new screen sequence, you must use your new screen reference for users and the new screen reference M## for material types.

Task 2:

Define a new screen sequence.

1. Carry out all necessary activities on the basis of your description. Name your new screen sequences as follows:

Groups	00 – 09: X#	(X0, X1, X2, ..., X9)	“X” instead of	“0”
Groups	10 – 19: Y#	(Y0, Y1, Y2, ..., Y9)	“Y” instead of	“1”
Groups	20 – 29: Z#	(Z0, Z1, Z2, ... , Z9)	“Z” instead of	“2”
Group	30:	ZA		

Continued on next page

Create a new screen sequence by copying the existing screen sequence 21 (tab pages), for example. Name the screen sequence as indicated above. Enter a description for your new screen sequence.

- a) Choose: **IMG → Logistics - General → Material Master → Configuring the Material Master → Define Structure of Data Screens for Each Screen Sequence**

Select screen sequence 21.

Choose *Copy as*.

Replace 21 by the key specified in the exercise (either X#, Y# or Z#) and enter a description (such as screen sequence ##).

Choose *Continue* and save your entries.

2. Change the data screen for purchasing so that it contains the fields of subscreen 2010 (Environment).

- a) Choose: **IMG → Logistics - General → Material Master → Configuring the Material Master → Define Structure of Data Screens for Each Screen Sequence**

Select your screen sequence and choose *Data Screens* in the dialog structure (double-click).

Select *screen 14* (purchasing).

Choose *Subscreens* in the dialog structure.

On the detail screen, you see six subscreens, of which the last two count as **empty**, however (subscreen 0001 represents an empty subscreen).

Replace subscreen 5 with the subscreen containing the environment-relevant fields (subscreen 2010).

Save your entries.

3. Define a screen sequence for your user name. Use your two-character group number (##) as the key.

- a) Choose: **IMG → Logistics - General → Material Master → Configuring the Material Master → Assign Screen Sequences to User/Material Type/Transaction/Industry Sector**

Choose *User Screen Reference* in the dialog structure.

Choose *New Entries*.

Create a new entry for your user name SCM550-## and assign ## as screen reference.

Save your entries.

Continued on next page

4. Define a screen sequence for your material type. Use **M##** as the key.
- a) Choose: **IMG** → **Logistics - General** → **Material Master** → **Configuring the Material Master** → **Assign Screen Sequences to User/Material Type/Transaction/Industry Sector**

Choose *Material Type Screen Reference* in the dialog structure.

Assign **M##** as screen reference group for your material type **GR##**.

Save your entries.



Hint: The new screen reference is displayed to you after saving also under *Define Attributes of Material Types*.

5. Assign your new screen sequence to the screen references for your user and your material type. Create a new entry in accordance with the following table:

Groups	0 – 9:	01	##	M##	M	X#
Groups	10 – 19:	01	##	M##	M	Y#
Groups	20 – 29:	01	##	M##	M	Z#
Group	30:	01	##	M##	M	ZA

- a) Choose: **IMG** → **Logistics - General** → **Material Master** → **Configuring the Material Master** → **Assign Screen Sequences to User/Material Type/Transaction/Industry Sector**

Choose *Screen Sequence Control* in the dialog structure.

Choose *New Entries*.

Create a new entry: Use ...

- **01** for *Screen Reference: Transaction*,
- **##** for *Screen Reference: User*,
- **M##** for *Screen Reference: Material Type*,
- **M** for *Screen Reference: Industry Sector*,

Enter your screen sequence (X#, Y#, Z#, or ZA) according to the task.

Save your entries.

Task 3:

Testing the new screen sequence

1. Check the configuration of your screen sequence.

Continued on next page

Test your settings for the new material type. To do this, change the master record for the material you created in the lesson “Settings for Material Types, task 2, subtask 3” for your material type GR##.

Check whether you can maintain the *DG Indicator Profile* and *Environmentally Relevant* fields in the *Purchasing* view.

- a) On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Material Master* → *Material* → *Change* → *Immediately*.

Enter your material number, select the *Purchasing* view, and choose plant 1000 or TR##.

The *Purchasing* view now also includes the *Environment* subscreen.

2. Is the configuration of the material master record plant-dependent?

Answer: No. Neither the settings for the screen sequence itself nor the assignment of a screen sequence are plant-dependent.

3. Test your settings for the material type ROH.

Check whether the *DG Indicator Profile* and *Environmentally Relevant* fields can be maintained in the *Purchasing* view for material R-T1## in plant 1000.

- a) On the *SAP Easy Access* screen, choose:

Logistics → *Materials Management* → *Material Master Record* → *Material* → *Change* → *Immediately*.

Enter your material number R-T1##, select the *Purchasing* view, and choose plant 1000.

The *Purchasing* view does not include the *Environment* subscreen.

Material R-T1## is of the material type ROH. The material type ROH is not assigned to your new screen reference for material types (M##). Therefore, your new screen sequence is not called during the display and maintenance of raw materials.



Lesson Summary

You should now be able to:

- Make simple changes to the material master configuration



Unit Summary

You should now be able to:

- Describe the inventory sampling procedure
- List the Customizing settings for the inventory sampling procedure
- Carry out inventory sampling in the system
- Describe the cycle counting procedure
- Give possibilities for setting the cycle counting indicator in the material master record
- Explain the creation of inventory documents with a batch input session
- List the most important settings for the old goods movement transactions
- Describe the advantages of using version management
- Use version management in purchasing
- Describe the settings that can or must be made for version management in Customizing for purchasing
- Make simple changes to the material master configuration



Test Your Knowledge

1. The inventory sampling is not a _____.
Not all stock management units are entered. In the ideal value distribution, _____% of the materials form _____% of the stock value. The stock population of the stock to be considered consists of the _____ and the _____. The total stock is calculated by _____.

Fill in the blanks to complete the sentence.

2. With the cycle counting procedure, you can inventory _____ materials at regular _____ in the year.

Fill in the blanks to complete the sentence.

3. Which methods can you use to maintain the cycle counting indicator?

Choose the correct answer(s).

- A The cycle counting indicator can only be maintained manually in the material master record.
- B The cycle counting indicator can be maintained manually in the material master record.
- C The cycle counting indicator can only be maintained with report RMCBIN in the material master.
- D A fixed indicator can only be changed with report RMCBIN.
- E A fixed indicator cannot be changed with report RMCBIN.
- F A fixed cycle counting indicator can only be changed manually in the material master record.



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Answers

1. The inventory sampling is not a complete inventory. Not all stock management units are entered. In the ideal value distribution, 80% of the materials form 20% of the stock value. The stock population of the stock to be considered consists of the sampling area and the complete-count area. The total stock is calculated by extrapolation.

Answer: complete inventory, 80, 20, sampling area, complete-count area, extrapolation

2. With the cycle counting procedure, you can inventory multiple materials at regular intervals in the year.

Answer: multiple, intervals

For the number of inventories for each fiscal year, the system calculates the interval in workdays, which can lie between two inventories.

3. Which methods can you use to maintain the cycle counting indicator?

Answer: B, E, F

The cycle counting indicator can be changed using report RMCBIN and can be changed manually in the material master. A fixed indicator can only be changed manually.



Course Summary

You should now be able to:

- Describe and influence control of material types and account groups
- Define the field selection for material master records and vendor master records
- Set up automatic account determination
- Set up the split valuation facility
- Configure the logistics organizational levels
- Describe the special procurement processes subcontracting and vendor consignment
- Work with invoicing plans

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Feedback

SAP AG has made every effort in the preparation of this course to ensure the accuracy and completeness of the materials. If you have any corrections or suggestions for improvement, please record them in the appropriate place in the course evaluation.