TS450

Sourcing and Procurement in SAP S/4HANA - Academy Part I 2/2

PARTICIPANT HANDBOOK
INSTRUCTOR-LED TRAINING

Course Version: 26
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Typographic Conventions

American English is the standard used in this handbook.

The following typographic conventions are also used.

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

Contents

Course Overview

TARGET AUDIENCE

This course is intended for the following audiences:

- Application Consultant
- Project Manager
- End User

UNIT 1 Purchasing Master Data

UNIT OBJECTIVES

- Extend a material master record using transaction Extend Material Views
- Maintain purchasing data for business partners

Unit 1
Lesson 1

Extending a Material Master Record

LESSON OVERVIEW

This lesson reviews the most important aspects of material master record usage and maintenance in the SAP system.

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Extend a material master record using transaction Extend Material Views

Repetition - Basics of Material Master Data

The material master database (often referred to simply as the "material master") comprises all the individual material master records stored in the system and contains descriptions of all the materials that a company procures, produces and keeps in stock. It is the central source of information about the company's materials.

Integrating all material data into a single material database eliminates data redundancy and allows the data to be used not only by purchasing, but also by other business applications such as inventory management, materials requirements planning, or invoice verification, among others.

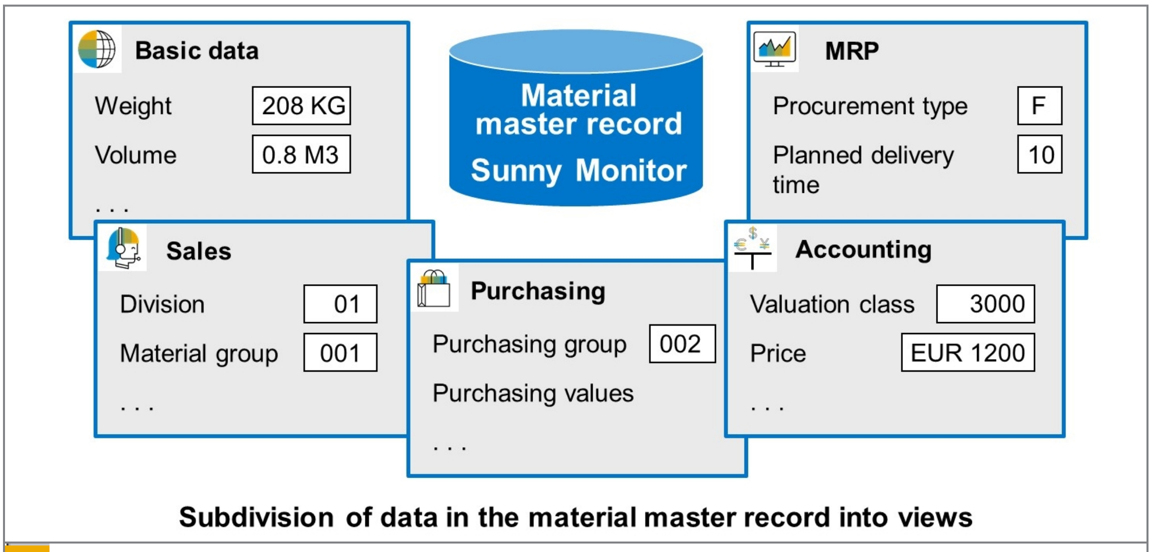

Figure 1: Material Master Record

The data stored in the material master record is sorted into individual views reflecting the various user departments. The data includes default data and control data for procurement, production, sales, warehousing, and so on.

Maintenance Status

A maintenance status is assigned to each user department. The maintenance status determines whether a material master record has been sufficiently maintained for a particular process. The user departments for which data can be maintained in a material master record depend on the material type selected for the material.

The **maintenance status for purchasing** is **E**. When you create a purchase order, the material must have maintenance status E (purchasing). If the material type of the material involves value-based inventory management, then the accounting data, maintenance status B, must also be available.

You can use the *Extend Material View(s)* functionality to determine whether a material is sufficiently maintained.

If you are logged on to the system via SAP Logon, you use the following menu paths on the *SAP Easy Access* screen to maintain material master records and extendable materials.

- Create material master record

  Logistics → *Materials Management* → *Material Master* → *Material* → *Create (General)* (`MM01`)

- Change material master record

  Logistics → *Materials Management* → *Material Master* → *Material* → *Change* (`MM02`)

- Display material master record

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

- Display or maintain extendable materials

  Logistics → *Materials Management* → *Material Master* → *Other* → *Extend Material View(s)* (`MM50`)

Corresponding SAP Fiori apps are available for the transactions, *Create Material*, *Change Material*, and *Display Material*. The user interface of these apps is equal to the interface of the back-end transactions MM01, MM02, and MM03.

Purchasing Data in the Material Master Record – Relevant Organizational Levels

In addition to being structured by views that correspond to user departments, material data is organized in hierarchical form.

Some material data is maintained at client level and is valid for all organizational units. Other data is maintained at plant or storage location level and can therefore be defined differently for each plant or storage location.

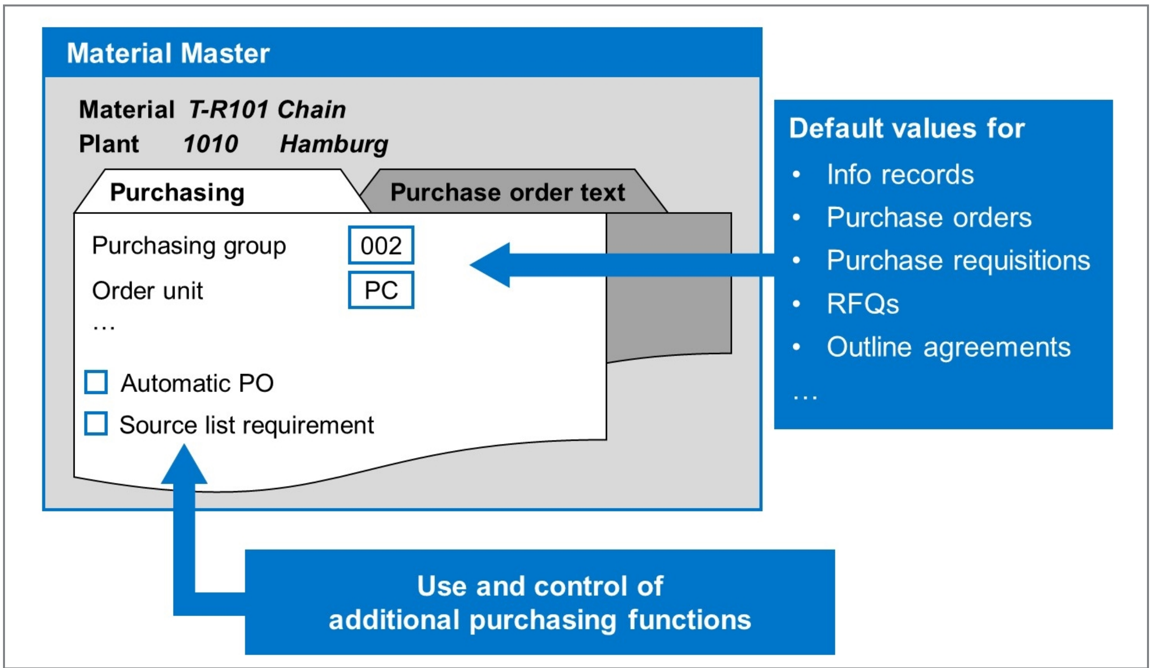

Figure 2: Purchasing Data in the Material Master Record

On the Purchasing view, you will find material master data related to the following organizational levels:

- Client

  Examples of material data that is valid client-wide are the material group, the short text, and the base unit of measure. This data is not only relevant for purchasing. However, purchasing-specific data, such as the purchase order text, the order unit, or the purchasing value key, is also maintained at client level.

- Plant

  Examples of data entered in the material master record at plant level are the purchasing group, the goods receipt processing time, and various control indicators, such as the indicators for the automatic purchase order or for the source list requirement.

Influence of the Material Type

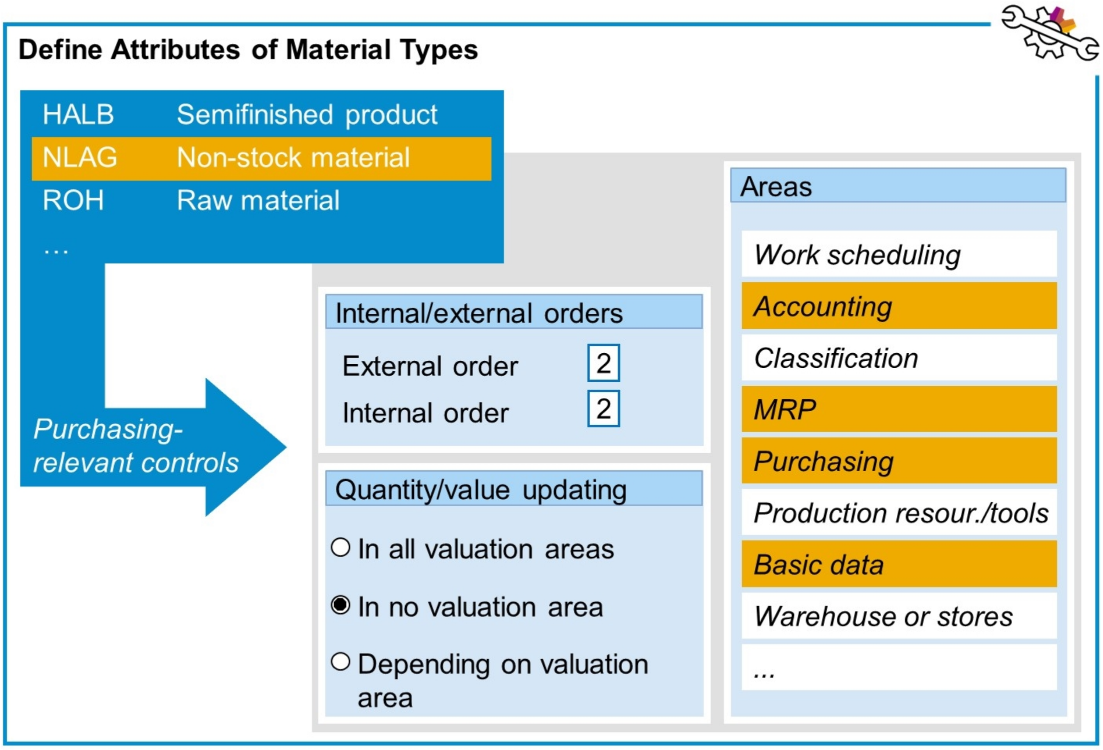

Figure 3: Material Type

When you create a material master record, you must assign a material type to the material.

Generally, the material type controls the following:

- The type of number assignment (internally by the system or externally by the user) and number ranges
- The data screens that are displayed and the sequence in which they appear
- The user departments for which data can be maintained
- The procurement type of the material (whether the material is produced in-house or procured externally, or whether both are possible)
- The updating of quantities and values in the relevant valuation areas
- The possible valuation classes for material types with value update

You can define attributes of material types in Customizing for *Logistics - General* under *Material Master* → *Basic Settings* → *Material Types* → *Define Attributes of Material Types*(OMS2).

Changing the material type assigned to a material master record is only possible if there are no stocks and no open documents for the corresponding material.

To change the material type for a material master record in the SAP Fiori Launchpad choose the *Change Material Type* app, or in the SAP GUI on the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Material Master* → *Material* → *Change Material Type* (MMAM).

Special Material Type NLAG (Non-stock materials)

This material type is suitable for spare parts or office materials that are procured regularly, but not stored.

In the standard system, the NLAG material type is set up in such a way that quantity update and value update are not allowed. Therefore, no postings to stock accounts are possible. The order quantity is posted as consumption quantity at the time of goods receipt.

You can create info records or contracts for NLAG materials to set up source determination for them. As material type NLAG has an accounting view, you can maintain a valuation price which is used in purchase requisitions. However, goods receipts and invoice receipts don'tupdate the valuation price.

Special Material Type UNBW (Non-valuated materials)

This material type is suitable for material for which you want to control the warehouse stocks but do not want to update any values on a stock account. For these materials, the costs are to be posted to a consumption account at the time of goods receipt.

For material type UNBW, the quantity update is active, but not the value update. The consumption quantities are updated at the time of goods issue and can be used for forecasting in the planning process.

It is not possible to create accounting data for the UNBW material type. Purchase order items for such material must have an account assignment. If you create a purchase requisition, the valuation price must be entered manually.

You can create info records or contracts for UNBW materials to use them in source determination.

Special Material Type SERV (Services)

The material type SERV provides an alternative way to define service master data in SAP S/4HANA. In the customizing details for the material types, you can find the field *Product Type Group*. For the material type, the product type group defines whether it is a material (blank or 1) or a service (2).

When you use material type SERV, some fields and departments that are irrelevant for services are hidden from the screen. This gives all transactions relevant for material master a leaner and simplified look. Therefore, material type SERV is delivered with reduced user departments and fields.

LESSON SUMMARY

You should now be able to:

- Extend a material master record using transaction Extend Material Views

Unit 1
Lesson 2

Creating Business Partners

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Maintain purchasing data for business partners

Repetition - Basics of Business Partner Concept

The master data of suppliers and customers is managed in SAP S/4HANA by using business partner master data. The business partner (BP) is a central master data object for all natural and legal persons with whom your company has a business relationship. From a technical point of view, the business partner forms a bracket over suppliers and customers.

- At the business partner level, basic data (number, name, address, bank data, tax number, etc...) is maintained.
- Depending on the assigned business partner roles, the business partner can be used as a supplier and/or as a customer, with corresponding customer and/or supplier master records being created in the background.

Business partner (BP) master data can be maintained with the transaction BP, or by using a corresponding app from the SAP Fiori launchpad.

Maintain a Business Partner in the SAP System

When a business partner is created, the business partner category must be selected. The business partner category is the term used to classify a business partner as one of the following:

- A natural person (for example, a private individual or an employee)
- A group (for example, a community of heirs)
- An organization (a legal entity or part of a legal entity, such as a company or a department of a company)

The business partner category determines which fields are available for data entry. Assignment of the business partner category is static and cannot be changed once the business partner has been created.

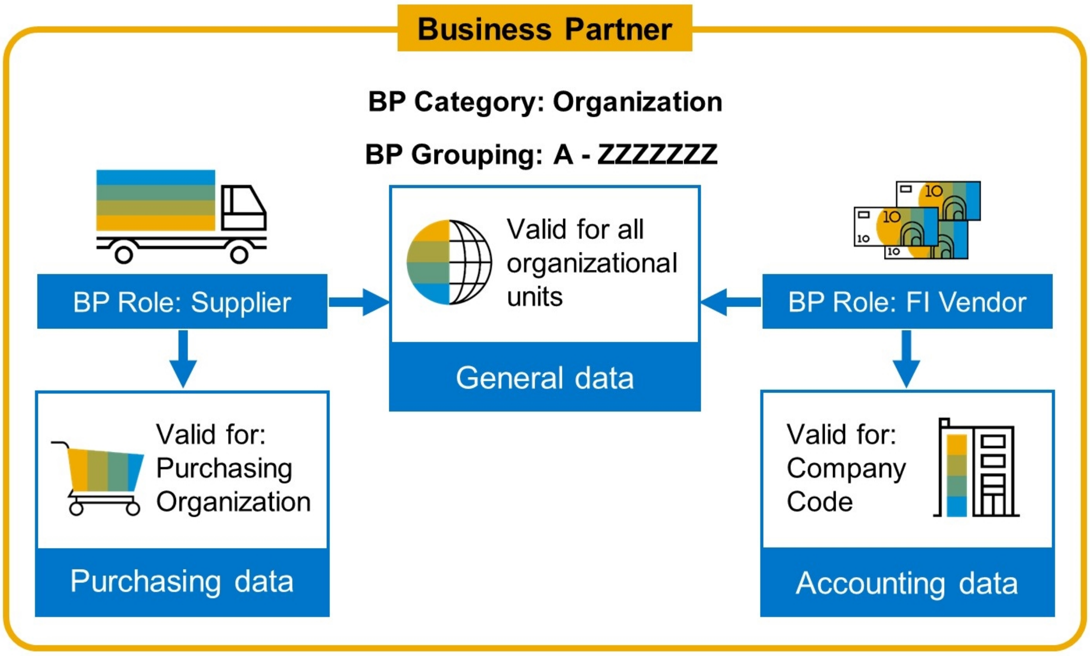

Figure 4: Maintain a Business Partner

The link between a business partner and other components is achieved by a role concept. A business partner role corresponds to a business context in which a business partner can appear. A business partner can have one or more roles; roles can be removed or added for a business partner.

The business partner data that is relevant for suppliers (business partner roles *Supplier* and *FI Vendor*) is subdivided into the following categories:

- General data

  General data is valid at client level. General data includes data such as the supplier's address, control data, bank details, and relationships.

- Accounting data

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

- Purchasing data

  Purchasing data is maintained for each purchasing organization. You can also maintain different data for specific plants or for supplier subranges. Purchasing data includes data such as the purchase order currency, International Commercial Terms (Incoterms), partner functions, and various controls pertaining to the supplier.

Purchasing Data in the Supplier Master Record

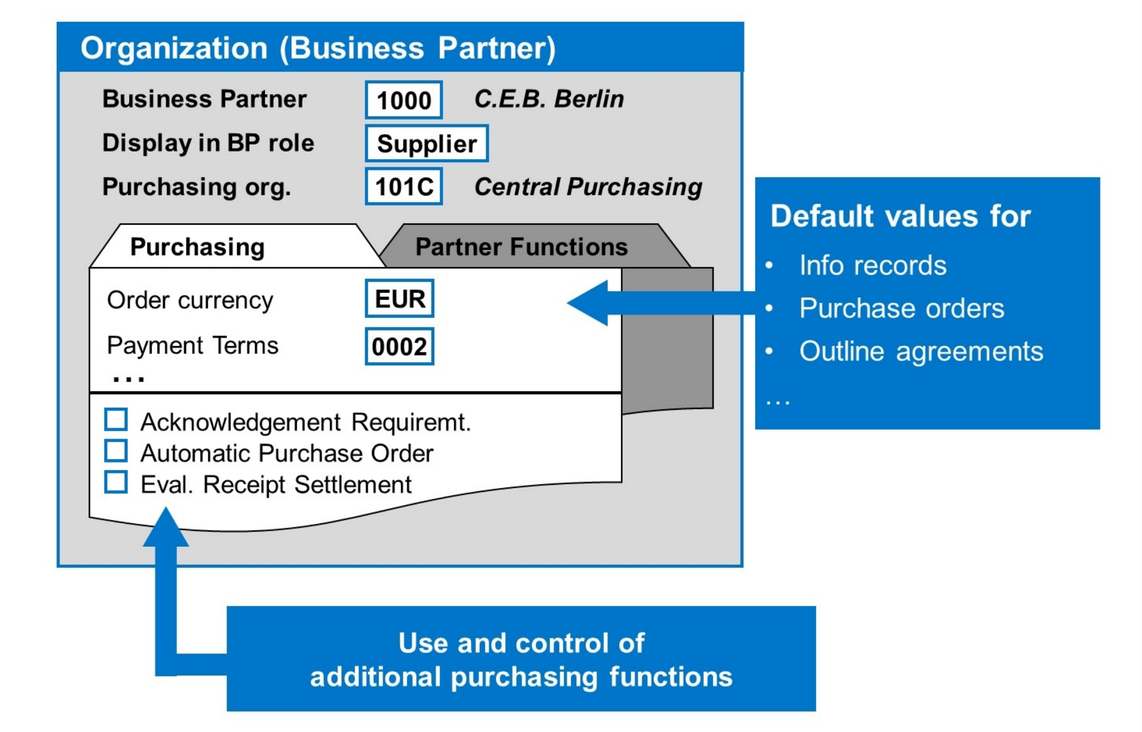

Figure 5: Purchasing Data in Supplier Master

In the purchasing data of a business partner, you maintain default values that are used in info records and/or purchasing documents. Examples of default values are: Order currency, applicable terms of payment or planned delivery time.

The business partner also contains control parameters for purchasing processing. These indicators control which purchasing functions are possible for a supplier. Some of the indicators are listed below:

- *GR-Based Invoice Verif.* or *Eval. Receipt Settlement*
- *Acknowledgment Requiremt.*
- *Automatic purchase order*

Different Data in the Supplier Master Record

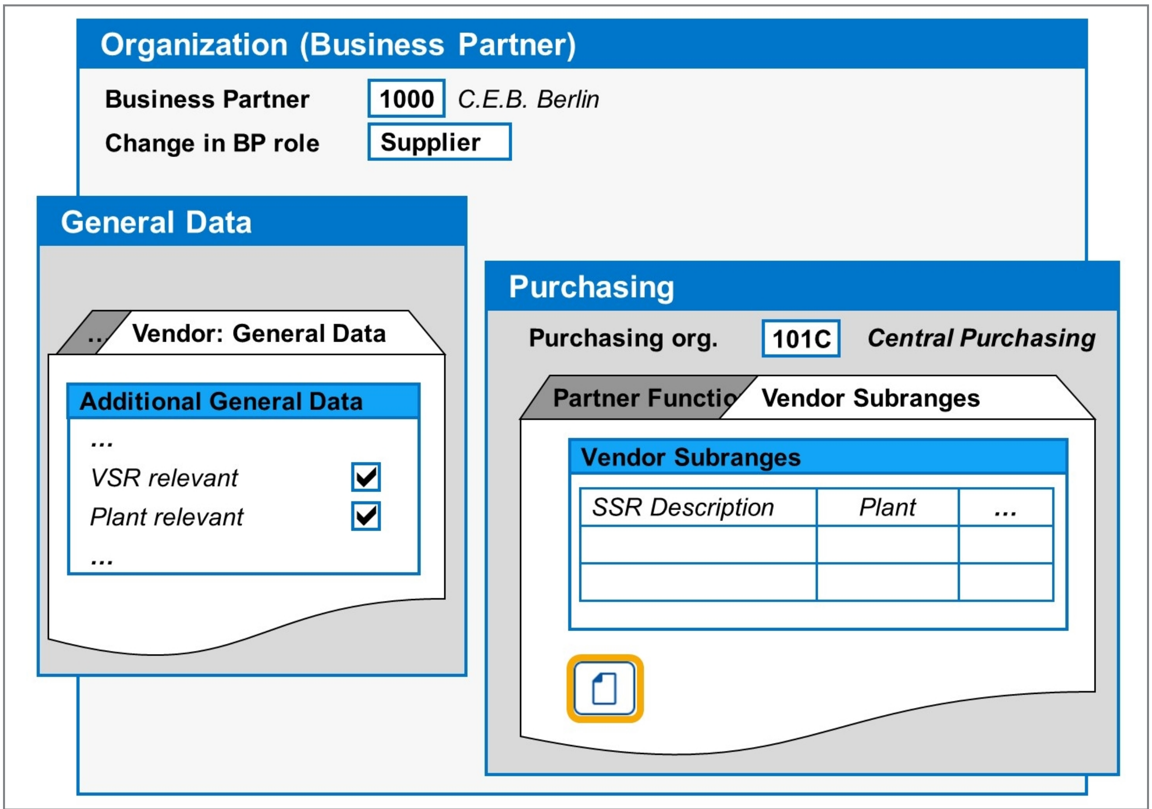

Figure 6: Different Data in Supplier Master

Purchasing data is always maintained at the purchasing organization level. However, you can also enter different data at the following levels:

- Purchasing organization/plant

> Note:
> Some data can even be maintained exclusively at purchasing organization/plant level. One example is the default value for the release creation profile used in scheduling agreement processing with release documentation.

- Purchasing organization/supplier subrange
- Purchasing organization/plant/supplier subrange

Supplier subranges subdivide a supplier's total product range according to a variety of criteria. You can freely define subranges, for example, CAR or TRUCK. However, they have a maximum length of six characters. You can assign a subrange in an info record or in a purchasing document item. In the general supplier data you have to allow additional data for plants/subranges before you can create them.

Apps and Transactions

On the SAP Fiori launchpad, you can use the following apps for business partners/suppliers:

- Maintain Business Partner

This app or the BP transaction is the central entry point for creating, editing and displaying master data for all business partners.

- Manage Business Partner Master Data

  With this application you can create, change, search, display, and copy business partner master data.

- Manage Supplier Master Data

  With this application you can create, change, search, display and copy supplier master data.

- Display Supplier List

  With this app you can view and download a list of suppliers according to different search filters.

- Mass maintenance, vendor master

In the SAP GUI you can use the following transactions for business partners/suppliers:

- Maintain Business Partner, transaction code `BP`

  This is the transaction that corresponds to the app Maintain Business Partner.

- Purchasing List, transaction code `MKVZ`

  With this report you can get an overview of all suppliers per purchasing organization.

- Mass Maintenance, transaction `MX99`

  This is the transaction that corresponds to the app Mass maintenance, vendor master.

- To delete a business partner, choose transaction `BUPA_DEL`.

LESSON SUMMARY

You should now be able to:

- Maintain purchasing data for business partners

Unit 1

Learning Assessment

1. Which field in the material master record is only necessary for materials of a material type with value updating?

   Choose the correct answer.

   - [ ] A *Base Unit of Measure*
   - [ ] B *Valuation Class*
   - [ ] C *Material Group*
   - [ ] D *Material Description*

2. Which views are maintained at client level in the material master record?

   Choose the correct answers.

   - [ ] A *MRP*
   - [ ] B *Purchase order text*
   - [ ] C *Purchasing*
   - [ ] D *Basic data*

3. For which of the following can you create different data for business partners?

   Choose the correct answers.

   - [ ] A Plant
   - [ ] B Material group
   - [ ] C Purchasing group
   - [ ] D Supplier subrange

4. While creating a purchase order, you want to take into account a supplier for whom no master record exists. Which statement is applicable?

   Choose the correct answer.

   - [ ] A A purchase order is not possible in the SAP system in this case.
   - [ ] B You can use a one-time supplier.
   - [ ] C You have to use a supplier where the account group allows external number assignment. This enables you to enter a number in the document that has not yet been created.
   - [ ] D You have to use a special document type.

Learning Assessment - Answers

1. Which field in the material master record is only necessary for materials of a material type with value updating?

   Choose the correct answer.

   - [ ] A *Base Unit of Measure*
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UNIT 2 Sources of Supply

UNIT OBJECTIVES

- Manage purchasing info records
- Create special types of info records
- Carry out price changes
- Manage contracts

- Get to know analytics for contracts
- Create contracts for material groups
- Manage scheduling agreements
- Create scheduling agreements without release documentation
- Create scheduling agreements with release documentation

Unit 2
Lesson 1

Working with Purchasing Info Records

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Manage purchasing info records

Overview of Sources of Supply

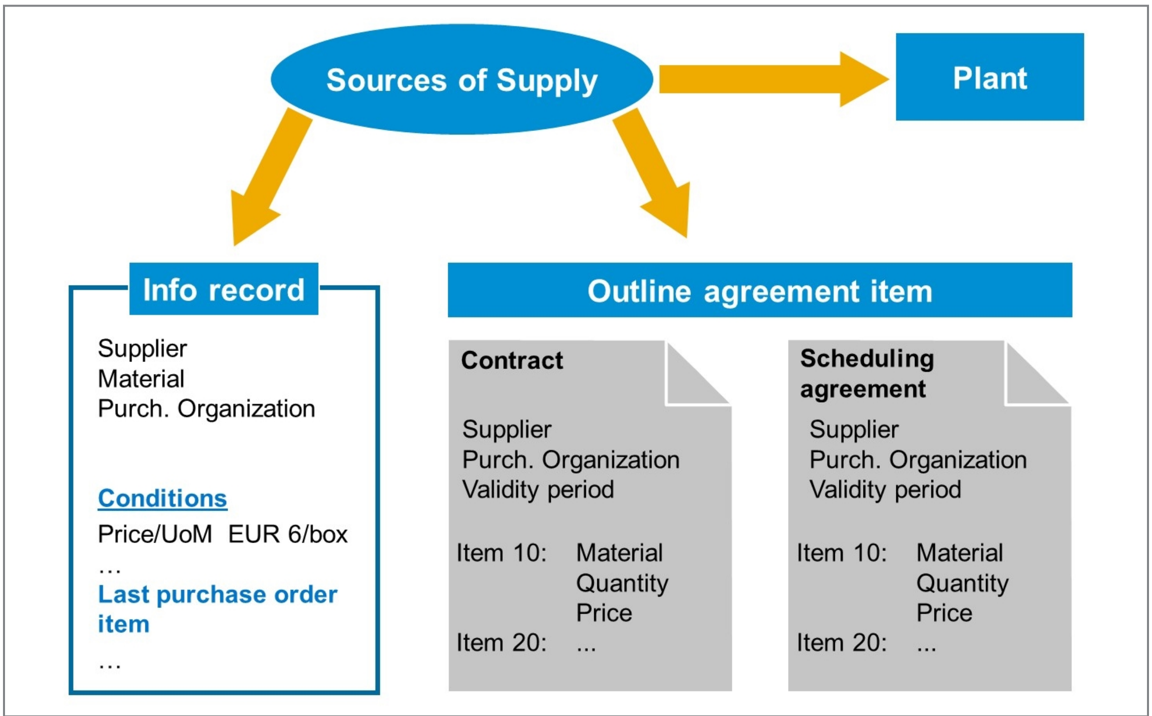


Figure 7: Sources of Supply Overview

The following are the various sources of supply:

- Purchasing info record:

  The purchasing information record (or info record for short), is part of the master data of the purchasing department. It contains data concerning the relationship between a material and a vendor or a material group and a supplier. The conditions in the info record are maintained at the purchasing organization level or at the purchase organization/plant level. The conditions and other data stored in the info record are used as default values in purchasing documents such as purchase orders.

- Outline agreement item:

An outline purchase agreement is a long-term agreement between a purchasing organization and a supplier covering the supply of materials or the provision of services subject to predetermined conditions. These apply for a predefined period and a predefined total purchase quantity or a certain total purchase value. The two types of outline agreement are contracts and scheduling agreements.

- Plant:

  An external procurement can be made by stock transfer from another plant. In this case, you do not need to maintain any special data in Purchasing, because normally an internal settlement will take place. However, it is also possible to create plants as suppliers. To do this, a plant assignment must be entered when maintaining the business partner (additional general data).

Purchasing Info Record Data

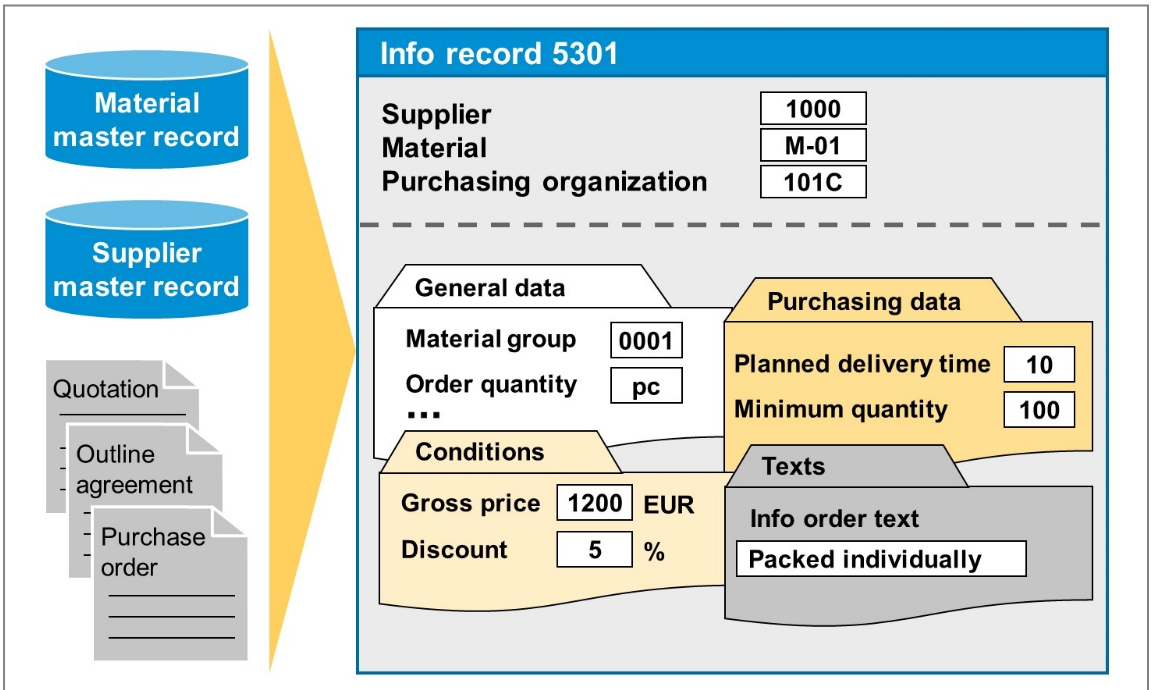


Figure 8: Purchasing Info Record

The purchasing info record contains supplier-specific data about a particular material.

When you create an info record, data from the material and business partner is applied as default values in the info record. If the info record is generated automatically using the *InfoUpdate* indicator, additional data from the respective document, such as conditions from the quotation or the document number of the purchase order, is transferred to the info record.

Info Records

Info records contain the following information:

- Prices and condition supplements for a particular purchasing organization (with or without plant reference)
- The supplier material number
- Supply options (available from/to)

- Origin data
- The last purchase order number
- The quotation number (if the info record was generated automatically from a quotation)
- Price determination date control
- Tolerance limits for over-deliveries or under-deliveries
- The planned delivery time for the material

An info record can apply to either all plants or just a single plant of a purchasing organization. You can create info records manually or generate them automatically when you create a quotation, a purchase order, or an outline agreement.

In the SAP Fiori launchpad, you can use the following apps to maintain purchasing info records:

- App to select, create, change and display purchasing info records: *Manage Purchasing Info Records*

  > Note:
  > With this app, you can only enter a gross price, but no other condition types, such as freight conditions or discounts.

- Apps that correspond to GUI transactions:

  Create Purchasing Info Record, *Change Purchasing Info Record*, *Display Purchasing Info Record*

- App *Monitor Purchasing Info Record Price History*

In the SAP GUI on the *SAP Easy Access* screen, you choose the following menu paths to maintain purchasing info records:

- *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Info Record* → *Create* (`ME11`)
- *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Info Record* → *Change* (`ME12`)
- *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Info Record* → *Display* (`ME13`)

In addition, list display functions for info records enable the buyer to search for the following:

- Info records by Supplier / Material / Material Group (transactions ME1L / ME1M / ME1W and the corresponding apps)
- Order price history / Quotation price history (transactions ME1P / ME1E and the corresponding apps)

Purchasing Info Record Structure

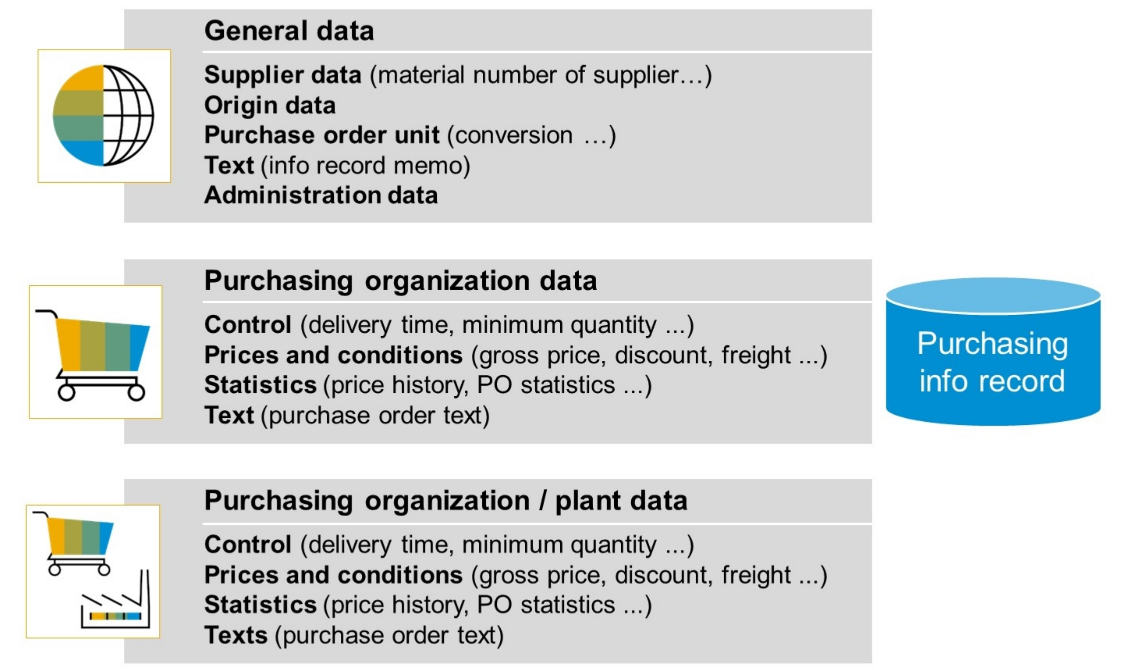


Figure 9: Purchasing Info Record Structure

In the purchasing info record, data is maintained at the following levels:

- General data is maintained at client level.
- Conditions, control data, and texts can be maintained at the level of purchasing organizations (not plant-specific or valid for all plants assigned to the purchasing organization) or at the level of purchasing organization and plant (plant-specific).

Hint:
To save conditions at plant level, this must be allowed in Customizing for *Materials Management* under *Purchasing* → *Conditions* → *Define Condition Control at Plant Level*.

Purchase Order Default Price

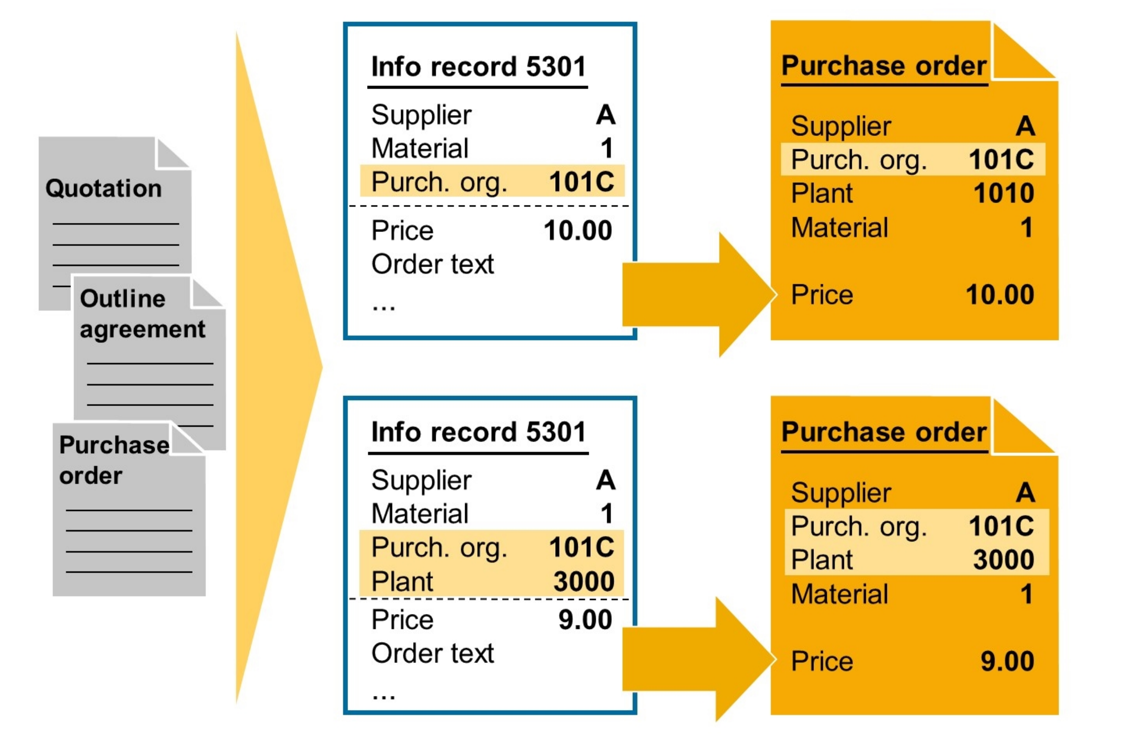


Figure 10: Default Price from Info Record

An info record can contain quotation and purchase order data in addition to material-specific and supplier-specific data. The data in the info record (for example, price or planned delivery time) is used as default data for purchase orders.

With default data for purchasing documents, the decisive factor is whether an info record contains data at purchasing organization level with or without plant data. If the data exists only on the purchasing organization level, this data is proposed for purchasing documents in every plant of this purchasing organization. However, if plant-specific data exists in the info record, this is proposed only when a purchase order is created for the corresponding plant.

The current valid conditions from the info record are always suggested. You can use the pricing date category to find other conditions, for example, those valid on the delivery date.

If you use the GR Date pricing date category, you can determine the price again when the goods are received. This means that you do not have to make changes to purchase orders if the price changes between the time of the order creation and receipt of the goods.

If there are no conditions maintained in an info record, the system can propose the price from the last purchase order. With the EVO user parameter (default values for purchaser), it is possible to suppress this proposal.

Info records can be created manually or automatically when a quotation, a purchase order, or an outline agreement is created. Purchase order data is automatically updated in the info record if the *InfoUpdate* indicator has been selected in the purchase order.

Hint:
Conditions are never created or updated on the basis of the *InfoUpdate* indicator in a purchase order.

Texts

For an info record with reference to a material master record, you can specify whether only the info record purchase order text is to be displayed and printed in purchasing documents. To do this, select the *No MText* indicator in the purchasing organization data of the info record.

Texts in info records can be maintained at purchasing organization level with or without plant.

> Note:
> The SAP Fiori app, *Manage Purchasing Info Records*, currently doesn't support text settings or text maintenance.

LESSON SUMMARY

You should now be able to:

- Manage purchasing info records

Unit 2
Lesson 2

Creating Special Info Records

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create special types of info records

Special Types of Purchasing Info Records

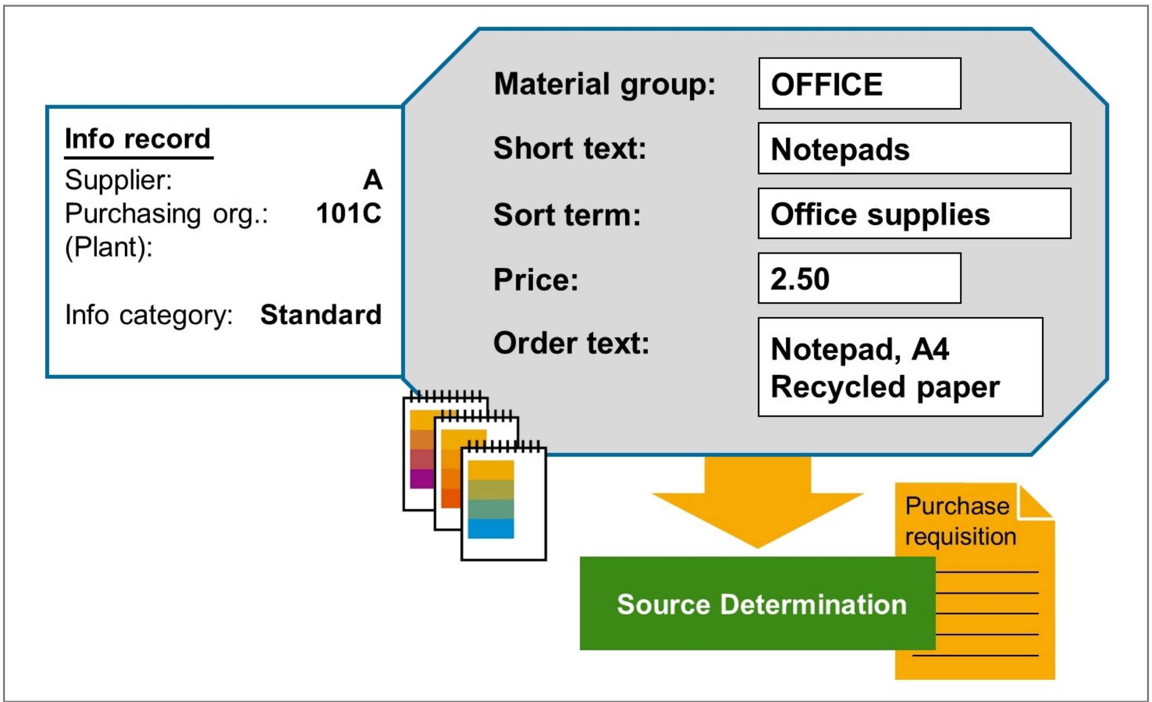


Figure 11: Info Record for Material Group

There are the following main kinds of purchasing info records:

- Info records with a material master record, such as stock material:

  You specify the relationship between a material with a material master record and a supplier.

  When you create a purchasing info record for stock material, you use the info category to specify the type of procurement for which the info record is relevant:

  - Standard
  - Subcontracting

- Pipeline

  There is no purchase order in pipeline processing. Here, the price from the info record is used to calculate the liability when withdrawing from the pipeline.

- Consignment

  Consignment orders do not contain any price. The condition from the consignment info record is used to calculate the liability when withdrawing the consignment stock.

> Note:
> The consignment and pipeline processes are discussed in detail in the S4510 (Inventory Management and Physical Inventory) course.

- Info records without a material master record, such as consumable material:

  You specify the relationship between a material group and a supplier.

  When you create a purchase requisition item manually without a material master record, a purchasing info record for the material group can be proposed automatically as a source of supply.

  When you create a purchase order, however, the system does not automatically propose info records for material groups as a source of supply. However, you can select and assign them: In the item overview of transaction `ME21N`, use the search help *Info Records per Material Group (Non-Stock Material)* on the *Info record* field. The purchase order unit and the material group are used as search criteria.

  When you create a purchasing info record without a material, you use the info category to specify the type of procurement for which the info record is relevant:

  - Standard
  - Subcontracting

> Note:
> Pipeline and consignment info records are only possible with material.

> Note:
> Info records without material can also be created for external processing. These can have the *Subcontracting* or *Standard* info category and are used in routings. When a production order is created with an external processing operation for which an info record has been entered, a purchase requisition with account assignment is automatically generated for external processing.

LESSON SUMMARY

You should now be able to:

- Create special types of info records

Unit 2
Lesson 3

Adjusting Prices Collectively in Info Records

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Carry out price changes

Price Changes

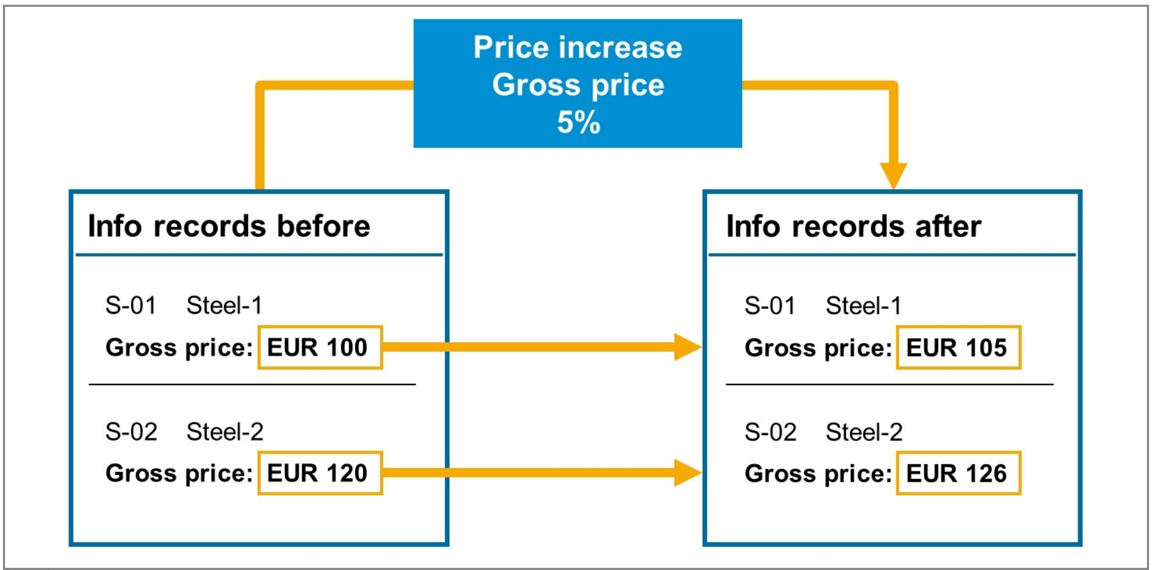


Figure 12: Price Change in Info Record

You can make collective changes to purchasing prices in info records.

The types of price changes are as follows:

- Gross price:

  The price change is calculated directly into the gross price.

- Condition type:

  The price change only applies to a particular condition type. If the price change only affects the freight costs, for example, you can restrict the change to the condition type for freight costs.

If pricing scales exist and the time period in which the changes are to become effective overlaps with the validity period of the pricing scales, only the price in the first scale line is applied, and the value is adopted in the other scale lines.

Taking the example in the figure, Price Change in Info Record, the following gross prices exist for a certain supplier for purchasing organization 101C:

- Material S-01 is EUR 100.
- Material S-02 is EUR 120.

The price changes function only allows you to change existing prices/conditions. You can't add new conditions to the existing ones.

Due to market pressures, you are obliged to accept an immediate price increase of 5%. The increase is to be valid until December 31, 2025.

To Perform Price Changes
Below you will learn how to perform price changes collectively. The data used matches the example described above.

The procedure describes how to use the *Price Changes: Info Records* app. Alternatively, price changes can be collectively performed in a similar way using the *Mass Changes to Purchasing Info Records* app.

1. On the SAP Fiori launchpad, start the *Price Changes: Info Records* app.

   OR

   In the SAP GUI on the *SAP Easy Access*, choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Conditions* → *Vendor Price Changes* → *Involving Info Records* (`MEKP`).

2. Enter purchasing organization **`101C`** and the supplier number.

3. Enter material **`S-01`** and **`S-02`**.

4. Enter **`5`** as the percentage and leave the *Gross Price* checkbox selected.

5. In the *Sign* field, enter **+** to define that the value is to be raised.

6. In the *Conditions valid* screen area, enter the validity period < current date > to December 31, 2025.

7. Note that in the standard list scope, prices are initially only simulated. To perform the changes, you have to deselect the *Test Run* checkbox.

8. Choose *Execute*.

   Result
   The old and new prices are displayed with the validity period.

9. Save your changes.

Special Evaluations of Prices in Info Records

The following table shows useful evaluations for prices and conditions in purchasing info records that are available in the SAP Fiori Launchpad and in the back-end system:

Evaluations	Transaction Code	(Corresponding) App
Monitor Purchasing Info Record Price History		Monitor Purchasing Info Record Price History
Order Price History	`ME1P`	Display Purchase Order Price History
Quotation Price History	`ME1E`	Maintain Quotation Price History

Evaluations	Transaction Code	(Corresponding) App
Prices by Info Record	`MEKC`	Display Price Conditions by Purchasing Info Record

LESSON SUMMARY

You should now be able to:

- Carry out price changes

Unit 2
Lesson 4

Working with Contracts

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Manage contracts
- Get to know analytics for contracts

Overview of Outline Agreements

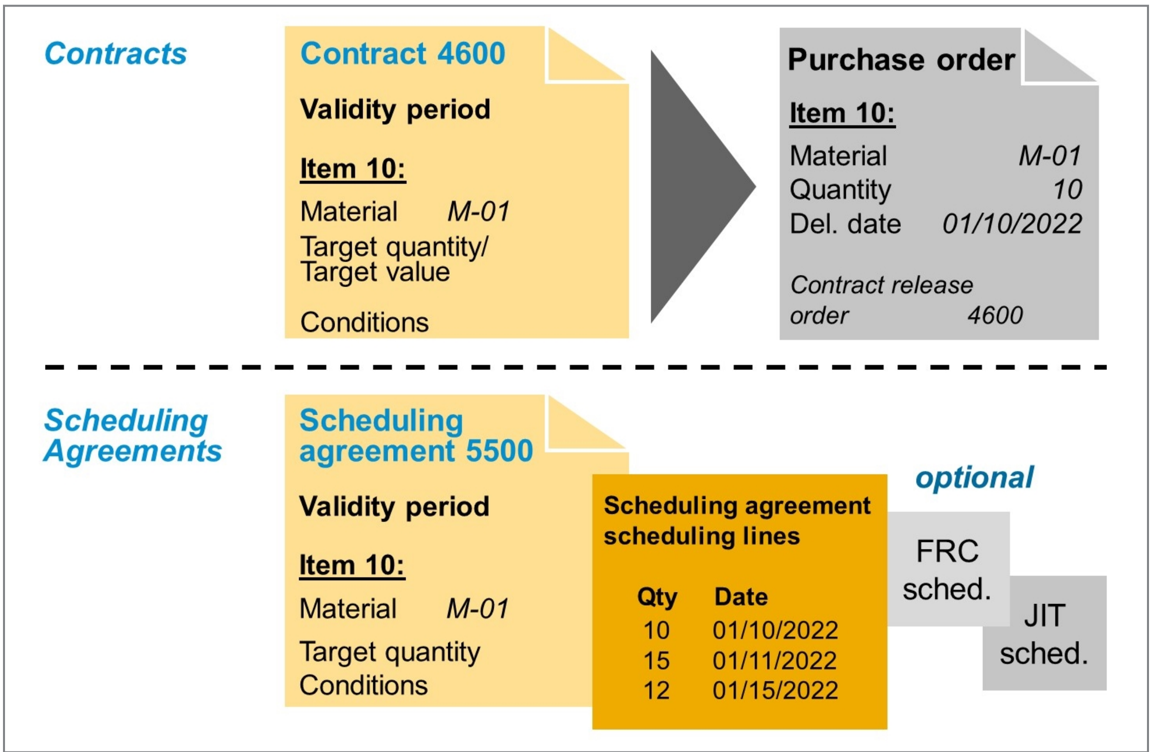


Figure 13: Outline Agreements Overview

An outline purchase agreement is a long-term agreement with a supplier covering the supply of materials or the provision of services, subject to predetermined conditions. These apply for a predefined period and a predefined total purchase quantity or certain total purchase value.

For long-term outline agreements, you can also store several condition records for each item if, for example, the outline agreement is to last five years and prices within this validity period are to decrease annually by 3%.

> Hint:
> SAP uses the terms Target Quantity and Target Value. The legally binding nature of these specifications must be agreed separately with the supplier.

An outline agreement does not contain data on specific delivery dates or quantities to be delivered.

Depending on the type of outline agreement, this data is transmitted to the supplier in one of the following ways:

- Contract: contract release order
- Scheduling agreement: delivery schedule

The following are the key differences in the use of a contract and a scheduling agreement:

- The volume of documents:

  In the case of a contract, as a rule, you create a new purchase order in the system each time you release goods or services against the contract. With a scheduling agreement, however, there is only one more document in addition to the contract document. This document is the scheduling agreement delivery schedule line, which is extended continuously.

- Use in automatic materials planning:

  Requirements planning can be set up in a way that the contract item is automatically assigned to a requisition item as the source of supply. However, this requisition must subsequently be converted into a purchase order (= contract release order). In the case of a scheduling agreement, you can directly generate scheduling agreement delivery schedules from the planning run, so that no further processing in purchasing is required.

Creating and Maintaining Contracts and Scheduling Agreements

In the SAP Fiori launchpad, you can use the following apps to maintain purchase outline agreements:

- App to create, manage, view or renew purchase contracts: *Manage Purchase Contracts*
- App to create, manage, or view scheduling agreement: *Manage Purchase Scheduling Agreements*
- Apps for purchase contracts that correspond to GUI transactions: *Create Purchase Contract*, *Change Purchase Contract*, *Display Purchase Contract*
- Apps for purchase contracts that correspond to GUI transactions: *Create Scheduling Agreement*, *Change Scheduling Agreement*, *Display Scheduling Agreement*

In the SAP GUI on the *SAP Easy Access* screen, you choose the following menu paths to maintain contracts or scheduling agreements:

- *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Contract* → *Create* (`ME31K`).
- *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Contract* → *Change* (`ME32K`).

- *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Contract* → *Display* (`ME33K`).
- *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Scheduling Agreement* → *Create* (`ME31L`).
- *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Scheduling Agreement* → *Change* (`ME32L`).
- *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Scheduling Agreement* → *Display* (`ME33L`).

Introduction to Contracts

Contracts can be created with or without reference to the following:

- A purchase requisition
- An outline agreement requisition
- A request for quotation (RFQ)
- Another contract

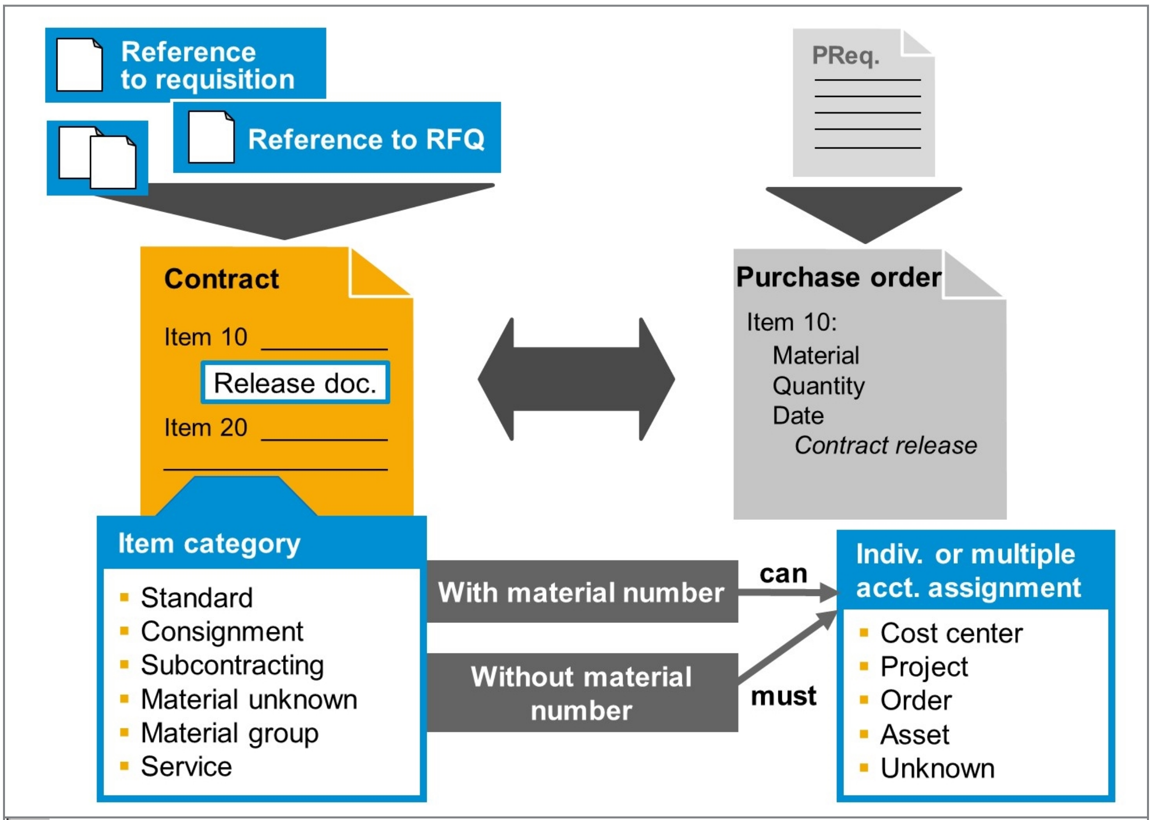


Figure 14: Working with Contracts

Various item categories can be used. The item category influences the document field control.

Depending on the type of item, data must be created as follows:

- If the contract item is a stock material, purchasing and accounting data must have been created in the relevant material master record.

- If the contract item is a consumable material, the account assignment data may already be stored in the contract. Alternatively, you can use the account assignment category *U* (*Unknown*), which indicates that the account assignment data must not be specified before creating the contract release order.

Contract Release Documentation

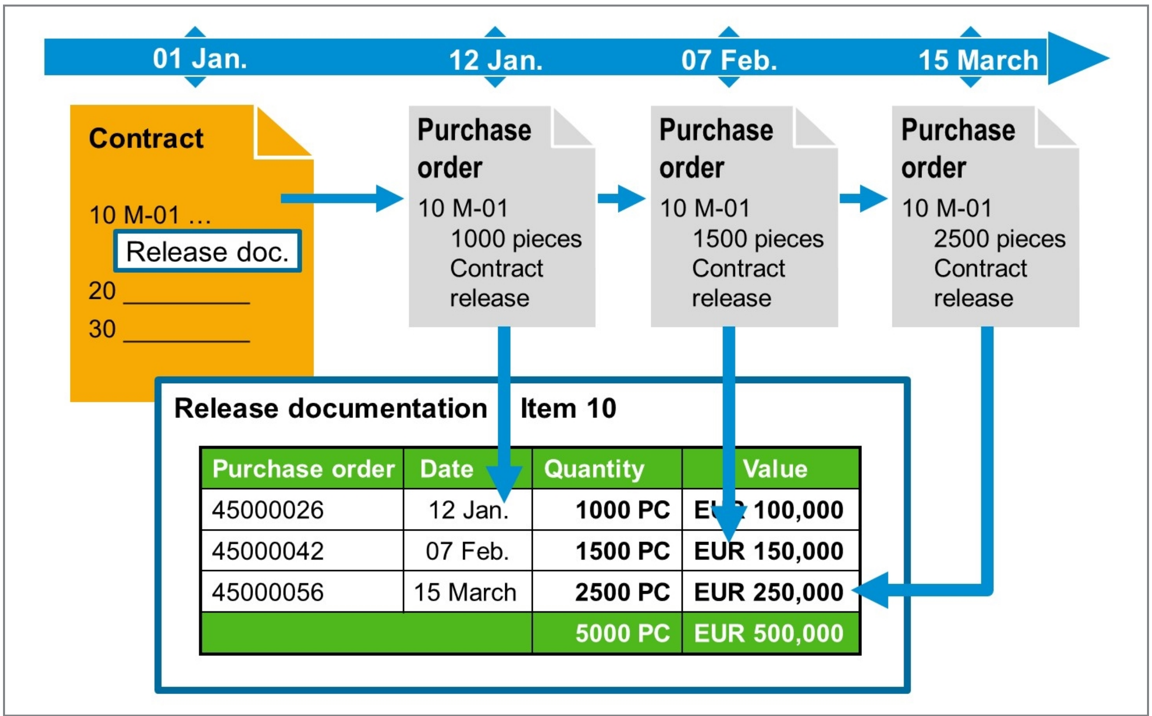


Figure 15: Contract Release Documentation

The release documentation for a contract item is updated for each purchase order item created with reference to a contract.

The system provides the following data for each release order:

- Purchase order number and relevant item number
- Order date
- Order quantity
- Order value

The release documentation also includes the following:

- Quantity or value already released
- Target quantity in comparison with the still open quantity or the target value in comparison with the still open value

Caution:
Over-deliveries and under-deliveries for contract release orders are only included in the release documentation if you set the update to *by the delivered quantity* using the Customizing transaction `OMXX`.

Whether the release documentation is updated with reference to the target value of the contract or the target quantity of each individual contract item depends on the agreement type used. For value contracts, the target value is updated at the header level. For quantity contracts, the target quantity is updated at the line item level.

Contract Types

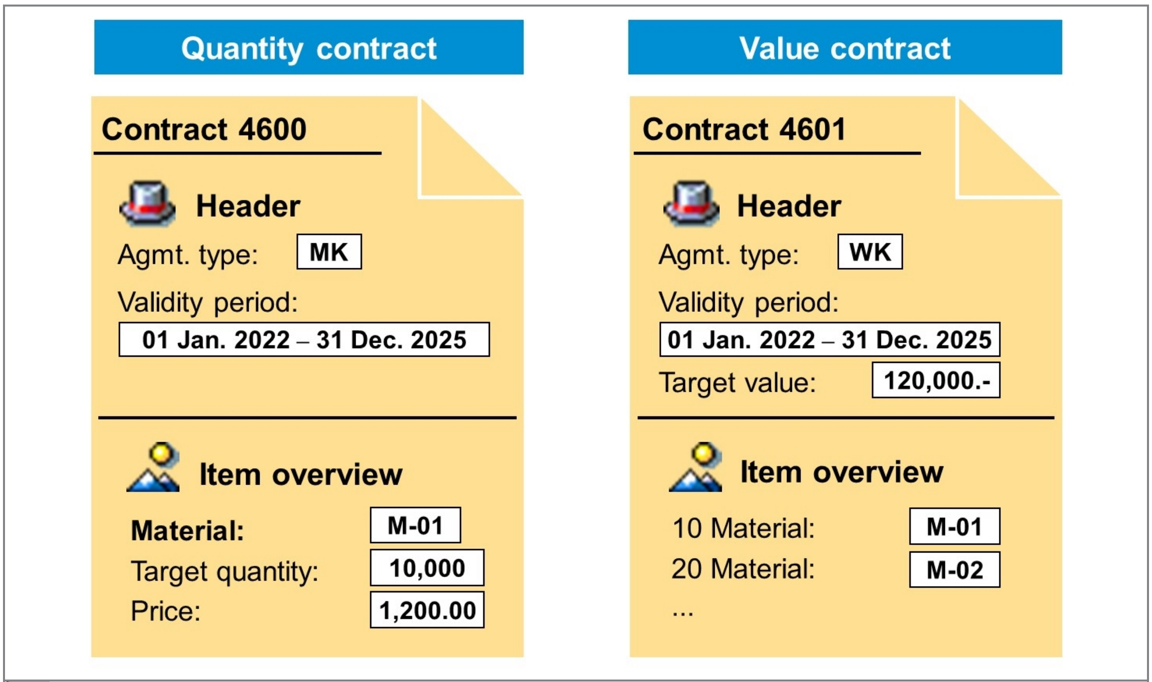


Figure 16: Contract Types

The following types of contract exist:

- Quantity contract

  This contract type is fulfilled when a stipulated target quantity per contract item is reached as a result of the issue of release orders. You choose the *MK* (*Quantity contract*) contract type if the total quantity of each item to be ordered over the duration of the contract is known. After specifying the validity period of the contract in the header data, you must enter the target quantity at item level. Specification of the total value in the header data is optional.

- Value contract

  This contract type is fulfilled when a stipulated overall target value (total value of all items) is reached as a result of the issue of release orders. You choose the *WK* (*Value contract*) contract type if the total value of all release orders issued against this contract is to reach a certain amount. The target value must, therefore, be specified in the header data of the value contract in addition to the validity period. Materials that are to be called with reference to the value contract have to be entered at item level. You can also enter the target quantities for the specified material, but this is not mandatory.

Centrally Agreed Contracts

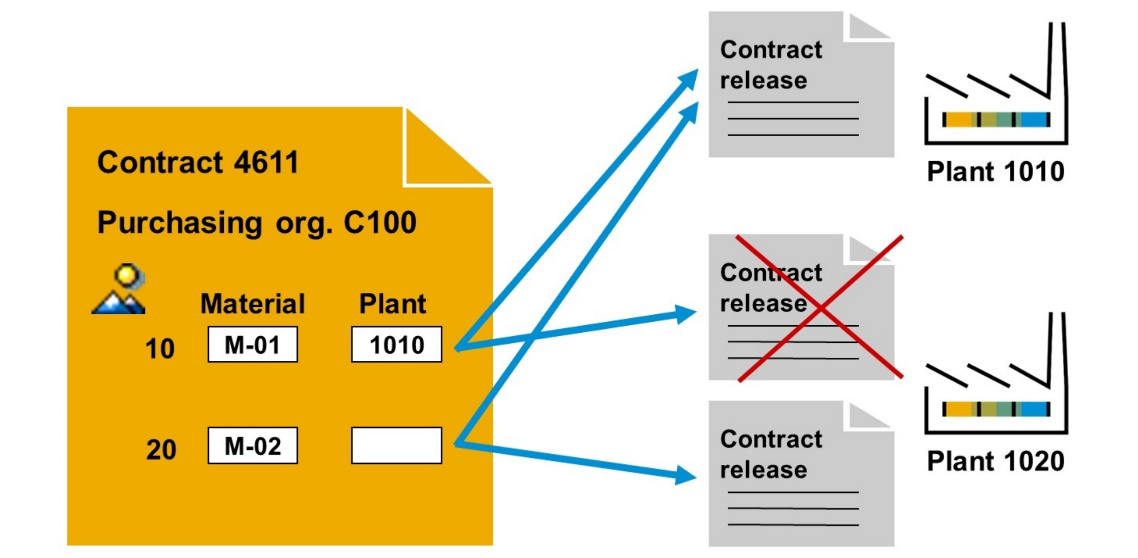


Figure 17: Items of Centrally Agreed and Plant Contracts

An enterprise that operates with a central purchasing organization covering several plants can often negotiate better conditions at a central level. The enterprise has the option of creating contracts that relate not to just one particular plant, but to the purchasing organization.

The plant is not specified until the contract release order is created. All plants assigned to the purchasing organization can release against a centrally agreed contract. For items with a material master record, the material must be created for each plant for which you are issuing a release.

In plant-specific contracts, a release order can only be created for the relevant plant. In a centrally agreed contract, however, you can store different conditions or partners for individual plants.

Hint:
If you do not want certain plants to release against the centrally agreed contract, block the centrally agreed contract as a source in the source list for the materials of these plants.

The plant relevance of a contract item cannot be changed subsequently.

A centrally agreed contract can also be created from a central purchasing organization. When creating a contract item, the system does not check whether the purchasing organization that creates the contract is responsible for a particular plant. This check only occurs in the contract release order. If the release order is performed from another purchasing organization, the central purchasing organization of the releasing purchasing organization must be assigned as the reference purchasing organization.

Plant Conditions in Centrally Agreed Contracts

With centrally agreed contracts, you can specify separate conditions for each receiving plant. These could be the result of different transportation costs for different distances. Plant conditions are not supplementary conditions for the central conditions; they are independent conditions for a specific plant.

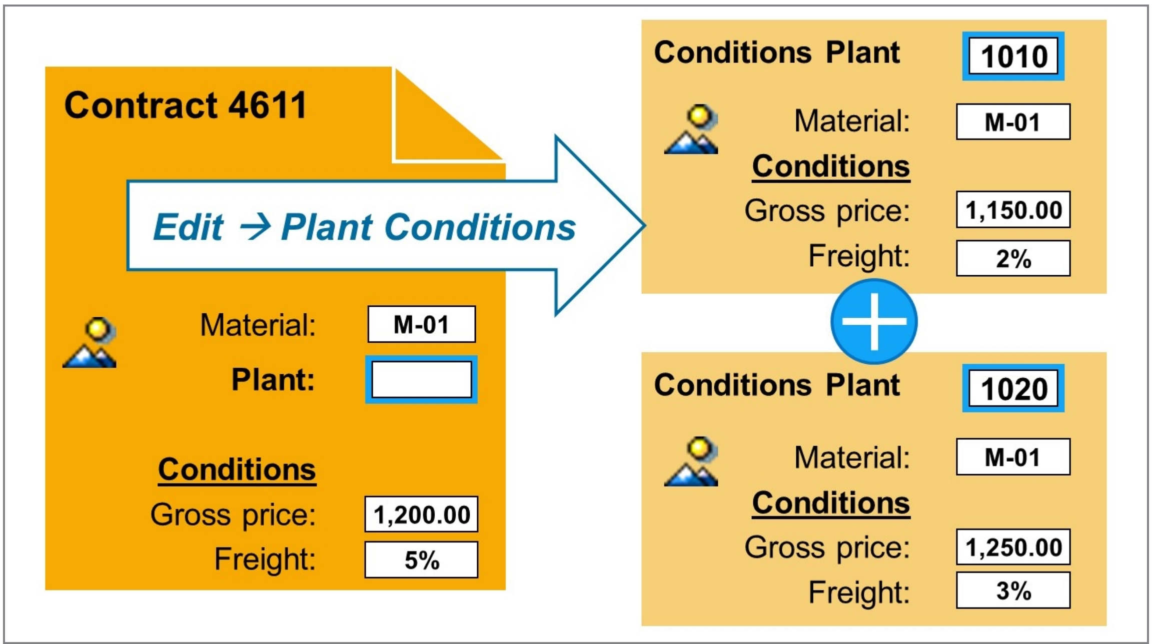


Figure 18: Plant Conditions in Centrally Agreed Contracts

> Caution:
> In the transaction *Create Purchase Contract* and the corresponding app, the maintenance of plant conditions in centrally agreed contracts is only possible using *(Menu)* → *Edit* → *Plant Conditions*.

If you have maintained different purchasing data or partner roles on plant or supplier subrange levels, that data is also adopted in the contract. You can change this data on a contract-specific basis.

Central Contracts Using Procurement Hub

Central Procurement

Central Procurement enables integration of the SAP S/4HANA hub system with multiple SAP ERP and SAP S/4HANA back-end systems. Contract management, purchasing, and requisitioning processes can be centralized with the hub system.

Optionally, you can leverage SAP Ariba solutions like *Guided Buying*.

To use Central Procurement, you have to activate the Procurement Hub and the desired scenarios in the back-end system.

Choose *IMG* → *Materials Management* → *Purchasing* → *Central Procurement - Settings in Hub System* → *Activate SAP S/4HANA Procurement Hub and Scenarios*.

Central Purchase contracts enable you to create, change, and display contracts created centrally in the hub system. A central purchase contract is a global long-term agreement between an organization and a supplier regarding the supply of materials or the performance of services within a certain period as per predefined terms and conditions. This enables purchasers from various parts of a company at different locations to take advantage of the negotiated terms and conditions. The central purchase contracts are created in SAP

S/4HANA (which acts as a hub system) and distributed to the connected systems. SAP ERP, SAP S/4HANA Cloud, or SAP S/4HANA can act as connected systems.

> Note:
> Further procurement scenarios, which are available in the hub scenarios, are as follows:
>
> Central Requisitioning
> Central Purchasing
> Central Sourcing
>
> Central Procurement is the successor of central functions in SAP SRM.

Contract Monitoring

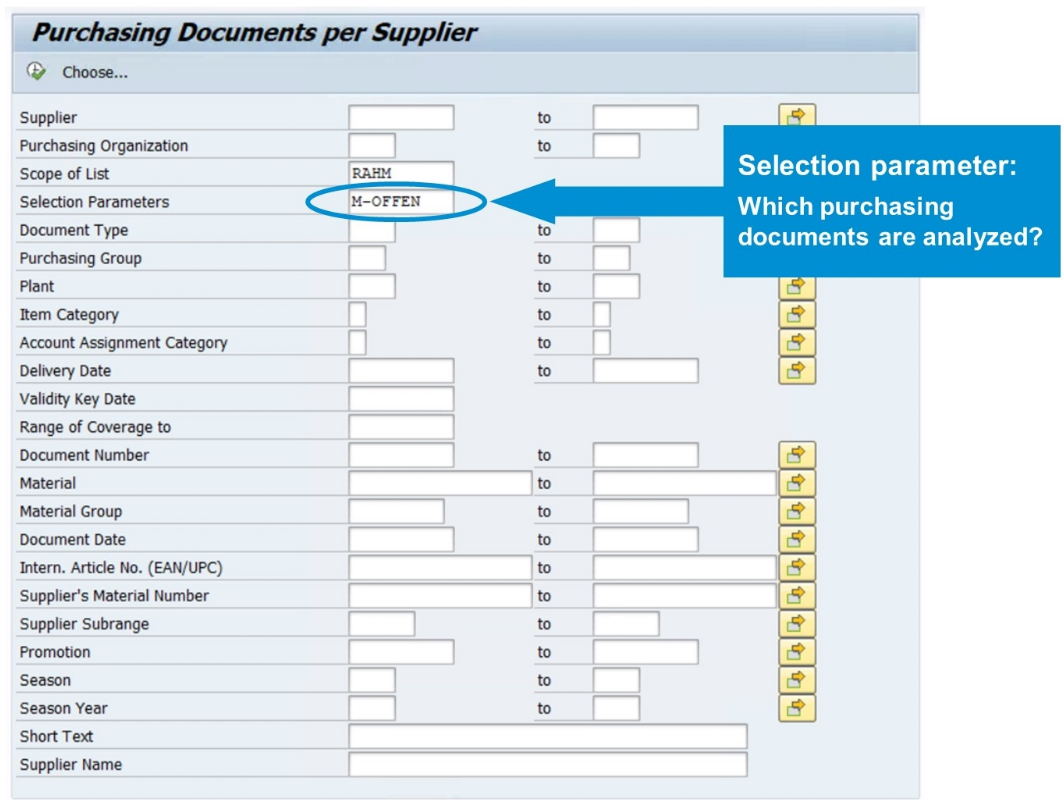


Figure 19: Selection Parameters

Accumulated values are updated at the item level for quantity contracts, and at the header level for value contracts. You can list all contracts that are going to expire in the near future. The analysis, which is based on a suitable selection parameter, is run on the *Target Value* and *Total Release Value* fields for value contracts and the *Target Quantity* and *Quantity Released to Date* fields for quantity contracts.

In Customizing for *Materials Management* under *Purchasing* → *Reporting* → *Maintain Purchasing Lists* → *Selection Parameters* → *Define Selection Parameters*, you can define a percentage of the target value or target quantity above which a contract is to be regarded as expiring.

Beyond the value and quantity, you can also check contracts with regard to their validity period.

Hint:
Target quantity, target value, and validity period are checked in the contract release order. If the quantity or value is exceeded, or in the case of release orders outside the validity period, warning messages are issued. You can set these as error messages to prevent release. You can double-click the warning message to view the message number.

You can define system messages in Customizing for *Materials Management* under *Purchasing* → *Environment Data* → *Define Attributes of System Messages*. You can also use the system messages to ensure that a purchase order for a material that has an outline agreement is only possible with a contract reference.

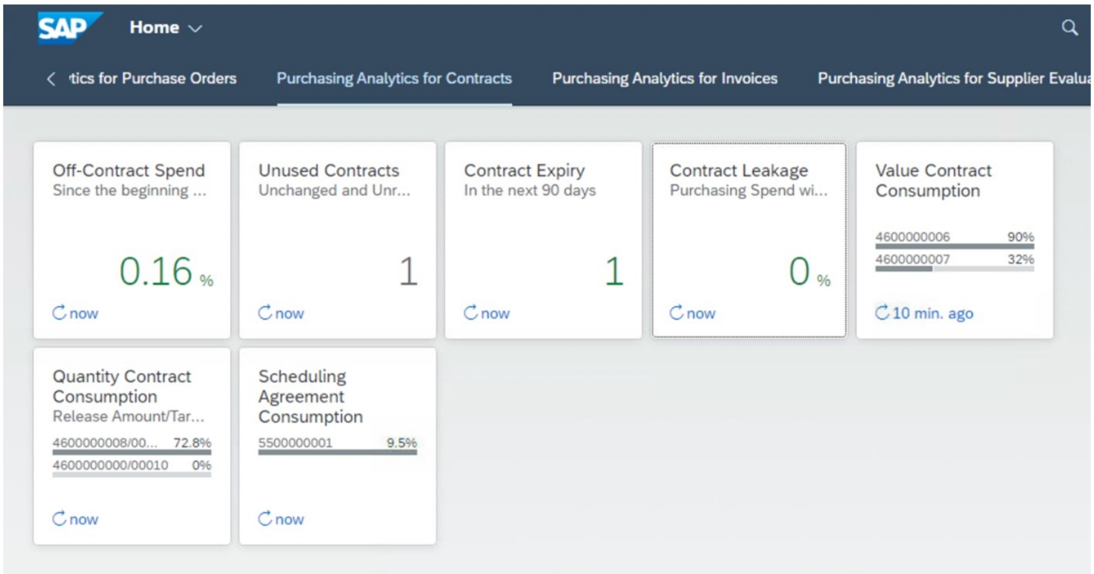


Figure 20: SAP Fiori Apps for Contract Monitoring

On the SAP Fiori launchpad, following SAP Fiori apps are available for contract monitoring:

1. Off-Contract Spend: You can use the *Off-Contract Spend* app to analyze the total spend amount in relation to purchase orders that do not have a contract reference, over the previous year to date. For some items, no negotiated pricing or blanket purchase agreement is in place when they are purchased. These items are defined as non-contract purchases. You can use this app to measure the percentage of purchases made without any contract.
2. Unused Contracts: You can identify contracts for which a release has not taken place within a specific time frame. With *Unused Contracts*, you can find the released amount of the unused contracts in the display currency and the IDs of all unused contracts.
3. Contract Expiry: You can use this app to identify purchase contracts that expire within a specific time frame (default: 90 days). You can also use the app to find the number of expiring contracts, target amount, and the released amount of the expiring contracts.

4. Contract Leakage: With the *Contract Leakage* app, you can identity the spend of purchase orders that do not have a contract reference, although an existing contract could have been used. As a purchaser, you want to find the related net value. You can use the *Contract Leakage* app to determine the amount of purchases made without considering existing contracts.

5. Value Contract Consumption: You use this app to identify the consumption percentage of value-type contracts from the previous year to date. You can also find the target and released amount of the contracts.

6. Quantity Contract Consumption: You use this app to identify the consumption percentage (value-based, not quantity-based) of quantity type contracts from the previous year to date. You can also find the target and released quantity of the contracts.

To get an overview of your contracts, you can use the app *Manage Purchase Contracts*. This app gives you a graphical overview of your contracts including the consumption and expiring data. If a contract is about to expire or has already expired, you can edit the contracts.

Another app for monitoring contracts is *Monitor Purchase Contract Items*. With this app, you can display aggregated values of purchase contract items for material groups and filter them according to your requirements.

Reporting for Contracts

The following table lists useful evaluations available for contracts in the back-end system:

Table 1: Evaluations Available for Contracts

Evaluations	Transaction Codes
General evaluations	`ME80RN`
Outline agreements per vendor	`ME3L`
Outline agreements by material	`ME3M`
Outline agreements by material group	`ME3C`
Conditions by contract	`MEKB`

In addition, the following apps are also available on the SAP Fiori launchpad:

- Manage Purchase Contracts
- Manage Purchase Contract Items

LESSON SUMMARY

You should now be able to:

- Manage contracts
- Get to know analytics for contracts

Unit 2
Lesson 5

Creating Contracts for Material Groups

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create contracts for material groups

Contracts for Material Groups

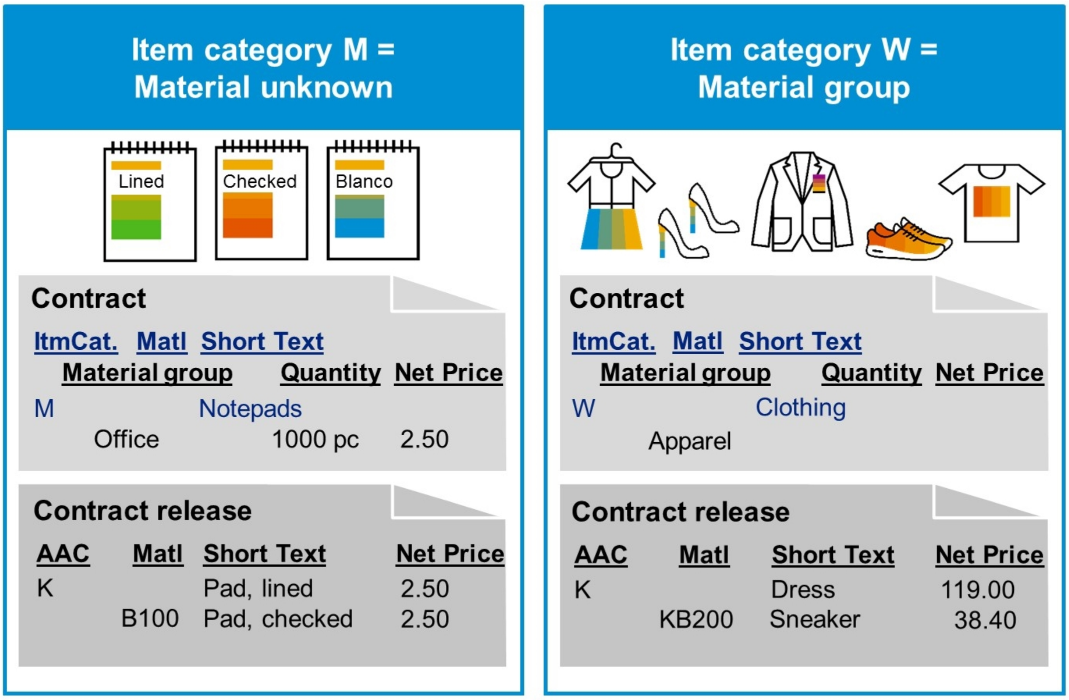


Figure 21: Item Categories M and W

You can use the contract-specific item categories *M* (*Material unknown*) and *W* (*Material group*) to map outline agreements for groups of materials. These item categories are intended for the entry of contract items without specification of the material number.

Details of Item Categories M and W

The following are the details of each item category:

- *M* item category:

  You can use this category in quantity and value contracts. This item category is recommended for similar materials of the same price. These can be materials with or without material master record. For example, you have set up a contract with your supplier covering various types of writing paper, such as lined, squared, blank, and pre-punched. The different types of paper have the same weight and quality, and can be bought at the same price. When creating this contract item of the *M* category, you enter the short description, material group, target quantity, unit of measure, and price, but no material number. You must then enter the short description, such as lined or blank, in the contract release order.

You can also release materials with a material master record against this contract item in the release order, provided that the material group and purchase order unit of measure match.

- *W* item category:

  You can use this category only in value contracts. This item category is recommended for materials belonging to the same material group but with different prices. For example, you have set up a contract with your supplier for various types of electrical equipment. The contract is to cover all articles included in the supplier's price list. The precise article is specified upon ordering. Instead of creating one contract item for each article in the supplier's list, you can use the *W* item category and the appropriate material group, for example, electrical equipment. The short text makes it clear that the contract item covers all electrical equipment supplied by the specific supplier. In the release order for this contract, you enter the exact information for the article - for example, a package of cable ties or an electrical socket.

  The price, the quantity, and the material number are not specified until you create a release order. If an info record exists, the conditions maintained in the info record are proposed. The item, with or without material number, must be assigned to the same material group as the contract item referenced. Items without material numbers must have a valid account assignment, such as a cost center.

  You can enter additional conditions. For example, you can enter a discount in the header conditions if the supplier grants a discount on all purchase orders referencing the contract. The discount is calculated automatically when a contract release order is created.

Hint:
If the materials involved are exclusively consumable materials of low value, it is also possible to use a blanket purchase order.

The SAP Fiori app, *Manage Purchase Contracts*, only supports the item category, *W*.

LESSON SUMMARY
You should now be able to:

- Create contracts for material groups

Unit 2
Lesson 6

Working with Scheduling Agreements

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Manage scheduling agreements

Introduction to Scheduling Agreements

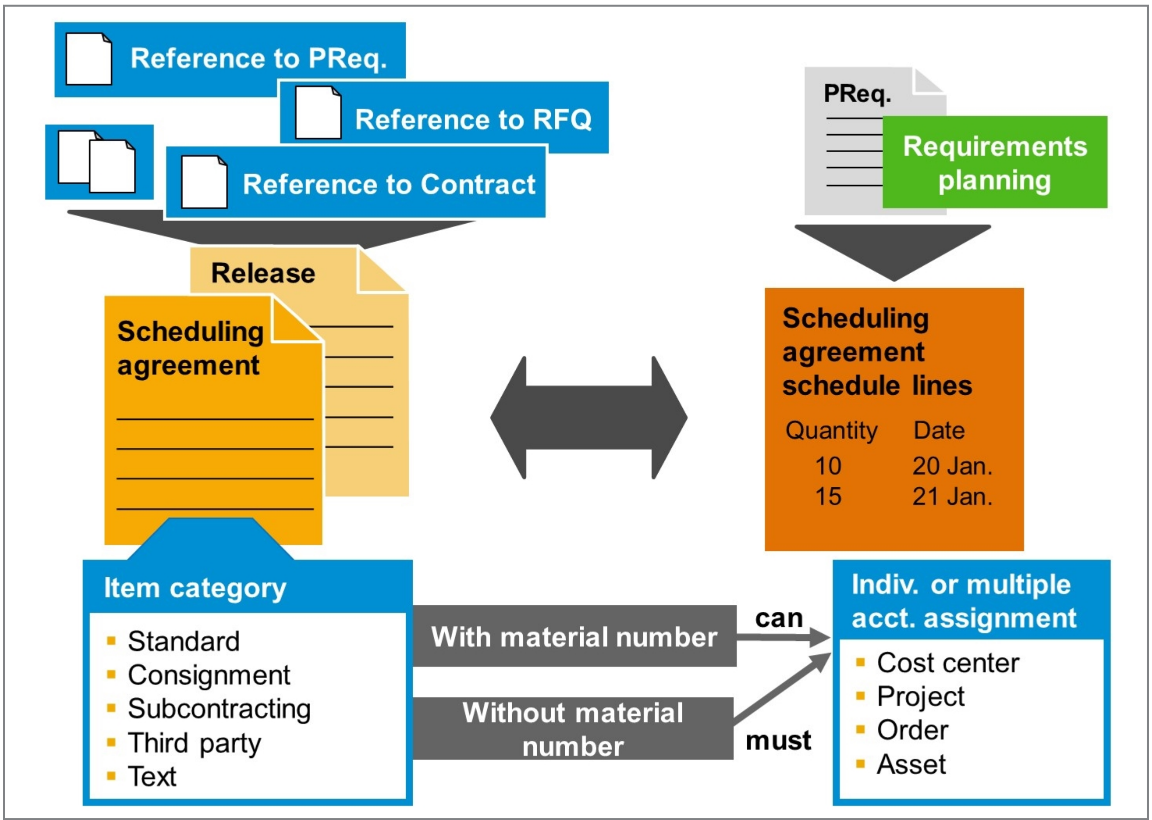


Figure 22: Working with Scheduling Agreements

A scheduling agreement is a long-term agreement with a supplier covering the supply of materials subject to predetermined conditions, which are valid for a defined period and a defined total purchase quantity.

You can create scheduling agreements either with or without reference to one of the following:

- An outline agreement requisition
- A request for quotation

- Another scheduling agreement

You can also create scheduling agreements with reference to a centrally agreed contract, thereby facilitating the use of centrally negotiated prices.

When you create a scheduling agreement, the following item categories are available:

- Standard
- Consignment
- Subcontracting
- Third-party
- Text

Creating Scheduling Agreements

Scheduling agreements are always plant-specific. Item categories *M* (*Material unknown*) and *W* (*Material group*) are not permitted. For the item category subcontracting, you can separately enter the material components to be provided for each delivery date.

Conditions may apply for the whole validity period of the scheduling agreement. If you use a document type that permits time-dependent conditions, you can also enter conditions for multiple validity periods.

If you have created the scheduling agreement item with reference to a centrally agreed contract, the conditions in the scheduling agreement should not be changed, because the system always refers to the current conditions of the central contract. Price control is set so that the conditions are always calculated at the time of goods receipt.

You can also create scheduling agreement items for materials without material master records. Costs incurred can be distributed among different controlling objects through the account assignment. In contrast to contracts, you are not allowed to use the *U* (*Unknown*) account assignment category in scheduling agreements.

The total quantity of material to be delivered specified in the scheduling agreement item is split into a number of partial quantities with individual delivery dates in the delivery schedule lines. Delivery schedule lines can be created manually with or without reference to a purchase requisition. Delivery schedules can also be created automatically by MRP.

You can issue scheduling agreement releases notifying the supplier that they are to deliver the required material on the scheduled dates. You can use scheduling agreements with or without release documentation. This is determined through the document type.

Hint:
Goods receipts for scheduling agreements can be posted prior to the schedule line date only if you are working with confirmations or if there is an unlimited over-delivery tolerance.

Advantages of Scheduling Agreements

Scheduling agreements have several advantages over other purchasing documents, including the following:

- Scheduling agreements can replace many standard purchase orders or contract release orders.

- Scheduling agreement delivery schedule lines can be generated automatically in the requirements planning run. Manual conversion of procurement proposals is unnecessary in that case. You can configure the scheduling agreement delivery schedule line *LPET* so that a message is generated and transmitted immediately to the supplier.

Scheduling Agreements Maintenance

On the SAP Fiori launchpad, use the *Manage Purchase Scheduling Agreements* app to create, change, and monitor your scheduling agreements. This app gives you an overview of your scheduling agreements including the expiring data. If a scheduling agreement is about to expire or has already expired, you can renew it. You can also delete or create scheduling agreements and schedule lines with this app. With the *Manage SA Delivery Schedule* app, you can maintain scheduling agreement delivery schedule lines.

In the SAP GUI, use the following menu paths on the *SAP Easy Access* screen to create and maintain scheduling agreements:

- Create a scheduling agreement:

  Choose *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Scheduling Agreement* → *Create (Vendor Known)* (`ME31L`).

- Change a scheduling agreement:

  Choose *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Scheduling Agreement* → *Change* (`ME32L`).

- Display a scheduling agreement:

  Choose *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Scheduling Agreement* → *Display* (`ME33L`).

- Create a stock transport scheduling agreement:

  Choose *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Scheduling Agreement* → *Create* → *Stock Transport Scheduling Agreement* (`ME37`).

- Maintain a scheduling agreement delivery schedule line:

  Choose *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Scheduling Agreement* → *Delivery Schedule* → *Maintain* (`ME38`).

- Display a scheduling agreement delivery schedule line:

  Choose *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Scheduling Agreement* → *Delivery Schedule* → *Display* (`ME39`).

You can also access all the transactions listed above through an app on the SAP Fiori launchpad.

Automatic Creation of Scheduling Agreement Schedule Lines

When the volume of transactions is large and the degree of repetition (repetitive manufacturing) is high, it is preferable to generate scheduling agreement delivery schedule lines automatically.

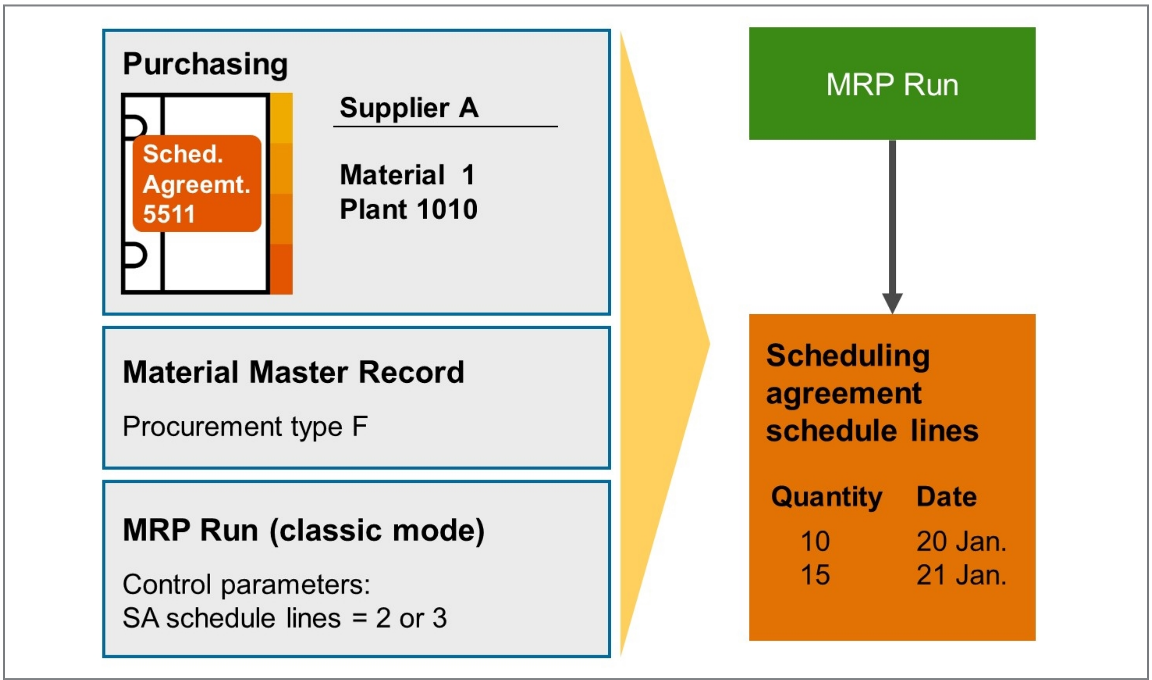


Figure 23: Automatic Scheduling Agreement Schedule Lines

You can generate scheduling agreement delivery schedule lines automatically through MRP if you complete the following prerequisites:

- Set the *F* (*External procurement*) procurement indicator in the MRP data of the material master record. The exception is when you are working with quota arrangements. In this case, it is sufficient to define external procurement for a source in the quota arrangement item.
- Permit automatic scheduling agreement delivery schedules in the planning run. The *SA Deliv. Sched. Lines* indicator sets the timeframe for which the scheduling agreement delivery schedule is to be generated.

A source list is only necessary if you have more than one valid scheduling agreement for a material in combination with the same plant and you want to define your own priority.

The possibility to create purchase requisitions instead of schedule lines is restricted to the classic MRP Run (MD01 / MD03). With MRP Live (MD01N), the system always creates schedule lines if a scheduling agreement exits for the material.

LESSON SUMMARY

You should now be able to:

- Manage scheduling agreements

Unit 2
Lesson 7

Creating Scheduling Agreements Without Release Documentation

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create scheduling agreements without release documentation

Scheduling Agreement Types Without Release Documentation

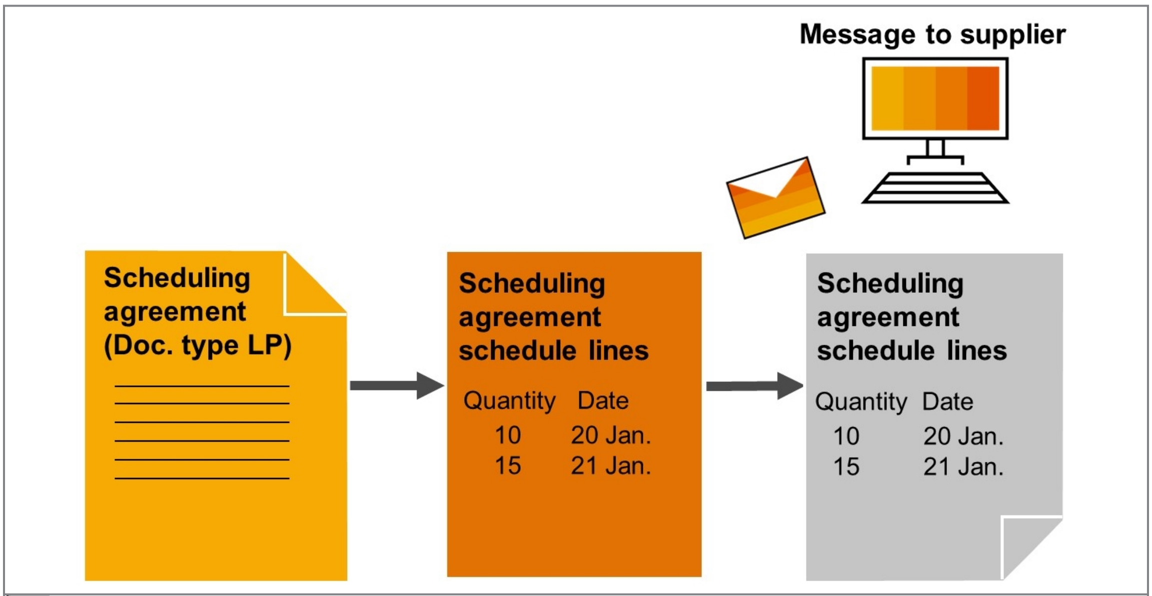


Figure 24: Scheduling Agreement Without Release Documentation

You can use scheduling agreements with or without release documentation. This is controlled in Customizing through an indicator when you define the document type for scheduling agreements.

For scheduling agreements without release documentation, you can use the *LP* document type. With this document type, the delivery schedule lines are transmitted to the supplier just as they are saved in the system. The system does not document in detail which quantities and dates were communicated to the supplier. Therefore, for the document type without release documentation, you should configure the message control to generate immediately a message when changes are made to the schedule lines.

All open schedule lines are included in each message. This type of document is therefore more suitable for a limited number of schedule lines.

LESSON SUMMARY

You should now be able to:

- Create scheduling agreements without release documentation

Unit 2
Lesson 8

Creating Scheduling Agreements with Release Documentation

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create scheduling agreements with release documentation

Scheduling Agreement Types with Release Documentation

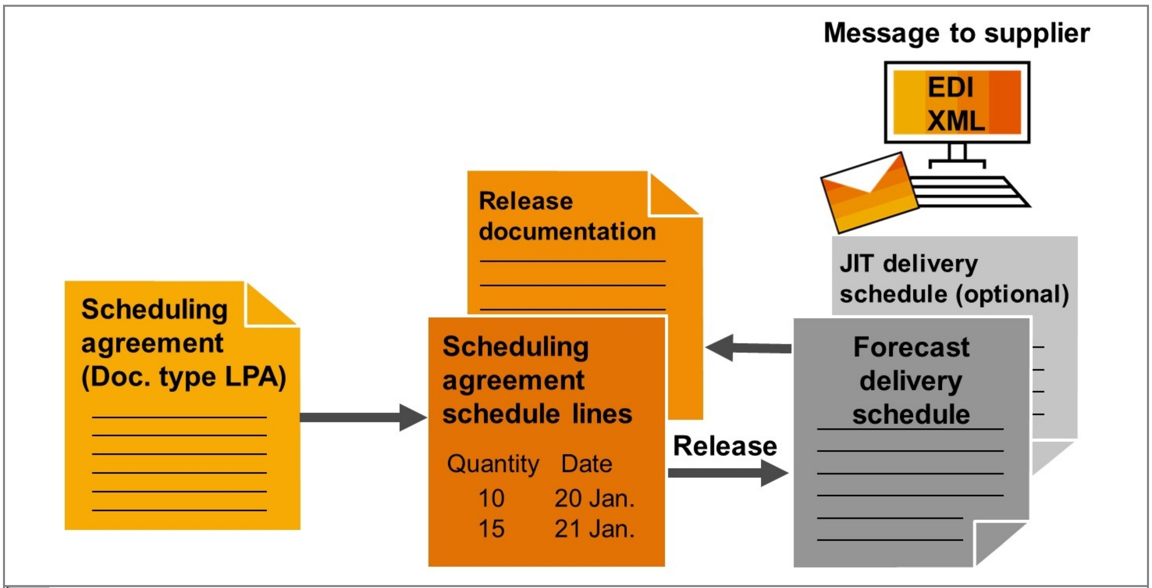


Figure 25: Scheduling Agreements with Release Documentation

If you use scheduling agreements with release documentation, the delivery schedule lines are not transmitted directly to the supplier. Initially, these lines, which are stored in the system, are for internal information only.

Messages cannot be transmitted until you create a scheduling agreement release. Through this process, you can change the way the schedule lines are represented. With the release documentation, you can display the scheduling agreement releases (delivery schedules) transmitted to a supplier over a certain period at any time. This enables you to trace precisely when you sent which information to the supplier.

For scheduling agreements with release documentation, you can use the *LPA* document type.

There are two types of scheduling agreement releases for scheduling agreements with release documentation:

- Forecast (FRC) delivery schedules

Use this to give the supplier a medium-term to long-term overview of your material requirements.

- Just-in-Time (JIT) delivery schedules

  Use this to inform your supplier of your short-term (near future) requirements. This type of schedule shows requirements per day or even per hour.

> Hint:
> In the planning run, schedule lines can only be generated on a daily basis. Schedule lines on an hourly basis (with time entry) are only possible manually or with external planning.

Scheduling Agreement Releases

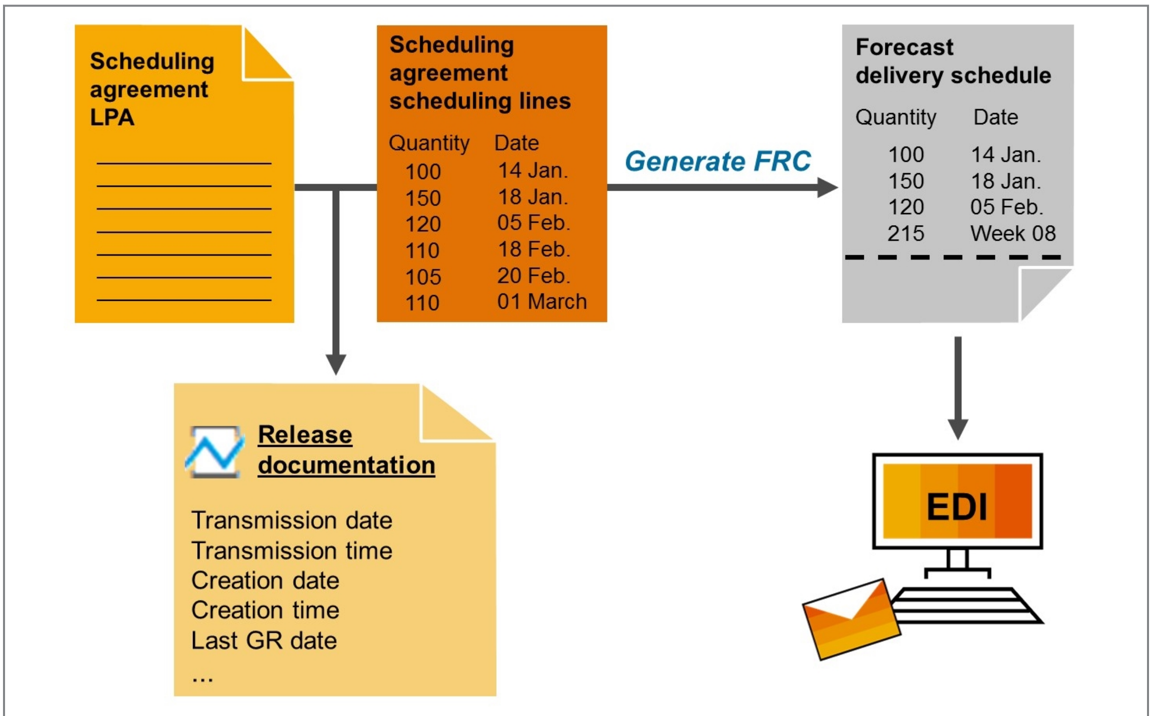


Figure 26: Scheduling Agreement with Forecast Delivery Schedule

You can specify that only forecast delivery schedules are possible for the schedule lines of your scheduling agreement with release documentation. You do this by leaving the *JIT Indicator* field in the item details of the scheduling agreement blank.

A scheduling agreement release can be created either manually or automatically on a regular basis, using a report. When you use the report (online or in the background), scheduling agreement releases can be generated either for all selected items of a scheduling agreement or only for those items for which schedule lines have been newly created or changed.

The release documentation enables the following:

- You can find out when you sent particular information to the supplier.
- The supplier can see which deliveries have already been taken into account. This is done through a cumulative quantity that has been accumulated automatically by the system

since the start of the scheduling agreement. If the scheduling agreement runs for a long time, you can – in consultation with the supplier – reset this number occasionally.

Scheduling Agreement with Forecast and JIT Delivery Schedules

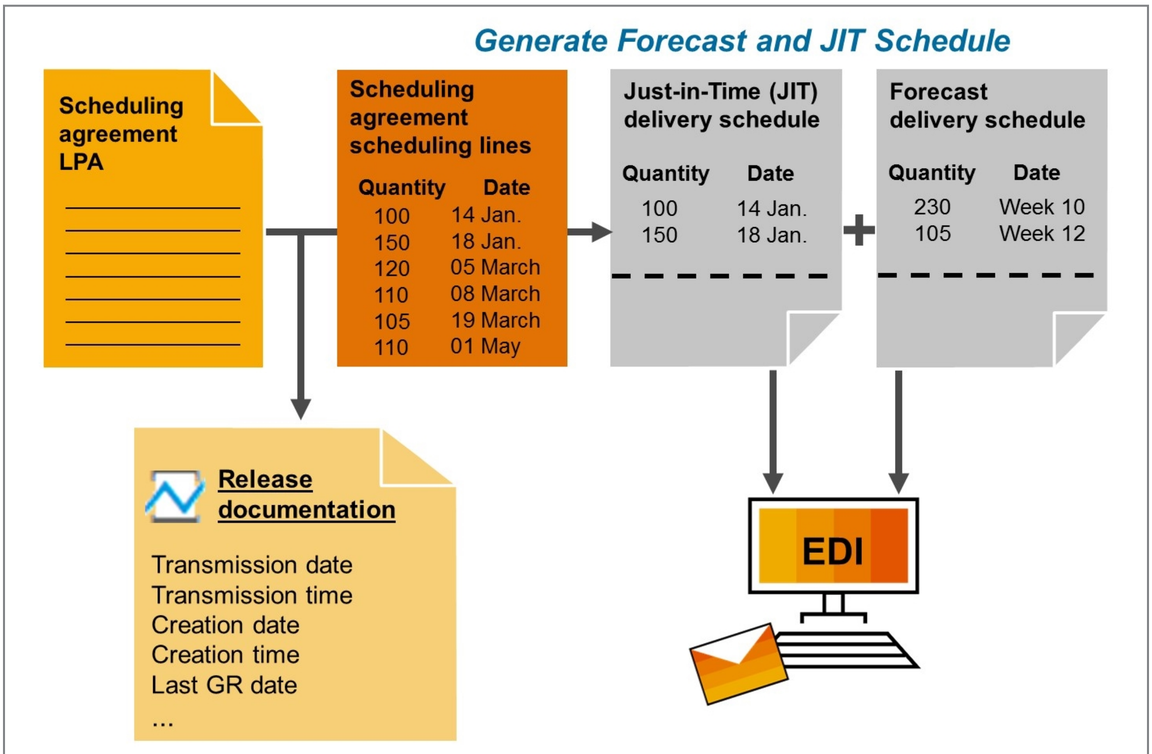


Figure 27: Scheduling Agreement with Forecast and JIT Delivery Schedules

If you set the value in the *JIT Indicator* field in the item details of the scheduling agreement to **1**, you can generate and send not only forecast delivery schedules, but also JIT delivery schedules.

To create scheduling agreement releases, on the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Outline Agreement → Scheduling Agreement → Delivery Schedule → Create SA Release* (`ME84`). On the SAP Fiori launchpad, you use the corresponding *Create Scheduling Agreement Releases* app.

Through the menu path *(Menu) → Edit → Generate Forc. Schd. or Edit → Generate JIT Sched.* on the delivery schedule maintenance screen (transaction/app `ME38`), you can directly create forecast and JIT delivery schedules.

To set the cumulative quantity, on the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Outline Agreement → Scheduling Agreement → Administer → Set Agreed Cumulative Quantity* (`ME88`).

Scheduling Agreement Releases Archiving

You can archive scheduling agreement releases to improve application performance.

The archiving function is available on the *SAP Easy Access* screen under *Logistics → Materials Management → Purchasing → Outline Agreement → Scheduling Agreement → Administer → Archive Scheduling Agreement Releases* (`ME83`).

You cannot reverse the archiving of scheduling agreement releases. Archived scheduling releases are located in tables EKEKH and EKEKHH.

Control Data for Scheduling Agreements

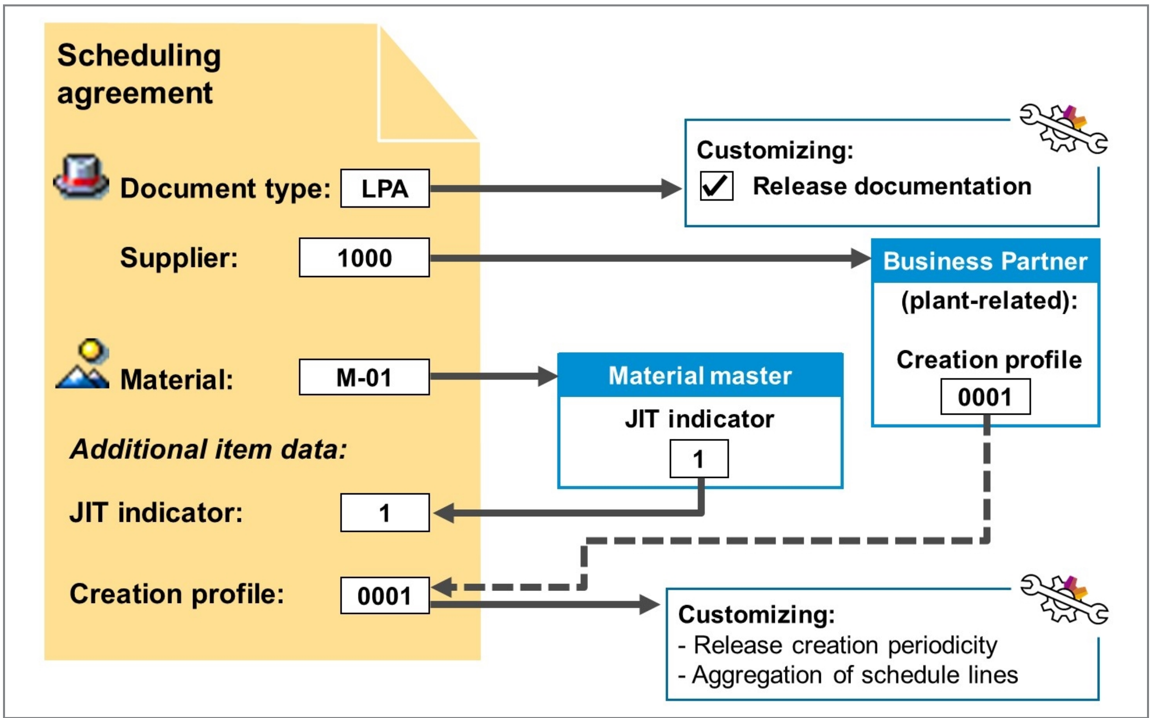


Figure 28: Control Data for Scheduling Agreements

The *Release Documentation* indicator is preset in Customizing for the *LPA* document type. Therefore, you can work with forecast and JIT delivery schedules if you use this document type.

You can define document types for a scheduling agreement in Customizing for *Materials Management* under *Purchasing → Purchase Scheduling Agreement → Define Document Types for Purchase Scheduling Agreements*.

You can generate both forecast and JIT delivery schedules against a scheduling agreement with release documentation only if you have set the *JIT delivery schedule* indicator in the material master record (*Purchasing* or *MRP 2* view) and in the additional data for the scheduling agreement item. The *JIT Indicator* field must be set in the material master record before the scheduling agreement is created. The *JIT Indicator* field cannot be set in the delivery scheduling agreement if it is not set in the material master record.

Release Creation Profile

A release creation profile is used for scheduling agreements with release documentation.

You can use release creation profiles to define the criteria when creating scheduling agreement releases to influence the quantities and delivery dates or times to be transmitted to the supplier.

Depending on whether a release create profile is maintained in the supplier master record, the following can occur:

- If the plant-specific data of a business partner includes a release creation profile, the latter is automatically adopted in the additional data of a scheduling agreement item with the supplier and the relevant plant.

- If the plant-specific data of a business partner does not include the creation profile, you can manually enter the creation profile in the additional data of a scheduling agreement item.

The release creation profile is plant-specific. To store the profile as the default value, enter it in the *Additional Purchasing Data* for the relevant plants.

Aggregation with the Release Creation Profile

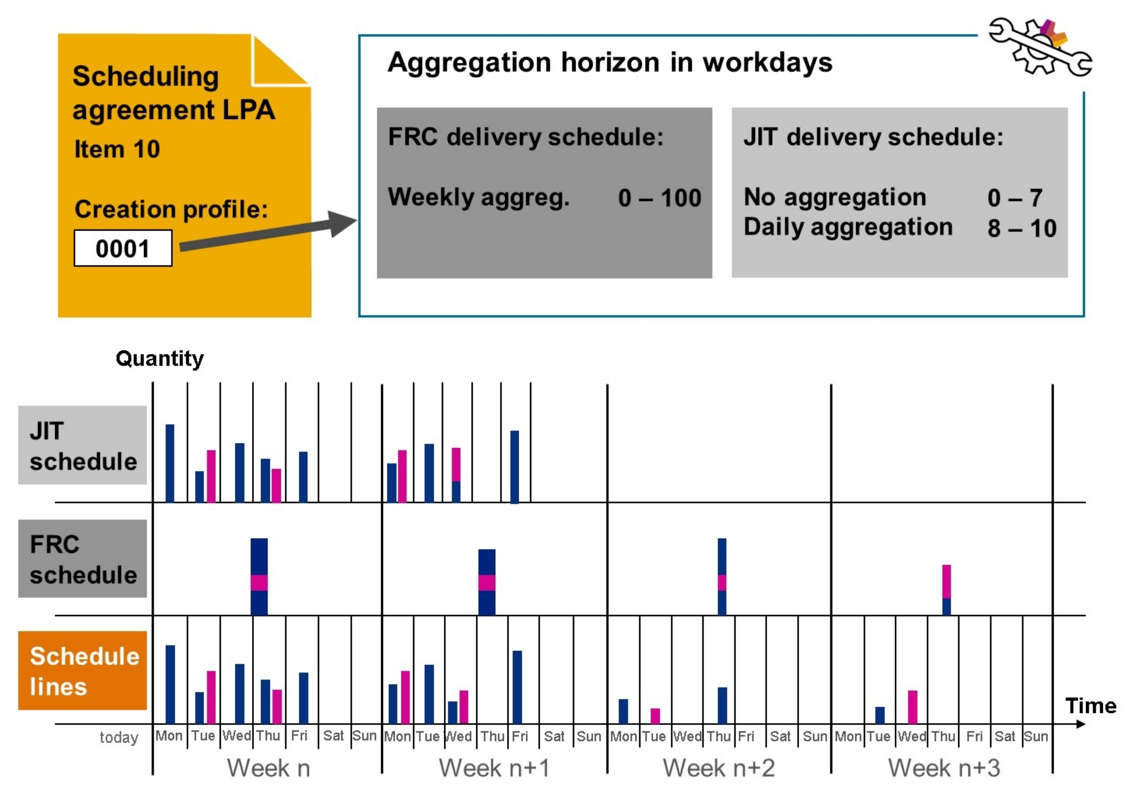


Figure 29: Aggregation with the Release Creation Profile

You use the release creation profile to determine how frequently, and under which circumstances, the system generates releases against a scheduling agreement.

The release creation rhythm determines the time intervals (for example, daily or weekly) in which scheduling agreement releases are generated and transmitted. You can define different time intervals for forecast delivery schedules and JIT schedules.

The creation profile also controls, starting from the current date of release creation, how quantities are aggregated. Aggregation of scheduled quantities determines the periods for which the schedule line quantities of a scheduling agreement item are to be consolidated. You can define different time periods for forecast delivery schedules and JIT schedules. A greater degree of aggregation is possible for schedule line quantities for forecast delivery schedules than for JIT delivery schedules.

You also define the release horizon in the release creation profile. This enables you to send suppliers only the dates and quantities they require for planning.

You can create release creation profiles in Customizing for *Materials Management* under *Purchasing → Purchase Scheduling Agreement → Maint. Rel. Creation Profile for Sched. Agmt. w. Rel. Docu.*

Example of the Exclusive Use of Forecast Delivery Schedules

For a scheduling agreement that has delivery schedule lines covering several months, a release creation profile may provide for releases to be created weekly, for example.

You can aggregate the release quantities as follows:

- No aggregation of the schedule line data for the first 10 days as of the current date of release creation
- Daily aggregation from the 10 th to the 30 th day
- Monthly aggregation from the 30 th to the 60 th day

Example of the Use of Forecast and JIT Delivery Schedules

In a scheduling agreement for which delivery schedule lines covering several months have been maintained, a release creation profile can enable JIT delivery schedules to be generated daily. Forecast delivery schedules, by contrast, should only be generated when delivery schedule data changes that exceed the tolerances in the defined tolerance profile occur.

The release quantities could be aggregated as follows:

- JIT delivery schedules for the first 14 calendar days without aggregation
- Forecast delivery schedules from the 1 st to the 100 th day aggregated on a weekly basis. However, forecast delivery schedules should only be created if the sum of schedule lines has increased by more than 2% or decreased by more than 5% compared to the last release.

Tolerance Limits for Scheduling Agreement Items

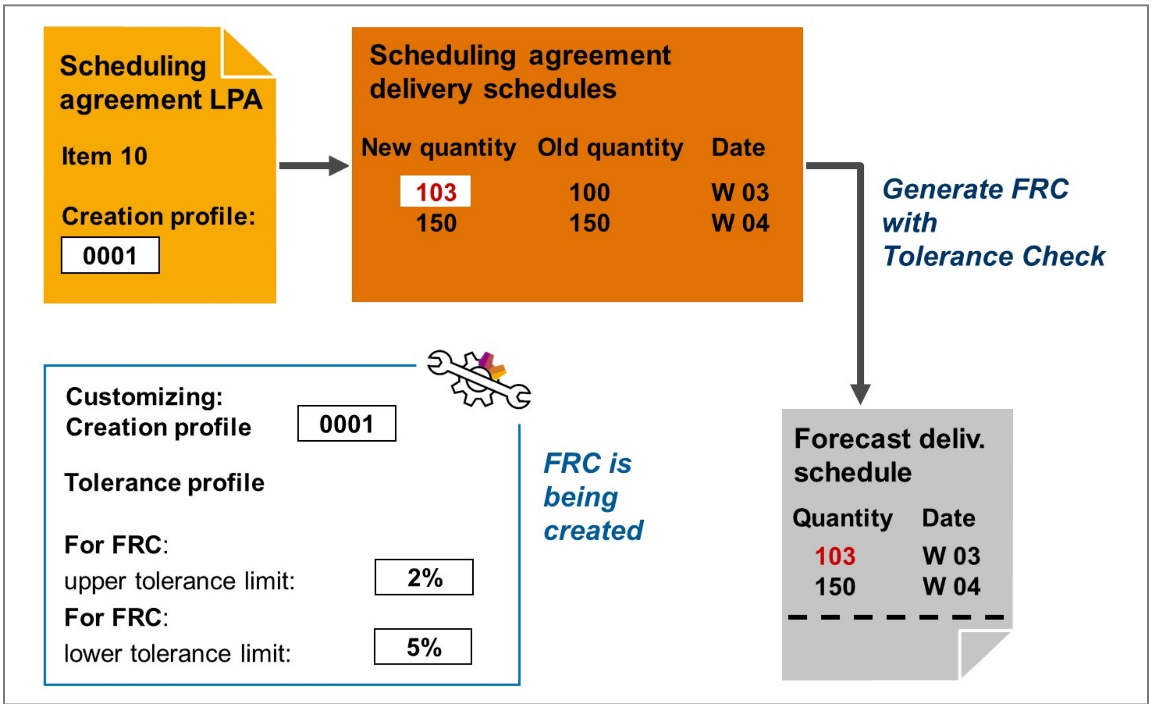


Figure 30: Tolerance Limits for Scheduling Agreement Items

The creation profile also enables you to specify that a tolerance check should be carried out if scheduling agreement releases need to be created after modifications in the overall delivery schedule. Using tolerance limits, you can specify that scheduling agreement releases should be generated only if there are major changes in the overall delivery schedule.

The tolerance limits are defined in the release creation profile in Customizing. Tolerance limits can be defined for a maximum of three checking periods per scheduling agreement release type (FRC and JIT).

For example, if a scheduling agreement delivery schedule line has been changed so that instead of the original 100 pieces, 103 pieces are now needed:

- This represents a change of 3% in the quantity.
- Because the upper tolerance limit for forecast delivery schedule (2%) is thus exceeded, a new forecast delivery schedule is generated for issue to the supplier.
- The check can be applied to each individual schedule line (individual check) or to the schedule lines total (overall check).

Scheduling Agreement Options

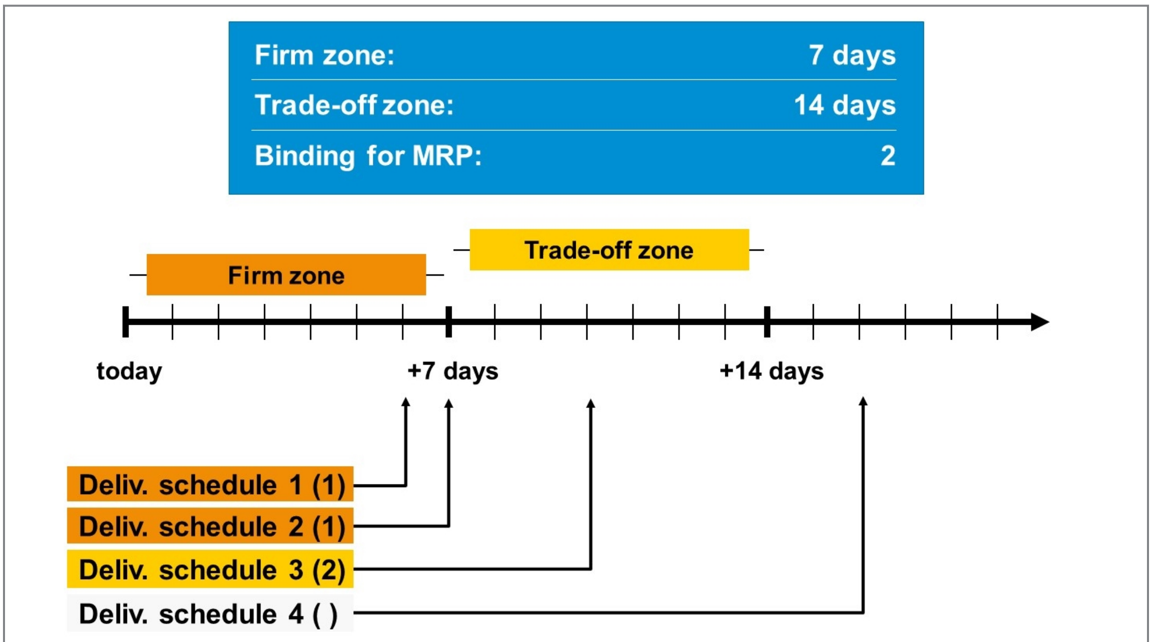


Figure 31: Firm and Trade-Off Zones

The firm zone and trade-off zone define the degree to which delivery schedule lines are binding. Scheduled delivery dates in the near future can be more binding than those in the more distant future.

For an item of a scheduling agreement, you can define the following zones:

- Firm zone (production go-ahead period)

  The firm zone defines the point in time at which the production go-ahead period ends. The production go-ahead period begins with the current date. The schedule lines falling within this zone or period are fixed, and can thus be regarded as equivalent to firm orders. The production go-ahead period should be defined in consultation with the supplier and generally comprises the time that the supplier needs to produce the scheduled quantities.

- Trade-off zone (material go-ahead period)

The trade-off zone defines the point in time at which the material go-ahead period ends. The material go-ahead period begins with the end of the production go-ahead period and encompasses both. Delivery schedule lines falling within this period can be less binding in nature than those in the firm zone. The material go-ahead period is generally based on the delivery time or production time of the components that the supplier needs to manufacture the ordered materials.

Both the production and the material go-ahead period are printed in the schedule lines and transmitted with them. The firm and trade-off zones are both calculated in calendar days. You enter these zones in the additional data for the relevant scheduling agreement. You also make the settings for the automatic fixing (firming) of schedule lines in MRP there.

Binding on MRP

You can define which delivery schedule lines can be changed by the system during an MRP run. The possible settings are as follows:

- Only schedule lines after the trade-off-zone
- Only schedule lines after the firm-zone
- All schedule lines

LESSON SUMMARY

You should now be able to:

- Create scheduling agreements with release documentation

Learning Assessment

1. At which level can you maintain conditions in the info record?

   Choose the correct answers.

   - [ ] A Purchasing organization
   - [ ] B Material
   - [ ] C Client
   - [ ] D Purchasing organization with plant

2. An info record can apply to all plants of a purchasing organization. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

3. You create a purchase order using an info record for a material group. Which of the following are mandatory entries in the item?

   Choose the correct answers.

   - [ ] A Material number
   - [ ] B Account assignment category
   - [ ] C Quantity
   - [ ] D Short text

4. Which of the following categories of purchasing info records can you create?

   Choose the correct answers.

   - [ ] A Standard
   - [ ] B Third-party
   - [ ] C Subcontracting
   - [ ] D Plant

5. Which statements apply for contracts and contract items?

   Choose the correct answers.

   - [ ] A Contracts can be created only with reference to a purchase requisition.
   - [ ] B You can use account assignment category U (unknown) for a contract item.
   - [ ] C Contracts can be created without reference to an outline agreement requisition.
   - [ ] D For a consumable material, the account assignment data must already be stored in the contract.

6. A quantity contract is fulfilled when a stipulated overall target value is reached as a result of the issue of release orders. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

7. The *W* item category can be used in quantity and value contracts. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

8. Items to be purchased from a value contract with the item category *M* all have the same... (Complete the sentence). There may be more than one correct answer.

   Choose the correct answers.

   - [ ] A Material group
   - [ ] B Short text
   - [ ] C Purchasing group
   - [ ] D Price

9. You can create a contract with reference to a scheduling agreement, but you cannot create a scheduling agreement with reference to a contract.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

10. How do scheduling agreements differ from contracts?

Choose the correct answers.

- [ ] A The *U* (*Unknown*) account assignment category is allowed in the contract but not in the scheduling agreement.
- [ ] B Contracts can contain a plant but scheduling agreements must contain a plant.
- [ ] C You can use the *W* item category in both the contract and the scheduling agreement, but you can only use the M item category in the contract.

11. In scheduling agreements, item categories *M* and *W* are not permitted. True or false?

Determine whether this statement is true or false.

- [ ] True
- [ ] False

12. Which messages are possible for scheduling agreements with release documentation?

Choose the correct answers.

- [ ] A Scheduling agreement (message type NEU)
- [ ] B Forecast delivery schedule
- [ ] C JIT delivery schedule
- [ ] D Scheduling agreement delivery schedule line

13. When you archive the scheduling agreement releases, you cannot reverse the archives. True or false?

Determine whether this statement is true or false.

- [ ] True
- [ ] False

Learning Assessment - Answers

1. At which level can you maintain conditions in the info record?

   Choose the correct answers.

   - [X] A Purchasing organization
   - [ ] B Material
   - [ ] C Client
   - [X] D Purchasing organization with plant

   Correct. In the info record, you can maintain conditions at purchasing organization level and purchasing organization with plant level.

2. An info record can apply to all plants of a purchasing organization. True or false?

   Determine whether this statement is true or false.

   - [X] True
   - [ ] False

   Correct. The statement is true. An info record can apply to all plants of a purchasing organization.

3. You create a purchase order using an info record for a material group. Which of the following are mandatory entries in the item?

   Choose the correct answers.

   - [ ] A Material number
   - [X] B Account assignment category
   - [X] C Quantity
   - [ ] D Short text

   Correct. In the item, you must enter a quantity and an account assignment category to create a purchase order using an info record for a material group.

4. Which of the following categories of purchasing info records can you create?

   Choose the correct answers.

   [X] A Standard

   [ ] B Third-party

   [X] C Subcontracting

   [ ] D Plant

   Correct. You can create Standard and Subcontracting purchasing info records.

5. Which statements apply for contracts and contract items?

   Choose the correct answers.

   [ ] A Contracts can be created only with reference to a purchase requisition.

   [X] B You can use account assignment category U (unknown) for a contract item.

   [X] C Contracts can be created without reference to an outline agreement requisition.

   [ ] D For a consumable material, the account assignment data must already be stored in the contract.

   Correct. You can use account assignment category U (unknown) for a contract item and contracts can be created without reference to an outline agreement requisition.

6. A quantity contract is fulfilled when a stipulated overall target value is reached as a result of the issue of release orders. True or false?

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   Correct. A quantity contract is fulfilled when a stipulated target quantity per contract item is reached as a result of the issue of release orders.

7. The *W* item category can be used in quantity and value contracts. True or false?

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   Correct. You can use the item category W only in value contracts.

8. Items to be purchased from a value contract with the item category *M* all have the same... (Complete the sentence). There may be more than one correct answer.

   Choose the correct answers.

   - [X] A Material group
   - [ ] B Short text
   - [ ] C Purchasing group
   - [X] D Price

   Correct. Items to be purchased from a value contract with the item category *M* all have the same material group and the same price.

9. You can create a contract with reference to a scheduling agreement, but you cannot create a scheduling agreement with reference to a contract.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

   Correct. It's exactly the other way around. You can create a scheduling agreement with reference to a contract, but not a contract with reference to a scheduling agreement.

10. How do scheduling agreements differ from contracts?

    Choose the correct answers.

    - [X] A The *U* (*Unknown*) account assignment category is allowed in the contract but not in the scheduling agreement.
    - [X] B Contracts can contain a plant but scheduling agreements must contain a plant.
    - [ ] C You can use the *W* item category in both the contract and the scheduling agreement, but you can only use the M item category in the contract.

    Correct. The *U* (*Unknown*) account assignment category is allowed in the contract but not in the scheduling agreement. Contracts can contain a plant but scheduling agreements must contain a plant.

11. In scheduling agreements, item categories *M* and *W* are not permitted. True or false?

    Determine whether this statement is true or false.

    - [X] True
    - [ ] False

    Correct. The statement is true. The *U* (*Unknown*) account assignment category is allowed in the contract but not in the scheduling agreement. Contracts can contain a plant but scheduling agreements must contain a plant.

12. Which messages are possible for scheduling agreements with release documentation?

Choose the correct answers.

- [x] A Scheduling agreement (message type NEU)
- [x] B Forecast delivery schedule
- [x] C JIT delivery schedule
- [ ] D Scheduling agreement delivery schedule line

Correct. Scheduling agreement delivery schedules can only be transmitted for scheduling agreements without release documentation.

13. When you archive the scheduling agreement releases, you cannot reverse the archives. True or false?

Determine whether this statement is true or false.

- [x] True
- [ ] False

Correct. The statement is true.

UNIT 3 Source Determination

UNIT OBJECTIVES

- Understand and manage source lists
- Maintain source lists
- Create and maintain quota arrangements
- Use quota arrangements for source determination in the planning run
- Identify priorities in source determination
- Block sources of supply

Unit 3
Lesson 1

Controlling Source Determination with Source Lists

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Understand and manage source lists

Source Determination

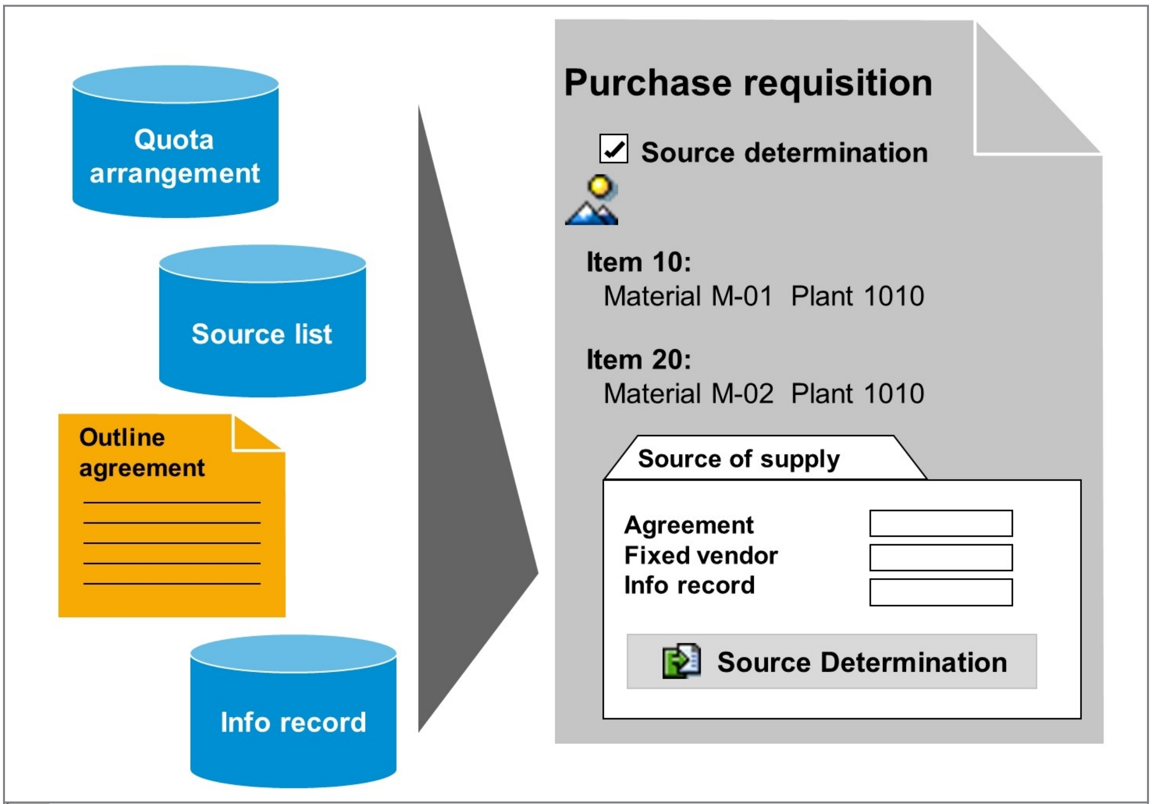


Figure 32: Overview of Supply Source Determination

The source determination process tries to assign a source of supply to purchase requisition items. For example, when you create a purchase requisition and select the *Automatic Source Determination* indicator, the system searches for possible sources of supply. If several valid sources of supply are identified for a material and none of them can be clearly determined as the preferred source of supply, a list of possible sources of supply is displayed. You can then decide on the source of supply through a price simulation or by referring to vendor evaluation data.

Hint:
The EFB user parameter (function authorizations in purchasing) enables you to exclude certain users from manually assigning sources of supply.

Source Determination and Related Transactions or Apps

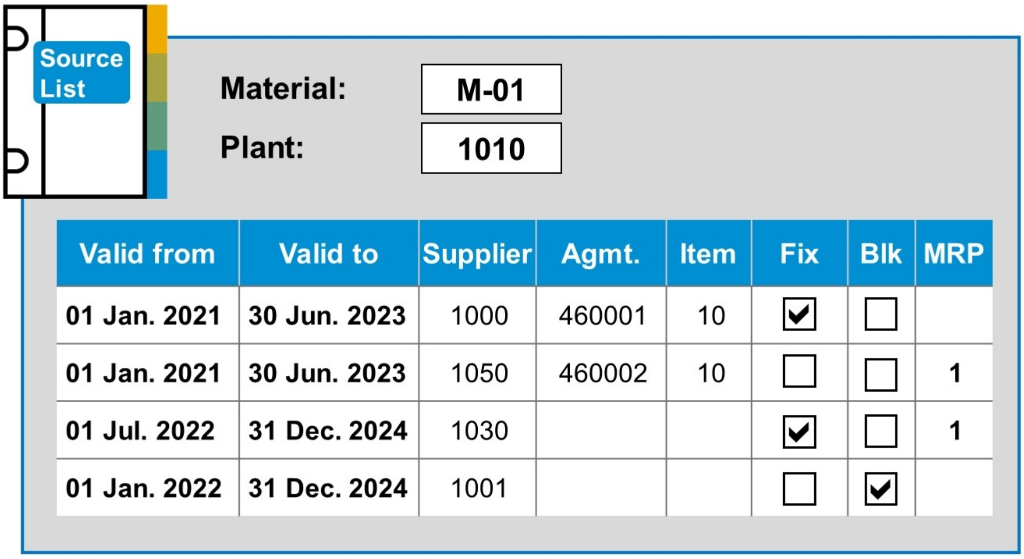
Source determination takes place when creating a purchase requisition either during the MRP run or manually. Later in the course, we will learn that the logic for source determination differs depending on whether we are talking about the MRP run or the manual creation and processing of purchase requisitions.

The following table lists some transactions (back-end system) or apps (SAP Fiori launchpad) where source determination can be performed:

Table 2: Source Determination and Related Transactions or Apps

Function	Transactions or Apps
Execute planning run	`MD01`, `MD01N`, `MD02`, `MD03` *Manage Material Coverage*, *Schedule MRP Runs*
Create purchase requisition	`ME51N` *Create Purchase Requisition - Advanced*, *Manage Purchase Requisitions - Professional*
Assign source of supply to purchase requisitions	`ME56` *Assign Source of Supply to Purchase Requisitions*
Assign and process purchase requisitions	`ME57` *Assign and Process Purchase Requisitions*, *Process Purchase Requisitions*
Create purchase order, where vendor is unknown	`ME25` *Create Purchase Order - With Source Determination*
Convert a planned order into a purchase requisition	`MD14`, `MD15` *Convert Planned Orders - to Purchase Requisitions*

Source List Functions



Valid from	Valid to	Supplier	Agmt.	Item	Fix	Blk	MRP
01 Jan. 2021	30 Jun. 2023	1000	460001	10	☑	☐	
01 Jan. 2021	30 Jun. 2023	1050	460002	10	☐	☐	1
01 Jul. 2022	31 Dec. 2024	1030			☑	☐	1
01 Jan. 2022	31 Dec. 2024	1001			☐	☑	

Figure 33: Source List

The source list can be used to control the source determination in the case of several possible sources of supply. It can also be used for other purposes.

The source list is a list of sources of supply for a material in a particular plant. Depending on the period, each source list record can be assigned attributes that have the following purposes:

- Defining a source as a fixed source
- Blocking a source
- Defining a source as relevant for MRP
- Complementary source determination when using a quota arrangement

Data in the Source List Record

Each source list record consists of the following data:

- Validity period:

  This is the period in which the settings made in the source list are valid. The reference date checked against these periods varies:

  - In manual source determination, the period always refers to the delivery date of a purchase requisition.
  - In source determination via material requirements planning (MRP), the period always refers to the requirements date.

> Note:
> For materials that are planned according to the reorder point procedure, the requirement date is the current date.

- Key source data:

  This includes the supplier number and the responsible purchasing organization number. It can also be the item of an outline agreement, such as a scheduling agreement or a contract, representing the source of supply for the material.

- Procurement plant:

  If the material is to be procured from another plant, enter the plant number in the *PPl* (*Procurement Plnt*) field, and do not enter any supplier number or outline agreement item number. The plant is only determined as source of supply for a purchase requisition item with the *U* (*Stock transfer*) item type. For purchase requisitions that are created in the planning run, the materials require a corresponding special procurement type in the MRP data of the material master record.

- Fixed source:

  The *Fix* checkbox enables you to define a source as a fixed source of supply for source determination. This fixed source is then used in all cases except the planning run. You can mark only one source of the same type, such as info record or outline agreement item, as fixed at one time. If you mark both an info record and an outline agreement item as fixed, the outline agreement item has priority.

- Blocked source:

  The *Blk* (*Blocked Source of Supply*) checkbox enables you to block a source of supply. If you block a source of supply, you cannot use the info record or outline agreement item during the source determination process, and you cannot create a purchase order or requisition with this source.

> Hint:
> If you select the *Blk* checkbox and do not enter a supplier but only a validity period, the material is excluded from external procurement. This means that you cannot order or request that material in the concerned plant during the specified validity period.

- *MRP* indicator:

  The *MRP* (*Use in Materials Planning*) field enables you to control whether a source is considered during the planning run. You do this by setting the indicator to *1*. If this source is a scheduling agreement item, by setting the indicator as *2*, you can also directly generate scheduling agreement schedule lines. You can mark multiple source list entries as MRP-relevant if you want to use them in a quota arrangement.

> Note:
> When working without a source list and having multiple sources for a material, MRP is able to determine a suitable source of supply according to a certain logic that we will learn in the lesson "Identifying Additional Aspects of Source Determination". You can use the source list and the *MRP* indicator to override this logic.

> Caution:
> The source list does not check whether an outline agreement is already completely exhausted. To enable this check, you can create, together with the source list, a quota arrangement in which you define the outline agreement target quantity as the maximum quantity.

Source List in the SAP Fiori Launchpad

If you want to maintain the source list in the SAP Fiori launchpad, use the *Manage Source Lists* app, which is located in the *Source of Supply Management* tile group. The functions are almost identical to the GUI transaction ME01. Only the validity periods are not defaulted automatically.

Mandatory Source Lists

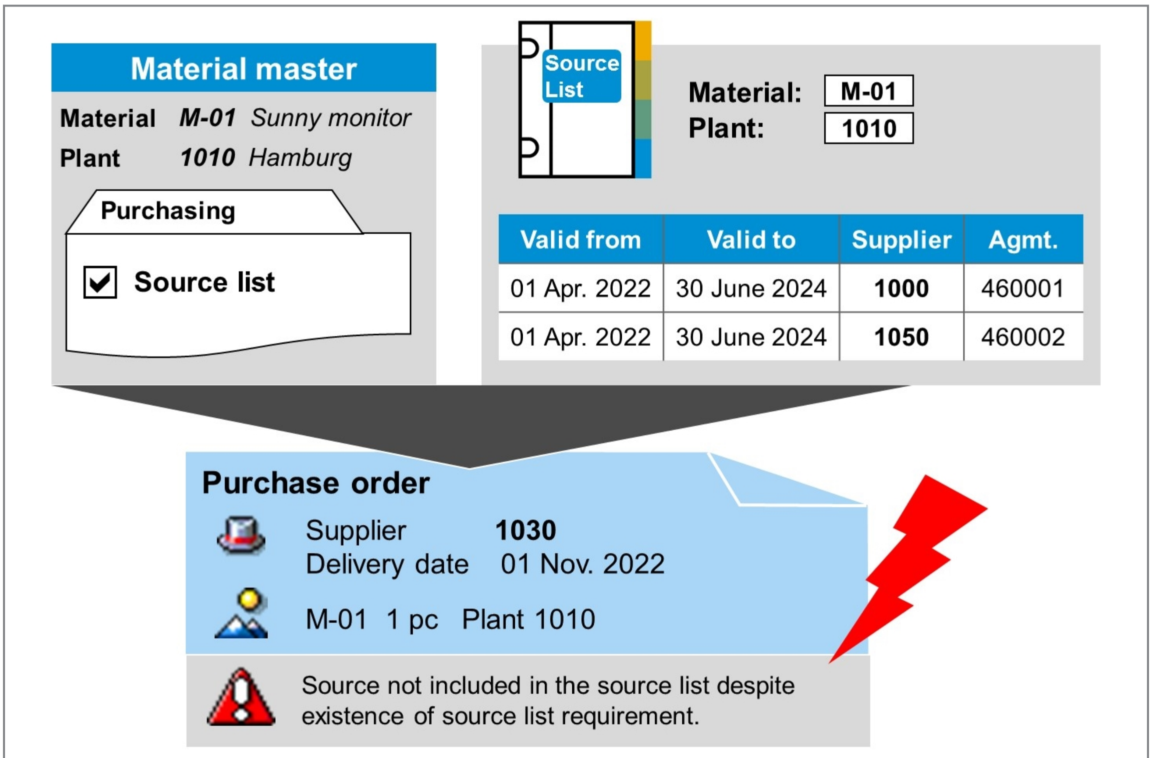


Figure 34: Source List Mandatory for Material

If you want to prevent a material from being ordered or requested from a vendor for which no corresponding source has been entered in the source list, you define the material as subject to a source list requirement in the material master record at plant level.

The source list requirement function is especially useful when you first need to release suppliers (for example, by quality inspection), before you can place orders with them. After you release the suppliers, you can enter and use the sources in the source list.

When creating a purchase requisition or purchase order, if you try to use a source that is not contained in the source list, you will get an error message.

Hint:
Instead of the supplier, if the manufacturer of the material is important, you can use the *Approved Manufacturer Parts* function.

Source List Mandatory at Plant Level

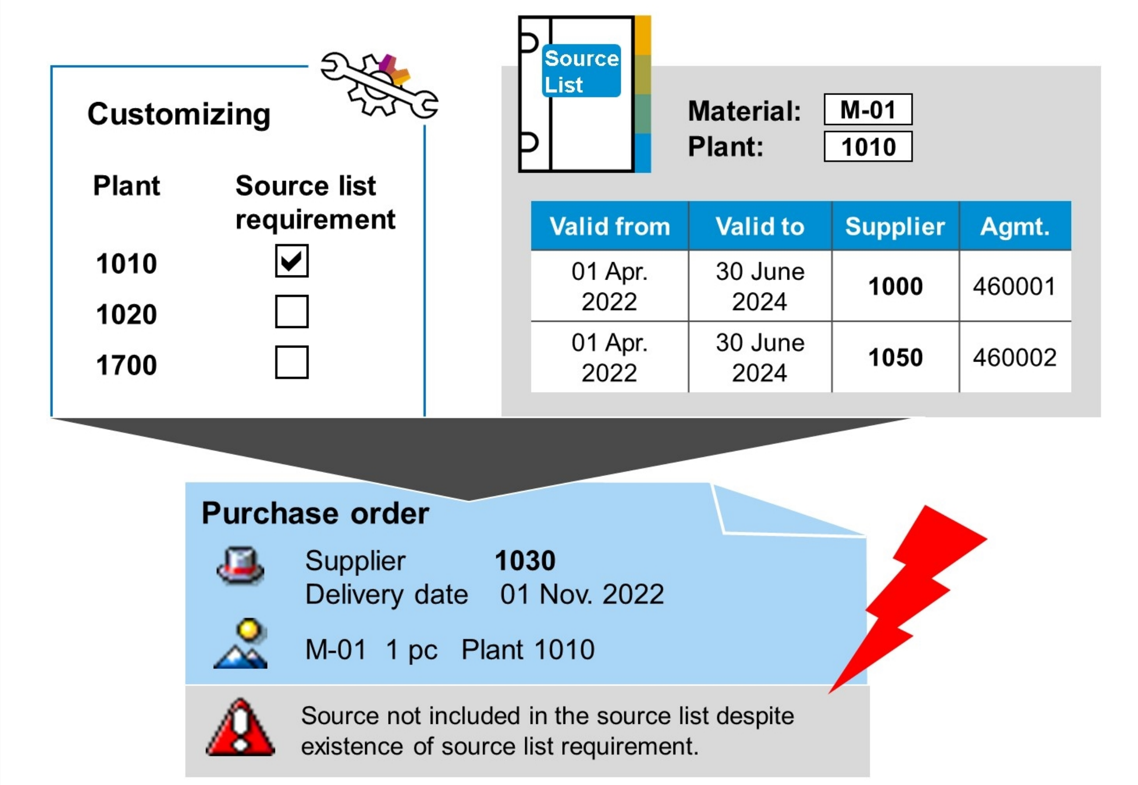


Figure 35: Source List Mandatory at Plant Level

You can also specify in Customizing that all materials for a certain plant are to be subject to a source list requirement. If a source list requirement exists for a plant, you have to enter valid source list entries for every material in that plant before it can be ordered. Source list analysis enables you to find out whether source list records exist for materials of a plant within a certain period. For plants with a source list requirement, you can find out the materials for which source list records are missing and call them immediately for maintenance.

Note:
You cannot, by using a source list requirement or blocking a source in the source list, prevent an automatic generation of a purchase order with the supplier concerned by posting a goods receipt.

You can define a source list requirement at plant level in Customizing for *Materials Management* under *Purchasing* → *Source List* → *Define Source List Requirement at Plant Level*.

To analyze the source list, on the SAP Fiori Launchpad start the *Analyze Source List* app. Or in the SAP GUI on the *SAP Easy Access* screen, choose *Logistics* → *Materials*

Management → Purchasing → Master Data → Source List → Follow-On Functions → Analyze (`ME06`).

LESSON SUMMARY

You should now be able to:

- Understand and manage source lists

Unit 3
Lesson 2

Maintaining Source Lists

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Maintain source lists

Source List Maintenance

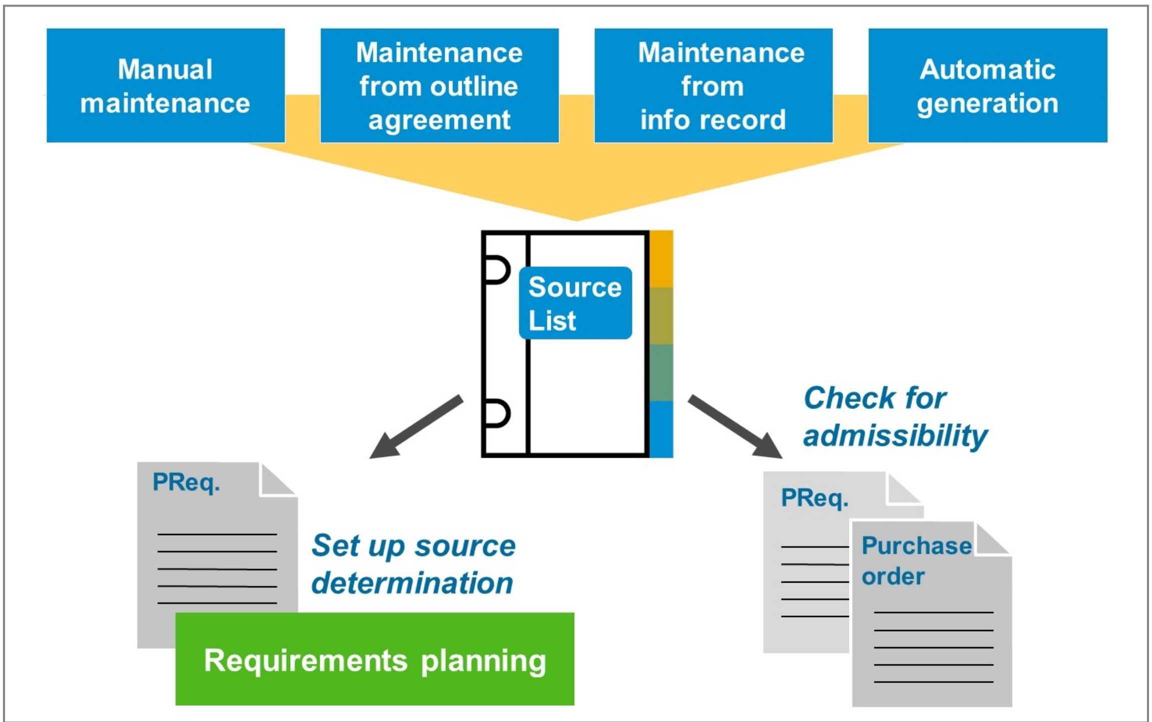


Figure 36: Source List Maintenance

You can create source list records for a material as follows:

- Manually:

  Use this method if you want to make changes or enter new entries in the source list.

- Creation from within an outline agreement:

  With this procedure, you can adopt an item from an outline agreement in a source list when creating or changing the agreement. On the outline agreement overview screen, select an item for which you want to create source list records and choose *Item →* *Maintain Source List*. If you have not entered a plant in the outline agreement item, you must additionally enter the plant(s) for the source list record(s).

- Creation from within an info record:

With this procedure, you can enter a vendor in the source list when creating or changing a purchasing info record. In the info record, choose *Extras → Source List*. If the info record is valid for an entire purchasing organization, you can create the source list for all plants of the organization in question. To select the plant, choose *Goto → Plant*.

- Automatically:

  You can have source list records generated automatically by the system. The source list records can be generated for several materials (collective procedure) or for a single material (individual procedure). The system thus enables you to create or update all source list records quickly. With this procedure, you can create a source list record for every source of one or several materials.

Prerequisites for Generating Source List Records

Before generating source list records, you should answer the following questions:

- For which materials in which plants are source list records to be generated?
- Are only outline agreement items, or only info records, or both source types to be taken into account?
- For which period are the source list records to be valid?
- Do source list records already exist for the materials for which you want to generate source list records? If so, you must decide if the system deletes or leaves the old records unchanged.
- Which indicators, such as the *Fix*, *Blk*, or *MRP* indicators, should be set?

On the SAP Fiori launchpad, the following apps are available for source list maintenance:

- Manual creation: *Manage Source Lists*
- Automatic generation: *Generate Source List*

In the SAP GUI on the *SAP Easy Access* screen, choose following menu paths:

- Manual Creation: *Logistics → Materials Management → Purchasing → Master Data → Source List → Maintain* (`ME01`).
- Automatic Generation: *Logistics → Materials Management → Purchasing → Master Data → Source List → Follow-On Functions → Generate* (`ME05`).

Corresponding apps are also available for both transactions.

Source List Records for Material Group Contracts

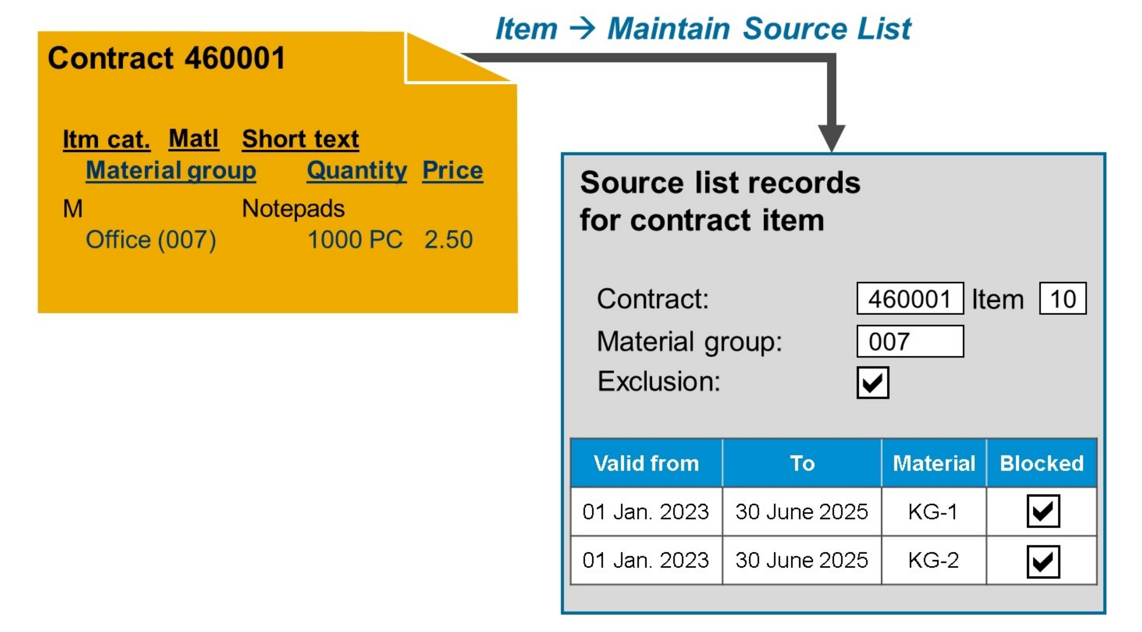


Figure 37: Source List Records for Material Group Contracts

You may have outline agreement items relating to a material group rather than a single specific material – that is, an outline agreement item with item category *M* (*Material unknown*) or *W* (*Material group*). You can create material-specific source list records for these contract items. When doing so, you can decide whether to exclude or include certain materials of the relevant material group by means of the source list.

Your decision could be as follows:

- Exclude materials:

  Generally, you can order all materials belonging to the specific material group with reference to this contract item except those materials that are excluded for the material group item in the source list. A source list entry with a *Blk* indicator selected is generated for these materials.

- Include materials:

  Only materials belonging to the specific material group for which the contract item is listed in the source list can be ordered with reference to this contract item. For all other materials, the following error message appears:

  `The source of supply is blocked by the source list.`

  Materials without a material master record, in contrast, can always be ordered with reference to the contract item.

Example

A contract exists for computer components. It is not necessary to include every possible material in the contract as a separate item. The contract must merely have a single item covering all materials, for example, the material group ZT99. The material D-01, which also belongs to the material group ZT99, should be excluded from contract release, because a separate outline agreement item exists for this material. Therefore, you decide to use the source list for the material group item as an exclusion list.

To Create the Source List for a Material Group Item

1. Start the *Change Purchase Contract* app or the transaction `ME32K` to change the existing contract.
2. On the contract overview screen, select the item for which you wish to enter the source list record and choose *(Menu)* → *Item* → *Maintain Source List*.
3. To exclude material D-01, select the *Exclusion* indicator checkbox.
4. Enter the material number **`D-01`** in the list with the appropriate validity period.

   The system generates a source list record in which this outline agreement item is blocked as a source for material D-01.

> Hint:
> Materials without a material master record cannot be blocked using the source list.

Evaluations for Source Lists

The following table lists the useful evaluations that are available for source lists:

Evaluations	Transactions Codes or App Name
Source lists for the material	`ME0M`
Analyze source lists	`ME06` *Analyze Source List*

On the SAP Fiori launchpad, you can also use the *Manage Source Lists* app for reviewing source lists.

LESSON SUMMARY

You should now be able to:

- Maintain source lists

Unit 3
Lesson 3

Controlling Source Determination with Quota Arrangements

LESSON OBJECTIVES

After completing this lesson, you will be able to:

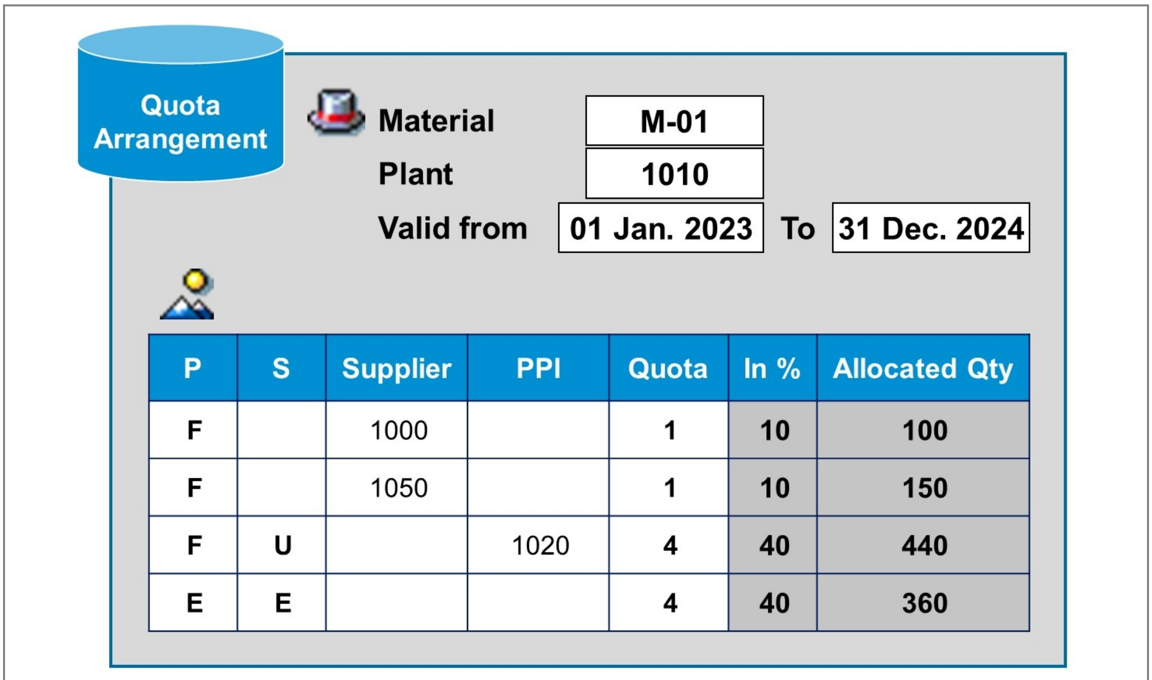
- Create and maintain quota arrangements

Quota Arrangement Functions

Similar to the source list, a quota arrangement facilitates the administration of supply sources at plant level. If you would like to procure a material from different sources within a certain time period, you can assign a quota to each source. The quota indicates which share of the requirements arising for the material over a certain period is to be procured from which source.

If a valid quota arrangement exists for a material, it is taken into account during source determination. A quota arrangement is agreed for a certain period of time, and a quota arrangement item is created for each source during that period. If a quota arrangement applies, this does not mean that the quantity of a single manually created purchase requisition is automatically apportioned among different sources. The entire requested quantity of a purchase requisition item is assigned fully to one source in accordance with the quota arrangement. You can only divide up a single requirement according to the quota in the planning run.

Quota Arrangement Maintenance



P	S	Supplier	PPI	Quota	In %	Allocated Qty
F		1000		1	10	100
F		1050		1	10	150
F	U		1020	4	40	440
E	E			4	40	360

Figure 38: Quota Arrangement

To Create a Quota Arrangement for a Material

1. After entering the material and plant on the initial screen, specify, in the header overview, the date that the quota arrangement is valid until.

   The start date is always the current date or the follow-on date from the end of the previous quota arrangement.

2. Enter a quota arrangement item for each source of supply that you want to use in the quota arrangement.

   You must do the following:

   - Specify the procurement type – in-house production or external procurement – for each source.
   - Where appropriate, specify the special procurement type.

     You can use the following special procurement types in quota arrangement:

     - In-house production
     - Production in another plant
     - Consignment
     - Subcontracting
     - Stock transfer
   - Enter the vendor. If it is a stock transfer, specify the supplying plant.
   - Specify the quota that you want to assign to this source.

- Specify further details if required for the individual quota arrangement items.

3. The system calculates the percentage distribution of the requirements on the basis of the quotas. The system updates the quota-allocated quantity following each assignment of requirements effected on the basis of the quota arrangement.

> Note:
> In Customizing for *Materials Management* under *Purchasing* → *Quota Arrangement* → *Define Number Ranges for Quota Arrangements (Purchasing)*, you define the number range for the quota arrangements and you specify whether the number is to be assigned by the system or externally.

On the SAP Fiori launchpad, you can use the *Manage Quota Arrangements* app in the *Source of Supply Management* tile group.

To create a quota arrangement in the SAP GUI on the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Quota Arrangement* → *Maintain* (`MEQ1`).

Operation Mode for Quota Arrangements

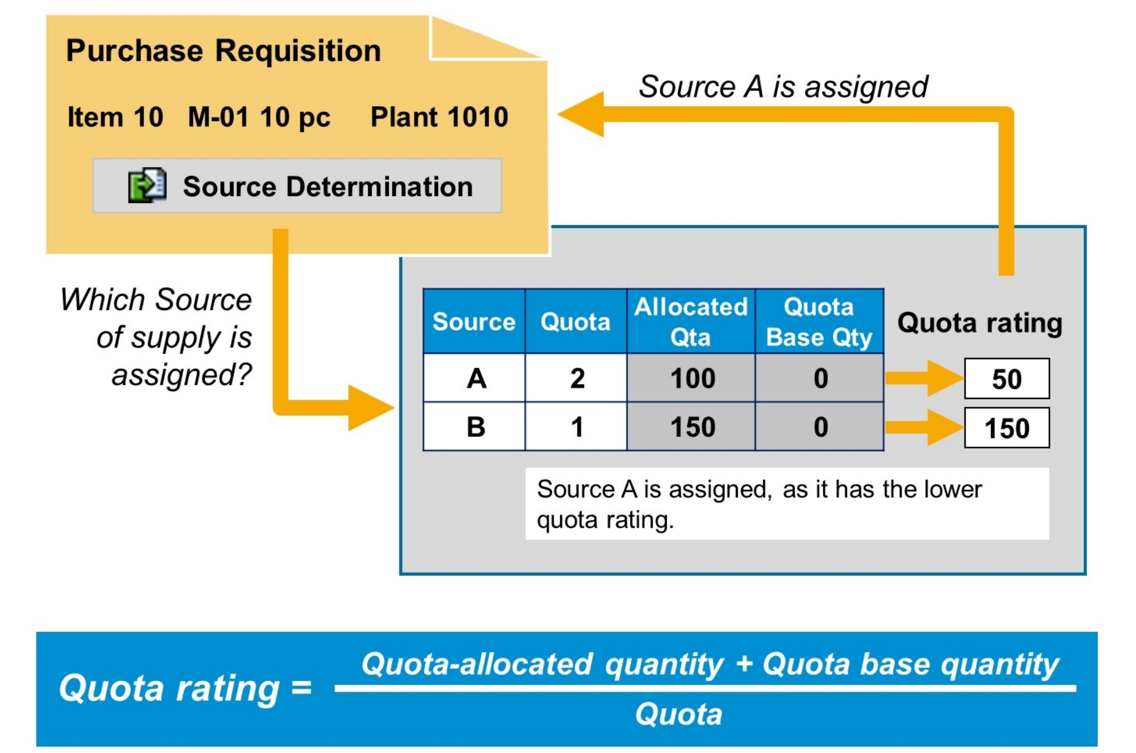


Figure 39: Source Determination

In the case of sources for which you have specified a quota in the current validity period, the system calculates which source is used next for a requirement. The system calculates this during the source determination process for a requested material. For each source of supply, the system calculates a quota rating as follows: Quota rating = (Quota-allocated quantity + Quota base quantity)/Quota.

The individual values are defined as follows:

- Quota-allocated quantity:

  This is the total quantity of all requirements that have been assigned to a source since the start of the quota arrangement. The quota-allocated quantity is updated automatically. The update also takes place when you delete or change objects after the assignment.

- Quota base quantity:

  This is the quantity used for manual control of the quota arrangement (for example, when new sources are included).

- Quota:

  This number determines how requirements are apportioned among the various sources.

> Hint:
> The current quota rating is not displayed in the quota arrangement.

In the source determination process outside MRP, the source with the lowest quota rating is always assigned. If two or more sources have the same quota rating, the system assigns the first item, not the one with the highest quota.

You use the quota base quantity when a new source is included in an already existing quota arrangement or to remedy a disproportion between quota and quota-allocated quantity.

Example of Quota Base Quantity Usage

You include a new supplier in an already existing quota arrangement. The existing quota arrangement consists of two suppliers, who are each assigned 50% of the material requirements that arise. Each of these suppliers has a high quota-allocated quantity, because your company has already ordered a lot of material from them during the validity period of the quota arrangement.

The new supplier is to be assigned the same share of forthcoming requirements as the other two. However, according to the formula for calculating the quota rating, all new requirements would be allocated to the new supplier until its quota number exceeds that of one of the other two suppliers.

If purchase requisitions are to be allocated equally with immediate effect, as if the new supplier had been part of the quota arrangement from the beginning, you must enter a quota base quantity for the new supplier accordingly or have the system determine it.

In the GUI transaction `MEQ1` the system provides the following procedures for calculating the quota base quantity:

- Individual calculation:

  This calculates the quota base quantity for the selected quota arrangement items. Select the items whose quota base quantity is to be recalculated and choose *Edit → Base Quantities → Individual Calculation*.

- Collective calculation:

  This calculates the quota base quantity for all quota arrangement items. Use this procedure if you want to set the quota rating to the same value for each source. Choose *Edit → Base Quantities → Collective Calculation*.

Example of Quota Rating Calculation

You create a purchase requisition for 100 pieces of a material for which the source determination process in the requisition is regulated on the basis of a quota arrangement.

The following table shows the situation of the quota arrangement at the time of source determination:

Table 3: Quota Arrangement

Supplier	Quota	Quota-Allocated Quantity	Quota Base Quantity
A	3	780	0
B	2	380	0
C	1	0	260

In accordance with the formula Quota rating = (Quota-allocated quantity + Quota base quantity)/Quota, the quota ratings for vendors A, B, and C are as follows:

Table 4: Vendor Quota Ratings

Supplier	Quota Rating
A	(780 + 0) / 3 = 260
B	(380 + 0) / 2 = 190
C	(0 + 260) / 1 = 260

This means that the source representing supplier B will be assigned to the next requisition item because this supplier has the lowest quota rating.

Quota Arrangement After the Requisition Is Saved

After the requisition is saved, the quota arrangement is as follows:

Table 5: Quota Arrangement After Requisition Is Saved

Supplier	Quota	Quota-Allocated Quantity	Quota Base Quantity
A	3	780	0
B	2	480	0
C	1	0	260

In accordance with the formula mentioned earlier, the quota ratings for suppliers A, B, and C are as follows:

Table 6: Vendor Quota Ratings

Supplier	Quota Rating
A	(780 + 0) / 3 = 260
B	(480 + 0) / 2 = 240

Supplier	Quota Rating
C	(0 + 260) / 1 = 260

In the GUI transaction `MEQ1` you can simulate source determination using the quota arrangement. To do so, go to maintenance for quota arrangement and choose *Extras → Simulation → Quota Arrangement* or *Extras → Simulation → Source of Supply*. If you choose the first menu path, only the quota arrangement is checked. If you choose the second menu path, outline agreements, info records, and source lists are also included.

LESSON SUMMARY

You should now be able to:

- Create and maintain quota arrangements

Unit 3
Lesson 4

Executing the Planning Run with Quota Arrangements

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use quota arrangements for source determination in the planning run

Quota Arrangements in Material Requirements Planning

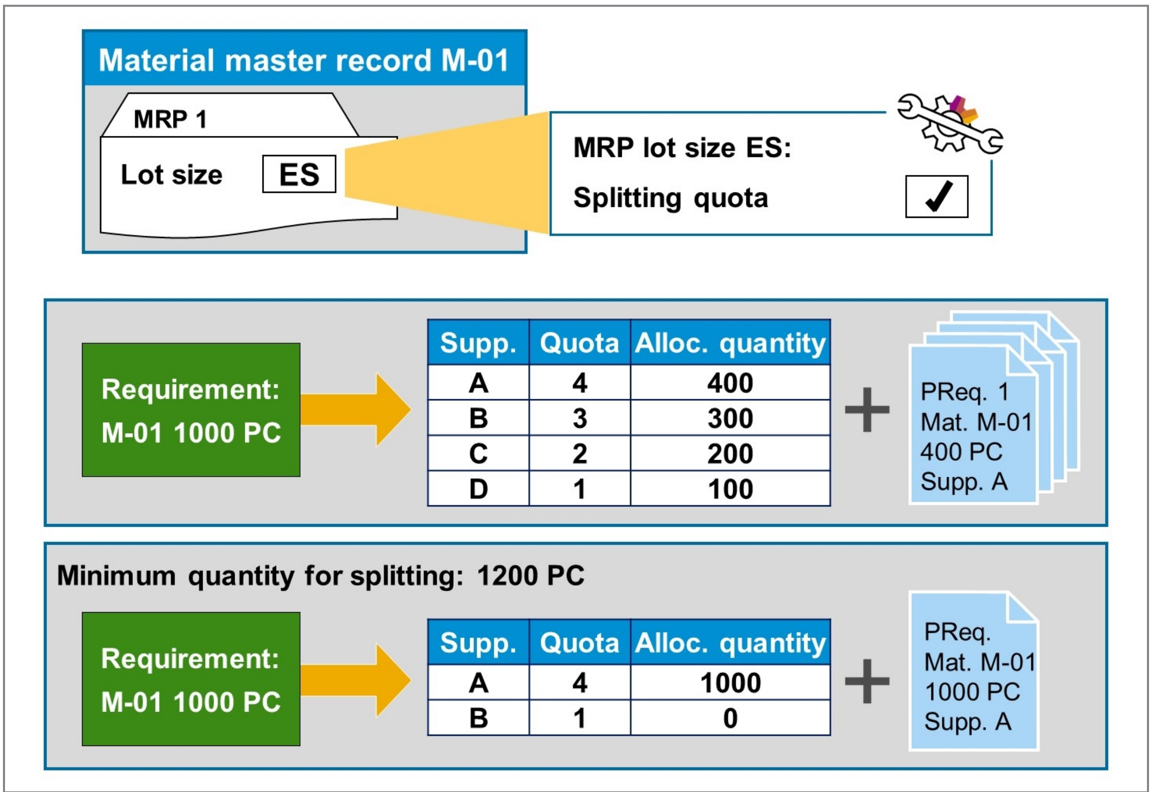


Figure 40: Requirement Splitting

In the planning run, you can split up an individual requirement among various sources. This procedure is called splitting. You control whether a requirement is split or not using the assigned lot-sizing procedure in the material master record and the minimum split quantity in the quota arrangement header.

In Customizing of the lot-sizing procedure, you can set the indicator for the splitting quota. For example, the *Splitting* indicator is set for the standard lot-sizing procedure *ES* (lot-for-lot size calculation with splitting). If you assign this lot-sizing procedure to a material and have a quota arrangement for this material, then each purchase requisition quantity calculated by MRP is split between the various sources of supply for the quota arrangement.

Example of Requirement Splitting in Materials Planning

There is a requirement for 1,000 pieces of a certain material in whose master record the *ES* (lot-for-lot size calculation with splitting) lot size has been set.

The suppliers currently have the quotas as listed in the following table:

Table 7: Quotas

Supplier	Quota	Quota-Allocated Quantity
A	4	420
B	3	310
C	2	190
D	1	100

In requirements planning, four purchase requisitions are generated. The requirement of 1,000 pieces is apportioned among the four sources in the proportion 4:3:2:1. In the case of a quota arrangement with splitting, the quota-allocated quantity and quota rating are both ignored.

This results in the following situation after source allocation:

Table 8: Situation After Assignment

Supplier	Quota	Quota-Allocated Quantity
A	4	820
B	3	610
C	2	390
D	1	200

To prevent the system from splitting up a requirement that is too small, you can specify a minimum quantity for splitting in the quota header. The minimum quantity defines the lowest quantity that a lot must have before it is split up among several sources during the requirements planning run.

Example of Requirement Splitting with Minimum Splitting Quantity

For material M-01, a minimum splitting quantity of 1,200 is set. If there is a requirement of 1,000 pieces, this requirement will be completely assigned to the source with the lowest quota rating.

Lot Sizes with Splitting Quota

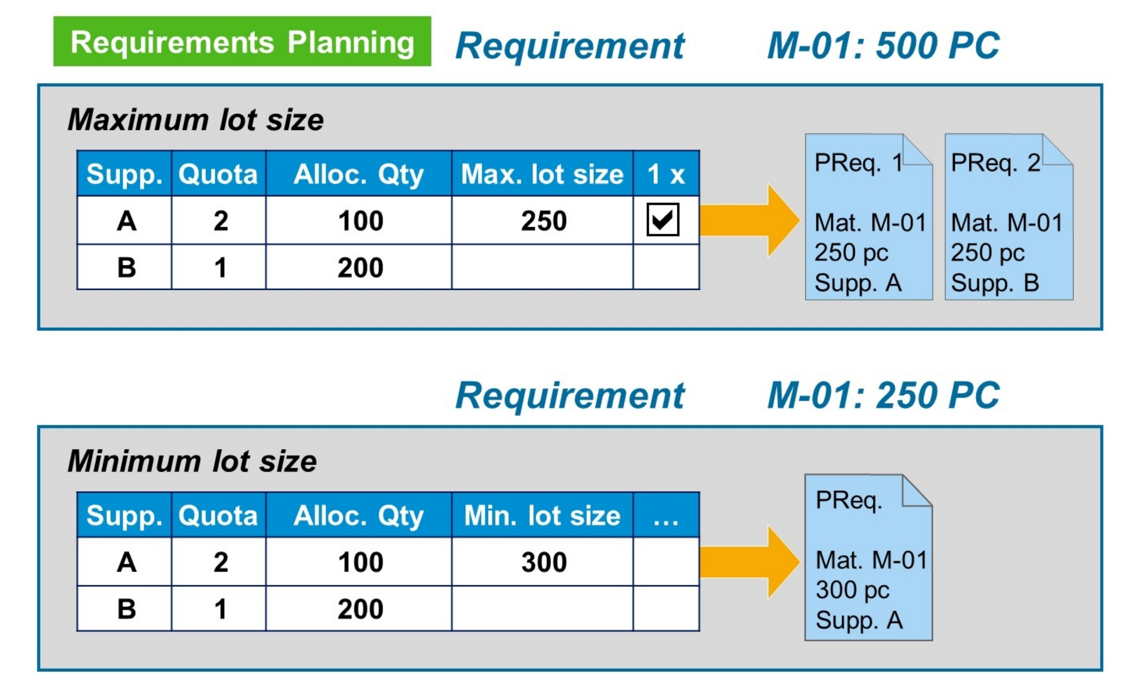


Figure 41: Lot Sizes with Splitting Quota

You can define lot-sizing procedures in Customizing for *Materials Management* under *Consumption-Based Planning* → *Planning* → *Lot-Size Calculation* → *Define Lot-Sizing Procedure*.

When maintaining a quota arrangement, you can also specify a minimum or maximum lot size for each item of the arrangement. However, the specified lot sizes are only considered in the planning run. The lot size specified in the quota arrangement item overrides the settings in the material master record.

Lot Size Definition

You can define the following lot sizes:

- Maximum lot size per quota arrangement item:

  Maximum lot size is the maximum quantity that is assigned to a source for each procurement proposal in the requirements planning run. If the requirement quantity exceeds the maximum lot size, the quantity is split into several proposal for the same source. To prevent this, you can select the *1x* indicator checkbox. If you set this indicator, a source is not taken into account for more than one lot with a quantity equal to the maximum lot size. The remaining quantity is then allocated to the remaining sources.

- Minimum lot size per quota arrangement item:

  Minimum lot size is the minimum purchase order quantity that is assigned to a source for a proposal in the requirements planning run. If the requirement quantity is less than the minimum lot size, the minimum lot size for the source is set for the lot.

Example of Maximum Lot Size with 1x Indicator

There is a requirement for 500 pieces of a certain material.

The starting situation is as shown in the following table:

Table 9: Starting Situation

Vendor	Quota	Quota-Allocated Quantity	Maximum Lot Size	1x
A	3	100	250	x
B	1	200		

You have set the *1x* indicator for vendor A. Therefore, a planning run will generate a procurement proposal for 250 pieces with vendor A and a procurement proposal for 250 pieces with vendor B. If you had not set the *1x* indicator, the planning run would generate two procurement proposals for 250 pieces with vendor A.

In addition to a minimum lot size or maximum lot size, or both, you can also specify a maximum quantity in a quota arrangement item. The maximum quantity is taken into account in both the manual creation of purchase requisitions and the automatic generation of procurement proposals in material requirements planning. The maximum quantity acts as an upper limit for the quota-allocated quantity for a source. A quota arrangement item is not suggested as source if the quota-allocated quantity is – or would become – greater than or equal to the maximum quantity.

For example, you can enter as maximum quantity the target quantity of an outline agreement item that is marked as relevant to MRP in the source list.

Example of Maximum Quantity Without Splitting Quota

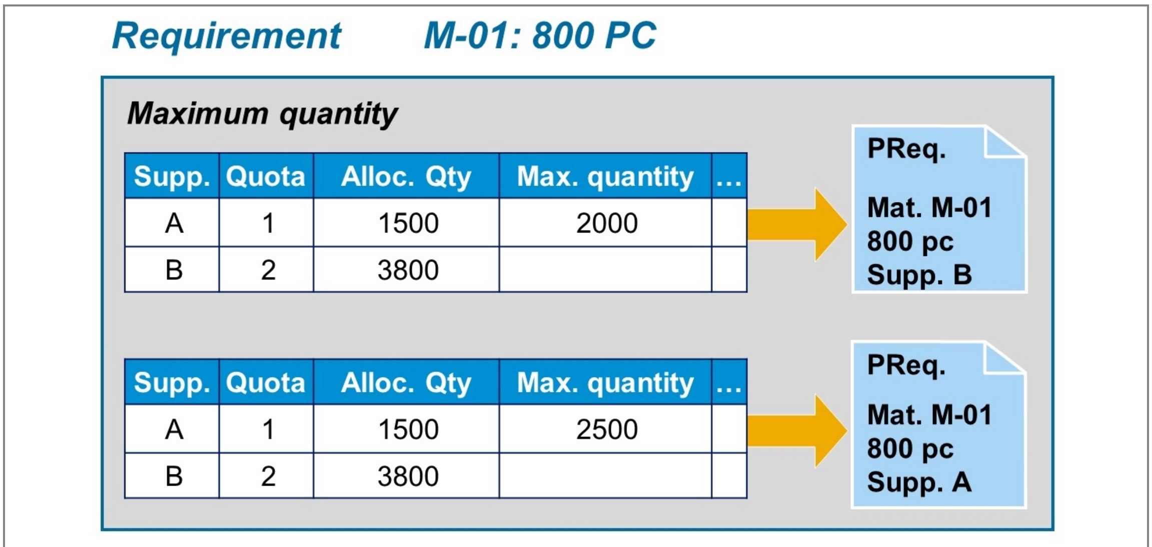


Figure 42: Maximum Quantity Without Splitting Quota

There is a requirement for 800 pieces of material M-01.

The quota arrangement has been maintained in the system according to the following table:

Table 10: Quota Arrangement

Vendor	Quota	Quota-Allocated Quantity	Maximum Quantity
A	1	1500	2000

Vendor	Quota	Quota-Allocated Quantity	Maximum Quantity
B	2	3800	

With this starting situation, a planning run would result in the generation of one procurement proposal for 800 pieces with vendor B as the source. Although vendor A has a lower quota rating than vendor B, the maximum quantity would be exceeded because the quota quantity of 1,500 pieces has already been allocated. If the maximum quantity were not 2,000 but 2,500 pieces, the system would assign vendor A as the source.

Priority is another option for quota arrangements. For example, you can produce 10,000 pieces of a material per month yourself. Using quota arrangements, you want to procure the requirements that exceed the quantity of 10,000 pieces within a month from an external vendor. You achieve this by including the in-house production and the external vendor in the quota arrangement. For the in-house production item, enter a maximum release quantity of 10,000 a month and specify a priority of 1. The item for the external vendor does not require any further indicator.

Hint:
When you work with priorities, you cannot use a lot-sizing procedure with splitting quota.

LESSON SUMMARY

You should now be able to:

- Use quota arrangements for source determination in the planning run

Identifying Additional Aspects of Source Determination

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Identify priorities in source determination

Source Determination in the Planning Run

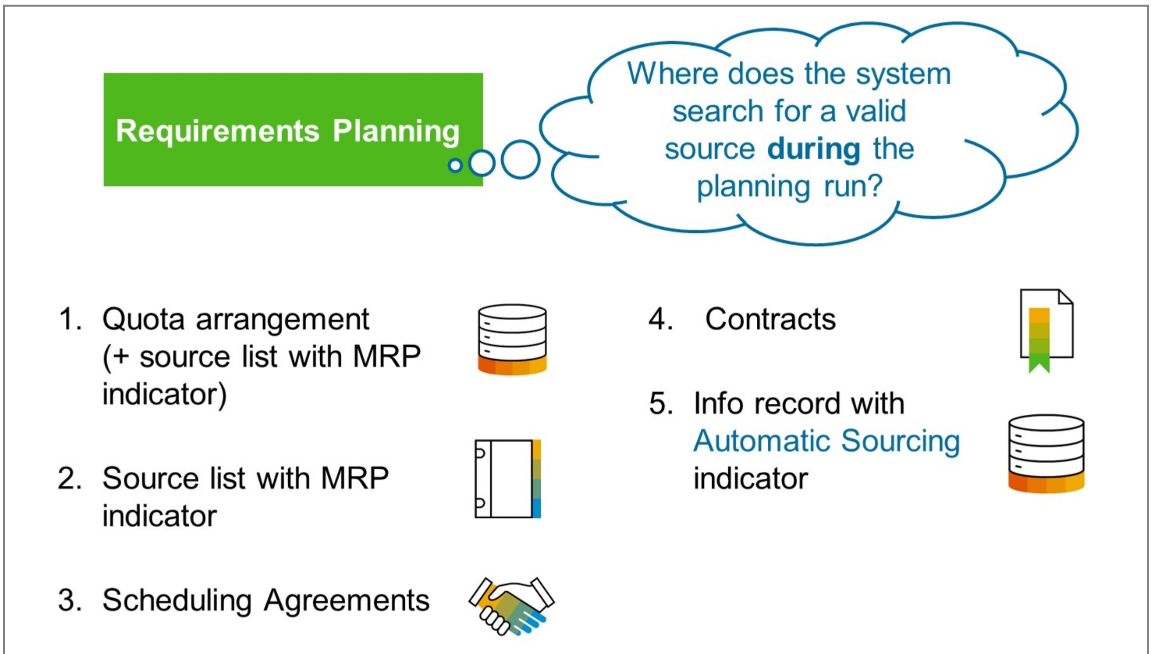


Figure 43: Source Determination in the Planning Run

The search logic of automatic source of supply determination in the planning run differs from the search logic in other processes in which you can use source of supply determination. During the MRP run, the source of supply determination is performed in the background.

During the MRP run, the system determines the possible sources according to the following priorities:

1. Quota arrangement:

   If a quota arrangement exists for a material, it has the highest priority. You can enter only suppliers and plants in the quota arrangement, but no outline agreement items. If you want outline agreement items to be found as sources, you must additionally enter these in the source list with MRP indicator *1* (*Record relevant to MRP*) or *2* (*Record relevant to MRP. Sched. lines generated automatically*). If you have entered different delivery times in the info records to those in the material master record, you should also maintain MRP-relevant source list entries for the materials concerned, in addition to the quota arrangement.

2. Source list:

   If there is no quota arrangement, the system checks the existing source list entries for which the MRP indicator *1* or *2* has been set. If the indicator is set for more than one item, the system takes the first item with an *MRP* indicator.

3. Scheduling Agreement:

   If several valid scheduling agreements exist, MRP selects a scheduling agreement with active releases first. Otherwise MRP selects the scheduling agreement with the smallest document number.

4. Contract:

   If several valid contracts exist, plant-specific contracts have higher priority than cross-plant contracts. If there are several contracts on the same organizational level, MRP selects the one with the smallest document number.

5. Info record with *Automatic Sourcing* indicator:

   If there is no quota arrangement, no source list, and no outline agreement, MRP can assign an info record that is marked as relevant for sourcing. If the indicator is set for more than one info record, the system assigns according to the following priorities:

   a. Plant-specific info records have higher priority than info records on purchasing organization level

   b. Smallest supplier number

   c. Smallest purchasing organization number

   d. Smallest purchasing group number

For materials that do not match any of these options, the system generates procurement proposals without a source.

Source Determination Outside the Planning Run

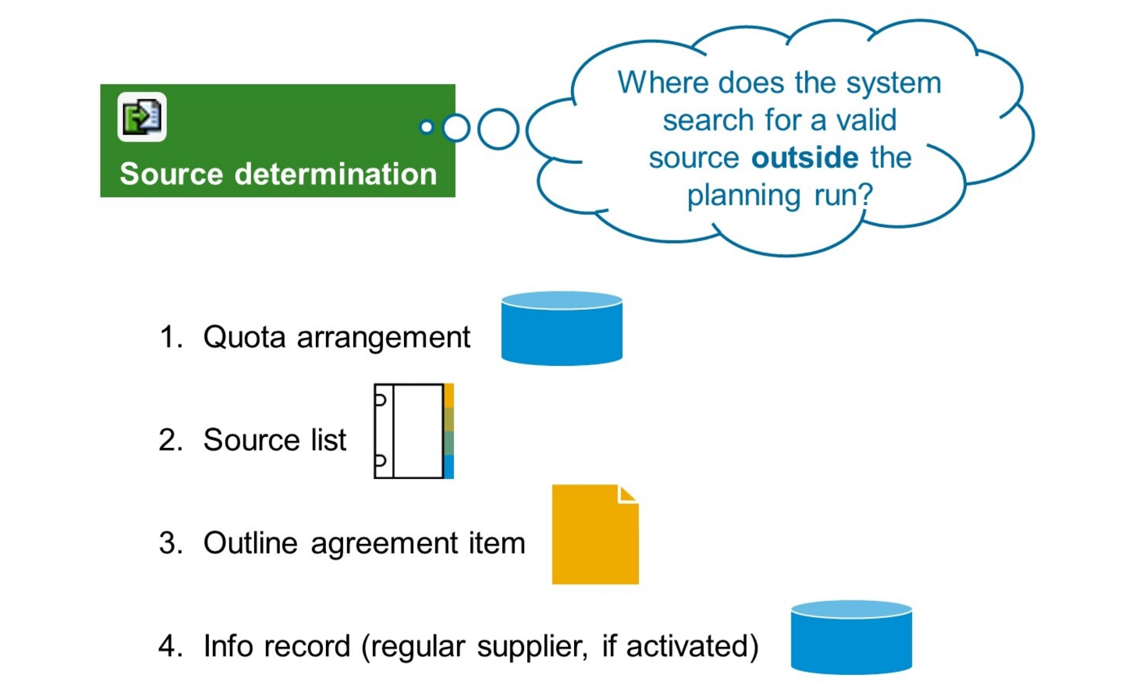


Figure 44: Source Determination Outside the Planning Run

Source Determination Search Logic

When you manually create a purchase requisition with automatic source determination, the system determines the possible sources according to the following priorities:

1. Quota arrangement:

   The system first checks whether there is a quota arrangement for the material whose validity period covers the delivery date in the purchase requisition. If a quota arrangement exists, the system assigns the source with the lowest quota rating.

2. Source list:

   If there is no valid quota arrangement, the system checks whether there is an entry in the source list for the material in the relevant plant. The validity period of the source list entry must cover the delivery date in the requisition. The entry may take the form of either an info record or an outline agreement (contract or scheduling agreement). If the source list contains only one item, the system assigns this source to the purchase requisition. If the list contains several valid entries, the source with the *Fixed* indicator will be assigned. If both an outline agreement item and an info record are marked as fixed source, the outline agreement item has higher priority and is assigned. The *Fixed* indicator cannot be set for more than one source of the same type (outline agreement or info record) in the same validity period.

3. Outline agreement items:

   If neither a quota arrangement nor a source list exists, the system searches for valid outline agreement items. If you have already triggered the source determination process in the requisition header, a unique outline agreement item is assigned directly. Unique means that there is only one valid outline agreement item. If more than one valid outline agreement item is available, you can select from a list. If you have triggered the source determination process per item, all valid sources that exist in the system are offered for selection.

4. Info records:

   If neither a quota arrangement, nor a source list, nor outline agreement items exist, the system searches for valid info records. If you have already triggered the source determination process in the requisition header, a unique info record is assigned directly. Unique means that there is only a single valid info record. If more than one valid info record is available, you can select from a list.

Source Determination Related Points

The following are some points to remember with respect to source determination:

- The system does not use condition technique for source determination. Therefore, there is no determination analysis with which you can determine why a certain source was assigned to a requirement.
- Plants are found as a source of supply only if you use the stock transfer item category in the purchase requisition.

Regular Supplier

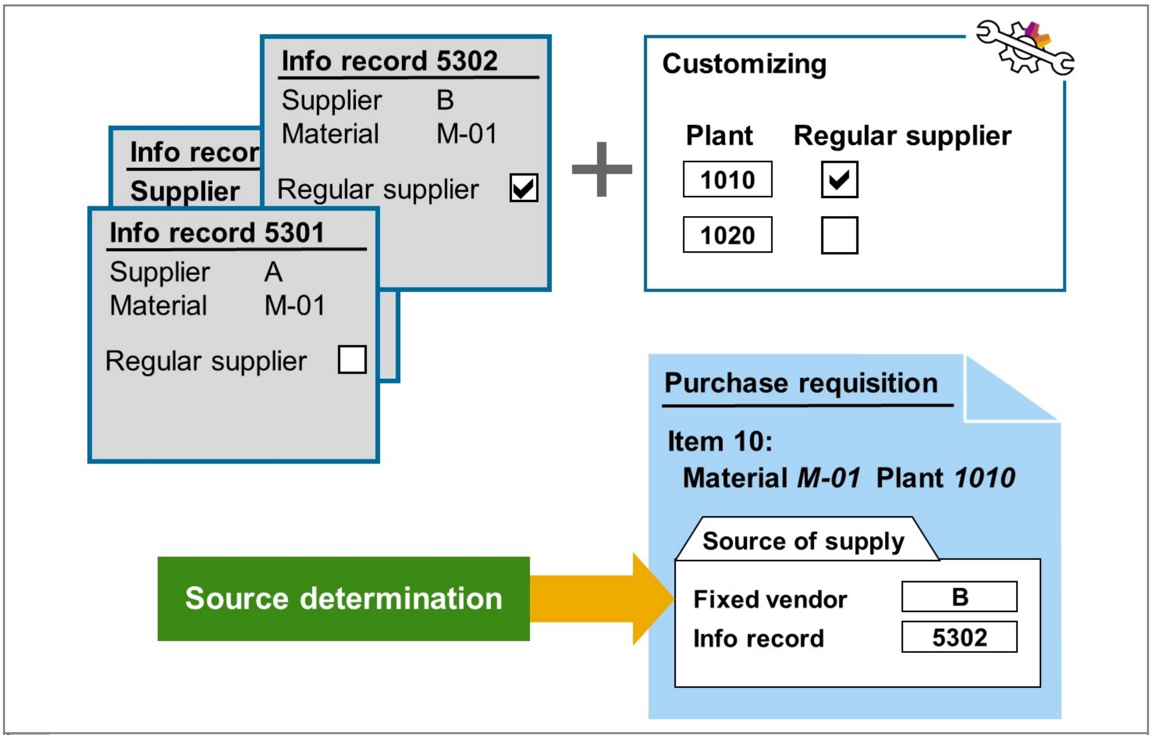


Figure 45: Regular Supplier

You use the *Regular Supplier* indicator in the info record to specify that a material is to be procured client-wide from this supplier. The regular supplier is thus comparable to the fixed supplier that you can specify in the source list at plant level. You select the *Regular Supplier* indicator in the general data of the info record. You must activate the regular supplier usage in Customizing for each relevant plant in order for the regular supplier to be determined during source determination.

If you have set the indicator in the info record and made the appropriate Customizing setting, the regular supplier is proposed as the unique source, if you have only info records as source of supply for the corresponding material. You are allowed to set the indicator only in one info record per material. If you set the indicator in another info record, you will receive a warning. The indicator will be deselected in the previous info record if you confirm this.

In requirements planning, the regular supplier is only considered if your system is a retail system.

You can activate regular supplier per plant in Customizing for *Materials Management* under *Purchasing → Source Determination → Define Regular Supplier*.

LESSON SUMMARY

You should now be able to:

- Identify priorities in source determination

Unit 3
Lesson 6

Blocking Sources of Supply

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Block sources of supply

Blocking of Sources of Supply

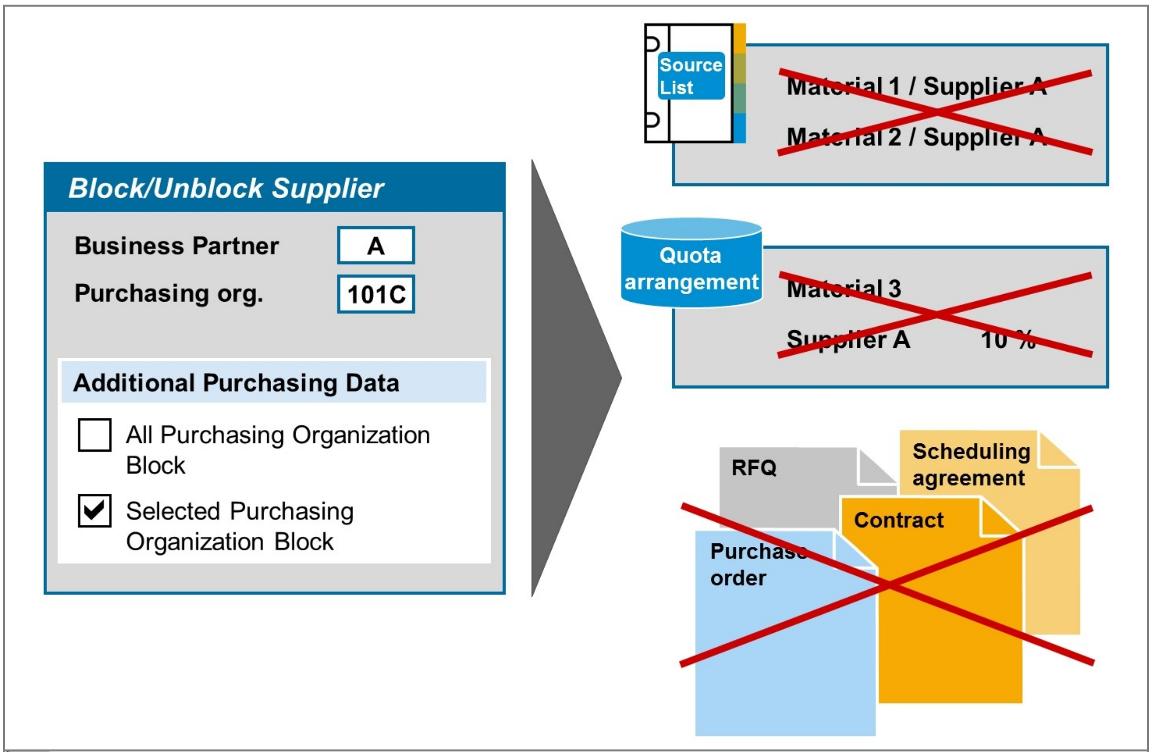


Figure 46: Blocking Suppliers

There may be instances when you want to prevent goods from being procured from a particular supplier, for example, because the supplier has recently supplied products of deficient quality. The business partner master record allows you to block purchases from such suppliers. You can block a supplier either for all purchasing organizations or only for a specific purchasing organization.

As soon as you set the blocking indicator for a supplier, you cannot create any more purchase orders for that supplier. You cannot create any Request for Quotation (RFQ), outline agreement, quota arrangement, or source list entry for the blocked supplier. Similarly, you can no longer assign an info record or an outline agreement item with this supplier as a source in a requisition. The block applies until you remove the blocking indicator again.

Functions to Block a Supplier

On the SAP Fiori launchpad you can use the following apps, to block a supplier:

- *Block Vendor (Purchasing)*
- *Block Vendor (Centrally)*

To open the corresponding GUI transactions on the *SAP Easy Access* screen, choose the following menu paths:

- *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Vendor* → *Purchasing* → *Block* (`MK05`)
- *Logistics* → *Materials Management* → *Purchasing* → *Master Data* → *Vendor* → *Central* → *Block* (`XK05`)

Transactions `MK05` and `XK05` redirect you to transaction `BP`, which can also be called directly. The purchasing block is in the additional purchasing data area. You have to select role *FLVN01 Supplier* and the purchasing view for the desired purchasing organization.

When you block a supplier, you receive a warning message from the system if documents are still open for this supplier. Pay special attention to this, as you can still enter goods receipts for and undertake changes to the open documents, but you will not be able to post any invoices if there is a posting block.

> Hint:
> The block for quality reasons only affects the materials of the supplier for which quality management procurement is active in the material master record.

Blocking Using the Source List

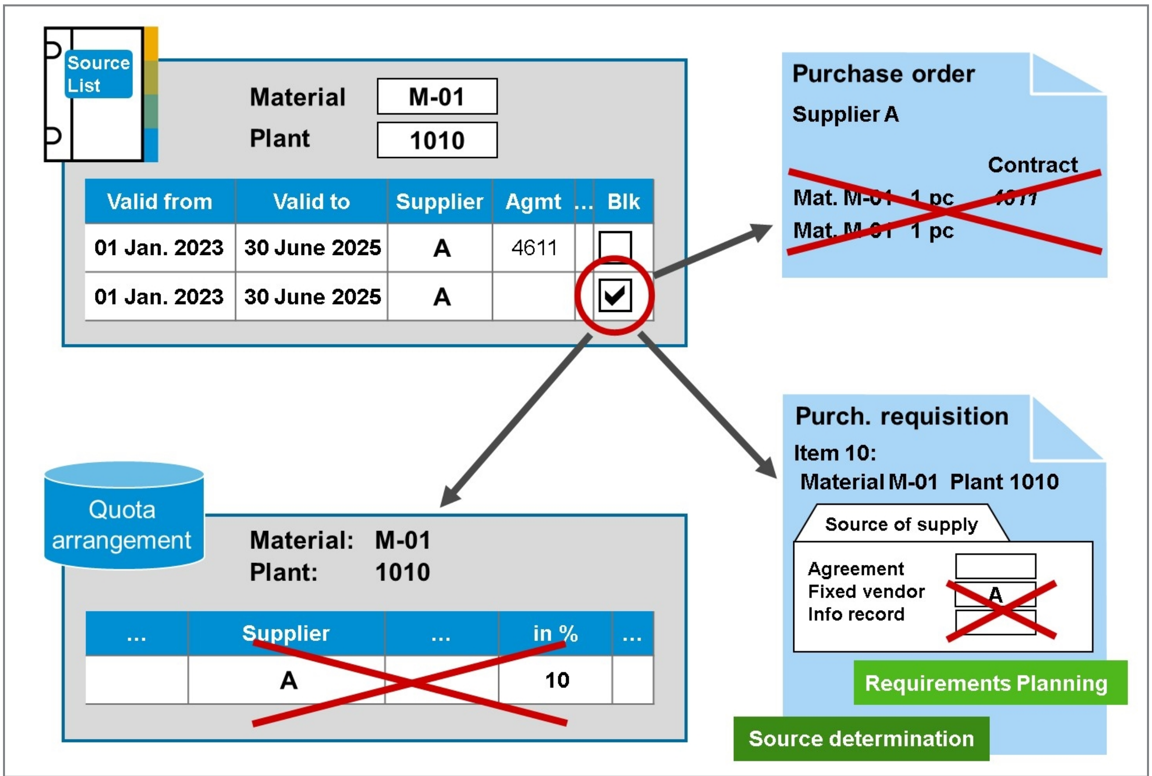


Figure 47: Blocking Sources of Supply in Source List

If you set the blocking indicator for a source list entry, the source represented by that entry can no longer be used in purchasing documents.

You can make a distinction between the following cases:

- Blocking a source list entry with an outline agreement item:

  If you set the blocking indicator in a source list entry with an outline agreement item, you cannot then create a release order or schedule line against that item. However, you could order the material without reference to the outline agreement item. A blocked outline agreement item is not suggested during the source determination process in a purchase requisition or purchase order. It also cannot be assigned manually.

- Blocking a source list entry without an outline agreement item:

  If you set the blocking indicator in a source list entry without an outline agreement item (which means the source in question is an info record or a plant), you generally cannot order or schedule the relevant material from the supplier concerned – either with or without reference to an existing outline agreement item. During the source determination process in a purchase requisition, neither an info record nor an outline agreement item is proposed for the blocked combination of material and supplier. An existing quota arrangement item is no longer taken into account in this case either.

  If you set the blocking indicator and enter a validity period but no supplier, the material is completely blocked for procurement in this plant.

  You can also block a material for procurement in the material master record using the material status. The material status can be assigned client-wide (*Basic Data* view) or specific to a plant (*Purchasing* or *MRP* view).

LESSON SUMMARY

You should now be able to:

- Block sources of supply

Learning Assessment

1. If the *Source list* indicator has been set in the material master record, it is not possible to create a purchase requisition or purchase order for a supplier that is not in the source list. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

2. Which of the following statements are true when creating source list records for a material?

   Choose the correct answers.

   - [ ] A The manual procedure allows you to make changes or enter new entries in the source list.
   - [ ] B You cannot create a source list from within an outline agreement.
   - [ ] C From within an info record, you can create a source list only for a single plant even if the info record is valid for an entire purchasing organization.
   - [ ] D You can automatically generate a source list for a single material or several materials.

3. You can use the source list to prevent materials from being ordered with reference to a material group contract item. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

4. Which of the following is the calculation for quota rating?

   Choose the correct answer.

   - [ ] A (Quota-allocated quantity + Quota base quantity)/Quota
   - [ ] B (Quota-allocated quantity – Quota base quantity)/Quota
   - [ ] C (Quota-allocated quantity + Quota base quantity) * Quota
   - [ ] D Quota-allocated quantity + Quota base quantity + Quota

5. Which of the following is used for manual control of the quota arrangement when new sources are included?

   Choose the correct answer.

   - [ ] A Quota
   - [ ] B Quota-allocated quantity
   - [ ] C Quota rating
   - [ ] D Quota base quantity

6. The total quantity of all relevant assigned planned orders for a material goes into the quota-allocated quantity. If the planned order is converted to a requisition, the quota-allocated quantity is updated once more. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

7. The lot size specified in the quota arrangement item overrides the settings in the material master record for the planning run. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

8. You can define only the minimum lot size per quota arrangement item. The maximum lot size per quota arrangement item cannot be modified. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

9. Which of the following indicators do you set to prevent reselection of the same source because of quota rating?

   Choose the correct answer.

   - [ ] A *P*
   - [ ] B *1x*
   - [ ] C *S*
   - [ ] D *PPl*

10. You create a purchase requisition using source determination. When is a source found uniquely?

    Choose the correct answers.

    - [ ] A When there is a valid quota arrangement
    - [ ] B When there is no quota arrangement, but a single valid info record exists as a source list entry without any other indicators
    - [ ] C When there is no quota arrangement, but several valid info records exist as source list entries without any other indicators
    - [ ] D When there is no quota arrangement, but multiple valid source list entries, of which both an outline agreement item and an info record are selected as fixed sources.

11. During the requirements planning run, according to what priority does the system determine the possible sources?

    Choose the correct answer.

    - [ ] A First quota arrangement and then source list
    - [ ] B First source list and then quota arrangement
    - [ ] C From the cheapest price to the highest
    - [ ] D From the shortest delivery time to the longest

12. You can enter only suppliers and plants in the quota arrangement, but no outline agreement items. True or false?

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

13. For transactions outside the planning run, what flow logic does the system use for source determination?

Choose the correct answer.

- [ ] A First quota arrangement, then info records, then outline agreement items, and last source list
- [ ] B First, quota arrangement, then source list, then outline agreement items, and last info records
- [ ] C First info records, then quota arrangement, then outline agreement items, and last source list
- [ ] D First source list, then info records, then outline agreement items, and last quota arrangement

14. You should use the regular supplier if you only have info records for a material and if you prefer not to create a source list to control sourcing. True or false?

Determine whether this statement is true or false.

- [ ] True
- [ ] False

15. How do you block sources of supply?

Choose the correct answers.

- [ ] A Using a cross-plant vendor status in the vendor master record
- [ ] B Blocking the source client wide in the source list for a material
- [ ] C Blocking the source dependent on the plant in the source list for a material
- [ ] D Using a blocking indicator in the supplier master record purchasing data

16. By blocking a source list entry with outline agreement item, you can still order the material without reference to the outline agreement item from the same supplier. True or false?

Determine whether this statement is true or false.

- [ ] True
- [ ] False

17. After blocking a supplier, you cannot enter goods receipts for and undertake changes to the open documents. True or false?

    Determine whether this statement is true or false.

    - [ ] True
    - [ ] False

Learning Assessment - Answers

1. If the *Source list* indicator has been set in the material master record, it is not possible to create a purchase requisition or purchase order for a supplier that is not in the source list. True or false?

   Determine whether this statement is true or false.

   [X] True

   [ ] False

   Correct. The statement is true. If the source list indicator is flagged in the material master record, you will get an error message if you try to use a source of supply that is not contained in the source list.

2. Which of the following statements are true when creating source list records for a material?

   Choose the correct answers.

   [X] A The manual procedure allows you to make changes or enter new entries in the source list.

   [ ] B You cannot create a source list from within an outline agreement.

   [ ] C From within an info record, you can create a source list only for a single plant even if the info record is valid for an entire purchasing organization.

   [X] D You can automatically generate a source list for a single material or several materials.

   Correct. You can manually create or change source list records and you can automatically generate a source list for a single material or several materials.

3. You can use the source list to prevent materials from being ordered with reference to a material group contract item. True or false?

   Determine whether this statement is true or false.

   [X] True

   [ ] False

   Correct. The statement is true. If you have created a material group contract item, you can order a material belonging to this material group with reference to this contract item, unless you have an exclusion source list entry for this material.

4. Which of the following is the calculation for quota rating?

   Choose the correct answer.

   - [X] A (Quota-allocated quantity + Quota base quantity)/Quota
   - [ ] B (Quota-allocated quantity – Quota base quantity)/Quota
   - [ ] C (Quota-allocated quantity + Quota base quantity) * Quota
   - [ ] D Quota-allocated quantity + Quota base quantity + Quota

   Correct. (Quota-allocated quantity + Quota base quantity)/Quota is the calculation for quota rating.

5. Which of the following is used for manual control of the quota arrangement when new sources are included?

   Choose the correct answer.

   - [ ] A Quota
   - [ ] B Quota-allocated quantity
   - [ ] C Quota rating
   - [X] D Quota base quantity

   Correct. Quota base quantity is used for manual control of the quota arrangement when new sources are included.

6. The total quantity of all relevant assigned planned orders for a material goes into the quota-allocated quantity. If the planned order is converted to a requisition, the quota-allocated quantity is updated once more. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [X] False

   Correct. The statement is false. The total quantity of all relevant assigned planned orders for a material goes into the quota-allocated quantity. If the planned order is converted to a requisition, however, the quota-allocated quantity is not updated again.

7. The lot size specified in the quota arrangement item overrides the settings in the material master record for the planning run. True or false?

   Determine whether this statement is true or false.

   - [X] True
   - [ ] False

   Correct. The statement is true.

8. You can define only the minimum lot size per quota arrangement item. The maximum lot size per quota arrangement item cannot be modified. True or false?

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   Correct. The statement is false. You can define a minimum and a maximum lot size per quota arrangement item.

9. Which of the following indicators do you set to prevent reselection of the same source because of quota rating?

   Choose the correct answer.

   [ ] A *P*

   [X] B *1x*

   [ ] C *S*

   [ ] D *PPI*

   Correct. 1x indicator is used to prevent reselection of the same source because of quota rating.

10. You create a purchase requisition using source determination. When is a source found uniquely?

    Choose the correct answers.

    [X] A When there is a valid quota arrangement

    [X] B When there is no quota arrangement, but a single valid info record exists as a source list entry without any other indicators

    [ ] C When there is no quota arrangement, but several valid info records exist as source list entries without any other indicators

    [X] D When there is no quota arrangement, but multiple valid source list entries, of which both an outline agreement item and an info record are selected as fixed sources.

    Correct. If both an outline agreement and an info record are selected as fixed source (answer B), the outline agreement has even higher priority and is thus found uniquely.

11. During the requirements planning run, according to what priority does the system determine the possible sources?

    Choose the correct answer.

    - [x] A First quota arrangement and then source list
    - [ ] B First source list and then quota arrangement
    - [ ] C From the cheapest price to the highest
    - [ ] D From the shortest delivery time to the longest

    Correct. During the requirements planning run, the system first considers a quota arrangement and then a source list.

12. You can enter only suppliers and plants in the quota arrangement, but no outline agreement items. True or false?

    Determine whether this statement is true or false.

    - [x] True
    - [ ] False

    Correct. The statement is true.

13. For transactions outside the planning run, what flow logic does the system use for source determination?

    Choose the correct answer.

    - [ ] A First quota arrangement, then info records, then outline agreement items, and last source list
    - [x] B First, quota arrangement, then source list, then outline agreement items, and last info records
    - [ ] C First info records, then quota arrangement, then outline agreement items, and last source list
    - [ ] D First source list, then info records, then outline agreement items, and last quota arrangement

    Correct. In transactions outside the planning run, the system considers first quota arrangement, then source list, then outline agreement items, and last info records for source determination.

14. You should use the regular supplier if you only have info records for a material and if you prefer not to create a source list to control sourcing. True or false?

    Determine whether this statement is true or false.

    - [x] True
    - [ ] False

    Correct. The statement is true.

15. How do you block sources of supply?

    Choose the correct answers.

    - [ ] A Using a cross-plant vendor status in the vendor master record
    - [ ] B Blocking the source client wide in the source list for a material
    - [x] C Blocking the source dependent on the plant in the source list for a material
    - [x] D Using a blocking indicator in the supplier master record purchasing data

    Correct. You can block a source of supply at plant level in the source list for a material or by using the blocking indicator in the supplier master record.

16. By blocking a source list entry with outline agreement item, you can still order the material without reference to the outline agreement item from the same supplier. True or false?

    Determine whether this statement is true or false.

    - [x] True
    - [ ] False

    Correct. The statement is true.

17. After blocking a supplier, you cannot enter goods receipts for and undertake changes to the open documents. True or false?

    Determine whether this statement is true or false.

    - [ ] True
    - [x] False

    Correct. The statement is false. You can still enter goods receipts and make changes to open documents, but you can no longer post invoices after blocking a supplier.

UNIT 4 Optimized Purchasing

UNIT OBJECTIVES

- Assign and process purchase requisitions
- Process assigned purchase requisitions
- Monitor order confirmations and deliveries
- Introduce Situation Handling
- Understand the key concepts and features in Situation Handling

Unit 4
Lesson 1

Processing Unassigned Purchase Requisitions

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Assign and process purchase requisitions

Purchase Requisition Assignment and Processing

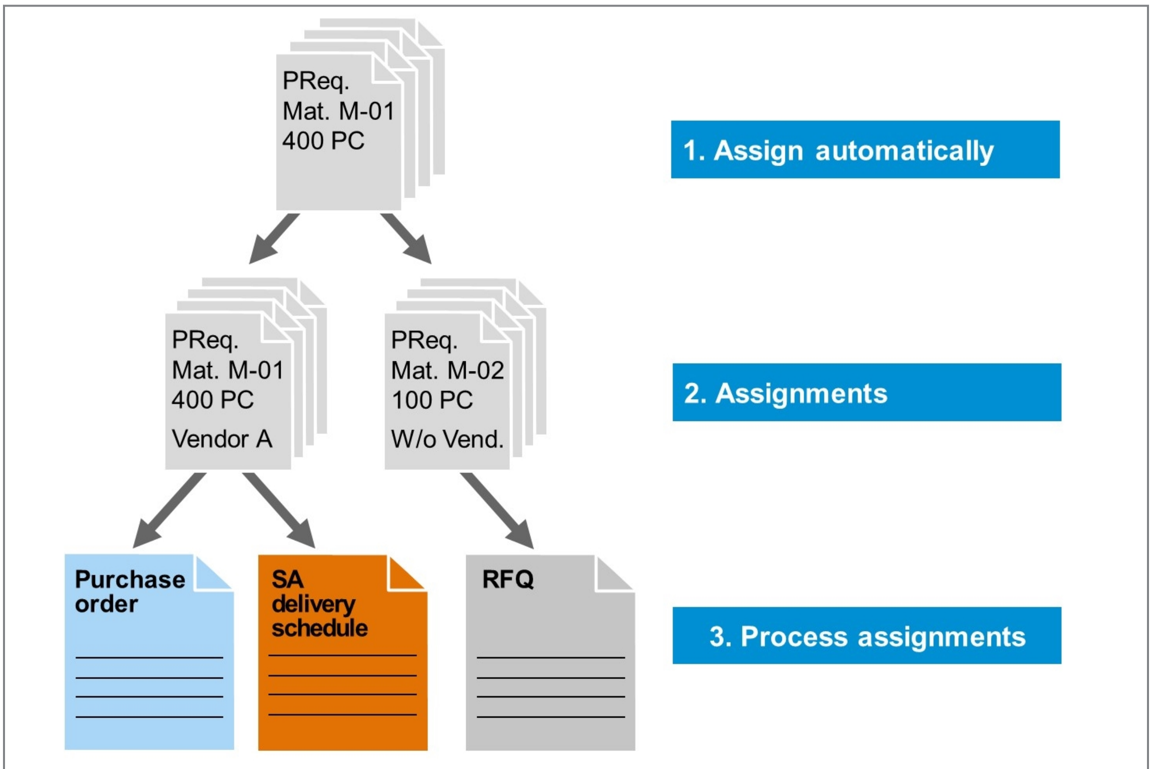


Figure 48: Assigning and Processing Purchase Requisitions

For purchase requisition items that were not assigned to sources at the time of their creation, you can perform either of the following actions:

- Collectively assign sources and convert these purchase requisitions using a single transaction.
- First, assign the purchase requisitions to sources, and then continue processing the assigned items with other transactions.

If you want to carry out the assign and process steps together, use the *Assign and Process* function for purchase requisitions. This function is a combination of the *Assign Source to Purch. Requisition* function and the *Ordering: Assigned Purchase Requisitions* function.

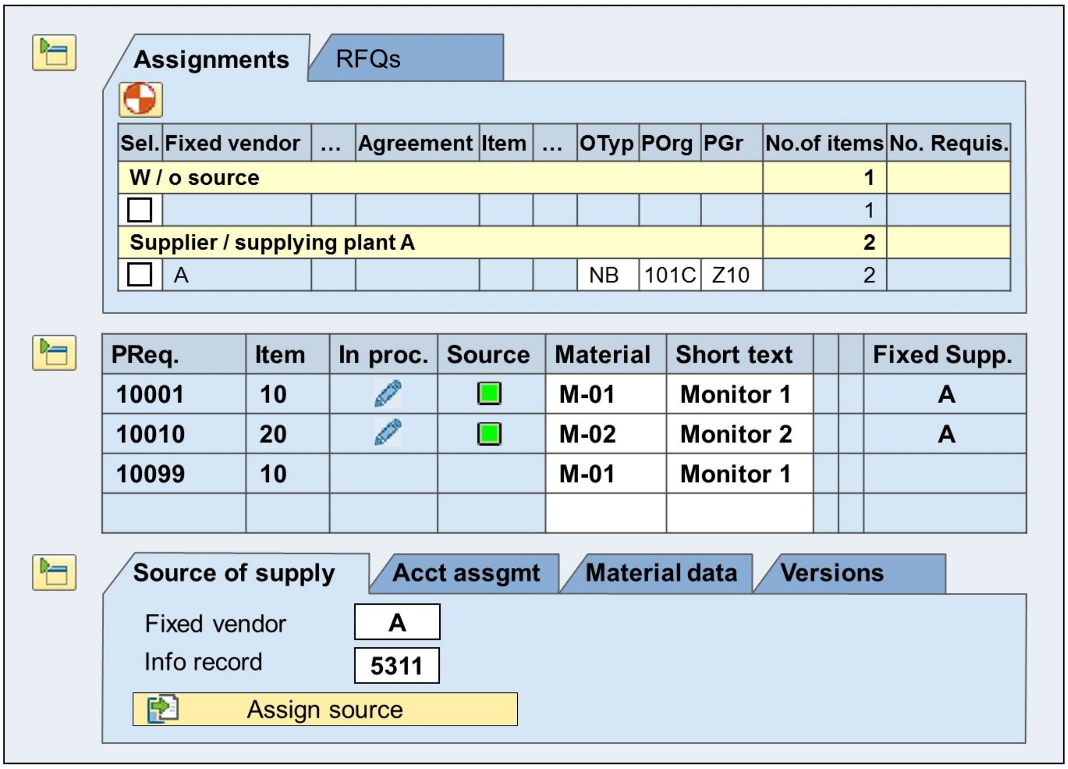


Figure 49: Assign and Process Purchase Requisitions

You can trigger the automatic assignment of sources for all selected purchase requisition items from a list of open purchase requisitions. If there are several sources of supply for a material, you can choose the desired one from a list of all possible sources.

You can manually assign requisitions for which no source was found to a vendor. You can also flag them for RFQ processing (*Edit → Flag for RFQ → Without Vendor/With Vendor*). You cannot save the flag for RFQ. Convert the purchase requisitions that are marked for a request for quotation into RFQs immediately; otherwise, the assignment will be lost when you leave the transaction.

After the system makes the assignment, you can save your purchase requisitions with the assigned source or convert the items now assigned into purchase orders, scheduling agreement delivery schedule lines, or RFQs from within the assignment overview. If you select the requisitions that have already been assigned, and the automatic source determination process identifies a different source than the one already determined, the previous source is overwritten without prior warning.

On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Purchase Requisition → Follow-On Functions → Assign* (`ME56`) to assign purchase requisitions.

On the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Purchase Requisition → Follow-On Functions → Assign and Process* (`ME57`) to assign and process purchase requisitions.

Both transactions are also available as an app. The apps are as follows:

- *Assign Source of Supply to Purchase Requisitions* (`ME56`)
- *Assign and Process Purchase Requisitions* (`ME57`)

On the SAP Fiori launchpad, the *Process Purchase Requisitions* SAP Fiori app is also provided. The differences to the SAP GUI transactions are as follows:

- Mass selection and assignment is not possible. You have to assign the sources one by one.
- Automatic assignment is not supported. Quota arrangements and source lists are not considered.

After the manual assignment you can convert the requisitions to purchase orders, contracts, and RFQs. Multiple selection is possible for the generation of the follow-on documents.

LESSON SUMMARY

You should now be able to:

- Assign and process purchase requisitions

Unit 4
Lesson 2

Processing Assigned Purchase Requisitions

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Process assigned purchase requisitions

Conversion of Requisitions into Purchase Orders

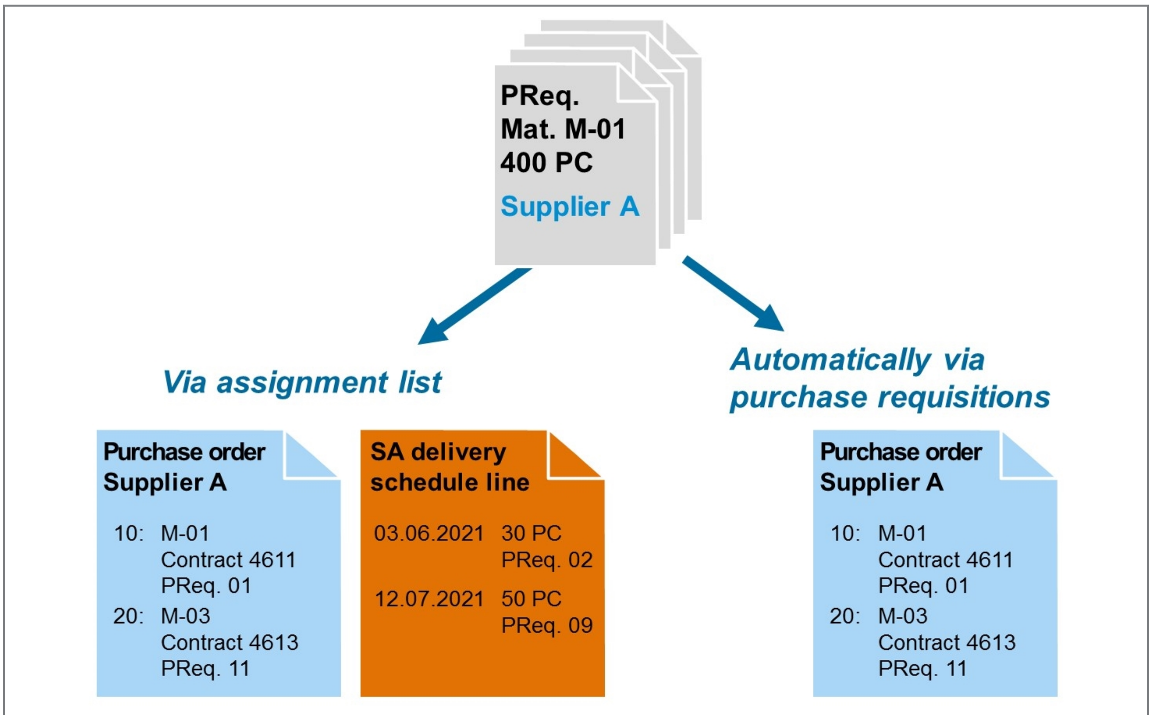


Figure 50: Collective Transactions for Converting Requisitions

SAP S/4HANA provides the following functions for converting assigned purchase requisitions to follow-on documents:

- Assignment list
- Document overview in the purchase order transaction (as worklist)
- Automatic generation of purchase orders

Assignment List

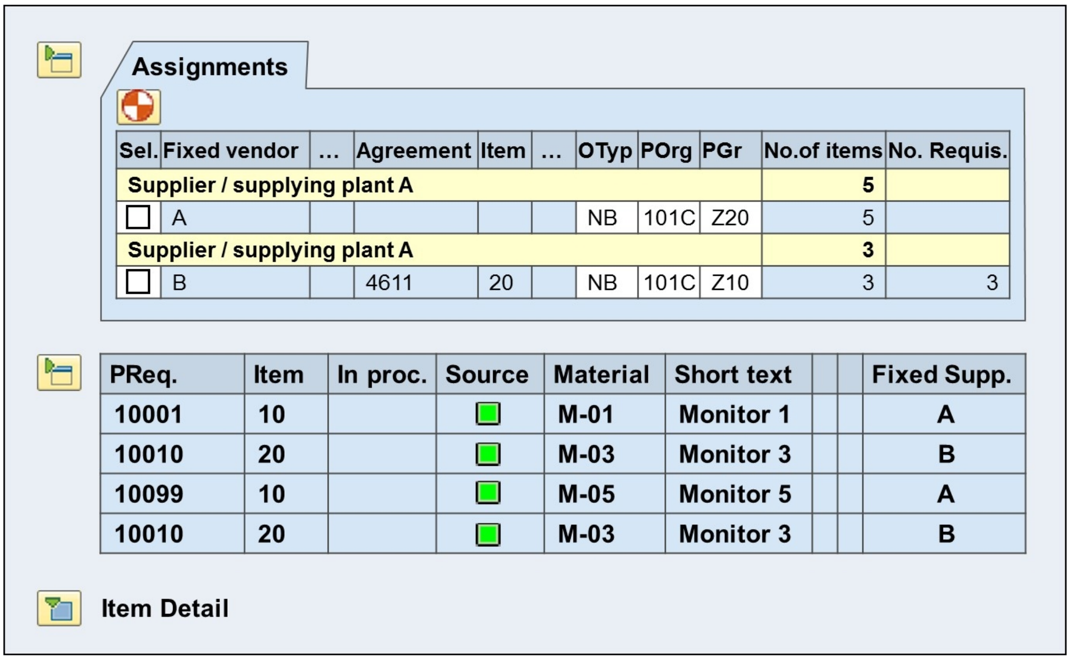


Figure 51: Creating Follow-On Documents Using an Assignment List

To convert purchase requisitions into purchase orders or scheduling agreement delivery schedule lines using transaction `ME58`, you must have already assigned sources of supply to the purchase requisition items to be converted.

A list appears, displaying the number of assigned requisition items per supplier. You can convert all purchase requisition items that are assigned to a supplier without reference to a scheduling agreement into purchase orders in a single step. Items for which a scheduling agreement is assigned must be converted separately.

The following menu paths on the *SAP Easy Access* screen enable you to create purchase orders using assignment lists:

- Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Create* → *Via Requisition Assignment List* (`ME58`).
- Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Requisition* → *Follow-On Functions* → *Create Purchase Order* → *Via Assignment List* (`ME58`).

On the SAP Fiori launchpad, the *Create Purchase Order via Purchase Requisition* app in the *Purchase Requisition Processing* tile group is available and is identical to the SAP GUI transaction, `ME58`.

Document Overview

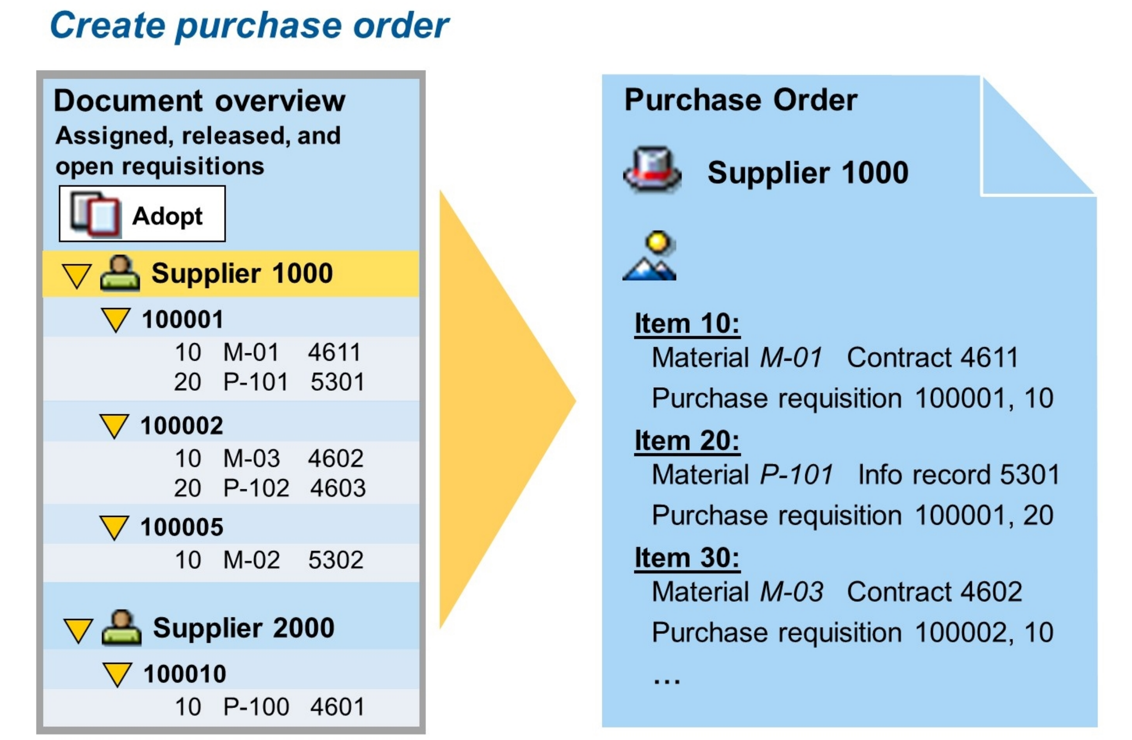


Figure 52: Document Overview as Alternative to Assignment List

Instead of creating purchase orders using the assignment list, you can configure the document overview within the *Create Purchase Order – Advanced* app or the corresponding *Create Purchase Order* transaction (`ME21N`) so that purchase requisition items are displayed as a worklist. The document overview represents an alternative to the assignment list if you select only the released, already assigned, and still open requisition items.

To display the purchase requisitions as a worklist for you to process, you generally select purchase requisitions with your purchasing group.

> Note:
> The *My Purchase Requisitions* selection variant is not suitable for this, as it displays only the purchase requisitions that you created.

Converting Open Requisition Items

For maximum efficiency when converting open requisition items, define the layout of the document overview for requisitions in such a way that the breakdown occurs at the highest level by vendor. This layout enables you to quickly and easily consolidate all items for the same vendor in one purchase order. You can convert the items either individually or in groups.

If the delivery date is the only differentiating factor between two or more purchase requisitions for a vendor and material, you can also combine them. Drag and drop the first purchase requisition into the shopping cart at header level and the other purchase requisition(s) into the shopping cart on the *Schedule Lines* tab in the item details. This is particularly advantageous if you have agreed quantity-dependent scale prices for the respective material with the supplier.

From time to time, use the *Refresh* option in the document overview so that only those requisition items that have not yet been converted are still displayed in the document overview.

> Hint:
> If the purchase orders are created by an MRP controller, you can also trigger the purchase order by double-clicking a purchase requisition directly from within the MRP list or the current stock/requirements list.

Automatic Generation of Purchase Orders

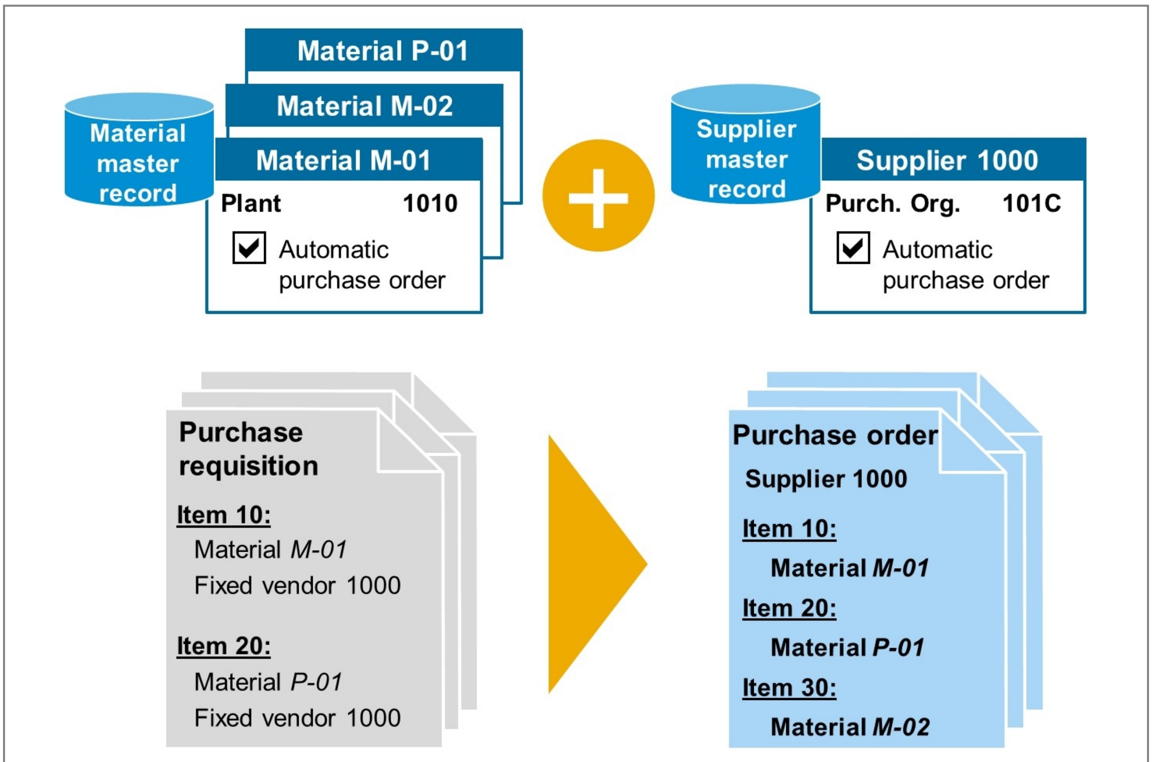


Figure 53: Automatic Generation of Purchase Orders

Requisition items to which you have already assigned a source of supply can also be automatically converted into purchase orders in an SAP system. You can run this transaction either online or in the background.

In automatic purchase order generation, the system can convert only those requisition items that satisfy the following conditions:

- You have set the *Automatic purchase order* indicator in the plant-specific purchasing data of the material master record.
- You have set the *Automatic purchase order* indicator in the purchasing data of the business partner.
- The system is able to determine valid conditions for the source assigned (for example, from an outline agreement item, an info record, or the last purchasing document).

You can also automatically generate purchase orders for items without a material master record. This requires, together with the *Automatic purchase order* indicator in the business partner, a valuation price in the purchase requisition item. This valuation price is then copied to the purchase order.

Apps and Transactions for Automatically Creating Purchase Orders

On the SAP Fiori launchpad, the *Automatic Creation of Purchase Orders from Requisitions* app is available and is identical to the SAP GUI transaction `ME59N`.

On the SAP Fiori launchpad, you can also use the *Schedule Purchasing Jobs - Advanced* and choose the *Automatic Creation of Purchase Orders from Requisitions* job template.

In the SAP GUI on the *SAP Easy Access* screen, choose one of the following menu paths to automatically create purchase orders:

- *Logistics → Materials Management → Purchasing → Purchase Order → Create → Automatically via Purchase Requisitions* (`ME59N`)
- *Logistics → Materials Management → Purchasing → Purchase Requisition → Follow-On Functions → Create Purchase Order → Automatically via Purchase Requisitions* (`ME59N`)

You cannot automatically generate delivery schedule lines against a scheduling agreement with this transaction. Generally, scheduling agreement schedule lines are generated directly as part of MRP.

To Generate Purchase Orders Automatically

1. In the upper part of the initial screen of the *Automatic Creation of Purchase Orders from Requisitions* app, enter your organizational selection criteria (for example, purchasing group, and plant). In the lower part of this screen, enter the selection criteria for the requisitions (for example, a number interval, a certain material, or a time period).

2. In the middle screen area, specify in which cases a separate purchase order should be created for purchase requisition items (for example, if purchase requisition items for different plants should not be converted into the same purchase order).

   Other control parameters are also located in the middle part of the screen. Note the following:

   - Select the *Omit Faulty Items* checkbox if you want to omit the faulty items and create a purchase order. For example, if you set this indicator, the system will create a purchase order with 9 items from a total of 10 requisition items for the same vendor of which one is faulty (perhaps due to unspecified account assignment). If the indicator is not set, the system does not convert any of the 10 items, but issues an error message.
   - Set the *Detailed Log* indicator if you want to perform and log the function in the background. The log shows which purchase orders have been generated and which requisition items are faulty. The log provides detailed information indicating the cause of the error for each faulty item.
   - Select the *Generate Schedule Lines* checkbox if you want a single purchase order item with delivery schedule lines to be generated for multiple requisition items that differ only in respect of the desired delivery date.
   - Select the *Test Run* checkbox to perform PO generation as a test.

3. After the test run, either start the program online or save the screen as a selection variant and schedule the report as a background job to be carried out at regular intervals, for example.

LESSON SUMMARY

You should now be able to:

- Process assigned purchase requisitions

Unit 4
Lesson 3

Monitoring Purchase Orders

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Monitor order confirmations and deliveries

Order Confirmation Monitoring

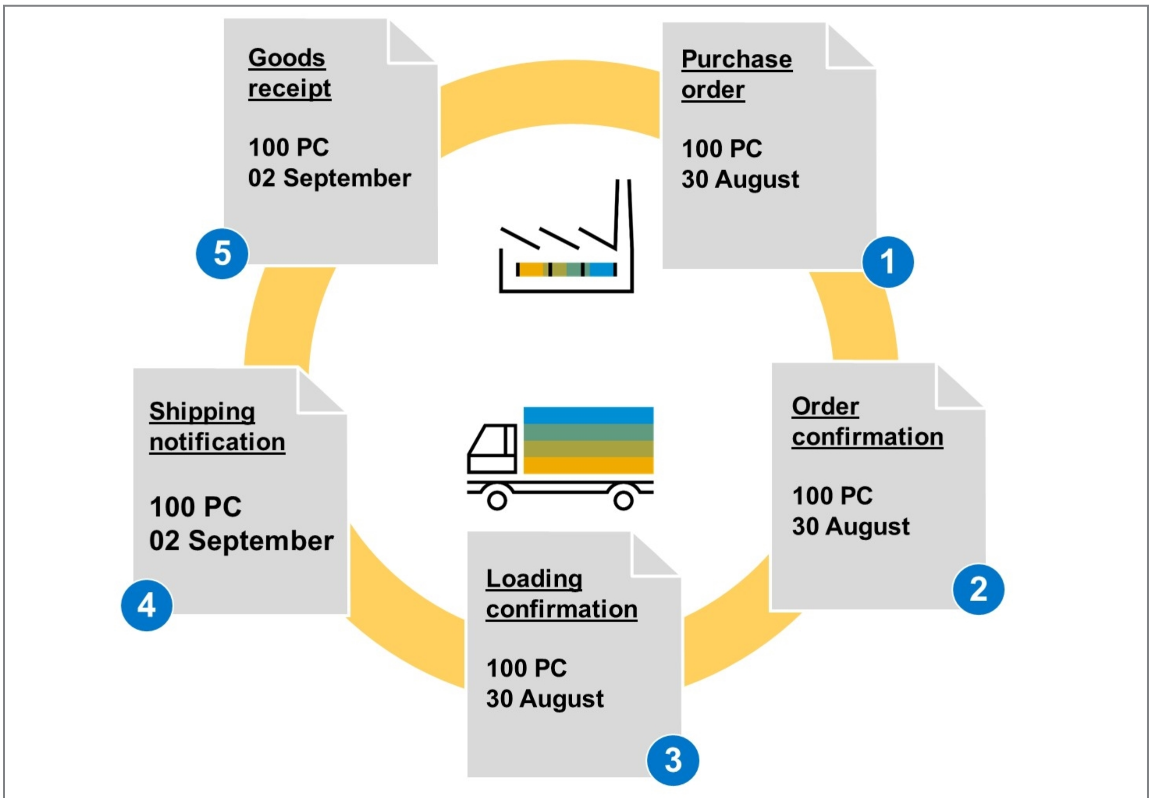


Figure 54: Confirmations in the Purchasing Process

When working with confirmations, the following options are available:

- You work only with order confirmations.

  In this case, the confirmation has only general character. You cannot separately record the confirmed dates and quantities. In MRP, it is not obvious in the Stock/Requirements List, whether or not the vendor has confirmed the purchase order.

- You work with several confirmation types, such as order confirmation, loading confirmation, or shipping notification.

In this case, you can record the confirmed dates and quantities in the system. In MRP, you can see in the Stock/Requirements List which quantities were confirmed for which dates.

Working Only with Order Confirmation

When you are creating the purchasing document, select the *Acknowl.Reqd* (*Order Acknowledgment Required*) checkbox if you are working only with an order confirmation. This enables order confirmation monitoring and allows reminders to be sent.

You can preset the order acknowledgment indicator as follows, if you want it to be generally proposed as a default:

- In the purchasing data of the business partner
- In the purchasing info record
- In the material master as part of the purchasing value key
- Using the EVO user parameter
- In the personal settings for the transaction `ME21N`

If you have received the order confirmation from your supplier, you enter the confirmation number on the purchase order item screen. The system checks as a part of monitoring whether or not an entry exists in the *order confirmation* field. If there is no entry, you can generate an order acknowledgment reminder.

Using the fast change, you can enter the same confirmation number for all items of a purchase order. The *Fast Change* icon is located in the purchase order below the item overview.

Working with Different Confirmation Types

When creating the purchasing document, you have to enter a confirmation control key in the item detail. The key determines the confirmations that you expect from suppliers and the sequence. The key also controls, which confirmation types are relevant for MRP and goods receipt. If a confirmation control key is maintained in a purchasing info record, this is defaulted in the purchasing document. You can also define the default value for the confirmation control key in the purchasing data of the business partner.

Options for Entering the Confirmation

- You enter the confirmation in the purchasing document.
- You generate an independent document – an *inbound delivery*.
- You have the confirmation transmitted electronically by the supplier. If the supplier rejects the purchase order, the rejection indicator and the deletion indicator are set in the purchase order item.

Generating an independent document requires that you have used a confirmation category that allows an inbound delivery. The data for the inbound delivery is transferred to the corresponding *confirmation* fields in the purchasing document. You can then enter the goods receipt with reference to a purchasing document or inbound delivery. As part of monitoring, the system checks whether you have confirmed the entire ordered quantity. If you have not yet confirmed or only partially confirmed the quantity, you can generate an order acknowledgment reminder.

For scheduling agreement schedule lines, you can only work with confirmation control keys. The key must be contained in the scheduling agreement. You enter the confirmations when maintaining the scheduling agreement schedule lines (`ME38` transaction) using the menu path *Item → Confirmations → Overview*.

Order Acknowledgment Reminders Generation

To generate order acknowledgment reminders, you must satisfy the following preconditions:

- You have selected the *Acknow.Reqd* checkbox.
- You have not yet entered an acknowledgment number for items without a confirmation control key.
- For items with a confirmation control key, you have only partially confirmed or not yet confirmed the ordered quantity. The system considers only confirmations that are assigned to the 1 (order confirmation) internal confirmation type.
- The purchasing document has been output.
- You have set the message determination for the order acknowledgment reminder.
- Message records for the order acknowledgment reminder are maintained in the master data of Purchasing.

Accessing the Monitoring Transaction

If you do not want to generate any reminders, you can also check the confirmations with the simple monitoring transaction.

To access the monitoring transaction, on the *SAP Easy Access* screen, do one of the following:

- Choose *Logistics → Materials Management → Purchasing → Purchase Order → Reporting → Monitor Confirmations* (`ME2A`).
- Choose *Logistics → Materials Management → Purchasing → Outline Agreement → Reporting → Monitor Confirmations* (`ME2A`).

You can use this function to monitor confirmations of all confirmation categories, but you can't create reminder messages for them.

On the SAP Fiori launchpad, you can find the according app *Monitor Supplier Confirmations* in the *Purchase Order Processing* tile group.

Delivery Reminders

To send reminders for due and overdue orders, scheduling agreement schedule lines, and Requests for Quotations (RFQs), you must satisfy the following prerequisites:

- You have entered one or more reminder levels (reminder periods) in the document item.
- The purchasing document has been output.
- You have set the message determination for delivery reminder.
- Message records for the delivery reminder exist in the master data of Purchasing.

You can manually enter reminder periods in the purchase order item. You can define default values for these using the purchasing value keys, which you can preset in the *Purchasing* view of the material master record or in Customizing with reference to the material group.

You can define purchasing value keys in Customizing for *Materials Management* under *Purchasing → Material Master → Define Purchasing Value Keys*.

You can assign purchasing value keys to material groups in Customizing for *Materials Management* under *Purchasing* → *Material Master* → *Entry Aids for Items Without a Material Master*.

To Generate Reminder Messages for the Corresponding Document Category

> Note:
> The transactions specified below only apply if you use classic output determination with condition technique and not SAP S/4HANA output management with BRFplus.
>
> If you have activated SAP S/4HANA output management for the purchase order, use transaction ME91FF or the app *Dunning Reminder on Purchase Order – Advanced*.

1. Choose the appropriate menu path on the *SAP Easy Access* screen based on the following document types:

   - Purchase order:

     Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Messages* → *Urging/Reminders* (`ME91F`).

   - RFQ:

     Choose *Logistics* → *Materials Management* → *Purchasing* → *RFQ/Quotation* → *Request for Quotation* → *Messages* → *Urging/Reminders* (`ME91A`).

   - Scheduling agreement schedule lines:

     Choose *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Scheduling Agreement* → *Delivery Schedule* → *Urging/Reminders* (`ME91E`).

2. Enter the criteria for selecting the purchasing documents and start the program.

   The list of results enables you to decide for which documents you want to generate messages.

3. After saving, output the documents with the standard transactions for message output for purchasing documents.

   If the message record contains dispatch time 4 (immediate), the messages are output automatically on saving.

On the basis of the reference date entered, the system checks which reminders can be issued. It also considers confirmations, provided that these are marked in Customizing as subject to reminder. For RFQs, the quotation deadline is considered rather than the delivery date.

If you have not entered reminder or dunning days in your purchasing documents, you can use the list display of open purchasing documents. The following menu paths on the *SAP Easy Access* screen enable you to use the list:

- Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *List Displays* → *By Material* (`ME2M`).
- Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *List Displays* → *By Vendor* (`ME2L`).

Use the WE101 selection parameter, and restrict the delivery date to the time period that you want to monitor.

For both transaction you can also use apps on the SAP Fiori launchpad:

- *Display Purchasing Documents by Material* (`ME2M`)
- *Display Purchasing Documents by Supplier* (`ME2L`).

Confirmation Control Keys

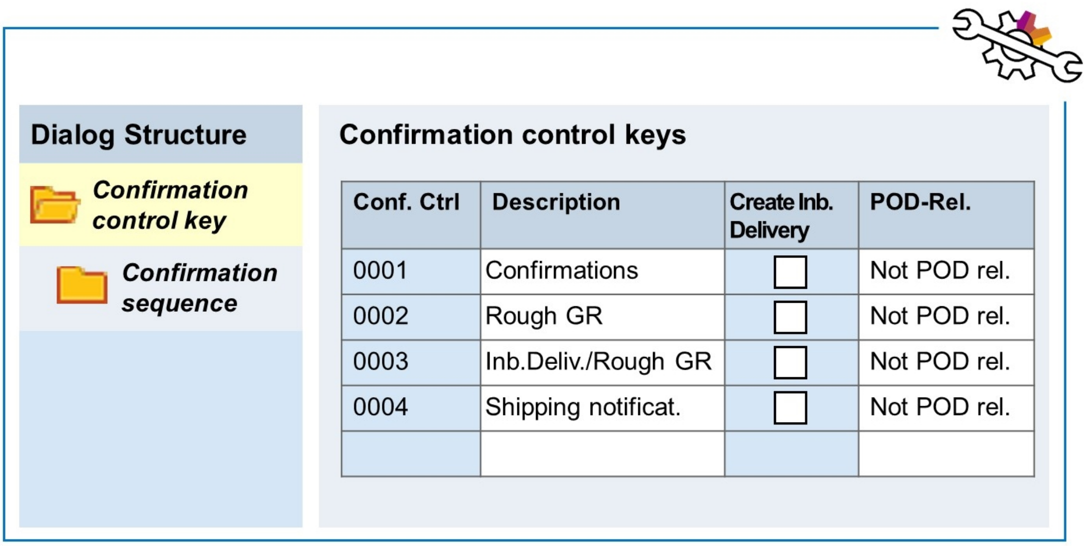


Figure 55: Defining Confirmation Control Keys

To set up confirmation control keys in Customizing, first, you must define external confirmation categories. You assign these in the next step to the internal categories that SAP provides. Use the following paths:

- Customizing for *Materials Management* under *Purchasing* → *Confirmations* → *Define External Confirmation Categories*
- Customizing for *Materials Management* under *Purchasing* → *Confirmations* → *Define Internal Confirmation Categories*

Next, you must define the confirmation control keys in Customizing for *Materials Management* under *Purchasing* → *Confirmations* → *Set Up Confirmation Control*. The *Create Inb. Delivery* indicator determines that inbound deliveries can automatically be created from purchase orders without the prior existence of a shipping notification. Inbound deliveries are created by choosing *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Inbound Delivery* → *Create* (`VL31N`). A confirmation control key can be relevant for the proof of delivery. You can use the proof of delivery to inform your suppliers of goods receipts by means of EDI.

After you have defined the confirmation control key, you must define the confirmation sequence.

Confirmation Sequence

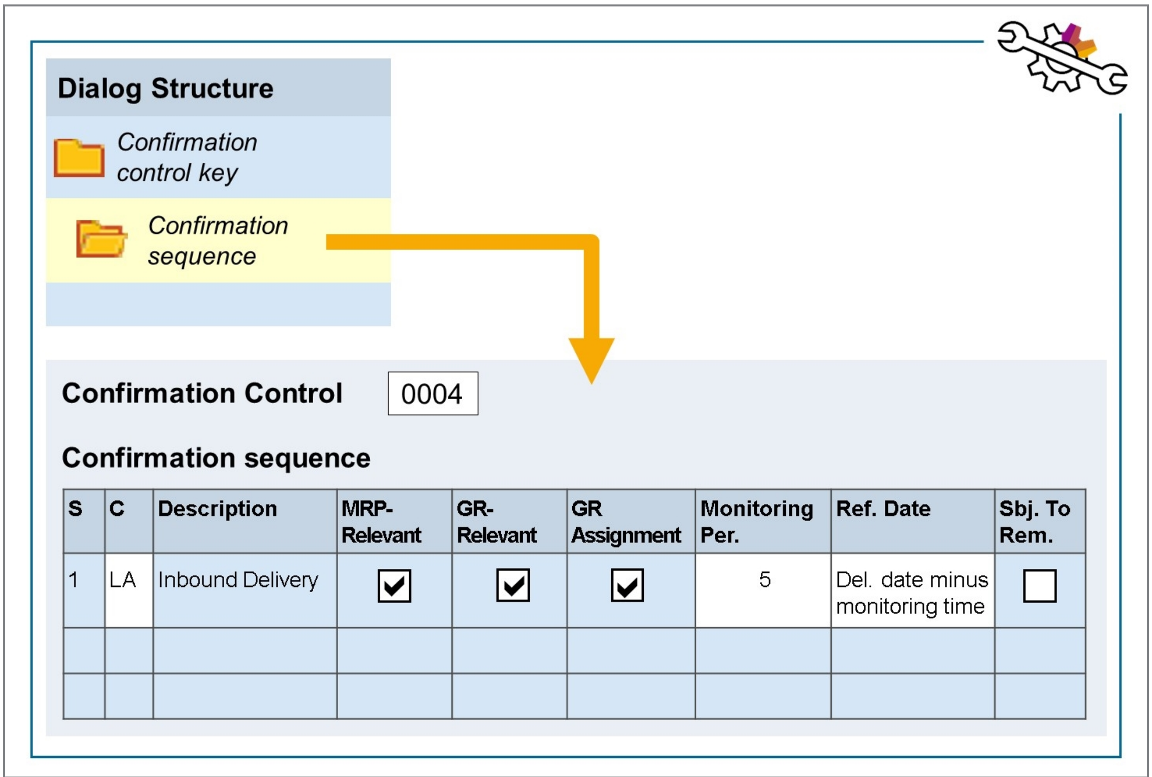


Figure 56: Confirmation Sequence

Note that one or several confirmations may be required.

For each confirmation category, you define the following:

- *MRP-Relevant* indicator:

  After you enter the appropriate confirmation, the purchase order is displayed in the stock/requirements list with a different MRP element (ShpgNt) to the unconfirmed purchase order (POitem). Alternative confirmations are considered by the planning run.

- *GR-Relevant* indicator:

  This indicator causes the confirmed quantity (for example, inbound delivery) to be reduced by a goods receipt for the corresponding purchase order item. If there are several confirmations in the confirmation sequence, you can mark only one as GR-relevant.

- *GR Assignment* indicator:

  The system suggests only the confirmed quantity when you post a goods receipt. You cannot post a goods receipt without a prior confirmation. You can use this indicator only in conjunction with the *GR-Relevant* indicator. The indicator is also necessary if you post the goods receipt through inbound delivery (VL32N) for creating a material document and updating the purchase order history.

- *Moni.Per.* (monitoring period) and *Ref.Date* (reference date):

  This controls up to what point you expect a confirmation. You can define this period with reference to the order date or the delivery date. If you do not record any confirmation within this period, an expediter can be issued automatically provided the *Sbj. to Rem.*

indicator has been set. Without the *Sbj. to Rem.* indicator, you cannot create any reminders for any confirmation.

LESSON SUMMARY
You should now be able to:

- Monitor order confirmations and deliveries

Deploying Situation Handling

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Introduce Situation Handling
- Understand the key concepts and features in Situation Handling

Introduction to Situation Handling

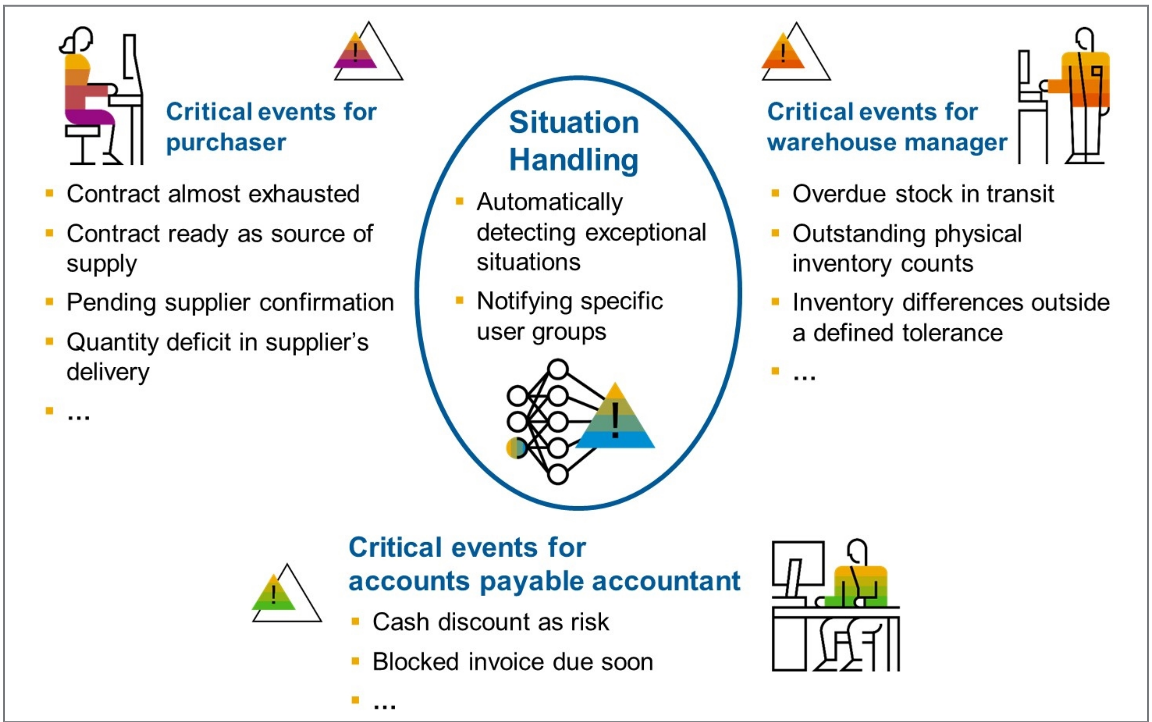


Figure 57: Monitoring of Critical Business Events

In the user's day-to-day job, there may be certain recurring issues that go unnoticed when the user fails to retrieve information or manually searches through transactions and applications. Recurring, undetected issues such as approaching deadlines, expiring contracts, pending confirmations or approvals can impact your business. Reacting too late to these situations can result in penalties, whether it's additional costs or efforts, frustrated employees, or even the loss of customers.

Situation Handling is a framework within SAP S/4HANA that increases the quality and efficiency of your business processes by automatically detecting exceptional situations and notifying specific user groups based on defined teams and responsibilities. By bringing these issues to the attention of the right users, Situation Handling enables them to take immediate follow-up action, accelerating the resolution of critical business events.

A situation captures a current business event, its circumstances, and outcomes. Situation Handling supports the following two types of situations:

- Object-based situations: Situations for a specific business object, such as a contract, a purchase order, an invoice, or a material. You can create the conditions that specify when a situation is created, for example, when the status of an object changes or when a threshold is surpassed.
- Message-based situations: Situations that refer to warning and error messages occurring in system runs or reports. Instead of defining conditions, you select system messages that create situations.

Key Concepts and Features in Situation Handling

With Situation Handling, SAP provides a wide range of standard situation templates for different business areas. A situation template defines a business situation that you want to bring to the attention of specific employees in your company using the situation handling framework, for example, a pending purchase order confirmation. Standard situation templates are preconfigured by SAP and are intended for specific use cases. The following table contains selected situation templates relevant for purchasing, together with the apps that display the situations:

Situation Template	Description	Situation Template ID	App Name
Predicted Contract Consumption	Purchasers are automatically informed when a purchase contract is about to be consumed. This minimizes the risk of purchasers missing information about full consumption of a purchase contract.	PROC_CONTRACTCONSUMPTNPREDICTION	Manage Purchase Contracts
Contract is Ready as Source of Supply	Operational purchasers are informed automatically when a new or updated contract is available for open purchase requisition items.	PROC_CONTRACTREADYTOUSE_V2	Manage Purchase Requisitions - Professional
Pending Supplier Confirmation	Purchasers are informed about missing supplier confirmations automatically.	PROC_PENDINGSUPPLIERCONF_V2	Monitor Supplier Confirmations

Situation Template	Description	Situation Template ID	App Name
Quantity Deficit in Supplier's Delivery	Purchasers are informed automatically when: • Supplier confirmation is missing. • Supplier confirmation has been received but a certain quantity of materials out of the total will not be delivered on the scheduled delivery date.	PROC_POITEM-CONFQTYDEFICIT	Manage Purchase Orders

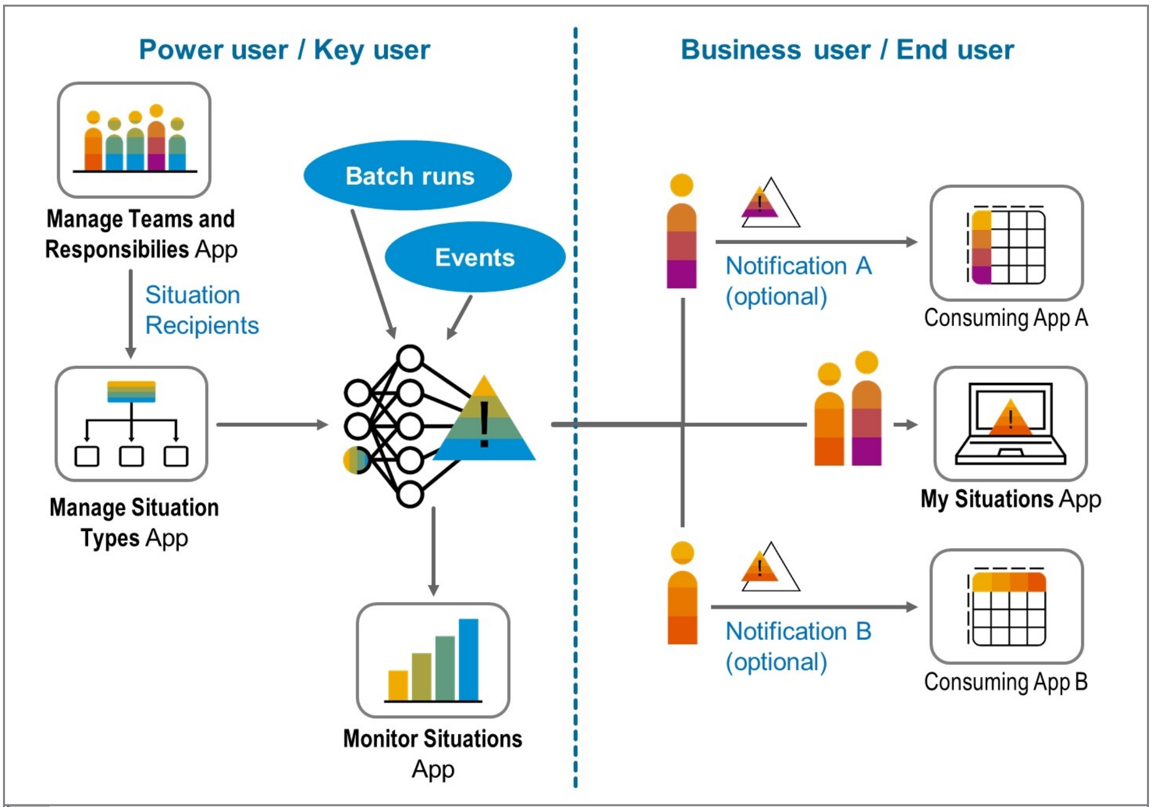


Figure 58: Situation Handling - Process Overview

Situation templates serve as a blueprint to create situation types. A **situation type** defines how a situation instance is triggered, who is informed about it, and what actions can be performed to solve it. When creating a situation type based on a template, many of the preconfigured settings can be changed and redefined, including the texts that are shown to the *end users* when a situation occurs. However, the underlying data structure on which a standard template is based cannot be changed.

Power or key users who have been assigned the *Configuration Expert - Business Process Configuration* business role can define object-based situation types in the SAP Fiori launchpad using the *Manage Situation Types* app based on standard situation templates.

The integration with Responsibility Management allows defining the recipients for situation types based on teams or responsibility rules, depending on the use case.

Situation instances of an enabled situation type are generated according to the situation type settings:

- For object-based situations: Whenever the conditions defined for the situation type are fulfilled.
- For message-based situations: Depends on the run type settings for scheduled application jobs.

When a situation instance occurs, the specified end users can be informed by texts that are displayed through the following various channels:

- A list entry in the *My Situations* and *My Situations - Message-Based* apps.
- A situation message in the corresponding business apps.
- An automatic notification in the SAP Fiori launchpad.
- Optional e-mail notifications that the *end user* can opt to receive in the SAP Fiori launchpad's settings.

> Note:
> The last three features are only available for object-based situations.

Key users can monitor the occurrence and status updates of situation instances using the *Monitor Situations* app.

How to Setup an Object-Based Situation Type

1. Open the *Manage Situation Types* app and create a situation type as a copy of a situation template:

   Choose the *Situation Templates* tab, select a situation template, for example, the *PROC_PENDINGSUPPLIERCONF_V2*, *Pending Supplier Confirmation* use case, then choose *Copy*.

2. On the *New Situation Type* screen, maintain *Admin Information* such as *ID*, *Name*, and *Display Sequence*. If there are several situation types enabled for the same business object, you can define the sequence in which you want to display the situation instances in the situation message.

3. Define the *Conditions* based on which situation instances are created, and for which notifications are sent. These can be configured by adding filter values and further conditions or by deleting predefined conditions. By checking *Send Notification*, you are enabling notifications to be displayed in the SAP Fiori launchpad (and optionally as an e-mail notification) when a condition is met.

4. In the *Batch Job Scheduling* section, enter a time zone and a start time for scheduling the batch job, if required.

5. In the *Situation Display* section, personalize the in-app text that is displayed in the consuming app.
6. In the *Situation Display* section, you can also adjust the notification texts for situations that are displayed in the SAP Fiori launchpad when a situation occurs. Additionally, you can decide if you want to send notifications for each individual situation instance or just one aggregated notification, as well as whether you want to resend notifications whenever open situation instances are updated.
7. In the *Recipients* section, define who is responsible for situations, that is, who can see them in the *My Situations* app and receives notifications.

   Under *Responsibility by Teams*, column *Number of Teams*, you can view how many teams are enabled for the situation type. When you display the enabled teams in detail, the *Create Team* button takes you directly to the object page for creating a new team in the *Manage Teams and Responsibilities* app.
8. In the *Situation Monitoring* section, define whether you want to monitor the occurrence and status updates of situation instances by flagging *Monitor Instances*.
9. Choose *Create* and on the *Enable Situation Type* dialog window, choose *Yes* to enable the situation type.

LESSON SUMMARY

You should now be able to:

- Introduce Situation Handling
- Understand the key concepts and features in Situation Handling

Learning Assessment

1. Which of the following transactions enables you to assign and process purchase requisitions?

   Choose the correct answer.

   - [ ] A `ME55`
   - [ ] B `ME56`
   - [ ] C `ME57`
   - [ ] D `ME58`

2. Which documents can you generate with the *Automatic Generation of Purchase Orders* transaction (`ME59N`)?

   Choose the correct answers.

   - [ ] A Contract release orders
   - [ ] B Scheduling agreement delivery schedule lines
   - [ ] C Purchase orders
   - [ ] D RFQs

3. You would like to convert assigned purchase requisitions into follow-on documents. Which of the following statements apply?

   Choose the correct answers.

   - [ ] A You can convert several requisition items from the same vendor to one single purchase order.
   - [ ] B You can automatically convert all requisition items generated by MRP into purchase orders using transaction ME59N.
   - [ ] C If the assigned source was blocked in the source list after the assignment was made, it is not possible to convert the corresponding requisition item.
   - [ ] D You can convert purchase requisitions into scheduling agreement delivery schedule lines.

4. A prerequisite to convert purchase requisitions into purchase orders or scheduling agreement delivery schedule lines using the assignment list is that you should have already assigned sources of supply to the purchase requisition items to be converted. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

5. Which of the following statements is true if you only work with order confirmations (without confirmation control key)?

   Choose the correct answer.

   - [ ] A You can separately record both the confirmed dates and quantities.
   - [ ] B You can separately record only the confirmed dates.
   - [ ] C You can use the Fast Change function to enter a confirmation number for all items.
   - [ ] D You can separately record only the confirmed quantities.

6. Which of the following prerequisites must be met to generate order confirmation reminders?

   Choose the correct answers.

   - [ ] A You have selected the *Acknowledgment Reqd* checkbox.
   - [ ] B You have entered an acknowledgment number for items without a confirmation control key.
   - [ ] C You have set the message determination for the order acknowledgment reminder.
   - [ ] D You have confirmed the ordered quantity for items with a confirmation control key.

7. If the confirmation control key contains a sequence with multiple confirmation categories, you can set the GR relevant indicator for all confirmation categories. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

8. Which of the following indicators should you set when configuring the confirmation control key so that only the confirmed quantity is proposed when posting a goods receipt?

   Choose the correct answer.

   - [ ] A *MRP-Relevant* indicator
   - [ ] B *GR Assignment* indicator
   - [ ] C *Create Inb. Delivery* indicator
   - [ ] D *Acknowledgment Reqd* indicator

9. What are functions of Situation Handling?

   Choose the correct answers.

   - [ ] A Notification of suppliers about new purchasing documents
   - [ ] B Automatic detection of exceptional business situations
   - [ ] C Automatic completion of purchasing processes
   - [ ] D Notification of responsible users

Learning Assessment - Answers

1. Which of the following transactions enables you to assign and process purchase requisitions?

   Choose the correct answer.

   - [ ] A `ME55`
   - [ ] B `ME56`
   - [x] C `ME57`
   - [ ] D `ME58`

   Correct. The transaction `ME57` enables you to assign and process purchase requisitions.

2. Which documents can you generate with the *Automatic Generation of Purchase Orders* transaction (`ME59N`)?

   Choose the correct answers.

   - [x] A Contract release orders
   - [ ] B Scheduling agreement delivery schedule lines
   - [x] C Purchase orders
   - [ ] D RFQs

   Correct. With the transaction ME59N, you can generate contract release orders and purchase orders.

3. You would like to convert assigned purchase requisitions into follow-on documents. Which of the following statements apply?

   Choose the correct answers.

   [X] A You can convert several requisition items from the same vendor to one single purchase order.

   [ ] B You can automatically convert all requisition items generated by MRP into purchase orders using transaction ME59N.

   [X] C If the assigned source was blocked in the source list after the assignment was made, it is not possible to convert the corresponding requisition item.

   [X] D You can convert purchase requisitions into scheduling agreement delivery schedule lines.

   Correct. Multiple requisition items for the same supplier can be converted into one purchase order. Purchase requisitions can be converted into delivery schedule lines once you have assigned a scheduling agreement. Blocking a source in a source list prevents users from ordering the material further.

4. A prerequisite to convert purchase requisitions into purchase orders or scheduling agreement delivery schedule lines using the assignment list is that you should have already assigned sources of supply to the purchase requisition items to be converted. True or false?

   Determine whether this statement is true or false.

   [X] True

   [ ] False

   Correct. The statement is true.

5. Which of the following statements is true if you only work with order confirmations (without confirmation control key)?

   Choose the correct answer.

   [ ] A You can separately record both the confirmed dates and quantities.

   [ ] B You can separately record only the confirmed dates.

   [X] C You can use the Fast Change function to enter a confirmation number for all items.

   [ ] D You can separately record only the confirmed quantities.

   Correct. You can use the Fast Change function to enter a confirmation number for all purchase order items.

6. Which of the following prerequisites must be met to generate order confirmation reminders?

   Choose the correct answers.

   [X] A You have selected the *Acknowledgment Reqd* checkbox.

   [ ] B You have entered an acknowledgment number for items without a confirmation control key.

   [X] C You have set the message determination for the order acknowledgment reminder.

   [ ] D You have confirmed the ordered quantity for items with a confirmation control key.

   Correct. The following prerequisites must be met: you have selected the *Acknowledgment Reqd* checkbox and set the message determination for the order acknowledgment reminder.

7. If the confirmation control key contains a sequence with multiple confirmation categories, you can set the GR relevant indicator for all confirmation categories. True or false?

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   Correct. The statement is false. If there are several configuration categories in the confirmation sequence, you can mark only one as GR-relevant.

8. Which of the following indicators should you set when configuring the confirmation control key so that only the confirmed quantity is proposed when posting a goods receipt?

   Choose the correct answer.

   [ ] A *MRP-Relevant* indicator

   [X] B *GR Assignment* indicator

   [ ] C *Create Inb. Delivery* indicator

   [ ] D *Acknowledgment Reqd* indicator

   Correct. If you set the GR assignment indicator for a confirmation category in the confirmation control key, the confirmed quantity is suggested when you post a goods receipt.

9. What are functions of Situation Handling?

   Choose the correct answers.

   - [ ] A Notification of suppliers about new purchasing documents
   - [X] B Automatic detection of exceptional business situations
   - [ ] C Automatic completion of purchasing processes
   - [X] D Notification of responsible users

   Correct. The automatic detection of exceptional situations and the notification of specific users are functions of the Situation Handling.

UNIT 5 Spezial User Parameters for Purchasing

UNIT OBJECTIVES

- Maintain system messages and user parameters in Purchasing
- Check the EFB user parameter

Unit 5
Lesson 1

Analyzing Special Aspects in Customizing

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Maintain system messages and user parameters in Purchasing

System Message Settings

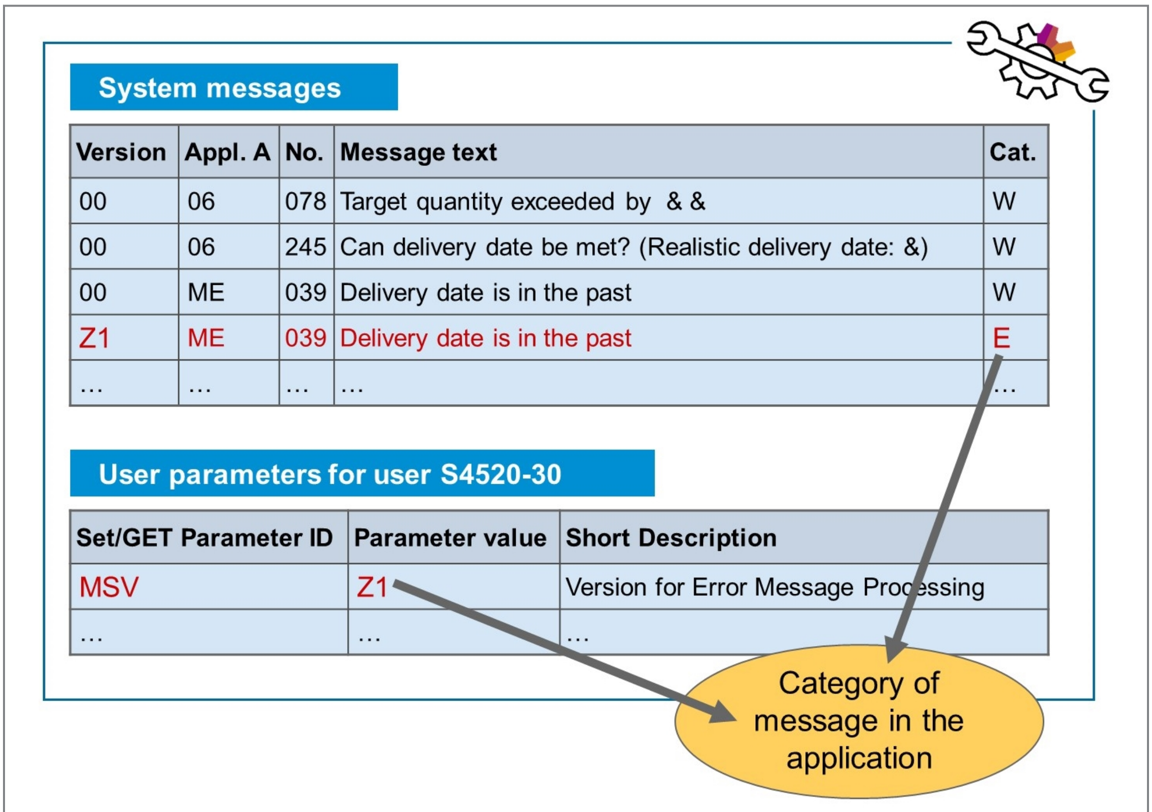


Figure 59: System Messages in Purchasing

In many transactions in Purchasing, the system issues messages to inform users about critical situations, for example, as follows:

`The target quantity has been exceeded`

You can define the following attributes for selected system messages:

- Warning message
- Error message
- No message

All messages that can be controlled are available in the standard system with the version 00. Before you change the standard type for a particular message, you must check whether this change is valid for all users.

You can change the message type for the message with the version 00. You can also store this message for a user-specific output as a new version, such as version Z1, and then change the message type for the new version. All users for whom this new version is to apply must have the MSV user parameter with the value of the new version entered in their own data. If you have not maintained the parameter MSV for a user, the system uses version 00.

If you want to determine the number of a message you have received, you can call the long text of the message by double-clicking it. You will see the application area and the message number. System messages in Purchasing are generally assigned to the *06* and *ME* application areas (message classes).

User Parameters in Purchasing

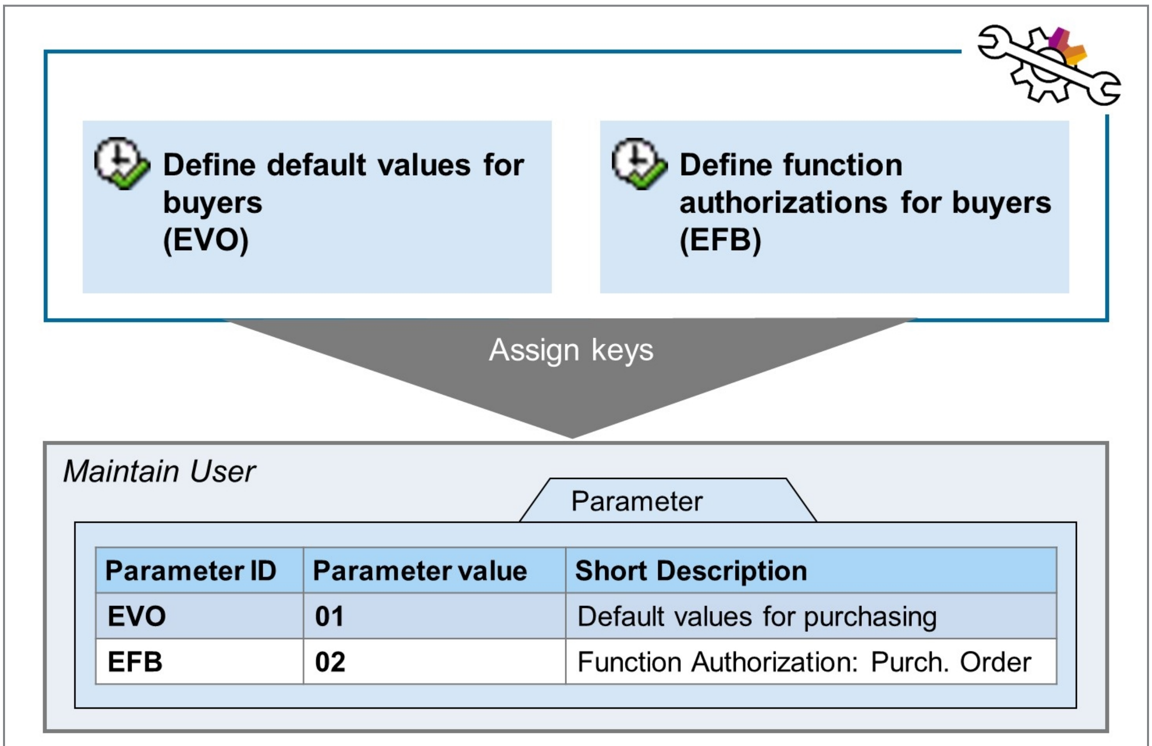


Figure 60: User Parameters in Purchasing

There are two purchasing-specific user parameters that can influence and control the activities of buyers. These are the EVO (default values for buyers) and EFB (function authorizations) parameters. You define both user parameters in Customizing for *Purchasing* and then assign them to the relevant user by entering the keys for the parameter IDs EVO and EFB in the user master data.

EVO User Parameter

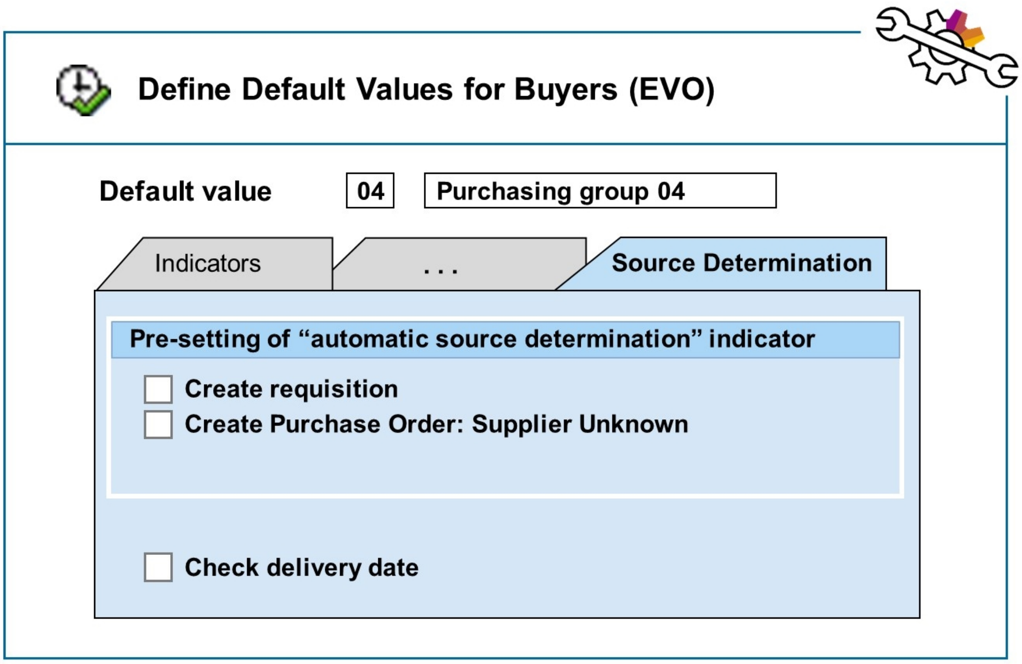


Figure 61: EVO User Parameter

This parameter enables you to change the standard settings for certain fields on a user-specific basis.

Possible Settings on the Individual Tabs

The following settings are possible on the individual tabs:

- *Indicators* tab:

  On the *Indicators* tab, you can influence the default values for the *Info record update* indicator in purchase orders and quotations. If the user data does not contain an EVO parameter, the *Info record update* indicator is preselected in purchase orders as the default setting. In quotations, the default setting is that the *Info record update* indicator is not preselected.

  If you set the *Order acknowledgment requirement* indicator, the *Order acknowledgment req.* field is the default when you create a purchasing document. You can make separate settings for purchase orders, contracts, and scheduling agreements.

- *Overview Screens* tab:

  On the *Overview Screens* tab, you can specify whether the overview screens for entering document items in Purchasing have a two-line display (step loop technique) or a one-line display (table control technique).

> Hint:
> Use of the step loop technique is not supported in the Enjoy transactions.

- *Fast Processing* tab:

If you have set the *Select All* indicator, when you create a document using a template, all items in the template document are already selected for transfer to the new document.

By selecting the *Assign and Edit Purchase Requisition* checkbox in the *Adopt all* screen area, you specify that the assigned requisition items are to be automatically adopted in the relevant purchasing documents. This setting affects the *Assign and Process* transaction for purchase requisitions and the conversion of requisitions to purchase orders from the current stock/requirements list or MRP list.

If you have not set the indicator, when you convert the purchase requisitions into purchase orders, the purchase requisition items are copied to the document overview. The purchase requisition items then have to be copied from the document overview to the purchase order.

- *Addl Screens* tab:

  The *Change doc. type when saving req.* indicator enables you to switch the document type within the transaction *Purchase Order → Create → Vendor Unknown* when saving items as purchase requisitions. For example, when creating a purchase order using the transaction *Purchase Order → Create → Vendor Unknown*, you enter the desired order type for the purchase order on the initial screen. The document type also applies to items that are saved not as a purchase order, but as a purchase requisition. However, if the document type used does not exist for purchase requisitions, you cannot save the items. Setting the *Change doc. type when saving req.* indicator opens a dialog box in which you can reselect the document type to appear when you save the items as purchase requisitions.

  The *Detailed Information* indicator in the *Availability check for stock transfers* screen area determines whether or not detailed information regarding the availability of a material is shown when you create a stock transfer order using the `ME27` transaction. If you create a stock transfer order using the `ME21N` transaction, you can access the detailed information through *Environment → Availability*, irrespective of the indicator setting.

- *Price Adoption* tab:

  You can use the EVO parameter to prevent a price from being pulled from the last purchase order as a default value.

  The *Manual price becomes gross price* indicator prevents a manually entered gross price from being overwritten by the price from the last purchase order. However, this applies exclusively to the gross price condition type. All other condition types are still copied from the last purchase order.

- *Source Determination* tab:

  The indicators for automatic source determination control the relevant default value in the following transactions: *Create Purchase Requisition* and *Purchase Order → Create → Vendor Unknown*.

  If you have set the *Check Delivery Date* indicator, in the course of automatic source determination, the system proposes only those sources that can deliver on the desired date. In doing so, it takes the planned delivery time and purchasing department processing time into account.

> Caution:
> The settings in the EVO user parameter (such as *Check Delivery Date*) are not taken into account in the planning run.

You can create the EVO user parameter in Customizing for *Materials Management* under *Purchasing → Environment Data → Define Default Values for Buyers*.

> Hint:
> You can create a parameter with a blank value. This will be relevant for all users who have not assigned a value for the EVO parameter.

Info Record Update Indicator

Define condition control at plant level

	Plant	Name	Conditions at plant level
	1010	Hamburg	(Conditions allowed with and without plant)
	1020	Berlin	+ (Only plant-related conditions allowed)
	1710	Atlanta	– (No plant-related conditions allowed)

Figure 62: General Setting for the Info Record Update Indicator

When creating a purchase order using the `ME21N` transaction, you can only stipulate whether a corresponding info record is to be created or, if one already exists, to be updated. The status of the *Info record update* indicator in the purchase order depends on various factors.

General Settings

To control the use of plant-specific conditions, you create the relevant settings in Customizing for *Purchasing* (condition control). These settings determine the user-independent status of the *Info record update* indicator in the `ME21N` transaction.

The settings determine the status as follows:

- To create conditions with or without a plant (*blank* indicator), set the status of the *Info record update* indicator as *C*. This status means that an info record at a purchasing organization level will be created if no such record yet exists. If a plant-specific or purchasing organization level info record already exists, it is updated.
- To create conditions only on a plant-specific basis (+ indicator), set the status of the *Info record update* indicator as *B*. This status means that a plant-specific info record will be created if no such record yet exists. An existing info record for the plant is updated.
- If you do not want conditions to be created on a plant-specific basis (– indicator), set the status of the *Info record update* indicator as *A*. This status means that an info record at a purchasing organization level will be created if no such info record yet exists for the relevant organization. An existing info record will be updated.

Hint:
You will find a comprehensive overview of all the options for combining the *Info record update* indicator and condition control and the resulting updates in SAP Note 569885.

You can maintain the general settings of the *Info record update* indicator for the `ME21N` transaction in Customizing for *Materials Management* under *Purchasing → Conditions → Define Condition Control at Plant Level*.

User-Dependent Setting for the Info Record Update Indicator

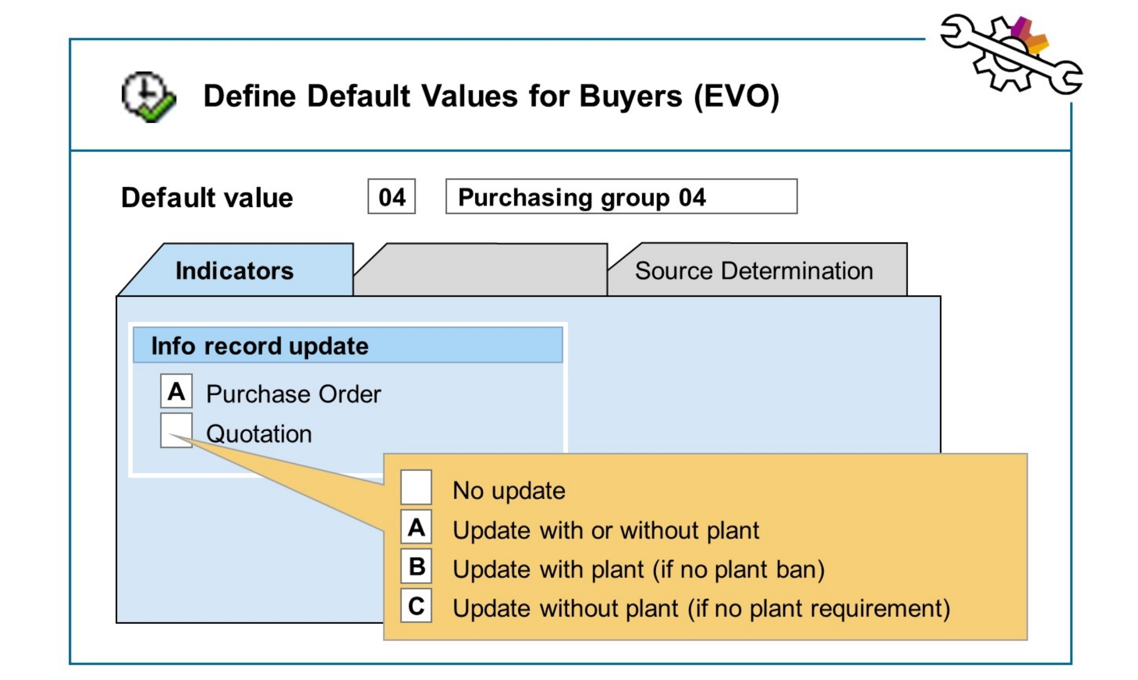


Figure 63: User-Dependent Setting for Info Record Update Indicator

The settings for the *Info record update* indicator that are incorporated in the EVO parameter override the general settings, thereby enabling you to define the status of that indicator on a user-specific basis. If the user data does not include an EVO parameter, the *Info record update* indicator is set in a purchase order item as a default value.

Hint:
If you create a quotation item, purchase order item, or outline agreement item without a material master record, the *Info record update* indicator is not set, regardless of your personal settings. However, you can set it manually. In this case, the system creates a material group info record.

LESSON SUMMARY

You should now be able to:

- Maintain system messages and user parameters in Purchasing

Unit 5
Lesson 2

Defining Function Authorizations for Buyers

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Check the EFB user parameter

EFB User Parameter

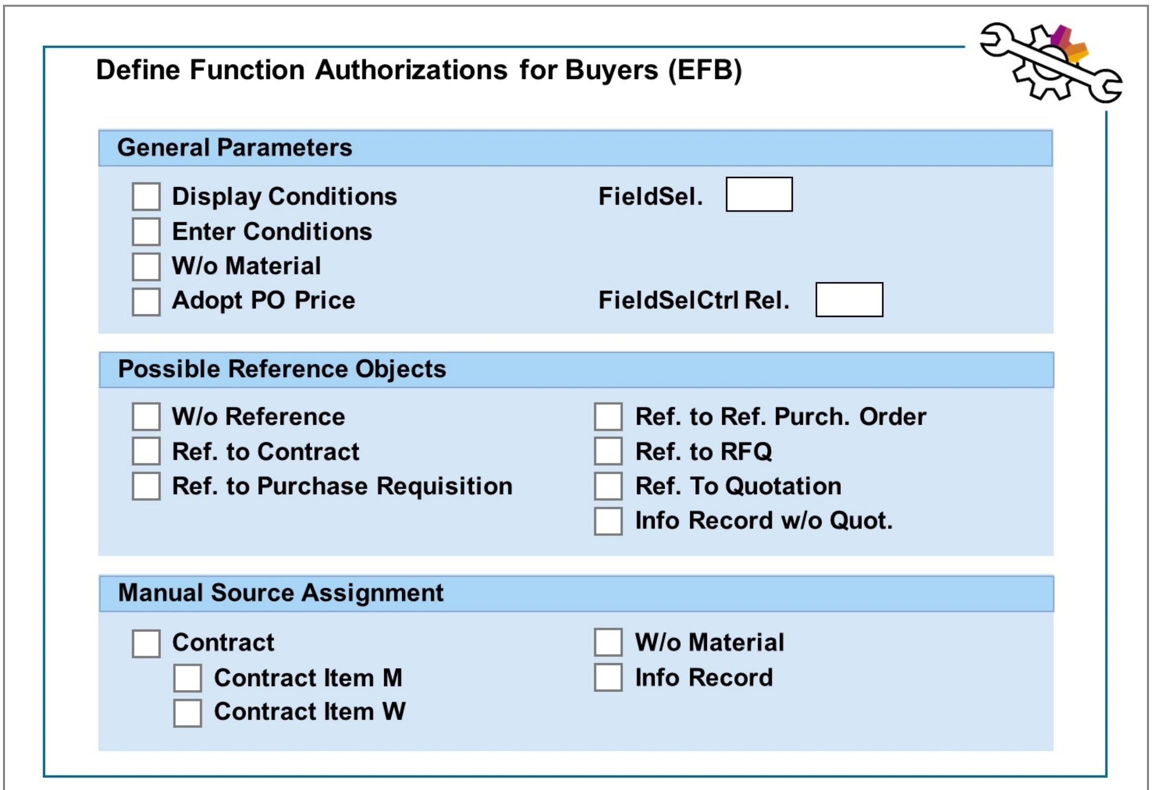


Figure 64: EFB User Parameter

The EFB user parameter enables you to restrict the function authorizations for the requisitioning and ordering transactions on a user-specific basis.

Functions of the EFB Parameter

The EFB parameter enables you to create the following settings:

- General parameters:

  The EFB parameter enables you to determine whether a user can enter conditions in purchasing documents or only display them. If you have not set the *Display Conditions* indicator, the relevant fields and tabs in the purchasing document, such as purchase order and outline agreement, are hidden. If you have not set the *Enter Conditions* indicator, you must also define a field selection key controlling the field status (display or hide) of the relevant fields. The *W/o Material* indicator determines whether purchase order items without a material master record may be created. The *Adopt PO Price* indicator enables you to specify, when creating or changing a purchase requisition item, whether the internal valuation price of the purchase requisition is to be adopted in the purchase order. It is possible to adopt the valuation price as a net price or gross price in the purchase order.

> Hint:
> The valuation price in the purchase requisition is determined for items with a material master record from the accounting view of the material master record. For items without a material master record, you have to enter the valuation price manually.

- Possible reference objects:

  The indicators in this area relate exclusively to the creation of purchase order items. You can use the indicators to determine whether you must reference a preceding document when you create a purchase order item. You can also use them to determine which reference objects are allowed.

- Manual source assignment:

  If you have not set the relevant indicators for manual source assignment, a requester can only use the automatic source determination facility.

You can create the EFB user parameter in Customizing for *Materials Management* under *Purchasing → Authorization Management → Define Function Authorizations for Buyers*.

LESSON SUMMARY

You should now be able to:

- Check the EFB user parameter

Learning Assessment

1. The EVO parameter enables you to set the default value for the *Info record update* indicator on a user-dependent basis. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

2. Which user parameter will enable you to prevent a price from being pulled from the last purchase order as a default value?

   Choose the correct answer.

   - [ ] A EKG
   - [ ] B MSV
   - [ ] C EVO
   - [ ] D EFB

3. Which of the following statements apply to the EFB parameter? The EFB parameter enables you to determine whether:

   Choose the correct answers.

   - [ ] A The price from the last purchase order appears as the default value when a new purchase order is created.
   - [ ] B The conditions in an outline agreement are displayed to a user.
   - [ ] C A user may create a purchase order without reference to a preceding document.
   - [ ] D The planned delivery time is checked against the delivery date during the source determination process.

4. If you have not set the *Enter Conditions* indicator, you must also assign a field selection key controlling the field status of the relevant fields. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

Unit 5

Learning Assessment - Answers

1. The EVO parameter enables you to set the default value for the *Info record update* indicator on a user-dependent basis. True or false?

   Determine whether this statement is true or false.

   [X] True

   [ ] False

   Correct. On the *Indicators* tab of the EVO parameter, you can influence the default values for the *Info record update* indicator in purchase orders and quotations.

2. Which user parameter will enable you to prevent a price from being pulled from the last purchase order as a default value?

   Choose the correct answer.

   [ ] A EKG

   [ ] B MSV

   [X] C EVO

   [ ] D EFB

   Correct. The EVO user parameter will enable you to prevent a price from being pulled from the last purchase order as a default value.

3. Which of the following statements apply to the EFB parameter? The EFB parameter enables you to determine whether:

   Choose the correct answers.

   [ ] A The price from the last purchase order appears as the default value when a new purchase order is created.

   [X] B The conditions in an outline agreement are displayed to a user.

   [X] C A user may create a purchase order without reference to a preceding document.

   [ ] D The planned delivery time is checked against the delivery date during the source determination process.

   Correct. Statements A and D do not apply to the EFB parameter, but to the EVO parameter.

4. If you have not set the *Enter Conditions* indicator, you must also assign a field selection key controlling the field status of the relevant fields. True or false?

   Determine whether this statement is true or false.

   - [x] True
   - [ ] False

   Correct. The statement is true.

UNIT 6

Document Release Procedure

UNIT OBJECTIVES

- Release blocked purchase requisitions
- Release blocked purchase orders
- Check Customizing settings for release procedures
- Create release procedures for purchase requisitions
- Set up flexible workflows in purchasing

Unit 6
Lesson 1

Releasing Purchase Requisitions

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Release blocked purchase requisitions

Introduction

In SAP S/4HANA, you can set up approval procedures for purchase requisitions and for external purchasing documents, such as purchase orders, contracts, scheduling agreements, and requests for quotations.

If a purchase requisition or an external purchasing document fulfills certain conditions (for example, a requisition item is assigned to a cost center), the document has to be approved (by the cost center manager, for example) before further processing can take place. An electronic release procedure can reflect the approval process. This release procedure automatically blocks the relevant documents for further processing. You cannot convert blocked requisition items into follow-on documents. Blocked purchase orders cannot be output/transmitted.

Release Procedure for Purchase Requisitions

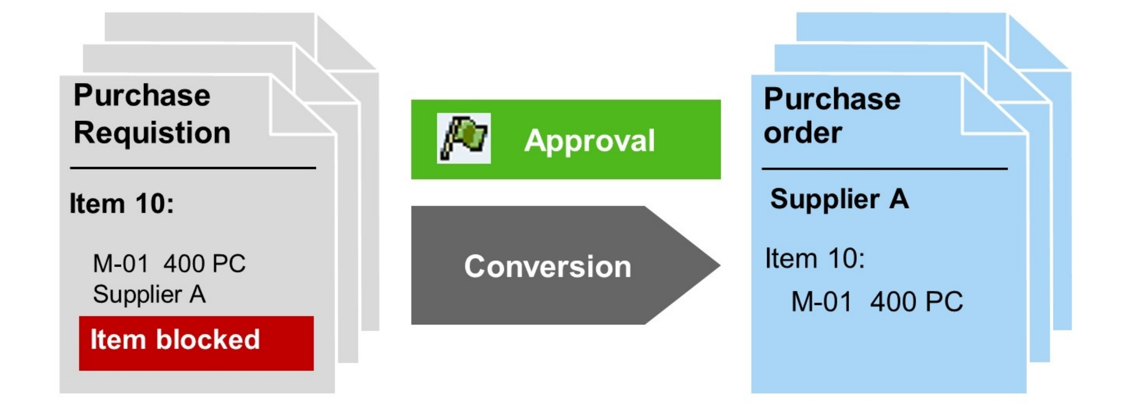


Figure 65: Purchase Requisition Release

You create a release procedure for requisitions to prevent the requisitions from being converted into follow-on documents, such as RFQs, purchase orders, and outline agreements. You may require one or several approvals for the release. The release acts as an electronic signature.

You need to differentiate between the following types of release:

- Item-wise release
- Overall release

Overall and Item-Wise Release of Purchase Requisitions

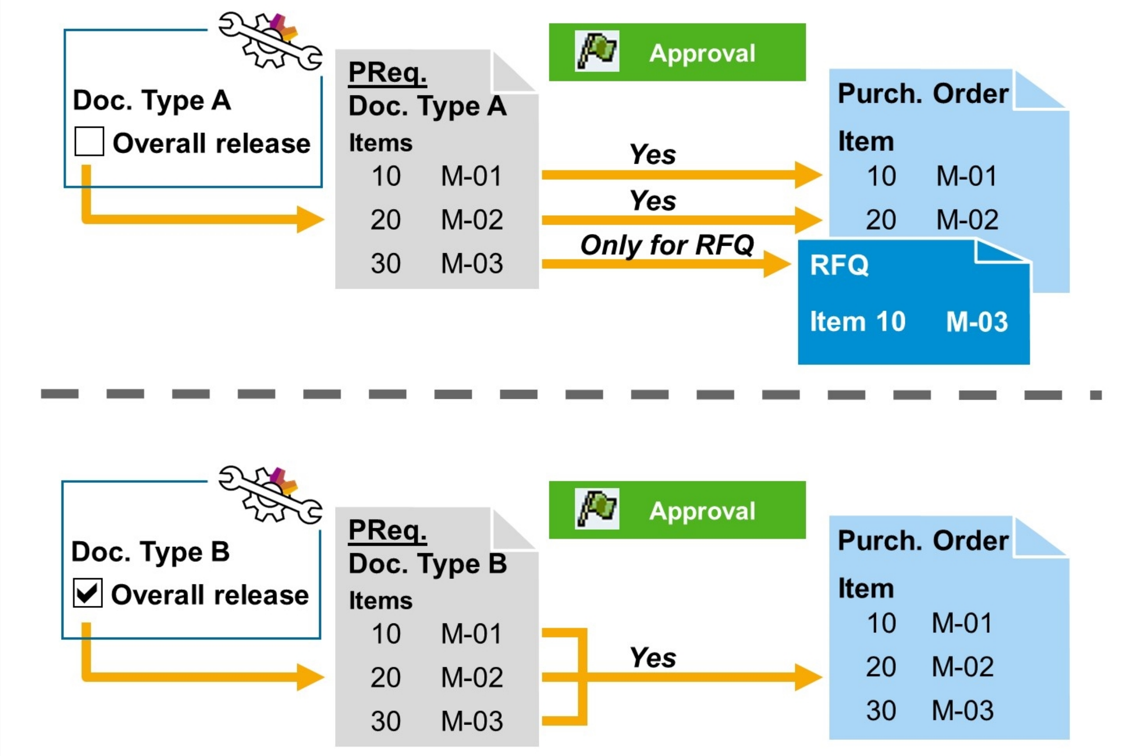


Figure 66: Overall and Item-Wise Release of Purchase Requisitions

With an item-wise release, every item is checked if it is relevant for release. The check is made as you enter the data. With the overall release, all items must fulfill these criteria. Therefore, you must choose the criteria for the overall release carefully. The check is made when you save or check the purchase requisition.

All people involved in the release procedure indicate their approval in a release transaction, using their release code. You can cancel an already effected release with the same code, in which case, the system reinstates the original release status. However, this option exists only as long as a requisition or requisition item has not been converted into a follow-on document.

Connecting to SAP Business Workflow for a Release Code

If you have created a connection to SAP Business Workflow for a release code, the following takes place:

1. The employee responsible for the approval gets a work item in the Inbox.
2. From here, the approver can directly call the purchase requisition or purchase requisition item that requires approval.
3. On approval (released or rejected), the information is sent to the employee who created the requisition by means of the workflow.

> Hint:
> You can also integrate workflows in a mail system or use SAP Fiori apps.
>
> Flexible Workflows are covered in a separate lesson.

The document type and the release group in the classification determine whether an item-wise release or an overall release of a requisition is applied.

Release Procedures for Purchase Requisitions

For purchase requisitions, the following release procedures are available:

- Without classification:

  With this procedure, you can release purchase requisitions only at item level. Only the account assignment category, material group, plant, and value characteristics are available as release criteria, which are also known as release characteristics.

- With classification:

  This procedure enables you to release requisitions item-wise or overall. In principle, you can use every field of the purchase requisition as a criterion for the release.

The two procedures are mutually exclusive – that is, you must decide on one of the two alternatives. In SAP standard delivery, no procedure with classification is initially available. As soon as you create a procedure with classification, the procedure without classification is deactivated automatically.

> Note:
> If you want to use the procedure without classification, see the documentation for the relevant IMG activity for the points you need to observe when doing this.

Release Options for Blocked Purchase Requisitions

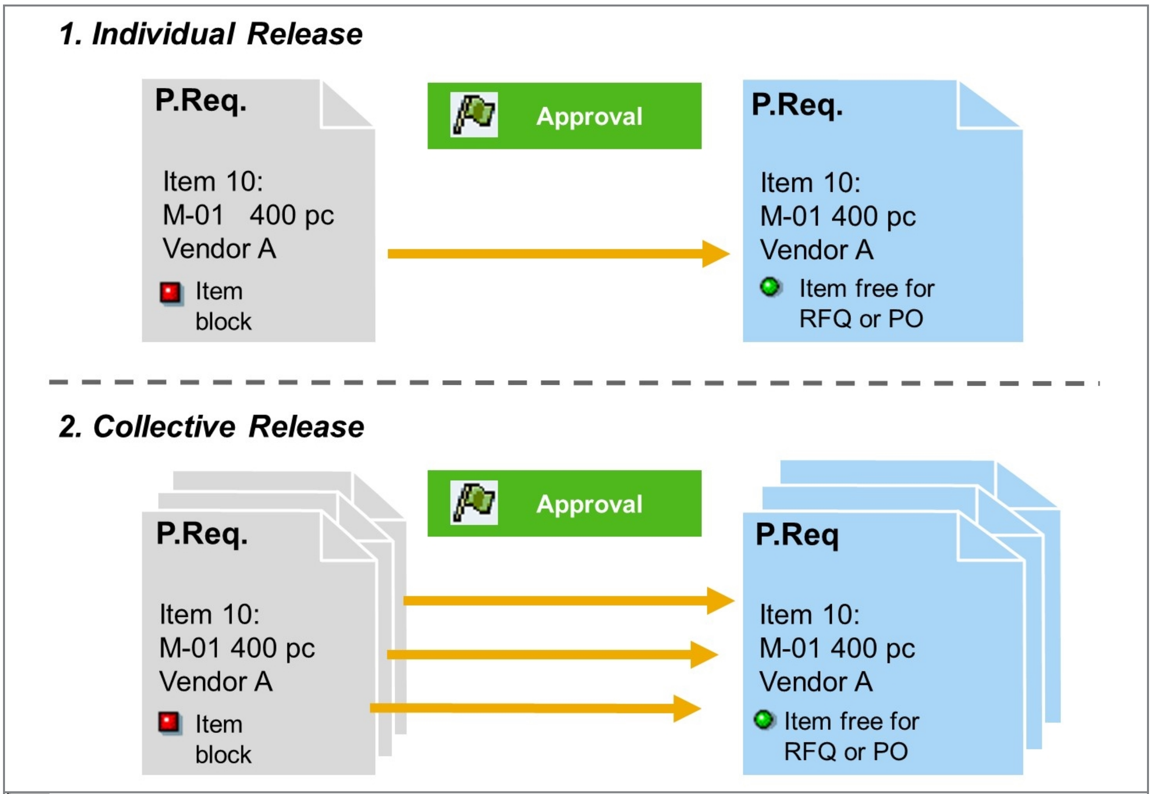


Figure 67: Release Options for Blocked Purchase Requisitions

You can release purchase requisitions in the following ways:

- Individual release:

  You release individual items of a requisition, or – if the requisition must be released completely – you release the entire document. With individual releases, you can also reject the release.

- Collective release:

  You release several requisition items or requisitions by using your release code. To execute this transaction, you need to enter only your release code. The system then lists all requisitions and requisition items that can be released with this release code. You can limit the scope of this list using various selection options on the initial screen. A rejection is not possible with collective release.

To release purchase requisitions individually, on the SAP Fiori Launchpad start the *Release Purchase Requisition* app. In the SAP GUI on the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Purchase Requisition → Release → Individual Release* (`ME54N`).

To release purchase requisitions collectively, on the SAP Fiori Launchpad start the *Release Purchase Requisitions* app. In the SAP GUI on the *SAP Easy Access* screen, choose *Logistics → Materials Management → Purchasing → Purchase Requisition → Release → Collective Release* (`ME55`).

Key Terms for Release Procedures

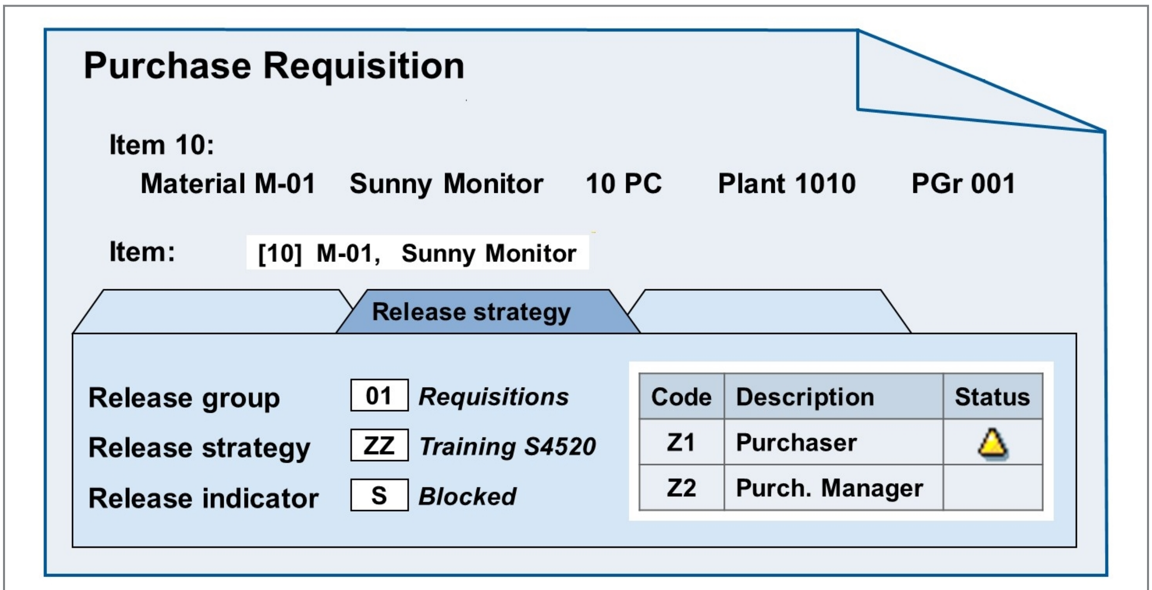


Figure 68: Release Procedures for Purchase Requisition – Key Terms

If a requisition is blocked by the system, a *Release Strategy* tab appears. This tab gives you more detailed information about the release. For item-wise release, the tab is located in the item detail. For overall release, the tab is located in the header.

The following are the key terms with regard to release procedures:

Release group:

You can compile several release strategies in a release group. The *01* release group is intended for purchase requisitions with item-wise release, and the *02* release group is intended for purchasing purchase requisitions with overall release. The release group and the document type determine if a purchase requisition is subject to item-wise release or overall release.

Release strategy:

The release strategy contains the criteria that have caused an item or the document to be blocked. The criteria that cause the block are not shown. They are stored in Customizing for the release strategy.

Release indicator:

The release indicator is a key denoting the current release status of the item or document. At the start of the release procedure, the status is usually *Blocked*.

Release code:

The release code is a two-character ID that allows an individual or group of individuals to release a blocked document or reverse an already effected release. Authorizations control release code usage.

LESSON SUMMARY

You should now be able to:

- Release blocked purchase requisitions

Unit 6
Lesson 2

Releasing Purchasing Documents

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Release blocked purchase orders

Release Procedure for Purchasing Documents

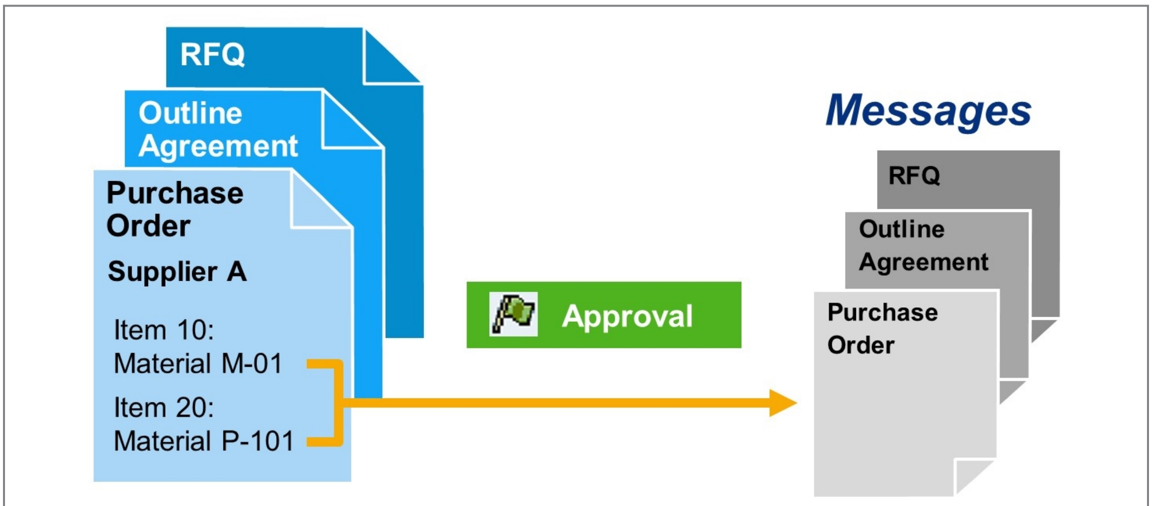


Figure 69: Overall Release for Purchasing Documents

The purpose of the release procedure for purchasing documents is to prevent the printout or transmission of purchasing documents before they go through the defined approval process. You can only release or reject purchasing documents at header level; an item-wise release or rejection is not possible. The system determines the release strategies when you save or check a purchasing document.

You can use collective transactions to release purchasing documents. In these transactions, you can display the blocked documents in print preview. However, you can output the message only after the release has been effected. You can also release purchase orders individually.

In an individual release, the person authorized to effect release can display the current version of a purchase order and, on the basis of this information, perform one of the following:

- Release with the release code
- Refuse to implement the release
- Reverse an already implemented release or rejection

For setting up release strategies for external purchasing documents, such as purchase orders, Requests for Quotations (RFQs), and outline agreements, you can only use release procedures with classification.

Apps and Transactions to Release Purchasing Documents

The following menu paths on the *SAP Easy Access* screen enable you to release purchasing documents:

- Choose *Logistics* → *Materials Management* → *Purchasing* → *Purchase Order* → *Release* → *Individual Release* (`ME29N`).
- Choose *Logistics* → *Materials Management* → *Purchasing* → *RFQ/Quotation* → *Request for Quotation* → *Release* (`ME45`).
- Choose *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Contract* → *Release* (`ME35K`).
- Choose *Logistics* → *Materials Management* → *Purchasing* → *Outline Agreement* → *Scheduling Agreement* → *Release* (`ME35L`).

For the collective release of purchase orders, you have to enter transaction `ME28` in the command field. There is no menu path to this transaction.

The following apps are available as an alternative to the transactions:

- *Release Purchase Order* (`ME29N`)
- *Release Purchase Orders* (`ME28`)
- *Release Purchase Contract* (`ME35K`)
- *Release Scheduling Agreement* (`ME35L`)

Hint:
For scheduling agreement schedule lines, forecast, and JIT delivery schedules, there are no release procedures.

Key Terms for Release Procedures for Purchasing Documents

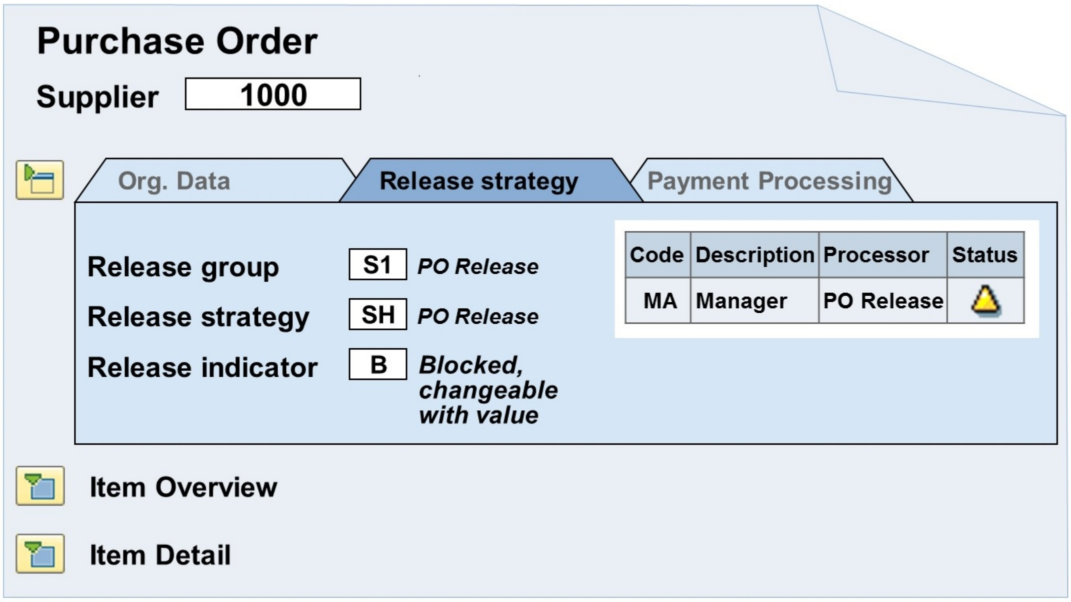


Figure 70: Release Procedures for Purchasing Documents – Key Terms

Use different characteristics for the release of purchasing documents than for purchase requisitions. Since the release is done at header level, use header fields as characteristics.

LESSON SUMMARY

You should now be able to:

- Release blocked purchase orders

Unit 6
Lesson 3

Configuring Release Procedures in Customizing

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Check Customizing settings for release procedures
- Create release procedures for purchase requisitions

Release Procedure Customizing

You can specify the following types of release procedures in Customizing for purchase requisitions:

- Procedures without classification
- Procedures with classification

This lesson deals exclusively with setting up release procedures with classification.

Characteristic and Class Creation

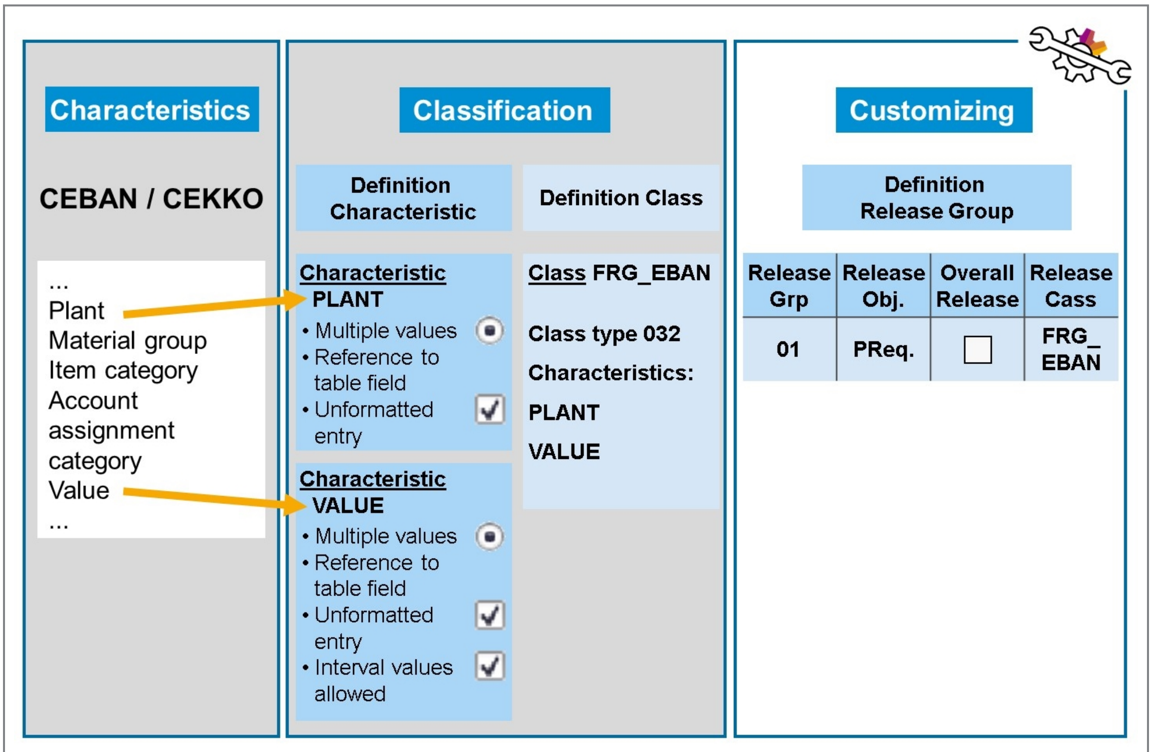


Figure 71: Definition of Release Criteria

A precondition for a release strategy with classification is that you have created a class with characteristics for each document category, such as purchase requisitions or purchase documents. The individual release strategies differ according to the different values of the characteristics that a class contains. If you want to use both overall and item-wise release procedures for requisitions, you must create separate classes for each.

Creating Characteristics

You create characteristics in Customizing for *Materials Management* under the following paths:

- *Purchasing → Purchase Requisition → Release Procedure → Procedure with Classification → Edit Characteristics*
- *Purchasing → Purchase Order → Release Procedure for Purchase Orders → Edit Characteristic*

The communication structures CEBAN (for purchase requisitions) and CEKKO (for purchasing documents) contain all the fields that you can define as release characteristics. To display the technical name of the fields, display the tables with transaction SE11.

You can cover additional requirements through the user exit that SAP provides.

For each field that acts as a criterion for your release strategy, you must create a characteristic. You have a free choice how to name the characteristic. You must link the characteristic in the *Addnl data* (*Additional data*) tab with the database table CEBAN or CEKKO and the field name from these tables. You can assign the *Multiple Values* attribute to a characteristic, so that you can enter several different values for the characteristic. For characteristics of the NUM (numerical format) or CURR (currency format) data types, you can allow interval values. For characteristics of the CHAR (character format) data type, you can't use interval values.

Creating a Class

You create classes in Customizing for *Materials Management* under the following paths:

- *Purchasing → Purchase Requisition → Release Procedure → Procedure with Classification → Edit Classes*
- *Purchasing → Purchase Order → Release Procedure for Purchase Orders → Edit Class*

You must collect all the characteristics that you will use in release strategies for purchase requisitions or external purchasing documents together in classes. You must assign the classes to the 032 (release strategies) class type. You can use a maximum of two classes for purchase requisitions, one for overall release and the other for item-wise release. You have a free choice of names for the classes. For purchasing documents, you can only use one class. To differentiate between the different document categories, it is recommended to use the document type as characteristic.

Creating a Release Group and Release Codes

Definition of Release Codes

Release Group	Release Code	Workflow	Description
01	Z1	1	Purchasing
01	Z2		Controlling

Figure 72: Release Codes

You create **release groups** in Customizing for *Materials Management* under the following paths:

- *Purchasing → Purchase Requisition → Release Procedure → Procedure with Classification → Set Up Procedure With Classification*
- *Purchasing → Purchase Order → Release Procedure for Purchase Order → Define Release Procedure for Purchase Orders*

With the release group, you link the release class to the release object. For purchase requisitions, you must also specify whether the release group is for overall or item-wise release.

You create all the **release codes** you need for your release strategies together with a suitable description (for example, name of the person or the release point), and assign these to the desired release group. If a release code should trigger a workflow, set the corresponding indicator.

Creating Release Indicators

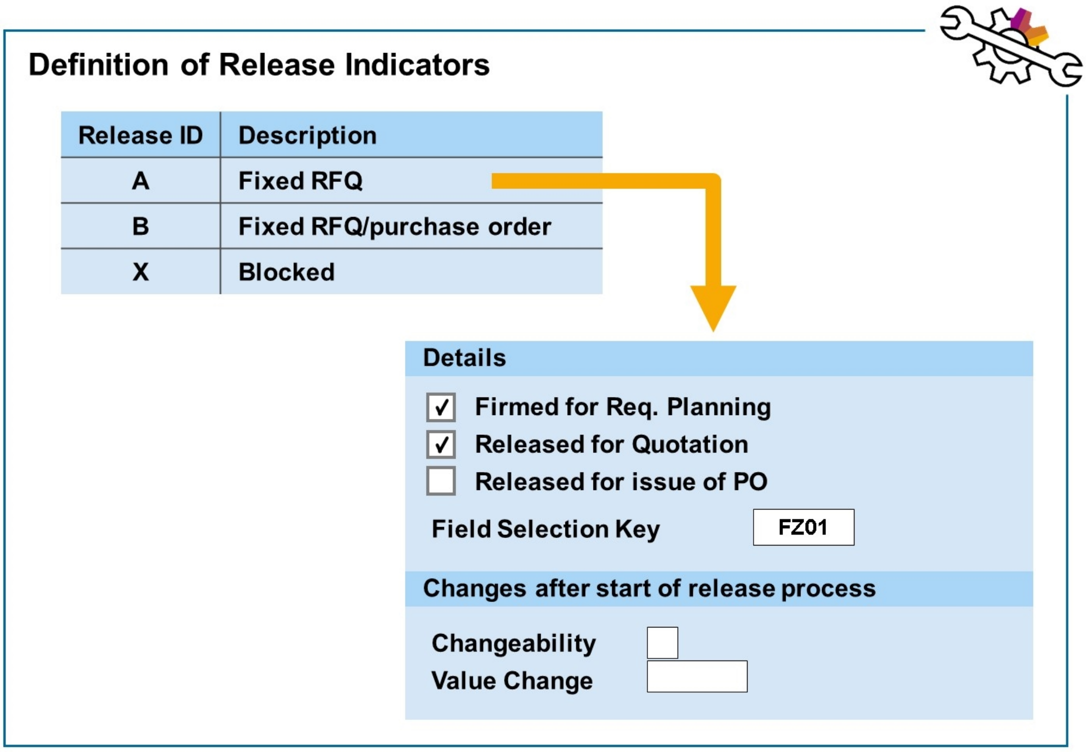


Figure 73: Release Indicators

Release indicators are necessary in release procedures. For purchase requisitions, the following are required:

- A release indicator for the initial status

  As a rule, you must release a purchase requisition before you can create a Request for Quotation (RFQ) or a Purchase Order (PO) referencing the requisition. For this reason, you must assign a release indicator to a requisition to denote initial status and prevent it from being converted to an RFQ or a PO. You may not select the indicators for release for issue of an RFQ or a PO on the detail screen for this indicator.

- A release indicator for the released status

  You must select the indicators for release for issue of an RFQ or a PO on the detail screen for this indicator. You must select at least one of these indicators.

The fixing indicator enables you to protect purchase requisitions that were created in a planning run from changes caused by a new planning run, after the release process has started. You can use a field selection key to prevent certain fields, such as quantity, from being changed later. Otherwise, you can use the *Changeability* indicator to specify the consequence of changing the document after the start of the release procedure. For value changes, you can define a percentage that will be tolerated.

In contrast to purchase requisitions, for purchase orders, there are no fixing indicators and field selection keys. Blocked purchase orders cannot be output.

Creating a Release Strategy

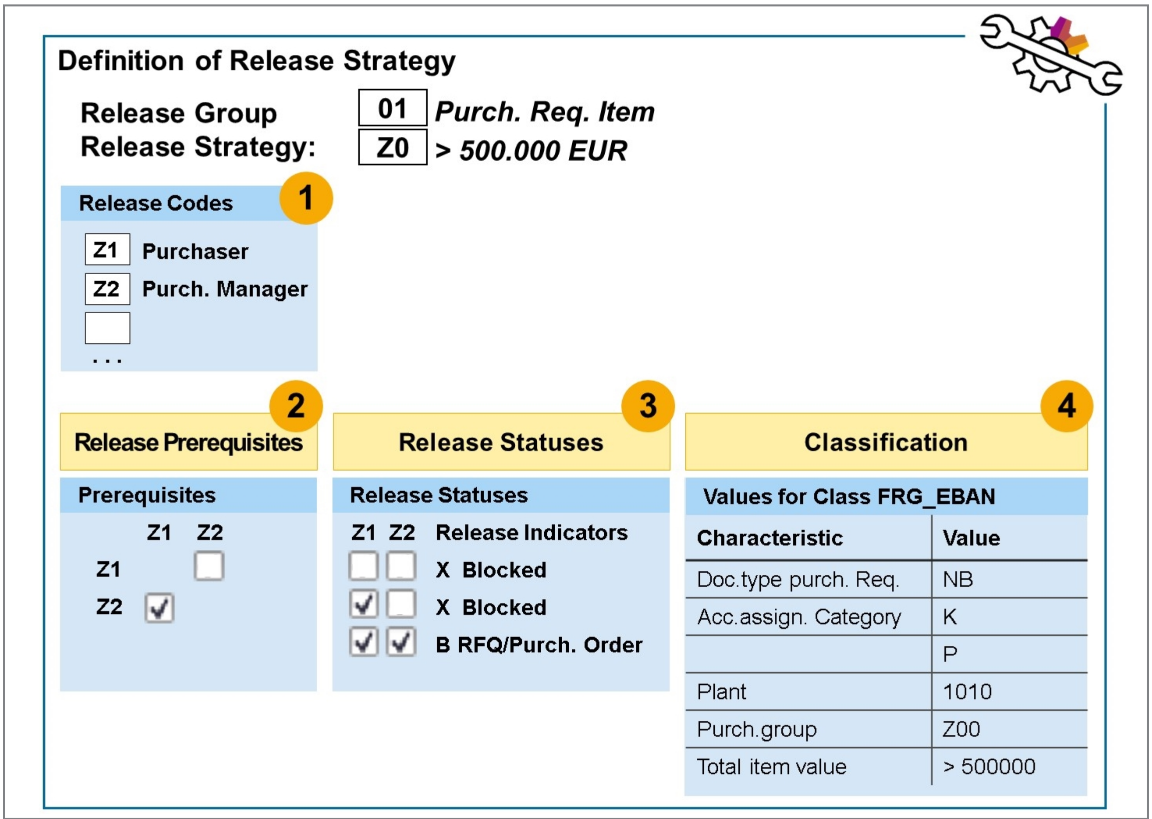


Figure 74: Release Strategies

Release strategies define the criteria that result in the blocking of a purchase requisition or purchasing document and the flow of the release process. The following considerations must be taken into account when applying a release strategy:

- The individuals involved in the process
- The order in which the individuals involved can effect release
- The status of the document during the release process
- The criteria that must be satisfied for the release strategy to be determined

Definitions in Release Strategies

You define the following information for every strategy:

- Release codes:

  In the first step toward defining your new release strategy, you specify the release points (release codes) that are to be included in the release process.

- Release prerequisites:

  The release prerequisites determine the order in which the release points (individuals or groups of individuals) involved may effect release through their release codes. For example, the figure shows a release strategy for purchase requisitions with item-wise release. The strategy contains two release codes. For the Z1 release code, no release prerequisite exists. For the Z2 release code, a release with the Z1 release code is a prerequisite. You can see this because the Z1 code is marked as a prerequisite for the Z2 code.

- Release status:

  You specify the status of a document after a release step. You must specify the status the document should have in all situations that might occur during the release process. The conditions must be logical. The first status is usually *Blocked*. The final status must contain all of the desired follow-on documents.

- Classification:

  You define the attributes of the characteristics, that is, which field values result in the determination of a certain release strategy.

You can define several field values for multi-value fields. In doing so, you cannot use placeholders. In addition, ensure that characteristics without a field value are empty in the document. You can specify intervals only for characteristics with numeric format (for example, an interval from EUR 10,000 to EUR 15,000 for the value of the requisition item), time, or date.

The following are special features of individual attributes that you must address:

- You have to use the internal representation for the item category.
- Cost centers and vendors have ten places in the standard version, and you must create this with leading zeros at the start (for example, vendor 1010 = 0000001010).

If you do not wish to restrict a characteristic, delete it from the release class. You can also create a characteristic with a value of *blank* and a description (for example, *No Entry*) and use this in your release strategies. In this case, the characteristic is considered fulfilled when a value stored in the classification is used or when the field is empty.

Observe the following points:

- The release simulation function enables you to check which status a document would acquire with this release strategy after a certain release point releases the document.

  Choose the *Release Simulation* button and implement the release by double-clicking the release code. The system displays the status that the document would acquire as a result of this release.

- Defining a workflow is optional.

  You can specify the recipient of a workflow if you define a specific release code that is intended for a workflow connection. You define the determination using a combination of the release group, release code, and plant.

  Other settings are also required for the workflow. For example, the workflow must be active and you must assign the individual workflow steps to the object type that is to receive the workflow in the organizational structure of the workflow. You can find the basic settings for the workflows under *Tools → ABAP Workbench → Development → SAP Business Workflow*.

Authorizations

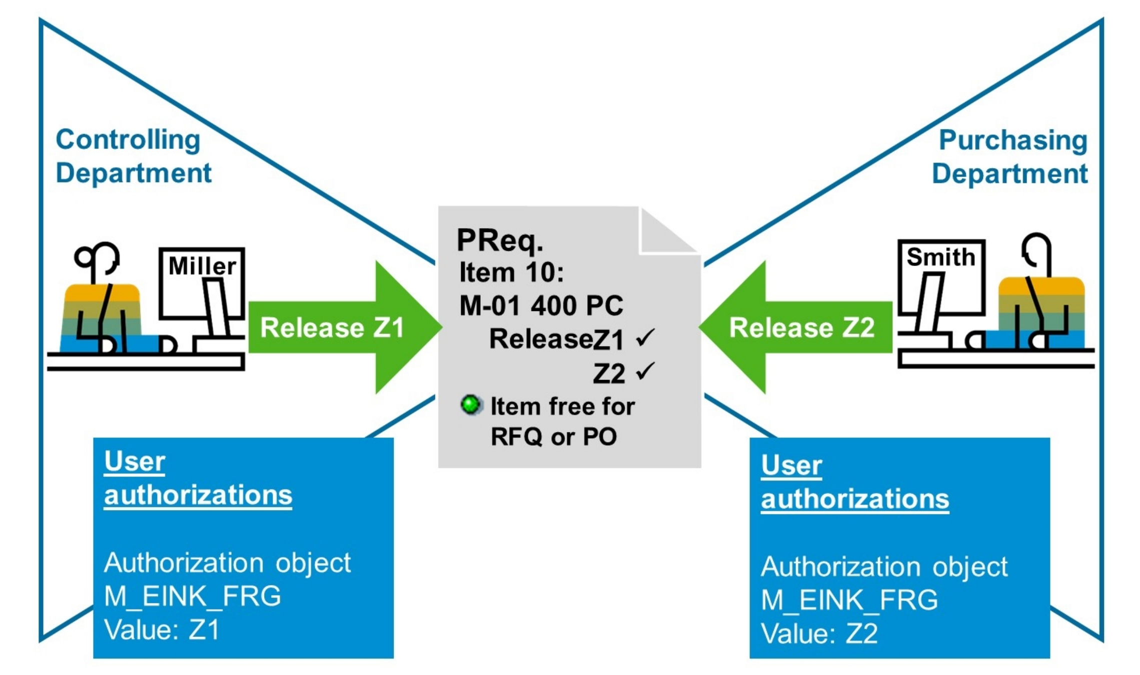


Figure 75: Authorization Objects

The *M_EINK_FRG* (*Release Code and Group (Purchasing)*) authorization object determines which purchasing documents you can release and which release codes you can use to do so. The *M_EINK_FRG* authorization object contains the *Release group* and *Release code* fields.

> Hint:
> If you use the release procedure for requisitions without classification, you must create authorizations for the *M_BANF_FRG* (*Release Code in Purchase Requisition*) authorization object.

Use the following menu paths to maintain authorizations:

- Choose *Tools* → *Administration* → *User Maintenance* → *Role Administration* → *Roles* (`PFCG`).
- Choose *Tools* → *Administration* → *User Maintenance* → *Authorizations and Profiles (Manual Maintenance)* → *Edit Authorizations Manually* (`SU03`).
- Choose *Tools* → *Administration* → *User Maintenance* → *Authorizations and Profiles (Manual Maintenance)* → *Edit Profiles Manually* (`SU02`).

You can use the `SU22` transaction to check the available authorization objects for each transaction.

LESSON SUMMARY

You should now be able to:

- Check Customizing settings for release procedures

- Create release procedures for purchase requisitions

Unit 6
Lesson 4

Setting Up Flexible Workflows in Purchasing

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Set up flexible workflows in purchasing

Flexible Workflows for Purchase Orders

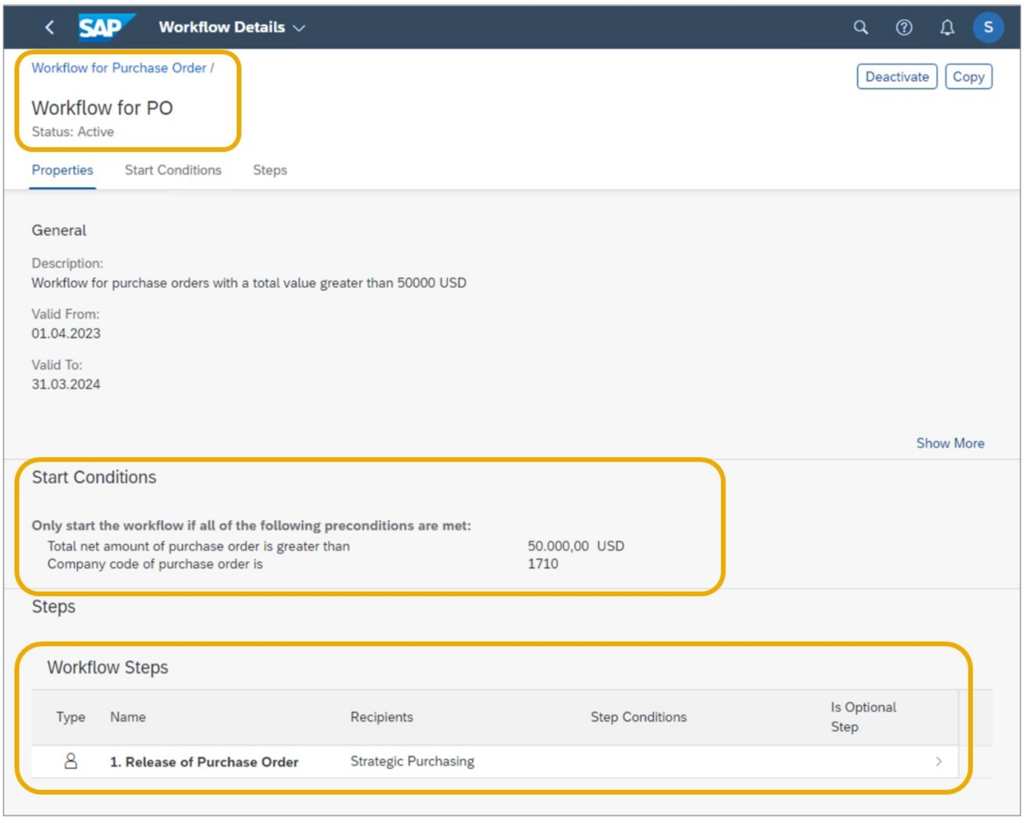


Figure 76: Flexible Workflow for Purchase Order

As of SAP S/4HANA 1709, you can use flexible workflows. For purchase orders, the Workflow Template is 00800238. This new function can replace the release procedure with classification or be used additionally. Depending on the document type, you can decide if you want to use the flexible workflow or the classic release procedure.

To activate the flexible workflow for a document type, choose *IMG → Materials Management → Purchasing → Purchase Order → Flexible Workflow for Purchase Orders → Activate Flexible Workflow for Purchase Orders*.

The settings for the flexible workflows are made in the SAP Fiori app *Manage Workflows for Purchase Orders*.

The flexible workflow can be set up for one or several of the following characteristics:

- Account assignment category Cost Center
- Account assignment category Project
- Company code
- Material group in at least one purchase order item
- Currency
- Document type
- Purchasing group
- Purchasing organization
- Total net amount

The characteristics can be combined as and/or linkage. The approval can be carried out from the SAP Fiori Inbox or on mobile devices. Approvals can have one or several steps. You can assign one or several possible approvers to a workflow. The approvers can be users or roles.

Flexible Workflow for Purchase Requisition

Flexible workflows are also possible for purchase requisitions. You can activate them per document type by selecting the *Scenario based workflow* indicator.

To activate the flexible workflow for a document type, choose *IMG → Materials Management → Purchasing → Purchase Requisition → Flexible Workflow for Purchase Requisitions → Activate Flexible Workflow for Purchase Requisitions*.

The settings for the flexible workflows are made in the SAP Fiori app, *Manage Workflows for Purchase Requisitions*. You can create workflows for overall release as well as for item-wise release.

The relevant Workflow Templates are 00800173 for item-wise release and 00800157 for overall release.

LESSON SUMMARY

You should now be able to:

- Set up flexible workflows in purchasing

Unit 6

Learning Assessment

1. Which of the following is applicable for releasing purchase requisitions?

   Choose the correct answers.

   - [ ] A You can cancel an already effected release for a requisition item that has been converted into a follow-on document.
   - [ ] B To release purchasing objects with a certain release code, you need a corresponding authorization.
   - [ ] C In a collective release, you cannot reject a release.
   - [ ] D You can perform an item-wise release irrespective of the document type and the release group in the classification.

2. When you create a procedure with classification, the procedure without classification is deactivated automatically. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

3. Which of the following determines if a purchase requisition is subject to item-wise release or overall release?

   Choose the correct answer.

   - [ ] A Release group and document type
   - [ ] B Release strategy
   - [ ] C Release indicator
   - [ ] D Release code

4. You can carry out item-wise release for purchasing documents. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

5. Which tables contain the possible fields for characteristics of release procedures in purchasing?

   Choose the correct answers.

   - [ ] A EBAN
   - [ ] B CEBAN
   - [ ] C EKKO
   - [ ] D CEKKO

6. What is the maximum number of release codes that you can use in a release strategy?

   Choose the correct answer.

   - [ ] A Two
   - [ ] B Five
   - [ ] C Eight
   - [ ] D Nine

7. You want to set up a release procedure with classification. You have already created characteristics and classes in Customizing. Which step should you perform next?

   Choose the correct answer.

   - [ ] A Create release groups
   - [ ] B Set up workflows
   - [ ] C Create release codes
   - [ ] D Create release indicators
   - [ ] E Create release strategies

8. To use both overall and item-wise release procedures for requisitions, you must create one class for each. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

9. A release procedure without classification is to be set up in your system for purchase requisitions. Which of the following fields can you take as a criterion?

   Choose the correct answers.

   - [ ] A Item category
   - [ ] B Account assignment category
   - [ ] C Plant
   - [ ] D Purchasing group

10. What can you never do with a blocked purchase order?

    Choose the correct answer.

    - [ ] A Output it
    - [ ] B Change it
    - [ ] C Call the preview
    - [ ] D Add another item to the purchase order

11. Which characteristics can you use in Flexible Workflows for Purchase Orders?

    Choose the correct answers.

    - [ ] A Item Category
    - [ ] B Plant
    - [ ] C Purchasing Group
    - [ ] D Material Group

Learning Assessment - Answers

1. Which of the following is applicable for releasing purchase requisitions?

Choose the correct answers.

[ ] A You can cancel an already effected release for a requisition item that has been converted into a follow-on document.

[X] B To release purchasing objects with a certain release code, you need a corresponding authorization.

[X] C In a collective release, you cannot reject a release.

[ ] D You can perform an item-wise release irrespective of the document type and the release group in the classification.

Correct. To release a purchase requisition with a release code, you need the authorization for this release code. A rejection is not possible with collective release.

2. When you create a procedure with classification, the procedure without classification is deactivated automatically. True or false?

Determine whether this statement is true or false.

[X] True

[ ] False

Correct. The statement is true.

3. Which of the following determines if a purchase requisition is subject to item-wise release or overall release?

Choose the correct answer.

[X] A Release group and document type

[ ] B Release strategy

[ ] C Release indicator

[ ] D Release code

Correct. The release group and the document type determine if a purchase requisition is subject to item-wise release or overall release.

4. You can carry out item-wise release for purchasing documents. True or false?

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   Correct. The statement is false. An item-wise release or rejection is not possible for purchasing documents.

5. Which tables contain the possible fields for characteristics of release procedures in purchasing?

   Choose the correct answers.

   [ ] A EBAN

   [X] B CEBAN

   [ ] C EKKO

   [X] D CEKKO

   Correct. CEBAN and CEKKO tables contain the possible fields for characteristics of release procedures in purchasing.

6. What is the maximum number of release codes that you can use in a release strategy?

   Choose the correct answer.

   [ ] A Two

   [ ] B Five

   [X] C Eight

   [ ] D Nine

   Correct. Eight is the maximum number of release codes that you can use in a release strategy.

7. You want to set up a release procedure with classification. You have already created characteristics and classes in Customizing. Which step should you perform next?

   Choose the correct answer.

   - [x] A Create release groups
   - [ ] B Set up workflows
   - [ ] C Create release codes
   - [ ] D Create release indicators
   - [ ] E Create release strategies

   Correct. You want to set up a release procedure with classification. You have already created characteristics and classes in Customizing. Create release groups will be the next step you should perform.

8. To use both overall and item-wise release procedures for requisitions, you must create one class for each. True or false?

   Determine whether this statement is true or false.

   - [x] True
   - [ ] False

   Correct. The statement is true.

9. A release procedure without classification is to be set up in your system for purchase requisitions. Which of the following fields can you take as a criterion?

   Choose the correct answers.

   - [ ] A Item category
   - [x] B Account assignment category
   - [x] C Plant
   - [ ] D Purchasing group

   Correct. You can use the account assignment category to set up a release procedure without classification.

10. What can you never do with a blocked purchase order?

Choose the correct answer.

- [x] A Output it
- [ ] B Change it
- [ ] C Call the preview
- [ ] D Add another item to the purchase order

Correct. The purchase order can be changed before the release is started. After the release process has started, it depends on the settings in the release indicator assigned to the release step.

11. Which characteristics can you use in Flexible Workflows for Purchase Orders?

Choose the correct answers.

- [ ] A Item Category
- [ ] B Plant
- [x] C Purchasing Group
- [x] D Material Group

Correct. Purchasing group and material group can be used as characteristics in Flexible Workflows for Purchase Orders.

UNIT 7 Self-Service Requisitioning

UNIT OBJECTIVES

- Use the employee self-service to request material
- Confirm receipt of requested material

Performing a Self-Service Process

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use the employee self-service to request material

Self-Service Procurement

In SAP S/4HANA, employees are supported with a special app to request materials and services. This self-service requisitioning is the first step of the self-service procurement process.

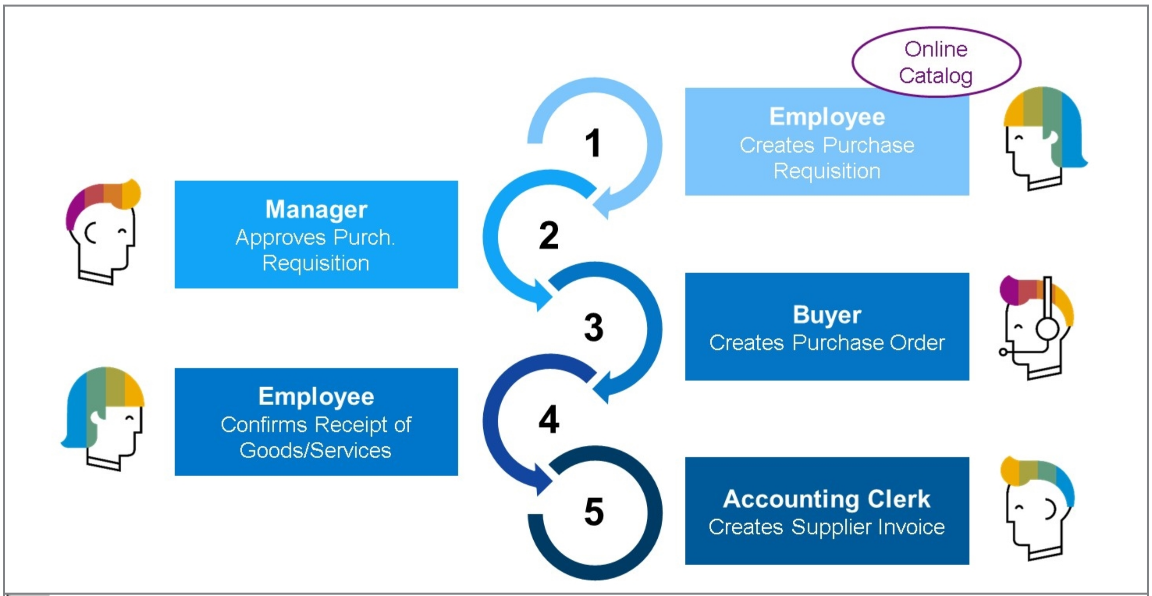


Figure 77: Self-Service Procurement Process

1. Employee: The employee creates a purchase requisition for goods or services that are procured for direct consumption or for stock.
2. Manager: (Optional) Depending on system configuration, employees may need to have their requests granted by a superior (or another person). The employee responsible for the release can be informed through the workflow about the purchase requisition to be released.
3. Buyer: The purchase requisition is converted into a purchase order. Before this can happen, it may be necessary to execute the determination of a source of supply. If a source of supply is assigned to the requisition item, it could automatically be converted to a purchase order.
4. Employee: The employee confirms the receipt of goods.

5. Accounting Clerk: The invoice for the delivered goods is entered.

Self-Service Requisition

SAP Fiori App My Purchase Requisitions - New

With the *My Purchase Requisitions - New* app, you can create and display self-service requisitions. The app can also be used to edit or delete own requisitions depending on their processing status. Furthermore, you can track the status of a purchase requisition and display the status and follow-on documents created for an individual item.

In addition, you can use the *My Purchase Requisitions – New* app to confirm goods receipts and return goods received if there are issues or errors.

If you want to use filters to restrict the list of your recent purchase requisitions, choose the *View All* button. This takes you to a screen on which you can restrict the selection of your purchase requisitions with various filters, such as the status, the date and time of creation, or the material.

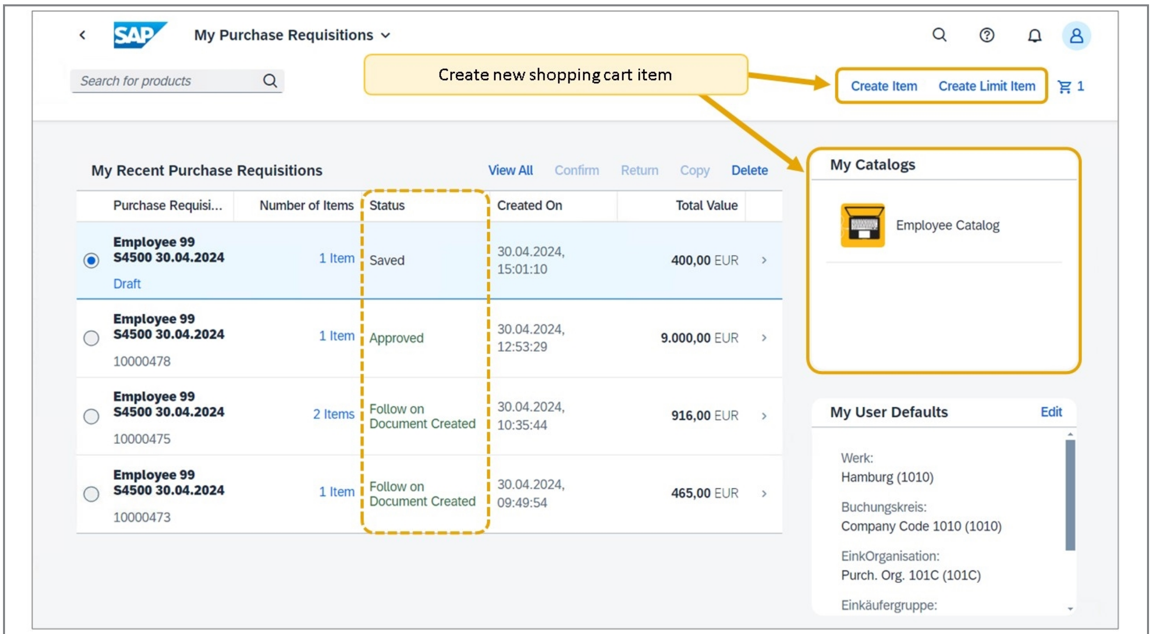


Figure 78: My Purchase Requisitions - New App

There are different options to add a new item to the shopping cart (= purchase requisition).

- You can select a material or service from a web-based catalog. If the cross-catalog search is set up in the system, you can use the cross-catalog search bar to search for a material or service and add it to the shopping cart.

> Note:
> The catalog in the training landscape is a **Lean Catalog**, a solution by SAP consulting that can be implemented as an add-on. For more information, see SAP Note [1509352 - Lean Catalog for SAP ERP and S/4HANA]() or send an e-mail to leancatalog@sap.com.

- You can create a free text item, a material item, or a service item using the *Create Item* button.

- You can create a limit item using the *Create Limit Item* button. Limit items are unplanned services and materials that cannot be specified in detail at the time of ordering.

Before you actually order the items you added to the shopping cart, you can open the item details to check or change the data. Ordering the items of a shopping cart means that a purchase requisition is created.

With the *My Purchase Requisitions - New* app, you can also create purchase requisitions on behalf of other users. For example, an assistant can create purchase requisitions for a manager. To do this, you can enter a different person as the requester in the *General Data* when you create a purchase requisition.

Default Settings for User

Before you enter requisition items, you can maintain the default settings for your user. There are various options for making user-specific default settings. One option is to edit the following default settings in the *My User Defaults* section on the start page of the *My Purchase Requisitions* app:

- Plant
- Company code
- Purchasing organization
- Purchasing group
- Purchasing document type

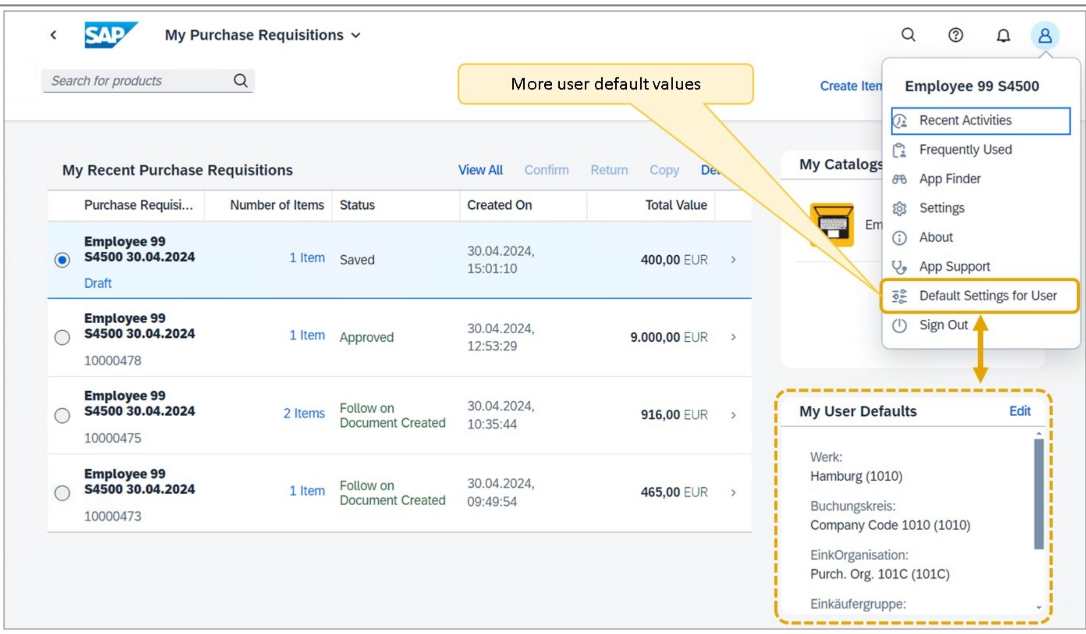


Figure 79: Default Settings in the My Purchase Requisitions - New App

As a second option you can navigate within the *My Purchase Requisitions - New* app to the *Default Settings for User* app. To do this choose the profile icon in the top-right corner of the app and select *Default Settings for User* from the dropdown menu. This option offers more default values than the first option, for example the account assignment category, the cost center and the delivery date.

For many users, an administrator can also maintain the default settings. For this, an administrator uses the *Default Settings for Users* app. In the *User ID* field, the administrator can select multiple users via the entry help.

It is also possible that the default values are determined from the organizational structure in Human Resources. For this, the employee must be assigned in the organizational structure and the attributes for the self-service procurement scenario must be maintained.

LESSON SUMMARY

You should now be able to:

- Use the employee self-service to request material

Unit 7
Lesson 2

Confirming a Goods Receipt

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Confirm receipt of requested material

Confirmation of Goods Receipt of Requested Material

After the materials from your purchase requisitions are ordered, you can confirm the receipt of the goods.

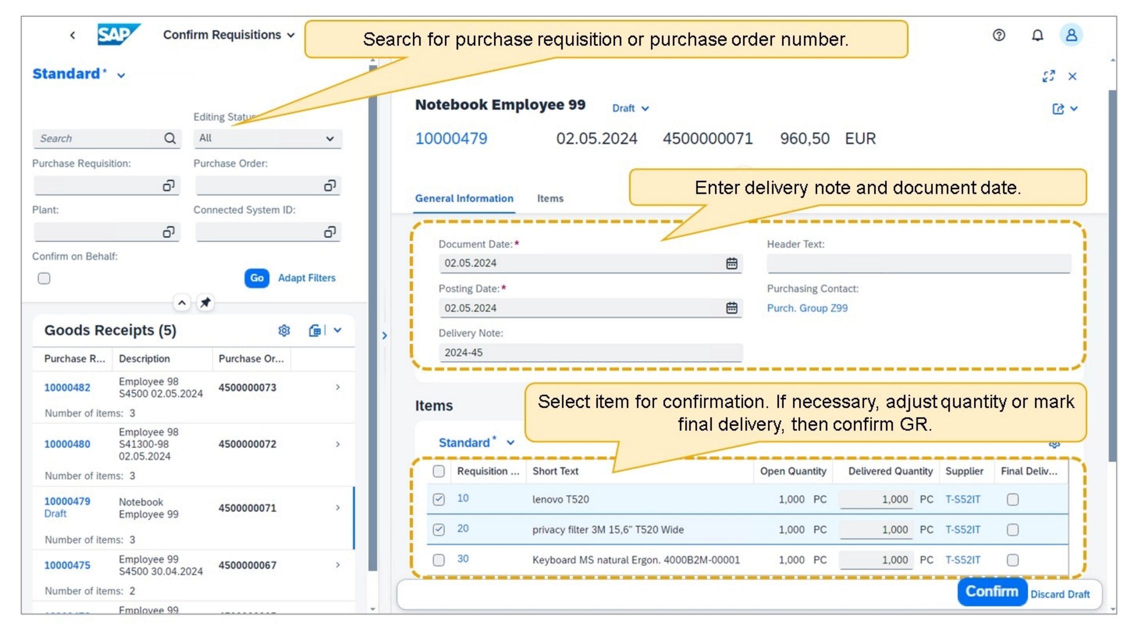


Figure 80: Self-Service Requisitioning–Confirm Receipt of Goods

The *Confirm Receipt of Goods - New* app lists all of your purchase requisitions with material items that are relevant for confirmation. Relevant for a confirmation are purchase requisitions with a purchase order as follow-on document. However, the app also lists all purchase requisitions relevant for confirmation that were requested for you by other employees.

Requisition items appear as available for confirmation until the purchase order quantity for the item is confirmed or the *Final Delivery* indicator is set for the item.

> Note:
> Purchase requisition items with multiple schedule lines in a purchase order are not listed in this app.

In the app, you can search a document using a purchase order number or purchase requisition number. If you need more information, you can navigate to the Purchase Requisition Item fact sheet. It is possible to confirm partial quantities for an item, and also to mark the item for final delivery.

You can also start confirmation of a goods receipt via the *My Purchase Requisitions - New* app. To do this, select a purchase requisition in the list for which a purchase order exists and then select the *Confirm* button.

> Note:
> The *Confirm* button is not active for purchase requisitions without a purchase order.

You can also use the *My Purchase Requisitions - New* app to post a return delivery for delivered (confirmed) materials. In this case, you must enter the quantity you want to return and a return reason for the item.

LESSON SUMMARY

You should now be able to:

- Confirm receipt of requested material

Learning Assessment

1. With the *Create Purchase Requisition* app, how can you create a purchase requisition item?

   Choose the correct answers.

   - [ ] A Add the number of a material master record
   - [ ] B Describe the required product if it is not found in a catalog
   - [ ] C Import an Excel list with material numbers
   - [ ] D Select the material from a catalog

2. The default settings for a user can be centrally maintained by an administrator.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

3. You are using the *Confirm Receipt of Goods - New* app. Which conditions must a purchase requisition item fulfill so that you can confirm a goods receipt for the item?

   Choose the correct answers.

   - [ ] A The purchase requisition item was created by you or for you.
   - [ ] B A purchase order has been created for the purchase requisition item.
   - [ ] C The item has been completely delivered.
   - [ ] D An invoice must have been entered for the purchase requisition item.

Learning Assessment - Answers

1. With the *Create Purchase Requisition* app, how can you create a purchase requisition item?

   Choose the correct answers.

   [X] A Add the number of a material master record

   [X] B Describe the required product if it is not found in a catalog

   [ ] C Import an Excel list with material numbers

   [X] D Select the material from a catalog

   Correct. Importing a Microsoft Excel file is not a valid option for the Create Purchase Requisition app. But it is possible to add the number of a material master record, to select the material from a catalog, or to describe the required product if it is not found in a catalog. For more information, see the Performing a Self-Service Process lesson in the S4500 (or TS450) training material.

2. The default settings for a user can be centrally maintained by an administrator.

   Determine whether this statement is true or false.

   [X] True

   [ ] False

   Correct. The default settings for a user can be centrally maintained by an administrator using the *Default Settings for Users* app. For more information, see the Performing a Self-Service Process lesson in the S4500 (or TS450) training material.

3. You are using the *Confirm Receipt of Goods - New* app. Which conditions must a purchase requisition item fulfill so that you can confirm a goods receipt for the item?

   Choose the correct answers.

   - [X] A The purchase requisition item was created by you or for you.
   - [X] B A purchase order has been created for the purchase requisition item.
   - [ ] C The item has been completely delivered.
   - [ ] D An invoice must have been entered for the purchase requisition item.

   Correct. The *Confirm Goods Receipt - New* app selects all purchase requisitions with material items that are relevant for confirmation, which are created by you or for you. Relevant for a confirmation are purchase requisitions for which a purchase order has been created and which have not yet been completely delivered. For more information, see the Confirming Goods Receipt lesson in the S4500 (or TS450) training material.

UNIT 8 Specific Procurement Processes

UNIT OBJECTIVES

- Identify differences between periodic and partial invoice plans
- Create blanket purchase orders

Unit 8
Lesson 1

Using Invoicing Plans

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Identify differences between periodic and partial invoice plans

Invoicing Plans Overview

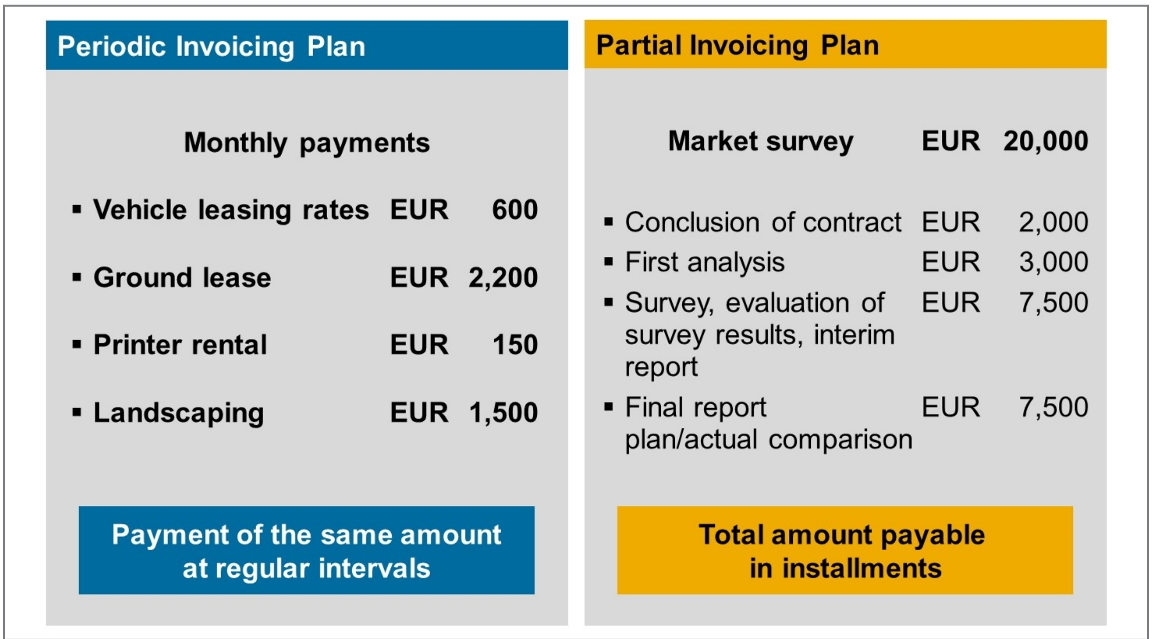


Figure 81: Invoicing Plans

An invoicing plan is not an independent document type, but a special type of purchase order. An invoicing plan enables you to schedule the desired dates for the creation of invoices that relate to the planned procurement of materials or services. The invoice plan is independent of the actual receipt of the goods or actual performance of the services. It lists the dates on which you want to create and pay the invoices.

The system can automatically create the invoices on the basis of the dates in the purchase order, thereby triggering payment to the vendor. However, you can also manually enter invoices for an invoicing plan. There are two kinds of invoicing plans: periodic invoicing plans and partial invoicing plans.

Hint:
Invoicing plans cannot be requested with a purchase requisition.

It is also not possible to create or edit invoicing plans with the SAP Fiori app *Manage Purchase Orders*.

Periodic Invoicing Plan

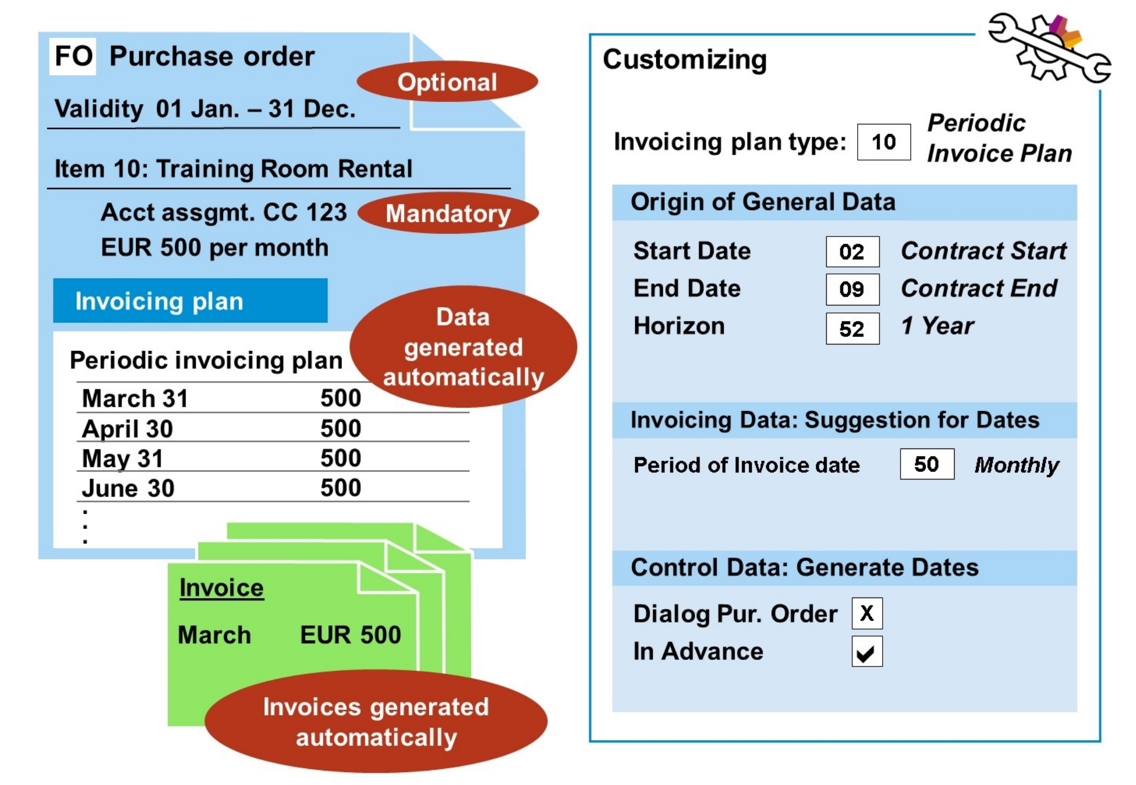


Figure 82: Periodic Invoicing Plan

You can use a periodic invoicing plan for regularly recurring payments, such as rental and lease payments. In a periodic invoicing plan, the net value of the purchase order item is invoiced on each due date.

The figure, Periodic Invoicing Plan, shows an example of a periodic invoicing plan. Suppose that the monthly rent for a training room is EUR 500, which is charged to the 123 cost center. The rental agreement with the owner is valid for five years. You have to transfer the rent to the owner on a monthly basis and in advance. In this case, you would use a periodic invoicing plan. This type of invoicing plan ensures that the invoice dates are automatically generated when you create the invoicing plan. In our example, the system calculates the dates in a way that the rent is paid at the end of each month for the forthcoming month.

You can specify in Customizing for the invoicing plan type whether the dates are to be maintained manually or the system puts forward date proposals according to the specified rules.

Partial Invoicing Plan

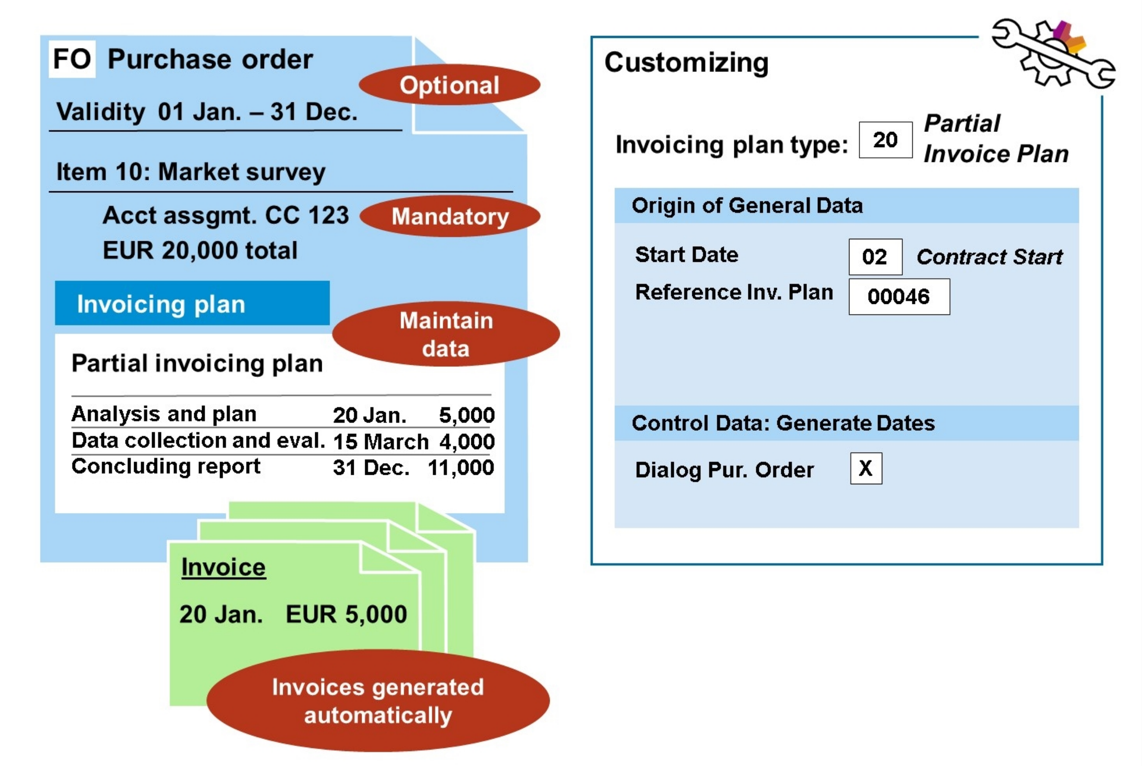


Figure 83: Partial Invoicing Plan

You can use a partial invoicing plan to settle procurement transactions that are to be settled in stages, such as for IT projects. In a partial invoicing plan, you can indicate dates as down payments (billing rule 4 or 5). The amounts for these dates are not included in the total of the invoice items, and they are not automatically settled either. With a partial invoicing plan, the total value of the purchase order item is split over the individual dates of the plan. This is done either by percentage (billing rule 1) or by value (billing rule 2).

The figure, Partial Invoicing Plan, shows an example of a partial invoicing plan: You have allotted a total budget of EUR 20,000 for a market survey. You need to pay EUR 5,000 after the initial analysis is completed, EUR 4,000 after the survey is carried out, and the rest, amounting to EUR 11,000, after the final report is submitted. Create a reference invoicing plan for partial invoicing plans in Customizing if you intend to carry out this survey on a regular basis in future. You can use this as a template for the automatic generation of the appropriate invoicing dates. Without a reference invoicing plan, you will need to manually specify the invoicing dates in the invoicing plan.

Hint:
You can also copy the due dates in the partial invoicing plan from invoicing plans or billing plans that were created as part of networks. This is particularly useful for event-dependent payment due dates. If the due dates are changed in the network, you can update them in the invoicing plan.

Partial Invoicing Plan Creation

The procedure for creating a partial invoicing plan is similar to that for creating a periodic invoicing plan. After maintaining the data in the purchase order item overview, choose *Invoicing Plan* on the *Invoice* tab in the item details and select *Partial Invoicing Plan*. You obtain a date overview, in which you can manually enter the desired dates and amounts.

> Caution:
> After you have assigned an invoicing plan type to an item (for example, partial invoicing plan), you cannot subsequently change the invoicing plan type.

Control Date and Settlement of Invoicing Plans

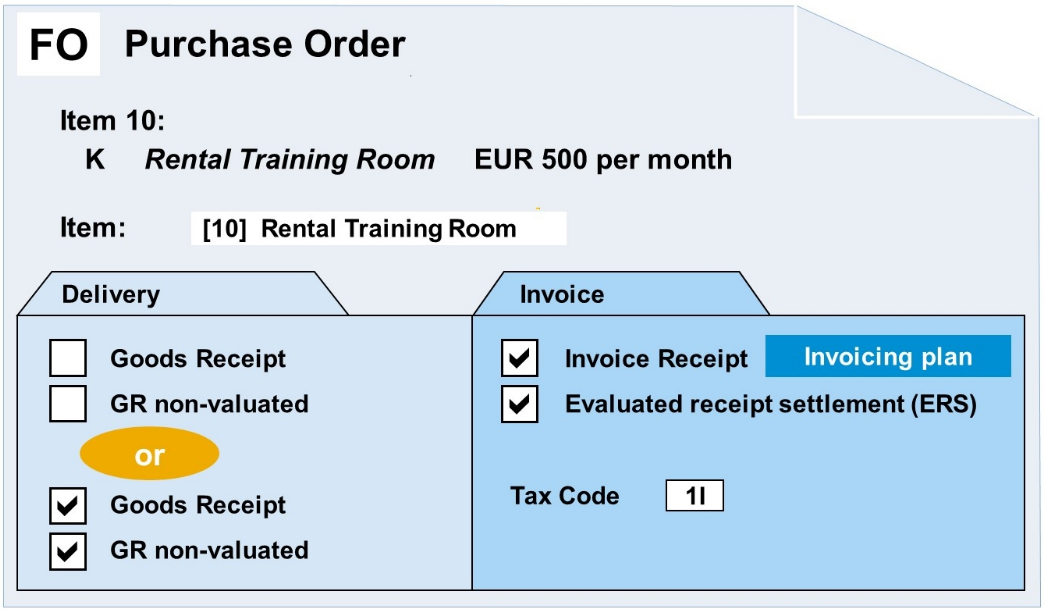


Figure 84: GR/IR Control

You must set the GR/IR control for invoicing plans 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. Therefore, you can choose between the following alternatives:

- Select both the *Goods Receipt* checkbox and the *GR non-valuated* checkbox.
- Deselect the *Goods Receipt* checkbox.

If you want to use automatic settlement, you must set the evaluated receipt settlement indicator, the *ERS* indicator, in addition to the *Inv. Receipt* indicator. The former indicator, which you must already have set for the business partner, appears as default when you create a purchase order for the vendor in question. A further prerequisite for automatic settlement is the tax code, which you must enter in the item detail for an invoicing plan item. The purchase orders for settlement must also contain payment terms.

To automatically settle invoicing plans, on the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Automatic Settlement* → *Invoicing Plan Settlement* (`MRIS`).

On the SAP Fiori launchpad, use the *Create Invoicing Plan Settlement* app.

To issue credit memos for invoicing plans, on the *SAP Easy Access* screen, choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Further Processing* → *Output Messages* (`MR90`).

To update the dates in periodic invoicing plans, choose *Logistics* → *Materials Management* → *Purchase Order* → *Follow-On Functions* → *Periodic Invoicing Plan* (`MLRP`).

On the SAP Fiori launchpad, use the *Update Invoicing Plans – Purchase Order* app.

You can perform Customizing settings for invoicing plans in Customizing for *Materials Management* under *Purchasing* → *Purchase Order* → *Invoicing Plan*.

LESSON SUMMARY

You should now be able to:

- Identify differences between periodic and partial invoice plans

Unit 8
Lesson 2

Creating Blanket Purchase Orders

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create blanket purchase orders

Advantages of Blanket Purchase Orders

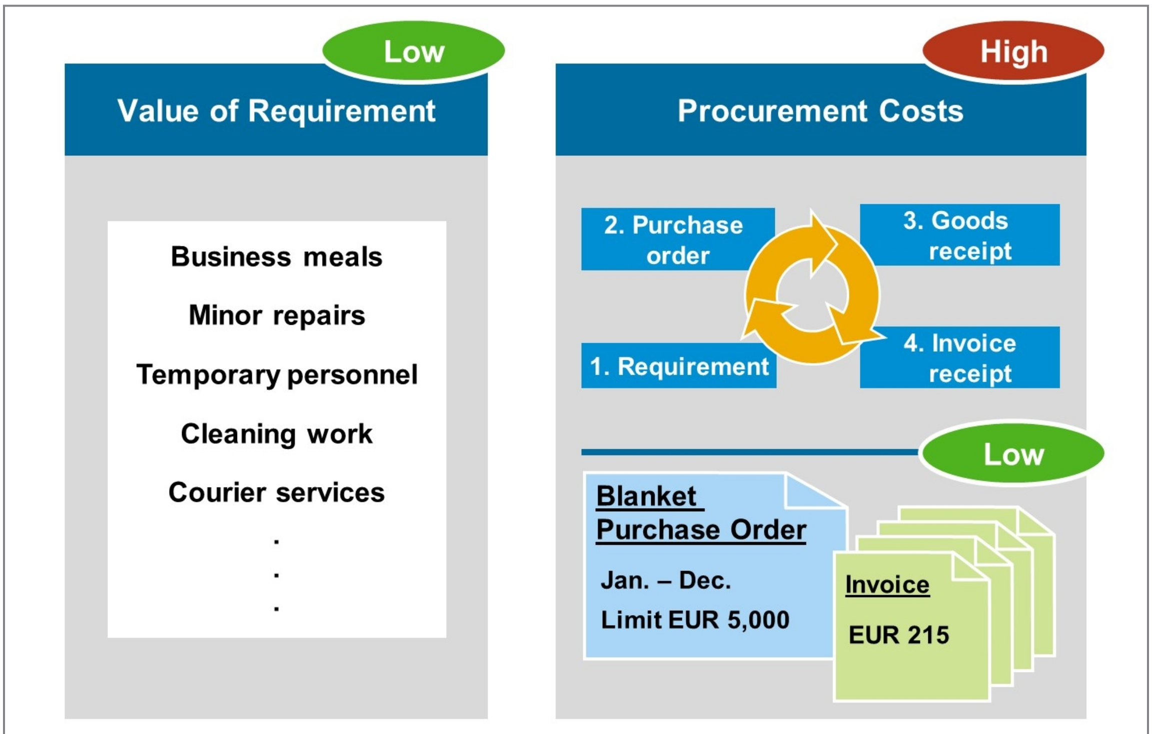


Figure 85: Requirement Value Versus Procurement Costs

Process costs are often in total contrast to a comparatively low requirement value, and do not bear any sort of relation to the value of materials or services procured. You can reduce these process costs by using a blanket purchase order instead of a standard purchase order. You can use such a single long-term purchase order to procure a variety of materials or services whose low value does not justify the high processing cost of issuing a series of individual purchase orders.

The main advantage of using blanket purchase orders is the reduction in order processing costs. These are significantly lower because of the following:

- The blanket purchase order is valid for a longer period.
- There is no goods receipt or service entry.

- It is not necessary to create purchase order items for individual procurement transactions.
- You generally use collective invoices (for example, monthly invoices).

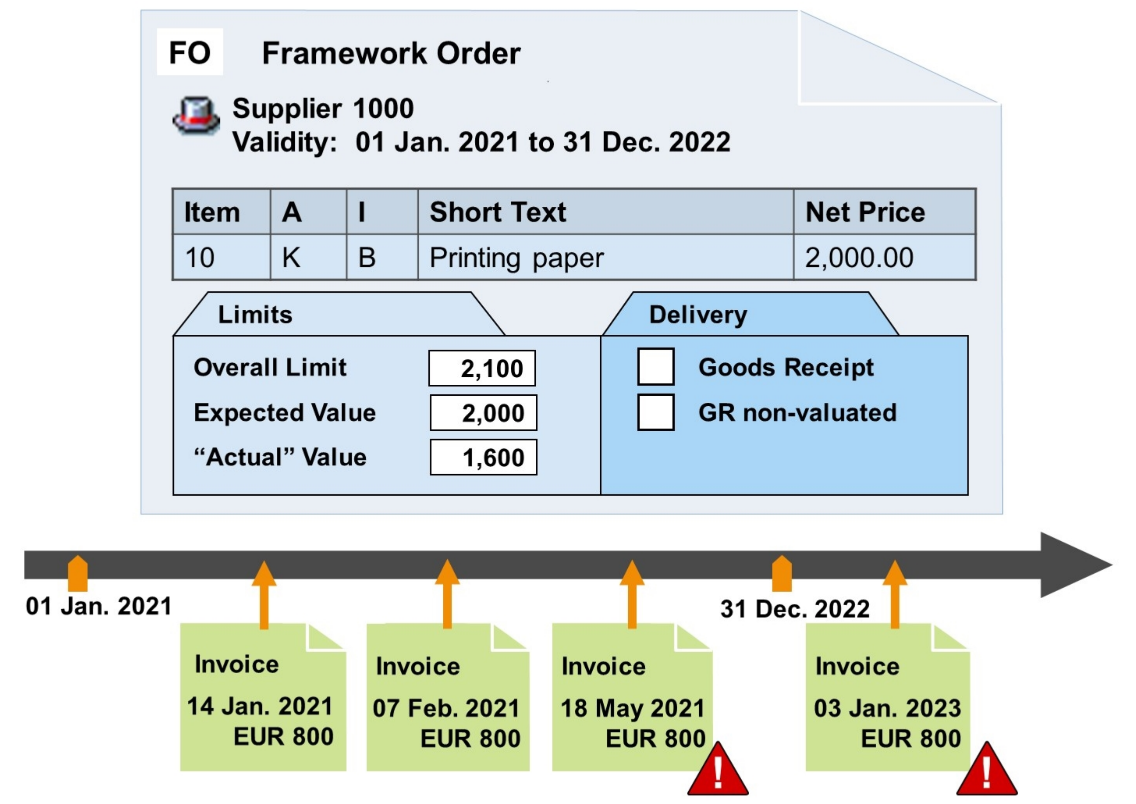


Figure 86: Example – Blanket purchase order with item category B

Blanket Purchase Order

For a limit item, you must enter the following data:

- Item category E (Enhanced Limit) or B (Blanket Item)
- Short Text
- Material Group
- Plant
- Account Assignment Category

  In contrast to normal material items, you can use the account assignment category U (Unknown) in a limit item. If you use account assignment category U, you only specify the account assignment at the time of invoice entry. Note that no commitments can be created in Controlling for the account assignment category U (Unknown).
- Overall Limit and Expected Value

  The overall limit represents the maximum value for which you can post invoices referencing the purchase order item. If the overall limit is exceeded when you post an invoice, the system issues a warning or error message, depending on the settings in Customizing. The expected value is the order value with the supplier. If you work with the release procedure for purchasing documents, this value serves as the basis for a release strategy. Controlling uses this value to create the purchase order commitment. If the expected value is exceeded when you post an invoice with reference to a blanket purchase order, the system does not issue a notification unless the overall limit is exceeded.

In a limit item, you cannot enter a material number, a purchase order quantity, or a net price. As soon as you enter the expected value when you create the limit item, it is automatically adopted as the net price.

In SAP S/4HANA, there are two ways to create a limit item in a purchase order:

- With the *Manage Purchase Orders* app:

  You use NB (Standard PO) as the purchase order document type. You create the limit item on the *Limit Items* tab page. This automatically determines the item category *E (Enhanced Limit)* for the item.

  You enter the validity period of the item in the item details under the *Schedule Lines* in the *Start of Performance Period* and *End of Performance Period* fields.

- With the *Create Purchase Order – Advanced* app:

  You use FO (Framework Order) as the purchase order document type. You create the limit item with item category *B (Blanket Item)* in the item overview.

  You enter the validity period in the header data of the purchase order.

> Note:
> Note that with the *Create Purchase Order – Advanced* app, you can also create a blanket purchase order with item category E.

LESSON SUMMARY
You should now be able to:

- Create blanket purchase orders

Learning Assessment

1. For which operations are periodic invoicing plans suitable?

   Choose the correct answers.

   - [ ] A Rental payments
   - [ ] B Magazine subscriptions
   - [ ] C Electricity bills
   - [ ] D Credit card settlements

2. Which of the following are prerequisites for automatic invoice creation?

   Choose the correct answers.

   - [ ] A You must enter a tax code in the purchase order.
   - [ ] B The document type must be FO.
   - [ ] C You must set the evaluated receipt settlement indicator.
   - [ ] D You must enter short text.

3. Unlike the periodic invoicing plan, it is not mandatory to specify an account assignment category when creating a partial invoice plan. True or false?

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

4. Which of the following statements apply to blanket purchase orders?

   Choose the correct answers.

   - [ ] A The administrative cost of using blanket purchase orders is very high.
   - [ ] B Blanket purchase orders are only suitable for the procurement of consumable materials
   - [ ] C Blanket purchase orders are especially suitable for the procurement of stock materials.
   - [ ] D The *B* item category has the effect that no goods receipt can be posted
   - [ ] E The account assignment does not need to be known at the time of ordering

5. Which of the following are advantages of using blanket purchase orders?

   Choose the correct answers.

   - [ ] A Blanket purchase orders can be created at client level
   - [ ] B You can reduce administrative costs
   - [ ] C You can use multiple account assignment
   - [ ] D You can use monthly invoices

6. When creating a blanket purchase order, a prerequisite is that you have to specify an order quantity in the item overview.

   Determine whether this statement is true or false.

   - [ ] True
   - [ ] False

Unit 8

Learning Assessment - Answers

1. For which operations are periodic invoicing plans suitable?

   Choose the correct answers.

   [X] A Rental payments

   [X] B Magazine subscriptions

   [ ] C Electricity bills

   [ ] D Credit card settlements

   Correct. Periodic invoicing plans are not suitable for electricity bills and credit card settlements because they normally have different amounts each month.

2. Which of the following are prerequisites for automatic invoice creation?

   Choose the correct answers.

   [X] A You must enter a tax code in the purchase order.

   [ ] B The document type must be FO.

   [X] C You must set the evaluated receipt settlement indicator.

   [ ] D You must enter short text.

   Correct. A tax code and the evaluated receipt settlement indicator in the purchase order item are prerequisites for automatic invoice creation.

3. Unlike the periodic invoicing plan, it is not mandatory to specify an account assignment category when creating a partial invoice plan. True or false?

   Determine whether this statement is true or false.

   [ ] True

   [X] False

   Correct. The statement is false.

4. Which of the following statements apply to blanket purchase orders?

   Choose the correct answers.

   - [ ] A The administrative cost of using blanket purchase orders is very high.
   - [x] B Blanket purchase orders are only suitable for the procurement of consumable materials
   - [ ] C Blanket purchase orders are especially suitable for the procurement of stock materials.
   - [x] D The *B* item category has the effect that no goods receipt can be posted
   - [x] E The account assignment does not need to be known at the time of ordering

   Correct. Blanket purchase orders are only suitable for the procurement of consumable materials, with the item category *B* no goods receipt can be posted and the account assignment can be entered at invoice receipt.

5. Which of the following are advantages of using blanket purchase orders?

   Choose the correct answers.

   - [ ] A Blanket purchase orders can be created at client level
   - [x] B You can reduce administrative costs
   - [ ] C You can use multiple account assignment
   - [x] D You can use monthly invoices

   Correct. Using a blanket PO can help you to reduce administrative costs. You can agree on monthly invoices.

6. When creating a blanket purchase order, a prerequisite is that you have to specify an order quantity in the item overview.

   Determine whether this statement is true or false.

   - [ ] True
   - [x] False

   Correct. The statement is false. When creating a blanket purchase order item, you do not enter a quantity in the item overview.

UNIT 9 Reporting and Analytics

UNIT OBJECTIVES

- Use analytical apps
- Use the Procurement Overview app

Unit 9
Lesson 1

Using Analytical Apps

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use analytical apps

Analytics in Procurement

Analytics in procurement enables you to gain deep, real-time insights through advanced analytics capabilities. Embedded analytics capabilities like contract analytics, spend visibility, and supplier evaluation can run data from SAP S/4HANA in real time, without the need to extract the data into a separate data warehouse.

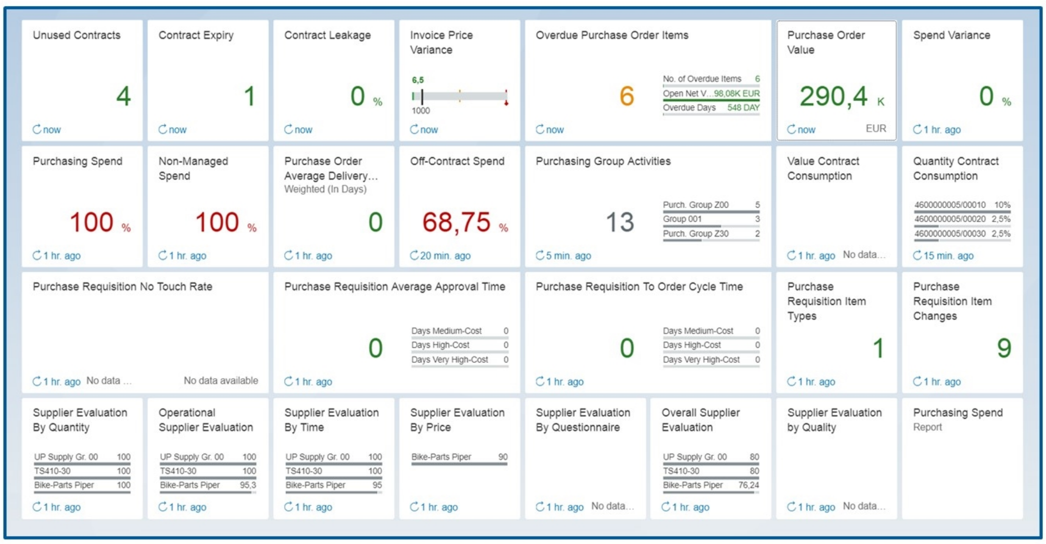


Figure 87: Purchasing Analytics

The *Purchasing Analytics* launchpad groups include the SAP Smart Business key performance indicators (KPIs) for spend visibility. KPI tiles highlight key information at a glance. Numbers can be color-coded to represent different levels of alert. The surface of a tile can show numbers or chart snippets. The information on a tile is updated in real time.

Functions in SAP Smart Business KPIs

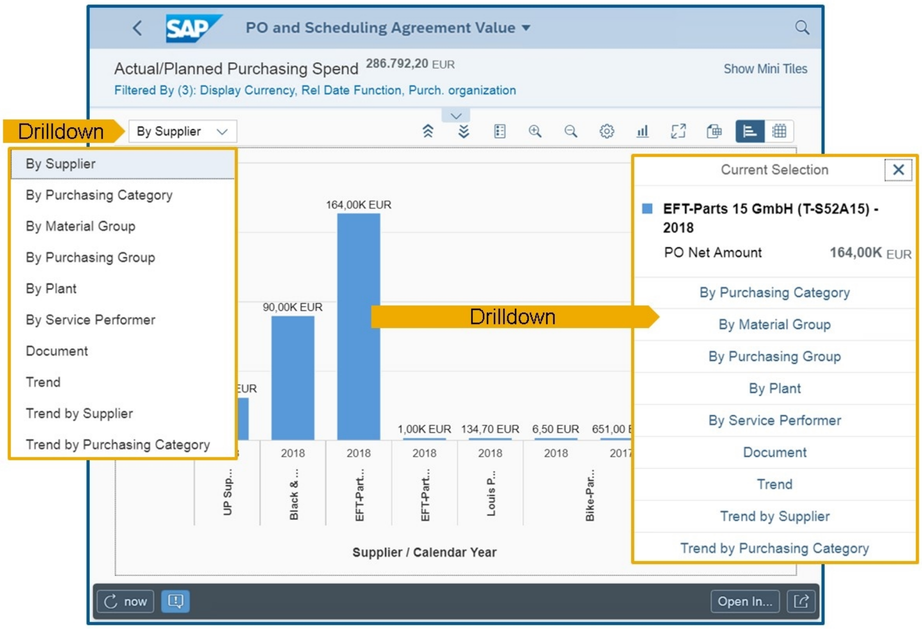


Figure 88: Example KPI Purchase Order Value (1)

When you choose a KPI tile, you launch an evaluation that provides more information to break down the individual KPI to provide drilldown capabilities and appropriate actions. We call this Insight to Action. In addition, the SAP Smart Business runtime environment is enhanced with smart controls, such as smart filter and smart charts.

Example KPI Purchase Order Value

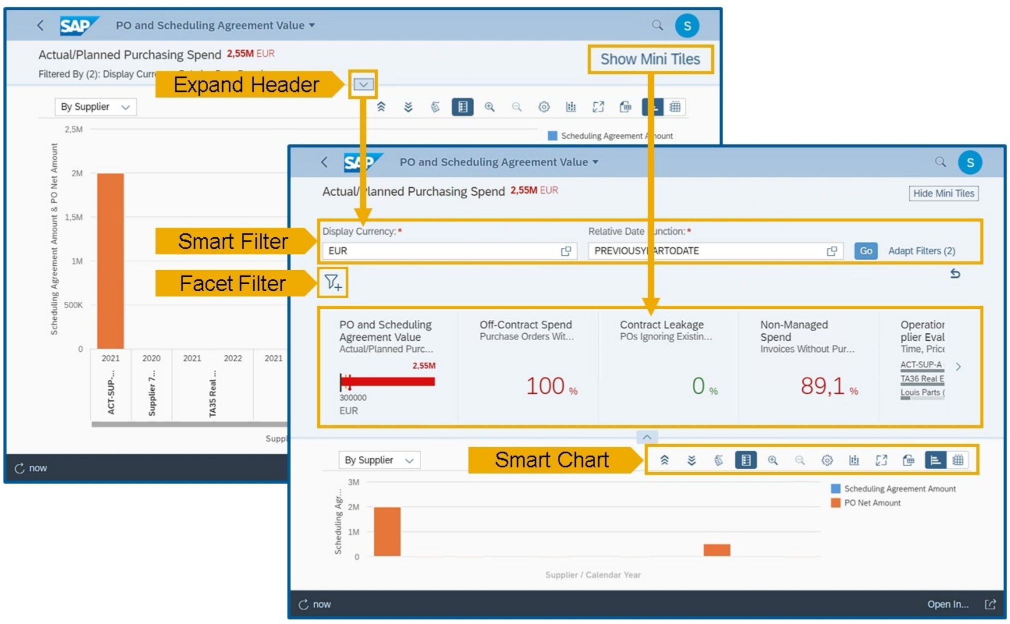


Figure 89: Example KPI Purchase Order Value (2)

When you execute a Smart Business KPI app, the default input parameters for the **smart filter** for the KPI are displayed in the filter bar, for example, the display currency and the relative date function. You can show or hide the filter bar itself using the *Expand header* or *Collapse header* function (button or . You can add more filters to the configuration using the *Adapt Filters* button. The smart filter provides you with a list of all the values for the dimensions of the Smart Business KPI.

The facet filter provides an additional restriction on the discrete values of the current evaluation.

One example based on the *Purchase Order Value* KPI is as follows: You want to evaluate the purchase order value for the previous year up until today for purchasing organization 101C. You have to add the purchasing organization as a smart filter and enter value 101C. The evaluation with these smart filter values has the result that only purchase orders from three purchasing groups (Group 1, Group 2, and Group 3) are selected. If you now use the facet filter and choose *Purchasing Group* as the filter value, exactly these three purchasing groups are proposed.

Show/Hide Mini Charts allows you to view the configured mini charts at runtime. The visualization of the mini charts depends on the format selected. If numeric, the mini chart displays the threshold values and the relevant details. If the mini chart is from an associated KPI, then when you choose the mini chart the associated page is displayed. There is no impact on the mini charts if there is a change in the filters.

Smart Chart allows you to display the dimensions and measures selected in the chart view or tabular view. They allow you to select a chart type and change the dimensions and measures of the chart. The charts are rendered instantly at runtime. The toolbar on the chart offers you the following functions:

- Drill down/drill up.
- Show or hide legends on the chart.
- Zoom in and out of a chart.
- Settings: This screen allows you to select a different chart type for the defined dimensions and measures. You can also select a different dimension and the chart rendered is based on the selected dimension. The *Show Selected/All* button enables you to view the defined dimensions or all of the dimensions available in the data source.

  The *Sort* column allows you to sort by ascending or descending data. When you view the data in the tabular view, the columns are sorted accordingly. The chart rendered changes immediately based on the settings but you cannot save them. You can scroll down in the dialog box using the up and down arrows.
- Selection of various chart types.
- Display in full screen.
- Export to a spreadsheet.
- Switch from chart view to tabular view and conversely.

All this helps you to easily identify exceptions, for example, if a KPI turns red when defined thresholds are affected. You can act instantly to resolve business issues by seamlessly navigating from analytical apps to transactional apps and back again.

List of KPIs in Procurement

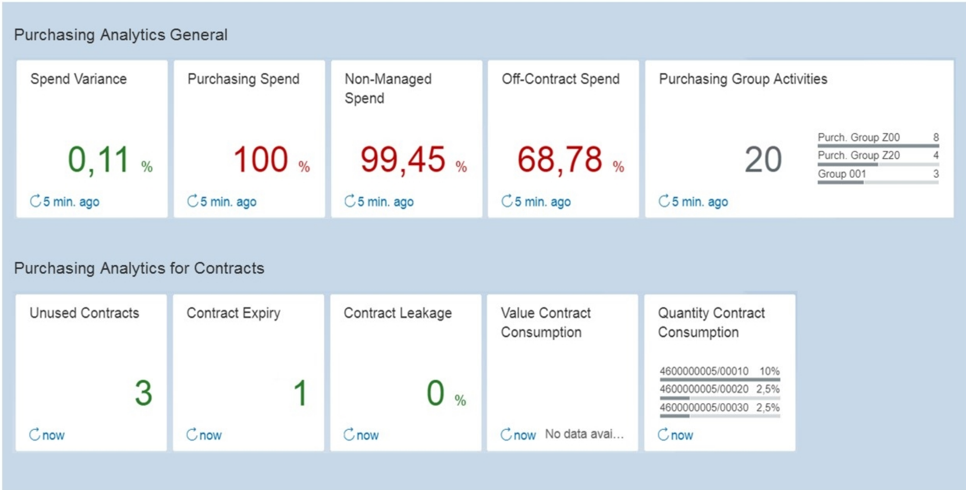


Figure 90: KPIs: Purchasing Analytics

Purchasing Analytics General

- Purchase Group Activities:

  This app displays all the purchase orders, requisitions, contracts, scheduling agreements and goods receipts against a particular purchasing group and category for a given time frame. Only the business documents that are completed and the items not released are considered. Deleted items are not considered. The app also helps to calculate the number of goods receipts for a particular purchase order and item, as well as the total invoice amount and purchase order net amount.

- Off-Contract Spend:

  With this KPI, you can analyze the total spend amount in relation to purchase orders without a contract reference over the previous year to date. You can use this app to measure the percentage of purchases made without any contract.

- Non-Managed Spend:

  With this app, you can determine the amount (without taxes) paid to the suppliers without a purchase order reference in relation to the total spend for suppliers. The calculation is based on the accounting documents.

- Purchasing Spend:

  With the Purchasing Spend app, you can compare the spend for a given set of comparison filters to the total spend. Filters include supplier, material group, purchasing group, supplier country, and purchasing organization.

- Spend Variance:

  This app determines the sum of the purchase order value, goods receipt value, and invoice value by supplier or material. The app then calculates the relation between the purchase orders, good receipts, and invoice value for a given filter.

Purchasing Analytics for Contracts

- Contract Expiry:

You can use this app to identify purchase contracts that expire within the specific time frame. You can also use the app to find the number of expiring contracts, the target amount, and the released amount of the expiring contracts.

- Unused Contracts:

  You use this app to identify the number of contracts not used over the previous year to date. You can also find the target and released amount of the unused contracts.

- Contract Leakage/Last 365 Days:

  With the Contract Leakage app, you can identity the spend of purchase orders that do not have a contract reference, although an existing contract could have been used. As a purchaser, you want to find the related net value. You can use the Contract Leakage app to determine the amount of purchases made without considering existing contracts.

- Quantity Contract Consumption:

  This KPI displays the consumption percentage of quantity type contracts from the previous year to date. Using this KPI, you can find the target and released quantity of the contracts.

- Value Contract Consumption:

  This KPI displays the consumption percentage of value-type contracts from the previous year to date. Using this KPI, you can find the target and released amount of the contracts.

KPIs: Purchasing Analysis for Purchase Requisitions and Purchasing Analysis for Purchase Orders

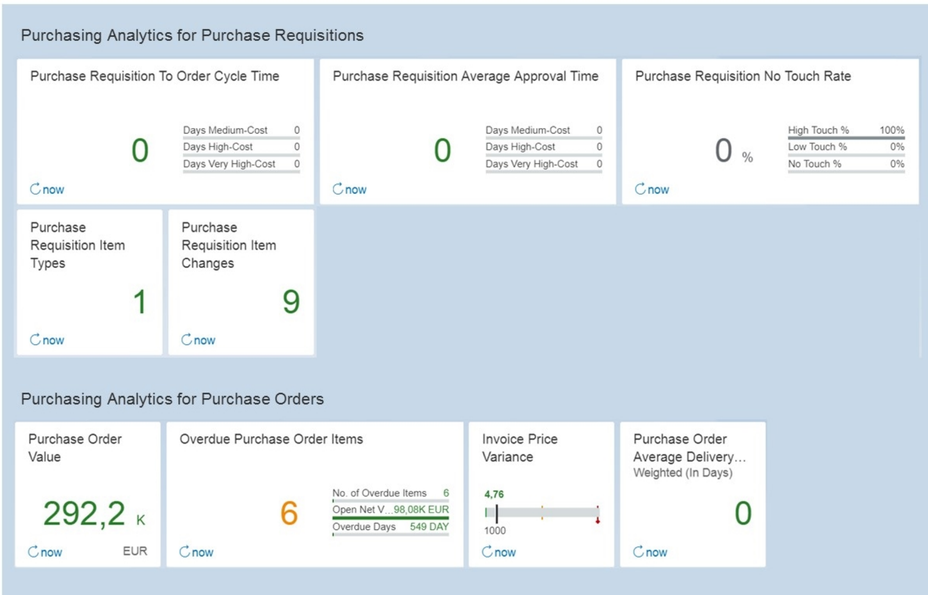


Figure 91: KPIs: Purchasing Analysis for Purchase Requisitions and Purchasing Analysis for Purchase Orders

Purchasing Analytics for Purchase Requisitions

- Purchase Requisition Average Approval Time:

  You use this app to identify the time (in days) from shopping cart creation to purchase order creation, over the time period from the previous year to date.

- Purchase Requisition Item Changes:

This KPI calculates the absolute number of item changes (GUI) from the previous year to date. It also shows you the number of price changes, quantity changes, purchasing group changes, supplier changes, and the total number of purchase requisition item changes.

- Purchase Requisition Item Types:

  You use this app to identify the number of free-text items created (GUI) in the time period from the previous year to date. The requisitions for which material was specified are shown as the number of material items created (GUI) at the time of creation. Similarly, the number of material items, free-text items, and catalog items created from the SAP Fiori app are also shown in the app.

- Purchase Requisition-to-Order Cycle Time:

  You use this app to identify the average cycle time in days from shopping-cart creation to when the purchase order is sent to the supplier. It works from the previous year to date.

- Purchase Requisition Touch Rate:

  This KPI displays the percentage of purchase requisition items, which are processed automatically from the shopping cart. This is called the No Touch rate. It is displayed in percentage and covers the time period from the previous year to date. The KPI also calculates the High Touch and the Low Touch rates. The Low Touch rate refers to those items for which approval is required, but no changes are made in either the purchase order or the purchase requisition after creation. The High Touch rate refers to items that require manual changes to the purchase order or the purchase requisition after creation. The rates are calculated as a percentage of all items.

Purchasing Analytics for Purchase Orders

- Overdue Purchase Order Items:

  With this app, the number of purchase order items with delivery dates in the past and those yet to be delivered are calculated. You can also use this app to analyze the delivery dates of purchase order items sent to the supplier.

- Purchase Order Value:

  You can use this app to determine the current value for all purchase orders within a stipulated time. The app also helps to determine the KPI value of the purchase orders for a given set of filter criteria, such as materials, suppliers, and plants.

- Purchase Order Average Delivery Time Weighted (in Days):

  The app is used to analyze the delivery time of suppliers based on the previous delivery time of the purchase orders.

- Invoice Price Variance:

  This KPI determines the trend in which invoice price varies over the previous year to date. The trend is calculated monthly. This is a trend tile based on the Weighted Material Price key performance indicator.

You can find more information for the KPIs in the SAP S/4HANA Product Assistance in the SAP Help Portal (help.sap.com). Navigate to *SAP S/4HANA → Enterprise Business Applications → Sourcing and Procurement (Materials Management) → Procurement Analytics → Spend Visibility*.

LESSON SUMMARY

You should now be able to:

- Use analytical apps

Unit 9
Lesson 2

Using the Procurement Overview App

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use the Procurement Overview app

Procurement Overview

The Procurement Overview app shows you the most important information and tasks relevant for you right now. The information is displayed on a set of actionable cards. You can therefore focus on the most important tasks, enabling faster decisions and immediate action. The cards show you the most important information, ranked according to relevance.

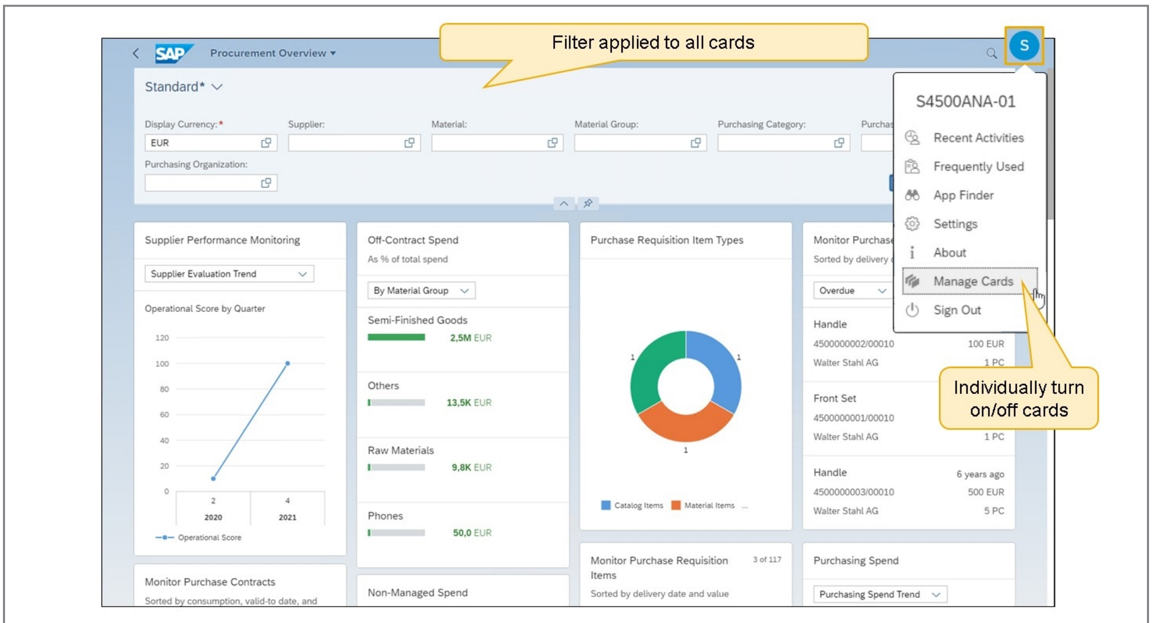


Figure 92: Procurement Overview

You can customize the Procurement Overview by rearranging cards and by hiding or showing them:

- If you want to hide a card, choose the *User* icon in the header bar. Then choose *Manage Cards* and use the switch control to hide the relevant card.
- If you want to rearrange the cards, drag and drop a card to the place you want.

You can also apply a filter to the displayed information, which will affect all relevant cards. For example, you can filter the content of all cards according to a specific supplier or material group.

Navigate to Related Apps for More Information

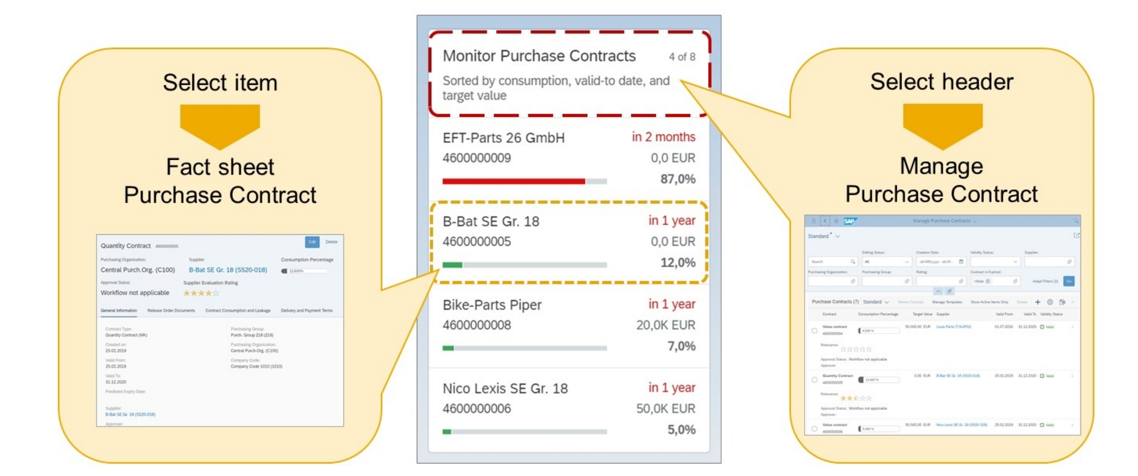


Figure 93: Navigate to Related Apps for More Information

For list cards, selecting the header of a card brings you to the app itself, while selecting an item brings you to more detailed item information. For graphical or analytical cards, selecting the card brings you to more detailed analytical information.

For example, on the *Monitor Purchase Contracts* card, you can see the consumption and expiry date per contract. Selecting the header brings you to the Manage Contract app, while selecting an item brings you to the *Contract* object page in the same app.

Cards That Appear on Procurement Overview

Card Name	Description
Monitor Purchase Contracts	• Shows you expiring and nearly consumed contracts. • Priority is sorted by time remaining, target value, and consumption. • Selecting the header brings you to the Manage Contract app, while selecting an item brings you to the Contract object page in the same app.
Monitor Purchase Requisition Items	• Using the view switch, you can choose to view all open purchase requisition items. You can also view unsourced purchase requisition items- ones that don't yet have a source of supply, even though the delivery date is close. • Priority is sorted by item value and time to delivery date. • Selecting the header brings you to the Manage Purchase Requisition app, while selecting an item brings you to that item in the same app (filtered by the selected item).

Card Name	Description
Monitor Purchase Order Items	• Using the view switch, you can view overdue items and items in approval. • Priority is sorted by overdue days and item value. • Selecting the header brings you to the Monitor Purchase Order Items app, while selecting an item brings you to that item in the relevant app.
Monitor RFQs	• Shows you requests for quotations (RFQs) sorted by submission deadline. • Priority is sorted by time remaining, target value, and consumption. • Selecting the header brings you to the Manage RFQs app, while selecting an item brings you to the RFQ object page in the same app.
Purchasing Spend	• Shows you the overall purchasing spend, calculated using the aggregated purchase order values. • You can switch the view between supplier and material group. • Selecting the header brings you to the Purchasing Spend KPI, while selecting the material group brings you to the same app, filtered by the material group.
Non-Managed Spend	• Shows you the total invoice spend where that spend isn't associated with a purchase order. • You can switch the view between supplier and material group. • The bar chart shows the spend amount as a percentage of the invoiced spend by material group (or supplier). The number shows the value of the non-managed spend. • Selecting the header or the chart brings you to the Purchasing Spend KPI.
Off-Contract Spend	• Shows you the total invoice spend where that spend isn't associated with a contract. • You can switch the view between supplier and material group. • The bar chart shows the spend amount as a percentage of the invoiced spend by material group (or supplier). The number shows the value of the non-managed spend. • Selecting the header or the chart brings you to the Purchasing Spend KPI.

Card Name	Description
Supplier Performance Monitoring	• Shows you a bubble chart of purchasing spend against the supplier performance. • Selecting the header or the chart brings you to the Supplier Evaluation KPI, grouped by supplier. • You can also see the Supplier Feedback Score.
Purchase Requisition Touch Rate	• Shows you the proportion of purchase requisition items, which are processed automatically (no touch rate). Also shows the high touch rate (the percentage of all purchase requisition items or purchase orders that require manual intervention during processing) and the low touch rate (for those items that only require approval). • Selecting the header or the chart brings you to Purchase Requisition Touch Rate KPI, where you can sort the data as you like. • The donut chart is divided based on touch rate. You can select the divisions to see more information.
Purchase Requisition Item Types	• Shows you the different items types for purchase requisitions, such as catalog items, free-text items, and so on. • Selecting the header or the chart brings you to Purchase Requisition Item Types KPI, where you view more details. • The donut chart is divided based on item type. You can select the divisions to see more information.

LESSON SUMMARY

You should now be able to:

- Use the Procurement Overview app

Learning Assessment

1. What are the functions of SAP Smart Business KPIs?

   Choose the correct answers.

   - [ ] A Smart filter
   - [ ] B Layout
   - [ ] C Drilldown
   - [ ] D Mini charts
   - [ ] E Selection variant
   - [ ] F Export to a spreadsheet

2. What can you do in terms of the cards on the Procurement Overview?

   Choose the correct answers.

   - [ ] A Hide cards.
   - [ ] B Rearrange cards.
   - [ ] C Create new cards.
   - [ ] D Filter the cards' content

Unit 9

Learning Assessment - Answers

1. What are the functions of SAP Smart Business KPIs?

   Choose the correct answers.

   - [X] A Smart filter
   - [ ] B Layout
   - [X] C Drilldown
   - [X] D Mini charts
   - [ ] E Selection variant
   - [X] F Export to a spreadsheet

   Correct. The functions of SAP Smart Business KPIs include smart filter, drilldown, mini charts, and export to a spreadsheet. For more information, see the Using Analytical Apps lesson in the S4500 (or TS450) training material.

2. What can you do in terms of the cards on the Procurement Overview?

   Choose the correct answers.

   - [X] A Hide cards.
   - [X] B Rearrange cards.
   - [ ] C Create new cards.
   - [X] D Filter the cards' content

   Correct. Creating new cards is not supported by the *Procurement Overview* page, but you can hide or rearrange cards and filter their content. For more information, see the Using the Procurement Overview App lesson in the S4500 (or TS450) training material.

UNIT 10

Further Customizing for Purchasing

UNIT OBJECTIVES

- Create document types in Purchasing
- Adjust the screen layout of purchasing documents
- Create account assignment categories
- Activate the required output solution
- Configure message determination (NAST)
- Explain SAP S/4HANA output management

Unit 10
Lesson 1

Creating Document Types in Purchasing

LESSON OVERVIEW

This lesson explains how to create new document types for purchase requisitions and purchase orders.

Business Example

You need to set up a new document type for which only subcontracting items are allowed. For this reason, you require the following knowledge:

- How to create new document types for purchase requisitions and purchasing documents

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create document types in Purchasing

Documents Categories

SAP S/4HANA distinguishes between purchase requisitions and purchasing documents.

All purchasing documents (requests for quotation, purchase orders, contracts, and scheduling agreements) have the same structure, consisting of a header and item data (as well as other additional data). The system differentiates the different purchasing documents by using internal indicators called document categories A, F, K and L.

Purchase requisitions are internal documents, sometimes created automatically by the system. The system internally marks purchase requisitions with document category B.

Document Types

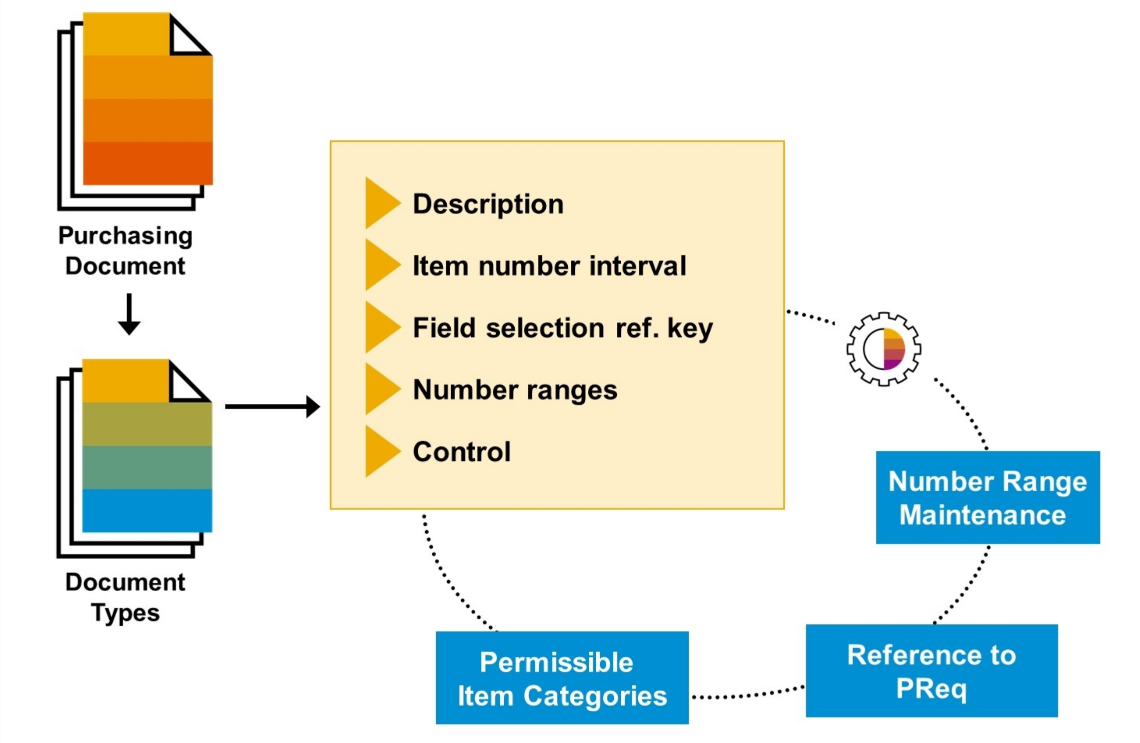


Figure 94: Document Types for Purchase Transactions

Document types in Purchasing have a control function.

SAP S/4HANA includes document types for all standard business processes. Sometimes, however, you need to create your own document types. The following are some examples of why you may need a new document type:

- If you want to assign certain order numbers exclusively for a special procurement process (such as subcontracting), you need a specific document type to which you assign the desired number range and only the corresponding item category.
- Using different document types, you can define the field selection control at header level differently.
- You can use the document type to influence the layout of the document output (e.g. the order printout).

Document types are defined by each of the following document categories:

- Purchase Requisition
- Request for Quotation
- Purchase Order
- Contract
- Scheduling Agreement

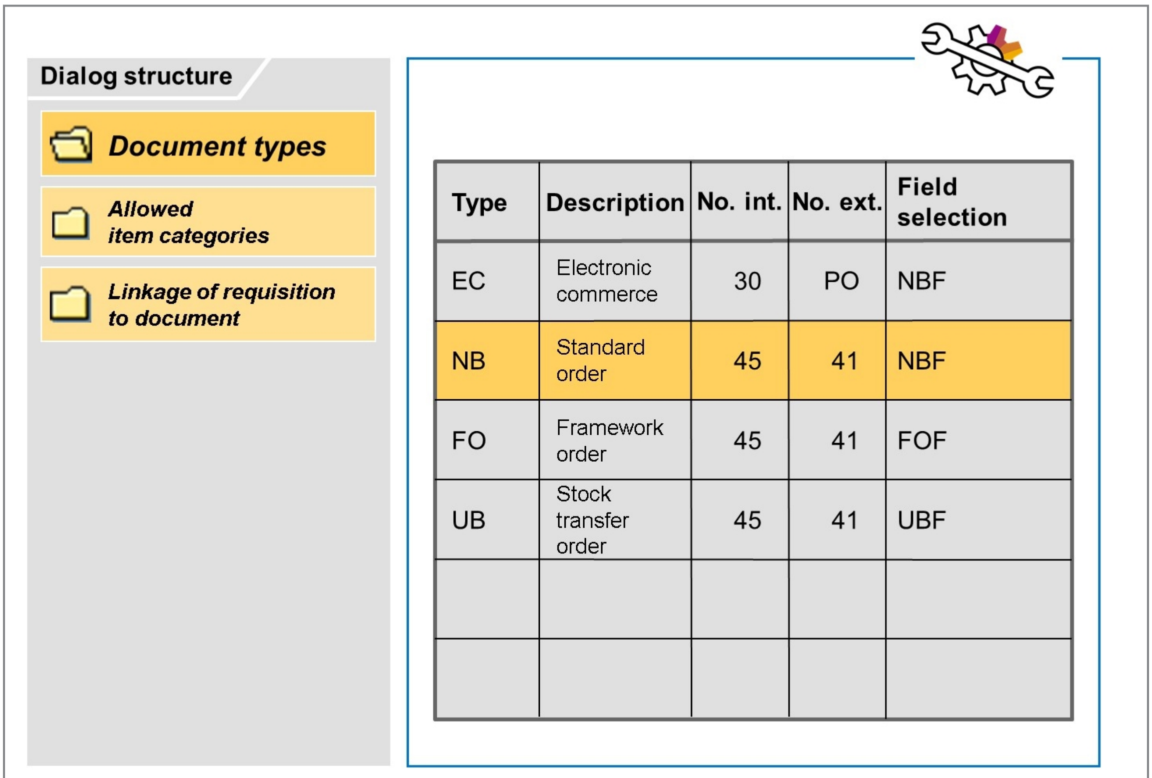
You must also assign the permissible item categories for each document type.

If you want to convert purchase requisitions into purchasing documents, you must link the document types and item categories.

You must assign at least one number range to each document type.

> Hint:
> To use partner roles for purchasing documents with a new document type, assign a partner schema to this document type. In Customizing, go to *Materials Management* → *Purchasing* → *Partner Determination* → *Partner Settings in Purchasing Documents* → *Assign Partner Schemas to Document Types*. The system does not copy this assignment while copying a document type.

Definition of Document Types – Overview



Type	Description	No. int.	No. ext.	Field selection
EC	Electronic commerce	30	PO	NBF
NB	Standard order	45	41	NBF
FO	Framework order	45	41	FOF
UB	Stock transfer order	45	41	UBF

Figure 95: Defining Document Types – Overview

To define a new document type for a document category, perform the following steps:

1. Define document types.

   Define the general settings for each document type, for example, number assignment and field selection.

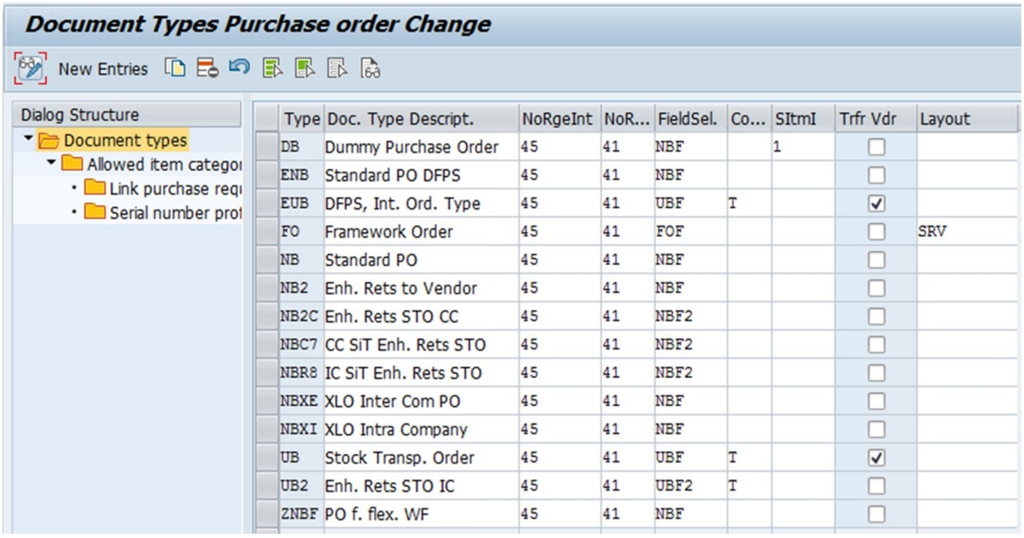
2. Define the permissible item categories.

   Define the permissible item categories that are dependent on the document type.

3. Define the linkage of document types.

   Define, depending on the document types and item categories of the purchase requisition and purchasing document, which conversions are allowed.

Step 1 – Define Document Types



Type	Doc. Type Descript.	NoRgeInt	NoR...	FieldSel.	Co...	SItmI	Trfr Vdr	Layout
DB	Dummy Purchase Order	45	41	NBF		1	☐	
ENB	Standard PO DFPS	45	41	NBF			☐	
EUB	DFPS, Int. Ord. Type	45	41	UBF	T		☑	
FO	Framework Order	45	41	FOF			☐	SRV
NB	Standard PO	45	41	NBF			☐	
NB2	Enh. Rets to Vendor	45	41	NBF			☐	
NB2C	Enh. Rets STO CC	45	41	NBF2			☐	
NBC7	CC SiT Enh. Rets STO	45	41	NBF2			☐	
NBR8	IC SiT Enh. Rets STO	45	41	NBF2			☐	
NBXE	XLO Inter Com PO	45	41	NBF			☐	
NBXI	XLO Intra Company	45	41	NBF			☐	
UB	Stock Transp. Order	45	41	UBF	T		☑	
UB2	Enh. Rets STO IC	45	41	UBF2	T		☐	
ZNBF	PO f. flex. WF	45	41	NBF			☐	

Figure 96: Defining Document Types

You can define the following general parameters at the document type level:

- Item number interval:

  The item number interval determines the size of the steps between default item numbers.

- Field selection

  The attributes of the individual fields in the document (field selection) are dependent on the field selection of a document type.

The figure, an excerpt from the Implementation Guide, displays the dialog structure for the definition of document types using the purchase order as an example.

The document type level contains further control indicators that vary depending on the document category.

Features for Purchase Requisitions, Requests for Quotation (RFQ) and Purchase Orders (PO)

You can define the following features for purchase requisitions:

- Control:

  To specify that an outline agreement needs to be created as a follow-on document to the purchase requisition instead of a standard PO, use the *Control* column and assign indicator *R* to a document type for purchase requisitions. Such a document type (RV, for example) is neither relevant for material requirements planning nor for account commitments.

- Overall Release:

  Use the *Overall Release* indicator to specify that the purchase requisitions of this document type must be released on header level, not on item level.

- Scenario based workflow:

This indicator controls the release procedure. The scenario based workflow is also called flexible workflow. The workflow is set up in the SAP Fiori Launchpad, using the app *Manage Workflows for purchase requisitions*.

It is free configurable and doesn’t need classification. You will find more information about this topic in the app documentation in the Fiori Apps Library.

You can define the following features for RFQs:

- Global percentage bid:

  If you define an RFQ document type FOR external services as a global percentage bidding document type, the price is preset in the RFQ. You then expect the vendor to quote only percentage additions to, or deductions from, the agreed prices for each outline level.

- Time-dependent conditions:

  To define a validity period as well as scales for the conditions in the quotation, set the time-dependent condition indicator for the RFQ document types.

You can define the following features for POs:

- Control:

  To indicate that a document is for stock transport orders, assign indicator *T* in the Control column to a document type for POs.

- Stock transfer: Include supplier data:

  To work with supplier master records when processing stock transport orders (provided such records are present for the supplying plants in question), select the *Stock Transfer: Take Vendor Data into Account* checkbox.

To make additional settings for stock transport orders, in Customizing, go to *Materials Management → Purchasing → Purchase Order → Set up Stock Transport Order*.

Features for Scheduling Agreements and Contracts

You can define the following features for scheduling agreements:

- Control:

  To indicate that this is a document type for stock transport scheduling agreements, assign indicator *T* to a document type for scheduling agreements.

- Stock transfer: Include supplier data:

  To work with supplier master records when processing stock transport scheduling agreements (provided such records are present for the supplying plants in question), select the *Stock Transfer: Take Vendor Data into Account* indicator.

- Time-dependent conditions:

  To maintain a validity period and scales for the conditions, select the time-dependent condition indicator for the scheduling agreement document types.

- Release documentation:

  To determine that the system stores the scheduling agreement releases in a separate file and displays the file at any time, select the *Release documentation* indicator for the scheduling agreement document types. This indicator determines that you must work with SA releases in addition to delivery schedules.

You can define the following features for contracts:

- Shared lock only:

  Select the *Shared lock* only indicator to set a shared lock, instead of an exclusive lock, when the system creates a release order against a contract of this document type. This enables several users to issue release orders against the contract simultaneously (an advantage); as a result, however, the target quantity can be exceeded (a disadvantage).

- ALE-distributed contract:

  Select the ALE-distributed contract indicator to identify the changes by the pointers when the system transmits the contract via ALE. You then evaluate the changes through the ALE administration facility.

Step 2 – Define Allowed Item Categories

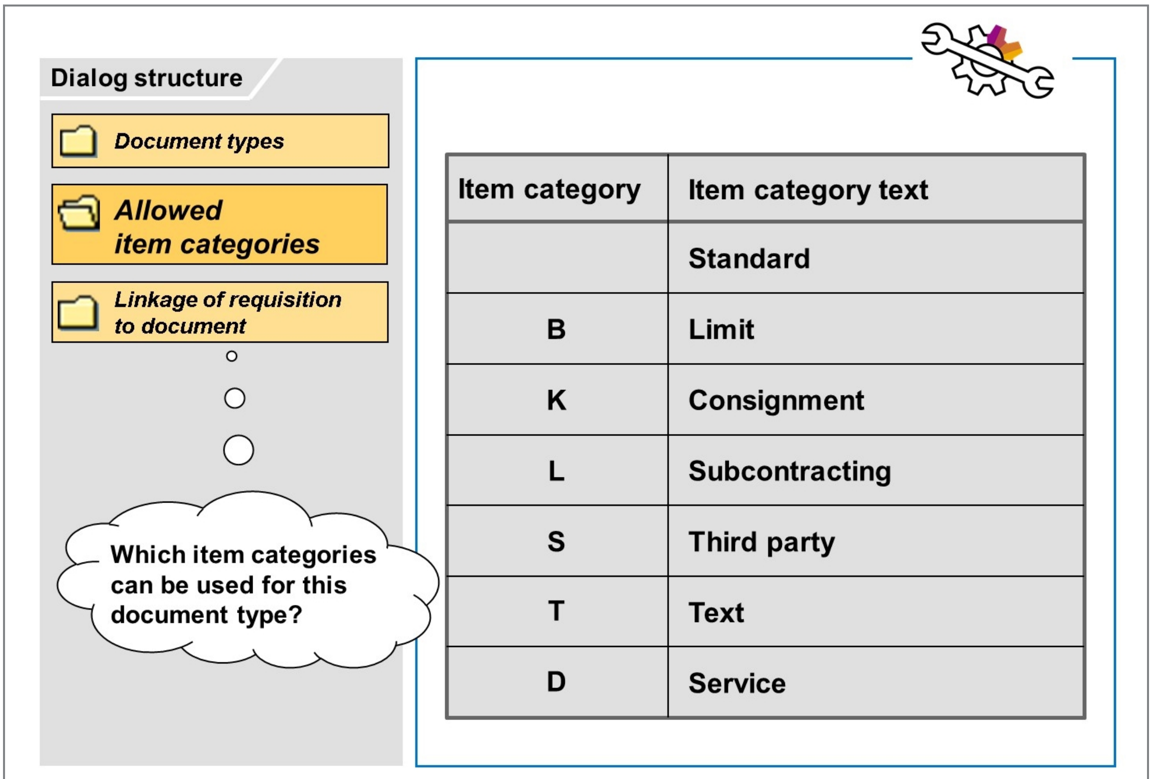
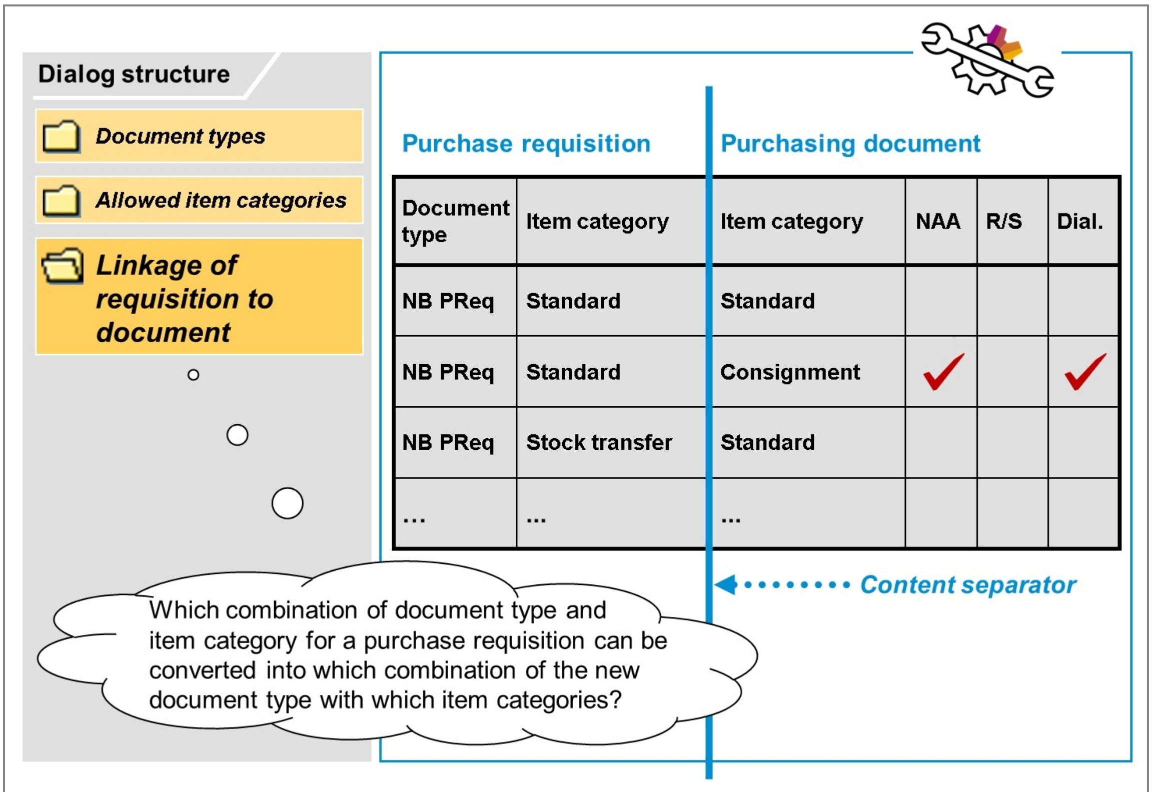


Figure 97: Assigning Item Categories

You must assign all item categories you want to use for the documents of a document type. When used in a business process, the document type only proposes the assigned item categories.

The item categories that the system supports depend on the document category. The system defines some item categories for contracts only, such as *M* (material unknown) and *W* (material group).

Step 3 – Linkage of a Purchase Requisition to an External Purchasing Document



Document type	Item category	Item category	NAA	R/S	Dial.
NB PReq	Standard	Standard			
NB PReq	Standard	Consignment	✓		✓
NB PReq	Stock transfer	Standard			
...	...	...			

Figure 98: Linkage of a Purchase Requisition to an External Purchasing Document

If you create an external purchasing document with reference to a purchase requisition, you must link the document types to each other. In this case, it is best to proceed on an item category basis.

For each item category of the purchase requisition document type, you must specify the type of purchasing documents (document category and document type) and items (with which item types) that can be created with reference to this purchase requisition item.

Creating a New Document Type: Example

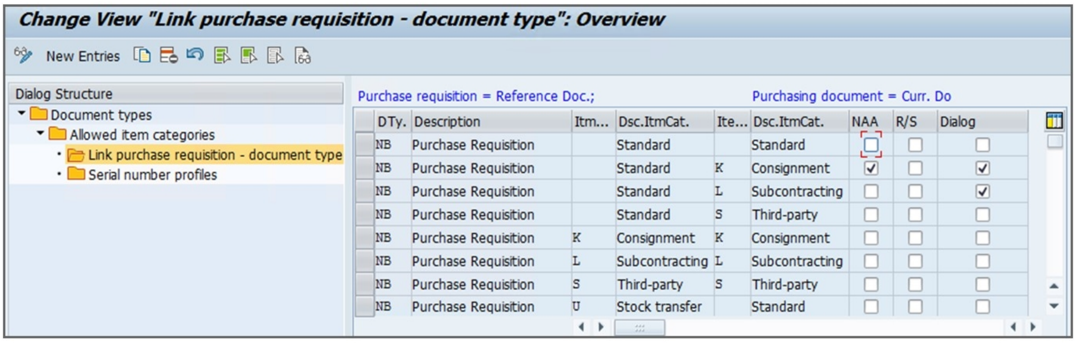
- You create a document type *NX* for POs. You allow the standard and subcontracting item categories in this document type.
- You want to create documents of this document type with reference to purchase requisitions of document type *NB*. It is irrelevant whether the purchase requisition item has item category standard or subcontracting.

In this case, you have to define the following entries:

- Requisition items of document type *NB* with the item category standard may be converted into purchasing documents of document type *NX* with the item category standard.
- Requisition items of document type *NB* with the item category standard may be converted into purchasing documents of document type *NX* with the item category subcontracting.
- Requisition items of document type *NB* with the item category subcontracting may be converted into purchasing documents of document type *NX* with the item category standard.

- Requisition items of document type *NB* with the item category subcontracting may be converted into purchasing documents of document type *NX* with the item category subcontracting.

Linkage of Requisition Document Type – Purchasing Document Type



DTy.	Description	Itm...	Dsc.ItmCat.	Ite...	Dsc.ItmCat.	NAA	R/S	Dialog
NB	Purchase Requisition		Standard		Standard	☐	☐	☐
NB	Purchase Requisition		Standard	K	Consignment	☑	☐	☑
NB	Purchase Requisition		Standard	L	Subcontracting	☐	☐	☑
NB	Purchase Requisition		Standard	S	Third-party	☐	☐	☐
NB	Purchase Requisition	K	Consignment	K	Consignment	☐	☐	☐
NB	Purchase Requisition	L	Subcontracting	L	Subcontracting	☐	☐	☐
NB	Purchase Requisition	S	Third-party	S	Third-party	☐	☐	☐
NB	Purchase Requisition	U	Stock transfer		Standard	☐	☐	☐

Figure 99: Linkage of Requisition Document Type – Purchasing Document Type

You can maintain this linkage in the purchase requisition document types or in the purchasing document types.

In addition, you can set the dialog indicator for certain linkages (for example, for combinations that are to be allowed in exceptional circumstances only). In this case, you receive a warning message when you create the purchasing document.

> Hint:
> You do not need to define a linkage between types of external purchasing documents (for example, RFQ and PO).

The figure, which is an excerpt from SAP system Customizing, displays the linkage between Document Type *NB* of Purchase Requisition and Document Type NB of PO.

Of the two *Item Category* columns in the figure, the column on the left relates to the purchase requisition. The *Item Category* column on the right relates to the item category of the *NB* standard PO (see title line).

Number Assignment for Purchasing Documents

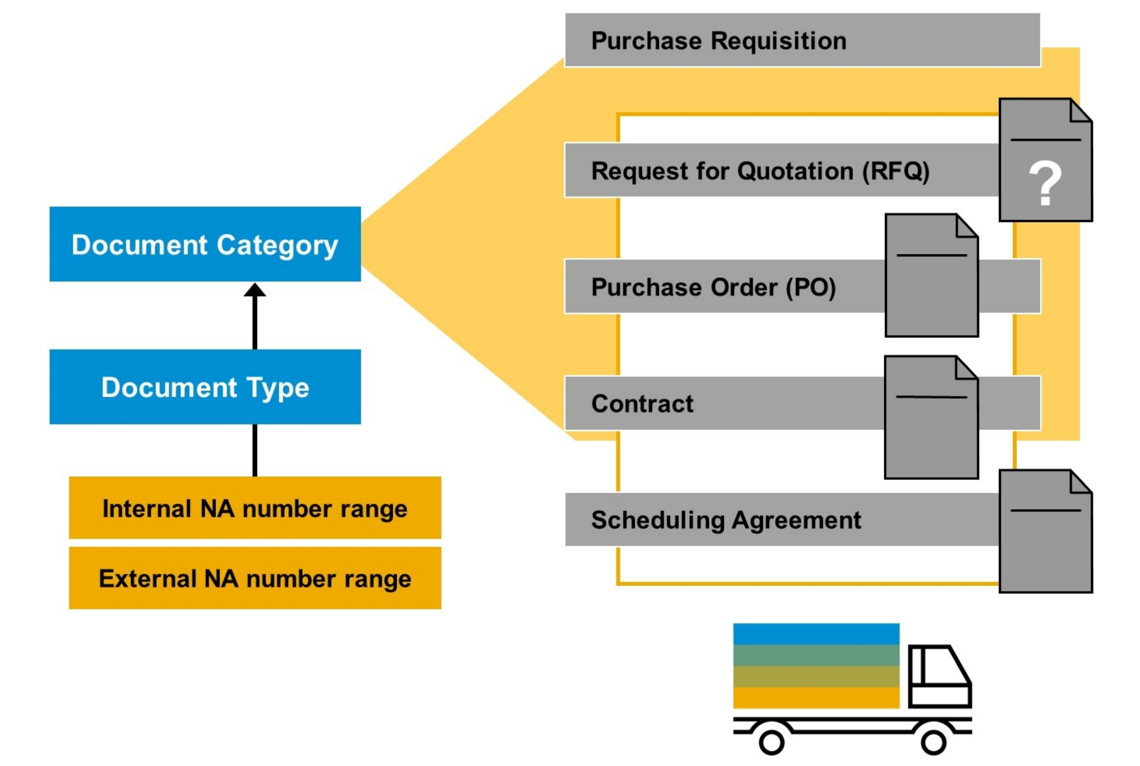


Figure 100: Number Assignment for Purchasing Transactions

Perform number assignment for purchasing documents by performing the following steps:

1. Set up number ranges.

   For a number range, you must specify the interval for number assignment (defined by lower and upper limits) and indicate whether the system should assign the numbers internally or externally. The individual intervals defined for a number range object must not overlap.

   The numbers can have a maximum length of 10 characters.

2. Assign number ranges to the individual document types of a document category.

   You can assign a number range for internal number assignment and a second number range for external number assignment to each document type of a document category.

   There are separate number range objects for purchase requisitions and external purchasing documents.

Number Range for Number Assignment

> Note:
> The system does not assign a number for purchase requisitions in the planning run using the number range of purchasing, but using the number range of the planning run. Go to *Customizing* for *Materials Management* under *Consumption-Based Planning → Number Ranges → Define Number Ranges for Planning Run*. You can configure the number ranges to depend on the relevant plant.

To allow only internal number assignment for a certain document type, you do not need to enter any external number range interval for that document type.

For contract types that you distribute among decentralized (local) systems, such as Application Link Enabling (ALE) systems, you must specify a number range for internal number assignment. The numbers of contract release orders in the local systems are not unique in the central system, and therefore, the system assigns new keys to such orders.

LESSON SUMMARY

You should now be able to:

- Create document types in Purchasing

Unit 10
Lesson 2

Adjusting the Screen Layout of Purchasing Documents

LESSON OVERVIEW

This lesson explains how to set up separate field selections for different purchasing documents, depending on the document type and document category. For this purpose, you need to assign a field selection key to the document type for which the field attributes are defined.

This lesson also explains that the field selection is used in Customizing for defining such categories as the account assignment category. You set up new account assignment categories for items with account assignment and use them to control the default values for the General Ledger (G/L) accounts.

Business Example

You want to adjust the field selection for the new purchasing document types.

For this reason, you require the following knowledge:

- Factors that influence the screen layout of purchasing documents
- How to adjust the field selection for purchase transactions

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Adjust the screen layout of purchasing documents

Field Selection for Purchasing Documents

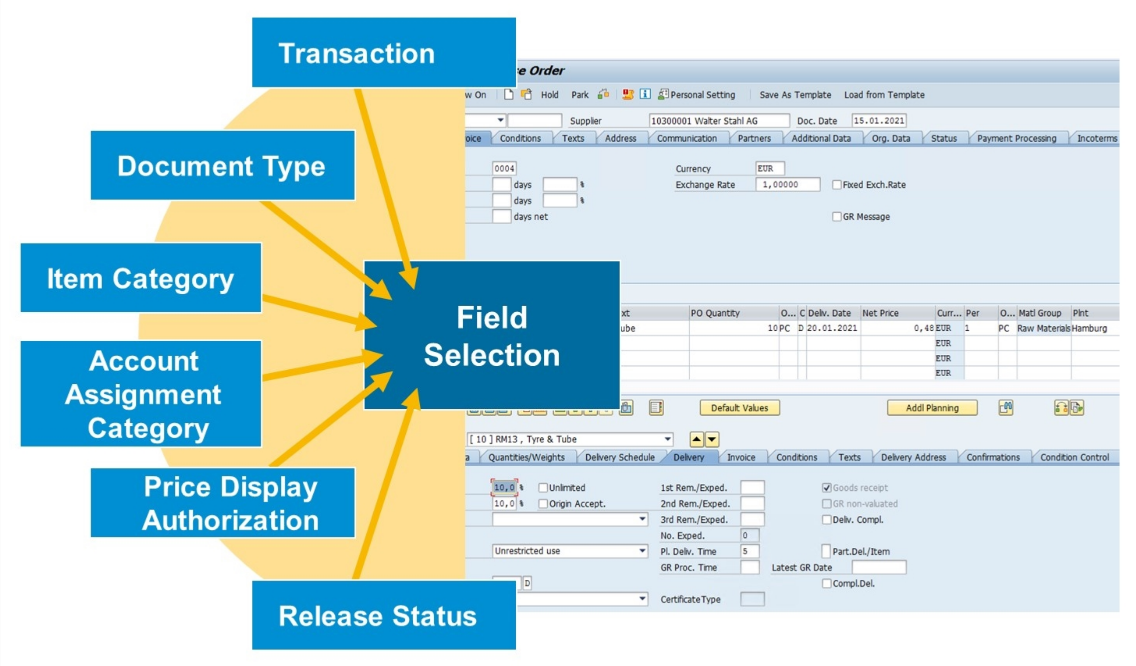


Figure 101: Screen Layout for Purchase Transactions

The following influencing factors control the field selection for purchasing documents:

- Field selection keys
- Account assignment categories (only for additional fields for items with account assignment)

With the field selection keys, you can define the field selection for the header data of the documents (except for purchase requisitions) and for the item data. However, the field selection specifications for the account assignment category apply only to additional fields that depend on the account assignment category. This is done directly in *Customizing* for account assignment categories.

Several factors influence the field selection for purchasing documents.

The system offers the configuration for each of the influencing factors. You can specify the field attributes (that is, whether a field is to be hidden, displayed only, or ready for input, and in the latter case, whether input is required or optional) for each field selection key.

Types of Field Selection Keys for Purchasing Documents

The following sections present the different types of field selection keys for purchasing documents:

- Field selection key for the transaction:

  This field selection key has a fixed link to the transaction used. For example, for the transaction *Change Contract*, `ME32` is the field selection key, and for the transaction *Display Contract*, `ME33` is the field selection key.

  For the single screen transaction for maintaining POs, there is only one field selection key – `ME21N`.

- Field selection key for the activity category:

  The four activity categories that are called internally by the program are AKTH (to add or create a document, or add an item), AKTV (to change a document, or create a PO with ME21N), AKTE (for PO extension), and AKTA (to display a document).

> Hint:
> For more information about the field selection keys for activity categories, see SAP Notes 30316 and 326125.

- Field selection key for the purchasing document type:

  You can assign each purchasing document type its own field selection key. For example, the field selection key *UBF* is assigned to the document type *UB* (for stock transport orders within a company code). With this field selection key, the fields *Price* and *Price Unit* are hidden.

- Field selection key for the item category (for each document category):

  The item category, in combination with the document category, determines this field selection key. The first two characters of the field selection key are the letters PT, the third character is the item category (internal), and the fourth character is the document category. The characters assigned to item categories are: A, for requests for quotations, B, for purchase requisitions, F, for POs, K, for contracts, and L, for scheduling agreement.

  For example, for a subcontracting PO item, the field selection key *PT3F* is used. You can control only item fields with this key.

- Release Status Field Selection Key:

  The field status of a purchase requisition can be controlled using the field selection key for the release indicator, which depends on the release status of a purchase requisition.

Special Procurement Transactions

For special procurement transactions, such as those in a retail system, the program includes additional field selection keys. For example, if a vendor offers a discount-in-kind in the form of inclusive or exclusive bonus item quantities, the discount-in-kind items are automatically generated in a PO, provided the conditions are fulfilled.

You can control the field selection for the subitems of the PO using the following field selection keys:

- *UP2F* – Subitem inclusive bonus quantity
- *UP4F* – Subitem exclusive bonus quantity

User Parameter EFB

You can also influence the field selection, depending upon the user parameter EFB (Function Authorization for Buyers). This parameter is assigned to the user along with a value.

Each value of EFB can have an associated field selection key for price display.

Based on the value, the system controls the display or entry of prices in purchasing documents (like PO and Outline Agreements).

If the authorization for the price entry and display is denied without assigning an additional field selection key, the field selection key $$$$ is used. In addition, this user parameter enables you to assign an additional field selection key that is relevant in single-screen transactions for maintaining purchase requisitions.

Field Selection Priorities

In field selection for a transaction in the purchasing area, the relevant field selection keys are linked together.

The following order of priority applies (where 1 = highest and 4 = lowest priority):

- Priority 1: Hide
- Priority 2: Display
- Priority 3: Required entry
- Priority 4: Optional entry

The following table shows the linkage rules for the individual field selection settings for purchasing documents:

Table 11: Linkage Rules for Field Selection Settings

Characteristic	Hide	Display	Required Entry	Optional Entry
Hide	Hide	Hide	Hide	Hide
Display	Hide	Display	Display	Display
Required Entry	Hide	Display	Mandatory	Mandatory
Optional Entry	Hide	Display	Mandatory	Optional Entry

If a certain field is defined as a mandatory field by one field selection key and as an optional field by another selection key, the mandatory attribute applies because it has the higher priority.

The field selection keys for the release status apply when you assign a field selection key to the individual release indicators, and, only to purchase requisitions in the release stage.

The field selection keys for the authorization to display price data apply only to users to whom special function authorizations for buyers have been assigned via user parameter EFB.

LESSON SUMMARY

You should now be able to:

- Adjust the screen layout of purchasing documents

Unit 10
Lesson 3

Creating Account Assignment Categories

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create account assignment categories

Account Assignment Categories and Their Attributes

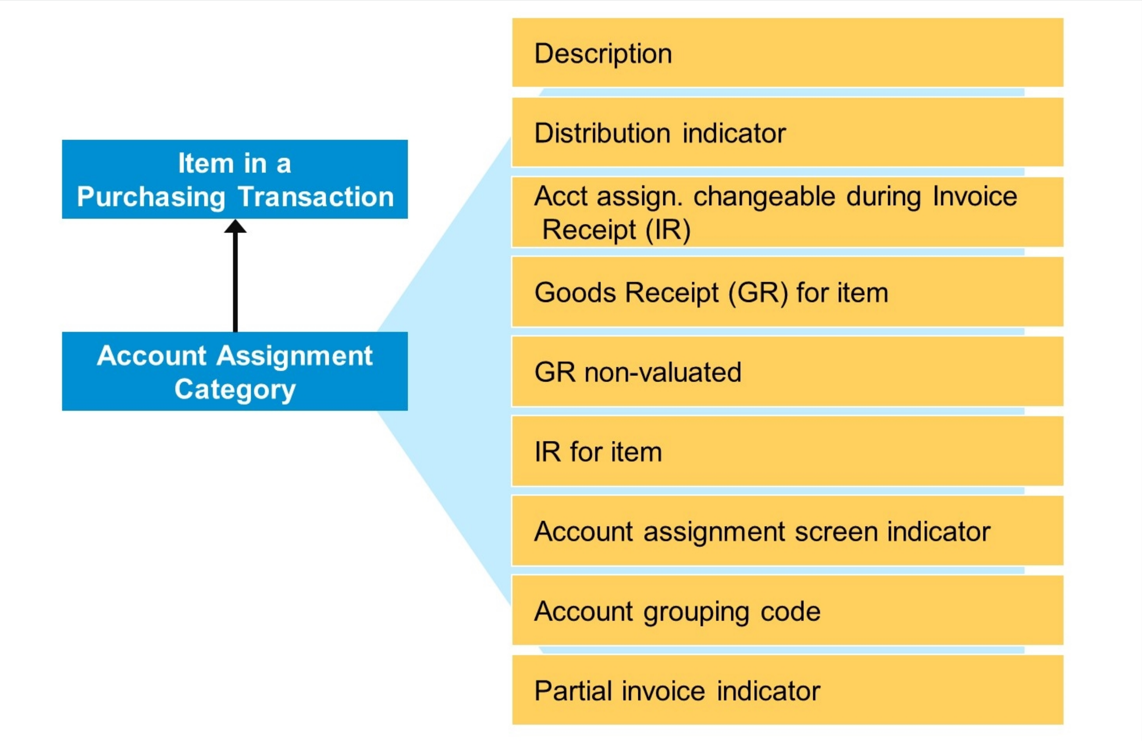


Figure 102: Account Assignment Categories

The account assignment category in purchasing documents indicates whether you need to assign an account assignment object, such as a cost center. You can change the attributes of the account assignment categories for purchasing documents and create new categories.

The user assigns the account assignment category at the item level in purchasing documents.

The system uses the account grouping code of the account assignment category to propose a General Ledger (G/L) account when you create a document item with account assignment.

In addition, you can set up a field selection that is dependent on the account assignment category. These field selection applies only to the fields on the account assignment tab page.

Details of Account Assignment Category K

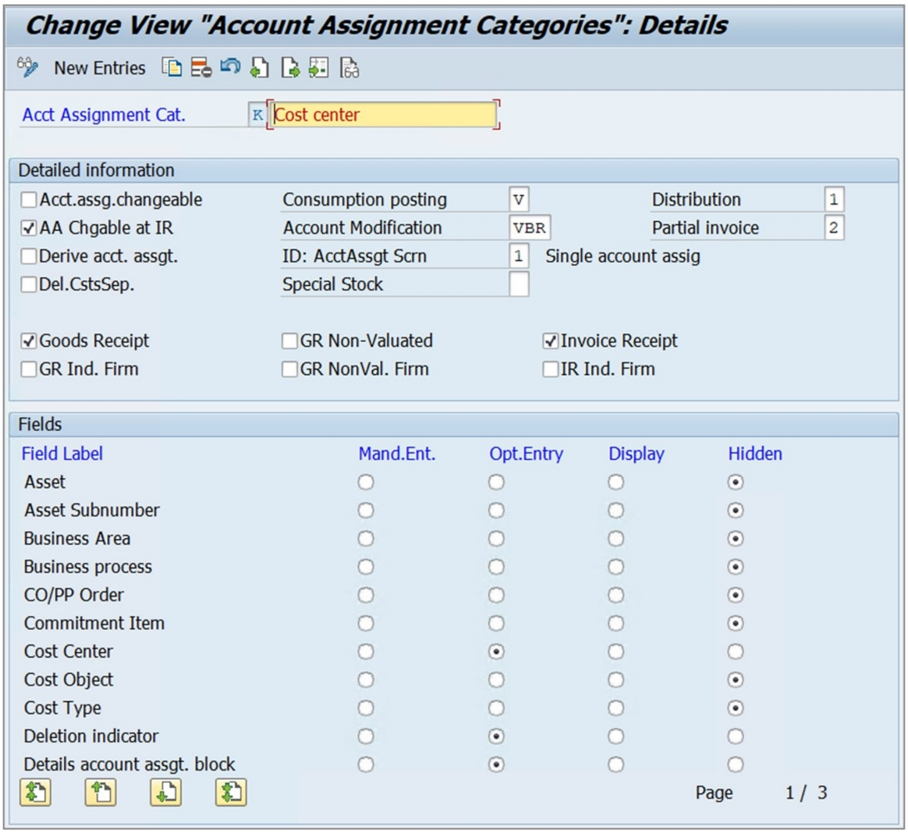


Figure 103: Details of Account Assignment Category K

The figure displays the settings for account assignment category K (cost center) as an example.

Specifications

You can make the following specifications for each account assignment category:

- Whether the *Goods receipt* checkbox is to be defaulted, binding, or both (this setting must agree with the definitions for the item category)
- Whether the *GR non-valuated* checkbox is to be defaulted, binding, or both
- Whether the single or multiple account assignment screen is to be defaulted in the item detail data of the account assignment specifications for purchasing documents
- The distribution indicator (quantity, percentage, or amount) the system proposes in the case of multiple account assignment
- How partial invoices are treated in the case of multiple account assignment

Combination of Item Categories and Account Assignment Categories

Item cat.	Acct assgmt cat.	Item cat. text	Acct assgt cat. description
	K	Standard	Cost center
L	K	Subcontracting	Cost center
U	A	Stock transfer	Asset
D	U	Service	Unknown
...	...	...	...

Figure 104: Combination of Item Categories/Account Assignment Categories

You have to specify the permissible account assignment categories for each item category.

To perform this task, in *Customizing*, go to *Materials Management → Purchasing → Account Assignment → Define Combination of Item Categories/Account Assignment Categories*.

The control parameters for item categories cannot be changed. For each account assignment category, you can specify the associated control parameters, such as the goods receipt indicator, according to your requirements.

If the specifications you make for the account assignment category differ from the specifications of the item category, then the specifications for the item category have a higher priority.

Special Conditions

For the goods receipt, goods receipt non-valuated, and invoice receipt indicators, the following special conditions apply: If the indicator for the item category is mandatory, the specification for the account assignment category for this indicator must not contradict the indicator.

LESSON SUMMARY

You should now be able to:

- Create account assignment categories

Unit 10
Lesson 4

Controlling the Output of Messages in Purchasing

LESSON OVERVIEW

This lesson explains the necessary settings for message determination in Purchasing. The lesson also explains printer determination for purchasing documents.

Business Example

You are asked to give an overview of the current configuration for purchasing document output and create the necessary condition records for your new document type.

For this reason, you require the following knowledge:

- An understanding of the message determination process for purchase transactions

LESSON OBJECTIVES

After completing this lesson, you will be able to:

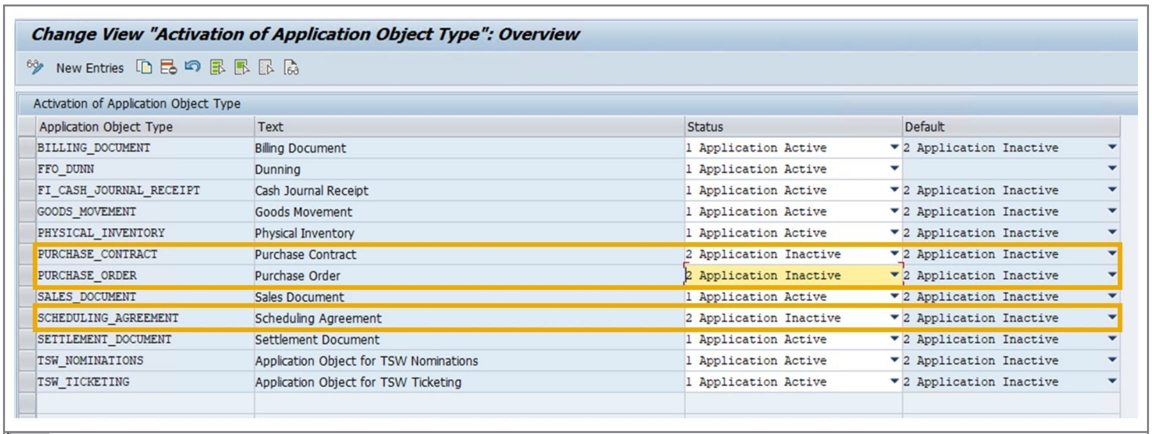
- Activate the required output solution

Options for Output Control

Output control includes complex tasks such as automatic determination of output parameters based on the configuration, creation of documents based on form templates, sending via various output channels and the required archiving of the created documents.

In addition to the classic output solution based on message determination, also referred to as NAST, SAP S/4HANA offers a new output solution, SAP S/4HANA output management. However, message determination (NAST) remains the default solution for SAP S/4HANA on premise.

You decide in Customizing whether you want to set up output control via SAP S/4HANA output management or NAST: *IMG → Cross-Application Components → Output Control → Manage Application Object Type Activation*. By default, SAP S/4HANA output management is active for cloud installations and inactive for on premise ones.



Change View "Activation of Application Object Type": Overview

New Entries

Activation of Application Object Type

Application Object Type	Text	Status	Default
BILLING_DOCUMENT	Billing Document	1 Application Active	2 Application Inactive
FFO_DUNN	Dunning	1 Application Active	
FI_CASH_JOURNAL_RECEIPT	Cash Journal Receipt	1 Application Active	2 Application Inactive
GOODS_MOVEMENT	Goods Movement	1 Application Active	2 Application Inactive
PHYSICAL_INVENTORY	Physical Inventory	1 Application Active	2 Application Inactive
PURCHASE_CONTRACT	Purchase Contract	2 Application Inactive	2 Application Inactive
PURCHASE_ORDER	Purchase Order	2 Application Inactive	2 Application Inactive
SALES_DOCUMENT	Sales Document	1 Application Active	2 Application Inactive
SCHEDULING_AGREEMENT	Scheduling Agreement	2 Application Inactive	2 Application Inactive
SETTLEMENT_DOCUMENT	Settlement Document	1 Application Active	2 Application Inactive
TSW_NOMINATIONS	Application Object for TSW Nominations	1 Application Active	2 Application Inactive
TSW_TICKETING	Application Object for TSW Ticketing	1 Application Active	2 Application Inactive

Figure 105: Output Control

SAP S/4HANA output management can be activated per business object type, therefore the coexistence of SAP S/4HANA output management and NAST in SAP S/4HANA on premise is possible.

As a rule, when converting from SAP ECC to SAP S/4HANA, it makes sense to continue using the already existing solution (NAST).

For new implementations or new feature deployments, you may want to consider which solution to choose. Unlike NAST, SAP S/4HANA output management is easy to set up, but there are some restrictions. You can read about the advantages and disadvantages of each solution in the following blog.

In this training you will learn about both solutions, with a clear focus on NAST - the default solution for SAP S/4HANA on premise.

Introduction to Message Determination (NAST)

Message determination in Purchasing includes:

- Message schemas
- Message types and fine-tuned control
- Access sequences and condition tables
- Partner roles for outputting messages
- Printer determination
- Change messages

Messages are an important means of communication with suppliers in relation to purchase transactions.

You can send messages through the postal service or electronically. A message-control facility, dependent on a number of different criteria, enables you to process and send these messages subject to certain conditions and with predefined restrictions.

The message determination process enables you to output messages on a variable and differentiated basis. Message determination is a variant of the condition technique.

In addition to the settings for message determination, you need to assign printers for print output.

When you create or change a purchasing document, for example, a Request for a Quotation (RFQ), a purchase order (PO), or an outline agreement, the system checks whether it has to create an output format for this document. A document in output format represents a message.

Message Output

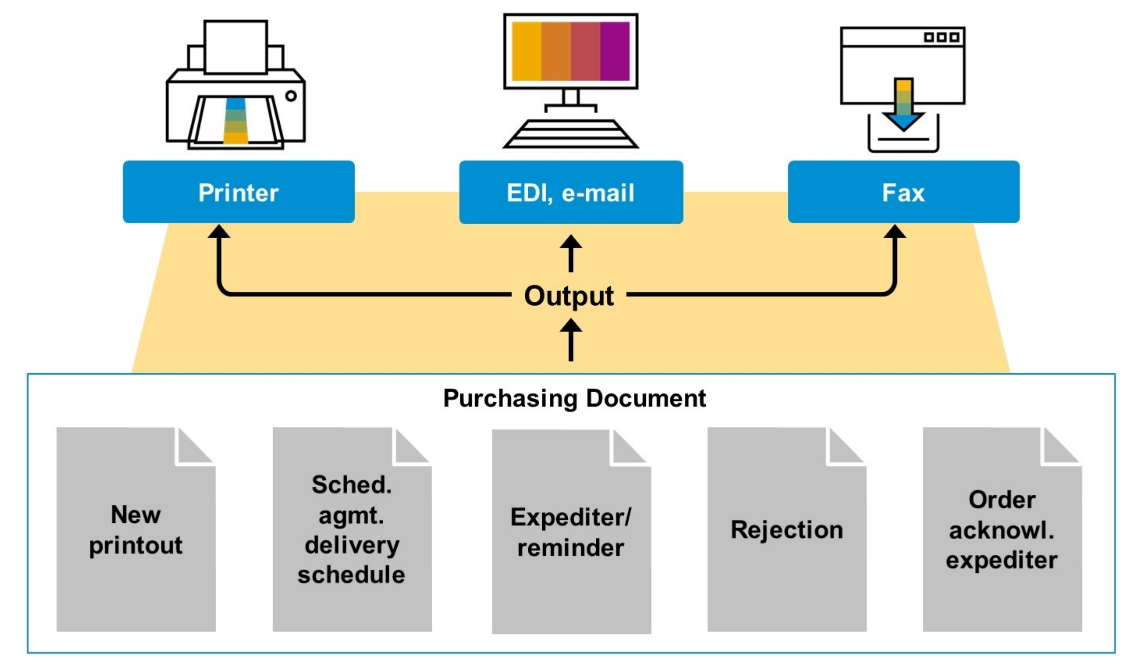


Figure 106: Message Output

You can print these messages on a printer or send them directly through e-mail, Electronic Data Interchange (EDI), or fax.

If you use message determination to output purchasing documents, you can also use condition records to determine under what conditions, with what medium, and at what time a document will be output. You can specify these details for message output individually for each print operation, for example New, Change, or Expediter.

When you create or change a document in SAP S/4HANA, you can change the proposal from a condition record.

Message Output with Message Determination

To use message control via NAST, you must first ensure that SAP S/4HANA output management has not been activated.

Then, you must assign a message schema to each purchasing document category.

If no message determination schema is assigned, the system cannot perform automatic message determination for the corresponding purchasing document category.

Working with message schemas results in the following:

- Any message type can be output.
- In case of print output, the system determines the printer in the following sequence:
  - printer from message record
  - printer depending on the print parameter in the message type

- Output medium and dispatch time can be defaulted, depending on the concrete values of influencing factors, such as document type and supplier.

The purpose of message determination is to output messages in accordance with predefined criteria.

With message determination, the system checks whether condition records exist for the actual application data in a purchasing document. The condition records specify how, when, where, and how often a message should be output. If condition records exist, then the system can generate and process (for instance, send electronically) one or more messages. Without a valid condition record, the system cannot generate a message automatically.

Example — Result of Message Determination

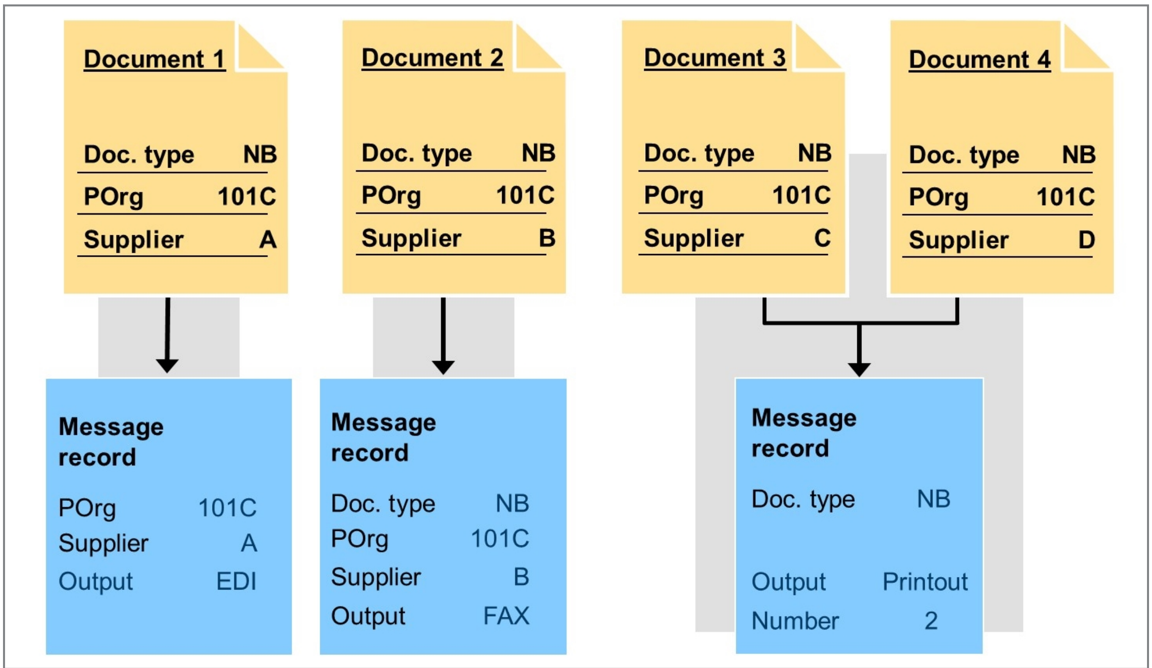


Figure 107: Example – Result of Message Determination

What does message determination enable you to do? For instance, message determination enables you to control the document output process for each supplier on an individual basis.

Depending on the actual application data in the document, you could specify the following options:

- Transmit purchasing documents for particular suppliers by EDI.
- Send purchasing documents with a particular document type to certain suppliers by fax.
- Print purchasing documents for the remaining suppliers.

In this example, the program uses different message records (condition records) for the outputs.

Example of Message Determination Process

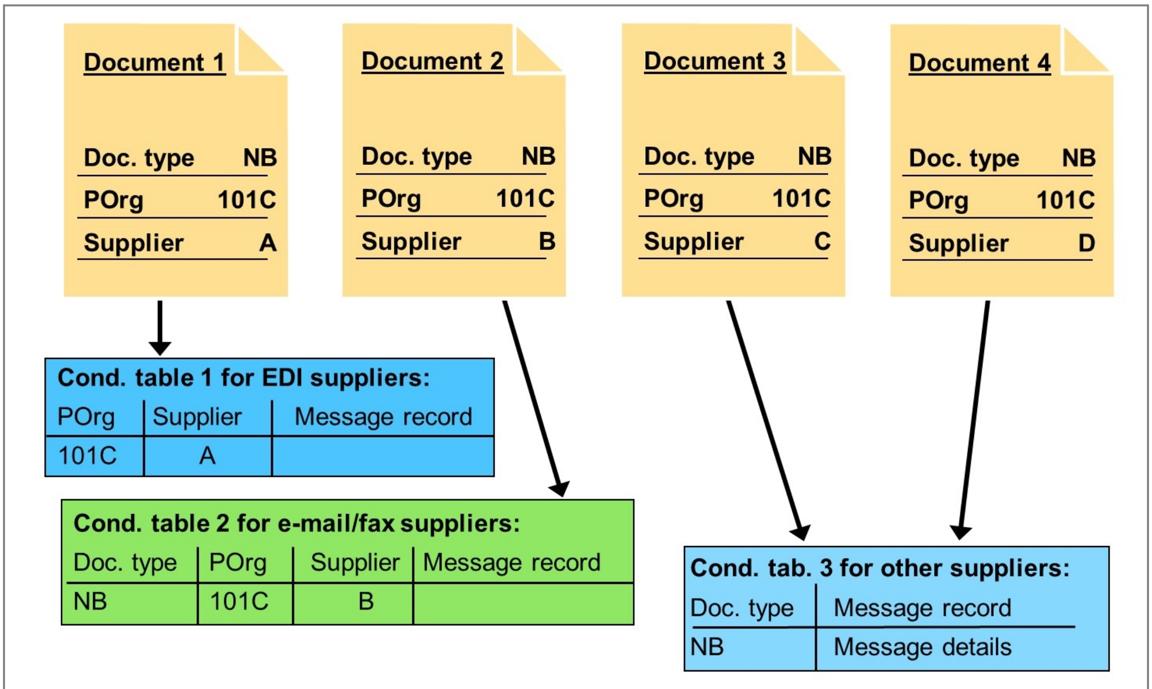


Figure 108: Example — Message Determination Process

With the relevant application data that you want to use for message output, condition tables must be created in Customizing.

In the message determination process, the system searches the condition records depending on the condition tables in a predefined sequence (the access sequence).

You can take into account various dependencies with the three different condition tables in the figure *Example — Message Determination Process.* Thus, supplier A can receive every purchasing document by EDI whereas supplier B only receives purchasing documents belonging to particular document types by fax.

LESSON SUMMARY

You should now be able to:

- Activate the required output solution

Exploring Customizing for Message Determination in Detail

LESSON OVERVIEW

This lesson explains how to use condition technique for message determination in Purchasing.

Business Example

Message determination enables the system to determine the appropriate messages and search for valid condition records for the messages. You can define the output medium, the device, the time of output, and the number of copies.

For this reason, you require the following knowledge:

- An understanding of how to use condition technique for message determination

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Configure message determination (NAST)

Condition Technique for Message Determination

Message determination in Purchasing enables you to control message defaults by making certain assignments and groupings. This allows the system to determine and process valid messages according to predefined criteria.

In message records, you can define the output parameters based on these criteria. The output parameters include the output medium, time of output, and number of copies. Examples of criteria include document type and purchasing organization.

The following terms are used in message determination:

- The permitted message types for each message application are specified in a corresponding **message schema**. Examples of message types include dunning and new printout.

  The system provides separate message schemas for the individual purchasing document categories: Request for Quotation (RFQ), Purchase Order (PO), Contract and Scheduling Agreement.

- A **message type** can also be seen as a condition type, and groups together messages of the same kind. It contains parameters that are valid for all the messages that the system assigns to it: for example, the print program, form, and defined partner roles. Each message type represents different messages in the system. Examples of message types include PO printouts and reminders.

- The **access sequence** is a search strategy that the SAP system uses to search for valid condition records (message records). The access sequence is the sequence in which the message determination accesses the condition tables.
- A **condition table** contains one or more fields as key fields that you want to use as influential factors (dependencies) for message output. You define the combination of fields for which you want to create message records.

Message Determination Process

In purchasing, the system performs message determination only at the header level for a purchasing document.

Therefore, message determination only considers header fields directly.

There are separate message schemas with message types for the output of RFQs, POs, outline agreements, and scheduling agreement delivery schedule lines.

Message Determination Process Example

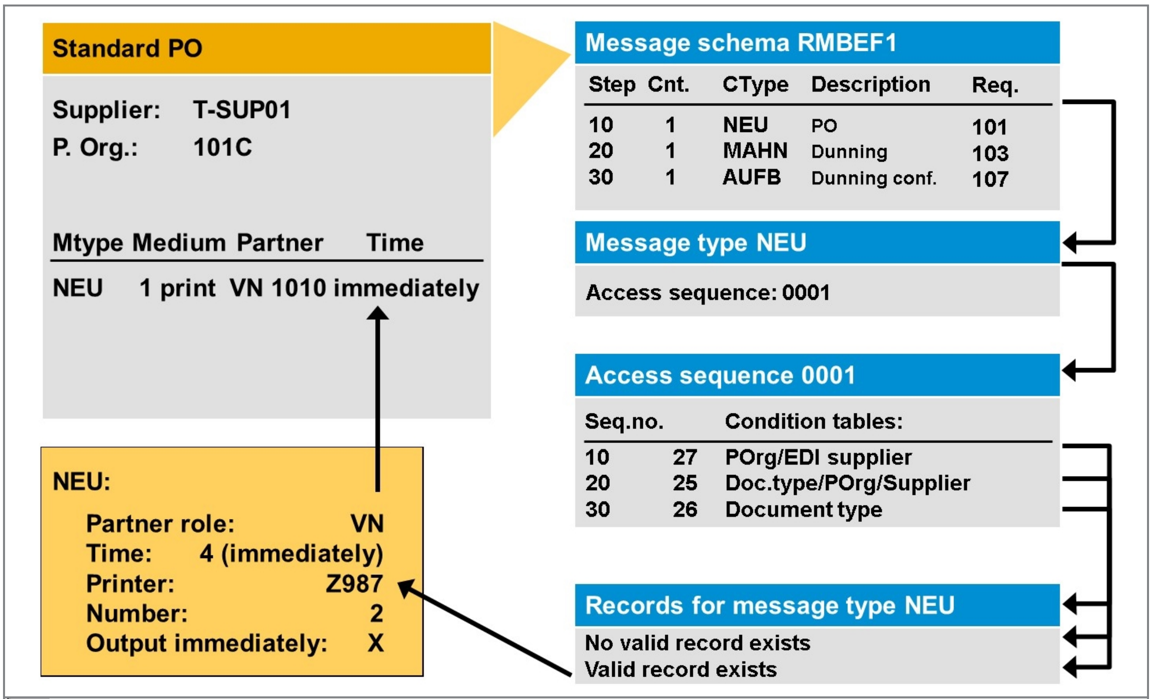


Figure 109: Message Determination Process 1–7

The figure shows an example of the message determination process. In this example, you create a purchase order with document type NB for supplier T-SUP01 and purchasing organization 101C.

The determination steps are:

- SAP S/4HANA determines the message schema for the purchasing document category. For purchase orders, the standard message schema is RMBEF1.
- The system determines from the message schema which message types are applicable for this transaction. To do this, it checks the requirements that are assigned to the different message types included in the schema. In this example, the system has determined the message type NEU. For the other message types, the assigned requirements are not met.

> Note:
> A determination schema contains all possible message types for a purchasing document category. A *requirement* is assigned to each message type. *Requirements* are ABAP form routines that specify under which circumstances a particular message is to be considered for output: requirement *101*, for example, specifies that the assigned message is relevant when a purchasing document is created or changed.

The fine tune control checks whether the determined message types are also relevant for the respective printing process: New, Change, Reminder, and Order Confirmation.

- The system determines the access sequence for message type NEU. In this example, it is the access sequence 0001, which contains three condition tables. The first table has the fields purchasing organization and supplier. The second table has the fields document type, purchasing organization, and supplier. The third table only has the field document type.
- The system searches for valid condition records. In the example, no condition record has been defined for the combinations of purchasing organization and supplier or document type, purchasing organization, and supplier. However, there is a condition record for document type NB.
- The system copies the data from this condition record, which include output medium, printer, and time-spot, to the PO (at header level) and displays it under Messages.

As the system performs message determination in Purchasing at header level, you can only output an entire document.

If you are not satisfied with the result of the message determination, you can change or delete the messages in the documents.

Determination Analysis

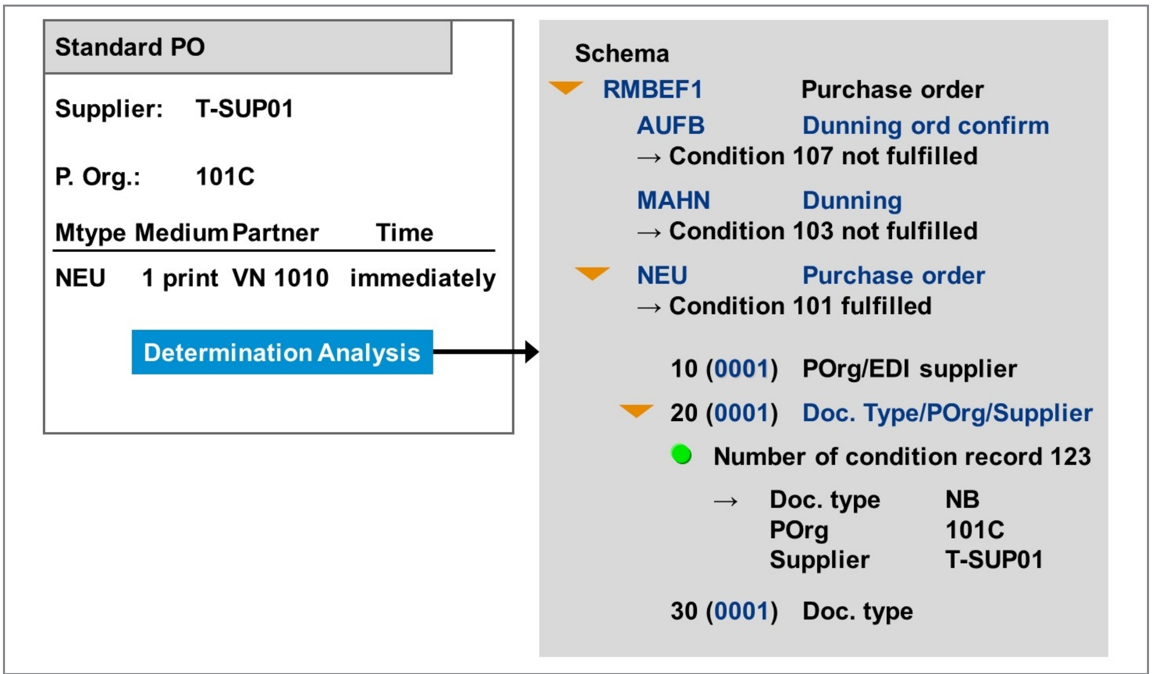


Figure 110: Determination Analysis

You can use determination analysis to check the result of message determination on the output overview screen. To do so, in transaction ME21N or in the *Create Purchase Order - Advanced* app, for example, choose *Messages*, then *Determin. Analysis*.

You get an overview of all possible message types. You get a list that indicates for which condition types and access sequences the system has found condition records. If you select such an access sequence, you can see the field values for which a condition record was found.

Condition Tables

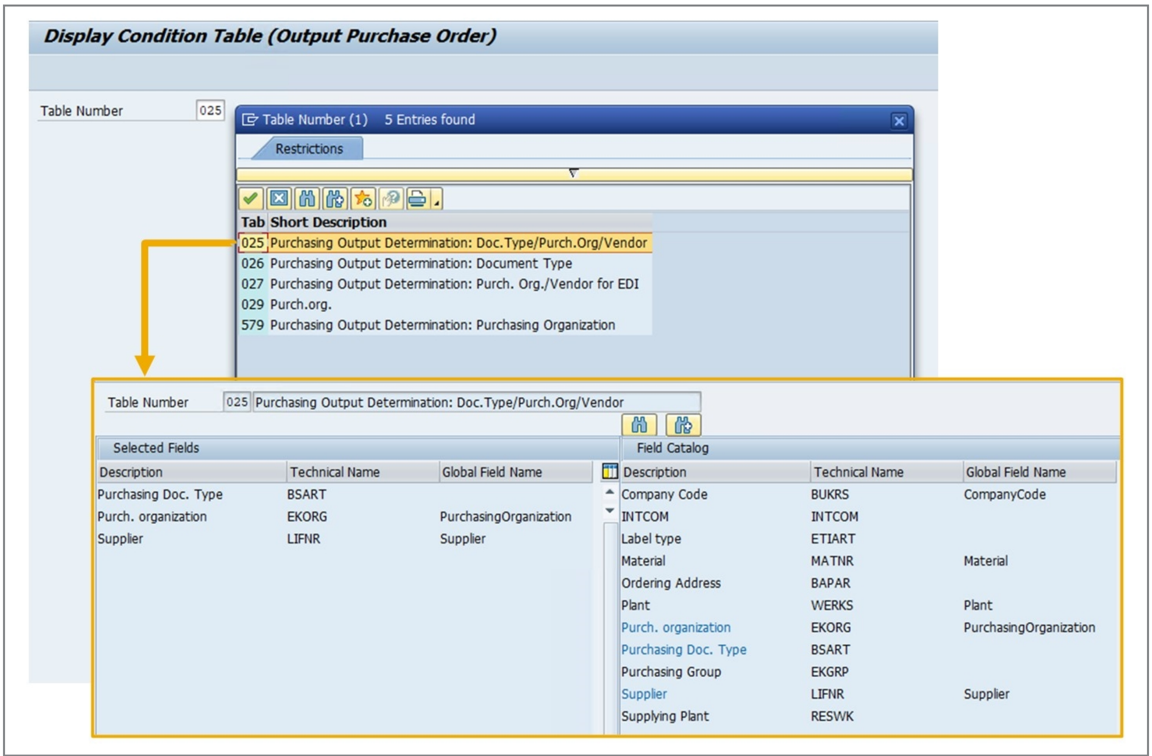


Figure 111: Condition Tables

Condition tables contain field combinations for which you want to create message records. In other words, condition tables represent the criteria combinations depending on which you want to control your message output.

For example, condition table *025* contains the fields *Purchasing Document Type*, *Purchasing Organization*, and *Supplier*. This means that you can create different message records for each combination of document type/purchasing organization/supplier. Since a message record contains data such as output medium (print, email, fax, etc...) or time of output (immediately, per order, etc...), you can decide per document type/purchasing organization/supplier combination the medium and time for sending messages.

SAP S/4HANA contains some standard condition tables. In addition, you can define further criteria for message determination in Customizing. When creating condition tables, you select influencing criteria (e.g. purchasing group or company code) from a field catalog.

Since message determination takes place at purchasing document header level, you will only be able to include fields from the document header in the condition tables. Output determination using the fields of the document item - for example, the plant - is not possible directly. Not directly means that you can have business partners with certain partner functions at header level that depend on the plant or supplier sub-range included in the item. If you have message records for these partner roles, you can transmit messages to the appropriate partners.

Access Sequences

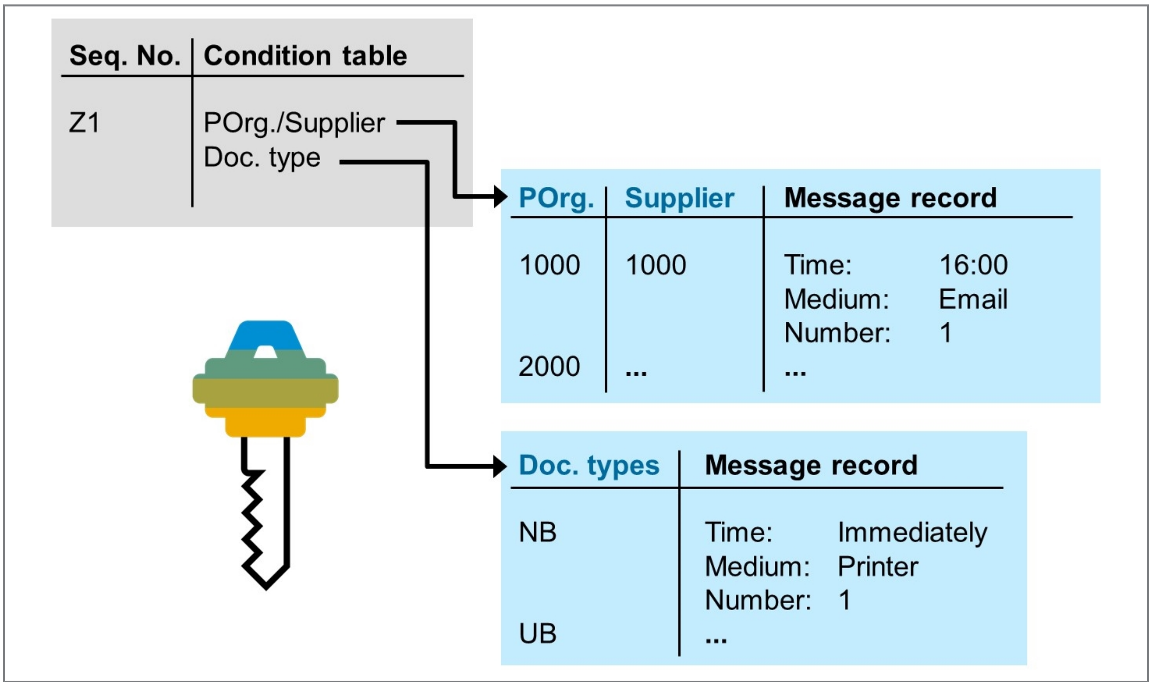


Figure 112: Condition Tables and Access Sequences

Condition tables contain different key combinations. In the access sequence, you assign condition tables and the sequence in which the system reads the tables to determine a valid message record.

An access sequence itself is assigned to a message type. This means that once the system has determined a message type using the message schema during purchase order creation, the access sequence is then taken from this message type.

In the example on the figure above (access sequence Z1), the system first searches for a suitable message condition for the purchasing organization/supplier combination, then for the document type.

Access Sequences for Purchase Orders

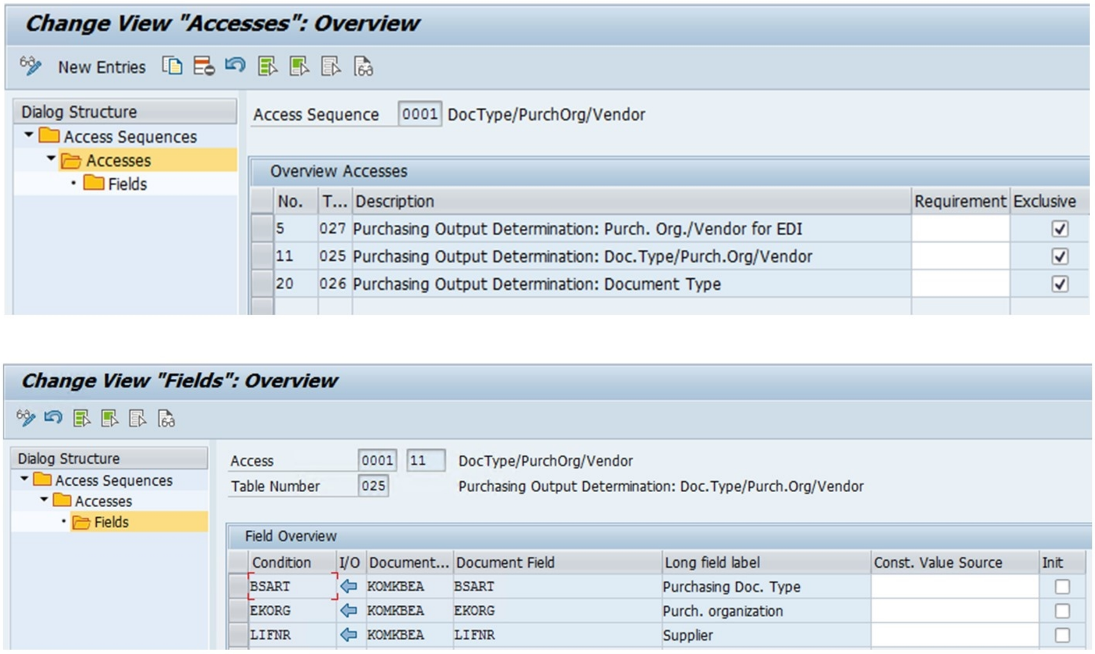


Figure 113: Access Sequences for Purchase Orders

The figure entitled *Access Sequences for Purchase Orders* shows an access sequence for the message output of purchase orders.

The system always searches for all existing condition records that match your entries. Using the *Exclusive* indicator in an access sequence, you can specify that the search should end after the first valid condition record.

Message Types

In SAP S/4HANA, a message type is a key that describes a specific kind of output (in purchasing, mainly messages to suppliers, such as purchase orders, purchase order confirmations, and reminders). By maintaining message types, you can:

- Assign access sequences
- Set partner roles for different recipients, such as supplier, ordering address, or supplying plant
- Assign processing programs and forms, depending on the output medium

In the fine-tuned control, you define for which print operations the message type is intended: for example, for a new printout or a printout of changes.

The system only processes message types that are assigned to the message schema of a purchasing category.

Standard message types are delivered for each purchasing document, e.g. NEW is the standard message type for the output of a purchase order (new and change print).

Details of Message Type NEU

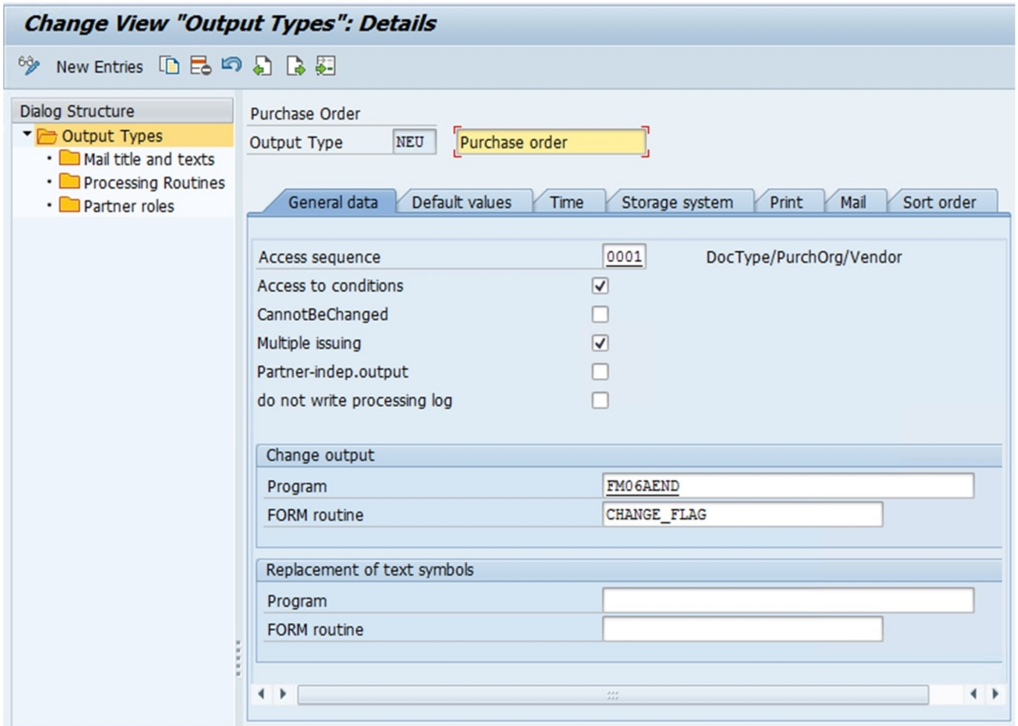


Figure 114: Details of Message Type NEU

You can define further message types for each purchasing document category separately. The figure shows details of the message type NEU for purchase orders.

Fine-Tuned Message Control

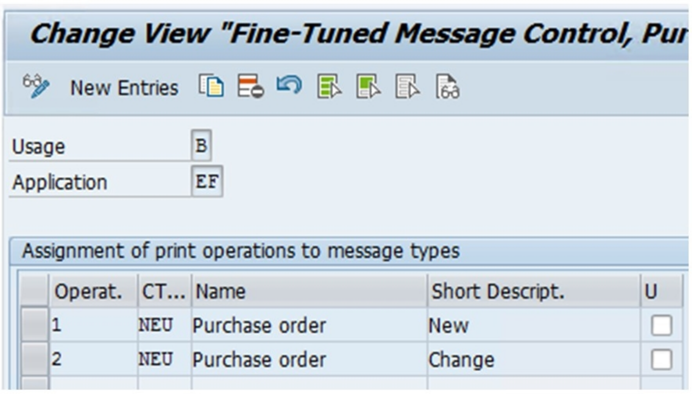


Figure 115: Fine-Tuned Message Control

The figure shows the fine-tuned control function that can be used to define various message types for a document category for output, depending on the relevant transaction. In standard, message type NEU is used for new printout (operation 1) as well as for change printout (operation 2).

Condition Records

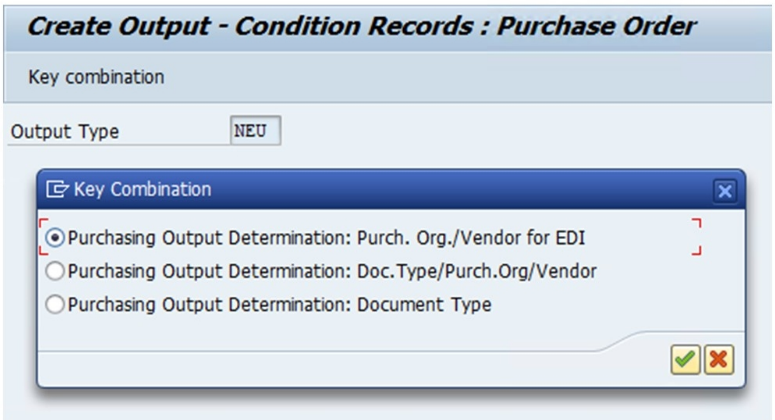


Figure 116: Creating Message Condition Records

You create message records (condition records) for the individual message types in the application menu.

Message records can be created depending on a key combination. The key combination corresponds to the access sequence in Customizing.

The figure from the Purchasing menu shows the initial screen for maintaining message condition records.

In a condition record, you specify the following parameters:

- Partner function
- Output medium
- Output time

The system proposes the values from the default values of the message type in Customizing.

With the output medium *Print*, you can enter an output device and the desired number of messages.

With the output medium *Send Externally* you can store a communications strategy.

Hint:
It is sufficient to enter the partner function in the condition record. The partner will then be determined from the partner role of the purchasing document.

Languages entered in the condition record are ignored. The language in the header of the purchasing document determines the language. For more information on the language of a message, see SAP Note 89899.

Printer Determination

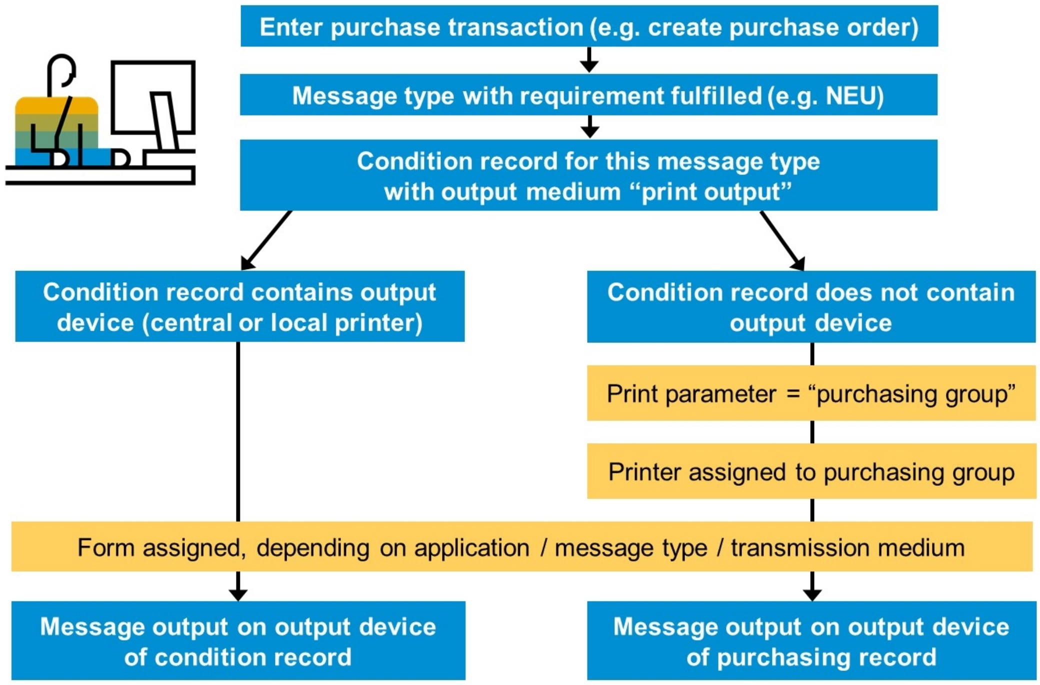


Figure 117: Printer Determination in Purchasing

If a condition record is found for a message type with the medium print output, the system determines the printer in the next step. If the condition record contains an output device, the message is output on this device.

If the condition record does not contain an output device, the system checks whether the purchasing group parameter has been entered for this message type on the *Print* tab page. If the group parameter has been entered, the system uses the printer entered for the purchasing group in Customizing. To assign output devices, in Customizing, go to *Materials Management → Purchasing → Messages → Assign Output Devices to Purchasing Groups.*

If you do not want to assign the printers for the individual buyers in the Customizing activity, you can also assign the print parameter S (user default values) for the message type in purchasing (see SAP Note 306385).

Hint:
If no valid printer is found, the system cannot create a message. The system informs you of this on saving the purchasing document. If no valid printer can be found automatically, you can enter the parameters for message output manually.

Once the output medium and the message type are known, the system can determine the print form. The print form can be decided only when the medium is known because the information for the layout in an Electronic Data Interchange (EDI) transmission differs significantly from printing, for example, a purchase order. You assign the output program and print forms to the message types for each output medium in Customizing.

Output of Changes to a Purchasing Document

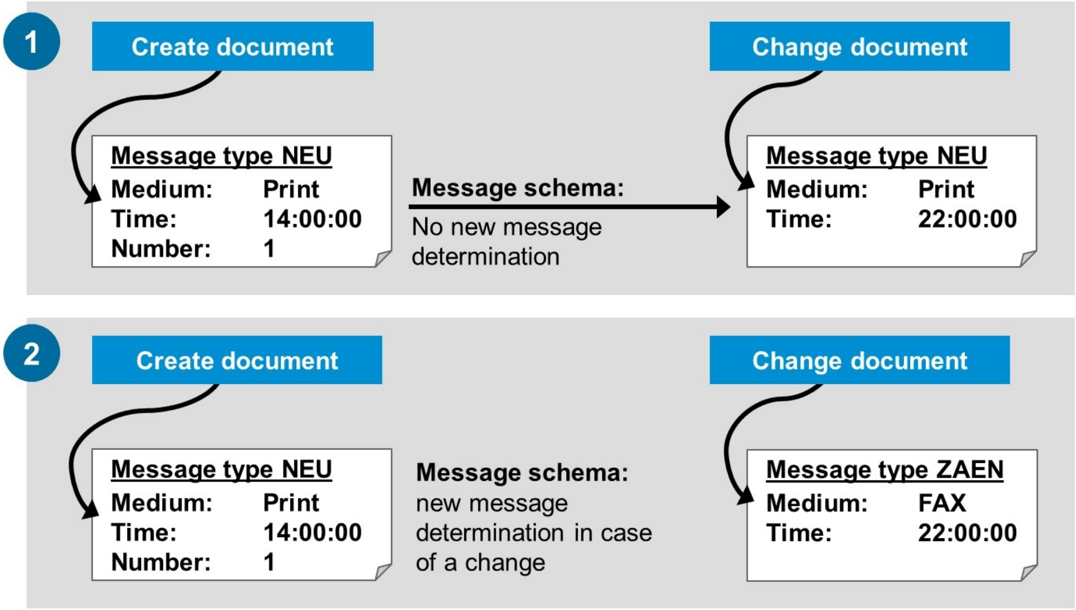


Figure 118: New Printout and Printout of Changes

In a purchasing document that you have already sent to the supplier, if you change fields that are relevant for a change printout, the system generates a new message to inform the business partner of these changes.

For each purchasing category, you can specify in Customizing for message schemas that a new message determination process is to be triggered when a printout of a change is generated.

Thus, you can specify that new purchase orders, for example, should be printed (because they need to be signed), while changes should be sent by email.

The following are the effects of the new message determination for change messages indicator:

(In Customizing under *Materials Management* → *Purchasing* → *Messages* → *Output Control* → *Message Types* and then *Maintain Message Types <Document Category>*)

- Case 1 – The indicator is not set.

  You CANNOT use different message types for the print operations new and change. You must assign message type NEU for the print operations 1 and 2 (New and Change) under *Maintain Message Types* → *Fine-Tuned Control*.

  Once you manually change the output parameters for new printouts that the message determination facility determines, the system will use the changed values for the printouts of changes.

- Case 2 – The indicator is set.

  If the indicator is set, you can use different message types for the print operations New and Change.

  Under *Maintain Message Types* → *Fine-Tuned Control*, you can specify that the message type NEU is to be used for the print operation New and the message type ZAEN is to be used for the print operation *Change*.

For the message types NEU and ZAEN, you can enter different media and times for output in the condition records.

> Hint:
> If the printout gets lost or has to be repeated for any reason, you must select the message that is to be repeated in the message details and then choose *Repeat Output* to output the document as usual. However, the printout contains no indication that it is a repeat message. Notice that the output of a change message cannot be repeated. If a change message is still contained in the SPOOL file, you can trigger output from the SPOOL file again (transaction `SP01`).
>
> Other frequently asked questions for message determination in Purchasing are answered in the FAQ Note 457497.
>
> You can find information about sending messages by mail in Note 191470.

LESSON SUMMARY

You should now be able to:

- Configure message determination (NAST)

Unit 10
Lesson 6

Explaining the SAP S/4 HANA Output Management

LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Explain SAP S/4HANA output management

SAP S/4HANA Output Management

With SAP S/4HANA, SAP has introduced a new output management solution which is optional for SAP S/4HANA on premise.

This output management solution is referred to as SAP S/4HANA output management or SAP S/4HANA output control.

The configuration differs from the configuration used when output management is based on NAST.

SAP S/4HANA output management has the following features:

- Runs in a cloud or on premise environment
- Offers a unified solution for all output-related tasks across the product
- Supports ready-to-use output scenarios (pre-delivered configuration)
- Supports standard extensibility for configuration documents (form email templates)
- Provides central monitoring tools for key users

In Purchasing, SAP S/4HANA output management is available for requests for quotation, purchase orders, and purchase contracts.

The most important differences compared to classic (NAST) output management are:

- The print preview is not available before you have saved a document.
- The print preview is marked as test copy.
- There is no message determination analysis.
- The business rules are defined in Customizing and not in the application.
- Message details cannot be changed in the application (while creating a purchase order, for example).
- Every output is stored and can be displayed later.

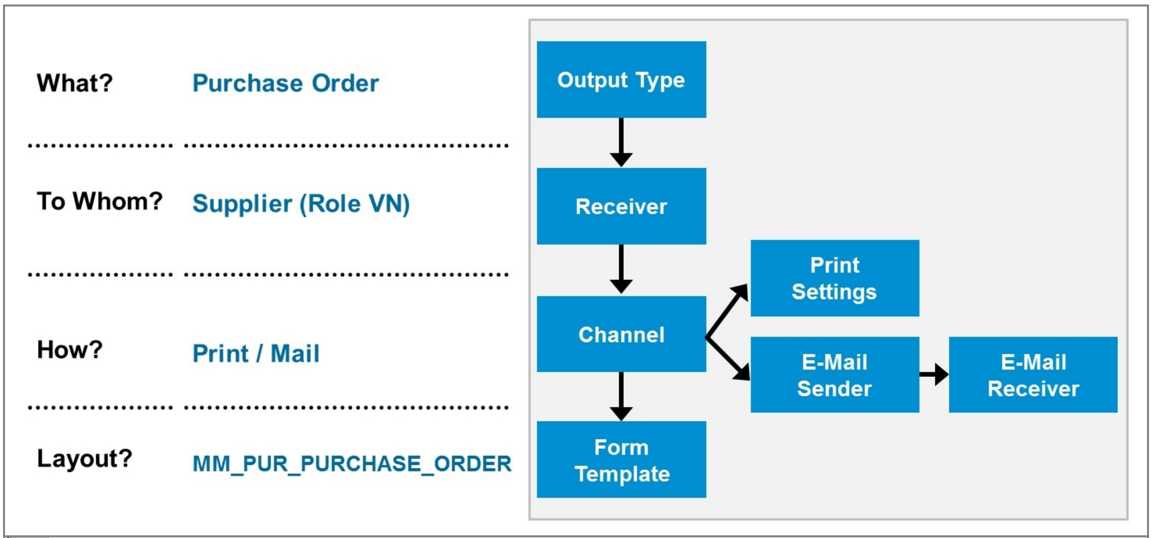


Figure 119: SAP S/4 HANA Output Management: Business Rules for Output Parameter Determination

In contract and purchase order processing, it is recommended to use Adobe Forms, but, due to compatibility, the form technologies known from Business Suite (such as Smartform, SAPscript) are still supported. This also applies to print reports.

To activate and deactivate the SAP S/4HANA output management, in Customizing go to *Cross-Application Components → Output Control → Manage Application Object Type Activation*. The default settings are that the new output management is active in cloud installations and inactive in on-premise installations.

For the output/transmission of your purchase orders with the SAP S/4HANA output management you can use the Print Scheduled Purchase Orders app in the SAP Fiori launchpad or the corresponding transaction ME9FF in the backend system.

SAP S/4HANA output management does NOT support fax transmission and storage mode *Print and archive*.

To define the business rules for determining the output parameters, proceed as follows:

1. Define the *Output Type*, that is the document to be output. In this step you also define the dispatch time.
2. Specify the *Receiver*, that is the partner who is to receive the message.
3. Specify the *Channel*, that is whether the message is to be printed, mailed or sent electronically.
4. Define the *Printer settings*, like the printer for messages to be printed.
5. Define the *Email settings* i.e. assign the email template and how the sender email address is to be determined.
6. Specify the *Email recipient*. If you don't want to use the default email address of a business partner, you can define other or additional email addresses.
7. Specify the *Form template* to be used. The standard form MM_PUR_PURCHASE_ORDER uses Adobe Forms with fragments. Besides, you can assign country-specific form languages in this step.

All business rules are processed. If you create specific rules, set the *Exclusive* indicator for it to avoid multiple outputs. Also sort the rules from the most specific to the most general.

Further information about the configuration steps for the SAP S/4HANA output management is available in the SAP notes 2228611 and 2292539.

LESSON SUMMARY

You should now be able to:

- Explain SAP S/4HANA output management

Unit 10

Learning Assessment

1. Upon which of the following keys does the number assignment for purchasing documents depend in the standard system?

   Choose the correct answer.

   - [ ] A Purchasing organization
   - [ ] B Purchasing group
   - [ ] C Document type
   - [ ] D Company code

2. What is the maximum length for purchasing document numbers?

   Choose the correct answer.

   - [ ] A 8
   - [ ] B 10
   - [ ] C 12
   - [ ] D 18

3. Which of the following options can you specify for purchase order document types?

   Choose the correct answers.

   - [ ] A Allowed item categories
   - [ ] B Allowed account assignment categories
   - [ ] C Linkage to purchase requisition document types
   - [ ] D Linkage to outline agreement document types

4. For which document categories can you allow time-dependent conditions?

   Choose the correct answers.

   - [ ] A Purchase requisition
   - [ ] B Purchase order
   - [ ] C Request for Quotation
   - [ ] D Scheduling agreement

5. For which document category can you define overall release?

   Choose the correct answer.

   - [ ] A Purchase requisition
   - [ ] B Purchase order
   - [ ] C Request for quotation
   - [ ] D Scheduling agreement

6. For which of the following can you define field selection keys?

   Choose the correct answers.

   - [ ] A Item categories
   - [ ] B Document categories
   - [ ] C Document types
   - [ ] D Account assignment categories

7. Which user parameter is used for function authorizations in purchasing?

   Choose the correct answer.

   - [ ] A EVO
   - [ ] B EKG
   - [ ] C FOB
   - [ ] D EFB

8. For which document category can you define field selection keys depending on the release indicator?

   Choose the correct answer.

   - [ ] A Requests for Quotation
   - [ ] B Contracts
   - [ ] C Purchase Orders
   - [ ] D Purchase Requisitions

9. To which object must you assign account assignment categories?

   Choose the correct answer.

   - [ ] A Document types
   - [ ] B Field selection keys
   - [ ] C Document categories
   - [ ] D Item categories

10. What is controlled by account assignment categories?

    Choose the correct answers.

    - [ ] A Whether a material is allowed
    - [ ] B Whether inventory management is allowed
    - [ ] C Whether account assignment is changeable at invoice receipt
    - [ ] D How partial invoices should be handled

11. Regarding account determination, what can you maintain in account assignment categories?

    Choose the correct answer.

    - [ ] A Valuation grouping code
    - [ ] B Valuation class
    - [ ] C Account modification
    - [ ] D Account category reference

12. On which level can you assign message schemas in purchasing?

Choose the correct answer.

- [ ] A Purchasing organization
- [ ] B Document type
- [ ] C Application
- [ ] D Plant

13. Where can you maintain printers for message output?

Choose the correct answers.

- [ ] A Message schema
- [ ] B Condition record
- [ ] C User default
- [ ] D Print indicator

14. Which output type is most commonly used when you change a purchase order?

Choose the correct answer.

- [ ] A NEU
- [ ] B AEN
- [ ] C AUFB
- [ ] D MAHN

15. Where do you define the key fields that you want to use in the output determination process?

Choose the correct answer.

- [ ] A Access sequence
- [ ] B Document type
- [ ] C Condition record
- [ ] D Condition table

16. Which is the correct order for the message determination process?

Choose the correct answer.

- [ ] A Access sequence → Message type → Message schema → Condition record
- [ ] B Condition record → Access sequence → Message schema → Message type
- [ ] C Message schema → Message type → Access sequence → Condition record
- [ ] D Message type → Message schema → Condition record → Access sequence

17. What is mandatory for message determination analysis?

Choose the correct answer.

- [ ] A Condition record
- [ ] B Message schema
- [ ] C Access sequence
- [ ] D Print preview

18. What do you specify in a condition record?

Choose the correct answers.

- [ ] A Output language
- [ ] B Output medium
- [ ] C Output time
- [ ] D Output attachments

19. What can you define for change messages?

Choose the correct answers.

- [ ] A Different time of output
- [ ] B Different message schema language
- [ ] C New message determination
- [ ] D New release procedure

20. Which Output Channels are supported in SAP S/4HANA Output Management?

Choose the correct answers.

- [ ] A Fax
- [ ] B Print
- [ ] C E-Mail

21. What is used for output determination in SAP S/4HANA Output Management?

Choose the correct answer.

- [ ] A Condition Tables
- [ ] B Condition Records
- [ ] C Decision Tables
- [ ] D Access Sequences

Unit 10

Learning Assessment - Answers

1. Upon which of the following keys does the number assignment for purchasing documents depend in the standard system?

   Choose the correct answer.

   - [ ] A Purchasing organization
   - [ ] B Purchasing group
   - [x] C Document type
   - [ ] D Company code

   Correct. In the standard system, number assignment for a purchasing document depends on the document type (and the document category).

2. What is the maximum length for purchasing document numbers?

   Choose the correct answer.

   - [ ] A 8
   - [x] B 10
   - [ ] C 12
   - [ ] D 18

   Correct. The maximum length is 10 positions.

3. Which of the following options can you specify for purchase order document types?

   Choose the correct answers.

   - [x] A Allowed item categories
   - [ ] B Allowed account assignment categories
   - [x] C Linkage to purchase requisition document types
   - [ ] D Linkage to outline agreement document types

   Correct. You can not define the allowed account assignment categories for purchasing document types: however, you can define allowed combinations of item categories and account assignment categories (in general). You also have to set up the linkages to purchase requisition document types.

4. For which document categories can you allow time-dependent conditions?

   Choose the correct answers.

   - [ ] A Purchase requisition
   - [ ] B Purchase order
   - [x] C Request for Quotation
   - [x] D Scheduling agreement

   Correct. Time-dependent conditions can be specified for requests for quotations and scheduling agreements.

5. For which document category can you define overall release?

   Choose the correct answer.

   - [x] A Purchase requisition
   - [ ] B Purchase order
   - [ ] C Request for quotation
   - [ ] D Scheduling agreement

   Correct. Overall release can be setup for purchase requisitions. The other document categories mentioned here work with header-based release strategies by default (and this is the only option). So no overall release needs to be set up specifically.

6. For which of the following can you define field selection keys?

   Choose the correct answers.

   - [x] A Item categories
   - [ ] B Document categories
   - [x] C Document types
   - [ ] D Account assignment categories

   Correct. You can define field selection keys for item categories and document types. Field selection keys can not be defined per document category. There is field selection per account assignment category possible, but not via a field selection key.

7. Which user parameter is used for function authorizations in purchasing?

   Choose the correct answer.

   - [ ] A EVO
   - [ ] B EKG
   - [ ] C FOB
   - [X] D EFB

   Correct. Parameter EFB can be used to setup function authorizations for buyers.

8. For which document category can you define field selection keys depending on the release indicator?

   Choose the correct answer.

   - [ ] A Requests for Quotation
   - [ ] B Contracts
   - [ ] C Purchase Orders
   - [X] D Purchase Requisitions

   Correct. Field selection keys for release indicators are possible for purchase requisitions.

9. To which object must you assign account assignment categories?

   Choose the correct answer.

   - [ ] A Document types
   - [ ] B Field selection keys
   - [ ] C Document categories
   - [X] D Item categories

   Correct. Account assignment categories must be assigned to item categories.

10. What is controlled by account assignment categories?

    Choose the correct answers.

    - [ ] A Whether a material is allowed
    - [ ] B Whether inventory management is allowed
    - [x] C Whether account assignment is changeable at invoice receipt
    - [x] D How partial invoices should be handled

    Correct. Whether account assignment is changeable at invoice receipt and how partial invoices should be handled is controlled by account assignment categories. Whether a material and whether inventory management is allowed, is controlled by the item category (not the account assignment category!).

11. Regarding account determination, what can you maintain in account assignment categories?

    Choose the correct answer.

    - [ ] A Valuation grouping code
    - [ ] B Valuation class
    - [x] C Account modification
    - [ ] D Account category reference

    Correct. Account assignment categories contain the so called account modification code or field that is used in the setup of automatic account determination.

12. On which level can you assign message schemas in purchasing?

    Choose the correct answer.

    - [ ] A Purchasing organization
    - [ ] B Document type
    - [x] C Application
    - [ ] D Plant

    Correct. The schema is determined separately for every application using it. There are separate message schemas for Purchase Orders, Requests For Quotation, and so on. So application is the correct answer.

13. Where can you maintain printers for message output?

    Choose the correct answers.

    - [ ] A Message schema
    - [x] B Condition record
    - [x] C User default
    - [ ] D Print indicator

    Correct. The printer can be maintained in the condition record for output or can be taken from the user default.

14. Which output type is most commonly used when you change a purchase order?

    Choose the correct answer.

    - [x] A NEU
    - [ ] B AEN
    - [ ] C AUFB
    - [ ] D MAHN

    Correct. NEU is the most commonly used output type when you change a purchase order.

15. Where do you define the key fields that you want to use in the output determination process?

    Choose the correct answer.

    - [ ] A Access sequence
    - [ ] B Document type
    - [ ] C Condition record
    - [x] D Condition table

    Correct. The condition tables consist of the key fields you want to use for the output determination.

16. Which is the correct order for the message determination process?

Choose the correct answer.

- [ ] A Access sequence → Message type → Message schema → Condition record
- [ ] B Condition record → Access sequence → Message schema → Message type
- [X] C Message schema → Message type → Access sequence → Condition record
- [ ] D Message type → Message schema → Condition record → Access sequence

Correct. The correct order for the message determination process is as follows: Message schema → Message type → Access sequence → Condition record.

17. What is mandatory for message determination analysis?

Choose the correct answer.

- [ ] A Condition record
- [X] B Message schema
- [ ] C Access sequence
- [ ] D Print preview

Correct. For the analysis in message determination, you need the message schema. We do not use the condition record for the analysis: we use the condition record to store details for message determination like the required output method. The access sequence is also not used for the analysis: we use it to tell the system to what condition tables to go to look for a condition record. The print preview option is also not used for the analysis for message determination, but to preview the printout of the message.

18. What do you specify in a condition record?

Choose the correct answers.

- [ ] A Output language
- [X] B Output medium
- [X] C Output time
- [ ] D Output attachments

Correct. The condition record contains (amongst other info) the medium and time for output. Output language and output attachments are not something you can maintain in a condition record for output.

19. What can you define for change messages?

Choose the correct answers.

- [x] A Different time of output
- [ ] B Different message schema language
- [x] C New message determination
- [ ] D New release procedure

Correct. When you have a change to the document with change messages, the system could execute a new message determination and you could specify a different time of output. A new release procedure is not something you could define for a change message. Release procedures are not relevant for change messages.

20. Which Output Channels are supported in SAP S/4HANA Output Management?

Choose the correct answers.

- [ ] A Fax
- [x] B Print
- [x] C E-Mail

Correct. Print and E-Mail are supported, Fax is not possible.

21. What is used for output determination in SAP S/4HANA Output Management?

Choose the correct answer.

- [ ] A Condition Tables
- [ ] B Condition Records
- [x] C Decision Tables
- [ ] D Access Sequences

Correct. The output determination in SAP S/4HANA Output Management uses decision tables.