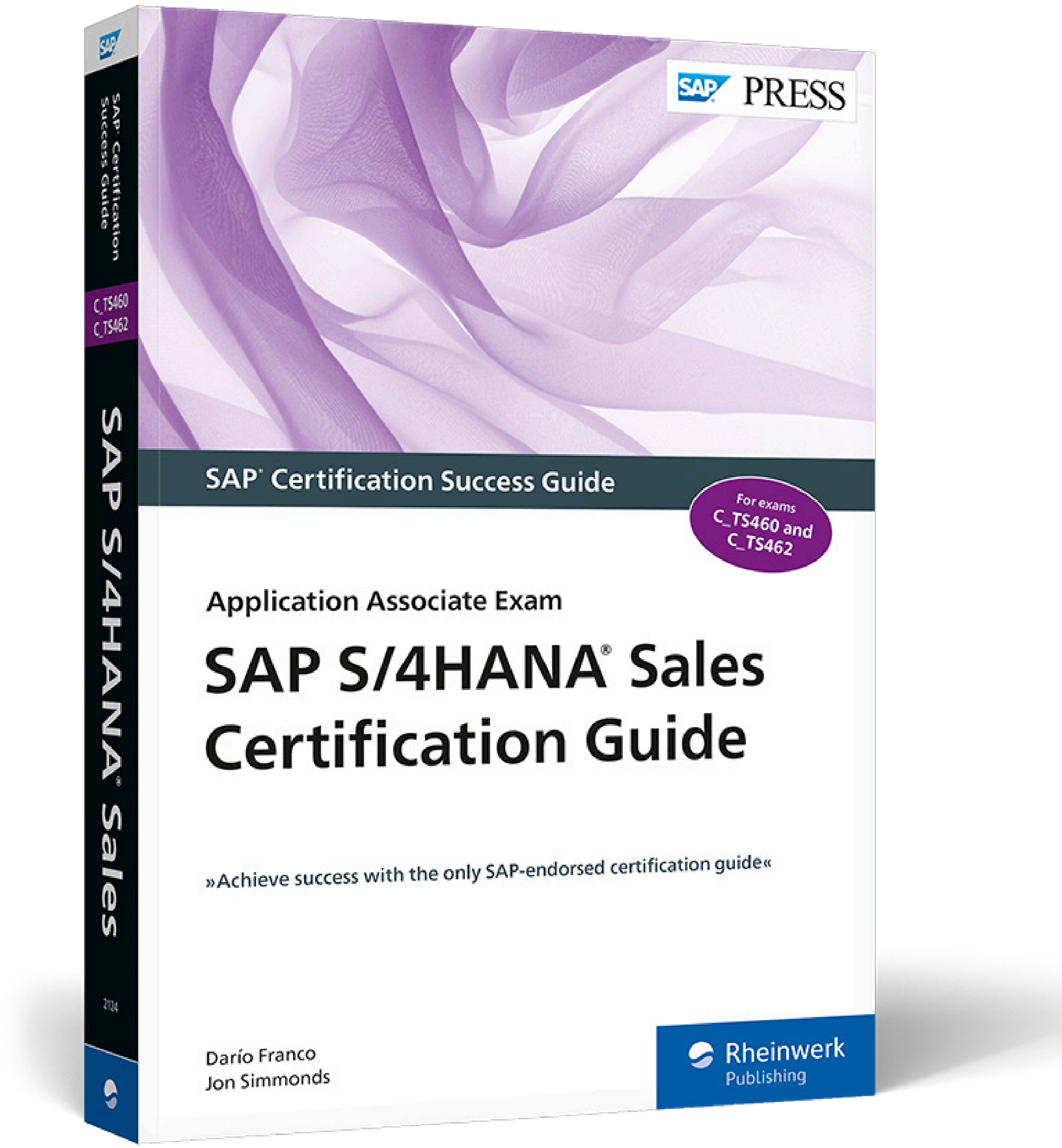

Browse the Book

This sample chapter explains the role that sales document types, item categories, and schedule line categories play in controlling the processing of sales documents in an SAP S/4HANA system. It discusses the rules for item category and schedule line category determination and the usage of BOMs in sales documents as a typical special business process in sales. The chapter ends by reviewing the different categories of sales contracts and the most relevant customizing activities. Like all chapters, it contains extensive practice questions with detailed answers.

"Sales Document Customizing"

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Chapter 4

Sales Documents Customizing

Techniques You'll Master

- Control sales processes
- Define sales document types
- Apply item categories
- Interpret the item category determination
- Use bills of materials (BOMs) in sales documents
- Apply schedule line categories
- Interpret the schedule line category determination
- Understand sales contracts
- Set up customer-specific contract data

The focus of this chapter is to explain the role that sales document types, item categories, and schedule line categories play in controlling the processing of sales documents in an SAP S/4HANA system. We'll discuss the rules for item category and schedule line category determination and the usage of BOMs in sales documents as a typical special business process in sales. We'll end the chapter by reviewing the different categories of sales contracts and the most relevant customizing activities.

Real-World Scenario

Companies that sell products may require the creation of bundles or sales kits to group together materials that are related to or that complement each other. For example, angle grinders are usually sold alongside cutting discs, printers can be sold alongside ink cartridges, and a common practice in the retail industry is to offer an extended warranty or insurance policy when a customer buys expensive electronic equipment such as high-end tablets or mobile phones. In all these cases, a more competitive price is typically offered if the customer orders the bundle as opposed to the standalone items. These bundles can be achieved through BOMs in sales documents; thus, knowing how to set up these master data objects would allow you to meet your customers' requirements in this kind of scenario.

The sales process in SAP S/4HANA is controlled by the combination of the sales document type, item category, and schedule line category. For instance, based on the document type, you can specify whether the system should carry out a credit check or whether a delivery or billing block must be automatically applied. You can also specify whether a certain item category is relevant for delivery or billing. Finally, you can use the schedule line category to dictate how the system determines the quantity available based on the requested delivery date. As a consultant for sales and distribution, configuring these elements with confidence is essential, and you'll need to describe the available options when asked to come up with solutions for specific sales requirements.

4.1 Objectives of This Portion of the Test

The goal of this portion of the SAP S/4HANA Sales Certification exam is to test your understanding of the following topics:

- Define and assign sales document types
- Define and assign sales item categories
- Understand item category determination
- Define and assign schedule line categories

- Understand schedule line category determination
- Understand BOMs in sales documents
- Maintain sales contract data
- Understand master contracts
- Understand quantity contracts
- Understand value contracts
- Understand service contracts

Note

The Sales Documents Customizing topic makes up 8%–12% of the total SAP S/4HANA Sales 2020 exam.

The content of this chapter is included in the Sales topic of the SAP S/4HANA Sales 2020 Upskilling exam, which makes up more than 12% of this exam.

4.2 Controlling Sales Documents

All sales transactions take place within the organizational structures discussed in Chapter 2. The system uses the information stored in master data records, together with the additional data entered by the user, to generate a sales document.

The structure of any sales document in SAP consists of data at the header level and at the item level. For each item, in some cases, you can go down one more level and store information at the schedule line level. The header of a sales document contains information that applies to the entire document, such as the sold-to party or the currency. Data that is only valid for specific items is stored at the item level. Delivering plant, material number, and net price are examples of item data. Finally, any information regarding the delivery schedule for an item is located in the schedule line. For example, if a customer orders 50 units to be delivered tomorrow and 70 units next week, you'll see 120 units as the quantity ordered for the item, but two schedule lines will be created for 50 and 70 units with the corresponding delivery dates. A sales document item can have one or more schedule lines. Unlike header and item data, schedule line data is not mandatory in all sales documents. Some types of documents like contracts or credit memo requests are not relevant for delivery; thus, these documents do not have schedule lines.

The following structure represents a hypothetical sales document with three items and two or three schedule lines per item:

- Header
  - Item 10
    - Schedule line 1
    - Schedule line 2

- Item 20
  - Schedule line 1
  - Schedule line 2
  - Schedule line 3
- Item 30
  - Schedule line 1
  - Schedule line 2

During the implementation of an SAP S/4HANA system, one of the critical tasks in the sales area is to define the types of data controlling how sales documents are processed. Via customizing, you can set control parameters for sales documents at the following three levels:

1. Sales document type (header level)
2. Item category (item level)
3. Schedule line category (subitem level)

In SAP S/4HANA, four different categories of sales documents exist, and each category comes with a subset of predefined sales document types. Some common standard sales document types are shown in Table 4.1.

Document Category	Sales Document Type	Document Type Description
Presales	IN	Inquiry
	QT	Quotation
	FD	Free-of-charge delivery
Sales orders	OR	Standard order
	BV	Cash sale
	SO	Rush order
Outline agreements	CQ	Quantity contract
	WV	Service and maintenance contract
	MV	Rental contract
	LP	Scheduling agreement
Complaints	CR	Credit memo request
	DR	Debit memo request
	SD	Subsequent delivery, free of charge
	RE	Returns

Table 4.1 Sample of Standard Sales Document Types for Each Sales Document Category

Tip

If the document types available in the standard version of the SAP S/4HANA system don't meet your company's needs, you can modify them or create your own sales document types. We recommend you copy a similar existing sales document type and make the required changes. This procedure will copy all the specifications of the existing sales document type, thus saving you a considerable amount of time. To easily distinguish between custom and standard sales document types, any new document type should start with the letter "Z," following SAP's guidelines, to avoid your custom objects being overwritten by a release upgrade.

Some functions controlled by the sales document type include the following:

- Availability checks
- Transfer of requirements
- Delivery dates
- Pricing
- Subsequent document types
- Texts
- Credit checks
- Messages

You can define sales document types in the IMG menu under **Sales and Distribution • Sales • Sales Documents • Sales Document Header • Define Sales Document Types**. As a reference, Figure 4.1 shows a portion of the screen where the standard sales document type OR can be configured.

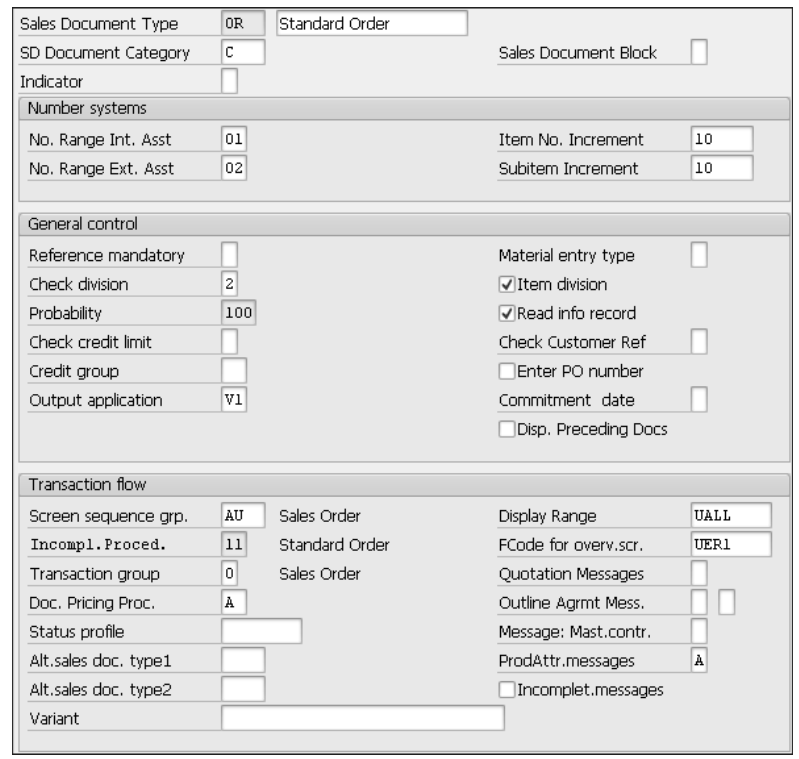


Figure 4.1 Defining Sales Document Types

Details about each and every element in this customizing activity are beyond the scope of the certification exam, but you should be familiar with how the following settings influence the sales process:

- **General Data**
  - **SD Document Category**: This field is used to assign one of the predefined sales document categories to the sales document type. Inquiries (A), quotations (B), orders (C), contracts (G), and returns (H) are some of the most common document categories.
  - **Sales Document Block**: This field determines whether the sales document is blocked for use. The following three values are available:
    - <blank>: No block
    - **A**: Only automatic creation allowed (e.g., for rebate processing)
    - **X**: The sales document type is blocked
  - **Indicator**: This field is used to classify the sales document type internally. Several standard SAP S/4HANA Sales programs query this field to find out the classification of the sales document type. Some of the values available include the following:
    - <blank>: No classification
    - **B**: Delivery order
    - **C**: Scheduling agreement with delivery order
    - **D**: Invoice correction request
    - **E**: Delivery order correction
  - **Item No. Increment**: This field specifies the increment by which item numbers are increased in a sales document when the system automatically generates item numbers. A typical value for this field is 10, which allows for new items to be inserted between other items.
  - **Reference mandatory**: This field indicates whether the document can only be created with reference to a preceding document and the type of reference document required (e.g., quotation, sales order, billing document, etc.)
  - **Read info record**: If this checkbox is selected, the system considers existing customer-material info records.
  - **Propose Deliv.Date**: If this checkbox is selected, the system automatically proposes the current date as the delivery date.
  - **Incompl.Proced.** (incompletion procedure): The incompletion procedure assigned to a sales document type determines which fields must be maintained for a document to be considered complete. We'll expand on this concept in Chapter 5, Section 5.2.
  - **Incomplet.messages** (incompletion messages): If this indicator is selected, and you try to save a document where mandatory data is missing, the system will prompt you with a dialog message informing you that the document is incomplete. You can then decide whether to save the incomplete document or to populate the missing data. If you leave the indicator blank, incomplete sales documents cannot be saved.
  - **Item division**: If this checkbox is selected, the system takes the division from the material master record for every item. Otherwise, the division entered at the sales document header level is also valid for all items.
  - **Check division**: This field dictates how the system reacts if the division entered at the header level differs from the division at the item level.
  - **Check credit limit**: This field controls whether the system runs credit checks and how it responds if the check is unsuccessful.
  - **No. Range Int. Asst** (number range, internal assignment): This field determines how documents are numbered by the system.
  - **No. Range Ext. Asst** (number range, external assignment): This field determines how documents are numbered by the user.
  - **Doc. Pricing Proc.** (document pricing procedure): This field specifies the key of the pricing procedure assigned to the sales document type, which determines how pricing is carried out in a sales document.
- **Shipping Data**
  - **Delivery type**: This field determines the delivery document type used by the system when a delivery document is created for the order concerned.
  - **Delivery block**: This field controls if a delivery block must be set for the entire sales document.
  - **Immediate delivery**: This field indicates if a delivery should be automatically created as soon as the sales document is saved. You can also decide whether all items or only those with a quantity confirmed on the date should be delivered.
  - **Shipping conditions**: If this field is maintained, the shipping condition from the customer master record is overwritten by the shipping condition defined in this field.
- **Billing Data**
  - **Dlv-rel.billing type** (delivery-relevant billing type): This field controls the billing document type used by the system when creating billing documents with reference to a delivery.
  - **Order-rel.bill.type** (order-relevant billing type): This field controls the billing document type used by the system when creating billing documents for sales document items that are not relevant for delivery but that require billing.
  - **Intercomp.bill.type** (intercompany billing type): This field controls the billing document type used by the system when creating billing documents for intercompany billing.

   - **Billing block**: This field specifies whether a sales document is automatically blocked for billing. For example, this block could be useful in credit memo requests to ensure that documents are checked before billing.
- **Contract Data**
   - **Contract profile**: This field is the contract profile assigned to the document type. The contract profile is used by the system to calculate start and end dates and also contains information regarding the cancellation procedure, the follow-up action to be carried out before the contract expires, and the date when the follow-up action must be carried out.
   - **Contract data allwd.** (contract data allowed): This field controls whether contract data can be maintained for a particular sales document type. Contract data is stored in both the header and in the contract items. By default, the header data applies to all items. Contract data contains validity period and cancellation data.

All sales documents can be used in all sales areas by default. However, if required by your project, you can restrict the sales document type by sales area. To set up this restriction, first, you must combine sales organizations, distribution channels, and divisions by specifying a reference sales organization, distribution channel, and division.

Example

Let's imagine you've created your own document type ZQT for quotations that is a copy of the standard document type QT. Sales document type ZQT should only be allowed in the following sales area:

- Sales organization: 0001
- Distribution channel: 10
- Division: 01

First, you must combine sales organizations by assigning a reference sales organization, as shown in Table 4.2.

Sales Organization	Reference Sales Organization
0001	0001

Table 4.2 Assigning a Reference Sales Organization

Second, you'll combine distribution channels by assigning a reference distribution channel, as shown in Table 4.3.

Sales Organization	Distribution Channel	Reference Distribution Channel
0001	10	10

Table 4.3 Assigning a Reference Distribution Channel

Third, you'll combine divisions by assigning a reference division, as shown in Table 4.4.

Sales Organization	Division	Reference Division
0001	01	01

Table 4.4 Assigning a Reference Division

Finally, you can assign the sales document type allowed for this sales area, as shown in Table 4.5.

Reference Sales Organization	Reference Distribution Channel	Reference Division	Sales Document Type
0001	10	01	ZQT

Table 4.5 Assigning a Sales Document Type to a Reference Sales Area

Warning

Once you have assigned a sales document type to a sales area, you must assign all other sales document types to the sales areas where they can be used. This requirement exists because, after assigning the first sales document type, the norm "all document types can be used in all sales areas" is no longer valid, and the system expects an assignment to a sales area to consider a sales document type as valid.

SAP S/4HANA introduced the option to assign order reasons and reasons for rejection to sales document types. These options were not available in SAP ERP, but now, you can restrict both elements by sales organization and sales document type. Figure 4.2 shows the order reason restriction table and the reason for rejection restriction table.

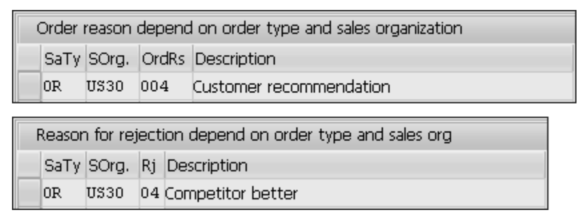


Figure 4.2 Assigning Sales Document Types and Sales Organizations to Order Reasons and Reasons for Rejection

This capability is particularly useful because reasons for rejection can be specifically defined for quotations or inquiries, removing them from the dropdown list in a standard sales order, which may help users find the relevant reason for rejection more quickly. Similar logic can be applied to order reasons.

4.3 Understanding Item Categories

Together with sales document types, item categories set the framework for the different business transactions in the system. The item category allows you to process the same material differently depending on the document type. For instance, if a material is used in a quotation, the item category determined by the system is not relevant for delivery or billing. However, if the same material is entered in a sales order, or a sales order is created with reference to the quotation, a new item category is determined, which makes the item deliverable, and the item can be billed.

Table 4.6 shows some of the item categories defined in the standard system for sales documents. If the standard item categories don't meet the requirements of your project, you can always define your own item categories in customizing to control the sales item differently.

Item Category	Description	Document Type Where Used
AGN	**Standard Item**	Quotation
AGNN	**Free of Charge Item**	Quotation
AGTX	**Text Item**	Quotation
CB1	**3rd Party with SN**	Sales order
TAN	**Standard Item**	Sales order
TANN	**Free of Charge Item**	Sales order
TATX	**Text Item**	Sales order
TAB	**Indiv.Purchase Order**	Sales order
TAD	**Service Item**	Sales order
TAE	**Explanation**	Sales order
TAP	**Pric.at Item Level**	Sales order
TAQ	**Pric.at Header Level**	Sales order

Table 4.6 Sample of Standard Sales Item Categories

You can define and assign item categories in the IMG menu under **Sales and Distribution • Sales • Sales Documents • Sales Document Item**. As a reference, Figure 4.3 shows a portion of the screen where the standard item category TAN can be configured.

As with the document type, we won't review every single function controlled by the item category, but you should be aware of the following parameters:

- **Business Data**
  - **Item Type**: This field is used to classify the item so that the system only performs relevant functions. You can specify if the item is a material, text, value item, or packaging. For instance, neither weight calculations nor pricing is carried out for text items.

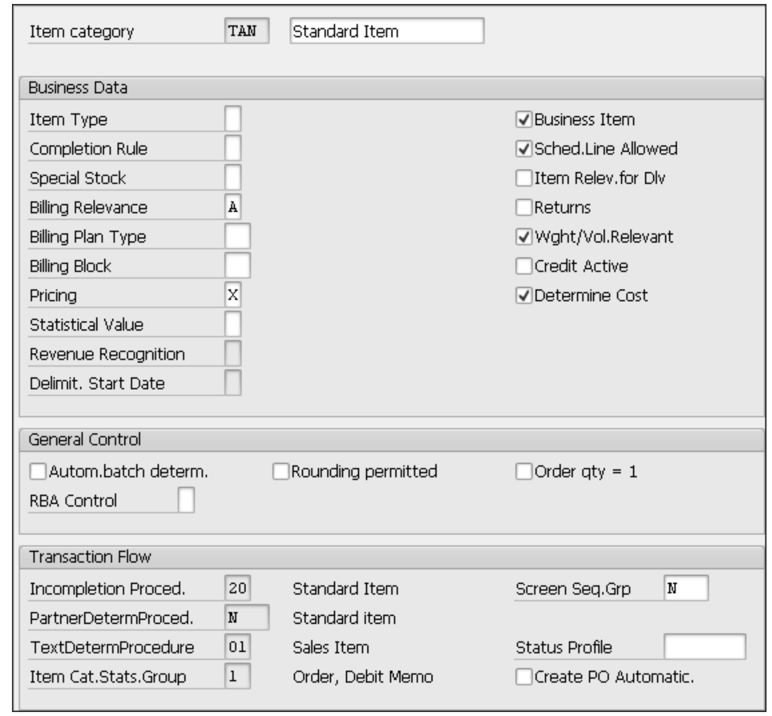


Figure 4.3 Defining Item Categories

  - **Completion Rule**: This field determines the condition that must be met to mark the item as completed in a sales document. For instance, if value **B** is selected, the item is marked as completed after the full quantity has been referenced. The completion rule can only be applied if the **Update Document Flow** field is selected in the copy control (sales document to sales document) at the item level. Some of the values available include the following:
    - <blank>: Not relevant for completion.
    - **A**: Item is completed with the first reference.
    - **B**: Item is completed after the full quantity has been referenced.
    - **C**: Item is completed after the target quantity is fully referenced.
  - **Pricing**: This field defines if pricing must be carried out for the item. The following four options are available:
    - <blank>: No pricing (e.g., text items)
    - **X**: Pricing standard (e.g., items with price)
    - **A**: Pricing for empties (e.g., returnable packaging such as pallets or crates)
    - **B**: Pricing for free goods (e.g., automatic 100% discount on free of charge items)
  - **Sched.Line Allowed** (schedule lines allowed): If this indicator is selected, schedule lines can be created for the item. You should select this checkbox if the item category is relevant for delivery.

- **Credit Active**: If selected, the item is relevant to be processed by the credit management functions and the value of the item will be updated in the total liability.
- **Business Item**: This field specifies whether business data at the item level can deviate from the values at the header level. For example, if this checkbox is selected, you can enter payment terms *30 days* at header level and *60 days* at the item level.
- **Incompletion Proced.** (incompletion procedure): This field indicates which fields are part of the incompletion log, that is, which fields must be populated for the item to be completed.
- **PartnerDetermProced.** (partner determination procedure): The procedure maintained in this field specifies which partner functions are allowed at the item level and which are mandatory.
- **Create PO Automatic.**: If this indicator is selected, the system automatically creates both a purchase requisition and a purchase order (PO) when the sales document is saved for third-party schedule lines.
- **Structure scope**: This field indicates how a BOM is processed in a sales document. You can specify, for example, whether or not the material structure is exploded and, if so, whether only the first level must be exploded or a multilevel explosion must be carried out.

■ **Shipping Data**

- **Item Relev.for Dlv** (item relevant for delivery): If this checkbox is selected, the text or value item is relevant for delivery; thus, the system copies the item into the delivery note. As shown earlier in Figure 4.3, you don't need to select this item for standard items that are relevant for delivery (e.g., item category TAN). This field only applies to value or text items (item types A and B, respectively).
- **Wght/Vol.Relevant** (weight/volume relevant): If selected, the system determines the weight and the volume of the item.
- **Create Delivery Group**: This field determines if the subitems of a BOM that has been exploded in a sales document must be delivered together. The following three options are available:
  - <blank>: The system will not form delivery groups, and the BOM components will be delivered as they become available.
  - **X**: The system will use the last date of the items in the group to confirm the schedule line.
  - **A**: The system generates correlated schedule lines. Assuming the **Complete Dlv** (complete delivery) indicator is not selected, on the first date when something is available (quantity available > 0) for all items in the BOM, a confirmed quantity is calculated based on the ratio of the BOM.

■ **Billing Data**

- **Billing Relevance**: This field specifies whether the item is relevant for billing and, if so, the basis for billing. More than 20 different options are available in this dropdown list. Covering all these options is beyond the scope of this book, but we'll describe a few of the most common values:
  - <blank>: Not relevant for billing.
  - **A**: Delivery-related billing document. The billing for this item is based on the outbound delivery document.
  - **B**: Relevant for order-related billing. The billing for this item is based on the sales document. The billing status in the sales document item is defined according to the order quantity, for instance, item category REN (returns).
  - **C**: Relevant for order-related billing. The billing for this item is based on the sales document. The billing status in the sales document item is defined according to the target quantity, for instance, item category G2N (credit memo).
  - **D**: Relevant for pro forma. This option allows you to make free-of-charge outbound deliveries.
  - **F**: Relevant for order-related billing. The billing for this item is based on the sales document. The billing status in the sales document item and the quantity in the customer invoice are defined according to the invoice receipt quantity. For example, in a third-party sales order scenario, you can specify whether the system must wait for the vendor invoice to be received before an invoice is issued to the customer, for instance, item category TAS (third party business transaction).
  - **G**: Relevant for order-related billing. The billing for this item is based on the sales document and the quantity that has already been delivered. You can bill for multiple partial deliveries in one transaction and one billing document.
  - **H**: Relevant for delivery-related billing. The billing for this item is based on the outbound delivery document. Items with zero quantity are not included in the billing document.
  - **I**: Relevant for order-relevant billing. The billing for this item is based on the sales document. Billing takes place using the billing plan and its status, for instance, item category WVN (maintenance contract).
- **Determine Cost**: If selected, the system determines the cost of the sales document item.
- **Statistical Value**: This field specifies whether the value of the item is used to calculate the total value of the order. The following three options are available:
  - <blank>: The system will pass the item value to header totals.

  - **X**: No cumulation. The item value cannot be used statistically.
  - **Y**: No cumulation. The item value can be used statistically.
- **Billing Block**: If a billing block is selected, the system will automatically set the billing block at the item level, so no billing document can be created until the sales document item is reviewed and the billing block removed.
- **Returns**: This field indicates whether the item is a return item.

The item category is automatically determined by the system based on the sales document type, the item category group of the material, the higher-level item category, and the usage of the item category. Most of the time, a user won't need to worry about the item category. However, in some cases, the item category can be changed manually in the sales document item to deviate from the default business transaction.

You can configure the item category determination procedure by assigning item categories to sales document types and item category groups primarily. However, you can also define the usage and higher-level item category when necessary. SAP S/4HANA comes with a list of predefined item category groups covering the most common business scenarios, but you can always define new ones if needed. As shown in Table 4.7, we've listed some of the main item category groups in the standard system.

Item Category Group	Description
NORM	Standard item
LEIS	Service without delivery
DIEN	Service with delivery
CBOR	Third-party sales order with shipping notification
BANC	Individual PO
ERLA	Structure/material above (sales BOM with pricing at main item level)
LUMF	Structure/material below (sales BOM with pricing at subitem level)
VERP	Packaging

Table 4.7 Sample of Item Category Groups in the Material Master

For example, you would normally assign item category group NORM to materials in stock and item category group DIEN to services and nonstock materials that are relevant for delivery.

Tip
Maintaining the correct item category group in the material master record for the relevant sales organizations is vitally important. For each material type, you can define the default item category group, which will be automatically proposed when a material master record is created. This setting helps ensure the expected item category is determined in the sales order item.

The item category usage also contributes to the item category determination and controls the system's response to special cases, for instance, when the item is the result of a batch split or if the item is a text item. As with the item category group, you can create a new item category usage if the standard offerings don't meet your requirements. An item category usage is only used in certain circumstances. To illustrate few special circumstances where the item category usage plays a key role in item category determination, Table 4.8 shows some common values defined in the standard system.

Item Category Usage	Description
CHSP	**Batch Split**
CSEL	**Cross Selling**
FREE	**Free Goods**
PSEL	**Product Selection**
TEXT	**Text Item**

Table 4.8 Sample of Item Category Usage

The next step is to assign the default item category and the item categories that can be entered manually to overwrite the value proposed by the system. These alternative item categories are known as *manual item categories*. Figure 4.4 shows the logic to determine the item category in a simple scenario where the sales item contains a material that is neither a subitem nor a special case that utilizes the item category usage.

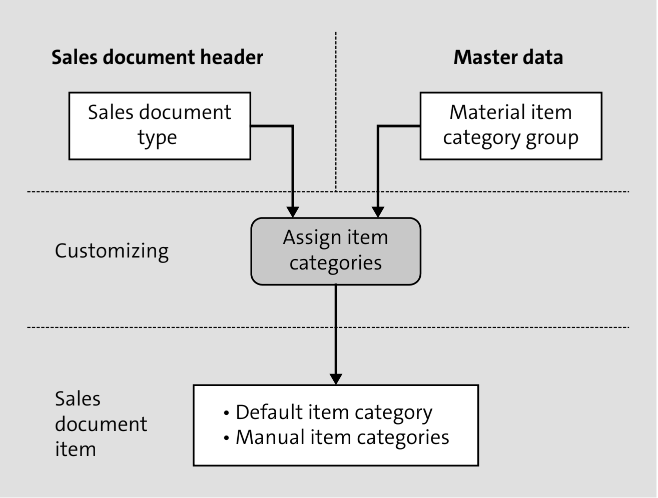


Figure 4.4 Item Category Determination

Now that you understand how the system determines the item category in a sales document, let's take a look at Figure 4.5, which shows a subset of the actual customizing table where default and manual item categories are assigned.

SaTy	ItCGr	Usge	HLevItCa	DfItC	MItCa	MItCa	MItCa
OR	NORM			TAN	TAP	TAQ	TANN
OR	NORM		GT01	TAN			
OR	NORM		GT02	TAN			
OR	NORM		GTR2	REN			
OR	NORM		TAC	TAE			
OR	NORM		TAE	TAE			
OR	NORM		TAG	TAN			
OR	NORM		TAM	TAN			
OR	NORM		TAN	TANN			
OR	NORM		TANN	TANN	KBN		
OR	NORM		TAP	TAN			
OR	NORM		TAQ	TAE			

Figure 4.5 Assigning Item Categories

According to the top configuration entry shown in Figure 4.5, if a material with item category group NORM is entered on a sales document type OR and this material is neither a subitem nor a special case, the system will propose item category TAN, which is the item category maintained in the **DfItC** (default item category) column, where both the **Usge** (usage) and **HLevItCa** (higher-level item category) fields are blank. However, business users have the option to manually change the item category to TAP, TAQ, or TANN. Any other item categories are not allowed in this particular case. You should note that all the other configuration entries shown in Figure 4.5 are only relevant for subitems, since the **HLevItCa** column contains the item category of the parent item.

In SAP S/4HANA, you can manually create items in a sales document as subitems or enter a sales BOM, and the system will generate the subitems for you. By definition, a subitem is always allocated to a parent. The item number of the parent can be found in the **HL Itm** (higher-level item) field of the child (subitem). Table 4.9 shows an example of a sales document with three items, where items 20 and 30 are subitems of parent item 10.

Item Number	Material	Quantity	Item Category	Higher-Level Item
10	MAT1	1	TAN	
20	MAT2	1	TANN	10
30	MAT3	1	TANN	10

Table 4.9 Subitems in a Sales Document

Assuming the item category group for materials MAT1, MAT2, and MAT3 is NORM, and the sales document type is OR, the example shown in Table 4.9 is in line with the assignments shown in Figure 4.5. For item 10, the system determines item

category TAN (the first entry from the top in the assignment table), whereas item category TANN is proposed for items 20 and 30 (the fourth configuration entry from the bottom).

Another important customizing activity related to item categories allows you to activate enhanced logic to automatically reject sales order items with third-party delivery or individual procurement. If you select the **Enhanced Rejection Logic** checkbox and enable automatic rejection by selecting an option from the **Auto Reject SO Item** dropdown list, as shown in Figure 4.6, you can specify an automatic rejection reason for the sales order item that will be automatically applied when either the **Delivery Complete** or the **Final Invoice** indicator is set in the corresponding PO item.

You can also select the **Update SO Only From Conf. PO** checkbox to update the schedule line data of the sales order item only upon confirmation of the corresponding PO item. In the standard system, the schedule data of a sales order item with individual procurement is updated when the delivery date of the related PO item changes. If selected, this indicator would change the standard behavior, and the system will only update the schedule data of a sales order item when the corresponding PO item has been confirmed.

Additional Settings for Item Categories with Purchasing

Item category	Description	Enhanced Rejection Logic	Auto Reject SO Item	Reason for Rejection	Update SO Only From Conf. PO
CB1	3rd Party with SN	☐	Disable Automati…		☐
CB2	3rd Party w/o SN	☐	Disable Automati…		☐
CB3	3rd Pty with SN free	☐	Disable Automati…		☐
CB4	3rd Pty w/o SN free	☐	Disable Automati…		☐

Figure 4.6 Additional Settings for Item Categories with Purchasing

Example

Let's look at an example of how the automatic rejection functionality works in SAP S/4HANA: You create a sales document using the third-party delivery item category CB1 for 50 units. A PO is generated in the system for 50 units and sent to the vendor.

The vendor has only 45 units available, and there is no plan to manufacture more units as this product has been discontinued. After doing the post goods receipt for 45 units, the buyer sets the **Delivery Complete** indicator in the PO item.

Assuming both the enhanced rejection logic and the automatic sales order update from PO functionalities have been activated in customizing, as shown in Figure 4.6, for item category CB1, the system automatically sets the reason for rejection selected on the sales document item. As a result, even though only 45 out of 50 units have been delivered, the sales order item is marked as closed, and it won't show up in backorder reports.

Note

You can enable automatic rejection and select a reason for rejection only for item categories involving third-party delivery. For example, the automatic rejection works with item category CB1 (third-party delivery), but it cannot be activated for item category TAB (individual procurement).

The functionality to update the sales order item only upon confirmation of the corresponding PO item can be enabled for item categories with third-party delivery or individual procurement.

4.4 Using Bill of Materials in Sales Documents

A BOM is defined as a group of materials that make up a product. In SAP S/4HANA, a sales BOM is formed by the header item and then subitems or components.

Companies often want to sell single products bundled into a sales kit; for example, a company selling consumer electronics can create a sales BOM in SAP S/4HANA, as shown in Table 4.10.

Header Material Number	Component Material Number	Description
KIT11		Kit Smartphone 11 w/ Insurance
	SMPH11	Smartphone Model 11
	CASE11	Model 11 protective case
	400000140	1 Year insurance

Table 4.10 Example of a Sales BOM

Sales kits are commonly used when the products that are part of the sales kits can also be sold independently as single products. However, buying a sales kit is usually more cost effective. If the kit is ordered, when the sales BOM header material KIT11 is entered in the sales document item, the system automatically explodes the BOM adding the three components. Materials SMPH11, CASE11, and 400000140 are added as children of the same parent item. Using SAP terminology, these children are called "subitems of the same higher-level item."

Processing pricing and inventory control at both header and subitem levels wouldn't make sense. Thus, if the components are assembled, then the sales BOM must be defined so only the main item is relevant for pricing and delivery processing. This type of sales BOM is known as a *main item level BOM*. On the other hand, if the components are not assembled, pricing must be maintained at the subitem level, and for those components that are also stock materials, inventory is also controlled at the subitem level. This other type of sales BOM is known as a *subitem level BOM*.

The item category group entered in the **Sales: sales org. 2** view in the material master record defines how the system processes the sales BOM. To create a main item level BOM, you must maintain item category group ERLA for the top-level material, and the system will carry out pricing, delivery control, and delivery processing at the main item level. When the main item is entered in a sales document, the

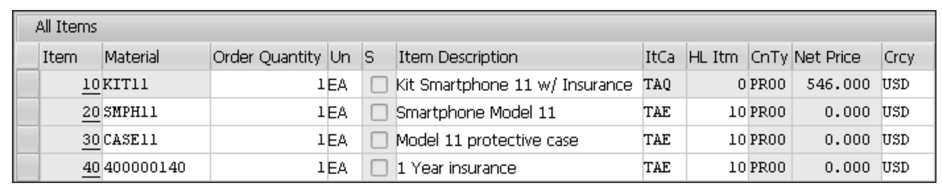
components will be exploded as text items; thus, they won't be relevant for delivery and won't drive any functionality. Table 4.11 shows the item category groups you must assign to each material to create a main item level BOM based on the previous example shown earlier in Table 4.10. Table 4.11 also displays the expected default item category in the sales order.

Material Number	Item Category Group	Item Category Group Description	Item Category in Sales Order	Item Category Description
KIT11	ERLA	Structure/Mat. above	TAQ	Pric.at Header Level
SMPH11	NORM	Standard item	TAE	Explanation
CASE11	NORM	Standard item	TAE	Explanation
400000140	LEIS	Service w/o Delivery	TAE	Explanation

Table 4.11 Main Item Level BOM: Item Category Groups and Item Categories

Note
We're assuming that service item 400000140 should not be delivered, which is why item category group LEIS has been assigned to the insurance item. In the event you want to copy the service item to the outbound delivery, you should maintain the item category group DIEN.

The next step to set up a sales BOM is to create the actual BOM that links the parent material with the components. We'll show you how to create a BOM relevant for sales later in this subsection, but first, let's take a look at the BOM shown in Figure 4.7, which is a main item level BOM in a sales order after entering the main item KIT11. Note that only item 10, the main item, has a price and that all the components have the value 10 in the **HL Itm** (higher-level item) column, which indicates they all belong to item 10.


All Items

Item	Material	Order Quantity	Un	S	Item Description	ItCa	HL Itm	CnTy	Net Price	Crcy
10	KIT11	1	EA		Kit Smartphone 11 w/ Insurance	TAQ	0	PR00	546.000	USD
20	SMPH11	1	EA		Smartphone Model 11	TAE	10	PR00	0.000	USD
30	CASE11	1	EA		Model 11 protective case	TAE	10	PR00	0.000	USD
40	400000140	1	EA		1 Year insurance	TAE	10	PR00	0.000	USD

Figure 4.7 Main Item Level BOM in a Sales Document

Don't forget to check that the item category determination has been set up correctly for the main item and its components. In the example shown in Figure 4.7, we want the system to propose item category TAQ for the main item and item category TAE for all the components (both stock and service items), so you must ensure the entries shown in Figure 4.8 have been maintained in the customizing activity, which can be accessed via **Sales and Distribution • Sales • Sales Documents • Sales Document Item • Assign Item Categories**.

SaTy	ItCGr	Usge	HLevItCa	DfItC	MItCa	MItCa	MItCa
OR	ERLA			TAQ			
OR	LEIS		TAQ	TAE			
OR	NORM		TAQ	TAE			

Figure 4.8 Item Category Assignment Required for Main Item Level BOM

Now, imagine you would like the system to carry out pricing, inventory control, and delivery processing at the component level for the sales BOM in the previous example. For this procedure to happen, you would need to define the BOM as a subitem level BOM by changing the item category group to LUMF for the top-level material KIT11. You don't need to change the item category group for the subitems, however. Table 4.12 shows the item category groups and the expected item categories for all the materials in the example shown earlier in Table 4.10 when the BOM is configured as a subitem level BOM.

Material Number	Item Category Group	Item Category Group Description	Item Category in Sales Order	Item Category Description
KIT11	LUMF	**Structure/Mat. below**	TAP	**Pric.at Item Level**
SMPH11	NORM	**Standard item**	TAN	**Standard Item**
CASE11	NORM	**Standard item**	TAN	**Standard Item**
400000140	LEIS	**Service w/o Delivery**	TAD	**Service**

Table 4.12 Subitem Level BOM: Item Category Groups and Item Categories

Figure 4.9 shows a subitem level BOM in a sales order after entering the main item KIT11. This time, item 10 is just a text, and pricing and inventory are managed at the subitem level.

All Items

Item	Material	Order Quantity	Un	S	Item Description	ItCa	HL Itm	CnTy	Net Price	Crcy
10	KIT11	1	EA		Kit Smartphone 11 w/ Insurance	TAP	0	PR00	0.000	USD
20	SMPH11	1	EA		Smartphone Model 11	TAN	10	PR00	525.000	USD
30	CASE11	1	EA		Model 11 protective case	TAN	10	PR00	10.500	USD
40	400000140	1	EA		1 Year insurance	TAD	10	PR00	21.000	USD

Figure 4.9 Subitem Level BOM in a Sales Document

In this case, you should configure the item category assignment by maintaining the entries shown in Figure 4.10, so the system determines item category TAP for the main item, TAN for the components in stock, and TAD for the service item.

SaTy	ItCGr	Usge	HLevItCa	DfItC	MItCa	MItCa	MItCa
OR	LUMF			TAP	TAQ	GT01	GT02
OR	LEIS		TAP	TAD	TAW		
OR	NORM		TAP	TAN			

Figure 4.10 Item Category Assignment Required for the Subitem Level BOM

After maintaining the correct item category assignment in customizing and making sure all materials involved in the BOM have the correct item category group, you still need to create a sales BOM to enable the use of this functionality. So, let's now explore how to create BOMs that are relevant for sales in SAP S/4HANA. To create a BOM, either execute Transaction CS01 or use the SAP Fiori app Create Bill of Material, depending on your user interface (UI). You'll be presented with the screen shown in Figure 4.11, where you must enter the material number of the main item and the BOM usage. On the initial screen, you can restrict the use of the BOM to a particular plant by specifying the plant as well as entering the date from which the BOM is valid.

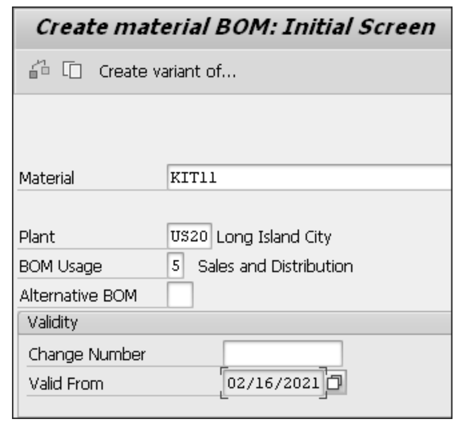


Figure 4.11 Creating a Sales BOM

Note

For a BOM to be used during sales order processing, it has to be created with BOM usage **Sales and Distribution**, which corresponds to value **5** in the dropdown list.

On the next screen, you can specify the mandatory information at the component level, such as the material number, the quantity, the unit of measurement (UoM), and the validity period. You also need to pick an item category depending on the nature of the subitem. The following item categories are available:

- **C: Compatible Unit**
- **D: Document item**
- **I: PM structure element**
- **K: Class item**

- **L: Stock item**
- **M: Intra material**
- **N: Non-stock item**
- **R: Variable-size item**
- **T: Text item**

In a sales BOM, you would normally use item category L for goods that are physically in the warehouse and item category N for service items. The rest of the fields are optional when creating a sales BOM, so at this point, the BOM can be saved. Figure 4.12 shows the BOM definition for the example **Kit Smartphone 11 w/ Insurance**.

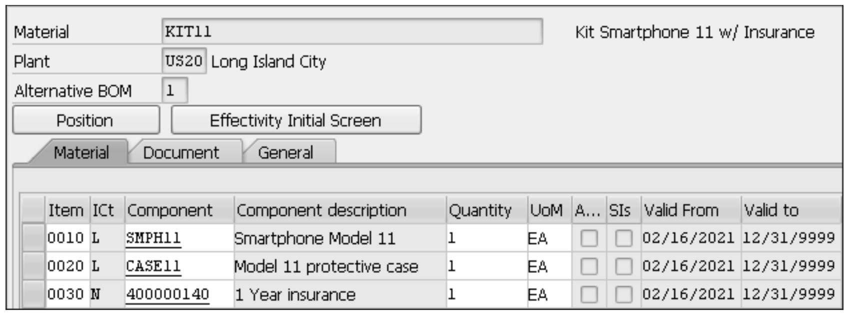


Figure 4.12 Sales BOM: General Item Overview

When configuring item categories for sales BOMs, a good practice is to think about forming *delivery groups* automatically, which allow you to combine several items in a sales document, so they are delivered together. This functionality is particularly useful for subitem level BOM scenarios, since customers typically want all the components to be delivered at the same time. Going back to the example of the smartphone sales kit, where pricing and inventory are controlled at the subitem level, let's say a customer orders the kit, but the protective case is currently available in stock. However, the smartphone will arrive in the warehouse in 2 days. In this case, you wouldn't want the system to generate a delivery for the case today and another delivery for the smartphone in a few days. To avoid this problem, you can select **A** in the **Create Delivery Group** field for the item category of the sales BOM main item (e.g. TAP), and the system will generate correlated schedule lines provided the **Complete Dlv.** indicator is not checked in the sales document. The system will confirm a quantity on the first day something is available for all the components in the BOM (a quantity greater than zero must be available for all subitems). The same confirmed delivery date will be assigned to all the sales BOM items relevant for delivery, as they are now part of a delivery group. The quantity confirmed depends on the ratio of the BOM. In the example used in this chapter, the BOM ratio is 1:1:1:1, so the system will always confirm the same quantity for all the subitems.

Note

As explained in question two in SAP Note 546719, incomplete delivery groups are not copied to the delivery when using transactions such as VL04, VL10, VL10A, VL10B, or VL10C. In other words, if at least one item of the delivery group is unavailable at the time of the delivery creation via multiple processing, the whole delivery group is rejected. However, the user can use Transaction VL01N to manually copy the available part of the delivery group to the delivery if the customer agrees to receive only the components available. The delivery creation log in Transaction VL01N will inform the user that the delivery group is incomplete.

However, for a delivery group with correlated schedule lines to work, the following prerequisites must be met:

- The delivery group may only contain one BOM.
- It cannot contain any fixed quantities.
- It cannot contain any items that have partial delivery indicator C (one-time delivery).
- It cannot contain any partially delivered items.
- It can only contain items that can be at least partially delivered.
- It can only contain items that have a maximum of one requested schedule line.

4.5 Understanding Schedule Line Categories

The schedule line is the third and last level in a sales document, and how it is processed by the system depends on the schedule line category. Sales document items without schedule lines cannot be delivered, so assigning a schedule line category to the item categories that are relevant for delivery is essential. The system will create deliveries for the dates and confirmed quantities in the schedule lines.

In the standard system, the keys for schedule line categories follow a naming convention, as shown in Table 4.13. The first character of the key represents the type of document, and the second character represents the usage in materials management.

First Character of the Key	Type of Document
A	Inquiry
B	Quotation
C	Sales order
D	Returns

Table 4.13 Schedule Line Category Naming Convention

Second Character of the Key	Usage
T	No inventory management (e.g., services)
X	No inventory management with goods issue
N	No planning
P	Material requirements planning (MRP)
V	Consumption-based planning

Table 4.13 Schedule Line Category Naming Convention (Cont.)

As with the sales document type and item category, if you need to define a new schedule line category according to your requirements, we suggest you copy a similar schedule line category and make the appropriate changes. Also, to avoid confusion, the first character of the new schedule line category should be Z.

To set up sales document scheduling line categories, follow the menu path **SAP Customizing Implementation Guide • Sales and Distribution • Sales • Sales Documents • Schedule Lines**. When creating your own schedule line category, you must define the parameters shown in Figure 4.13. As an example, Figure 4.13 shows the standard schedule line category **CP**, which is used in sales documents and is relevant for MRP.

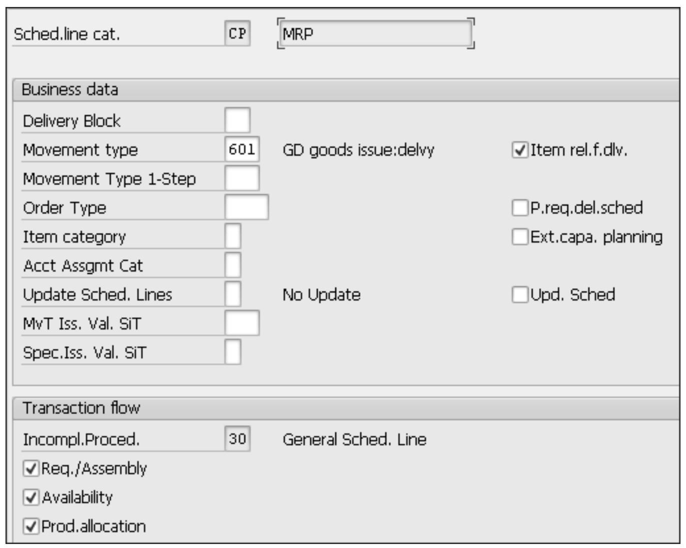


Figure 4.13 Maintaining Schedule Line Categories

The parameters of the schedule line category are divided into two sections, which contain the following fields.

- **Business data**
  - **Delivery Block**: This field allows you to block the schedule line for delivery. This feature could be useful if you want the schedule line to be reviewed before the item is delivered.

  - **Movement type**: You can use this parameter to define the movement type to be used when posting a goods issue. No movement type is required for schedule line categories assigned to items with no stock movement (e.g., quotation items).
  - **Movement Type 1-Step**: This movement type is used, for example, in stock transfers in two steps.
  - **Order Type**: This field is the purchase requisition type to be used by the system to create a purchase requisition when the sales document is saved.
  - **Item category**: This field is the item category of the purchase requisition (e.g., service, third-party, standard, stock transfer, subcontracting, etc.).
  - **Acct Assgmt Cat** (account assignment category): This field is only relevant for schedule lines that will generate a purchase requisition and defines the account assignment category in the purchase requisition. Some common values include the following:
    - **A: Asset**
    - **K: Cost center**
    - **W: Third-party with shipping notification**
    - **Y: Third-party without shipping notification**
    - **H: Non-stock sales**
  - **Update Sched. Lines** (update schedule lines): This field is used in third-party PO scenarios and controls whether the schedule line in the sales document must be automatically updated when a shipping notification is received from the supplier or when a goods receipt is entered for the corresponding individual PO item. The following three values are available:
    - <blank>: No update
    - **1**: Update only for goods receipt
    - **2**: Update for goods receipt and shipping notification
  - **MvT Iss. Val. SiT** (movement type for issuing valuated stock in transit): This field specifies the movement type for the follow-on material document for issuing valuated stock in transit. This movement type applies to the following scenarios:
    - Stock transfers with valuated cross-company stock in transit
    - Stock transfers with valuated intracompany stock in transit
    - Delivery to customers with valuated stock in transit
  - **Spec.Iss. Val. SiT** (special issuing of valuated stock in transit): This field indicates whether the exact transfer of title occurs during transit or on goods receipt. This field only applies to stock transfers and purchasing scenarios relevant for valuated stock in transit.

- **Item rel.f.dlv.** (item relevant for delivery): Select this checkbox if the schedule line category is relevant for delivery.
- **P.req.del.sched** (purchase requisition delivery schedule): If selected, the system calculates the delivery dates of the schedule line while taking into account the delivery date in the purchase requisition.
- **Ext.capa. planning** (external capacity planning): In a third-party order scenario, if this indicator is selected, the system executes external capacity planning in the SAP Supply Chain Management (SAP SCM) system.
- **Upd. Sched** (update schedule): This checkbox can be used to automatically update the availability date in the schedule line when the delivery date in the corresponding PO item is changed. This functionality only works if the PO is a stock transport order.

■ **Transaction flow**

- **Incompl.Proced.** (incompletion procedure): You can define an incompletion procedure with a set of mandatory fields at the schedule line level. If one or more fields in the incompletion procedure are not entered, the schedule line is considered incomplete. This functionality will be covered in more detail in Chapter 5, Section 5.2.
- **Req./Assembly** (requirements/assembly): This field specifies whether the transfer of requirements to MRP must be carried out. Note that you can only activate the transfer of requirements at the schedule line level if the transfer of requirements functionality is already activated in the requirements class. We'll cover the transfer of requirements in more depth in Chapter 7, Section 7.3.
- **Availability**: This checkbox indicates if an availability check must be carried out for the item.
- **Prod.allocation** (production allocation): This indicator can be used to activate product allocation for the schedule line category.

SAP S/4HANA automatically determines the schedule line category using the item category of the sales document item and the MRP type maintained in the material master record (**MRP 1** view). Therefore, after defining a new schedule line category, you must assign the schedule line category to the relevant item categories and MRP types.

As shown in Figure 4.14, you can specify the proposed schedule line category for each item category and MRP type. If required, you can maintain up to three manual schedule lines, which can be selected by a business user to overwrite the schedule line category determined by the system.

ItCa	Typ	SchLC	MSLCa	MSLCa	MSLCa
TAN		CP	CN		
TAN	ND	CN			
TAN	P1	CP	CN		
TAN	P2	CP	CN		
TAN	VB	CV			
TAN	VM	CV			
TAN	VV	CV			
TANN		CP			
TANN	ND	CN			
TANN	VB	CV			
TANN	VM	CV			
TANN	VV	CV			

Figure 4.14 Assigning Schedule Line Categories

4.6 Understanding Sales Contracts

Many businesses sign long-term agreements for the supply of goods or services at a specific price and quantity over a certain period. These agreements are known in SAP S/4HANA as *sales contracts* or *customer contracts*.

The following four categories of sales contracts have been defined in a standard SAP S/4HANA system:

- Master contract (type GK)
- Quantity contract (type CQ)
- Value contract (types WK1 and WK2)
- Service contract (types WV and MV)

In the following sections, we'll review the key features of these four types of sales contracts.

4.6.1 Master Contract

Master contracts are sales documents used to bundle contracts for the same customer. A master contract only contains general header data that is relevant for all lower-level contracts. You can enter the following data in a master contract:

- Billing plan data
- Partner data
- Business data
- Contract data

The overview screen of a master contract shows the lower-level contracts that refer to it. By using a master contract, you can ensure that the terms in the master contract apply to all lower-level contracts. In SAP S/4HANA, you can group quantity contracts, value contracts, and service contracts under a master contract. This functionality allows you to link sales contracts to a master contract and is known as *contract grouping*. When a lower-level contract is assigned to a master contract, the header information is copied from the master contract into the lower-level contract. However, contract grouping has some limitations since the structures of multiple levels of contracts linked together are not allowed. You can have a master contract with several lower-level contracts, but all lower-level contracts must be the same level. Also, the master contract and all its lower-level contracts must be assigned to the same sales area.

To group sales contracts, you must first define which types of contracts a master contract can refer to, the fields that are relevant for contract grouping, and the rules for copying the data from the master contract into the lower-level contract. You can perform these activities in customizing under **Sales and Distribution • Sales • Sales Documents • Contracts • Master Contract • Define Referencing Requirements**. First, assign the sales contract types that can be linked to each master contract type. This step allows you, for example, to ensure service and maintenance contracts (type WV) are only assigned to master contract type GK, as shown in Figure 4.15.

TarDoc	Description	Source	Description
CQ	Quantity Contract	GK	Master Contract
MV	Rental Contract	GK	Master Contract
WK1	Value Contract- Gen.	GK	Master Contract
WK2	Matl-rel. Value Cont	GK	Master Contract
WV	Service and Maint.	GK	Master Contract

Figure 4.15 Defining Reference Sales Document Types

Then, you can either assign the standard referencing procedure SDGK (SD Sample Reference Procedure) to the sales document type of your master contract, or if the standard procedure does not meet your business requirements, you can define a new referencing procedure by specifying the technical name of the tables and fields to be checked or copied from the master contract. As shown in Figure 4.16, the checkbox in the **Message** column can be used to decide if the system will issue a message in the lower-level contract to inform a business user which changes will be copied from the master contract. The **Copy rule** column is an important parameter that controls how the system treats each field when copying data into the lower-level contract. The following three copy rules are available:

- **A: Identical field**
  These fields must have the same value in the master contract and lower-level contract. If you change a value in this field in the lower-level contract, the system will not allow you to link both contracts. Note that contract data fields (table VEDA) must all have copy rule A to be added to the referencing procedure.
- **B: Copy field**
  The values in these fields are copied from the master contract and cannot be changed in the lower-level contracts.

- **C: Proposal field**
  The system proposes the value from the master contract into the lower-level contract. Changes are allowed in the lower-level contract so business users can overwrite the proposed value. However, the system will only copy changes if both contracts had the same value before the master contract was changed.

Dialog Structure
- Procedures
  - Fields

Group proced. SDGK

Table	Field name	Function	Copy rule	Message
FPLA	AUTTE		B	☑
FPLA	PERIO		B	☑
VBAK	FAKSK		B	☑
VBAK	SPART		A	☑
VBAK	VKORG		A	☑
VBAK	VTWEG		A	☑
VBKD	INCO1		B	☑
VBKD	INCO2		B	☑
VBKD	ZTERM		B	☑
VBPA	KUNNR	SP	A	☑
VBPA	KUNNR	BP	A	☑
VBPA	KUNNR	PY	A	☑
VEDA	VLAUEZ		A	☑
VEDA	VLAUFK		A	☑
VEDA	VLAUFZ		A	☑

Figure 4.16 Defining Referencing Procedures

The referencing procedure is then assigned to the sales document type of the master contract. Also, you can select the **Update low.lev.cont.** indicator if you want the system to update the lower-level contract as soon as the master contract is changed. The update will be carried out via a workflow according to the copy rules specified in the referencing procedure. If the indicator is not activated, the system will only update the lower-level contract when it is called for processing. These two parameters are maintained in the **Contract** section of the definition of the sales document type, as shown in Figure 4.17.

Contract

PricProcCondHeadr		Contract data allwd.	X
PricProcCondItem		FollUpActivityType	
Contract profile	0002 Contract w/ Renewal	Subseq.order type	
Billing request		Check partner auth.	
Group Ref. Procedure	SDGK	☑ Update low.lev.cont.	

Figure 4.17 Contract Data for Sales Document Type GK: Master Contract

Since the master contract is nothing but a document used to group sales contracts and ensure header data is consistent, the master contract is not relevant for delivery or billing. Therefore, you do not need to assign either delivery type or billing type to the sales document type of the master contract.

> **Note**
> Master contracts do not have item or schedule lines data to be transferred to a subsequent sales document, so you only need to maintain copy control rules at the header level. We'll review how to set up the copying control in Chapter 6, Section 6.2.

Now, you can create a master contract via Transaction VA41 or the SAP Fiori app Create Contract. Just enter the header information and save the master contract. The next step is to create the lower-level contracts using the same transaction or app, but this time, select the sales document type of the lower-level contract (e.g., WV for a service contract). You'll link the contracts by entering the master contract number in the **Master Contract** field under the **Sales** tab at the header level in the lower-level contract. Figure 4.18 shows the overview screen for a master contract with two service contracts.

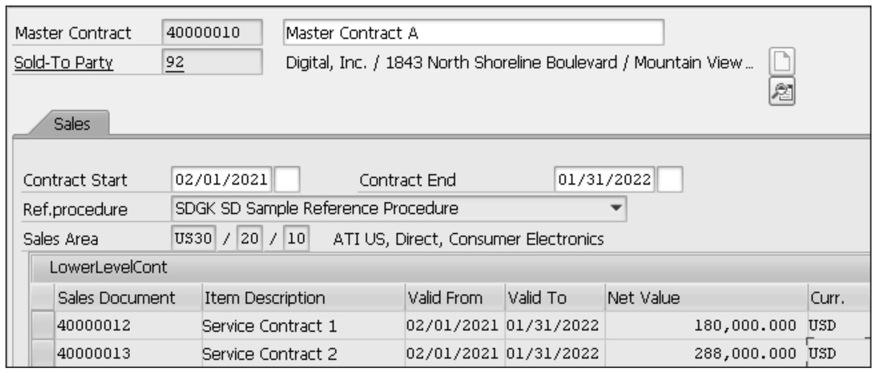


Figure 4.18 Master Contract Overview Screen

4.6.2 Quantity Contract

A quantity contract can be defined as a legally binding agreement where a certain quantity of goods must be supplied to a customer during a specified period. The customer is usually offered a special price in return. The target quantity entered at the item level is not transferred to MRP; thus, it does not create demand to satisfy the contract. The quantity contract has no schedule lines, but it has a start and end date at both header and item level. If required, the validity dates can be different for each item and differ from the start and end dates at header level. The standard sales document type for quantity contracts in SAP S/4HANA is CQ.

Once a sales order is created with reference to a quantity contract, the requirement is placed in MRP. These sales orders are known as *release orders*. Assuming the document type of the subsequent release order is OR, if the stock available on the requested delivery date is less than the quantity in the release order, the system will try to satisfy the release order by either buying more stock or producing more depending on the procurement type of the material.

Each release order automatically decreases the released quantity in the quantity contract. However, this functionality only works if the **Update Document Flow** field is not blank on the contract item category in the copy control rules, as shown in Figure 4.19. Otherwise, the customer can order as much as he would like, and the quantity in the contract won't be a limiting factor.

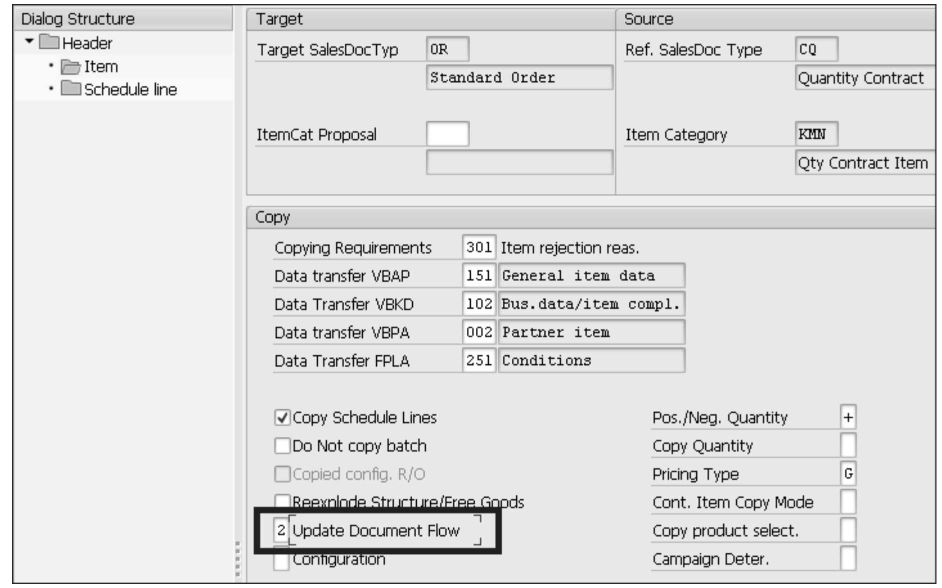


Figure 4.19 Set Copying Control: Quantity Contract to Sales Order

SAP S/4HANA allows you to specify which business partners, besides the sold-to party, can be used to release orders against the quantity contract. When a sales order is created with reference to a contract, the system checks whether the customer number entered is authorized or not by applying one of the following rules specified in the **Check partner auth.** (check partner authorization) field in the sales document type of the contract. This field may have the following values:

- <blank>: No partner check.
- **A**: The customer entered in the sold-to party field in the release order has the partner function sold-to party (AG) or sold-to party for release order (AA) in the contract.
- **B**: The customer entered in the sold-to party field in the release order belongs to the customer hierarchy of the sold-to party (AG) of the contract.

When creating a business partner master record, you can define multiple authorized sold-to and ship-to parties via standard partner functions AA and AW, respectively. These parties will appear as suggestions in the dialog box for creating a contract for the business partner in question.

Also, you can define multiple ship-to parties for a release order in the contract itself with partner function AW. Then, when a release order is created with reference to the contract, the system displays a list of possible ship-to parties from which business users can select. However, you could configure the copying control, so the rest of the partners (other than the sold-to party) are not copied from the contract but instead determined from the customer master record of the sold-to party.

To activate the partner authorization check, you must assign a partner determination procedure containing partner functions AW and AA to the sales document type of the quantity contract. You can use the standard partner determination procedure KAB (Release Order), which comes with the two required partner functions. Also, don't forget to select one of the rules (A or B) in the contract sales document type, in the **Check partner auth.** field.

Quantity contracts can act as lower-level contracts if a master contract number is entered in the master contract field of the quantity contract. The quantity contracts will then appear in the **LowerLevelCont** section of the overview screen of the master contract.

Another feature of sales contracts in SAP S/4HANA is the capability to use cancellation rules to specify the times when a customer can terminate the contract. You can define cancellation rules for a quantity contract in customizing under **Sales and Distribution • Sales • Sales Documents • Contracts • Contract Data • Control Cancellation**.

The first step is to define a cancellation procedure for which you can enter a validity period. You can assign the cancellation procedure to the contract profile, maintained in the **Contract** section of the sales document type. The next step is to define the cancellation rule and assign it to the relevant cancellation procedure. The flowchart shown in Figure 4.20 summarizes how the system uses the allocations made in customizing to determine the cancellation rule in a sales contract.

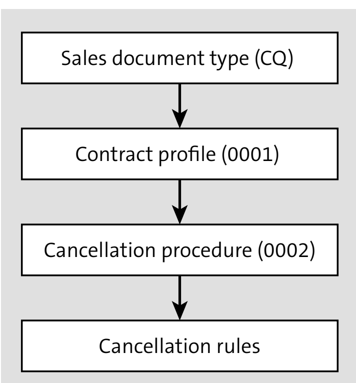


Figure 4.20 Cancellation Rule Determination in a Contract

The cancellation rule is defined by the following four parameters:

- **Canc.date** (cancellation date): This field specifies the rule for calculating the cancellation date, which is the date when the contract will be terminated, provided the cancellation is received in the period of notice.
- **Notice**: This field, alongside the cancellation date, determines the period when the customer must submit a cancellation request. Some examples of periods you can enter in this field include "3 days," "2 weeks," or "1 month."
- **Canc.period** (cancellation period): This field is the period by which the contract is automatically extended if no cancellation is received.
- **Rule valid to**: This field defines the period in which the cancellation rule is valid.

Example

Let's say a sales contract has been created with a start date of January 1st and should adhere to the following cancellation rule:

- Rule for the cancellation date: Start of contract + 1 year
- Period of notice: 2 weeks
- Cancellation period: 1 month

The contract can only be terminated after 1 year, that is, on December 31st, provided the customer submits a cancellation request 2 weeks before the cancellation date. In other words, the cancellation request must be received by December 17th. If the cancellation request is not received by December 17th, the contract is extended by 1 month.

Finally, to ensure that your quantity contracts are fully configured, you should check that a pricing procedure, partners, texts, and item categories have been assigned to the sales contract document type. Also, make sure that copying control rules have been maintained for the target sales document types of the release orders.

4.6.3 Value Contract

Value contracts are similar to quantity contracts in the sense that a customer cannot buy unlimited goods with reference to the contract. In the case of value contracts, the limiting factor is not the target quantity but the total value of the contract (also referred to as the target value).

As with quantity contracts, you can activate the partner authorization check in value contracts to control the additional ship-to and sold-to partners that can release against the contract. Again, partner functions AA (sold-to for contract release order) and AW (ship-to for contract release order) can be used in these scenarios.

In SAP S/4HANA, you can specify a predefined list of materials in the value contract, which could be either an assortment module or a product hierarchy. This type of value contract is often called a *general value contract*. Alternatively, you can create a value contract for only one material, which is typically used for configurable materials. This other type of value contract is known as a *material-related value contract*.

The standard system offers the following two types of value contracts:

- **Document type WK1: General value contract**
  You must select this type of contract if you want to create a value contract for a group of materials belonging to the same product hierarchy or assigned to an assortment module.
- **Document type WK2: Material-related value contract**
  You must select this type of contract if only one material is relevant for release.

To create an assortment module, you can use Transaction WSV2 or the Create Assortment Module – Value Contract app. You can specify an external module number if required; otherwise, the system assigns an internal number. Then, you'll enter the validity period, a short description for the module, and the list of materials. Figure 4.21 shows an example of an assortment module valid for the year 2021.

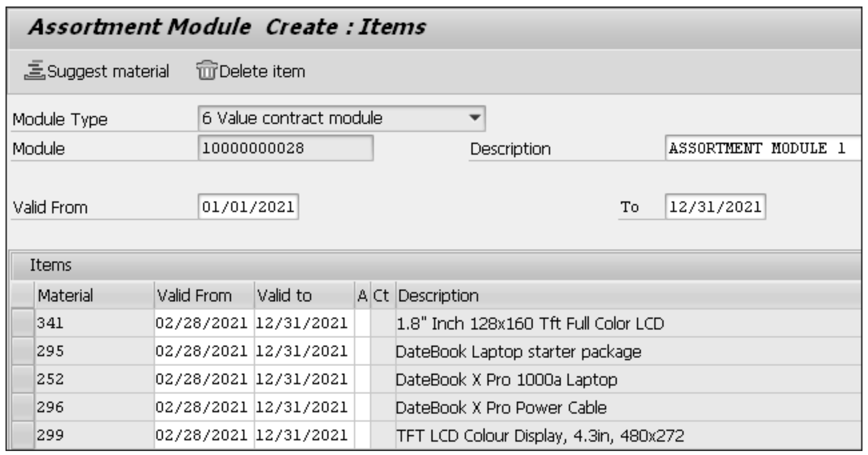


Figure 4.21 Creating an Assortment Module

Note
When creating a release order for a general value contract (WK1), the system will only show those materials in the assortment module that have been maintained in the sales organization and distribution channel of the release order being created.

The released value in the contract is automatically updated every time release orders are created. Once the target value is reached, no more release orders can be created for the contract. To calculate the released value, the system takes into account the amounts in open release orders, deliveries, and billing documents as well as any price adjustments, cancellations, returns, or rejection of order items.

Release orders can be created in any currency. The system will convert the currency in the release order into the currency in the value contract and update the release value accordingly.

In the **Define Item Categories** customizing activity for the item category of the value contract, you can use the **Contract Relase Ctrl** field to control how the system reacts when the value of your release order reaches or exceeds the open target value of the value contract item. The following five options are available:

- <blank>: No response if the target value is exceeded
- **A**: Warning if the target value is exceeded; contract is blocked when a release order exceeds the target value
- **B**: Error message if the target value is exceeded
- **C**: Permitted with a warning only the first time the target value is exceeded
- **D**: As for **A** but the value contract is not blocked

Note
A particular release order can only refer to either a quantity or a value contract. You cannot have an item linked to a quantity contract and another item linked to a value contract in the same release order.

If required, you can assign a cancellation procedure to the contract profile in the sales document type of the value contract, so cancellation rules apply in the event the customer wishes to terminate the contract.

4.6.4 Service Contract

Service contracts are outline agreements between the customer or receiver of the service and the supplier of the service. Release orders are not required to bill the customer since service materials are not relevant for delivery. If the service is billed at regular intervals (e.g., monthly), a billing plan type must be assigned to the sales document type of the contract. We won't go over the details of billing plans in this section since this topic will be reviewed in Chapter 11, Section 11.6. The two types of service contracts in the standard system are rental contracts (type MV) and maintenance contracts (type WV).

As with quantity contracts and value contracts, you can define cancellation rules in service contracts to determine whether a cancellation request from the customer must be processed to terminate the contract.

You can use the service contract to trigger follow-up activities, such as phone calls or quotations, before the contract expires. The type of follow-up activity is defined in the sales document type of the **FollUpActivityType** (follow-up activity type) field of the contract.

Service contracts can also be used to determine which services are covered by the contract and, if the service task is not covered, what price agreement must be applied. For example, a customer can choose between a gold and a silver service contract to cover a machine that is out of warranty. The gold contract is more expensive, but all spare parts are included. In contrast, the silver contract is cheaper but does not include spare parts. Thus, if a machine under a silver contract requires a new spare part, the customer will have to pay for the part. Usually, a special price is defined in the price agreement of the silver contract, so the customer is not charged full price for materials not covered by the monthly service fee. Billing for any additional services or products is initiated by a billing request.

To create a price agreement for a service contract, you must create condition records for the sold-to party in the service contract and the relevant materials or material groups. The standard version of the system provides three condition types for price agreements in service contracts, as shown in Table 4.14.

Condition Type	Description
PKAR	Header price settlement
PPAG	Item price settlement (price for material group)
PPAR	Item price settlement (price for material)

Table 4.14 Pricing Condition Types for Price Agreements in Service Contracts

Pricing condition records for price agreements at both the header and item level can be created directly in the service contract. To create a price agreement at header level, go to the overview screen of the service contract in change mode (via Transaction VA42 or the Manage Sales Contracts app) and select **Extras • Price Agreements • Header**. Then, click on **Other Condition Type**, select the condition type, and maintain the contract-specific pricing condition record, as shown in Figure 4.22.

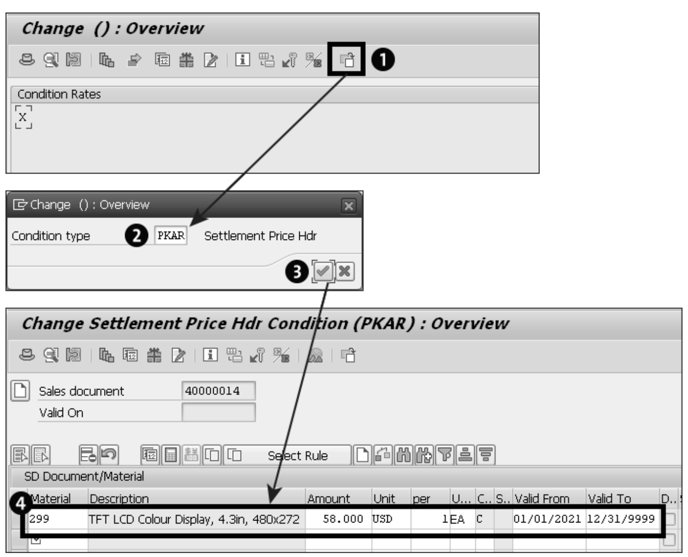


Figure 4.22 Creating a Price Agreement in a Service Contract

Finally, following the example shown in Figure 4.22, let's say the standard price for material 299 is $99.00. However, if a service order is created for service contract 40000014 and material 299 is consumed to repair the device assigned as a technical object in the contract item, the system will determine a price of $58.00 in the debit memo request generated when the service order is processed through resource-related billing as per the price agreement maintained in the service contract.

4.7 Important Terminology

In this chapter, the following terminology was used:

- **Sales document type**
  This key is used to classify sales documents and determines key data in the document such as pricing procedure, partner functions, item categories, incompleteness log, etc.
- **Sales document item category**
  Item categories in conjunction with document types define the business transaction. This key allows for different ways to process items within the same sales document. For instance, item 10 might be sold from local stock, while item 20 must be procured externally from a third-party vendor.
- **Item category group**
  This field in the material master is used to determine the item category in the sales document.
- **Item category usage**
  This field controls the system reaction when processing a sales document in a specific scenario (free goods, text items, batch split, etc.).
- **Third-party delivery item**
  This special category of sales item automatically creates a purchase requisition to buy the goods ordered by the customer from a vendor. The vendor ships directly to the customer. These order items, also known as third-party orders, are needed when the goods ordered by the customer are not in stock and cannot be manufactured in-house.
- **Individual procurement item**
  This special category of sales item automatically creates a purchase requisition to buy the goods ordered by the customer from a vendor. The vendor ships directly to your warehouse. These order items, also known as individual POs, are needed when the goods ordered by the customer are not in stock and cannot be manufactured in-house.
- **Schedule line category**
  This element is used to classify schedule lines and determines how the schedule line is processed by the system. For example, you can decide whether or not a

specific schedule line category passes on requirements to material requirements planning (MRP).

- **Sales bill of materials (sales BOM)**
  A sales BOM defines the different components that together create a product that can be sold to a customer.
- **Sales contract**
  This contractual agreement lays out the terms of a transaction of goods or services within a certain time period. Besides validity dates, a sales contract can contain the target quantity, target amount, cancellation conditions, price agreements, materials, billing plan details, etc.
- **Assortment module**
  This SAP S/4HANA Sales master data object is used to store a list of materials that can be released from a value contract. A validity period can be defined that is checked when a release order is created to ensure the release date lies within the validity period.
- **Master contract**
  Master contracts are sales documents used to bundle contracts for the same customer. The master contract contains only general header data that is relevant for all lower-level contracts.
- **Value contract**
  Value contracts are legally binding agreements specifying that a certain quantity of goods must be supplied to a customer during a specified period. The target value is the limiting factor of the contract.
- **Quantity contract**
  A quantity contract can be defined as a legally binding agreement specifying that a certain quantity of goods must be supplied to a customer during a specified period. The target quantity is the limiting factor of the contract.
- **Service contract**
  Service contracts are outline agreements between the customer or receiver of the service and the supplier of the service.

4.8 Practice Questions

These practice questions will help you evaluate your understanding of the topics covered in this chapter. The questions shown are similar in nature to those found on the certification examination. Although none of these questions will be found on the exam itself, they will allow you to review your knowledge of the subject. Select the correct answers and then check the completeness of your answers in the next section. Remember that, on the exam, you must select all correct answers and only correct answers to receive credit for the question.

1. Which of the following customizing settings are available when defining sales document types in SAP S/4HANA? (There are three correct answers.)

☐ A. Specify whether a credit check must be performed

☐ B. Define whether schedule lines are allowed

☐ C. Specify whether a sales document can only be created with reference to a preceding document

☐ D. Indicate how a BOM is processed in a sales document

☐ E. Decide whether the division entered at the header level takes precedence over the item specifications

2. In the standard system, the first character of the schedule line category refers to the type of sales document where it is used. If "C" is the first character, what document type is it referring to?

☐ A. Quotation

☐ B. Returns

☐ C. Sales order

☐ D. Inquiry

3. Which of the following options are available when configuring the schedule line category to control how the system updates the sales order schedule line in third-party PO scenarios? (There are two correct answers.)

☐ A. Update schedule line when the PO is approved through flexible workflow

☐ B. Update schedule line only for goods receipt

☐ C. Update schedule line for invoice receipt

☐ D. Update schedule line for goods receipt and shipping notification

4. True or False: It is not possible to assign an incompleteness procedure at the schedule line level.

☐ A. True

☐ B. False

5. In the customizing for sales and distribution, where do you define the movement type to be used at post goods issue?

☐ A. In the definition of sales document types

☐ B. In the definition of sales item categories

☐ C. In the definition of schedule line categories

☐ D. In the definition of delivery types

6. When assigning schedule line categories in customizing, how many manual schedule line categories can you maintain for each combination of item category and MRP type?

☐ A. Zero. You can only maintain the proposed schedule line category.
☐ B. One
☐ C. Two
☐ D. Three

7. True or False: You can assign a quantity contract to a master contract by entering the quantity contract number in the **Sales Document** field in the master contract overview screen.

☐ A. True
☐ B. False

8. Which of the following factors can limit the goods or services provided to a customer in a value contract?

☐ A. Both the target quantity and the contract end date
☐ B. The target quantity specified in the contract
☐ C. The target value specified in the contract
☐ D. Both the target value and quantity, whichever occurs first

9. True or False: Quantity and value contract items cannot be processed together in one release order.

☐ A. True
☐ B. False

10. In a standard SAP S/4HANA system, which of the following categories of sales contracts allow the creation of release orders? (There are two correct answers.)

☐ A. Master contract
☐ B. Service contract
☐ C. Value contract
☐ D. Quantity contract

11. When configuring sales documents, which of the following elements can be restricted by the combination of the sales organization and the sales document type? (There are two correct answers.)

☐ A. Order reason
☐ B. Delivery block

☐ C. Billing block
☐ D. Reason for rejection

12. True or False: In SAP S/4HANA, you can specify whether a particular sales document type is only allowed in a specific sales area.

☐ A. True
☐ B. False

13. True or False: All sales documents have data stored at the header, item, and schedule line levels.

☐ A. True
☐ B. False

14. What is the definition of a master contract in SAP S/4HANA?

☐ A. It is an agreement that contains the materials and services that the customer may receive within a time period and up to a target value.
☐ B. It is an agreement that contains the conditions for offering a certain service to the customer.
☐ C. It is an agreement that enables the customer to order a certain quantity of a product during a specified period.
☐ D. It is a document in which you can group contracts together as lower-level contracts.

15. Which of the following statements regarding master contracts are true? (There are two correct answers.)

☐ A. The master contract contains header data only.
☐ B. The master contract and the lower-level contract can be assigned to different sales organizations.
☐ C. Changes in the master contract can be automatically copied into the lower-level contract.
☐ D. Contract grouping supports hierarchical relationships of several lower-level contracts.

16. True or False: In the additional settings for sales order items with individual procurement, item category TAB, you can specify an automatic rejection upon completion of the corresponding PO item.

☐ A. True
☐ B. False

17. Which of the following settings can you configure in the schedule line category? (There are two correct answers.)

☐ A. Credit active
☐ B. Create PO automatically
☐ C. Delivery block
☐ D. Item relevant for delivery

18. Which of the following settings can you configure in the item category? (There are three correct answers.)

☐ A. Shipping condition
☐ B. Pricing relevance
☐ C. Billing relevance
☐ D. Item relevant for delivery
☐ E. Default delivery type

19. Which of the following elements can influence the item category determination for a sales document item? (There are three correct answers.)

☐ A. Usage
☐ B. Sales organization
☐ C. Sales document type
☐ D. Item category group
☐ E. Division

20. What customizing parameter controls whether a sales order item will automatically explode to generate subitems for the BOM components?

☐ A. The business transaction in the item category
☐ B. The item type in the item category
☐ C. The usage in the sales document type
☐ D. The structure scope in the item category

4.9 Practice Question Answers and Explanations

1. Correct answers: **A, C, and E**
   The checkbox to specify whether schedule lines are allowed is a configuration setting for the item category, so answer B is not correct since this setting is not available when defining sales document types. Similarly, the item category controls how a BOM is processed in a sales order, specifically through field structure scope; thus, answer D is also not correct. Thus, only three answers remain that correspond to the three customizing settings that are available when defining a sales document type.
2. Correct answer: **C**
   In the entries shown earlier in Table 4.13, the letter "C" in the first character refers to sales orders, meaning that schedule line categories beginning with C have been defined to be used in sales orders.
3. Correct answers: **B and D**
   The **Update Schedule Lines from External Procurement** field controls how the system updates the sales order schedule line in third-party PO scenarios. If the field is left blank, the system does not perform any update. If the value maintained is 1, then the schedule line is updated only for goods receipts. Finally, if the value is 2, the schedule line is updated for goods receipts and shipping notifications. Therefore, answers B and D are the two correct answers to this question.
4. Correct answer: **B**
   False. As shown earlier in Figure 4.13, you can assign an incompleteness procedure to the schedule line category in the **Incompl.Proced** field in the **Transaction flow** section.
5. Correct answer: **C**
   The movement type to be used at post goods issue is defined in the schedule line category field **Movement Type**, shown earlier in Figure 4.13.
6. Correct answer: **D**
   In the customizing activity **Sales and Distribution • Sales • Sales Documents • Schedule Lines • Assign Schedule Line Categories**, you can maintain the proposed schedule line category and up to three manual schedule lines, as shown earlier in Figure 4.14.
7. Correct answer: **B**
   False. This statement is incorrect. To assign a quantity contract to a master contract, the master contract number must be entered in the **Master Contract** field under the **Sales** tab at the header level in the lower-level contract. This field will create the link, and the quantity contract will automatically appear in the **Sales Document** field in the master contract overview screen, as shown earlier in Figure 4.18.
8. Correct answer: **C**
   For this question, answer C is the obvious choice. In a value contract, the target value is the limiting factor. As release orders are created, the system automatically updates the released value in the contract. Once the target value is reached, no more release orders can be created for the contract. All the other answers mention the target quantity, which is not even available for input in a value contract.

9. Correct answer: **A**
   True. A particular release order can only refer to either a quantity or a value contract. In other words, in the same release order, you cannot have an item created with reference to a value contract and another item created with reference to a quantity contract.
10. Correct answers: **C and D**
    Release orders are created for either value or quantity contracts. Services are invoiced directly from the service contract, usually based on a billing plan, so a release order is not needed since service items are not delivered. Master contracts are used to group the lower-level contracts, so no release orders can be created for the master contract.
11. Correct answers: **A and D**
    SAP S/4HANA introduced the ability to restrict both the order reason and the reason for rejection by sales organization and sales document type, as shown earlier in Figure 4.2. This feature was not available in older versions of SAP.
12. Correct answer: **A**
    True. By default, all sales document types can be used in all sales areas. However, if needed, you can restrict the sales document type per sales area.
13. Correct answer: **B**
    False. Some sales documents, such as contracts, debit memo requests, and credit memo requests do not contain data at the schedule line level. When configuring the item category, you can decide whether schedule lines are allowed.
14. Correct answer: **D**
    Answer A is the definition of a value contract, B is the definition of a service contract, and C is the definition of a quantity contract. Therefore, answer D corresponds to the definition of a master contract, which is a contract that only contains data at the header level and is used to link lower-level contracts.
15. Correct answers: **A and C**
    You can only assign a lower-level contract to a master contract if both contracts have been created in the same sales area. Also, SAP S/4HANA does not support multilevel structures of contracts where a master contract has several lower-level contracts, and each of those has its lower-level contracts, etc. Therefore, answers B and D are incorrect statements. On the other hand, master contracts do contain header data only, and you can configure the system so changes in master contracts are automatically transferred into their corresponding lower-level contracts.
16. Correct answer: **B**
    False. The *automatic rejection upon completion of the PO item* functionality is only available for item categories involving third-party delivery (CB1, CB2, CB3, and CB4), as shown earlier in Figure 4.6. Individual procurement item categories like TAB, where goods are physically received into the warehouse and then shipped to the customer, do not support this feature.

17. Correct answers: **C and D**
    This question concerns settings on the customizing screen for the schedule line category. On that screen, you can specify a delivery block that will be applied automatically as well as indicate whether the item linked to the schedule line is relevant for delivery. Both fields are shown earlier in Figure 4.13. The settings to activate credit management functions and create a PO automatically are not available when defining schedule line categories but instead when defining item categories.
18. Correct answers: **B, C, and D**
    On the customizing screen for the item category, you can specify whether the item is relevant for pricing, billing, and delivery. All these three fields are shown earlier in Figure 4.3. It is not possible to define the shipping condition, nor the default delivery type on the item category. Both the shipping condition and the default delivery type are specified in the definition of the sales document type.
19. Correct answers: **A, C, and D**
    This question tests your understanding of the logic to determine the item category in a sales document. Following the customizing table shown earlier in Figure 4.5, the system uses four fields to determine the item category: sales document type, material item category group, usage, and higher-level item category. Neither the sales organization nor the division are used during item category determination.
20. Correct answer: **D**
    This straightforward question relates to the setting that activates the functionality to automatically explode a sales BOM in a sales document. This feature is controlled by the **Structure Scope** field in the definition of the item category. You can use this field to indicate how a BOM is processed in a sales document.

4.10 Takeaway

In this chapter, you gained a good overview of all basic customizing settings regarding sales document types in SAP S/4HANA. You're also familiar with the important role the item category plays in sales documents, and you learned about its assignment and basic configurations. The same goes for the assignment and configuration options available for the schedule line category.

You've seen how to maintain a BOM that can be used in sales documents and learned about the differences between main item level BOMs and subitem level BOMs when deciding which items are just text items and which are relevant for pricing and delivery. You're also aware of the master data and configuration changes required for each type of sales BOM.

Finally, you got a thorough introduction to the four types of contracts in SAP S/4HANA: master contracts, value contracts, quantity contracts, and service contracts. You should understand the purpose of each type of sales contract, as well as some of the basic settings to enable features such as cancellation rules or rules to copy the data from a master contract into lower-level contracts.

4.11 Summary

The customizing of sales documents is the fundamental building block required for the successful processing of all types of sales documents such as sales orders, quotations, inquiries, contracts, and debit and credit memo requests. By ensuring that document types, item categories, and schedule line categories are configured in full alignment with your customers' requirements, you'll set the course for a successful SAP S/4HANA Sales implementation in your SAP S/4HANA project.

In the next chapter, we'll analyze some of the basic functions within the customizing of sales and distribution, including incompleteness procedures, partner determination, free goods, and material determination.

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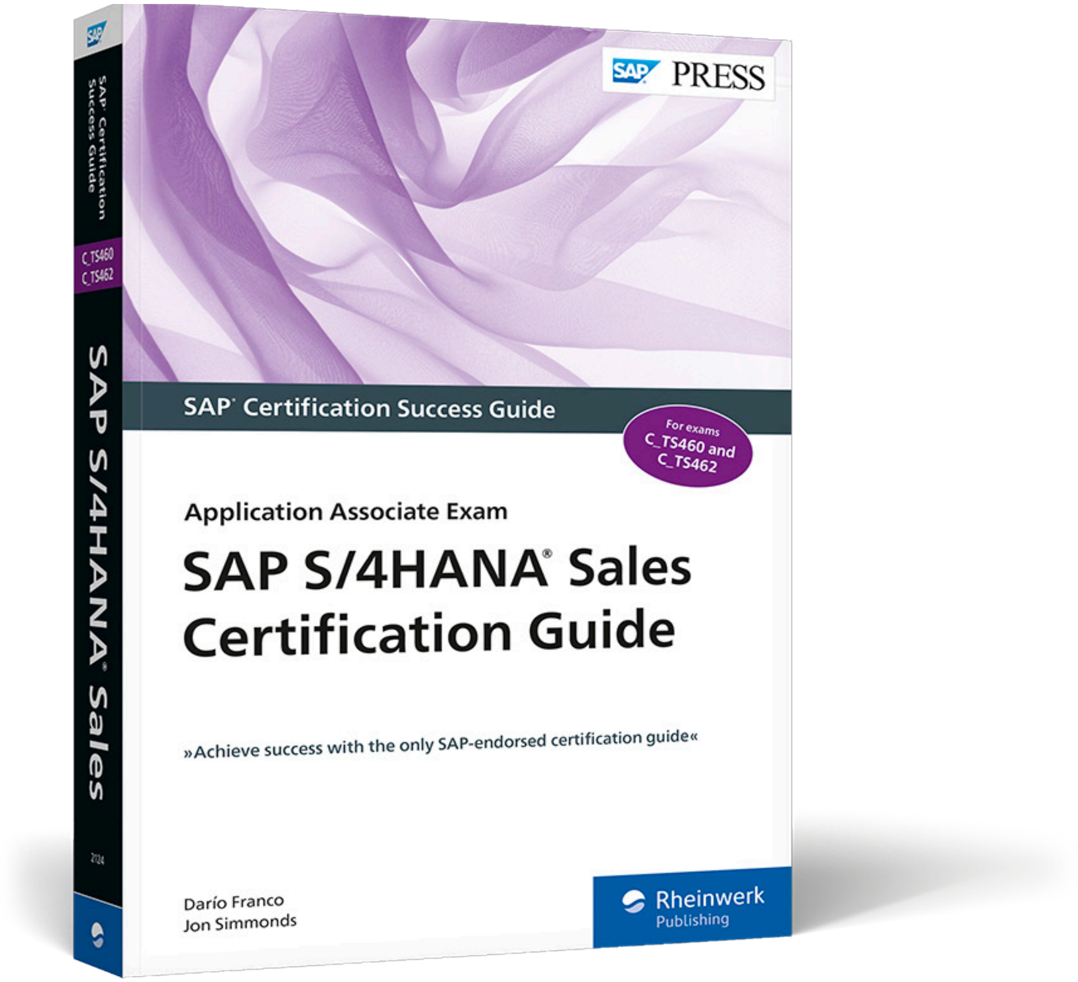

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