

SAP S/4HANA Cloud

Key User Extensibility in Sales

Table of Contents

1	Overview	4
2	Prerequisites	5
2.1	Business User	5
2.1.1	Business Roles	5
2.2	Fiori Apps	6
2.3	HTTP Client (optional)	6
2.4	Adobe LiveCycle Designer	7
3	Extensibility Basics	8
3.1	Custom Fields	8
3.1.1	How to Create a Custom Field	8
3.1.2	How to Configure a Custom Field	9
3.2	Adapting and Personalizing Apps	12
3.2.1	Adapting SAP Fiori UIs at Runtime - Key User Adaptation	13
3.2.2	Personalizing Apps	13
3.3	Business Add-Ins (BAdIs)	13
3.3.1	Debugging	14
3.4	Custom Reusable Elements	14
3.5	Output Forms	14
3.6	APIs	14
4	Example Scenarios	15
4.1	Enhanced Sell-From-Stock Business Scenario	15
4.1.1	Scenario Description	16
4.1.2	Prerequisites and Settings	17
4.1.2.1	Required Business Roles	17
4.1.2.2	Required Apps	17
4.1.2.3	Custom Fields	18
4.1.2.4	Custom Code List	22
4.1.2.5	Custom Business Object	22
4.1.2.6	Create BAdI implementations	26
4.1.2.7	Adjust UIs	29
4.1.2.8	Set Up Form Management	33
4.1.3	Executing the Enhanced Sell-from-Stock Scenario	43
4.1.3.1	Create Sales Quotation Using the OData API	43
4.1.3.2	Create Sales Order	44
4.1.3.3	Create Outbound Delivery	48
4.1.3.4	Create Billing Document	51
4.1.3.5	Sales Analytics	52

5	Further Information	55
5.1	Documentation	55
5.1.1	Product Documentation	55
5.1.2	Specific Documentation	55
5.1.3	Further Links	55
5.1.4	Useful released CDS Views	56

1 Overview

This document will give you some basic knowledge about how to use key user extensibility for Sales in SAP S/4HANA Cloud so that you can adapt the standard sales processes to your business needs.

Document History

Revision	Date	Change
1.0	2021-07-22	Initial Version

2 Prerequisites

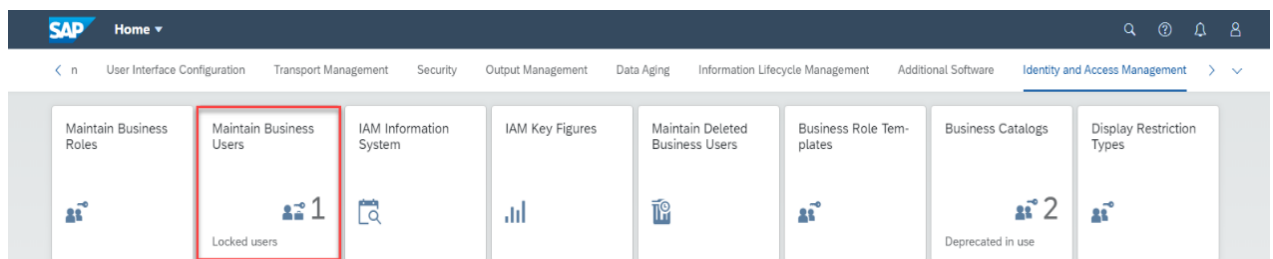
2.1 Business User

First of all, you need to have a business user in the system to set up and execute all the scenarios from this document. To create a business user, you can use the *Import Employees* app.

You can find more information about the app [here](#).

2.1.1 Business Roles

For all the scenarios you need to assign specific business roles to your business user. This can be done in the *Maintain Business Users* app. To get access to this application, you need to log on to the system with a user that has a business role assigned that is based on the SAP_BR_ADMINISTRATOR business role template.



In the app, you can select your user and assign the necessary business roles.

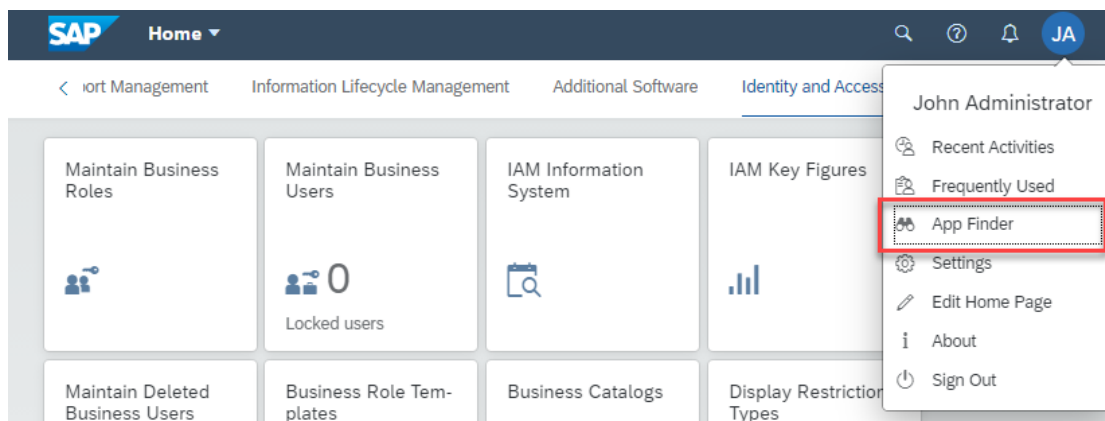
GENERAL			ASSIGNED BUSINESS ROLES			APPLICATION JOBS		
Assigned Business Roles (5)						Add Remove		
<input type="checkbox"/>	Business Role		Business Role ID			Price Category		
<input type="checkbox"/>	Administrator		SAP_BR_ADMINISTRATOR			Advanced		
<input type="checkbox"/>	Billing Clerk		SAP_BR_BILLING_CLERK			Core		
<input type="checkbox"/>	Configuration Expert - Business Process Configuration		SAP_BR_BPC_EXPERT			Advanced		
<input type="checkbox"/>	Internal Sales Representative		SAP_BR_INTERNAL_SALES_REP			Advanced		
<input type="checkbox"/>	Shipping Specialist		SAP_BR_SHIPPING_SPECIALIST			Core		

Tip: To get access to all the key user tools, the business catalog SAP_CORE_BC_EXT needs to be assigned. By default, this catalog is included in the business role template SAP_BR_ADMINISTRATOR, but you can also create your own role and assign this catalog.

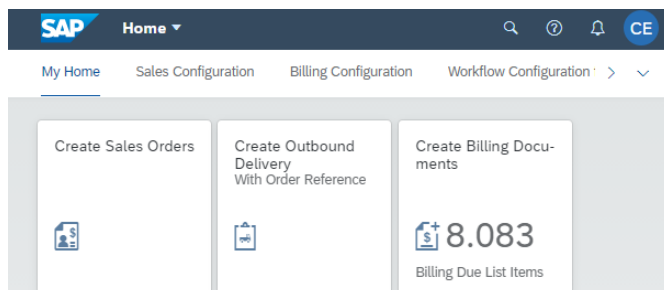
You can find more information about the app [here](#).

2.2 Fiori Apps

Once you have assigned all the business roles for the scenario to your user, you can find all the apps with the app finder:



You can also adjust the SAP Fiori launchpad to better fit your business needs. For example, you can put all the apps for the scenario in your *My Home* group of the SAP Fiori Launchpad:



You can find more information about personalizing the launchpad [here](#).

2.3 HTTP Client (optional)

In some scenarios you will use OData or SOAP APIs. You need an HTTP client to send requests. You can find tools online.

2.4 Adobe LiveCycle Designer

In some scenarios, you need to adjust output form templates. This can be done with Adobe LiveCycle Designer. If your business user has a business role assigned that is based on the SAP_BR_ADMINISTRATOR business role template, you can download the software using the *Install Additional Software* app:



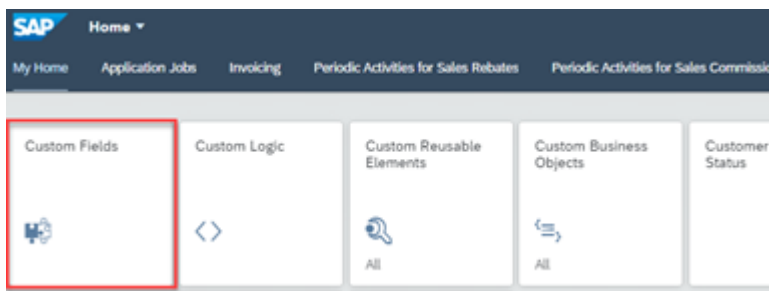
Name	Description	
SAP Cloud Print Manager	The SAP Cloud Print Manager component enables the automatic printing of business documents.	Download
SAP Cloud Print Manager for Pull Integration	The SAP Cloud Print Manager for Pull Integration enables the automatic printing of business documents.	Download
Adobe® LiveCycle® Designer	The Adobe® LiveCycle® Designer component enables the creation and maintenance of forms.	Download

3 Extensibility Basics

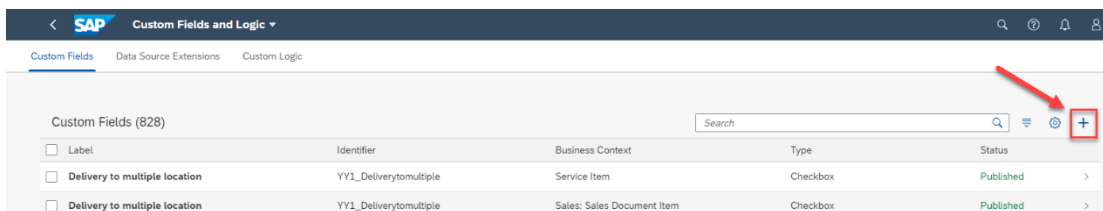
3.1 Custom Fields

3.1.1 How to Create a Custom Field

Open the *Custom Fields* app:



Click on the + button:



Define the field properties:

New Field

Field Properties

Business Context: *

Sales: Sales Document

Label: *

Package Colour

Identifier: *

YY1_ PackageColour

Tooltip: *

Package Colour

Type: *

Text

Length: *

5

Business Context Capacity:

75%

Create

Create and Edit

Cancel

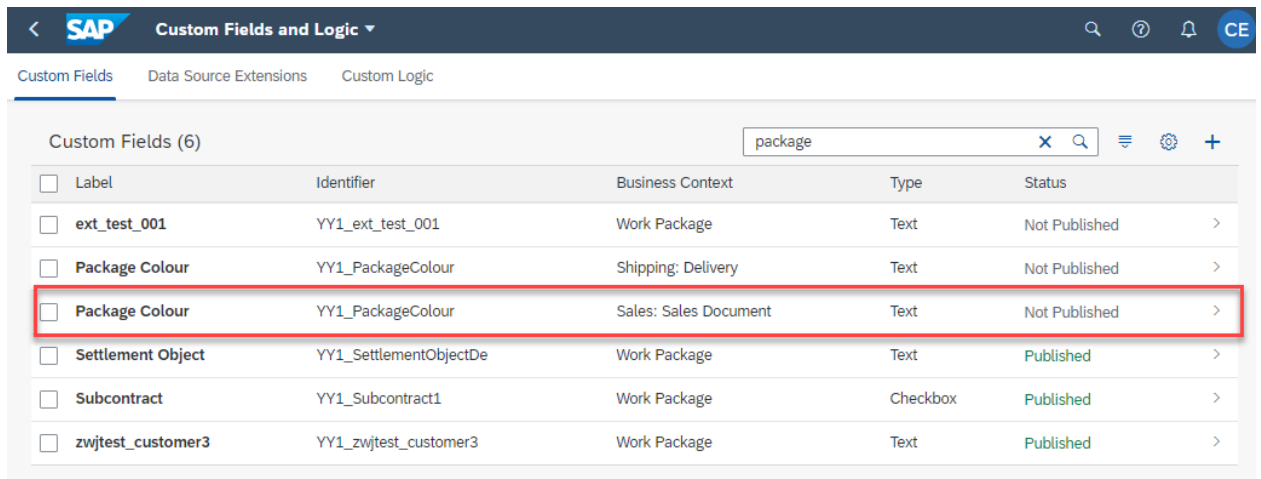
Tip: For sales documents, SAP provides the “Sales: Sales Document” and “Sales: Sales Document Item” business contexts.

You can also find the free business context capacity on this screen. The capacity of a business context in sales documents is limited to 1020 characters and 102 fields.

Choose *Create* to create the custom field in the system.

3.1.2 How to Configure a Custom Field

In the list of custom fields, click on the custom field to navigate to the settings of that specific field:

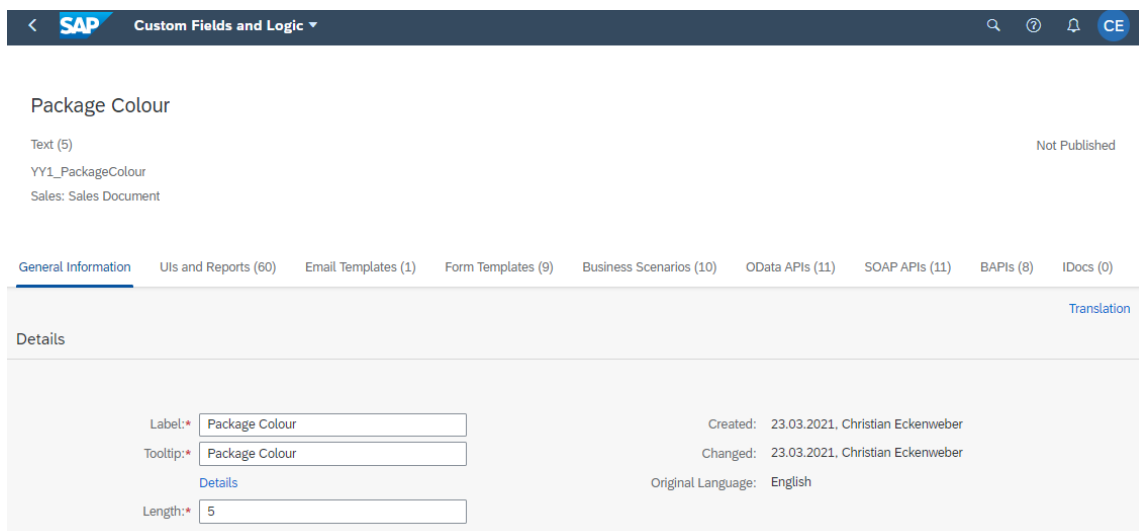


The screenshot shows the SAP Custom Fields and Logic interface. The 'Custom Fields' tab is active, displaying a list of 6 custom fields. The 'Package Colour' field is highlighted with a red box. The table columns are: Label, Identifier, Business Context, Type, and Status.

Label	Identifier	Business Context	Type	Status
ext_test_001	YY1_ext_test_001	Work Package	Text	Not Published
Package Colour	YY1_PackageColour	Shipping: Delivery	Text	Not Published
Package Colour	YY1_PackageColour	Sales: Sales Document	Text	Not Published
Settlement Object	YY1_SettlementObjectDe	Work Package	Text	Published
Subcontract	YY1_Subcontract1	Work Package	Checkbox	Published
zwjtest_customer3	YY1_zwjtest_customer3	Work Package	Text	Published

The following sections explain which settings you can make on the single tabs:

General Information



The screenshot shows the 'General Information' tab for the 'Package Colour' field. The field is a Text (5) field, not published, with the identifier YY1_PackageColour and business context Sales: Sales Document. The 'Details' section shows the label 'Package Colour', tooltip 'Package Colour', and length '5'. The 'Created' and 'Changed' dates are 23.03.2021, and the original language is English.

Package Colour

Text (5) Not Published

YY1_PackageColour

Sales: Sales Document

General Information UIs and Reports (60) Email Templates (1) Form Templates (9) Business Scenarios (10) OData APIs (11) SOAP APIs (11) BAPIs (8) IDocs (0)

Details

Label: * Package Colour

Tooltip: * Package Colour

Length: * 5

Created: 23.03.2021, Christian Eckenweber


Changed: 23.03.2021, Christian Eckenweber

Original Language: English

On this tab, you can edit specific information for the custom field, like label, tooltip, length, and also translation.

UIs and Reports


General Information **UIs and Reports (60)** Email Templates (1) Form Templates (9) Business Scenarios (10) OData APIs (11) SOAP APIs (11) BAPIs (8) IDocs (0)

UIs and Reports 					
Data Source	Description	Visibility Control	Behavior	Search Relevance	Field Usage
/CPD/SC_PROJ_ENGMT_CREATE_UPD_SRV	Create / Update Commercial Projects				Disabled Enable Usage
SD_SALESDOC_GUI	Create, Change, or Display Sales Documents (Header)				Disabled Enable Usage
C_BSORDPROCFLWCRTDTMEMOREQ	Credit Memo Request Attributes for Soln Ord Prgrs			<input type="checkbox"/>	Disabled Enable Usage
SD_F1846_CMR_FS_SRV	Credit Memo Request Object Page			<input type="checkbox"/>	Disabled Enable Usage
SD_F2187_CUST360_SRV	Customer - 360° View: Credit Memo Requests			<input type="checkbox"/>	Disabled Enable Usage

On this tab, you can enable the usage of the specific custom field for UIs and reports. If you do not enable the usage, the custom field will not be available in these UIs and reports.

Email Templates:


General Information UIs and Reports (60) **Email Templates (1)** Form Templates (9) Business Scenarios (10) OData APIs (11) SOAP APIs (11) BAPIs (8) IDocs (0)

Email Templates 		
Description	Field Usage	
Sales Document Default Email Template	Enabled	Disable Usage

On this tab, you can enable the usage for email templates. If you do not enable the usage, the custom field will not be available in these email templates.

Form Templates:

General Information UIs and Reports (60) Email Templates (1) **Form Templates (9)** Business Scenarios (10) OData APIs (11) SOAP APIs (11) BAPIs (8) IDocs (0)

Form Templates 			
Data Source	Name	Description	Field Usage
SD_SLS_FDP_V1_CREDITMEMOREQ_SRV	SD_SLS_CREDIT_MEMO_REQUEST	Credit Memo Request PDF Output	Disabled Enable Usage
SD_SLS_FDP_V1_DEBITMEMOREQ_SRV	SD_SLS_DEBIT_MEMO_REQUEST	Debit Memo Request PDF Output	Disabled Enable Usage
FDP_V1_ORDER_CONFIRM_SRV	SD_SLS_CASH_SALE	Sales Cash Sale PDF Output	Disabled Enable Usage

On this tab, you can enable the usage of the specific custom field for form templates. This is necessary if you want to extend your custom forms with your custom fields. If you do not enable the usage, the custom field will not be available in these form templates.

Business Scenarios:

General Information	UIs and Reports (60)	Email Templates (1)	Form Templates (9)	Business Scenarios (10)	OData APIs (11)	More ▾
---------------------	----------------------	---------------------	--------------------	-------------------------	-----------------	--------

Scenarios Available for Business Context Sales: Sales Document (10)	
Description	Field Usage
> Billing Document to Sales Document on Header Level	Disabled Enable Usage
> Sales Document Header Level to Billing Due List	Disabled Enable Usage
> Sales Document to Billing Document from Header to Item Level	Disabled Enable Usage
> Sales Document to Billing Document on Header Level	Disabled Enable Usage
> Sales Document to Delivery on Header Level	Enabled Disable Usage

All Scenarios Selected for this Field (1)	
Description	Field Usage
> Sales Document to Delivery on Header Level	Enabled

On this tab, you can enable usage of the custom field for specific business scenarios. For instance, if you want the system to automatically copy your custom field from a sales document to a delivery document, you must configure that here.

Tip: If you enable a business scenario (for example, Sales Document to Delivery on Header Level), a new custom field is created for the Shipping: Delivery business context. You can find it in the list of custom fields and you can also configure the field in this business context.

SAP Custom Fields and Logic ▾					
Custom Fields	Data Source Extensions	Custom Logic			

Custom Fields (2)		package colour			
<input type="checkbox"/> Label	Identifier	Business Context	Type	Status	
<input type="checkbox"/> Package Colour	YY1_PackageColour	Shipping: Delivery	Text	Not Published	>
<input type="checkbox"/> Package Colour	YY1_PackageColour	Sales: Sales Document	Text	Not Published	>

You can find an overview of all available business scenarios for sales documents [here](#).

OData APIs:

General Information	UIs and Reports (60)	Email Templates (1)	Form Templates (9)	Business Scenarios (10)	OData APIs (11)	SOAP APIs (11)	BAPIs (8)	IDocs (0)
---------------------	----------------------	---------------------	--------------------	-------------------------	-----------------	----------------	-----------	-----------

OData APIs			
Description	Search Relevance	Field Usage	
Credit Memo Request (A2X)	<input type="checkbox"/>	Disabled	Enable Usage
Customer Return (A2X)	<input type="checkbox"/>	Disabled	Enable Usage
Debit Memo Request (A2X)	<input type="checkbox"/>	Disabled	Enable Usage
Remote API for SD Sales Inquiry	<input type="checkbox"/>	Disabled	Enable Usage
Sales Contract (A2X)	<input type="checkbox"/>	Disabled	Enable Usage
Sales Document with Credit Block - Read, Check, Release, Reject (A2X)	<input type="checkbox"/>	Disabled	Enable Usage
Sales Order (A2X)	<input type="checkbox"/>	Disabled	Enable Usage

On this tab, you can enable usage of the custom field for all the available OData APIs. If you do not enable the usage, the custom field will not be available in these OData APIs.

SOAP APIs

General Information UIs and Reports (60) Email Templates (1) Form Templates (9) Business Scenarios (10) OData APIs (11) SOAP APIs (11) BAPIs (8) IDocs (0)				
SOAP APIs				
Data Source	XML Namespace	Field Name	Field Usage	
> Service Interface: Description: CustomerReturnBulkRequest_In Customer Return (A2A)				
> Service Interface: Description: CustomerReturnBulkConfirmation_Out Customer Return - Confirm Processing (A2A)				
> Service Interface: Description: CustomerReturnBulkReplication_Out Customer Return - Replicate (A2A)				
> Service Interface: Description: SchedulingAgreementDeliverySchedule_In Delivery Schedule of Sales Scheduling Agreement -- Create, Update (B2B)				
> Service Interface: Description: SchedulingAgreementConsignmentIssue_In Request to Create Scheduling Agreement Consignment Issue				
Service Interface: Description: SalesOrderBulkRequest_In Sales Order (A2A)				
Operation: Message Direction: SalesOrderBulkRequest_In Request			Disabled	Enable Usage

On this tab, you can find and enable all the available SOAP APIs for the custom field.

Save and Publish the custom field

When you are done with your configuration, you must save and publish your custom field. If you do not publish it, it will be not available for the enabled usages. Publishing a custom field can take several minutes.

You can find more information about the *Custom Fields* app [here](#).

3.2 Adapting and Personalizing Apps

You can change an app in two ways:

- Key users can adapt the user interface (UI) for all users of an app (for example, a team lead can add a field that's then available for all team members).
- Business users can display fields that a key user has enabled in the *Custom Fields* app. These fields are included in their personalization options.

3.2.1 Adapting SAP Fiori UIs at Runtime - Key User Adaptation

You can find all the information on how to add a custom field to a Fiori UI [here](#).

Remember: This functionality is only available for key users. When a key user makes changes to the UI, these changes are automatically applied to the app for all business users.

3.2.2 Personalizing Apps

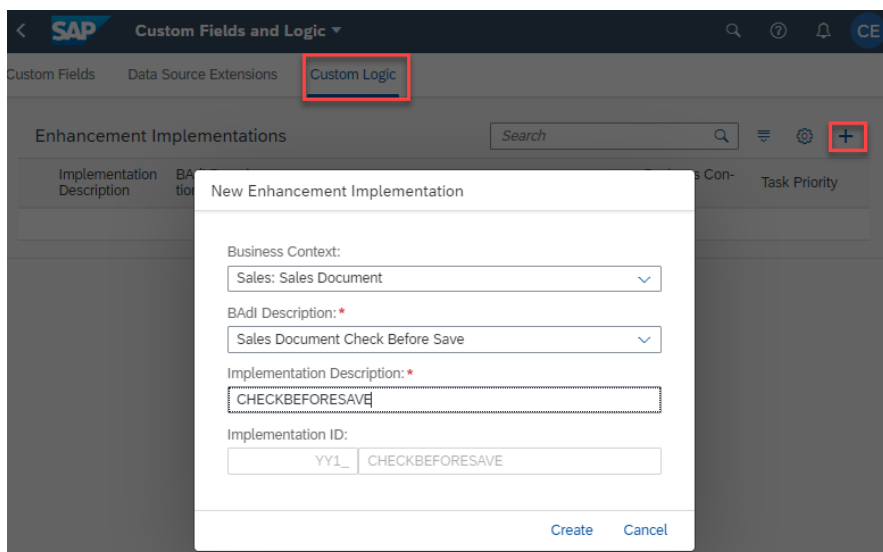
For some UI elements, like filter bars and table columns, you can personalize the settings and save them as a view. If you do so, you can later re-apply the same settings by simply selecting the view.

You can find more information [here](#).

3.3 Business Add-Ins (BAdIs)

If you want to implement a BAdI, you can do this in the *Custom Logic* app.

Click on the + button:



You can find some basic information about how to create BAdI implementations (that is, custom logic) [here](#).

You can find a list of BAdIs for Sales [here](#).

Information: For BAdI implementations, you can use ABAP for Key Users. You can find more information [here](#).

3.3.1 Debugging

You can check if a BAdI gets triggered and if your logic works with the *Custom Logic Tracing* app. You can find more information about the app [here](#).

3.4 Custom Reusable Elements

You can find more information about the *Custom Reusable Elements* app (which you can use, for example, for custom code lists) [here](#).

3.5 Output Forms

For a nice introduction to form management, you can watch the videos *Add Custom Fields to Form Templates for Billing Output (English Only)* provided [here](#).

You can find all information about Sales-specific output management, for example about predelivered templates or how to add custom or standard fields, [here](#).

3.6 APIs

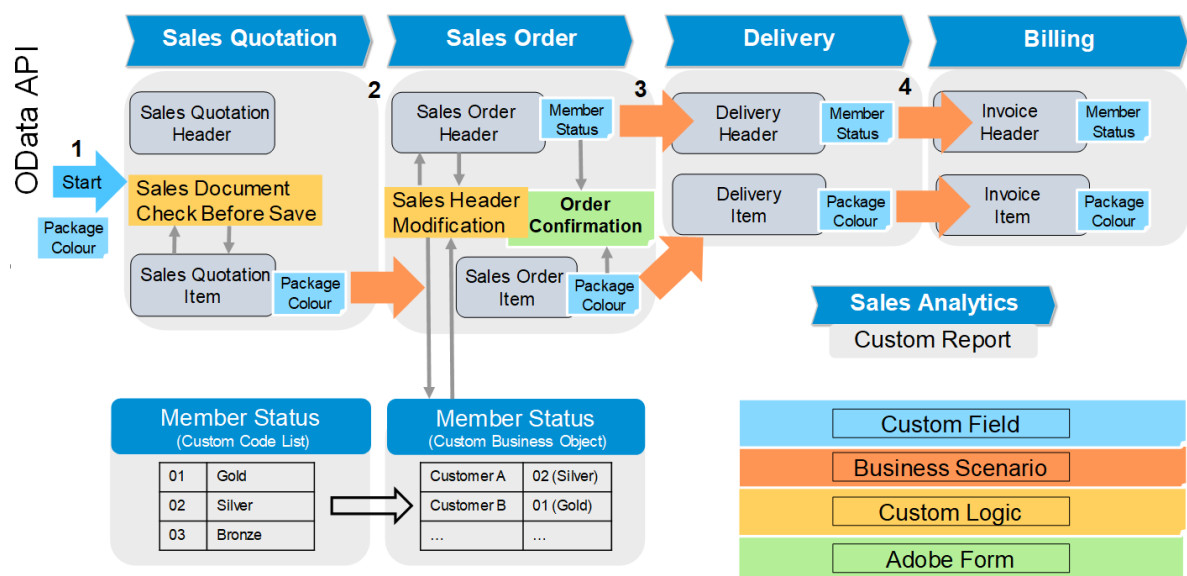
You can find all the APIs that are available for SAP S/4HANA Cloud [here](#). For more information about a specific API, check the *Business Documentation* link on the *Details* tab.

4 Example Scenarios

In this chapter, we will provide you with some example scenarios with a step-by-step description on how to implement them in your system. This should give you an overview about the key user extensibility functionalities of SAP S/4HANA Cloud in Sales.

4.1 Enhanced Sell-From-Stock Business Scenario

S/4HANA Cloud - Enhanced Sell From Stock Business Scenario



This scenario should give you an overview about some in-app extensibility features which can be used in the sell-from-stock scenario.

The following in-app extensibility features are used here:

- Custom fields
- Custom logic (BAdIs)
- Business scenarios
- Custom code lists
- Custom business objects
- Custom form templates
- Custom analytical reports

4.1.1 Scenario Description

In this scenario, we start with the creation of a sales quotation using the related OData API *Sales Quotation (A2X)*. In the SAP S/4HANA Cloud system, we continue with the creation of the subsequent sales order, outbound delivery, and billing document, and at the end we will have some custom analytical report.

For this scenario we will define two custom fields.

The first custom field is the package color of the product which is defined on item level. This field needs to be provided using the OData API. To ensure that the field is set, we will also implement the BAdI (custom logic) *Sales Document Check Before Save*. The package color will be copied into all subsequent documents.

The second custom field is for the member status of the customer on header level. We will create a custom business object to maintain the member status for customers. The different values for the status will be defined in a custom code list. The member status will be inserted in the sales order using the BAdI *Sales Header Modification* and it will also be copied into the delivery document and the billing document.

In this scenario, we will also create a custom form template for the order confirmation to print the created custom fields.

4.1.2 Prerequisites and Settings

4.1.2.1 Required Business Roles

For this scenario, business roles that are based on the following business role templates must be assigned to your user:

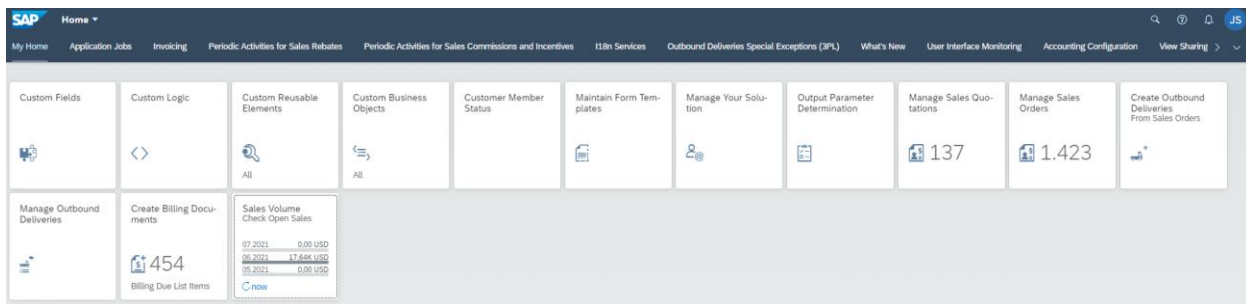
- SAP_BR_ADMINISTRATOR
- SAP_BR_INTERNAL_SALES_REP
- SAP_BR_BILLING_CLERK
- SAP_BR_SHIPPING_SPECIALIST

GENERAL			ASSIGNED BUSINESS ROLES	APPLICATION JOBS
Assigned Business Roles (5)			Add	Remove
<input type="checkbox"/>	Business Role	Business Role ID	Price Category	
<input type="checkbox"/>	Administrator	SAP_BR_ADMINISTRATOR	Advanced	
<input type="checkbox"/>	Billing Clerk	SAP_BR_BILLING_CLERK	Core	
<input type="checkbox"/>	Configuration Expert - Business Process Configuration	SAP_BR_BPC_EXPERT	Advanced	
<input type="checkbox"/>	Internal Sales Representative	SAP_BR_INTERNAL_SALES_REP	Advanced	
<input type="checkbox"/>	Shipping Specialist	SAP_BR_SHIPPING_SPECIALIST	Core	

4.1.2.2 Required Apps

The following apps are needed for this scenario:

- *Custom Fields*
- *Custom Logic*
- *Custom Reusable Elements*
- *Custom Business Objects*
- *Maintain Form Templates*
- *Output Parameter Determination*
- *Manage Sales Quotations*
- *Manage Sales Orders*
- *Create Outbound Deliveries – From Sales Orders*
- *Manage Outbound Deliveries*
- *Create Billing Documents*
- *Sales Volume - Check Open Sales*



4.1.2.3 Configuration Environment

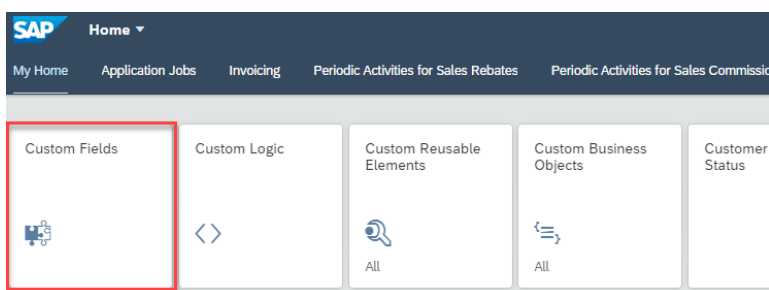
For this scenario you need to have access to your configuration environment. You can find more information about configuration environments [here](#). If your system is not connected to SAP Central Business Configuration, you may need in addition business role template SAP_BR_BPC_EXPERT assigned to your user and also *Manage Your Solution* app

4.1.2.4 Custom Fields

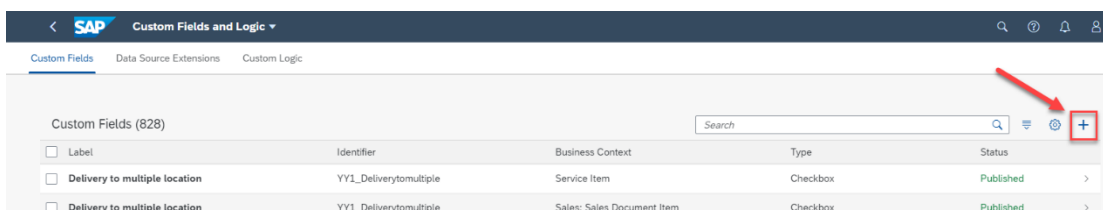
For this scenario, two custom fields are required: the custom field for member status on sales document level and the custom field for package color on sales document item level.

Create Member Status Custom Field

Open the *Custom Fields* app:



Click on the + button to create a new field:



Enter the field properties as below:

To make the field available in the apps and APIs which are used in this scenario, enable the usage for this specific custom field as follows:

- UI and Reports
 - SD_SALESDOC_GUI (*Create, Change, or Display Sales Documents (Header)*)
 - SD_F1873_SO_WL_SRV (*Manage Sales Orders*)
 - C_SALESORDERMANAGE (*Process Sales Orders*)
 - SD_F1814_SO_FS_SRV (*Sales Order Object Page*)
- Form Template
 - FDP_V1_ORDER_CONFIRM_SRV (*Sales Order Confirmation PDF Output*)
- Business Scenarios
 - *Sales Document to Delivery on Header Level*

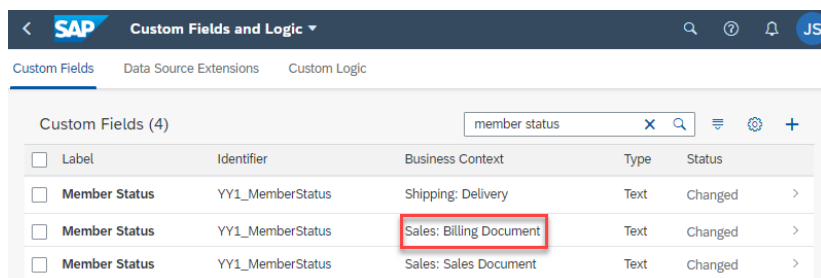
After saving these settings, the custom field will automatically be created also in the *Shipping: Delivery* business context:

Label	Identifier	Business Context	Type	Status
<input type="checkbox"/> Member Status	YY1_MemberStatus	Shipping: Delivery	Text	Changed
<input type="checkbox"/> Member Status	YY1_MemberStatus	Sales: Sales Document	Text	Changed

Settings for *Shipping: Delivery* business context:

- UI and Reports
 - LE_SHP_OUTBOUND_DELIVERY_FS (*Outbound Delivery*)
- Business Scenarios
 - *Delivery to Billing Document on Header Level*

After saving these settings, the custom field will automatically be created also in the *Sales: Billing Document* business context:



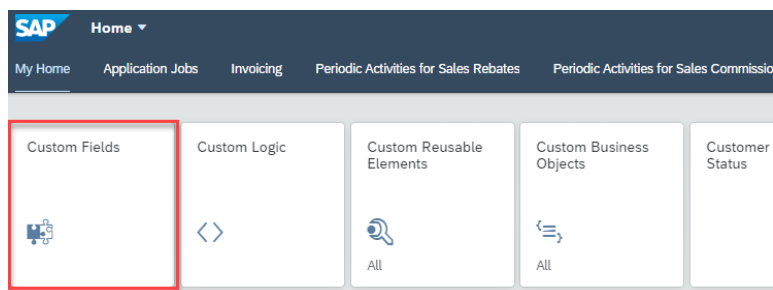
Label	Identifier	Business Context	Type	Status
Member Status	YY1_MemberStatus	Shipping: Delivery	Text	Changed
Member Status	YY1_MemberStatus	Sales: Billing Document	Text	Changed
Member Status	YY1_MemberStatus	Sales: Sales Document	Text	Changed

Settings for *Sales: Billing Document* business context:

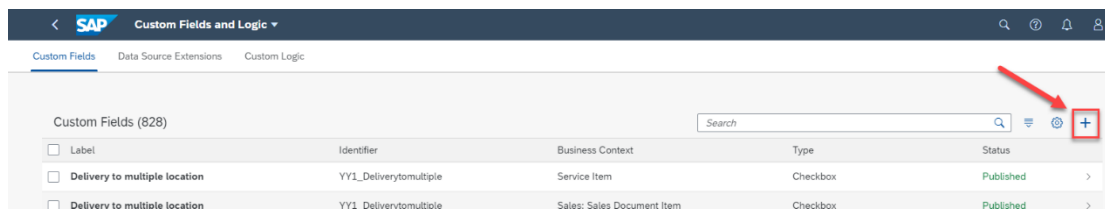
- UI and Reports
 - o SD_CUSTOMER_INVOICES_MANAGE (*Manage Billing Documents*)
 - o C_BILLINGDOCUMENTSFS (*Billing Document Object Page*)
- Save and publish your custom field.

Create Package Color Custom Field

Open the *Custom Fields* app:



Click on the + button to create a new field:



Label	Identifier	Business Context	Type	Status
Delivery to multiple location	YY1_Deliverytomultiple	Service Item	Checkbox	Published
Delivery to multiple location	YY1_Deliverytomultiple	Sales: Sales Document Item	Checkbox	Published

Enter the field properties as below:

New Field

Field Properties

Business Context: Sales: Sales Document Item

Label: Package Colour

Identifier: YY1_ PackageColour

Tooltip: Package Colour

Type: Text

Length: 10

Business Context Capacity: 57%

Create Create and Edit Cancel

To make the field available in the apps and APIs which are used in this scenario, enable the usage for this specific custom field as follows:

- UI and Reports
 - o SD_SALESDOCITEM_GUI (*Create, Change, or Display Sales Documents (Item)*)
 - o C_SALESORDERITEMMANAGE (*Process Sales Orders*)
 - o SD_F1871_QUOT_FS_SRV (*Sales Quotation Object Page*)
 - o C_SALESANALYTICSQRY_1 (*Sales Volume and Open Sales – Query*)
- Form Template
 - o FDP_V1_ORDER_CONFIRM_SRV (*Sales Order Confirmation PDF Output*)
- Business Scenarios
 - o *Sales Document to Delivery on Header Level*
- OData APIs
 - o API_SALES_QUOTATION_SRV (*Sales Quotation (A2X)*)

After saving these settings, the custom field will automatically be created also in the *Shipping: Delivery Item* business context.

Settings for “Shipping: Delivery Item” business context:

- UI and Reports
 - o LE_SHP_OUTBOUND_DELIVERY_FS (*Outbound Delivery*)
- Business Scenarios
 - o *Delivery to Billing Document on Item Level*

After saving these settings, the custom field will automatically be created also in the *Sales: Billing Document Item* business context.

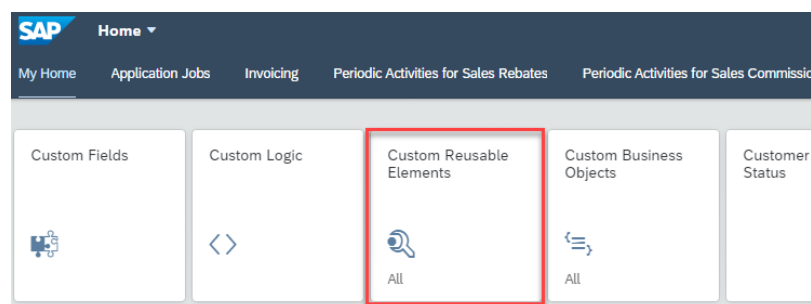
Settings for “Sales: Billing Document Item” business context:

- UI and Reports
 - o SD_CUSTOMER_INVOICES_MANAGE (*Manage Billing Documents*)
 - o C_BILLINGDOCUMENTITEMFS (*Billing Document Item Object Page*)

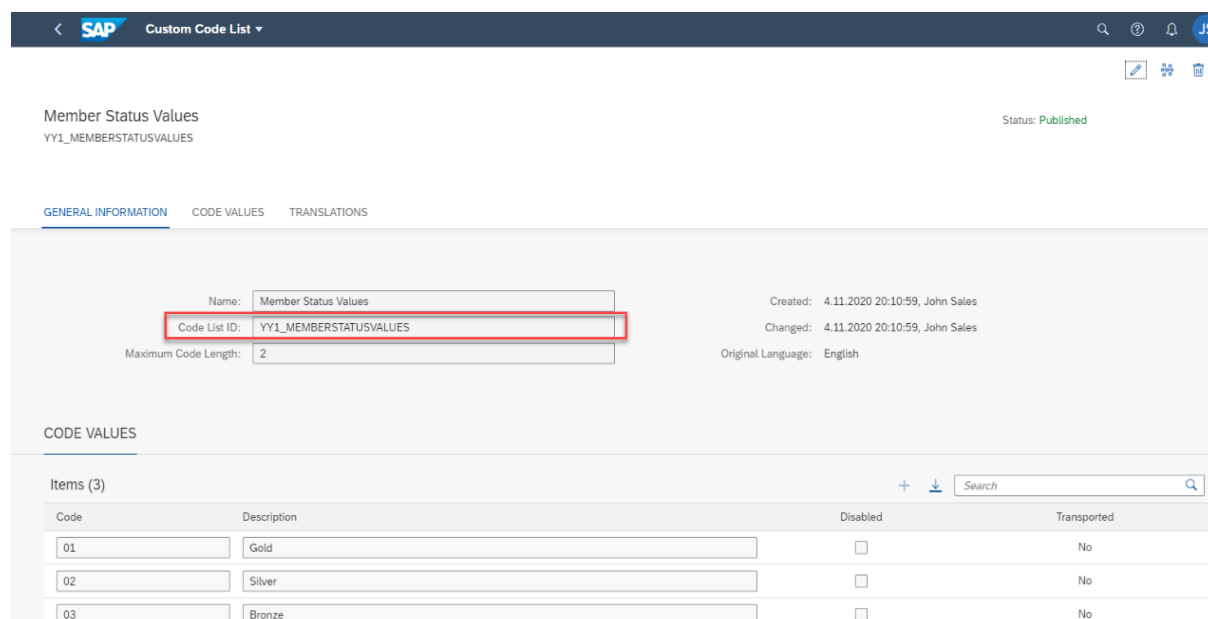
4.1.2.5 Custom Code List

A code list contains a list of values and descriptions and is used, for example, to provide dropdown lists on UIs. In this scenario, we create a custom code list with the available statuses for customers.

Open the *Custom Reusable Elements* app:



Create a new custom code list with the following values:

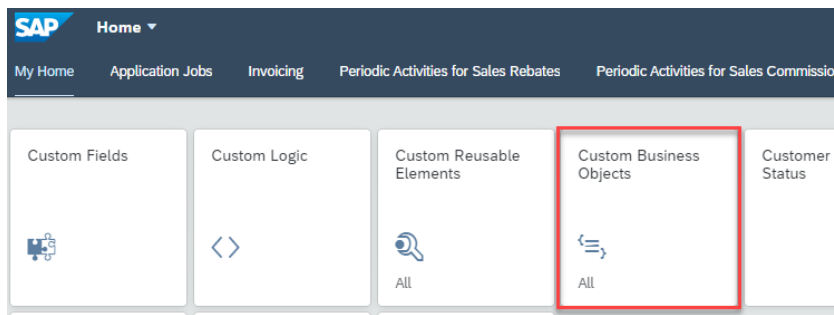


The code list ID will be used in the next section to establish a connection to the custom business objects.

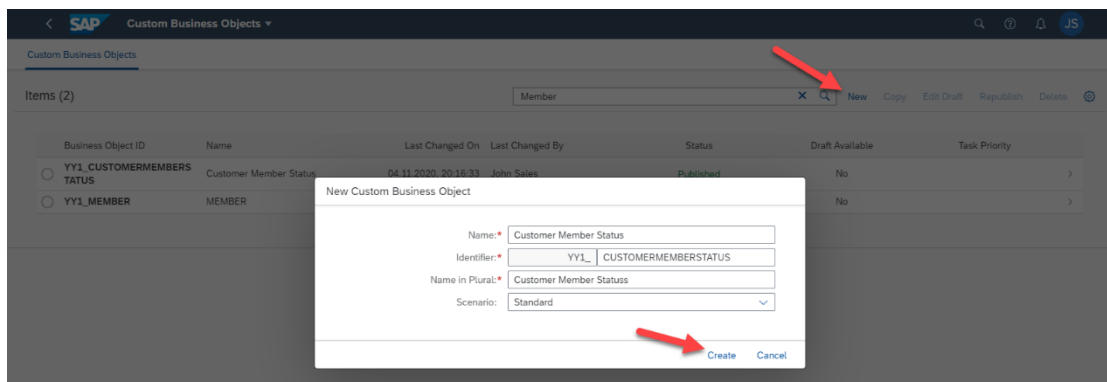
4.1.2.6 Custom Business Object

Custom business objects represent custom tables that are used to store customer-specific information. In this scenario, we create a custom business object to maintain the member status of customers.

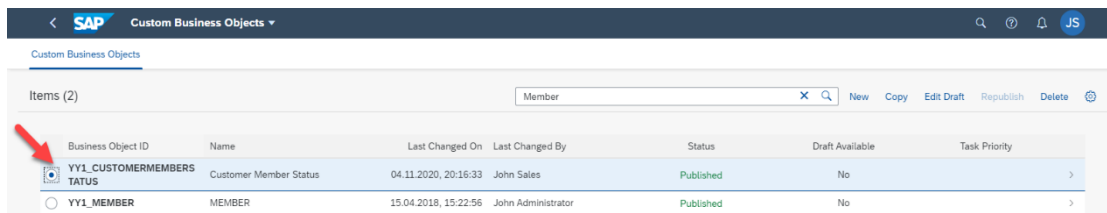
Open the *Custom Business Objects* app:



Create a new custom business object by clicking on *New*:



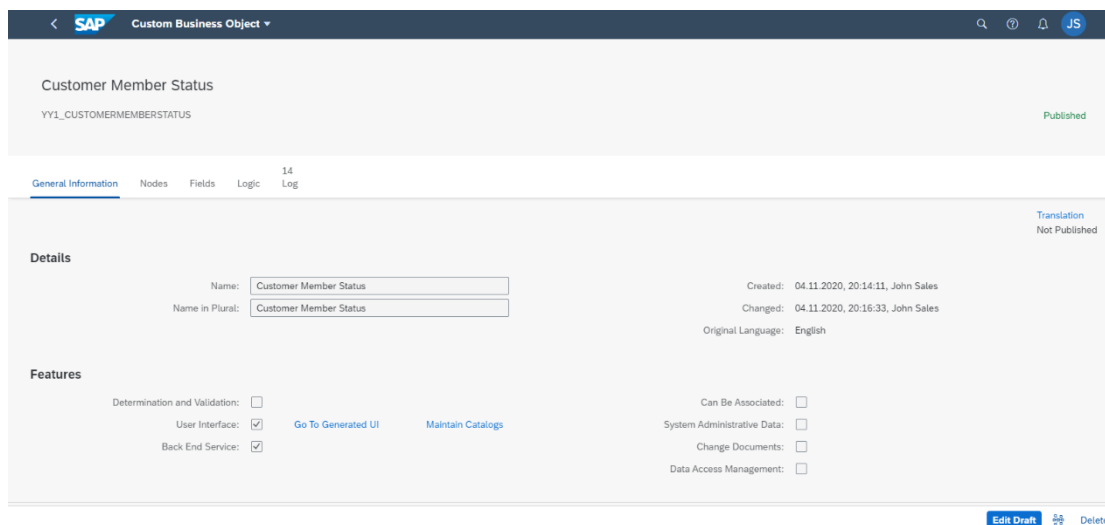
After creation, you can find the custom business object in the items list:



Click on the custom business object to edit the details.

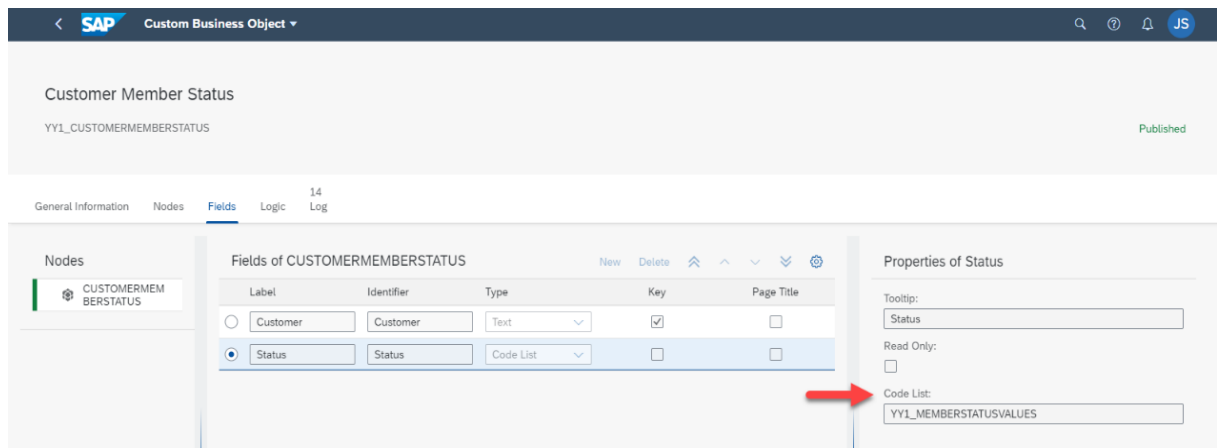
General Information

On this tab, you can see the details and features of the custom business object. For this scenario, we need to select the *User Interface* checkbox which will automatically create a UI for our custom business object.



In this scenario, we use only one node. In principle, it is possible to have multiple nodes in a business object.

Fields



Log

On this tab, you can check the steps for generating the new customer business object.

Customer Member Status
YY1_CUSTOMERMEMBERSTATUS

Published

General Information Nodes Fields Logic 14 Log

Severity	Description
Success	Publishing of business object YY1_CUSTOMERMEMBERSTATUS started.
Information	Generation of runtime object names started for business object YY1_CUSTOMERMEMBERSTATUS.
Information	Generation of data elements started for business object YY1_CUSTOMERMEMBERSTATUS.
Information	Generation of tables started for business object YY1_CUSTOMERMEMBERSTATUS.
Information	Generation of CDS views started.
Information	Generation of Metadata Extensions started for business object YY1_CUSTOMERMEMBERSTATUS.
Information	Generation of key started for business object YY1_CUSTOMERMEMBERSTATUS.
Information	Generation of business logic started for business object YY1_CUSTOMERMEMBERSTATUS.

Maintain CBO entries

After saving, you will find a link to the generated UI on the *General* tab of the custom business object:

Features

Determination and Validation: ☐

User Interface: ☒ [Go To Generated UI](#) [Maintain Catalogs](#)

Back End Service: ☒

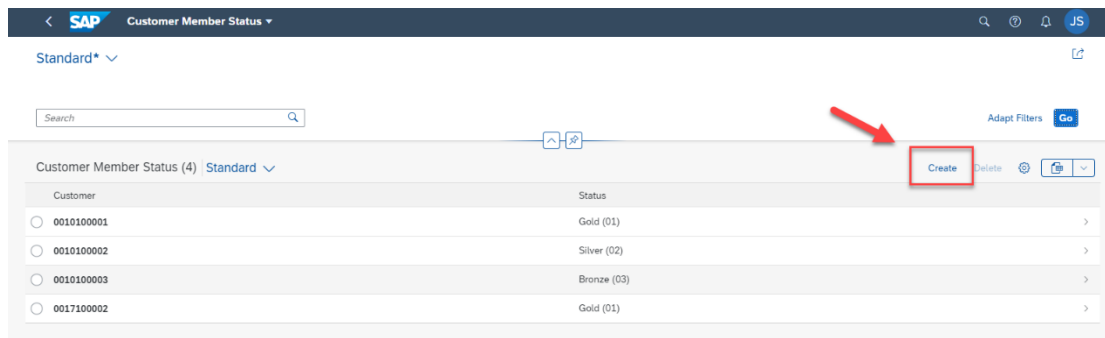
Can Be Associated: ☐

System Administrative Data: ☐

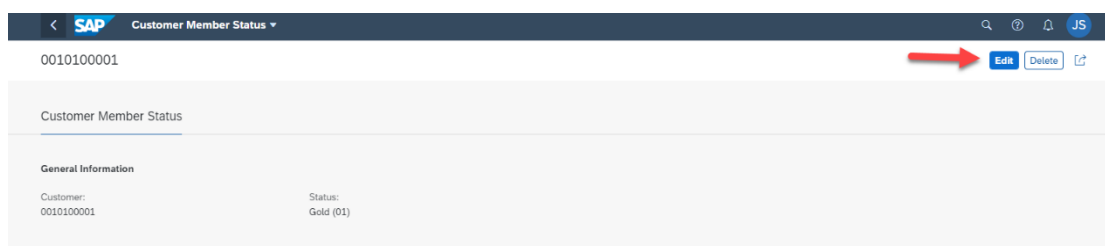
Change Documents: ☐

Data Access Management: ☐

On the newly generated UI, you can maintain records for your custom business object:



You can also edit the existing entries:

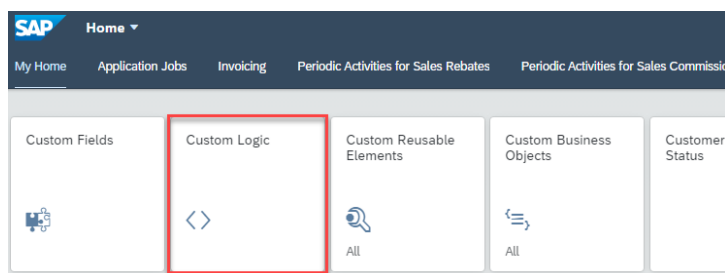


4.1.2.7 Create BAdI implementations

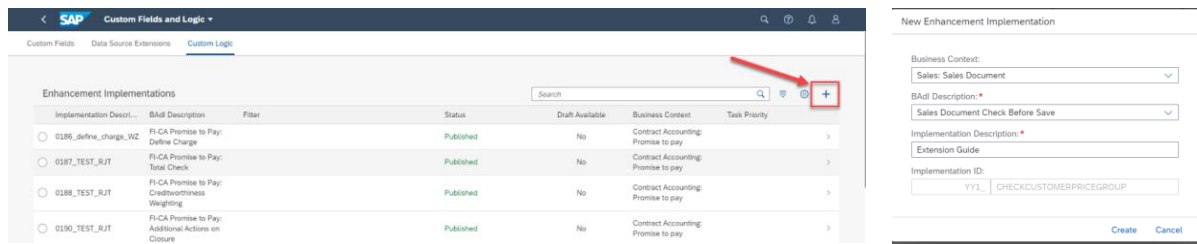
Sales Document Check Before Save

This BAdI implementation is used to make the custom field *Package Color* a mandatory field in a sales quotation. If there is no value maintained for the package color, an error message should be raised which prevents the document from being saved.

Open the *Custom Logic* app:



Create a new implementation of the BAdI.



Tip: It is not allowed to have multiple implementations of the Sales Document Check Before Save BAdI. In case there already is an implementation, you need to add the code to the existing coding.

Create a draft version and copy/paste the example implementation from below:

```

if salesdocument-salesdocumenttype = 'AG' and salesdocument-purchaseorderbycustomer = 'Sales Demo'.
  loop at salesdocumentitems_extension into data(ls_item).
    if ls_item-yy1_packagecolour_sdi is initial.
      append value #( message = 'E' message_text = 'Document cannot be saved. Please maintain a package color for each item.' ) to messages.
    endif.
  endloop.
endif.

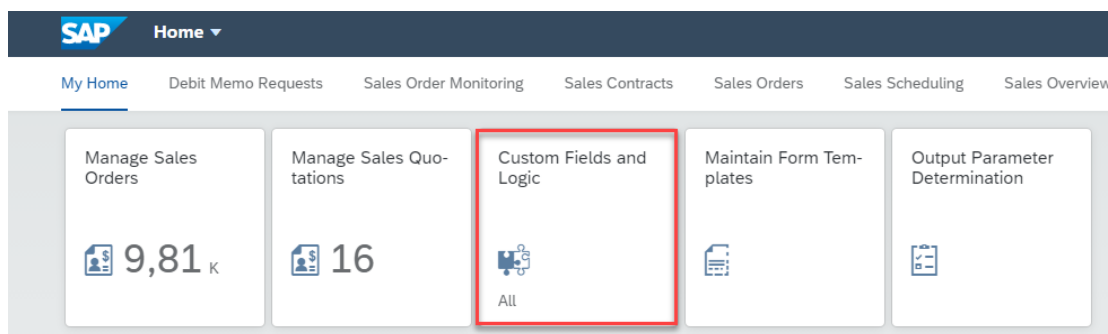
```

Save your draft and publish the custom logic.

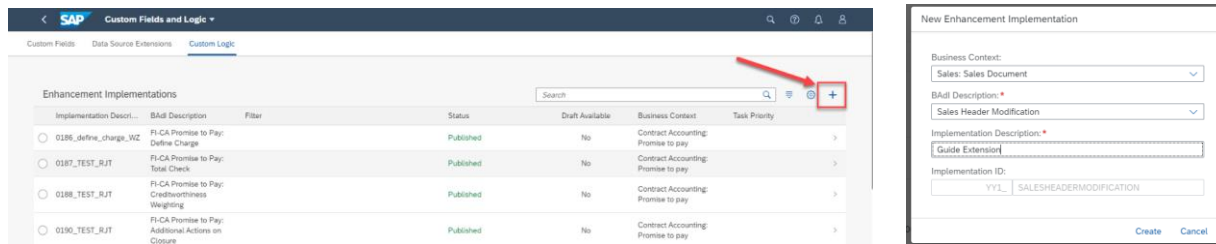
Sales Header Modification

This BAdI implementation is used to read the member status of the customer and populate the custom field *Member Status* in the sales order header.

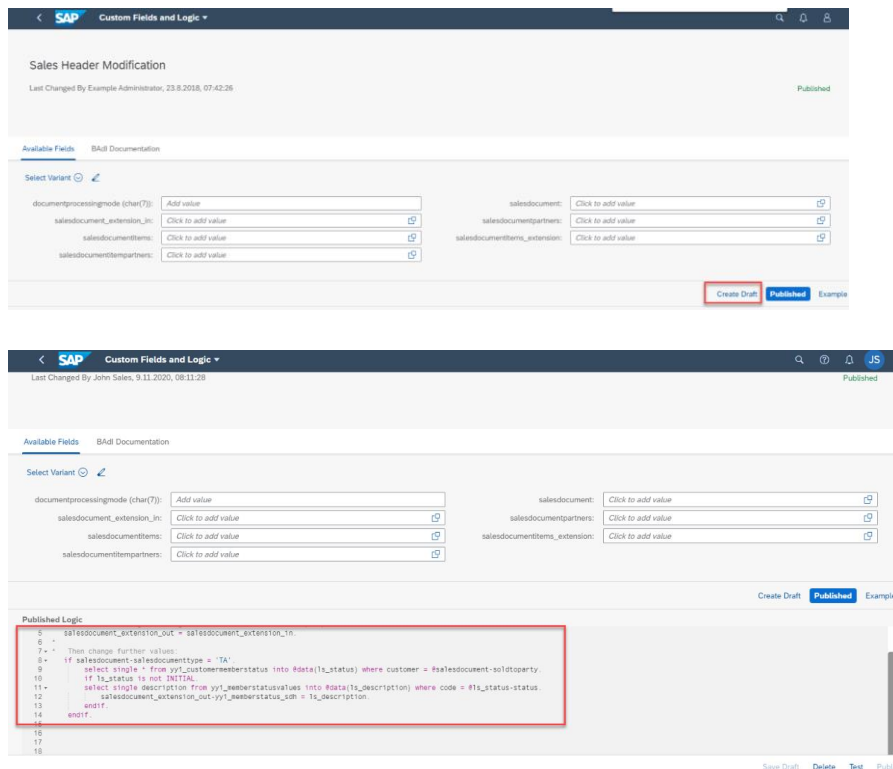
Open the *Custom Logic* app:



Create a new implementation or, in case there already is an implementation, adjust the existing one:



Create a draft version and copy/paste the example implementation from below:



Example Implementation:

```

salesdocument_extension_out = salesdocument_extension_in.
if salesdocument-salesdocumenttype = 'TA'.
  select single * from yy1_customerstatus into @data(ls_status) where customer = @salesdocument-soldtoparty.
  if ls_status is not INITIAL.
    select single description from yy1_memberstatusvalues into @data(ls_description) where code = @ls_status-status.
    salesdocument_extension_out-yy1_memberstatus_sdh = ls_description.
  endif.
endif.
endif.

```

Save your draft and publish the custom logic.

4.1.2.8 Adjust UIs

We use a lot of UIs in this example. In this section, we focus on adjusting the sales order apps. The other apps for delivery and billing need to be adjusted accordingly.

Manage Sales Orders App

Open the *Manage Sales Orders* app and click on *Adapt Filters*:

The screenshot shows the SAP Manage Sales Orders app interface. At the top, there's a header bar with the SAP logo and the title 'Manage Sales Orders'. Below the header, there's a search bar and several filter fields: Sales Order, Sold-to Party, Customer Reference, Requested Delivery Date, Overall Status, and Document Date. A red arrow points to the 'Adapt Filters' button, which is located next to the 'Overall Status' filter. Below the filters, there's a table with columns: Sales Order, Sold-to Party, Customer Reference, Requested Delivery Date, Overall Status, Net Value, Document Date, and Member Status. The table is currently empty, and the text 'To start, set the relevant filters.' is displayed below the columns.

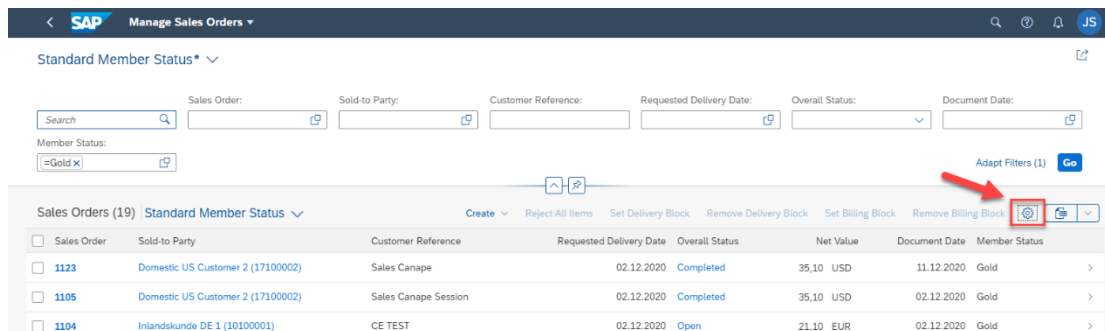
Search for the custom field *Member Status*, select it, and click *OK*:

The screenshot shows the 'Adapt Filters' dialog box. It has a search bar at the top with the text 'Search for filters'. Below the search bar, there's a list of filter fields with checkboxes: Legal Control Status, MaxAttendees, Member Status (checked), MinAttendees, Net Value, Order Reason, and Order Type. The 'Member Status' field is highlighted with a red box. At the bottom of the dialog, there are 'OK' and 'Cancel' buttons.

The field is now available in the filter bar:

The screenshot shows the SAP Manage Sales Orders app interface after the 'Member Status' field has been added to the filter bar. The 'Adapt Filters' button is now labeled 'Adapt Filters (1)'. Below the filter fields, there's a table with columns: Sales Order, Sold-to Party, Customer Reference, Requested Delivery Date, Overall Status, Net Value, Document Date, and Member Status. The table now contains one row with the following data: Sales Order 1123, Sold-to Party Domestic US Customer 2 (17100002), Customer Reference Sales Canape, Requested Delivery Date 02.12.2020, Overall Status Completed, Net Value 35,10 USD, Document Date 11.12.2020, and Member Status Gold. The 'Member Status' field is highlighted with a red box.

To show the field in the sales orders list, you need to click on the cogwheel next to the sales orders list:



Standard Member Status* ▾

Search Sales Order: Sold-to Party: Customer Reference: Requested Delivery Date: Overall Status: Document Date:

Member Status:

<input type="checkbox"/>	Sales Order	Sold-to Party	Customer Reference	Requested Delivery Date	Overall Status	Net Value	Document Date	Member Status
<input type="checkbox"/>	1123	Domestic US Customer 2 (17100002)	Sales Canape	02.12.2020	Completed	35,10 USD	11.12.2020	Gold
<input type="checkbox"/>	1105	Domestic US Customer 2 (17100002)	Sales Canape Session	02.12.2020	Completed	35,10 USD	02.12.2020	Gold
<input type="checkbox"/>	1104	Inlandskunde DE 1 (10100001)	CE TEST	02.12.2020	Open	21,10 EUR	02.12.2020	Gold

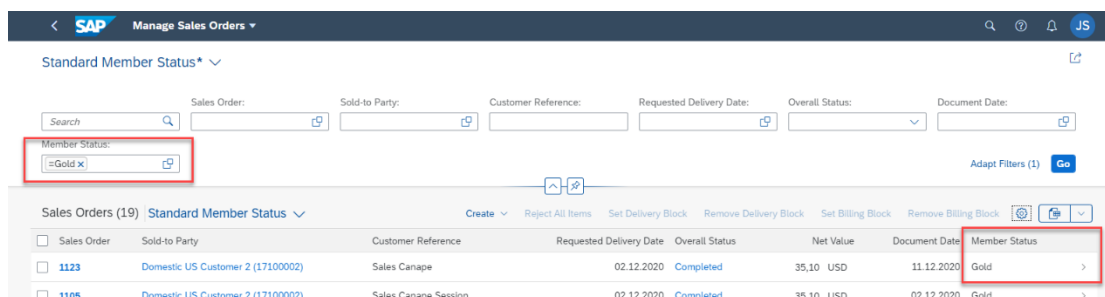
Search for the *Member Status* and select it:

View Settings

Columns	Sort	Filter	Group
<input type="checkbox"/> Select All (8/37)		<input type="text" value="Search"/>	<input type="button" value="Show Selected"/> <input type="button" value="Up"/> <input type="button" value="Down"/>
<input checked="" type="checkbox"/> Sales Order			
<input checked="" type="checkbox"/> Sold-to Party			
<input checked="" type="checkbox"/> Customer Reference			
<input checked="" type="checkbox"/> Requested Delivery Date			
<input checked="" type="checkbox"/> Overall Status			
<input checked="" type="checkbox"/> Net Value			
<input checked="" type="checkbox"/> Document Date			
<input checked="" type="checkbox"/> Member Status			

Tip: You can also sort, filter, and group using your custom field here.

The field is now available in the sales order filter bar and the sales orders list:



Standard Member Status* ▾

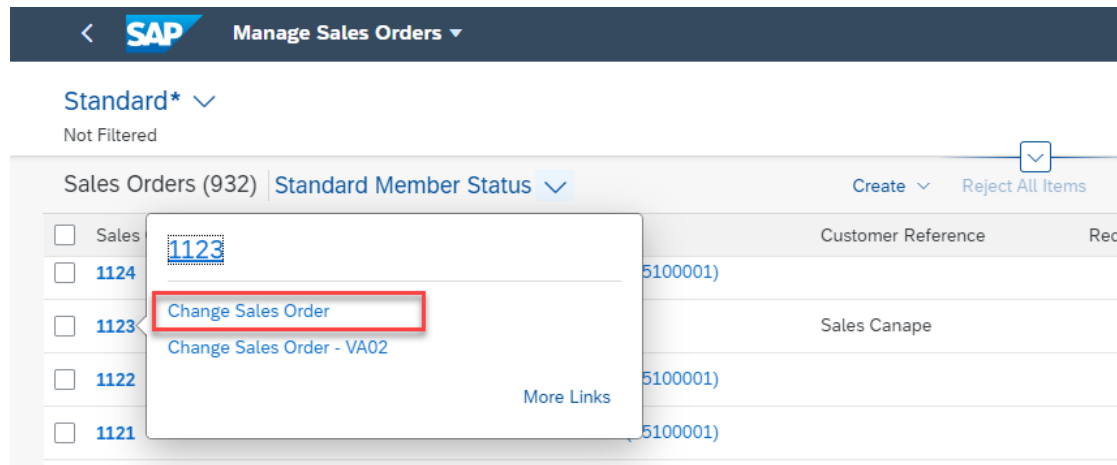
Search Sales Order: Sold-to Party: Customer Reference: Requested Delivery Date: Overall Status: Document Date:

Member Status:

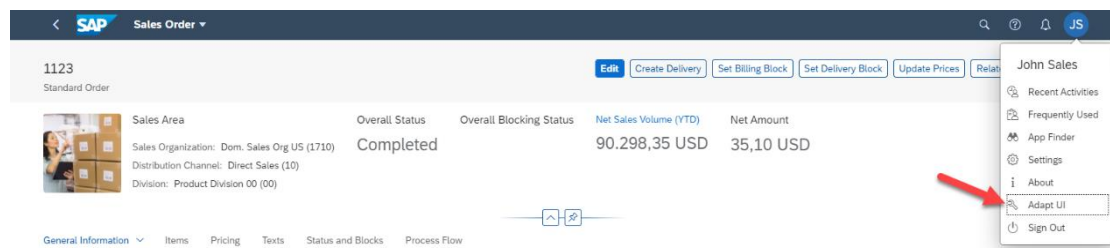
<input type="checkbox"/>	Sales Order	Sold-to Party	Customer Reference	Requested Delivery Date	Overall Status	Net Value	Document Date	Member Status
<input type="checkbox"/>	1123	Domestic US Customer 2 (17100002)	Sales Canape	02.12.2020	Completed	35,10 USD	11.12.2020	Gold
<input type="checkbox"/>	1105	Domestic US Customer 2 (17100002)	Sales Canape Session	02.12.2020	Completed	35,10 USD	02.12.2020	Gold

Change Sales Order

Navigate to the *Process Sales Orders* app by choosing the *Change Sales Order* link in the *Manage Sales Orders* app. This is the app we want to extend with the custom field.



Click on the user icon and select *Adapt UI* to activate the runtime adaptation mode:



Right-click on the space where you want to add the custom field. Click on the “+” button and select the *Member Status* field:

1123
Standard Order

Sales Area
Sales Organization: Dom. Sales Org US (1710)
Distribution Channel: Direct Sales (10)
Division: Product Division 00 (00)

Overall Status
Completed

Overall Blocking Status

General Information ▾ Items Pricing Texts Status and Blocks Process Flow

Basic Data

Order Data

Available Content: Fields

Search

- ☐ Document Currency
- ☐ Incompletion Status (Header)
- ☐ Incompletion Status (Items)
- ☐ Incoterms
- ☐ Incoterms Location 1
- ☐ Incoterms Location 2
- ☐ Incoterms Version
- ☐ Last Changed By
- ☐ Last Changed On
- ☒ Member Status
- ☐ Net Value
- ☐ Order Type

OK Cancel

Sold-to Party: Domestic US Customer 2 (17100002)
Customer Reference: Sales Canape
Requested Delivery Date: 02.12.2020

Order Reason:
Customer Group: Customer Group 01 (01)
Shipping Conditions: Standard (01)

Tip: After adding the field to the UI, you can adjust the position of the field via drag and drop.

The *Member Status* field is now available in the *Order Data* area of the sales order.

1123
Standard Order

Buttons: Edit, Create Delivery, Set Billing Block, Set Delivery Block, Update Prices, Related App, **Save & Exit** (highlighted with a red arrow)

Sales Area: Sales Organization: Dom. Sales Org US (1710), Distribution Channel: Direct Sales (10), Division: Product Division 00 (00)

Overall Status: Completed

Net Sales Volume (YTD): 90.298,35 USD

Net Amount: 35,10 USD

General Information | Items | Pricing | Texts | Status and Blocks | Process Flow

Basic Data

Order Data

Member Status: Gold

Sold-to Party: Domestic US Customer 2 (17100002)

Customer Reference: Sales Canape

Requested Delivery Date: 02.12.2020

Document Date: 11.12.2020

Order Reason:

Customer Group: Customer Group 01 (01)

Shipping Conditions: Standard (01)

Ship-To Party Data

Ship-To Party: Domestic US Customer 2 (17100002)

Street: N 4th Ave

House Number: 15

Postal Code: 91910-1007

Country/Region Key: USA (US)

Correspondence Language: English (EN)

Tax Jurisdiction: CA00000000

Transportation Zone: Region West (0000000002)

4.1.2.9 Set Up Form Management

In this scenario, we want to print the two custom fields *Customer Member Status* and *Package Color* in our order confirmation. Please watch the videos linked from the [Output Forms](#) section to get an overview how to adjust form templates.

Create a Custom Form Template

First, we need to create a custom form template. Therefore, we need to open the *Maintain Form Templates* app. We will download the already existing form template for order confirmations and do some adjustments. Go to the *Predelivered Templates* tab and search for the order confirmation template:

Maintain Form Templates

Standard * ▾

Form Template Name: Description: Data Source: Available Languages: Available Countries:

Form Template Name: Description: Data Source: Available Languages: Available Countries:

Custom Templates **Predelivered Templates**

Predelivered Templates (15)

Form Template Name	Description	Data Source	Available Languages	Available Countries	Form Type
PP_MOR_COMPONENT_LIST	Manufacturing Order Component List	FDP_PP_MOR_DATA_LIST_SRV	ZH, TH, KO, RO, MS, AR, CS, DE, EN, FR, HU, IT, JA, DA, PL, ZF, NL, NO, PT, SK, RU, ES, TR, FI, SV		Standalone
PP_MOR_DATA_LIST	Manufacturing Order Data List	FDP_PP_MOR_DATA_LIST_SRV	ZH, TH, KO, RO, MS, AR, CS, DE, EN, FR, HU, IT, JA, DA, PL, ZF, NL, NO, PT, SK, RU, ES, TR, FI, SV		Standalone
PP_MOR_PICK_LIST	Manufacturing Order Pick List	FDP_PP_MOR_PICK_LIST_SRV	ZH, TH, KO, RO, MS, AR, CS, DE, EN, FR, HU, IT, JA, DA, PL, ZF, NL, NO, PT, SK, RU, ES, TR, FI, SV		Standalone

Maintain Form Templates

Standard ▾

Form Template Name: Description: Data Source: Available Languages: Available Countries: Hide Filter Bar Filters (1) Go

<input type="radio"/> FIN_FO_PAYM_BORDERO_B_R	Bordero Form Brazil	FDP_FFQ_PAYM_BORDERO_BK_S_RV	EN	Content >
<input type="radio"/> FIN_FO_PAYM_BORDERO_B_R_ACCSHT	Bordero Form Brazil	FDP_FFO_PAYM_BORDERO_BR_A_CCSHT_SRV	DE, EN, FR, IT, PT, ES	Content >
<input type="radio"/> MMIM_GRORD_IND_SLIP	Goods Receipt for Order Individual Slip	FDP_GR_ORD_IND_SLIP_SRV	ZH, TH, KO, RO, MS, AR, CS, DE, EN, FR, HU, IT, JA, DA, PL, ZF, NL, NO, PT, SK, RU, ES, TR, FI, SV	Content >
<input type="radio"/> MMIM_GRORD_IND_SLIPT	Goods Receipt for Order Individual Slip with Inspection Text	FDP_GR_ORD_IND_SLIP_SRV	ZH, TH, KO, RO, MS, AR, CS, DE, EN, FR, HU, IT, JA, DA, PL, ZF, NL, NO, PT, SK, RU, ES, TR, FI, SV	Content >
<input type="radio"/> MM_PUR_PURCHASE_ORDER_R	Form Template Purchase Order	FDP_EF_PURCHASE_ORDER_SRV	ZH, TH, KO, RO, MS, AR, CS, DE, EN, FR, HU, IT, JA, DA, PL, ZF, NL, NO, PT, SK, RU, ES, TR, FI, SV	Content >
<input type="radio"/> MM_PUR_PURCHASE_ORDER_R_AE	Form Template Purchase Order (UAE)	FDP_EF_PURCHASE_ORDER_GLO_MENA_SRV	AR, EN	AE Content >
<input type="radio"/> MM_PUR_PURCHASE_ORDER_R_IN	Form Template Purchase Order for India GST	FDP_EF_PURCHASE_ORDER_GLO_IN_SRV	EN	IN Content >
<input type="radio"/> MM_PUR_PURCHASE_ORDER_R_SA	Form Template Purchase Order (KSA)	FDP_EF_PURCHASE_ORDER_GLO_MENA_SRV	AR, EN	SA Content >
<input checked="" type="radio"/> SD_SLS_ORDER_CONFIRM	Sales Order Confirmation PDF Output	FDP_V1_ORDER_CONFIRM_SRV	ZH, TH, KO, RO, MS, AR, CS, DE, EN, FR, HU, IT, JA, DA, PL, ZF, NL, NO, PT, SK, RU, ES, TR, FI, SV	Content >

Select SD_SLS_ORDER_CONFIRM to get to the details view of that form template. Here you can download the template.

SAP Maintain Form Templates

SD_SLS_ORDER_CONFIRM
Sales Order Confirmation PDF Output

Details

Form Template Name: SD_SLS_ORDER_CONFIRM
Description: Sales Order Confirmation PDF Output
Data Source: FDP_V1_ORDER_CONFIRM_SRV
Form Type: Content

Created by: SAP
Created on: 23.5.2015, 19:37:10
Changed by: SAP
Changed on: 11.5.2020, 14:11:31
Original Language: EN
Original Language: [Download](#)

Available Countries:

Available Translations

SD_SLS_ORDER_CONFIRM
Sales Order Confirmation PDF Output
FDP_V1_ORDER_CONFIRM_SRV
Content

Created by: SAP
Created on: 23.5.2015, 19:37:10
Changed by: SAP
Changed on: 11.5.2020, 14:11:31

Download Template SD_SLS_ORDER_CONFIRM (EN)

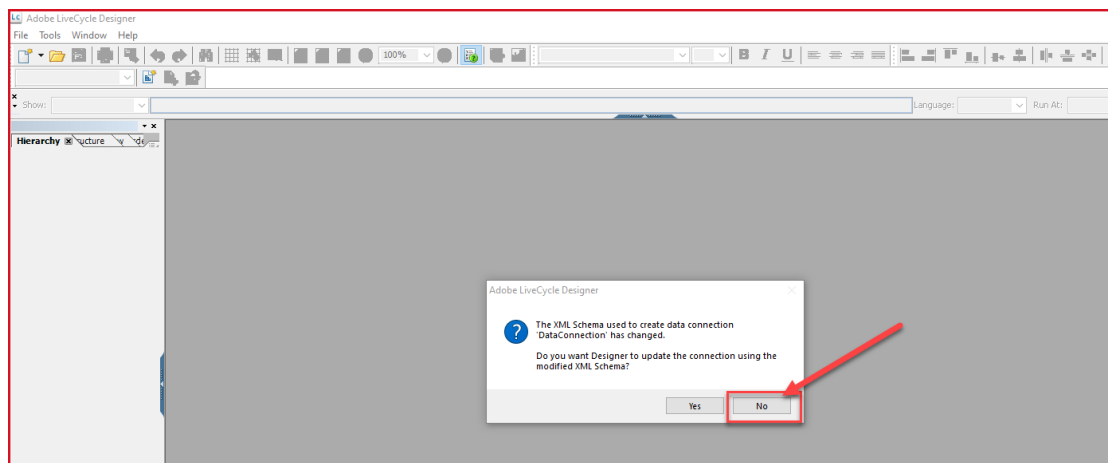
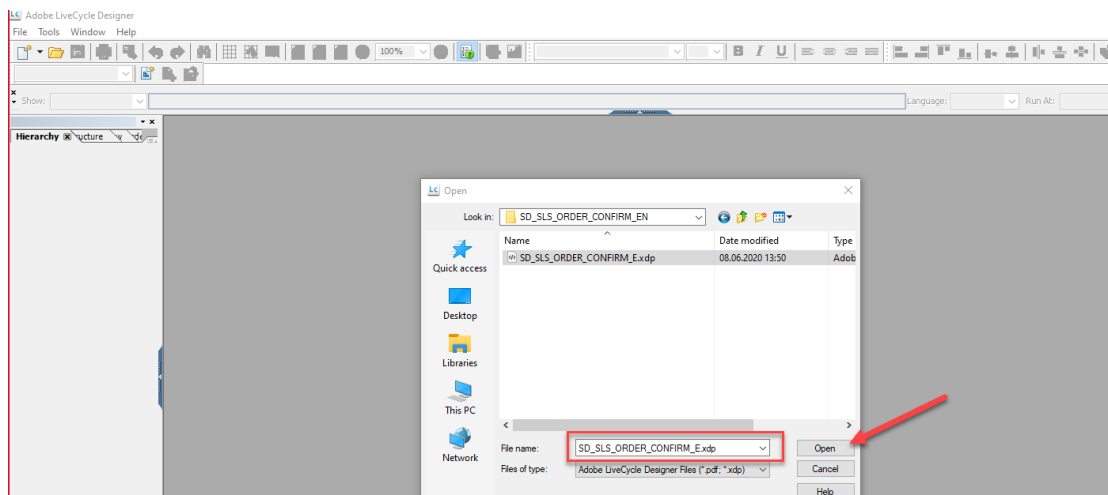
Select Form Template Master:
SOMU_FORM_MASTER_A4

☒ Download without Form Template Master

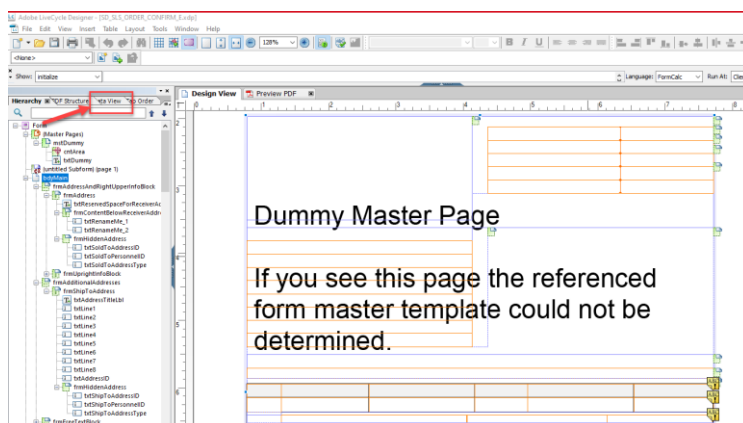
OK Cancel

Download the file from the system and save it locally.

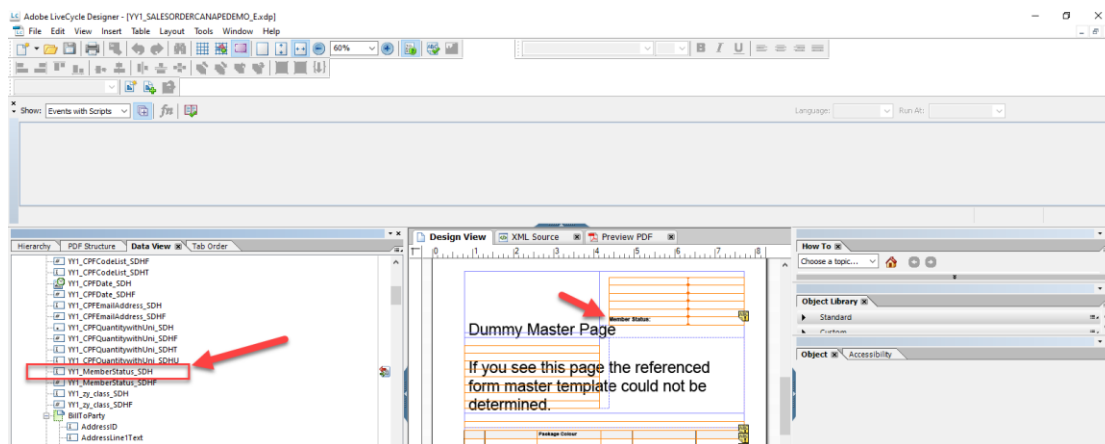
In Adobe LiveCycle Designer, open the downloaded file.



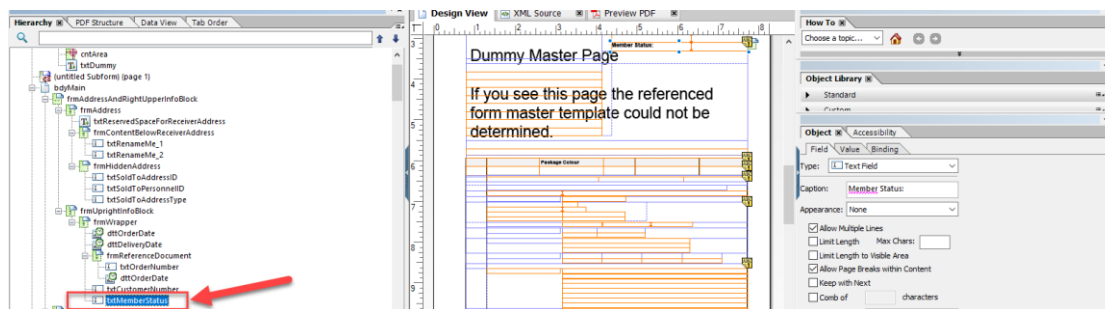
Go to *Data View*.



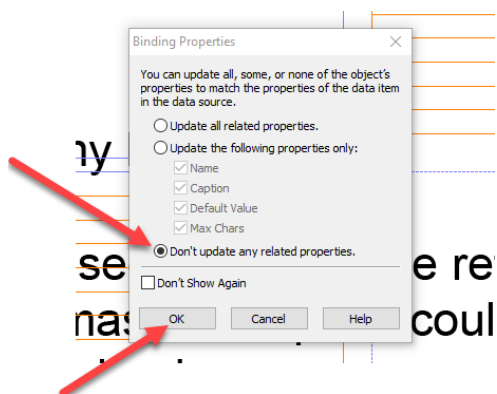
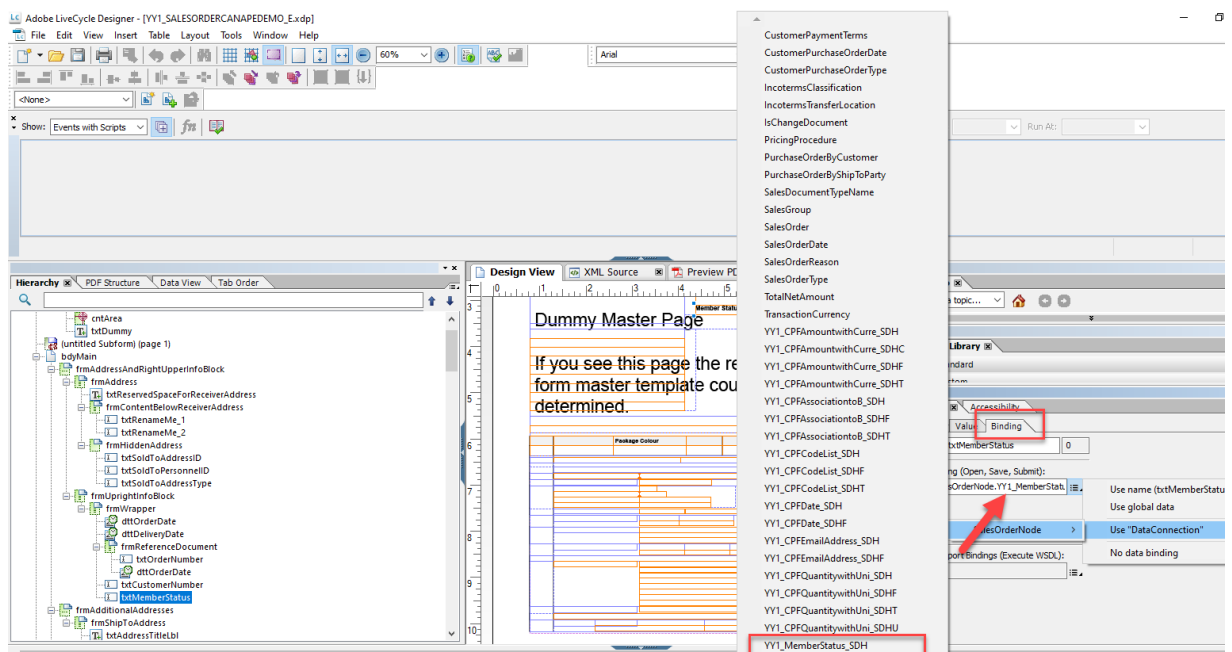
Here you can see your previously created custom field:



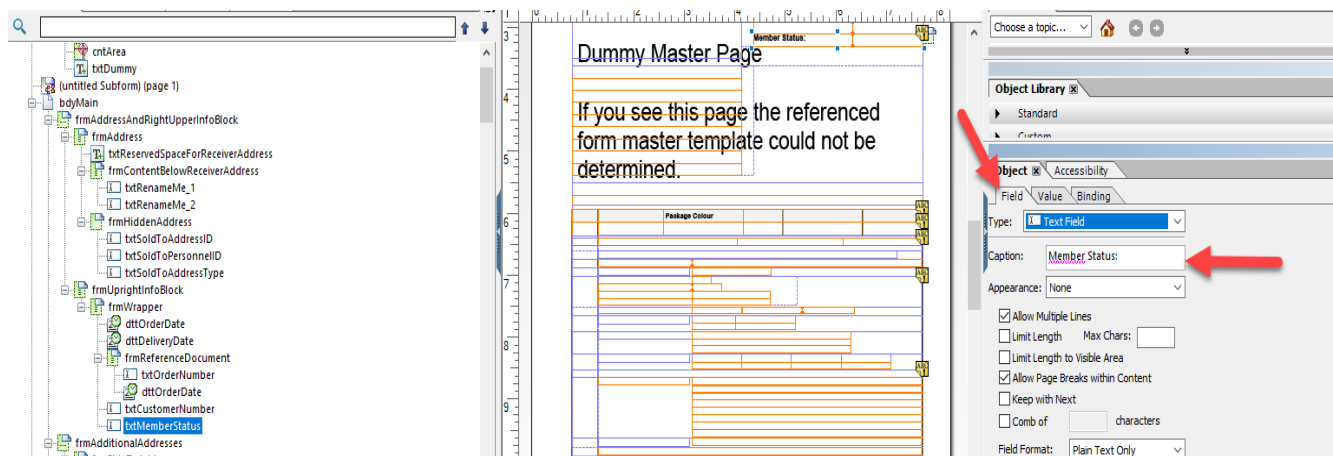
Switch to the *Hierarchy* view and copy, for example, the *txtCustomerNumber* field using CTRL C and CTRL V. Afterwards, rename the field *txtMemberStatus*.



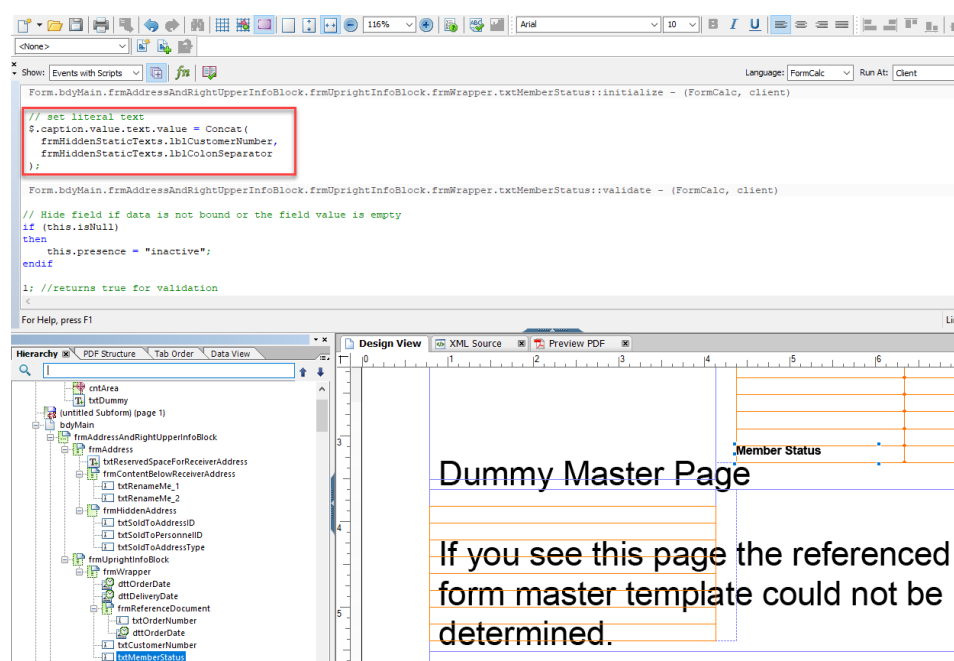
Go to *Object Details* → *Binding* → *Use Data Connection*, and select the *YY1_MemberStatus_SDH* field.



Give your field a caption, for example, *Member Status*:



Tip: As we do not need any script for the custom field, remove the script as indicated below.



Do the same steps for the custom field *Package Colour* accordingly.

Save your file and go back to the *Maintain Form Templates* app.

Here we need to create a new custom template.

SAP Maintain Form Templates

Standard * ▾

Form Template Name: Description: Data Source: Available Languages: Available Countries:

Custom Templates | Predelivered Templates

Custom Templates (4)

Form Template Name	Description	Data Source	Available Languages	Available Countries	Form Type
YY1_FORMPURCHASEORDER	Form Template Purchase Order	FDP_EF_PURCHASE_ORDER_S RV	ZH, TH, KO, RO, MS, AR, CS, DE, EN, FR, HU, IT, JA, DA, PL, ZF, NL, NO, PT, SK, RU, ES, TR, FI, SV		Content
YY1_OA_TESTING_FORM	Form Template Purchase Order	FDP_EF_PURCHASE_ORDER_S RV	ZH, TH, KO, RO, MS, AR, CS, DE, EN, FR, HU, IT, JA, DA, PL, ZF, NL, NO, PT, SK, RU, ES, TR, FI, SV		Content
YY1_TESTPURCHASEORDER	Form Template Purchase Order	FDP_EF_PURCHASE_ORDER_S RV	ZH, TH, KO, RO, MS, AR, CS, DE, EN, FR, HU, IT, JA, DA, PL, ZF, NL, NO, PT, SK, RU, ES, TR, FI, SV		Content
YY1_YY1_OA_FORM	Form Template Purchase Order	FDP_EF_PURCHASE_ORDER_S RV	ZH, TH, KO, RO, MS, AR, CS, DE, EN, FR, HU, IT, JA, DA, PL, ZF, NL, NO, PT, SK, RU, ES, TR, FI, SV		Content

New | Delete | Copy | [i] | [e]

Create Form Template

Prefix: YY1_

Form Template Name: * ZORDER_CONFIRMATION_EN

Language: * English

Select Form Template File: * SD_SLS_ORDER_CONFIRM_E... | Browse...

Data Source: * FDP_V1_ORDER_CONFIRM_SRV

Form Type: * Content

Order Confirmation!

OK | Cancel

Select the file you previously processed in Adobe LiveCycle (*.xdp file).

Choose a form template name and save the custom template.

Tip: If you want to update your form template with a newer version, you can just use the Upload button and select your local .xdp file.

YY1_ZORDER_CONFIRMATION_EN

Order Confirmation English

Details

Form Template Name: * YY1_ZORDER_CONFIRMATION_EN

Description: Order Confirmation English

Data Source: * FDP_V1_ORDER_CONFIRM_SRV

Form Type: * Content

Created by: CB9980013381

Created on: 10.6.2020, 07:46:21

Changed by: CB9980013381

Changed on: 12.6.2020, 07:43:57

Original Language: EN

Original Language: **Upload** | Download

Available Countries:

Available Translations | Search for Language | + New Translation | Delete Translation

Language | Current Processor

Upload Template

Language: English

Select Form Template File: * SD_SLS_ORDER_CONFIRM_E... | Browse...

OK | Cancel

Register the Custom Form Template

Open your configuration environment.

Search for the following configuration activity: *Assign Form Templates*.

Create a new entry as follows:

- Application object: Sales document
- Output type: Order confirmation
- Form template ID: YY1_ZORDER_CONFIRMATION_EN

Screenshot 1: Change View "Form Template": Overview

Buttons: New Entries, Copy As..., Delete, Undo Change, Select All, Deselect All, Configuration Help, More

Form Template	Applica...	Output Type	Form Template ID	Log Access
<input type="checkbox"/>	BANK_ACC	BANK_CORRESPONDEN	FCLM_BAM_ACCOUNT...	<input type="checkbox"/>
<input type="checkbox"/>	BANK_ACC	BANK_CORRESPONDEN	FCLM_BAM_SIGNATOR	<input type="checkbox"/>
<input type="checkbox"/>	BILLING_	BILLING_DOCUMENT	GST_INV_GLO_IN	<input type="checkbox"/>
<input type="checkbox"/>	BILLING_	BILLING_DOCUMENT	SDBIL_CI_PROF_SRV	<input type="checkbox"/>
<input type="checkbox"/>	BILLING_	BILLING_DOCUMENT	SDBIL_CI_PROF_SRV	<input type="checkbox"/>
<input type="checkbox"/>	BILLING_	BILLING_DOCUMENT	SDBIL_CI_PROF_SRV	<input type="checkbox"/>

Screenshot 2: Restrictions (Application Object Type)

Application Object Type: ☐ MANUFACTURING_ORDER, ☐ NOTA_FISCAL, ☐ OC_SORT, ☐ OSHA_301_CLOUD, ☐ OUTBOUND_DELIVERY, ☐ OUTBOUND_DELIVERY_ITEM, ☐ PHYSICAL_INVENTORY, ☐ PURCHASE_CONTRACT, ☐ PURCHASE_ORDER, ☐ QM_DEFECT, ☐ RE_CONTRACT_A520, ☐ RE_CONTRACT_CN, ☐ RECONCILIATION_REPORT, ☐ REQUEST_FOR_QUOTATION, ☐ SAFETY_DATA_SHEET, ☒ SALES_DOCUMENT

Screenshot 3: Restrictions (Output Type)

Output Type: ☐ CASH_SALE, ☐ CASH_SALE_CHANGE, ☐ CREDIT_MEMO_REQUEST, ☐ CREDIT_MEMO_REQUEST_CHANGE, ☐ CUSTOMER_RETURN, ☐ CUSTOMER_RETURN_CHANGE, ☐ DEBIT_MEMO_REQUEST, ☐ DEBIT_MEMO_REQUEST_CHANGE, ☒ ORDER_CONFIRMATION

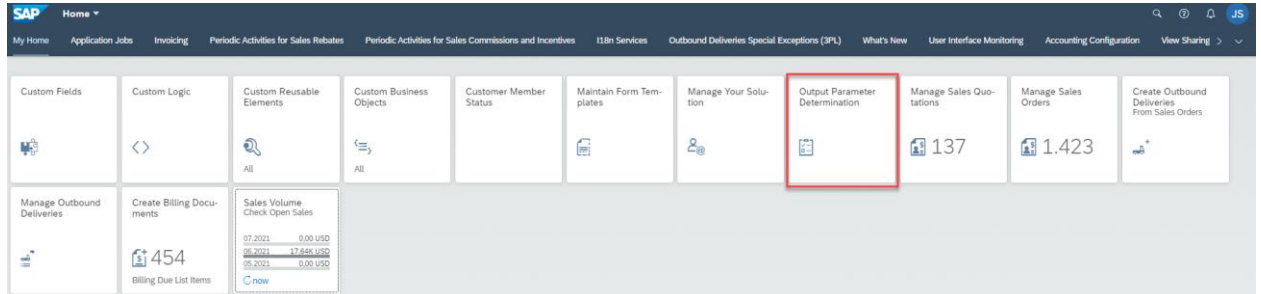
Screenshot 4: New Entries: Overview of Added Entries

Form Template	Application Obj...	Output Type	Form Template ID	Log Access
<input type="checkbox"/>	SALES_DOCUMENT	ORDER_CONFIRMAT...	YY1_ZORDER_CONF...	<input type="checkbox"/>

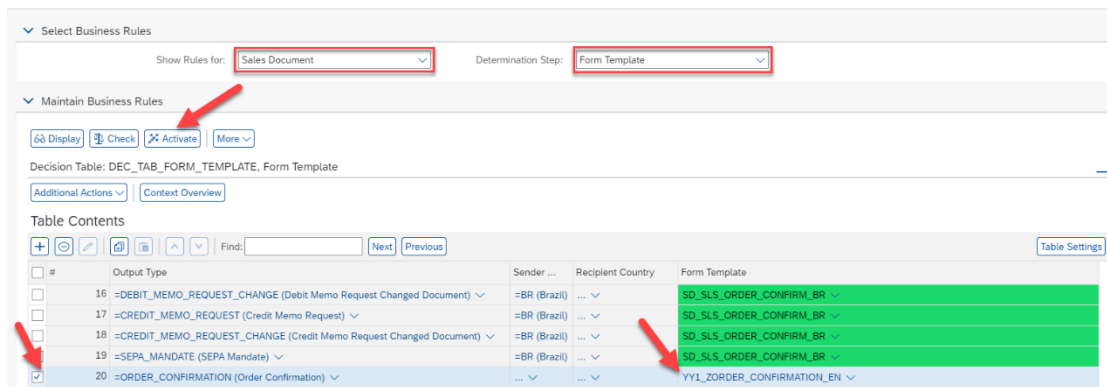
Save the settings.

Configure Output Management Settings

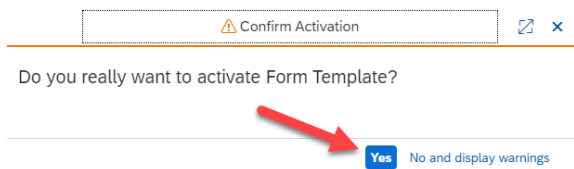
Open the *Output Parameter Determination* app:



Insert the previously created custom form template:



Click the *Activate* button to activate the changes.



Tip: Check the output type settings. The entry shown below is mandatory. If this entry does not exist in your system, create it.

SAP

Output Parameter Determination

⌵ Select Business Rules

Show Rules for:

Sales Document

Determination Step:

Output Type

⌵ Maintain Business Rules

⌵ Display

⌵ Check

⌵ Activate

⌵ More

Decision Table: DEC_TAB_OUTPUT_TYPE, Output Type

⌵ Additional Actions

⌵ Context Overview

Table Contents

⌵

⌵

⌵

⌵

⌵

⌵

Find:

Next

Previous

⌵

Table Settings

<input type="checkbox"/>	#	Document Cat.	Sales Doc. Type	Output Type	Dispatch time
<input checked="" type="checkbox"/>	1	=C (Order)	<=>BV exclude =SO01 (Sales Order Service) ; = ORDER_CONFIRMATION (Order Confirmation)	1 (Immediately)	

4.1.3 Executing the Enhanced Sell-from-Stock Scenario

4.1.3.1 Create Sales Quotation Using the OData API

You can send the following request to the OData API to create the sales quotation:

Body:

```
{
  "SalesQuotationType": "QT",
  "SalesOrganization": "1710",
  "DistributionChannel": "10",
  "OrganizationDivision": "00",
  "SoldToParty": "17100002",
  "PurchaseOrderByCustomer": "Sales Demo",
  "BindingPeriodValidityEndDate": "2025-12-15T00:00:00",
  "to_Item": [
    {
      "Material": "TG12",
      "RequestedQuantity": "2",
      "RequestedQuantityUnit": "PC",
      "YY1_PackageColour_SDI": "RED"
    }
  ]
}
```

If you do not send the custom field `YY1_PackageColour_SDI` with the request, you will get a *400 Bad Request* response because of the implementation of the *Sales Document Check Before Save* BAdI:

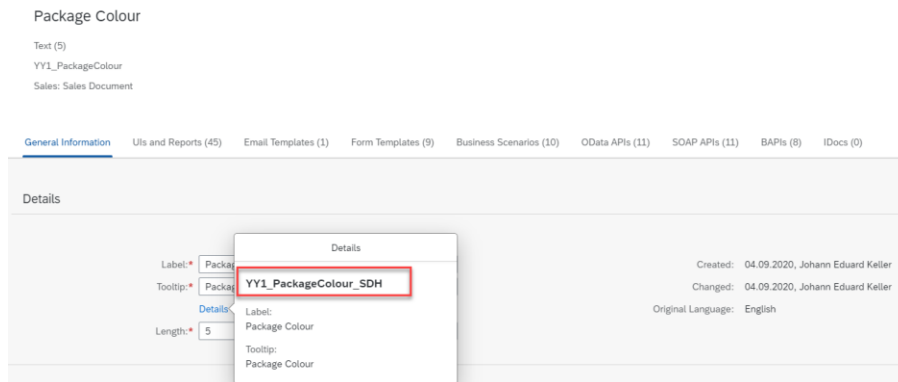
```
<errordetails>
  <errordetail>
    <ContentID/>
    <code>00/001</code>
    <message>Document cannot be saved. Please maintain a package colour for each item.</message>
    <propertyref/>
    <severity>error</severity>
    <target/>
    <transition>false</transition>
  </errordetail>
.
.
.
</errordetails>
```

If you also send the package color, you will get a *201 Created* response with the document number of the created sales quotation:

```
...
  <id>{{system}}/sap/opu/odata/sap/API_SALES_QUOTATION_SRV/A_SalesQuotation('20000064')</id>
...
```

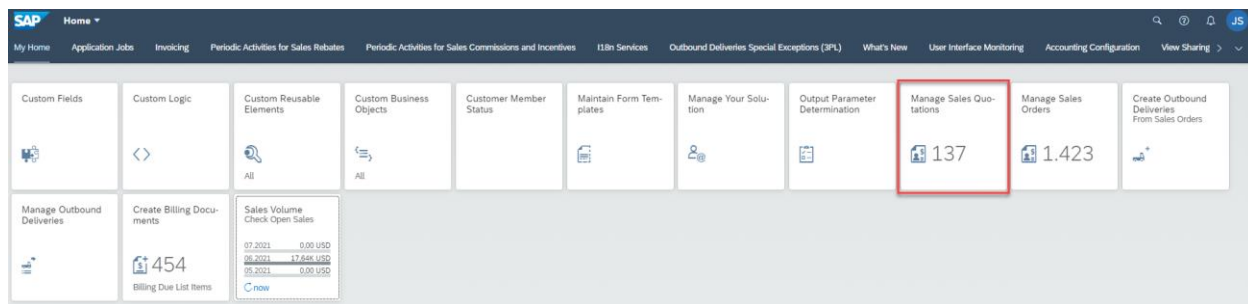
Tip:

You can find the technical name of your custom field in the *Custom Fields* app on the *General Information* tab.

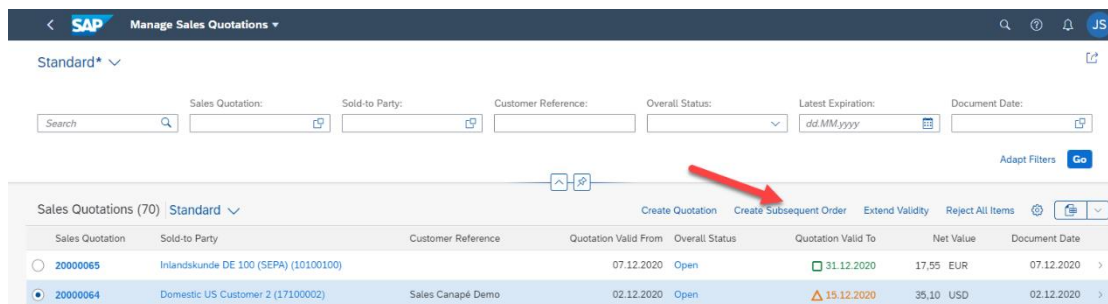


4.1.3.2 Create Sales Order

Create a new sales order using the *Manage Sales Quotations* app:



Search and select the quotation you just created and click on the *Create Subsequent Order* button.



Choose *Standard Order (OR)* as order type.

Create Subsequent Order

Order Type*

Standard Order (OR) ✓

OK Cancel

Enter a customer reference and save your order.

SAP Create Standard Order: Overview

Display Propose Items Header Output Preview Reject Document Loading Units and Aggregation Categories More ▾ Exit

Standard Order: Net Value: EUR

Sold-To Party: Inlandkunde DE 1 / Postfach 1 23 / 12345 Schöntal

Ship-To Party: Inlandkunde DE 1 / Postfach 1 23 / 12345 Schöntal

Cust. Reference: Cust. Ref. Date:

Req. Deliv. Date: Deliver. Plant:

Complete Dlx: Total Weight: KG

Delivery Block: Volume: M3

Billing Block: Pricing Date:

Pyt Terms: As of End of Month

Inco. Version:

Inco. Terms:

Inco. Location:

Group

Item	Material	Order Quantity	Un	S	Item Description	Customer Material Number	HCa	HL Item	D.. First Date	Plant	Batch
10	T512	1	PC		MAWA 12, Bestellpunkt, normaler Hst	HANACT1		TAN	D 16.10.2020	1010	

Save Cancel

Verify that the custom field *Member Status* on header level was set correctly by the BAdI according to the custom business object:

SAP Change Standard Order 1123: Overview

Display Display Document Flow Status Overview Propose Items Header Output Preview Reject Document Loading Units and Aggregation Categories More ▾ Exit

Standard Order: Net Value: USD

Sold-To Party: Domestic US Customer 2 / 15 N 4th Ave / Chula Vista CA 91910-1007

Ship-To Party: Domestic US Customer 2 / 15 N 4th Ave / Chula Vista CA 91910-1007

Cust. Reference: Cust. Ref. Date:

Req. Deliv. Date: Deliver. Plant:

SAP Change Standard Order 1123: Header Data

Display Document Flow Status Overview Header Output Preview Output Services for Object ▾ More ▾ Exit

Standard Order: Customer Reference:

Sold-to Party: Domestic US Customer 2 / 15 N 4th Ave / Chula Vista CA 91910-1007

Order Type: Standard Order Document Date:

Sales Area: / / Dom. Sales Org US, Direct Sales, Product Division 00

Sales Office: Created By:

Sales Group: Created On:

Version: Guarantee:

Order Reason:

Delivery Time:

Pricing and Statistics

Doc. Currency: / Pricing Date:

Pric. Procedure: Materials (US) Customer Group:

Price List Type:

Usage:

CustPrice Group:

Sales District:

Additional data B

- ✓ Sales
- Shipping
- Billing Document
- Electronic Payments
- Billing Plan
- Accounting
- Conditions
- Account assignment
- Partner
- Texts
- Order Data
- Status
- Additional data A
- Additional data B
- Custom Fields

SAP Change Standard Order 1123: Header Data

Display Document Flow Status Overview Header Output Preview Output Services for Object More

Custom Fields

CPF: Code List:

CPF: Date:

CPF: Email Address:

CPF: Quantity with Unit:

CPF: Association to Business Ob:

CPF: Checkbox: ☐

CPF: Number:

CPF: Numerical Tex:

CPF: Phone Number:

CPF: Text:

CPF: Time:

CPF: Time stamp:

CPF: Web Address:

Tutorial:

Tutorial1:

Member Status:

Verify that the custom field *Package Colour* on item level was set correctly by the business scenario from the sales quotation:

Delete Item Item Availability More

Exit

Navigation: < < > >

Sales Document Item: Item Category: Standard Item

Material: Trad.Good 12,Reorder Point,Reg.Trad.

Sales A Sales B Shipping Billing Document Conditions Account assignment Schedule Lines Partner Texts Order Data Status Structure Additional data A Additional data B

Order Quantity and Delivery Date

Order Quantity: PC PC <-> PC

First Delivery Date:

Delivery Time:

General Sales Data

Net Value: USD Exch. Rate:

Pricing Date:

Material Entered:

EAN/UPC:

Engineering Change: Preference: ☐

BOM Explosion Number:

Usage:

Reason for Rejection:

Custom Fields

< Custom Fields

ExtItemAmount:	<input type="text"/>	
ExtItemAmount5:	<input type="text"/>	
ConfOutAmount_I:	<input type="text" value="100,00"/>	EUR Euro
ConfOutBO_I:	<input type="text" value="ZH"/>	Chinese
ConfOutCheckbox_I:	<input checked="" type="checkbox"/>	
ConfOutCodeList_I:	<input type="text" value="H02"/>	
ConfOutDate_I:	<input type="text" value="31.12.2019"/>	
ConfOutEmailAddr_I:	<input type="text" value="Item@163.com"/>	
ConfOutNumber_I:	<input type="text" value="10,00"/>	
ConfOutNmbrTxt_I:	<input type="text" value="0000000010"/>	
ConfOutPhone_I:	<input type="text" value="13888888888"/>	
ConfOutQuantity_I:	<input type="text" value="10"/>	EA Each
ConfOutText_I:	<input type="text" value="Auto Txt for Item"/>	
ConfOutTime_I:	<input type="text" value="16:00:00"/>	
ConfOutTimestamp_I:	<input type="text" value="20.201.211.142.935,4714460"/>	
ConfOutWebAddr_I:	<input type="text" value="www.Item.com"/>	
Package Colour:	<input type="text" value="RED"/>	

Verify that both fields appear on the order confirmation:

< **SAP** Create Standard Order: Overview

Display Propose Items Header Output Preview Reject Document Loading Units and Aggregation Categories More ▾

Standard Order: Net Value: USD

Sold-To Party: Domestic US Customer 2 / 15 N 4th Ave / Chula Vista CA 91910-1007

Ship-To Party: Domestic US Customer 2 / 15 N 4th Ave / Chula Vista CA 91910-1007

Cust. Reference: Cust. Ref. Date:

Sales Item Overview Item Detail Ordering Party Procurement Shipping Configuration Reason for Rejection

* Req. Deliv.Date: Deliver.Plant:

Complete Dlv.: ☐ Total Weight: KG

Delivery Block:

Billing Block:

Volume:

Pyt Terms: As of End of Month Pricing Date:

Change Standard Order 1123: Output

Order: 1123



Company
Domestic US Customer 2
15 N 4th Ave
Chula Vista CA 91910-1007

Order Date: Dec 11, 2020
Customer Reference: Sales Canape
Customer Number: 17100002
Member Status: Gold

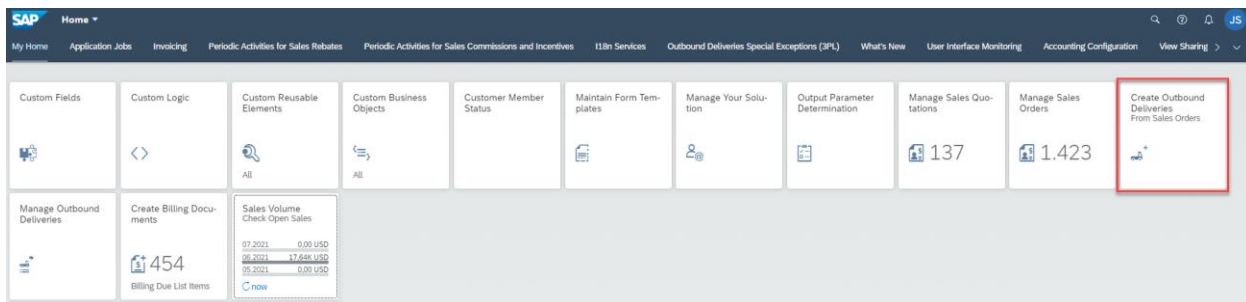
Ship-to Address:
Company
Domestic US Customer 2
15 N 4th Ave
Chula Vista CA 91910-1007

Item	Product	Package Colour	Quantity	Net Price	Net Value
10	TG12	RED	2 PC	17.55 USD / 1 PC	35.10 USD
	Gross Value		17.55 USD / 1 PC		35.10 USD
	Net Value 1		17.55 USD / 1 PC		35.10 USD
Delivery Date:		Dec 18, 2020	Confirmed Quantity:		2 PC
Payment Terms:		As of End of Month	Tax Jur Code Level 1	6%	2.11 USD
Delivery Terms:		EXW	Total Net Amount		35.10 USD

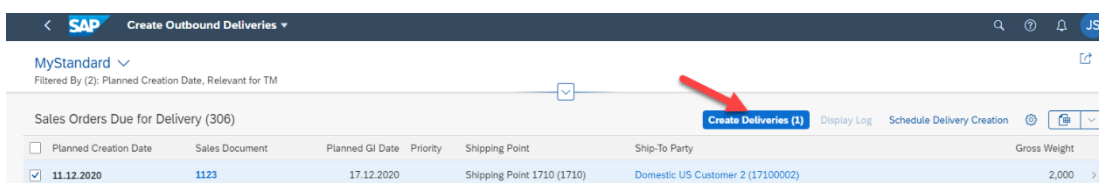
Note down the order number for the next steps.

4.1.3.3 Create Outbound Delivery

Open the *Create Outbound Deliveries - From Sales Orders* app:



Choose your sales order and click on *Create Deliveries*:



You can find the document number for the created delivery in the log:

The image shows two SAP screenshots. The top screenshot is the 'Create Outbound Deliveries' screen. It has a header bar with 'SAP' and 'Create Outbound Deliveries'. Below the header, there are several input fields: 'Ship-to Party', 'Shipping Point', 'Planned Creation Date' (set to 'Today and Tomorrow (18.06.2021 - 19...)', 'Priority', 'Sales Document', and 'Relevant for TM' (set to 'No'). There are also buttons for 'Go', 'Adapt Filters (2)', 'Create Deliveries (3)', 'Display Log' (highlighted with a red box), and 'Schedule Delivery Creation'. Below these fields, there is a table with columns: 'Planned Creation Date', 'Sales Document', 'Planned GI Date', 'Priority', 'Shipping Point', 'Ship-to Party', and 'Gross Weight'. The table is empty, with a message 'No data found. Try adjusting the search or filter parameters.' The bottom screenshot is the 'Analyze Delivery Logs' screen. It has a header bar with 'SAP' and 'Analyze Delivery Logs'. On the left, there is a sidebar with 'Standard*' and 'Filtered By (1): Log Number'. Below this, there is a 'Delivery Logs (1)' section with a table showing one log entry: '158330' by 'John Sales (CB9980034253)' on '11.12.2020, 15:35:50'. The log entry details show 'Created Deliveries: 1', 'Shipping Point: Shipping Point 1710 (1710)', and 'Log Status: No Issues'. On the right, there is a main area with the log number '158330' and date '11.12.2020'. Below this, there are tabs for 'Messages' and 'Deliveries'. The 'Deliveries' tab is active, showing a table with columns: 'Document', 'Item', 'Message Type', 'Message Text', and 'Long Text Available'. The table is empty, with a message 'No data found.' Below this, there is a 'Deliveries' section with a table showing one delivery entry: '80000389' with 'Overall Status: Open' and 'Ship-to Party: Domestic US Customer 2 (17100002)'. A red arrow points to the '80000389' document number in the 'Deliveries' table.

Next step is picking, which can be done in the *Manage Outbound Deliveries* app:

The image shows the 'Manage Outbound Deliveries' screen in SAP. It has a header bar with 'SAP' and 'Manage Outbound Deliveries'. Below the header, there are several input fields: 'Shipping Point', 'Picking Date' (set to 'Today (11.12.2020)'), 'Ship-to Party' (set to '=17100002 x'), 'Planned GI Date', and 'Overall Status' (set to 'All'). There are also buttons for 'Go', 'Adapt Filters (3)', 'Post GI (0)', 'Reverse GI (0)', and 'Pick'. Below these fields, there is a table with columns: 'Outbound Delivery', 'Picking Date', 'Priority', 'Picking Status', 'Confirmation Status', 'GI Status', and 'Pick'. The table has one entry: '80000389' with 'Picking Date: 11.12.2020', 'Picking Status: Not Yet Processed (A)', 'Confirmation Status: Not Relevant', and 'GI Status: Not Yet Processed (A)'. A red arrow points to the 'Pick' button in the table.

SAP Pick Outbound Delivery

Delivery: 80000389

Actual GI Date:

Planned GI Date:

Gross Weight: KG

Net Weight: KG

Picking Status:

Confirmation Status:

[Show More](#)

1 of 1 Picking GI Ready 0

Delivery Items (1)

Item	Material	Delivery Quantity	Picking Quantity	Serial Number Status	Picking Status	Confirmation Status	
<input type="checkbox"/>	000010 Tred.Good 12.Reorder Point.Reg.Trad. (TG12)	<input type="text" value="2"/> PC	<input type="text" value="2"/> PC	<input type="text" value="◇"/>	<input type="text" value="◇"/>	<input type="text" value="◇"/>	View Output >

Copy Picking Quantity (0) Delete Item (0) Delete Delivery View Delivery Output Save

You can also do the GI posting from here:

SAP Pick Outbound Delivery

Delivery:

Delivery Header

Delivery: 80000389

Actual GI Date:

Planned GI Date:

Gross Weight: KG

Net Weight: KG

Picking Status:

Confirmation Status:

[Show More](#)

1 of 1 Picking GI Ready 0

Status: Ready to Post GI

Planned GI Date: 17.12.2020

Gross Weight:

Ship-To Party: Domestic US Customer 2 (17100002)
Address: 15 N 4th Ave, Chula Vista CA 91910-1007, USA

[Post GI](#) Delete Delivery View Delivery Output Save

Now check if the custom fields are copied correctly from the sales order.

Navigate to the object page of the created outbound delivery:

MyStandard

Filtered By (3): Picking Date, Ship-to Party, Overall Status

Deliveries (1)

	80000389	Picking Status	Confirmation Stat
<input checked="" type="checkbox"/>	80000389	Completely Processed (C)	Not Relevant

[Change Outbound Delivery](#)

[More Links](#)

You can see that the values are copied correctly.

SAP Outbound Delivery ▾

80000389
Outbound Delivery

Ship-to Party: Domestic US Customer 2 (17100002) Overall Status: ✔ Completed Delivery Date: 18.12.2020
Sold-to Party: Domestic US Customer 2 (17100002) Shipping Point: Shipping Point 1710 (1710)

General Information Items Business Partners Output Process Flow Attachments

Member Status: Gold	Document Date: 11.12.2020	Picking Status: Fully Picked (C)	Dangerous Goods: OK – No Danger
Sales Organization: Dom. Sales Org US (1710)	Picking Date: 11.12.2020	Warehouse Management Status: No WM Transf Ord Req	Safety Data Sheet: OK – Not Relevant
Gross Weight: 2.000 KG	Transport Planning Date: 16.12.2020	Pick Confirmation Status: Not Sub. to Confirm.	Excise Tax ARC: Not defined
Net Weight: 1.800 KG	Loading Date: 16.12.2020	Packing Status: Packing Not Required	Advanced Shipment: Not Relevant
Volume: –	Planned Goods Movement Date: 17.12.2020	Goods Movement Status: ✔ Completed	Warehouse Execution: Not Relevant
Delivery Type: Outbound Delivery (LF)	Actual Goods Movement Date: 11.12.2020	Product Marketability Status: OK – Not Relevant	

Items

Items (1)

Item	Material	Batch	Plant	Storage Location	Actual Delivery Quantity	Picking Quantity	Package Colour
10	Trad.Good 12,Reorder Point,Reg.Trad. (TG12)		Plant 1 US (1710)	Std. storage 1 (171A)	2 PC	2 PC	RED

Business Partners

Tip:

If you do not see the fields, you need to adjust the UI first like described in the [Adapting SAP Fiori UIs at Runtime - Key User Adaptation](#) section.

4.1.3.4 Create Billing Document

Open the *Create Billing Documents* app:

SAP Home ▾

My Home Application Jobs Invoicing Periodic Activities for Sales Rebates Periodic Activities for Sales Commissions and Incentives I18n Services Outbound Deliveries Special Exceptions (3PL) What's New User Interface Monitoring Accounting Configuration View Sharing ▾

Custom Fields	Custom Logic	Custom Reusable Elements	Custom Business Objects	Customer Member Status	Maintain Form Templates	Manage Your Solution	Output Parameter Determination	Manage Sales Quotations	Manage Sales Orders	Create Outbound Deliveries From Sales Orders
		All	All					137	1.423	
Manage Outbound Deliveries	Create Billing Documents	Sales Volume Check Open Sales								
	454 Billing Due List Items	07.2021 0.00 USD 08.2021 17.64K USD 09.2021 0.00 USD now								

Search for your delivery document and click *Create Billing Documents*:

SAP Create Billing Documents

Standard*

SD Document: SD Document Category: Sold-to Party: Billing Date: To (11.12.2020) Adapt Filters (1) Go

Billing Due List Items (407)

<input type="checkbox"/> SD Document	SD Document Category	Sold-to Party	Billing Date	Net Value
<input checked="" type="checkbox"/> 80000389	Delivery	Domestic US Customer 2 (17100002)	11.12.2020	35,10 USD
<input type="checkbox"/> 1000000167	Billing Document Request	Domestic US Customer 1 (17100001)	01.12.2020	90,00 USD

[Create Billing Documents](#) [Billing Settings](#)

You will see that the custom fields are copied from the delivery document into the billing document.

Click on **Save** to create the billing document:

SAP Manage Billing Documents

Invoice TMP0000302

Payer: Domestic US Customer 2 (17100002) Sold-to Party: Domestic US Customer 2 (17100002) Billing Document Status: Temporary Net Value: 35,10 USD Tax Amount: 2,11 USD Total Amount: 37,21 USD

General Information Terms and Conditions Items Partners Accounting Data Process Flow Pricing Data Pricing Elements Taxes Texts Output Items

Document Data Member Status: Gold Billing Date: 11.12.2020 Billing Type: Invoice (F2) Reference: TMP0000302

Organizational Data Company Code: Company Code 1710 (1710) Sales Organization: Dom. Sales Org US (1710) Distribution Channel: Direct Sales (10) Division: Product Division 00 (00)

Additional Data ZZFLX: - ZZFLX (Desc.): - Shipping Conditions: Standard Man. Invoice Maint.: No

Terms and Conditions Incoterms: Ex Works (EXW) Incoterms Location 1: Palo Alto Terms of Payment: As of End of Month

Items

Item	Product	Billed Quantity	Net Value	Tax Amount	Package Colour
10	Trad Good 12.Reender Point.Reg.Trad. (TGI2)	2 PC	35,10 USD	2,11 USD	RED

Partners

Role	Name	Address
Sold-to Party	Domestic US Customer 2 (17100002)	15 N 4th Ave. Chula Vista CA 91910-1007, USA
Bill-to Party	Domestic US Customer 2 (17100002)	15 N 4th Ave. Chula Vista CA 91910-1007, USA

[Save](#) [Cancel](#)

SAP Manage Billing Documents

Invoice 90000361 [Edit](#) [Preview](#) [Cancel Billing Document](#)

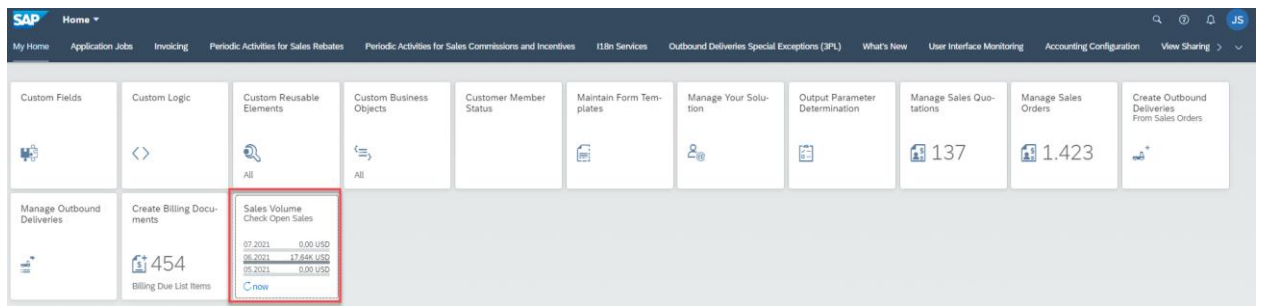
Payer: Domestic US Customer 2 (17100002) Sold-to Party: Domestic US Customer 2 (17100002) Billing Document Status: To Be Posted Net Value: 35,10 USD Tax Amount: 2,11 USD Total Amount: 37,21 USD

General Information Terms and Conditions Items Partners Accounting Data Process Flow Pricing Data Pricing Elements Taxes Texts Attachments Output Items

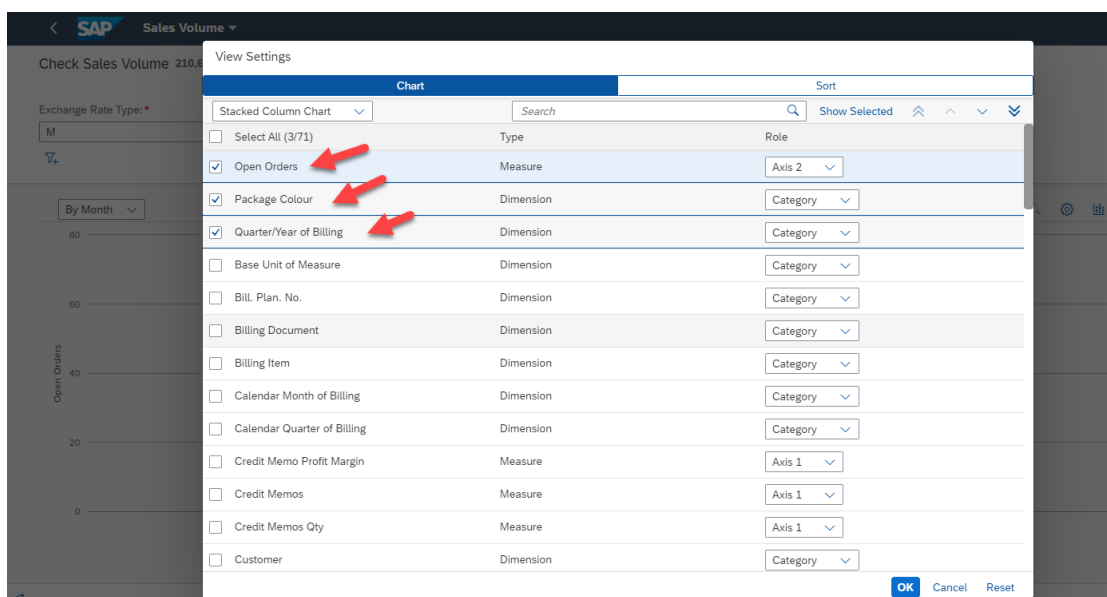
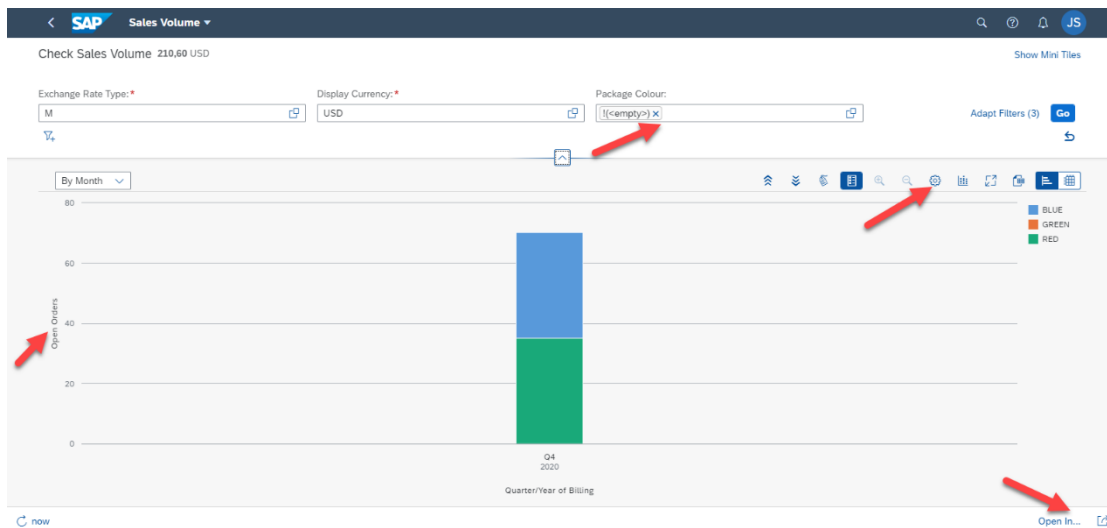
4.1.3.5 Sales Analytics

In this part, we want to create some reporting based on the custom field *Package Colour*.

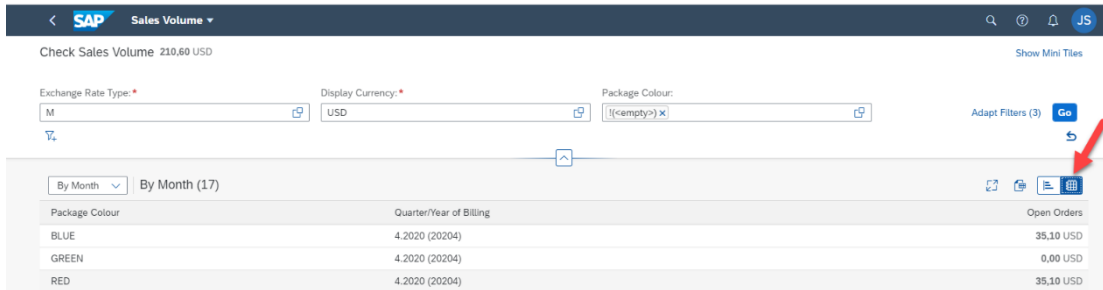
First, we need to open the *Sales Volume - Check open Sales* app:



Do the following configuration in the app:



In the tabular view, you see the origin of the data:



Check Sales Volume 210,60 USD

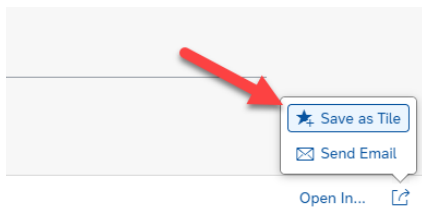
Exchange Rate Type: M Display Currency: USD Package Colour: [empty] x

Adapt Filters (3) Go

By Month (17)

Package Colour	Quarter/Year of Billing	Open Orders
BLUE	4.2020 (20204)	35,10 USD
GREEN	4.2020 (20204)	0,00 USD
RED	4.2020 (20204)	35,10 USD

To create your own tile use the button at the bottom right:



Save as Tile

Tile Format: Numeric Tile

Subtitle: MyTile

Group: My Home

Value Measure: Sales Volume

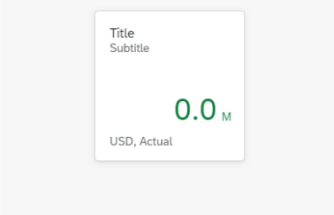
Goal Type: Maximizing

Target:

Warning:

Critical:

OK Cancel



5 Further Information

5.1 Documentation

5.1.1 Product Documentation

Description	Link
SAP Help Portal	Link
SAP Fiori Apps Reference Library	Link
SAP Best Practices Explorer	Link
SAP API Business Hub	Link

5.1.2 Specific Documentation

Description	Link
Analytical Reports in Sales	Link
ABAP for Key Users	Link
Copy Control in Sales Documents	Link
Extensibility of Output Forms	Link
BAdIs in Sales Documents	Link

5.1.3 Further Links

Description	Link
Open SAP course "Extending SAP S/4HANA Cloud and SAP S/4HANA"	Link
Open SAP course: "Create and Delver Cloud-Native S/4 HANA Extensions"	Link
Extensibility YouTube Channel	Link
SAP S/4HANA Extensibility Tutorial	Link

SAP Developers Tutorial: Custom Analytical Queries	Link
SAP Developers Tutorial: Custom Analytical Queries Calculated Measures	Link
SAP S/4HANA Cloud Customer Community	Link

5.1.4 Useful Released CDS Views

CDS View	Description
I_SalesDocumentTypeLangDepdnt	You can find the language-specific keys for sales document in this view.

Typographic Conventions

Type Style	Description
<i>Example</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Textual cross-references to other documents.
Example	Emphasized words or expressions.
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE	Keys on the keyboard, for example, F2 or ENTER.



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