BrandMaker

Job Manager and Marketing Data Hub

Administration Manual

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1 Useful information for getting started

This provides you with tips and information that will help you to efficiently carry out tasks related to the Job Manager or Data Hub. The manual is aimed towards specialist administrators and provides a full overview of the configuration and functions of the Job Manager and Data Hub. Please note that the default module name for the Marketing Data Hub is *Data Hub*.

Jobs, processes, and data objects

Jobs and processes are managed in the *Job Manager* module. Jobs are combined with a classic workflow, processes with a BPMN workflow. Jobs and processes represent standardized workflows in your company.
In the *Data Hub* module, users manage data objects, which are always combined with a classic workflow. In data objects, a standardized workflow captures data that can be used, for example, as a data source for other modules.

Classic workflows and tasks

One or more classic *workflows* are assigned to each job and each data object. A classic workflow consists of several *workflow steps*. The administrator assigns a user group to each workflow step when creating the classic workflow. The user selects a responsible person from the user group when forwarding the item to the next workflow step. In addition, *tasks* can be added to each workflow step so that typical activities are created automatically when the job is created.

BPMN workflows

BPMN stands for **B**usiness **P**rocess **M**odel and **N**otation and is used for the graphical representation of business processes. A process is always combined with a BPMN workflow, and the workflow is represented in BPMN notation.

Task Templates

Tasks that are used frequently can be saved as task templates and used again. To use a task template with a workflow, the number of workflow steps must match the number of task steps created in the task template.

Custom objects and structures

You can use custom objects and structures to create boilerplate texts, for example, that you can use to edit a document in *Brand Template Builder* module. In addition, the values for a dropdown list can be loaded from a custom structure.

Variables

Different variable types are used to allow you to group together and output data and information. The variables are placed on a data sheet using drag and drop. There are two different types of variables:

- Variables created automatically that allow you to use the basic functions, for example, for displaying the creator or the current workflow step.
- Variables that can be created individually (text fields, selection fields, or an asset selector, for example) can be created and configured as required.

Categories

To arrange the types, you can create categories and assign the types to one or more categories. When users create a new job or data object, they choose the required types from the overview, which is sorted by category.

Jobs/processes and sub-jobs/processes

A *job* or process groups together all of the information required to carry out a task (for example, the creation of a new campaign). Additional required tasks can be mapped as *sub-jobs* or sub-processes. A sub-job or sub-process can use a different workflow that is independent of the job. Sub-jobs and or sub-processes allow you to structure workflows and make dependencies between different workflows recognizable.

> **Note**
>
> It is possible to create a synchronization between jobs or processes of a certain type and corresponding planning elements in Marketing Planner. This synchronization is set up by BrandMaker. If you have any questions, please contact your BrandMaker contact person.

Products and sub data objects

A *data object* groups together all of the information related to a data object. If the data object consists of multiple parts, they can be represented through *sub data objects*. A sub data object can use a different workflow that is independent of the data object. Sub-data objects allow you to copy the data object structure precisely.

User

The access to and visibility of tabs and the field functions (variables) placed on them can be restricted when you configure the type for each workflow step. For this, users are divided up according to *Assignee/Processor*, *Creator*, *Other participants* and *Anonymous*. The user role to which you belong determines the datasheet tabs and variables that you can view or edit.

User	Description
Assignee/Processor	You are the (current) assignee/processor of a job, process, or data object if you are responsible for the current workflow step.
Creator	You are the creator (owner) of a job, process, or data object if you have created the job or data object. The creator can be changed at a later stage.

User	Description
Participant	You are a participant if you were once the processor of the job or if you are invited to be a participant in the job. As a participant, you are not responsible for the current workflow step, but you can follow the progress of the job, process, or data object. Participants can be added to a discussion.
Anonymous	Anonymous users are any users who are not the creator, assignee/processor, or participant, but who can still access a job, process, or data object. In general, anonymous users only have read access to variables.

1.1 Display, technical, and unique name

Each type and each custom variable have three different names:

- *Name displayed*
- *Technical Name*
- *Unique Name*

Property	Display Name	Technical Name	Unique Name
Usage	The display name is the name that is used to show the type or variable on the interface and that is used for the inheritance. You can create the display name in various languages.	The technical name is used to operate objects via interfaces of external systems (for example, via REST). The technical name is also used for grouping variables.	—
Input	You enter the display name when you create a type or variable.	The technical name and unique name are derived and created from the displayed name when you create a type or custom variable.	
Change	The display name can be changed and edited in any way.	The technical name can be changed.	The technical name cannot be changed.
Restrictions	There are no restrictions for the display name. However, long names may not be displayed in full under certain circumstances.	The characters [a-z], [0-9], and [_] are used for the name.	

Property	Display Name	Technical Name	Unique Name
Derivation	—	• If the display name begins with a number, the name "type_" is prefixed to the technical name. • Space characters are replaced with an underscore "_". • Umlauts and special characters are removed. • Uppercase letters are replaced by lowercase letters. • Restricted to a maximum of 255 characters.	• Like technical name; additionally restricted to a maximum of 24 characters.
Uniqueness	The display name can be used multiple times for each type.	The technical name and unique name must be unique for each type. If multiple variables of the same type with the same display name are entered, consecutive numbering is added during the derivation (for example, price_1, price_2).	

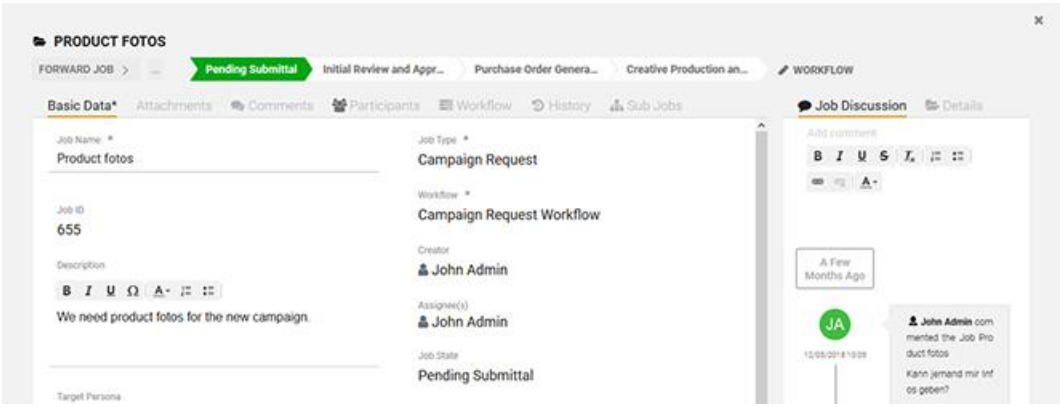
1.2 Data sheets

All of the information about a job or data object is collected and mapped on a *data sheet*. You can group together the different variables clearly on various tabs and place them easily using drag and drop.

Among others, the following information is displayed on the data sheet:

- The users who are involved/participating in the job or data object
- The current state (the current workflow step)
- The creator and the current assignee
- The predefined project workflow for the job or data object, including any tasks that have been defined
- The relevant information for the job or data object

Note: The appearance of the data sheet can be defined to suit the purposes of individual customers. Among others, the appearance is determined by the number of tabs created, their names, and the field functions that are used on them. The *Basic Data* and *Comments* tab are created automatically; they can be renamed but *cannot* be removed. You can hide the *Comments* tab.

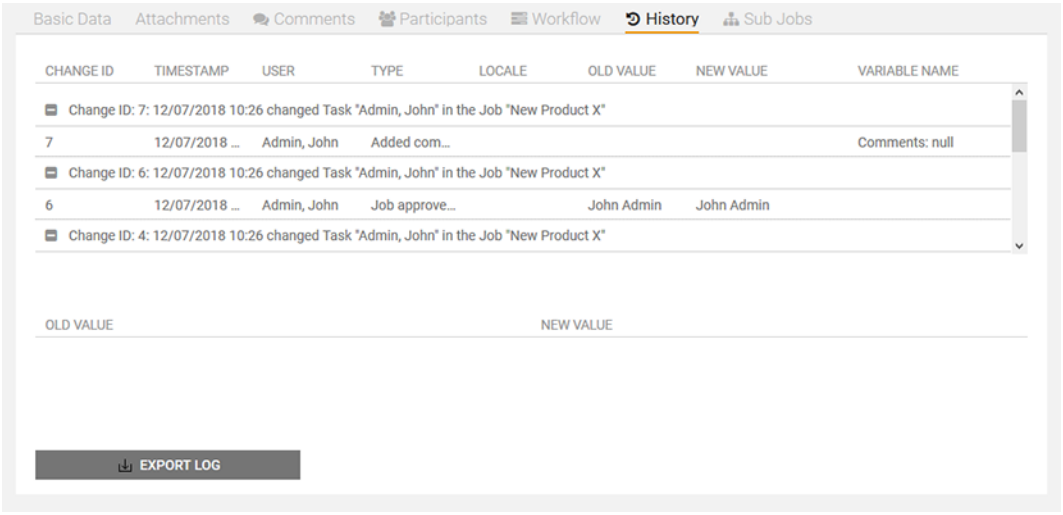


1.2.1 Change history

You can use the change history to track when an object is processed or edited. The recording of the time required is also entered.
In the upper area of the open data sheet, choose *Menu > Show change history* to open the change history in a new dialog box. The following information is displayed in a table overview:

- *Change ID:* Consecutive numbering of the changes (only with Job Manager)
- *Timestamp*: The time at which the change was made
- *User*: The name of the user who added or edited a comment or discussion
- *Type*: The type of editing or change (for example, the addition of a new comment)
- *Locale*: This column is not relevant in Job Manager.
- *Old value*: The original value of the edited variable
- *New value*: The new value of the edited variable
- *Variable name*: The name of the variable or discussion that was edited. Select the line to display the new and old value in the lower area of the dialog window.

Click *Export log* to export the change history as an XLSX file.



1.3 Inheritance for sub jobs and sub data objects

Sub-jobs and sub data objects can inherit values from a parent job or data object. If the values in the parent job or data object change (for example, a deadline), the value is also updated in the sub-job or sub data object. In the sub-type, you can configure the following options using the *Inheritance* selection box:

Note: Note that the inheritance can be created only when you create a new sub-job type or sub data object type. The *Inheritance* field cannot be changed at a later stage!

- *No inheritance*: In this case, variables of the sub-type do not inherit a value from a parent job or data object.
- *Single parent*: The variables can inherit; however, only one single type is permitted as the parent type. Define the parent types from which the inheritance is carried out for the sub-job or sub data object. In this case, you are given the option of specifying the parent type variable that must be inherited directly when creating the variables (see screen shot). If you use a large number of inherited variables, the consistent application of this method provides you with significant performance benefits.

- *Multiple parents*: Select this option if the parent types from which a sub-type inherits cannot be clearly defined. For example, the *Translation* sub-job can be permitted for both the parent job types *Brochure*, *Manual*, and *Flyer*. Activate the option *Inherit from parent* in the sub-type for the inheriting variable. In this case, the link is established via the display name, which must be identical for the variable in the parent type and sub-type.
  On the data sheet the user can break the inheritance at the inheriting variable. In this case, the last inherited value remains in the sub-job or sub data object, even if the value is changed in the parent job or data object. Choose the button to restore the inheritance.

1.4 Localization

Note: Note that you can only use this function in the Data Hub.

You use the *Localization* function to adapt data objects to the conditions of regional markets in the Data Hub. A localized data object contains a separate data sheet that is adjusted to local conditions and that uses an ID for each locale. You edit each data sheet in a separate workflow and can select different workflow types for each localized data sheet. This is significant, for instance, if there are different legal requirements in the territories and a legal check or certification is required.

You can use different workflow types to define different rights and visibilities for the required fields for each locale.

In order to enter values that are identical for a data object in each locale just once, flag the variable as language-neutral. Examples here include international data object names or technical data in standardized measurement systems (for instance, measurements in the metric system, weight specifications in kilograms).

You can also create sub data objects for localized data objects that inherit their values. Note that inheritance is only possible between localized parent data objects and localized sub data objects: The sub data object variant for *Spain* inherits its values from the parent data object variant *Spain*.

1.4.1 Configuring localization

Follow the process below to configure the localization. Follow all the required steps for setting up the Data Hub module (see page 18):

1. Create the required locales (for Locales see page 1514).
2. Define the required workflows. For more information, see the configuration manual.
3. Create a data object type (*module name* = *Product Manager*) for which the *Localization* checkbox is activated (see chapter 2.3).

   Note: Note that the *Localization* field can only be edited when you create a type.
4. Assign all workflows required for the localized data object to the type (for Type configuration see page 20).
5. Create the variables that are used for this data object type. For variables that are identical for each locale, activate the *Shared value* checkbox (for variable descriptions see page 87).
6. Publish the changes (see Publishing changes on page 48).

1.4.2 Locales

You can use the locale to describe the territories that are relevant to you using a small amount of data. You can enter the following values:

- *Name*: The unique ID of the locale.
  Warning! Entering other characters as digits leads to errors! Use consecutive numbering that continues the numbering from the last created territory.
- *Name displayed*: Include the names that you want to use in the various languages for the locale. Use the following structure: *~{language code}name*
  Enter multiple names one after the other. Note that you only have to enter the translations for the interface languages of your BrandMaker system.
  - *Language code*: language code according to ISO 639-1 in uppercase (for example, EN for English, DE for German).
  - *Name*: name of the locale that is displayed in the selection list in the data sheet of the localized data object.
  - Example: The *Spain* entry in the languages English, German, and French: ~{EN}Spain~{DE}Spanien~{FR}Espagne
- Attributes:

Name	Function	Edit
uniqueName	Unique name, which must be unique within the locale	Mandatory field
scriptCode	The character set used for print characters (for example, Cyrillic or Simplified Chinese)	—
numbers	The character set used for numbers	—
languageCode	Language code according to ISO 639-1 in lowercase	Mandatory field
image	Load an image to represent the territory visually. If the field is empty, the flag for the selected country code is displayed if it is stored by default.	Optional
default	Standard locale setting: true = the locale is the standard locale. false = the locale is not the standard locale. **Warning!** Only one locale must be flagged as the default locale at all times.	—
currency	Currency entry for the locale	—
countryCode	Enter the country code of the territory	Mandatory field
collationParameter, collation	Parameter for setting the character sorting in the relevant language	—

Name	Function	Edit
calendar	Calendar form, such as the Gregorian calendar	—

1.4.2.1 Configuring or Changing the Locale

1. Choose > *Administration* > *Data Structures & Workflows* > *Custom Objects & Structures* > *Custom Objects.*
2. In the *Select custom structure* selection list, select the structure `L10N_Locale(L10N_Local)`.
3. Choose *Select*.
4. To create a new locale: In the *Create new custom object* field, enter the name of the new locale. Choose *Create*.
   OR
   To change an existing locale: In the *Choose available custom object* selection list, select an existing locale.
5. Mandatory: you always edit the following fields:
   - *Name*
     Caution! Use consecutive numbering that continues the numbering from the last created territory.
   - *Name displayed*
   - Attribute *uniqueName*
   - Attribute *language code*
   - Attribute *country code*
6. Optional: edit the following fields:
   - Attribute *default* for the locale that is the standard locale.
   - *Optional*: Attribute *image*
7. Choose *Save* at the end of the attribute list.

You have configured the locale. Repeat the process if additional locales are required.

1.4.2.2 Deleting a Locale

Warning! Data loss! Do not delete any locales that are being used in *Brand Template Builder* module.

1. Choose *> Administration > Data Structures & Workflows > Custom Objects & Structures > Custom Objects.*
2. In the *Select custom structure* selection list, select the structure `L10N_Locale(L10N_Locale)`.
3. Choose *Select*.
4. In the *Select available custom object* selection list, select an existing locale.
5. Click the *Delete* button below the attributes.

You have deleted the locale.

1.5 Synchronization

Basically, it is possible to set up a job type so that planning elements are created, or data is synchronized in the Marketing Planner when the job is edited. For this purpose, the data sheet of the job type must be configured accordingly so that the position in the element tree as well as basic data is mapped correctly. In addition, for the combination of job type and workflow it is defined in which workflow steps the data is updated in the Marketing Planner when saving the job. You can also define whether the planning element is deleted if the job is canceled or deleted.

Note

This synchronization is set up by BrandMaker. If you have any questions, please contact BrandMaker.

2 Required work steps

You must perform a range of work steps for the configuration. Please note that the process differs based on whether you are using a conventional workflow created with the previous function or a BPMN workflow.

2.1 Jobs and Data Objects

Prerequisite

- You have created users and a user group.
- You have created a workflow.

Note the detailed descriptions for users, user groups, and workflows in the configuration manual.

Step by step

The following work steps are required or can be carried out as options for the configuration of Job Manager and Data Hub:

1. Create a new type and assign a module (see chapter 2.3).
2. Link the types with one or more workflows (see chapter 2.3.4).
3. Design data sheets for a type (see chapter 2.5).
4. Create and define variables (see chapter 2.6).
5. Optional: Define conditions for displaying a variable and access rights for variables for each workflow step (see chapter 2.6.1).
6. Optional: Define variables for the e-mail notification (see chapter 2.8).
7. Optional: Create a category (see chapter 2.9).
8. Optional: Configure the format of the unique object numbers (see chapter 2.10).
9. Optional: Define the default type for new jobs and data objects (see chapter 2.11).
10. Optional: Configure the settings for the Only Briefing type and theme navigation (see chapter 2.12).
11. Optional: Create and manage templates for the Task Manager variable (see chapter 2.13).
12. Publish changes (see chapter 2.14).

2.2 Processes

Prerequisite

- You have created users and a user group.
- You have created the custom structures required for your decisions.

Note the detailed descriptions for users, user groups, and workflows in the configuration manual.

Step by step

1. Create new types and assign a module (see chapter 2.3.1).
2. Design the data sheets for a type (see Designing the data sheet layout in chapter 2.5).
3. Create and define variables (see Creating and managing variables in chapter 2.6).
4. *Optional*: Define conditions for displaying a variable and access rights for variables for each workflow step (see Rights and visibilities of variables in chapter 2.7).
5. Create a BPMN workflow for the type (see BPMN workflow in chapter 3).
6. *Optional*: Define variables for the e-mail notification (see E-mail notification in chapter 2.8).
7. *Optional*: Create categories (see Type categories in chapter 2.9).
8. *Optional*: Configure the format of the unique object numbers (see Object number configuration in chapter 2.10).
9. *Optional*: Define the default type for new jobs and data objects (see Default types in chapter 2.11).
10. *Optional*: Configure the settings for the *Only Briefing* type and theme navigation (see Settings in chapter 2.12).
11. *Optional*: Create and manage templates for the *Task Manager* variable (see Managing task templates in chapter 2.13).
12. Validate the created type (see chapter 2.14.1).
13. Publish changes (see Publish changes in chapter 2.14).

2.3 Types

The type is the central element of the datasheet Engine. The type determines which basic data is created for a job, a process, or a data object. You create types under *> Administration > Datasheet Engine > Types – New*.

Notes

Navigating from the Administration home page by clicking on the Jobs & Data Hub tile will initially still take you to the old-fashioned type view, as it is at the top of the list on the left sidebar.

The previous page for managing types under *> Administration > Datasheet Engine > Types* continues to exist as a fallback solution for the time being. As of version 7.3, type creation is only supported in the modern user interface and the old version disappears for good.

The tables on both pages are synchronized so that you see the same objects on both pages. Note that processes created on the *Types - New* page will show up as jobs on the *Types* page.

Also, only the following actions are available on the respective pages in the current version:

- *Create and Edit Types*: You can create and edit types on both pages. However, BrandMaker recommends that you create new types exclusively on the *> Types - New* page.
- Copy types: (for *Types – New* directly in the creation dialog instead of in the list view).
- *Delete types*: Execution is recommended in the *Types – New* list view. Processes cannot be deleted at the moment, so they lack the icon.

To be able to reach both pages, your role must be assigned the MANAGE_TYPES permission.

2.3.1 Properties

The following table shows the properties of the job and data object types. A process has the same properties as a job except for the inheritance function.
Note that you set the *Name* (and thus the displayed name), *Type*, *Inheritance,* and for Data Objects, the *Localization* property when you create them. Type and inheritance cannot be changed after their creation.

Name	Description
(Displayed) name	Define the name that is visible to users. You can create the displayed name in different language versions. See Display, technical, and unique name, chapter 1.1
Type	The type determines which basic data is created for a job, a process, or a data object.
Inheritance	**Note:** that inheritance can only be created while you create a new type. The *Inheritance* property cannot be changed afterwards! The function can only be used for jobs and data objects. Configure the inheritance: • *No inheritance*: No datasheet variable inherits values from a parent datasheet. • *Single parent datasheet*: Only one job type is available as a possible parent datasheet. • *Multiple parents datasheet*: Multiple job types are available as possible parent datasheets. Refer also to the Chapter 1.3.
Localization	**Note:** Can only be activated when creating a new data object type. Select the checkbox at *Enable localization* if you want to create localized variants of a data object. See Localization, chapter 1.4.
Unique name, technical name	**Note:** Only accessible in the editing dialog box. See Display, technical, and unique name, chapter 1.1
Description	**Note:** Only accessible in the editing dialog box. Enter additional information about the type that is displayed when it is created.
Categories	**Note:** Only accessible in the editing dialog box. Select the categories to which the type is assigned. When the item is being created, the types are displayed in categories.

Name	Description
Type can only be selected by	**Note:** Only accessible in the editing dialog box. Specify which organizational unit, user group or VDB group can select the types. **Note:** Note that this setting does not affect the visibility of jobs based on this type.
Activating an access control.	**Note:** Only accessible in the editing dialog box. If you activate this checkbox, only users who belong to the same organizational unit or an organizational unit in the hierarchy below it such as the creator and processor of the job or data object can view the jobs derived from this type.
Parent datasheets	**Note**: Only visible in the editing dialog box if *Inheritance* = *single parent datasheet* was specified when created. Select a type.
Jobs/processes and data object type only exist as sub-job/process/data object	Activate the checkbox if the job, process, or data object may only be used as a sub-job, sub-process, or sub-data object.
Manually adding sub-jobs/sub-data objects	**Note:** Effective for Job and Data object types. Only accessible in the editing dialog box. Activate the checkbox if the user is allowed to add sub-jobs or sub-data objects to the job or data object manually.
Permitted sub-job types/data object types	**Note:** Only accessible in the editing dialog box. Only for Job and Data object types. The *Manual addition of sub-jobs* checkbox must be selected. Specify which types can be added as sub-jobs/data objects during creation.
Selected sub-job/data object type	**Note:** Only accessible in the editing dialog box. Only for Job and Data object types. The *Manual addition of sub-jobs* checkbox must be selected. Specify which sub-job or sub-data object is added by default when creating.

Name	Description
Automatically added sub-jobs/data objects	**Note:** Only for job and data object types. Only accessible in the editing dialog box. Specify which sub--jobs or data objects are added automatically when the item is created. Click the plus sign to configure a sub-job or sub-data object. Define the following settings: • *Job/Data object type*: Specify the sub-object type. • *Workflow*: Defines the workflow for the sub-object. • *Processor*: Defines which user is assigned to the sub-object. Depending on the settings of the selected type, further selection fields may open up • *Default job name*: Set a default job name. • *Optional sub-job/data object*: If you activate the checkbox, the user can choose whether the sub-object is created. If the checkbox is deactivated, the sub-object will always be created automatically.
Use for synchronization	**Note:** Only accessible in the editing dialog box for process types. Once synchronization is enabled, the function cannot be disabled. Activate the switch if the type is used for synchronization of a process with a planning element. If you have further questions about synchronization, please contact your BrandMaker contact person.

Note

The "delivery date" set in the parent job is inherited to the sub-job as the default value.

2.3.2 Managing Types

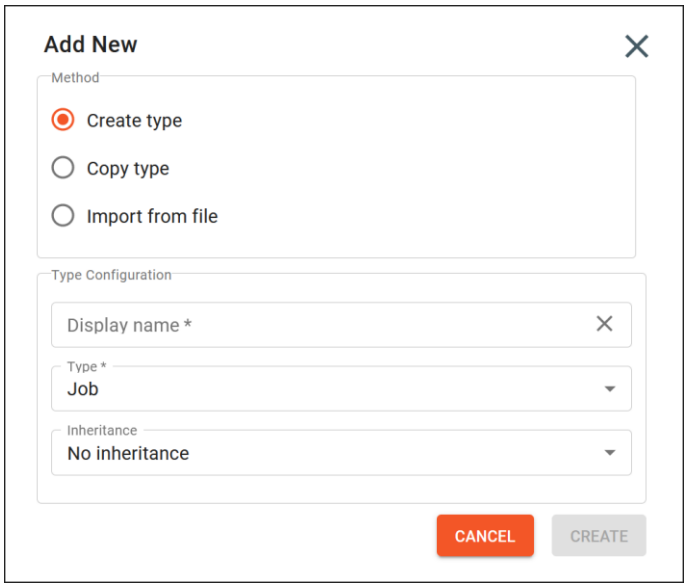
The chapters below describe how to manage types. This includes the following tasks:

- Creating types, see Chapter 2.3.2.1
- Editing types, see Chapter 2.3.2.2
- Copying types, see Chapter 2.3.2.3
- Deleting types, see Chapter 2.3.2.4

2.3.2.1 Creating a type

1. Choose *> Administration > Datasheet Engine > Types – New*.
2. Click *the button Create*.

The following creation wizard is displayed, where *Create type* is already preselected:



3. Enter a name in the *Display name* field.
4. Choose which type you want to create: Job, Data Object or Process.
5. For job and data-object types: Specify the inheritance. Note that you cannot change this setting at a later time.
6. For data object types: Select the checkbox if you want to create localized variants of a data object. Note that you cannot change this setting at a later time.
7. Click *Create*.

The *Edit properties* dialog box opens.

8. Switch to the *Properties* tab.
9. Edit or add to the type properties. Please refer to Chapter 2.3.1.
10. Switch to the *Changes* tab in the upper part of the dialog box.
11. Click the *Publish* button in the dialog box.

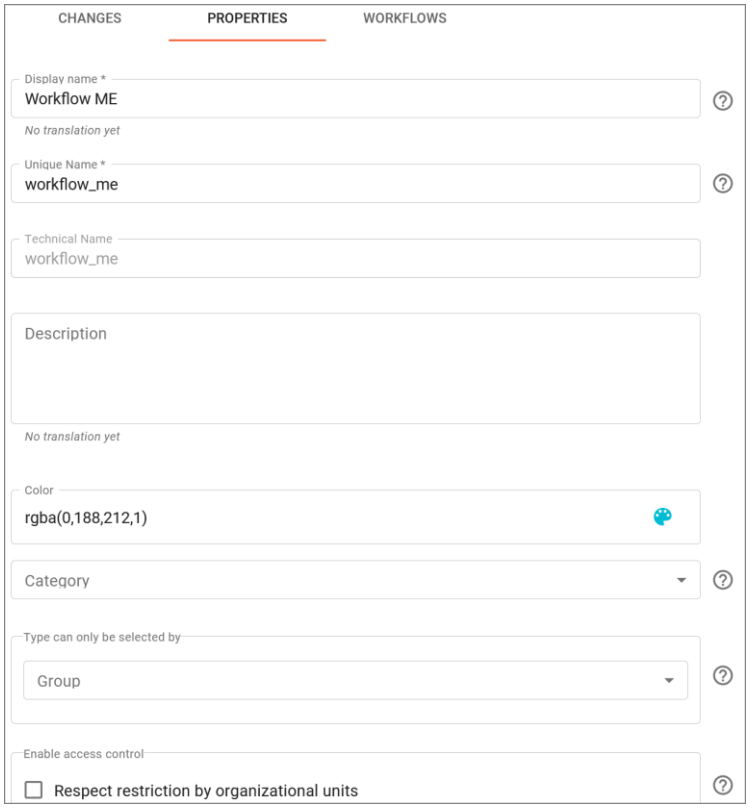
You have created the type and published the changes.

> **Note**
>
> Creating types is also possible via the *> Administration > Datasheet Engine > Types* page. However, BrandMaker recommends that you create new types exclusively on the *> Types - New* page.

2.3.2.2 Editing types

1. Choose *> Administration > Datasheet Engine >* Types – New.
2. In the table, click the ✎-icon at the end of the row for the type whose properties you want to edit.

The tab *Properties* of the job type is displayed:

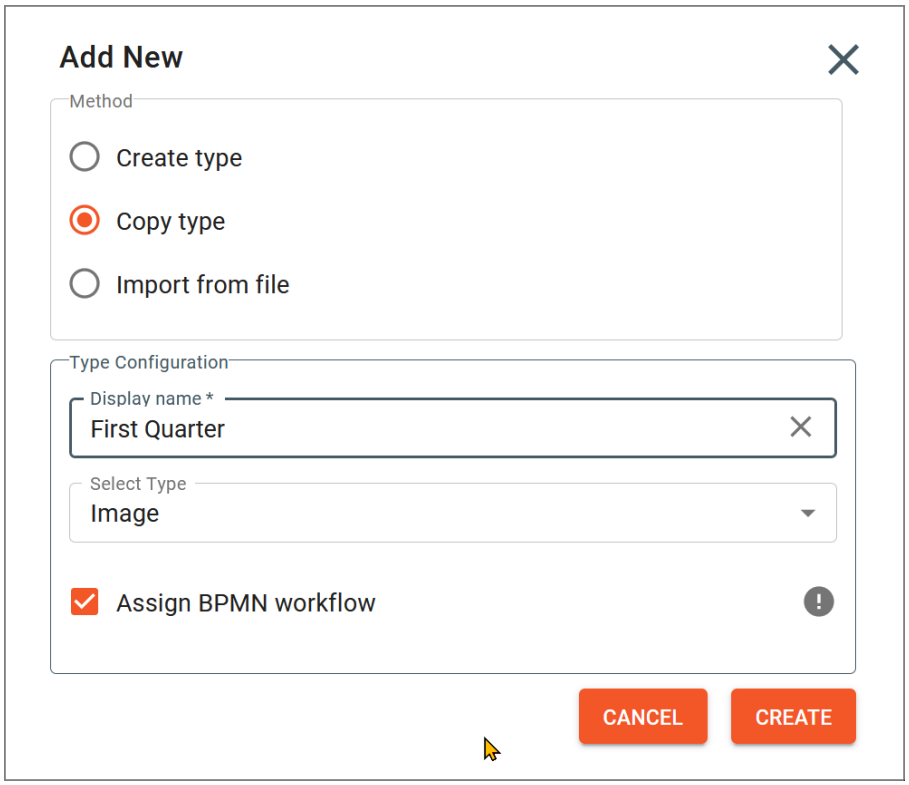


3. Edit or add to the type's properties. Please refer to Chapter 2.3.1. Changes are saved directly, but not published, i.e., they are not yet effective.
4. Switch to the *Changes* tab in the upper part of the dialog box.
5. Click *Publish* at the bottom right of the dialog box.

You have edited the *Type* and published the *Changes*.

2.3.2.3 Copying a type

If you copy a job type with classic workflow, the *option Assign BPMN-Workflow* is available. If you have activated the checkbox, the classic workflow will be discarded, and you can then create a new workflow for this type in the BPMN Workflow Modeler.



1. Click > *Administration* > *Datasheet Engine* > *Types-New*.
2. Click *Create*.

The Create Type dialog opens.

3. Select the method *Copy type*
4. Specify a name (displayed name) for the copy.
5. In the Select Type menu, search and select the type that will serve as a template for the copy.
6. *Click* Create.

You have created a copy of an existing type.

2.3.2.4 Localize display name

To localize the displayed name of a type, open it by clicking on the ✎-icon in the type list. You create and edit the translations in the Properties tab. This possibility also exists directly during the new creation.

1. Click in the field *Display name*.

   There will now appear a 🌐-Icon. Click this icon to store the job name in multiple languages.

2. The dialog *Input of language versions* opens.

   If you see an ISO language code instead of the globe at step 1, click it to customize an existing localization.

3. Fill in the fields for all languages you need a translation for.
4. Click *Save* to apply the changes to the language versions and return to the previous dialog.
5. Switch to the tab *Changes* and click the button *Publish*.

You have created the desired language versions. The language versions are now available in the respective interface languages.

2.3.2.5 Deleting types

6. Click *> Administration > Datasheet Engine > Types - New*.
7. In the table, at the end of the row for the type you want to delete, click the icon .

> Attention
>
> The type is seemingly deleted immediately after clicking on without a security prompt. Deleting the type must be published like other changes. On the page *Publish changes* by clicking *Undo changes* it can be undone after all.
>
> Processes cannot be deleted at the moment, so the icon is missing there until this functionality is added in a later version update.

You have deleted the type.

2.3.3 Adding a sub-job or sub data object

Sub-jobs allow you to structure workflows and make dependencies between different workflows visible. You can use sub-jobs to sub-divide a data object or data object data record. You can specify:

- whether a user can add sub-jobs or sub data objects manually when creating a new job or data object,
- whether certain sub-jobs or sub data objects are added automatically when a new job or data object is created.

Prerequisites:

- You have defined allowed sub-job types or sub data object types.
- You have already created job types or data object types and linked them to a workflow.

In the area *Automatically generated Sub-Jobs* choose *Add Sub-Job* (*Automatically generated Sub-Products > Add Sub-Product*) to specify the sub-type that is added automatically when the item is created. Enter the required settings in the dialog box that opens.

> **Note**:
>
> The required settings are identical for adding a sub-job and adding a sub data object.
> The "delivery date" set in the parent job is inherited to the sub-job as the default value

2.3.4 Export and import of process types

Export and import existing process types to simplify and speed configuration of new systems.

Note that email templates are not taken over during export, and after an import you have to adjust BPMN workflows with a “Send Task” accordingly.

2.3.4.1 Export of a process type

The export is done as JSON. The export includes the following features, rights, and parameters:

- Type properties
- Users, comfort tables as well as variables in connection with the sync to Marketing Planner
- BPMN workflows
- Access permissions
- Input/output parameters for service tasks
- Step names of the simplified view

2.3.4.2 Import of a process type

Once you have set up and configured a process with BPMN workflow on your test system, it should also be transferred to live operation at some point after thorough testing. The import is done in the creation wizard:

1. Choose *> Administration > Datasheet Engine > Types – New*.
2. Click *the button Create*.
3. Select the *Import from file* option.
4. To import, drag the desired JSON file from the file system to the marked upload area. The file name is listed below the area if the file extension is correct, and the process can be imported.
5. Or you can click in the marked area and a file selection dialog opens with preset file type filter *.json*. Browse the file system for the file you want to import.
6. Enter a name for the process in the *Displayed name* field.
7. The *Create* button executes the import and stores the process in your system under the specified name.

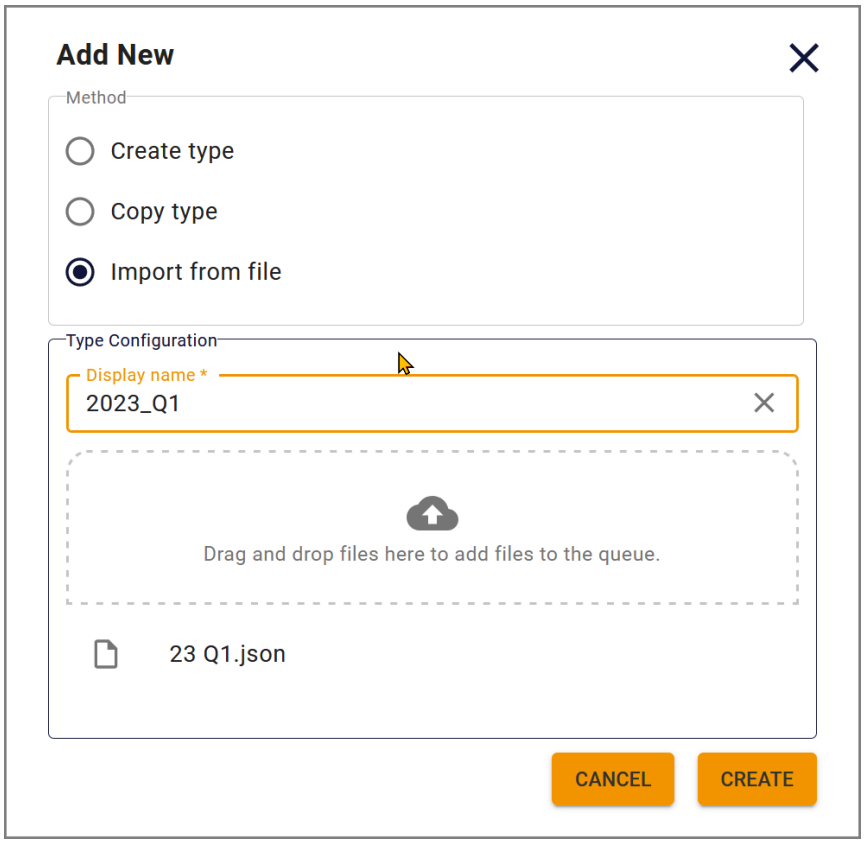
You have successfully imported a process type that was previously exported on another system.

Attention

Imports are performed without the data of a user-defined data structure. If the data structure on the import system is incomplete, you will see error messages on the relevant gateways. You cannot use the process yet. You need to recreate missing data structures and relink them in the imported BPMN workflow.

Note

Imports of processes with synchronization settings currently work only to a limited extent. This is because the settings for dimensions and Planner layers are ID-based, but these IDs differ from one system to another and cannot be re-mapped. Therefore, a manual re-creation is necessary.


Add New
Method
Create type
Copy type
Import from file
Type Configuration
Display name *
2023_Q1
Drag and drop files here to add files to the queue.
23 Q1.json
CANCEL
CREATE

2.4 Assigning a workflow

To use a type, you must link the type to a workflow. This ensures that all of the steps required for processing a datasheet are carried out.

Note:

- Job and data object types are linked to a classic workflow.
- For a process, you create a BPMN workflow.

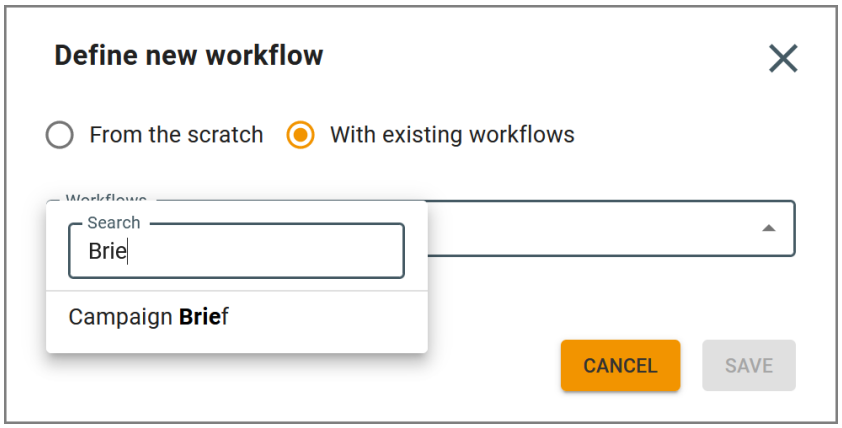
To create a classic workflow, you have two options:

- Under *> Administration > Data Structures & Workflows > Workflows,* you create classic workflows that other modules can also use. In this case you have to assign one or more workflows to the job or data object type. To do this, refer to the first of the following sections.
- Under *> Administration > Datasheet Engine > Types - New,* you create a classic workflow that is used exclusively by this job or data object type. Please refer to the second of the following sections.

2.4.1 Assigning classic workflows

You can assign workflows directly when creating the type or edit the type's properties later.

1. Select *> Administration > Datasheet Engine > Types - New*.
2. Click the *Create* button.
3. After creating a type, switch to the empty Workflows tab.
4. Click *Create New* to add a workflow.
5. Select *From the scratch* to define the new workflow from scratch or *With existing workflows*, to reuse an existing workflow.



6. When the workflow configuration is complete, click *Save*.
7. Next, switch to the *Changes* tab.
8. Click the *Publish* button.

After you have assigned or customized a classic workflow, you can also immediately close the dialog in the *Workflow* tab (**×**) and are not required to take the approach via *> Changes > Publish*. In doing so, the changes are accumulated for the time being and published at a later point. How this can be done is explained in detail in section 2.14.

2.4.2 Classic workflow for job or data object types

1. Click *> Administration > Datasheet Engine > Types - New*.
2. Click on the pencil icon in the list for a previously created job or data object type.

The Properties tab is displayed.

3. Switch to the *Workflows* tab.
4. Click *Create new*.

The *New Workflow* dialog box opens.

5. If you want to create a new classic workflow:
    a. Click *From the scratch*.
    b. Enter a name and description for the workflow.
6. If you want to use an existing classic workflow as a starting point:
    a. Click *With existing workflows*.
    b. Select an existing workflow from the drop-down list.
7. Click *Save*.

You have created the workflow.

8. Edit the workflow:
    - Click  to configure access rights.:
    - Click the plus symbol to insert a subsequent workflow step.
    - Click > ⋮ > *Edit* to edit the settings of the workflow step.
    - Click > ⋮ > *Copy* to copy the workflow step.
    - Click > ⋮ > *Delete* to delete the workflow step.

You can adjust the order of the workflow steps by drag and drop at any time. You can move a workflow step by dragging and dropping the ⁞⁞ handle.

9. Click **×** to close the dialog box.

You have created a classic workflow exclusively for this type.

2.4.3 Create a BPMN workflow for a process

You can also copy a job type with classic workflow, remove the existing assignment and assign a BPMN workflow instead. If you select a job type with an existing workflow as described in section 2.3.2.3, the *Assign BPMN workflow* option is displayed. This is a replacement for the legacy *Copy type and assign a BPMN process* function.

The feature *> Administration > Datasheet Engine > Assign Workflow* available in previous versions is no longer present in version 7.2. Therefore, proceed as follows:

1. Click *> Administration > Datasheet Engine > Types - New*.
2. Locate and select the desired process in the overview list.
3. Click the pencil icon.

   The Properties tab is displayed.
4. Switch to the *Workflow Modeler* tab.

The BPMN Workflow Modeler workspace is opened. This is where you can design a workflow according to the description in Chapter 3.

2.5 Managing a data sheet layout

Note

This section describes how to set visibility for job and data object types. A description of the visibilities for processes can be found in chapter 3.7.

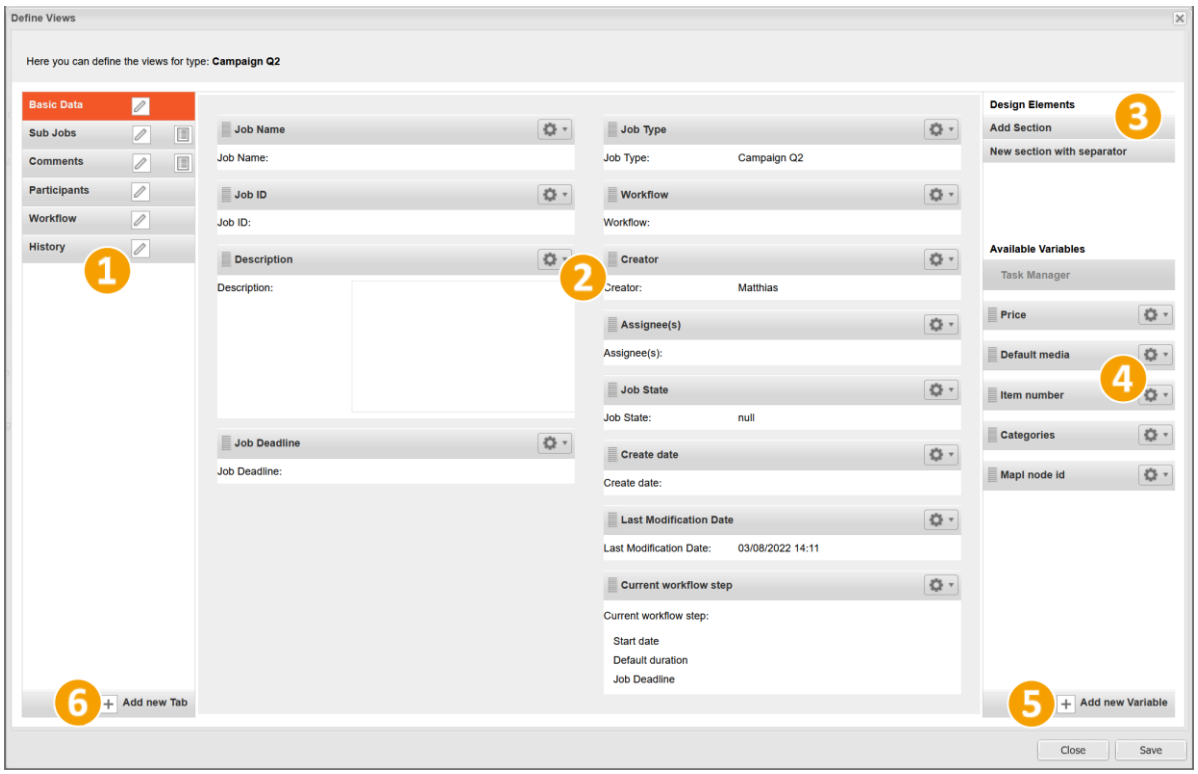
You can use existing variables and attributes to design data sheets that are used and filled out by users when creating a job, process, or data object. Note that a process is managed in the Job Manager module.

Note: It should be noted that the display of the data sheet fundamentally differs in the Job Manager and Data Hub. A data sheet in the Job Manager always includes the tabs *Basic Data*, *Comments*, *Participants*, *History*, and *Workflow*. You can rename and rearrange these tabs but cannot delete them. However, the *Comments* tab can be hidden using the visibility settings. A job data sheet is also always provided with a job discussion.

Number	Description
1	This lists all of the data sheet tabs that have been created. You can carry out the following functions for the tab: • Rename it. • Delete it. • Manage the access (rights and visibilities).
2	This area displays the data sheet layout. You can: • Design the layout as one-column or two-column. • Remove sections or columns via the context menu. • Place or remove variables or sections using drag and drop. Click the gear menu to open a context menu for editing or copying a variable.
3	Drag the graphical elements *Add Section, Add Section with Separator*, and *Additional column* to the data sheet using drag and drop.
4	Use drag and drop to place the available variables on the datasheet. Click the gear menu to open a context menu for editing or copying a variable.
5	Click the *Plus* icon to create a new variable for use on this datasheet.
6	Click the *Plus* icon to add a new tab.

Note: If you want to connect a data object and its data in *Brand Template Builder* module to the *Smart Group* function, an image must be defined in the *Images* field on the data sheet and the data object must be assigned to at least one theme. Accordingly, the type must provide the system variables *Images* and *Themes*. Take this into account when you create the data sheet.

Choose > *Administration* > *Datasheet Engine* > *Datasheet Layout* to edit the data sheet.



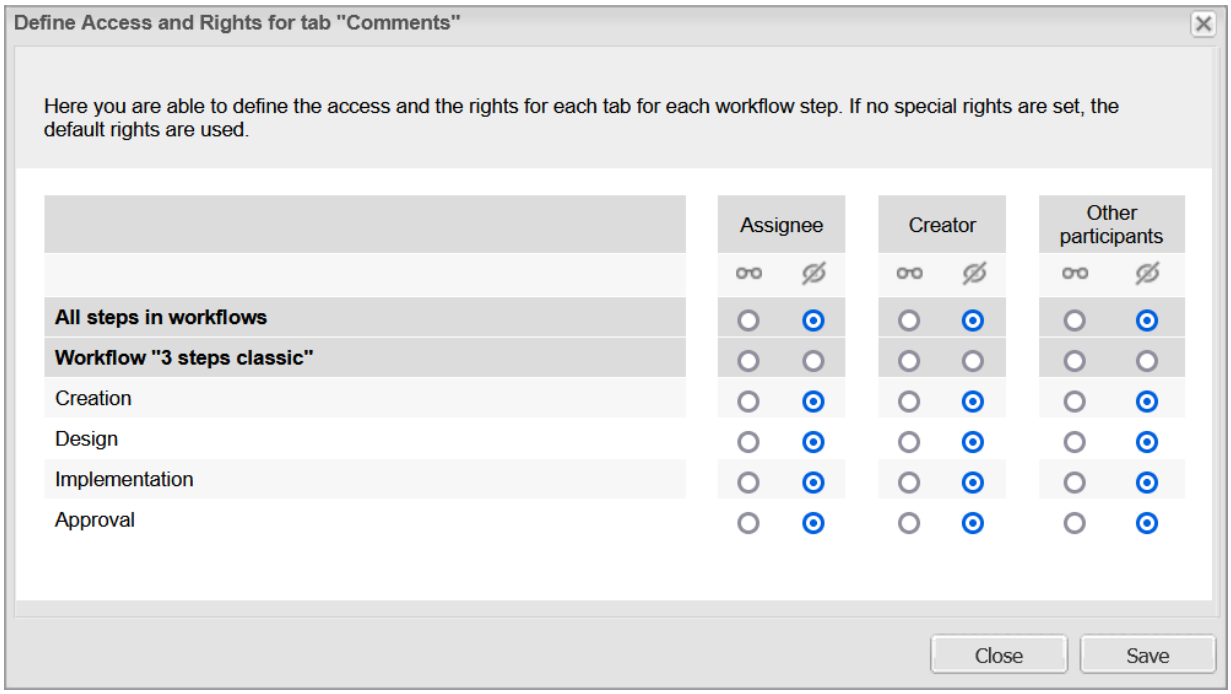
2.5.1 Visibility of a data sheet tab

The access to and visibility of tabs and the variables placed on them can be restricted when you configure the type for each workflow step. For this, users are divided into the categories *Assignee/Processor*, *Creator*, *Other participants* and *Anonymous*. The category that you belong to when opening the data sheet thus determines which tabs and variables on the data sheet can be viewed or edited.

To change the visibility of a data sheet tab, click *> Administration > Datasheet Engine > Datasheet Layout* and open a data sheet. Click the icon for a data sheet tab. The visibility of a data sheet tab can be defined as follows for each workflow step:

Category	Visibility
Initiator	Visible or not visible
Creator	Visible or not visible
Other participants	Visible or not visible

Note: The visibility of the *Basic Data* tab cannot be changed. The tab is visible to all users.



2.6 Managing Variables

You can edit the variables that are assigned to a type or add new variables. After you have selected a type from the dropdown list, the assigned variables are listed.

Note: If you want to connect a data object and its data in *Brand Template Builder* module to the *Smart Group* function, an image must be defined in the *Images* field on the data sheet and the data object must be assigned to at least one theme. Accordingly, the type must provide the system variables *Images* and *Themes*. Take this into account when you create the data sheet.

Prerequisites:

- You have the right MANAGE_VARIABLES.

Name/Button	Description
Neu	This creates a new variable for the selected type.
	This edits the selected variable.
	This copies the selected variable.
	This deletes the selected variable.

Note: You can also create a new variable when editing the data sheet layout.

2.6.1 Grouping variables

In principle, each variable is created individually for each type. This means that the values of the variables are displayed in different columns in the overview of the module.

You can group variables to compare specific values for each job, process, or data object to each other. You can then display these values in a column in the overview. Examples include:

- The price of data objects that are derived from various data object types
- The completion date of jobs that are derived from various job types

In order to group variables, the variables in the various types must have an identical technical name and must be of the identical variable type. In addition, the option *For all types* must be activated in the settings of the variables.

If a user wants to display these variables in a column, the user chooses *> Edit > Arrow key* in the overview in a cell in the header *> Columns > General* and activates the checkbox for the variables. The user then chooses *Save view for current filter*.

2.7 Visibility of variables

Note

This section describes how to set visibility for job and data object types. For a description of the visibility of processes, see Chapter 3.7.

By defining the visibilities and rights of a variable, you can specify whether a variable is displayed for certain user roles and/or can be edited. You can configure these settings separately for each workflow step. There are a number of different user categories:

- *Assignee*: The assignee is the user responsible for the workflow step.
- *Creator*: The creator is the user that has created the job or data object type.
- *Other participants*: Other participants are users that were invited to the job or data object type.
- *Anonymous*: All other users that do not belong to one of the named user groups are flagged as anonymous.

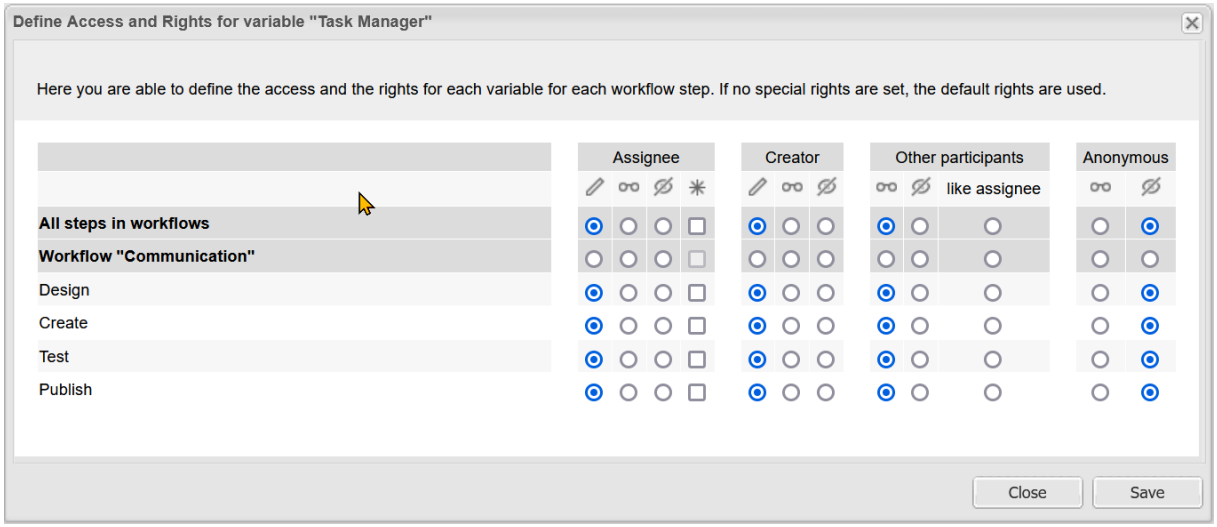
To define the visibility and editing options for the user categories, you have two options:

- Choose *> Administration > Datasheet Engine > Variables Access Rights*.
- Choose *> Administration > Datasheet Engine > Datasheet Layout*. Open the desired data sheet and choose *Access and Rights* from the context menu of the variables.

You can define the visibilities and editing options by activating the following options:

Name/Icon	Description
	The variable is displayed and can be edited.
	The variable is displayed but cannot be edited.
	The variable is defined as a mandatory field and must be edited.
	The variable is not displayed.

Note: If a workflow is changed at a later stage, all settings for authorizations and visibilities are reset.



2.8 Workflow messages

Messages are generated automatically and sent for actions such as forwarding to the next workflow step or inviting a user to a job, for example. Choose *> Administration > Datasheet Engine > Workflow Messages* to manage the dispatch of messages.

Prerequisites:

- You have the right MANAGE_EMAIL_NOTIFICATION.

Go to *> Administration > Datasheet Engine > Workflow Messages* and choose a type. The available variables are then displayed in the list.

The list contains the following columns:

Name	Description
Status	Activate the checkbox to adopt the variable or its value in the system messages.
Variable	This displays the name of the variable.
Tab	This displays the tab on which the variable is placed.
Sorting	You can change the order of activated variables.

Managing the e-mail dispatch

You can define which users are informed with a message when an action is carried out for a type. To do this, users are divided into different user groups. Select a type from the dropdown list and choose *Manage e-mail dispatch*.

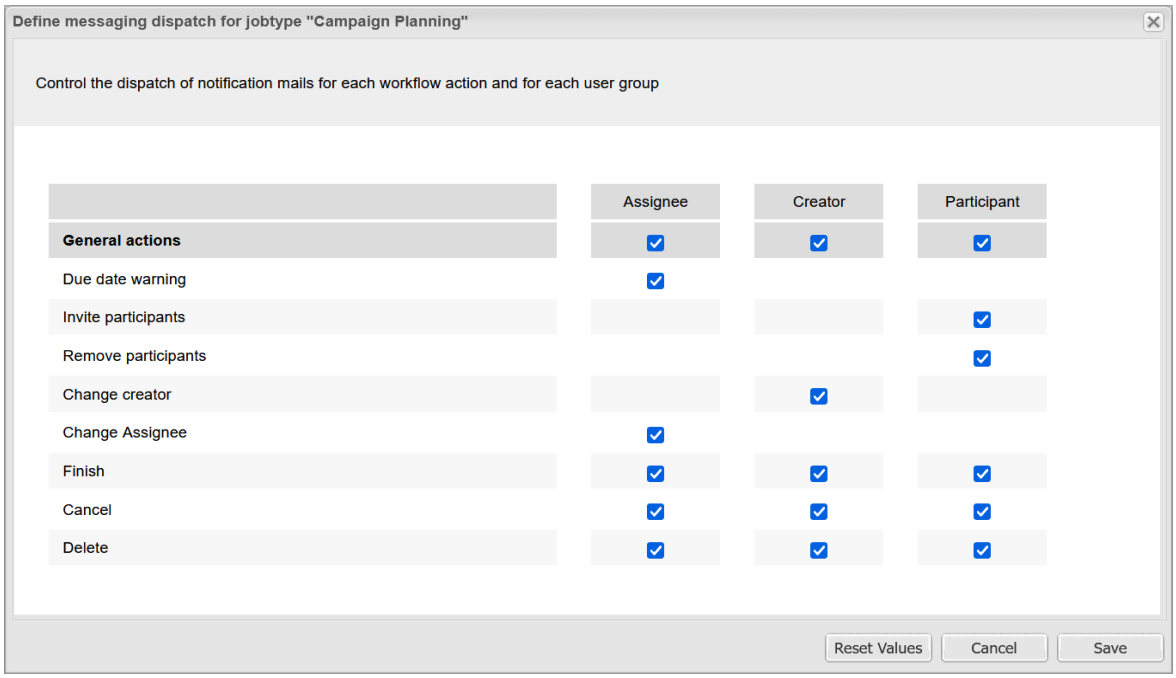
User groups:

- *Assignee*: The user who is responsible for the workflow step.
- *Creator*: The user who created the type.
- *Participant*: Users that have been invited.

Actions that trigger an e-mail dispatch:

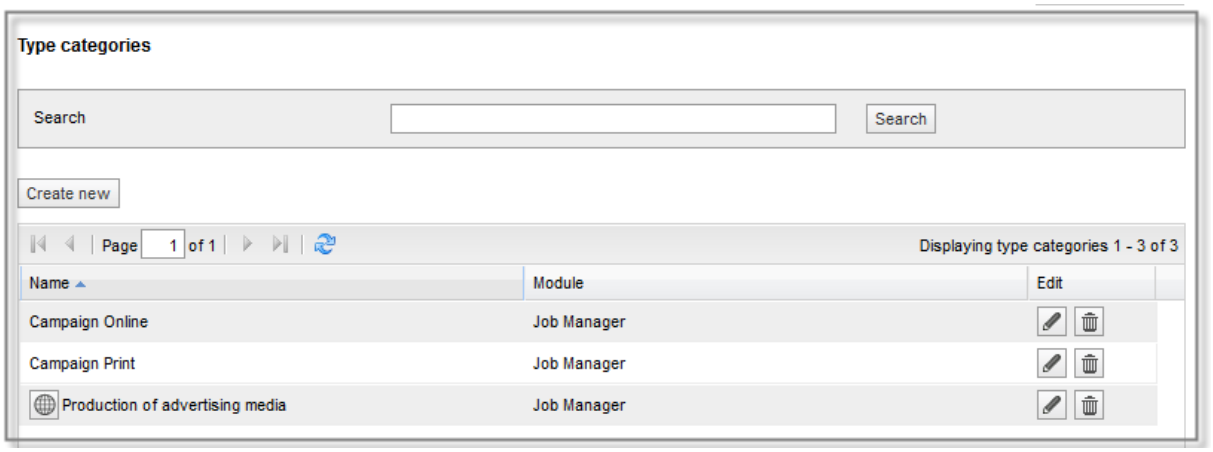
- *General actions*: Due date warning, Invite participants, Remove participants, Change creator, Finish, Cancel, Delete, Change Assignee
- *Workflow-specific actions*: Forward to next step, Pass back to previous step

Activate the corresponding checkboxes to configure the dispatch of messages. Note that the user that triggers an action does not receive a message.



2.9 Type categories

Define type categories to display the available types by category when creating a new job, process, or data object. Note that processes are managed like jobs in the *Job Manager* module. Users can browse the list and further restrict it.



2.9.1 Creating a type category

You want to create the category `Photo-shoots` for the Job Manager module.

Prerequisites:

- You have the right MANAGE_TYPE_CATEGORIES.

Step by step:

1. Click > *Administration* > *Datasheet Engine* > *Type Categories*.
2. Choose *Create new*.
3. This opens a new dialog box.
4. Enter `Photo-shoots` in the *Name* input field.
5. Choose the entry *Job Manager* from the *Module* dropdown list.
6. Click *Save*.

You have created the category `Photo-shoots` for the Job Manager module. You can assign job types to this category.

2.10 Configuring the object ID

When you create a data sheet, a unique ID for the job, processes, or data object is assigned automatically. Note that processes are managed like jobs in the *Job Manager* module. Choose > *Administration > Datasheet Engine > Object ID* to determine the format based on which the object ID is created. An overview provides information about how the object IDs are generated in the Job Manager and Data Hub modules.

Prerequisites

- You have the right MANAGE_OBJECT_NUMBERS.

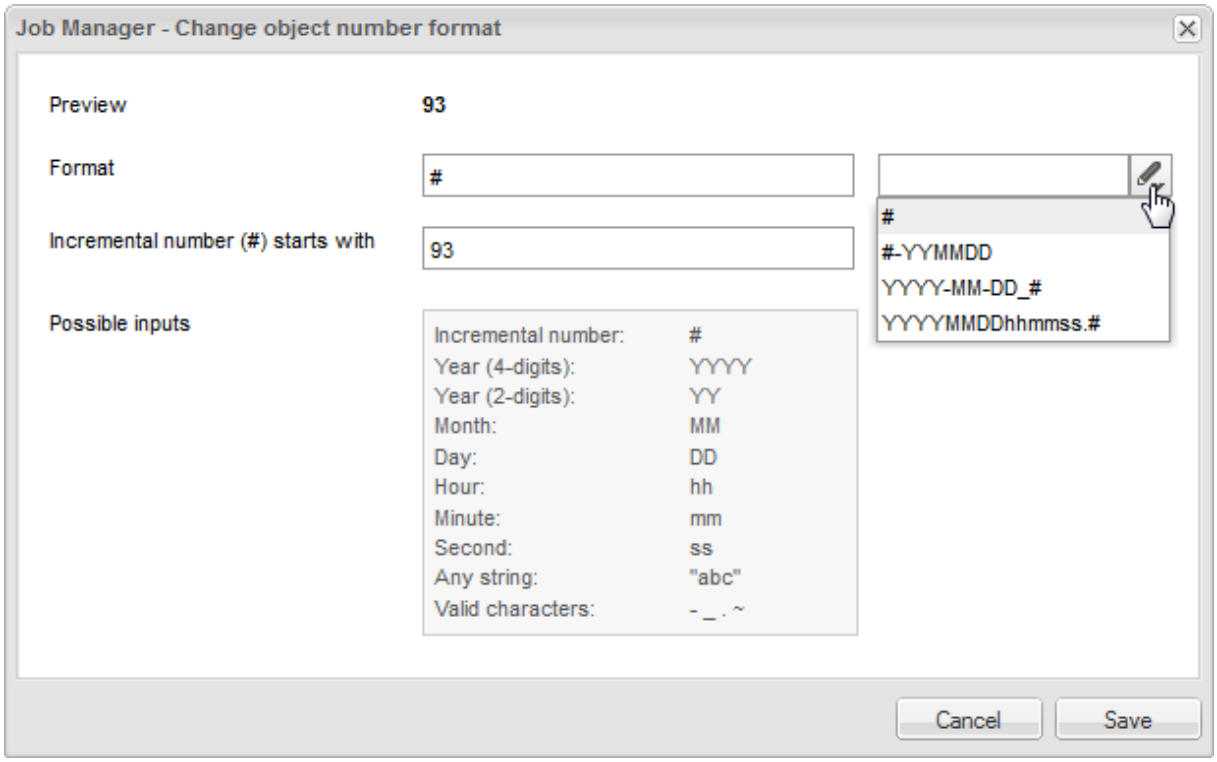
Name	Description
Module	This displays the module for which the object ID configuration is valid.
Format	This displays the currently selected format based on which the object ID is generated.
Preview	This displays an example of the object ID.
Last change	This displays the date on which the object ID configuration was last edited.
Last modification by	This displays the user that last edited the object ID configuration.
Editing	Click the pencil icon to edit the object ID configuration.

Note: A newly defined object ID format is applied as of the next incremental number (#) that is used. Unique IDs that have already been assigned for data sheets remain unchanged. The newly defined formats (a YYYY-MM-DD time stamp, for example) are attached to these IDs.

2.10.1 Editing the format of the object ID

In the overview of the object number configuration, click the *pencil* icon to edit the format of the object ID for a module.

Name	Description
Preview	This displays a preview of the current format of the object ID.
Format	Choose from the list of predefined formats (#, #-YYMMDD, YYYY-MM-DD_#, YYYYMMDDhhmmss.#).You can use the predefined formats to add a timestamp to the object ID.
Incremental number (#) starts with	The next number used (the ID used last + +1) is entered in the input field automatically. The newly defined object ID format is applied from the entered number onwards. You can enter another higher number. Your entry is checked. If you enter an invalid number, you are informed about this by an info message.
Possible inputs	This lists the characters that you can use for the object ID format, such as "YY" for two-digit year numbers or "DD" for days, for example, and the special characters that are permitted.

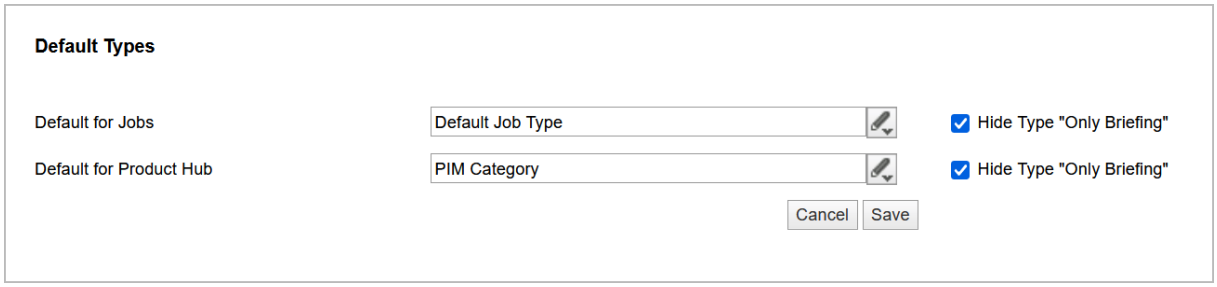


2.11 Default types

Create the default type for the Job Manager and Data Hub modules. The type defined as the default is then displayed under the category *Standard* when you create a new job, process, or data object. You can also define whether the *Only Briefing* type can be used in the individual modules. With the help of the *Only Briefing* type, requirements for a job, process, or data object can be described simply, without having to configure an extensive data sheet or select a workflow.

Prerequisites:

- You have the right MANAGE_DEFAULT_TYPES.



2.12 Settings

For the *Only Briefing* type, you can define the message text when a job or data object is forwarded. Click *> Administration > Datasheet Engine > Settings* and then choose whether you want to define the settings for jobs or data objects.

Prerequisites:

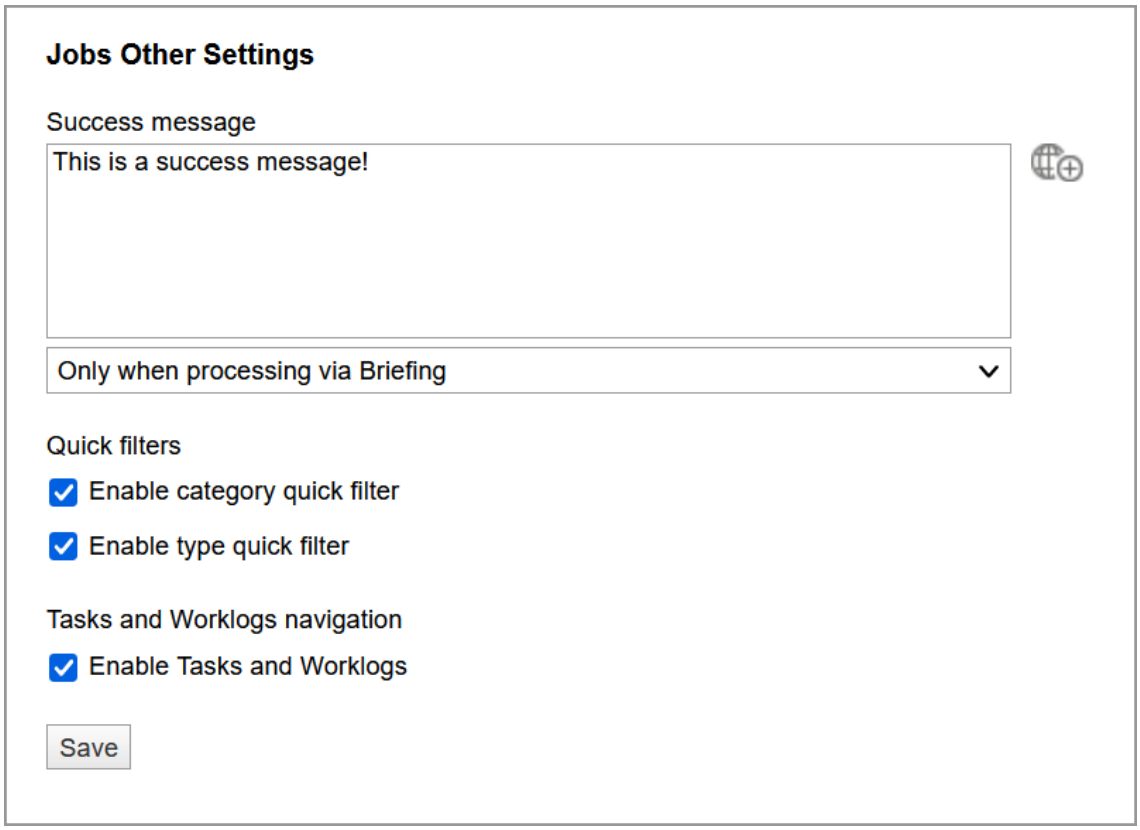
- Use of the *Only Briefing* type is allowed.

From the dropdown list or input field, you can define which message (if any) is sent when jobs or data objects of the type *Only Briefing* are forwarded:

- No message: No message is sent when the item is forwarded.
- Only when processing via Briefing: The stored message is sent when the item is forwarded.

You can also activate *Fast filters*. An activated checkbox at *Allow filtering by categories* allows filtering of type categories in the respective module for all users. Select the checkbox at *Filter by type* to allow type filters in the respective module for all users.

You can also configure the *settings for the theme navigation*. Select the *Enable theme navigation filter* checkbox to enable theme navigation for all users in the module in question. If you want to access the navigation for *tasks* and *time management*, activate the *Enable Tasks and Worklogs*.



2.13 Task Templates

You can use a created task schedule again by saving it as a template. In the Task Planner, you can thus quickly and easily access and use a task saved as a template. Click *> Administration > Datasheet Engine > Task Templates* to create a new template or edit an existing template.

Prerequisites:

- You have the right MANAGE_TASK_TEMPLATES.
- Tasks are already saved as templates.

This opens an overview that displays the name of the task, the number of work steps, the description, and the creator of the task. Click one of the icons to edit a task template or create a new task template.

Name/Button	Description
Neu	This creates a new task template.
	This allows you to edit the task template.
	This copies the task template.
	This deletes the task template.

2.13.1 Creating a task template

You want to create a task template to define the steps for creating a new brochure. You want to define the individual steps `Check image material and texts`, `Assign agency`, `Assign print agency`, and `Send`.

Prerequisites:

- To use the task template, a workflow that covers the work steps defined in the task template is required.
- You have the right MANAGE_TASK_TEMPLATES.

Step by step:

1. Choose *> Administration > Datasheet Engine > Task Templates*.
2. Choose *Create new* to create a new task template.

   This opens a new dialog box.
3. Enter the name of the task template in the input field.
4. *Optional*: Enter the name in different language versions.

5. *Optional*: Enter a description of the task template.
6. Choose the entry *1* from the *Apply Steps* dropdown list.
7. Choose *Add Tasks*.

   This activates the input screen below the entry *Step 1*.
8. Enter `Check image material and texts` as the name of the task.

   Note: In an activated input screen, use the [ESC] key to discard an entry.
9. Double-click the cell in the *Duration* column.

   This activates the input screen.
10. Enter the *Duration* in days and the *Estimation* in hours.
11. Choose the entry *2* from the *Apply Steps* dropdown list.

    This creates the field *Step 2*.
12. Choose *Add Tasks*.

    This activates the input screen below the entry *Step 2*.
13. Enter `Assign agency` as the name of the task.
14. Repeat steps 9 and 10.
15. Use the *Apply Steps* dropdown list to create the work steps `Assign print agency` and `Send`.
16. Click *Save*.

The task template has been created and can be used on a data sheet for the task planner. The names of the work steps are overwritten with the names of the individual workflow steps of the workflow assigned to the job when the template is used.

2.14 Publishing changes

All of the changes made in the type configuration are grouped together and can be carried out simultaneously at a time that you can specify yourself. This does not only mean the changes to the types themselves, but any changes and adjustments within the datasheet engine. This includes, for example, data sheet layout, categories, task templates or the variables.

Prerequisites:

You have the right PUBLISH_DSE_CHANGES.

Attention!

Please note that you have to fix all formal errors before you can publish a newly created or modified BPMN workflow. Publishing with formal errors can permanently damage the job type.

Note: Note that publishing changes may lead to impact performance for other users. We therefore recommend publishing changes at a time when the system load is lower.

You publish the changes for each type separately. You do this under *> Administration > Datasheet Engine > Types - New* in the Edit dialog box on the *Changes* tab.

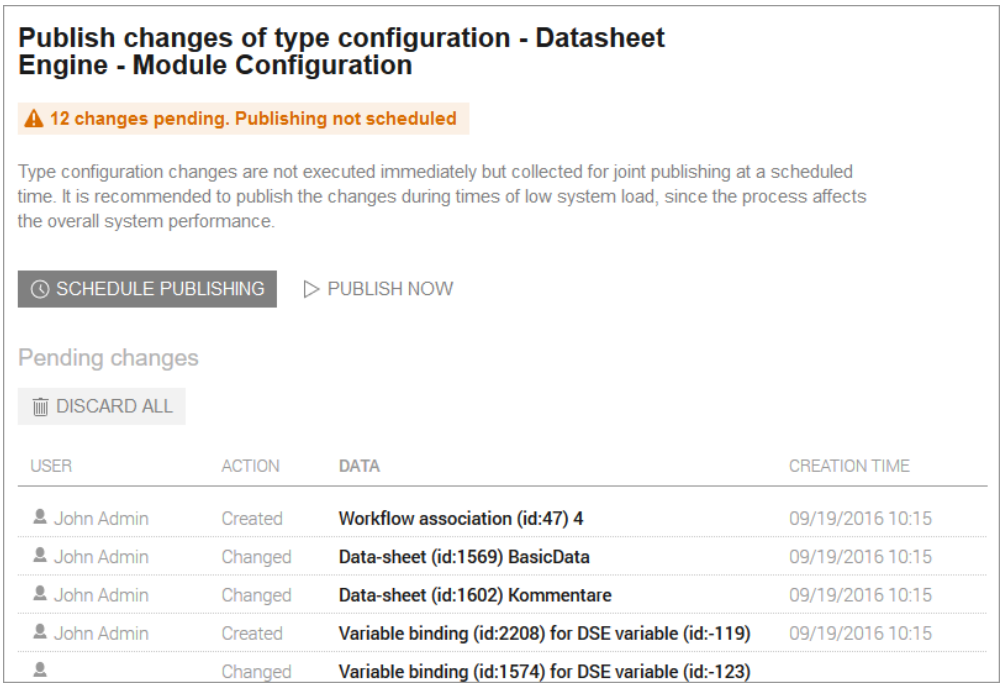
Except for classic workflows, all changes related to this type are published. Note that you cannot plan such a publication.

Note

We do not recommend collecting changes for a large number of types and publishing them together. This is because in the event of a possible error during publication, all pending changes to the types must always be rolled back.

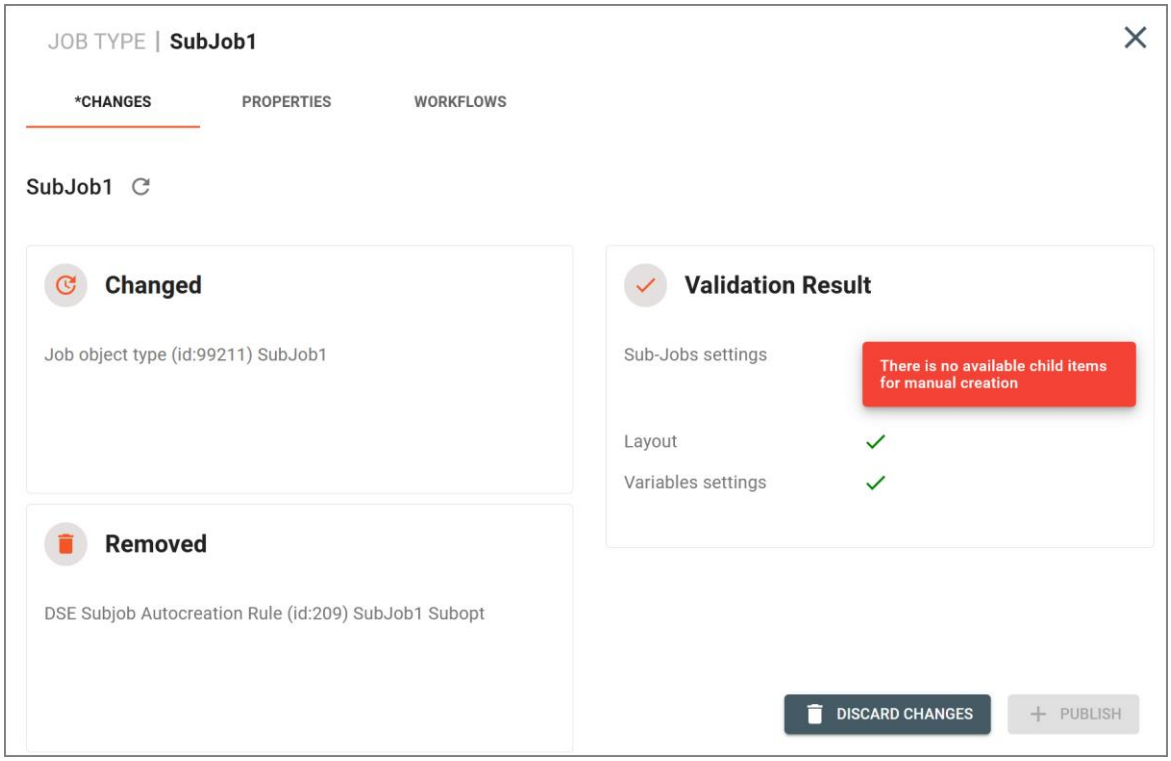
Associated tasks

- *Publishing changes immediately* see page 50: You can publish changes immediately at all times. You can do so even if you have already scheduled a publication.
- *Scheduling a publication* see page 51: If you want to publish the changes at a specific time, you can enter this time. Administration then carries out the publication at this time. You can schedule a publication even if there are still no changes in the type configuration.
- *Changing a scheduled publication* see page 52: If you want to carry out the publication at a different time, you can edit the time.
- *Canceling a scheduled publication* see page 53: If you no longer want to carry out a publication, you can cancel it.
- *Discarding changes* see page 53: If you do not want to publish changes that have been made, you can delete them. Note that you can only undo all of the pending changes, not just one.



2.14.1 Validation

The validation of the types (Job, Data object or Process) is done automatically within the respective creation dialog. When you create a type or make changes to an existing type, the validation information is displayed in the tab *Changes* under the heading *Validation Results*. Errors that need to be corrected are briefly described and highlighted in red. After corrections and adjustments, click the ↻ icon under *Changes* to validate the type again.



Only after all validation errors are fixed, can you publish the type using the *Publish* button.

2.14.2 Publishing changes immediately

You can publish changes immediately at all times. You can do so even if you have already scheduled a publication.

> **Note:** Note that publishing changes may lead to impact performance for other users. We therefore recommend publishing changes at a time when the system load is lower.

Prerequisite

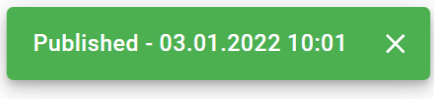
- An administrator has added changes that have not been published yet.

Publish changes of a type immediately

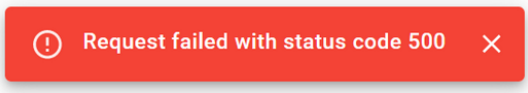
1. Click > Administration > Datasheet Engine > Types - New.
2. Click the pencil icon for the type whose changes you want to publish.
3. The editor opens.
4. Switch to the Changes tab.
5. Click Publish.

The changes are published.

After clicking the button *Publish*, server-side messages that affect the backend are briefly displayed as a browser notification.



Server notification after successful publishing



In case of errors or warnings as in the example above, the server's log file provides more detailed information.

Publishing accumulated changes immediately

1. Click > *Administration > Datasheet Engine > Publish changes of type configuration*.

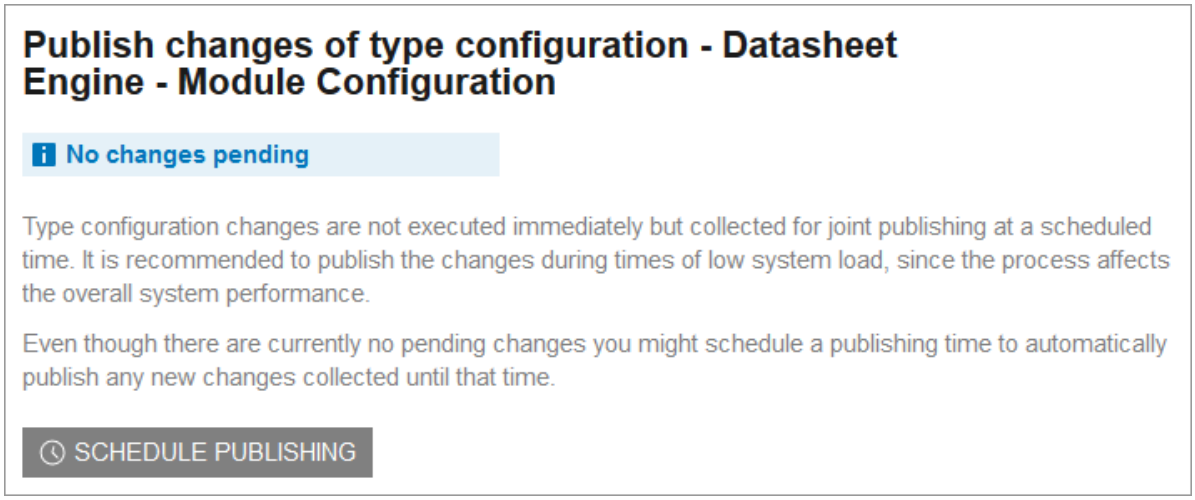
The list of changes is displayed.

2. Click > *Publish Now*.

The changes are published.

2.14.3 Scheduling a publication

If you want to publish the changes at a specific time, you can enter this time. The back-end system then performs this task on schedule. You can schedule a publication even if there are still no changes in the type configuration.



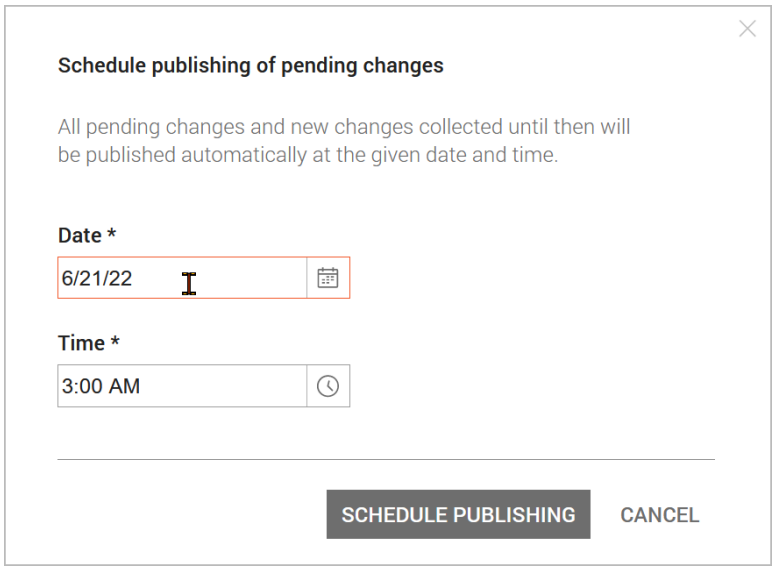
Note: Note that publishing changes may lead to impact performance for other users. We therefore recommend publishing changes at a time when the system load is lower.

1. Click > *Administration* > *Datasheet Engine* > *Publish changes*.

   The list of changes is displayed.

2. Click > *Schedule Publishing*.

   The following dialog box opens:



3. Enter the date and time of publication.
4. Click > *Schedule Publishing*.

You have scheduled the publication. The changes are published at the specified time.

2.14.4 Changing a scheduled publication

If you want to carry out the publication at a different time, you can edit the time.

Prerequisite

- You have already scheduled a publication.

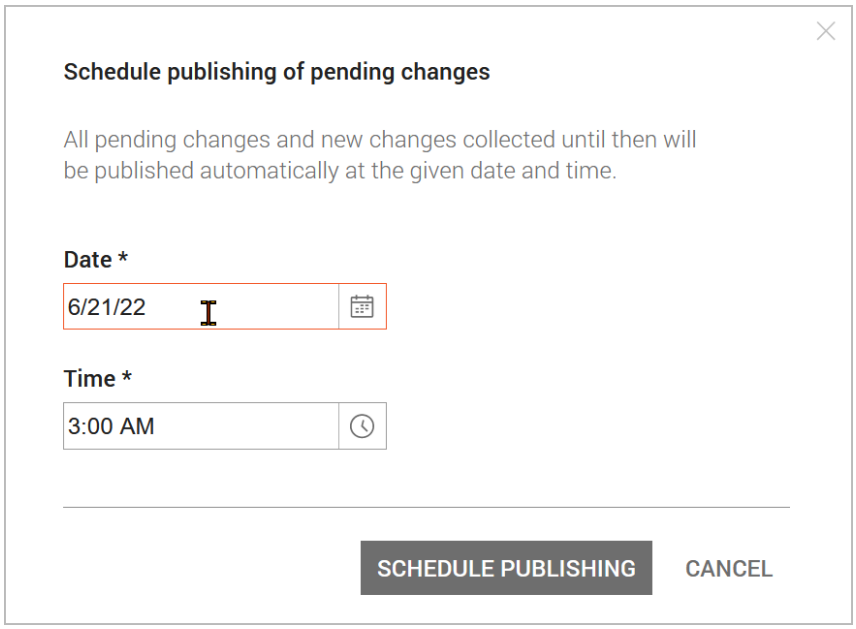
Changing a scheduled publication

1. Click > *Administration* > *Datasheet Engine* > *Publish changes of type configuration*.

   The list of changes and publishing time are displayed.

2. Click > *Edit Time*.

   The following dialog box opens:



3. Edit the publishing time.
4. Click > *Schedule Publishing*.

You have edited the publishing time. The changes are published at the specified time.

2.14.5 Canceling a scheduled publication

If you no longer want to carry out a publication, you can cancel it.

Prerequisite

- You have already scheduled a publication.

Changing a scheduled publication

1. Click > *Administration* > *Datasheet Engine* > *Publish changes of type configuration*.

   The list of changes and publishing time are displayed.
2. Click > *Cancel Scheduling*.

The publication is canceled. The changes therefore do not take effect.

2.14.6 Discarding changes

If you do not want to publish changes that have been made, you can delete them. Note that you can only undo all of the pending changes, not just one.

> **Warning! Data loss!**
>
> If you discard changes, all of the unpublished changed in the type configuration are discarded. You cannot undo this step!

Prerequisite

- An administrator has added changes that have not been published yet.

Discard changes of a type

1. Click > *Administration* > *Datasheet Engine* > *Types - New*.
2. Click the pencil icon for the type whose changes you want to publish.

   The editor opens.
3. Switch to the *Changes* tab.
4. Click *Discard changes*.

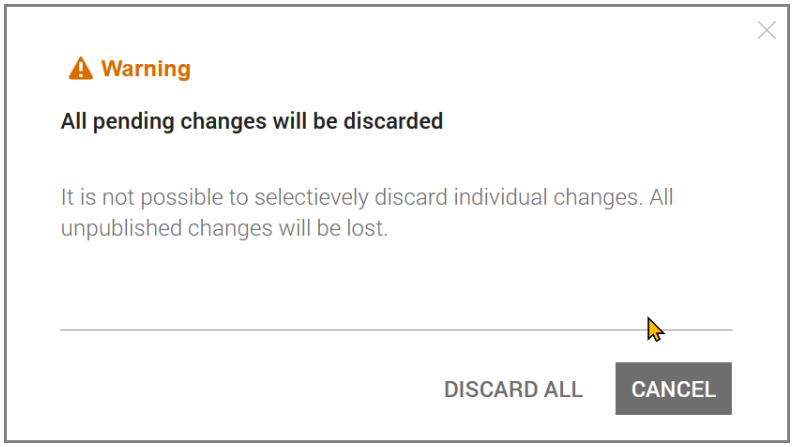
The changes in the type configuration are deleted.

Discarding all changes

1. Click > *Administration* > *Datasheet Engine* > *Publish changes of type configuration*.

   The list of pending changes is displayed.
2. Click > *Discard All*.

The following dialog box is displayed:

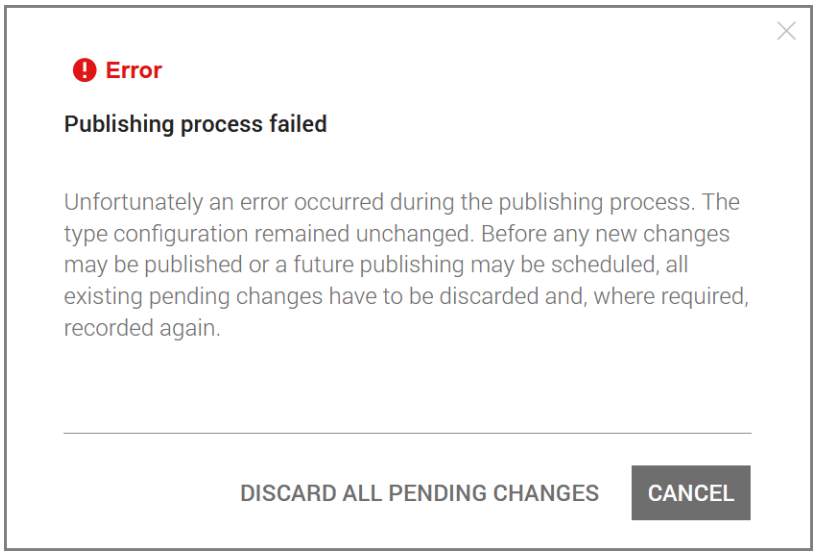


3. Click > *Discard All*.

The changes in the type configuration are deleted.

2.14.7 Failed publication

After a scheduled release, you will be notified of the release status by email and directly on the *Publish Changes* page. But also, errors that occurred with *Publish Immediately* lead to this error message.



When setting up a new system, thousands of database changes quickly accumulate. If several people are responsible for maintaining the types in the system, in such a case you will of course not immediately recognize which and above all whose changes could not be published because they are incorrect.

However, don't let this message worry you, because it doesn't mean that all your type customizations are lost. Instead, you can open each individual type under *Types - New* and also publish all changes affecting this type individually in the system there. A type with pending changes displays an * in the *Changes* tab. The display of existing validation errors in the tab *Changes* supports you in troubleshooting. Continue as described above in section 2.14.1.

3 BPMN workflow

This chapter explains how to create BPMN workflows for processes. You can create a BPMN workflow in the BPMN Editor.

Open BPMN editor

4. Click *> Administration > datasheet engine > Types - New*.
5. Click the pencil icon for a process type.
6. Activate the tab *Workflow Modeler*.

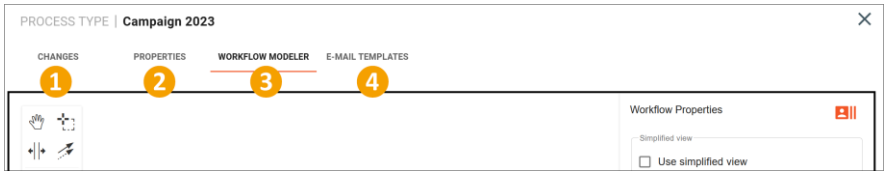
The BPMN editor opens. The following chapter describes the layout of the editor.

3.1 Layout of the Editor

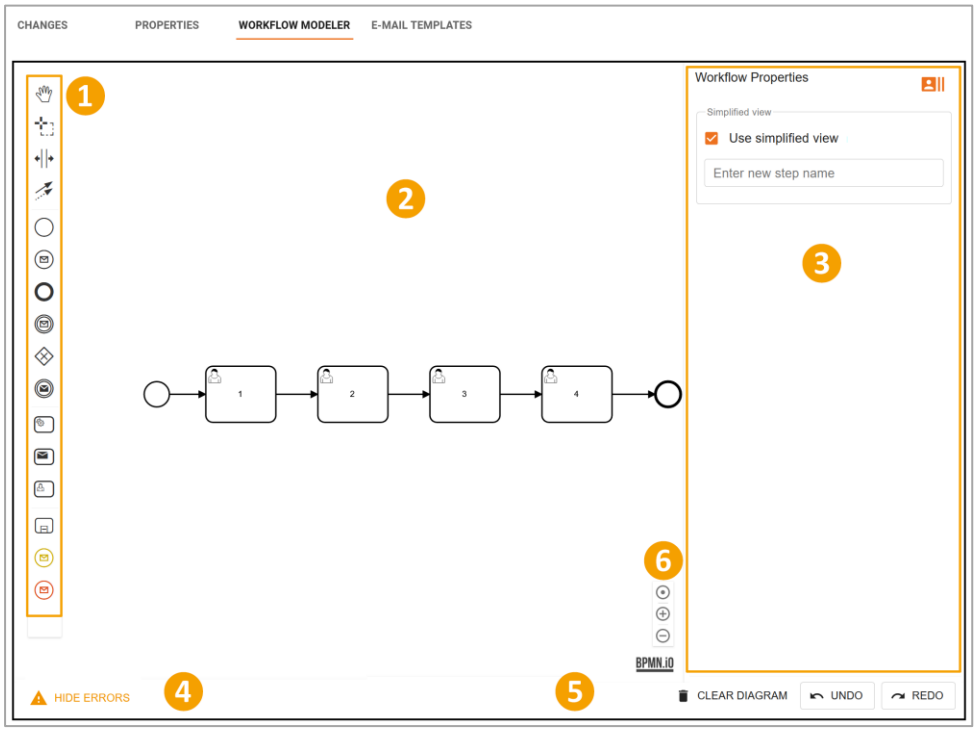
This section describes the layout and main functions of the editor.

The editor consists of four tabs:

- Changes: Tab where you publish the changes to the type (see Chapter 3.7, 1).
- Properties: tab where you enter or edit all properties of the type (2). The properties are described in Chapter 2.3.1.
- Workflow: Workflow Modeler (Chapter 3.1.1, 3)
- E-Mail Templates: Editor for creating e-mail templates for sending tasks (Chapter 3.1.2, 4)



3.1.1 Workflow Modeler



1 Toolbar

The toolbar contains the elements that you use for the workflow structure. See chapter 3.2 for a description. You can also access tools for working with the elements in the drawing area here:

- Hand tool
- Lasso tool
- Add/remove space

2 Drawing area

You add the elements to the drawing area to build your workflow.

3 Workflow Properties

This area shows the properties of the element you have selected. The screenshot above shows the workflow dialog where you activate and set the simplified view. For more information about the simplified view, see chapter 3.6.

4 Button for switching the view

The following button is displayed in this area:

- Show current error messages: If you activate this view, the current formal errors in the workflow design are displayed. This setting is recommended while you are finishing the design especially. If you deactivate the view, no formal errors are displayed.

5 Action buttons

You can access the following actions in the bottom area:

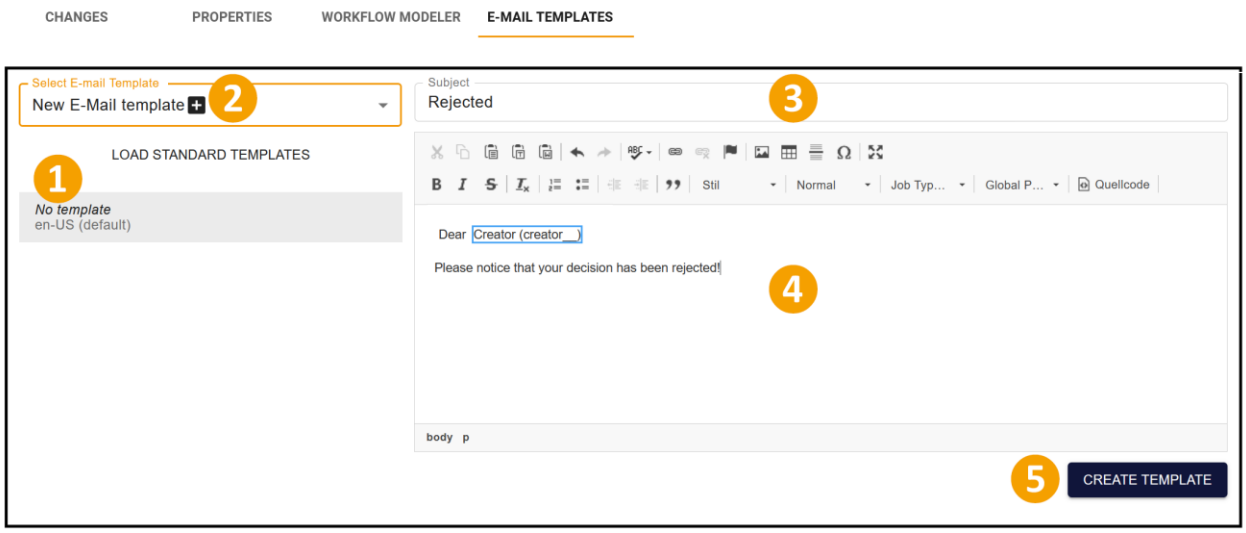
- Delete diagram: This action deletes all the elements from the drawing area.
- Undo: The last action is undone.
- Redo: The last undone action is restored.
  Keyboard shortcut: CTRL + Z / CMD + Z
- *Redo*: The last undone action will be restored.
  Keyboard shortcuts: CTRL + Y or SHIFT + CTRL + Z / CMD + Y or CMD + CMD + Z

6 Zoom Buttons

These buttons are used to customize the view.

- ⊙: Center the view and reset the zoom to the default value.
- ⊕: With each click you enlarge the view by zooming in.
- ⊖: With each click you zoom out to make the view smaller.

3.1.2 Editor for e-mail templates



1 List of language variants

When you create or edit a template, the language variants are displayed here. In the current version you can create German and English language variants, whereby the version for US-EN must be created first.

2 *E-mail template* selection list

In the selection list, select the e-mail template you want to edit, or select the *New e-mail template* entry to create a new template. If you click *Load Standard Templates* below the list, the templates stored in the system are loaded into the selection list. You can then also edit the default templates.

3 Subject

Enter the subject of the e-mail in the selected language variant.

4 Editor

Enter the content of the e-mail in the editor. You have numerous formatting options, and you can add system variables (see Chapter 4.2) and job variables using the drop-down lists *Job Type Placeholders* and *Global Placeholders*. Variables of the following types are available:

- Single line and multiline input area (see chapter 4.1.7)
- Single-select and multi-select (see chapter 4.1.6)
- Datepicker with/without time (see chapter 4.1.4)
- User (see chapter 4.1.2)
- Numbers (see chapter 4.1.17)
- Combo box (see chapter 4.1.8.1)
- Comfort Grid (see chapter 4.1.13)
- Advanced Grid (see chapter 4.1.12)

Other variable types cannot be inserted.

In the use case with BPMN only the following variables are filled:

- JM_JOB_CREATOR_NAME
- JM_JOB_CREATOR_EMAIL
- JM_JOB_LIST_VARIABLES
- LINK_JM_JOB_DETAIL

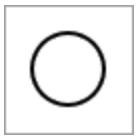
5 Create template

Click the button to save the created template.

3.2 Available elements

3.2.1 Start event

The start event initiates a process instance. Each BPMN workflow requires exactly one start event.



Parameters

You can enter a name for the start event in the properties dialog.

3.2.2 End event

The end event ends a process instance. Each BPMN workflow requires exactly one end event.

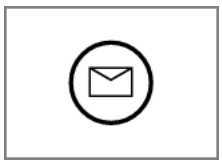
Parameters

You can enter a name for the end event in the properties dialog.

3.2.3 De-archive event

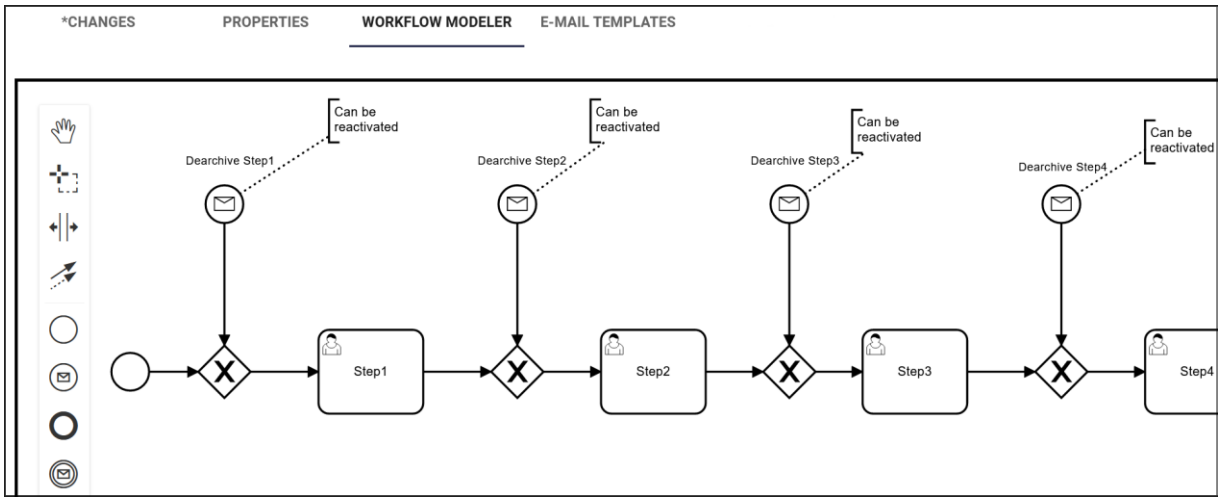
Sometimes it is necessary that terminated or canceled jobs can be reactivated with BPMN workflows. You can adapt your existing BPMN workflows accordingly. A standard BPMN message event of type `StartMessageEvent` is used for this purpose.

The De-archive event must be accessible to the StartMessageEvent. Appropriately prepared jobs can later be restored by users in the Job Manager.



Implementation in the Workflow Modeler

The workflow can be started either by the regular start event or a dearchive event stored as De-Archive-StartMessageEvent. You can theoretically insert a dearchiving event with a gateway before each workflow step.



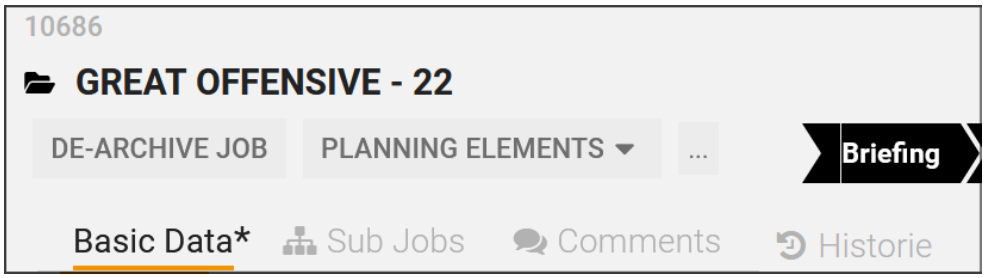
Notes

- Currently, a BPMN job can only be reactivated if the workflow does not contain fewer steps at the time of reactivation than at the time of job creation.
- Deleted jobs cannot be reactivated, even if they were previously properly terminated or canceled.

In practice, not every entry point proves useful. If a job were reactivated only after an element such as *CreateNode*, the person reactivating the job would be missing the previously uncreated node in the current workflow step. Therefore, careful planning is required for each user scenario.

Job Manager users can reopen a completed or canceled job with BPMN workflow. You will find the button *De-archive Job* at the place where the button *Close* is otherwise located. If several reactivation points exist, a selection dialog appears where the user can choose from a list to reactivate the job in a selectable workflow step.

User interface in the Job Manager to reactivate a canceled or terminated job with BPMN workflow:



3.2.4 User task

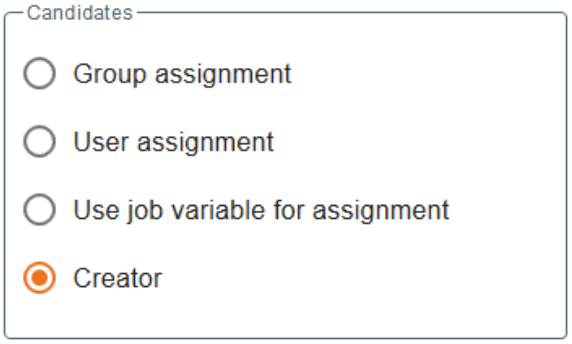
Each step in a process instance must be described as a task. The *User task* element is used to model the work to be performed in the system by a human actor.

Name

For a user task you have to enter a name in the properties dialog.

Assignment

Since user tasks must be performed by human actors, you must assign them to either a group or a specific user. Alternatively, you can also select the processor using a variable on the data sheet (e.g., with the *Creator* variable).



- *Group assignment*: When the user task is activated, it is displayed in the *Available tasks* list for the group. Every user that is part of the group can accept the task.
  With this setting, you select a user group in the picklist.
- *User assignment*: When the user task is activated, it is assigned directly to the selected user. With this setting, you select a user in the picklist. You can search through the users with access to the module based on logins, e-mail address, first name, and last name. An auto-complete helps you to select the user.

- Use variable for the assignment: When the user task is activated, it is assigned directly to the user that is entered in the selected variable.

  Note

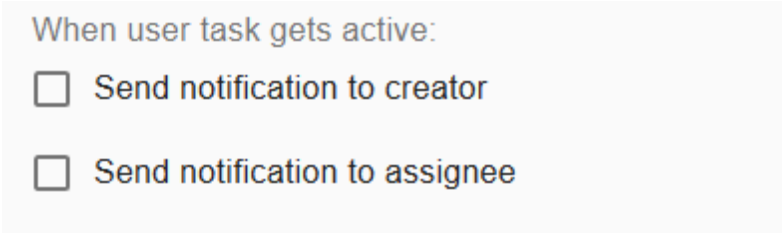
  The default *Creator* variable is always available. To select a different variable for the assignment, you must first create the data sheet layout with the desired variable.

  Attention!

  If the variable is not filled out when the user task is activated, the process hangs and cannot be ended. Therefore, ensure that the variable is filled out, for example, by having the variable filled out as a mandatory field in an earlier step (see chapter 2.7).

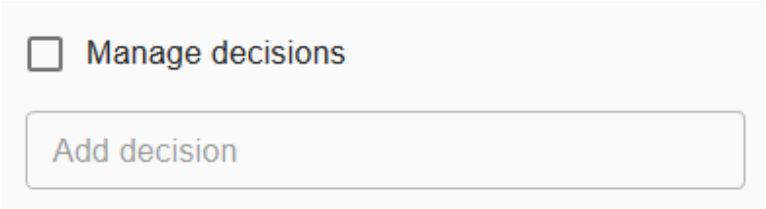
- *Creator*: The user task is assigned to the creator of the process.

Based on the assignment, you can control which notifications are sent when a user task is activated. If the task is assigned to a group, a notification is sent only to the creator. If a specific user has been defined as the processor, notifications can be sent to both the creator and the processor.

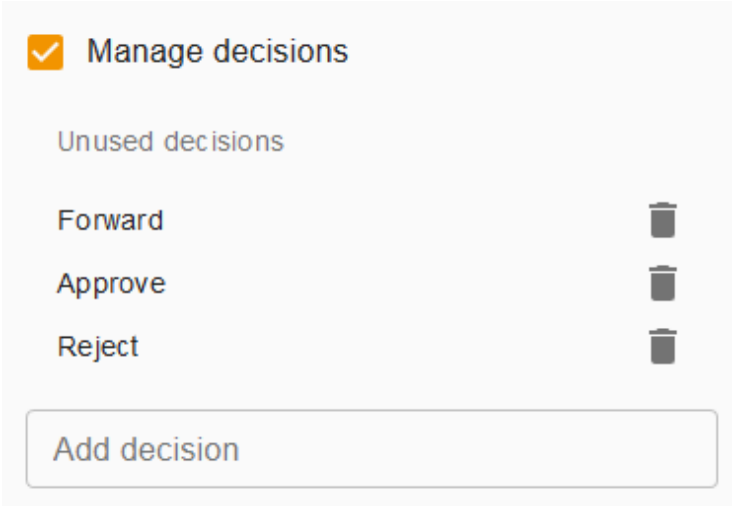


Decisions

To make it easier to create objects, decisions such as *Approve* or *Reject* can be enabled and added directly in the properties of the user tasks. Decisions are displayed as buttons in the header of the data sheet. When the user clicks a button, the relevant sequence flow is performed.



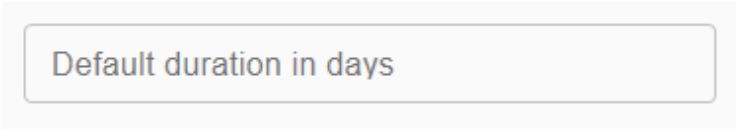
If you activate the *Manage decisions* checkbox, an exclusive gateway is added in the drawing area after the user task. The Properties dialog box for the task displays the default decisions *Forward*, *Approve*, and *Reject*. You can use these decisions, remove them (with the recycle bin icon), or add other decisions.



You assign the decisions to the sequence flows by connecting the exclusive gateway to the following elements.

Default duration

You can also define a default duration in days for user tasks. The default duration is used to calculate the due date for the task.



Description

Enter your notes in the description field so that you or your colleagues can track your decisions and thoughts on the workflow structure later.

3.2.5 Sending tasks

When a sending task becomes active in the workflow, the system sends an e-mail. The administrator selects a template for the e-mail in the properties dialog and specifies the recipient(s).

E-mail template

You create an e-mail template on a second tab of the Workflow Modeler, see chapter 3.1.2. How to create templates is explained in chapter 3.4.

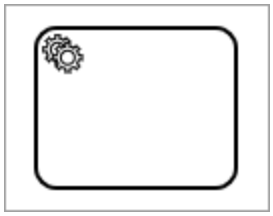
Recipients

Select one or more recipients of the e-mail.

3.2.6 Service tasks

Note

The service tasks are accessible in the interface from version 7.0. Note, however, that these service tasks can only be used to synchronize a job with a planning element in the *Marketing Planner* module. Contact your BrandMaker contact if you have any questions.



3.2.7 Intermediate Event Throw Message

There are two types of intermediate events. An intermediate event in the sequence flow can either trigger an event or respond to the receipt of an event. Intermediate events in the sequence flow have exactly one incoming and one outgoing sequence flow.

Intermediate event throw messages are used to send messages from one process and trigger them in another process.

An event is triggered and the sequence continues.

3.2.8 Intermediate Event Catch Message

An intermediate event catch message is used in processes to catch messages from a parent process and trigger appropriate actions. The sequence is paused until the event occurs.

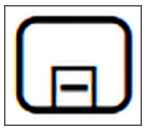
For example, the flow is interrupted until a message is received. The process continues after the event has occurred.

3.2.9 Sub-Actions

Sub-actions are actions independent of the central BPMN workflow that are executed in parallel. Event-based subprocesses in the Workflow Modeler are identified by a dotted outline.

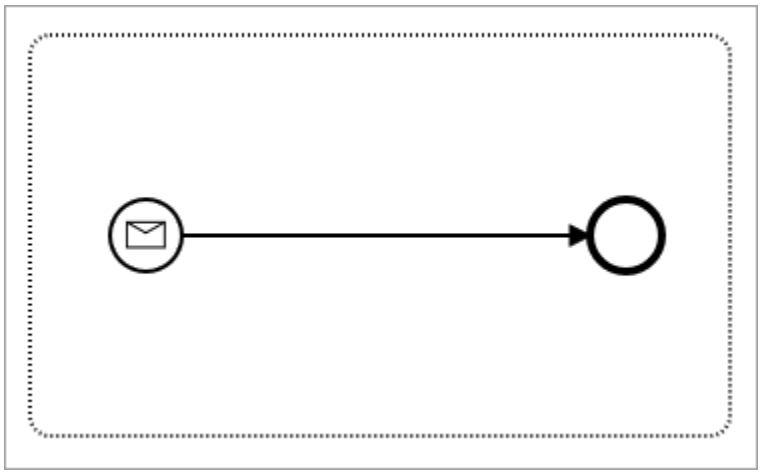
The event used to trigger one of these subprocesses is configured via a start event.

Create extended subprocess



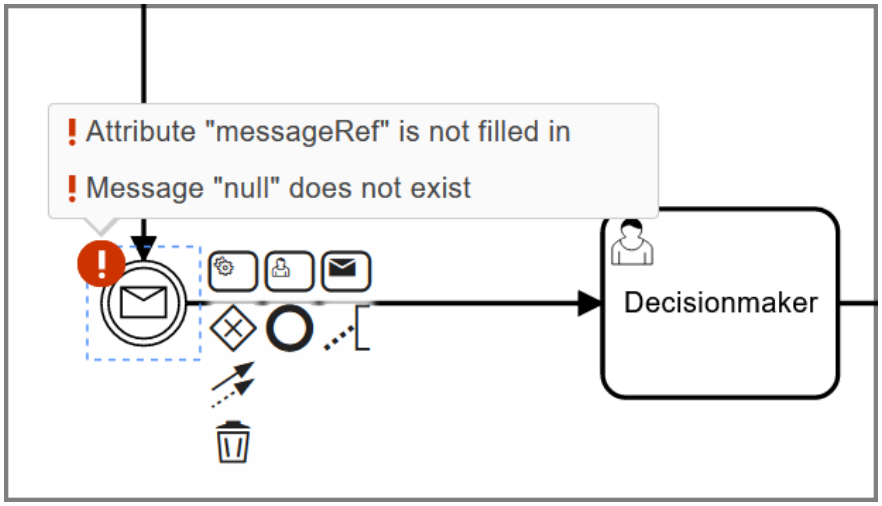
The extended subprocess always looks as shown below and always starts with a message start event. For example, such a process responds to MAPL update events.

Message events are used to send and receive messages between two separate processes. Message events serve as a mechanism for communication between processes.



After you created the subprocess, add an intermediate event catch message to the main process. The Workflow Modeler still reports errors at first as necessary attributes and referencing are missing.

After you create the subprocess, add an intermediate event catch message to the main process. The Workflow Modeler still reports errors at first. Necessary attributes and referencing are missing.



To resolve this issue, highlight the placed intermediate catch event message symbol and select option `Mapl Update Event` in the Intermediate Catch Event Properties info panel in the *Message* field.

The errors are thus fixed.

The following two workflow elements can be used to configure which actions are initiated after the deletion or cancellation of an associated job.

Message events are used for these use cases.

Create Subprocess „Cancel Message“

You create an event subprocess that responds to a `Cancel Message`type event. Example: A user has cancelled a job prematurely. You can specify what should happen when the job is canceled.

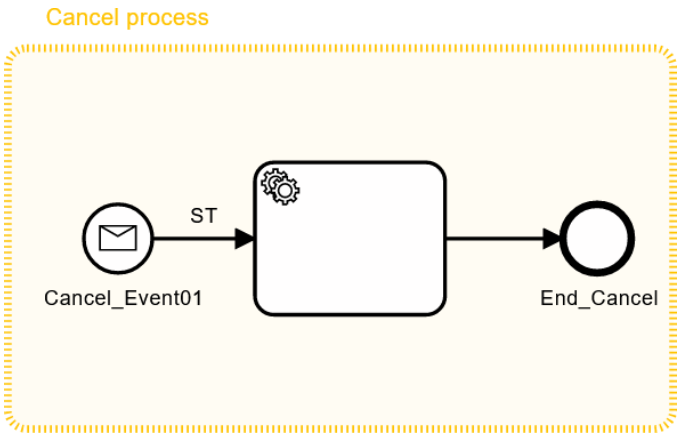
You can:

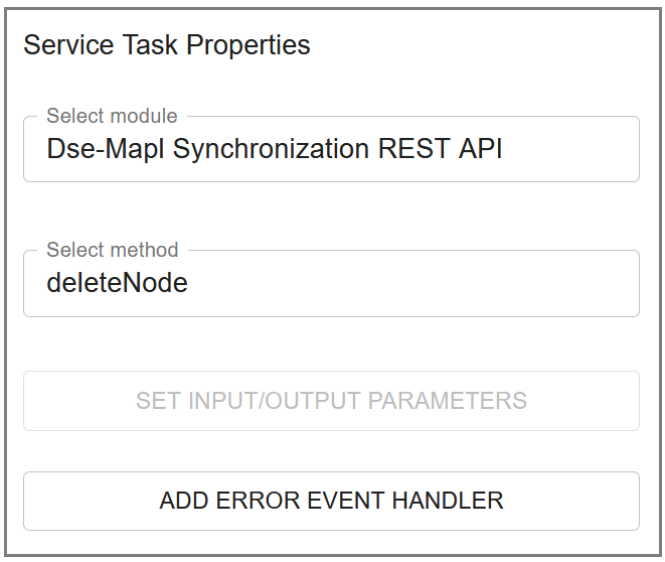
- Delete synchronized planning elements
- Cancel sub-processes

The planning element in Planner is to be removed by the event.

The following methods for the *MaplNodeSyncRestService* are available:

- deleteNode
- createNode
- moveNode
- updateNode





Adjust the properties in the service task of the sub-process accordingly. The method *deleteNode* is needed to delete the planning element in Planner on termination.

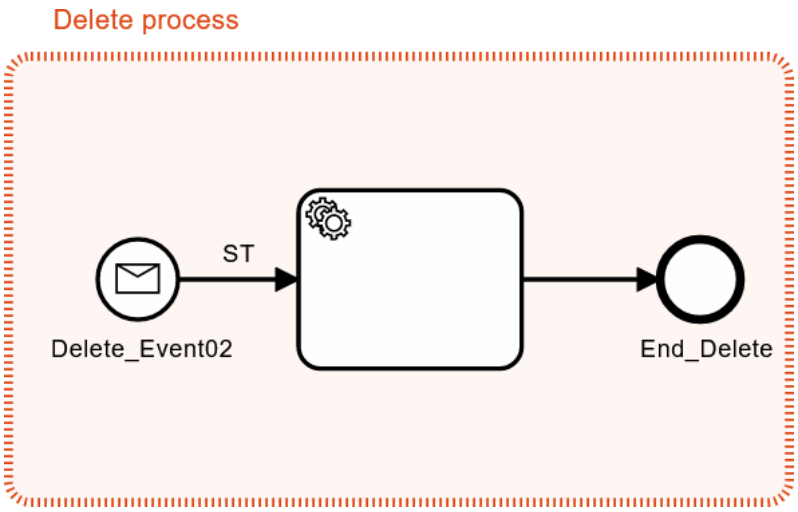
1. In the drop-down menu, select the module: *Dse-Mapl Synchronization REST API*.
2. From the drop-down menu, select *deleteNode*.
3. After you create and configure the subprocess, add an Intermediate Event Catch Message to the main process.

Create Subprocess “Delete Message”

You create an event subprocess that responds to an event of type `Delete Message`.
Example: A user has deleted a running job.

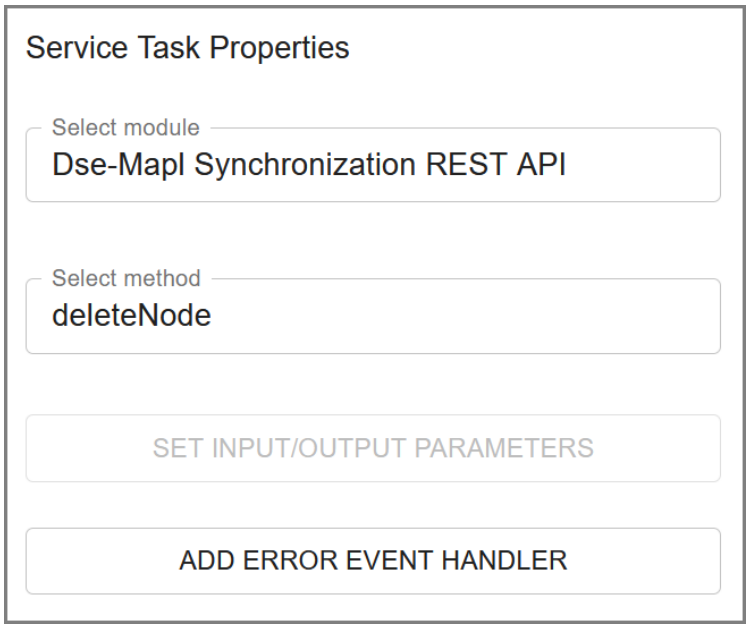
You can specify what happens when the job is deleted. For example, if the associated node in Planner is also to be deleted, you must create a corresponding service task.

Adjust the properties in the service task of the sub-process accordingly. Here, too, the method *deleteNode* is used to delete the planning element in Planner in the same way when it is canceled.



Adjust the properties in the service task of the sub-process accordingly.

1. In the drop-down menu, select the module: *Dse-Mapl Synchronization REST API*.
2. From the drop-down menu, select *deleteNode*.
3. After you create and configure the subprocess, add an Intermediate Event Catch Message to the main process.



After publishing the changes, this job will be synchronized with the related elements in Planner. The planning element in the Planner is removed by an event with the above settings for the two subprocesses presented.

It is also possible to process several service tasks one after the other in one subprocess. In this way, it is also possible to delete sub-jobs as part of a subprocess.

3.2.10 Gateways

Gateways are used to control the process sequence: If the condition is true, the process takes the appropriate course. The available gateways are described below. For information about setting up conditions with gateways, see chapter 3.5.

Exclusive (OR)

All the conditions are evaluated but only one condition can be true; therefore, only one sequence flow is performed. The conditions can be established using user decisions or *Number* or *Single select*-type variables.

Inclusive (AND)

All the conditions are evaluated and anything from one condition to all the conditions can be true; each sequence flow with a true condition is performed. The conditions can be established using *Multiselect*-type variables.

Parallel

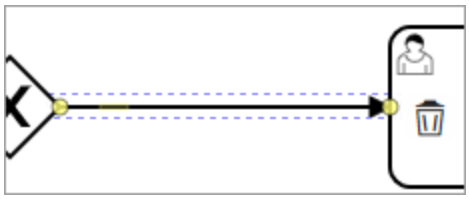
All the subsequent sequences are performed; conditions are therefore not required.

Parameters

You can enter a name for the gateways in the Properties dialog box. Other settings are based on the conditions that you establish. For more information, see chapter 3.5.

3.2.11 Sequence flow

A sequence flow connects tasks, gateways, and events and creates the process flow between the start and end element. Conditions for decisions at gateways are also described on the sequence flows.



Default sequence flow

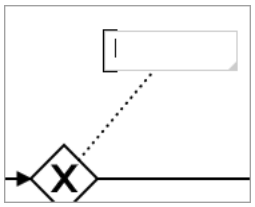
For sequence flows departing from a gateway, you have the option to specify a default sequence flow. The default sequence flow is executed if none of the conditions for other sequence flows are met.
How to set a default sequence flow is described in Chapter 3.3.2.

Parameters

In the case of sequence flows that connect exclusive and inclusive gateways with subsequent elements, you define the decisions in the Properties dialog box.

3.2.12 Comments

You can use comments to add details about the elements in the process.



Parameters

You can also enter the comment in the properties dialog.

3.3 Creating a BPMN workflow

This chapter describes how you create BPMN workflows using the Workflow Modeler.

Attention!

Please note that you have to fix all formal errors before you can publish a newly created or modified BPMN workflow. Publishing with formal errors can permanently damage the job type.

3.3.1 Adding elements

You can add a start or end event, a user task, or a gateway in two ways:

Toolbar

1. Click the relevant icon in the toolbar.
2. Click the point in the drawing area at which you want to add the element.

The element is added.

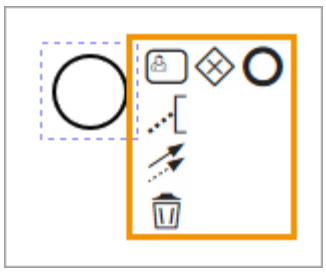
Adding related elements

You use this option when you want to add elements that are directly related to one another.

Prerequisite: You have already added one element. This element must be before the element to be added in the process sequence.

3. Click the added element after which you want to add a related element.

   A toolbar is displayed to the right of the element:



4. In the toolbox, click the symbol for the next element.

The selected element is added. It is connected to the previous element through a sequence flow.

3.3.2 Connecting elements

Once you have positioned elements, you must connect them using sequence flows. Please refer to the following sections, which explain how to connect using the toolbar or using elements that have already been inserted. In addition, you can define a default sequence flow for sequence flows that leave from a gateway, see the last section.

Toolbox

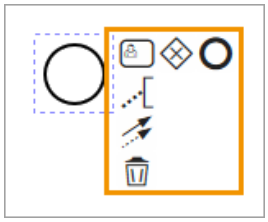
1. In the toolbox, click the symbol for sequence flows.
2. In the drawing area, click the element at which the sequence flow starts.
3. In the drawing area, click the element at which the sequence flow ends.

The sequence flow connects the elements.

On elements that have been added already

1. Click an element that you have already added to the drawing area.

   A toolbox is displayed to the right of the element:



2. Click the sequence flow symbol.
3. Click the element to which you want to connect the starting element.

The sequence flow connects the elements.

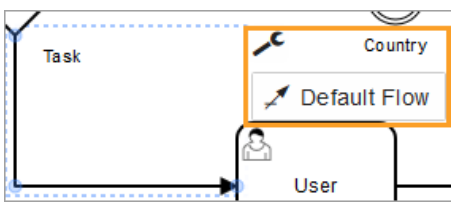
Set default sequence flow

> **Note**
>
> You can only set a default sequence flow that originates from a gateway.

1. Click the sequence flow you want to set as default.

   The  icon is displayed on the frame of the sequence flow.

2. Click >  > *Default flow*.



You have set the sequence flow as the default sequence flow.

3.3.3 Positioning elements

To display elements in a clear way, you can reposition the elements on the diagram.

> **Note**
>
> If you move connected elements, the connections are not removed; instead, they are updated and adapted to the desired position.

Positioning an individual element

1. Click the element and hold the mouse button.
2. Drag the element to the desired position and release the mouse button.
3. Alternatively, you can fine-position a selected element or group using the keyboard with the four direction keys or move it in larger steps with SHIFT + direction key.

You have positioned the element.

Positioning multiple elements

1. Hold down CTRL + SHIFT / CMD + SHIFT and click the elements you want to move together.

   The elements are highlighted together.
2. Click one of the highlighted elements and hold down the mouse button.
3. Drag the elements to the desired position and release the mouse button.

You have positioned the elements.

Positioning an area

If you want to position an area of the diagram containing several elements, proceed as follows.

1. In the toolbox, click the  symbol.
2. Click the drawing area and hold down the mouse button to select the area that you want to position.
3. Click one of the highlighted elements and hold down the mouse button.
4. Drag the elements to the desired position and release the mouse button.

You have positioned the elements.

Adding/removing space

1. In the toolbox, click the  symbol.
2. On the drawing area, click a position where you want to add or remove space and hold down the mouse button.
3. Move the cursor horizontally or vertically.

> **Note**
>
> Depending on the use of the function, you can remove or add space only in one direction.

The space is added or removed.

3.3.4 Editing elements

To edit elements, you open the Properties dialog box and edit the properties there. To do so, click an element. The Properties dialog box is then displayed to the right of the drawing area. You may have to expand the dialog box.

Editing multiple user tasks

You can select multiple user tasks at the same time and assign them to a user or user group for editing.

1. Hold down the CTRL + SHIFT / CMD + SHIFT keys and click the user tasks that you want to edit at the same time.

   You have selected the user tasks. The fields for the assignment are displayed in the Properties dialog box.
2. Assign the tasks. For information about performing the assignment, see chapter 3.2.4.

You have assigned multiple user tasks simultaneously.

Changing the gateway type

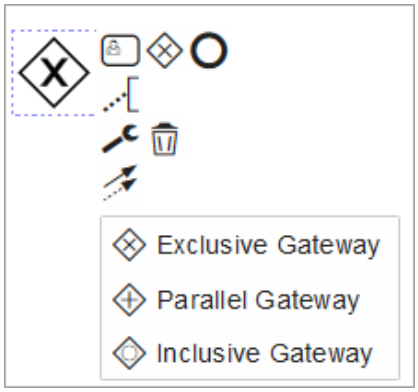
> **Note**
>
> If you have created conditions for a gateway, the options for changing the gateway type may be limited.

When you add a gateway, you always add an exclusive gateway to start with. To get a parallel or inclusive gateway, you have to change the gateway type.

1. Click the gateway whose type you want to change.

   A toolbar is displayed to the right of the element:
2. Click the  symbol.

A picklist is displayed:



3. Select the type.

You have changed the gateway type.

3.3.5 Deleting elements

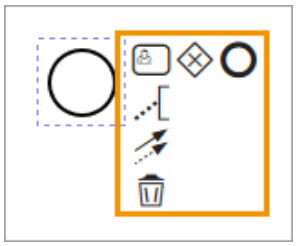
Note

If you have rejected decisions for a gateway, the gateway can no longer be deleted. To delete the gateway, you must first remove the subsequent user tasks.

Deleting an individual element

1. Click the element.

A toolbox is displayed to the right of the element:



2. You can optionally click on the trash icon.
3. Or press the Delete key or Backspace key on your keyboard to delete.
4. Click the Delete or Backspace key on your keyboard.

The element is deleted.

Deleting multiple elements

1. Hold down the CTRL + SHIFT / CMD + SHIFT keys and click the items you want to delete.
2. Press the Delete or Backspace key.

The elements are deleted.

Deleting the elements in an area

1. In the toolbox, click the  symbol.
2. Click the drawing area and hold down the mouse button to select the area that you want to delete.
3. Press the Delete key.

The elements are deleted.

Deleting all elements

1. In the Workflow Modeler, click the *Delete diagram* button in the bottom right corner.

All elements are deleted. You must completely set up the whole workflow again.

3.3.6 Editing a view

You can adjust the image section with the three zoom buttons above the BPMN.iO logo. Or you can use the following key combinations to adjust the zoom factor:

Windows/Mac key combination	Function
CTRL + 0 / CMD + 0	Reset zoom factor to default
CTRL + + / CMD + +	Zoom in
CTRL + - / CTRL + -	Zoom out

Trackpad owners use the pinch-zoom gesture to adjust the area with two fingers by moving them apart and bringing them together.

The zoom functions support the mouse scroll wheel. The current position of the mouse pointer over the workflow is considered. If you use such a mouse, hold down the CTRL / CMD key and scroll up to zoom in. Scroll in the opposite direction to zoom out.

Hold down the SHIFT key and use the scroll wheel to move the image section to the right and left. Only with the scroll wheel without additional key can you move the visible area up and down.

Press the [ESC] key to exit the selected BPMN tool. You can now click and hold directly in the white area of the workflow modeler until the mouse pointer turns into a hand, and freely move the image section. With this procedure you save the detour via the toolbar and do not have to select the hand tool separately.

Additional keyboard shortcuts for the Workflow Modeler

Windows/Mac key combination	Function
CTRL + Z / CMD + Z	Undo the last action
CTRL + Y / CMD + Y	Redo the state before pressing STRG + Z / CMD + Z

or SHIFT + CTRL + Z / SHIFT + CMD + Z	
CTRL + A	Select all elements
E	Quickly switch to text mode to enter a name for the selected workflow item
H	Deselect the current tool and switch to the hand tool
L	Lasso tool
S	Space tool

3.4 E-Mail templates

3.4.1 Creating an e-mail template

1. Switch to the *E-Mail Templates* tab in the editor.
2. Enter a subject. The subject is used as name for the English version and the template.
3. Enter the content for the English variant.
4. Click *Create template*.

   The English variant is created.
5. Click on the German variant on the left.
6. Enter the German subject.
7. Enter the content for the German variant.
8. Click *Create template*.

You have created the e-mail template.

3.4.2 Editing an e-mail template

1. Switch to the *E-Mail Templates* tab in the editor.
2. Select the template you want to edit.
3. select the language variant you want to edit.
4. Optional: Edit the subject.
5. Optional: Edit the content of the template.
6. Click *Save Changes*.
7. Optional: Repeat steps 3 to 6 for other language variants.

You have edited the e-mail template.

3.4.3 Deleting a German e-mail template

Currently, you can only delete the German version of an e-mail template.

1. Switch to the *E-Mail Templates* tab in the editor.
2. Select the template whose German variant you want to delete.
3. Click the recycle bin icon for the German variant.

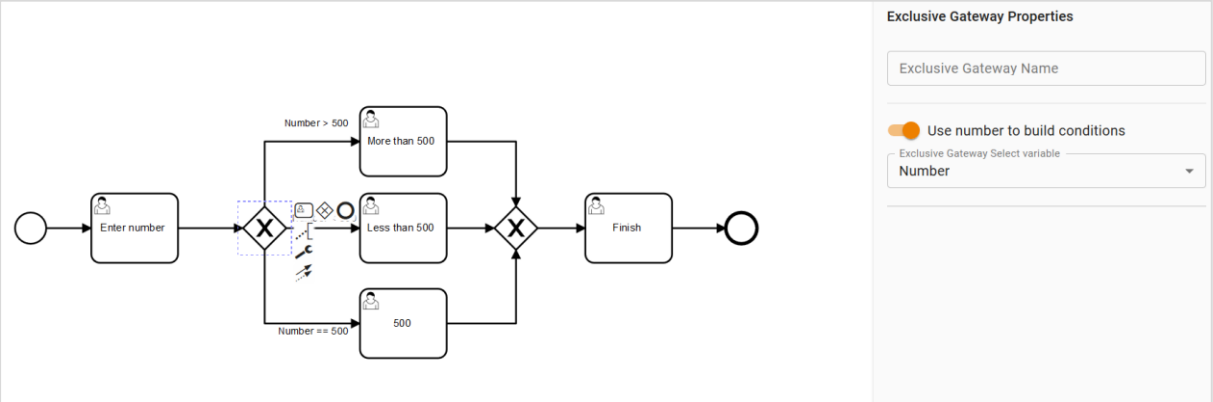
You have deleted the German version of the e-mail template.

3.5 Establishing conditions

This chapter explains how to establish conditions using exclusive or inclusive gateways.

3.5.1 Exclusive gateway: Using a number

You want to establish a condition in which a number is evaluated, such as:



Prerequisites

- You have assigned a number variable to the type (see chapter 4.1.17).
- You have added an exclusive gateway to the workflow.

Setting up a condition

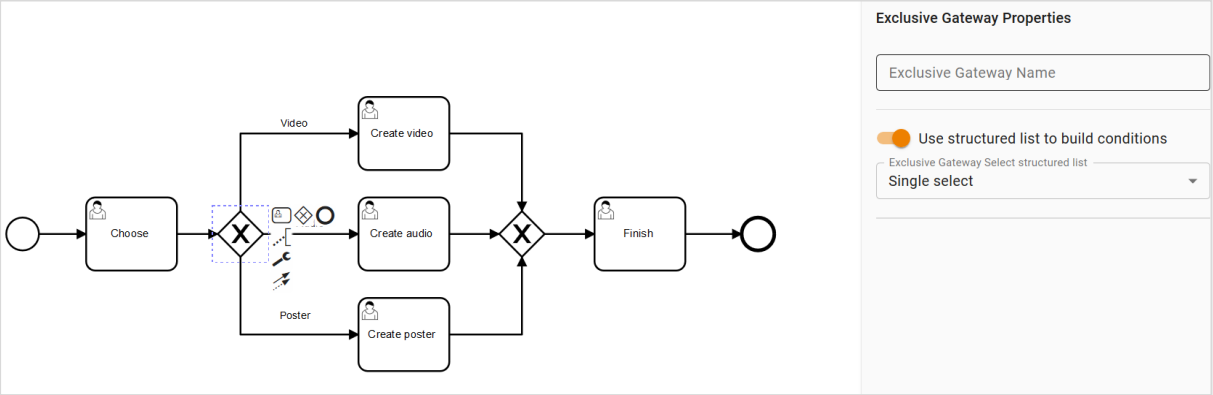
1. Click the gateway.
2. In the Properties dialog box, activate the function *Use number to build conditions*.
3. In the picklist below that, select the variable that you want to use to create the condition.
4. Select all the outgoing sequence flows one after the other and enter the operator and value of the number variables in the Properties dialog box.

> **Note**
>
> Negative numbers are permitted.
>
> If the number ranges for the various sequence flows overlap, the Workflow Modeler reports an error.

You have set up the condition.

3.5.2 Exclusive gateway: Using a custom structure

You want to establish a condition in which the selection is evaluated in a list. In this case, only one path is permitted to be executed.



Prerequisites

- You have assigned a single select variable to the type (see chapter 4.1.6). A custom structure is assigned to the variable.
- You have added an exclusive gateway to the workflow.

Setting up a condition

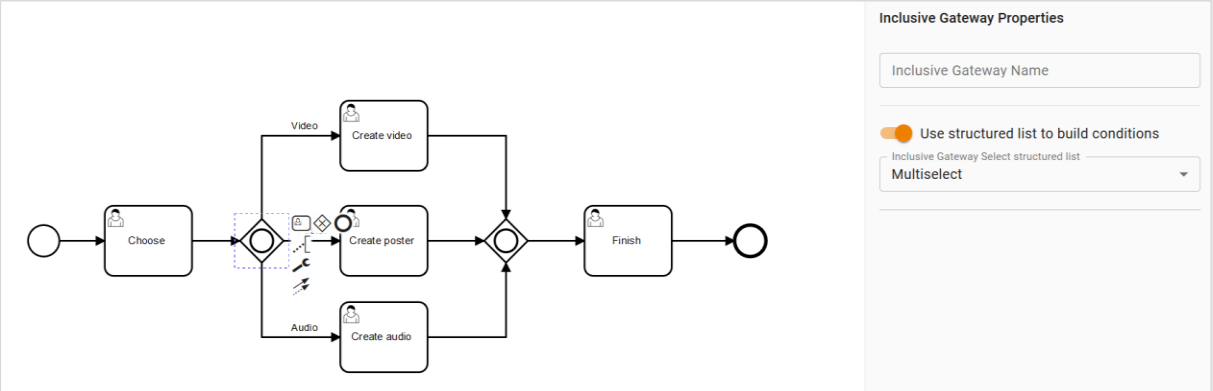
1. Click the gateway.
2. In the Properties dialog box, activate the function *Use structured list to build conditions*.
3. In the picklist below that, select the variable that you want to use to create the condition.
4. Select all the outgoing sequence flows one after the other and enter the list value with which the applicable path is to be executed in the Properties dialog box.

> **Note**
>
> If not all the list values are assigned to a sequence flow, the Workflow Modeler reports an error.

You have set up the condition.

3.5.3 Inclusive gateway: Using a custom structure

You want to establish a condition in which the selection is evaluated in a list. In this case, multiple paths are allowed to be executed.



> **Note**
>
> Processes are shown in the module's Kanban representation in read-only mode. This means that they cannot be dragged and dropped into another workflow step. The datasheet, on the other hand, can also be opened and edited in the Kanban view.

Prerequisites

- You have assigned a multiselect variable to the type (see chapter 4.1.6). A custom structure is assigned to the variable.
- You have added an inclusive gateway to the workflow.

Setting up a condition

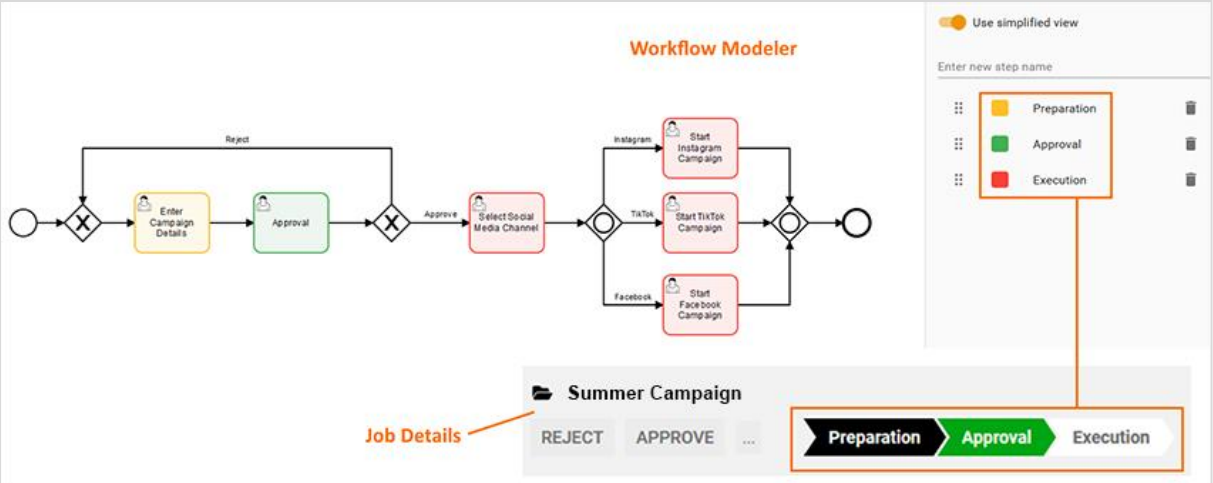
1. Click the gateway.
2. In the Properties dialog box, activate the function *Use structured list to build conditions*.
3. In the picklist below that, select the variable that you want to use to create the condition.
4. Select all the outgoing sequence flows one after the other and enter at least one list value with which the applicable path is to be executed in the Properties dialog box.

> **Note**
>
> If not all the list values are assigned to a sequence flow, the Workflow Modeler reports an error.

You have set up the condition.

3.6 Simplified view

You can use the simplified view to display the status of the job or data object in the workflow on the data sheet. In this case, you assign one or more user tasks to a process step. These process steps are displayed sequentially in the data sheet of a job or data object and show the progress made in the workflow:



Prerequisite

- You have added at least one user task on the drawing area.

Configuring the simplified view

1. Click the drawing area.

   The Properties dialog box for the workflow is displayed.

2. Activate the *Use simplified view* checkbox.
3. Enter a name for the workflow step in the *Enter new step name* field. Press the Enter key.

   The step has been created.

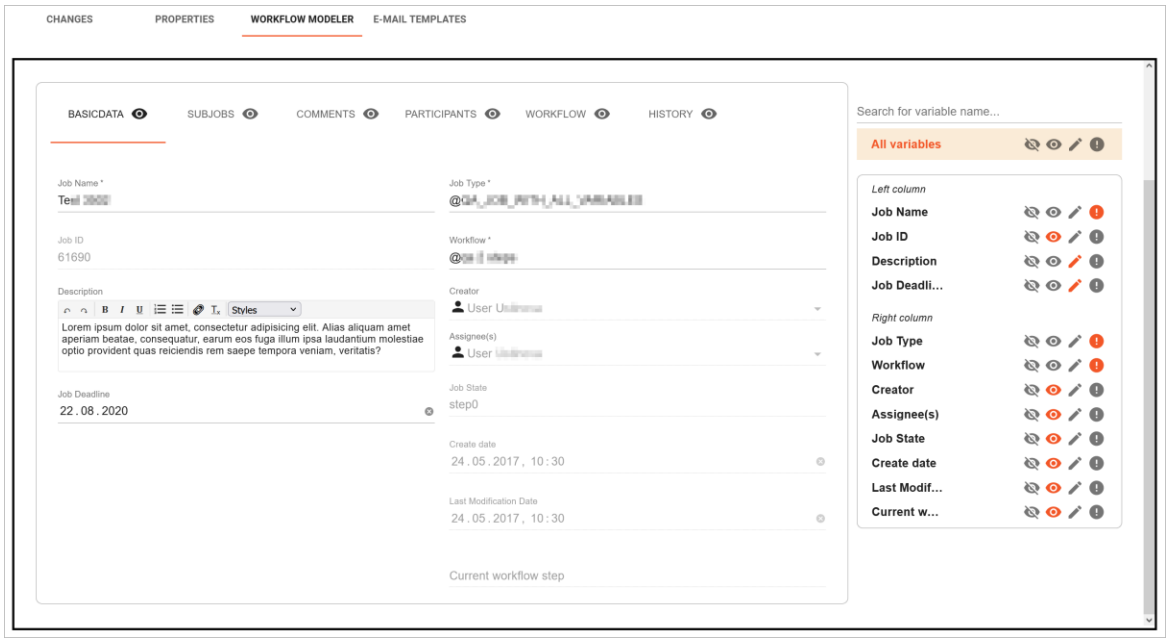
4. Optional: Click the colored field next to the step name and select a different color.
5. Select the tasks that you want to assign to the step.
6. In the Properties dialog box, select the step in the *Select step from simplified view* picklist.
7. Repeat steps 3 to 6 until all the required workflow steps are created and all the user tasks are assigned to a step.

> **Note**
>
> If the simplified view is used, the Workflow Modeler checks if all steps are assigned to the view. If not all user tasks are assigned, the modeler reports an error.

You have set up the simplified view.

3.7 Setting up visibility and editability

You set up the visibility of tabs of the datasheet and individual variables in the editor for processes. Click  to open the dialog box for access rights. You can reach the icon in the Workflow Modeler in the Properties dialog box when you select either the workflow or a user task. Depending on what you activate, you either set up the visibilities for the overall workflow or the corresponding user task.



At the top of the dialog, first select the user role for which you want to set visibility. Then activate the visibility of the datasheet tabs below. For the visible tabs, you can then specify for the variables whether they are visible, editable, or a required field.

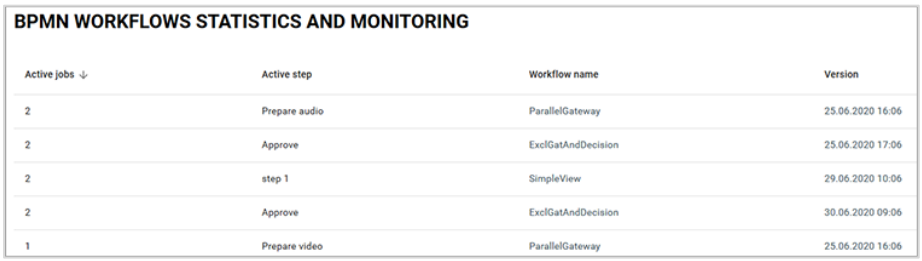
Mandatory fields to be filled in are marked with * in the Job Manager interface of the data sheet. These access rights can also be set for system variables.

When you set up the visibilities of a user task, you can also define a default tab. The default tab is displayed directly when you open the datasheet. To set a tab as default, click the star icon to the right of the tab name.

If you are editing a process with several variables, you can search for variables in the right pane above the list of variables.

3.8 Monitoring

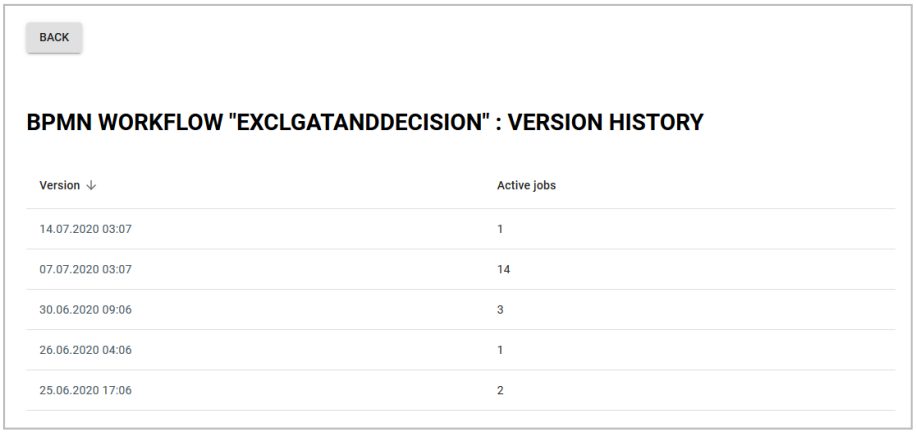
Administrators can access an overview of the running BPMN processes under *> Administration > Datasheet Engine > BPMN Monitoring*.



BPMN WORKFLOWS STATISTICS AND MONITORING

Active jobs ↓	Active step	Workflow name	Version
2	Prepare audio	ParallelGateway	25.06.2020 16:06
2	Approve	ExclGatAndDecision	25.06.2020 17:06
2	step 1	SimpleView	29.06.2020 10:06
2	Approve	ExclGatAndDecision	30.06.2020 09:06
1	Prepare video	ParallelGateway	25.06.2020 16:06

The table lists the ongoing processes by amount and active step. It also lists the name and version of the type. When you click the type name, the version history of the workflow opens:

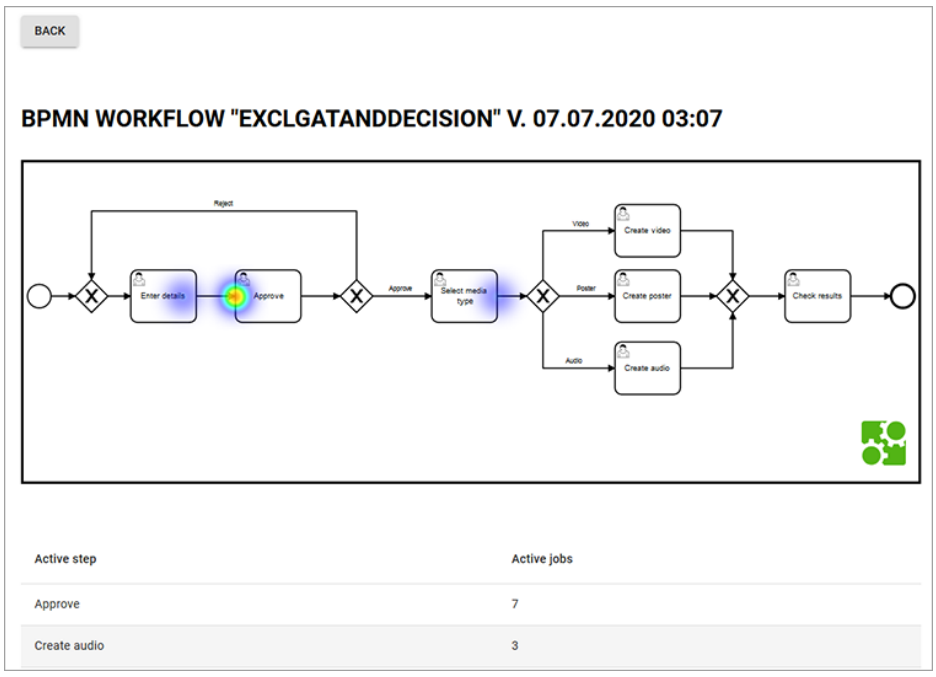


BACK

BPMN WORKFLOW "EXCLGATANDDECISION" : VERSION HISTORY

Version ↓	Active jobs
14.07.2020 03:07	1
07.07.2020 03:07	14
30.06.2020 09:06	3
26.06.2020 04:06	1
25.06.2020 17:06	2

When you click the *Version* column, the workflow is displayed with a superimposed thermal image:



The more intense the red color is, the more processes are in the applicable process step. Steps that currently do not have a process are displayed without a color.

4 Available variables

Different variable types are used to allow you to group together and output data and information on a data sheet. The variables are placed on a data sheet using drag and drop.

There are two different types of variables:

- System variables that allow you to use the basic functions, for example, for displaying the creator or the current workflow step. When you create a type, system variables are created and - if absolutely necessary - placed on the data sheet automatically.
- Custom variables (text fields, selection fields, or an asset selector, for example) can be created as required.

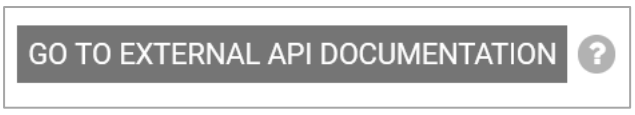
Note: When you create a variable, fields that are mandatory are flagged with a * on the interface. Pre-filling means that users see already filled values in the data sheet but are allowed to overwrite the content.

4.1 Custom variables

4.1.1 Action

With the variable named *Action Button* you integrate a button on a data sheet that opens a URL. The processor of the data sheet can use the button to access programming that is generally customer-specific. Use the button *Close* at the bottom of the page or click in the Close box × at the top right to navigate back to Job Manager.

Name	Description
Unique name, technical name	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. For details see chapter 1.1.
Display Name	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. For details see chapter 1.1.
URL	URL that is opened when you click the button.
Help text	Define the help text that can be displayed to users.



4.1.2 User

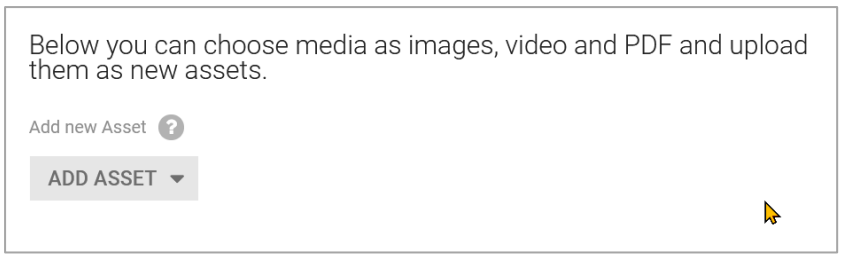
You can use the *User* variable to ensure that the user can select another system user on the data sheet. If necessary, you can limit the selection to users in a user group.

Name	Description
Unique name, technical name	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. For details see chapter 1.1.
Display Name	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. For details see chapter 1.1.
User group	Define a user group. Once you make a selection, the processor can only select users from this group on the data sheet. If you do not define a group, the user can choose from all the available users.
Default value	Enter the value to use as the default for the field. **Note:** Note that the default value is adopted only when you create an object (data object or job). Changing the default value does not have any effect on objects that were created already.
Help text	Define the help text that can be displayed to users.
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the selection field only after a user has selected a specific value for a different selection field on the data sheet.

4.1.3 Description text

Use a *Description text* to enter additional information on a data sheet, for example.

Name	Description
Unique name, technical name	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
Text	This displays the title used to display the headline text on the data sheet. You can create any language versions that are required. The text is used as the display name in the system; see Display, technical, and unique name see page 9.
Visibility	Activate the checkbox *Visibility is depending on another variable* to display the field only after a user has selected a specific value for a different selection field on the data sheet.
Variable	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the dropdown list upon whose value you want to make the visibility dependent.
*Value**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.



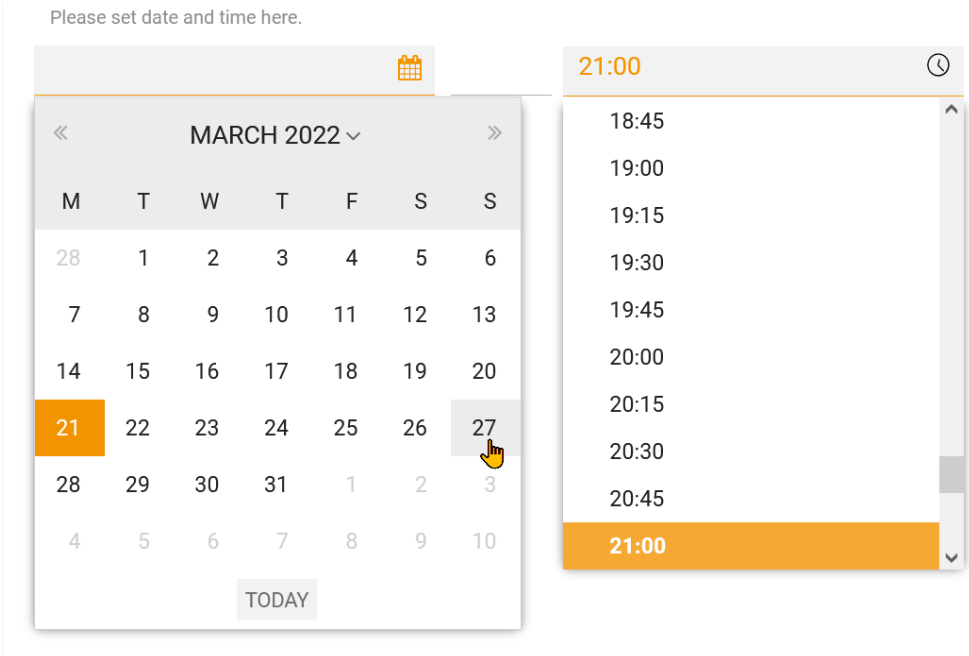
4.1.4 Datepicker with/without time

Use the *Datepicker* variable to create a date field with a date picker on the data sheet. The variable *Datepicker with time* also provides an additional field for the time.

The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
Name displayed	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.
For all types	Select this checkbox to display variables with an identical technical name and identical variable type in one column in the filter view. See Grouping variables see page 37.
Validity	Select the checkbox *Allow only valid dates* to define conditions for the date selection validity.
Number of offset days	**Note:** This is visible only if the *Validity* checkbox is activated. Specify the minimum number of days into the future the date must be in relation to the *Reference* date.
Reference	**Note:** This is visible only if the *Validity* checkbox is activated. Define the date to which the Number of offset days refers. Choose: • *Creation date* • *Current date* • *Transfer date from initial creation to any other workflow step*
Help text	Define the help text that can be displayed to users.
Shared value	**Note:** This is visible only if the type is a data object type and localization is enabled (see Localization see page 14). **Note:** Note that the variable can be selected as language-neutral only while you create it. The *Shared value* field cannot be changed at a later stage! Activate the checkbox if you want the variable value to receive the same value in each localized data object version.

Name	Description
Inherit from parent	**Note:** This is visible only if the type permits inheritance (*Inheritance* dropdown list = `Multiple parents`). Activate this checkbox if you want the data record to adopt the values of a parent job or data object as a sub-job or sub data object. **Note:** The variables must have identical display names.
Prefilling from custom structure	**Note:** This option can only be used for the *Datepicker* variable. Select an existing custom structure and a created attribute whose values you want to use to prefill the date picker.



4.1.5 Document Selector

Use a *Document Selector* to make the *Select from Brand Template Builder* button available on a data sheet. Users can use this button to open a search in *Brand Template Builder* module and add a document (finalized or still in progress) to the data sheet.

A document that is still in progress can be loaded to the document wizard for further processing directly from the data sheet. Users can open the detailed view of a finalized document and call additional functions (to adjust it to suit their own purposes, for example).

Note: Which documents in *Brand Template Builder* module can be selected and edited is determined by the authorizations of the user.

The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
*Display name**	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.
Type spanning	Select this checkbox to display variables with an identical technical name and identical variable type in one column in the filter view. See Grouping variables see page 37.
Help text	Define the help text that can be displayed to users.
Shared value	**Note:** This is visible only if the type is a data object type and localization is enabled (see Localization see page 14). **Note:** Note that the variable can be selected as language-neutral only while you create it. The *Shared value* field cannot be changed at a later stage! Activate the checkbox if you want the variable value to receive the same value in each localized data object version.
Inherit from parent	**Note:** This is visible only if the type permits inheritance (*Inheritance* dropdown list = `Multiple parents`). Activate this checkbox if you want the data record to adopt the values of a parent job or data object as a sub-job or sub data object. **Note:** The variables must have identical display names.

Name	Description
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the selection field only after a user has selected a specific value for a different selection field on the data sheet.
*Variable**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the selection field upon whose value you want to make the visibility dependent.
*Value**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.

4.1.6 Single-select and multi-select

Use a *Singleselect or Multiselect* to allow users to select one or more predefined values.

Prerequisites:

- You require a custom structure that you can select as the data source.

The following parameters are provided when you create or change the variables:

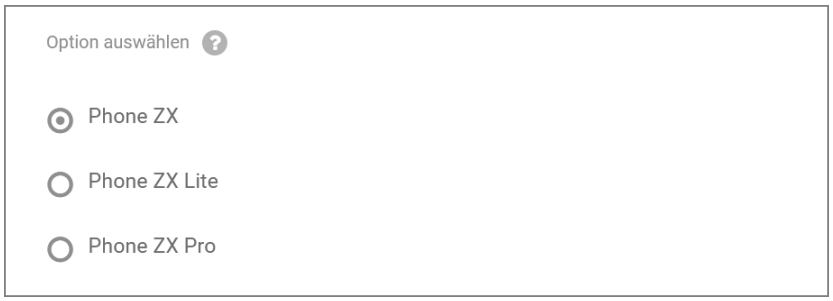
Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
Name displayed	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.
Type spanning	Select this checkbox to display variables with an identical technical name and identical variable type in one column in the filter view. See Grouping variables see page 37.
Style	You can define the layout for the selection field. *Singleselect:* • *Dropdown*: This creates a dropdown list. • *OptionBoxArea*: This creates an option box. • *OptionBoxAreaWithImages*: This creates an option box. The existing preview images for the custom structure can be displayed. *Multiselect:* • *Selection Box*: This creates a selection list. • *OptionBoxArea*: This creates an option box. • *OptionBoxAreaWithImages*: This creates an option box. The existing preview images for the custom structure can be displayed.
Data source	Select an existing custom structure as data source for the values of the selection field.

Name	Description
Dependent on parent selection	**Note:** Only visible if there is a single selection of the *Dropdown* type or a multiple selection of the *Selection Box* type and if a parent selection has already been created on the data sheet. Activate the checkbox if the display of the selections in this field depends on the setting in another selection field, for example the display of street names on the selection of a town in another selection field.
Parent selection	**Note:** This is visible only if the *Dependent on parent selection* checkbox is activated. Select the parent field containing the setting that the displayed values of the selection depend on.
Help text	Define the help text that can be displayed to users.
Shared value	**Note:** This is visible only if the type is a data object type and localization is enabled (see Localization see page 14). **Note:** Note that the variable can be selected as language-neutral only while you create it. The *Shared value* field cannot be changed at a later stage! Activate the checkbox if you want the variable value to receive the same value in each localized data object version.
Inherit from parent	**Note:** This is visible only if the type permits inheritance (*Inheritance* dropdown list = `Multiple parents`). Activate this checkbox if you want the data record to adopt the values of a parent job or data object as a sub-job or sub data object. **Note:** The variables must have identical display names.
Default value	Enter the value to use as the default for the field. **Note:** Note that the default value is adopted only when you create an object (data object/job). Changing the default value does not have any effect on objects that were created already.
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the selection field only after a user has selected a specific value for a different selection field on the data sheet.
*Variable**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the selection field upon whose value you want to make the visibility dependent.

Name	Description
*Value**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.

Selection with *Multiselect*, display type: *SelectionBox*

Selection with *Singleselect*, display type: *OptionBoxArea*



4.1.7 Single input line and Multiline input area

Use single input line and/or multiline input area *text fields* to allow users to enter text on the data sheet.

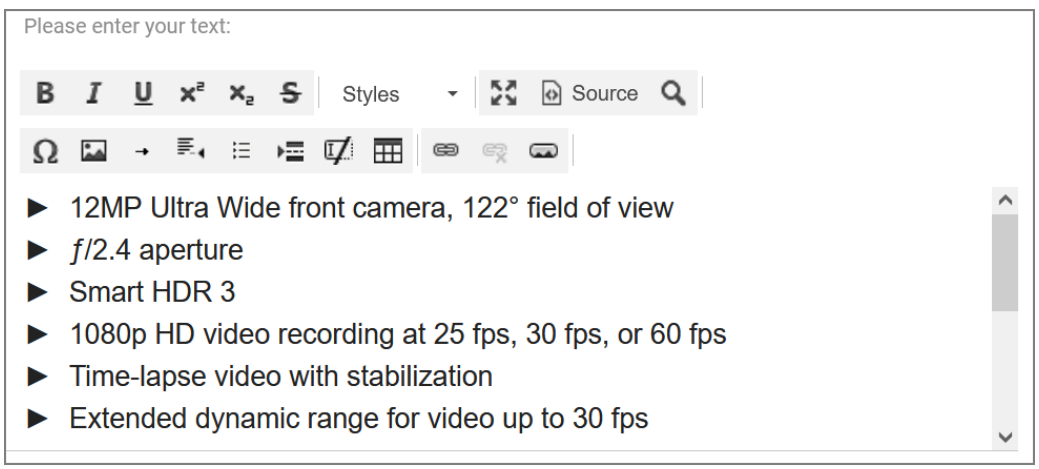
Note: You can enter a maximum of approximately 500,000 characters in a multiline input area.

The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
Name displayed	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.
Type spanning	Select this checkbox to display variables with an identical technical name and identical variable type in one column in the filter view. See Grouping variables see page 37.
Max. Characters	Define the maximum number of characters that can be entered in the field.
Columns Visible	**Note:** Visible only for multiline input areas. You can define the width of the input area by specifying the number of columns.
Lines Visible	**Note:** Visible only for multiline input areas. You can define the height of the input area by specifying the number of lines.
Complete width	**Note:** This is visible only for multiline input areas. Activate this checkbox to utilize the entire width of the data sheet for the input area in a one-column layout. If you activate this checkbox, leave the *Columns Visible* field empty.
Allow formatting	**Note:** Visible only for multiline input areas. This checkbox can only be activated while you create the variables. This displays a rich-text editor that allows users to format the text (for example, bold, italics, underline, and so on).

Name	Description
Editor configuration	**Note:** This is visible only for multiline input areas and if the *Allow formatting* checkbox is activated. You can select an editor configuration from the selection list. This allows you to define which formatting the user can use in the text field. For more information, see the configuration manual.
Reg. Exp. Validator	**Note:** Visible only for single input lines. Enter a regular expression in the field to check the entry for validity. For example, you can ensure that entries for BIC codes or e-mail addresses are provided in a specific format.
Input Size	**Note:** Visible only for single input lines. Defines the maximum number of characters displayed. If more characters are entered, the field gets a scroll bar.
Suffix	**Note:** Visible only for single input lines. You can enter a suffix (`Millimeter` or `%`, for example) that is attached to the field.
Help text	Define the help text that can be displayed to users.
Shared value	**Note:** This is visible only if the type is a data object type and localization is enabled (see Localization see page 14). **Note:** Note that the variable can be selected as language-neutral only while you create it. The *Shared value* field cannot be changed at a later stage! Activate the checkbox if you want the variable value to receive the same value in each localized data object version.
Inherit from parent	**Note:** This is visible only if the type permits inheritance (*Inheritance* dropdown list = `Multiple parents`). Activate this checkbox if you want the data record to adopt the values of a parent job or data object as a sub-job or sub data object. **Note:** The variables must have identical display names.
Default value	Enter the value to use as the default for the field. **Note:** Note that the default value is adopted only when you create an object (data object/job). Changing the default value does not have any effect on objects that were created already.

Name	Description
Prefilling from custom structure	Select a custom structure and a defined attribute of this structure. By choosing *Key*, you can configure the pre-assignment of a value based on the branch number of the current user or on the name of the user. In the process, the unique names of the custom objects must match the branch number or the username. You can use the option *Override with* to link the display in the text field to a single selection that is connected to the same custom structure: In the single selection, you choose one of the custom objects (for instance, the branch office). The text field is linked to the attribute *Address*. If a different affiliate is set in the single selection, the corresponding address is automatically displayed in the text field. If you activate the checkbox *Activate a fixed connection to the selected "custom object"*, the text field content is updated automatically if the custom structure is changed at a central location. Note that to do so, a value must be selected in the *Override with* selection list.
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the field only after a user has selected a specific value for a selection field on the data sheet.
Variable	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the selection field upon whose value you want to make the visibility dependent.
Value	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.



4.1.8 Enter multiple values

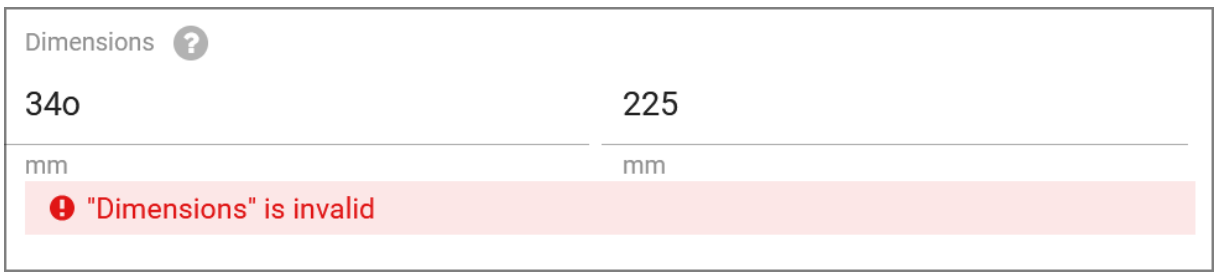
Use the variable *Multiple values inputlines* to place a field for two related values (height and width, for example) next to each other on a data sheet.

The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
Name displayed	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.
Type spanning	Select this checkbox to display variables with an identical technical name and identical variable type in one column in the filter view. See Grouping variables see page 37.
Shared value	**Note:** This is visible only if the type is a data object type and localization is enabled (see Localization see page 14). **Note:** Note that the variable can be selected as language-neutral only while you create it. The *Shared value* field cannot be changed at a later stage! Activate the checkbox if you want the variable value to receive the same value in each localized data object version.
Percentage	Distribute the width of both input fields in percentage to the total width of the data sheet.
Max. Characters	Define the maximum number of characters that can be entered in the field.
Reg. Exp. Validator	Enter a regular expression in the field to check the entry for validity. For example, you can then ensure that bank codes or e-mail addresses have been entered in a specific format.
Input Size	Define the width of the variables. If so many characters are entered that cannot be displayed in the configured width, the field is provided with a scroll bar.
Suffix	You can enter a suffix (`Millimeter` or `%`, for example) that is attached to the field.
Help text	Define the help text that can be displayed to users.

Name	Description
Inherit from parent	**Note:** This is visible only if the type permits inheritance (*Inheritance* dropdown list = `Multiple parents`). Activate this checkbox if you want the data record to adopt the values of a parent job or data object as a sub-job or sub data object. **Note:** The variables must have identical display names.
Default value	Enter the value to use as the default for the field. **Note:** Note that the default value is adopted only when you create an object (data object/job). Changing the default value does not have any effect on objects that were created already.
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the field only after a user has selected a specific value for a selection field on the data sheet.
*Variable**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the selection field upon whose value you want to make the visibility dependent.
*Value**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.

In this example, the input is invalid because the regex default, which only allows three-digit numbers, is not met and the lowercase letter “o” was entered instead of zero.



4.1.8.1 Examples of regular expressions

When creating or modifying the expressions, you can use an online tool such as https://regexr.com/ for testing. The following table provides you with some proven examples for a successful start. For further support, please visit the above website.

Name	Description
E-mail address	`/([\w\.\-_]+)?\w+@[\w-_]+(\.\w+){1,}/igm`
SWIFT BIC Code	`/^[A-Z]{6}[A-Z0-9]{2}([A-Z0-9]{3})?$/`
IBAN without spaces	`[a-zA-Z]{2}[0-9]{2}[a-zA-Z0-9]{4}[0-9]{7}([a-zA-Z0-9]?){0,16}`
Three digit number	`\d{3}`
German zip code	`[0-9]{5}`
IPv4 address	`^(?:(?:25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)\.){3}(?:25[0-5]|2[0-4][0-9]|[01]?[0-9][0-9]?)$`

4.1.9 Combo box

Use a *Combo box* to combine the features of a *Single select* and *Single inputline* with each other. In a combo box, users can:

- Select from values that are defined as a data source using a custom structure.

  Note: Stored values are proposed using Auto-Complete.

- Enter other values that are different from the stored values if required.

Prerequisites:

- You require a custom structure that you can select as the data source.

The following parameters are provided when you create or change the variables:

Name	Description
Unique Name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
Name displayed	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.

Name	Description
Type spanning	Select this checkbox to display variables with an identical technical name and identical variable type in one column in the filter view. See Grouping variables see page 37.
*Data Source**	Select an existing custom structure as data source for the values of the selection field.
Help text	Define the help text that can be displayed to users.
Shared value	**Note:** This is visible only if the type is a data object type and localization is enabled (see Localization see page 14). **Note:** Note that the variable can be selected as language-neutral only while you create it. The *Shared value* field cannot be changed at a later stage! Activate the checkbox if you want the variable value to receive the same value in each localized data object version.
Inherit from parent	**Note:** This is visible only if the type permits inheritance (*Inheritance* dropdown list = `Multiple parents`). Activate this checkbox if you want the data record to adopt the values of a parent job or data object as a sub-job or sub data object. **Note:** The variables must have identical display names.
Default value	Enter the value to use as the default for the field. **Note:** Note that the default value is adopted only when you create an object (data object/job). Changing the default value does not have any effect on objects that were created already.
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the selection field only after a user has selected a specific value for a different selection field on the data sheet.
*Variable**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the selection field upon whose value you want to make the visibility dependent.
*Value**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.

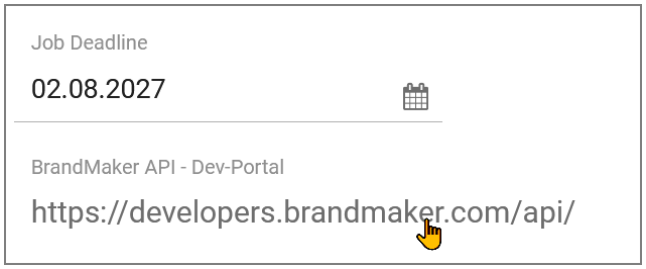

Enter
ZX 81
E10 Series
Q Series
ZX Series

4.1.10 Link

You use a *Link* to create a reference to another page in the Marketing Efficiency Cloud (e.g., a Marketing Shop page) or an external website.

The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
Name displayed	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.
Type	You can create two different types of links: • *Relative*: This creates a link to an existing page in the Marketing Efficiency Cloud (for example, a Marketing Shop page. Do not enter the entire address as the link; instead, enter only the part that is relevant to the link. The "front" part of the link (the URL of your system) is generated and added automatically. • *Absolute*: This creates a link to an external web page.
Help text	Define the help text that can be displayed to users.
URL	Enter the address of the (web) page for which you want to create a link. **Note:** You must enter the full address for an external web page (including "http://" or "https://").
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the selection field only after a user has selected a specific value for a different selection field on the data sheet.
*Variable**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the selection field upon whose value you want to make the visibility dependent.
*Value**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.



4.1.11 Asset Selector

Use an *Asset Selector* to make the buttons *Upload new assets* and *Select from Media Pool* available on a data sheet. You can use the *Upload new assets* function to add both locally saved files and assets from a collection to the data sheet. You can also specify that assets are added to a data sheet automatically based on specific criteria.

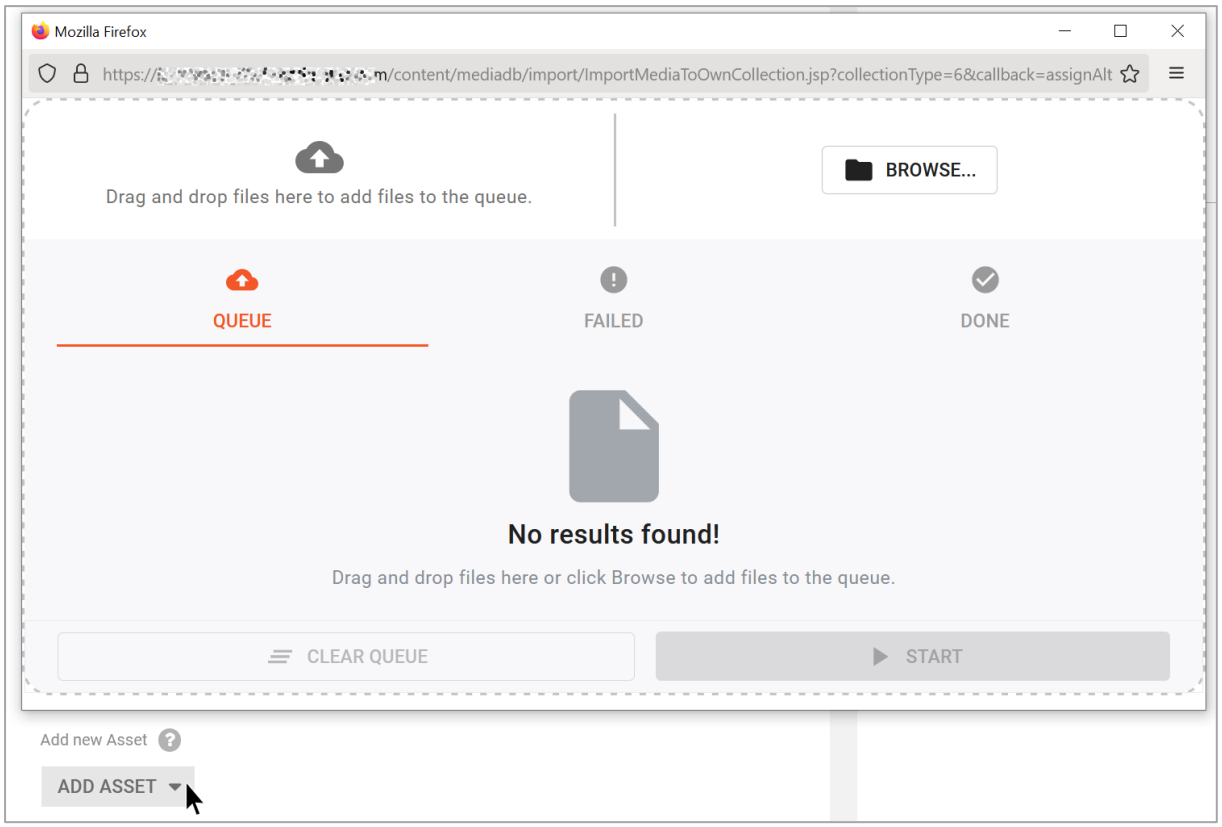
Note: the assets that can be selected and edited are determined by the authorizations of the user.

The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
*Display name**	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.
Type spanning	Select this checkbox to display variables with an identical technical name and identical variable type in one column in the filter view. See Grouping variables see page 37.
Help text	Define the help text that can be displayed to users.
Shared value	**Note:** This is visible only if the type is a data object type and localization is enabled (see Localization see page 14). **Note:** Note that the variable can be selected as language-neutral only while you create it. The *Shared value* field cannot be changed at a later stage! Activate the checkbox if you want the variable value to receive the same value in each localized data object version.

Name	Description
Inherit from parent	**Note:** This is visible only if the type permits inheritance (*Inheritance* dropdown list = `Multiple parents`). Activate this checkbox if you want the data record to adopt the values of a parent job or data object as a sub-job or sub data object. **Note:** The variables must have identical display names.
Prefilling from custom structure	Select a custom structure and a created attribute. By choosing *Key*, you can configure the display of an asset based on the affiliate ID. You can use the option *Override with* to link the display of an asset to a single selection that is linked to the same custom structure: in the single selection, you choose one of the custom objects (for instance, the data object). The text field is linked to the attribute *Product image*. If a different data object is set in the single selection, the corresponding data object image is automatically displayed in the text field.
Select media automatically	Activate this checkbox to add assets with the following properties to a data sheet automatically: • *Show all assets with the same 'Item Number'* • *Show all media that include ID in 'free text field'*: Specify the free text field in which the job ID or data object ID must be entered. **Note:** If one of these options is activated, users cannot select assets manually.
Free text field	**Note:** This can only be used when the checkbox *Show all media that include ID in 'free text field'* is activated. You can specify the free text field in which the job ID or data object ID must be entered.
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the variable only after a user has selected a specific value for a different selection field on the data sheet.
*Variable**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the selection field upon whose value you want to make the visibility dependent.

Name	Description
*Value**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.



4.1.12 Advanced Grid

Use an *Advanced Grid* to place information or input fields clearly on the data sheet. The variables selected for the advanced grid are displayed as the grid columns. You can group the following variable types together in an advanced grid:

- *Single inputline*
- *Date picker*
- *Single select*
- *Reference/Relation*
- *Relation*: Use a *Relation* to connect a specific variable from a different data sheet (an Asset Selector, for example).

  Note: Note that you can only add a *Relation* if you have already created a *Relation* variable in the table.

- *Organizational units*

> **Note:** You can only add the *Organizational units* variable type to the advanced grid once. If you add other variable types, the *Organizational units* entry is no longer displayed for selection.

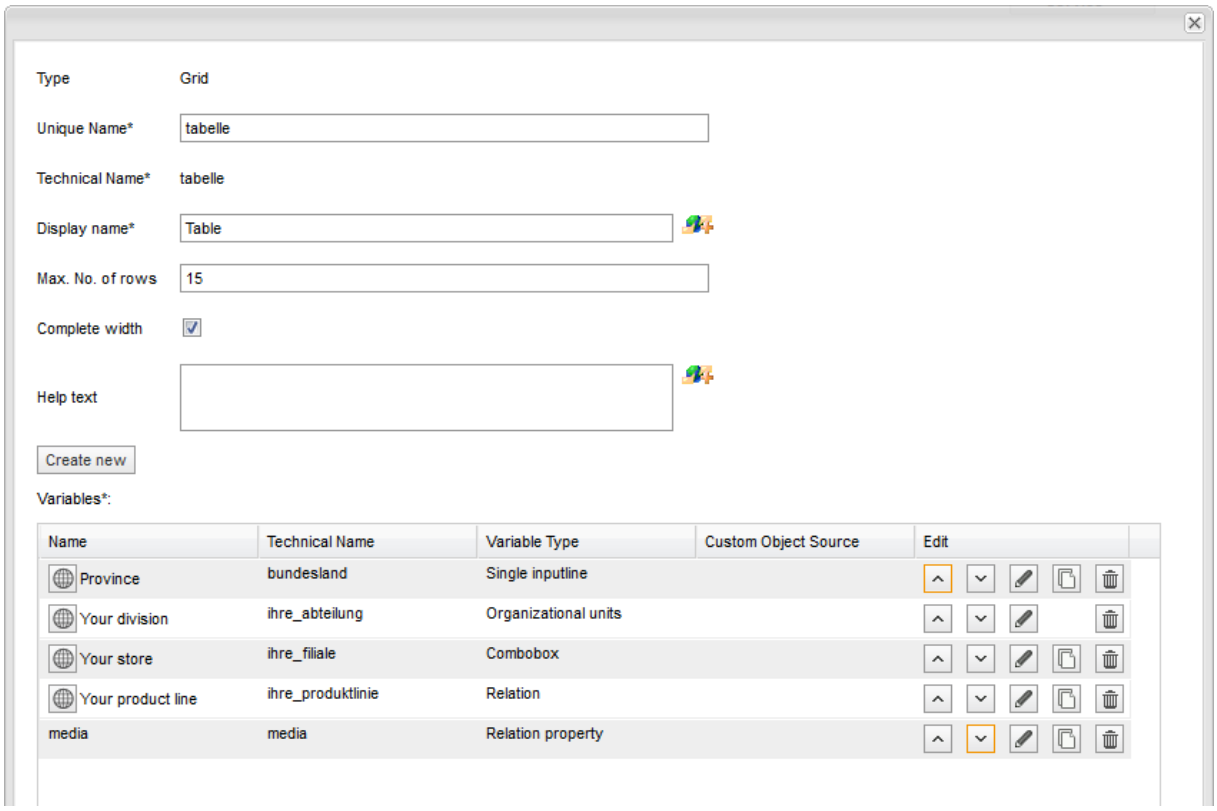
- *Multiline input area*
- *Asset Selector*
- *Multiselect*
- *Combo box*
- *Action*: An action button can be integrated into an extended table. Via the button, users call customer-specific functions. The button is not displayed in a column like other variables, but the user reaches the button when a row is in edit mode. Clicking the button invokes a URL stored in the variable.

Each variable type can be configured as a mandatory field, which means that the user must edit the field when populating the table. To do this, set the checkbox at *Mandatory field* when creating.

The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9. **Note:** If you want the values of a parent table to be inherited by the table, the technical name of the parent and child tables must be identical.
Name displayed	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.
Max. No. of rows	Define how many maximum rows the table can contain.
Table height	Enter the table height in pixels.
Complete width	Activate this checkbox to utilize the entire width of the data sheet. **Note:** If this checkbox is activated, the variable can only be placed on a one-column data sheet layout.
Records per page	Define with how many records per page the table is paginated: 10, 20, 50 or 100 records per page or without pagination. **Note:** Note that the performance for displaying large tables with pagination improves considerably.

Name	Description
Prefill from parent	Activate this checkbox if you want the table to be filled by a table in a higher-level job or data object. The user can edit the table in the child job or child data object and delete and add data records. The user can also refresh the data filled by the parent element. All changes are lost in this case. **Note:** For a successful inheritance, the parent and child tables must have an identical technical name.
Help text	Define the help text that can be displayed to users.
Shared value	**Note:** This is visible only if the type is a data object type and localization is enabled (see Localization see page 14). **Note:** Note that the variable can be selected as language-neutral only while you create it. The *Shared value* field cannot be changed at a later stage! Activate the checkbox if you want the variable value to receive the same value in each localized data object version.
Create new	You can add an additional variable to the grid.
Variables	Your selected variables are listed in the *Variables* area. You can: • Change the order of the variables. • Open a variable for editing. • Copy a variable. • Delete a variable and remove it from the table.


Type
Grid
Unique Name*
tabelle
Technical Name*
tabelle
Display name*
Table
Max. No. of rows
15
Complete width
Help text
Create new
Variables*:
Name
Technical Name
Variable Type
Custom Object Source
Edit
Province
bundesland
Single inputline
Your division
ihre_abteilung
Organizational units
Your store
ihre_filiale
Combobox
Your product line
ihre_produktlinie
Relation
media
media
Relation property

4.1.13 Comfort Grid

Users can also use the comfort grid to enter data in a clear tabular form. When users fill in the grid on the data sheet, numerous keyboard shortcuts in particular make editing easier. Please refer to the user manuals for details.

4.1.13.1 Data Types

You can use the following data for a comfort grid:

- One-line text field
- Numbers
- Single select: selection of a value from a structured list.
- Date
- Formula, for details see chapter

Each variable type, except formula. can be configured as a mandatory field, i.e., the user must edit the field when filling the table. To do this, set the checkbox at *Mandatory field* when creating.

Numerical and date values are displayed and entered localized according to the selected UI language:

4.1.13.2 Summary row

You can set up a summary for each table variable in the footer of the table. To do this, enter a name and select one of the following functions:

- SUM(): Sum of all numbers in the column
- AVERAGE(): arithmetic mean of all numbers in the column
- MAX(): highest value in the column
- MIN(): lowest value in the column
- COUNT(): number of values in the column
- MIN_OCCURRENCE():Value that occurs least in the column.
  Example
  The column is a variable of type Single-Selection with the values A, B, C and D. The column contains 5 times A, 1 time B, 0 times C and 3 times D. The result in the footer is C (0).
  If the result is not unique, several values are displayed separated by commas.
- MAX_OCCURRENCE(): Value that occurs most frequently in the column.
  Example
  The column is a variable of type Single-Selection with the values A, B, C and D.

The column contains 5 times A, 1 time B, 0 times C and 3 times D. The result in the footer is A (5).
If the result is not unique, several values are displayed separated by commas.

- MEDIAN(): Median of the values in the column
- DEVIATION(): Deviation, rounded to two decimal places
- VARIANCE(): Variance, rounded to two decimal places

You can combine the functions with table variable types as follows

	Text	Date	Single Select	Number	Formula
SUM()				✓	✓
AVERAGE()				✓	✓
MAX()		✓		✓	✓
MIN()		✓		✓	✓
COUNT()	✓	✓	✓	✓	✓
MIN_OCCURRENCE()		✓	✓	✓	✓
MAX_OCCURRENCE()		✓	✓	✓	✓
MEDIAN()				✓	✓
DEVIATION()				✓	✓
VARIANCE()				✓	✓

4.1.13.3 Formula variables

With a formula variable, you calculate values in a column according to an entered formula. The following operators and operands are available:

- +, -, /, * and (and)
- Numbers
- Other variables of the *Number* type within the table. You address the variables as follows: {*Name of the variable*}. Then the value of the variable is copied from the same row into the formula. Note Example 1 below.
- The following summaries for other columns. Note Example 2 below:
  - SUM(): sum of all numbers in the column
  - AVERAGE(): arithmetic mean of all numbers in the column
  - MAX(): highest value in the column
  - MIN(): lowest value in the column

  - COUNT(): number of values in the column
  - MEDIAN(): Median of the values in the column
  - DEVIATION(): Deviation, rounded to two decimal places
  - VARIANCE(): Variance, rounded to two decimal places
- Mathematical operations and constants according to the following Library; note Example 3 below.

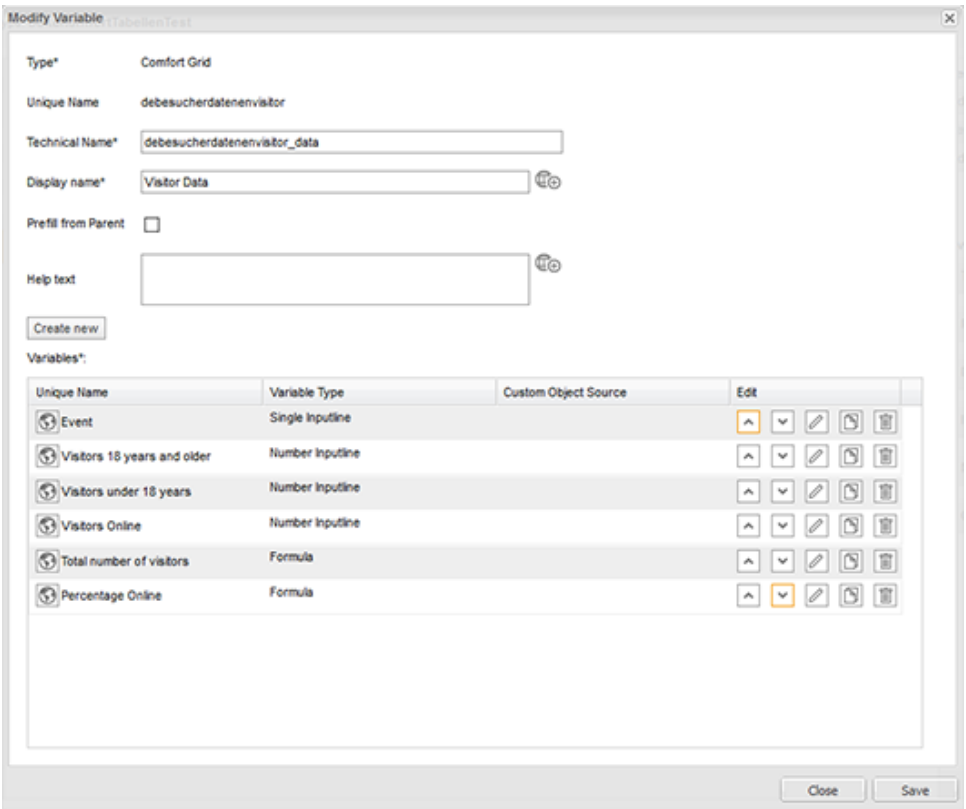
Example 1

A table is to be used to enter visitor data for events, categorized by visitors over 18 years of age, visitors under 18 years of age, and visitors who participated in the event online. For this you need the average in the respective category over all events.
Additionally you want to calculate the following values:

- Total number of visitors
- Percentage of online visitors

For these values, you also want to know the average across all events.

Implementation: Create a variable of type *Comfort Grid* on the job type datasheet. Add the following column variables to the table:

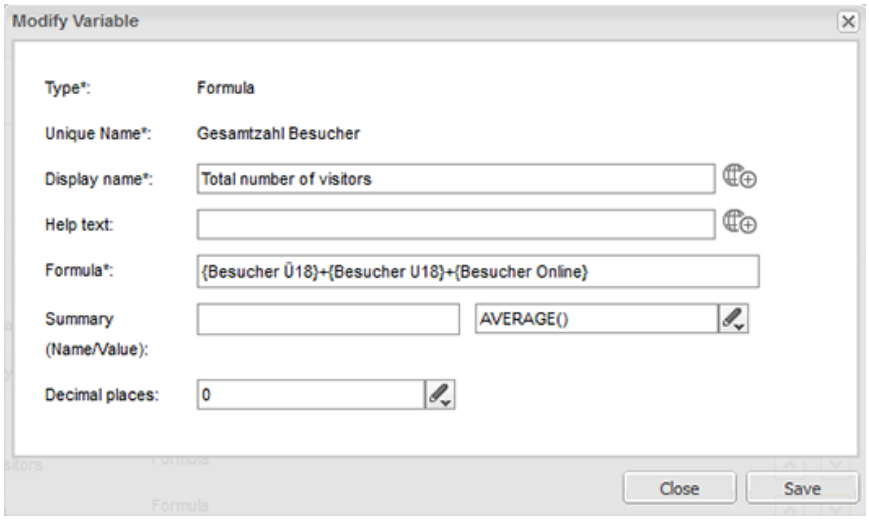


- Event: simple text field, summary function: COUNT() to get the total number of events.
- Visitors U18: simple number field to enter the number of visitors over 18 years old, summary function: AVERAGE()

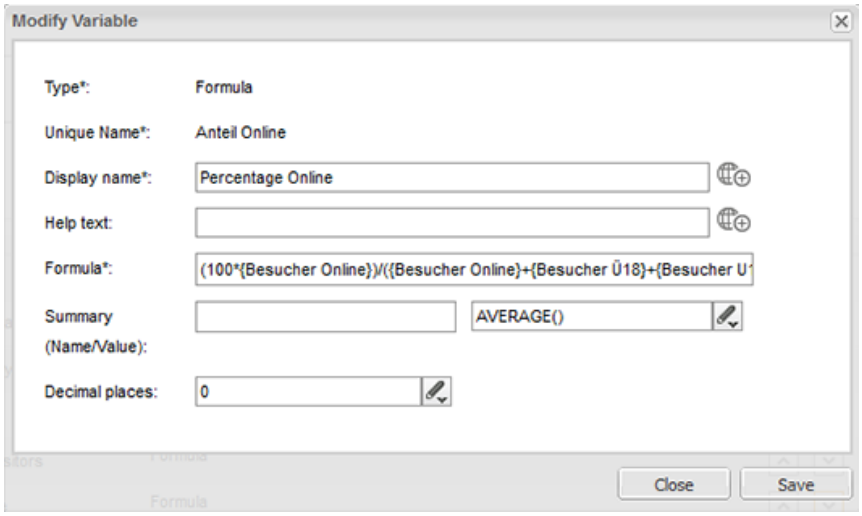
- Visitors U18: simple number field to enter the number of visitors over 18 years old, summary function: AVERAGE()
- Visitors online: simple number field to enter the number of visitors who participated online; summary function: AVERAGE()

These fields are edited for each event by the user on the datasheet. To calculate the other values, create two formula variables in the comfort grid:

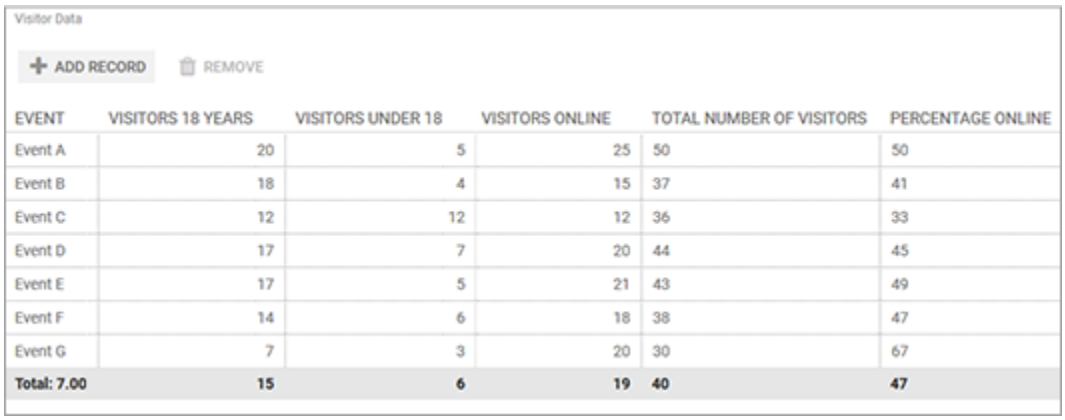
- Total number of visitors: The formula is
  {Visitors O18}+{Visitors U18}+{Visitors online}
  The formula adds up the entered values in the number fields for each event in the respective row. Note that the names in the curly brackets must correspond to the names of the number field variables described above.



- Share Online: The formula is
  (100*{Visitors Online})/({Visitors Online}+{Visitors O18}+{Visitors U18}).



The following screenshot displays how a correspondingly filled table is displayed on the datasheet.


Visitor Data

ADD RECORD REMOVE

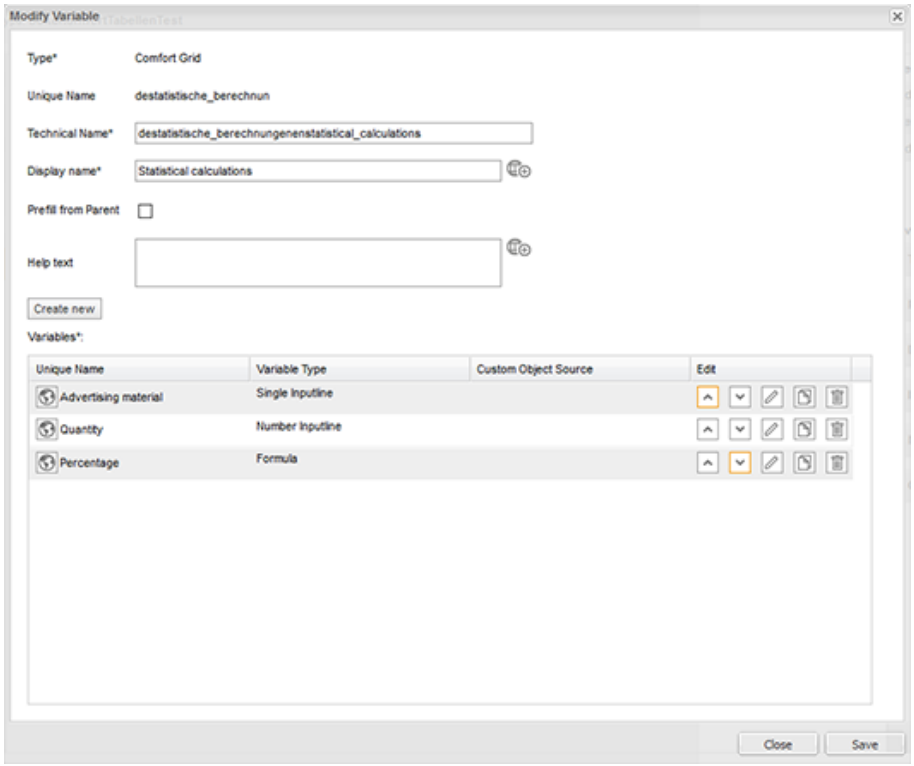
EVENT	VISITORS 18 YEARS	VISITORS UNDER 18	VISITORS ONLINE	TOTAL NUMBER OF VISITORS	PERCENTAGE ONLINE
Event A	20	5	25	50	50
Event B	18	4	15	37	41
Event C	12	12	12	36	33
Event D	17	7	20	44	45
Event E	17	5	21	43	49
Event F	14	6	18	38	47
Event G	7	3	20	30	67
Total: 7.00	**15**	**6**	**19**	**40**	**47**

In this case, the user only fills in the first four columns. The last two columns are calculated automatically.

Example 2

You want to compile and evaluate the number of distributed advertising media in a table.

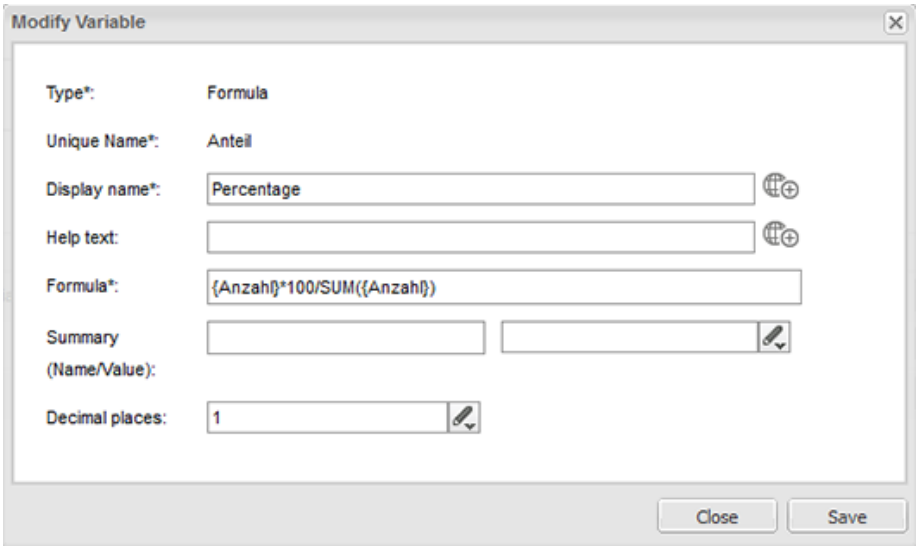
Implementation: Create a variable of type *Comfort Grid* on the job type datasheet. Add the following column variables to the table:



- Advertising media: Simple text field, without summary function
- Number: Simple number field to enter the number of ad media, summary function: SUM()

These fields are edited for each ad media by the user on the datasheet. To calculate the percentage, create a formula variable in the comfort grid:

- Ratio: The formula is
  {Number}*100/SUM({Number})
  The formula takes the entered number of the ad media in the respective row and calculates the share of the sum of all values entered in the Number column. The result is given with one decimal place.



Example 3

With the following Library (external link) you can insert mathematical functions and constants in the formulas. You can insert the functions and constants into the formulas as follows:

- Example Pi: You want to multiply a value from the *Diameter* column by Pi. The entry in the formula line is: Math.PI{Diameter}
- Example Powers: You want to take the square root of the sum of two column values: Math.pow({column A}+{column B}, 0.5)

4.1.13.4 Grid Parameters

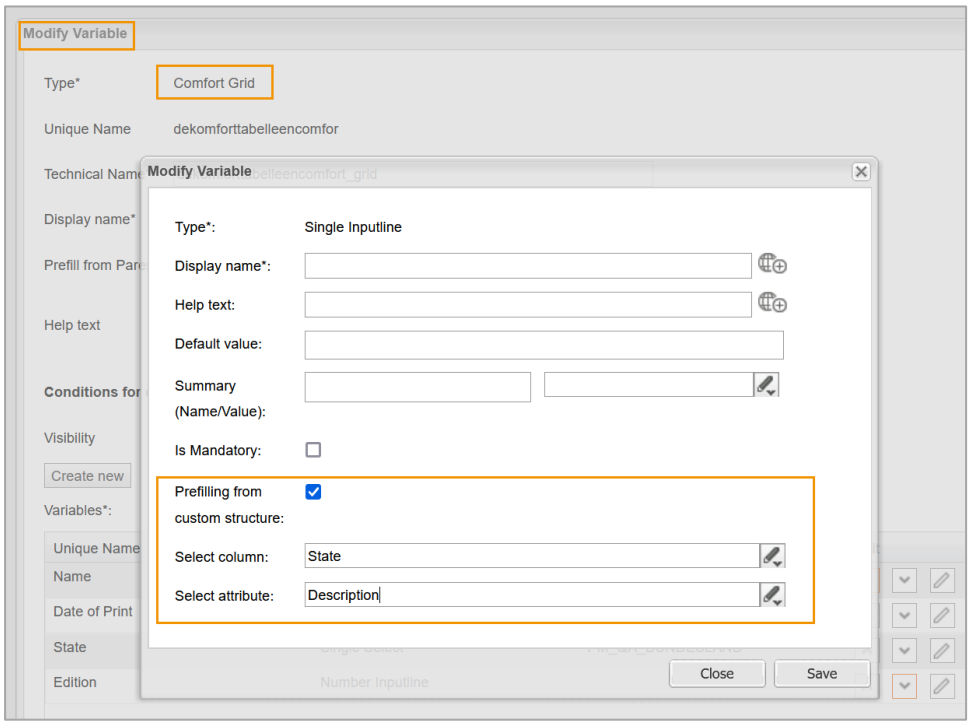
The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** this is visible only if the variable is changed. Neither fields are visible when you create the variable. See chapter 1.1.
Display Name	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. You can create required language versions. See chapter 1.1.
Prefill from parent	Activate this checkbox if you want the table to be filled by a table in a higher-level job or data object. The user can edit the table in the child job or child data object and delete and add data records. The user can also refresh the data filled by the parent element. All changes are lost in this case. **Note:** For a successful inheritance, the parent and child tables must have an identical technical name.
Help text	Define the help text that can be displayed to users. You can create required language versions.
Create new	You can add an additional variable to the grid. Simple text fields, number fields and date fields have the option for *Pre-filling from custom structure* within the comfort grid. See above in the table under 4.1.7.
Variables	Your selected variables are listed in the *Variables* area. You can: • Change the order of the variables. • Open a variable for editing. • Copy a variable. • Delete a variable and remove it from the table. For a description of the parameters for the various table variables, see the following chapter 4.1.13.5.
Prefilling from custom structure	Activate the checkbox to be able to select already existing values of the type *Single select* here. After you select a column, you can select an attribute in the field below it. There, only attributes of type date, text, floating point number and integer can be selected.

4.1.13.5 Grid Variables

Single inputline variable

Name	Description
Unique name *Technical Name*	**Note:** this is visible only if the variable is changed. Neither fields are visible when you create the variable. See chapter 1.1.
Display Name	Define the name with which the variable is displayed in the table. You can create required language versions.
Help text	Enter the help text that can be displayed for a user. You can create required language versions.
Default value	Enter a default value.
Summary	Enter a designation in the left field. Select a function for the summary in the right field, see chapter 4.1.13.2.
Mandatory	Activate the check box if the user has to edit the column.
Prefilling from custom structure	Activate the checkbox to be able to select already existing values of the type “Single selection” here. After you select a column, you can select an attribute in the field below it. There only attributes of type date, text, floating point number and integer can be selected.



With version 7.2, simple text fields, simple number fields and date selections can now be prefilled in a comfort grid.

Date picker variable

Name	Description
Unique name *Technical Name*	**Note:** this is visible only if the variable is changed. Neither fields are visible when you create the variable. See chapter 1.1.
Display Name	Define the name with which the variable is displayed in the table. You can create required language versions.
Help text	Define the help text that can be displayed to users. You can create required language versions.
Summary	Enter a designation in the left field. Select a function for the summary in the right field, see chapter 4.1.13.2.
Mandatory	Activate the check box if the user has to edit the column.
Prefilling from custom structure	Activate the checkbox to be able to select already existing values of the type “Single selection” here. Select an existing custom structure and a created attribute whose values you want to use to prefill the date picker.

Single select variable

Name	Description
Unique name *Technical Name*	**Note:** this is visible only if the variable is changed. Neither fields are visible when you create the variable. See chapter 1.1.
Display Name	Define the name with which the variable is displayed in the table. You can create required language versions.
Source	Choose a custom structure as source for the dropdown list.
Dependent on parent selection	**Note:** Only visible if a single selection has already been created in the table, which is linked to the custom structure superior to the data source. Activate the checkbox if the display of the selections in this field depends on the setting in another selection field, for example the display of street names on the selection of a town in another selection field.
Parent selection	**Note:** This is visible only if the *Dependent on parent selection* checkbox is activated. Select the parent field containing the setting that the displayed values of the selection depend on.

Name	Description
Help text	Enter the help text that can be displayed for a user. You can create required language versions.
Default value	Select a default value.
Summary	Enter a designation in the left field. Select a function for the summary in the right field, see chapter 4.1.13.2.
Mandatory	Activate the check box if the user has to edit the column.

Single number field variable

Name	Description
Unique name *Technical Name*	**Note:** this is visible only if the variable is changed. Neither fields are visible when you create the variable. See chapter 1.1.
Display Name	Define the name with which the variable is displayed in the table. You can create required language versions.
Help text	Define the help text that can be displayed to users. You can create required language versions.
Default value	Enter a default value.
Summary	Enter a designation in the left field. Select a function for the summary in the right field, see chapter 4.1.13.2.
Decimal places	Set the number of decimal places with which the data in the column will be displayed. Possible are 0 to 10 decimal places.
Mandatory	Activate the check box if the user has to edit the column.
Prefilling from custum structure	Activate the checkbox to be able to select already existing values of the type “Single selection” here. Select an existing modifiable structure and a created attribute with whose values the number field will be prepopulated.

Formula variable

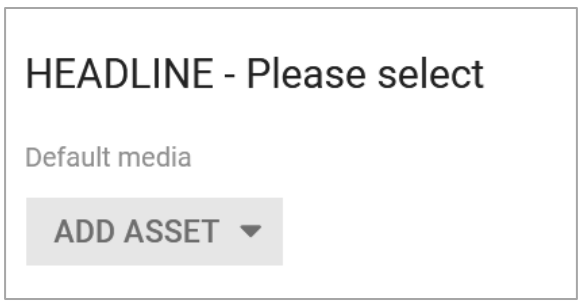
Name	Description
Unique name *Technical Name*	**Note:** this is visible only if the variable is changed. Neither fields are visible when you create the variable. See chapter 1.1.
Display Name	Define the name with which the variable is displayed in the table. You can create required language versions.
Help text	Define the help text that can be displayed to users. You can create required language versions.
Formula	Enter the formula.
Summary	Enter a designation in the left field. Select a function for the summary in the right field, see chapter 4.1.13.2.
Decimal places	Set the number of decimal places used to display the data in the column. Possible are 0 to 10 decimal places.

4.1.14 Heading

Use a *Headline Text* to name the sections of a data sheet and structure the placed variables, for example.

The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
Text	This displays the title used to display the headline text on the data sheet. You can create any language versions that are required. The text is used as the display name in the system; see Display, technical, and unique name see page 9.
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the field only after a user has selected a specific value for a different selection field on the data sheet.
Variable	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the dropdown list upon whose value you want to make the visibility dependent.
Value	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.



4.1.15 Reference/Relation

Use a *Relation* to link data sheets to each other. For example, users select a job from a selection list. Users can then open the relevant datasheet directly from the displayed link.

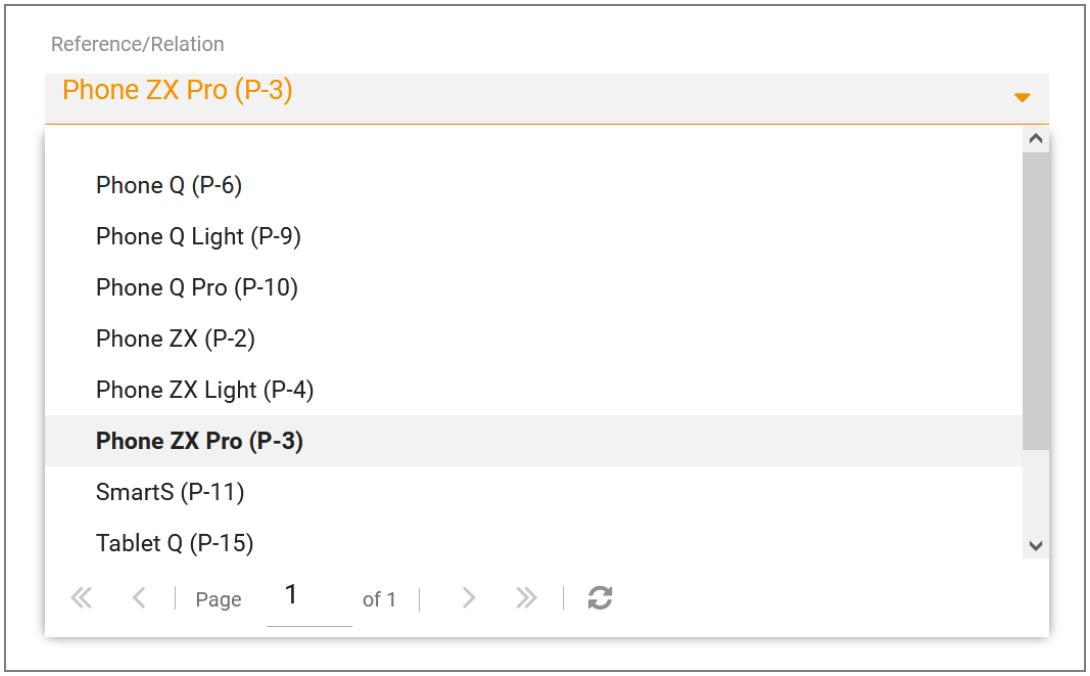
Prerequisites:

- You require at least one type that you can reference.

The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
Name displayed	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.
Type spanning	Select this checkbox to display variables with an identical technical name and identical variable type in one column in the filter view. See Grouping variables see page 37.
*Module**	This selects the module containing the types to which you want to make the reference.
Help text	Define the help text that can be displayed to users.
Shared value	**Note:** This is visible only if the type is a data object type and localization is enabled (see Localization see page 14). **Note:** Note that the variable can be selected as language-neutral only while you create it. The *Shared value* field cannot be changed at a later stage! Activate the checkbox if you want the variable value to receive the same value in each localized data object version.
Type	All of the types that are available based on the module that you selected are displayed. You can select the types that you want to reference.
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the variable only after a user has selected a specific value for a different selection field on the data sheet.

Name	Description
*Variable**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the dropdown list upon whose value you want to make the visibility dependent.
*Value**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.



4.1.16 Template

Use a *Template* variable to add a template from *Brand Template Builder* module to the data sheet. You can link the text boxes from the template to the variables on the data sheet to fill the corresponding text boxes automatically when editing the documents. Choose *Edit document* to open the document. If the values of the variables linked to the text boxes have been changed, a separate dialog box is displayed in which you can decide which content elements from the document are to be updated.

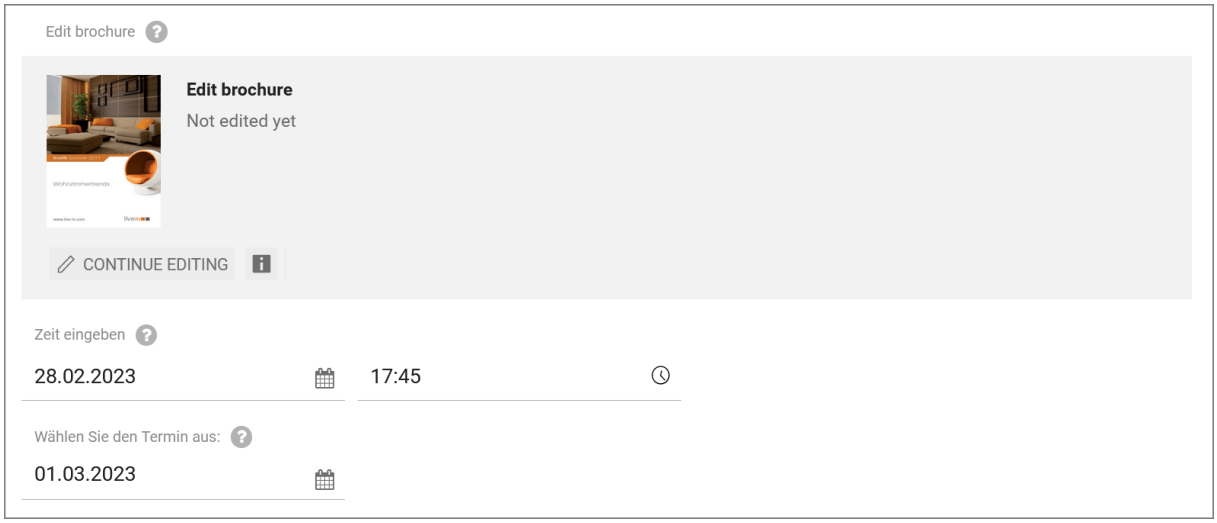
Note: A *BTB template* can be placed only on a one-column data sheet layout. To edit a document, you must have the corresponding rights.

The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
*Display name**	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.
Type spanning	Select this checkbox to display variables with an identical technical name and identical variable type in one column in the filter view. See Grouping variables see page 37.
*Template ID**	Enter the ID number (excluding T-) for the template that you want to use.
Help text	Define the help text that can be displayed to users.
Shared value	**Note:** This is visible only if the type is a data object type and localization is enabled (see Localization see page 14). **Note:** Note that the variable can be selected as language-neutral only while you create it. The *Shared value* field cannot be changed at a later stage! Activate the checkbox if you want the variable value to receive the same value in each localized data object version.
Inherit from parent	**Note:** This is visible only if the type permits inheritance (*Inheritance* dropdown list = `Multiple parents`). Activate this checkbox if you want the data record to adopt the values of a parent job or data object as a sub-job or sub data object. **Note:** The variables must have identical display names.

Name	Description
Preview	As soon as you have entered a valid ID of a template, a preview image of the template is displayed.
Assign variables to boxes	You can assign a data sheet variable to the text boxes of the template that is in use.
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the variable only after a user has selected a specific value for a different selection field on the data sheet.
*Variable**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the dropdown list upon whose value you want to make the visibility dependent.
*Value**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.

Note: As soon as a new Web-to-Publish document is created, a preview of the created document is displayed on the data sheet.



4.1.17 Numbers

Use the *Numbers* variable to make an input field for numbers available to users on the data sheet.

The following parameters are provided when you create or change the variables:

Name	Description
Unique name *Technical Name*	**Note:** This is visible only if the variable is changed. Neither fields are visible when you create the variable. See Display, technical, and unique name see page 9.
Name displayed	Define the name with which the variable is displayed on the data sheet. You can create any language versions that are required. See Display, technical, and unique name see page 9.
Type spanning	Select this checkbox to display variables with an identical technical name and identical variable type in one column in the filter view. See Grouping variables see page 37.
Help text	Define the help text that can be displayed to users.
Use Unit	Select this checkbox to add a unit to the field.
Shared value	**Note:** This is visible only if the type is a data object type and localization is enabled (see Localization see page 14). **Note:** Note that the variable can be selected as language-neutral only while you create it. The *Shared value* field cannot be changed at a later stage! Activate the checkbox if you want the variable value to receive the same value in each localized data object version.
Unit of measure	**Note:** This is visible only if the *Use Unit* checkbox is activated. You can select whether a unit for *Length* or *Weight* is displayed.
Default unit	**Note:** This is visible only if the *Use Unit* checkbox is activated. You can define a default entry for the unit of measure, such as centimeter (cm) or kilogram (kg).
Inherit from parent	**Note:** This is visible only if the type permits inheritance (*Inheritance* dropdown list = `Multiple parents`). Activate this checkbox if you want the data record to adopt the values of a parent job or data object as a sub-job or sub data object. **Note:** The variables must have identical display names.

Name	Description
Visibility	**Note:** This is visible only if a single-select or multi-select is already created for the type. Activate the checkbox *Visibility is depending on another variable* to display the variable only after a user has selected a specific value for a different selection field on the data sheet.
Variable	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the dropdown list upon whose value you want to make the visibility dependent.
Value	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.

If the number field is enabled with the option *Use Unit*, it can also run conversions between units for you. For comparison, you can see a simple number field below.

4.2 System variables

When you create a new type, variables are created and placed on the data sheet automatically. Absolutely vital system variables include:

- Job/data object name
- Job/data object type
- Workflow

Other system variables can be removed from the data sheet but cannot be deleted.

Note: The technical names of the system variables are used in the list. There may be a different name in the *Display name* field.

Technical Name	Variable type/Description
WorkflowTiming	Workflow timings: This variable is used to display the start date, duration, and due date of the current workflow step.
ArticleNumber	Single inputline: This variable can be used to display an existing item number (for an asset, for example).
Owner	Bean property: This variable is used to display the assignee.
Description	Multiline inputarea: This variable provides an input field. By default, the maximum number of characters is limited to 1000 and the height is defined as 3 lines.
CreateDate	Datepicker: This variable is used to display the create date.
Creator	Bean property: This variable is used to display the creator of the job or data object.
Deadline	Datepicker: This variable is used to make a date field available for the due date.
CurrentStepOverdueDate	Dynamic date: This variable is used to display the time (number of days) since the job or data object has been in a workflow step.
WorkflowOverdueDate	Dynamic date: This variable is used to display the number of days that the job or data object is overdue (in relation to the defined due date for the workflow step).
Job/data object name	Single inputline: This variable is used to provide an input field for the job or data object name.
JobIdFormatted	Constant variable: This variable is used to display the unique ID of the job or data object.

Technical Name	Variable type/Description
JobTypePseudoVariable	Job type: This variable is used to display the job type or data object type that is in use.
Comments	Chat desc from props: This variable is used to make the comment function available.
LastModificationDate	Datepicker: This variable is used to display the date of the last change.
SubJobs	Subjobs: This variable is used to make the functions required for sub-jobs or sub data objects available.
SystemPrice	Single inputline: This variable can be used to assign fixed or variable prices to the Service item types for the Marketing Shop.
default_media	Asset Selector: This variable is used to make the *Default media* variable available.
CurrentStepStartDate	Dynamic date: This variable is used to display the start date of the current workflow step.
JobState	Bean property: This variable is used to display the current workflow step.
TaskManager	Task Manager: This variable is used to make the functions for the Task Manager available; for Task Manager see page 132.
Themes	Description text: This variable can be used to assign one or more themes to the job or data object.
WorkflowObjectId	Workflow: This variable is used to display the workflow that is in use.
WorkflowStartDate	Dynamic date: This variable is used to display the start date of the workflow.

4.2.1 Task Manager

You can use tasks to plan and subdivide jobs or data objects in more detail. You can use the *Task Manager* and:

- Create the appropriate tasks for the workflow steps automatically using task templates.
- Enter the planned time required for a task.
- Post the actual time required for a task.
- Define the start and end date for the tasks and the assigned workflow steps.
- Assign individual tasks to a user for processing.

Note: The variable for the Task Manager is created by default. To use this function, you must place the element *Task Manager* on a single-column data sheet layout. Note that it is not possible to schedule individual workflow steps if the Task Manager is in use. The start and end date of the workflow steps and tasks are then provided from the Task Manager.

When you create or configure the *Task Manager*, you define:

Name	Description
Unique name, technical name	See Display, technical, and unique name see page 9.
Name displayed	Define the name with which the Task Manager is displayed on the data sheet. See Display, technical, and unique name see page 9.
Include weekends	Activate this checkbox to take weekends into account for the automatic recalculation of dates.
Help text	Define the help text that can be displayed to users.
Default Task Templates	Select a task template that is suitable for the workflow. When you create a job, the individual task steps for the assigned task are created automatically. **Note:** To use a task template together with a workflow, the number of task steps must be identical to the number of workflow steps.
Visibility	Activate the checkbox *Visibility is depending on another variable* to display the variable only after a user has selected a specific value for a different selection field on the data sheet.
*Variable**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can choose the selection field upon whose value you want to make the visibility dependent.

Name	Description
*Value**	**Note:** This is visible only if the checkbox *Visibility is depending on another variable* is activated. You can specify which value must be selected in order to display the variable.