sage

Enterprise Management

Development methodology with Responsive Design

Important changes and updates

2019

This document describes how to develop and modify screens based on a responsive design methodology. It includes using the Customize page tool to create visual layouts optimized for different screen sizes. This document also includes how to make functional changes in the Screen dictionary.

Audience

This document is intended for super users like Business Partners and administrators who are proficient in developing in Enterprise Management, specifically developments involving the **Screen dictionary**.

What's new

Enterprise Management uses a Responsive Design methodology for creating a single, flexible layout that can deliver an optimal experience across a vast range of devices. How screens and their components are modified has changed significantly with this new version of Enterprise Management. There are changes to the **Screen dictionary** and a new **Customize page** tool provides an intuitive workflow to visually adapt screen layouts.

Find out more

You can find appropriate supplementary documentation and videos in the Online Help Center.

- Watch the video on responsive design, which is available on the **Tutorials** tab.

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Introduction

What is Responsive design?

A responsive design platform allows you to customize the layout and visual style of pages to adjust to different screen sizes. Rather than creating different layouts for different screen sizes, you only need to create one layout that adapts as needed. This ensures that whether a screen is viewed on a desktop or a mobile device, the user has a good experience.

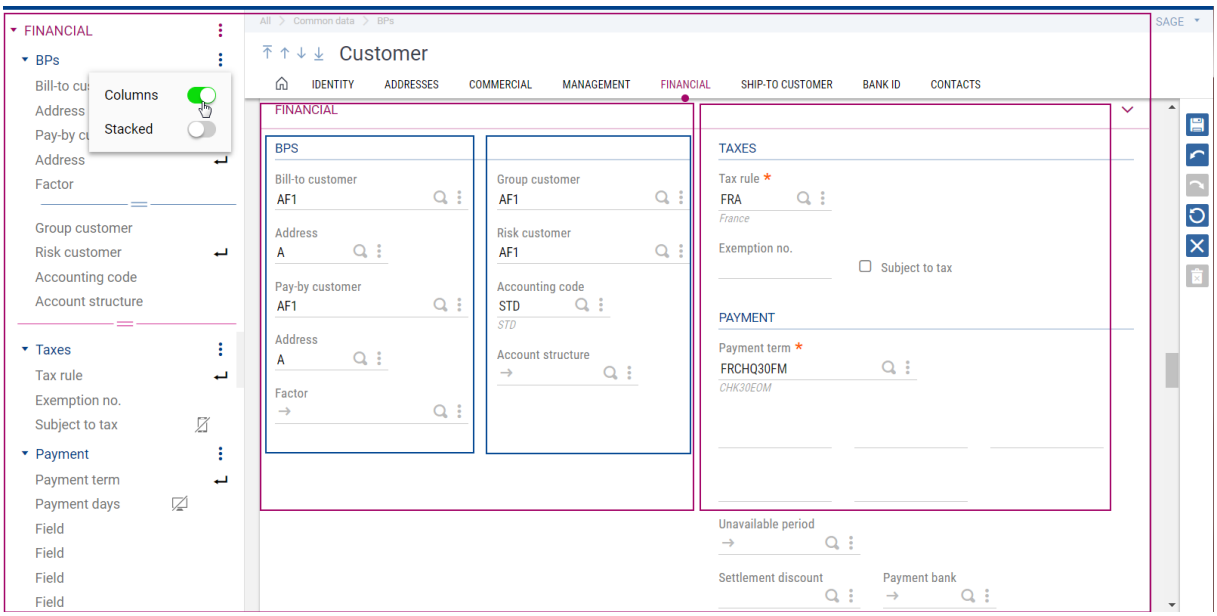
You can create these kinds of layouts using the **Customize page** tool, which can be accessed from any classic page. The customizations are applied to a setting layer with no impact on development.

Overview

After an in-depth review of the user interface, Enterprise Management now offers a responsive design approach to development. The page layout automatically adapts to the screen size. It adapts to the length of labels and to any language managed in the product.

When adapting to a screen size, the right column of the section moves under the left column, then fields move one under the other. Note that the columns inside a block stay at the same location, and their width is reduced.

The image below provides an overview of the **Customize page** tool. Note that a section is limited to only two columns to organize your blocks, and blocks can also be split into two columns. Drag the separator bars (pink for sections, blue for blocks) in the left panel to determine column breaks.



- The **Financial** section is displayed in two columns, with the **Taxes** block at the top of the second column. Note the pink bar just above **Taxes** in the left panel. If desired, you could drag this bar to just above **Payment**, which would put the **Payment** block at the top of the second column.
- The **BPs** block is also displayed in two columns. Note the blue bar below the **Factor** field that puts the **Group customer** field at the top of the second column. You could move the blue bar to change this column break.
- The **Return arrow** icons visible next to a field represent line breaks after that field.
- The **Mobile icon** visible next to a field means that field is hidden on mobile devices.
- The **Desktop** icon visible next to a field means that field is hidden on a desktop and hidden in the center panel preview area.

In the context of this new user interface, this document describes the **Customize page** tool and the **Screen** and **Representation dictionaries** changes for Enterprise Management V12.

It also explains how to adapt your existing specific function, if needed.

Responsive Design: a new function presentation

For classic functions, **Tabs** now display in a single page as **Sections**. You can navigate to each section by scrolling down the page or by clicking the section title, which is an anchor that goes to that section. Anchors are defined by **Tab title** in the **Window dictionary**.

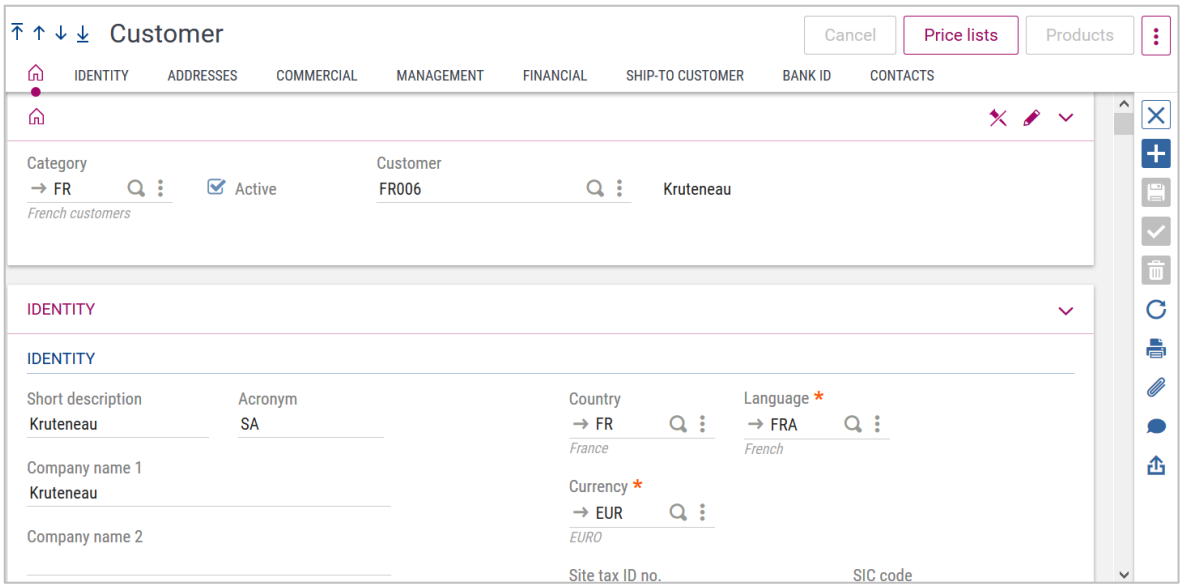
Blocks display according to their **sequence** in the **Screen dictionary**, from top to bottom, and from left to right when organized into two columns.

Fields display in-line according to their **position** in the **Screen dictionary.**

The first three **Buttons** declared in the list in the **Window dictionary** display at the top of the page; the others are accessed in the **Action** panel.

Menus declared in the list in the **Window dictionary** are in the **Action panel** that opens when you click the **Three-button** icon at the top, right. This panel can be pinned open.

Example: GESBPC function



Changes with the Customize page tool

The **Authoring tool** has been replaced with new functionality in the **Customize page** tool.

The following table provides an overview of changes with the **Customize page** tool and which modifications, if needed in your development, can be performed in the **Customize page** tool and which must be done in the **Screen** and **Window dictionaries**.

Note that changes that impact the functional logic must be performed in the **Screen** and **Window dictionaries** to respect coherence. The **Customize page** tool is only for visual display changes that do not impact business logic.

Changes	How to
Moving fields, blocks, or tabs	This must be done in the **Screen** and **Window dictionaries.** You cannot do this using the **Customize page** tool.
Block organization is simplified.	Blocks display in one column by default. Use the **Customize page** tool **Column** option at the **Section** level to display two columns in a section. The split can be managed by a pink separator bar in the left panel.
Field organization is simplified.	Fields display in-line by default. Use the **Customize page** tool **Column** option at the **Block** level to display two columns in a block. The split can be managed by a blue separator bar in the left panel. Use the **Customize page** tool **Stacked** option to display fields one below the other. Note that with the stacked option, local menu values display in-line, otherwise they display in a column.
Insert line break is new.	Use the **Customize page** tool to insert a line break after a field to display the following field on the line below.

Hide fields option is new.	Use the **Customize page** tool to hide fields depending on the device. This is especially needed to lighten the functionality for mobile.
Title options, such as show, hide, or remove	Title options are no longer possible in the **Customize page** tool. The field and block titles are taken from the **Screen dictionary**. The section titles (anchors) are taken from the **Window dictionary**.
Widgets, like drop-down lists and radio buttons	This option is no longer possible in the **Customize page** tool. This option is taken from the **Screen dictionary**.

Screen dictionary changes

For the responsive design, changes have been made in the **Screen dictionary** as described in the tables below.

Changes in block definitions

Please keep these behaviors in mind when with working with blocks:

Changes	New behavior
Block position, line, and column are obsolete.	Blocks display according to their **Sequence** only, and not according to the block number or the position, line, and column.
Block height and width are obsolete.	Blocks are automatically located according to the space available.

Changes in field definitions

Please keep these behaviors in mind when working with fields.

Changes	New behavior
Field position setting has changed.	**Position** defines the display order of the fields inside a block.
Column field is obsolete.	Fields are located automatically according to their length and the space available.
Break after field is new.	When set to **Yes**, a line break is added after this field. Used when the page is not customized.
Hidable field is new	When set to **Yes**, this field is hidden on a mobile device. Used when the page is not customized.
Truncation field is obsolete.	Alphanumeric fields are automatically truncated to about 42 characters.

Radio buttons display mode has changed.	A local menu displays in a combo box or as radio buttons according to the **Screen dictionary**. By default, radio button values display vertically. If the block has the **Stacked** option selected in the **Customize page** tool, values display in-line.
M option is obsolete.	In a list block, field length is calculated by considering the maximum field length and the title. In a table block, column size depends on the column content and not the column header.

Representation dictionary changes

For the responsive design, changes have been made in the **Representation dictionary** as described in this table.

Please keep these behaviors in mind when working with representations.

Changes in field definition

Change	New behavior
Break after field is new.	When set to **Yes**, the field declared immediately after displays on the next line. Used when the page is not customized.
Hidable field is new.	When set to **Yes,** this field is hidden on a mobile device. Used when the page is not customized.

Development recommendations

Functions developed in a previous version still work with the responsive design. However, in some cases, adjustments could be needed to better adapt to the new user interface.

> **Note**: There is no tool to retrieve the customizations done in a previous version.

You can create your own page customization on a standard function. If a Sage customization exists, you can start with that or reset it to the default state.

> Remember that changes to the **Screen** and **Window dictionaries** should only be done for your custom developments.

The following sections explain the development recommendations.

Sections

The **Tab title** from the **Window dictionary** provides the anchor for the section.

Blocks

There is no need to change the obsolete data such as the position, line, and column in a block definition.

Headers

Because headers can be pinned open, they should occupy the minimum height on display.

For that, build headers with these recommendations:

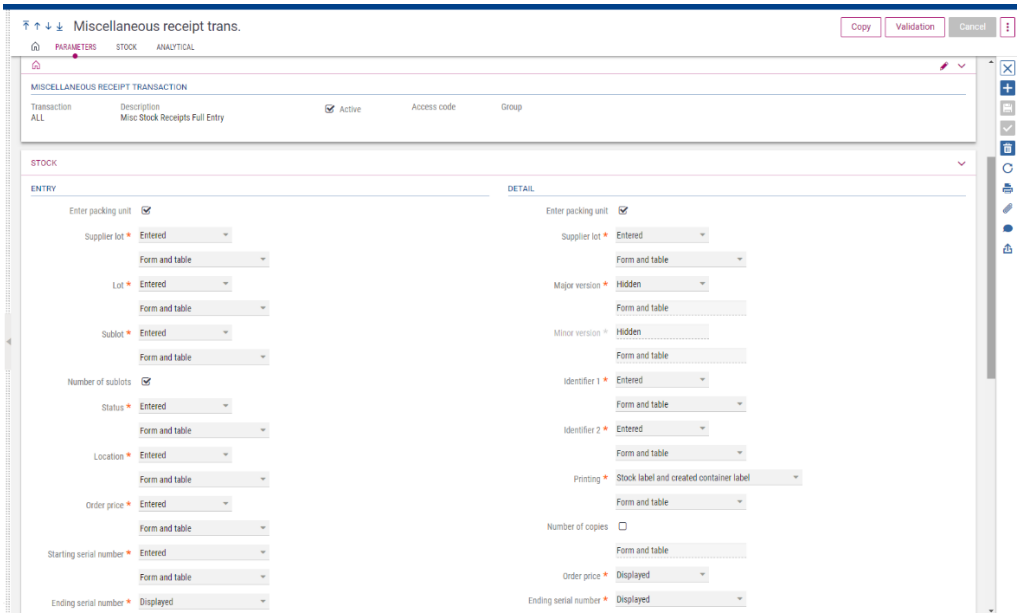
- They should contain minimal, key information.
- Fields should display in-line.

If it is not possible to follow these recommendations, remember that the header can be collapsed by clicking the **Chevron** icon in the top right corner of the section.

List blocks

By default, fields display in-line in a single column.

When the display is in-line, insert a line break after a logical field group to improve the readability.

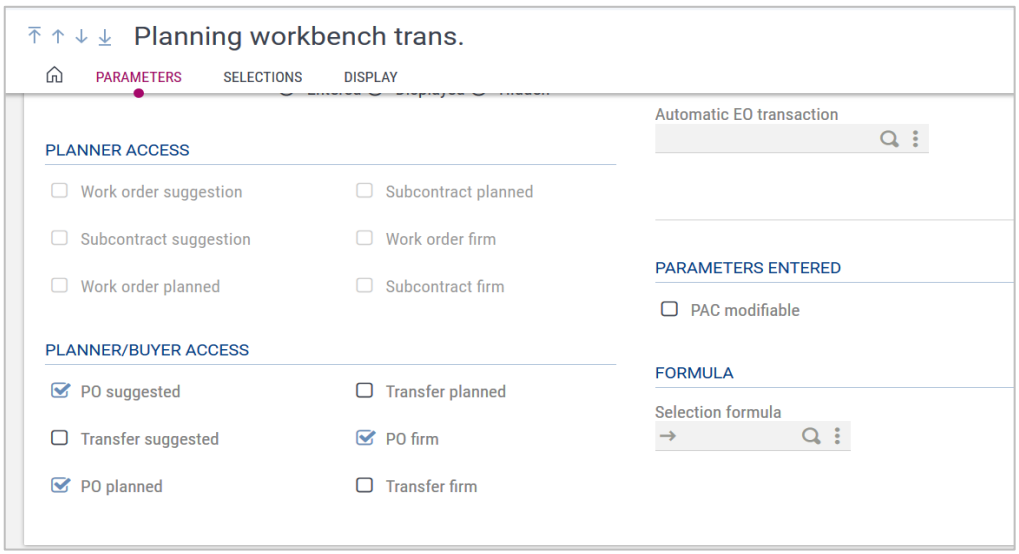


Use the **Column** option in the **Customize page** tool to display blocks in two columns in a section when:

- There is functional business logic to display two blocks next to each other.
- You want fields in a vertical alignment and you want to improve the use of space.

In GESMDL for example, the adaptation was made using the **Customize page** tool:

- To organize the screen into two columns
- To organize the blocks containing the check boxes into two columns



Use the **Stacked** option in the **Customize page** tool to display block fields in a vertical alignment, especially when the field characteristics are different. This is used in entry transactions, (e.g., GESSRT). This is especially recommended when columns are used.

Table blocks

No change has been made for table blocks.

For large grids, such as lines in orders, invoices, etc., it is recommended to keep the section without columns.

Fields

The **Customize page** tool offers a lot of flexibility in how you chose to layout your pages. It is therefore important to consider the following as you modify the visual layout.

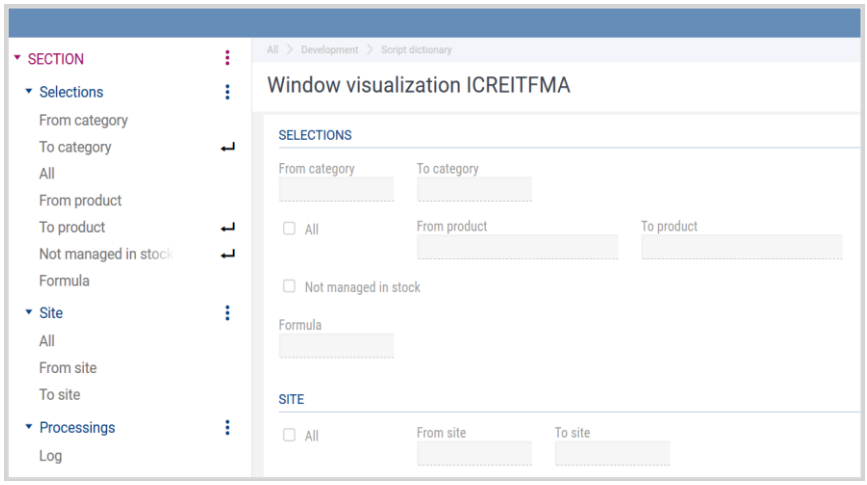
> Always keep in mind the business logic and the functional sequence for data entry when adding line breaks or separating fields into columns.

From- and To- fields (such as date ranges)

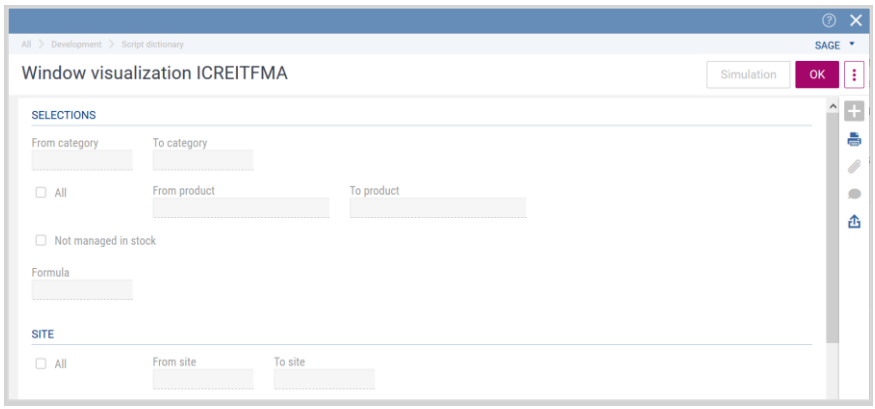
Do: Inserting a line break after **From-** and **To-** field pairs can ease readability and better adapt to mobile devices.

In the **Customize page** tool:

- Add a line break on the second field in the range.



After



Do not: Separating **From-** and **To-** field pairs into two separate columns would break the data sequence. The data sequence would be incorrect because all fields in the left column are applied before fields in the right column. On a mobile device, you would see all the **From-** fields first and then all the **To-** fields grouped below.

Field title & Data

Do: They should be declared in a single field. If not, use a line break after this field pair.

Code & Its Designation:

Do: They should be declared in a single field. If not, use a line break after this field pair.

Amount or number & unit:

Do: Display the unit to the right of the amount or number. Use a line break after this field pair if needed.

Field with W type

They were generally used to get a vertical alignment of fields belonging to several lines inside a block. They are not used with the new user interface.

Field with W option

They were generally used to display background text. Those fields are still visible.

Title

Remove titles that were previously hidden through authoring to avoid redundancy.

Field order

Change the field order on a screen when this had been done previously through authoring.

Examples

The following examples illustrate how common modifications are performed. They show how the **Customize page** tool and actions performed in the **Screen dictionary** work together to optimize user experience.

Removing a redundant title in a screen

Context: Now that all existing titles in the **Screen dictionary** display, titles could be repeated on a screen. With a single field in a block, avoid the second title.

Action: Delete the redundant title from the screen.

Removing a redundant title in the first section

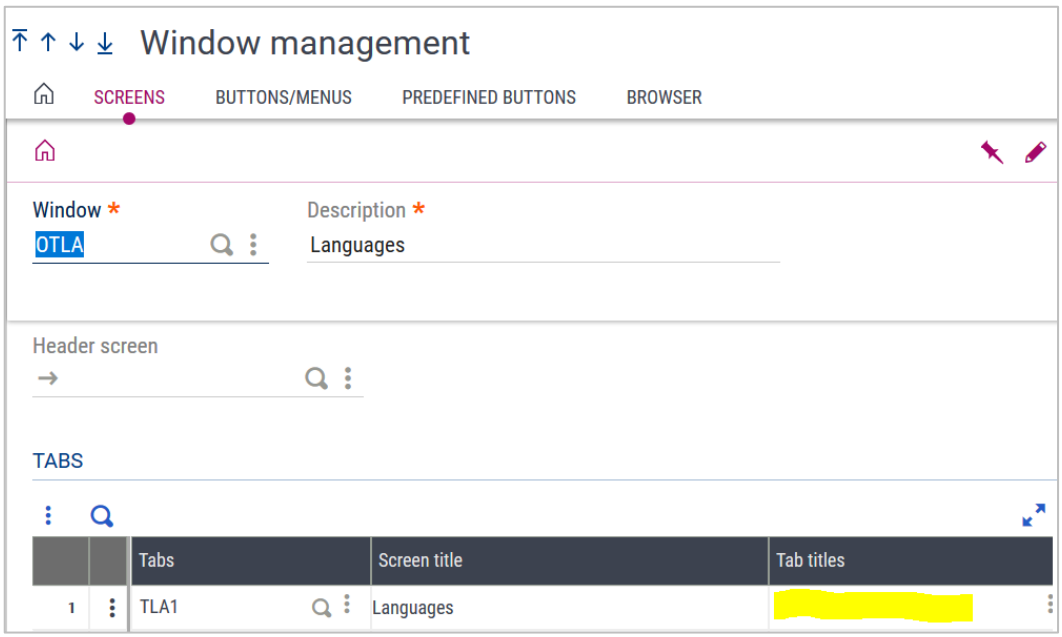
Goal: Keep the display efficient and simple

Context: Now that all existing titles in the **Window dictionary** display, titles could be repeated in the first section, or there is no added value for this title.

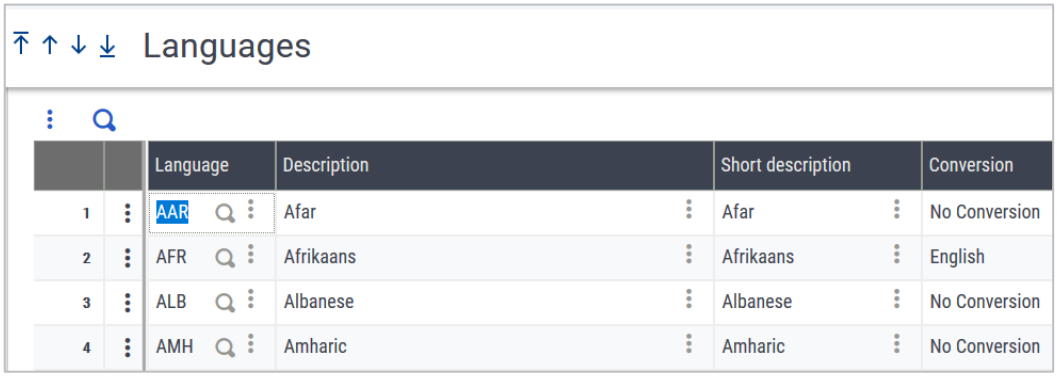
Action: Delete it from the **Window dictionary**.

Example: GESTLA function

There is only one section and there is no text for it. The function text alone is enough.



The display is as follows:

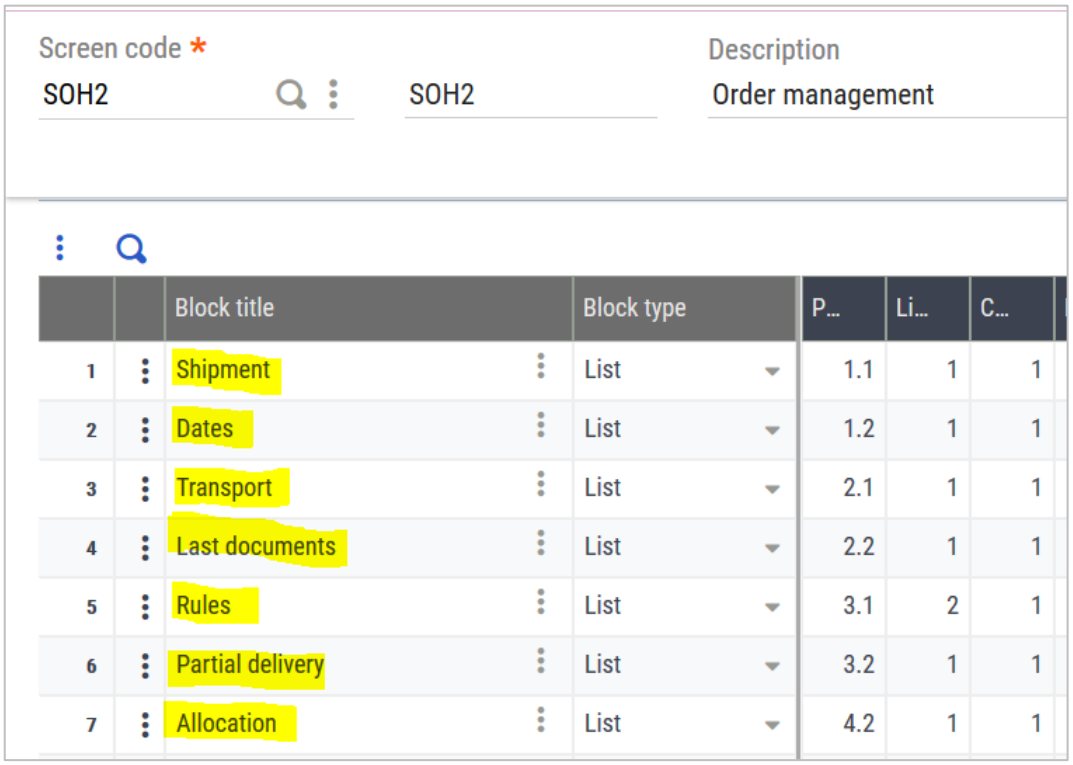


Providing a title for each block

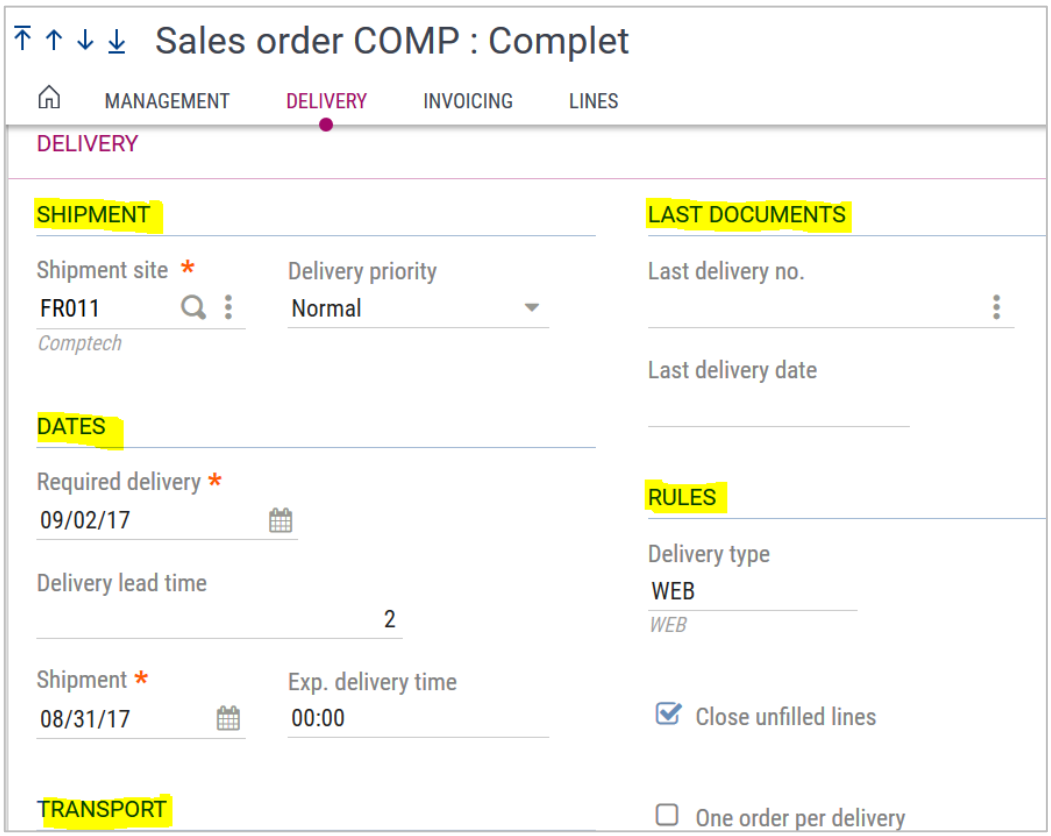
Action: It's a good practice to have a title for a block, except in the Header and for the first block in a section, when this title would be the same as the section.

Example: GESSOH function

Titles exist for each block through the **Screen dictionary**.



The display is as follows:



Changing field order inside a block

Goal: Keep the best functional sequence for the data entry

Why: The sequence is only determined through the **Screen dictionary**. Before, the default order could be changed through authoring.

Action: Change the field order sequence in the **Screen Dictionary**.

> **Development note**:
> Check the business logic to avoid having a field entered before another field that affects it.

Example: CREITFMA screen in the CREITFMA function

Before

The display of the **All** check box is okay in the **Site** block (Image 1), even if this field was in the last position on the line in the dictionary (Image 2) because it was relocated though authoring (Image 3).

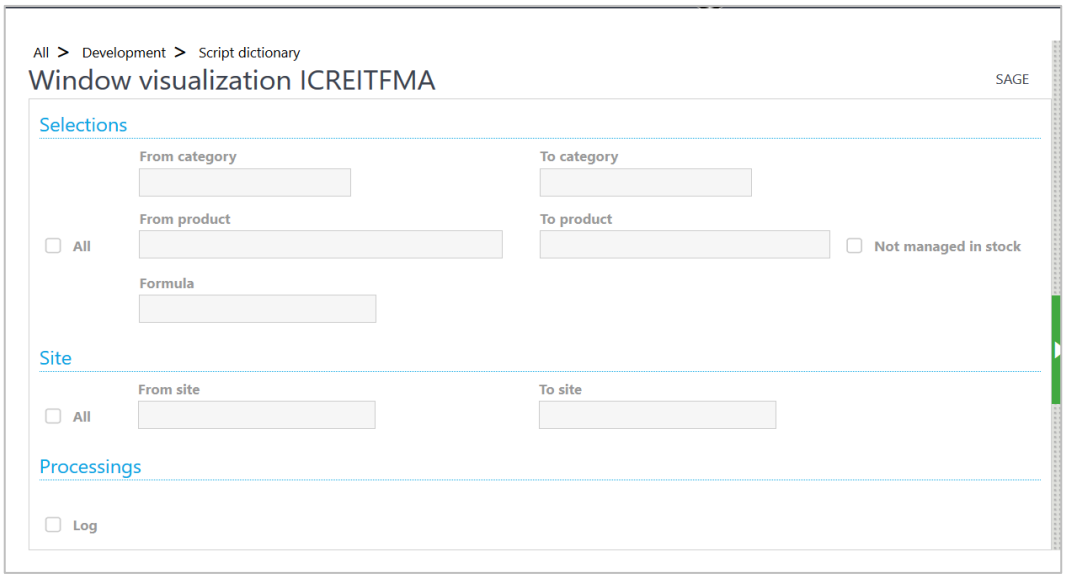


Image 1.

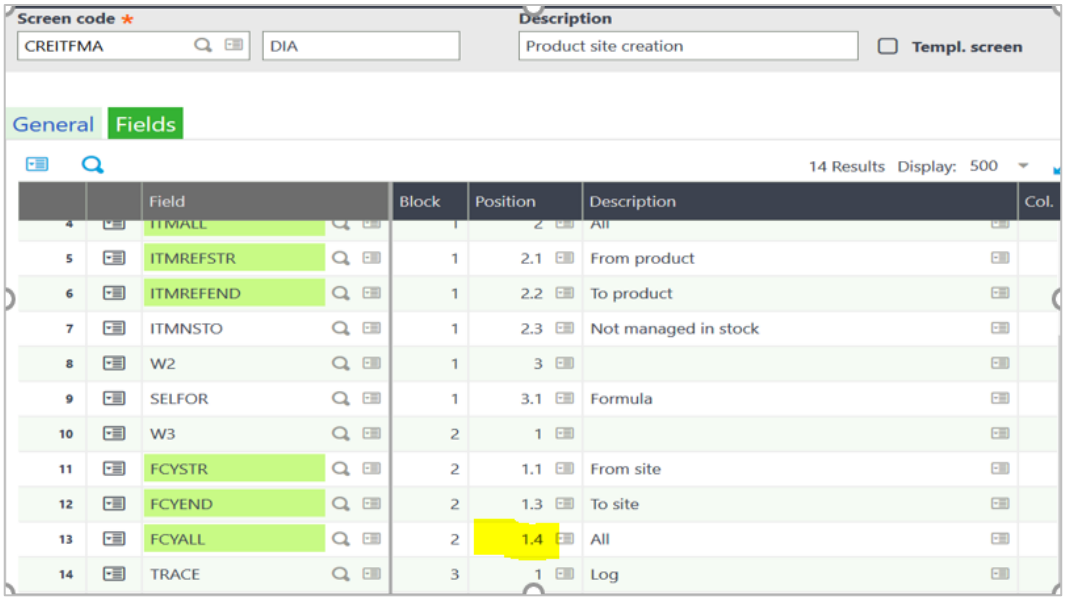


Image 2.

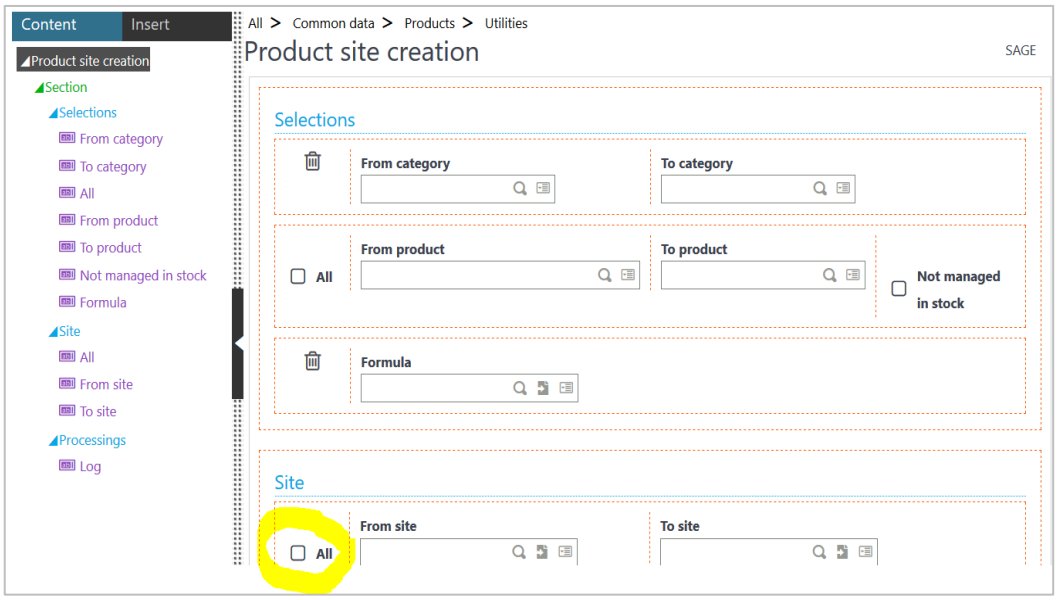
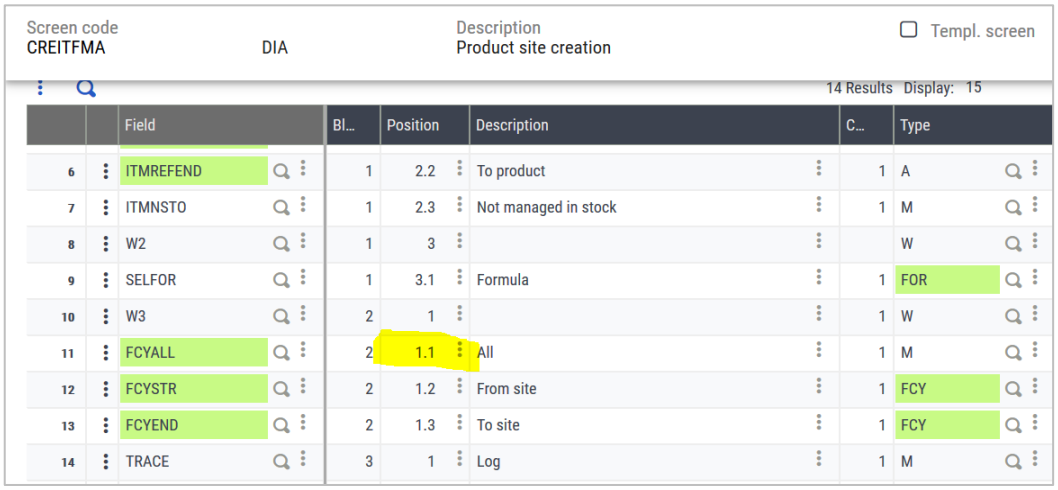


Image 3.

After

In the **Screen dictionary,** keep the correct data entry order by changing the field positions in the **Site** block.



		Field	Bl...	Position	Description	C...	Type
6		ITMREFEND	1	2.2	To product	1	A
7		ITMNSTO	1	2.3	Not managed in stock	1	M
8		W2	1	3			W
9		SELFOR	1	3.1	Formula	1	FOR
10		W3	2	1		1	W
11		FCYALL	2	1.1	All	1	M
12		FCYSTR	2	1.2	From site	1	FCY
13		FCYEND	2	1.3	To site	1	FCY
14		TRACE	3	1	Log	1	M

Moving a field to another block

Context: Only two blocks are allowed in parallel. Before, more than two blocks were allowed.

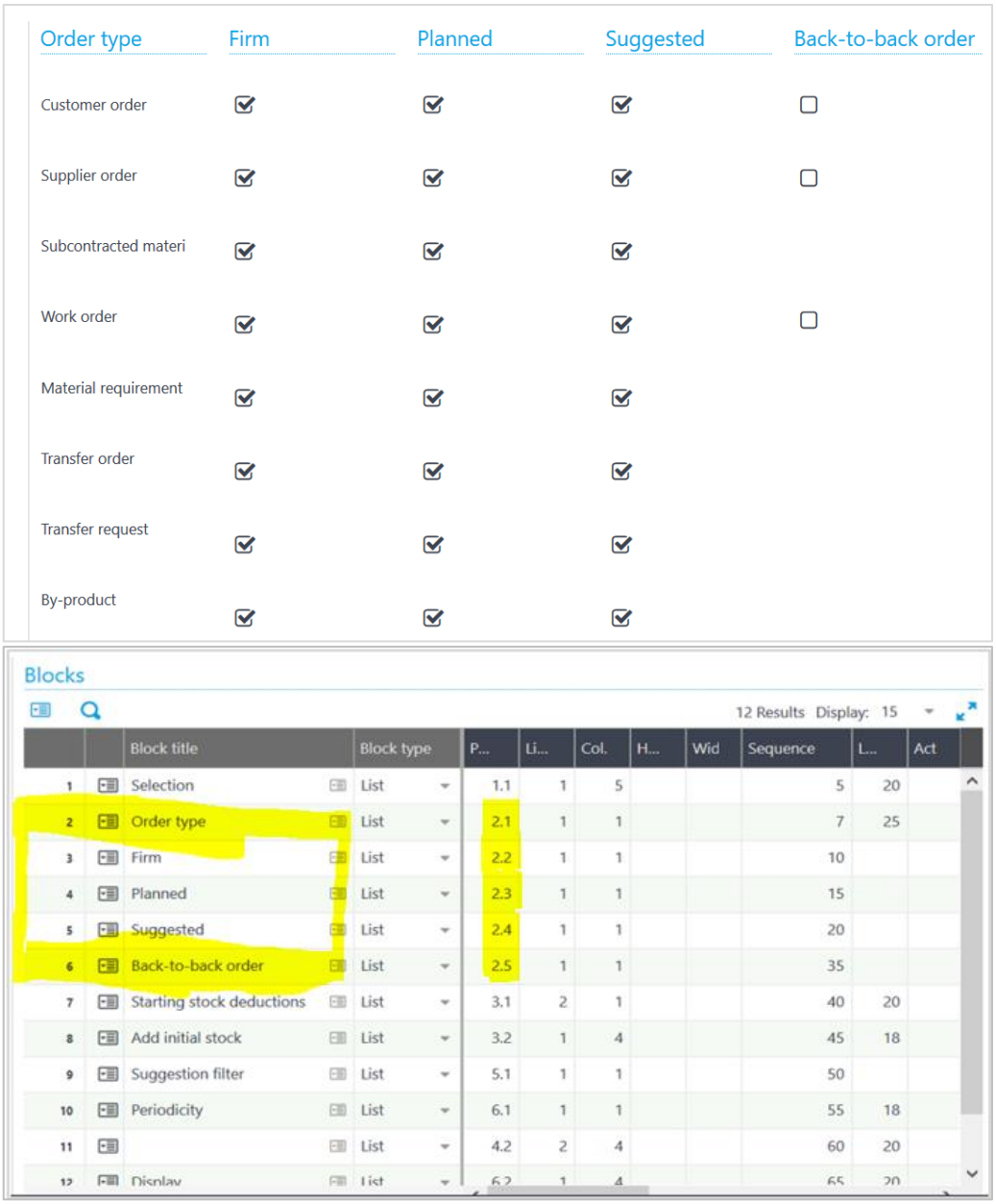
Action: Reorganize blocks into one block if there is a need to display the data entry in alignment.

Development note:
Check the business logic to avoid having a field entered before another field that affects it.
Check the block operations in your scripts: raz, affzo, diszo, grizo, ...
Check the block options in the **Screen dictionary**: type, activity code, size (for arrays)
Check the screen options in the **Screen dictionary**: activity code.

Example: CRITSDI screen in the CONSSDI function

Before

It was possible to display more than two blocks in parallel, as shown in the next two images.



Order type	Firm	Planned	Suggested	Back-to-back order
Customer order	☑	☑	☑	☐
Supplier order	☑	☑	☑	☐
Subcontracted materi	☑	☑	☑	
Work order	☑	☑	☑	☐
Material requirement	☑	☑	☑	
Transfer order	☑	☑	☑	
Transfer request	☑	☑	☑	
By-product	☑	☑	☑	

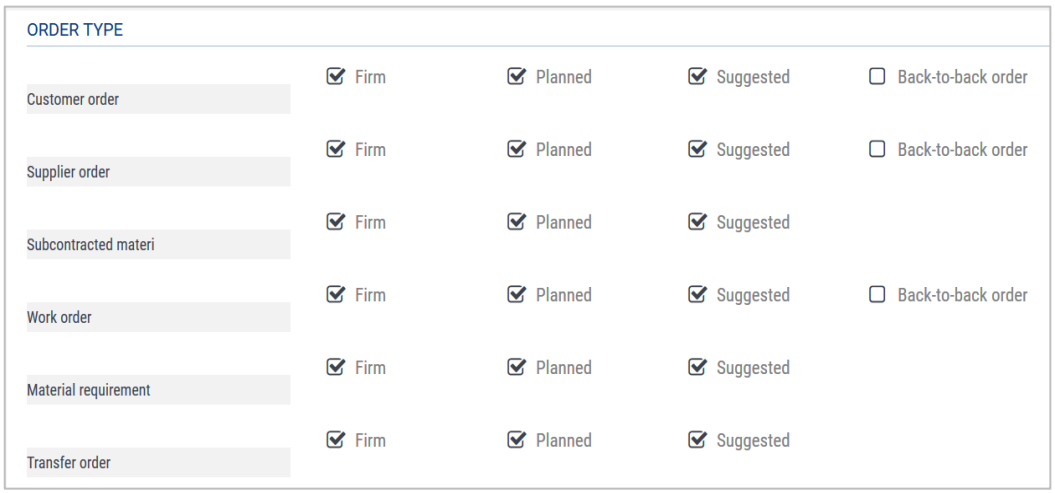
Blocks

12 Results Display: 15

	Block title	Block type	P...	Li...	Col.	H...	Wid	Sequence	L...	Act
1	Selection	List	1.1	1	5			5	20	
2	Order type	List	2.1	1	1			7	25	
3	Firm	List	2.2	1	1			10		
4	Planned	List	2.3	1	1			15		
5	Suggested	List	2.4	1	1			20		
6	Back-to-back order	List	2.5	1	1			35		
7	Starting stock deductions	List	3.1	2	1			40	20	
8	Add initial stock	List	3.2	1	4			45	18	
9	Suggestion filter	List	5.1	1	1			50		
10	Periodicity	List	6.1	1	1			55	18	
11		List	4.2	2	4			60	20	
12	Display	List	6.2	1	4			65	20	

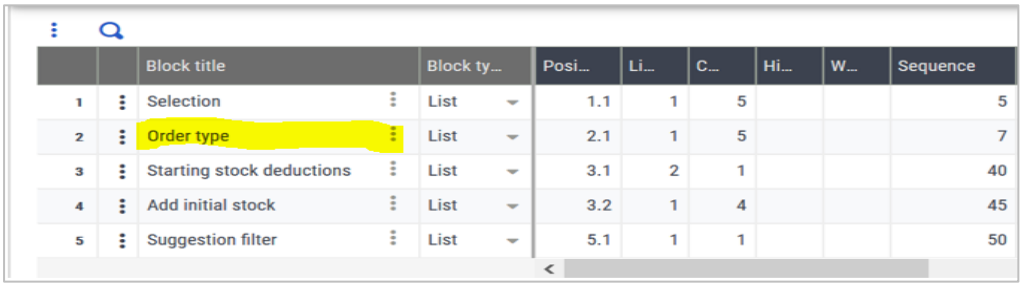
After

Action: Combine the five blocks into one and add line breaks to maintain data entry and alignment.



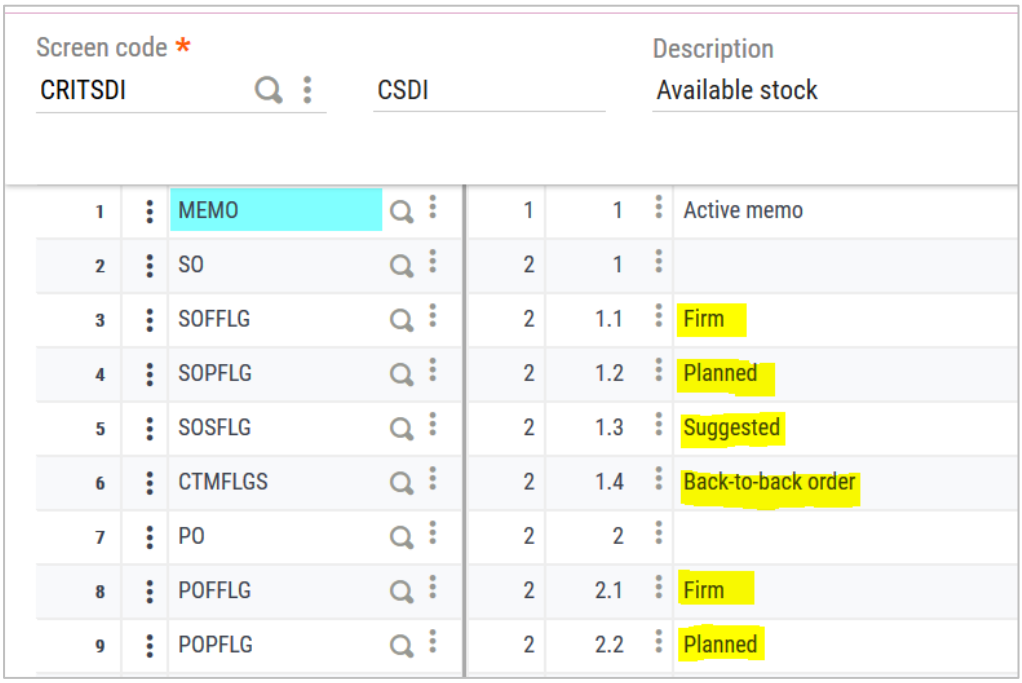
In the **Screen dictionary**:

- Move the blocks into a single block, with the title **Order type**. This results in the other four blocks being deleted: **Firm**, **Planned**, **Suggested**, and **Back-to-back order**.



		Block title	Block ty...	Posi...	Li...	C...	Hi...	W...	Sequence
1		Selection	List	1.1	1	5			5
2		Order type	List	2.1	1	5			7
3		Starting stock deductions	List	3.1	2	1			40
4		Add initial stock	List	3.2	1	4			45
5		Suggestion filter	List	5.1	1	1			50

- Add a title to each check box because the column title is lost with the block deletion.

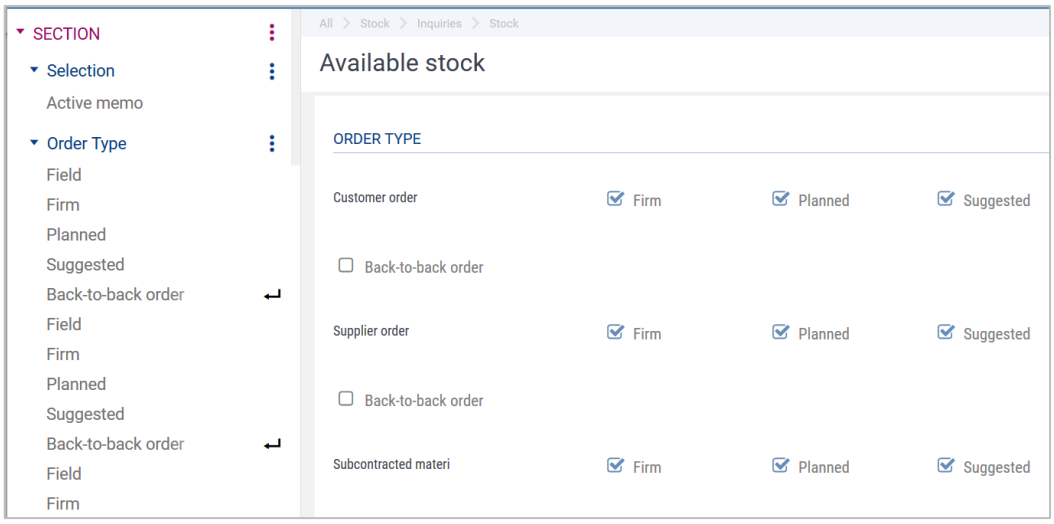


Screen code * CRITSDI | CSDI | Description Available stock

1	MEMO	1	1	Active memo
2	SO	2	1	
3	SOFFLG	2	1.1	Firm
4	SOPFLG	2	1.2	Planned
5	SOSFLG	2	1.3	Suggested
6	CTMFLGS	2	1.4	Back-to-back order
7	PO	2	2	
8	POFFLG	2	2.1	Firm
9	POPFLG	2	2.2	Planned

In the **Customize page** tool.

- Add a line break to the last field for each line.



Organizing a screen into two columns

Why: To have a good use of space and good functional organization in some screens.

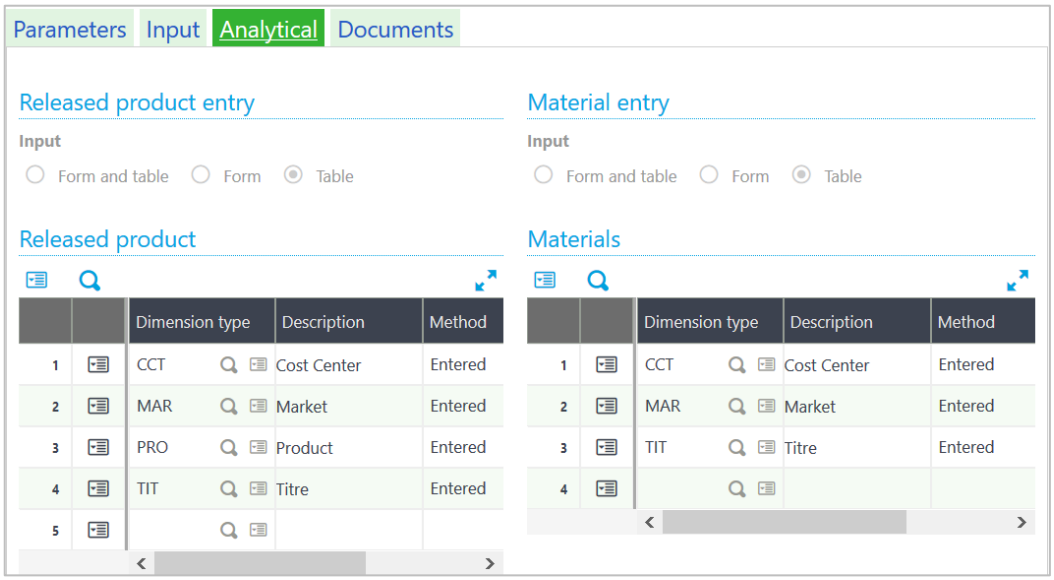
Action: Select the **Column** option for the section in the **Customize page** tool.

> **Development note:**
> No change needed in the development.

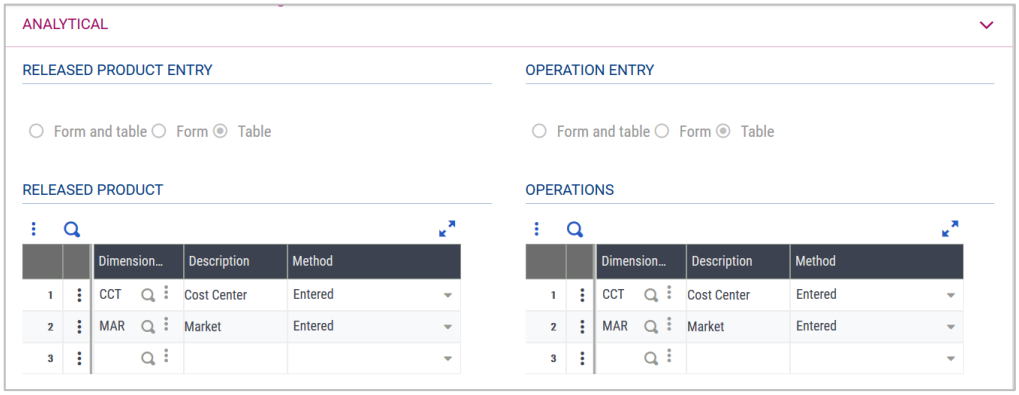
Example: DIESCRTRS3 screen in the GESMFL function

Before

Blocks were already organized into two columns.



After



Split a screen into two screens

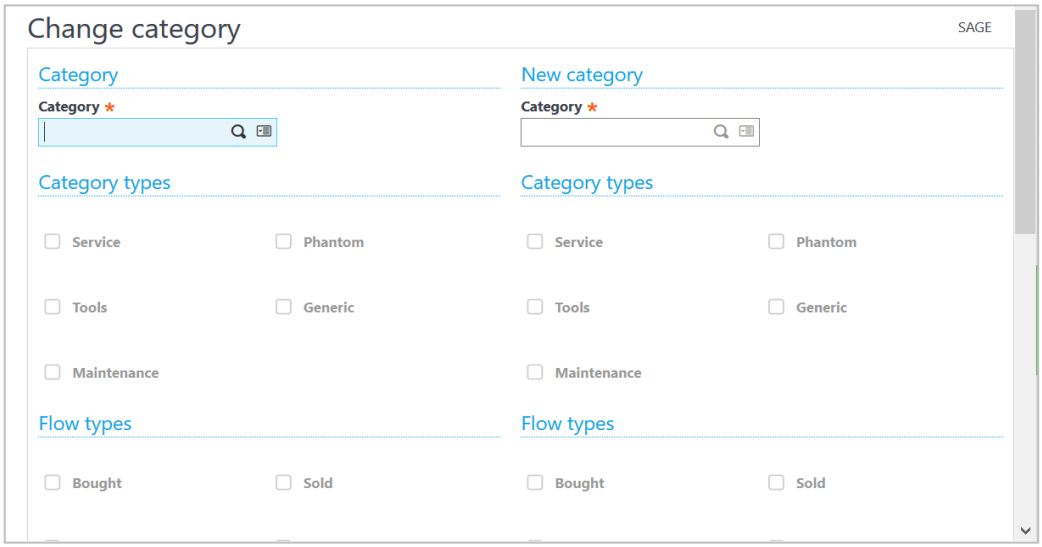
When: If there is a lot of information that cannot be designed properly, or if the block organization in columns cannot be done properly. It could be easier to split a screen into two screens. This is allowed in your specific function.

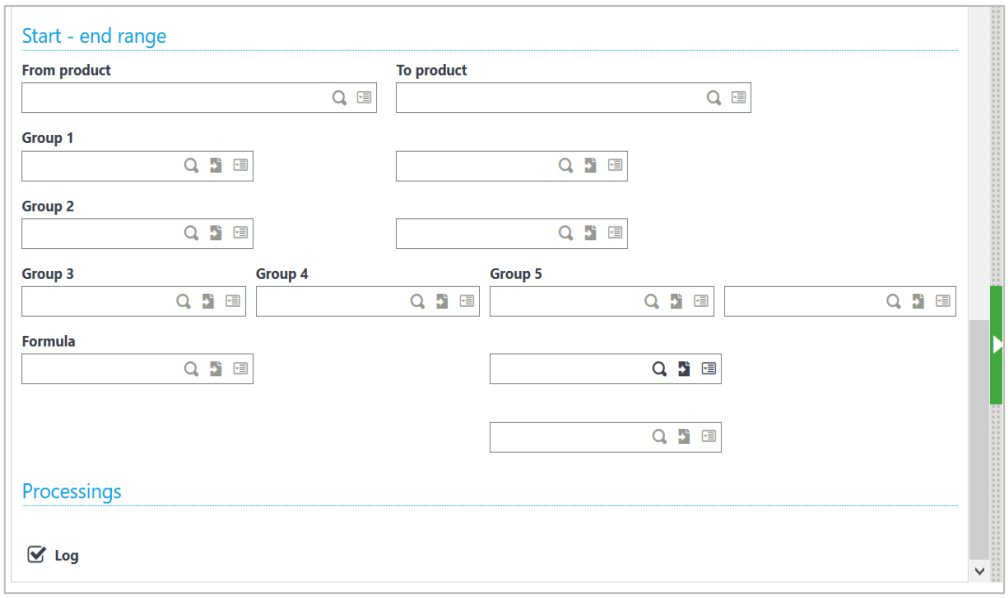
Development note:
Check the business logic to avoid having a field entered before another field that set it.
Check the block operations in your scripts: raz, affzo, diszo, grizo, …
Check the block options in the **Screen dictionary**: type, activity code, size (for arrays).
Check the screen options in the **Screen dictionary**: activity code.

Example: CHGITG screen in the FUNCHGITG function

Before

In this function, blocks are in parallel at the top of the screen, while they occupy the complete width at the bottom of the screen.



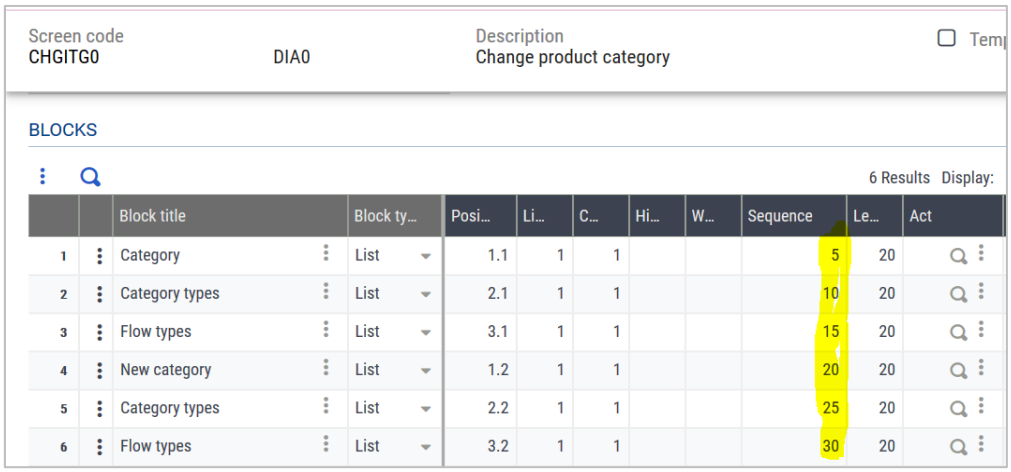


After

Action: Use functionality in the **Screen dictionary** and the **Customize page** tool to move blocks to a new screen and display as columns while maintaining data entry logic.

In the **Screen dictionary** for CHGITG:

- Split into two screens to manage the two columns separately from the other blocks.
- Move the blocks for the two columns to the new screen CHGITG0.
- Change the sequence of blocks: from the top to the bottom and from the left to the right.

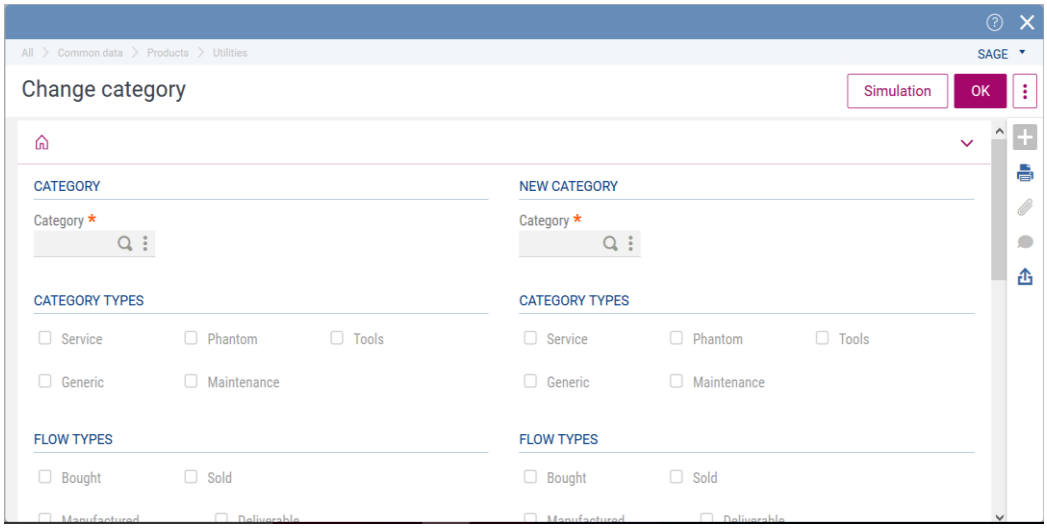


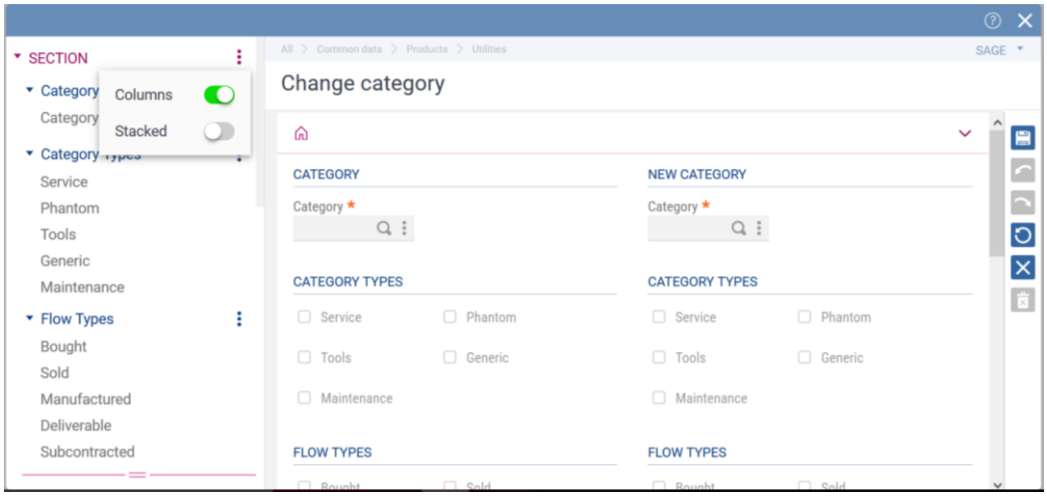
In the **Window dictionary**:

- Add the new screen, CHGITG0. (This adds a new section and anchor in the function.)

In the **Customize page** tool:

- Select **Columns** for the first screen (CHGITG0).
- Move the **Column** separator to the end of the first set of blocks.





Managing the title for a sizing field

Context: If you need a title for the sizing field.

Action: Manage the data entry and its title through the same sizing field by entering the formula in **Evaluated title**.

Example: BPABPC screen in the GESBPC function

Before

There are two data types in parallel (Image 1): phone types managed by the ATYPTEL field and phone numbers managed by the XTEL1 to XTEL5 fields. (Image 2)

Image 1.

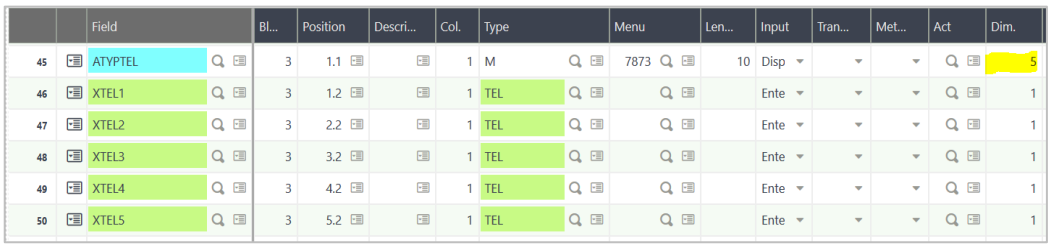


Image 2.

<u>After</u>

The need is to keep this information in parallel.

In the **Screen dictionary**:

- Manage the phone type using the **Evaluated title** on each field containing a phone number. (Image 2)

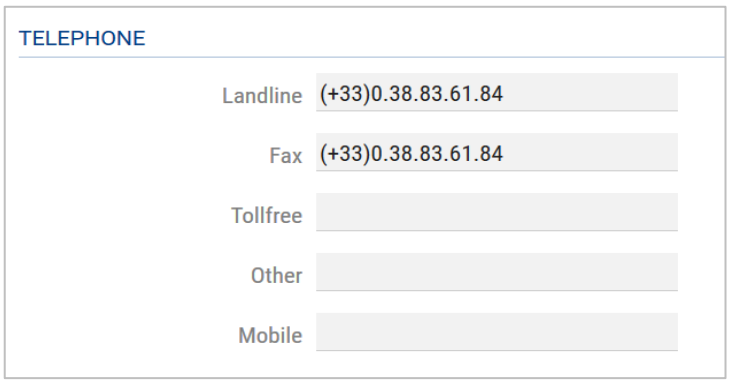


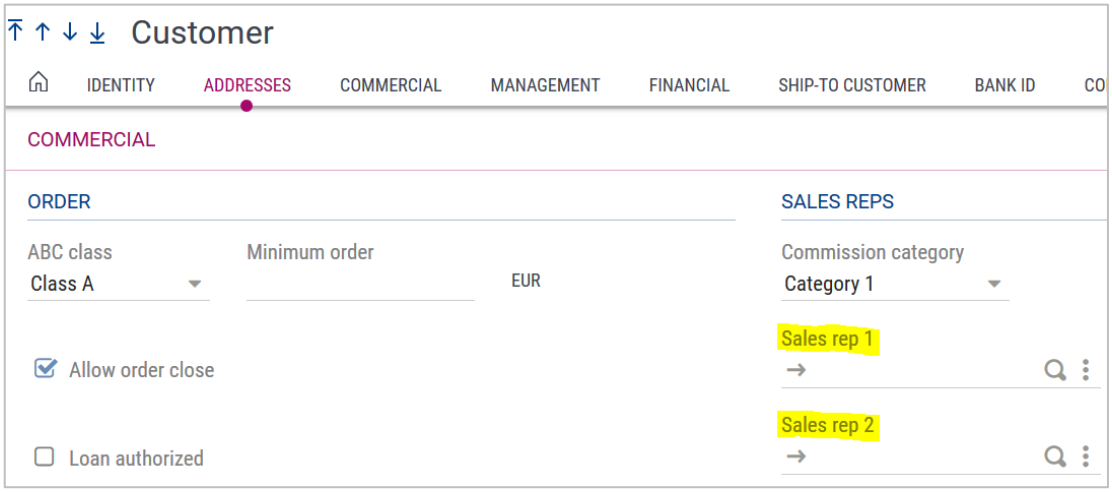
Image 2.

Managing titles for multiple sizing fields

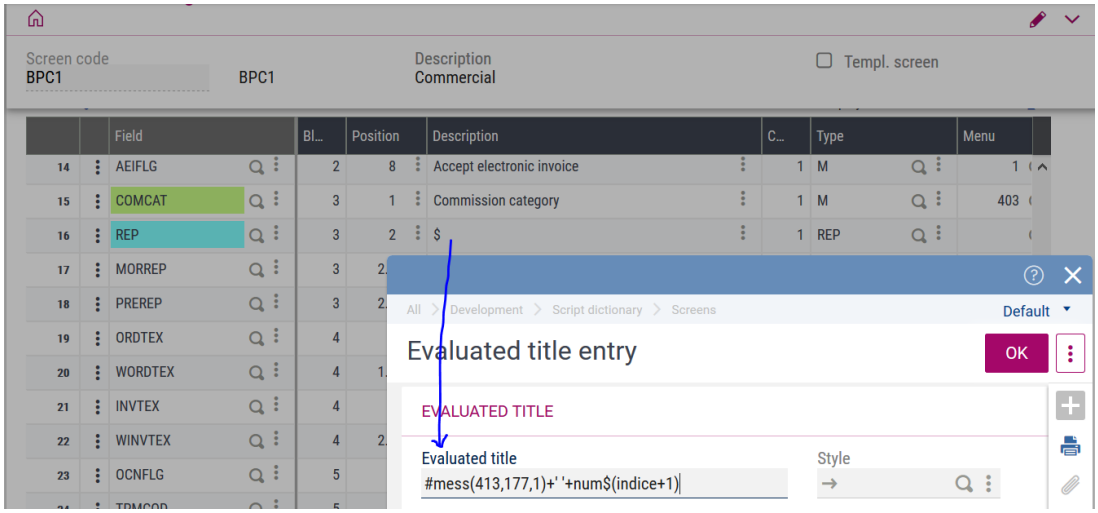
Context: When the title is the same for any element of the sizing field.

Action: Add a sequential number to the end of each sizing field title.

Example: BPC1 screen in the GESBPC function



To append the number at the end of **Sales rep** field titles, you need to adjust the formula entered in **Evaluated title** as shown below:



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