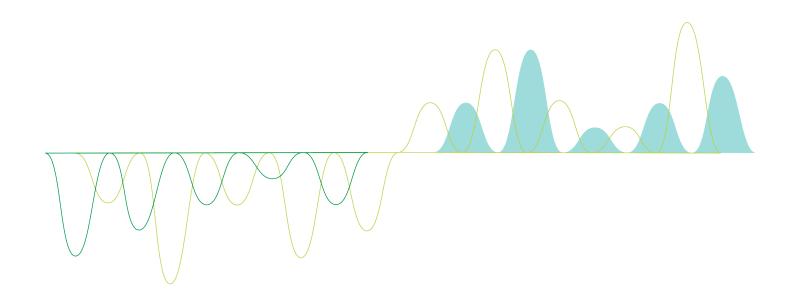
Explore, discover and analyze

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1 About this document

Read and learn how to make discoveries in your data, using different tools.

This document is derived from the online help for Qlik Sense. It is intended for those who want to read parts of the help offline or print pages easily, and does not include any additional information compared with the online help.

You find the online help, additional guides and much more at help.qlik.com/sense.

2 Discover and analyze

When you have created your app and loaded data into it you can start using it for data discovery and analysis.

2.1 Routine analysis

It is typical in routine analysis to follow up on key metrics on a regular basis. Here are some examples of KPIs you might want to keep a close watch on:

- · Total sales versus quota each morning
- · Total sales versus total sales the same period last year
- Orders placed but not delivered at the end of the week
- Sales per region on a certain day each month

2.2 Exploratory analysis

Sometimes when you are analyzing data, you might find that something is missing in the app that you have access to. Even though Qlik Sense allows for efficiently filtering the data by making multiple selections, you might want to adapt the existing visualizations, dimensions or measures to be able to explore the data for new insights.

3 Exploring data with visualizations

You make selections by clicking and drawing lines in the different visualizations.

When you make a selection, all associated visualizations are updated immediately to reflect the selection. You confirm the selection by clicking \checkmark , or by clicking anywhere on the sheet outside the visualization, including in another visualization, (in which case you generate a new selection). You can also press Enter to confirm.

You cancel a selection by clicking **3**. You can also press Esc to undo.

By default, new selections in a visualization are added to the previous ones. You deselect an item by clicking it. On a computer, you can hold down Ctrl while you make a selection, to automatically clear previous selections in a visualization, and only keep the new selection.

3.1 Selection preview

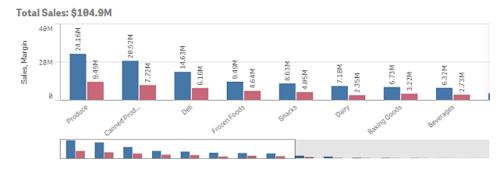
The following images show how the visualizations are updated immediately when a selection is made.

No selection

Sheet view with no selections made.

Product Details







 $^{^\}star$ The data set contains negative or zero values that cannot be shown in this chart.

A selection is made

In this image, a selection is made (in the filter pane Region) and is reflected in all associated visualizations.

A selection made in the Region filter pane.

Product Details

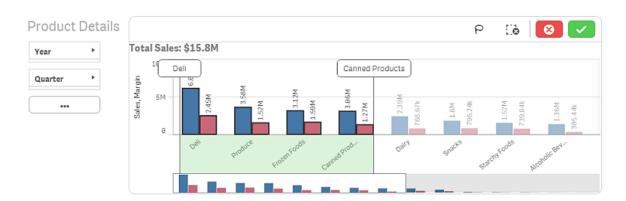


A second selection is made

In this image, a second selection is made (in the bar chart *Total Sales*). It automatically confirms the first selection and presents a preview of the new selection.

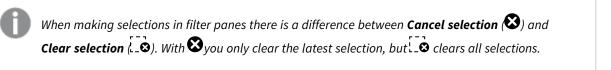
* The data set contains negative or zero values that cannot be shown in this chart.

A second selection has been made in the bar chart Total Sales.





 $^{^{\}star}$ The data set contains negative or zero values that cannot be shown in this chart.



3.2 Types of selections in visualizations

When you analyze your data, you have different ways of making selections. The charts and tables have different selection patterns. Some selection types are particularly useful for certain visualizations. The following table displays which kinds of selections that are supported in the visualizations.

Click Draw Range Lasso Legend Label **Visualizations** selection selection selection selection selection selection **Bar chart** Yes Yes Yes Yes Yes Yes **Box plot** Yes Yes Yes Yes Yes **Combo chart** Yes Yes Yes Yes Yes Yes Distribution Yes Yes Yes Yes Yes Yes plot Filter pane Yes Yes

Selections that are supported in the visualizations

Visualizations	Click selection	Draw selection	Range selection	Lasso selection	Legend selection	Label selection
Gauge	-	-	-	-	-	-
Histogram	Yes	Yes	Yes	Yes	-	-
KPI	-	-	-	-	-	-
Line chart	Yes	Yes	Yes	Yes	Yes	Yes
Мар	Yes	Yes	-	Yes	Yes	-
Pie chart	Yes	Yes	-	Yes	Yes	Yes
Pivot table	Yes	Yes	-	-	-	-
Scatter plot	Yes	Yes	Yes	Yes	-	-
Table	Yes	Yes	-	-	-	-
Text & image	-	-	-	-	-	-
Treemap	Yes	Yes	-	Yes	-	-
Waterfall chart	-	-	-	-	-	-

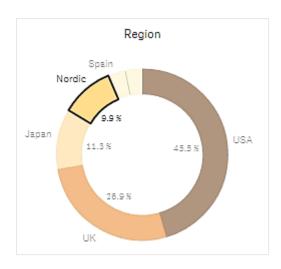
Limitations

- You cannot make selections in **Gauge**, **KPI**, **Waterfall chart**, and **Text & image** visualizations.
- Legend selection is not available in a visualization when coloring by expression.
- Range selection is only available on the dimension axis for stacked bar charts or combo charts, and box plots.
- You cannot select a measure by name.

Click selection

You click to select single values/data points, one at a time. If you want to deselect a value/data point, click it.

Pie chart with the sector Nordic selected.

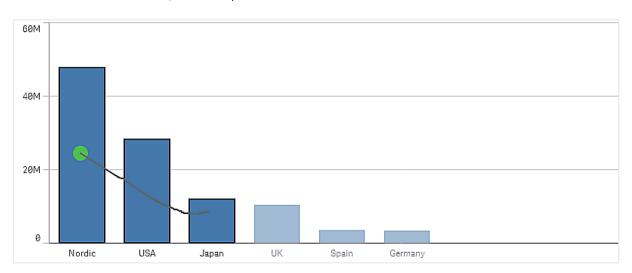


Draw selection

When you want to make a draw or lasso selection, you must first click inside the visualization and turn on lasso selection by clicking the lasso icon \mathbf{e} at the top of the visualization. On a computer, you can also press Shift and make the selection.

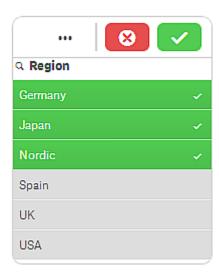
You draw a freehand line to select several values/data points at a time. You cannot draw to deselect values/data points.

Bar chart with selections Nordic, USA and Japan made with draw selection.



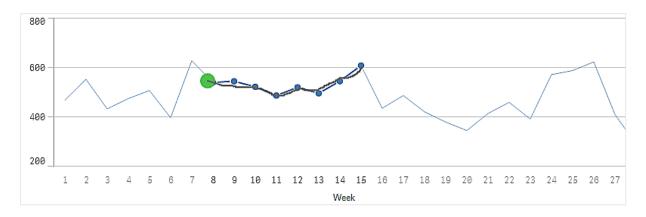
In a table or a filter pane, you draw across several values to select them.

Filter pane with selections Germany, Japan and Nordic made with draw selection.



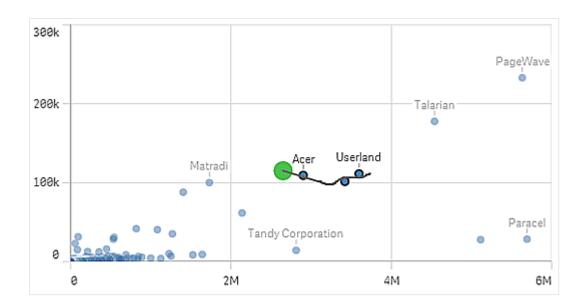
In a line chart you draw along a line to select a number of data points.

Line chart with weeks selected with draw selection.



In a scatter plot you draw across a number of data points to select them.

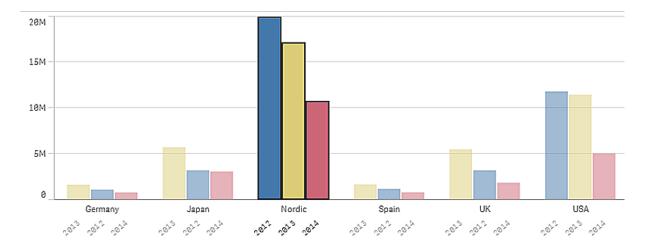
Scatter plot with selections made with draw selection.



Label selection

You can click the dimension labels to make selections. When dimensions are grouped or stacked, the whole group or stack is selected.

Bar chart with label selection of 2011, 2012, and 2013. Clicking any of the years selects the whole group.

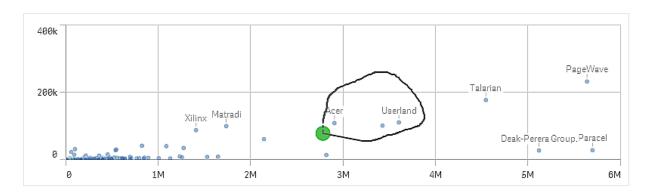


Lasso selection

When you want to make a draw or lasso selection, you must first click inside the visualization and turn on lasso selection by clicking the lasso icon \mathbf{P} at the top of the visualization. On a computer, you can also press Shift and make the selection.

You draw a freehand circle to capture and select data points.

Selection of values made in a scatter plot using lasso selection.



Your lasso selections only include visible data points. For charts using a continuous axis, data points not visible in the chart will be excluded, even if they are within the area being selected.

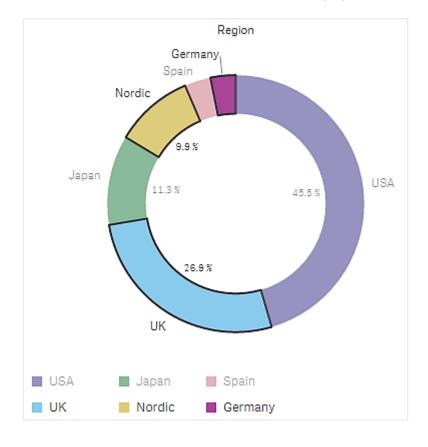
Legend selection

You can click any legend item, except the item representing **Others**, to select the associated values.



Legend selection is not available in a visualization when coloring by expression.

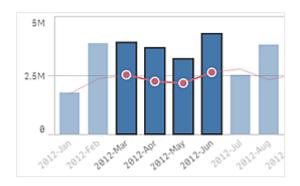
Pie chart with sectors Nordic, Germany and UK selected, using legend selection.



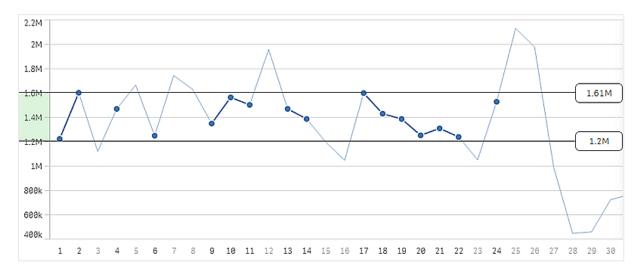
Range selection

You draw your selections on the y-axis or the x-axis. For an axis with measure values, you can click on the range bubble to enter a specific numeric value.

Combo chart with selections made with range selection.



Line chart with selections made with range selection.



3.3 The associative selection model

Making selections is the main interaction method in Qlik Sense. Selections filter out a subset of the data that is loaded into Qlik Sense. You use selections to focus on something you want to know more about. Qlik Sense responds by color coding values according to their different states.

You can think of your selections as an input for Qlik Sense. Qlik Sense evaluates the input and displays the color codes on data values as the output.

- The input state: the selection that you have made whether the field value is selected or not.
- The output state: whether the field value is possible or not, given the logical inference of the selection.

Selection states

When you make selections, the colors of the values change accordingly. Color-coding is used in filter panes, selections list items, and the selections tool, with the characteristic Qlik Sense colors green, white, and gray. The colors bring you information about which field values are selected, alternative, possible and excluded, respectively.

The following table lists which colors are used for the different states.

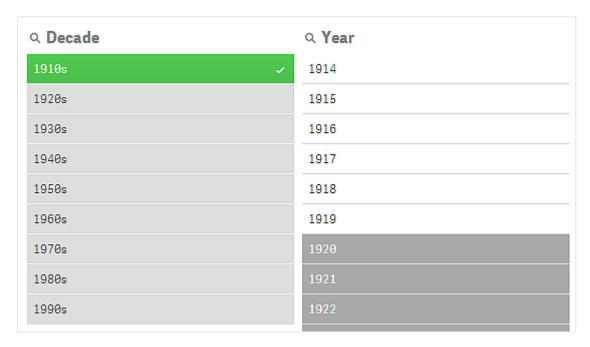
Colors used for different states

Color	State
Green, with a check mark as a selection indicator	Selected
White	Possible
Light gray	Alternative
Dark gray	Excluded
Dark gray with a check mark as a selection indicator	Selected excluded

The selected state

When you select one or more values in a filter pane and the values turn green, they are in the selected state. In the following image, the value 1910s has been selected. The selection filters out a subset of the data that is loaded, and the filter panes *Decade* and *Year* are updated according to the selection.

1910s in the Decade filter pane has been selected.

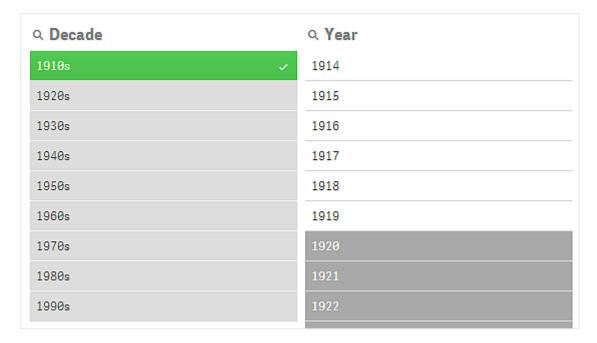


The filter panes have four states altogether. Apart from the selected state (green), there are possible values (white), light gray values (alternative), and dark gray values (excluded). These states are explained in the following sections.

The possible state

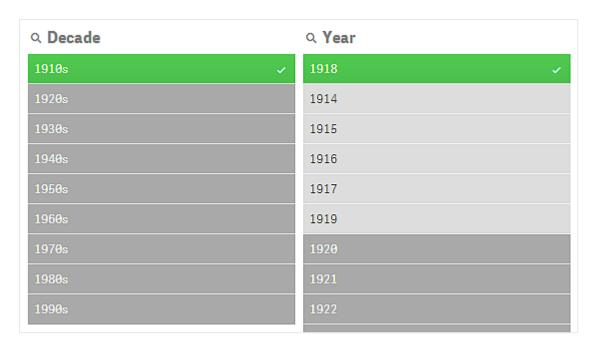
In the *Year* filter pane, the years *1914* up to *1919* are white (possible), because these values are all years from the *1910s*, the selected value in *Decade*. All possible values are 'associated' with the value *1910*. You could refine your selection by selecting one or more of the possible values.

1914 to 1919 in the Year filter pane are possible values.



In the following image, such a refinement has been made. The value 1918 has been selected in the Year filter pane.

1918 has been selected in the Year filter pane.



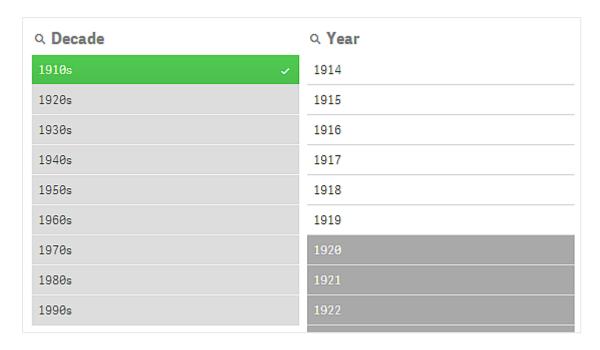
With selections in two filter panes, the possible values are only those that are associated both with 1910s and 1918. There is a logical AND condition between selections from different filter panes. A possible value must then be associated both with 1910s and 1918.

In the *Year* filter pane, there are no longer any values in the state possible, because none of the values are associated with both 1910s and 1918.

The alternative state

In the *Decade* filter pane, the value *1910s* has been selected, and all the other fields in the filter panes have a certain state, depending on their relationship to the selected value.

1910s has been selected and all other fields in the filter panes have different states depending on their relationship with 1910s.



All the other values in the filter pane *Decade* are light gray, meaning that they are alternative values. The alternative state is used for values that would have been possible if a selection had not already been made in that field. Before *1910s* was selected, all the values in the filter pane *Decade* were possible values.

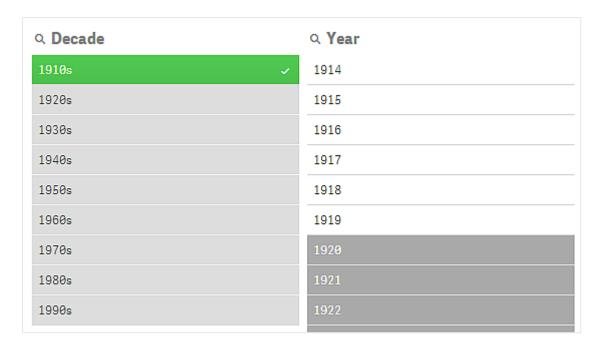
Logically, the alternative values are excluded, but they are only excluded by a single selection (of one or more values), in the same filter pane. If you would clear the selection of 1910s in Decade, all the values would have the state possible.

Even if a value is alternative, you can still select it, but that means that you are, partly, making a new selection rather than refining your original selection. What is useful with alternative values is that you know that there are alternatives available for the same set of selections. If you have a list of sales persons, the alternative values constitute sales persons that may be able to help or replace the selected person.

The excluded state

When a selection is made, values in other filter panes may automatically be excluded, because they are not associated. In the following image, 1910s has been selected, and as a consequence the values 1920, 1921, and 1922 have been excluded. This is an obvious exclusion, because the years 1920, 1921, and 1922 are not part of the 1910s. The other values in *Decade* are alternative, that is, they are excluded but you can still select them and thereby expand the selection. If you were to select 1920s the value would turn green and have the state selected.

1920, 1921, and 1922 in the Year filter pane have been excluded.



But if you select one of the possible values in the filter pane *Year*, all the values in *Decade* that were alternative become excluded instead. When only *1910s* was selected they were alternative, but with selections in two filter panes, values that do not match the condition *1910s*AND*1918* are excluded.

The values that are alternative in *Year* are only excluded by the selection *1918*. They are all associated with the value *1910*s and had the state possible until *1918* was selected.



The selected excluded state

When you make selections in more than one filter pane, you might run into a fifth state: selected excluded.

As mentioned previously, there are two different states for each field value:

- The input state: the selection that you have made whether the field value is selected or not.
- The output state: whether the field value is possible or not, given the logical inference of the selection.

A value enters the selected excluded state because the value was first selected, and then excluded by a selection in another field.

For the selected excluded state, the check mark is an indicator that the value was first selected and then excluded, in contrast to excluded values that have never been selected. A dark gray field with a check mark indicates that the value was previously a selected value, but a new selection has then rendered it selected excluded.

Example:

In the following image, the first selection was of the values 1910s and 1920s. The values 1910s and 1920s were both selected (green) and all the values in the filter pane Year were white (possible), since they are all years from the 1910s or 1920s and therefore logically possible values after the first selection. The second selection is of the years 1914, 1915, and 1916. Now, 1920s is no longer a part of the active selection, since the second selection logically excludes 1920s. However, 1920s is still a selected value and therefore it makes sense to denote it as a value that is selected excluded. It was originally selected, but a later selection excluded it. The check mark distinguishes it from the excluded values that have never been selected.

The dark gray value with a check mark is selected excluded.



3.4 Viewing data of visualizations

You can change between a visualization and a view of the data it represents.

When working with a visualization in analysis mode, you might need to take a look at the data behind a selection. For most visualizations, a table containing their data is available through the context menu.

Visualizations where data viewing is available

In the following visualizations you can change between the visualization and a view of its data in table form:

- · Bar chart
- Box plot (with one or more dimensions)
- · Combo chart
- · Distribution plot
- Histogram
- · Line chart
- · Pie chart
- Pivot table
- Scatter plot
- Treemap

Changing between visualization and data view

Do the following:

- 1. Right-click on the visualization or click the hover menu ***.
- 2. Select **View data**. If a selection has been made only the selected data will be shown.
- 3. Right-click on the view of data and select **View chart** to go back to the visualization.



When you enter edit mode, or if you navigate to another sheet, any visualizations changed to data view will change back to the original visualizations.

3.5 Visual exploration

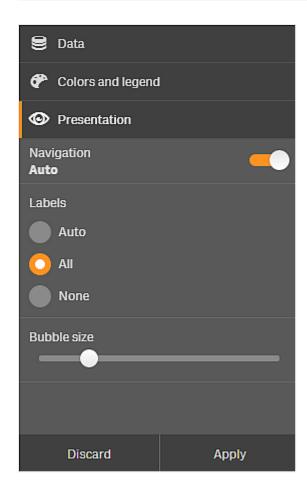
The visual exploration menu lets you change certain visualization properties, without making selections or editing the sheet. For example, you can change data, sort data, color by dimension or measure, and change how labels are displayed.

For a visual demo about how to use the visual exploration menu, see Visual explorations.



The visual exploration menu is available for the following visualizations: bar chart, line chart, pie chart, scatter plot, treemap, box plot, distribution plot, map, and combo chart.

Example of visual exploration menu for a scatter plot visualization.



Using the visual exploration menu to change properties

Do the following:

- 1. When analyzing, hover over the visualization you want to change.
- Click *** at the top right of the visualization or right-click on the visualization and select Exploration menu.
- 3. Update the properties you want to change.
- 4. To close the menu and save your changes, click to the changes are saved during this session.

 To save your changes for future sessions (and have them updated in the properties panel), click **Apply**. This button is only available for unpublished sheets, visualizations that are not master items or linked to master items, and for users with rights to edit the sheet.



If you do not click **Apply** to save the changes or **Discard** to discard the changes and later click **Edit** to edit the sheet, you will be prompted to select whether to apply or discard the changes you made when analyzing the sheet.

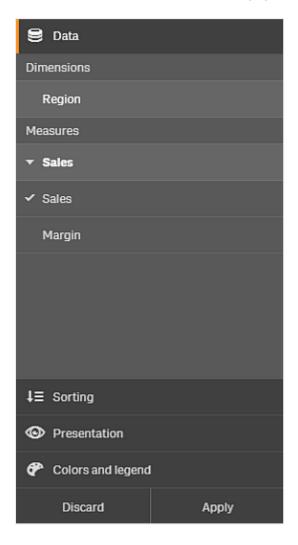
Using the visual exploration menu to change data

The visual exploration menu can change visualization data, if you have alternative dimensions or measures. Simply click on the dimension or measure you want the visualization to display. The selection is marked with a \checkmark .



Alternative dimensions and measures are dimensions and measures that are added to a visualization, but are not displayed until a user chooses to switch which dimensions and measures are being displayed during visual exploration.

Example of visual exploration menu when changing data



Using the visual exploration menu on mobile devices

When you are using Qlik Sense on a very small screen (640 pixels wide or smaller), you access the visual exploration menu by doing the following:

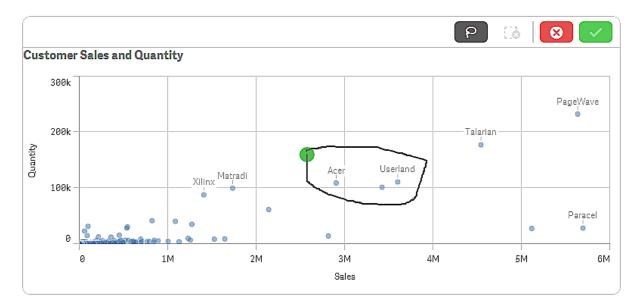
- 1. Tap the visualization you want to change to open it in full screen.
- 2. Tap *** at the top of the visualization or long-touch on the visualization and select **Exploration menu**.
- 3. Update the properties you want to change.
- 4. To get a preview of what the changes will look like, long-touch outside of the menu on the visualization, and the menu will slide to the side. Release to open the menu again and continue doing your changes.
- 5. To close the menu and save your changes, tap | | at the top of the visualization, or long-touch and select Close exploration menu.

3.6 Scrolling in visualizations

You can swipe/drag to pan and scroll in visualizations and then turn on lasso selection to draw and select.

When working with visualizations, you often need to scroll to find the data you are looking for. Especially on a touch device, the most natural way of scrolling is to swipe. You scroll by swiping to the data that you want to select and then make your selection. When you scroll, draw selection and lasso selection are disabled, so as not to interrupt the scrolling and to avoid making accidental selections. The other selection options are available as usual.

Scatter plot with selections made with lasso selection.



Using lasso selection with scrolling

When you make a lasso selection, the interaction differs depending on what device you are using.

Touch device interaction

Do the following:

- 1. Tap P to turn on lasso selection.
- Draw to make a selection.You can make consecutive selections.
- 3. Confirm the selection.

Use two-finger-swipe if you need to scroll and pan between selections.

Computer (mouse) interaction

Do the following:

- Press Shift and draw to make a selection.
 You can make consecutive selections. Lasso selection is turned on for as long as Shift is pressed.
- 2. Confirm the selection.

Alternative procedure

Do the following:

- Click inside the visualization without making a selection.
 Selection options are displayed at the top of the visualization.
- 2. Click to turn on lasso selection.
- 3. Make and confirm the selection.

You can click P to turn lasso selection on and off if you need to scroll and pan between selections.

Visualizations where lasso selection needs to be enabled

In the following visualizations you need to activate lasso selection:

- · Bar chart
- Box plot
- · Combo chart
- · Distribution plot
- Line chart
- Map
- Pie chart
- Scatter plot
- Treemap

3.7 Canceling data retrieval

When you use Qlik Sense to explore your data on a server, you might experience a delay. If the waiting time is long, a Cancel button displays on each visualization. Use the Cancel buttons to stop the data retrieval. You must stop each visualization separately. When you stop a data retrieval, a Retry button appears so you can try again.

4 Bookmarking selections

When you analyze data, you might find something interesting that you want to return to, or share with others. Using bookmarks is an easy way to save a specific selection state on a sheet.

Bookmarks save your selections and a particular sheet location. Bookmarks can later on be opened to restore the selections to a former state. You can apply bookmarked selections to any sheet that has the same data as the sheet used to create the bookmark. All bookmark tools can be found under \square in the toolbar.

If you use alternate states in the app and create a bookmark, the bookmark will capture the selections of all states.

4.1 Creating bookmarks

Bookmarks let you save specific selection states. This allows you to review them later, and share them with other users.

Creating a bookmark

Do the following:

- 1. Make the selections on the sheet that you want to save as a bookmark.
- 2. Click Bookmarks in the toolbar.
- 3. Click Create new bookmark.
- 4. **Title**: By default, the name of the sheet and a summary of the selections are used as the title of the bookmark. You can change this if needed.



Do not use a name already used by an alternate state.

- 5. **Description**: You have the option to enter a description of the bookmark.
- 6. **Save sheet location**: Toggle this on if you want the bookmark to switch to the sheet that was open when it was created. Toggling it off means that the user will stay in their current sheet when the bookmark is applied.
- 7. Save layout: Toggle this on if you want to save chart layouts, sorting, or expansions.
- 8. Click Create.

States and set expressions

When creating or editing a bookmark, you will see the possible alternate states that have been bookmarked. If a state includes selections, then the set expression for the selections is also shown.

You can copy the set expression by clicking **Copy**.



If the bookmark selection includes a calculated dimension, the set expression will show MISSING VALUES and cannot be used.

Bookmark options

In sheet view, if you right-click on a bookmark, you will see the following options:

- **Apply bookmark**: The selections saved in the bookmark are applied and the sheet which the bookmark originates from is displayed. Any previous selections are cleared.
- **Apply selections only**: The selections saved in the bookmark are applied. Any previous selections are cleared.
- View details: Displays location, layout state, and set expressions.
- **Copy link**: Copies the bookmark location so it can be shared.
- Make public: Making a bookmark public means that anyone can use it. You will no longer be the owner of the bookmark.
- **Set as default bookmark**: When the app is opened, the layout state and the selection state of the default bookmark are used, instead of the app overview page. See *Setting a default bookmark to create an app landing page (page 30)*.
- Delete: The bookmark is deleted.

Searching for bookmarks

Do the following:

- 1. In sheet view, click **Bookmarks** in the toolbar.
- Type your search criteria in the search field. The list is filtered as you type.



When you search in bookmarks, Qlik Sense looks for matches in titles and descriptions.

Changing the title and description of a bookmark

You can change the title and description of a bookmark.

Do the following:

- 1. In sheet view, click **Bookmarks** in the toolbar.
- 2. Click next to the bookmark you want to edit.
- 3. Click
- 4. Make your changes to **Title** and **Description**.
- Click ✓ to stop editing.

The changes are automatically saved.



You can also edit bookmarks from the app overview using the same procedure.

4.2 Setting a default bookmark to create an app landing page

You can select a sheet to be the landing page of your app by setting a default bookmark. When you open the app, the layout state and the selection state of the default bookmark are used.

If you do not set a default bookmark, the app overview is displayed when the app is opened.

Consider the following when using default bookmarks:

- You can only set or remove a default bookmark in an unpublished app.
- You can only set one default bookmark for an app.
- You can clear the selection of the default bookmark when viewing a sheet. However, the bookmark will be applied when you re-open or reload the sheet.
- In a published app, the app consumer can clear the selection of the default bookmark and make other selections. However, the selection state of the default bookmark will be re-applied when the app consumer re-opens or reloads a sheet.
- When you duplicate an app, the default bookmark is duplicated with the app.
- If you have the same app open in an active session in another tab, the default bookmark will not override the selections made in the other tab.

You can use a default bookmark in conjunction with the **Always one selected value** for a field to highlight specific selections for your app consumer.



In previous versions of Qlik Sense, the default bookmark would only apply the selection state of the bookmark.



Set a default bookmark

Do the following:

- 1. Click **Bookmarks** in the toolbar of a sheet. The **Bookmarks** window opens.
- 2. Right-click an existing bookmark, and then click **Set as default bookmark**.
- 3. Click the bookmark. The **Bookmarks** window closes. The bookmark is shown in the top toolbar, and the selections are shown in the app.
- 4. To test that the default bookmark is working properly, close and then reopen the app. The default bookmark sheet and selections should be shown.

To remove a bookmark as the default, open the **Bookmarks** window in an unpublished app, and then right-click the default bookmark. Click **Remove as default bookmark**. The next time you open the app, the app overview is shown.

4.3 Deleting bookmarks

There are several different ways to delete bookmarks.

Deleting a bookmark in sheet view

Do the following:

- 1. In sheet view, click **Bookmarks** in the toolbar.
- 2. Click inext to the bookmark you want to delete.
- 3. Click ...
- 4. Click .
- 5. To confirm that you want to delete the bookmark, click **Delete** in the dialog.

The bookmark is deleted.

Deleting a bookmark from app overview

Do the following:

- 1. From the app overview, click **Bookmarks** to view the bookmarks.
- 2. Click inext to the bookmark you want to delete.
- 3. Click .
- 4. Click Ⅲ.
- 5. To confirm that you want to delete the bookmark, click **Delete** in the dialog.

The bookmark is deleted.



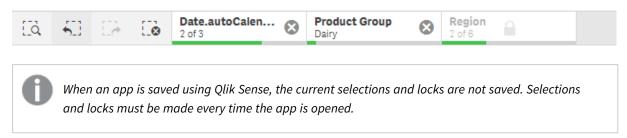
In the bookmarks dialog, you can right-click on a bookmark and select **Delete**.

5 Exploring with selections

During analysis, your selections are displayed above the sheet.

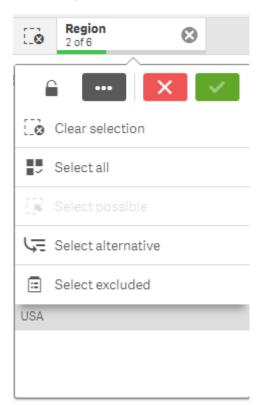
Each selection item has a small bar at the bottom that reflects the selection states for that dimension. Three states are displayed in the bars: selected (green), alternative (light gray), and excluded (dark gray). Locked values are indicated by a lock icon.

Selections bar with the selections Year, Product Group and Region made. Region is locked.



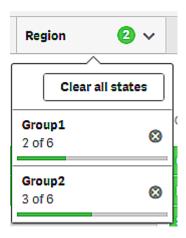
When you click a selection item, a pop-up appears. This lets you view, edit, or clear that selection. You can also search for dimension values or lock the selection. In the following image the selection menu is open. Some options may not be available, depending on what selections were made previously,

Selection Region with selection pop-up menu.



If you use alternate states in the app, you can see selections that are made in the states in the selection bar. The field that is used in the state is displayed with the number of alternate states. You can click on the field to show the states, and then click on a state to see the selections. You can also clear the selections of a state or clear all selections.

Selection Region with alternate state pop-up menu for the states Group1 and Group2.



Sheets can have actions that trigger when you navigate to the sheet. Actions can change your selections or states.

5.1 Selection options

Select all

All values are selected (marked \checkmark). Alternative values change state to selected (green). Excluded values change state to selected excluded. They are still dark gray, but are now selected (marked \checkmark). If you clear the selections that made these values excluded, they will change state to selected (green).

Select possible

All possible values (white) are selected. This option is never available in the selections item, because when a selection is made, the other values are either alternative or excluded. In a filter pane, however, you can have possible values as a result of another selection.

Select alternative

When a selection has already been made in a field, alternative values, when present, have a light gray color. These are values that would have been possible values (white), if a selection had not already been made in that field.

By selecting alternative values, the values that previously were selected become alternative.

Select excluded

If there are alternative values, they will be selected (green) and the values that previously were selected will change state to alternative. Excluded values will change state to excluded.

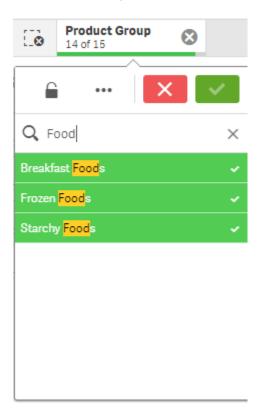
If there are no alternative values, the excluded values are selected (green), and the previously selected values change state to alternative.

5.2 Searching within selections or visualizations

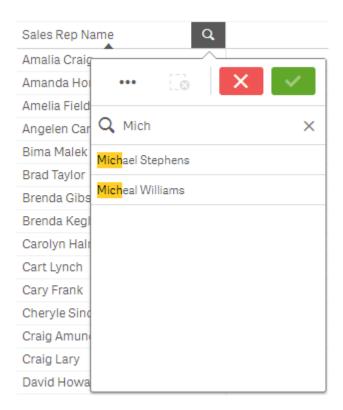
You can search for values and make selections from the resulting filtered list. You can search selection items in the selection bar, and within visualizations such as filter panes and tables.

Click a selection item, and in the selection pop-up, type your search string. The list is filtered as you type, to display matching values.

The result of searching for 'Food' in the selection Product Group.



The result of search for 'Mich' in the Sales Rep Name filter pane.



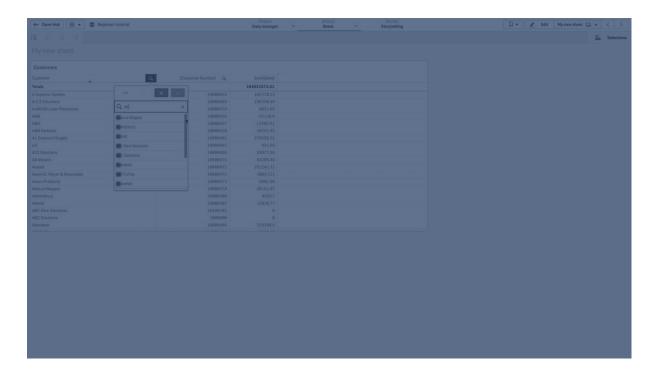


You can search for strings that contain up to 5,000 characters.

You can use the following methods of searching in selections:

- Text search. Use text, including wildcards and plus and minus signs.
- Fuzzy search. The tilde character "~" as a prefix allows inexact matches to be found.
- **Numeric search**. Relational symbols (">", ">=", "<" or "<=") allow values greater than, less than, and so on, to be found.
- **Expression search**. An equals sign (=) indicates an expression. Field values that match the expression are selected.

You can also search your entire data set using smart search. For more information, see *Using smart search* (page 55).



Text search

As you type your search string, Qlik Sense filters the field values and displays the matching items. If you perform a normal search (without wildcards), strings that match the search string are displayed. If you use several strings, separated by blanks, each of these is interpreted as a separate search string and displays all field values that contain either of the strings. If you want the separate search strings to be interpreted as only one string, use quotation marks (" ") to link the strings together. You can also use a plus sign (+) for a similar result. By using a plus sign, you set the condition that strings with a plus sign must be included in the matching items. However, the strings need not necessarily be next to each other, nor in the same order as they were entered. A minus sign (-) before a search term excludes results containing that text.



Search is not case sensitive.

Text search examples

Example	Result
"orange juice"	Only finds field values that contain the whole string "orange juice".
orange juice	Without the quotation marks, all fields that contain either "orange" or "juice" would be displayed.
+orange +juice	Finds matches such as "orange juice", "orange and apple juice" and "juice from oranges".
-orange -juice	Excludes results containing orange or juice.

Wildcards

You can use one or several wildcards in a search string. The following wildcards can be used:

Wildcards

Wildcard	Representation
*	Zero or more characters, including blank. This wildcard is flexible and matches any character or any block of characters in a specific position.
?	A single character, including blank. This wildcard is useful when you suspect that a string may be misspelled, when you are unsure of the spelling, or when the string contains special characters that may be difficult to reproduce correctly.
۸	Beginning of word within field value. This wildcard is used in conjunction with other wildcards.



If you use wildcards, only those records that match the entire search string are displayed, that is, a blank does not imply a logical OR. The search string '*creamed' does not get a match on "Rocky's creamed corn" since the value does not end with "creamed". Neither does "creamed*" result in a match on "Rocky's creamed corn", since the value does not start with "creamed".

Wildcards examples

Example	Result
a*	Finds all values that begin with the letter "a", including strings with several words where the first word begins with an "a".
*b	Finds all values that end with the letter "b", including strings with several words where the last word ends with a "b".
c	Finds all values that contain the letter "c", including strings with several words.
^ab	Returns all values that have words that begin with "ab". Equivalent to a normal search for "ab", but unlike the normal search it can be made more complex using wildcards. It can also be used in a programmatic search, such as in Set Analysis.
r?ck	Finds all values that have four letters and start with an "r", followed by any character, and ending with "ck", for example, "rack", "rick", "rock", and "ruck".
r?? ????d	Finds all values that consist of a three-letter word beginning with an "r" and a five-letter word ending with a "d".



Space in a search string makes a difference. If you search for "*corn" you get matches on strings ending with, for example, "popcorn" as well as "corn". If you use a space in your search string, "*corn", you only get matches that end with "corn".

Fuzzy search

Fuzzy search is similar to a text search, with the difference that it compares and sorts all field values according to their degree of resemblance to the search string. Fuzzy search is especially useful when items may be misspelled. Fuzzy search can also help you find multiple values that are nearly identical.

Begin your search string with a tilde "~" character. While typing, all values are sorted by the degree of resemblance to the search string, with the best matches at the top of the list. If you press Enter, the first value in the list is selected.

Numeric search

Numeric search is very similar to text search. The only difference is that the search string must begin with one of the relational operators ">", ">=", "<" or "<=".

Numeric search examples			
Example	Result		
>900	Finds all values greater than 900.		
<=900	Finds all values less than or equal to 900.		
>900<1000	Finds all values greater than 900 and less than 1000.		
<900>1000	Finds all values less than 900 or greater than 1000.		

Numeric search examples

Expression search

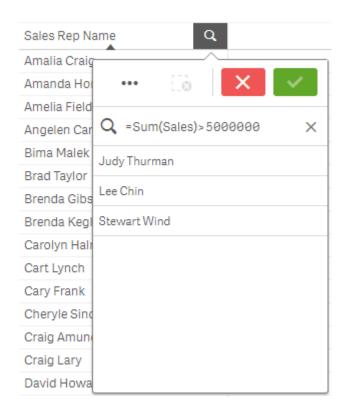
An expression search always begins with an equals sign (=). The expression is evaluated for each field value in the search field. All values for which the search expression returns a non-zero value are selected.

In a filter pane with Sales values, you can use a search such as: =Sum(Sales) > 1000000 to find values larger than 1,000,000. This is a simple search and you could get the same result by using the numeric search: >1000000. Often, an expression search is the only choice. For example, if you want to search for values in associated fields, you have to use an expression search.

Example:

Let us assume that you have a filter pane for sales representatives. You can then use an expression search for the sales representatives who have sales larger than, for example, 5,000,000. The search string is similar to the previous one: =Sum(Sales) > 50000000. Because the sales values are associated with the sales representatives, you can perform the search in the Sales Rep filter pane.

Expressive search in a filter pane using a search string.



5.3 Editing the selections

You can change selections during data analysis. You change the selections in the selections bar.

Do the following:

- 1. Switch to sheet view.
- In the selections bar above the sheet, click the selection that you want to edit.A popup window with the selection appears.
- In the popup window, select the values that you want to add or clear.
 You can search and filter your selections using the special characters, operators, wildcards, and methods described in Searching within selections or visualizations (page 34).
- 4. Confirm your selection.

The selection is updated.

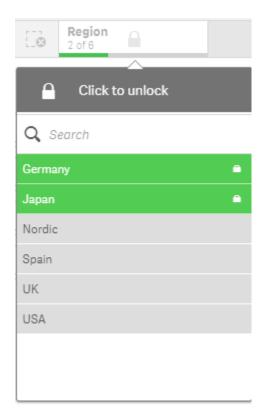
5.4 Locking and unlocking selections

With the lock option, you can protect your selections.

Locking selections

You can lock a selection by clicking the lock icon in the selection popup. The lock prevents any changes from being made to that selection. You can neither change nor clear a locked selection. If you have locked a selection and then try to select excluded field values, the selection item will flash to indicate that the locked selection prevents the selection from being made.

Locked values Germany and Japan within the selection Region.





It is possible to step back in the selection history to a state before the dimension was locked.

Unlocking selections

You can unlock a selection by clicking the lock icon in the selection popup. When you have unlocked the selection, you can make changes to it, or clear it.



When an app is saved using Qlik Sense, the current selections and locks are not saved. Selections and locks must be made every time the app is opened.

5.5 Stepping back and forward in selections

When you make selections, these are saved as items in the selections bar above the sheet.

Selections bar with the options to step back and forward in the selections history and to clear all selections.



To the left in the selections bar, there are three options, one for stepping back in the selections history, one for stepping forward, and one for clearing all selections. In the screen shot you can see that the option to step back is available, but not the forward option. This is the normal case when you have not stepped back in the selection history.

Clicking — I brings you one step back in the selection history. You can move back all the way to the first selection in the session. Even if a selection has been locked, you can move back to a state before the selection was made. A locked selection has a before the dimension name. In the screen shot, the dimension *Region* is locked.

Clicking brings you one step forward in the selection history.

Clicking clears all selections, except the ones that are locked.

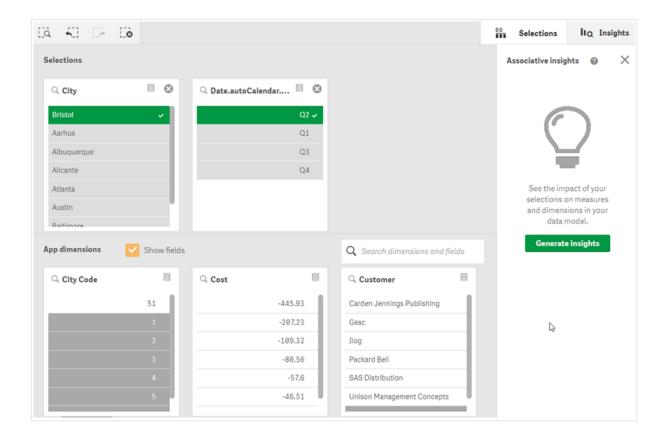
5.6 Using the selections tool

The selections tool gives an overview of every dimension and field in an app. It also gives a more detailed view of selected data, so that you can explore associations in dimensions that have not been used.

During analysis, click **Selections** to open selections view.

The selections tool is divided into two sections: **Selections** and **App dimensions**. The selections section displays the fields that have active selections. The app dimensions section displays all dimensions without an active selection. Both sections are sorted alphabetically. By default, app dimensions only displays master items. Select **Show fields** to show all the fields that have been loaded into the app, but are not used as dimensions.

Selections tool displaying the two sections Selections and App dimensions.



Making and clearing selections

You can make several selections consecutively. Click or click outside the list, but within the selections tool area, to confirm your selections. These dimensions will move up to **Selections**. Click the toolbar to close the selections tool.

In **Selections**, you can clear a selection in a field by clicking **S**. The field is then moved down to **App** dimensions.

When you are in the selections tool, you can still use the options in the selections bar: step back, step forward, and clear all selections. In each dimension you have the usual list options: selection menu, clear selection, cancel selection, confirm selection, and search.

Searching in the App dimensions section

App dimensions has a search box that is useful when you have many dimensions and fields. You can search by field or dimension title. Your search string can consist of one or more words, or only a part of word. The search is not case sensitive, but only exact string matches are displayed. A search for "numbers" will not display fields with the string "number", but a search for "mbe" will.

Scrolling in the selections tool

You can drag the scroll bar to scroll horizontally through a section. When you scroll in one section the other section is unaffected.

The dimension lists also have scroll bars, for vertical scrolling.

Generating insights

Associative insights reveals relationships in your data. The Qlik cognitive engine searches your data model for excluded values in a subset of fields. It then highlights those values, so you can explore them.

Once you have made a selection, click **Generate insights**. Cards are shown in the right hand panel. The cards show the effect of your selection on dimensions and measures in your data.

5.7 Discovering your data with associative insights

Associative insights reveals relationships in your data. The Qlik cognitive engine searches your data model for excluded values in a subset of fields. It then highlights those values, so you can explore them.

You can compare the contributions of your selections and excluded values against your measures. In any data set, particularly in complex ones, this can help you uncover blind spots and reveal relationships that you may have missed.

For a visual demo and practical example about discovering your data with associative insights, see the following:

- Discovering your data with associative insights
- Qlik associative insights A simple yet practical example

Limitations

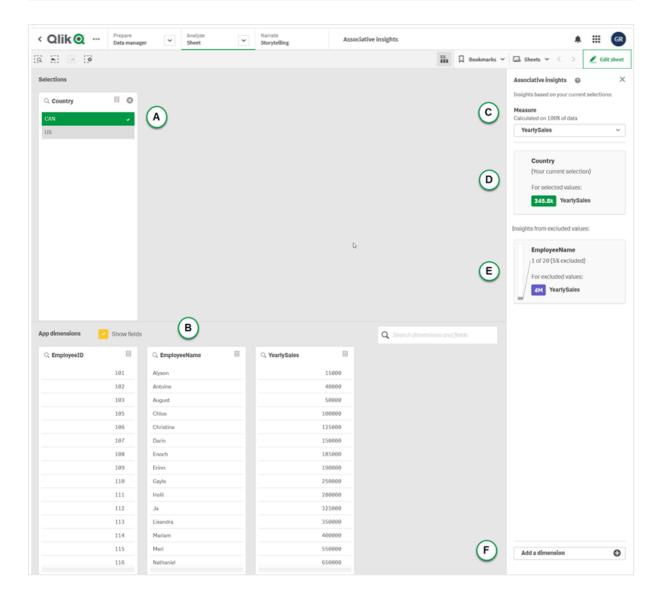
App consumers with the appropriate access rights for an app can use associative insights. They must connect to a Qlik Sense Enterprise or Qlik Core server. They cannot:

- Use the Alternate states feature.
- Set Always one selected value for a field in an app
- Lock their selections..

Associative insights selections view

When generating insights, Qlik Sense looks at your selections and analyzes the excluded values in your data model. It then highlights data that may be of interest for further exploration. That data is displayed in cards, which can be clicked to provide a more detailed view.

Associative insights selections view



A: Selections

Your currently applied selection or selections. The top list box shows data associated with your current selection. The other list boxes show data excluded from your current selection.

B: App dimensions

The selections that are available to you. By default, only master items are displayed. Select **Show fields** to show all fields.

C: Measure

The measure that Qlik Sense has selected for insights. You can change the measure in the drop-down menu.

D: Included values

This card represents included values.

E: Insights from excluded values

Insight cards show the impact of the excluded value on your measure. In this case, it shows that one employee (*EmployeeName*), who is not in Canada (*CAN*), contributed 37.8% of yearly sales (*YearlySales*). Purple indicates an insight. Click on a card to reveal the insights details view.

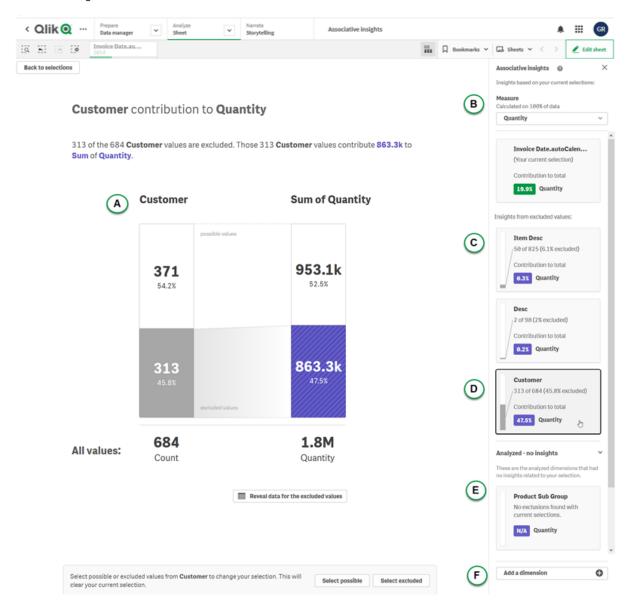
F: Add a dimension drop-down

You can use this drop-down to add cards to the Insights from excluded values section.

Insights card details view

Details view will display a detailed chart if you have a simple sum() measure.

Associative insights card details view



A: Details view

A detailed view of the currently selected card. Click the chart to see the data in a table. Purple indicates an insight.

B: Measure and included values

You can use the drop-down to change the current measure. The card beneath it represents included values.

C: Insights from excluded values

These cards represent excluded values. You can click them to change the chart in details view.

D: Currently selected dimension card

The dimension you have currently selected will have a dark border around it.

E: Analyzed - no insights

These values have been analyzed, but have no interesting insights.

F: Add a dimension drop-down

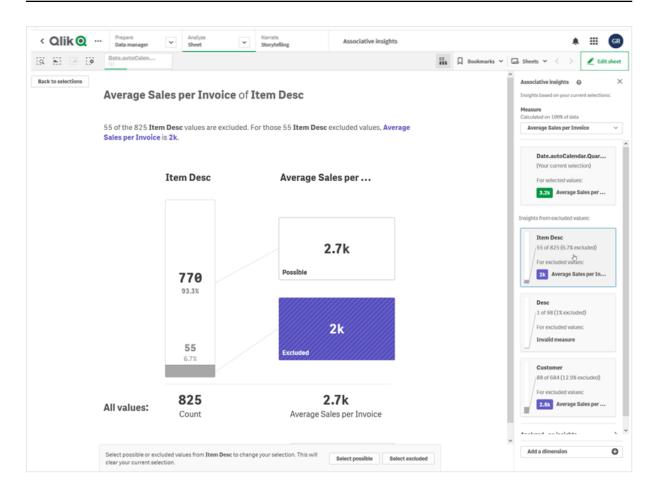
You can use this drop-down to add cards to the Insights from excluded values section.

Insights card KPI view

Details view will display a KPI chart under two conditions:

- Measure aggregation is other than sum().
- Measure aggregation is sum(), but the data model is not appropriate for standard stacked charts.

Associative insights card details KPI layout



Generating insights

Do the following:

- In a sheet in your app, click Selections. The Selections window opens. The window contains the Associative insights panel.
- Select a value in App dimensions.
 By default, only master items are displayed. Select Show fields to show all fields. You can then select a value from the fields that are shown.
- 3. Click Generate insights.
- 4. Cards are shown in the right hand panel. The cards show the effect of your selection on dimensions and measures in your data.
- 5. You can change which measure is assessed. Choose a new measure from the **Measure** drop-down menu.
- 6. Click a card to see more information about your associative insight.

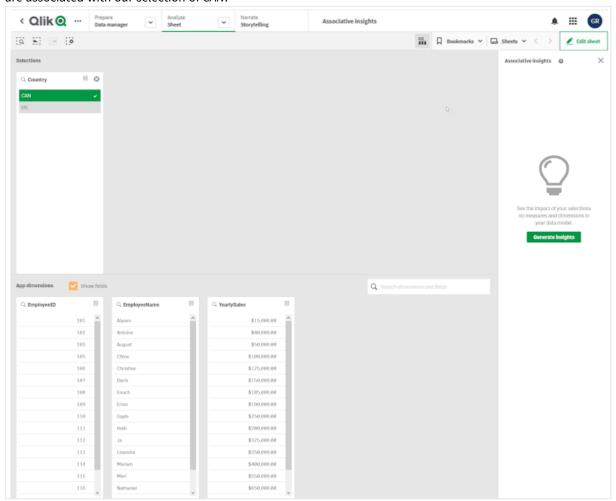
You can make or change you selections in the **Associative insights** window at any time. Make your selections and then click **Refresh**. The cards will be updated based on your new selections.

Associative insights example: No data left behind

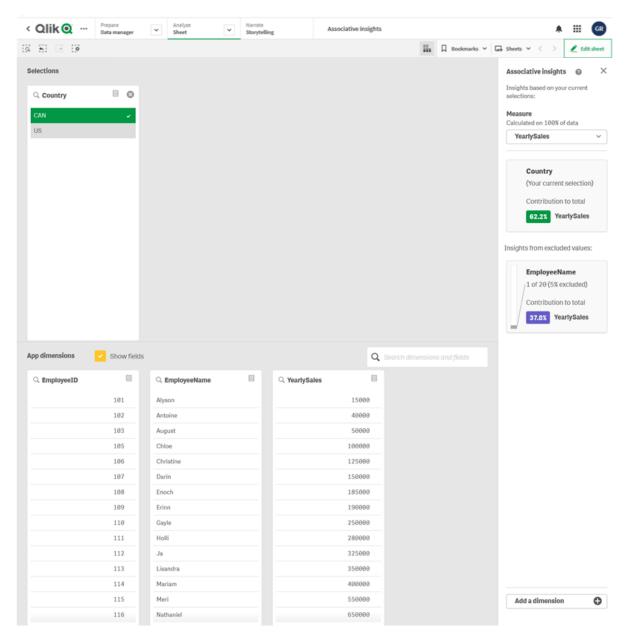
In this example, we use a simple data set to uncover an insight.

Do the following:

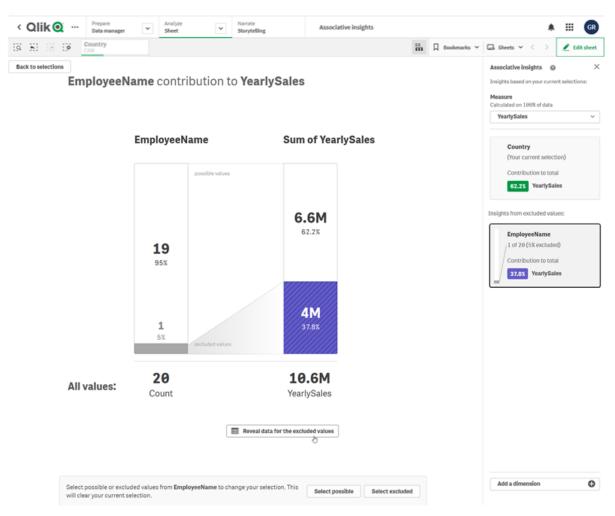
1. Here is a view of our app with the **Selections** window open. We have selected *CAN* in the *Country* field. *US* is colored light gray because it is an alternate selection. The values in the *EmployeeID*, *EmployeeName*, and *YearlySales* fields are white because they are possible values. In other words, they are associated with our selection of *CAN*.



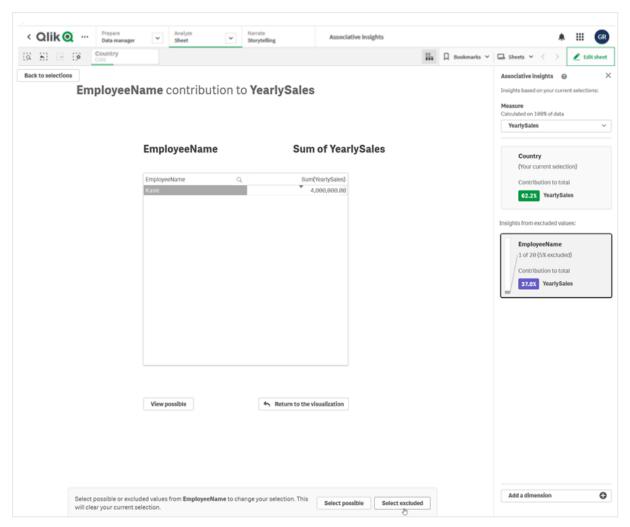
2. When we click **Generate insights**, Qlik Sense selects interesting data to show in the associative insights cards. We see that CAN contributes 62.2% to our yearly sales. We also see in the bottom card that one of our employees (or 5% of all *EmployeName*) is excluded from this selection. This employee contributes 37.8% to our yearly sales. Purple indicates an insight.



3. When we click on card, Qlik Sense shows us a detailed view of the data. It shows how much this excluded employee contributed to yearly sales. Who is this employee? We know they are excluded from our selection of *CAN*. Click **Reveal data for the excluded values**.

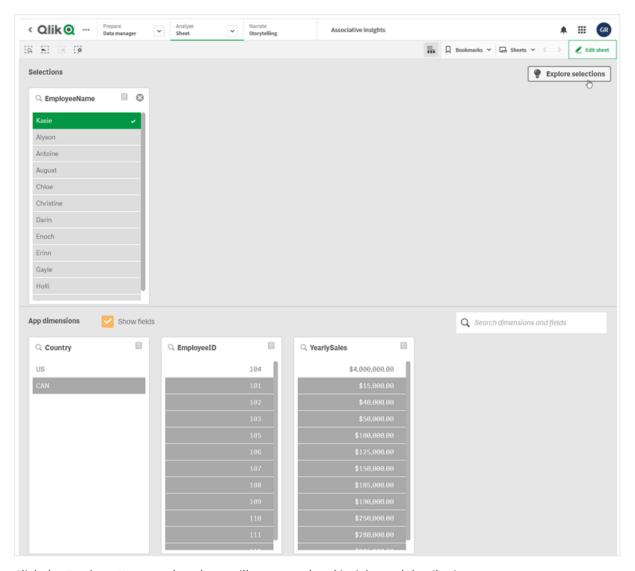


4. We now see a table showing information about *Kasie*, the excluded value from the *EmployeeName* field. Click **Select excluded** to apply *Kasie* as a selection.

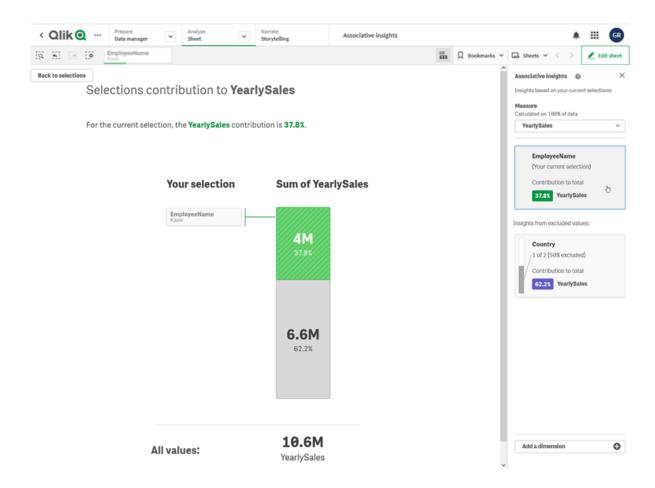


5. We are brought back to the **Selections** window. *Kasie* is selected. Values in our former selection of *CAN* are colored dark gray, because they are now excluded.

Click Explore selections, and then Generate insights.



6. Click the EmployeeName card, and you will see an updated insight card details view.



Disabling associative insights in an app

Associative insights can be disabled in an app by adding a variable and then refreshing the app.

Do the following:

- 1. In the sheet edit mode, in the assets panel, click x=.
- 2. Click Create new.
- 3. In Name, type DISABLE_SELECTION_INSIGHTS.
- 4. In **Definition**, type any value.
- 5. Click Close.
- 6. Refresh the app.

Troubleshooting associative insights

I cannot see associative insights

Possible cause

A script variable is disabling this feature.

Proposed action

Contact your administrator.

Insights are not available

Possible cause

Qlik Sense is offline or not connected to a Qlik Sense server.

Proposed action

Verify that you are online. Log into your Qlik Sense server and try again. If this does not solve the problem, there might be an issue with engine.

I am missing fields under My dimensions

Possible cause

You can only see master dimensions, because Show fields is not selected

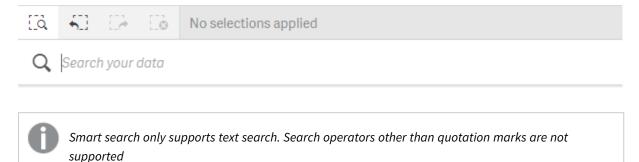
Proposed action

On the **Selections** screen, select **Show fields**.

6 Using smart search

Smart search is the global search tool in Qlik Sense, enabling you to search the entire data set in your app from any sheet in the app. Smart search is available from the selections bar in a sheet by clicking $\overline{\square}$.

Smart search field where you can search the entire data set in your app from any sheet.



If you click on a result under **Apply a selection**, the results disappear and the selection is applied.

Smart search is available when you are analyzing data on a sheet. The data results help you to find associations and make selections in your data.

You can search for data in visualizations in your sheets with Insight Advisor, which you can access by clicking **Insights** under **Analyze** in the toolbar. Insight Advisor can also generate new visualizations based on your data searches.

You can also search within selections and visualizations such as tables and filter panes.

6.1 What happens when you search

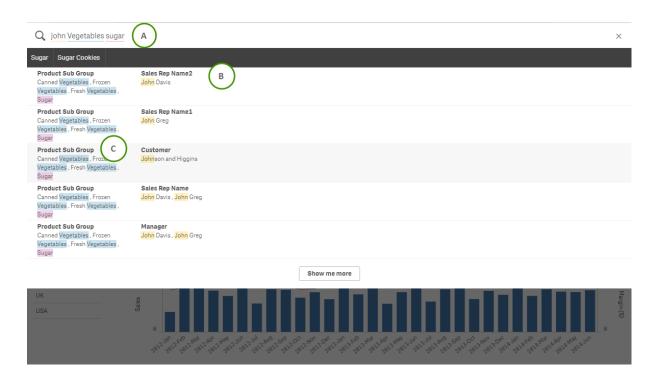
As you type your search query, Qlik Sense searches data items. Smart search filters the field values and displays the matching items. Smart search looks for:

- Field values
- Dimension values (also dimension values that are created as master items)



Measures (measure values) are not included in smart search.

The results of searching for 'John Vegetables sugar', which generates one search query for each term.



A: Search field

Separate search terms with spaces. To link words into one search term, use quotation marks, for example, "mountain bike". Suggested search strings are displayed beneath the search field

B: Apply a selection

The search results from the app data, shown with one result per row.

Click **Show me more** to see more results.

C: Color-coded search result terms

A color code is assigned to each search term found. It shows partial matches as well as full matches.

You can clear the search field by clicking the cancel icon \times to the right in the search field. Click the search icon $\frac{1}{2}$ to close smart search.

The search terms are always compared against the beginning of the words in the database. Searching for "read" does not present "bread" as a match, whereas "reader" and "Reading" would both be matches. The search terms are each given a color to support the identification of the matches. When there are more than six search terms, the colors are reused.

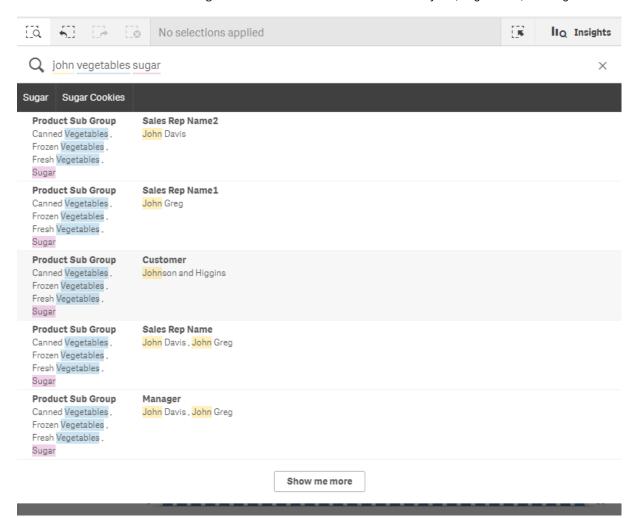
6.2 Using search results to change selections

Interacting with search results for data

When you search data, the results show the combinations of matches found in the entire Qlik Sense database. The results are based on field associations. They are sorted by the number of matched search terms, in descending order. If there is more than one match, the results are ranked by relevance. Click a match to insert it into the search field.

When you select a result, you make an actual selection of the values, and your current selections and the visualizations containing the selected data are updated.

The screenshot illustrates the categories that are available in the database: john, Veqetables, and sugar.





If you select a dimension value in the search result, the field name (not the dimension name) will be displayed in the selections bar.

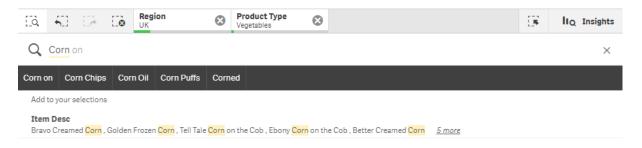
You can clear the search field by clicking the cancel icon \times to the right in the search field. Click the search icon $\frac{1}{2}$ to close smart search.

The search terms are always compared to the beginnings of the words in the database. Searching for "read" does not present "bread" as a match, whereas "reader" and "Reading" would both match. The search terms are colored to show the matches. When there are more than six search terms, the colors are reused.

Using smart search to change the current selection

When you use smart search to search the data in an app, and you make a selection from the results, you can search within that selection. Then you can click on search results to change your current selections. Smart search searches within your selections automatically, all you need to do is add search strings and perform a new search. You can do this over and over to filter your search results.

Using smart search to search within the selections Region and Product type.

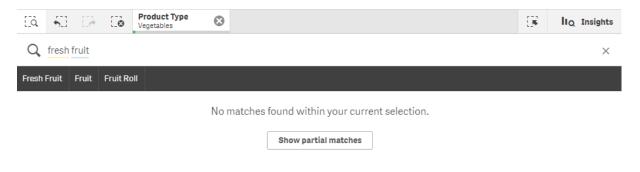


When you search within your current selection, smart search will find results associated with your current selection. If the terms you are searching for are not associated with the current selection, you will see an option to clear the current selection. If you clear the selection you will see the result for the searched terms without having to re-enter them.

If you search within a selection, and your search terms are excluded because of the selections (dark gray), there will be no results.

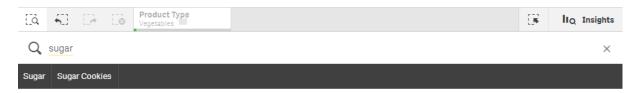
If you search within a selection using multiple terms and your query does not produce a result for all of your search terms, you can view partial matches by clicking **Show partial matches**.

Searching for the multiple terms 'fresh fruit' did not produce a result for all search terms, making the option 'Show partial matches' available.



If you search within a selection and your query does not produce a result, you will get the message "**No matches found within your current selection.**". If the selection is locked, you can consider to unlock the selection and perform a new search.

No result searching for 'sugar' in the selection Product Type.



No matches found within your current selection.

6.3 Keyboard shortcuts used in smart search



This description of keyboard shortcuts assumes you are working in Windows. For Mac OS use Cmd instead of Ctrl.

Keyboard shortcuts used in smart search

Keyboard navigation	Description
Ctrl+F	Open smart search. You can then enter the values or characters you want to search for.
Tab or Enter	Add the first suggested search string to the search field, if none is highlighted.
Down/up arrow keys	Move between the search field, suggested search string list, and search results. Move between rows in the search results.
Right/left arrow keys	Move between the entries in the suggested search string list.
Tab	Add the highlighted entry from the suggested search string list to the search field.
Enter	Make a selection of the highlighted search result. Make a selection from the highlighted suggested search string list.
Esc	Clear the search field. Close smart search (if the search field is empty).
Ctrl+F	Close smart search.

7 Troubleshooting - Discover

This section describes problems that can occur when discovering and analyzing in Qlik Sense.

7.1 My search does not produce any results

Possible cause

You have locked selections.

Proposed action

Unlock the selections and then perform a new search.

Do the following:

- 1. Click on the selection with \triangle .
- 2. Click to unlock.
- 3. Perform a new search.

7.2 My search using Insight Advisor does not produce any results

Possible cause

You are searching for a field which is not a master item.

Proposed action

Search for a master item instead. Additionally you can use smart search to find fields which are not master items.

7.3 Incomplete visualization

A visualization is not displayed, instead an error message Incomplete visualization is displayed.

Possible cause

The visualization contains data fields that you do not have access to.

Proposed action

Contact your Qlik Sense administrator to see if you can get access to the omitted data fields, to be able to use the visualization.