Customize the data in Power BI

Objectives:

This chapter would help you learn how to

- Understanding Tool tip with information
- Use and understanding of Drill Down
- Visual interaction and customisation of visual interaction

Tooltips in Power BI

Tooltips in Power BI are small windows that pop up when you hover over a visual element in your report. These windows can display additional information about the visual element, such as its underlying data or its context in the report. Tooltips can be used to provide users with more detailed information without cluttering up the report with unnecessary detail.

To create a tooltip in Power BI, you can follow these steps:

1. Select the visual element that you want to add a tooltip to.
2. In the Visualizations pane, click on the Tooltip card.
3. Enable the Tooltip toggle switch to turn on tooltips.
4. Use the Fields well to choose the data fields that you want to display in the tooltip.
5. Customize the appearance of the tooltip using the formatting options in the Tooltip card.

Once you have created a tooltip, you can preview it by hovering over the visual element in the report. Tooltips can be a powerful tool for providing users with more information and making your reports more interactive and engaging.

For example, let's say you have a bar chart that shows sales data for different regions. You can create a tool tip that displays additional information about each region, such as the total sales, the number of units sold, and the profit margin. This additional information can help users better understand the data and make more informed decisions.

Overall, tool tips are a powerful tool for enhancing the interactivity and usability of your Power BI reports. By providing additional information on demand, you can help users explore your data and gain insights more effectively.

Create tooltips based on report pages.

You can create visually rich **report tooltips** that appear when you hover over visuals, based on report pages you create in **Power BI Desktop** and the **Power BI service**. By creating a report page that serves as your tooltip, your custom tooltips can include visuals, images, and any other collection of items you create in the report page.

You can create as many tooltip pages as you want. Each tooltip page can be associated with one or more fields in your report, so that when you hover over a visual that includes the selected field, the tooltip you created on your tooltip page appears when you hover over the visual, filtered by the datapoint over which your mouse is hovering.

There are all sorts of interesting things you can do with report tooltips. Let's take a look at how to create tooltips and what you must do to configure them.

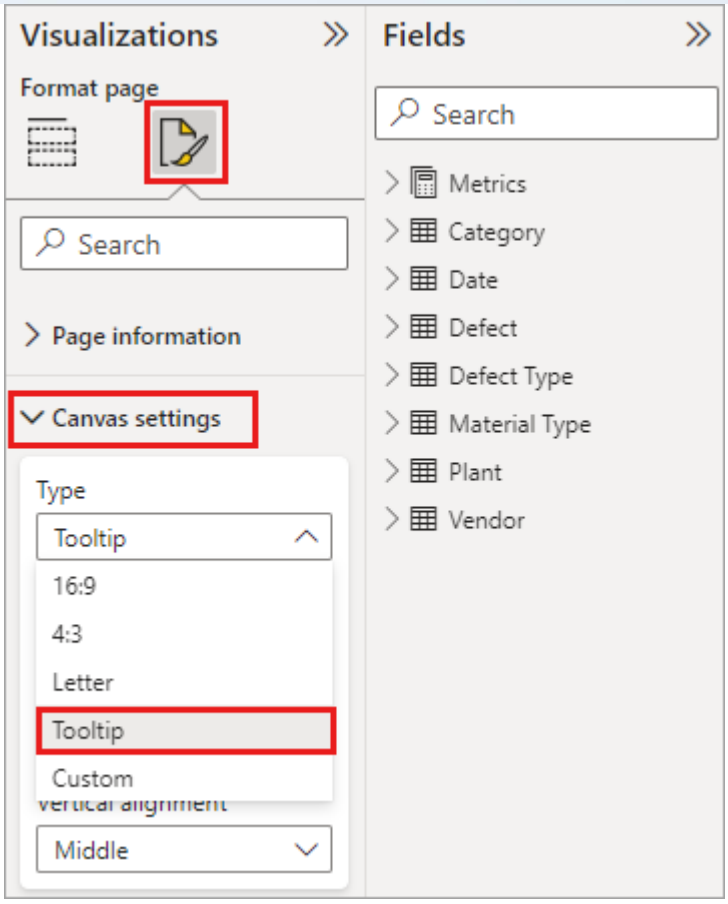
Tip

You may be interested in trying the new visual tooltips, currently in preview. They can include drill-down and drillthrough actions, and can reflect report theme styling.

Create a report tooltip page

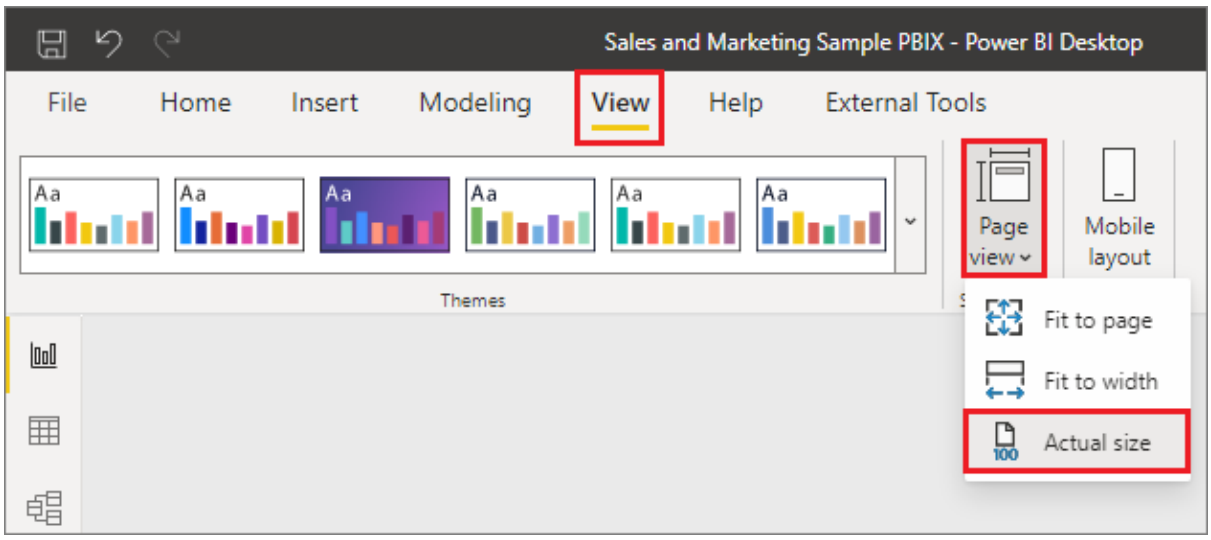
To get started, create a new report page by clicking the **+** button, found along the bottom of the **Power BI Desktop** canvas, in the page tabs area. The button is located beside the last page in the report.

Your tooltip can be any size, but keep in mind that tooltips hover over the report canvas, so you might want to keep them reasonably small. In the **Format** pane in the **Canvas Settings** card, you can see a new page size template called *Tooltip*. This provides a report page canvas size that's ready for your tooltip.

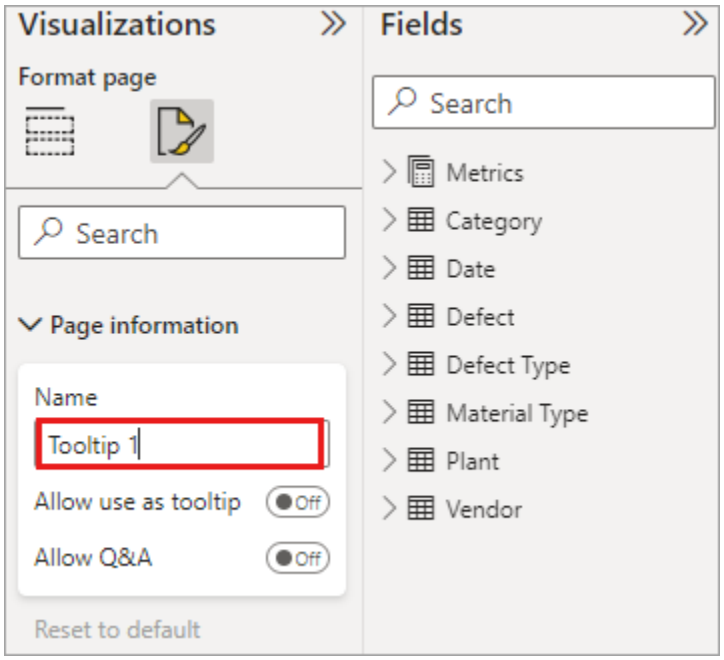


By default, **Power BI Desktop** fits your report canvas to the available space on the page. Often that's good, but not in the case of tooltips. To get a better sense and view of what your tooltip will look like when you're done, you can change the **Page View** to actual size.

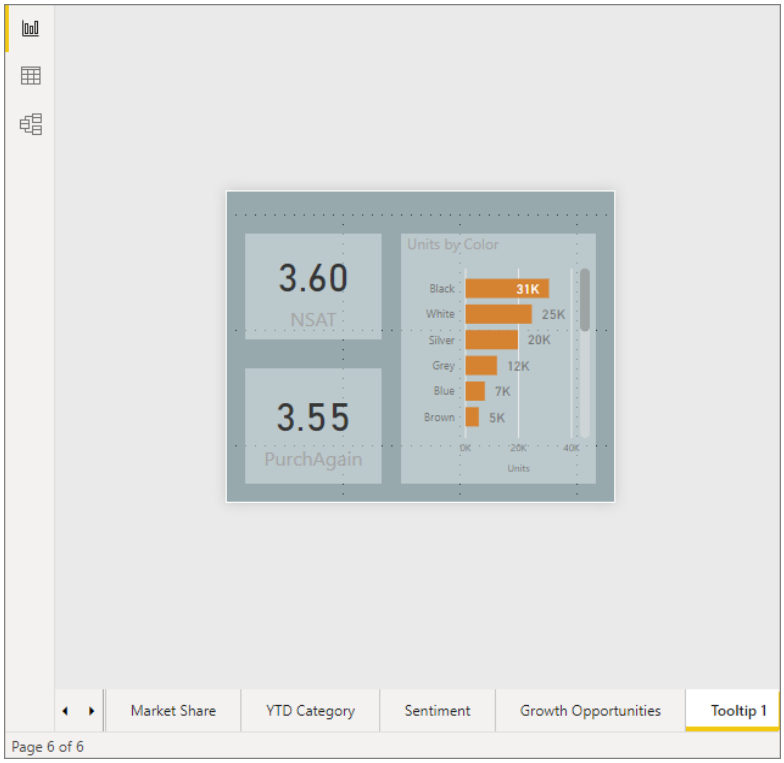
To see the actual size of the tooltip, select the **View** tab from the ribbon. From there, select **Page View > Actual Size**, as shown in the following image.



You can also name the report page so its purpose is clear. Just select the **Page Information** card in the **Format** pane, then type the name into the **Name** field you find there. In the following image the tooltip report name is *Tooltip 1*, but feel free to name yours something more inspired.



From there, you can create whatever visuals you would like to show up in your tooltip. In the following image, there are two cards and one clustered bar chart on the tooltip page, along with a background colour for the page itself, and backgrounds for each of the visuals, to give it the look we wanted.

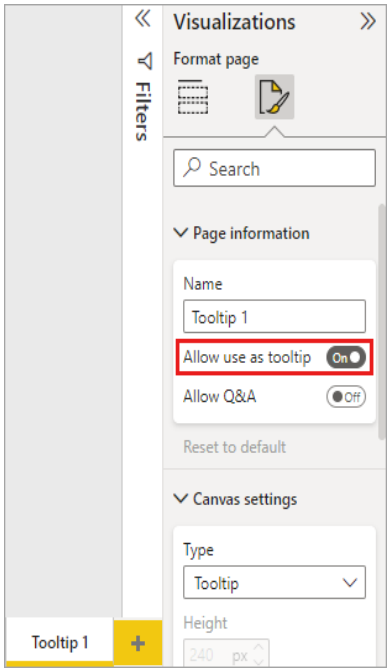


There are more steps to complete before your tooltip report page is ready to work as a tooltip. You need to configure the tooltip page in a few ways, as described in the next section.

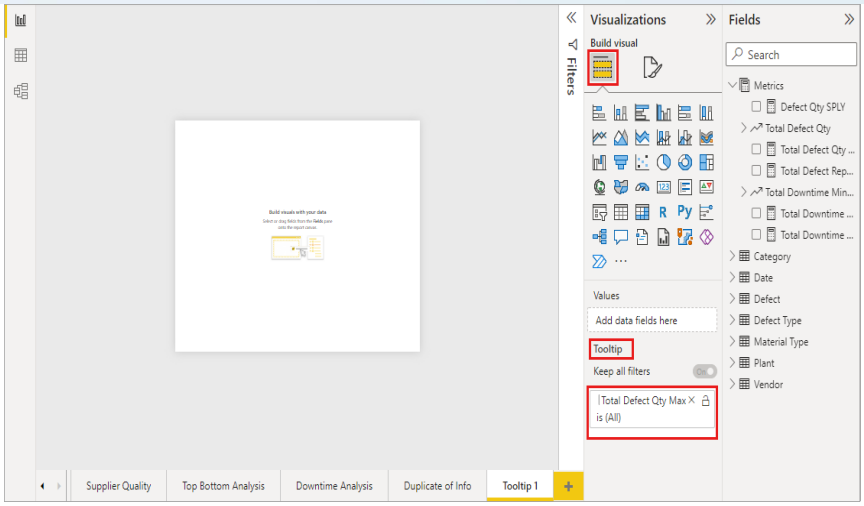
Configure your tooltip report page

Once you have the tooltip report page created, you need to configure the page in order to register it as a tooltip, and to ensure it appears in over the right visuals.

To begin with, you need to turn the **Tooltip** slider to **On**, in the **Page Information** card, to make the page a tooltip.



Once that slider is set to on, you specify the fields for which you want the report tooltip to appear. For visuals in the report that include the field you specify, the tooltip will appear. You specify which field or fields apply by dragging them into the **Tooltip fields** bucket, found in the **Fields** section of the **Visualizations** pane. In the following image, the *Total Defect Qty* field has been dragged into the **Tooltips fields** bucket.



You can include both categorical and numerical fields in the **Tooltips fields** bucket, including measures.

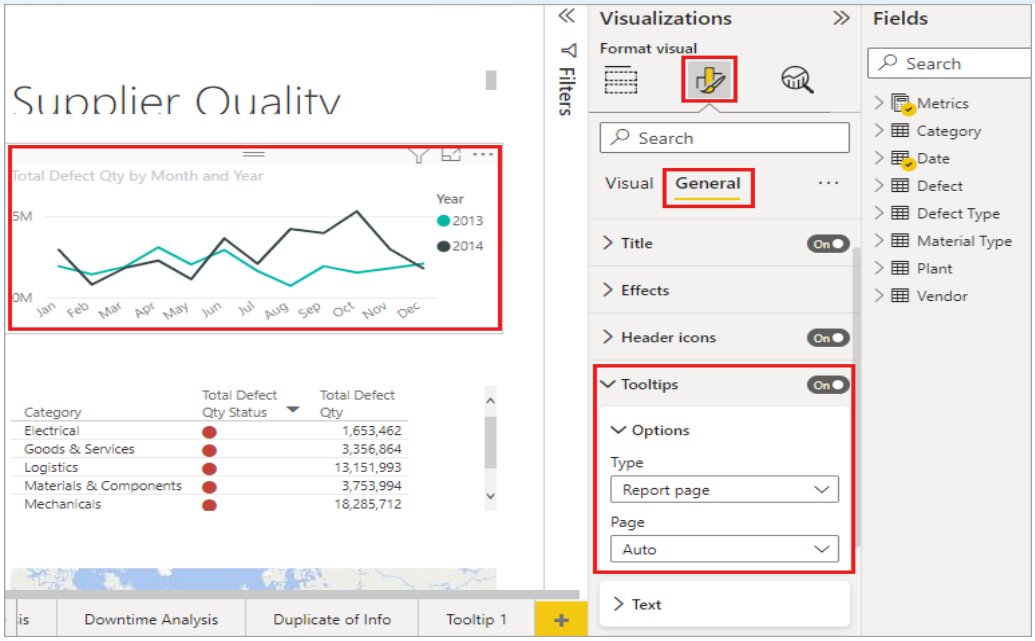
Once completed, the tooltip report page you created will be used as a tooltip in visuals in the report that use any fields you placed into the **Tooltips fields** bucket, replacing the default Power BI tooltip.

Manually setting a report tooltip

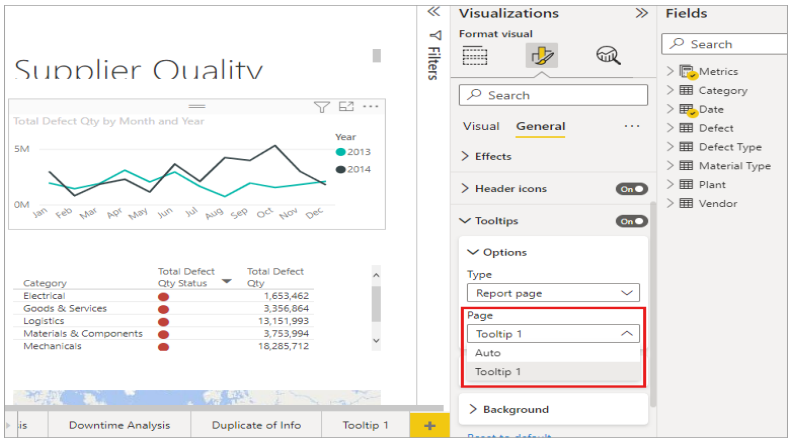
In addition to creating a tooltip that automatically appears when hovering over a visual that contains the specified field, you can manually set a tooltip.

Any visual that supports report tooltips now has a **Tooltip** card in its **Formatting** pane.

To set a tooltip manually, select the visual for which you want to specify the manual tooltip, then in the **Visualizations** pane, select the **Format** section and expand the **Tooltips** card.



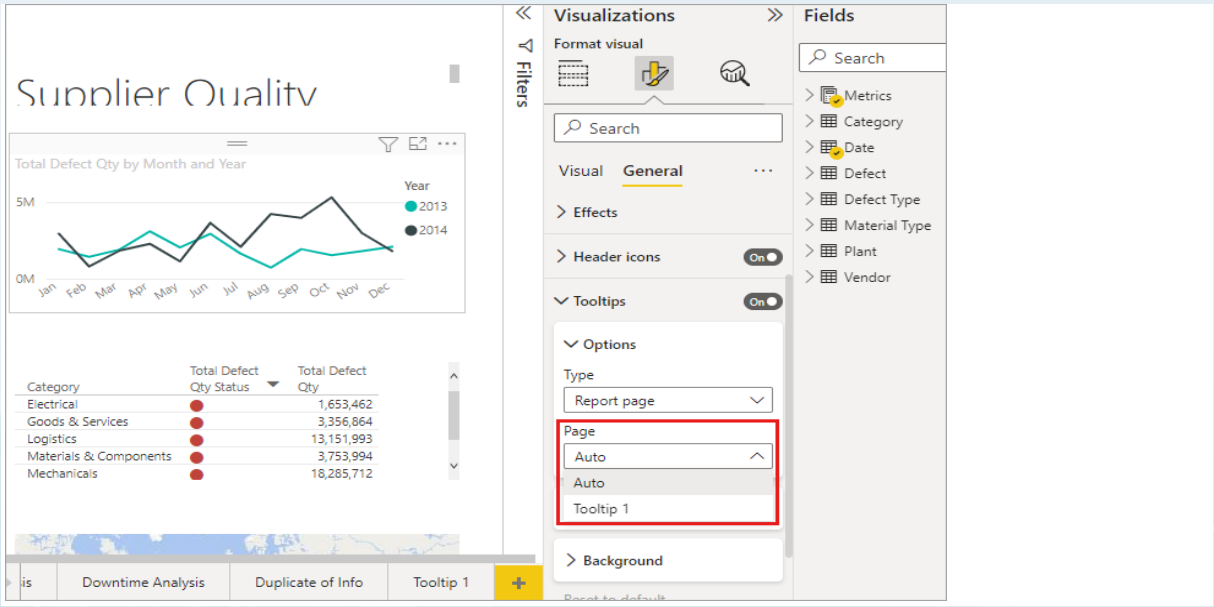
Then, in the **Page** dropdown, select the tooltip page you want to use for the selected visual. Note that only report pages that are specified as **Tooltip** pages show up in the dialog.



Being able to manually set a tooltip has many uses. You can set a blank page for a tooltip, and thereby override the default Power BI tooltip selection. Another use is when you don't want the tooltip that is automatically selected by Power BI to be the tooltip. For example, if you have a visual that includes two fields, and both of those fields have an associated tooltip, Power BI selects only one to show. You might not want that to be the case, so you could manually select which tooltip should be displayed.

Reverting to default tooltips

If you create a manual tooltip for a visual but decide you want the default tooltip instead, you can always return to the default tooltip that Power BI provides. To do so, when a visual is selected and the **Tooltips** card is expanded, just select *Auto* from the **Page** dropdown to go back to the default.



Custom report tooltips and line charts

There are a few considerations to keep in mind when your report tooltips are interacting with line chart visuals, and with visuals when cross-highlighting.

Report tooltips and line charts

When a report tooltip is displayed for a line chart, only one tooltip for all lines in the chart is displayed. This is similar to the default tooltip behaviour for line charts, which also displays only one tooltip.

This is because the field in the legend does not get passed through as a filter for the tooltip. In the following image, the tooltip being displayed is showing all units sold on that day across all three classes displayed in the report tooltip (in this example, Deluxe, Economy, and Regular).

Report tooltips and cross-highlighting

When a visual is being cross-highlighted in a report, report tooltips always show the cross-highlighted data, even if you're hovering over the faded section of the data point. In the following image, the mouse is hovering over the faded section of the bar graph (the section that is not highlighted), but the report tooltip still shows data for the highlighted portion of that datapoint (the highlighted data).

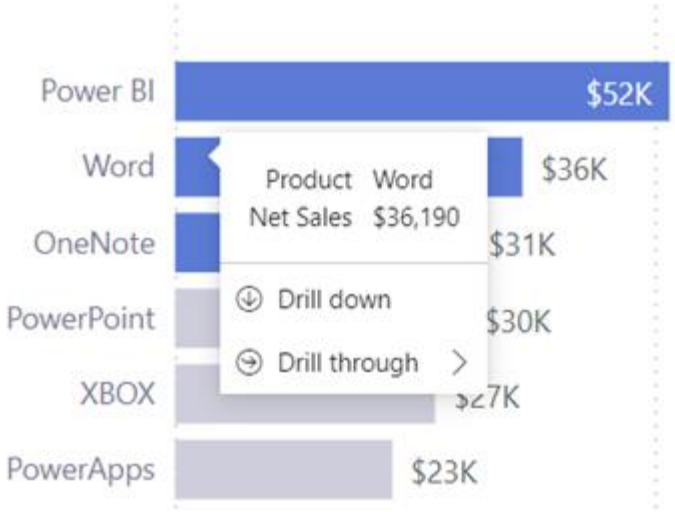
Considerations and limitations

There are a few considerations and limitations for **tooltips** to keep in mind.

- Button visuals also support tooltips.
- Clusters are not currently supported as fields that can be shown in report tooltips.
- When choosing a field to be shown for report tooltips, when using a field versus a category, visuals that contain that field will only show the specified tooltip when summarization with the selected field matches.
- You can turn tooltips off completely for a visual in Power BI reports. However, when you pin that visual to a dashboard in the Power BI service, the basic tooltip will still be displayed.

Create modern visual tooltips (preview)

The public preview of modern visual tooltips includes data point drill actions and updated styling to match your report theme.

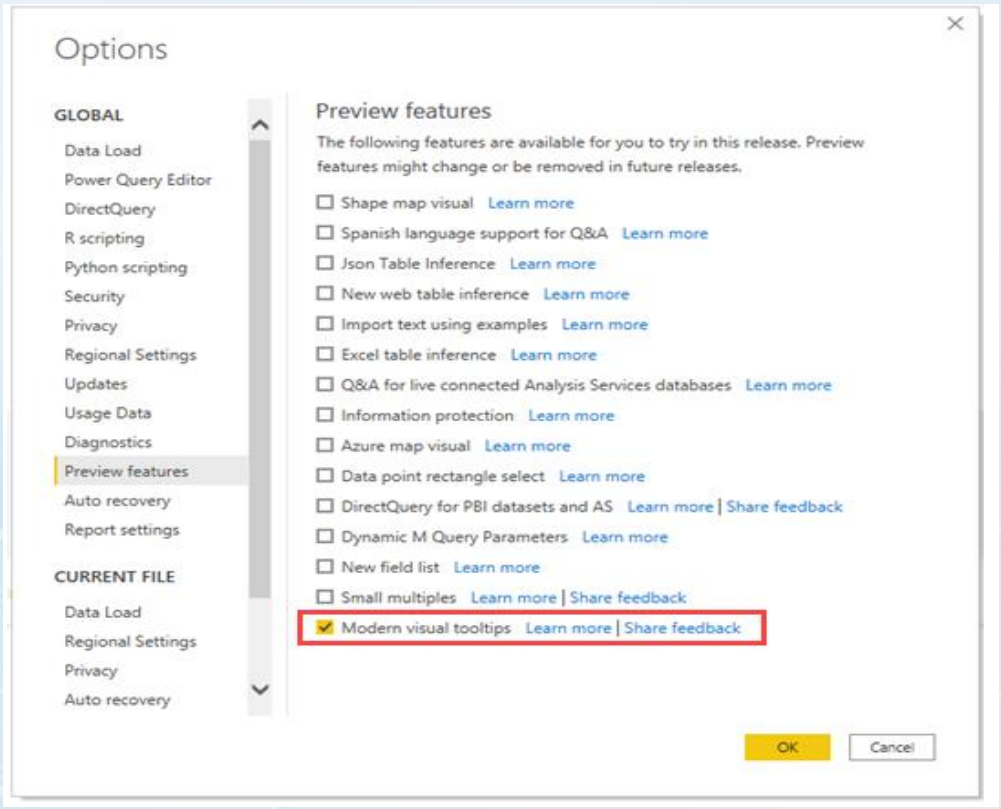


Power BI service.

Turn on the new tooltips

When you enable this preview, new reports have modern tooltips enabled by default. However, to have the new tooltips in existing reports, you need to enable them for each report.

1. In Power BI Desktop, go to **File** > **Options and settings** > **Options** > **Preview features**.
2. Select the **Modern visual tooltips** checkbox.

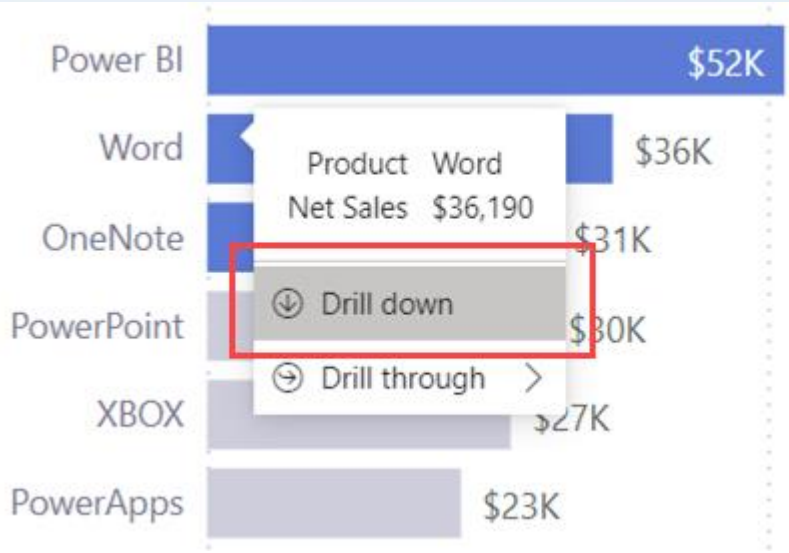


3. Restart Power BI Desktop.

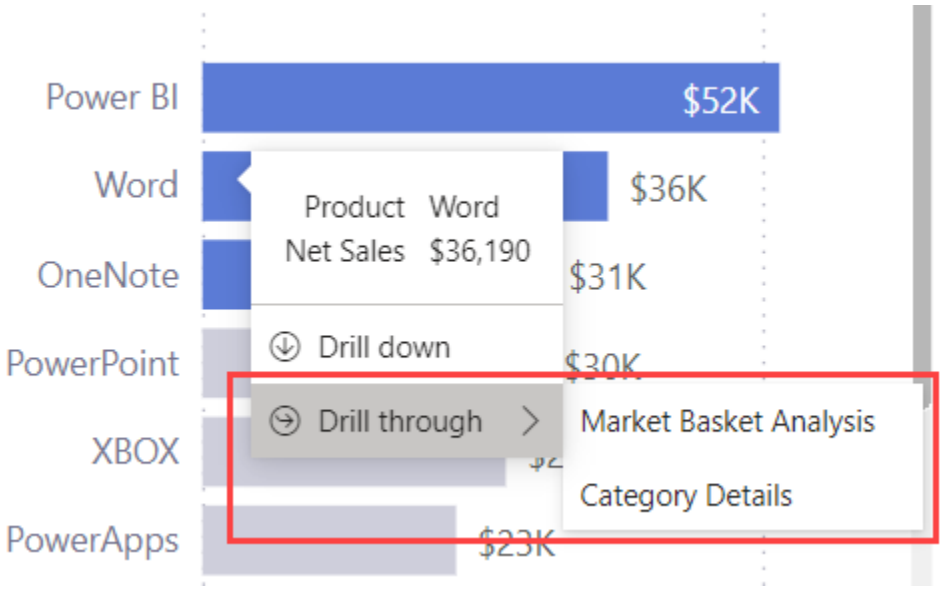
Drill actions

When you enable these new tooltips, you can drill down and up, and drill through on a data point without having to use the right-click menu or the header for the visual.

For example, when you hover over the *Word* data point in a bar chart, you can **Drill down** on the data point or **Drill through**. If you select **Drill down**, the visual updates to display the next level in the hierarchy and filter to *Word*.



If you select **Drill through**, you see which pages you can drill through to. In this example, choose either the Market Basket Analysis or the Category Details page.



If you select **Market Basket Analysis** in the tooltip, you drill through to the Market Basket Analysis page, filtered to *Word* and any other filters on the source data point.

Updated styling

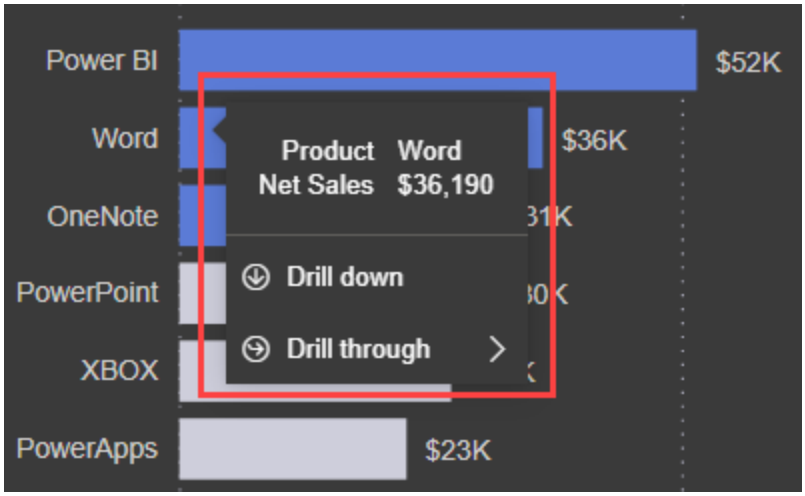
Once you upgrade to the new tooltips, you might notice an updated styling that's based on the report's theme colors:

- The background of the tooltips default to the **Background elements**.
- The text and icon color of the tooltips default to the **First-level elements**.

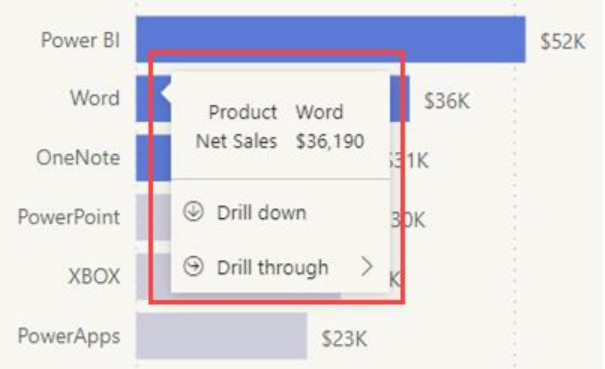
- The separator line and hover color on the tooltip default to the **Secondary background elements**.

For example, this tooltip has the **Default** theme style:

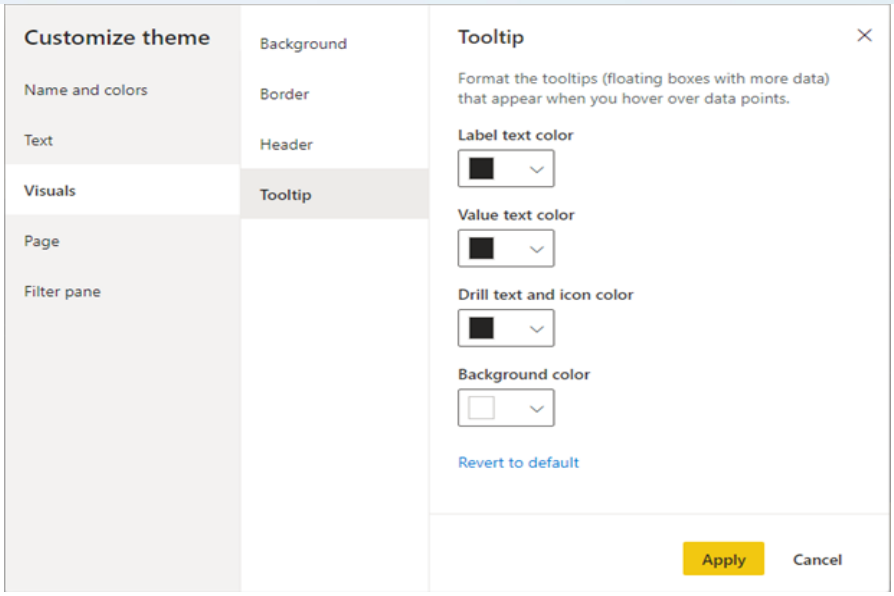
Here's an example with the **Innovate** theme:



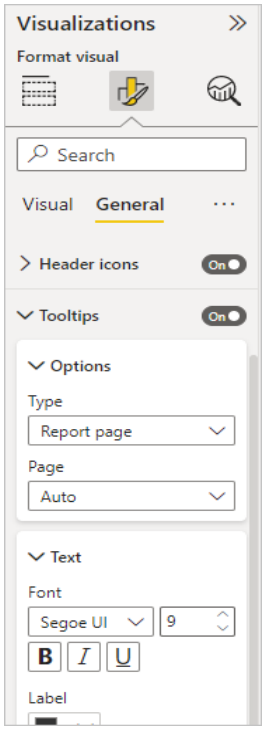
Here's an example with the **Frontier** theme:



To customize the styling further in Power BI Desktop, you can update the **Tooltip** theme in the **Customize theme** dialog:



Additionally, you can format tooltips per visual by customizing the settings in the **Format** pane:



Considerations and limitations

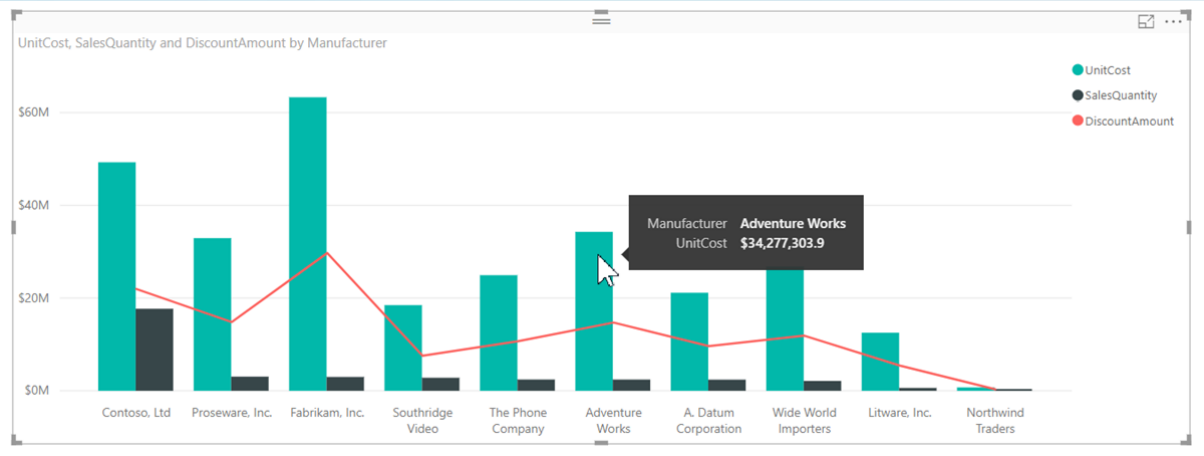
Drill actions aren't available in the tooltip for the following scenarios:

- Report page tooltips
- AppSource visuals (custom visuals)
- Decomposition trees

We don't have visual-level control to turn on or off the drill actions for the tooltips. You can enable or disable this capability for a whole report.

Customize tooltips in Power BI

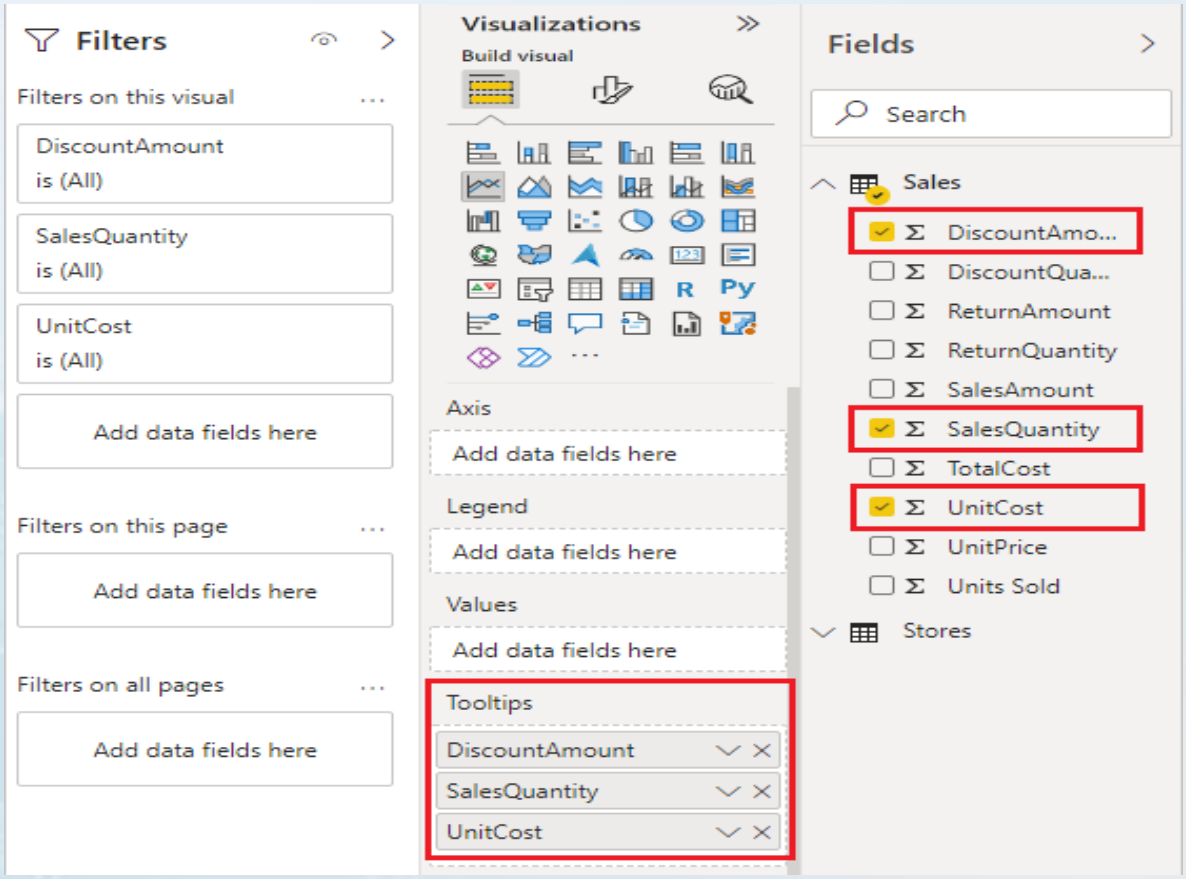
Tooltips are an elegant way of providing contextual information and detail to data points on a visual. The following image shows a tooltip applied to a chart in Power BI Desktop. You can customize tooltips in Power BI Desktop and in the Power BI service.



When a visualization is created, the default tooltip displays the data point's value and category. There are many instances when customizing the tooltip information is useful. Customizing tooltips provides context and information for users viewing the visual. Custom tooltips enable you to specify more data points that display as part of the tooltip.

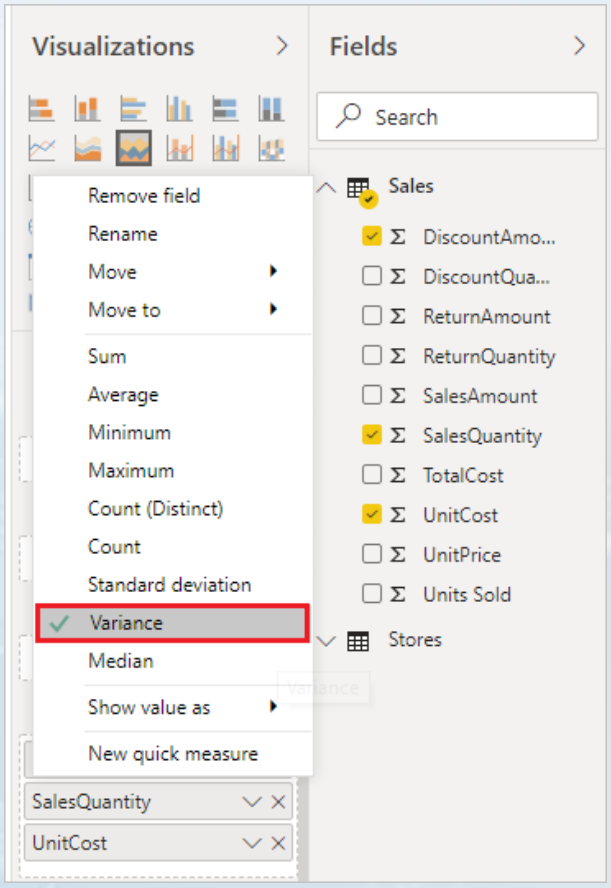
How to customize tooltips

To create a customized tooltip, in the **Fields** well of the **Visualizations** pane, drag a field into the **Tooltips** bucket, shown in the following image. In the following image, three fields have been placed into the **Tooltips** bucket.



Once tooltips are added to **Tooltips**, hovering over a data point on the visualization shows the values for those fields.

You can further customize a tooltip by selecting an aggregation function. Select the arrow beside the field in the **Tooltips** bucket. Then select from the available options.



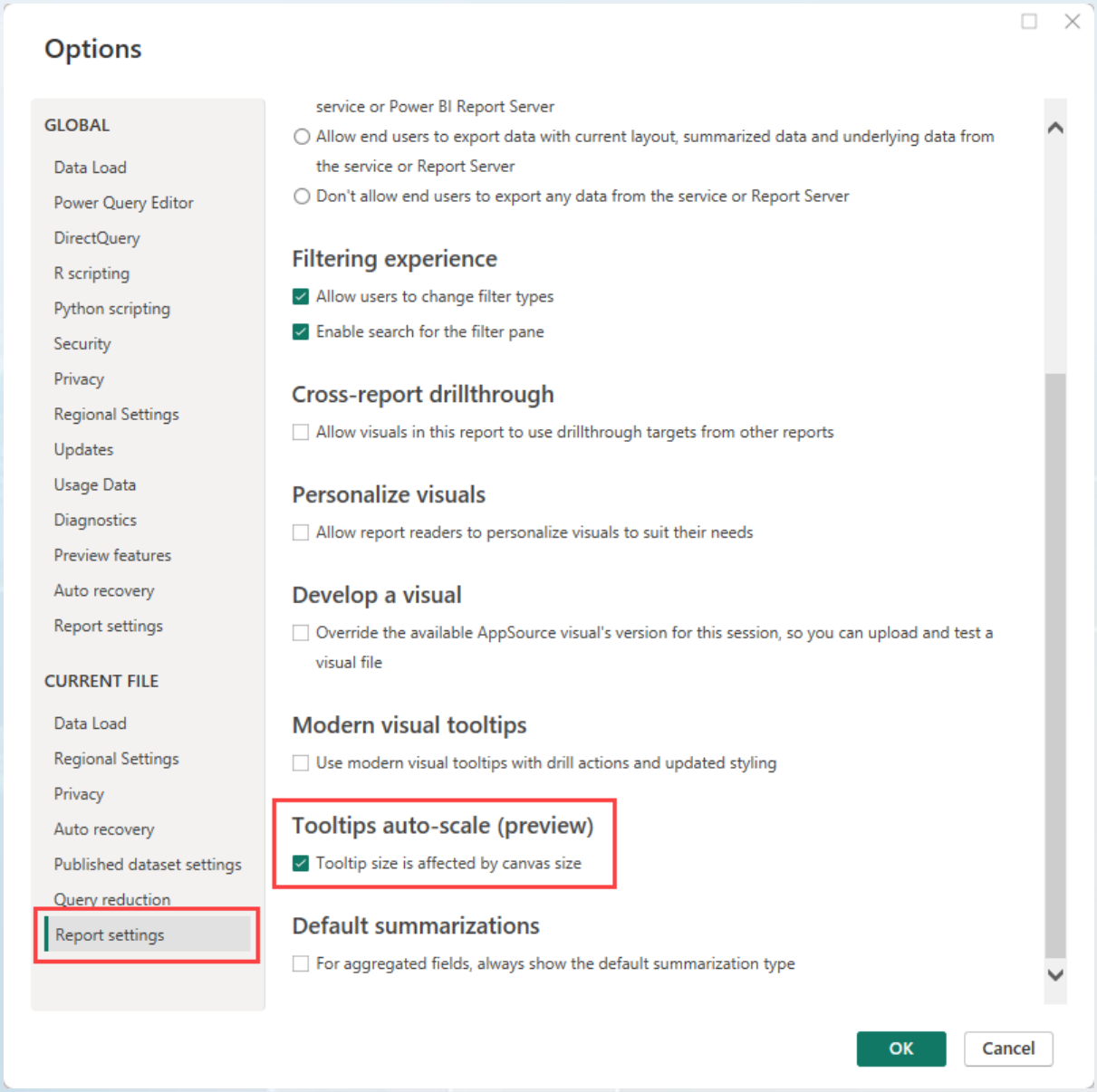
In Power BI Desktop, you can also select a *quick measure*.

There are many ways to customize tooltips, using any field available in your dataset, to convey quick information and insights to users viewing your dashboards or reports.

You can change a report setting so that tooltips adjust their size automatically based on the canvas size.

In Power BI Desktop, select **File** > **Options and settings** > **Options**.

Under **Current file**, select **Report settings**, and select **Tooltip size is affected by canvas size**.



Use and understanding of Drill Down

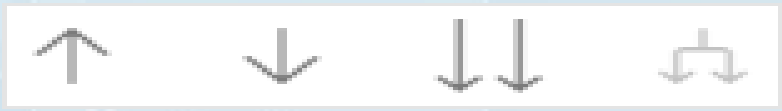
Drill mode requirements

To use the drill mode, the Power BI visual must have a hierarchy. For example, you might have a visual that shows the number of medals won in a sports competition. The hierarchy in this example is the sport, specific types of the sport, and the events. By default, the visual shows the medal count by sport, like gymnastics, skiing, and aquatics. Then, you can select one of the visual

elements, like a bar, line, or bubble, to display the individual sports. For example, selecting the aquatics element shows you data for swimming, diving, and water polo. Then, selecting the diving element opens the next level in the hierarchy and shows you details for springboard, platform, and synchronized diving events.

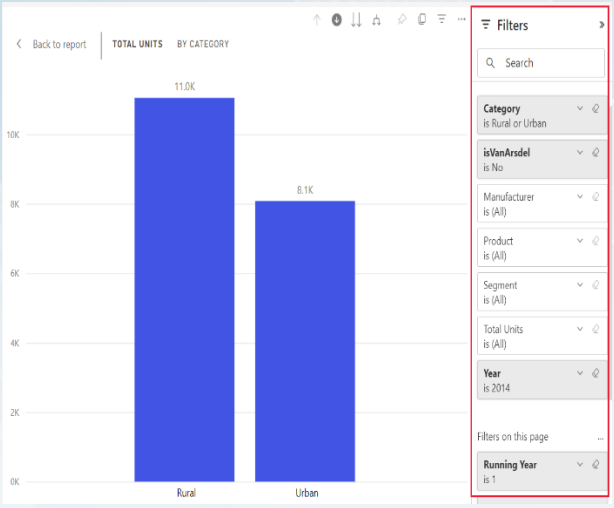
Report designers often add date hierarchies to visuals. A common date hierarchy is one that contains fields for the year, quarter, month, and day.

You can tell if a visual has a hierarchy by hovering over it. If the drill control options appear in the action bar, your visual has a hierarchy.



Drill down and up

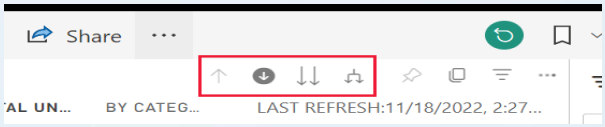
The following example is a bar chart that has a hierarchy made up of category, manufacturer, segment, and product. The bar chart shows the total number of units sold in the year 2014 by category. Category is the top level of the hierarchy. The chart is filtered by the categories Rural and Urban.



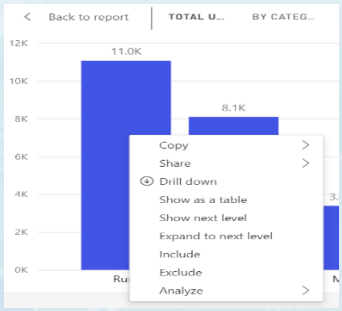
Ways to access the drill features

There are two ways to access the drill-down, drill-up, and expand features for visuals.

One way is to hover over a visual to use the icons in the action bar. Turn on the drill-down option by selecting the single downward arrow. The grey background indicates that the drill-down option is turned on.



Another way to access the drill features is by right-clicking a data point on the visual to open a menu with available options.



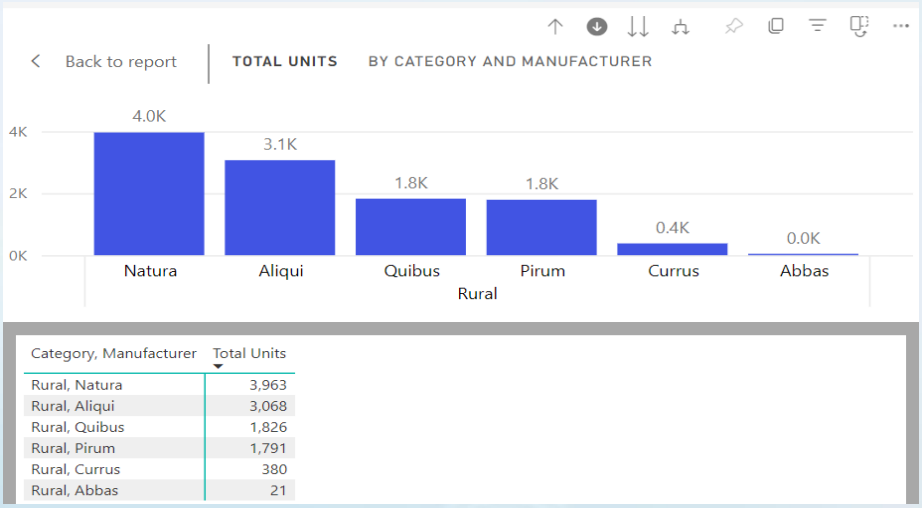
Show the data in a table as you drill

Use **Show as a table** to get a look behind the scenes. Each time you drill or expand, **Show as a table** displays the data that's used to build the visual. This feature makes it easier to see how hierarchies, drill, and expand work together to build visuals.

In the upper right corner, select **More options** (...), and then select **Show as a table**.

- In the upper right corner, select **More options** (...), and then select **Show as a table**.

The data that makes up the bar chart appears below the visual.



Category, Manufacturer	Total Units
Rural, Natura	3,963
Rural, Aliqui	3,068
Rural, Quibus	1,826
Rural, Pirum	1,791
Rural, Currus	380
Rural, Abbas	21

Select the double arrow icon to drill down all fields at once. Watch the data in the table change to reflect the data that's being used to create the bar chart. The following table shows the results of drilling down all fields at once from the category level to the product level.

Category	Total Units
Rural	11,049
Urban	8,081

Manufacturer	Total Units
Natura	5,561
Aliqui	4,485
Pirum	3,811
Quibus	1,941
Currus	1,319
Fama	778
Victoria	672
Abbas	381
Pomum	180
Salvus	2

Segment	Total Units
Productivity	7,246
Extreme	6,745
Select	3,803
Regular	1,336

Product	Total Units
Pirum UE-13	715
Natura RP-79	486
Natura RP-80	486
Aliqui UE-06	429
Natura RP-07	383
Natura RP-08	383
Aliqui UE-11	369
Pirum UE-07	367
Aliqui RS-02	347
Natura UE-11	338
Pirum RS-06	337
Pirum RS-03	303
Natura UE-17	301
Aliqui RS-08	286
Natura RS-12	274
Pirum RP-31	266

The first table represents the top level of the hierarchy. It shows the categories Rural and Urban. The next three tables represent the bar chart's data as you drill down all levels at once, from category to manufacturer to segment to product.

Customize visualization

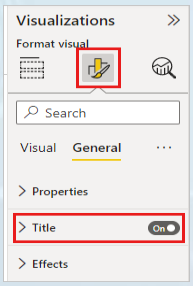
There are so many options for customizing your visualizations, that the best way to learn about them is by exploring the **Format** pane (select the paint roller icon).

- **Prerequisites**
  - The Power BI service or Power BI Desktop
  - Retail Analysis Sample report

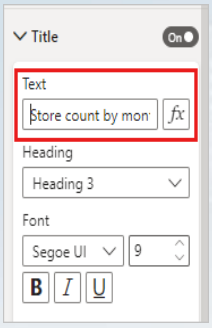
Customize visualization titles in reports

To follow along, sign into Power BI Desktop and open the Retail Analysis Sample report.To follow along in the Power BI service, open the report and select **Edit.**

1. Go to the **New Stores** page of the **Retail Analysis Sample** report.
2. Select the **Open Store Count by Open Month and Chain** clustered column chart.
3. In the **Visualizations** pane, select the paint brush icon, then **General** to reveal the format options.
4. Select **Title** to expand that section.



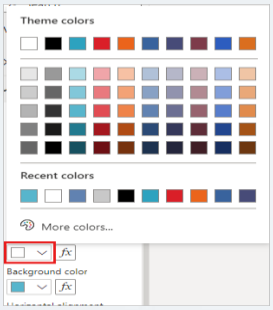
5.To change the title, enter Store count by month opened in the **Text** field.



6.Change **Text color** to white and **Background color** to blue.

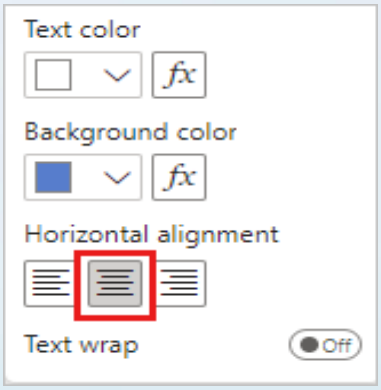
A). Select the drop-down and choose a color from **Theme colors**, **Recent colors**, or **More colors**.

B). Select the drop-down to close the color window.



7.Increase the text size to **16 pt.**

8.The last customization you'll make to the chart title is to align it in the center of the visualization.


Text color
fx
Background color
fx
Horizontal alignment
Text wrap
Off