1. **Introduction to Power BI- Get Started with Power BI - Sign up for Power BI - Overview: Power BI data sources - Connect to a SaaS solution - Upload a local CSV file - Connect to Excel data that can be refreshed - Create a Report with Visualizations.**

Power BI is a collection of software services, apps, and connectors that work together to turn your unrelated sources of data into coherent, visually immersive, and interactive insights. Your data might be an Excel spreadsheet, or a collection of cloud-based and on-premises hybrid data warehouses. Power BI lets you easily connect to your data sources, visualize and discover what's important, and share that with anyone or everyone you want.

Power BI is a **business intelligence tool** that allows you to connect to various data sources, visualize the data in reports and dashboards, and then share them with anyone you want.

Power BI is made up of 3 main elements:

- Power BI Desktop - a free desktop application for building and designing reports.
- Power BI Service - the online publishing service for viewing and sharing reports and dashboards.
- Power BI mobile apps - for viewing reports and dashboards on the go**.**

Power BI is a tool in the category of Business Intelligence (BI). The purpose of BI is to track Key Performance Indicators (KPIs) and uncover insights in business data so as to better inform decision-making across the organization.

Power BI is used in different ways depending on the role of the individual, from developers, analysts, managers, and directors, to everyone in between.

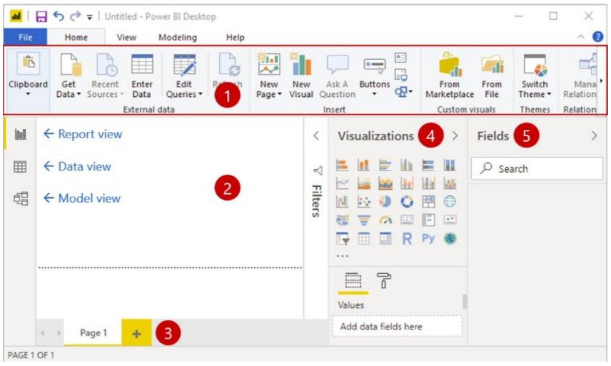
Signing up for a Power BI account

The following steps outline how to sign up and start a free trial license of Power BI.

1. So, to the sign-up page
2. Enter your email address and then select **sign up**
3. Verify your account via your mobile
4. Check your email address for your verification code
5. On the next screen, enter your information and the verification code from the email. Select a region, review the policies that are linked from this screen, then select **Start**.
6. You're then taken to Power BI sign in page, and you can begin using Power BI.

overview of Power BI

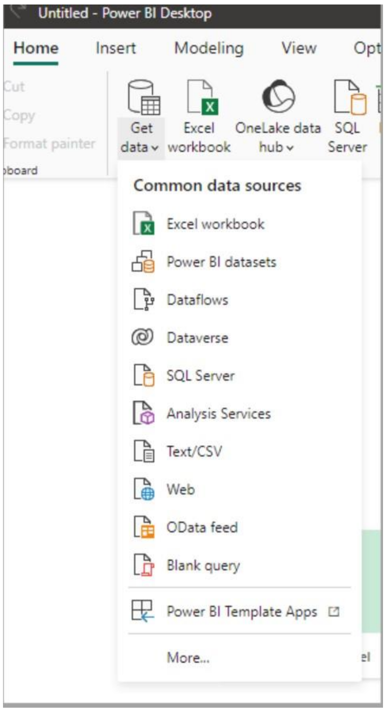
Power BI Desktop is a free application for PCs that lets you gather, transform, and visualize your data. In this module, you'll learn how to find and collect data from different sources and how to clean or transform it. You'll also learn tricks to make data-gathering easier. Power BI Desktop and the Power BI Service work together. You can create your reports and dashboards in Power BI Desktop, and then publish them to the Power BI Service for others to consume.

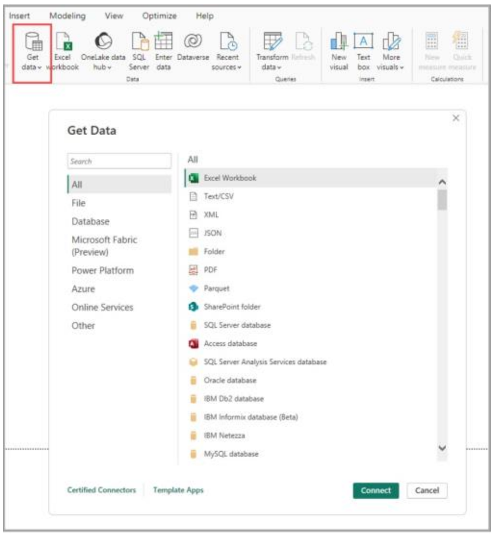


1. **Ribbon -** Displays common tasks that are associated with reports and visualizations.
2. **Report view, or canvas -** Where visualizations are created and arranged. You can switch between **Report**, **Data**, and **Model** views by selecting the icons in the left column.
3. **Pages tab -** Located along the bottom of the page, this area is where you would select or add a report page.
4. **Visualizations pane -** Where you can change visualizations, customize colours or axes, apply filters, drag fields, and more.
5. **Fields pane -** Where query elements and filters can be dragged onto the **Report** view or dragged to the **Filters** area of the Visualizations pane.

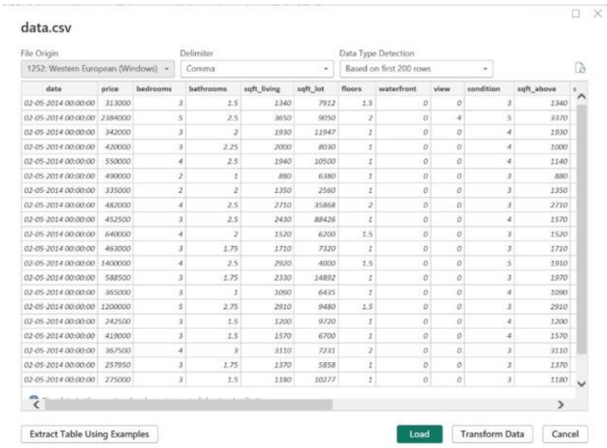
Power BI data sources

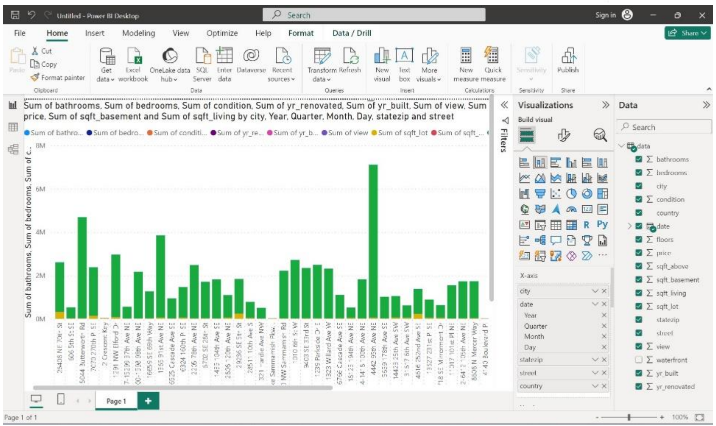
To see available data sources, in the **home** group of the Power BI Desktop ribbon, select the **Get data** button label or down arrow to open the **Common data sources** list. If the data source you want isn't listed under **Common data sources**, select **More** to open the **Get Data** dialog box. Or, open the **Get Data** dialog box directly by selecting the **Get Data** icon itself.





Connect to a SaaS solution - Upload a local CSV file - Connect to Excel data that can be refreshed - Create a Report with Visualizations.





Select get Data-> select excel workbook->select the excel sheet from the desired location-> load the excel sheet-> an excel sheet is opened- from the data pane select the required column and from the visualization pane->select the chart type for preparation of report.

2. **Using visualizations - Create a new report - Create and arrange visualizations - Format a visualization - Use text, map, and gauge visualizations and save a report - Use a slicer to filter visualizations - Sort, copy, and paste visualizations.**

   Data visualisation brings data to life, making you the master storyteller of the insights hidden within your numbers. Through live data dashboards, interactive reports, charts, graphs, and other visual representations, data visualisation helps users develop powerful business insight quickly and effectively. Visualizations can be added to Power BI reports

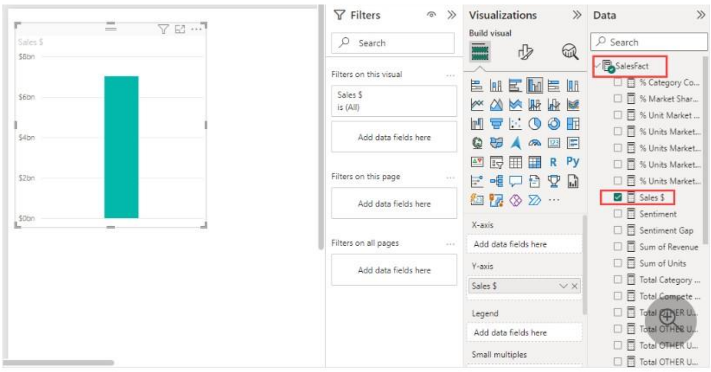
1. Download the sample PBIX file to your desktop.
2. In Power BI Desktop, select **File** > **Open report**.
3. Browse to and select the **Sales and Marketing Sample PBIX** file, and then select **Open**.

   The **Sales and Marketing Sample PBIX** file opens in report view.

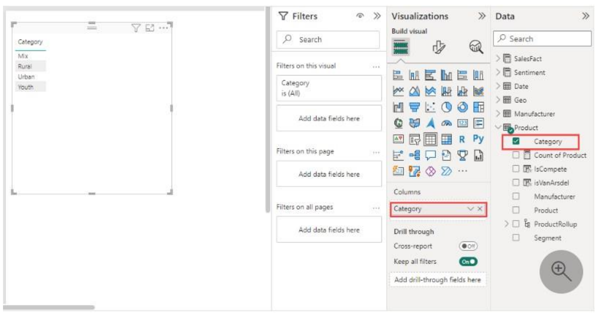
4. At the bottom, select the green plus symbol to add a new page to the report.

Add visualizations to the report

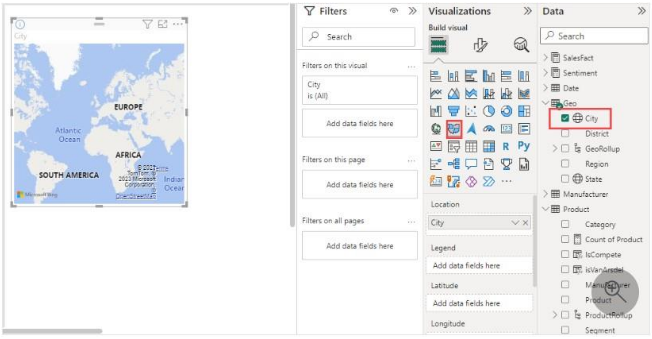
Start with a numeric field like **SalesFact** > **Sales $**. Power BI creates a column chart that has a single column:



Or start with a field like **Product** > **Category**. Power BI creates a table and adds that field to the **Columns** section:

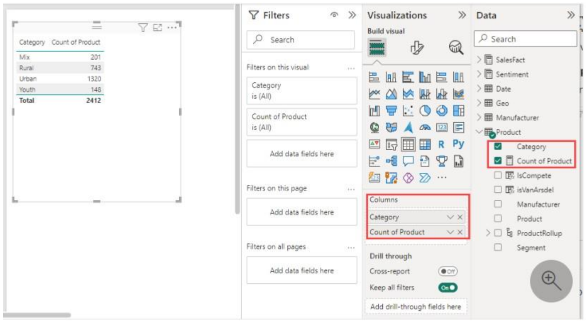


Or select the **Filled map** button and then select a geography field, like **Geo** > **City**. Power BI and Bing Maps create a map visualization:

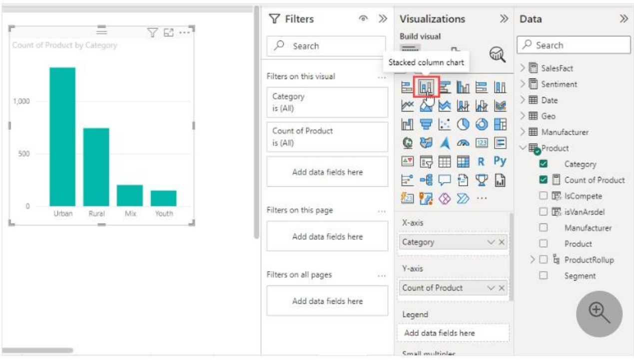


Change the type of visualization

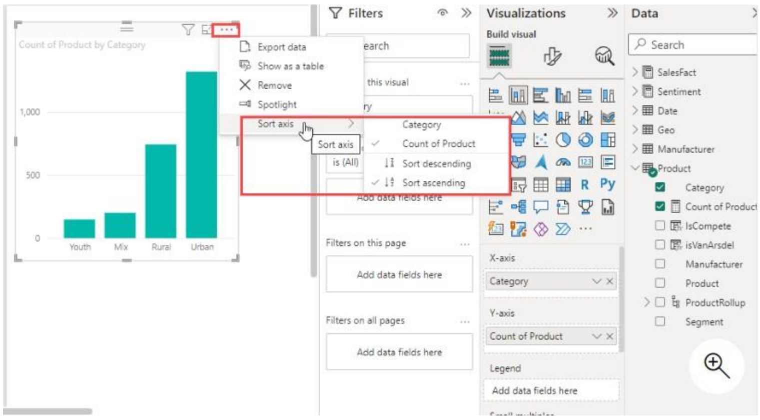
On a new page, select **Product** > **Category** and then **Product** > **Count of Product** to add both fields to the **Columns** section:



Change the visualization to a column chart by selecting the **Stacked column chart** button on the **Visualizations** pane:



To change the way the visual is sorted, select **More options** (...) and then **Sort axis** on the chart. Use the menu options to change the direction of the sort axis (ascending or descending) or to change the column that's being sorted on:



When to use a slicer

Slicers are a great choice when you want to:

- Display commonly used or important filters on the report canvas for easier access.
- Make it easier to see the current filtered state without having to open a drop-down list.
- Filter by columns that are unneeded and hidden in the data tables.
- Create more focused reports by putting slicers next to important visuals.

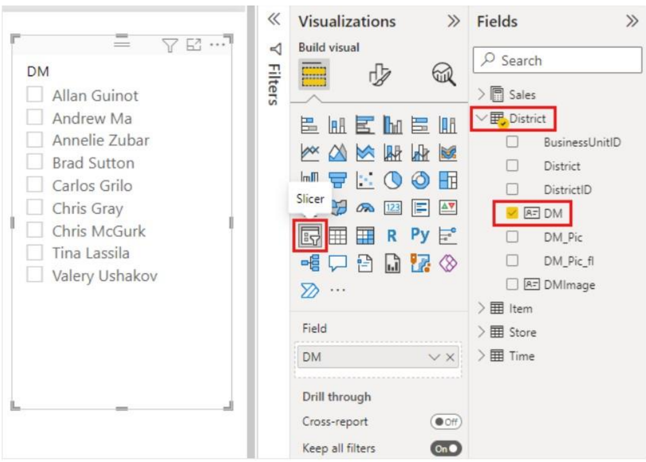
1. Open Power BI Desktop, and from the menu bar, select **File** > **Open report**.
2. Browse to the **Retail Analysis Sample PBIX.pbix** file, then select **Open**.
3. On the left pane, select the **Report** icon  to open the file in report view.
4. On the **Overview** page, with nothing selected on the report canvas, select

   the **Slicer** icon in the **Visualizations** pane to create a new slicer.

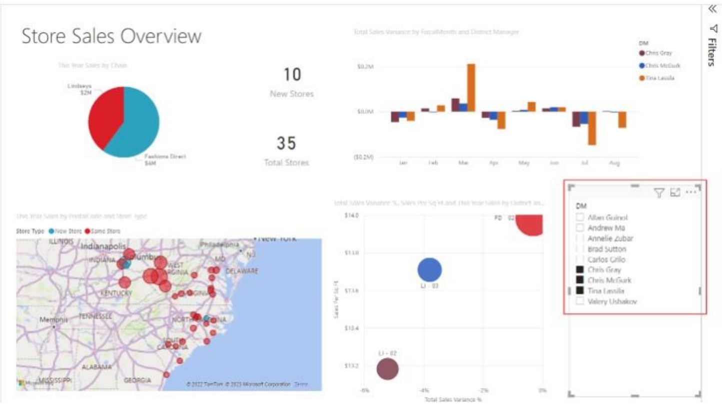
5. With the new slicer selected, from the **Fields** pane, expand the **District** table and select **DM** to populate the slicer.

6.Resize and drag the elements on the canvas to make room for the slicer. If you resize the slicer too small, its items are cut off.

The new slicer is now populated with a list of district manager names and their selection boxes.



7.Select names on the slicer and notice the effects on the other visualizations on the page. Select names again to deselect them, or hold down the **Ctrl** key to select more than one name. Selecting all names has the same effect as selecting none.



3. **Modify and Print a Report - Rename and delete report pages - Add a filter to a page or report Set visualization interactions - Send a report to PowerPoint.**

Print a report in Power BI Report Builder

1. Open a report.
2. On the Home tab, select **Run**.
3. (optional) Select **Print Layout** to see how the report will look when it is printed.
4. (optional) Select **Page Setup** to set paper, orientation, and margins.

1. Select **Print**.
2. In the **Print** dialog box, select a printer and specify other printing options.

Print a report from a Web browser application

1. In the Power BI service web portal, navigate to the report that you want to print. Open the report.
2. On the toolbar at the top of the report, select **Print**.
3. In the **Print** dialog box, select a printer, and then select **Print**.

Print a report from other applications

1. In the Power BI service web portal, navigate to the report that you want to print. Open the report.
2. On the toolbar at the top of the report, select a rendering format, then select **Export**. The report opens in a viewer application that corresponds to the rendering format.

   For example, if you select PDF, the report opens in Adobe Acrobat Reader.

3. On the File menu in that program, select **Print**.

Change paper size

1. Right-click outside of the report body and select **Report Properties**.
2. In **Page Setup**, select a value from the **Paper Size** list. Each option populates the **Width** and **Height** properties. You can also specify a custom size by typing numeric values in the **Width** and **Height** boxes. Select **OK**.

To rename a report page in Power BI, you can do the following:

1. Open the report in Editing View
2. Locate the report page tabs at the bottom of the window
3. Open the report page you want to rename by selecting the tab
4. Double-click the name on the tab to highlight it
5. Type a new report page name and select ENTER

To delete pages in Power BI, you can do the following:

1. Select all the pages
2. Right-click on any of the selected pages and choose Delete from the menu
3. Alternatively, you can use the Delete button on the ribbon to delete the selected pages

Use Filters to Control Interactions

Filters are a powerful tool in Power BI that allow you to control how visualizations interact with each other. To effectively use filters and control interactions, follow these steps:

1. Add a filter to the report by selecting the visual you want to filter.
2. In the Visualizations pane, select the Fields pane and choose the field you want to use as a filter.
3. Drag the field onto the Filters pane or right-click on the visual and select “Add as Filter”.
4. Adjust the filter settings, such as selecting specific values or applying conditions.

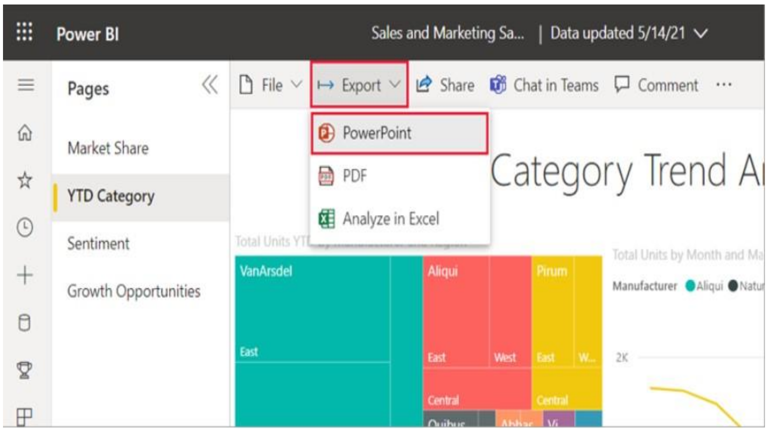
By using filters, you can focus on specific data subsets, drill down into details, and control how visuals interact with each other. This allows for a more customized and interactive experience for end-users.

When you export to PowerPoint, the following occurs:

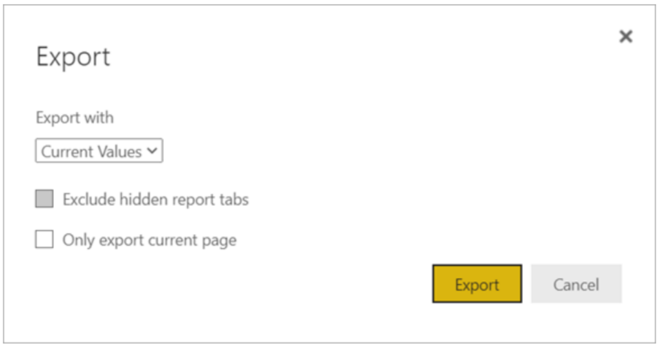
- Each page in the Power BI report becomes an individual slide in PowerPoint.
- Each page in the Power BI report is exported as a single high-resolution image in PowerPoint.
- You can preserve the filters and slicers settings that are added to the report.
- A link is created in PowerPoint that links back to the Power BI report.

Export your Power BI report to PowerPoint

In the **Power BI service**, select a report to display it on the canvas. Then, select **Export** > **PowerPoint** from the menu bar.



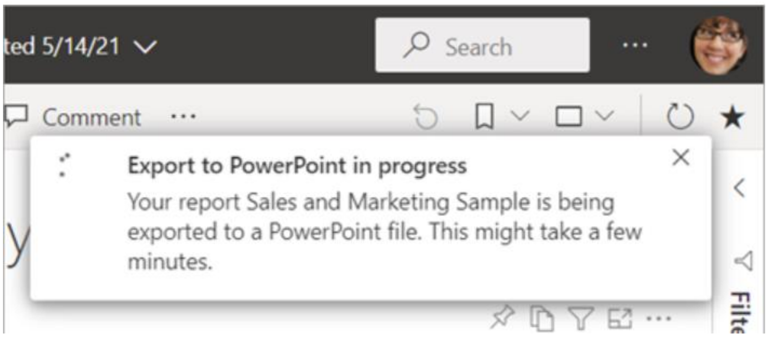
A pop-up appears where you can select **Current values** or **Default values**. **Current values** exports the report in the current state, which includes the active changes you made to slicer and filter values. Most users select this option. If you've scrolled, **Current values** doesn't include the scroll state of the visual, but instead exports the top portion of the data. Alternatively, selecting **Default values** exports the report in the original state, as the *designer* shared it, and doesn't reflect any changes made to the original state.



Additionally, there's a check box to select whether or not to export the hidden tabs of a report. Select this check box if you want to export only report tabs that are visible to you in your browser. If you prefer to get all the hidden tabs as part of your export, leave this check box cleared. If the check box is grayed out, there are no hidden tabs in the report. An example of a hidden tab would be a tooltip tab. Custom tooltips are created by report *designers* and don't display as report tabs in the Power BI service for *business users*.

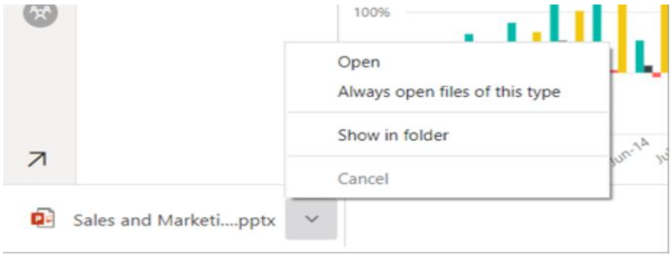
You may also choose to export only the current page you're viewing in a report by checking the **Only export current page** option. By default, **Only export current page** is unchecked and all pages are exported from your report.

After you make your selections, select **Export** to continue. You see a notification banner in the upper-right corner of the Power BI service browser window that the report is being exported to PowerPoint.



Exporting might take a few minutes. Factors that can affect the time required include the structure of the report and the current load on the Power BI service. You can continue to work in Power BI while the report is being exported.

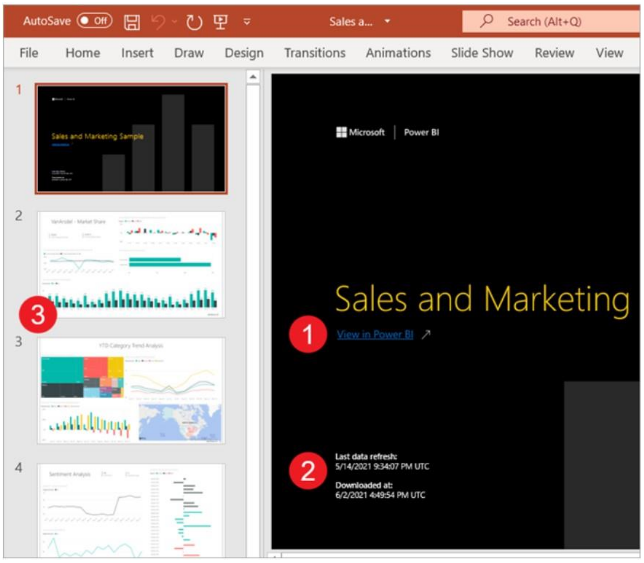
After the Power BI service completes the export process, the notification banner changes to let you know. Your file is then available where your browser displays downloaded files. In the following image, the download banner appears at the bottom of the browser window.



And that's all there's to it. You can download the file, open it with PowerPoint, and then modify or enhance it like you would any other PowerPoint deck.

Open the PowerPoint file

When you open the PowerPoint file that Power BI exported, you find a few cool and useful elements. Take a look at the following image, and check out the numbered elements that describe some of those cool features. Pages in PowerPoint are always created in the standard 9:16 size, regardless of the original page sizes or dimensions in the Power BI report.



1. The first page of the slide deck includes the name of your report and a link so that you can **View in Power BI** the report on which the slide deck is based.
2. You get some useful information about the report, too. **Last data refresh** shows the date and time on which the exported report is based. **Downloaded at** shows the date and time when the Power BI report was exported into a PowerPoint file.
   The **Downloaded at** time is the time of the export in UTC (Universal Coordinated Time).
3. Each report page is a separate slide, as shown in the nav pane.

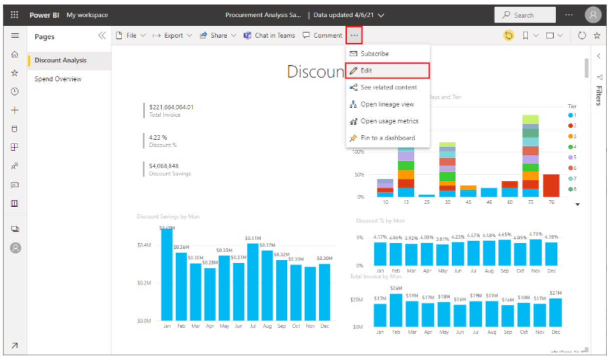
4. Your published report is rendered in the language according to your Power BI settings, or otherwise by the locale setting of your browser. To see or set your language preference in your browser, select the cog icon  > **Settings** > **General** > **Language**. For locale information, see Supported languages and countries/regions for Power BI.

4. **Create a Dashboard - Create and manage dashboards - Pin a report tile to a dashboard - Pin a live report page to a dashboard - Pin a tile from another dashboard - Pin an Excel element to a dashboard - Add a tile to a dashboard.**

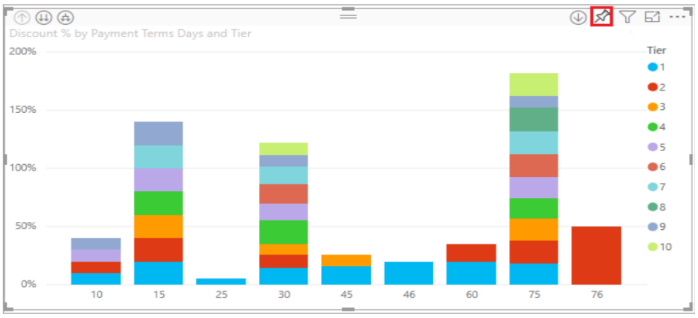
Create a Power BI dashboard from a report

Pin tiles to a dashboard

1. Open a report and select **More options (...)** > **Edit** to open the report in Editing view.



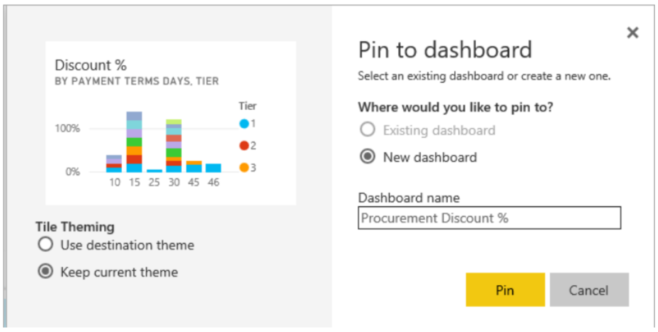
2. Hover over a visualization to reveal the options that are available. To add a visualization to a dashboard, select the pin icon



3.Select whether to pin to an existing dashboard or new dashboard.

- **Existing dashboard**: Select the name of the dashboard from the dropdown. Dashboards that have been shared with you won't appear in the dropdown.
- **New dashboard**: Enter the name of the new dashboard.

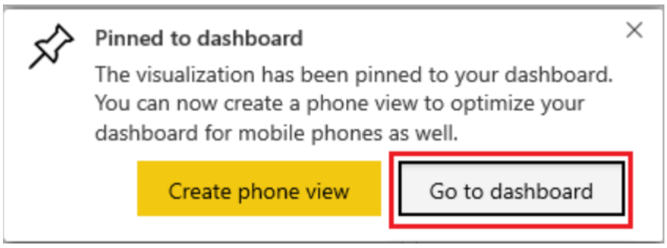
4.In this case, we select the option for **new dashboard** and enter a name.



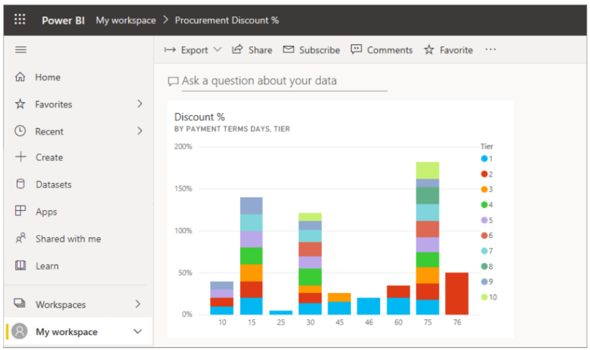
5.In some cases, the item you're pinning might have a *theme* already applied. For example, visuals pinned from an Excel workbook. If so, select the theme to apply to the tile:

- **Use destination theme**: The theme of the dashboard.
- **Keep current theme**: The theme of the report.

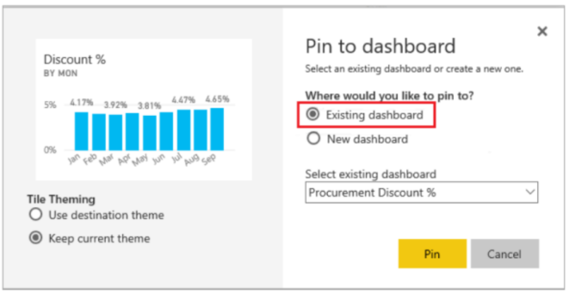
6.When you select **Pin**, Power BI creates the new dashboard in the current workspace. After the **Pinned to dashboard** message appears, select **Go to dashboard**. If you're prompted to save the report, select **Save**.



Power BI opens the new dashboard, which has one tile: the visualization you just pinned.

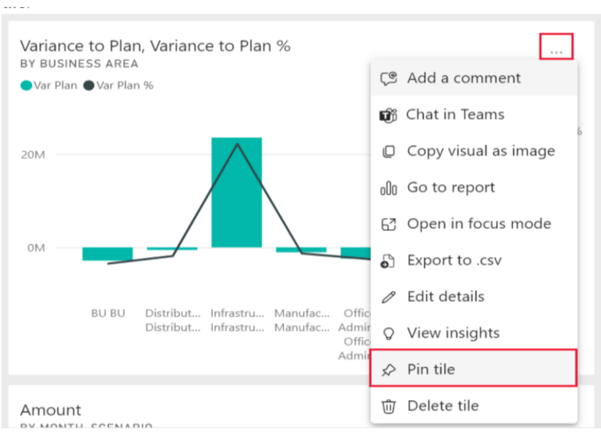


7.Select the tile to return to the report. Pin a few more tiles to the new dashboard. When the **Pin to dashboard** window appears, select **Existing dashboard**.



Pin a tile to another dashboard

1. Open the IT Spend Analysis sample dashboard.
2. Hover over the tile you want to pin, select **More options (...)**, then select **Pin tile**.

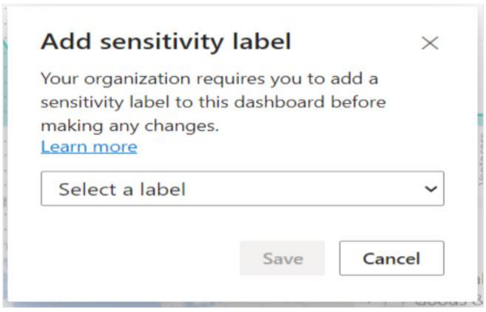


3. Pin the tile to an existing dashboard or to a new dashboard.

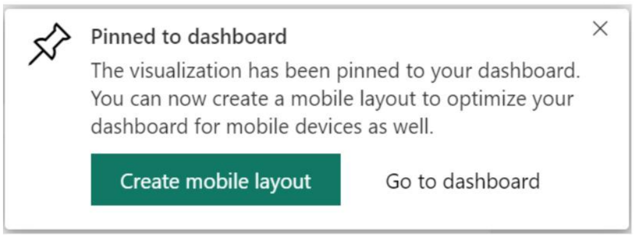
- **Existing dashboard**: select the name of the dashboard from the dropdown.
- **New dashboard**: enter the name of the new dashboard.

4.Select **Pin**.

5.If this dashboard doesn't yet have a sensitivity label, Power BI prompts you to specify one.



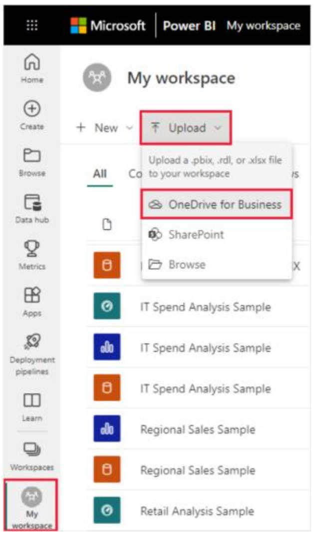
6.A Success message near the top right corner lets you know the visualization was pinned to the selected dashboard.



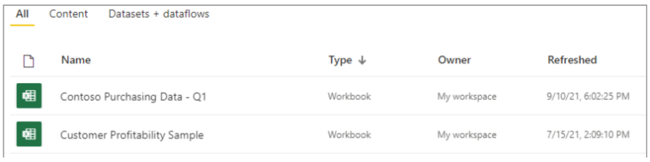
6. Select **Go to dashboard** to see the pinned tile. There, you can rename, resize, link, and move the pinned visualization.

Pin a tile to a Power BI dashboard from Excel

1. Upload your workbook to your OneDrive for work or school.
2. From Power BI, connect to that workbook by going to **My workspace** and selecting **Upload** > **OneDrive - Business** and navigating to the location where you saved the Excel file. Select the file and choose **Upload**.



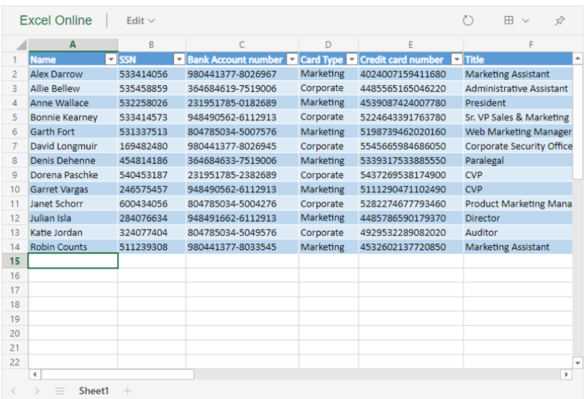
3.In Power BI, the workbook is added to your workspace. The icon indicates an Excel workbook.


All Content Datasets + dataflows

Name	Type ↓	Owner	Refreshed
Contoso Purchasing Data - Q1	Workbook	My workspace	9/10/21, 6:02:25 PM
Customer Profitability Sample	Workbook	My workspace	7/15/21, 2:09:10 PM

4. Open the workbook in Power BI by selecting the workbook name.

Changes you make to the workbook in Power BI aren't saved and don't affect the original workbook on OneDrive for work or school. If you sort, filter, or change values in Power BI, those changes can't be saved or pinned. If you need to save changes, select **Edit** from the upper-right corner to open it for editing in Excel Online or Excel. Changes made this way might take a few minutes to update in the tiles on the dashboards.


Excel Online | Edit

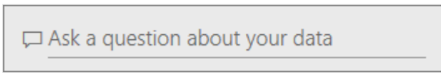
Name	SSN	Bank Account number	Card Type	Credit card number	Title
Alex Darrow	533414056	980441377-8026967	Marketing	4024007159411680	Marketing Assistant
Allie Bellew	535458859	364684619-7519006	Corporate	4485565165046220	Administrative Assistant
Anne Wallace	532258026	231951785-0182689	Marketing	4539087424007780	President
Bonnie Kearney	533414573	948490562-6112913	Corporate	5224643391763780	Sr. VP Sales & Marketing
Garth Fort	531337513	804785034-5007576	Marketing	5198739462020160	Web Marketing Manager
David Longmuir	169482480	980441377-8026945	Corporate	5545665984686050	Corporate Security Office
Denis Dehenne	454814186	364684633-7519006	Marketing	5339317533885550	Paralegal
Dorena Paschke	540453187	231951785-2382689	Corporate	5437269538174900	CVP
Garret Vargas	246575457	948490562-6112913	Marketing	5111290471102490	CVP
Janet Schorr	600434056	804785034-5004276	Corporate	5282274677793460	Product Marketing Mana
Julian Isla	284076634	948491662-6112913	Marketing	4485786590179370	Director
Katie Jordan	324077404	804785034-5049576	Corporate	4929532289082020	Auditor
Robin Counts	511239308	980441377-8033545	Marketing	4532602137720850	Marketing Assistant

Sheet1

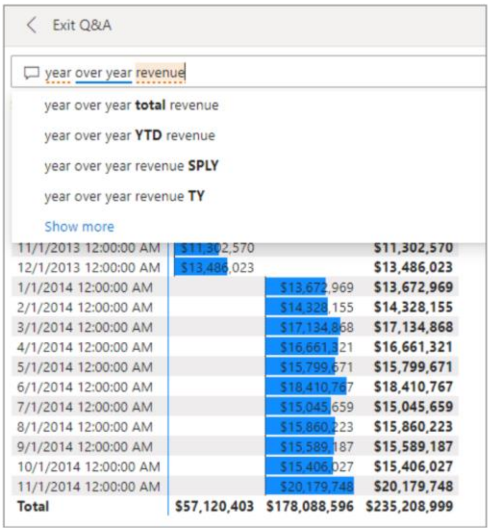
Pin a tile to a dashboard

1. Open a dashboard that has at least one tile pinned from a report. When you ask a question, Power BI looks for the answer in any semantic model that has a tile pinned to that dashboard.

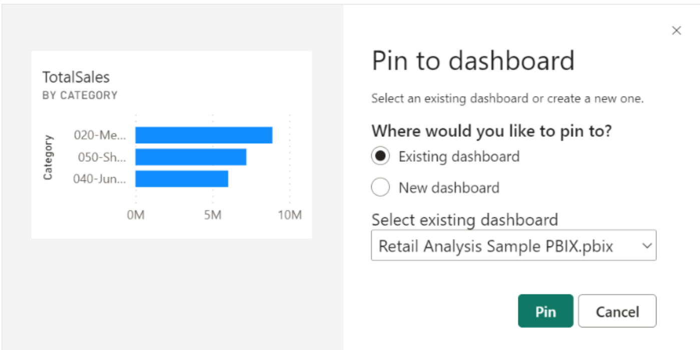
2. In the question box at the top of your dashboard, start typing what you want to know about your data.



3. For example, as you type "year over year revenue", the question box gives you suggestions. Select a suggestion or press Enter.

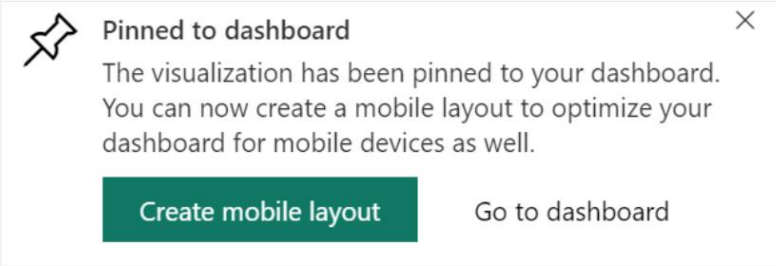


4. To add the chart to your dashboard as a tile, select **Pin visual** in the upper right corner. If the dashboard has been shared with you, you aren't able to pin any visualizations.
5. Pin the tile to an existing dashboard or to a new dashboard.



- Existing dashboard: select the name of the dashboard from the dropdown. Your choices are limited to only those dashboards within the current workspace.
- New dashboard: type the name of the new dashboard, and it will be added to your current workspace.

6. Select **Pin**. A success message lets you know the visualization was added as a tile to your dashboard.



7. Select **Go to dashboard** to see the new tile. There, you can rename, resize, add a hyperlink, reposition the tile, and more on your dashboard.