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# The Power BI service for business users

12/10/2021 • 3 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

You live in a data culture, where business decisions are based on facts, not opinions. You need data to make these decisions, and your colleagues don't let you down.

They send you all types of reports, spreadsheets, emails with charts, and even printed handouts. As the data piles up, it becomes harder and harder to find what you need quickly, and you worry that you might not be using the most recent information.



## The Power BI service for *business users*

Power BI makes your job easier and more impactful at the same time. All that data becomes charts and graphs, that visualize your data for you. Instead of long lists or tables of numbers and words, your data insights are *beautiful* – colorful and compelling visuals that tell stories about the insights in your data.



Just open the Power BI service, in a browser or on a mobile device. You and your colleagues work from the same trusted dashboards and reports, that update and refresh automatically, so you're always working with the freshest content.



Since the content isn't static, you can dig in, looking for trends, insights, and other business intelligence. Slice and dice the content, and even ask it questions using your own words. Or, sit back and let your data discover interesting insights for you; send you alerts when data changes, and email reports to you on a schedule you set. All your data, anytime, in the cloud or on-premises, from any device. That's just the beginning of what Power BI

can do.

## Am I a Power BI *business user*?

The way you interact with Power BI will depend on your job role. As a consumer or *business user*, you are the person who receives content (dashboards, reports, and apps) from colleagues. You work in the online or mobile version of Power BI, which is called the Power BI service, reviewing and interacting with this content, to make business decisions.

As a business user, you won't have access to all of the capabilities of Power BI, and that's ok, because your job isn't building dashboards and reports. You'll be using the Power BI service for analysis, monitoring, exploration, and decision making.

You'll undoubtedly hear the term "Power BI Desktop" or just "Desktop", and this is a stand-alone tool used by the *designers* who build and share dashboards and reports with you. It's important to know that there are other Power BI tools out there, but if you're a *business user*, you'll only work with the Power BI service.

And because you'll be working with *shared* content, you'll need one of the following:

- a Power BI Pro or Premium Per User (PPU) license
- for your organization to have a Power BI Premium subscription, and for the content to be shared with you from Premium capacity.

### NOTE

Users with PPU capacity subscriptions cannot share content with users who have a Pro or free license.

For more information about licenses and subscriptions, see [Which license do I have?](#)

## Safely interact with content

As you filter, slice, subscribe, and export, don't worry -- your work is not impacting the underlying dataset or the original shared content (dashboards, reports, and apps).

You cannot hurt your data. Power BI is a great place for you to explore and experiment without worrying that you'll "break" anything.

That doesn't mean you can't save your changes - you can. But those changes only affect your view of the content. And reverting to the original default view is as easy as clicking a button.



## Next steps





[Take a tour of the Power BI service for business users](#)

[Power BI service training for business users](#)

[Terminology and concepts for Power BI \*business users\*](#)

# Basic concepts for the Power BI service business user

12/10/2021 • 9 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

This article assumes that you've already read the [Power BI overview](#) and have identified yourself as a [Power BI business user](#). *Business users* receive Power BI content, like dashboards, reports, and apps, from colleagues. *Business users* work with the Power BI service (app.powerbi.com), which is the website-based version of Power BI.

Receiving content from others requires one of the following:

- A Power BI Pro or Premium Per User (PPU) user license
- Your organization to have a subscription for Power BI Premium, and for the content to be shared with you from a Power BI Premium capacity. [Look up your license and subscription types](#).

You'll undoubtedly hear the term "Power BI Desktop" or just "Desktop." It is the stand-alone tool used by *designers* who build and share dashboards and reports with you. It's important to know that there are other Power BI tools out there. As long as you're a *business user*, you'll only work with the Power BI service. This article applies only to the Power BI service.

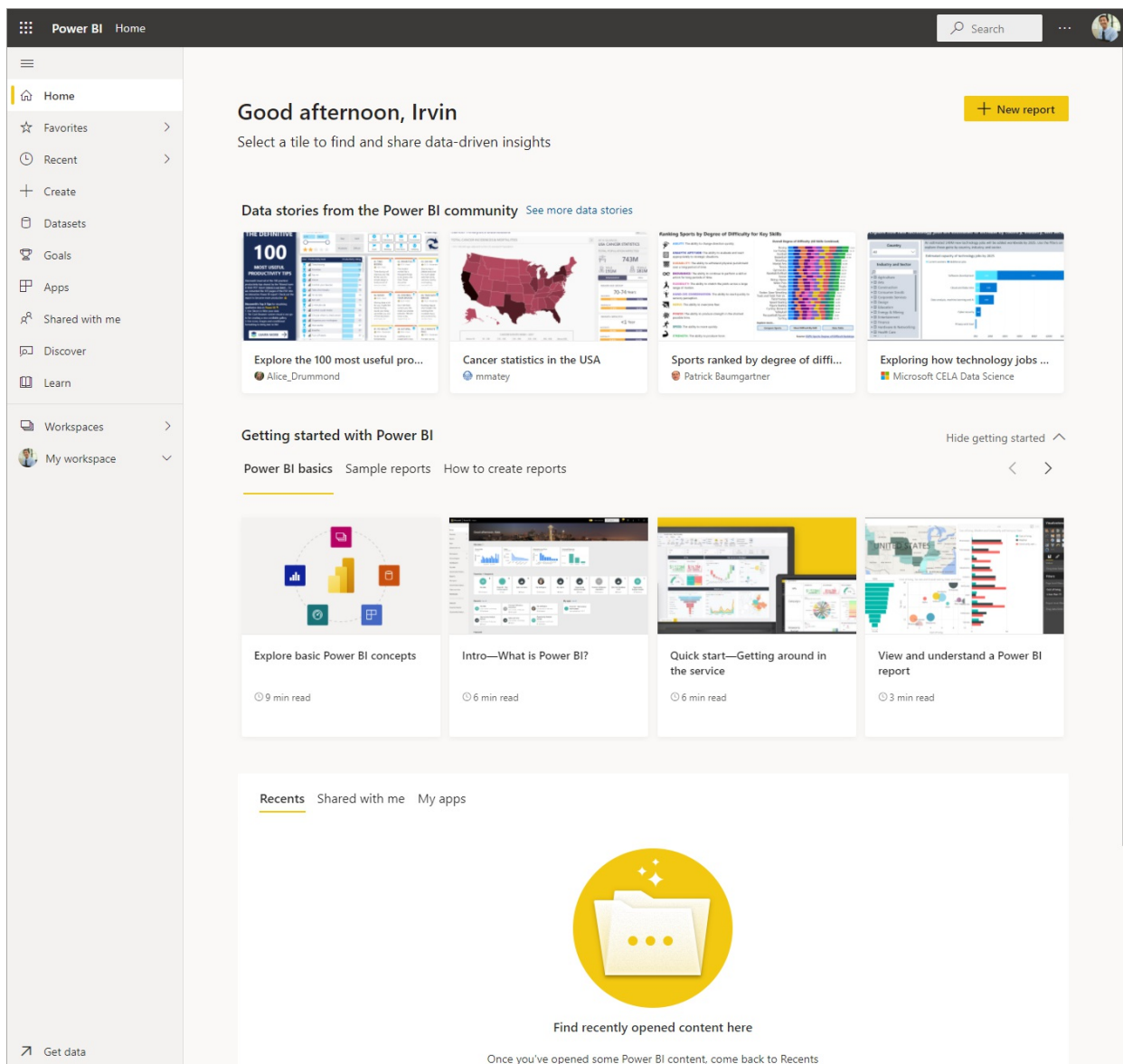
## Terminology and concepts

This article isn't a visual tour of Power BI, nor is it a hands-on tutorial. Instead, it's an overview article that will get you comfortable with Power BI terminology and concepts. It will teach you the lingo and the lay of the land. For a tour of the Power BI service and its navigation, go to [Quickstart - Getting around in the Power BI service](#).

## Open the Power BI service for the first time

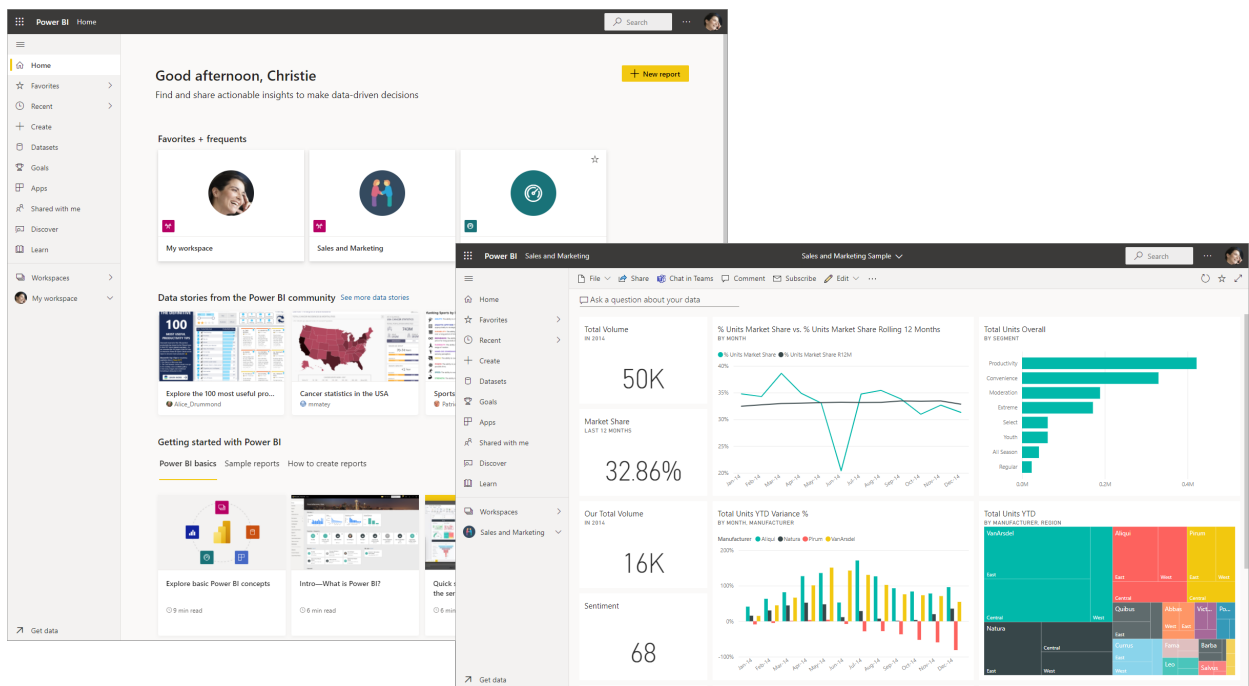
Most Power BI *business users* get the Power BI service because 1) their company buys licenses and 2) an admin assigns the licenses to employees.

To get started, open a browser and enter **app.powerbi.com**. The first time you open the Power BI service, you'll see something like the following:



As you use the Power BI service, you'll personalize what you see when you open the website each time. For example, some people like Power BI to open to **Home**, while others have a favorite dashboard they want to see first. Don't worry, these two article will teach you how to personalize your experience.

- [Introducing Power BI Home & Global Search](#)
- [Featured dashboards in the Power BI service](#)

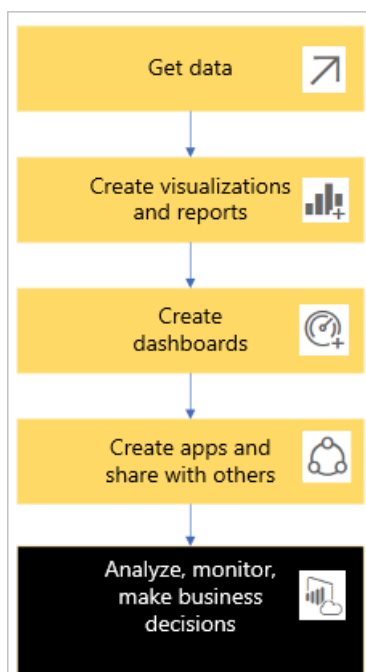


But before we get much further, let's back up and talk about the building blocks that make up the Power BI service.

## Power BI content

### Introduction to building blocks

For a Power BI *business user*, the five building blocks are: **visualizations**, **dashboards**, **reports**, **apps**, and **datasets**. These are sometimes referred to as *Power BI content*. Content exists in *workspaces*. A typical workflow involves all of the building blocks: A Power BI *designer* (yellow in diagram below) collects data from *datasets*, brings it into Power BI for analysis, creates *reports* full of *visualizations* that highlight interesting facts and insights, pins visualizations from reports to *dashboards*, and shares the reports and dashboards with *business users* like you (black in diagram below). The *designer* shares them in the form of dashboards, reports, or apps.



At its most basic:



- A **visualization** (or *visual*), is a type of chart built by Power BI *designers*. The visuals display the data from *reports* and *datasets*. Typically, *designers* build the visuals in Power BI Desktop.

For more info, see [Interact with Visuals in reports, dashboards, and apps](#).



- A *dataset* is a container of data. For example, it might be an Excel file from the World Health Organization. It could also be a company-owned database of customers or it might be a Salesforce file. Datasets are managed by *designers*.



- A *dashboard* is a single screen with interactive visuals, text, and graphics. A dashboard collects your most important metrics, on one screen, to tell a story or answer a question. The dashboard content comes from one or more reports and one or more datasets.

For more info, see [Dashboards for the Power BI service business users](#).



- A *report* is one or more pages of interactive visuals, text, and graphics that together make up a single report. Power BI bases a report on a single dataset. Often, the *designer* organizes report pages to address a central area of interest or answer a single question.

For more info, see [Reports in Power BI](#).



- An *app* is a way for *designers* to bundle and share related dashboards and reports together. *Business users* receive some apps automatically but can go search for other apps created by colleagues or by the community. For example, out-of-the-box apps are available for external services you may already use, like Google Analytics and Microsoft Dynamics CRM.

To be clear, if you're a new user and you've logged in to the Power BI service for the first time, you probably won't see any shared dashboards, apps, or reports yet.

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## Datasets

A *dataset* is a collection of data that *designers* import or connect to and then use to build reports and dashboards. As a *business user*, you won't interact directly with datasets, but it's still nice to learn how they fit into the bigger picture.

Each dataset represents a single source of data. For example, the source could be an Excel workbook on OneDrive, an on-premises SQL Server Analysis Services tabular dataset, or a Salesforce dataset. Power BI supports many different data sources.

When a designer shares an app with you, you can look up which datasets are being used, by opening **Related content**. You won't be able to add or change anything in the dataset. But, if the designer gives you permissions, you'll be able to download the report, look for [insights in the data](#), or even [create your own report](#) based on the dataset.

## Related content



Customer Profitability Sample

▼ My workspace

### REPORTS

Customer Profitability Sample



### DATASETS

Customer Profitability Sample

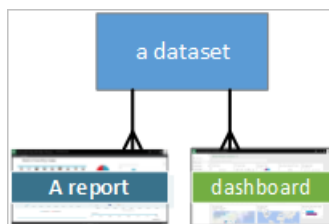


Last refresh: 5/16/2021, 2:37:25 PM

Close

One dataset...

- Can be used over and over by a report designer to create dashboards and reports
- Can be used to create many different reports
- Visuals from that one dataset can appear on many different dashboards

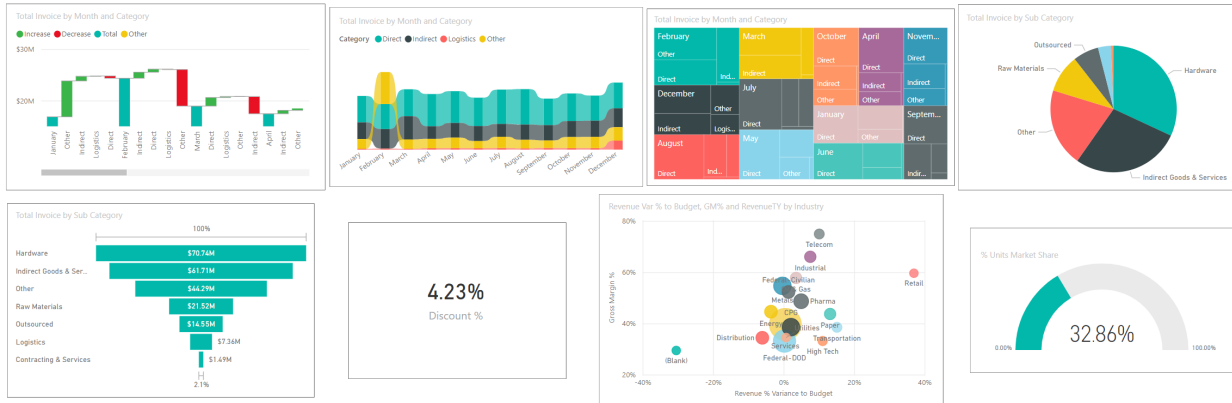


On to the next building block -- visualizations.

# Visualizations

Visualizations (also known as visuals) display insights that Power BI discovers in the data. Visualizations make it easier to interpret the insight, because your brain can comprehend a picture quicker than a spreadsheet of numbers.

Just some of the visualizations you'll come across in Power BI are: waterfall, ribbon, treemap, pie, funnel, card, scatter, and gauge.



See the [full list of visualizations included with Power BI](#).

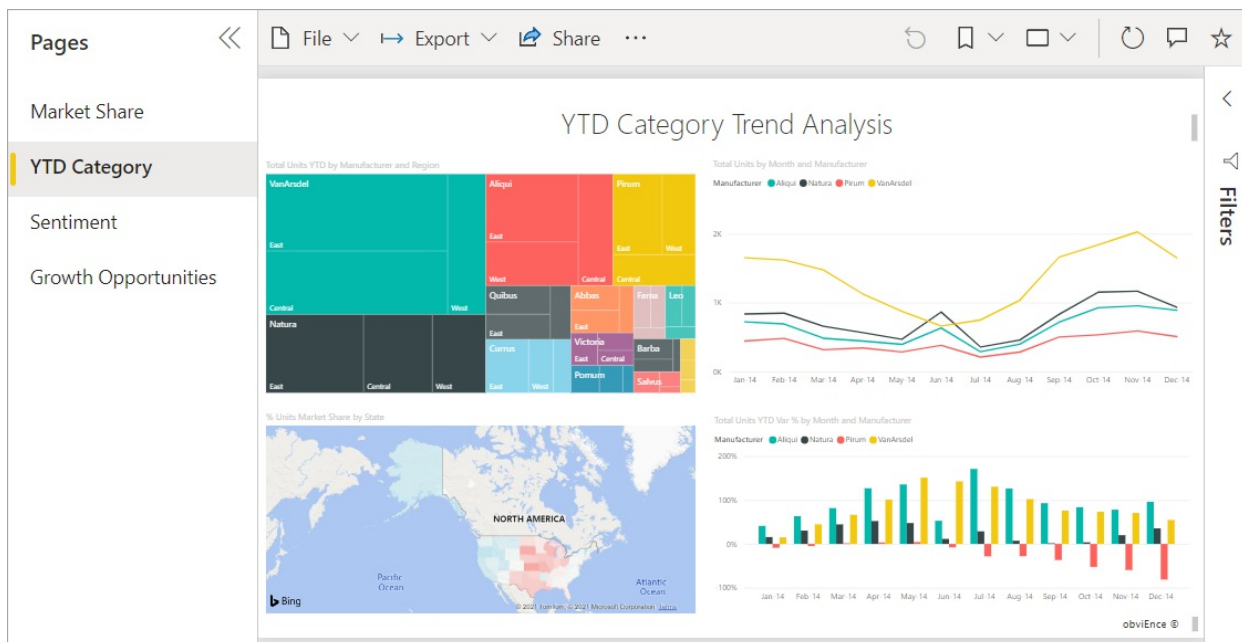
Special visualizations called *custom visuals* are available from the community. If you receive a report with a visual you don't recognize, likely it's a custom visual. If you need help with interpreting the custom visual, look up the name of the report or dashboard *designer* and contact them. Contact information is available by selecting the title from the top menu bar.

One visualization in a report...

- Can appear multiple times in the same report
- Can appear on many different dashboards

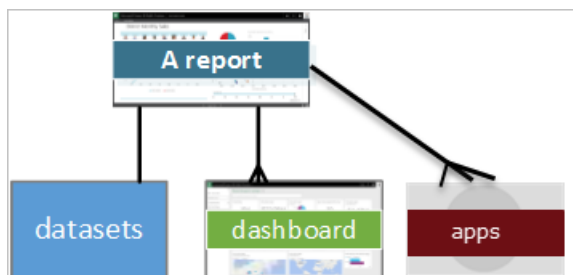
## Reports

A Power BI report is one or more pages of visualizations, graphics, and text. All of the visualizations in a report come from a single dataset. *Designers* build reports and share them with others; either individually or as part of an app. Typically, *Business users* [interact with reports in Reading view](#).



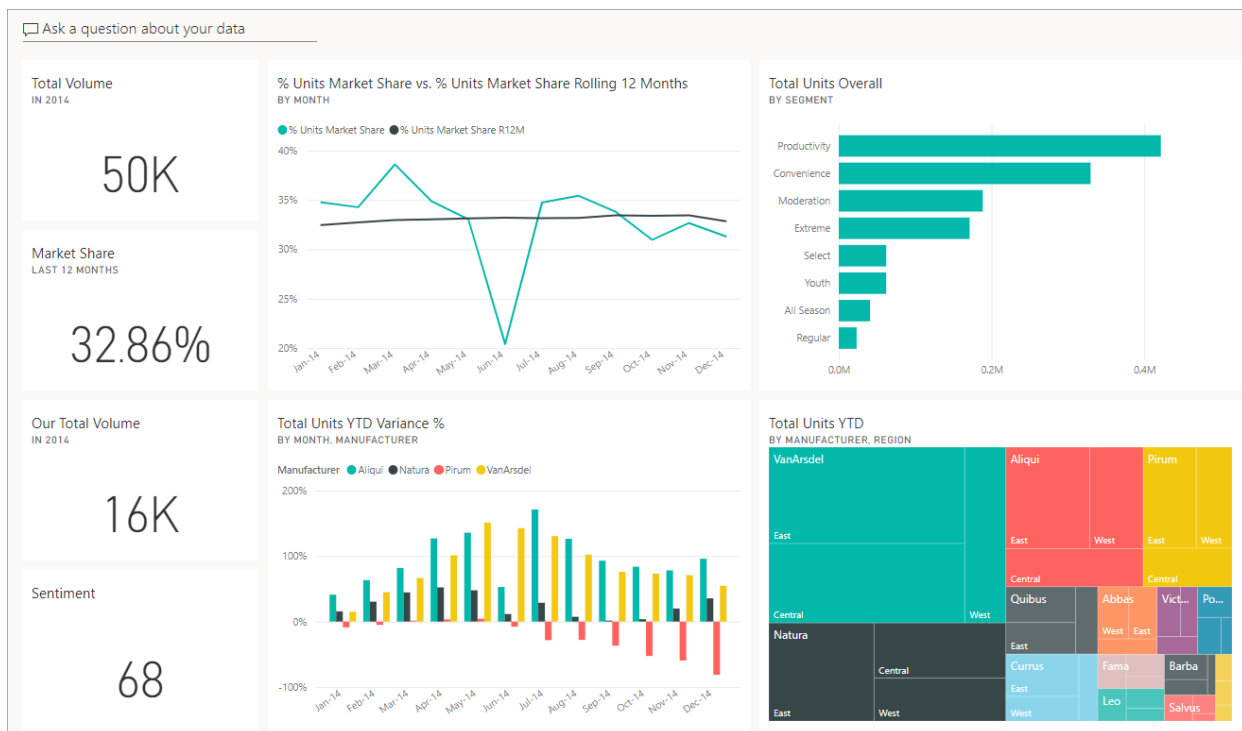
One report...

- Can be associated with multiple dashboards (tiles pinned from that one report can appear on multiple dashboards).
- Can be created using data from only one dataset.
- Can be part of multiple apps.



## Dashboards

A dashboard represents a customized graphical view of some subset of the underlying dataset(s). *Designers* build dashboards and share them with *business users*; either individually or as part of an app. A dashboard is a single canvas that has *tiles*, graphics, and text.



A tile is a rendering of a visual that a *designer pins*, for example, from a report to a dashboard. Each pinned tile shows a [visualization](#) that a designer created from a dataset and pinned to that dashboard. A tile can also contain an entire report page and can contain live streaming data or a video. There are many ways that *designers* add tiles to dashboards, too many to cover in this overview article. To learn more, see [Dashboard tiles in Power BI](#).

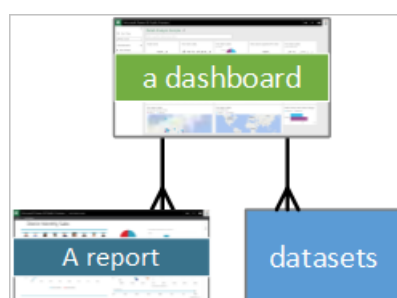
*Business users* can't edit dashboards. You can however add comments, view related data, set it as favorite, subscribe, and more.

What are some purposes for dashboards? Here are just a few:

- to see, in one glance, all the information needed to make decisions
- to monitor the most-important information about your business
- to ensure all colleagues are on the same page; viewing and using the same information
- to monitor the health of a business or product or business unit or marketing campaign, and so on
- to create a personalized view of a larger dashboard -- all the metrics that matter to you

ONE dashboard...

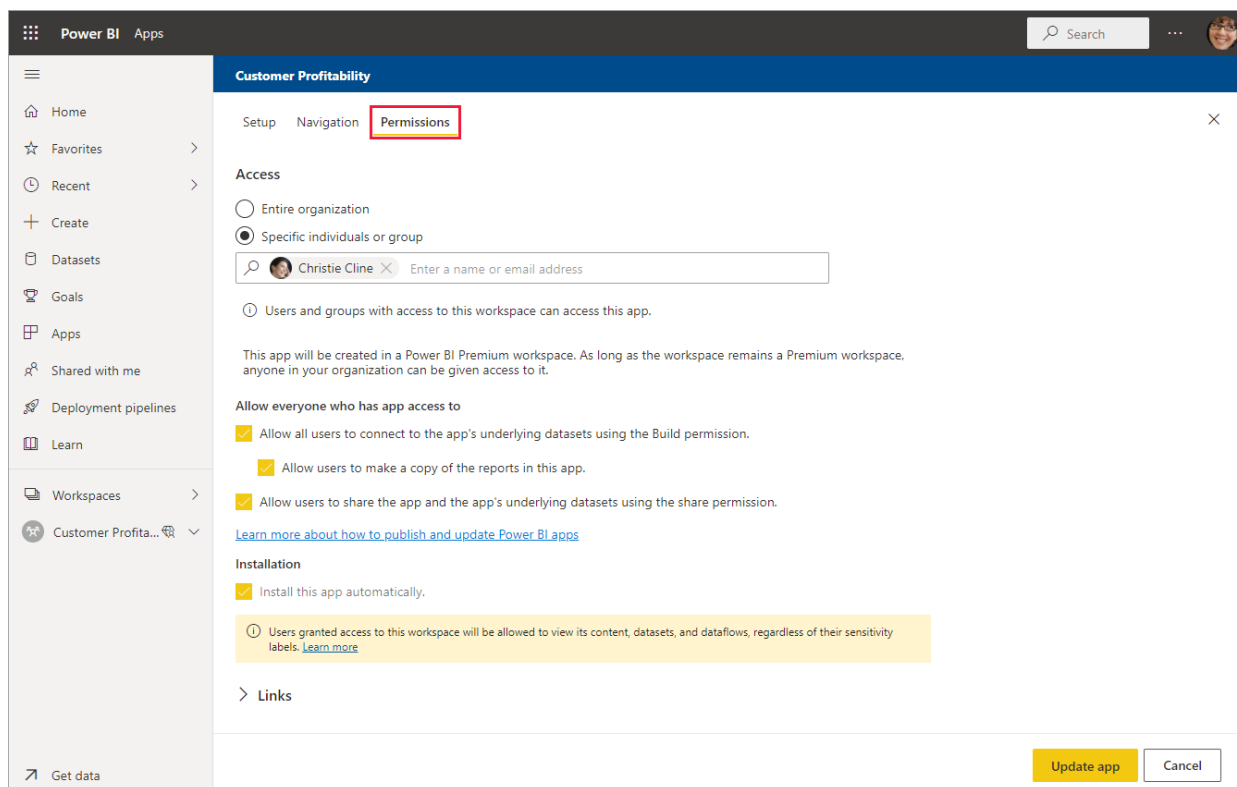
- can display visualizations from many different datasets
- can display visualizations from many different reports
- can display visualizations pinned from other tools (for example, Excel)



# Apps

These collections of dashboards and reports organize related content together into a single package. Power BI *designers* build them in workspaces and share apps with individuals, groups, entire organizations, or the public. As a *business user*, you can be confident that you and your colleagues are working with the same information; a single trusted version of the truth.

Sometimes, the app's workspace itself is shared, and there can be many people collaborating and updating both the workspace and the app. The extent of what you can do with an app will be determined by the permissions and access you are given.

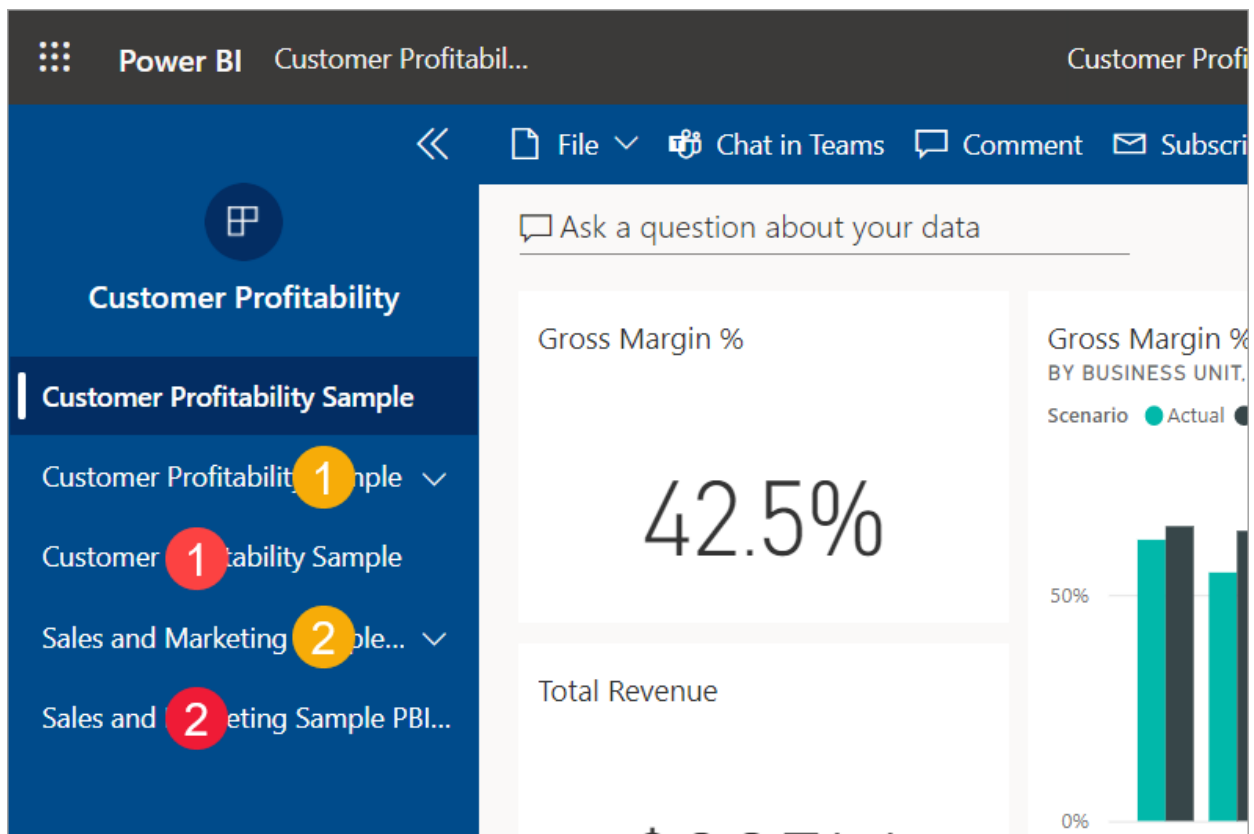


## NOTE

The use of apps requires a Power BI Pro or Premium Per User (PPU) license, or for the app workspace to be stored in Premium capacity. [Learn about licenses.](#)

Apps are easy to find and install in the [Power BI service](#) and on your mobile device. After you install an app, you don't have to remember the names of a lot of different dashboards and reports. They're all together in one app, in your browser, or on your mobile device.

This app has two dashboards and two reports that make up a single app. If you were to select the arrow to the right of a report name, you'd see a list of pages that make up that report.



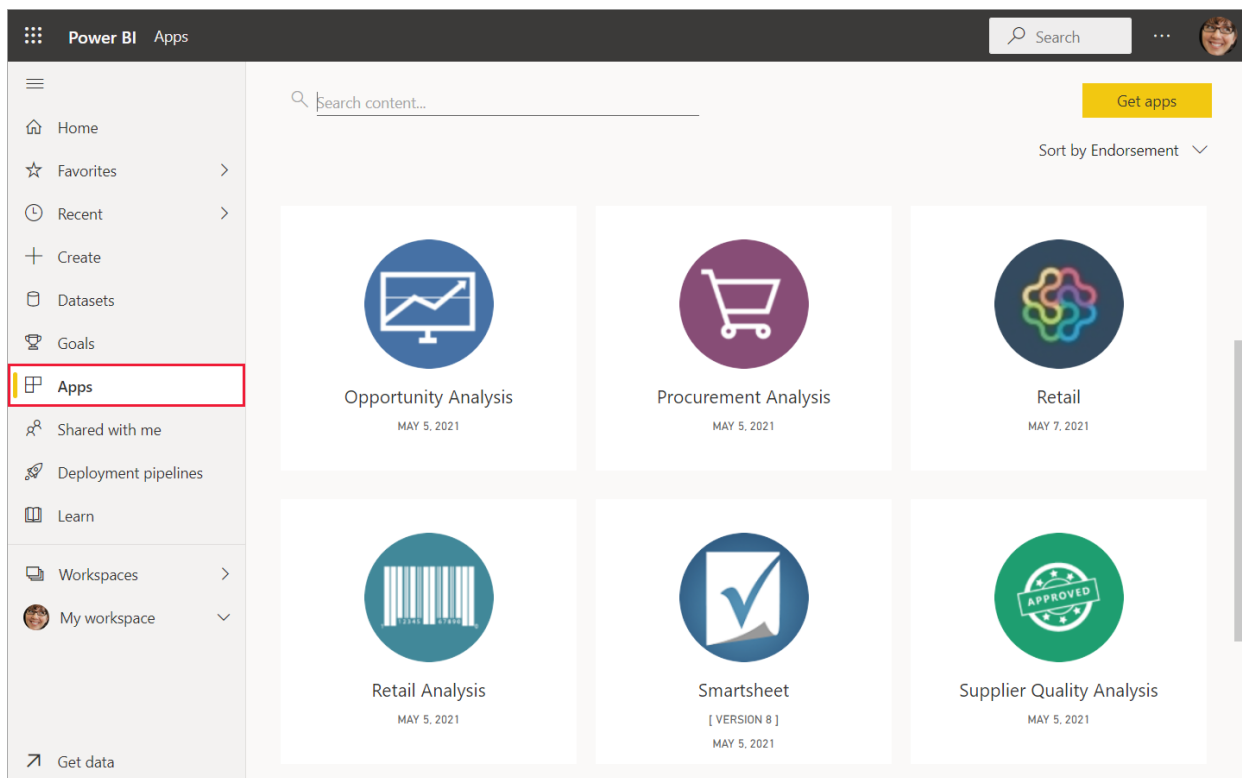
Whenever the app is updated, you automatically see the changes. Also, the designer controls the schedule for how often Power BI refreshes the data. You don't need to worry about keeping it up-to-date.

You can get apps in a few different ways:

- The app designer can install the app automatically in your Power BI account.
- The app designer can send you a direct link to an app.
- You can search from within the Power BI service for apps available to you from your organization or from the community. You can also visit [Microsoft AppSource](#), where you will see all the apps that you can use.

In Power BI on your mobile device, you can only install apps from a direct link, and not from AppSource. If the app designer installs the app automatically, you'll see it in your list of apps.

Once you've installed the app, just select it from your Apps list and select which dashboard or report to open and explore first.



I hope this article gave you an understanding of the building blocks that make up the Power BI service for business users.

## Next steps

- Review and bookmark the [Glossary](#)
- Take a [tour of the Power BI service](#)
- Read the [overview of Power BI written especially for business users](#)
- Watch a video in which Will reviews the basic concepts and gives a tour of the Power BI service.





### NOTE

This video might use earlier versions of Power BI Desktop or the Power BI service.

<https://www.youtube.com/embed/B2vd4MQrz4M>

# Quickstart: learn about the Power BI capabilities for *business users*

12/10/2021 • 6 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

In this quickstart, you'll learn how to interact with Power BI to discover data-driven business insights. This article isn't intended to be a deep dive, but rather a quick trip through many of the actions available for Power BI **business users**.

If you're not signed up for Power BI, [sign up for a free trial](#) before you begin.

## What is Power BI?

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. Whether your data is a simple Excel spreadsheet, or a collection of data from different data sources, Power BI lets you easily connect to your data sources, visualize (or discover) what's important, and share that with anyone or everyone you want.



Open the Power BI service, in a browser or on a mobile device. You and your colleagues work from the same trusted apps, dashboards, and reports, that update and refresh automatically, so you're always working with the freshest content.

## Reading view

There are two modes for interacting with reports in the Power BI service: Editing view and Reading view. If you are a *business user*, then you are more likely to use Reading view to consume reports created by others. Editing view is used by report *designers*, who create the reports and share them with you. Reading view is your way to explore and interact with reports created by colleagues.

Even in Reading view, the content isn't static. You can dig in, looking for trends, insights, and other business intelligence. Slice and dice the content, and even ask it questions using your own words. Or, sit back and let your data discover interesting insights for you; send you alerts when data changes, and email reports to you on a schedule you set. All your data, any time, in the cloud or on-premises, from any device.

Read on to learn about these and more.

## Power BI content

When we use the term "content" in Power BI, we're referring to reports, dashboards, and apps. These are the building blocks you'll use to explore your data and make business decisions.

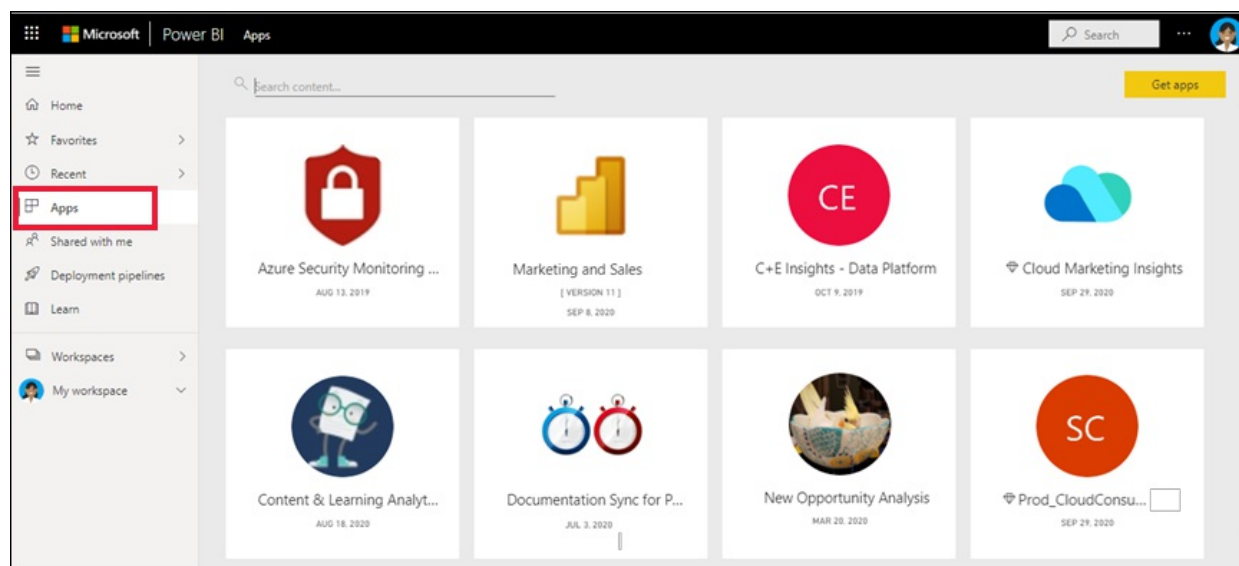
## NOTE

Dashboards, reports, and apps can be viewed and shared on mobile devices, too.

## Apps

An *app* is a Power BI content type that combines related dashboards and reports, all in one place. An app can have one or more dashboards and one or more reports, all bundled together. Apps are created by Power BI *designers* who distribute and share the apps with *business users* like you.

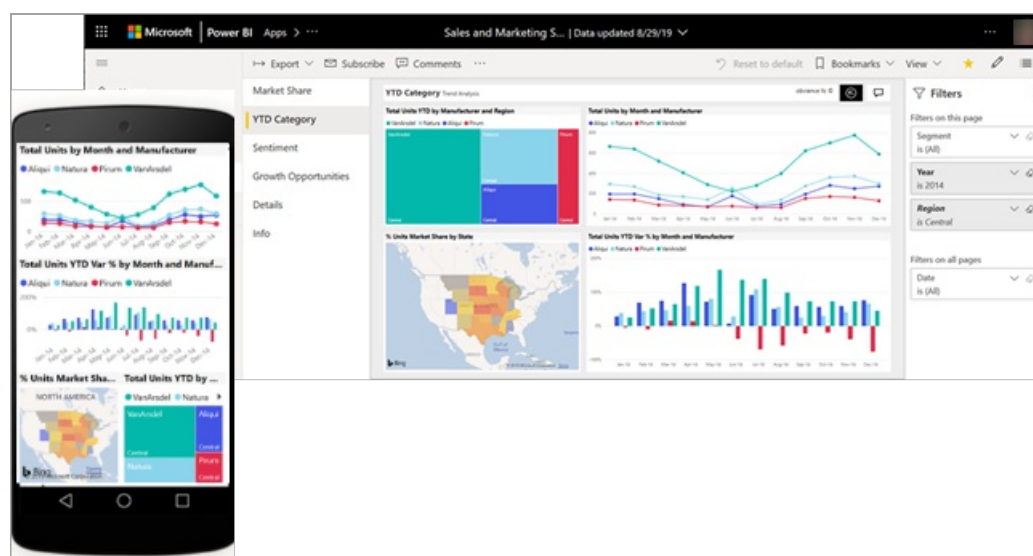
One way to view your apps is to select **Apps** from the nav pane and choose an app to open.



To learn more about viewing apps, see [Power BI apps](#)

## Reports

A Power BI report is a multi-perspective view into a dataset, with visuals that represent different findings and insights from that dataset. A report can have a single visual or pages full of visuals. Reports are created by Power BI *designers* who distribute and share the reports with *business users* like you.

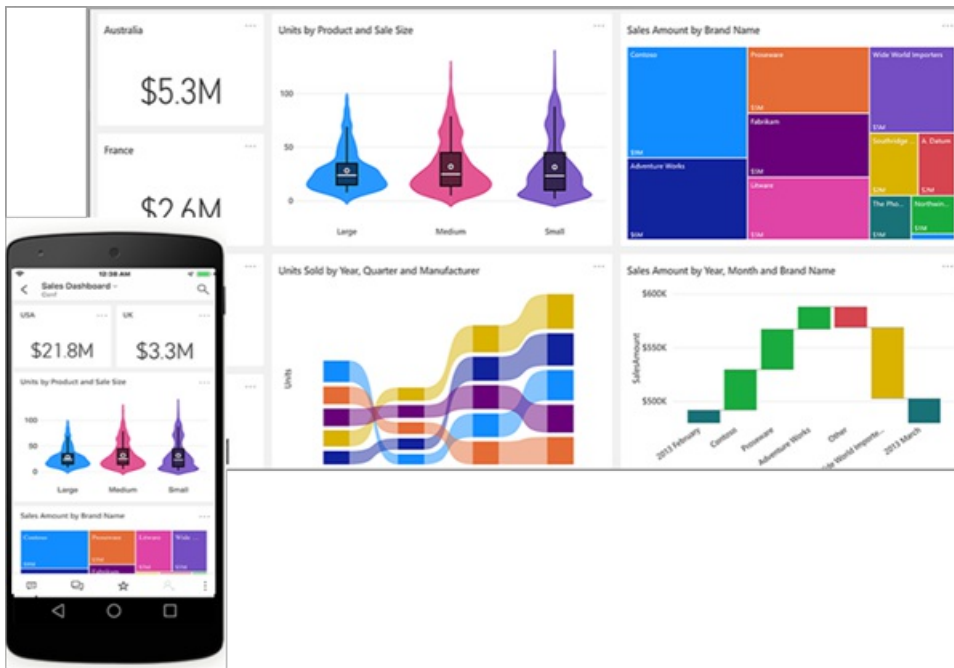


To learn how to view reports, see [Power BI reports](#)

## Dashboards

A Power BI dashboard is a single page, often called a canvas, that uses visualizations to tell a story. Because it is limited to one page, a well-designed dashboard contains only the most-important elements of that story.

The visualizations you see on the dashboard are called tiles and are pinned to the dashboard by report *designers*. In most cases, selecting a tile takes you to the report page where the visualization was created.

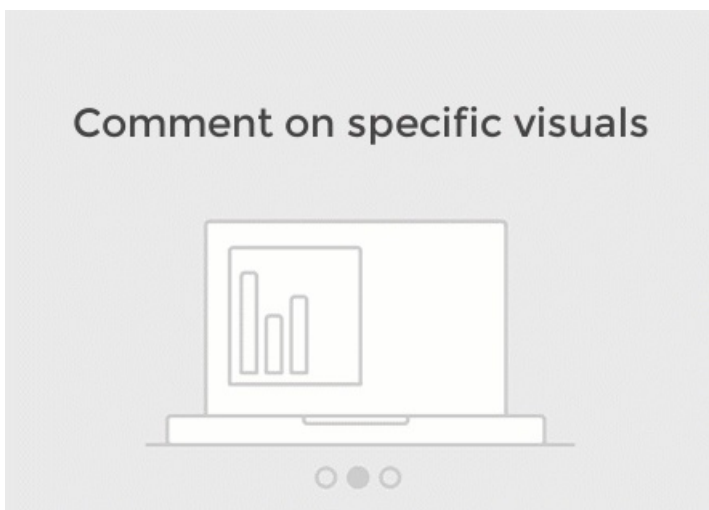


To learn how to view dashboards, see [Power BI dashboards](#)

## Interact in the Power BI service

### Collaborate with colleagues

Skip the email. Add a personal comment or start a conversation with colleagues about a dashboard, right there on that dashboard. The comment feature is just one of the ways you can collaborate with others.



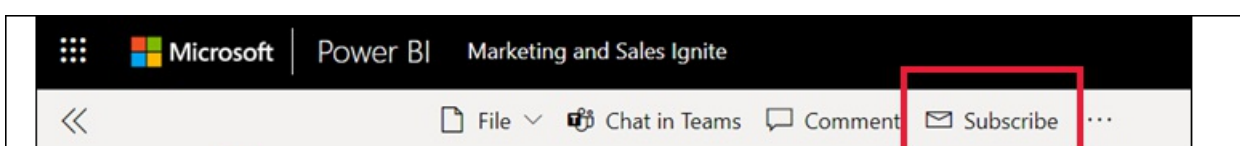
Learn more about [commenting](#)

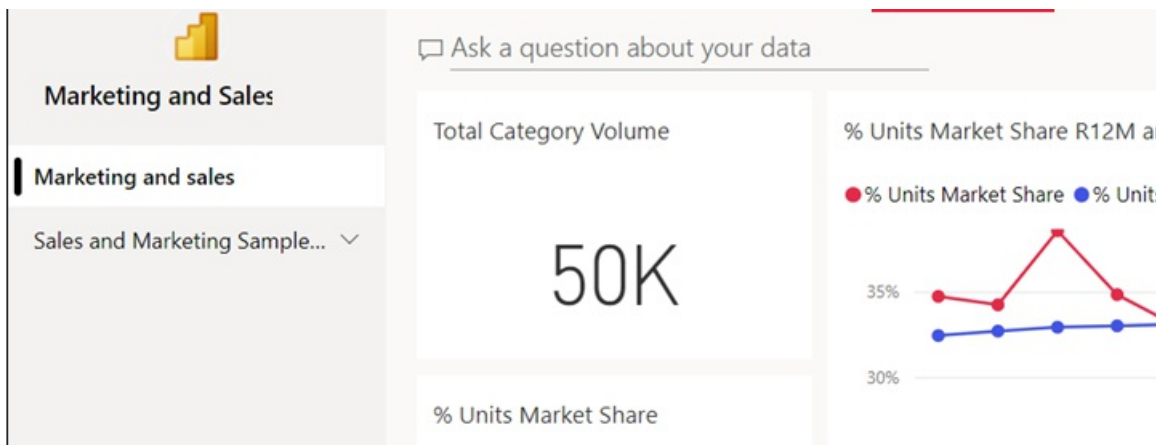
### Sit back and let Power BI work for you

Two of the ways that the Power BI service does the work for you is with subscriptions and alerts.

#### Subscribe to a dashboard (or report)

It's not necessary to open Power BI to monitor a dashboard. You can subscribe instead, and Power BI will email you a snapshot of that dashboard on a schedule you set.





## Subscription for Sales and Marketing



Microsoft Power BI (No Reply)

To Michele

If there are problems with how this message is displayed, click here to view it in a web browser.



Marketing and sales.png

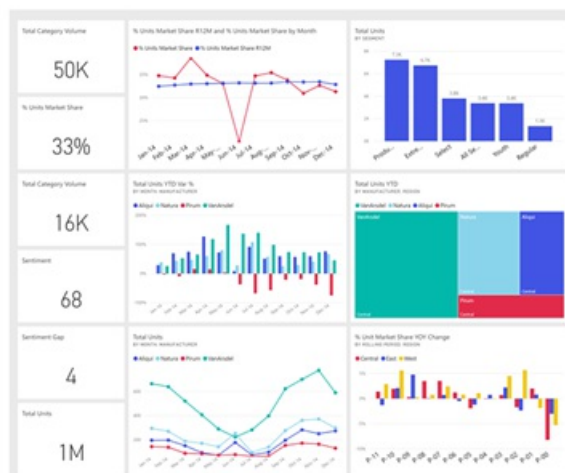
359 KB



Power BI

### Marketing and sales

[Go to the dashboard >](#)



You're receiving this email because you subscribed to the 'Marketing and sales' dashboard. The image above was generated at October 1, 2020 5:02 UTC.

[Manage subscription >](#)

[Privacy Statement](#)

Microsoft Corporation, One Microsoft Way, Redmond, WA 98052

Learn more about [Power BI subscriptions](#)

### Get alerts when your data reaches a threshold

Your data is live, and your visuals update automatically to reflect this. If you want to get notified when data changes above or below a threshold you set, use data alerts. Alerts work on gauges, KPIs, and cards.



Power BI sends you an email when the value increases or decreases past the limit you set.

### Alert for Sentiment



Power BI

## Alert for Sentiment

- Dashboard: Marketing and sales
- Measure: Alert for Sentiment
- Current value: 67.8289578361177
- Threshold: 70

[Go to dashboard >](#)

[Get Insights >](#)

[Privacy Statement](#)

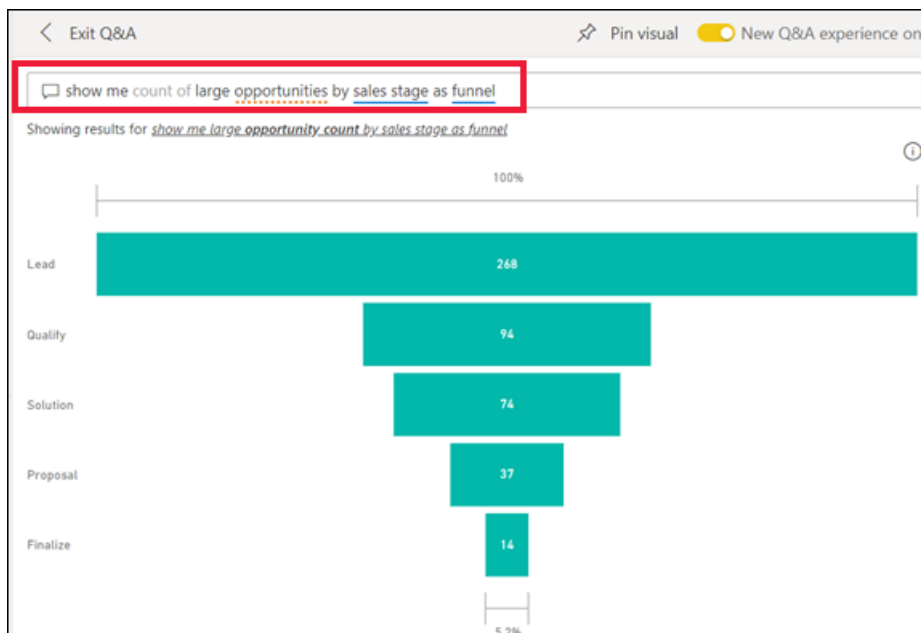
Microsoft Corporation, One Microsoft Way, Redmond, WA 98052



Learn more about [Power BI alerts](#)

### Use Q&A to ask questions using natural language

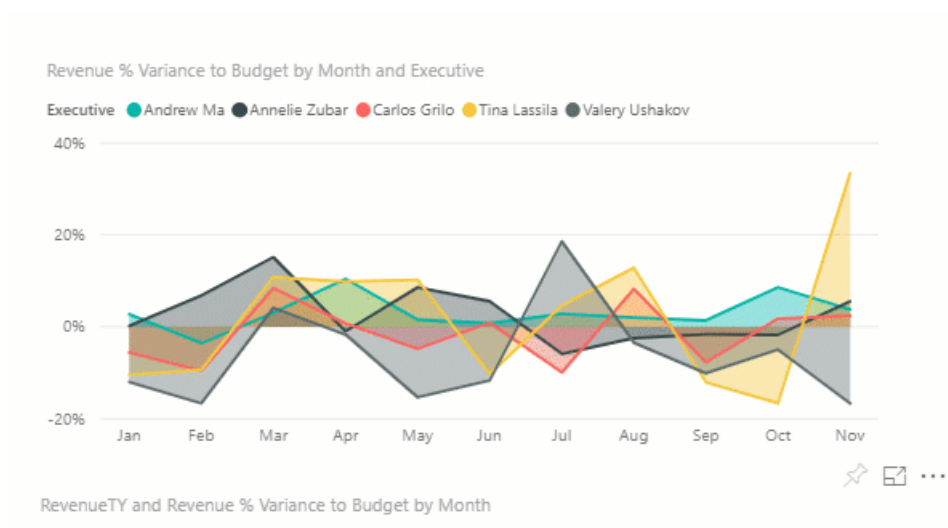
Sometimes the fastest way to get an answer from your data is to ask a question using natural language. The Q&A question box is available at the top of your dashboard. For example, "show me count of large opportunities by sales stage as a funnel."



Learn more about [Power BI Q&A](#)

### Display details on a visualization

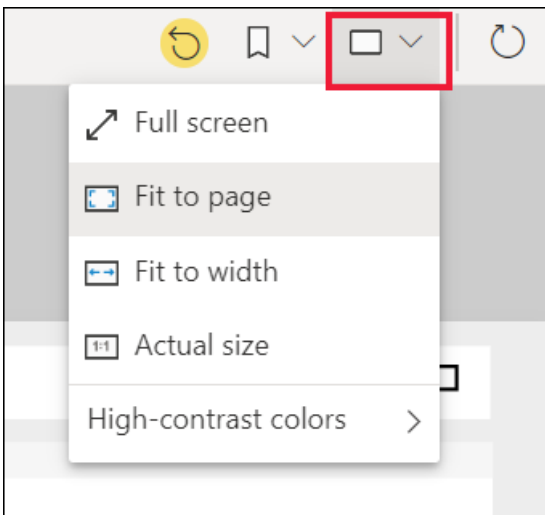
Visuals are made up of datapoints, and by hovering over a datapoint, you can view the details.



### Adjust the display dimensions

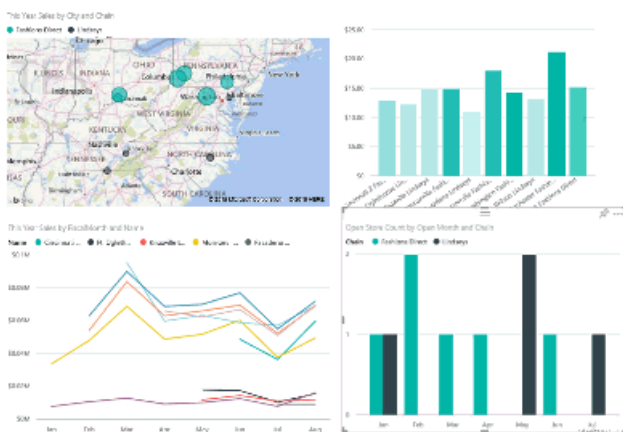
Reports are viewed on many different devices, with varying screen sizes and aspect ratios. The default rendering may not be what you want to see on your device.

To adjust, from the upper right menu bar select the **View** icon and choose one of the display options.




## See how all the visuals on a page are interconnected

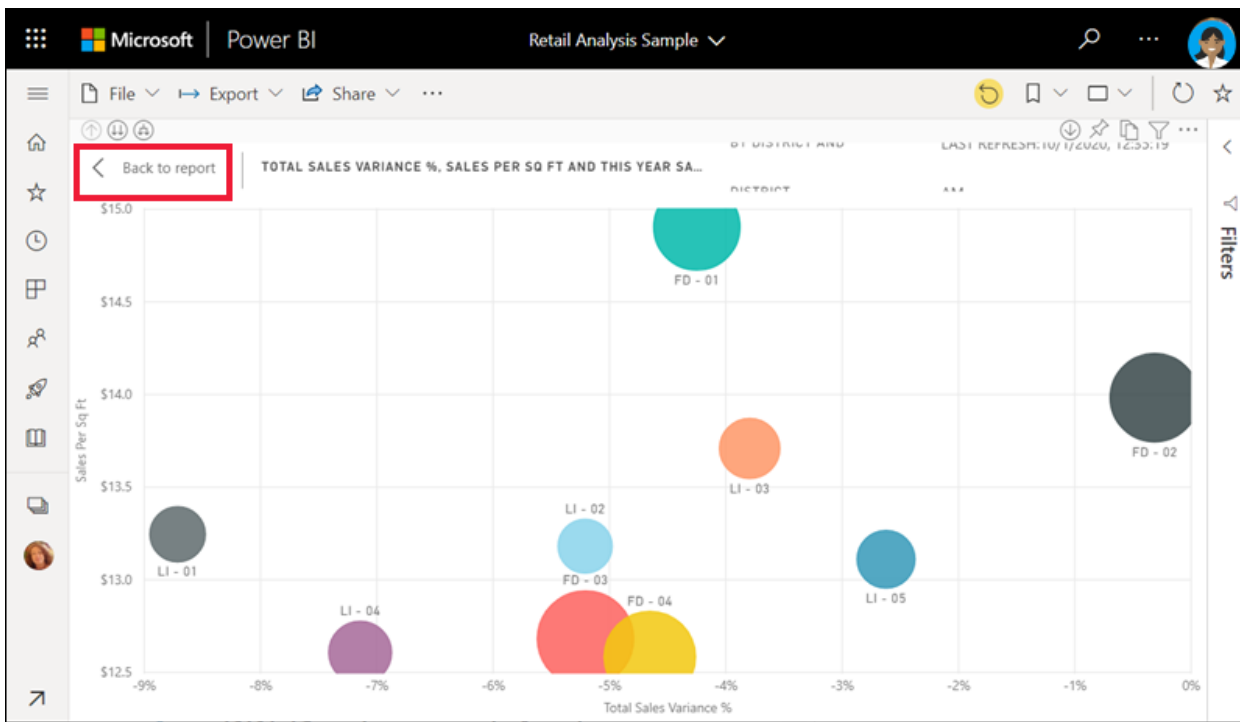
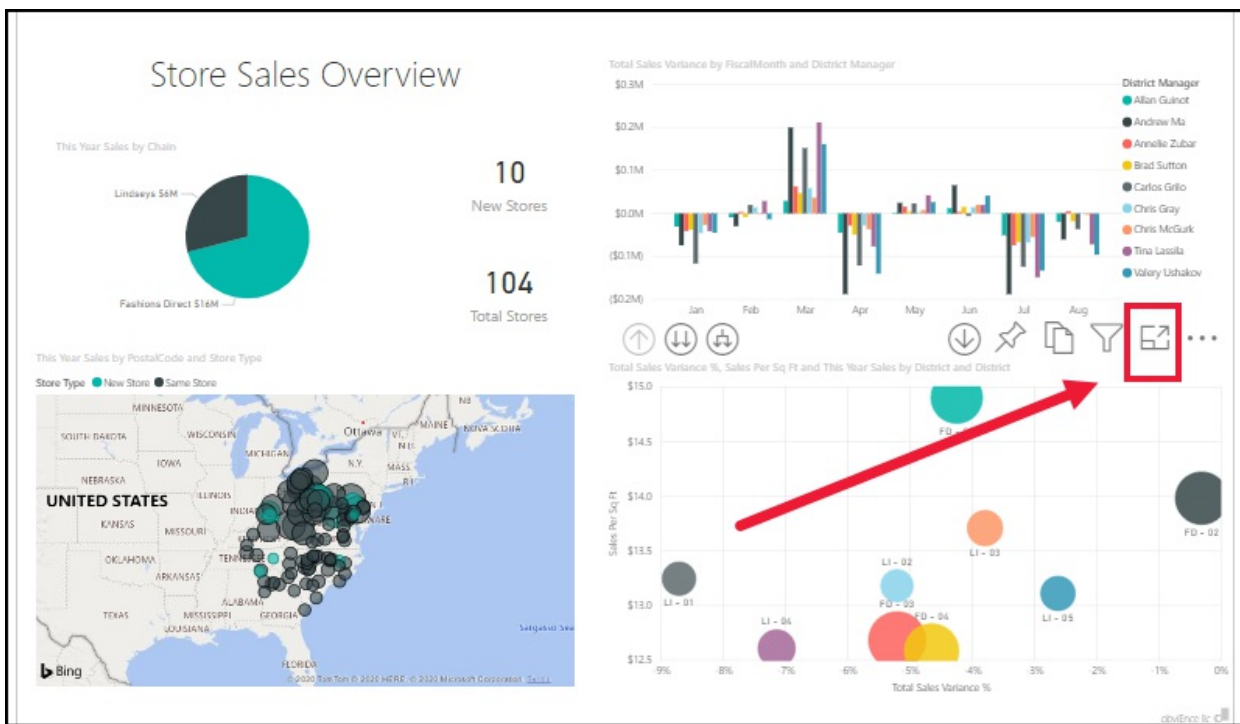
Cross-highlight and cross-filter the related visualizations on a report page. The visualizations on a single report page are all "connected" to each other. What this means is that if you select one or more values in one visualization, other visualizations that use that same value will change based on your selection.



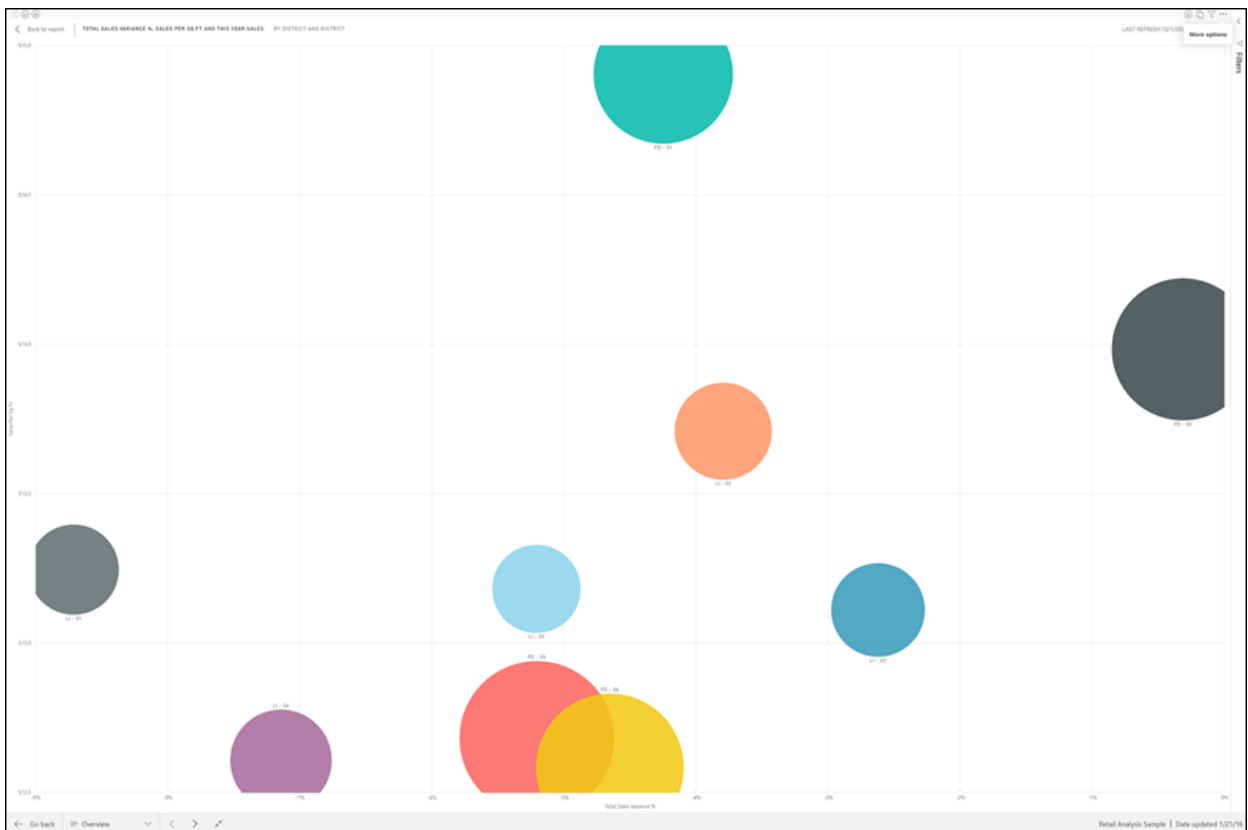
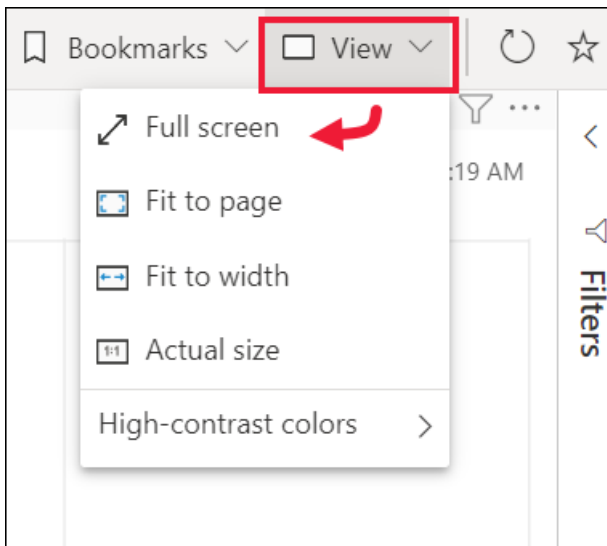
Learn more about [visual interactions](#)

## Zoom in on individual visuals

Hover over a visual and select the **Focus mode** icon . When you view a visualization in Focus mode, it expands to fill the entire report canvas as shown below.



To display that same visualization without the distraction of menu bars, filter pane, and other chrome -- select **Full screen** from the View dropdown.



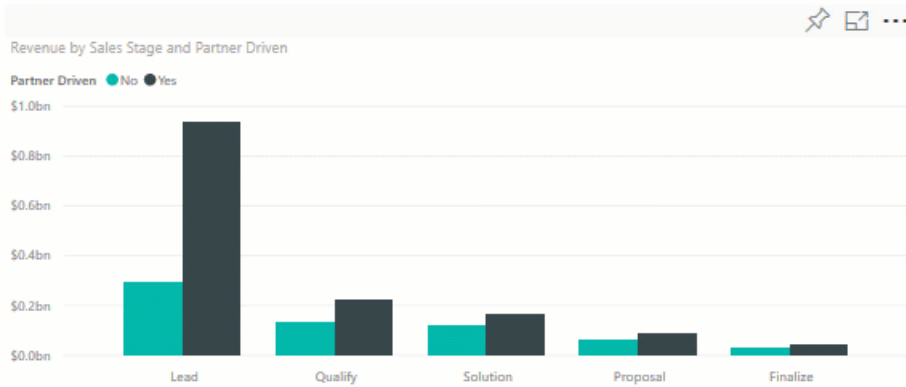
Learn more about [focus mode](#) and [full screen mode](#)

### Sort a visualization

Visuals on a report page can be sorted and saved with your changes applied.

Hover over a visual to make it active, and select **More options** (...) to open sorting options.

# Revenue Analysis

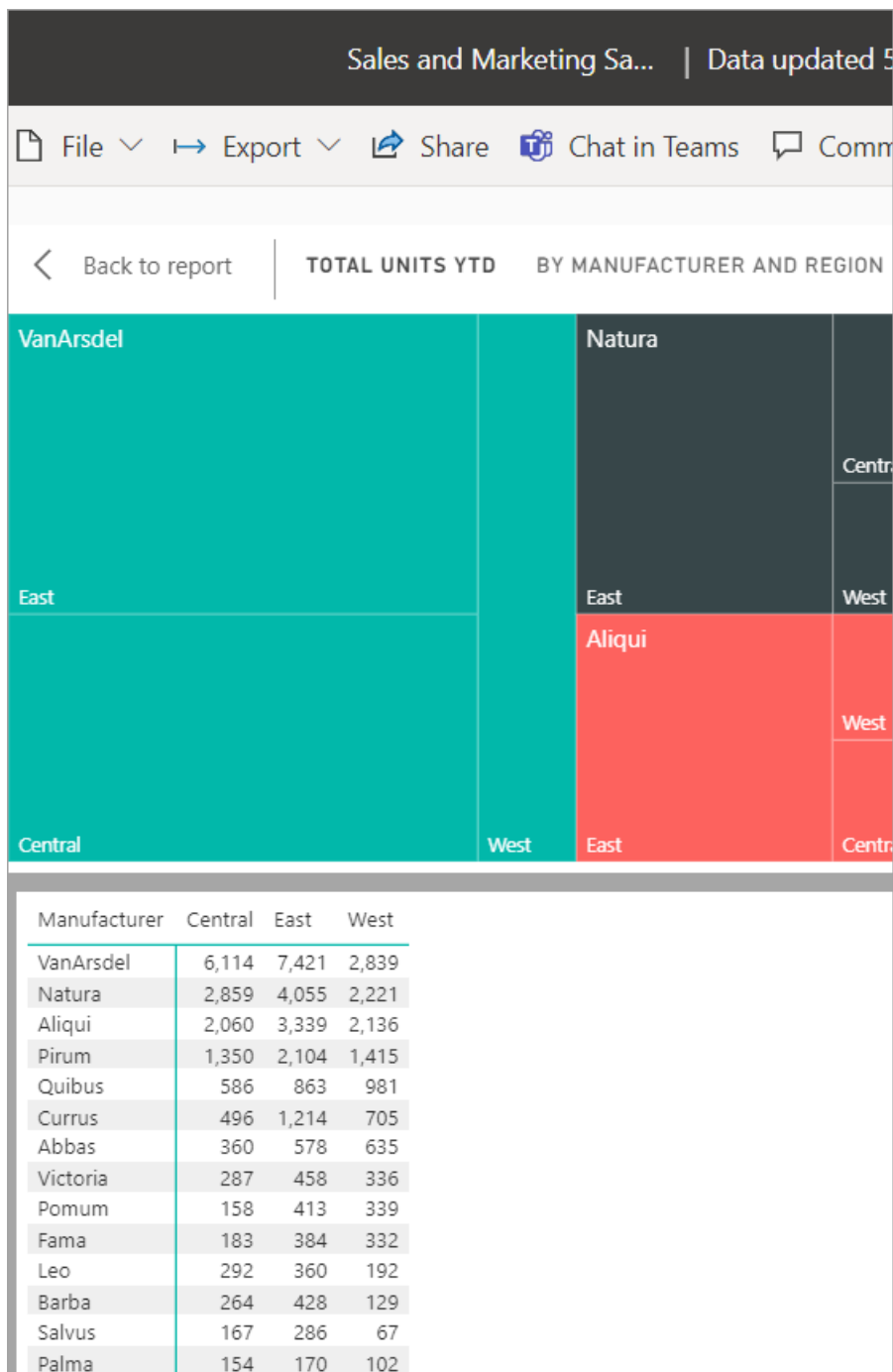


Learn more about [sorting visuals](#)

## Show the data used to create a visualization

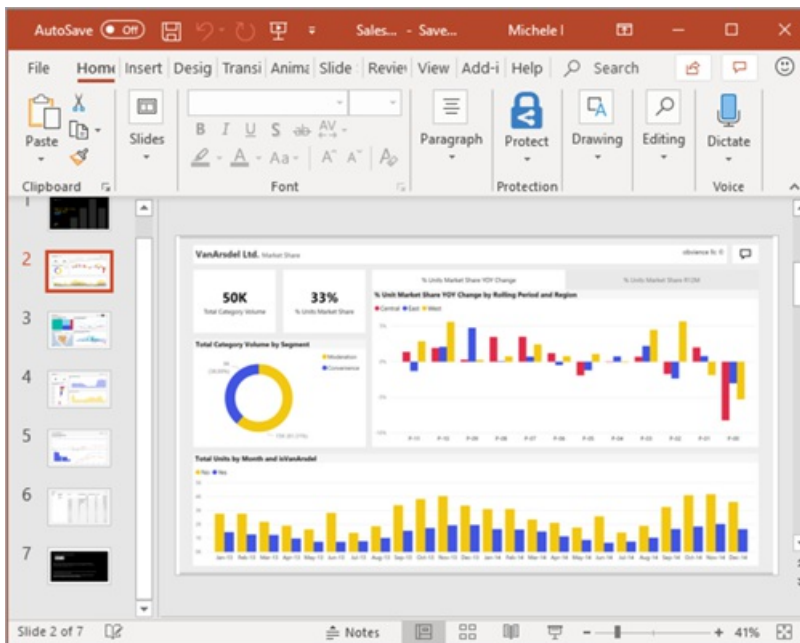
A Power BI visualization is constructed using data from underlying datasets. If you're interested in seeing behind-the-scenes, Power BI lets you *display* the data that is being used to create the visual. When you select **Show as a table**, Power BI displays the data below (or next to) the visualization.

With a visual active, select **More options** (...) and choose **Show as a table**.



## Export data to Excel

In addition to showing the data that is used to create a visual, you can also export that data and view it in Microsoft Excel. When you export to Excel, you're creating a separate document, a spreadsheet that isn't part of Power BI. Any changes that you make in the Excel file won't impact the data in Power BI. Whether you want to take a closer look at the data, or you want to use the data in another application or for another purpose, Power BI gives you that flexibility.



This has been a quick overview of just some of the things *business users* can do with the Power BI service.

## Clean up resources

- If you connected to an app, from the nav pane, select **Apps** to open the Apps content list. Hover over the app to delete, and select the trashcan icon.
- If you imported or connected to a Power BI sample report, from the nav pane, open **My workspace**. Using the tabs at the top, locate the dashboard, report, and dataset, and select the trashcan icon for each.

## Next steps

[Power BI for business users](#)

# Quickstart - Getting around in Power BI service

12/10/2021 • 7 minutes to read • [Edit Online](#)

Now that you know the [basics of Power BI](#), let's take a look around the **Power BI service**. As mentioned in the previous article, colleagues on your team might spend all of their time in **Power BI Desktop**, combining data and creating reports, dashboards, and apps for others. They're *designers*. You, on the other hand, might spend all of your time in the Power BI service, viewing and interacting with content created by others (**consuming** experience). You're a *business user*. This quickstart is for *business users*.

## Prerequisites

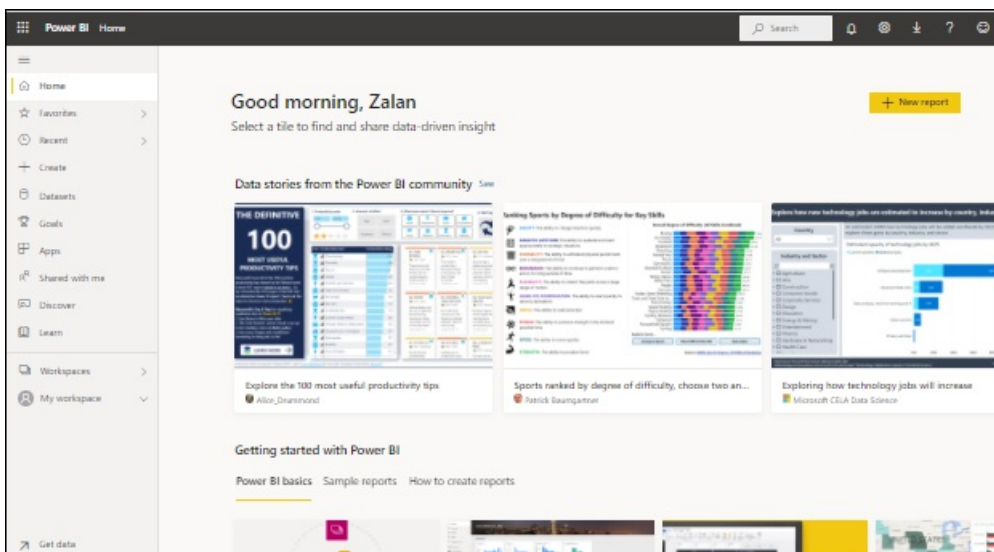
- If you're not signed up for Power BI, [sign up for a free trial](#) before you begin.
- Read [Power BI service basic concepts](#).
- Viewing Power BI content (reports, dashboards, apps) created by *designers* requires one of two conditions:
  - a Power BI Pro or Premium Per User (PPU) license
  - Your organization to have a Power BI Premium subscription, and the content to be shared with you from Premium capacity.


[Learn about licenses and subscriptions](#).

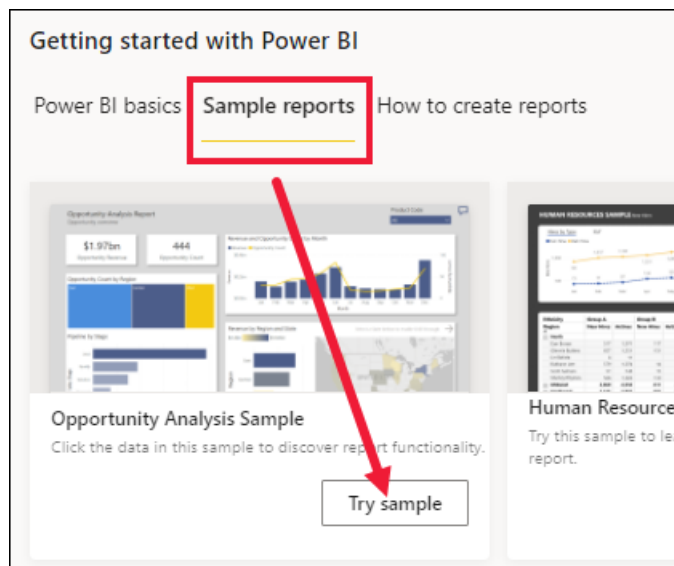
For the purposes of this quickstart, we aren't requiring either of these conditions to be met. Microsoft has made sample content available to you directly from the Power BI service interface. We'll use this sample content to learn our way around the Power BI service.

## Open the Power BI service

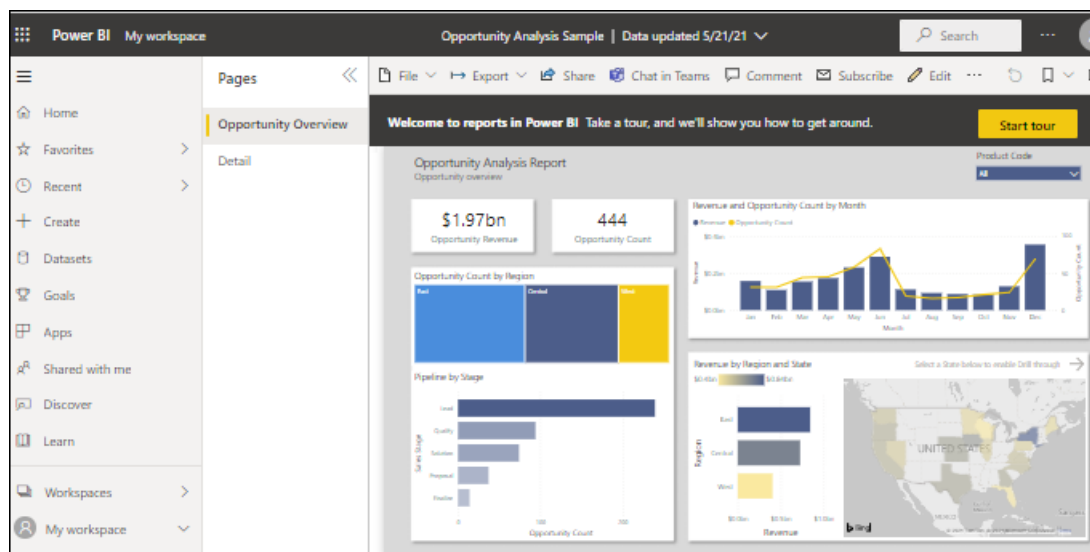
To begin, open the Power BI service ([app.powerbi.com](https://app.powerbi.com)).



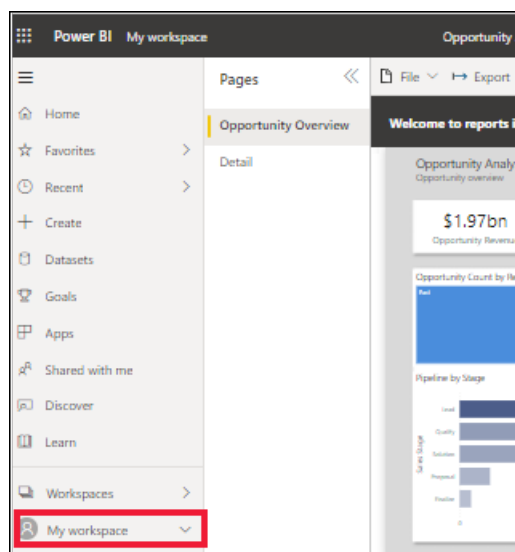
1. If the left navigation pane is collapsed, select the nav pane icon  to expand it.
2. Scroll down to **Getting started with Power BI > Sample reports**. We'll grab some sample data to use for our tour of the Power BI service. There are all types of sample data provided for you to explore, and this time we'll use the data about opportunity analysis.



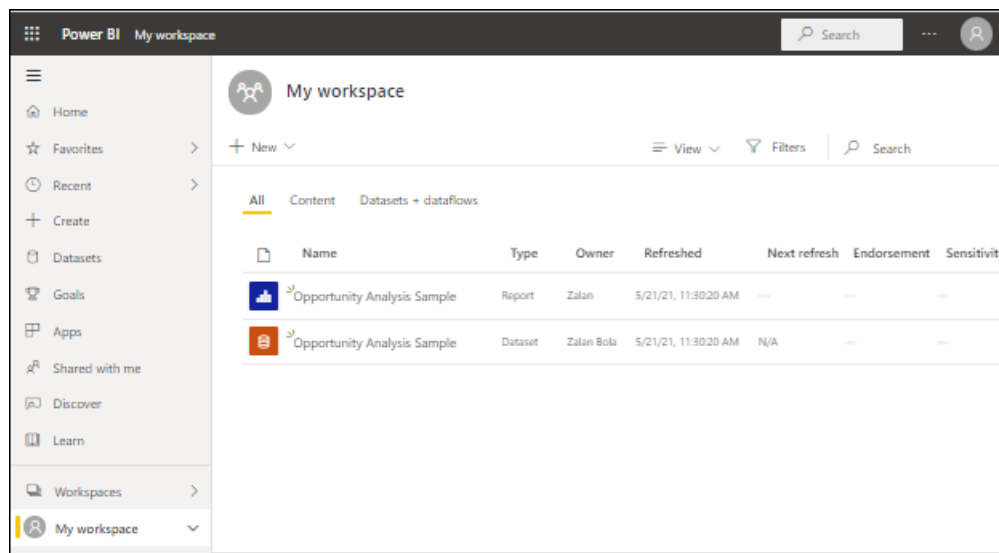
3. Select **Try sample** > **Open**. The Opportunity analysis sample report opens in the Power BI service.



4. The Power BI service installs the sample in your **My workspace**. **My workspace** is your private sandbox for learning and experimenting. Only you can see the content in **My workspace**. Select **My workspace** to see details about this sample report.



The sample includes one report and one dataset. Typically, *business users* won't receive datasets, but this sample is designed for all users and it does include one.



As a *business user*, most content that is shared with you won't include direct access to the underlying datasets. Because the Power BI samples are created for all Power BI customers, datasets are included.

## View content (dashboards and reports)

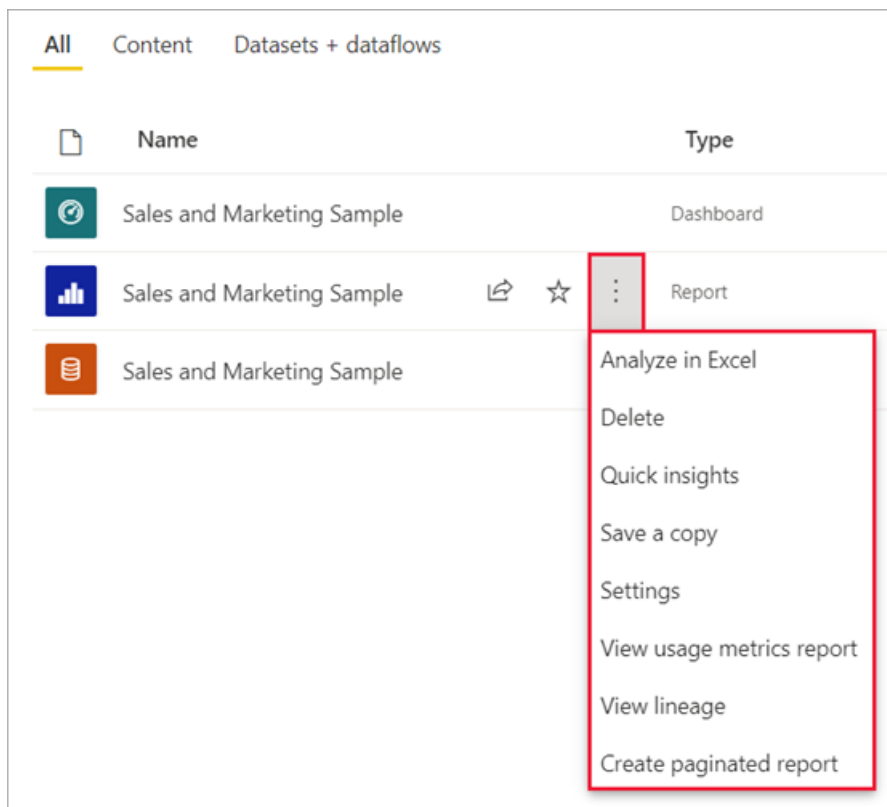
Content is organized within the context of a workspace. Every business user has at least one workspace, and it's called **My workspace**. When *designer* colleagues share content with you, you may end up with additional workspaces. For example, if a *designer* assigns you access permissions to one of their workspaces, that workspace will show up in your Power BI site.

**My workspace** stores all the content that you own and create. Think of it as your personal sandbox or work area for your own content. For many Power BI *business user*, **My workspace** remains empty because your job doesn't involve creating new content. *Business users*, by definition, consume data created by others and use that data to make business decisions. If you find that you are creating content, consider reading the [Power BI articles for report creators](#) instead.

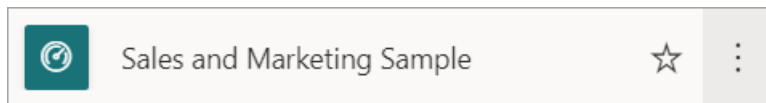
A workspace is much more than a simple listing of content. On this page, you can learn a lot about the workspace's dashboards and reports. In this section of the Quickstart, we'll put the *Opportunity analysis* sample aside, and look at a workspace that has both a dashboard and a report.

To display a list of actions for the dashboard or report, select **More actions (...)**.

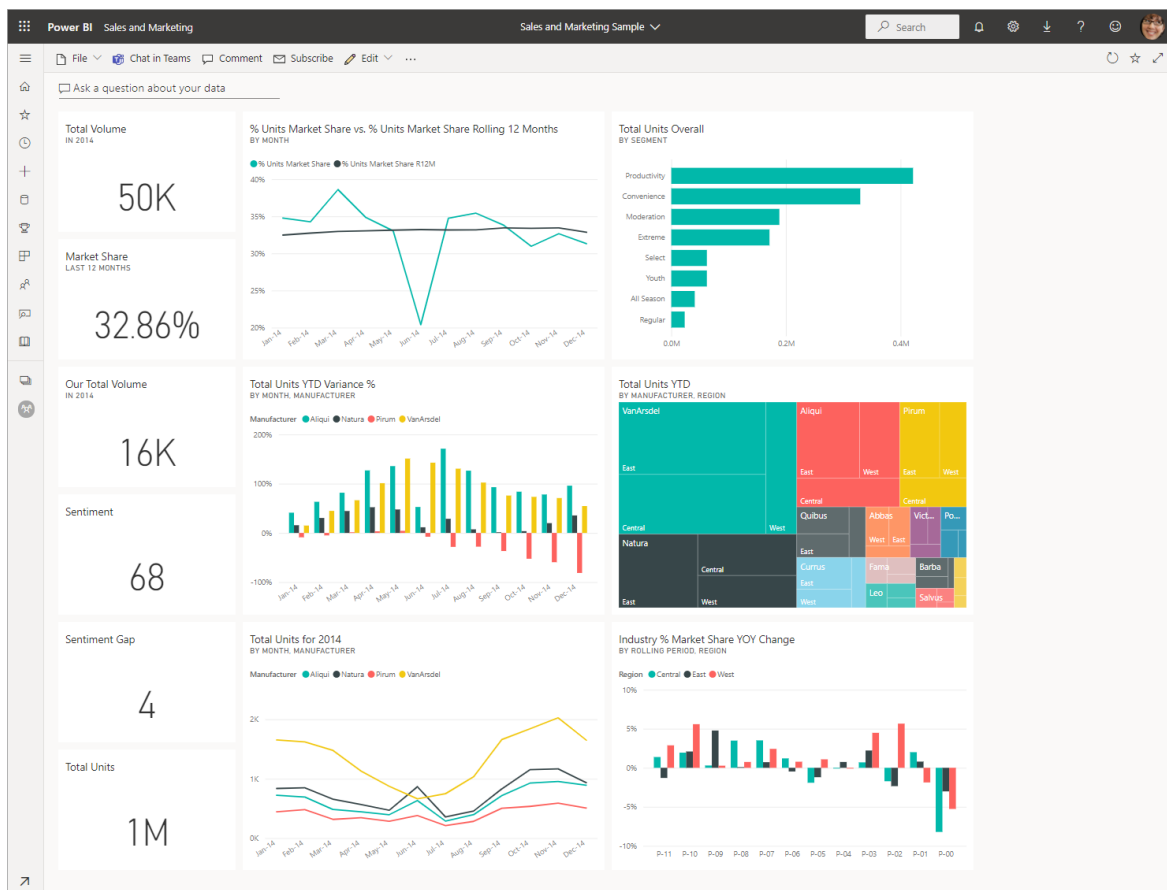
To learn more, see [Workspaces](#).



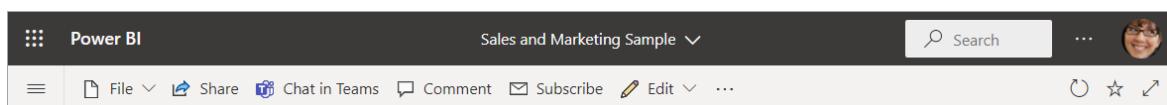
A workspace is also one of the paths into your data. From a workspace you can open a dashboard or report by selecting it from the list. You can favorite a dashboard or report by hovering and selecting the star icon. If the *designer* gave you [sharing permissions](#), you can share from here as well.



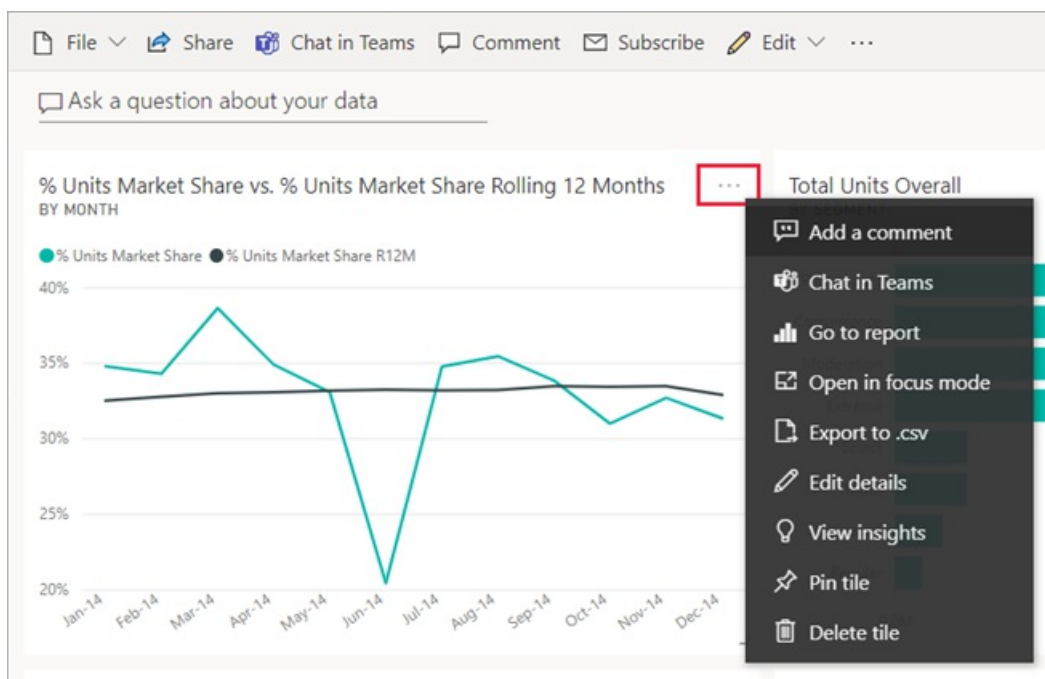
1. Select the name of the dashboard to open it. Dashboards are something that differentiates the Power BI service from Power BI Desktop. [Learn about dashboards](#)



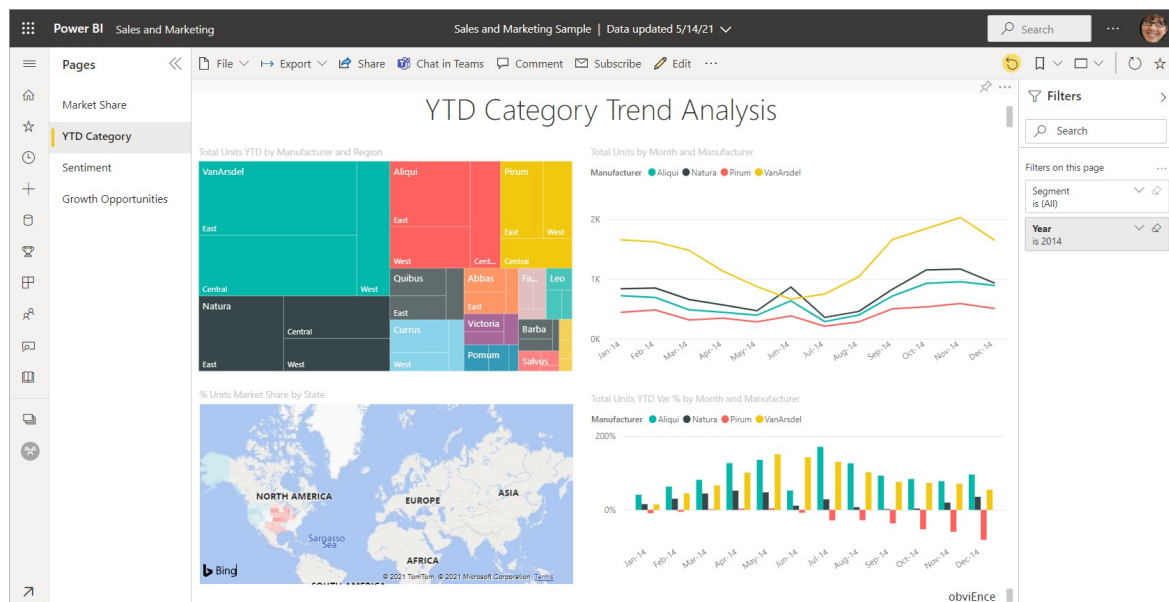
2. The actions you can take on a dashboard are displayed in the top menu bar. Select **More actions (...)** to see the complete list.



3. Hover over a dashboard tile and select **More options (...)** to see the options you have for interacting with that tile.



4. Select a dashboard tile to open the report that was used to create that tile. The report opens to the page that contains the visual that is on the tile. Here, I've selected the dashboard tile with the treemap. The Power BI service opens the **YTD Category** report page.



Reports have several sections. On the left is the clickable list of report pages. Across the top is the menu bar containing actions you can take with the report. The options available will depend on the role and permission the report *designer* assigned to you. On the right side is the **Filters** pane. And the center canvas contains the report itself. Similar to the dashboard, there are actions that you can take for the entire report, for individual visuals, and also for a single report page.

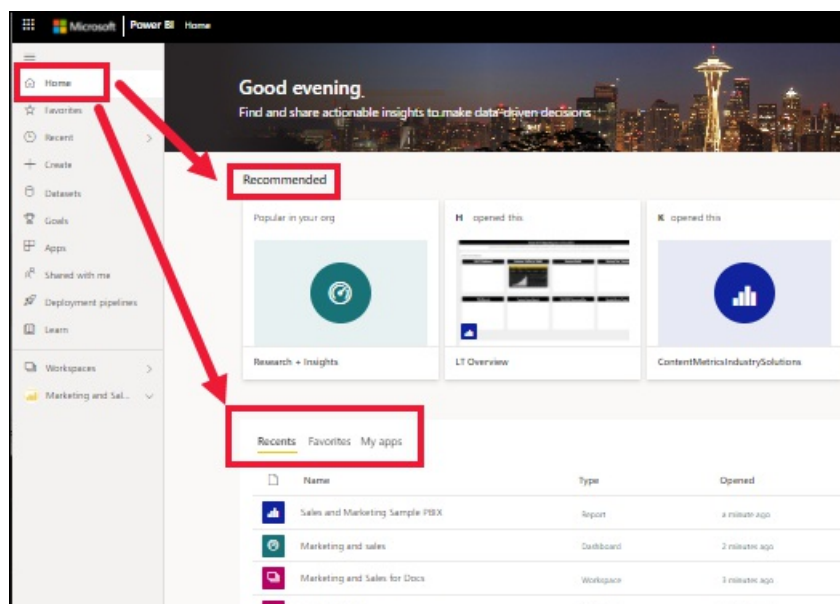
Learn about reports [Power BI reports](#).

## Using the left navigation pane

The nav pane will become more useful as colleagues share content with you. In this section of the Quickstart, we'll look at a dashboard and report that belong to a Power BI *business user* who has a lot of shared content.

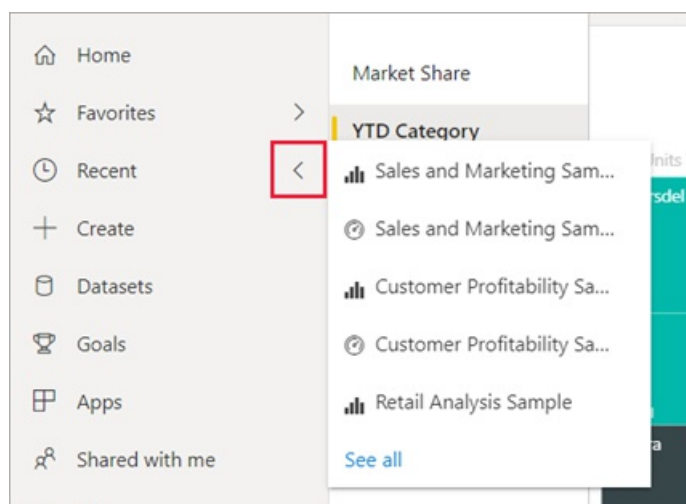
1. **Home** is the default landing page when you log in to the Power BI service. Home is a great jumping off point and alternate way to navigate your content. Content on Home is organized several different ways: by recommended, favorites, recent, and apps. For new users, the **Getting started** section is especially helpful, with tabs containing samples, documentation, and training content. Just select an item to open it.

Home brings together the searching and sorting tools, the nav pane, and a canvas with *cards* that you can select to open your dashboards, reports, and apps. At first, you might not have many cards on your Home canvas, but that will change as you start to use Power BI with your colleagues. Your Home canvas also updates with recommended content and learning resources.

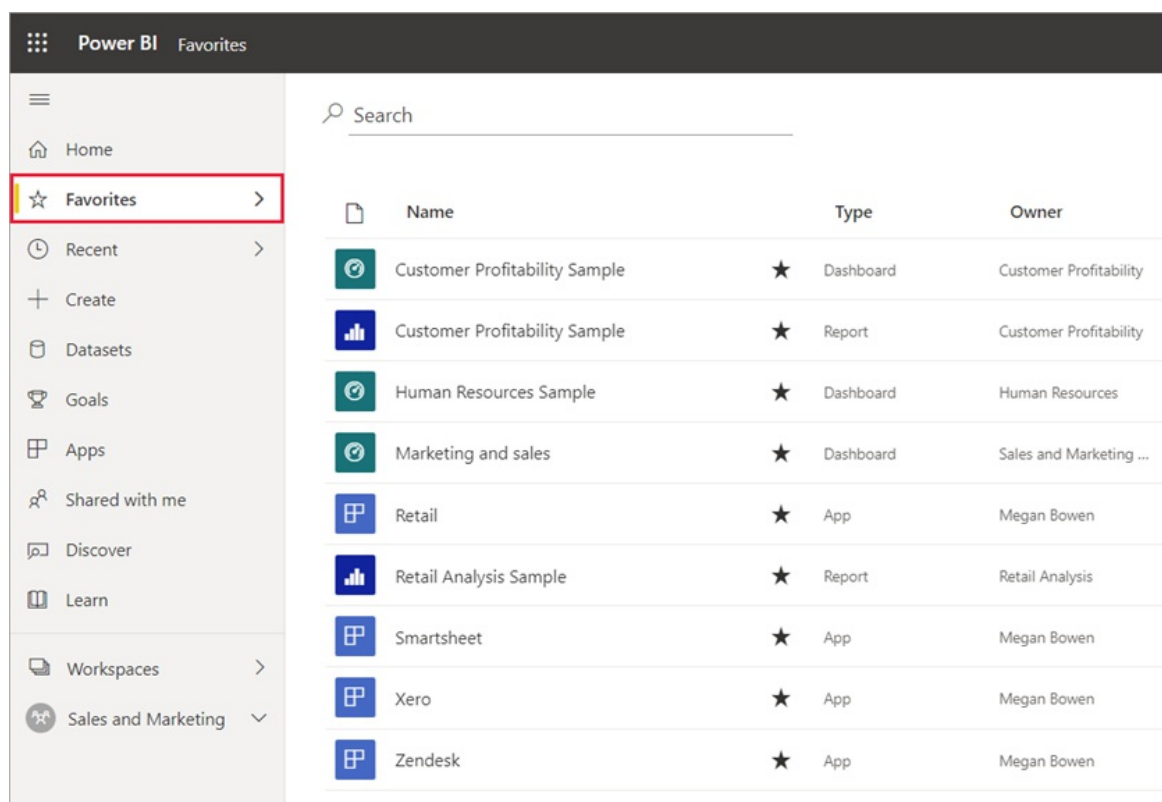


To learn more, see [Power BI Home](#)

2. **Favorites** and **Recent** both have arrows. Select an arrow to quickly see the top five favorites or five most recently visited content. From the flyout, select content to open it.



To see your full list of favorites or recents, select the word or icon. These content lists provide additional details about the reports, apps, and dashboards.



To learn more, see [Recents in Power BI](#) and [Favorites in Power BI](#).

3. Select **Apps** to display all apps that have been shared with you or that you have installed. And select **Shared with me** to see dashboards and reports that have been shared with you. Since you're just starting out with the Power BI service, these content areas will be empty.

Learn about [Apps](#) and [Shared with me](#).

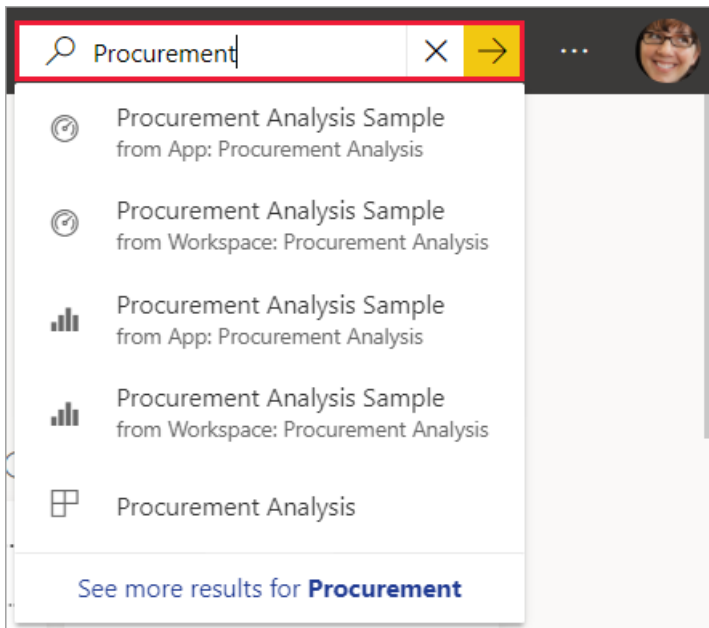
### Search and sort content

When you're new to the Power BI service, you'll have only a few pieces of content. But as colleagues begin sharing content with you and you begin downloading apps, you may end up with long lists of content. That's when you'll find searching and sorting extremely helpful.





Search is available from almost every part of the Power BI service. Just look for the search box or search magnifying glass icon.



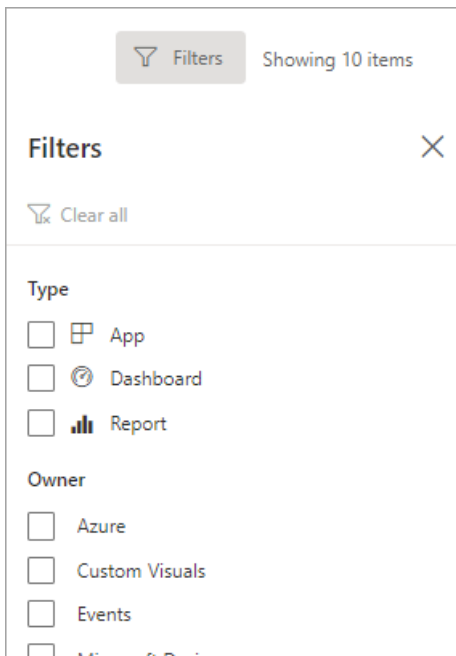
In the Search field, type all or part of the name of a dashboard, report, workbook, app, or owner. Power BI searches all of your content.



There are also many ways to sort content. Hover over column headers and look for arrows indicating that the column can be sorted. Not all columns can be sorted.

	Name		Type ↑	Owner
	Sales and Marketing Sample	★	Dashboard	Sales an
	Sales and Marketing Sample	★	Report	Sales an
	Sales and Marketing Sample		Dataset	Sales an

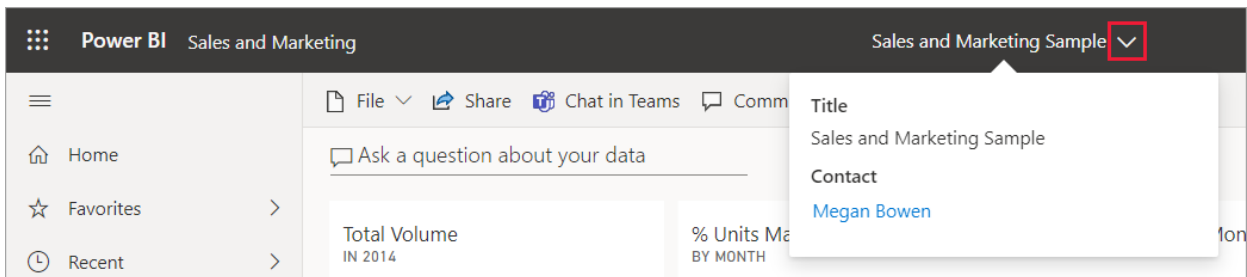
Or, look for the Search **Filters** near the upper right corner of your content lists. Find content quickly by filtering for things like type of content or owner.



To learn more, see [Power BI navigation: search and sort](#)

## Find the owner

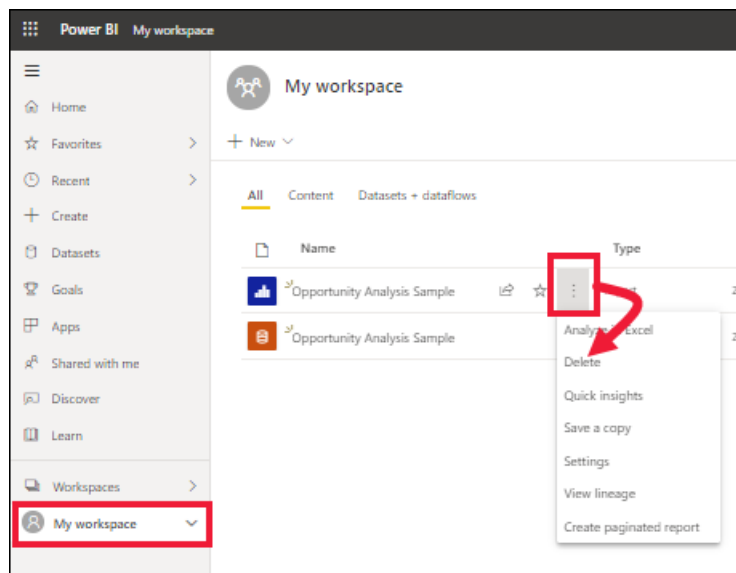
And we'll end this quickstart with a helpful tip. If you have questions about a dashboard, report, or app -- you can look up the owner. With the content open, select the title dropdown to display the owner. The owner may be a person or a group.



## Clean up resources

After you finish this quickstart, you can delete the sample report and dataset, if you wish.

1. Open the Power BI service ([app.powerbi.com](https://app.powerbi.com)) and sign in.
2. Open Power BI Home, scroll down and select **My workspace**.
3. Hover over the report or dataset and select **More options (...)** > **Delete**. Repeat until both are removed.






## Next steps

[Reading view in Power BI service](#)

# Find your dashboards, reports, and apps

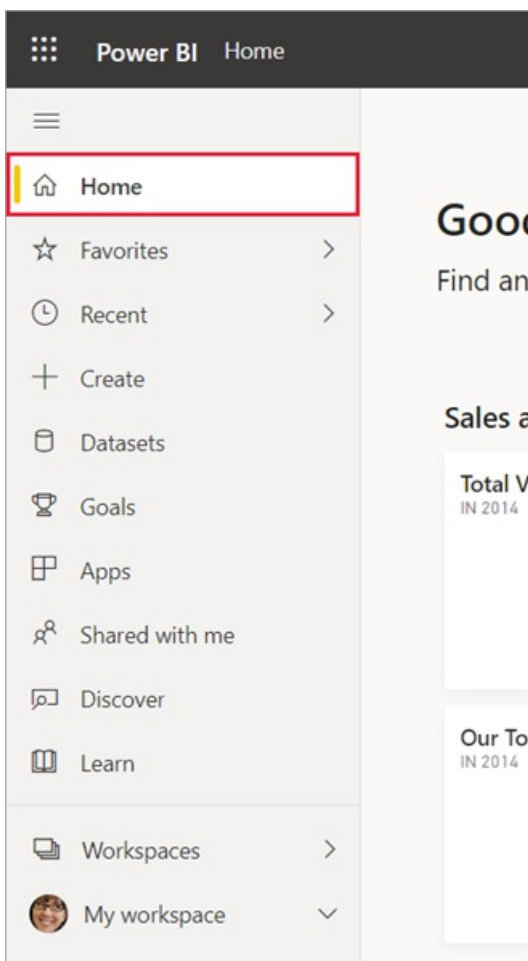
12/10/2021 • 7 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for **business users**  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

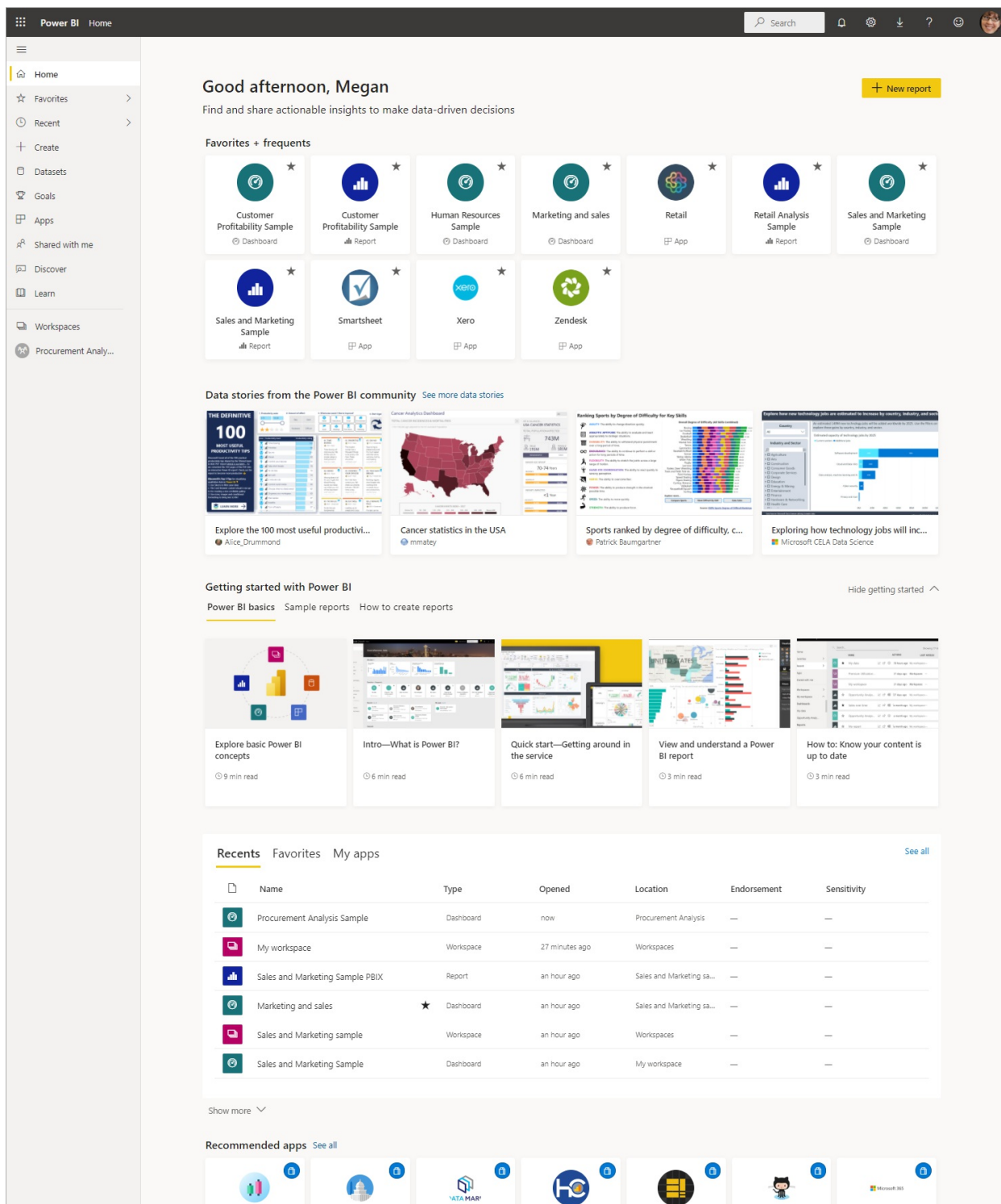
In Power BI, the term *content* refers to apps, dashboards, reports, and more. Content is created by Power BI *designers*, who share it with colleagues like you. Your content is accessible and viewable in the Power BI service, and the best place to start working in Power BI is from Power BI **Home**.

## Explore Power BI Home

After you sign in to the Power BI service, select **Home** from the navigation pane.




Power BI displays your Home canvas, as shown in the following image. The layout and content on Home is different for every user. New users will have less content, but that will change as they use Power BI more often. Your Home view will also depend on the layout you've selected. The image below is using the *Expanded* view. The *Simplified* view displays less categories of content; you'll see only **Recommended** and tabs for **Recents**, **Favorites**, **My apps** and a link to **Show more**.



Power BI Home offers three different ways of locating and viewing your content. All three access the same pool of content, they're merely different ways of getting to that content. Occasionally, searching will be the easiest and quickest way to find something, while other times, selecting a *card* on the Home canvas will be your best option.

- The Home canvas displays and organizes your favorite, frequent, recent, featured, and recommended content, along with apps and workspaces. If you're new to the Power BI service, you'll also have a Getting started section. Select a card, or an item in a list, to open it.

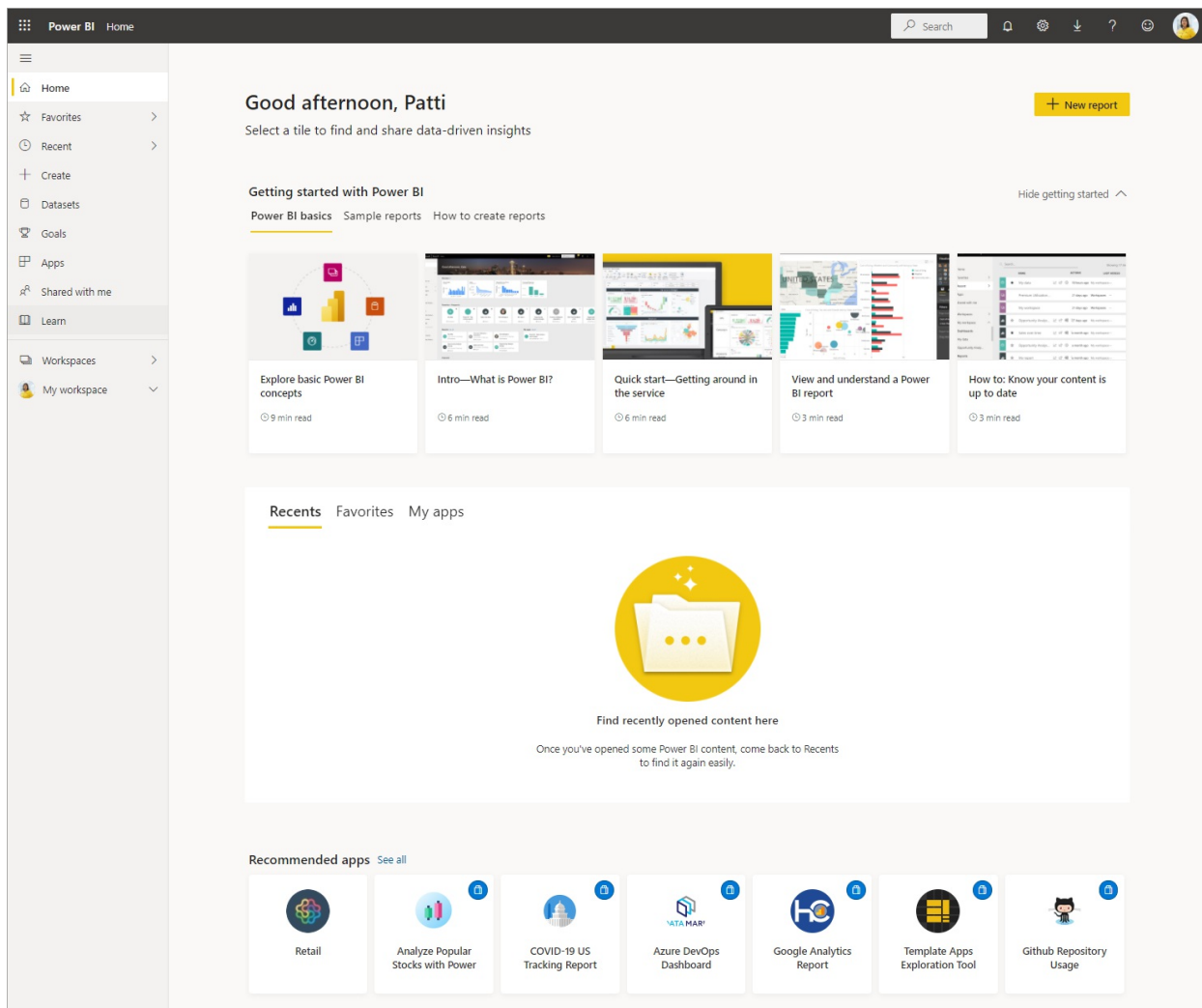
- Along the left side, is a navigation pane, referred to as the nav pane. Select  to expand the nav pane. On the nav pane, your same content is organized a little differently, by Favorites, Recent, Apps, Datasets, and Shared with me. From here, you can view lists of content and select the one to open.

- In the upper right corner, the global search box lets you search for content by title, name, or keyword.

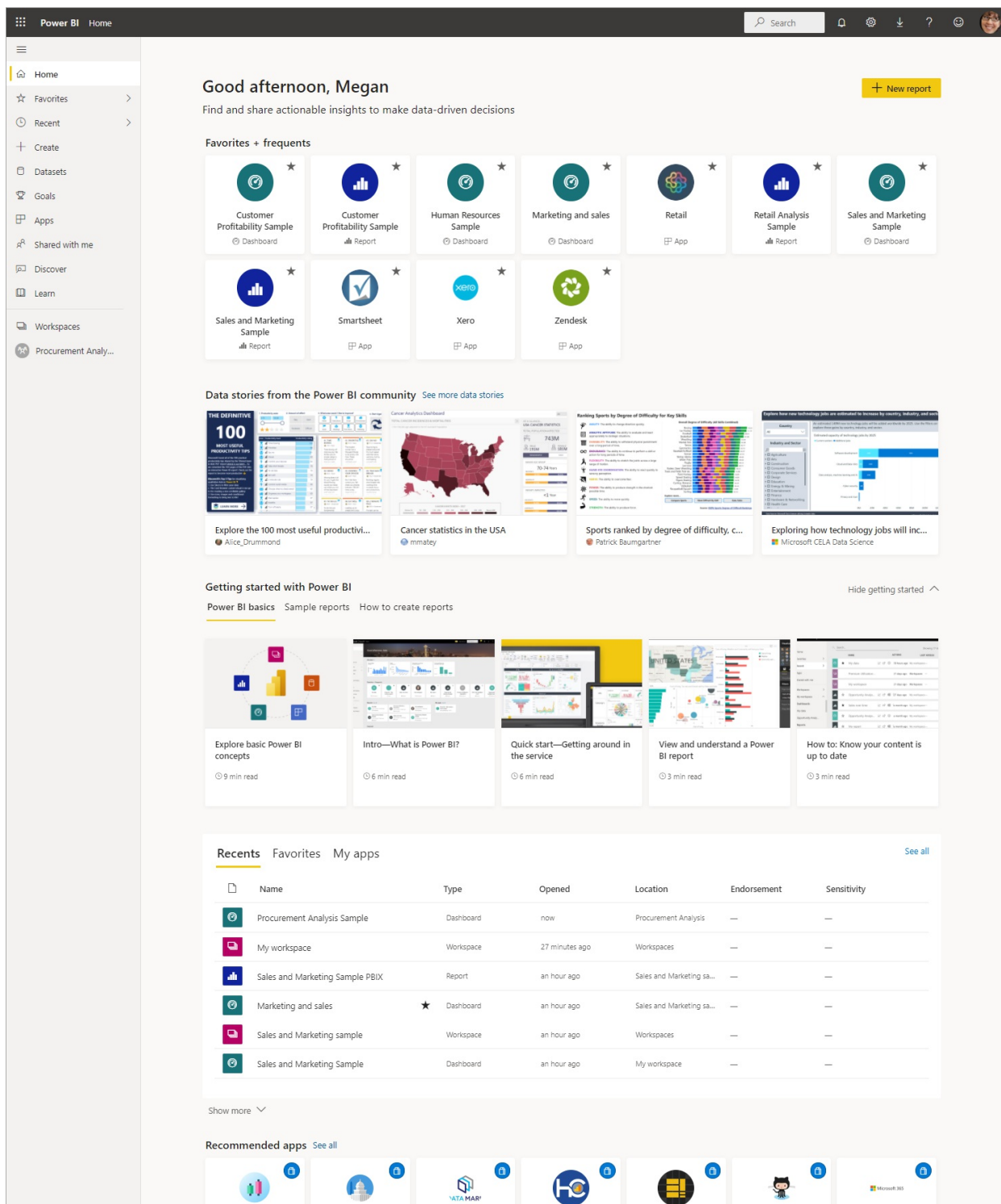
The following topics review each of these options for finding and viewing content.

# Home canvas

On the Home canvas, you can view all the content that you have permission to use. Your Home canvas also updates with recommended content, featured content, and learning resources. At first, you might not have much content on your Home canvas, but that will change as you start to use Power BI with your colleagues.



As you work in the Power BI service, you'll receive dashboards, reports, and apps from colleagues, and then Power BI Home will eventually fill in. Over time, it might resemble the following.

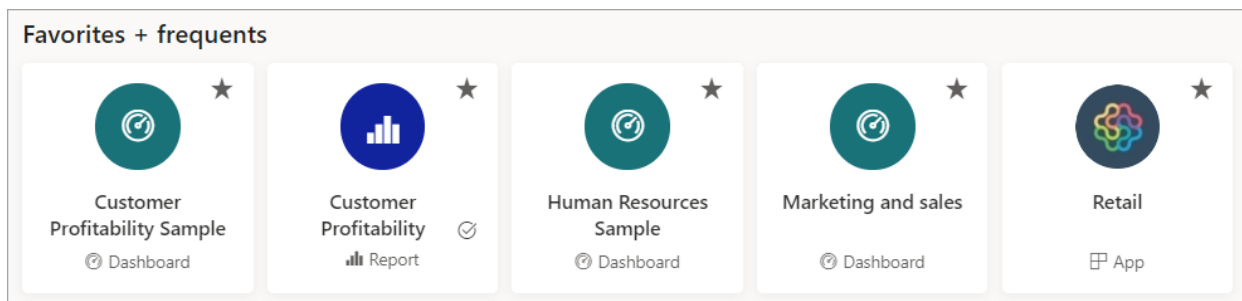


The next few topics take a closer look at Home for an experienced user, from top to bottom. Your Home landing page may look different. Power BI optimizes Home based on your usage and settings.

## Most important content at your fingertips

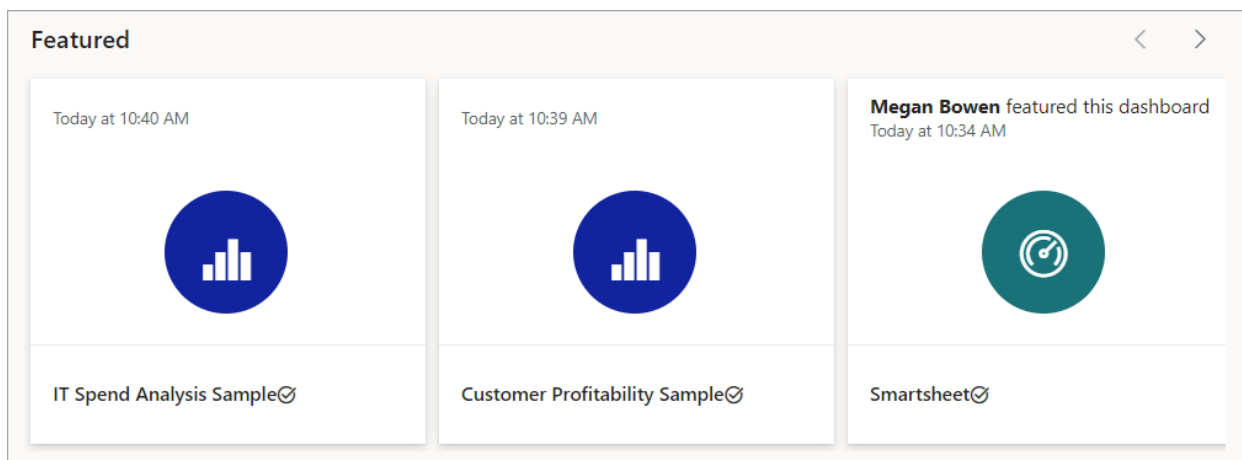
### Favorites and frequents

This section contains links to the content that you visit most often or that you've tagged as a [favorite](#). Notice that several cards have black stars; they've been tagged as favorites.



## Featured

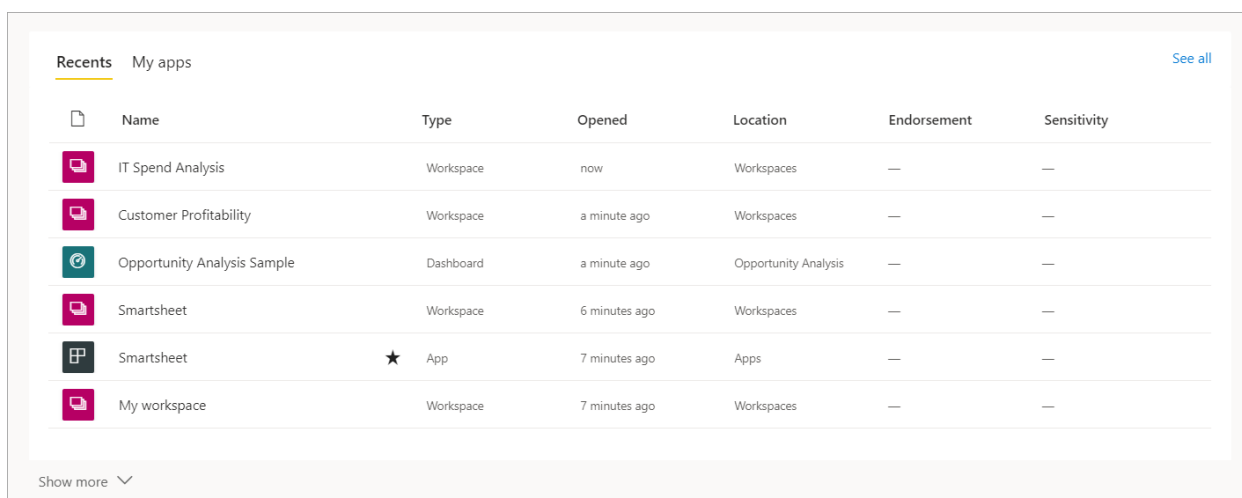
The **Featured** section contains content that your administrator or colleagues have *promoted* to your Home. Typically, this is content that is important or helpful for you to do your job. In this example, the featured content includes metrics to track success. Unless it has been disabled by your administrator, any user with Admin, Member, or Contributor permissions to a workspace can feature content on Home. For more information about featuring content on Home, see [Feature content on colleagues' Power BI Home](#)



## Recents and My apps

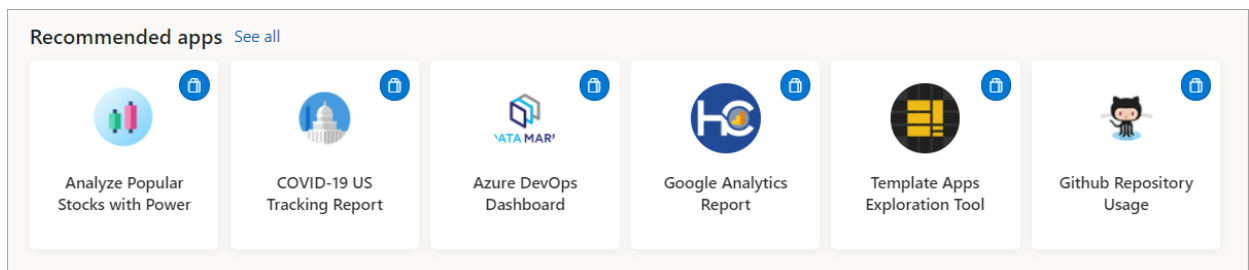
The next section is two (or more) tabbed lists.

- **Recent** is the content you've visited most recently. Notice the timestamp for each item.
- The **My apps** section lists [apps that have been shared with you](#) or that you've [downloaded from AppSource](#); the most recent apps are listed here.
- In some scenarios, you'll also see a tab for **Favorites**.



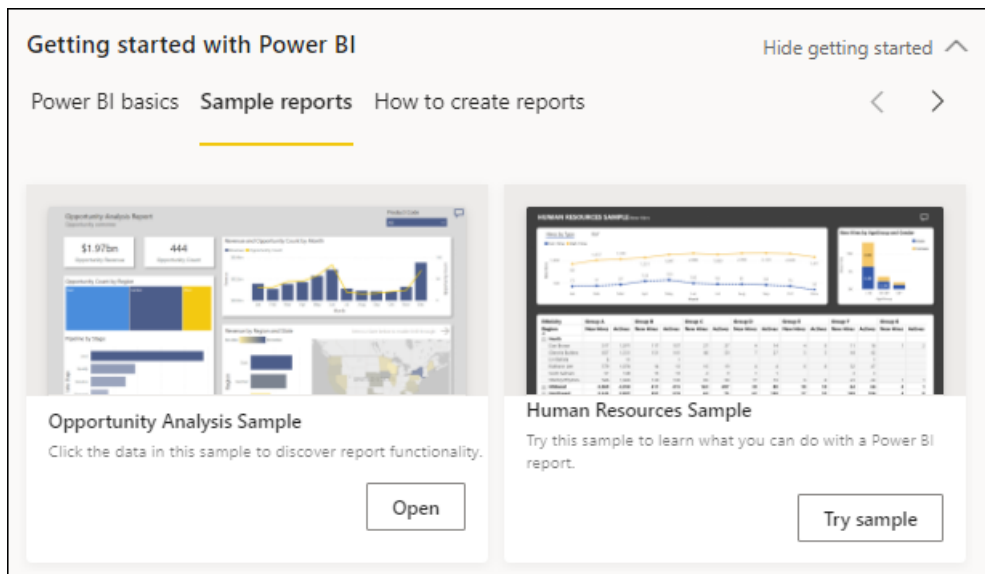
## Recommended

Based on your activity and account settings, Power BI displays a set of recommended apps. Selecting an app card opens the app. Apps with the blue icon are [template apps](#).



## Getting started learning resources

The exact resources that appear depend on your activity, settings, and Power BI administrator. If you're a new user, the Getting started section displays at the top of Home. If you're a new user, and you no longer want to see Getting started at the top of Home, select **Pin to bottom**. When you no longer need to see the Getting started tabs, select **Hide getting started**.

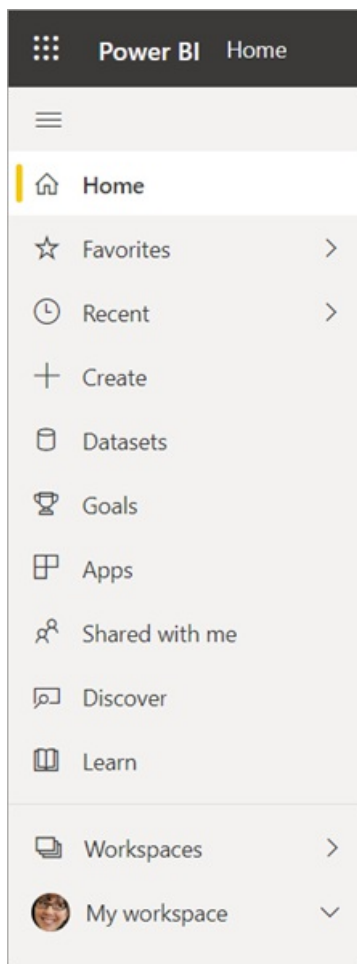


## Hide items on Power BI Home

You can hide items from the different sections of your Home canvas: Favorites + frequents, Featured, Recents, Shared with me, and My apps. Even if you hide them on the Home canvas, you can still access the items from the left nav and from Search. You can add them back to Home at any time.

## Explore the nav pane

The nav pane classifies your content in ways that help you find what you need, quickly.

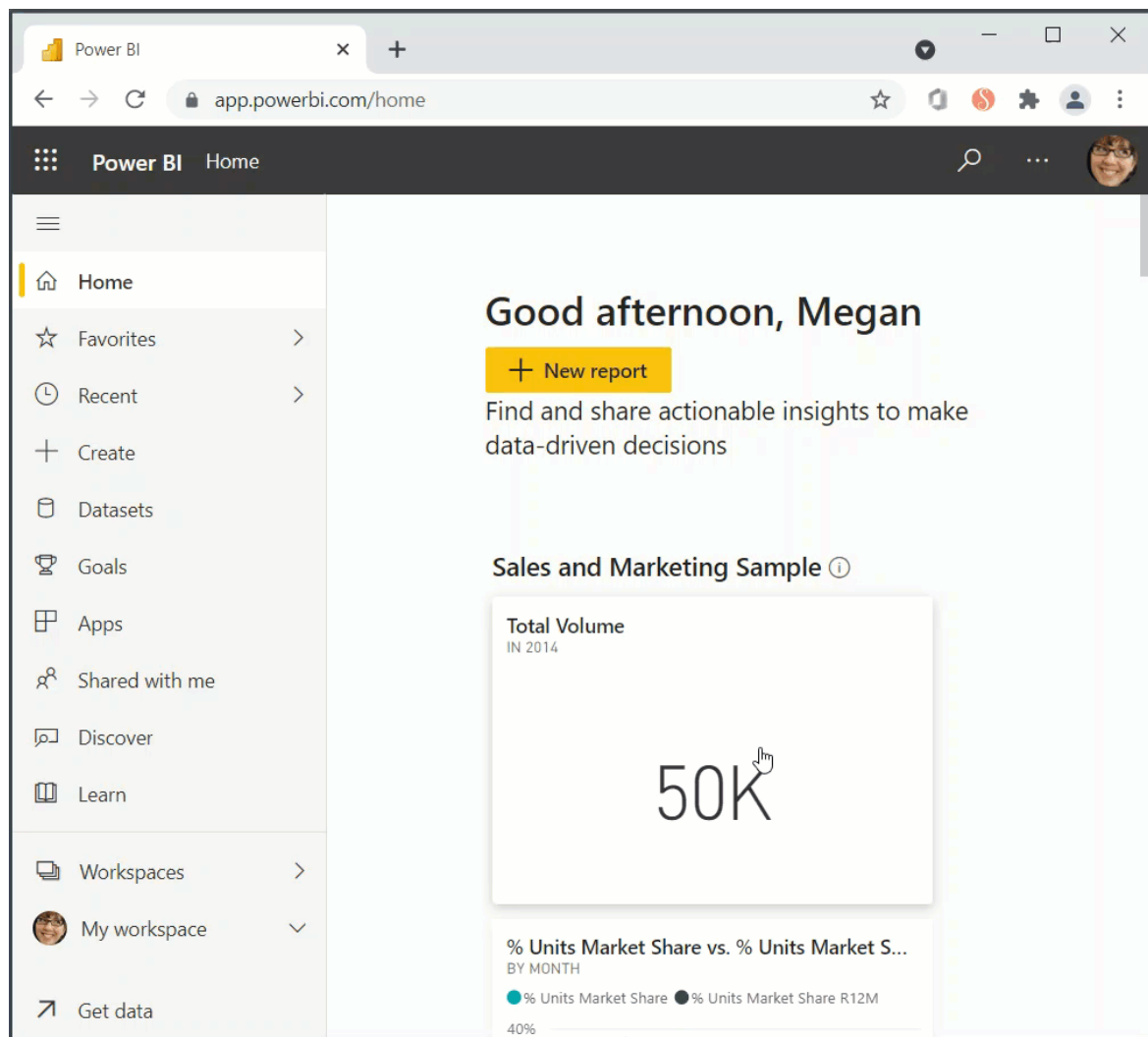


Use the nav pane to locate and move between dashboards, reports, and apps. Occasionally, using the nav pane will be the quickest way to get to content. The nav pane is there when you open your Home landing page, and remains there as you open other areas of the Power BI service. It can be collapsed by selecting the Hide icon



The nav pane organizes your content into containers that are similar to what you've already seen on the Home canvas: Favorites, Recent, Apps, Datasets, Shared with me, and workspaces. Some containers have flyouts that offer you the option of viewing just the most-recent content in a container. Otherwise, select a container to see all content.

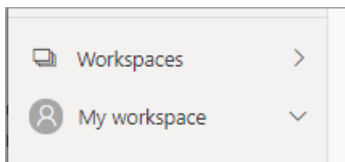
- To open one of these content sections and display a list of all items, select the heading.
- To see the most recent in either the **Favorites** or **Recent** container, select the flyout (>).



The nav pane is another way for you to find the content you want, quickly. Content is organized in a manner similar to the Home canvas, but shown in lists instead of cards. Even if you hide content from the Home canvas, you can still access it from the nav pane.

## Workspaces

Every Power BI service user has one **My workspace**. **My workspace** will only contain content if you've downloaded Microsoft samples or created your own dashboards, reports, or apps. For many *business users*, **My workspace** will be empty and will remain empty. If you're a brand new user, you will only have one workspace, **My workspace**.



And if you select that one workspace, you'll find it empty.

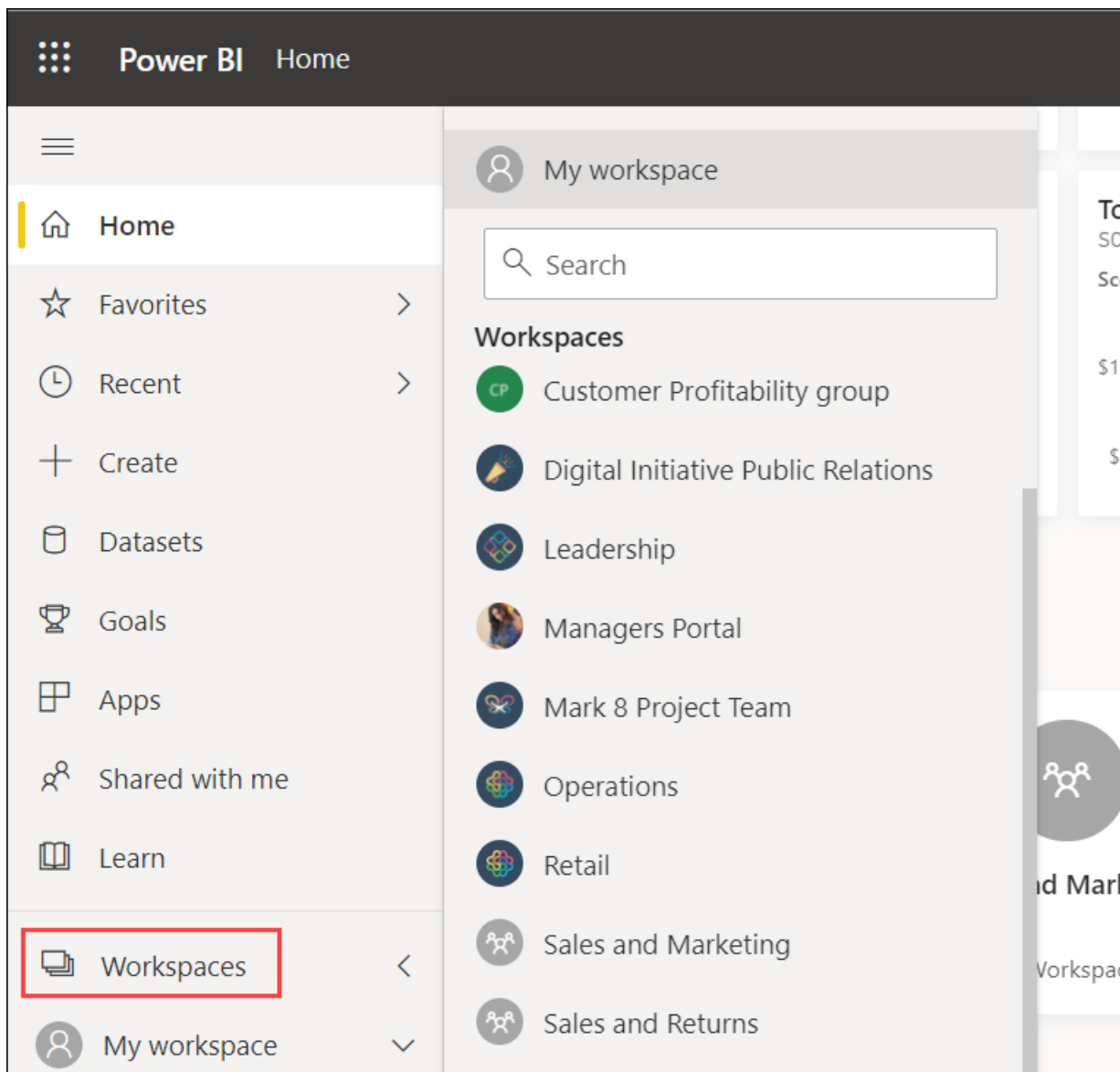


### Add content to this workspace

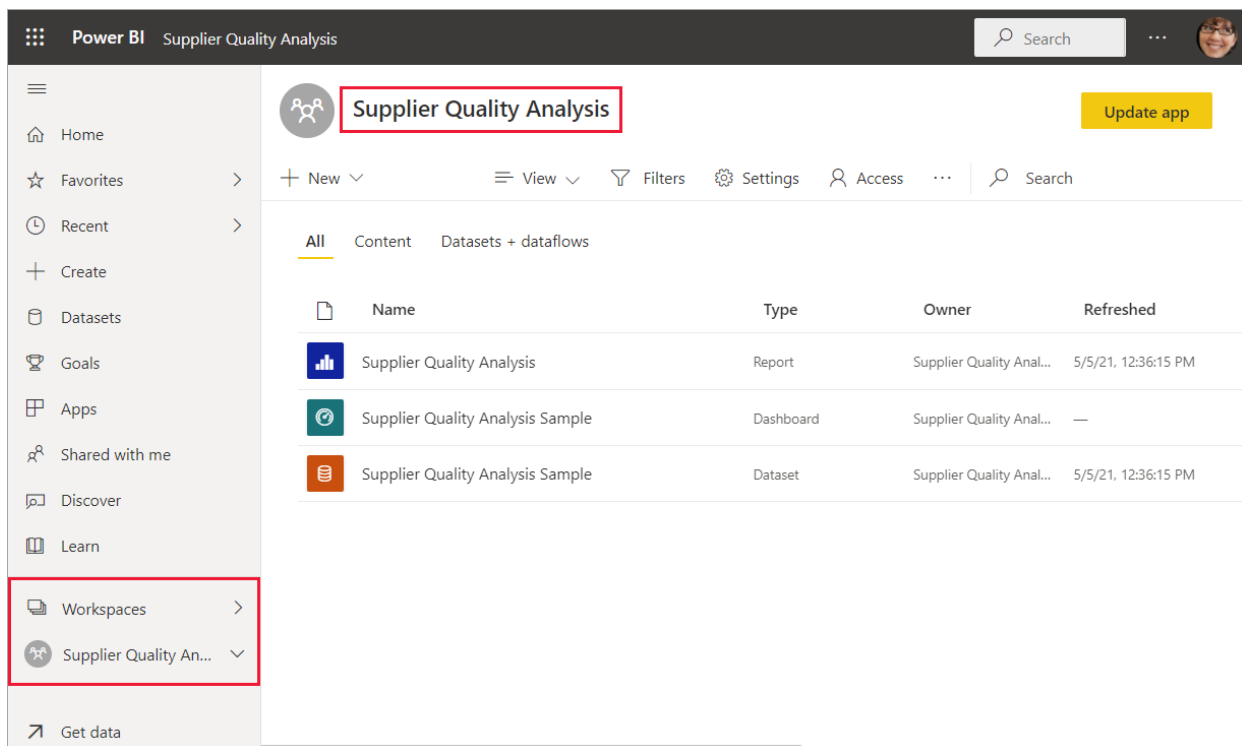
Save reports, dashboards, datasets, and workbooks to this workspace by making something new or uploading existing files.

Add content

If someone in your organization adds you to a workspace, you'll see it in your list of workspaces. Over time, you'll have more than one workspace. For example, your coworkers can add you to a workspace by giving you a role, such as Member, Contributor, or Viewer. If you [download a template](#) from outside your organization, you get the combination of an app and a new workspace. You can also create workspaces, if you have a Power BI Pro or Premium Per User license. To open a *workspace*, select it from the nav pane.



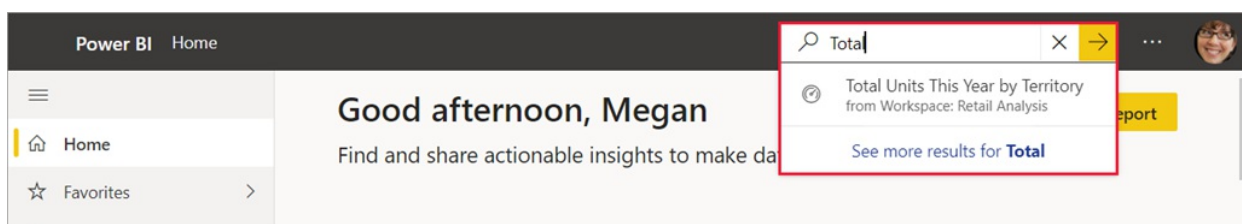
The workspace opens on your canvas and you see the name of the workspace listed on your nav pane. Within workspaces, you see your dashboards and reports. In some cases, you'll also have workbooks and datasets. You'll see this organization when you select a workspace. In this example, the **Supplier Quality Analysis** workspace contains one report, one dashboard, and one dataset.



## Search all of your content

Sometimes, the fastest way to find your content is to search for it. For example, perhaps you've discovered that a dashboard you haven't used in a while isn't showing up on your Home canvas. Or, perhaps you remember that your colleague, Aaron, shared something with you, but you don't remember what he called it or what type of content he shared, whether it was a dashboard or a report. Or you may have so much content that it's easier to search than it is to scroll or sort.

The search field is located in the upper right section of the Home menu bar. You can enter the full or partial name of that dashboard and search for it. Additionally, you can enter your colleague's name and search for content that they have shared with you. The search is scoped to look for matches in all the content that you own or have access to.







## Next steps

Overview of the [Power BI basic concepts](#)

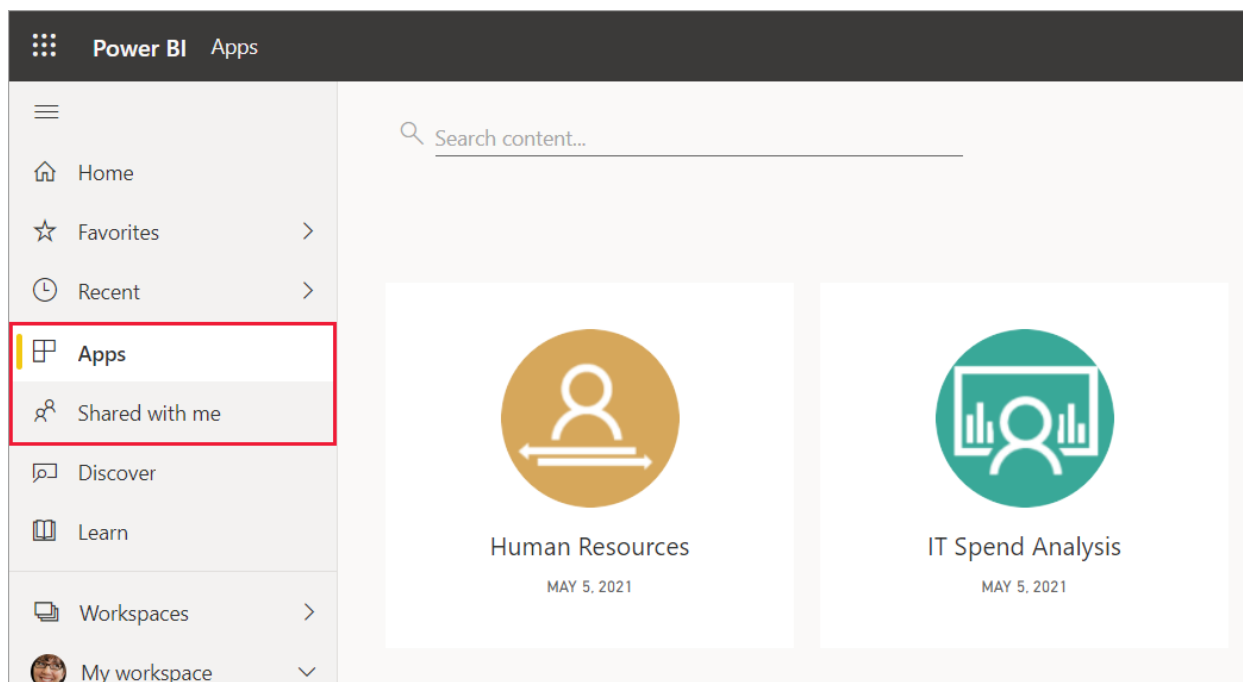
# Power BI feature list for *business users* and others with free licenses

12/10/2021 • 6 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for ***business users***  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

As a *business user*, you use the Power BI service to explore reports and dashboards in order to make business decisions. Those reports and dashboards are created by *designers* who have Power BI *Pro* or Premium Per User (PPU) licenses. Pro and PPU users have the ability to share content with their colleagues and to control what their colleagues can and can't do with that content. Sometimes, designers share content by sending you links, and sometimes the content automatically installs and appears in Power BI under **Apps** or **Shared with me**.

There are many different ways designers can share content. But this article is for Power BI *business users*, and therefore only describes how *business users* receive and interact with content. For more information on other ways to share content, see [Ways to share your work in Power BI](#).



In the [previous article](#), you learned that what you can do with dashboards, reports, and apps (content) in the Power BI service depends on three things: your licenses, your roles and permissions, and where content is stored.

This article lists which features in the Power BI service are available to *business users* like you. By definition, *business users* have a free license to work in the Power BI service (not Power BI Desktop) and are members of organizations that have content stored in Premium capacity.

## Quick review of terminology

Let's review some Power BI concepts before we get to the list. This will be a quick review and if you need more details, visit [Licenses for consumers](#) or [Power BI basic concepts](#).

### Workspaces and roles

There are two types of workspaces: **My workspace** and app workspaces. Only you have access to your own **My**

**workspace.** Collaborating and sharing requires the content *designers*, who have Pro or Premium Per User (PPU) licenses, to use an app workspace.

Within app workspaces, *roles* are assigned by the designers to manage who can do what in that workspace. *Business users* are often assigned the **Viewer** role.

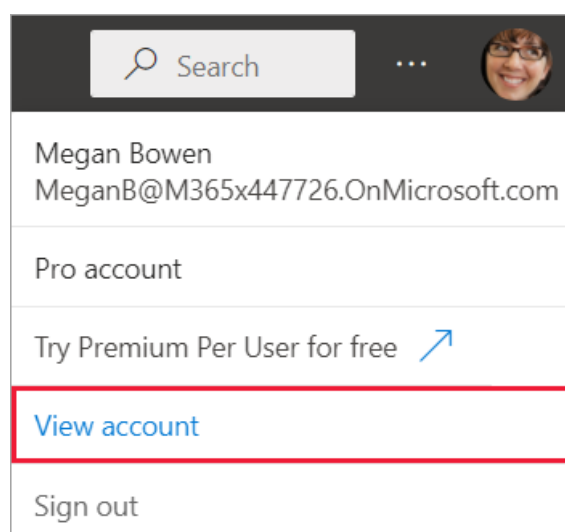
### Premium capacity

When an organization has a Premium capacity subscription, admins and Pro users can assign workspaces to a *capacity*. A workspace in a capacity is a space where Pro users can share and collaborate with free users -- without requiring the free users to have Pro or Premium Per User (PPU) licenses. Within those workspaces, free users have elevated permissions (see list, below).

### Licenses

Each Power BI service user has a free license, a Power BI Pro license, or a Premium Per user license. *Business users* in an organization are typically assigned free licenses. Anyone who signs up for the Power BI service as an individual and wants to try out the [Power BI service in standalone mode](#) will start with a free license. For free users, being a member of an organization that has Premium capacity is what gives you super powers. As long as your colleagues use Premium capacity workspaces to share content, free users can view and collaborate with that content. In this way, the free user gains the ability to consume content created by others.

To find out what type of license is assigned to your account, select your profile picture from the page header in [Power BI service](#). If **Pro account** or **Premium Per User account** is displayed, you can share content with other users. When **Free** is shown, you can only create content in My Workspace and consume content that is shared to a Premium workspace. Select **View account** to see more details about your account.



## Power BI feature list for *business users* and free users

The following chart identifies which tasks can be performed by a *business user* interacting with content in Premium capacity.

The first column represents a free user working with content in **My workspace**. This user cannot collaborate with colleagues in the Power BI service. Colleagues cannot directly share content with this user, and this user cannot share from **My workspace**.


The second column represents a *business user*. A business user:


- has a free user license
- is part of an organization that has a Premium capacity subscription
- gets content (apps, dashboards, reports) from Pro or PPU users who share that content using app workspaces in Premium capacity.
- is assigned the **Viewer** role to those app workspaces.

## NOTE

Users with PPU subscriptions cannot share content with users who have a Pro or free license.

## Legend

 feature is available in the current scenario



























 feature is not available in the current scenario

**MWO** feature availability is limited to **My workspace**. Content in **My workspace** is for the owner's personal use and cannot be shared or viewed by anyone else in Power BI.

\* access to this feature can be turned on or off by a Pro user or an admin.

## Feature list

FEATURES	SCENARIO 1: POWER BI FREE USER WHO HAS NO ACCESS TO CONTENT HOSTED IN A CAPACITY.	SCENARIO 2: POWER BI FREE USER WITH VIEWER PERMISSIONS TO CONTENT STORED IN A CAPACITY. THIS PERSON IS A POWER BI <i>BUSINESS USER</i> .
<b>Apps</b>		
Installs automatically		 *
Open		
Favorite		
Edit, update, reshare, republish		
Create new app		
AppSource: download and open		
Organization store: download and open		
<b>App workspaces</b>		
Create, edit, or delete workspace or content		
Add endorsements		
Open and view		
Read data stored in workspace dataflows		
<b>Dashboards</b>		

FEATURES	SCENARIO 1: POWER BI FREE USER WHO HAS NO ACCESS TO CONTENT HOSTED IN A CAPACITY.	SCENARIO 2: POWER BI FREE USER WITH VIEWER PERMISSIONS TO CONTENT STORED IN A CAPACITY. THIS PERSON IS A POWER BI <i>BUSINESS USER</i> .
Receive, view, and interact with dashboards from colleagues		
Add alerts to tiles	MWO	
View and respond to comments from others: add your own comments		 *
Save a copy	MWO	
Copy visual as an image?	MWO	
Create, edit, update, delete	MWO	
Export tile to Excel	MWO	
Favorite	MWO	
Feature	MWO	
Full screen and focus modes	MWO	
Global search	 *	 *
Insights on tiles	MWO	 *
Q&A: use on dashboard	MWO*	 *
Q&A: add featured and saved questions		
Q&A: review asked questions		
Performance inspector	MWO	
Pin tiles from Q&A or reports	MWO	
Print	MWO*	 *
Refresh	MWO	
Reshare		

FEATURES	SCENARIO 1: POWER BI FREE USER WHO HAS NO ACCESS TO CONTENT HOSTED IN A CAPACITY.	SCENARIO 2: POWER BI FREE USER WITH VIEWER PERMISSIONS TO CONTENT STORED IN A CAPACITY. THIS PERSON IS A POWER BI <i>BUSINESS USER</i> .
Subscribe yourself	MWO*	●*
Subscribe others	✗	✗
<b>Datasets</b>		
Add, delete, edit	MWO	✗
Create a report in another workspace based on a dataset in this workspace	✗	●
Insights on datasets	MWO	✗
Schedule refresh	MWO	✗
Analyze in Excel	MWO	●
Create a report	MWO	●
Create a paginated report	MWO	●
Share	✗	✗
Manage permissions	✗	✗
Save a copy	✗	✗
Create from template	✗	✗
<b>Reports</b>		
Receive reports from colleagues	✗	●
Collaborate with colleagues on the same version of a report	✗	●
Analyze report in Excel	MWO*	●*
View bookmarks created by others, and add your own bookmarks	✗	●
View and respond to comments from others: add new comments	✗	●

FEATURES	SCENARIO 1: POWER BI FREE USER WHO HAS NO ACCESS TO CONTENT HOSTED IN A CAPACITY.	SCENARIO 2: POWER BI FREE USER WITH VIEWER PERMISSIONS TO CONTENT STORED IN A CAPACITY. THIS PERSON IS A POWER BI <i>BUSINESS USER</i> .
Change display dimensions	MWO	●
Save a copy	✗	✗
Copy visual as an image*		
Cross-highlight and cross-filter report visuals	MWO	●
Drill	MWO	●
Drillthrough	MWO *	● *
Embed (publish to web, public)	MWO *	✗
Export summarized data from report visuals*	MWO	●
Export underlying data from report visuals*	MWO	●
Favorite the report	MWO	●
Filters: change types	MWO *	● *
Filters: interact	MWO	●
Filters: persistent	MWO *	● *
Search on the filter pane	MWO *	● *
Full screen and focus modes	MWO	●
Insights on reports <sup>1</sup>	MWO	●
Lineage view	MWO	✗
Export to PDF*	MWO	●
Performance Inspector	MWO	●
Export to PowerPoint*	MWO	●


FEATURES	SCENARIO 1: POWER BI FREE USER WHO HAS NO ACCESS TO CONTENT HOSTED IN A CAPACITY.	SCENARIO 2: POWER BI FREE USER WITH VIEWER PERMISSIONS TO CONTENT STORED IN A CAPACITY. THIS PERSON IS A POWER BI <i>BUSINESS USER</i> .
Promote content to Home	✗	✗
Print report pages*	●	●
Interact with Q&A visual	MWO	●
QR Code	MWO	●
Refresh	MWO	●
Share content with external users	✗	✗
Share: allow others to reshare items	✗	✗
Show as table (show data)	MWO	●
Slicers: add or delete	MWO	✗
Interact with slicers	MWO	●
Sort report visuals	MWO	●
Subscribe yourself to reports*	MWO	●
Subscribe others to reports	✗	✗
View related	MWO	●
Visuals: change types in reports	MWO*	●*
Change visual interactions	MWO	✗
Visuals: add new	MWO	✗
Visuals: add new fields	MWO	✗
Visuals: change type	MWO	●
Visuals: hover to reveal details and tooltips	MWO	●

# Next steps

Power BI for *business users*

# Sign in to Power BI service

12/10/2021 • 3 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

## Power BI accounts

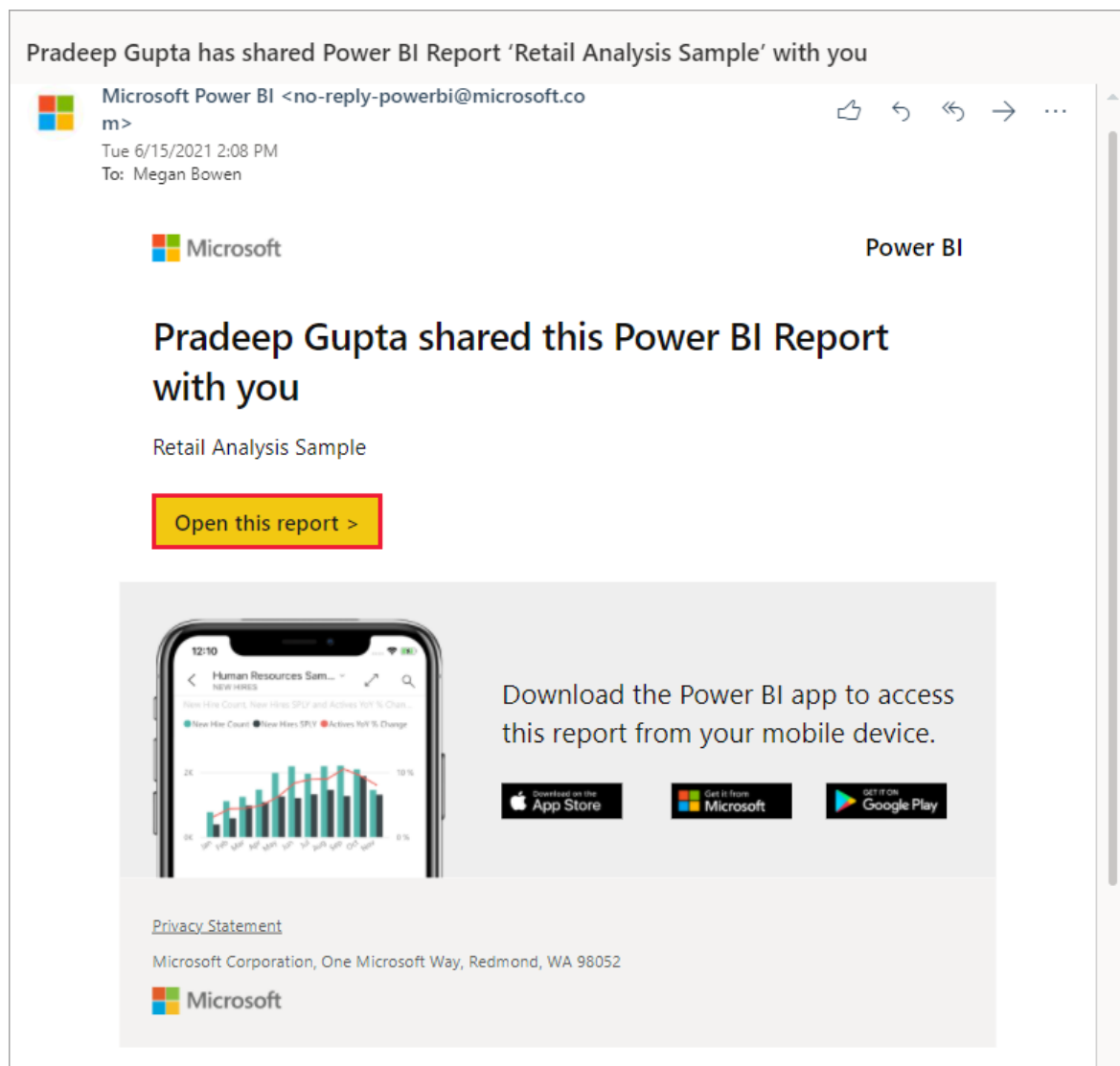
Before you can sign in to Power BI, you'll need an account. There are two ways to get a Power BI account. The first is when your organization purchases Power BI licenses for its employees. And the second is when [individuals sign up for free trials or personal licenses](#). This article covers the first scenario.

## Sign in for the first time

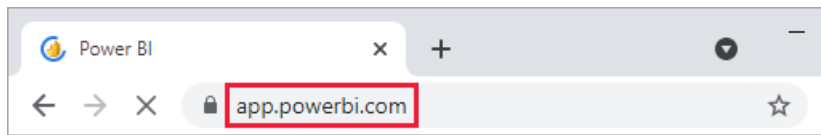
### Step 1: open the Power BI service

The Power BI service runs in a browser.

- If you've received an email from a colleague, with a link to a dashboard or report, select the link to **Open this report** or **Open this dashboard**.

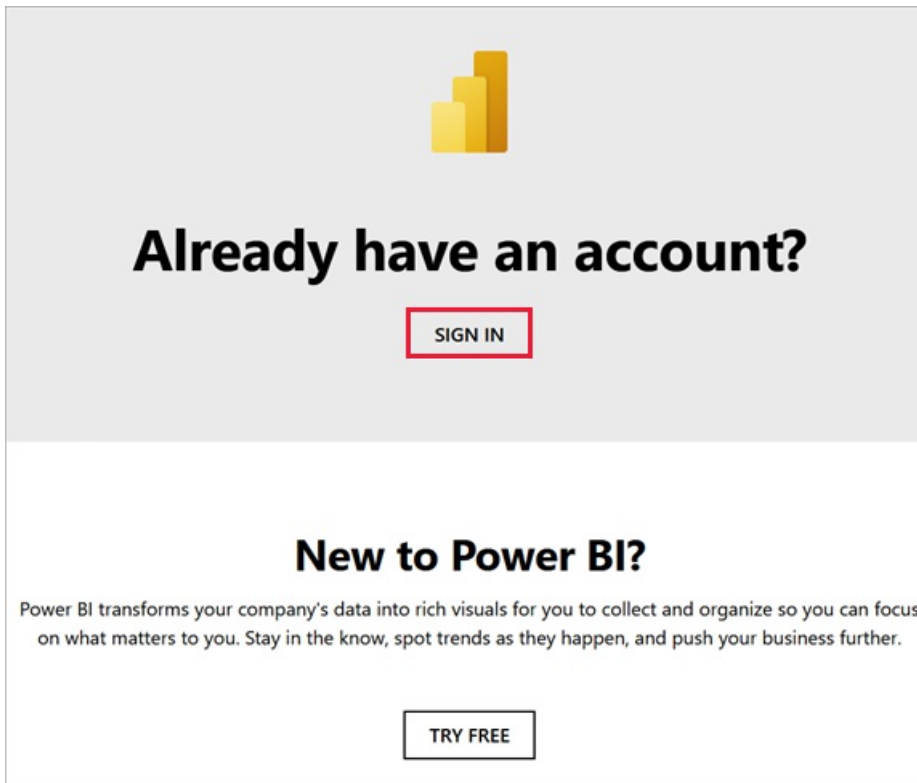


- Otherwise, open your favorite browser and type [app.powerbi.com](https://app.powerbi.com).

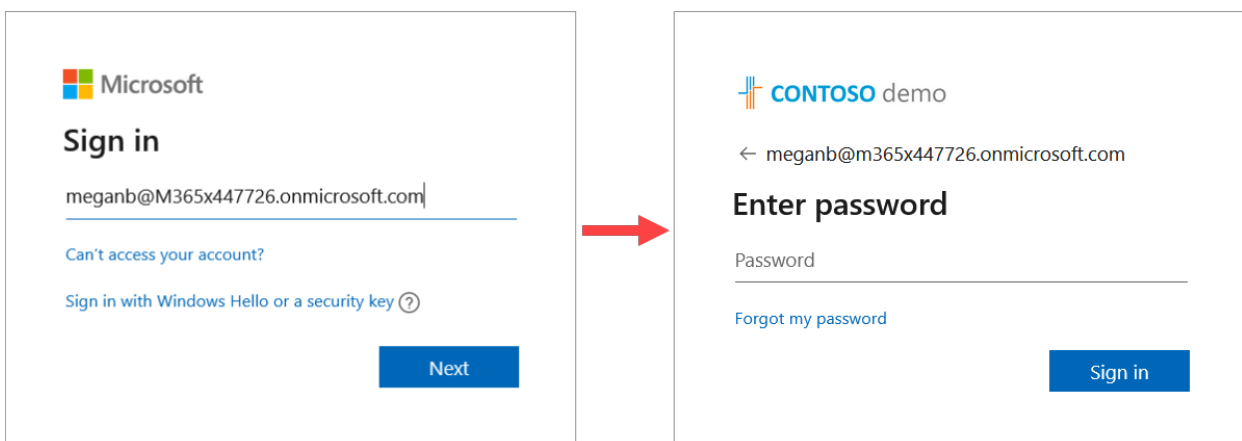


## Step 2: type your email address

The first time you sign in, Microsoft asks if you already have a Microsoft 365 account. Select **SIGN IN**.



Enter your password. This is your Microsoft 365 account password. It is the same email and password that you use for other Microsoft products, such as Outlook and Office. Depending on how your account is set up, you may also be prompted to enter a code sent to your email or mobile device.



Sometimes, your global administrator will assign you a license and send you an email with this information. Look in your Inbox for a welcome email and follow the instructions to sign in for the first time. Use this same email account for your sign-in.

## Step 3: Review the terms and conditions

Review the terms and conditions, and if you agree, select the checkbox and choose **Start**.

# Almost there

You're signed in as pradtanna@onmicrosoft.com

Microsoft will send you promotions and offers about Microsoft products and services for businesses. You can unsubscribe anytime.

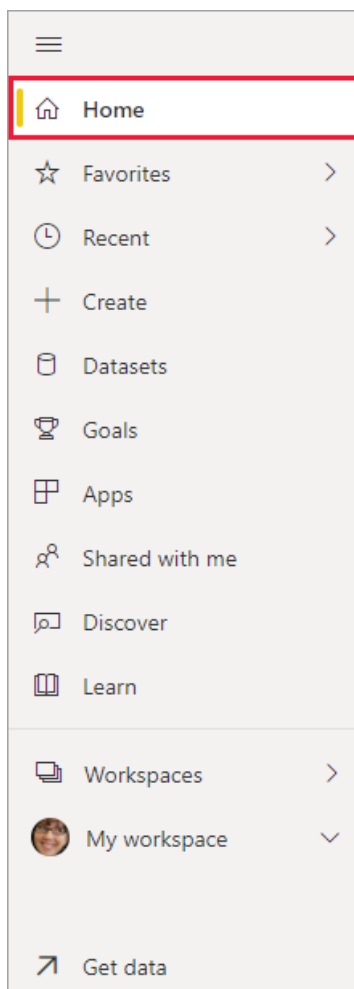
☐ I would like Microsoft to share my information with select partners so I can receive relevant information about their products and services. To learn more, or to unsubscribe at any time, view the [Privacy Statement](#).

By choosing **Start**, you agree to our [terms and conditions](#) and [Microsoft Privacy Policy](#) and acknowledge that your email address is associated with an organization (and is not a personal use or consumer email address). You also understand an administrator of your organization may assume control over your account and data and that your name, email address, and trial organization name will be visible to other people in your organization. [Learn more](#).

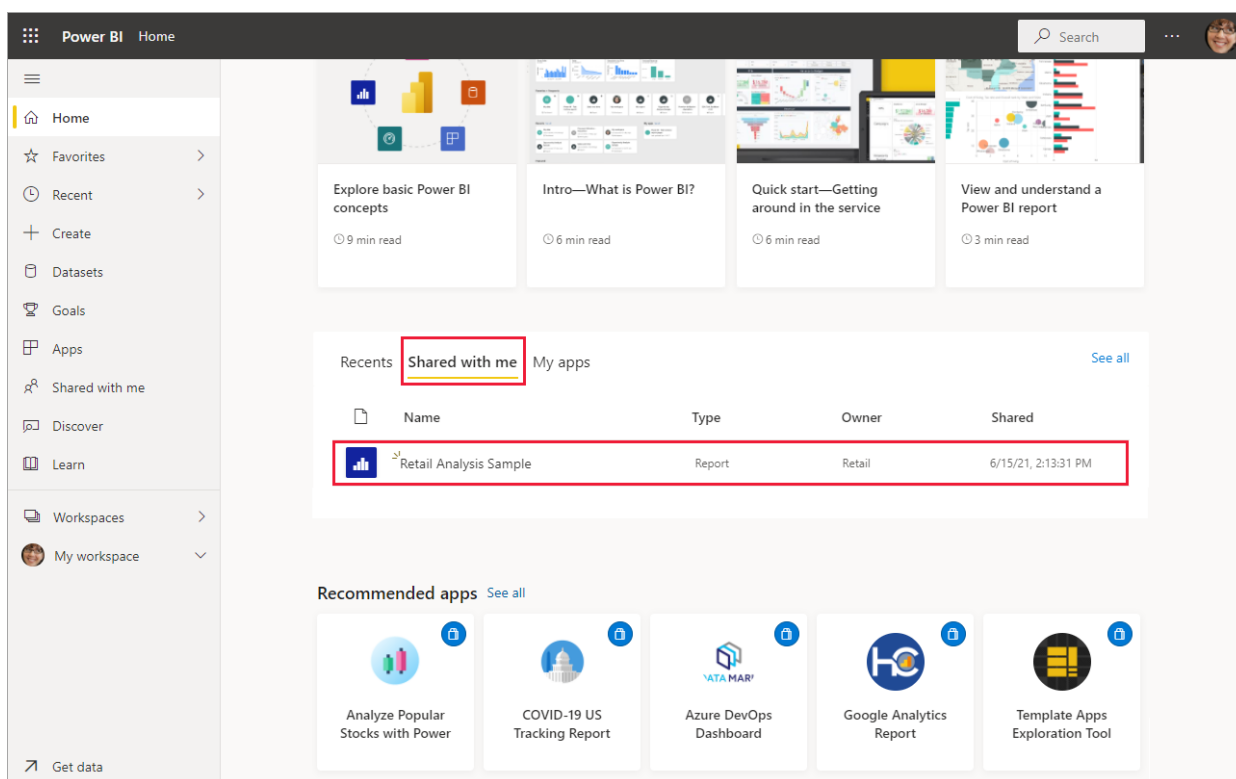
**Start** ➔

## Step 4: review your Home landing page

On your first visit, Power BI opens your **Home** landing page. If **Home** doesn't open, select it from the nav pane.



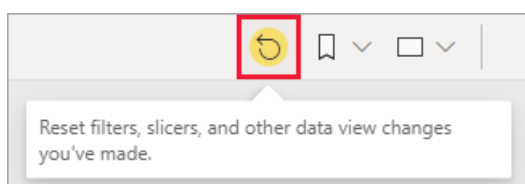
On Home, you'll see all the content that you have permission to use. At first, there may not be much content, but don't worry, that will change as you start to use Power BI with your colleagues. Remember that report that your colleague shared with you via email? It's on your Home landing page under the heading **Shared with me**.



If you don't want Power BI to open to Home, you can [set a Featured dashboard or report](#) to open instead.

## Safely interact with content

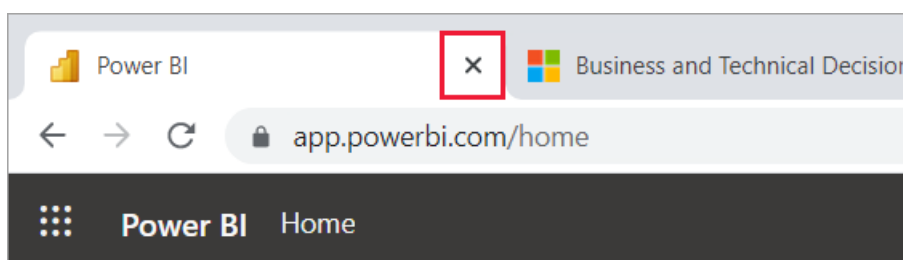
As a **business user**, others will share content with you and you'll interact with that content to explore the data and make business decisions. As you filter, slice, subscribe, export, and resize, don't worry -- your work is not impacting the underlying dataset or the original shared content (dashboards and reports). Power BI is a safe space for you to explore and experiment. That doesn't mean you can't save your changes - you can. But those changes only affect **your** view of the content. And reverting to the original default view is as easy as clicking a button.



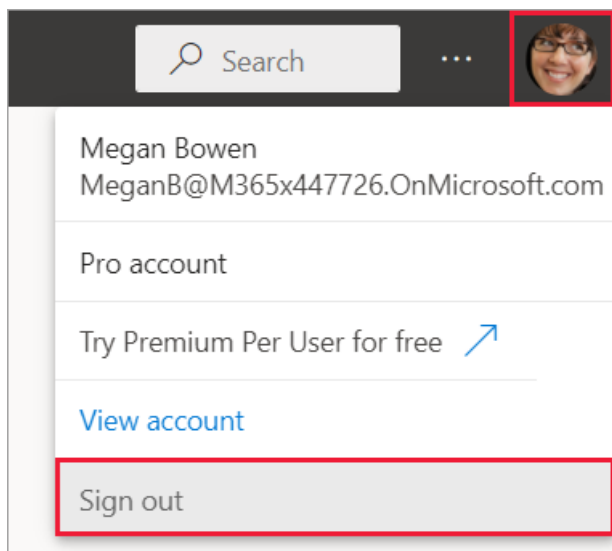
## Sign out of the Power BI service

When you close or sign out of the Power BI service, your changes are saved so you can pick up right where you left off.

To close Power BI, close the browser tab where you are working.



If you share a computer, we recommend signing out each time you close Power BI. To sign out, from the upper right corner, select your Profile picture, and choose **Sign out**.



## Troubleshooting





- If you've signed up for Power BI as an individual, sign in with the email address you used to sign up.
- Some people use Power BI with more than one account. If so, when signing in, you will be prompted to select an account from a list.

## Next steps

[View a Power BI app](#)

# Licenses and subscriptions for *business users*

12/10/2021 • 6 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

As a *business user*, you use the Power BI service to explore reports and dashboards so you can make data-backed business decisions. If you've been using Power BI for a while, or have been chatting with your *designer* colleagues, you've probably discovered that there are some features that only work if you have a certain type of license, subscription, or permissions.

What you can do in the Power BI service depends on three things:

- the type of license and subscription you're using,
- where content is stored, and
- the roles and permissions you're assigned.



In this article, we describe the capabilities of each license type and how *where content is stored* can affect *what you can do with it*. You'll also learn how to look up your license and subscription and figure out where your content is stored. For more information about roles and permissions, see [workspace roles](#).

## Licenses

Each user of the Power BI service has either a *free* license, a *Pro* license, or a *Premium per-user* license. If you're a Power BI *business user*, you're probably using a free license that is managed by your Power BI admin.

It's possible to have more than one license at the same time. The service always delivers you the experience equal to the most-permissive license you currently have.

## Power BI Premium capacity subscription

Premium is an organizational *subscription* that provides a different way to store content--in a virtual container called a *capacity*. With Premium capacity, anyone with permissions, whether they're inside or outside your organization, can view content stored in this Premium capacity, without purchasing individual Power BI Pro or Premium per-user licenses.

Premium capacity enables widespread distribution of content by Pro users without requiring Pro licenses for the recipients who view the content. The person who is creating the content in the Premium capacity uses a Pro license to connect to data sources, model data, and create reports and dashboards that are saved to a workspace in Premium capacity. Users without a Pro license can still access a workspace that's in Power BI Premium capacity, as long as they're assigned a [role in that workspace](#). If the workspace owner creates an app based on content in that workspace, users without a Pro license can still view that app in Premium capacity, as long as they've been given permissions for that app.

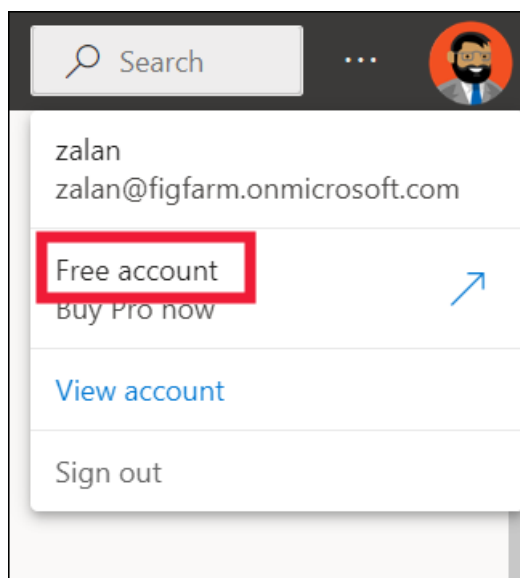
Within those workspaces, designers assign roles, like **Viewer**, **Contributor**, **Member**, and **Administrator**. These roles determine the extent to which colleagues can interact with the content. For more information, see [workspace permissions and roles](#).

When a designer creates and publishes an app, they grant access to entire organizations or individuals. The extent to which you can interact with the app's content depends on the specific access permissions given to you. For example, you may be given access to view the app, connect to the underlying datasets, make copies of reports, or share the content.

For more info about Premium capacity, see [What is Microsoft Power BI Premium?](#).

## Find out which licenses you have

Select your profile picture to display account information. Zalan is using a free license. Other types of licenses are: **Pro** and **Premium per user**.

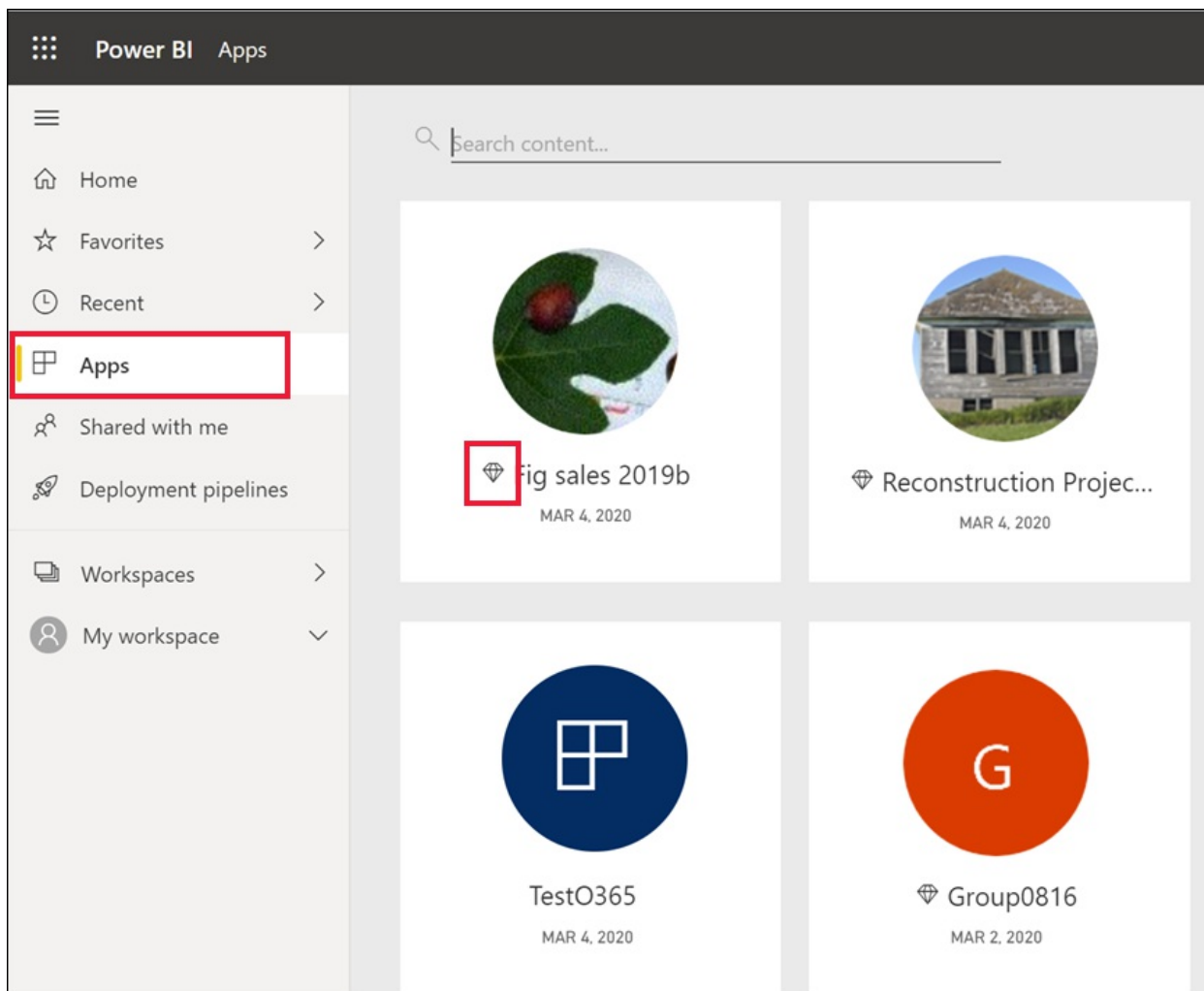


To see additional details about your account, select **View account**.

## Identify content hosted in Premium capacity

There are a couple of ways to identify content that is stored in Premium capacity. One way is to look for apps and app workspaces with a diamond icon. The diamond indicates that the content is stored in Premium capacity.

In the image below, three of the apps are stored in Premium capacity.



If you're a user with a free license, as long as the *designer* places the workspace in a Premium capacity, you have the ability, **within that workspace**, to view shared content, collaborate with colleagues, work with the app dashboards and reports, and more. The extent of your permissions is set by your Power BI administrator and by the content designer.

## Putting it all together

There are many different ways organizations organize their Power BI subscriptions and licenses. From a *business users* perspective, one of the most common scenarios is when an organization buys a Premium subscription, the admin assigns Pro licenses to a small group of users, and all the other users work with free licenses. Typically, the admin assigns the Pro licenses to the employees who will be creating and sharing content. The Pro users create [workspaces](#) and add content (dashboards, reports, datasets, apps) to those workspaces. To allow free users to collaborate in those workspaces, the admin or Pro user then assigns the workspaces to a *Premium capacity*.

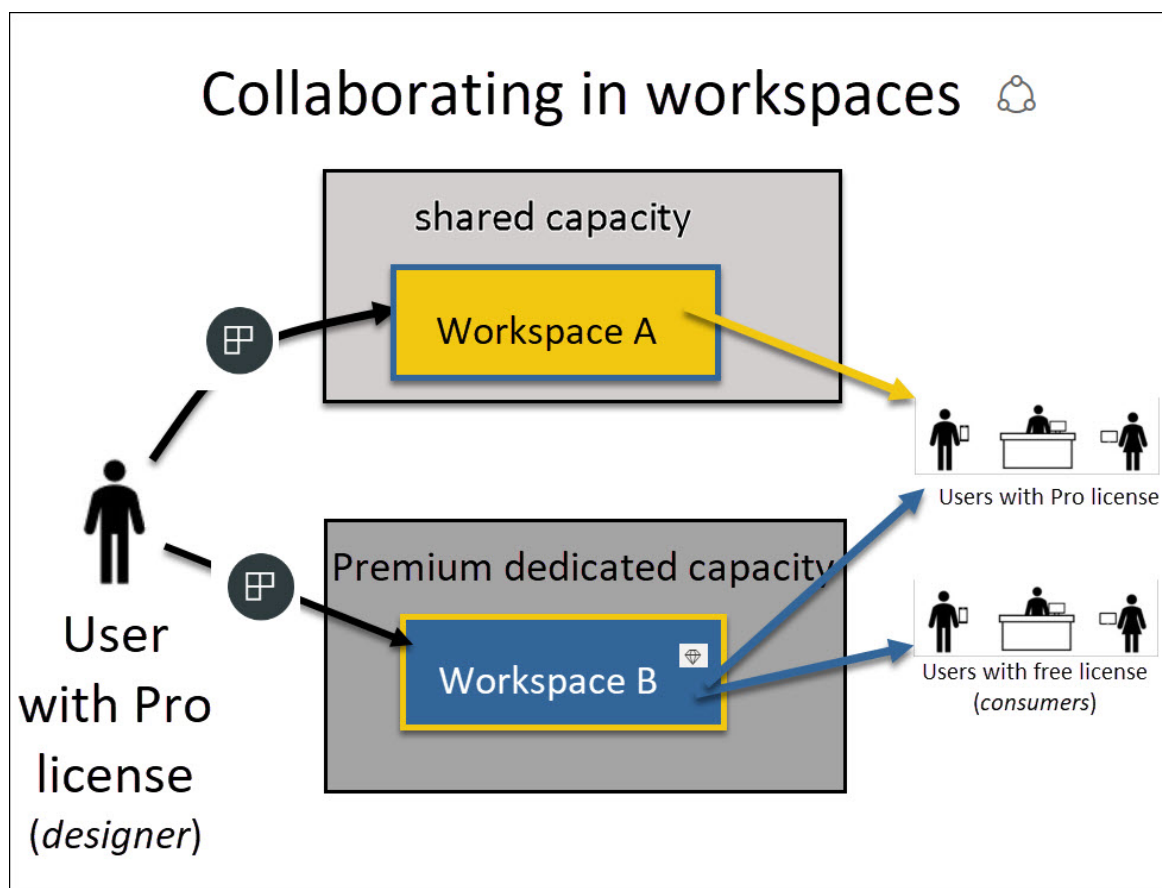
LICENSE TYPE	NOT IN PREMIUM CAPACITY	PREMIUM CAPACITY
Free	Use as a personal sandbox where you create content for yourself and interact with that content. A free license is a great way to try out the Power BI service. You can't consume content from anyone else or share your content with others <sup>1</sup>	Interact with content assigned to Premium capacity and shared with you. Free, Premium per-user, and Pro users can collaborate without requiring the free users to have Pro accounts.

LICENSE TYPE	NOT IN PREMIUM CAPACITY	PREMIUM CAPACITY
Pro	Collaborate with Premium per-user and Pro users by creating and sharing content.	Collaborate with free, Premium per user, and Pro users by creating and sharing content.

<sup>1</sup> See [Considerations and troubleshooting](#).

In the diagram below, the left side represents Pro users who create and share content in app workspaces.

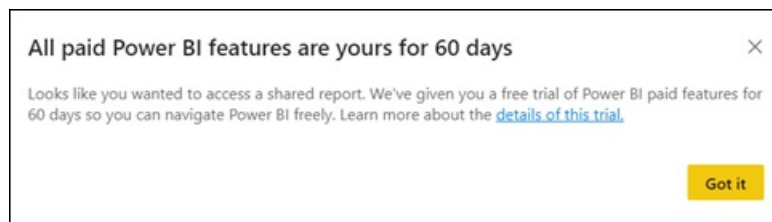
- **Workspace A** was not created in a Premium capacity.
- **Workspace B** was created and saved in a Premium capacity. This workspace has a diamond icon.



The Power BI Pro *designer* can share and collaborate with other Pro users in either of the workspaces. But, the only way the Power BI Pro user can share and collaborate with free users is by using Workspace B, which is in a Premium capacity. Within the workspace, the designer assigns roles to collaborators. Your role determines what actions you can take within the workspace. Power BI *business users* are usually assigned the *Viewer* role. To learn more about roles, see [Workspaces for Power BI business users](#).

## Considerations and troubleshooting

- It's possible to have more than one Power BI license. The Power BI service will always deliver the experience equal to the best license that you currently have. For example, if you have both a Pro and a free license, the Power BI service will use the Pro license.
- If you want to create and share content (dashboards, reports, apps), or open content that someone else shared with you, then you need to have a Pro user license or a Premium per user license. You may be able to sign up for a free 60-day individual trial of the paid version of Power BI Premium Per User. If your organization has enabled self-service trials, select the upgrade dialog that appears in the Power BI service whenever you try to use a Pro feature.



When the 60-day trial expires, your license reverts back to the previous version, either free or Pro. After your trial license reverts, you no longer have access to features that require a Power BI Premium Per User license. If you want to continue with a Premium Per User or a Pro license, contact your administrator or IT Help Desk about purchasing an upgrade. If you don't have an admin or IT Help Desk, visit [the Power BI pricing page](#).

- If you signed up for a free license on your own by selecting a *Try it free* type of button, it never expires. So if you upgrade to a trial or your organization provides you with a Pro or Premium Per User license, and then your trial ends or your organization removes your Pro license, you still have the free license to fall back on - unless you cancel the license.
- <sup>1</sup> A free user license for the Power BI service is perfect for someone exploring or using it for personal data analysis and visualizations using **My workspace**. A free standalone user isn't using Power BI to collaborate with colleagues. Standalone users with free licenses can't view content shared by others or share their own content with other Power BI users.

## Next steps

- [Am I a Power BI \*business user\*?](#)
- [Learn about workspaces](#)
- [View Power BI business user features by license type](#)

# Q&A for Power BI business users

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:** ✔ Power BI service for *business users* ✔ Power BI service for designers & developers ✕  
Power BI Desktop ✔ Requires Pro or Premium license

## What is Q&A?

Sometimes the fastest way to get an answer from your data is to ask a question using natural language. For example, "what were total sales last year."

Use Q&A to explore your data using intuitive, natural language capabilities and receive answers in the form of charts and graphs. Q&A is different from a search engine -- Q&A only provides results about the data in Power BI datasets.

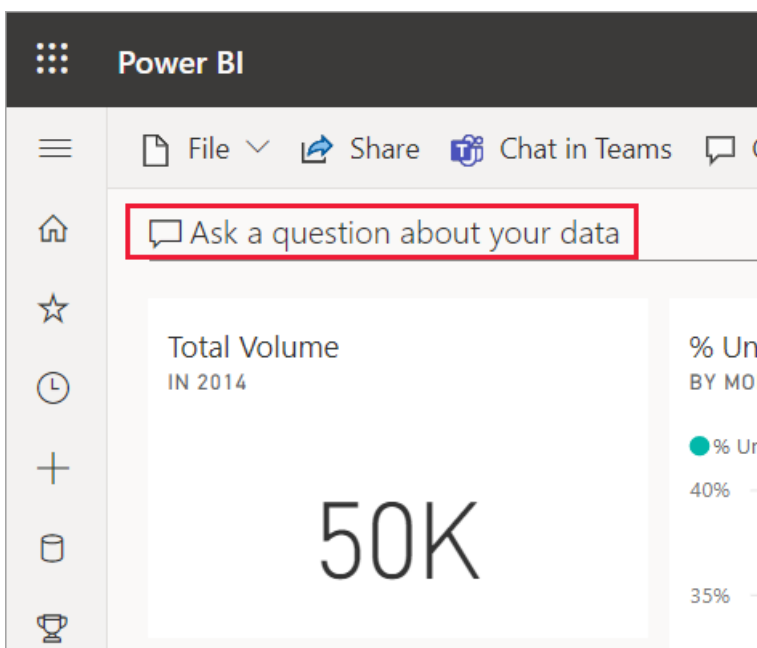
## Which visualization does Q&A use?

Q&A picks the best chart or graph based on the data being displayed. Sometimes data in the underlying dataset is defined as a certain type or category and this helps Q&A know how to display it. For example, if data is defined as a date type, it is more likely to be displayed as a line chart. Data that is categorized as a city is more likely to be displayed as a map.

You can also tell Q&A which visual to use by adding it to your question. But keep in mind that it may not always be possible for Q&A to display the data using the visual type you requested. Q&A will prompt you with a list of workable visual types.

## Where can I use Q&A?

You'll find Q&A on dashboards in the Power BI service, and at the bottom of the dashboard in Power BI mobile. Unless the designer has given you edit permissions, you'll be able to use Q&A to explore data but won't be able to save any visualizations created with Q&A.



You'll also find Q&A on reports, if the report *designer* added an interactive [Q&A visual](#).

Ask a question about your data

Try one of these to get started

top geo states by total units YTD

top geo states by total units ytd var %

what is the total category volume by geo state

what is the total OTHER units YTD by geo state

[Show all suggestions](#)

## Q&A on dashboards

Power BI Q&A is available with a Pro or Premium license. [Q&A in the Power BI mobile apps](#) and [Q&A with Power BI Embedded](#) are covered in separate articles. At the current time, **Power BI Q&A** only supports answering natural language queries asked in English, although there is a preview available for Spanish that can be enabled by your Power BI administrator.



Asking the question is just the beginning. Have fun traveling through your data refining or expanding your question, uncovering trust-worthy new information, zeroing in on details and zooming out for a broader view. You'll be delighted by the insights and discoveries you make.

The experience is truly interactive...and fast! Powered by an in-memory storage, response is almost instantaneous.

## The Q&A visual in Power BI reports

In Power BI reports, there is a specific type of interactive visual called the Q&A visual. When a report designer adds this visual to a report, report end users can ask natural language questions and create a new report visual that represents the answer to that question. The Q&A visual behaves like other visual in a report, it can be cross-filtered/cross-highlighted and also supports bookmarks and comments.

You can identify a Q&A visual by its question box across the top. This is where you'll enter or type questions

using natural language. The Q&A visual can be used over and over again to ask questions about your data. When you leave the report, the Q&A visual resets to its default.

Try one of these to get started

top geo states by total units YTD

top geo states by total units ytd var %

what is the total category volume by geo state

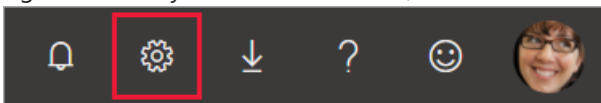
what is the total OTHER units YTD by geo state

Show all suggestions

## Considerations and troubleshooting

**Question:** I don't see Q&A on this dashboard.

**Answer 1:** If you don't see a question box, first check your settings. To do this, select the cog icon in the upper right corner of your Power BI toolbar, or from the **More options** (...) dropdown menu.



Then choose **Settings > Dashboards**. Make sure there is a check mark next to **Show the Q&A search box on this dashboard**.

General Alerts Subscriptions **Dashboards** Datasets Workbooks Dataflows App

Marketing and sales

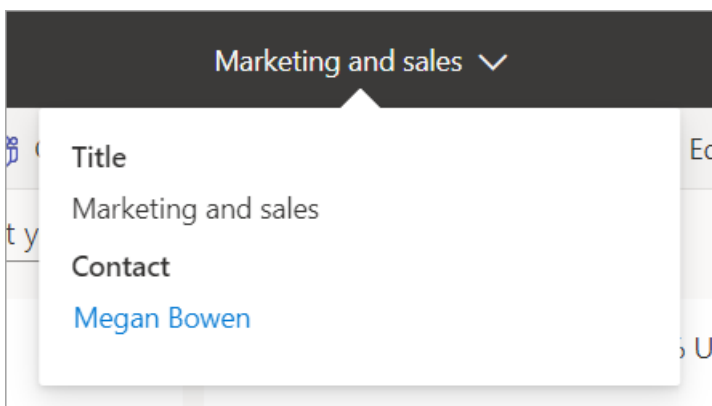
Settings for Marketing and sales

Q&A

Allow people to use natural language to ask questions about their data and let them create new visuals from it.  
[Learn more](#)

☒ Show the Q&A search box on this dashboard

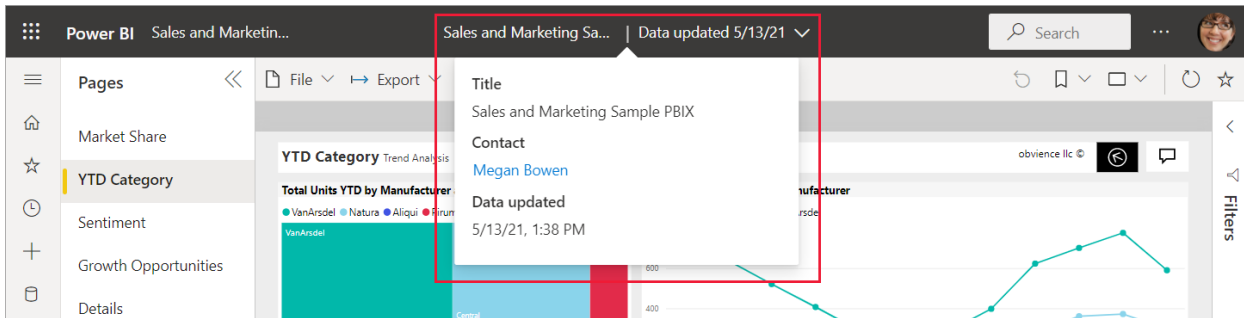
**Answer 2:** Sometimes you won't have access to the settings. If the dashboard owner or your administrator turned Q&A off, check with them to see if it's OK to turn it back on. To look up the owner, select the name of the dashboard from the top menu bar.



**Question:** I'm not getting the results I'd like to see when I type a question.

**Answer:** Select the option to contact the report or dashboard owner. You can do this directly from the Q&A

dashboard page or the Q&A visual. Or, you can look up the owner from the Power BI header. There are many things the owner can do to improve the Q&A results. For example, the owner can rename columns in the dataset to use terms that are easily understood ( `CustomerFirstName` instead of `CustFN` ). Since the owner knows the dataset really well, they can also come up with helpful questions and add them to the Q&A suggested questions.



## Privacy





Microsoft may use your questions to improve Power BI. Please review the [Microsoft Privacy Statement](#) for more information.

## Next steps

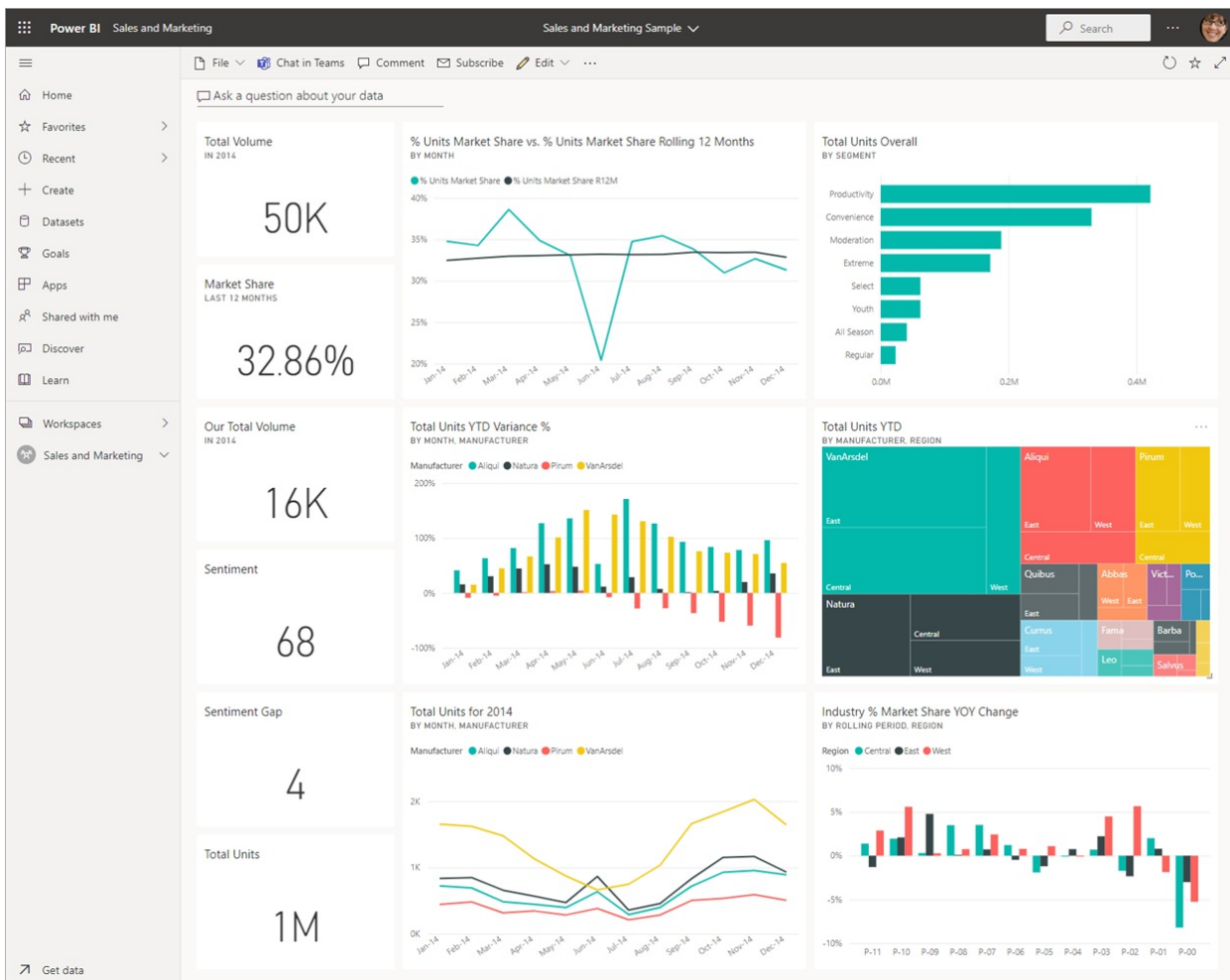
Learn how to ask your own natural language questions and create answers in the form of visuals. [Q&A Tutorial](#)

# Dashboards for business users of the Power BI service

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for **business users**  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

A Power BI **dashboard** is a single page, often called a canvas, that uses visualizations to tell a story. Because it is limited to one page, a well-designed dashboard contains only the most-important elements of that story.



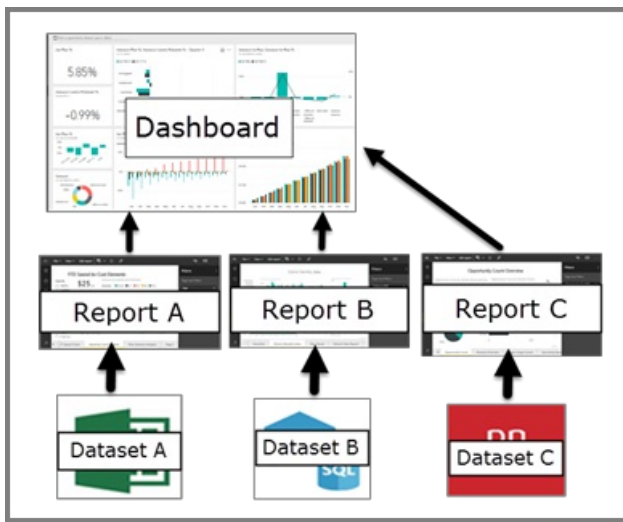
The visualizations you see on the dashboard are called *tiles* and are *pinned* to the dashboard by report *designers*. In most cases, selecting a tile takes you to the report page where the visualization was created. If you're new to Power BI, you can get a good foundation by reading [Power BI basic concepts](#).

## NOTE

Dashboards can be [viewed and shared on mobile devices](#).

For colleagues to be able to share dashboards with you, your version of Power BI must be "Pro" or "Premium." For more information, see [Power BI license types](#).

The visualizations on a dashboard come from reports and each report is based on one dataset. In fact, one way to think of a dashboard is as an entryway into the underlying reports and datasets. Selecting a visualization takes you to the report that was used to create it.



## Advantages of dashboards

Dashboards are a wonderful way to monitor your business, to look for answers, and to see all of your most-important metrics at a glance. The visualizations on a dashboard may come from one underlying dataset or many, and from one underlying report or many. A dashboard can combine on-premises and cloud data, providing a consolidated view regardless of where the data lives.

A dashboard isn't just a pretty picture; it's interactive and the tiles update as the underlying data changes.

## Dashboards versus reports for Power BI *business users*

The way you interact with Power BI will depend on your job role. As a consumer or *business user*, you are the person who receives content (dashboards, reports, and apps) from *creator* colleagues. Reports are often confused with dashboards since they too are canvases filled with visualizations. But there are some major differences from a Power BI *business user* point of view.

CAPABILITY	DASHBOARDS	REPORTS
Pages	One page	One or more pages
Ask a question about your data (Power BI Q&A) field at top	almost always	no
Data sources	One or more reports and one or more datasets per dashboard	A single dataset per report
Filtering	Can't filter or slice	Many different ways to filter, highlight, and slice
Set alerts	Can create alerts to email you when certain conditions are met	No
Featured	Can set one dashboard as your "featured" dashboard	Cannot create a featured report
Can see underlying dataset tables and fields	No. Can export data but can't see tables and fields in the dashboard itself.	Yes. Can see dataset tables and fields and values.

## Dashboard designers and dashboard business users

As a Power BI ***business user***, you receive dashboards from *designers*. Continue learning about dashboards with these topics:

- [View a dashboard](#)
- Learn about [dashboard tiles](#) and what will happen when you select one.
- Want to track an individual dashboard tile and receive an email when it reaches a certain threshold? [Create alerts on tiles](#).
- Have fun asking your dashboard questions. Learn how to use [Power BI Q&A](#) to ask a question about your data and get the answer in the form of a visualization.

**TIP**





If you didn't find what you're looking for here, use the Table of Contents to the left.

## Next steps

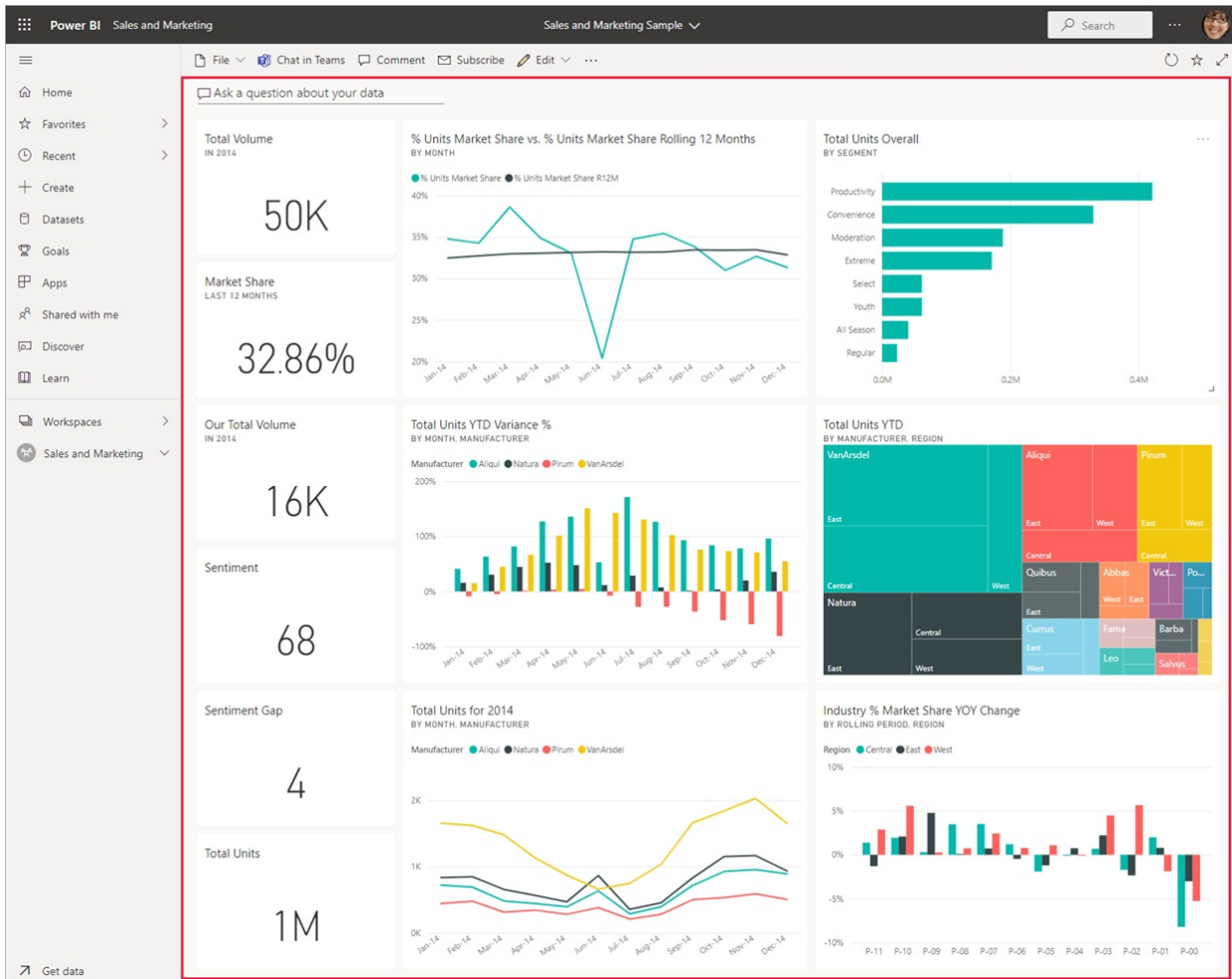
[View a dashboard](#)

# View a dashboard

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for **business users**  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

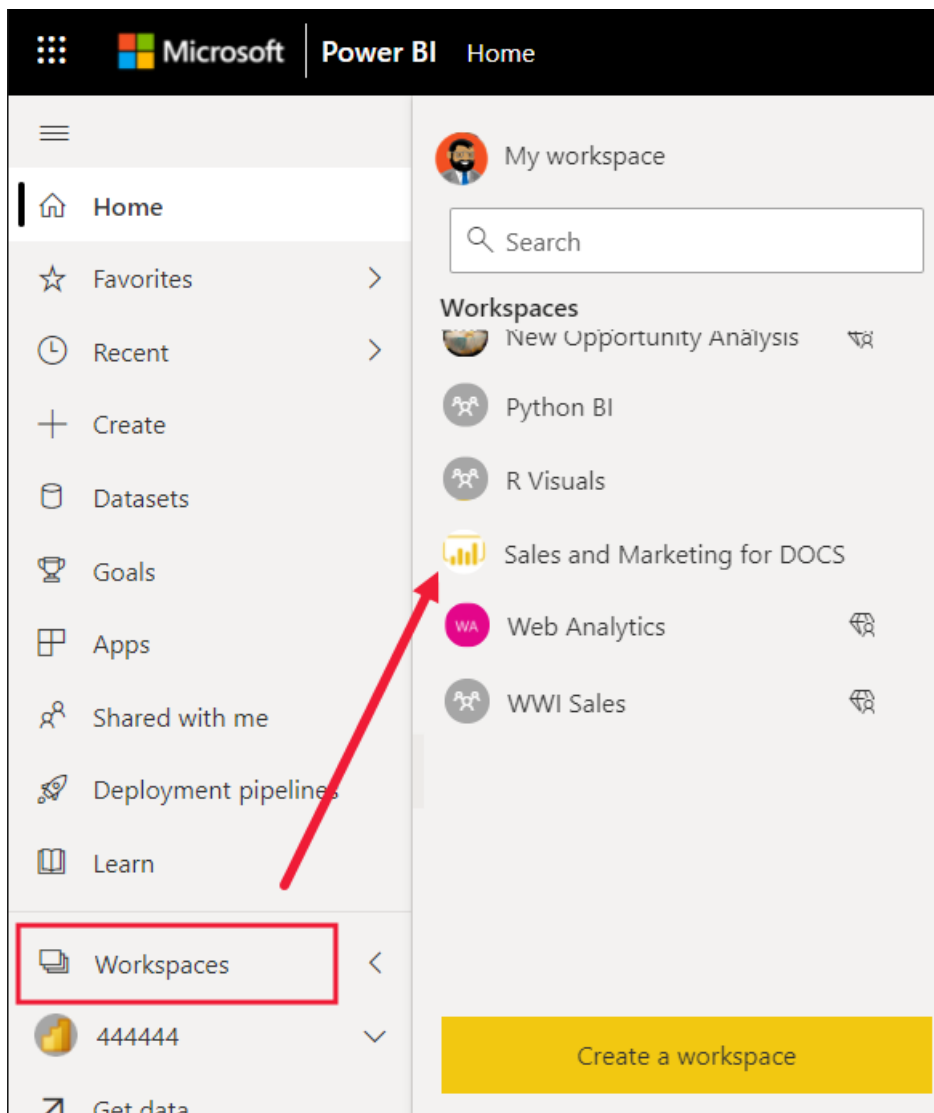
Power BI *business users* spend a lot of time viewing dashboards. Dashboards are designed to highlight specific information from the underlying reports and datasets. And Power BI business users rely on that information for tracking, monitoring, answering questions, testing, and more -- in order to make data-driven business decisions.



A Power BI Pro or Premium license is required for both sharing a dashboard and viewing a shared dashboard.  
[Which license do I have?](#)

## Open a dashboard

Dashboards can be opened from many locations in the Power BI service. One way to open a dashboard is to select and open a workspace.



If that workspace contains a dashboard, you'll see the following icon.



**Sales and Marketing for DOCS**

+ New

All Content Datasets + dataflows

	Name	Type	Owner
	Marketing and sales	Dashboard	Sales and
	Sales and Marketing Sample PBIX	Report	Sales and
	Sales and Marketing Sample PBIX	Dataset	Sales and

Once you've identified a dashboard, open it by selecting it and the dashboard will fill your Power BI canvas.

You may find dashboards in all of the containers in the nav pane.

Finding and opening dashboards.

- Home
- Favorites - if you've [set a dashboard as a favorite](#)
- Recent - if you've recently visited a dashboard
- Apps - most apps contain both dashboards and reports
- Shared with me - if a colleague has [shared a dashboard with you](#)
- My workspace - if you've downloaded any of the [Power BI samples](#)

## Next steps

- Back to [dashboard overview](#)
- Get comfortable with dashboards by taking a tour of one of our [sample dashboards](#).
- Learn about [dashboard tiles](#) and what will happen when you select one.

# Featured dashboards in the Power BI service

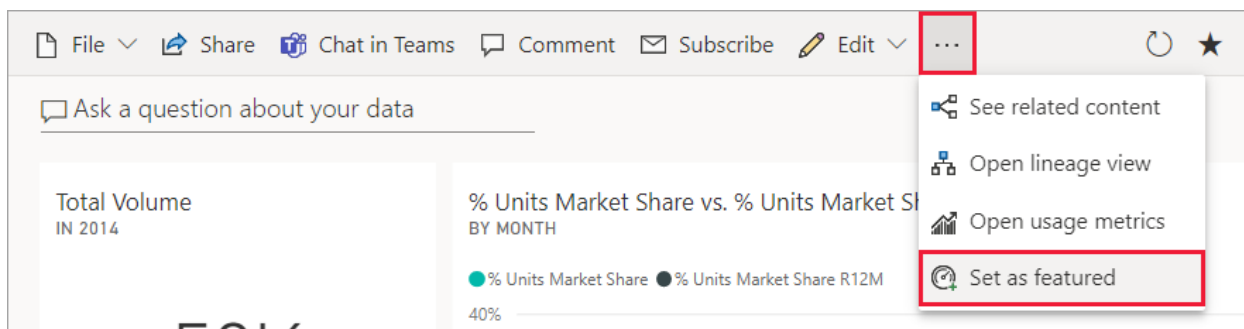
12/10/2021 • 2 minutes to read • [Edit Online](#)

Many of us have one dashboard that we visit more than any others. It might be the dashboard we use to run our business. Or, it might be a dashboard that contains an aggregation of tiles from many different dashboards and reports.

This article addresses how to select your one featured dashboard. Power BI automatically displays your featured dashboard each time you open the Power BI service. For information about a different functionality (that has a similar name), *featured content on Home*, please read [Explore Power BI Home](#)

## Create a featured dashboard

When you set a dashboard as *featured*, each time you open the Power BI service from your browser (app.powerbi.com), it opens with that dashboard displayed. If you're opening Power BI from an email link, or any other shared URL, Power BI will open to the dashboard or report selected by the content owner.

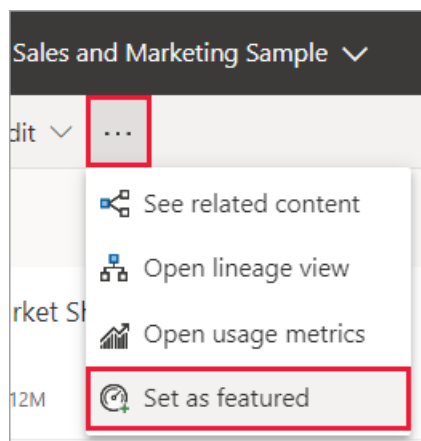


You can also select a few dashboards and set them as favorites. See [Dashboard favorites](#).

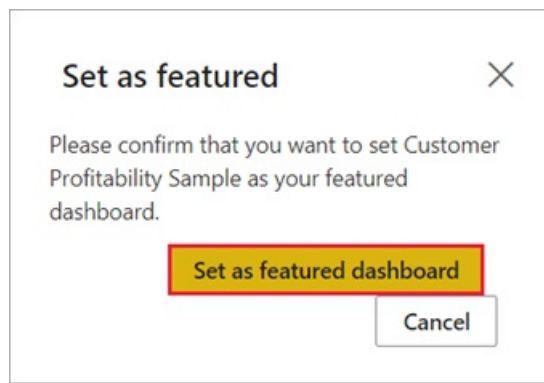
If you haven't set a featured dashboard, Power BI opens to the last dashboard you used or to Power BI **Home**.

### Set a dashboard as featured

1. Open the dashboard that you want to set as featured.
2. On the top menu bar, select **More options** (...) and select **Set as featured**.



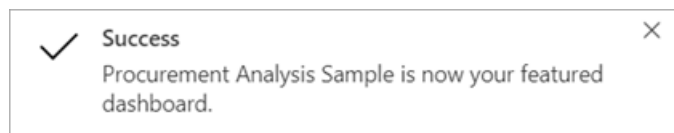
3. Confirm your selection.



## Change the featured dashboard

If you change your mind later, you can set a new dashboard as the featured dashboard. Unfeaturing a dashboard doesn't remove it from Power BI.

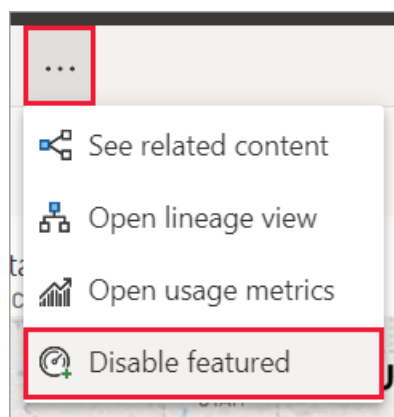
1. Follow the previous steps 1 and 2.
2. Select **Set as featured dashboard**.



## Remove the featured dashboard

If you decide that you don't want any dashboard to be designated as featured, here's how to unfeature a dashboard.

1. Open the currently featured dashboard.
2. On the top menu bar, select **More options (...)** and select **Disable featured**.







## Next steps

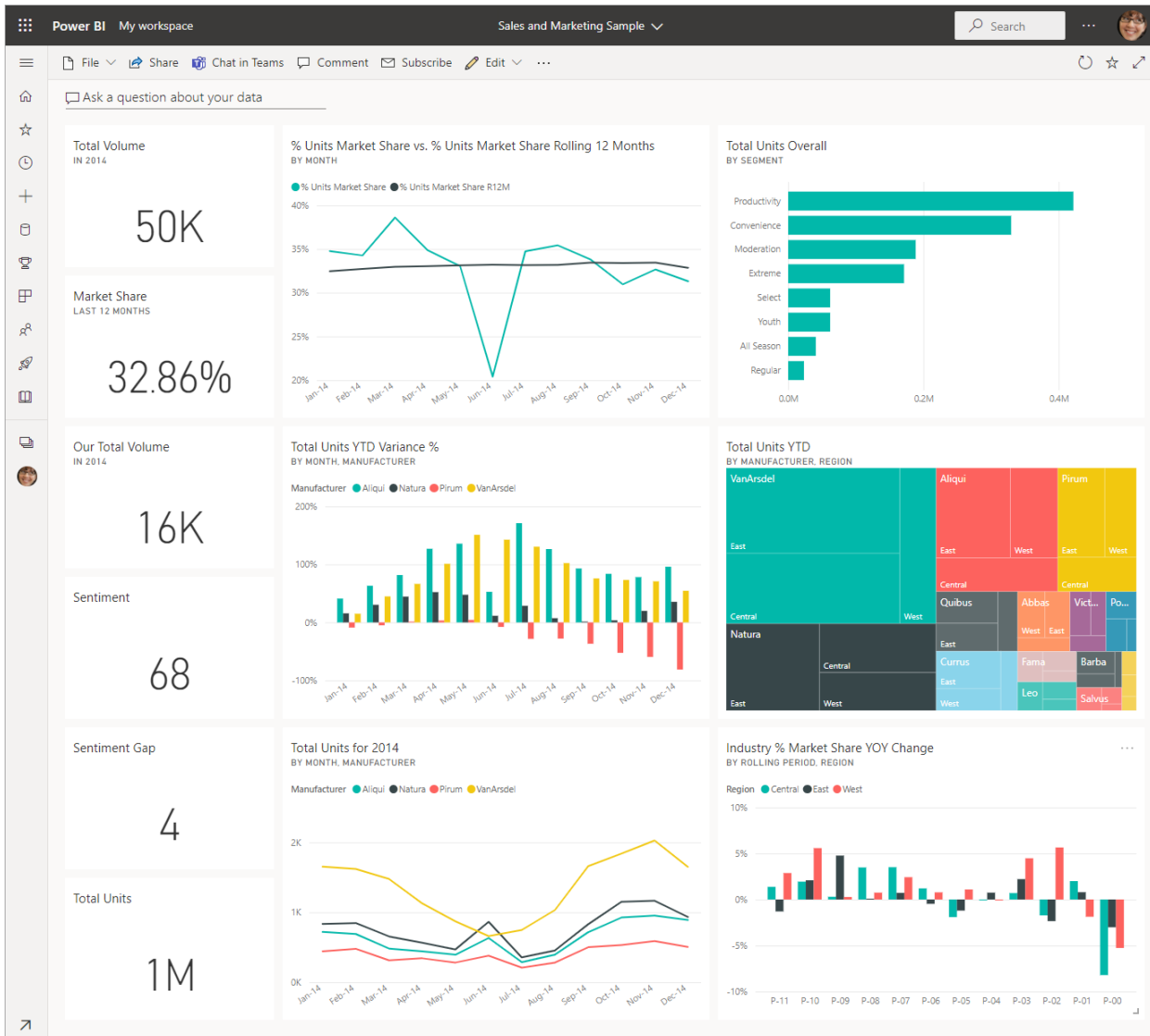
- [Favorite a dashboard](#)
- More questions? Try the [Power BI Community](#).

# Dashboard tiles in Power BI

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for **business users**  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

A tile is a snapshot of your data, pinned to a dashboard by a *designer*. *Designers* can create tiles from a report, dataset, dashboard, the Q&A question box, Excel, SQL Server Reporting Services (SSRS), and more. This screenshot shows many different tiles pinned to a dashboard.

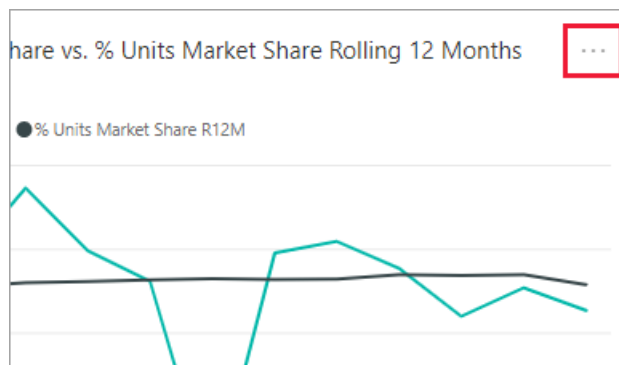


Besides tiles pinned from reports, *designers* can add standalone tiles directly on the dashboard using **Add tile**. Standalone tiles include: text boxes, images, videos, streaming data, and web content.

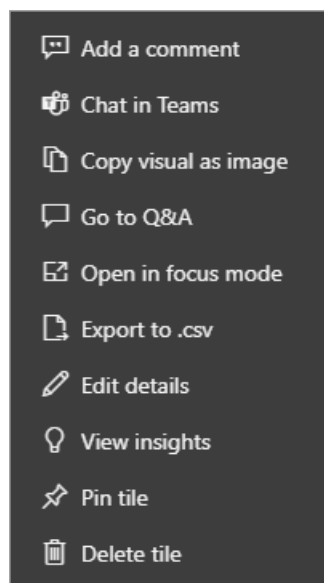
Need help understanding the building blocks that make up Power BI? See [Power BI - Basic Concepts](#).

## Interacting with tiles on a dashboard








1. Hover over the tile to display the ellipses.



2. Select the ellipses to open the tile action menu. The options available vary by your permissions, the visual type, and the method used to create the tile. For example, the menu items available for tiles pinned from Q&A are different than the tiles pinned from a report. Here is an action menu for a tile created using Q&A.



Some of the actions available from these menus are:

- [Open the report that was used to create the tile](#) 
- [Open the Q&A question that was used to create the tile](#) 
- [View the tile in focus mode](#) 
- [View insights](#) 
- [Add a comment and start a discussion](#) 
- [Manage alerts set on a dashboard tile](#) 
- [Open the data in Excel](#) 

3. To close the action menu, select a blank area in the canvas.

### Select (click) a tile

When you select a tile, what happens next depends on how the tile was created and if it has a [custom link](#). If it has a custom link, selecting the tile takes you to that link. Otherwise, selecting the tile takes you to the report, Excel Online workbook, SSRS report that is on-premises, or Q&A question that was used to create the tile.

#### NOTE

The exception to this is video tiles added to dashboards by *designers*. Selecting a video tile (that was created this way) causes the video to play right there on the dashboard.

## Considerations and troubleshooting

- If nothing happens when you select (click) a tile, or you receive an error message, here are some possible reasons:
  - The report that was used to create the visualization was not saved, or has been deleted.
  - The tile was created from a workbook in Excel Online, and you do not have at least Read permissions for that workbook.
  - If the tile was created from SSRS, and you don't have permission to the SSRS report or you don't have access to the network where the SSRS server is located.
- For tiles created directly on the dashboard using **Add tile**, if a custom hyperlink has been set, selecting the title, subtitle, and or tile will open that URL. Otherwise, by default, selecting one of these tiles created directly on the dashboard for an image, web code, or text box produces no action.
- If the original visualization used to create the tile changes, the tile doesn't change. For example, if the *designer* pinned a line chart from a report and then changed the line chart to a bar chart, the dashboard tile continues to show a line chart. The data refreshes, but the visualization type does not.





## Next steps

[Data refresh](#)

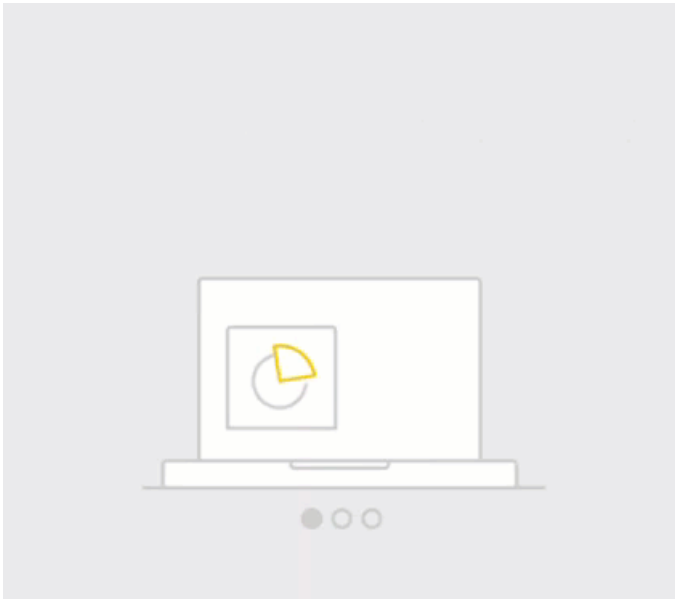
[Power BI - Basic Concepts](#)

# Add comments to a dashboard or report

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

Add a personal comment or start a conversation about a dashboard or report with your colleagues. The **comment** feature is just one of the ways a *business user* can collaborate with others.



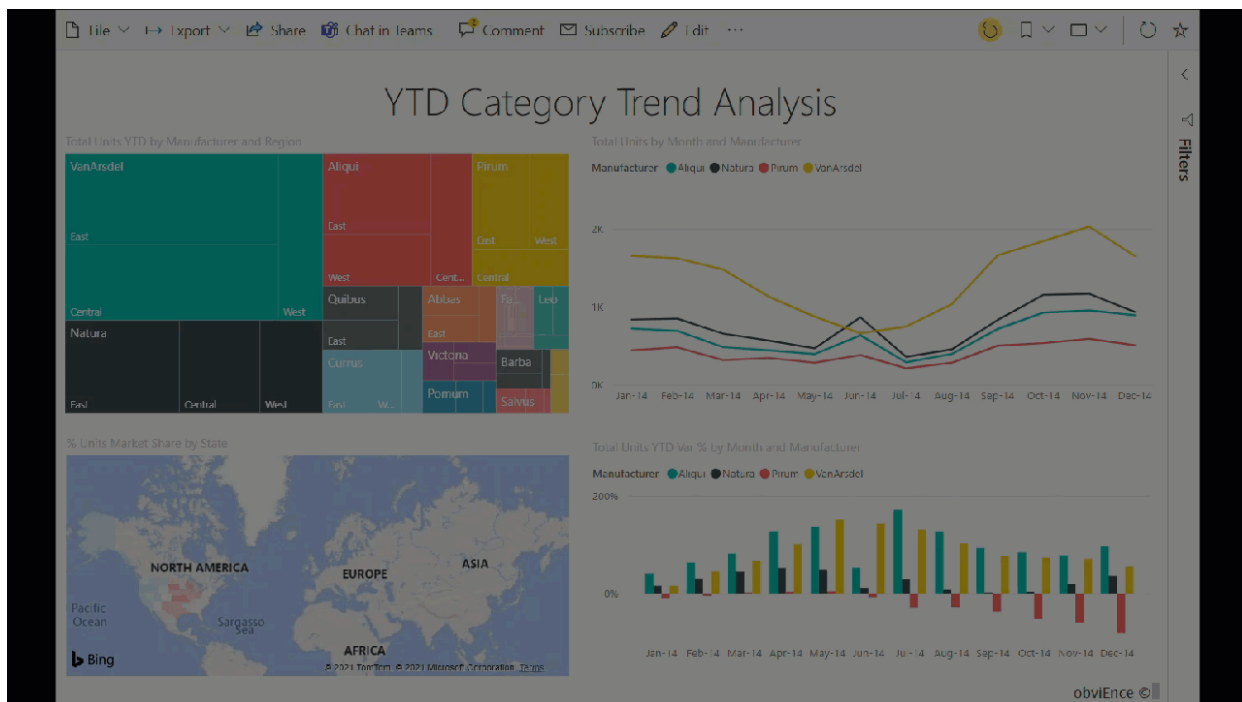
## NOTE

Collaborating with others, including adding comments to shared reports, requires a Power BI Pro license or for the content to be hosted in Power BI Premium capacity. [Which license type do I have?](#)

## How to use the Comments feature

Comments can be added to an entire dashboard, to individual visuals on a dashboard, to a report page, to a paginated report, and to individual visuals on a report page. Add a general comment or add a comment targeted at specific colleagues. Comments can be up to 2000 characters, including @mentions of other users and spaces.

When you add a comment to a report, Power BI captures the current filter and slicer values and creates a [bookmark](#). This means that when you select or respond to a comment, the report page or report visual may change to show you the filter and slicer selections that were active when the comment was first added.



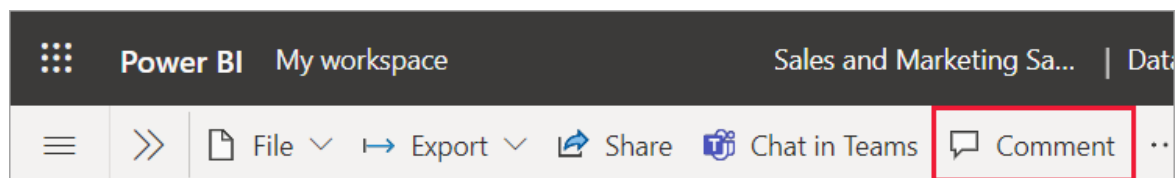
Why is this important? Say a colleague applied a filter that revealed an interesting insight that they want to share with the team. Without that filter selected, the comment might not make sense.

If you are using a paginated report, you may only leave a general comment about your report. Support for leaving comments on individual paginated report visuals is not available.

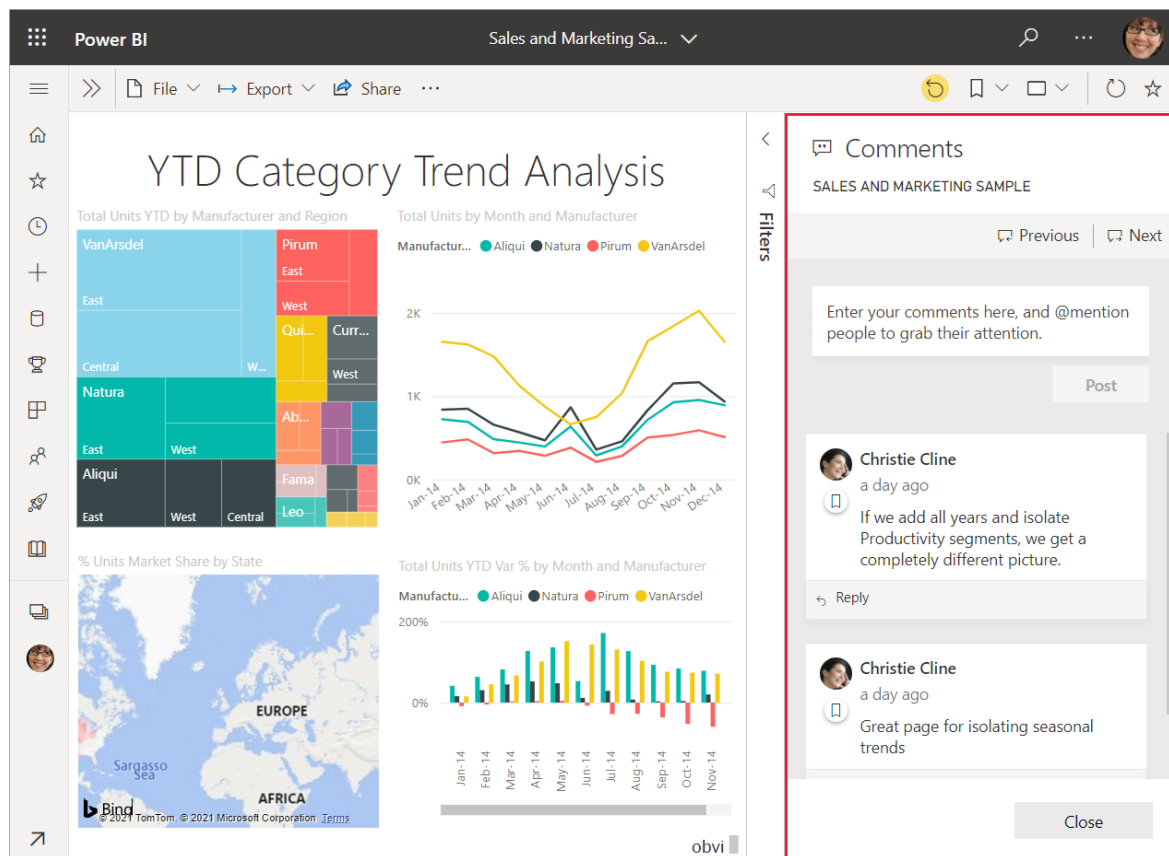
### Add a general comment to a dashboard or report

The process for adding comments to a dashboard or report is similar. In this example, we're using a dashboard.

1. Open a Power BI dashboard or report and select the **Comment** icon. This opens the Comments dialog.



Here we see that the dashboard creator has already added a general comment. Anyone with access to this dashboard can see this comment.



2. To respond, select **Reply**, type your response, and select **Post**.

@Christie Cline Thanks for

**Post**

By default, Power BI directs your response to the colleague who started the comment thread, in this case Aaron.

**Christie Cline**  
a day ago  
If we add all years and isolate Productivity segments, we get a completely different picture.



**Megan Bowen**  
now  
@Christie Cline Thanks for the adding the filters. Did you notice the Natura spike in June of '04?

**Reply**

3. If you want to add a comment that is not part of an existing thread, enter your comment in the upper text field.

## Comments

SALES AND MARKETING SAMPLE

 Previous |  Next

Start a new thread here

Post



**Christie Cline**

a day ago




If we add all years and isolate Productivity segments, we get a completely different picture.



**Megan Bowen**

now

@Christie Cline Thanks for the adding the filters. Did you notice the Natura spike in June of '04?

 Reply



**Christie Cline**

a day ago

Close

The comments for this dashboard now look like this.


Comments

SALES AND MARKETING SAMPLE

Previous | Next


Enter your comments here, and @mention people to grab their attention.

Post




Megan Bowen

now




Start a new thread here

Reply




Christie Cline

a day ago



If we add all years and isolate Productivity segments, we get a completely different picture.



Megan Bowen

now

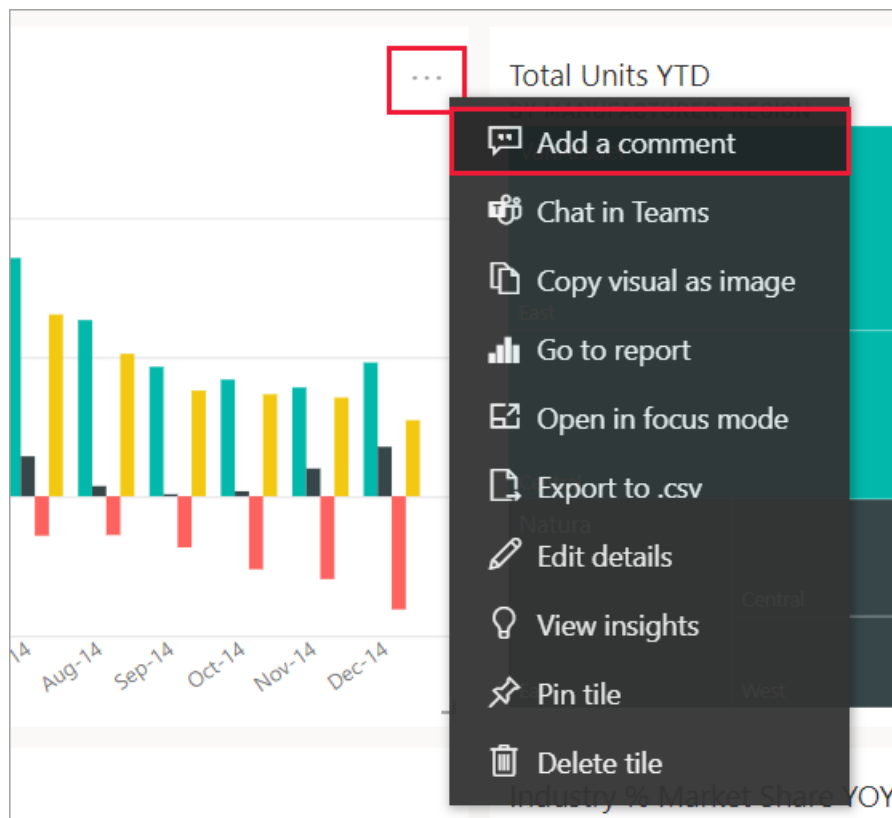
@Christie Cline Thanks for the adding

Close

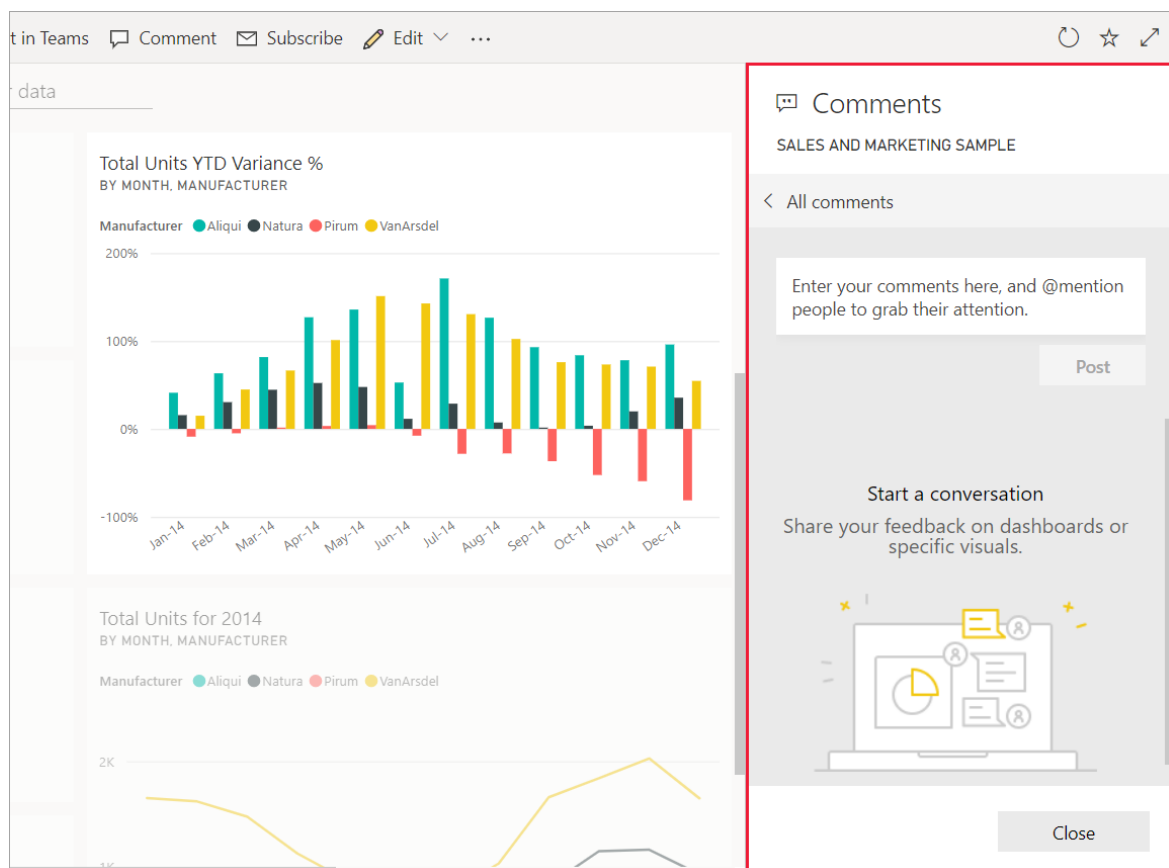
### Add a comment to a specific dashboard or report visual

In addition to adding comments to an entire dashboard or to an entire report page, you can add comments to individual dashboard tiles and individual report visuals. The processes are similar, and in this example we're using a report.

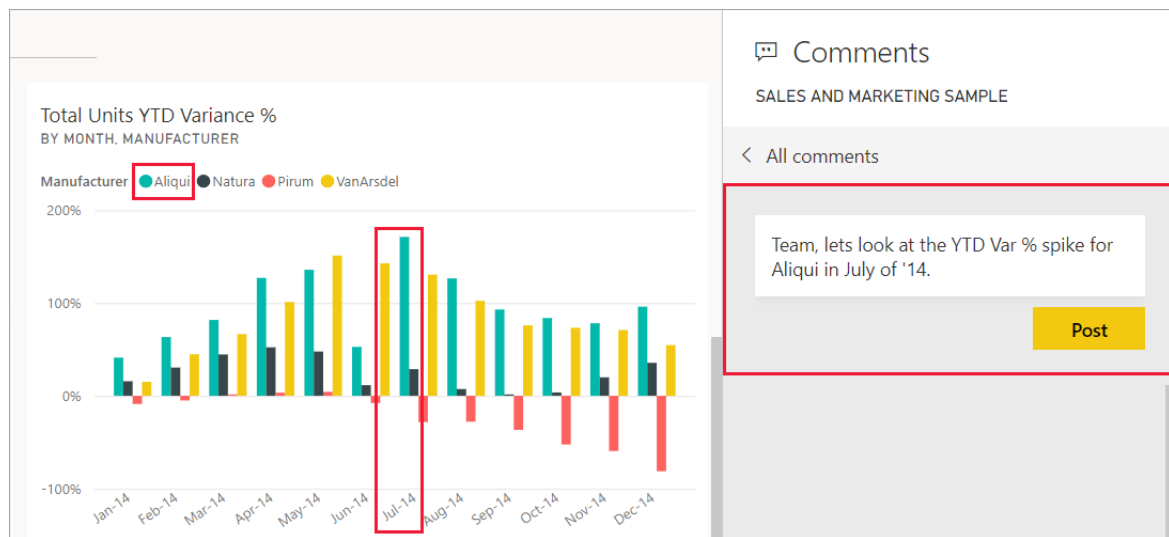
1. Hover over the visual and select **More options** (...).
2. From the dropdown, select **Add a comment**.




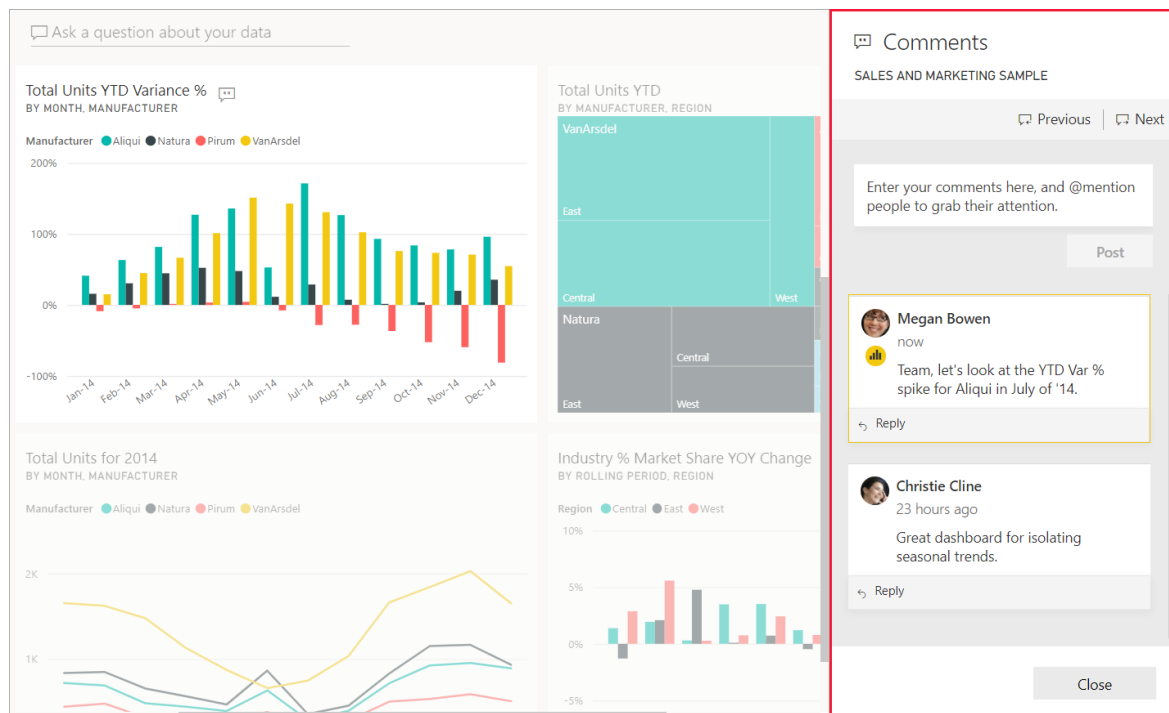
3. The **Comments** dialog opens, and the other visuals on the page are greyed out. This visual doesn't have any comments yet.



4. Type your comment and select **Post**.



- On a report page, selecting a comment that was made on a visual, highlights that visual (see below).
- On a dashboard, the chart icon  lets us know that a comment is tied to a specific visual. Comments that apply to the entire dashboard do not have a special icon. Selecting the chart icon highlights the related visual on the dashboard.

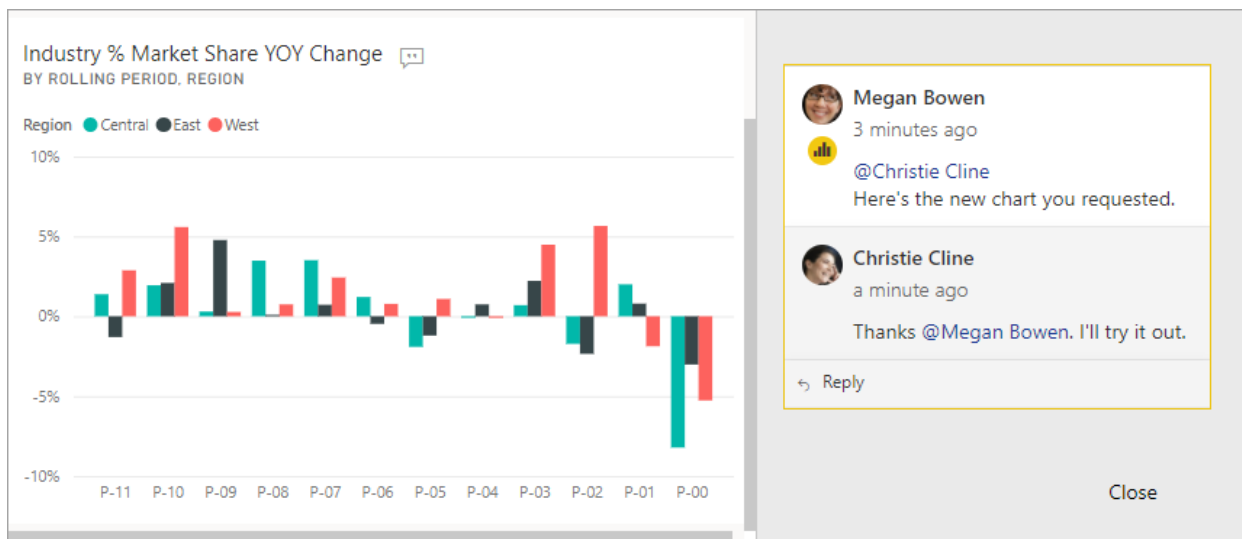


5. Select **Close** to return to the dashboard or report.

### Get your colleagues attention by using the @ sign

Whether you're creating a dashboard, report, tile, or visual comment, grab your colleagues' attention by using the "@" symbol. When you type the "@" symbol, Power BI opens a dropdown where you can search for and select individuals from your organization. Any verified name prefaced with the "@" symbol, appears in blue font. The @mentioned individuals will immediately receive an e-mail in their inbox, and if they are using a Power BI Mobile app, they will receive a push notification on their device. They can open the report or dashboard directly from the notification, see the comment, view the data, and reply accordingly.

Here's a conversation I'm having with the visualization *designer*. They are using the @ symbol to ensure I see the comment. I receive a notification and select the link to open this dashboard and the relevant conversation.



## Considerations and troubleshooting

- Comments are limited to 2000 characters, including @mentions of other users and spaces.
- The maximum number of conversations on a dashboard or report is 100. The maximum number of comments per conversation is 1000. To add a new conversation or comment, delete prior conversations or comments.
- Bookmarks are not captured when you reply to a conversation. Only the first comment in a conversation creates a bookmark.
- If you are using a paginated report, you may only leave a general comment about your report. Support for leaving comments on individual paginated report visuals is not available.

## Next steps

Back to [visualizations for business users](#)

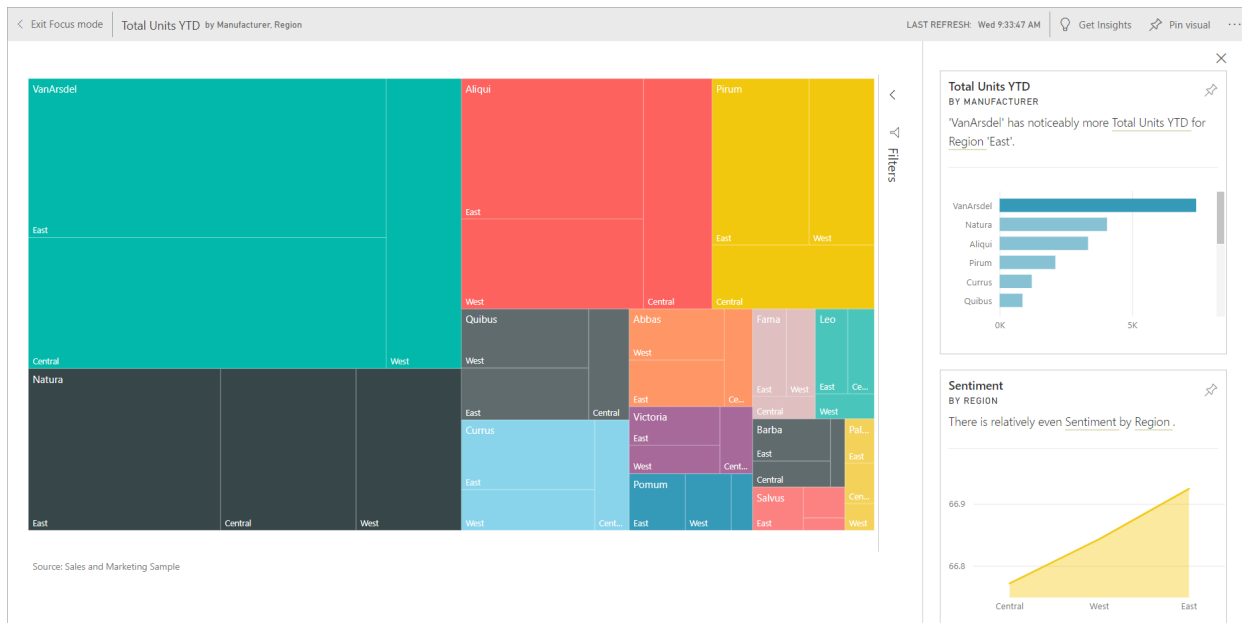
[Select a visualization to open a report](#)

# View data insights on dashboard tiles with Power BI

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

Each visual [tile](#) on your dashboard is a doorway into data exploration. When you select a tile, it opens a report or [opens Q&A](#) where you can filter and sort and dig into the dataset behind the report. And when you run insights, Power BI does the data exploration for you.



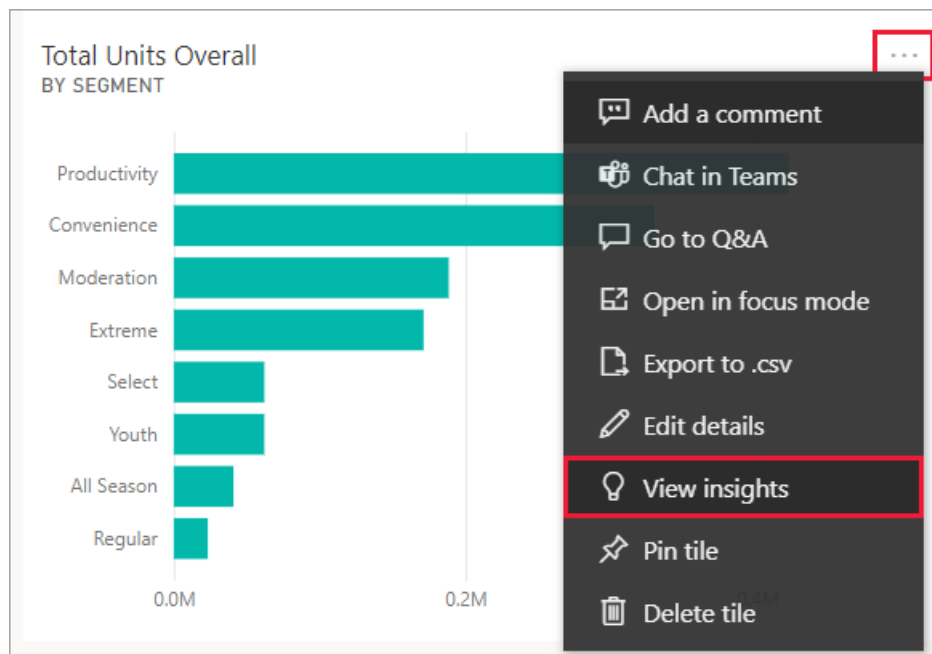
Run insights to generate interesting interactive visuals based on your data. Insights can be run on a specific dashboard tile and you can even run insights on an insight!

The insights feature is built on a growing [set of advanced analytical algorithms](#) developed in conjunction with Microsoft Research that we'll continue to use to allow more people to find insights in their data in new and intuitive ways.

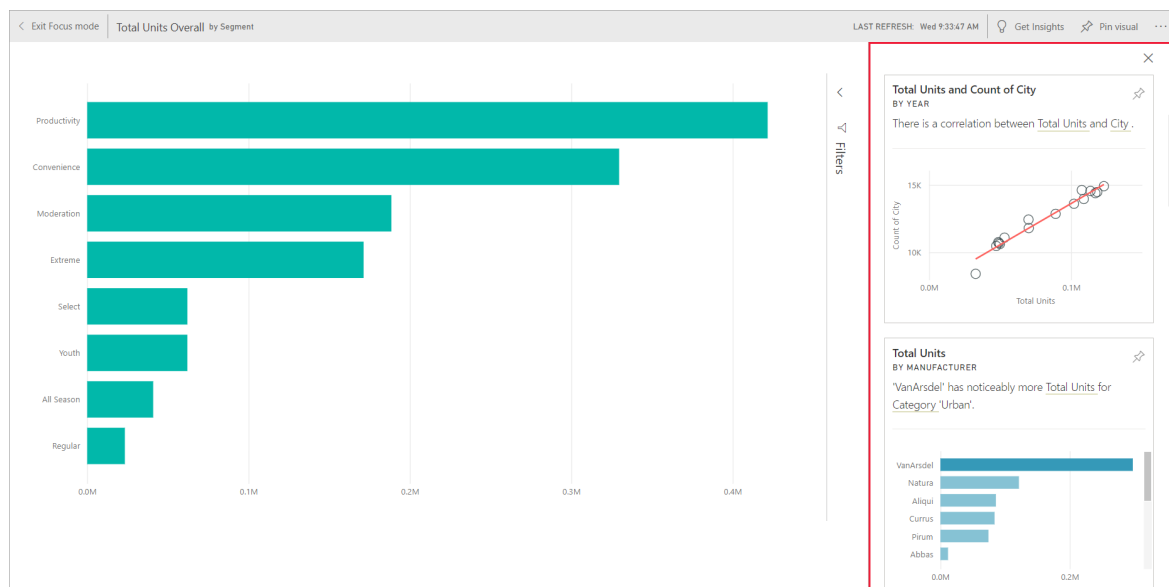
## Run insights on a dashboard tile

When you run insights on a dashboard tile, Power BI searches just the data used to create that single dashboard tile.

1. [Open a dashboard](#).
2. Hover over a tile. select **More options (...)**, and choose **View insights**.



3. The tile opens in **Focus mode** with the insights cards displayed along the right.

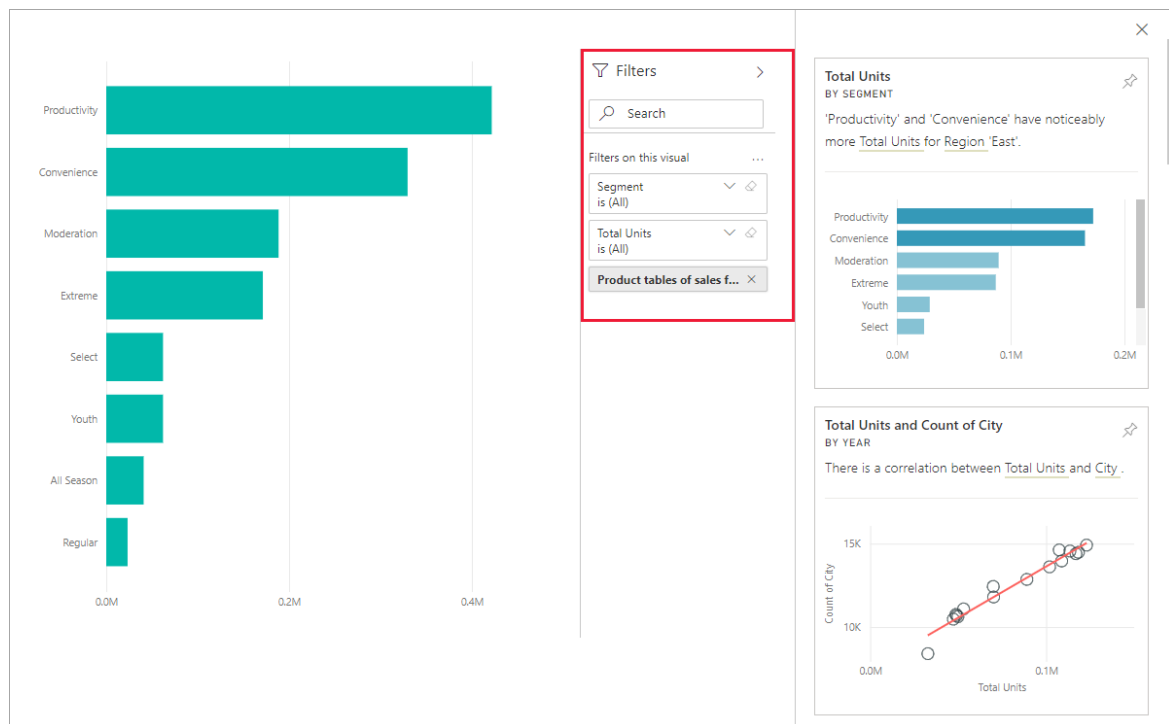


4. Does one insight pique your interest? Select that insight card to dig further. The selected insight appears on the left and new insight cards, based solely on the data in that single insight, display along the right.

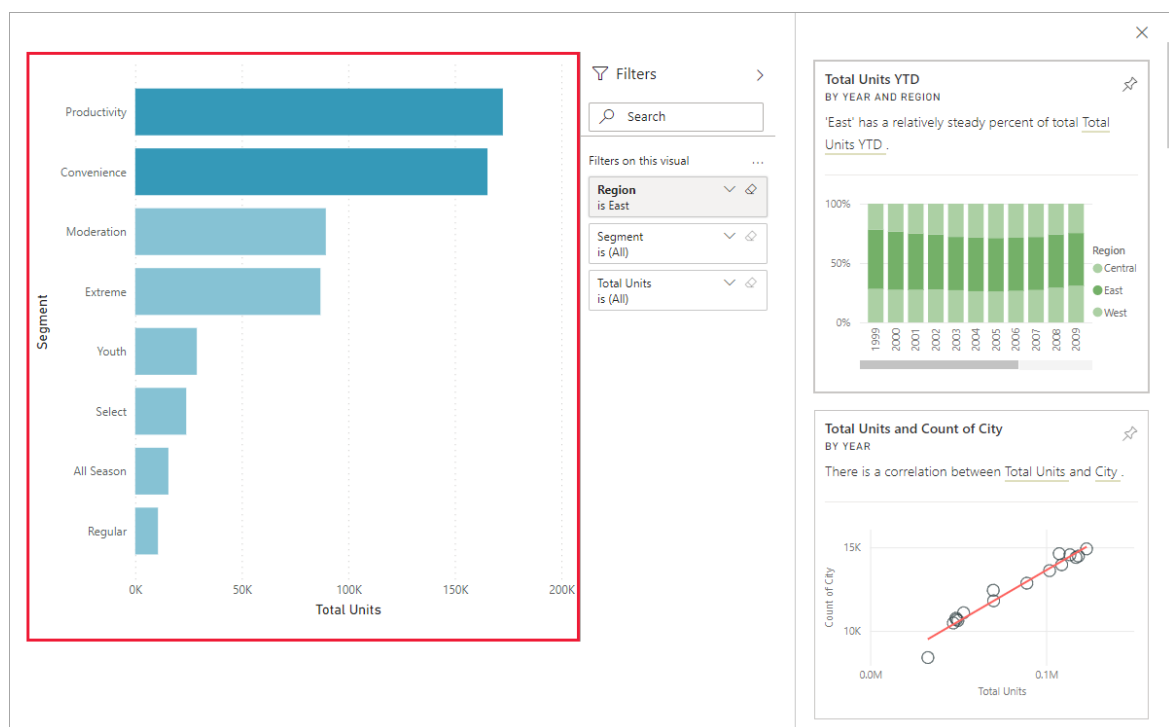
## Interact with the insight cards

Once you have an insight open, continue exploring.

- Filter the visual on the canvas. To display the filters, in the upper right corner, select the arrow to expand the Filters pane.



- Run insights on the insight card itself. This is often referred to as **related insights**. Select an insight card to make it active. It will move to the left side of the report canvas, and new cards, based solely on the data in that single insight, will display along the right.



To return to your report, from the upper left corner, select **Exit Focus mode**.

## Considerations and troubleshooting

- **View insights** doesn't work with all dashboard tile types. For example, it is not available for Power BI custom visuals.



## Next steps

Run insights on report visuals [using the Analyze feature](#)

Learn about the [types of Insights available](#)

# Tutorial: Set alerts on Power BI dashboards

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for **business users**  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

Set alerts in the Power BI service to notify you when data on a dashboard changes above or below limits you set. Alerts can be set on tiles pinned from report visuals or from Power BI Q&A, and only on gauges, KPIs, and cards.



Alerts can be created on dashboards:

- that you have created and saved in **My workspace**
- that have been shared with you in a [Premium reserved capacity](#).
- in any workspace you can access, if you have a Power BI Pro or Premium Per User (PPU) license.

Alerts only work on data that is refreshed. When data refreshes, Power BI looks to see if an alert is set for that data. If the data has reached an alert threshold, an alert is triggered.

This feature is still evolving, so refer to the [Tips and troubleshooting section below](#).

Only you can see the alerts you set, even if you share your dashboard. Data alerts are fully synchronized across platforms; set and view data alerts [in the Power BI mobile apps](#), in Power BI for Teams, and in the Power BI service.

## WARNING

These alerts provide information about your data. If you view your Power BI data on a mobile device and that device gets stolen, we recommend using the Power BI service to turn off all alerts.

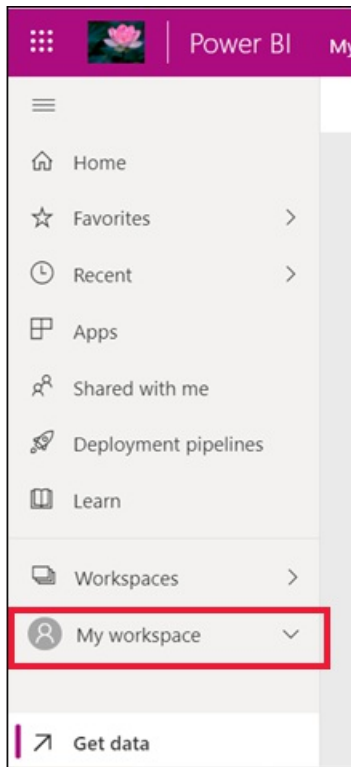
This tutorial covers the following.

- Who can set alerts
- Which visuals support alerts
- Who can see my alerts
- Do alerts work on Power BI Desktop and mobile
- How to create an alert
- Where will I receive my alerts

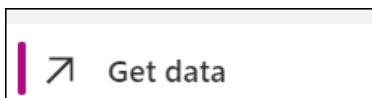
## Prerequisites

If you're not signed up for Power BI, [sign up for a free trial](#) before you begin.

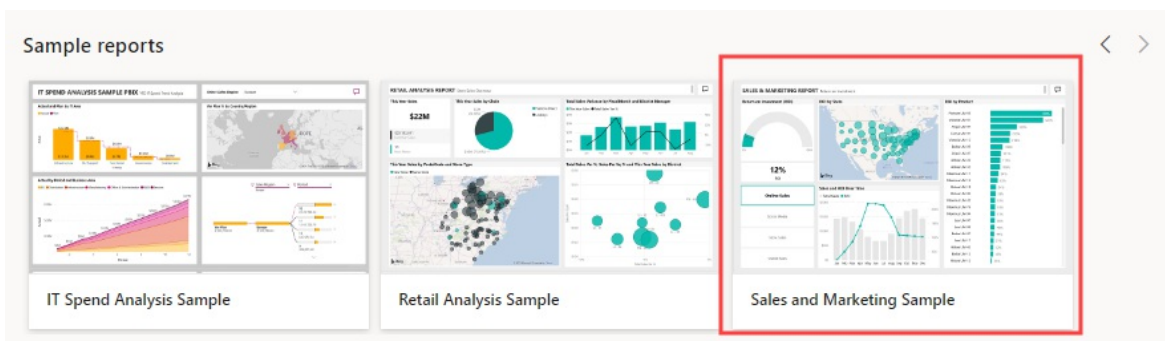
1. This example uses a dashboard card tile from the Sales & Marketing sample. Open the Power BI service (app.powerbi.com), sign in, and open your **My Workspace**.



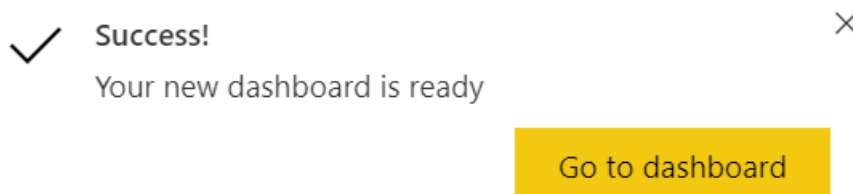
2. In the bottom-left corner, select **Get data**.



3. On the Get data page that appears, select **Samples**.
4. Select the Sales and Marketing Sample, then choose **Connect**.




5. After Power BI has connected to the sample, select **Go to dashboard** from the dialog that appears.

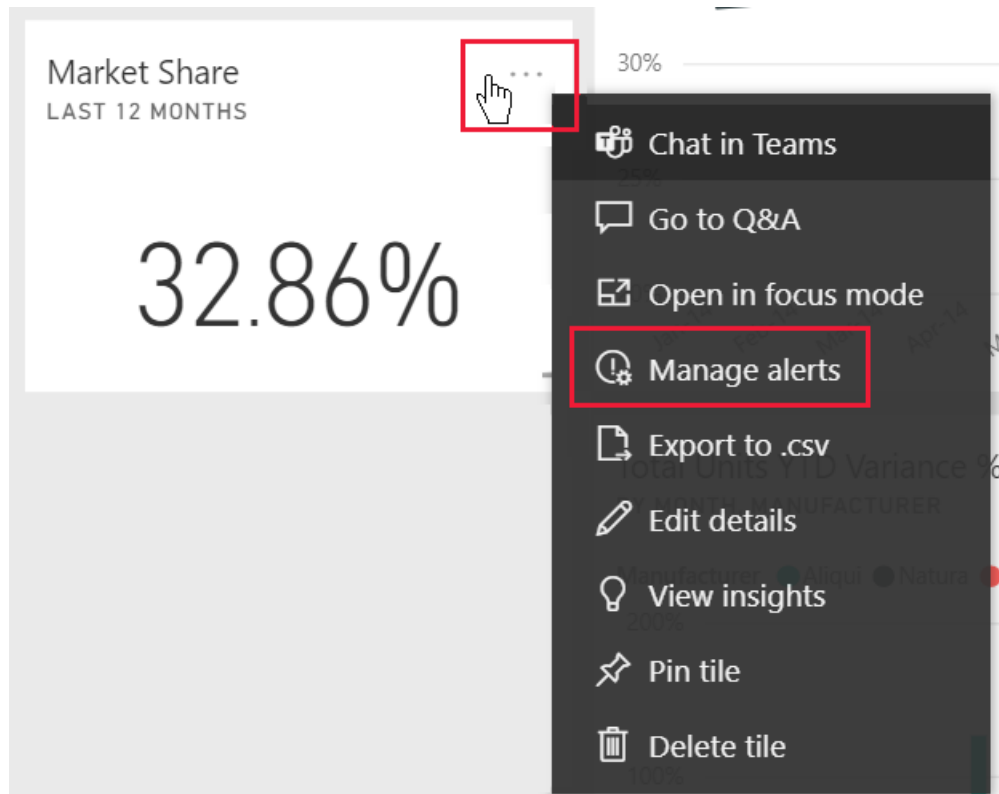


## Add an alert to a dashboard tile

1. From a dashboard gauge, KPI, or card tile, select the ellipsis.



2. Select the alert icon , or **Manage alerts**, to add one or more alerts for the **Market share** card.



3. On the **Manage alerts** pane, select + **Add alert rule**. Ensure the slider is set to **On**, and give your alert a title. Titles help you easily recognize your alerts.

## Manage alerts

+ Add alert rule

Alert for Market Share

Active

☒ On

Alert title

Alert for Market Share

Set alerts rule for

% Units Market Share

Condition

Threshold

[Use Microsoft Power Automate to trigger additional actions](#)

Save and close

Cancel

4. Scroll down and enter the alert details. In this example we'll create an alert that notifies us once a day if our market share increases to 40 or higher. Alerts will appear in our [Notification center](#). And we'll have Power BI send us an email as well.

Condition

Above

Threshold

40

Maximum notification frequency

☒ At most every 24 hours

☐ At most once an hour

Alerts are only sent if your data changes.

By default, you'll receive notifications on the service in the notification center.

☒ Send me email, too

[Use Microsoft Power Automate to trigger additional actions](#)

Save and close

Cancel

5. Select **Save and close**.

## Receiving alerts

When the data being tracked reaches one of the thresholds you've set, several things happen. First, Power BI checks to see if it has been more than an hour, or more than 24 hours (depending on the option you selected), since the last alert was sent. As long as the data is past the threshold, you'll get an alert.

Next, Power BI sends an alert to your Notification center and, optionally, in email. Each alert contains a direct link to your data. Select the link to see the relevant tile.

1. If you've set the alert to send you an email, you'll find something like this in your Inbox. This is an alert we set for the **Sentiment** card.

### Alert for Sentiment



Microsoft Power BI (No Reply)  
To Michele



4:20 PM

If there are problems with how this message is displayed, click here to view it in a web browser.



Power BI

## Alert for Sentiment

- Dashboard: Marketing and sales
- Measure: Alert for Sentiment
- Current value: 67.8289578361177
- Threshold: 70

[Go to dashboard >](#)

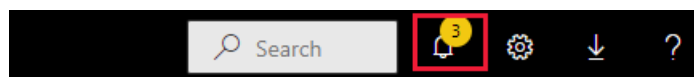
[Get Insights >](#)

[Privacy Statement](#)

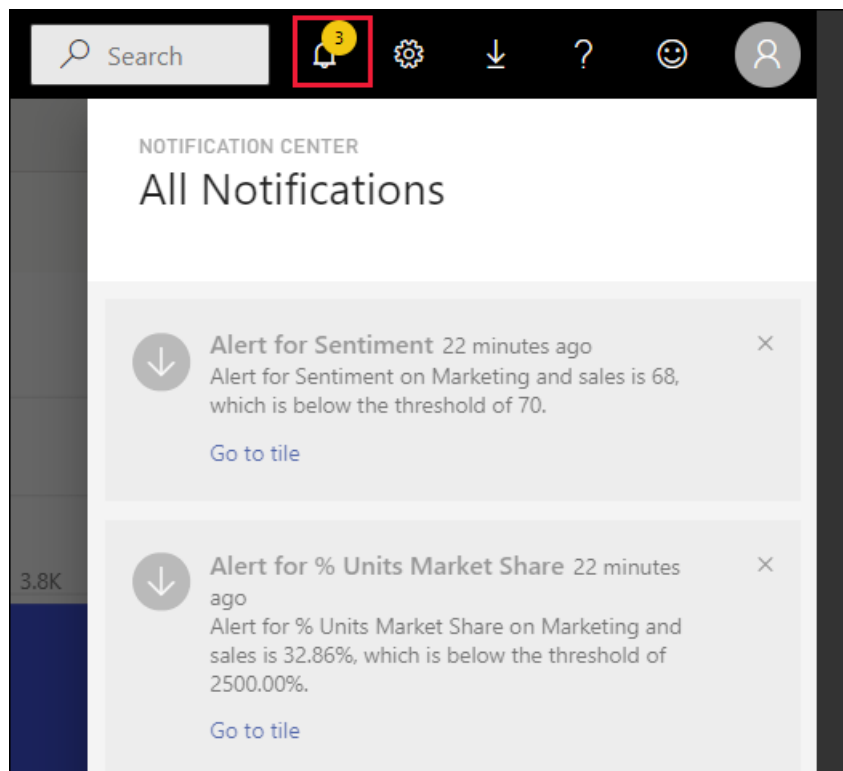
Microsoft Corporation, One Microsoft Way, Redmond, WA 98052



2. Power BI also adds a message to your **Notification center**.




3. Open your Notification center to see the alert details.

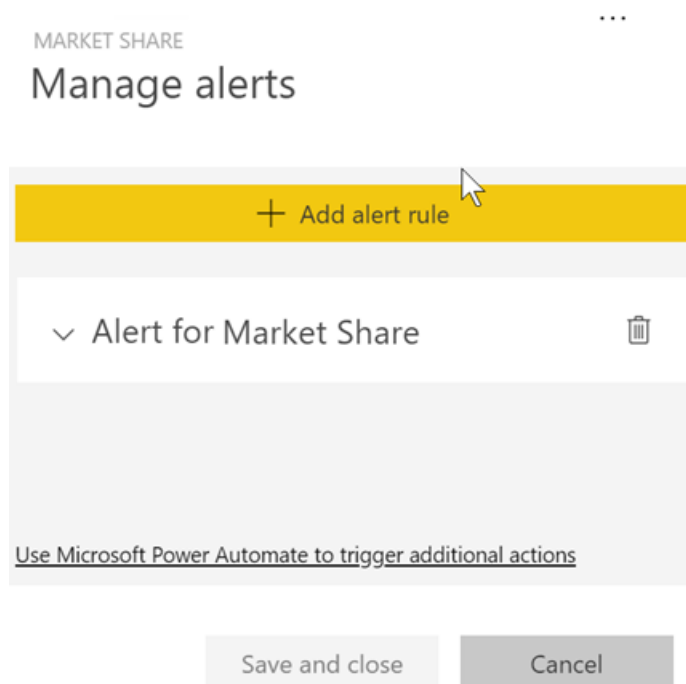


## Managing alerts

There are many ways to manage your alerts: from the dashboard tile itself, from the Power BI Settings menu, on an individual tile in the [Power BI mobile app on the iPhone](#) or in the [Power BI mobile app for Windows 10](#).

### From the tile itself

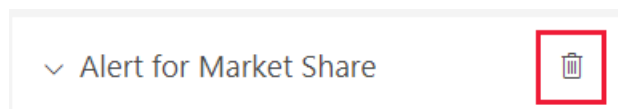
1. If you need to change or remove an alert for a tile, re-open the **Manage alerts** window by selecting the alert icon . All the alerts that you've set for that tile are displayed.



2. To modify an alert, select the arrow to the left of the alert name.



3. To delete an alert, select the trashcan to the right of the alert name.

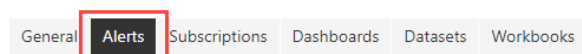


### From the Power BI settings menu

1. Select the gear icon from the Power BI menubar.



2. Under **Settings** select **Alerts**.



My workspace

ALERT	DASHBOARD	DATE CREATED	
Alert for Market Share	Sales and Marketing Sample	May 7, 2021, 2:54:25 PM	<input checked="" type="checkbox"/> On <a href="#">Edit</a> <a href="#">Delete</a>
Alert for Sentiment	Sales and Marketing Sample	May 7, 2021, 2:55:06 PM	<input checked="" type="checkbox"/> On <a href="#">Edit</a> <a href="#">Delete</a>

3. From here you can turn alerts on and off, open the **Manage alerts** window to make changes, or delete the alert.

## Tips and troubleshooting

- If you are unable to set an alert for a gauge, KPI, or card, contact your Power BI admin or IT help desk for help. Sometimes alerts are turned off or unavailable for your dashboard or for specific types of dashboard tiles.
- Alerts only work on data that is refreshed. They do not work on static data. Most of the samples supplied by Microsoft are static.
- The ability to receive and view shared content requires a Power BI Pro license, a Premium Per User license, or for the report to be saved in Premium reserved capacity. For more information, read [Which license do I have?](#).
- Alerts can be set on visuals created from streaming datasets that are pinned from a report to a dashboard. Alerts can't be set on streaming tiles created directly on the dashboard using **Add tile > Custom streaming data**.

## Clean up resources

Instructions for deleting alerts are explained above. In brief, select the gear icon from the Power BI menubar. Under **Settings** select **Alerts** and delete the alert.

[Set data alerts on your mobile device](#)

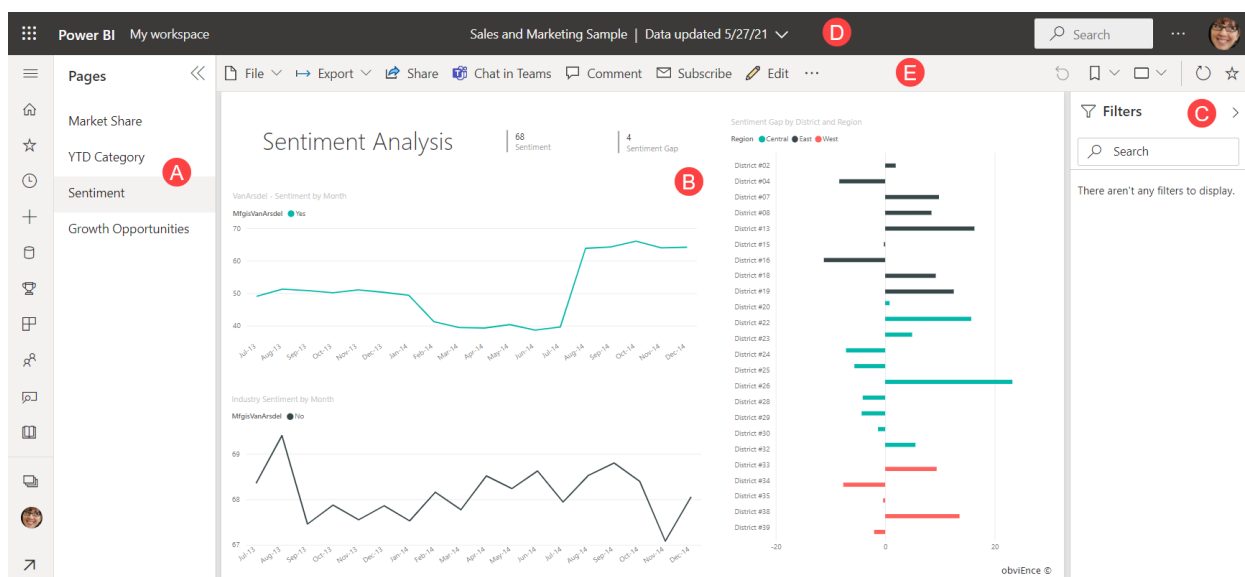
# Reports in Power BI

12/10/2021 • 3 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop

A Power BI report is a multi-perspective view into a dataset, with visuals that represent different findings and insights from that dataset. A report can have a single visual or pages full of visuals. Depending on your job role, you may be someone who *designs* reports. You also may be a *business user* who *consumes* or uses reports. This article is for *business users*.

## The parts of a report



- A. This report has four pages (or tabs) and you're currently viewing the **Sentiment** page.
- B. On this page are five different visuals and a page title.
- C. The **Filters** pane shows us one filter applied to all report pages. To collapse the Filters pane, select the arrow (>).
- D. The Power BI banner displays the name of the report and the last updated date. Select the arrow to open a menu that also show the name of the report owner.
- E. The action bar contains actions you can take on this report. For example, you can add a comment, view a bookmark, or export data from the report. Select **More options** (...) to reveal a list of additional report functionality.

If you're new to Power BI, you can get a good foundation by reading [Basic concepts for the Power BI service business users](#). Reports are available for viewing, sharing, and annotating on mobile devices. For more info, see [Explore reports in the Power BI mobile apps](#).

## Advantages of reports

Power BI bases a report on a single dataset. Report *designers* create the visuals in a report to represent nuggets of information. The visuals aren't static. They update as the underlying data changes. You can interact with the visuals and filters as you dig into the data to discover insights and look for answers. Like a dashboard, but more so, a report is highly interactive and highly customizable. The extent of what you can do with a report will depend on the role and permissions assigned by the report *designer*.

## Safely interact with content

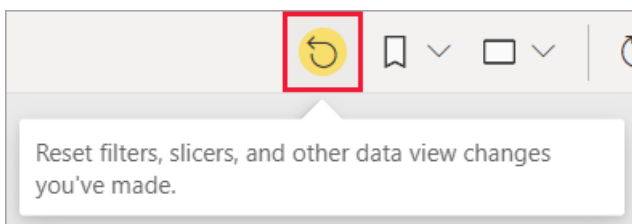
As you explore and interact with your content: filtering, slicing, subscribing, and exporting, you can't break the reports. Your work doesn't affect the underlying dataset or the original shared content. This applies to dashboards, reports, and apps.

### NOTE

Remember, you can't hurt your data. The Power BI service is a great place for you to explore and experiment without worrying that you'll break something.

## Save your changes or revert to the default settings

That doesn't mean you can't save your changes. You can, but those changes only affect your view of the content. To revert to the original default view of the report, select the **Reset** icon.



## Dashboards versus reports

**Dashboards** are often confused with reports since they're also canvases filled with visuals. But there are some major differences.

CAPABILITY	DASHBOARDS	REPORTS
Pages	One page	One or more pages
Data sources	One or more reports and one or more datasets per dashboard	A single dataset per report
Filtering	Can't filter or slice	Many different ways to filter, highlight, and slice
Set alerts	Can create alerts to email you when the dashboard meets certain conditions	No
Feature	Can set one dashboard as your featured dashboard	Can't create a featured report
Can see underlying dataset tables and fields	No. Can export data but can't see the dataset tables and fields in the dashboard itself	Yes. Can see dataset tables and fields and values that you have permissions to see
Customization	No	Can filter, export, view related content, add bookmarks, generate QR codes, analyze in Excel, and more

## Report designers and report users

Depending on your role, you may be a *designer*, someone who creates reports for your own use or to share with colleagues. You'll want to learn how to create and share reports.

Or you may be a *business user*, someone who receives reports from others. You'll want to learn how to understand and interact with the reports. If you're a report *business user*, these links are for you:

- Start with a [tour of the Power BI service](#) so you know where to find reports and report tools.
- Learn how to [open a report](#) and all the [interactions available to business users](#).
- Get comfortable with reports by taking a tour of one of our [samples](#).
- To see which dataset the report is using and which dashboards are displaying visuals from the report (*pins*), see [View related content in the Power BI service](#).

**TIP**

If you didn't find what you're looking for here, use the Table of Contents to the left to browse all *Report* articles.





## Next steps

[Open and view a report](#)

[Dashboards in the Power BI service](#)

# View a report in the Power BI service for *business users*

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

A report is one or more pages of visuals. Reports are created by Power BI *designers* and [shared with business users directly](#) or as part of an [app](#). To open a report, you'll need either a Power BI Pro license, or for the report to be part of a workspace that is stored in a Premium capacity. [Learn about licenses and subscriptions](#)

There are many different ways to open a report and we'll show you two of them: open from Home and open from a dashboard.

## Open a report from Power BI Home

Let's open a report that's been shared with you directly and then open a report that was shared as part of an app.

The first screenshot shows the 'Favorites + frequents' section of the Power BI Home canvas. The left navigation pane has 'Home' selected. The main area displays a grid of eight items: 'Customer Profitability Sample' (Dashboard), 'Customer Profitability' (Report), 'Human Resources Sample' (Dashboard), 'Marketing and sales' (Dashboard), 'Retail' (App), 'Retail Analysis Sample' (Report), 'Sales and Marketing Sample' (Dashboard), and 'Sales and Marketing Sample' (Report). The 'Sales and Marketing Sample' (Report) is highlighted with a red box.

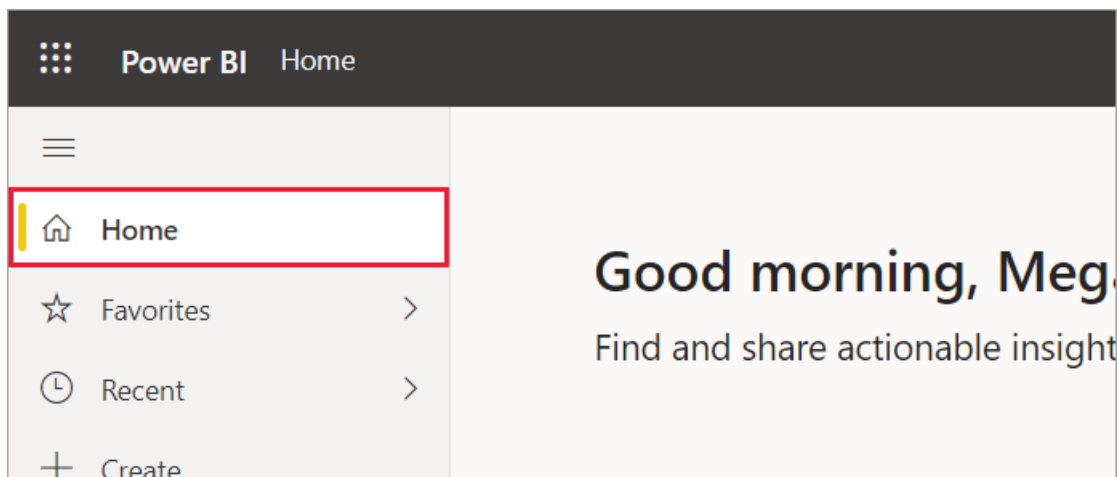
The second screenshot shows the 'Recents' section of the Power BI Home canvas. The left navigation pane has 'Home' selected. The main area displays a table of recent items. The 'Recents' tab is selected. The table has columns: Name, Type, and Opened. The 'Sales and Marketing Sample' (Report) is highlighted with a red box.


The third screenshot shows the 'Shared with me' section of the Power BI Home canvas. The left navigation pane has 'Home' selected. The main area displays a table of items shared with the user. The 'Shared with me' tab is selected. The table has columns: Name, Type, and Owner. The 'Sales and Marketing Sample' (Report) is highlighted with a red box.

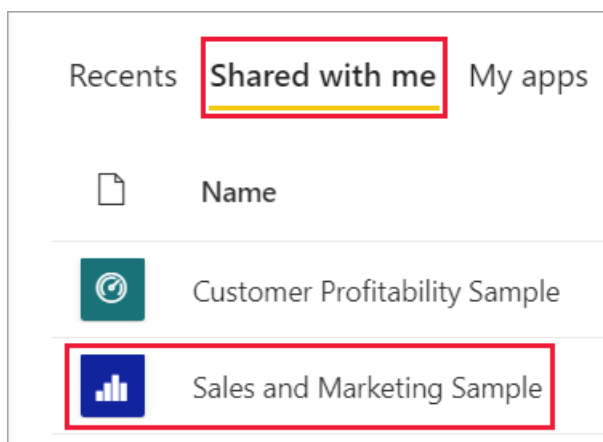
## Open a report that has been directly shared with you

Power BI *designers* can share an individual report directly with you via a link in email or by adding it automatically to your Power BI content. Reports that are shared this way show up in the **Shared with me** container on your nav pane and in the **Shared with me** section of your Home canvas.

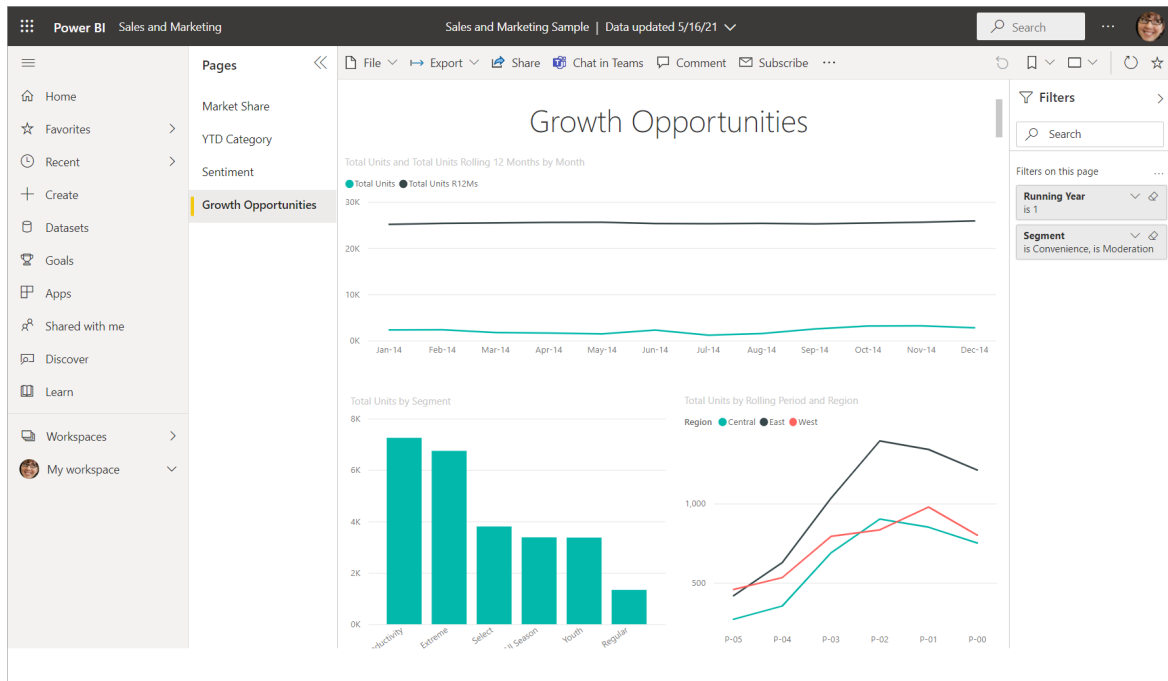
1. Open the Power BI service (app.powerbi.com).
2. From the nav pane, select **Home** to display your Home canvas.



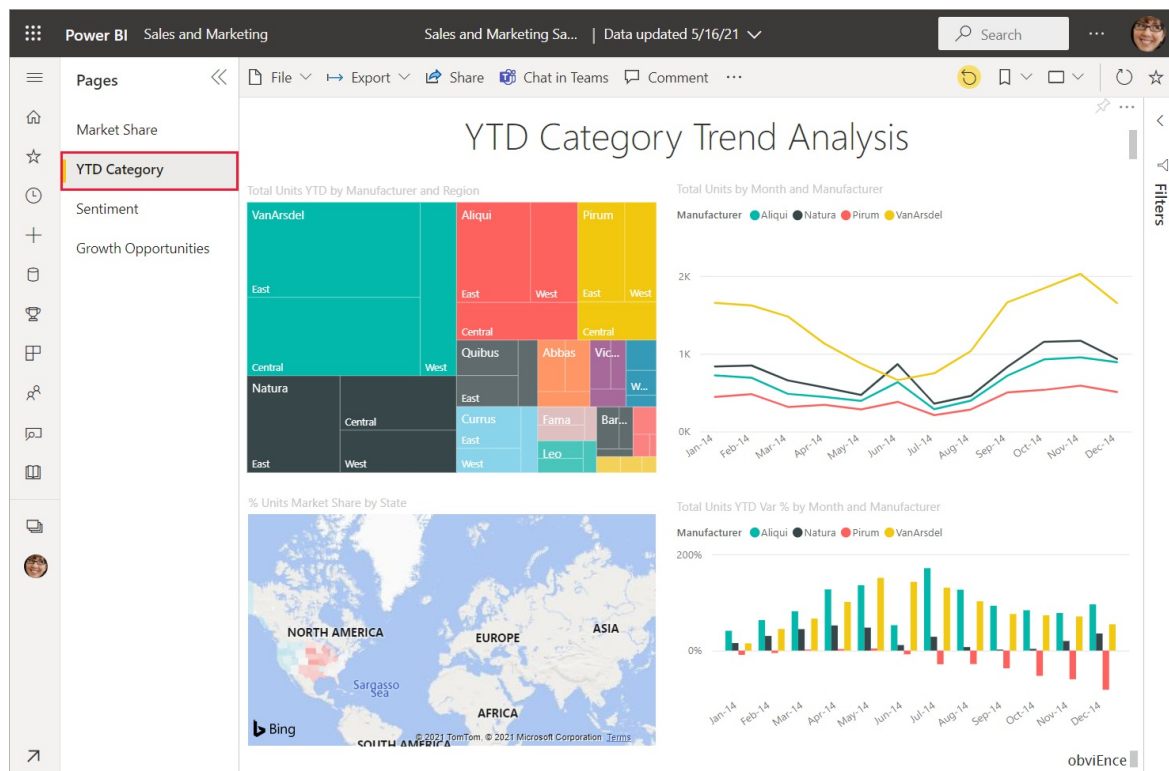
3. Scroll down until you see **Shared with me**. Look for the report icon . In this screenshot we have one dashboard and one report. The report is named *Sales and Marketing Sample*.



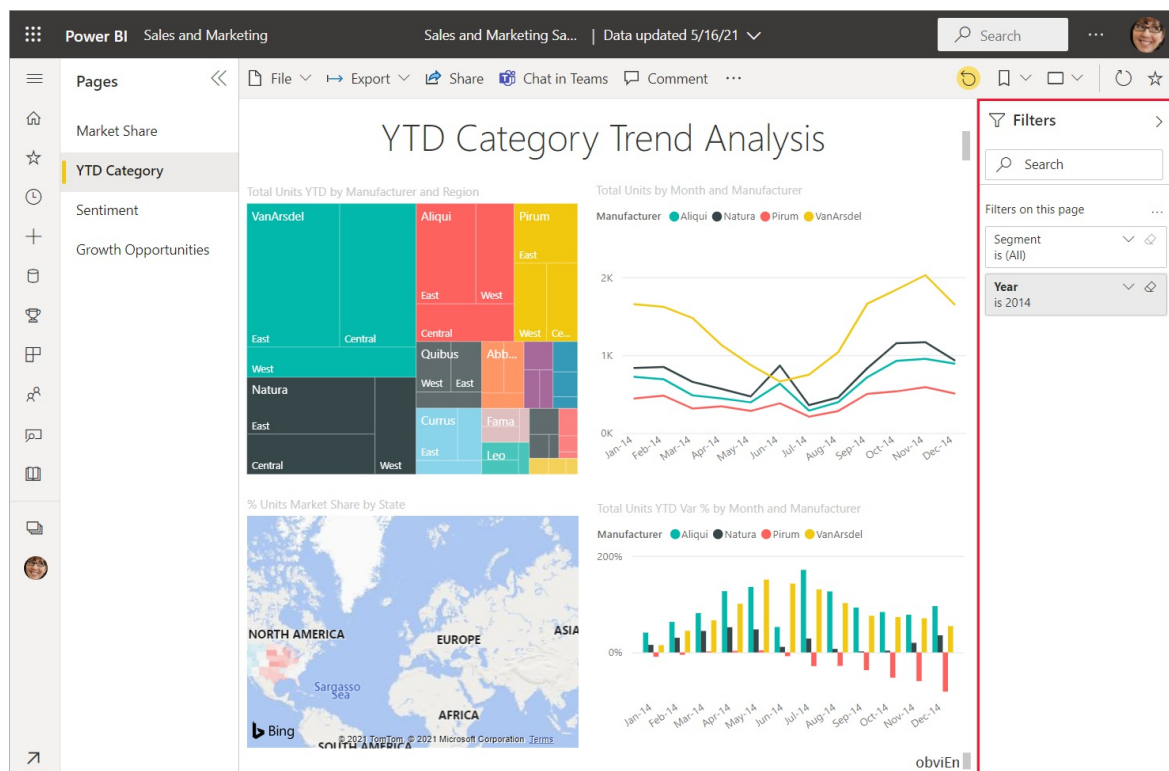
4. Simply select the report name to open the report.



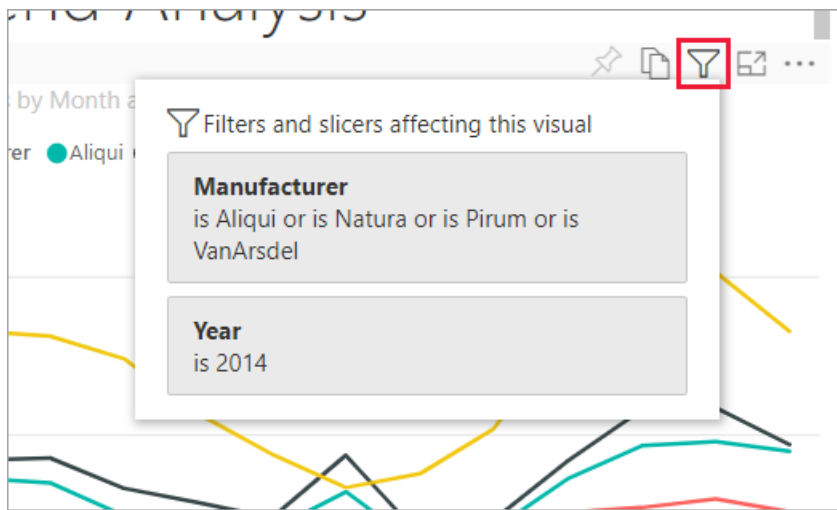
5. Notice the tabs along the left side. Each tab represents a report *page*. We currently have the *Growth Opportunity* page open. Select the *YTD Category* tab to open that report page instead.



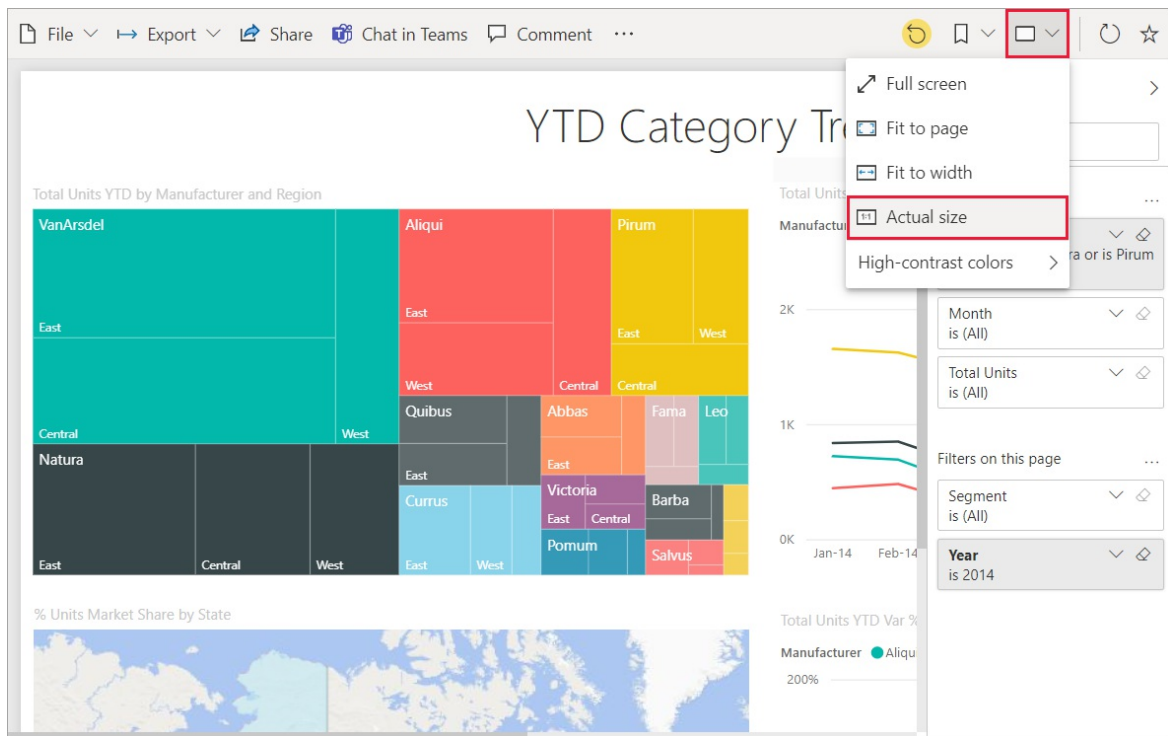
- Expand the **Filters** pane along the right side. Filters that have been applied to this report page, or to the entire report, are displayed here. You can change these filters to see the impact on your visuals and report.

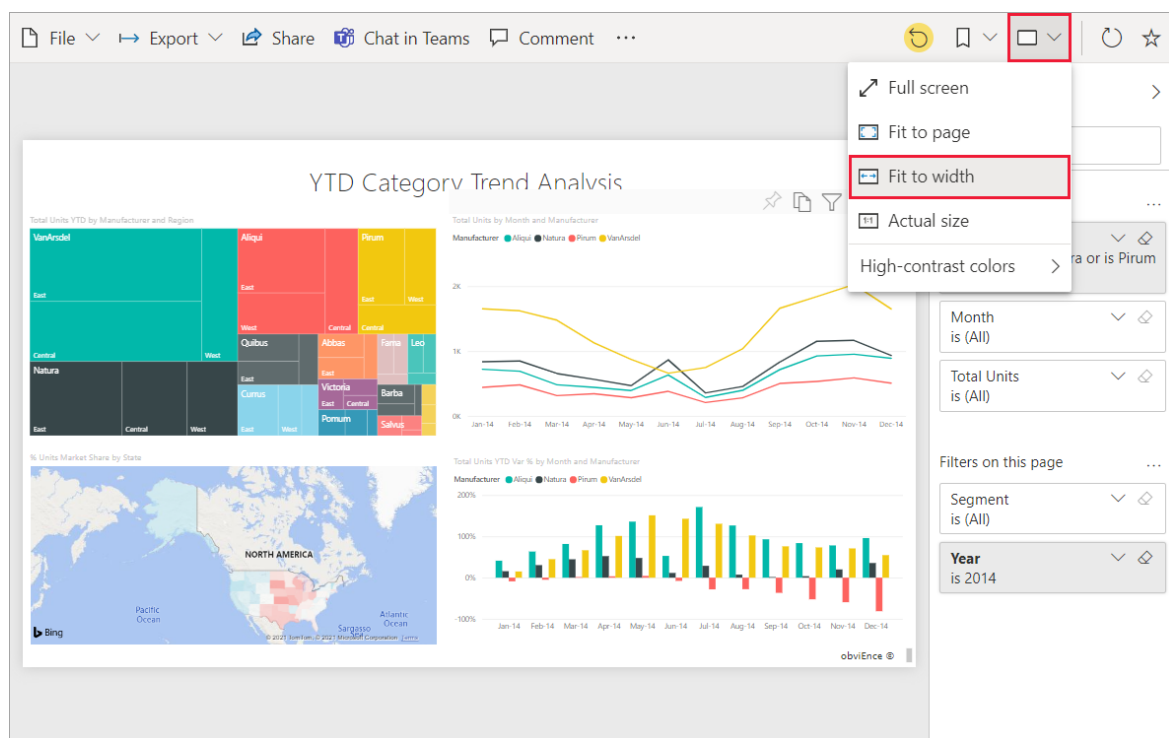


- Display the actions menu for a visual. Hovering over a report visual reveals actions you can take on that visual. To see the filters applied to a specific visual, select the filter icon. Here we've selected the filter icon for the *Total units by month and manufacturer* line chart.



8. You can also change the display of the report page. Right now, we're displaying the entire report page. To change the display (zoom) of the page, select the **View** dropdown from the upper right corner and choose **Actual size** and then switch to **Fit to width**. Notice the differences each view option makes to the display of your report.





There are many ways for you to interact with a report to discover insights and make business decisions. Use the table of contents on the left to read through other articles about Power BI reports.

## Open a report that is part of an app

If you've received apps from colleagues or from AppSource, those apps are available from Home, and from the **Apps** and **Shared with me** containers on your nav pane. An **app** is a collection of dashboards and reports that have been bundled together for you by a Power BI *designer*.

## Prerequisites

Opening an app requires a Power BI Pro license, or for the app workspace to be stored in Power BI Premium capacity. [Learn about licenses and subscriptions](#)

To follow along, download the Sales and Marketing app.

1. In your browser, navigate to [appsource.microsoft.com](https://appsource.microsoft.com).
2. Search for "Sales & Marketing" and select **Microsoft sample - Sales & Marketing**. Scroll down to see the search results.
3. Select **Get it now** > **Continue** > **Install** to install the app in your Apps container.

You can now open the app from your **Apps** container or from **Home**.

1. Go back to Home by selecting **Home** from the nav pane.
2. Scroll down and select **My Apps**.

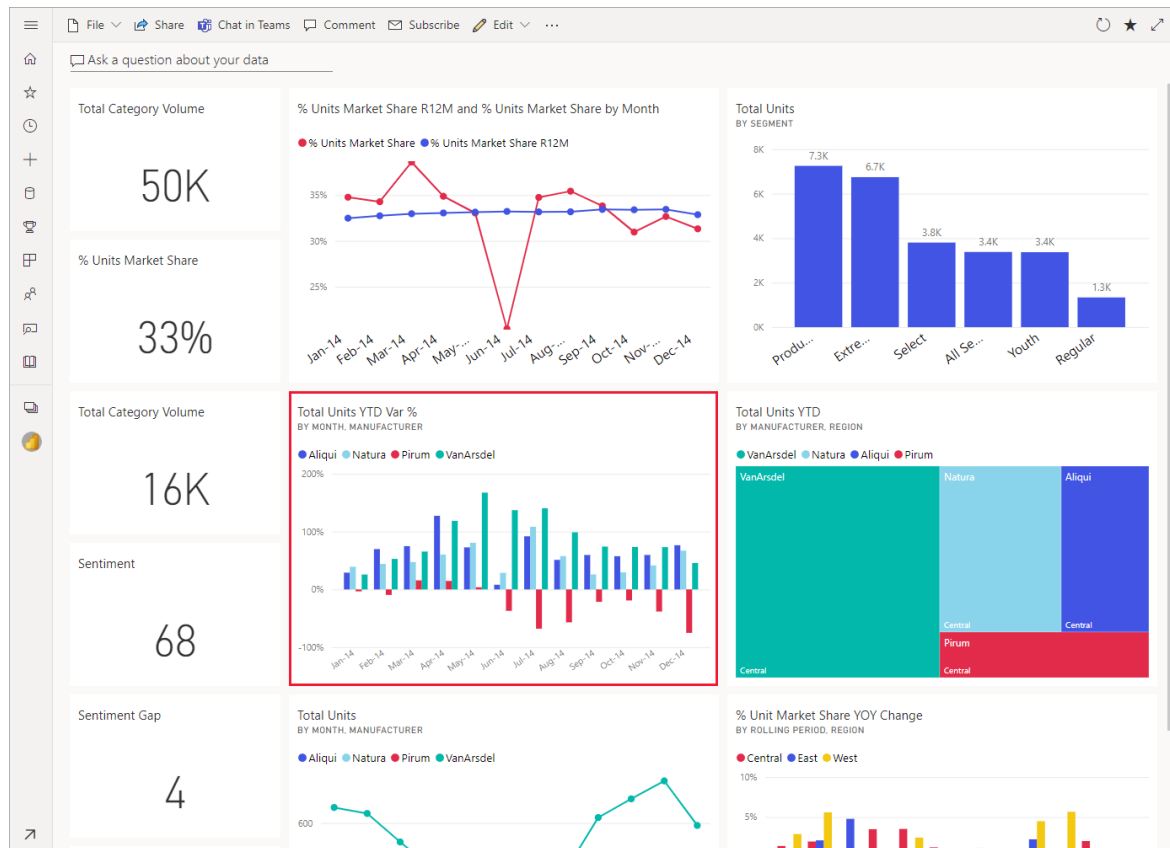
Recents	Shared with me	<b>My apps</b>	<a href="#">See all</a>
	Name	Description	Endorsement
	Sales and Marketing sample 6/11/2021 12:03:55 ...	Use this sample app with the Microsoft Power BI docu...	—
	Supplier Quality Analysis	Supplier Quality Analysis app	—

3. Select your new *Sales and marketing* app to open it. Depending on the options set by the app *designer*, the app will open either a dashboard or a report. This app opens to a dashboard.

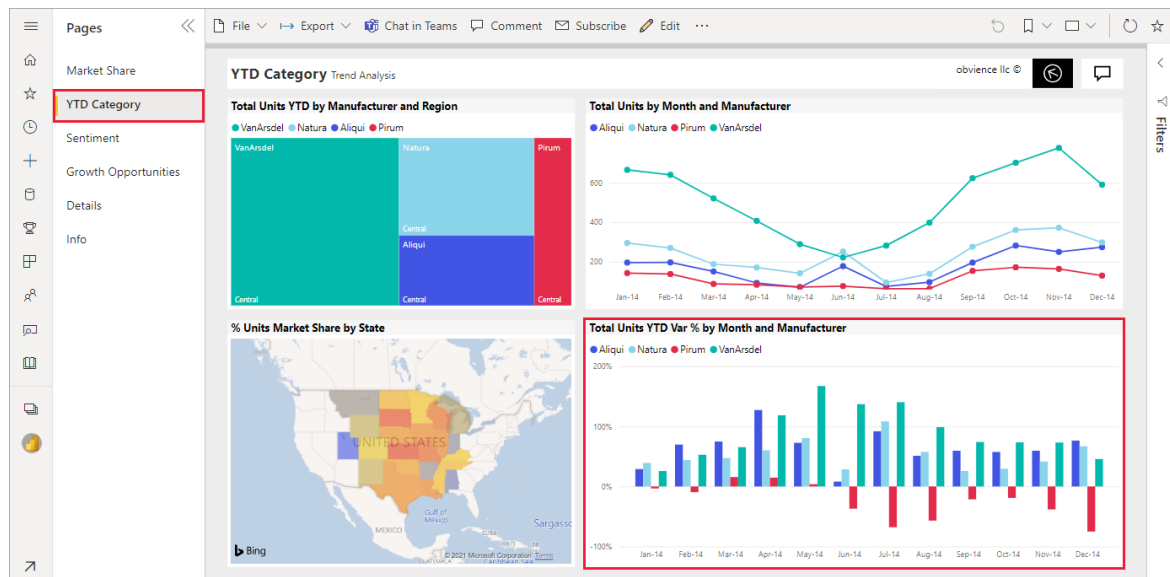
# Open a report from a dashboard

Reports can be opened from a dashboard. Most dashboard **tiles** are *pinned* from reports. Selecting a tile opens the report that was used to create the tile.

1. From the dashboard, select a tile. In this example we've selected the *Total Units YTD Var %* column chart tile.



2. The associated report opens. Notice that we're on the *YTD Category* page. This is the report page that contains the column chart we selected from the dashboard.



#### NOTE

Not all tiles lead to a report. If you select a tile that was [created with Q&A](#), the Q&A screen will open. If you select a tile that was [created using the dashboard Add tile widget](#), several different things may happen: a video may play, a website open, and more.

## Still more ways to open a report

As you get more comfortable navigating the Power BI service, you'll figure out workflows that work best for you. A few other ways to access reports:

- From the nav pane using [Favorites](#) and [Recent](#)
- Using [View related](#)
- In an email, when someone [shares with you](#) or you [set an alert](#)
- From your [Notification center](#)
- From a workspace
- and more

## Next steps

[Open and view a dashboard](#)

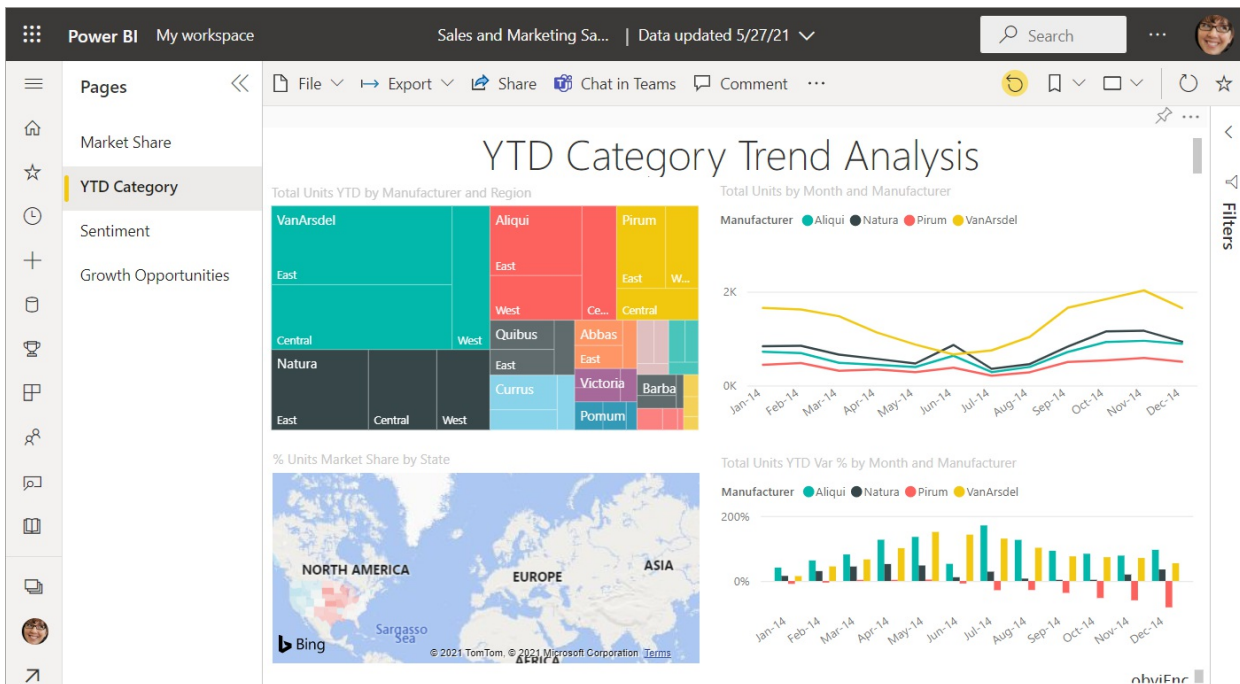
[Report filters](#)

# Change the display of a report page

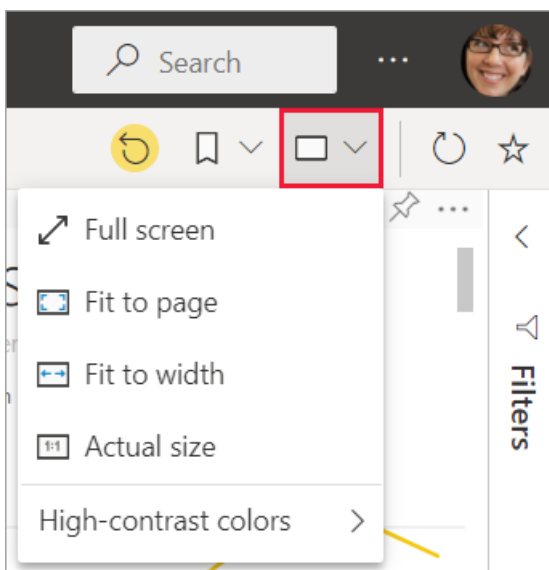
12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

People view reports on many different devices with varying screen sizes and aspect ratios. Change the way a report page displays to fit your needs.

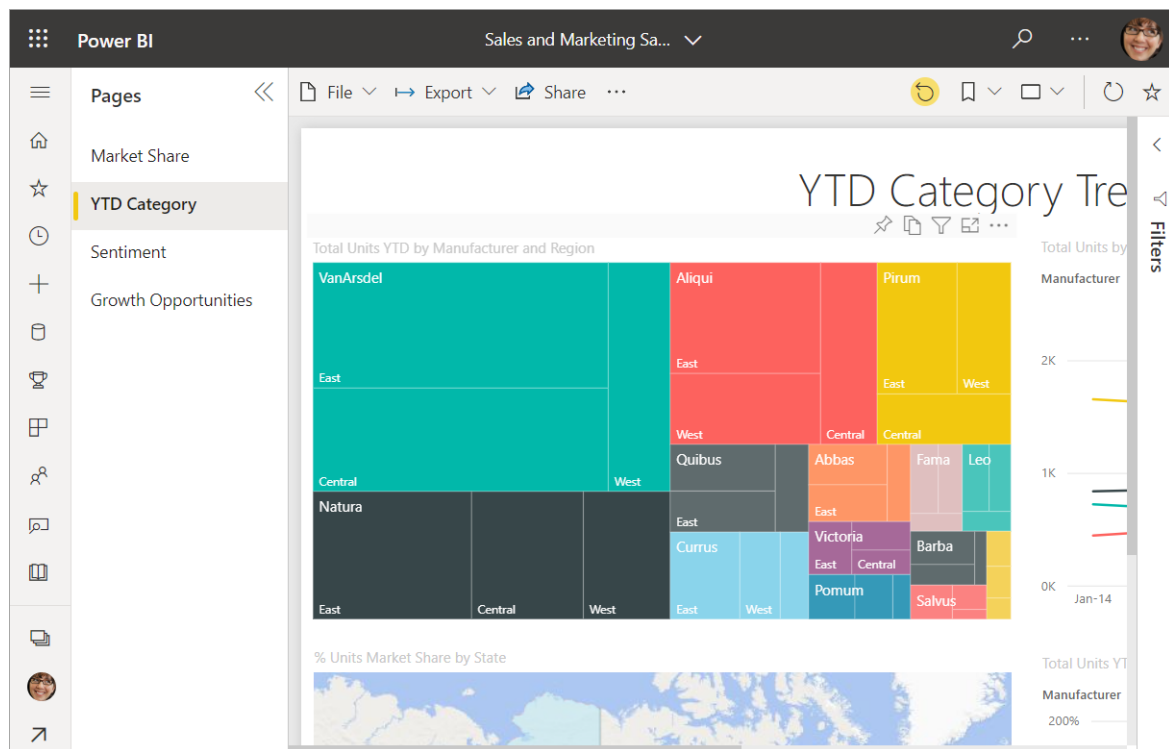


## Explore the View menu

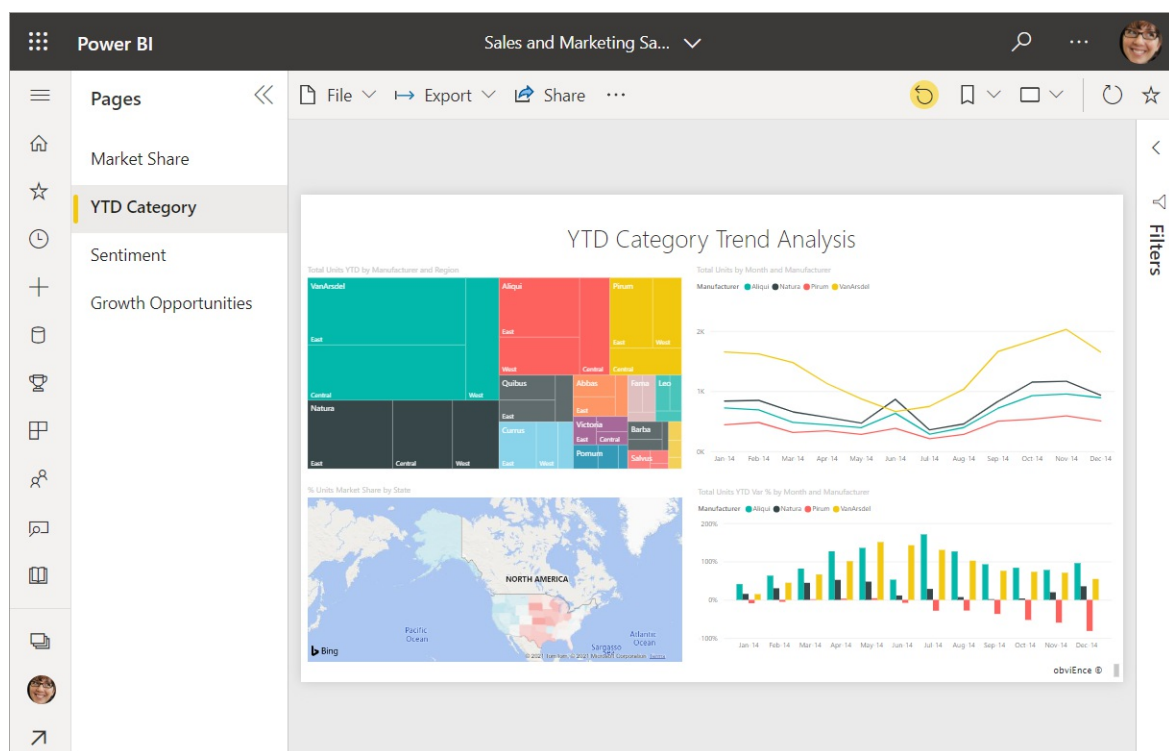


The options in the **View** menu give you flexibility to display report pages at the size and width you choose:

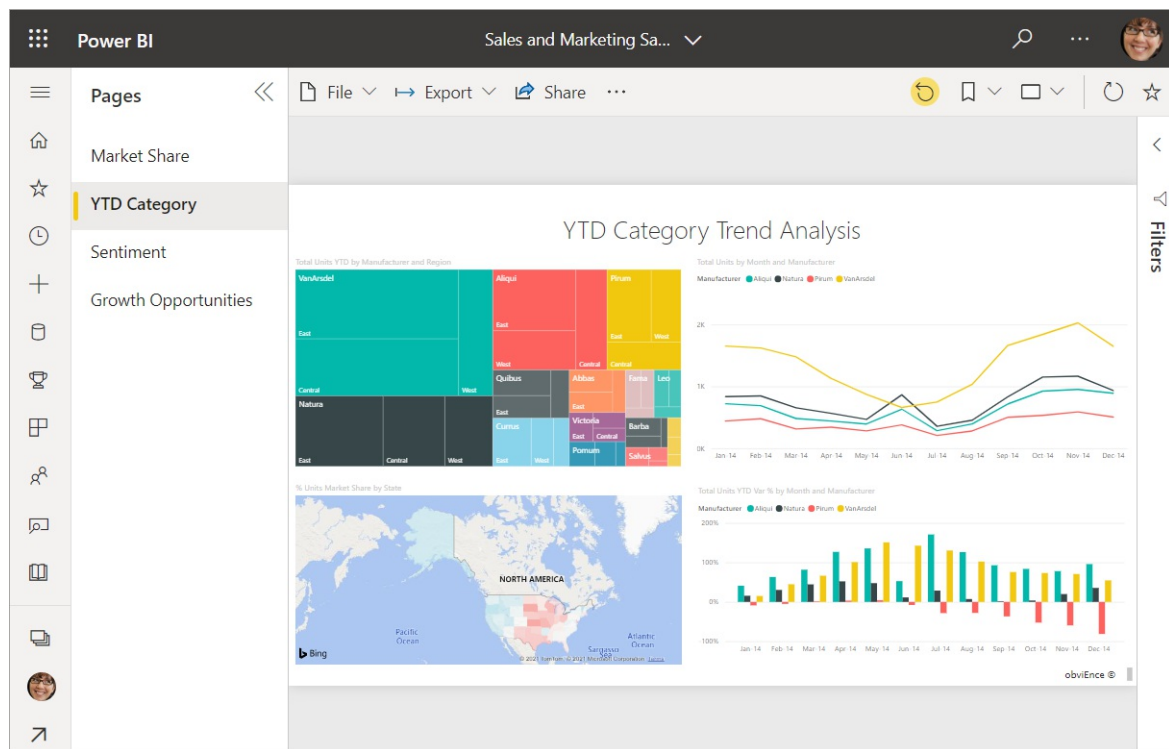
- Let's say you're viewing a report on a small device and it's hard to see titles and legends. Select **View** > **Actual size** to increase the size of the report page. Use the scroll bars to move around the report.



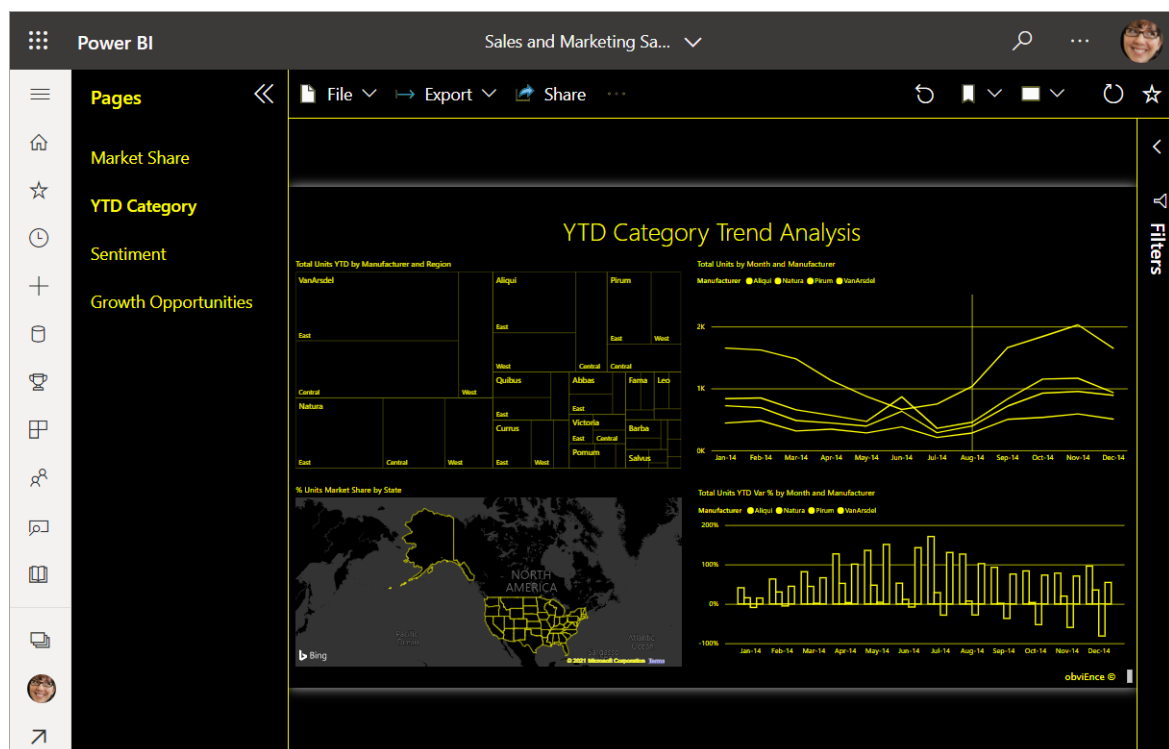
- Another option is to fit the report to your screen width by selecting **Fit to width**. Since it's just the width and not the height, you may still need to use the vertical scroll bar.



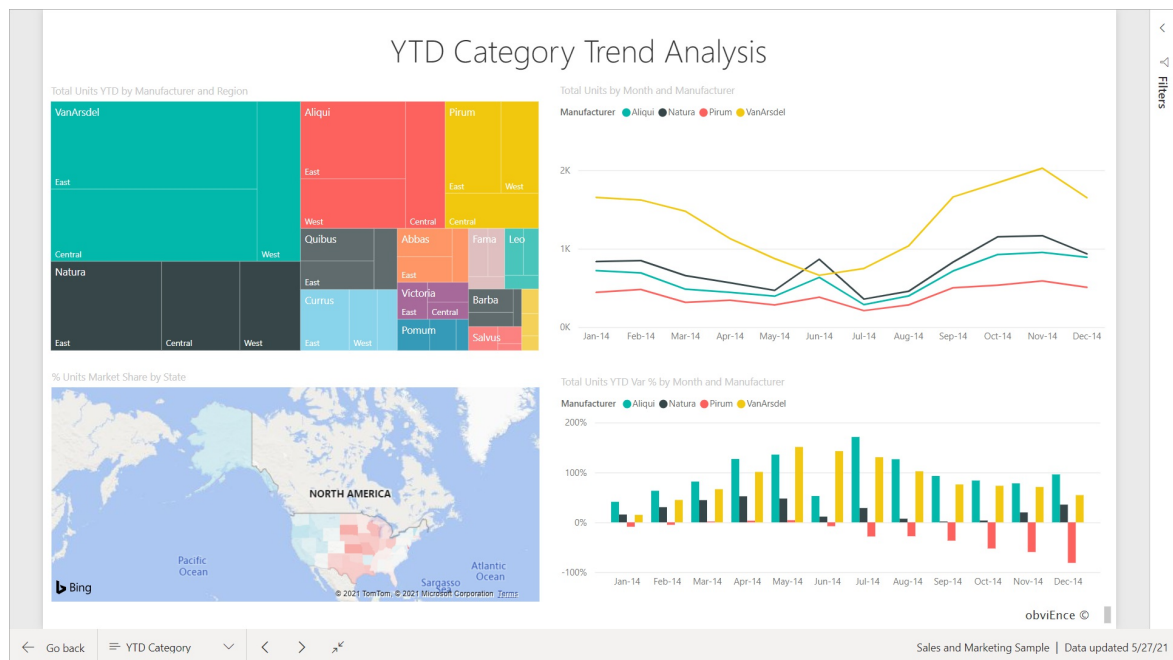
- If you don't want any scroll bars, but want to make the best use of your screen size, select **Fit to Page**.



- You can also choose from four **High contrast colors**: High contrast #1, High contrast #2, High contrast black, and High contrast white. It's an accessibility feature that you can use so people who may have impaired vision can see the reports better. The example below is high contrast 1.



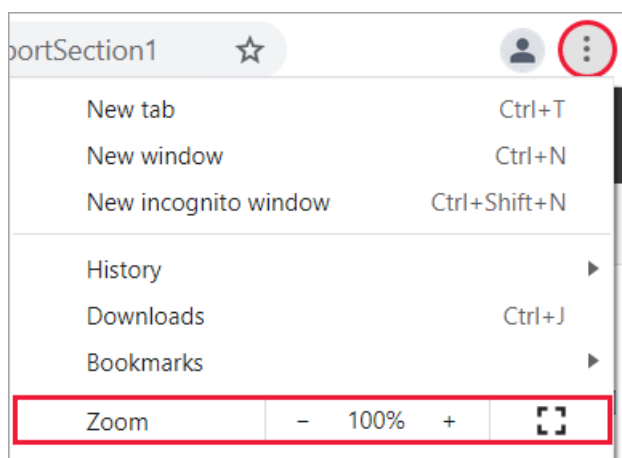
- The final option, **Full screen**, displays your report page without menu bars and headers. Full screen may be a good choice for small screens where the details are hard to see. Full screen may also be a good choice when projecting report pages on large screens for people to view but not interact.



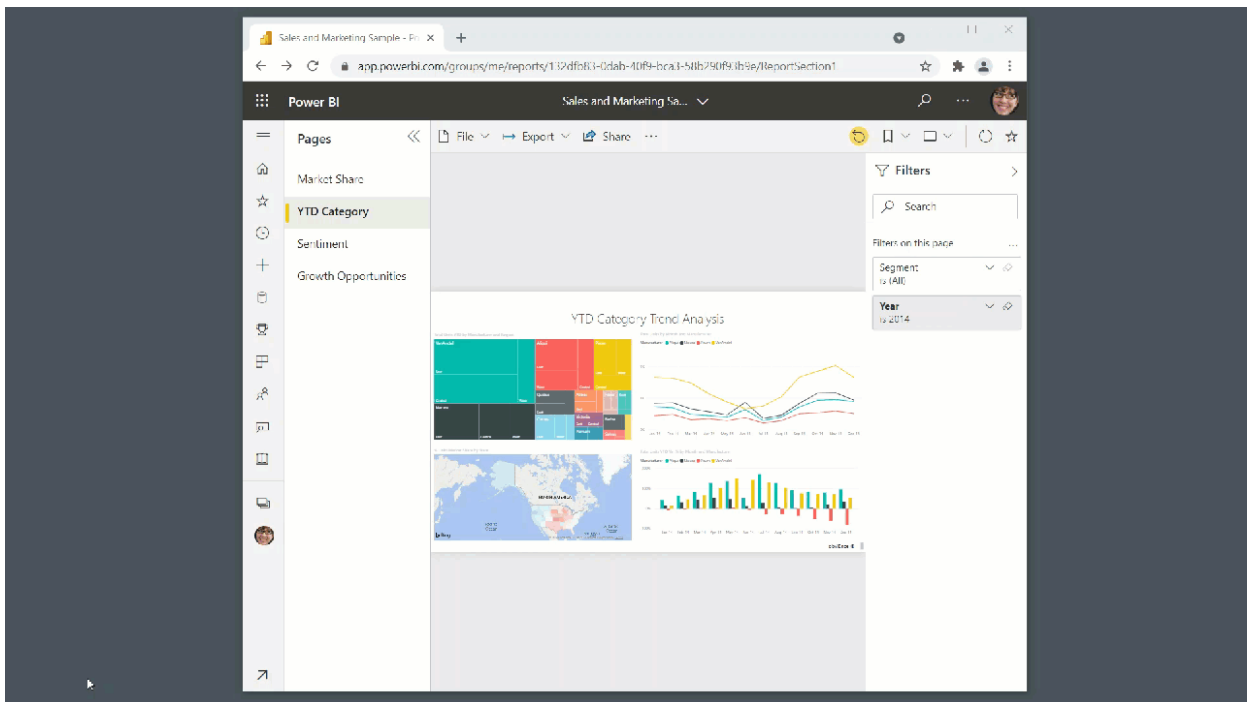
When you exit the report, your **View** settings aren't saved, but revert to the default. If it's important to you to save these settings, use [bookmarks](#).

## Use your browser to change page display

The zoom controls in your browser increase and decrease the available canvas area. Decreasing the zoom causes the available canvas area to expand, and vice versa.



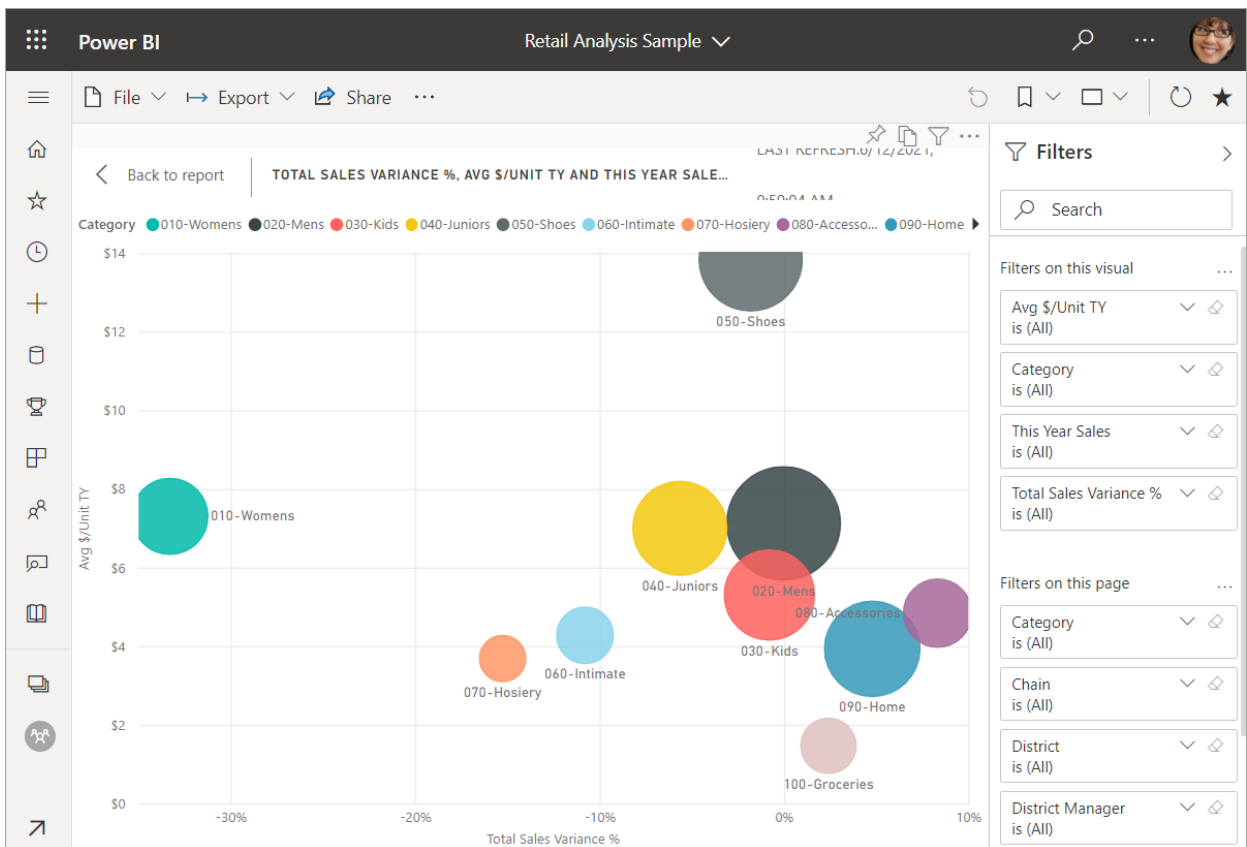
Resizing your entire browser is another way to change the display size of your report.



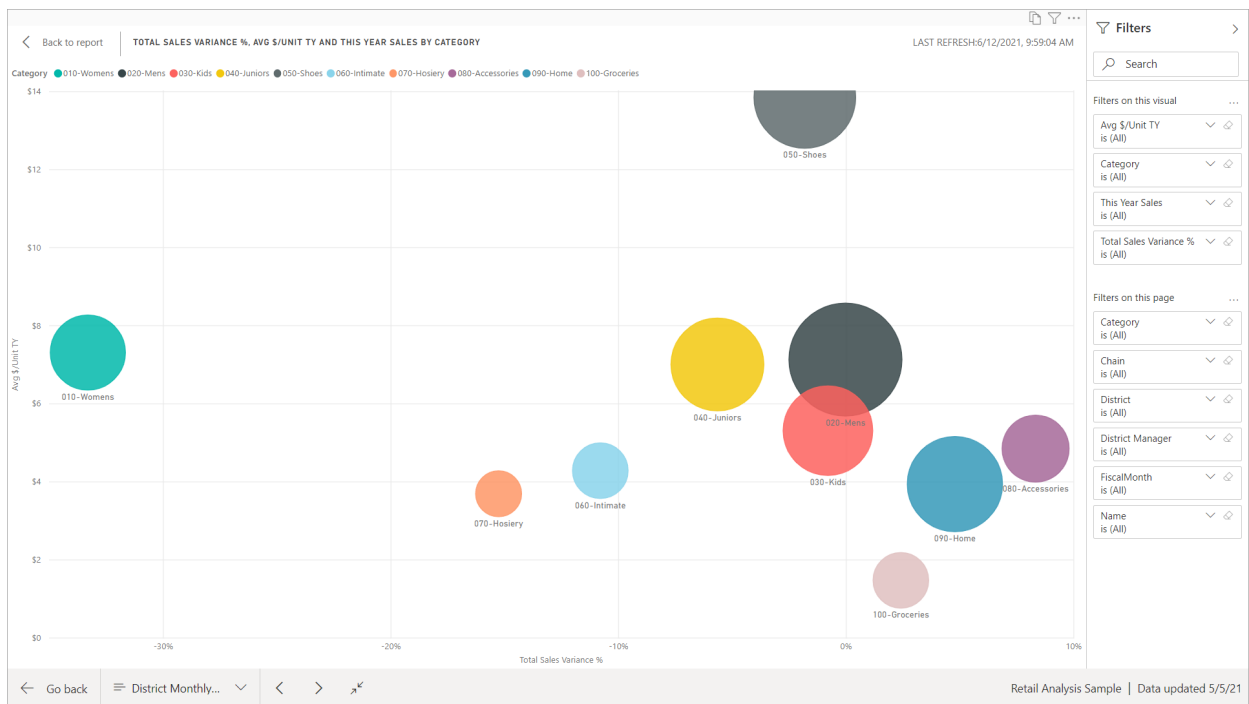
## Zoom in on a visual

Sometimes it's difficult to see the details in a visual. You can make that visual display bigger, and by itself. For more information, see [Focus mode](#) and [Full screen mode](#)

### A visual in *Focus mode*



### A visual in *Full screen mode*







## Next steps

- Take a tour of the report Filters pane

# Change how a chart is sorted in a Power BI report

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

## IMPORTANT

This article is intended for Power BI users who do not have edit permissions to the report or dataset and who only work in the online version of Power BI (the Power BI service). If you are a report *designer* or *administrator* or *owner*, this article may not have all the information you need. Instead, please read [Sort by column in Power BI Desktop](#).

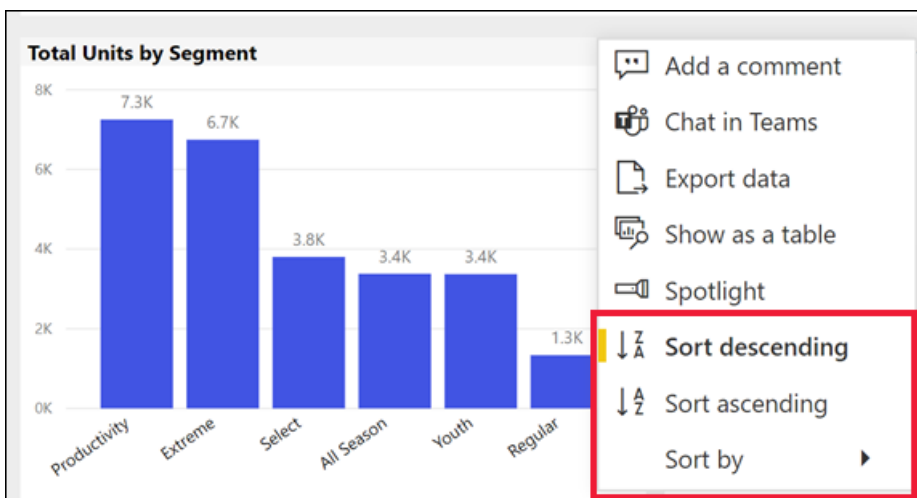
In the Power BI service, you can change how a visual looks by sorting it by different data fields. By changing how you sort a visual, you can highlight the information you want to convey. Whether you're using numeric data (such as sales figures) or text data (such as state names), you can sort your visuals as desired. Power BI provides lots of flexibility for sorting, and quick menus for you to use.

And after you've changed the sorting of a visual, you can save a personalized version of that visual. With the [Personalize this visual](#) feature, make the changes yourself and when you have the visual the way you want it, save it as a [bookmark](#) to come back to. You don't even need edit permission for the report.

Visuals on a dashboard cannot be sorted. But in a Power BI report, you can sort most visuals by one, and sometimes two, fields at a time. For certain types of visuals, sorting is not available at all: tree maps, gauges, maps, etc.

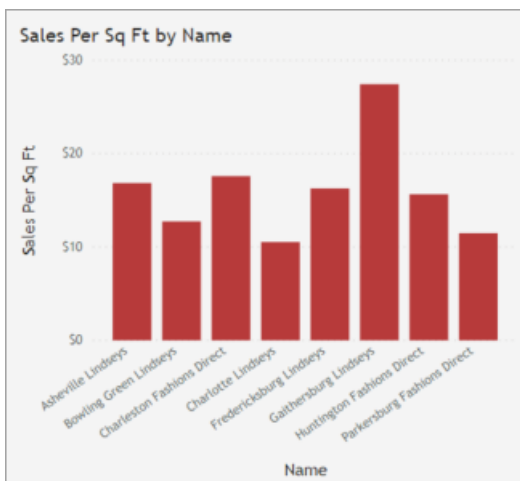
## Get started

To get started, open any report that you have created or that has been shared with you. Select a visual (that can be sorted) and choose **More actions** (...). There are three options for sorting: **Sort descending**, **Sort ascending**, and **Sort by**.

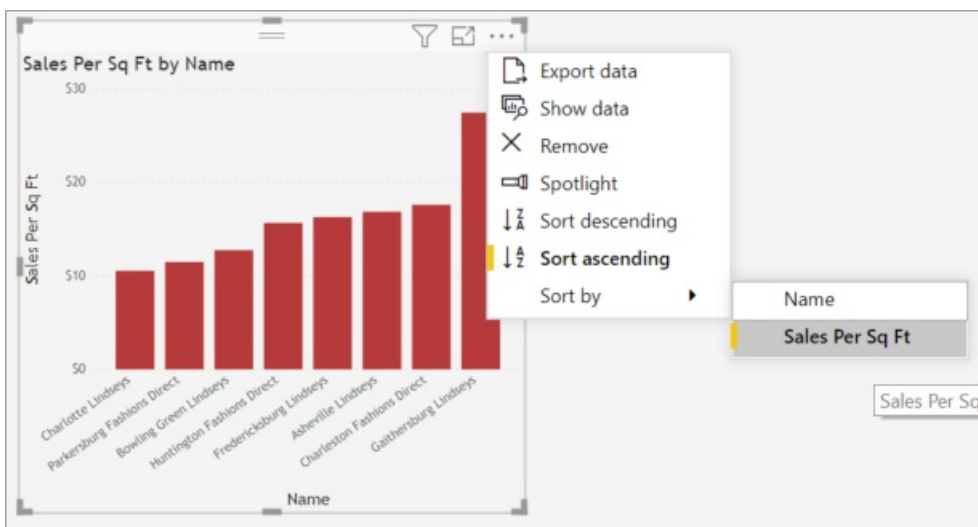


### Sort alphabetically or numerically

Visuals can be sorted alphabetically by the names of the categories in the visual, or by the numeric values of each category. For example, this chart is sorted alphabetically by the X-axis category store **Name**.



To change the sort from a category (store name) to a value (sales per square feet), select **More actions (...)** and choose **Sort by**. Select a numeric value used in the visual. In this example, we've selected **Sales Per Sq Ft**.



If necessary, change the sort order between ascending and descending. Select **More actions (...)** again and choose **Sort descending** or **Sort ascending**. The field that is being used to sort is in bold and has a yellow bar.



#### NOTE

Not all visuals can be sorted. For example, the following visuals cannot be sorted: treemap, map, filled map, scatter, gauge, card, waterfall.

## Sorting by multiple columns

The data in this table is sorted by **Number of customers**. We know this because of the small arrow beneath the word *Number*. The arrow is pointing down which means the column is being sorted in *descending* order.

Number of Customers	Product	Total Revenue	Executive
30	Primus	\$55,961,396	Andrew Ma
17	MI-72	\$664,935	Andrew Ma
13	Primus	\$64,781,560	Carlos Grilo
9	Gladius	\$55,760,290	Annelie Zubar
9	Gladius	\$3,336,146	Carlos Grilo
8		\$2,846,610	Carlos Grilo
8		\$17,162,683	Valery Ushakov
7		\$17,026,576	Tina Lassila
7	Doroga	\$7,362,616	Andrew Ma
5	Sova	\$455,668	Carlos Grilo
5	Sova	\$3,215,194	Tina Lassila
4		\$903,019	Annelie Zubar
2		\$676,726	Andrew Ma
2	Gunner	\$17,190	Andrew Ma
2	MI-72	\$25,615	Annelie Zubar
2	Sova	\$4,840,440	Annelie Zubar
1	Gunner	\$49,800	Allan Guinot
1	Gunner	\$11,310	Valery Ushakov
1	Primus	\$111,225	Tina Lassila
90		\$235,208,999	

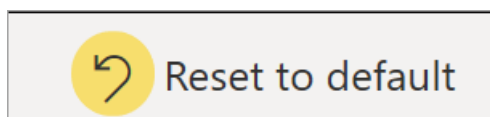
To add more columns to the sort order, Shift + click the column header you would like to add next in the sort order. For example, if you click **Number of customers** and then Shift + click **Total revenue**, then the table is sorted first by customers, then by revenue. The red outline show areas where sort order changed.

Number of Customers	Product	Total Revenue	Executive
30	Primus	\$55,961,396	Andrew Ma
17	MI-72	\$664,935	Andrew Ma
13	Primus	\$64,781,560	Carlos Grilo
9	Gladius	\$55,760,290	Annelie Zubar
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7		\$17,026,576	Tina Lassila
7	Doroga	\$7,362,616	Andrew Ma
5	Sova	\$3,215,194	Tina Lassila
5	Sova	\$455,668	Carlos Grilo
4		\$903,019	Annelie Zubar
2	Sova	\$4,840,440	Annelie Zubar
2		\$676,726	Andrew Ma
2	MI-72	\$25,615	Annelie Zubar
2	Gunner	\$17,190	Andrew Ma
1	Primus	\$111,225	Tina Lassila
1	Gunner	\$49,800	Allan Guinot
1	Gunner	\$11,310	Valery Ushakov
90		\$235,208,999	


If you Shift + click a second time on the same column, this will change the sort direction (ascending, descending) for that column. Furthermore, if you Shift + click a column you have previously added to the sort order, this will move that column to the back of the sort order.

## Saving changes you make to sort order

Power BI reports retain the filters, slicers, sorting, and other data view changes that you make -- even if you're working in [Reading view](#). So, if you navigate away from a report, and return later, your sorting changes are saved. If you want to revert your changes back to the report *designer's* settings, select **Reset to default** from the upper menu bar.



If however, the **Reset to default** button is greyed out, that means the report *designer* has disabled the ability to save (persist) your changes.

Another way to save your changes is with bookmarks. If the report *designer* enabled the **Personalize visual** feature for this report, you'll be able to change the sort order for a visual (and a lot more) and save it as a bookmark. If you see this icon  in the visual's header, then personalize visuals is enabled.

To learn more, see [Personalize visuals in a report](#)

## Considerations and troubleshooting

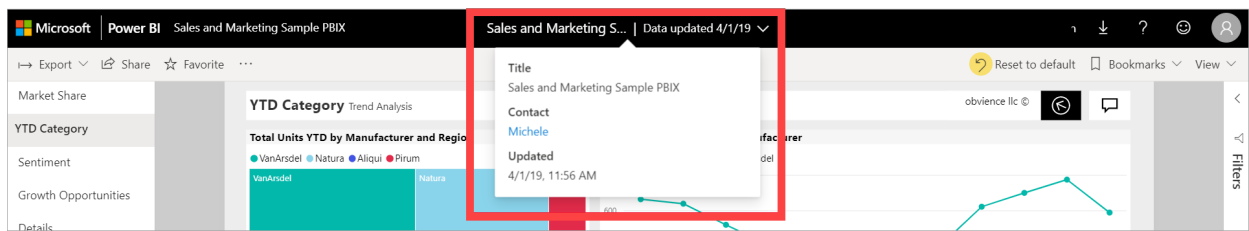
### Sorting using other criteria

Sometimes, you want to sort your visual using a different field (that isn't included in the visual) or other criteria. For example, you might want to sort by month in sequential order (and not in alphabetical order) or you might want to sort by entire numbers instead of by digit (example, 0, 1, 9, 20 and not 0, 1, 20, 9).

- To learn how to sort by another field in the dataset, and you have edit permissions to the report, see [Sort by](#)

column in Power BI Desktop.

- If you are the report designer, you can create new columns in the dataset to address sorting issues with values such as dates and numbers. Contact information for the *designer* can be found by selecting the report name from the header bar.



## Next steps

More about [Visualizations in Power BI reports](#).

[Power BI - Basic Concepts](#)

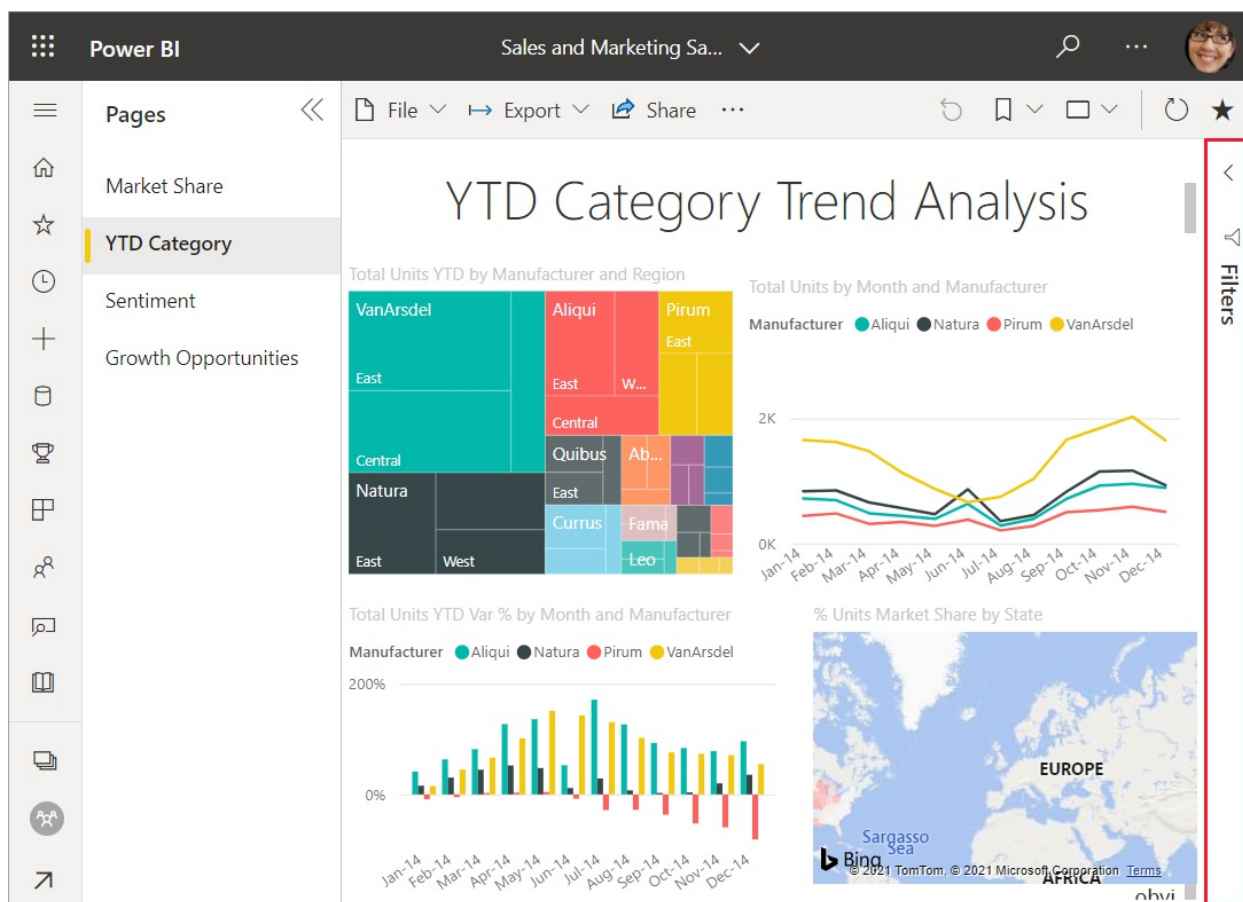
# Take a tour of the report Filters pane

12/10/2021 • 5 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

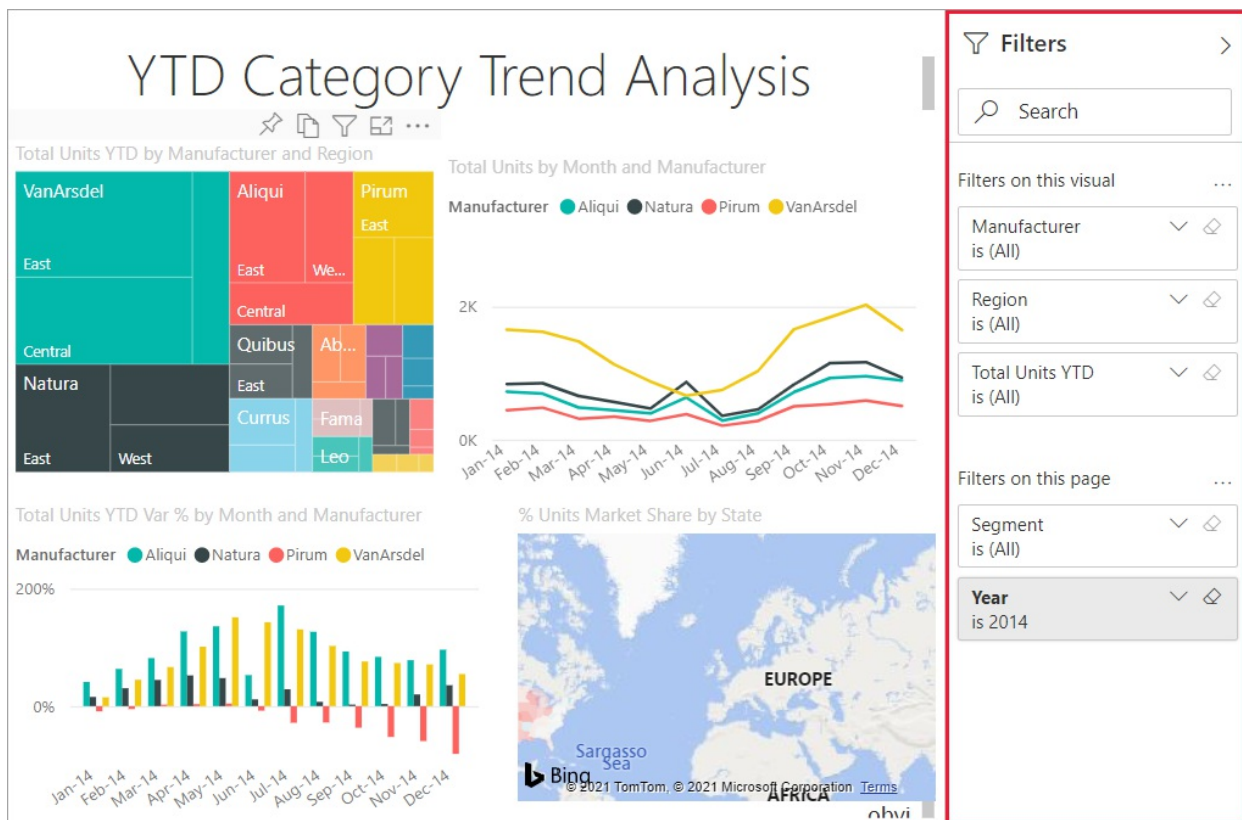
This article takes a look at the report **Filters** pane in the Power BI service. Use the filters to discover new insights in your data.

There are many different ways to filter data in Power BI. This article explains how to use the **Filters** pane. You can also filter by selecting data points on a report visual to filter the other visuals on the page -- this is referred to as **cross-filtering** and **cross-highlighting**. For more information about cross-filtering and cross-highlighting, see [How visuals cross-filter each other in a Power BI report](#).



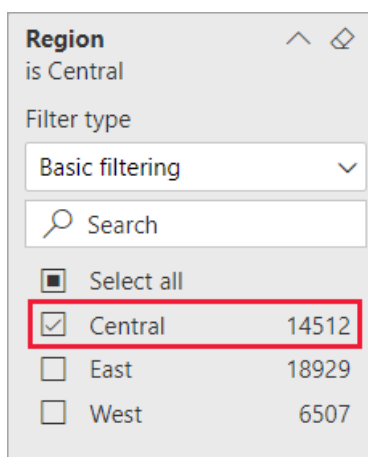
## Working with the report Filters pane

When a colleague shares a report with you, be sure to look for the **Filters** pane. Sometimes it's collapsed along the right edge of the report. Select it to expand it.



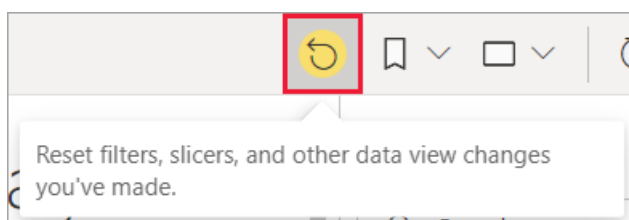
The **Filters** pane contains filters that the report *designer* added to the report. *Business users* like you can interact with the existing filters and save your changes, but you can't add new filters to the report. For example, in the screenshot above the designer added three page level filters: **Segment is All**, **Year is 2014**, and **Region is Central**. You can interact and change these filters, but you can't add a fourth page level filter.

Some of the filters are shaded, and some are not. If a filter is shaded, that means a filter has been applied and some data is being excluded. For example, the **Region** filter card is shaded, and when you expand the card you see that only **Central** is selected from the dropdown. Since Region is under the **Filters on this page** heading, all visuals on this page are not displaying (excluding) data for the **West** and **East** regions.



In the Power BI service, reports keep any changes you make in the **Filters** pane. The service carries those changes through to the mobile version of the report.

To reset the **Filters** pane to the designer's defaults, select the **Reset** icon from the upper menu bar.



## NOTE

If you don't see the **Reset to default** option, it may have been disabled by the report *designer*. The *designer* can also lock specific filters so that you can't change them.

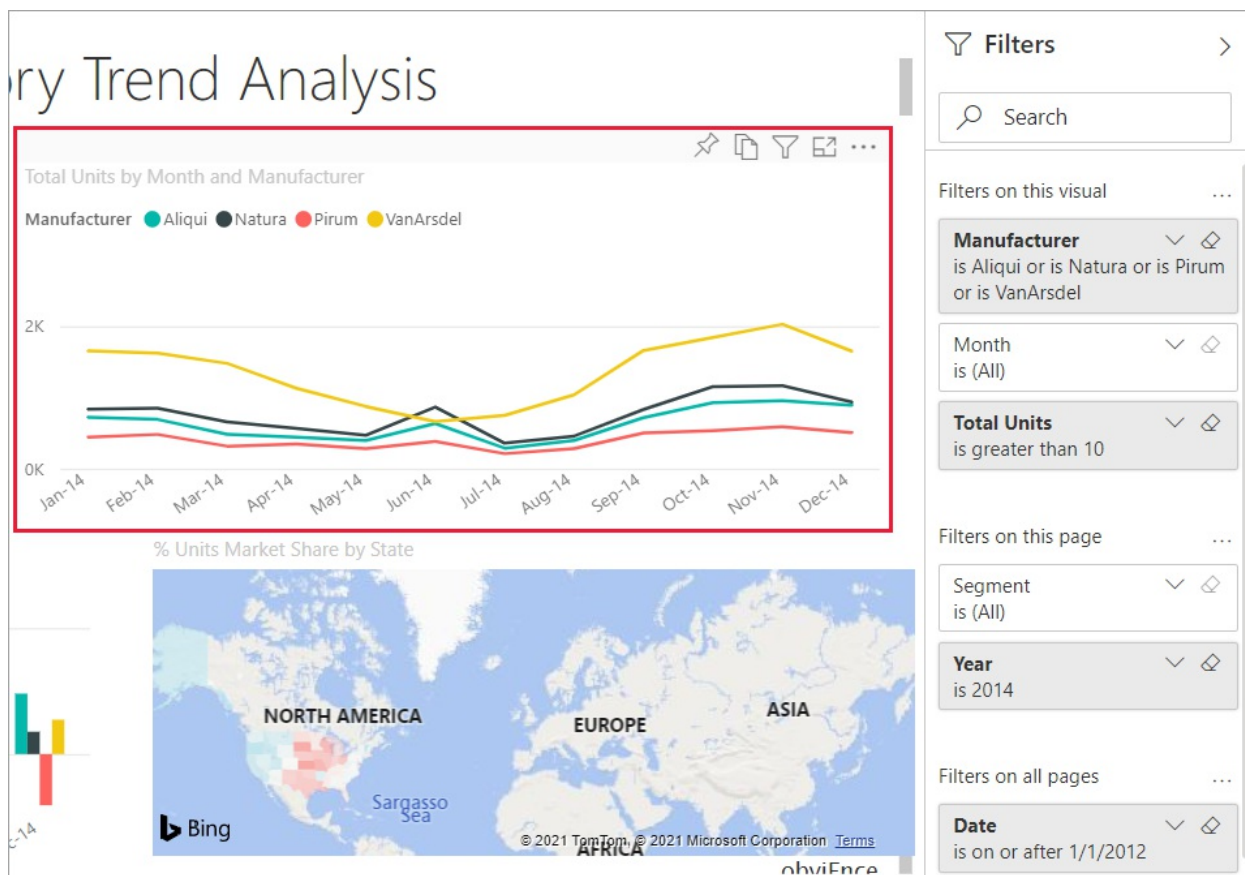
## View all the filters for a report page

The **Filters** pane displays all filters added by the designer to the report. The **Filters** pane is also the area where you can view information about the filters and interact with them. Save changes you make or use **Reset to default** to revert to the original filter settings.

If there are changes you'd like to save, you can also create a personal bookmark. For more information, see [What are bookmarks?](#).

The **Filters** pane displays and manages several types of report filters: report, report page, and visual.


In this example, we've selected a visual that has three filters: **Manufacturer**, **Month**, and **Total units**. The report page also has filters, listed under the **Filters on this page** heading. And, the entire report has a filter for **Date**, listed under **Filters on all pages**.

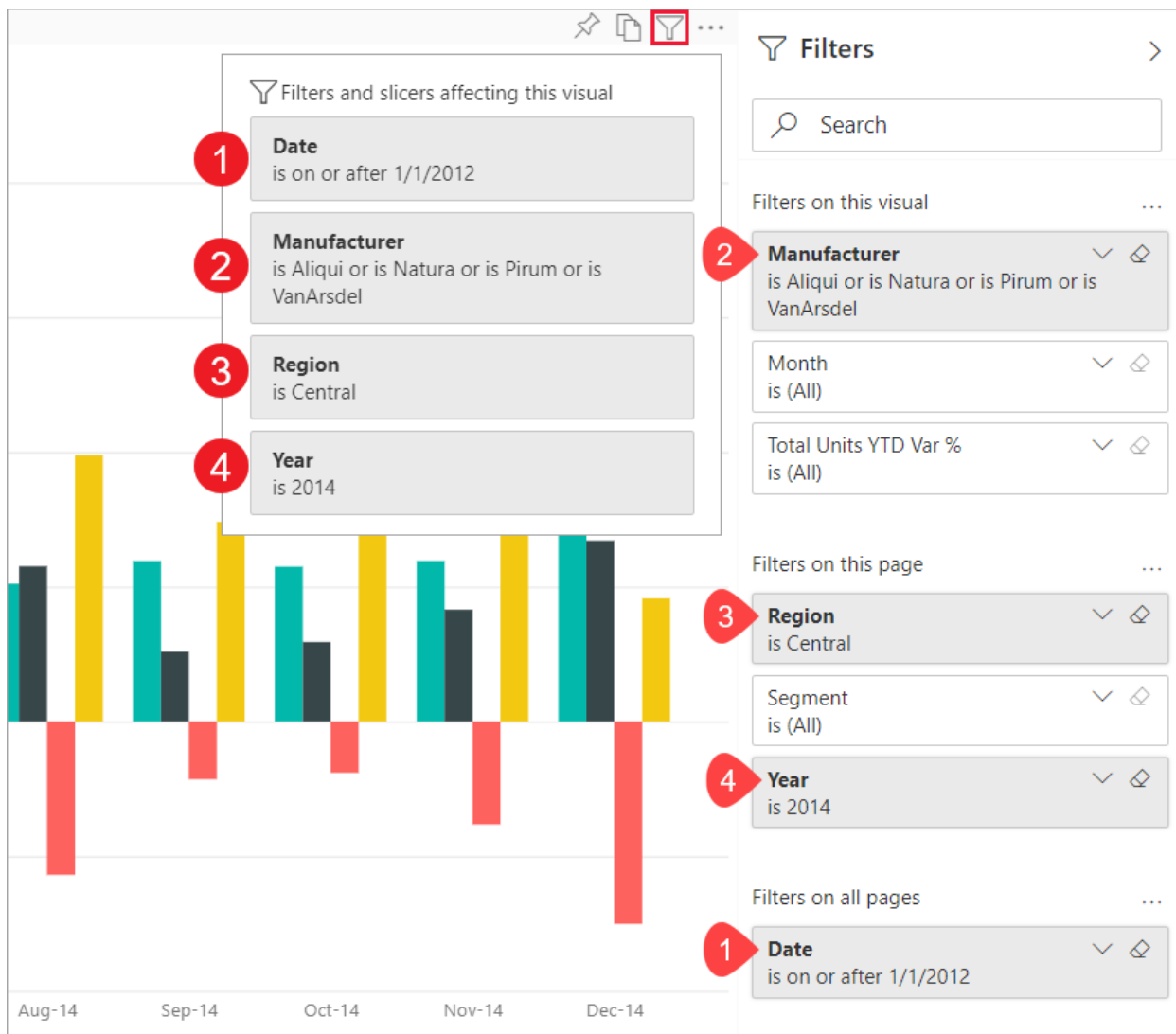


Some of the filters have **(All)** next to them. **(All)** means all values are being included in the filter. In the screenshot above, **Segment(All)** tells us this report page includes data about all the product segments.

Anyone with permissions to view this report can interact with these filters.

### View only those filters applied to a visual

To get a closer look at the filters affecting a specific visual, hover over the visual to reveal the filter icon . Select that filter icon to see a pop-up with all the filters, slicers, and so on, affecting that visual. The filters on the pop-up include the same filters displayed on the **Filters** pane, plus any additional filtering affecting the selected visual.



Here are the types of filters this view can display:

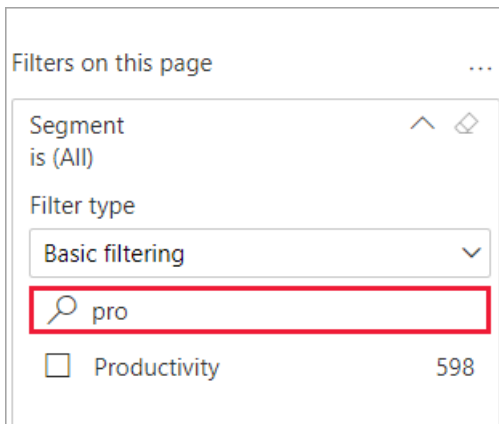
- Basic filters
- Slicers
- Cross-highlighting
- Cross-filtering
- Advanced filters
- Top N filters
- Relative Date filters
- Sync-slicers
- Include/Exclude filters
- Filters passed through a URL

In this example:

1. **Included** tells us that the visual has been cross-filtered. What this means is that the states of Alabama and Texas have been selected on one of the other visuals on this report page. In this case, it's the map visual. The selection of those two states has eliminated data for all other states from displaying on the selected bar chart.
2. **Date** is a filter applied to all pages in this report.
3. **Region is Central** and **Year is 2014** are filters applied to this report page.
4. **Manufacturer is VanArsdel, Natura, Aliqui, or Pirum** is a filter applied to this visual.

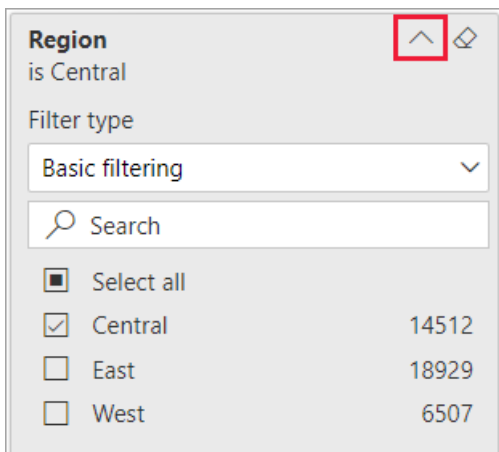
## Search in a filter

Sometimes a filter can have a long list of values. Use the search box to find and select the value you want.



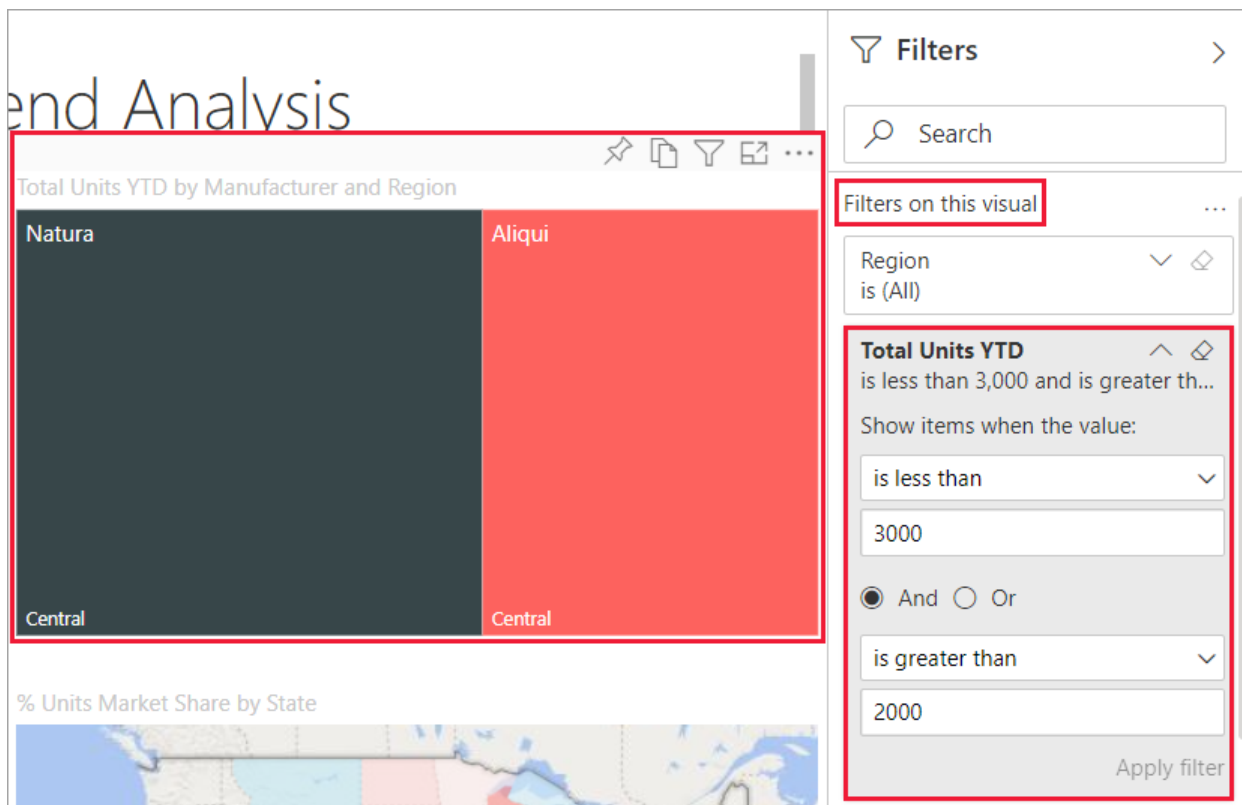
## Display filter details

To understand a filter, expand it and take a look at the available values and counts. To expand the filter, select the arrow next to the filter name.



## Change filter selections

One way to search for data insights is to interact with the filters. You can change filter selections using the drop-down arrow next to the field name. Depending on the filter and type of data that Power BI is filtering, your options will range from simple selections from a list, to identifying ranges of dates or numbers. In the advanced filter below, we've changed the **Total Units YTD** filter on the treemap to be between 2,000 and 3,000. Notice that this change removes Pirum and VanArsdel from the treemap.

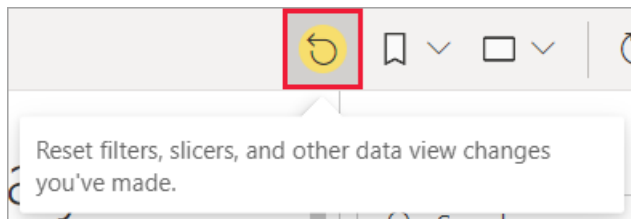


#### TIP

To select more than one filter value at a time, hold down the CTRL key. Most filters support multi-select.

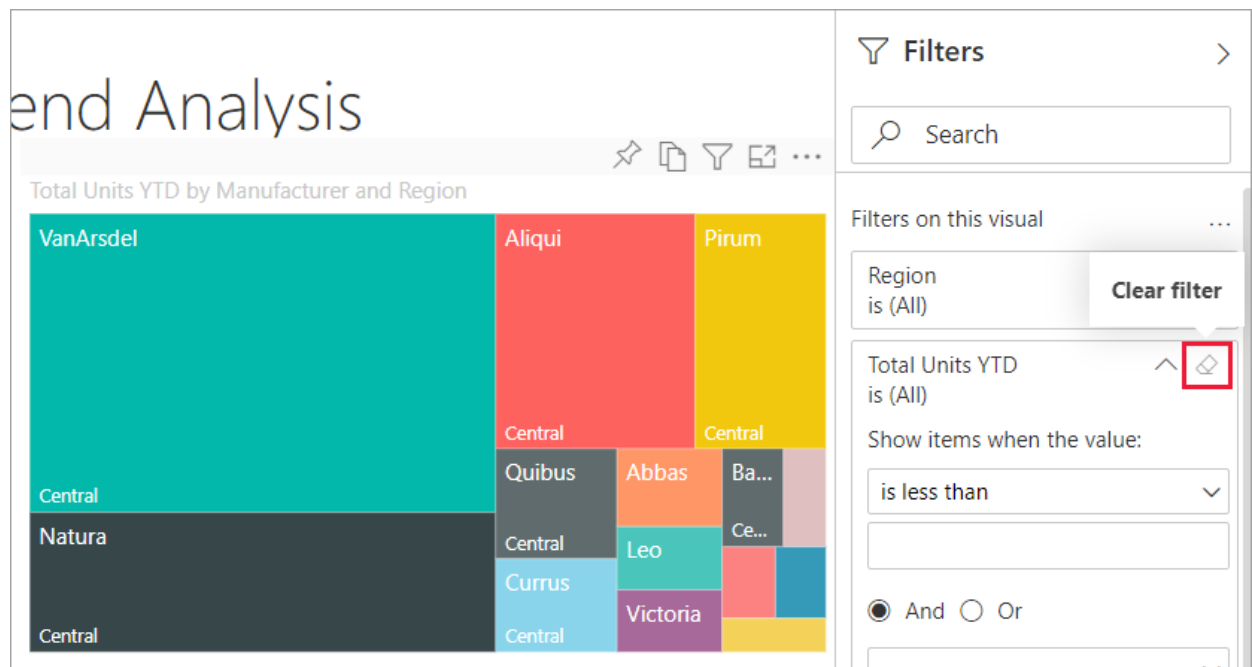
#### Reset filter to default

If you want to back out of all changes you've made to the filters, select the **Reset** icon from the top menu bar. This selection reverts the filters to their original state, as set by the report designer.



#### Clear a filter

To reset a filter to (All), clear it by selecting the eraser icon next to the filter name.







## Next steps

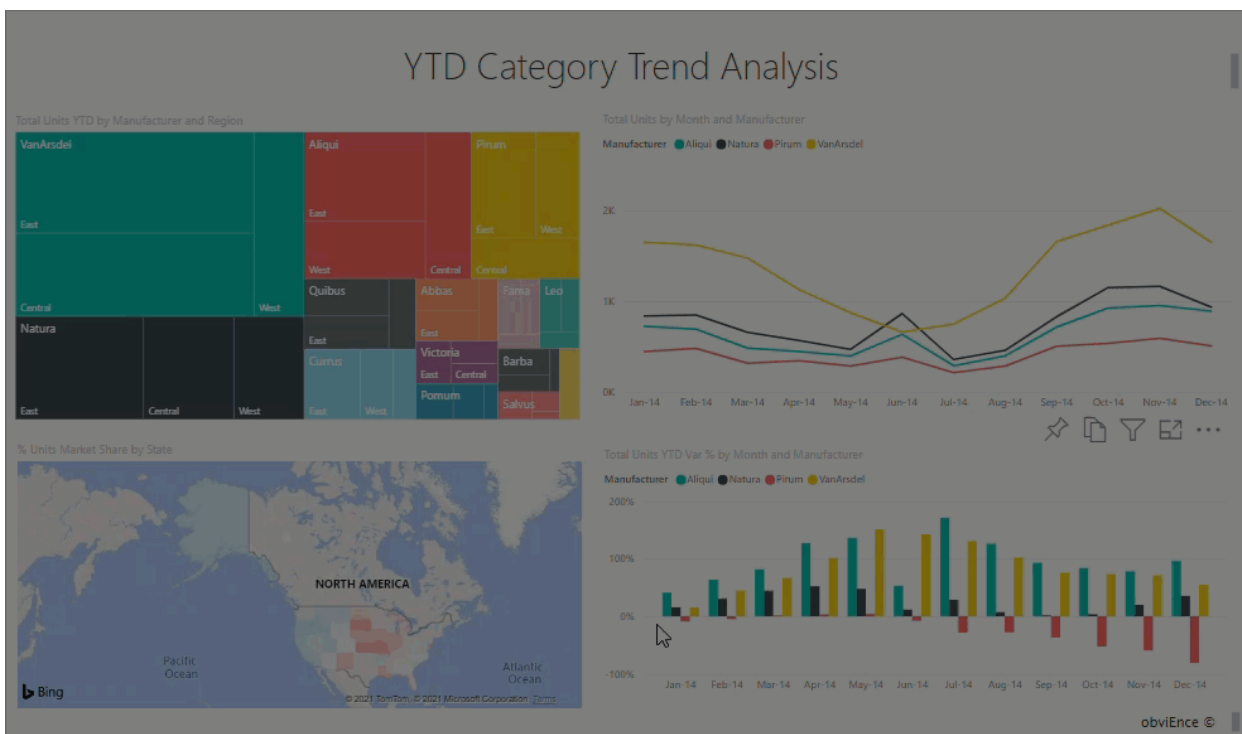
Learn how and why [visuals cross-filter and cross-highlight each other on a report page](#)

# How visuals cross-filter each other in a Power BI report

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

One of the great features of Power BI is the way all visuals on a report page are interconnected. If you select a data point on one of the visuals, all the other visuals on the page that contain that data change, based on that selection.



## How visuals interact with each other

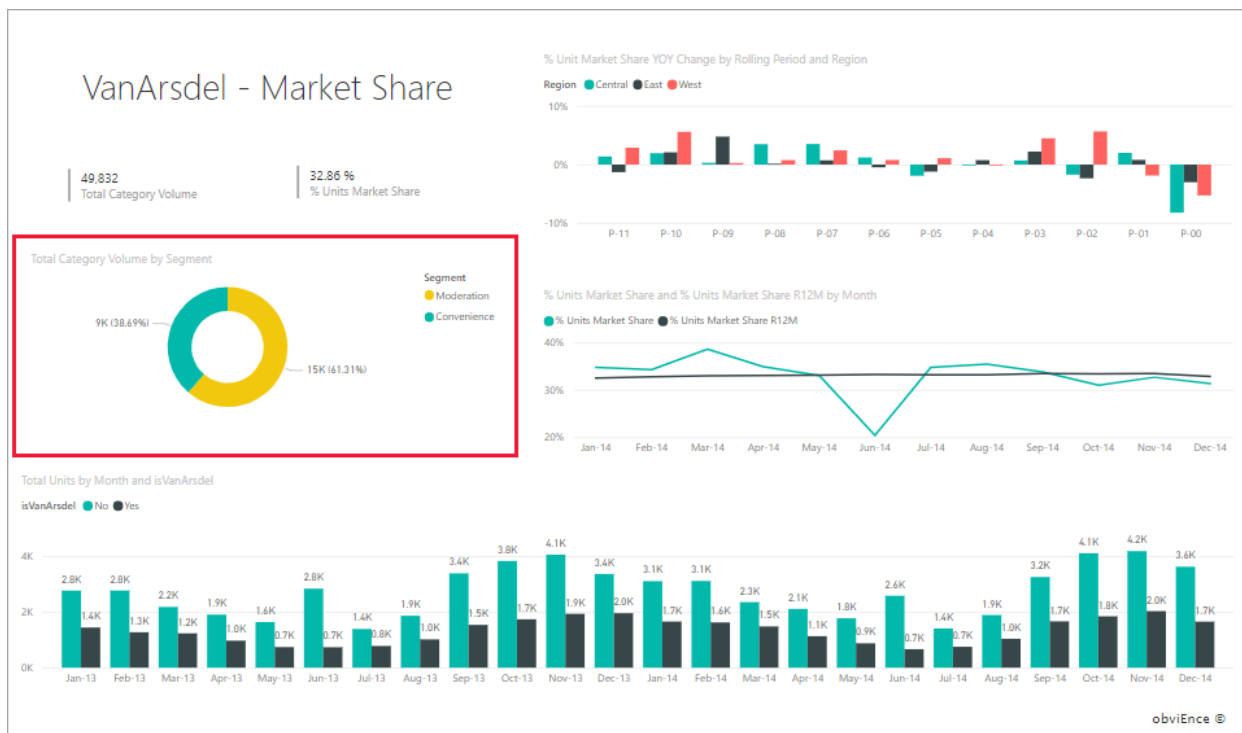
By default, selecting a data point in one visual on a report page will cross-filter or cross-highlight the other visuals on the page. Exactly how the visuals on a page interact is set by the report *designer*. *Designers* have options to turn visual interactions on and off, and to change the default cross-filtering, cross-highlighting, and [drilling](#) behavior.

If you haven't encountered hierarchies or drilling yet, you can learn all about them by reading [drill down in Power BI](#).

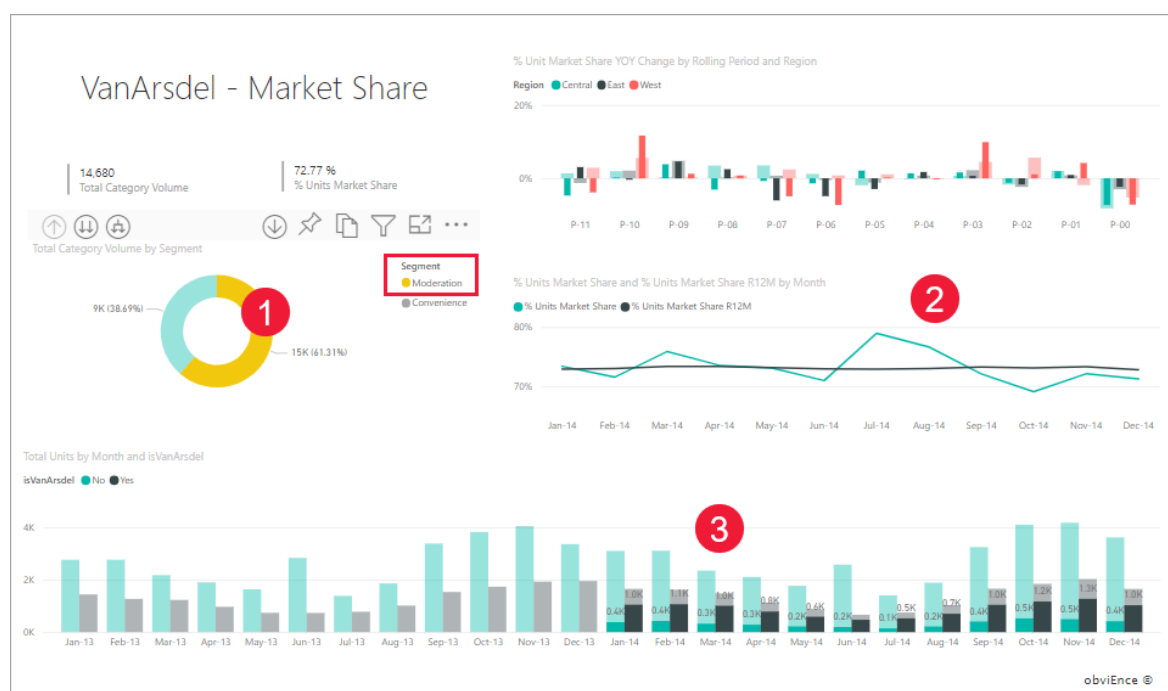
### Cross-filtering and cross-highlighting

Cross-filtering and cross-highlighting can be useful to identify how one value in your data contributes to another. The terms *cross-filter* and *cross-highlight* are used to distinguish the behavior described here from what happens when you use the **Filters** pane to filter and highlight visuals.

Let's define these terms as we look at the report pages below. The "Total category volume by segment" doughnut chart has two values: "Moderation" and "Convenience".



1. Let's see what happens when we select **Moderation**.

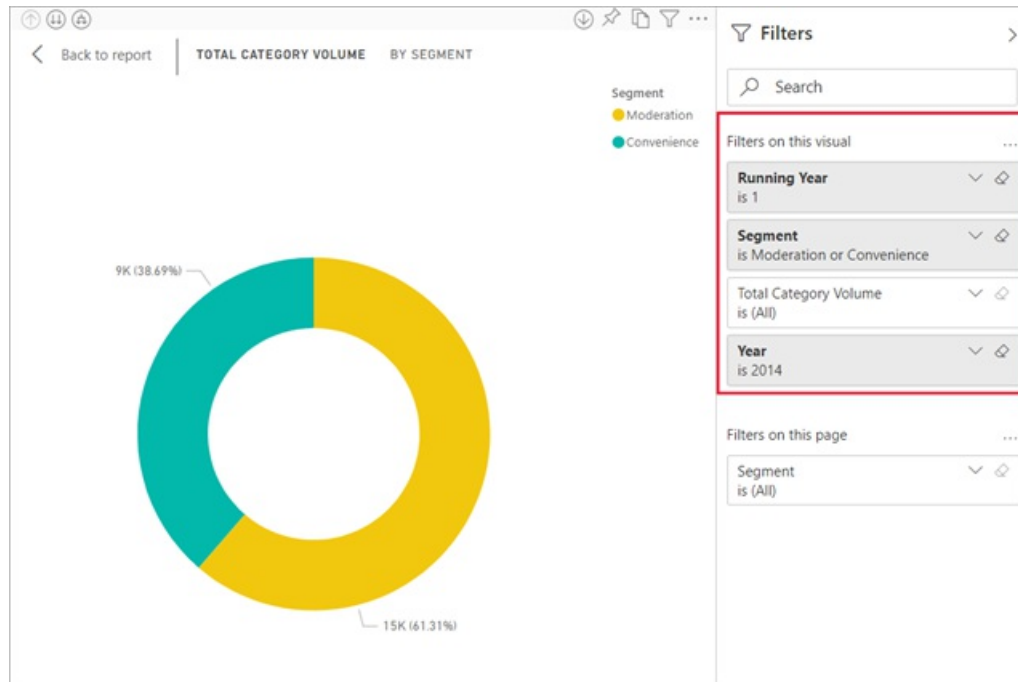


- Cross-filtering** removes data that doesn't apply. Selecting **Moderation** in the doughnut chart cross-filters the line chart. The line chart now only displays data points for the Moderation segment.
- Cross-highlighting** retains all the original data points but dims the portion that does not apply to your selection. Selecting **Moderation** in the doughnut chart cross-highlights the column chart. The column chart dims all the data that applies to the Convenience segment and highlights all the data that applies to the Moderation segment.

## Considerations and troubleshooting

- If your report has a visual that supports **drilling**, by default, drilling one visual has no impact on the other visuals on the report page. However, the report *designer* can change this behavior, so check your drillable visuals to see if **drilling filters other visuals** has been enabled by the report *designer*.

- Visual-level filters are retained when cross-filtering and cross-highlighting other visuals on the report page. So, If VisualA has visual-level filters applied by the report designer or by you, and you use visualA to interact with visualB, visual-level filters from visualA will be applied to visualB.



## Next steps

[How to use report filters](#)

[About filtering and highlighting.](#)

# Slicers in the Power BI service

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for **business users**  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license



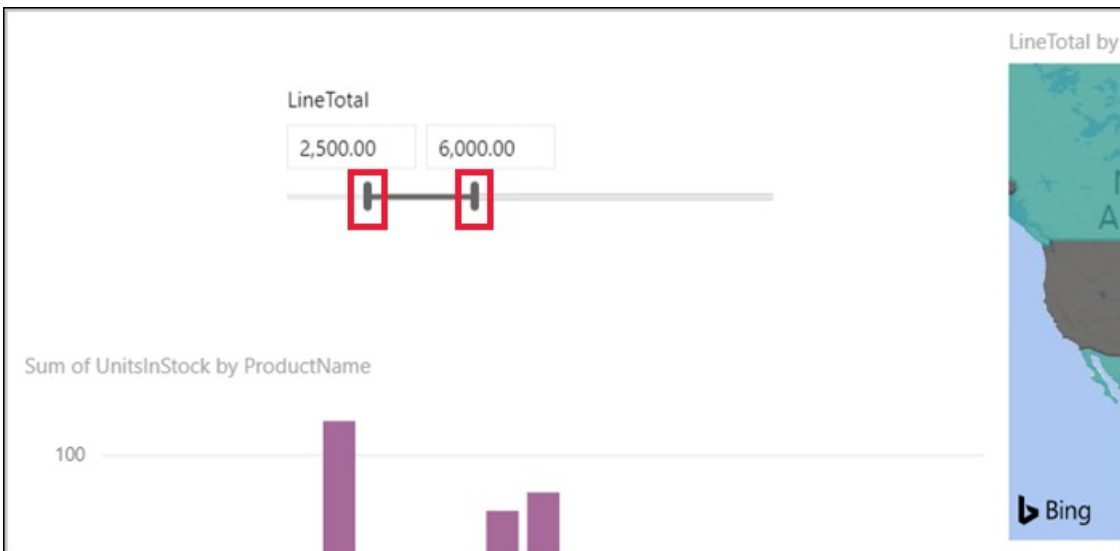
A slicer is a type of visual that filters the other visuals on a report page. When using Power BI reports, you'll discover many types of slicers. The image, above, shows the same slicer but with different selections. Notice how each selection filters the other visuals on the page.

## How to use slicers

When creating reports, *designers* add slicers to help tell a story and to give you tools to explore your data.

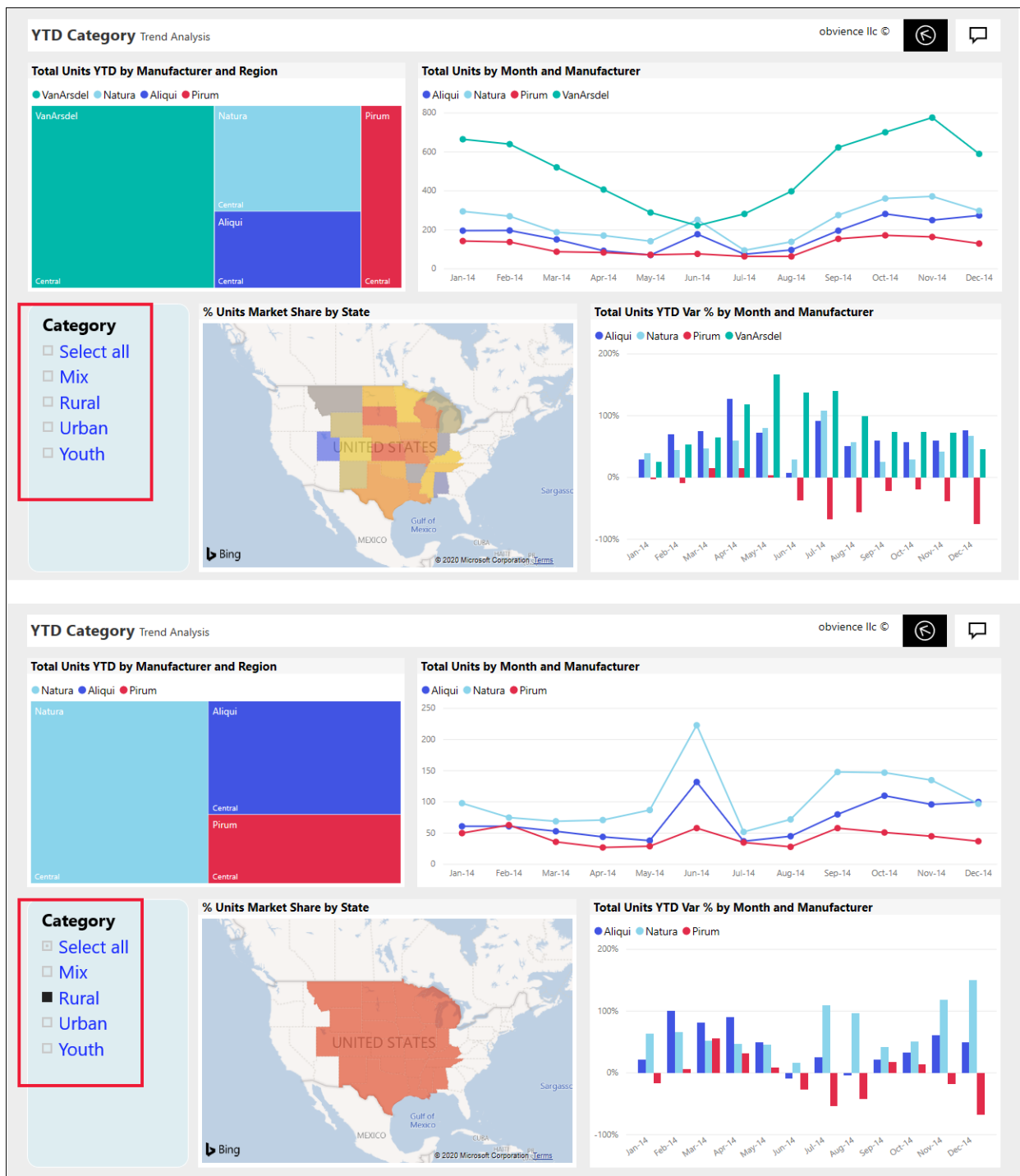
### Numeric range slicer

The numeric range slicer helps you explore quantitative data such as total sales by: geography, units in stock, and order date. Use the handles to select a range.



### Basic vertical checkbox slicer

In a basic checkbox slicer, select one or more checkboxes to see the impact on the other visuals on the page. To select more than one, use CTRL-select. Sometimes, the report *designer* will set the slicer to only allow you to select one value at a time.



## Image and shape slicers

When the slicer options are images or shapes, making your selections is similar to using checkboxes. You can choose one or more image or shape to apply the slicer to the other visuals on the page.



### Hierarchy slicer

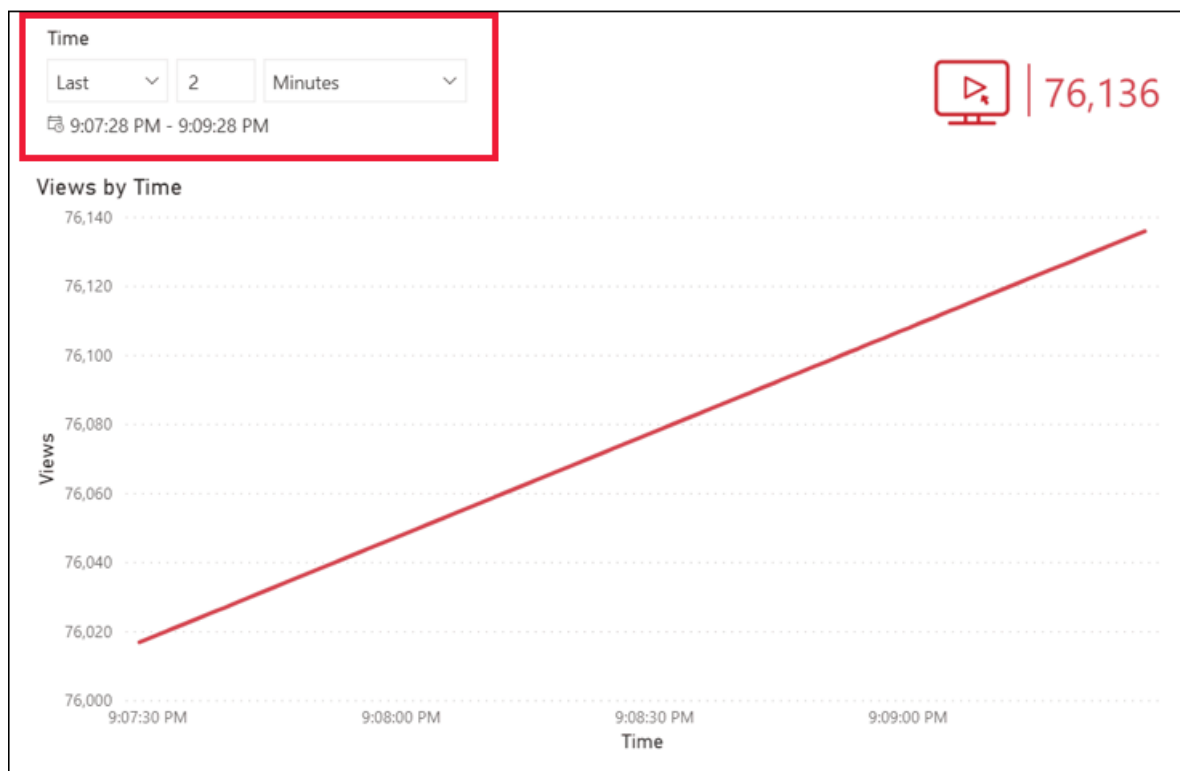
In a slicer with a hierarchy, use the chevrons to expand and collapse the hierarchy. The header updates to show your selections.

### Category, Segment: Multiple selections

- ☐ Select all
- ▼ ☐ Mix
- ▼ ☐ Rural
- ^ ☐ Urban
  - ☐ Convenience
  - ☒ Extreme
  - ☐ Moderation
  - ☐ Regular
- ▼ ☐ Youth

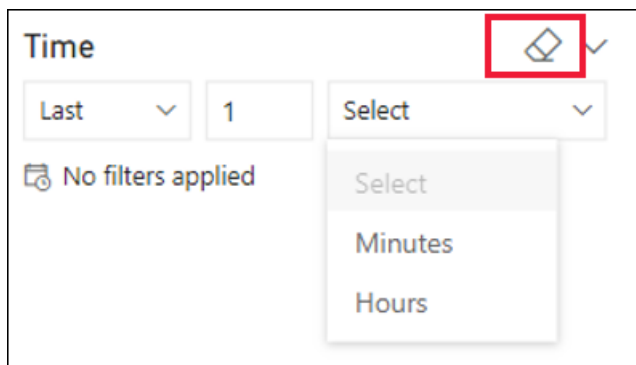
### Relative time slicer

With emerging fast refresh scenarios, the ability to filter to a smaller window of time can be very useful. Using the relative time slicer, you can apply time-based filters to any date or time data in your report. For example, you can use the relative time slicer to show only video views within the last 2 days, hours, or even minutes.



### Deactivate a slicer

To deactivate a slicer, select the eraser icon.



## Next steps

For more information, see the following articles:

[Visualization types in Power BI](#)

# Export reports from Power BI to PDF

12/10/2021 • 5 minutes to read • [Edit Online](#)

**APPLIES TO:** ✓ Power BI Desktop ✓ Power BI service

With Power BI, you can publish your report to PDF format and easily create a document based on your Power BI report. When you export to PDF, each page in the Power BI report becomes an individual page in your PDF document. Exporting to PDF is one way to share or print reports.

## Export your Power BI report to PDF

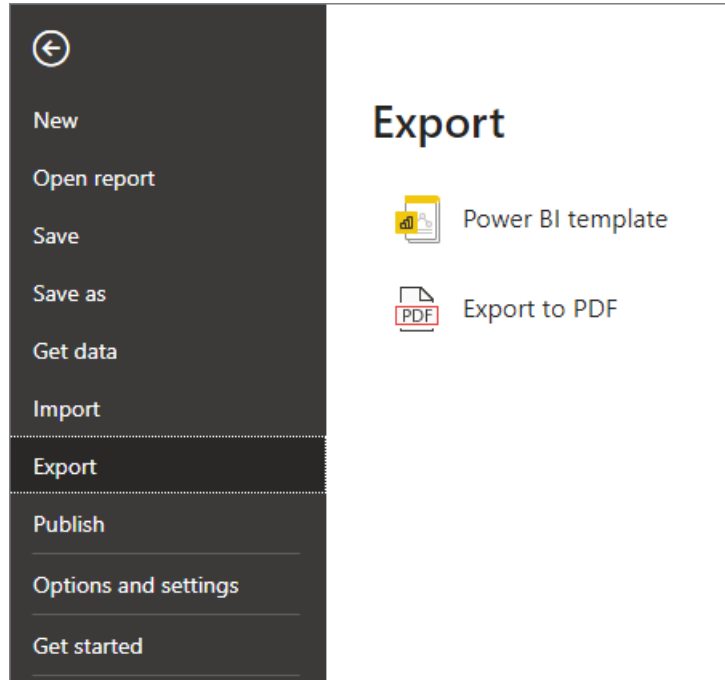
In the Power BI service or Desktop, select a report to display it on the canvas. In the Power BI service, you can select a report from your **Home** page, **Apps**, or any other container from the nav pane.

- [Power BI Desktop](#)
- [Power BI service](#)

## Export to PDF from Power BI Desktop

The process for exporting a report from Power BI Desktop to PDF is similar to the Power BI service process described above. There are only a few differences:


- In Desktop, select **File** > **Export** > **Export to PDF**.

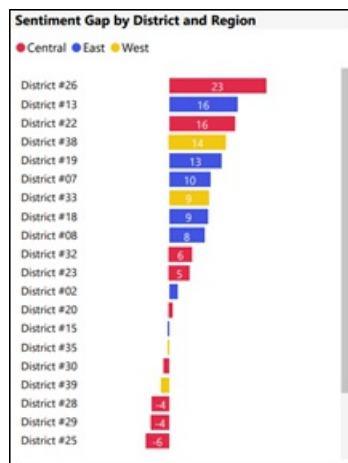


- Report pages that are currently not visible, such as any tooltips or hidden pages, are not exported to the PDF file.
- While the export is being processed, a dialog appears that lets you know that the export process is underway. The dialog remains on the screen until the export process completes. During the export process, all interaction with the report being exported is disabled. The only way to interact with the report is to wait until the export process completes, or to cancel the export.
- The exported PDF displays in your browser and is automatically saved in your **Downloads** folder.

# Considerations and limitations

There are a few considerations and limitations to keep in mind when you work with the **Export to PDF** feature.

- R and Python visuals aren't currently supported. In the PDF, these visuals are blank and display an error message.
- Power BI visuals that have been certified are supported. For more information on certified Power BI visuals, including how to get a Power BI visual certified, see [Get a Power BI visual certified](#). Power BI visuals that haven't been certified aren't supported. In the PDF, they display with an error message.
- The ESRI visual is not supported.
- Power BI reports with more than 50 report pages currently can't be exported. Paginated reports don't have this limitation. See [Print a paginated report](#) for details.
- Reports larger than 500 MB currently can't be exported.
- The process of exporting the report to PDF might take a few minutes to complete, so be patient. Factors that can affect the time required include the structure of the report and the current load on the Power BI service or Power BI Desktop.
- If the **Export to PDF** menu item isn't available in the Power BI service, it's likely because your Power BI administrator disabled the feature. Contact your administrator for details.
- Reports that are owned by a user outside your Power BI tenant domain, such as a report owned by someone outside your organization and shared with you, can't be published to PDF.
- If you share a dashboard with someone outside of your organization, and thereby, a user who isn't in your Power BI tenant, that user can't export the shared dashboard's associated reports to PDF. For example, if you're aaron@contoso.com, you can share with cassie@northwinds.com. But cassie@northwinds.com can't export the associated reports to PDF.
- Background images are cropped with the visualization's bounding area. Also, when you export to PDF with reports that contain a background image, you might see a distorted image in the export if you use the **Normal** or **Fill** options for the **Page Background**. For best results, use the **Fit** option to avoid issues with your exported document. Or, remove backgrounds before exporting.
- The Power BI service uses your Power BI language setting as the language for the PDF export. To see or set your language preference, select the cog icon  > **Settings** > **General** > **Language**.
- In the Power BI service, URL filters aren't currently respected when you choose **Current Values** for your export.
- Reports with unusual custom page sizes may experience issues in export scenarios. For best results, consider switching to a standard page size for your report.
- When exporting to PDF, reports using themes with custom fonts will have the custom font replaced with a default font.
- While we look to provide a consistent experience, we can't guarantee the exported PDF from the Power BI service will always match the exported PDF from a local Power BI Desktop file.
- When exporting to PDF, we cannot guarantee pixel perfect fidelity for Power BI reports. The resolution of exported report pages is 1280 pixels x 720 pixels.
- Visuals with scrollbars are exported in their default state. The visual will display all possible rows, starting with the first row. Even if you have the visual scrolled down, when exported, the visual will display unscrolled.



- The feature does *not* export any wallpaper you may have applied to the report. Since wallpaper is not exported to the PDF, you should pay special attention to reports that use dark wallpaper. If the text in your report is light or white, to have it stand out against your dark wallpaper, it will be difficult to read or unreadable in the export to PDF process since the wallpaper will not be exported with the rest of the report.

## Next steps

[Print a report](#)

# Export reports to PowerPoint

12/10/2021 • 6 minutes to read • [Edit Online](#)

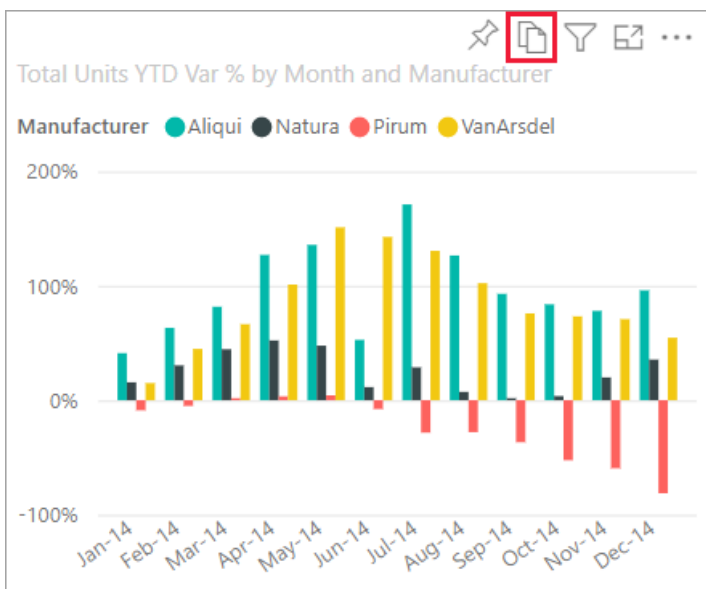
**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop

With the Power BI service (app.powerbi.com), you can publish your report to Microsoft PowerPoint and easily create a slide deck based on your Power BI report. 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 you've added to the report.
- A link is created in PowerPoint that links back to the Power BI report.

Getting your **Power BI report** exported into **PowerPoint** is quick. Follow the steps outlined in the next section.

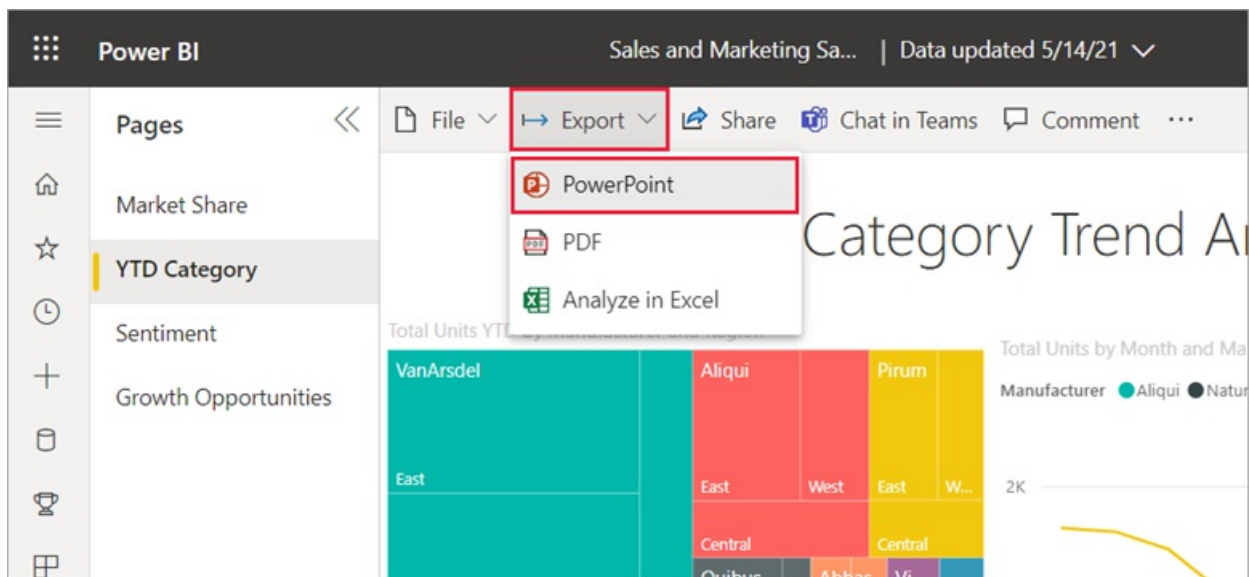
You can also copy one visual at a time from the Power BI service and paste it into PowerPoint (or any other program that supports pasting). Select the **Copy as image** icon to copy the visual to your clipboard. Then, open PowerPoint and paste the visual. For more information, see [Copy visuals as static images](#).



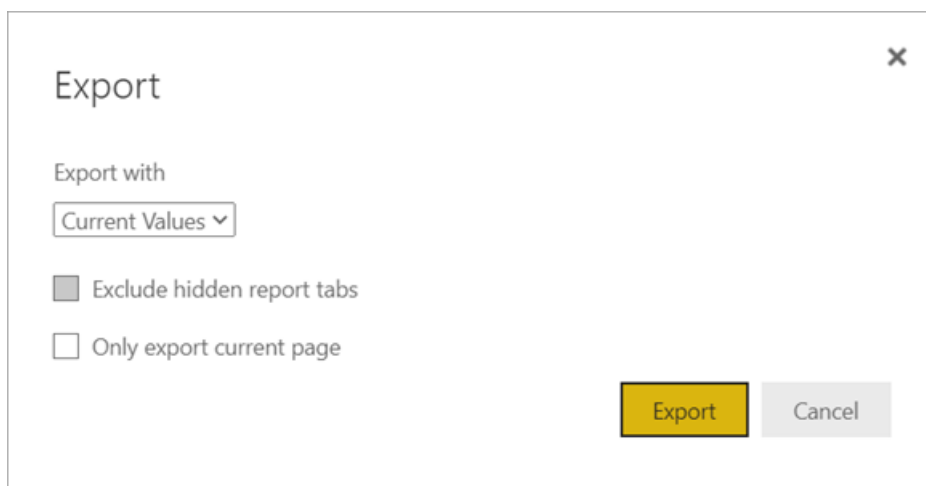
## Export your Power BI report to PowerPoint

In the **Power BI service**, select a report to display it on the canvas. You can also select a report from **Home**, **Apps**, or any other container from the nav pane.

When the report you want to export to PowerPoint is displayed on the canvas, select **Export > PowerPoint** from the menu bar.



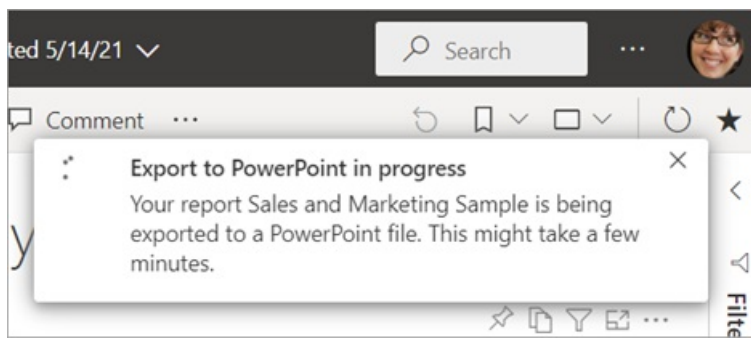
A pop-up appears where you have the option to select **Current values** or **Default values**. **Current values** exports the report in the current state, which includes the active changes you made to slicer and filter values. Most users select this option. If you've scrolled, **Current values** does not 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 you've 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*.

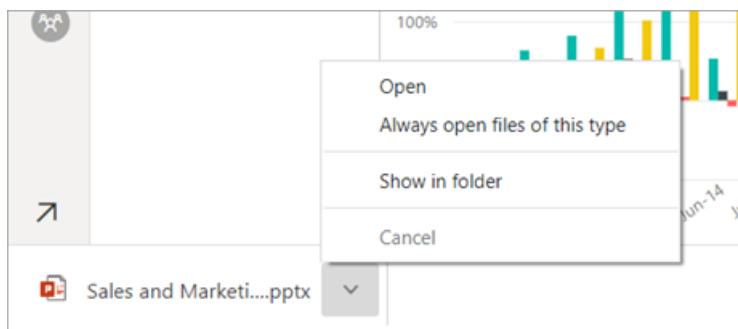
You may also choose to export only the current page you're viewing in a report by checking the **Only export current page** option. By default, this is unchecked and all pages will be exported from your report.

After you make your selections, select **Export** to continue. You'll 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.

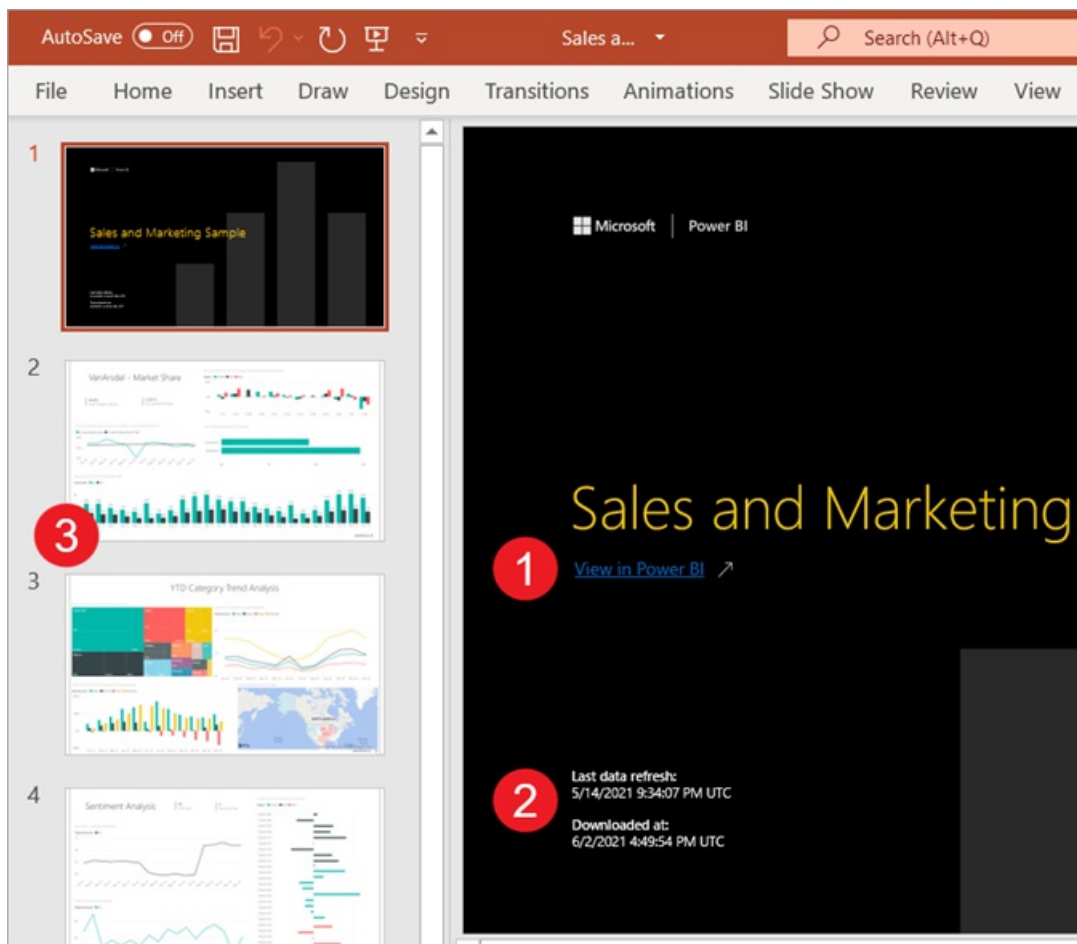
After the Power BI service has finished the export process, the notification banner changes to let you know. Your file is then available where your browser displays downloaded files. In the following image, it's shown as a download banner along the bottom of the browser window.



And that's all there is 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.



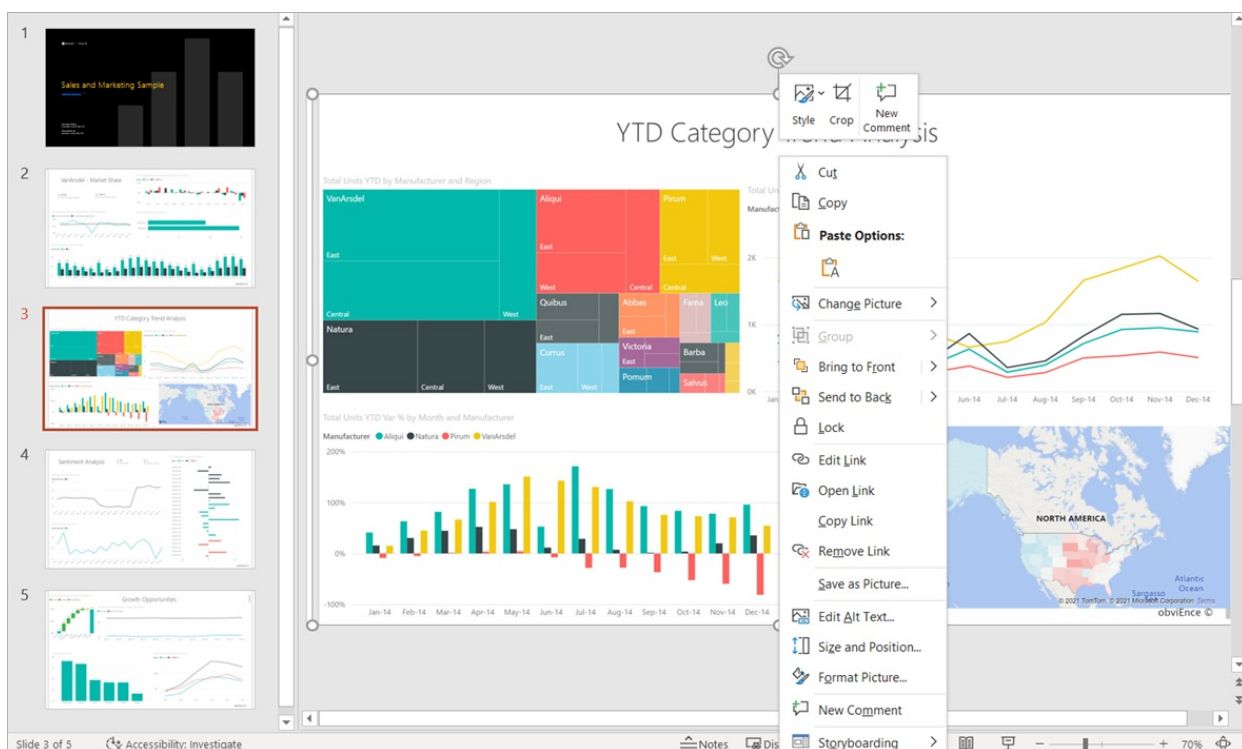
1. The first page of the slide deck includes the name of your report and a link so that you can **View in Power BI** the report on which the slide deck is based.
2. You get some useful information about the report, too. **Last data refresh** shows the date and time on which the exported report is based. **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.

#### NOTE

PowerPoint includes the name of each visual on the page and adds alt text for each item. The report creator can include alt text when designing the report. Otherwise, the default is "No alt text provided."

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 or regions for Power BI](#).

When you view an individual slide, you see that each report page is an independent image. Scrolling in PowerPoint is not available since each slide is a static image.




What you do with your PowerPoint deck from there, or any of the high-resolution images, is up to you.

## Considerations and limitations

There are a few considerations and limitations to keep in mind when you work with the **Export to PowerPoint** feature.

- If you don't see the **Export** option, make sure that you are viewing a report (not a dashboard).
- [URL filters](#) aren't currently respected when you choose **Current Values** for your export.
- When exporting to PowerPoint, if the report uses a custom font, that font will be replaced with a default font.
- The following visual types are not supported, and will not be exported to PowerPoint:
  - [Custom visuals that haven't been certified](#) aren't supported.
  - The [ESRI ArcGIS visual](#) is not supported
  - R and Python visuals are not supported.
  - Background images are cropped with the chart's bounding area. We recommend that you remove background images before you export to PowerPoint.
- Some reports cannot be exported. These include:
  - If you share a dashboard with someone outside of your organization, and thereby, a user who isn't in your Power BI tenant, that user can't export the shared dashboard's associated reports to PowerPoint. For example, if you're aaron@contoso.com, you can share with david@cohowinery.com. But david@cohowinery.com can't export the associated reports to PowerPoint.
  - Reports with more than 50 report pages. Paginated reports don't have this limitation. See [Print a paginated report](#) for details.
  - Reports larger than 500 MB when exported.
  - Reports being exported to older versions of PowerPoint.
  - Reports that take longer than an hour to process.
  - Report pages that take longer than 6 minutes to load.
- If the **Export to PowerPoint** menu item isn't available in the Power BI service, it's likely because your

Power BI admin or report owner disabled the feature. Contact your admin or the owner for details.

- The resolution of exported report pages is 1280 pixels x 720 pixels.
- The Power BI service uses your Power BI language setting as the language for the PowerPoint export. To see or set your language preference, in your browser, select the cog icon  > **Settings** > **General** > **Language**.

## Next steps

[Copy visuals as static images](#)

[Print a report](#)

# Identify and use buttons in the Power BI service

12/10/2021 • 4 minutes to read • [Edit Online](#)

In the reports that you receive from colleagues, you may have noticed buttons and wondered how to use them. Some have words, some have arrows, others have graphics, and some even have dropdown menus. This article will teach you how to recognize a button and how to figure out what to do with it.

If you want to learn how to create buttons, see [Create buttons in Power BI](#).

## How to recognize a button

Buttons can look a lot like shapes, images, or icons on a report page. But if an action occurs when you select (click) it -- then it's probably a button.

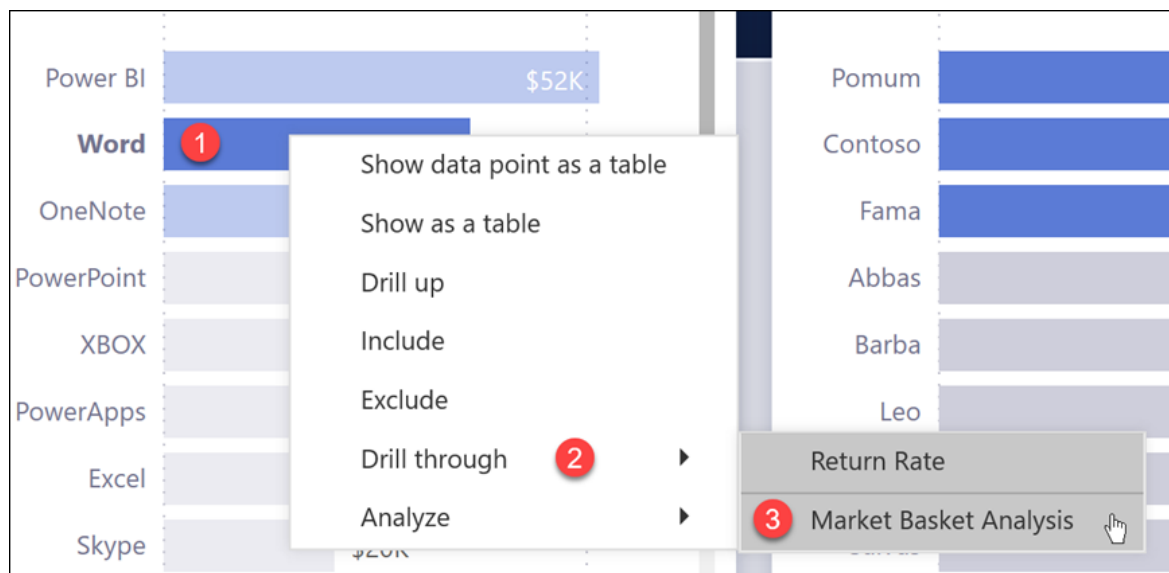
## Types of buttons

Report creators add buttons to reports to help you with navigation and exploration. Just some of the button types are: back, bookmark, arrows, Q&A, help, and blank.

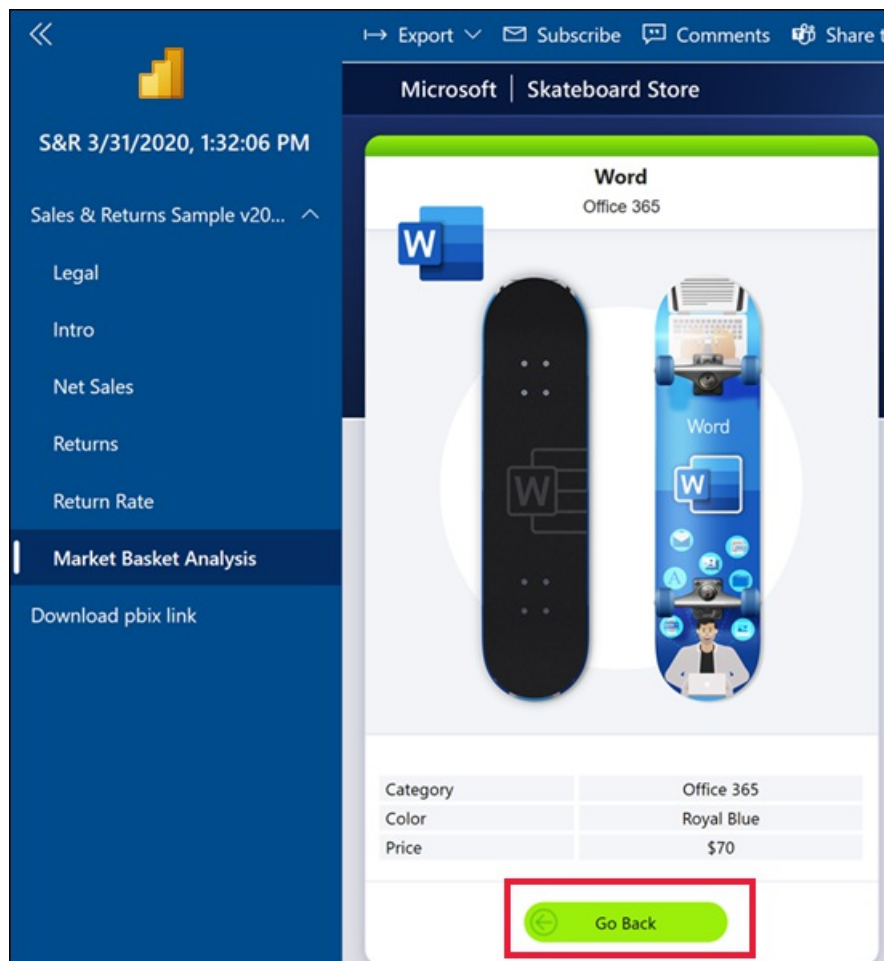
### Back buttons

A back button may have an arrow icon and when you select it, Power BI takes you back to the previous page. Back buttons are often used with drillthrough. Here's an example of a back button used with drillthrough.

1. The user has selected **Word** in the bar chart and is drilling through to **Market basket analysis**.



2. By choosing **Market basket analysis**, Power BI opens the *Market basket analysis* report page and uses the selections made on the source page to filter what is shown on the destination page.

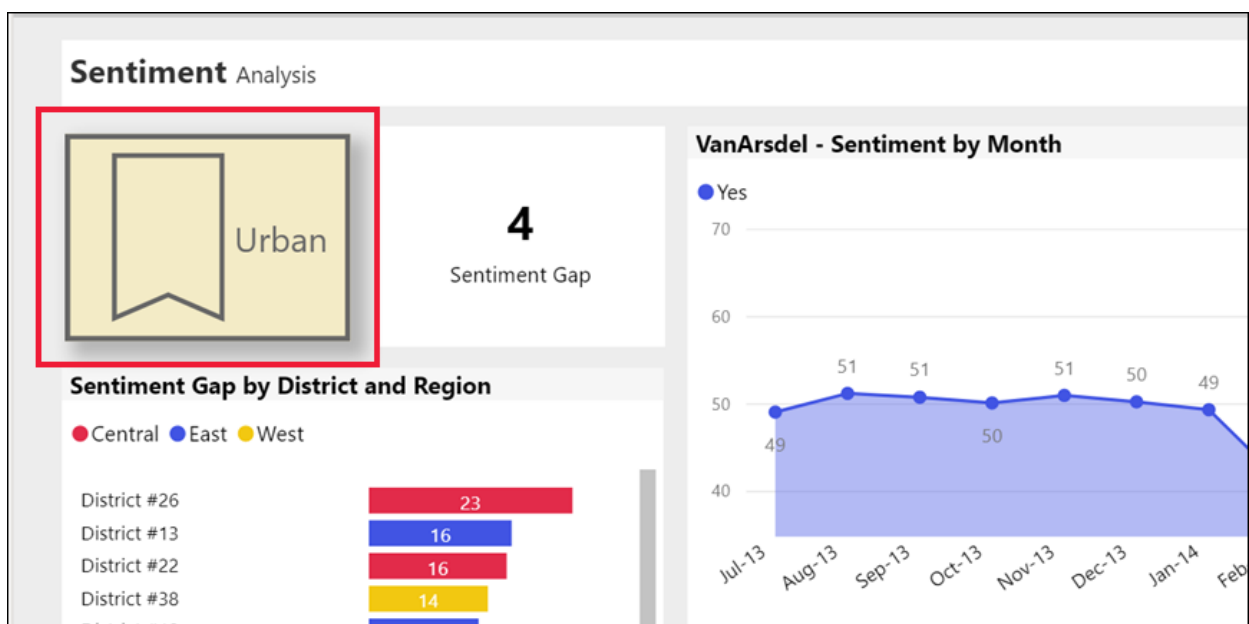


You're now on the **Market basket analysis** report page, which is filtered for **Word**. To return to the previous page, select the back button that is labeled **Go back**.

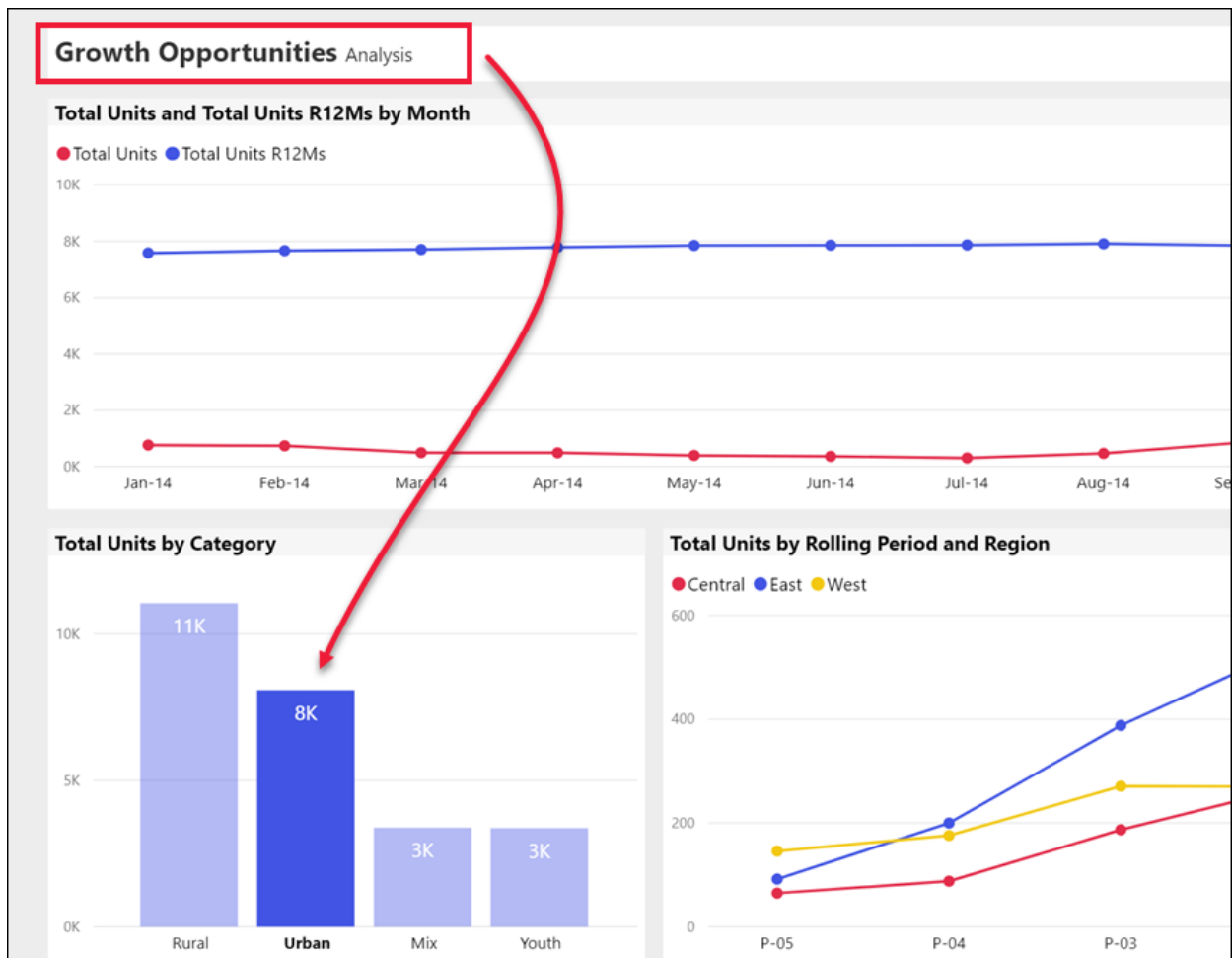
## Bookmark buttons

Report *designers* often include bookmarks with their reports. You can view the list of report bookmarks by selecting **Bookmarks** from the upper right corner. When a report designer adds a bookmark *button*, it's just an alternate way to navigate to the particular report page that's associated with that bookmark. The page will have the applied filters and settings that are captured by the bookmark. [Learn more about bookmarks in Power BI.](#)

In this example, the button has a bookmark icon and the name of the bookmark, *Urban*.



By choosing the bookmark button, Power BI takes you to the location and settings as defined for that bookmark. In this case, the bookmark is on the *Growth opportunities* report page and that page is cross-filtered for **Urban**.



## Drillthrough buttons

There are two ways to drill through in the Power BI service. Drilling through takes you to a different report page and the data on that destination page is presented according to the filters and selections you've made on the source page.

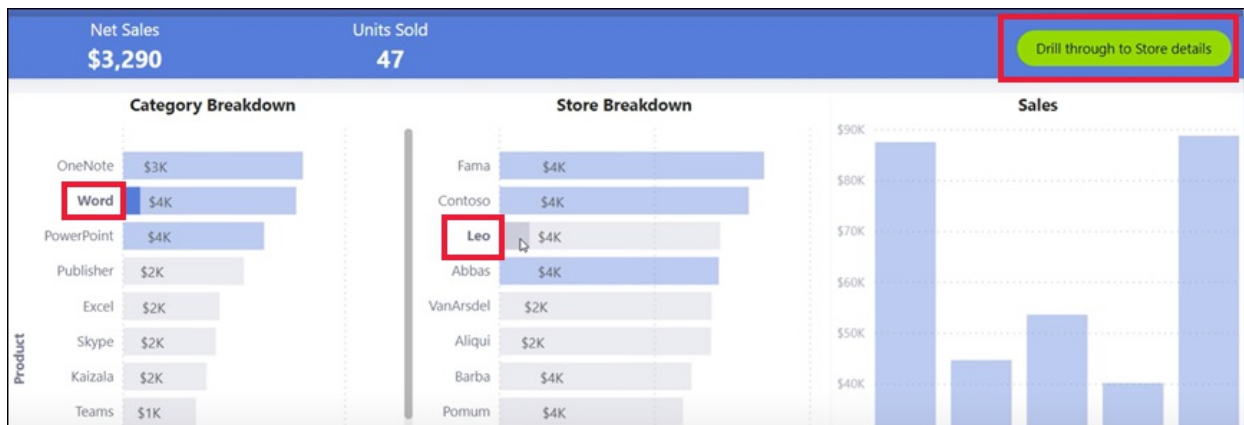
One way to drill through in a report is to right-click a data point in a visual, select **Drill through**, and choose the destination. This method is described above in the section titled **Back button**. But sometimes the report designers use a drillthrough *button* instead, to make the action more obvious and to call attention to important insights.

Drillthrough buttons can have more than one prerequisite. Unless you fulfill all the prerequisites, the button will not work. Let's look at an example.

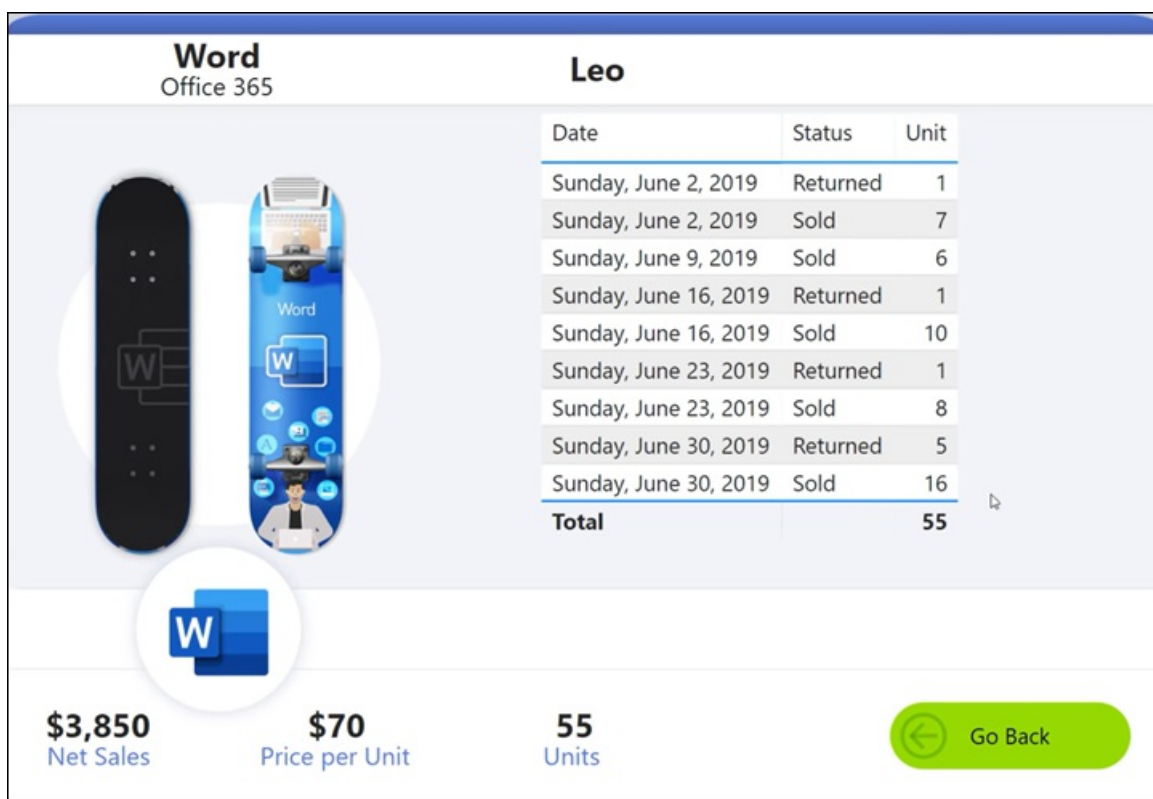
Here is a drillthrough button that will take us to the *Store details* page. Hovering over the button reveals a tooltip that lets us know that we need to select both a store and a product. Until we select one of each, the button remains inactive.



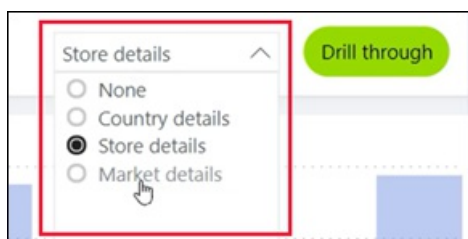
Now that we've selected one product (**Word**), and one store (**Leo**), the button changes color to let us know that it is now active.



Selecting the drillthrough button takes us to the *Store* report page. The *Store* page is filtered for our selections of **Word** and **Leo**.



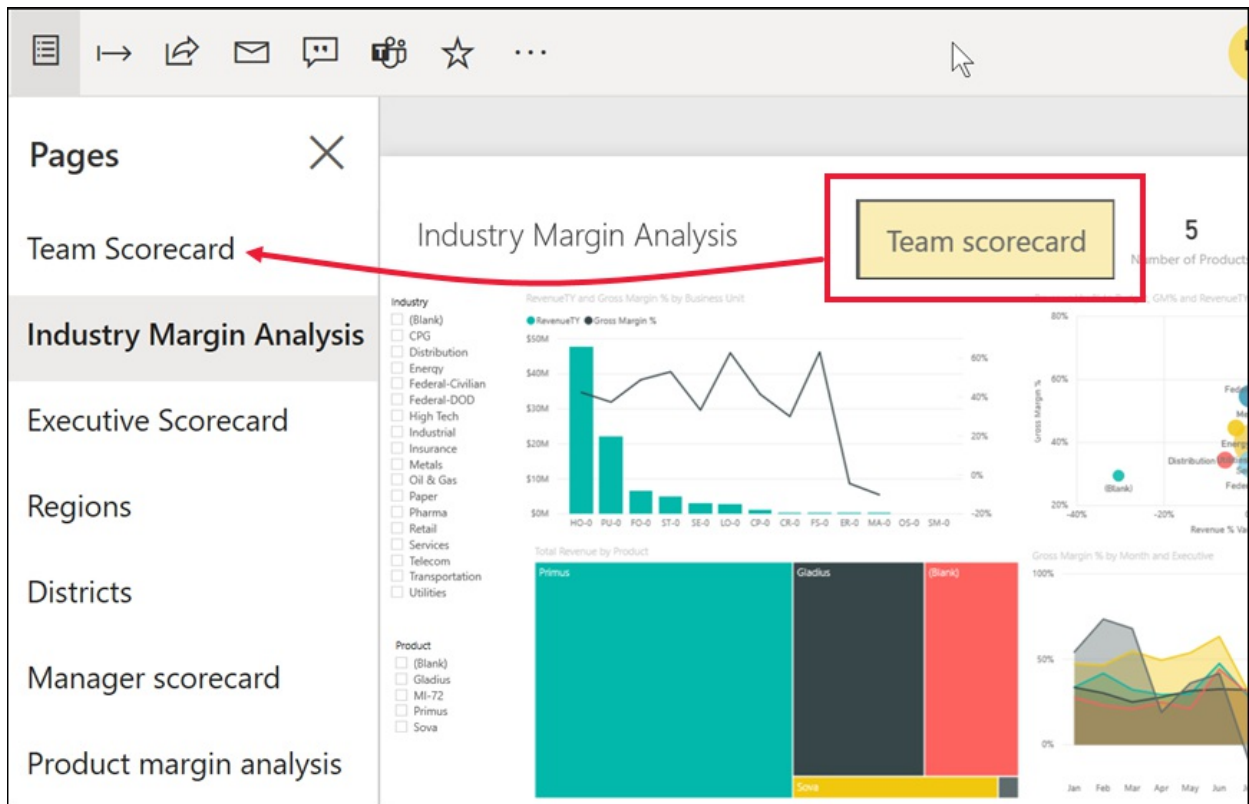
Drillthrough buttons can also have dropdown menus that offer you a choice of destinations. Once you've made your selections on the source report page, select the destination report page for the drillthrough. In the example below, we're changing our selection to drill through to the *Market details* report page.



## Page navigation

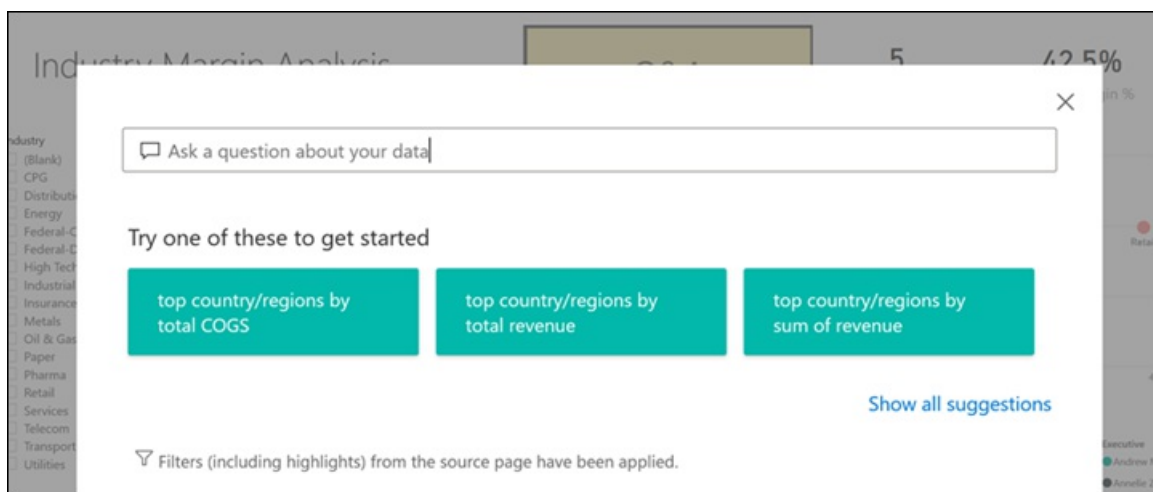
Page navigation buttons take you to a different page in the same report. Report designers often create navigation buttons to tell a story or guide you through the report insights. In the example below, the report

designer added a button on each report page that takes you back to the first page, the top-level summary page, in the report. This page navigation button is helpful because there are many pages in this report.



## Q&A buttons

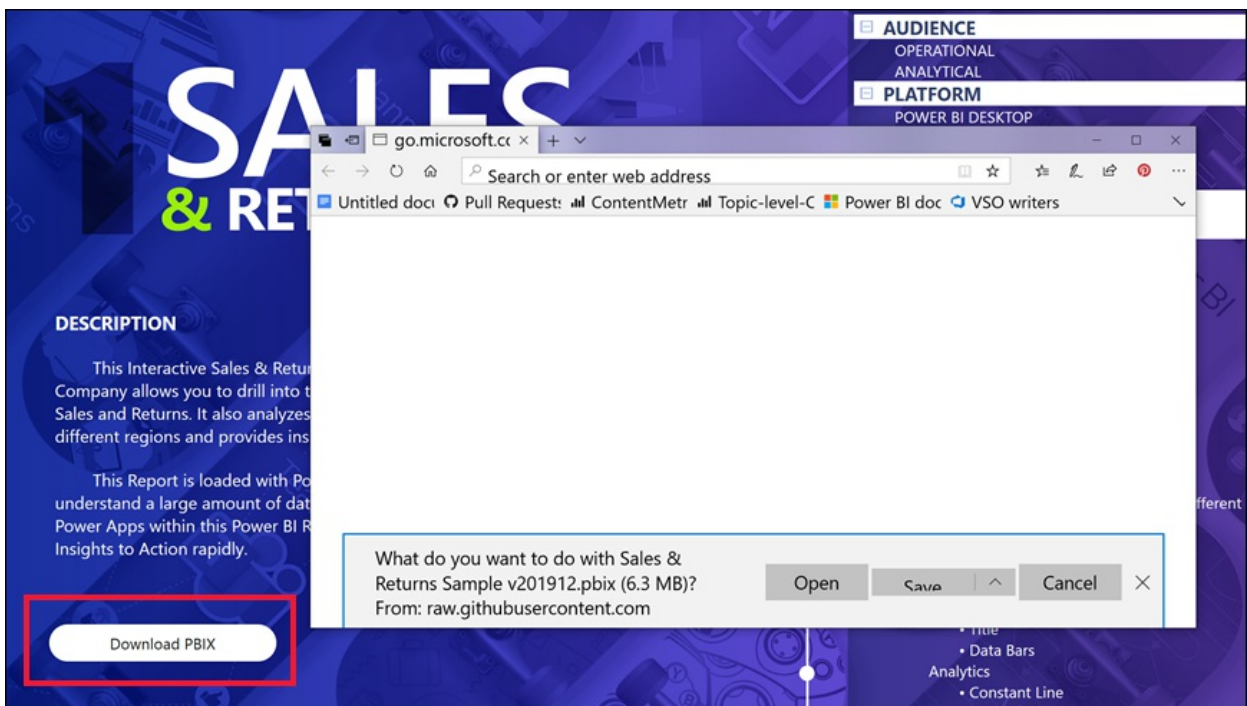
Selecting a Q&A button opens the Power BI Q&A Explorer window. The Q&A window displays on top of the report page and can be closed by selecting the X. [Learn about Q&A](#)



## Web URL

Web URL buttons open a new browser window. Report designers might add this type of button as a reference source, to link to the corporate website or a help page, or even as a link to a different report or dashboard. In the example below, the Web URL button lets you download the source file for the report.

Since the page opens in a separate window, close the window or select your Power BI tab to return to the Power BI report.







## Next steps

[Bookmarks](#)

[Drill up, drill down](#)

# Bookmarks in the Power BI service

12/10/2021 • 8 minutes to read • [Edit Online](#)

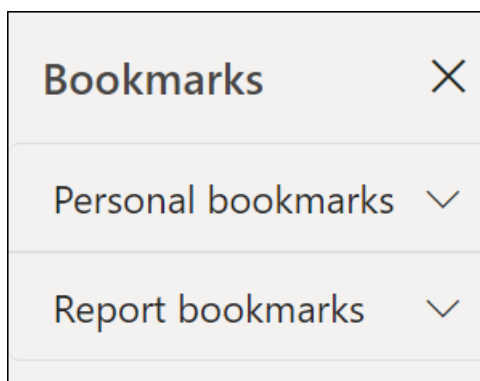
**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

## Introduction to bookmarks

A bookmark captures the state of a report page. This includes the settings you've made to filters, slicers, and visuals on that page. Once the report page is set the way you want, give it a friendly name. Now you can return to that state of the report page with a single click. Simply select a bookmark, and Power BI takes you back to that view.

## Types of bookmarks

There are two types of bookmarks: *personal* and *report*. Report bookmarks are added to reports by report *designers*. When the designers share their reports with colleagues, the bookmarks travel with the report. Everyone who can open and view that report can also see and use the report bookmarks. Personal bookmarks can be created by anyone who can open a report, they don't even require edit permissions. However, if you create personal bookmarks and share your report, the personal bookmarks do not travel with the report. Personal bookmarks are for your use only. However, if you want to share your personal bookmarks, this article provides some tips and tricks to do so.



This article explains how to create and use *personal* bookmarks. It also explains how to interact with *report* bookmarks that have been created by others and shared with you. Viewing shared content requires either a Power BI Pro or a Premium Per User license. [Which license do I have?](#)


If you will be designing reports and creating report bookmarks for others to use, see [Create report bookmarks](#).

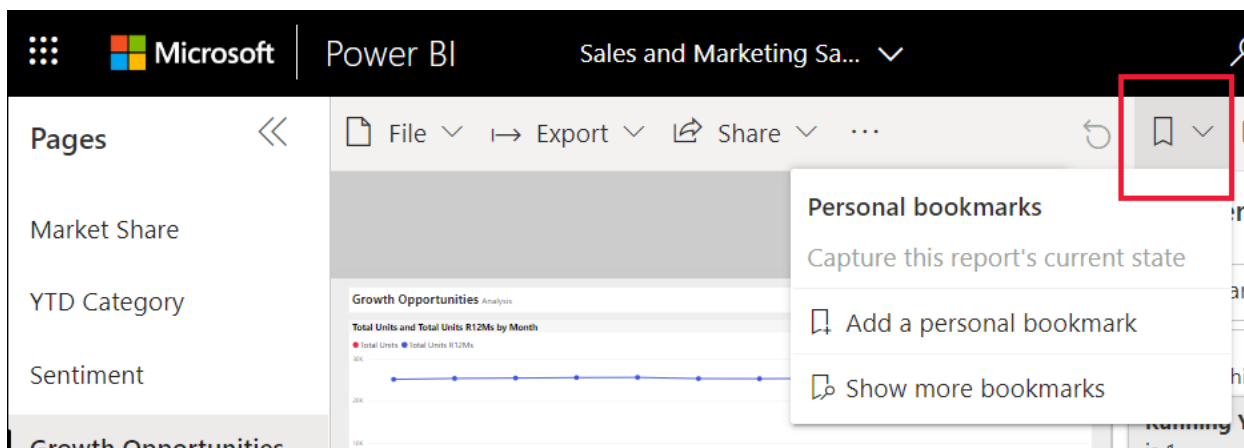
## Use *personal bookmarks* to save insights and build stories in Power BI

There are many uses for personal bookmarks. Say you discover an interesting insight and want to preserve it -- create a personal bookmark so you can return later. Need to leave and want to preserve your current work, create a personal bookmark. You can even make a personal bookmark your default view of a report, so each time you return, that view of the report page opens first.

You can also create a collection of bookmarks, arrange them in the order you want, and subsequently step through each bookmark in a presentation to highlight a series of insights that tell a story. This works like a slideshow, where you click an arrow to go forward or backward. There is a limit of 20 personal bookmarks per report.

## Open the Bookmarks pane

Open the **Bookmarks** pane by selecting the  icon and choosing either **Add a personal bookmark** or **Show more bookmarks**.



## Share changes

While you can't share your actual personal bookmarks with others, you can select a personal bookmark and save the report with that bookmarked view active. When colleagues who also have read access to the report open that report, they see the view you selected. This personalized view of the report does not override the designer's original report or the designer's *report* bookmarks. Sharing with colleagues who don't already have read access requires reshare permissions. If you are unable to share your view of the report, contact the report owner to request reshare permission.

If you do have reshare permissions, when you share the report you can choose to include your changes.

- If you have a personal bookmark active when you share your report, recipients will see the bookmarked version of that report page but will not see your bookmark listed under their "Personal bookmarks" list. So, they'll see the result of your personal bookmark. For example, if your bookmark filters the report page to show data for the year 2020.
- Similar to the method above, with a personal bookmark active, you can share in Microsoft Teams. Select **Chat in Teams** from the top menu. In the **Chat in Teams** dialog, provide the name of the Team or Channel that you wish to share to, then select **Share**. Or, from the **Chat in Teams** dialog, copy the generated URL and share that. For more information, see [Share personal bookmarks in Teams chat](#).
- With a personal bookmark active, use the comment feature. When you add a comment, the Power BI service saves the current view and that is the view other users will see when they select the comment. For more information, see [Add comments to dashboards and reports](#)
- If you then change your personal bookmark, it has no effect on your recipients' view of that report page. For example, if you select a different personal bookmark that shows data for the year 2021, your view of the report will change. However, your recipients will still see the version you shared, showing 2020.

When a personal bookmark is on you can use the comment feature on the Power BI service. Add a comment. This comment will save the view with another user when they click on the comment.

### NOTE

To share reports, you will need a Power BI Pro or Premium Per User license, or for the report to be saved in reserved capacity. To learn more, see [Licensing](#).

## Share report

GAMING ANALYSIS

Share Access

Only users with Power BI Pro will have access to this report. Recipients will have the same access as you unless row-level security on the dataset further restricts them. [Learn more](#)

Grant access to

Ewan X

Enter email addresses

Include an optional message...

☐ Allow recipients to share your report

☐ Allow recipients to build new content using the underlying datasets

☐ Send an email notification to recipients

☒ Include my changes

Report link ⓘ

https://dxt.powerbi.com/groups/me/reports/125ef17a-5bcb-4acf-8db4-5393541

Share

Cancel

## Create personal bookmarks in the Power BI service

If you can view a report, then you can also add personal bookmarks. The maximum number of personal bookmarks per report is 20. When you create a bookmark, the following elements are saved with the bookmark:

- The current page
- Filters
- Slicers, including slicer type (for example, dropdown or list) and slicer state
- Visual selection state (such as cross-highlight filters)
- Sort order
- Drill location

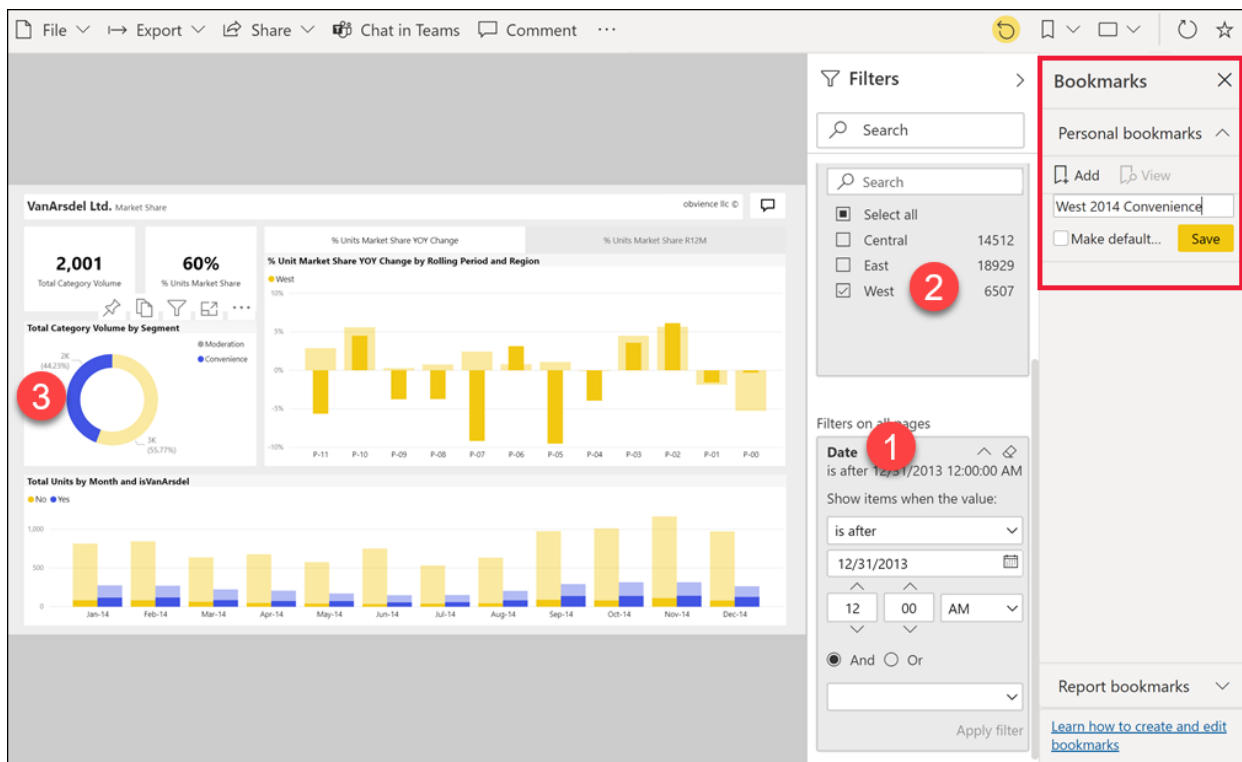
If you have access to the **Selection** pane, you can also set and save:

- Visibility (of an object, using the **Selection** pane)
- The focus or **Spotlight** modes of any visible object

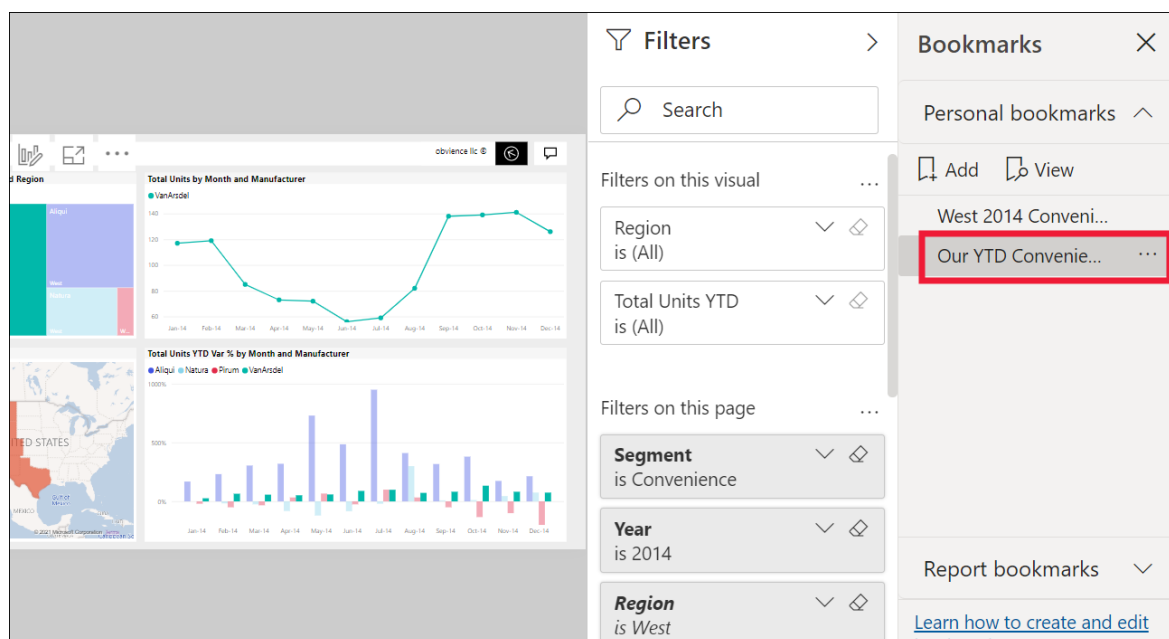
### Create two bookmarks

Configure a report page the way you want it to appear in the bookmark. In this example:

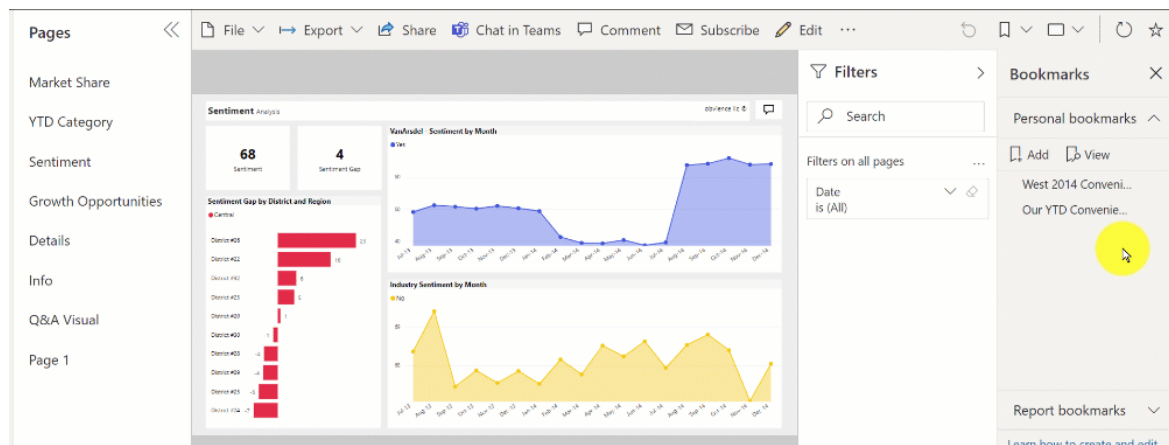
1. We've changed the existing Date filter on the **Filters** pane,
2. changed the existing Regions filter on the **Filters** pane to **West**, and
3. selected a data point on the doughnut chart visual to cross-filter and cross-highlight the report canvas.



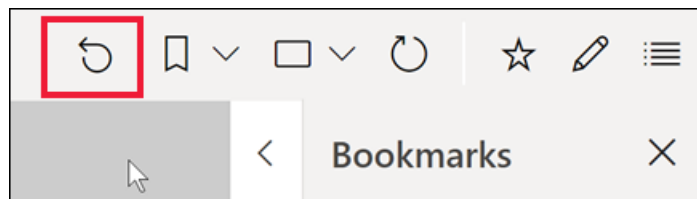
1. Once your report page and visuals are arranged how you want them, from the **Bookmarks** pane, select **Personal bookmarks > Add**.
2. Power BI creates a personal bookmark and gives it a generic name or a name you enter. You can *rename*, *delete*, or *update* your bookmark by selecting the ellipses next to the bookmark's name, then selecting an action from the menu that appears.
3. Select **Save**.
4. Open the **YTD Category** page of your report and create another personal bookmark. This bookmark captures YTD information for just our company, VanArsdel.



5. Now that you have two bookmarks, switch between them by selecting the bookmark in the **Bookmarks** pane.

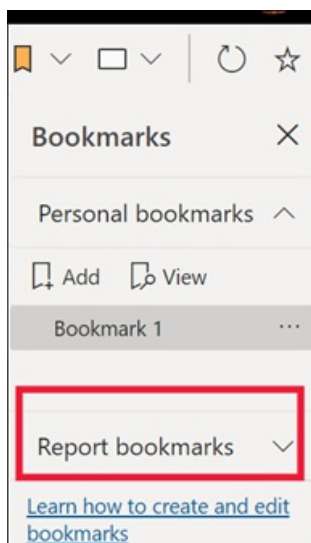


6. To return to the original published view of the report, select the **reset** icon.



## Open *report* bookmarks

To view the report bookmarks created by the report *designer*, from the **Bookmarks** pane, select **Report** bookmarks.

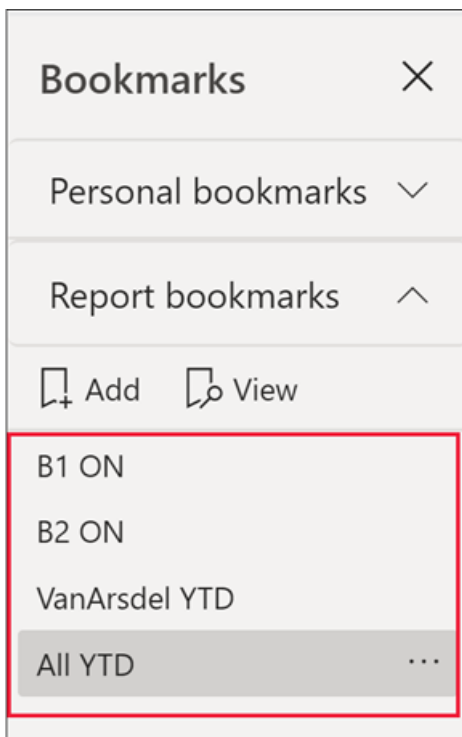


### NOTE

To view shared reports, you will need a Power BI Pro or Premium Per User license, or for the report to be saved in reserved capacity. To learn more, see [Licensing](#).

## Report bookmarks

If the report *designer* included report bookmarks, you'll find them under the **Report bookmarks** heading. This report page has four bookmarks: B1, B2, VanArsdel YTD, and All YTD. **All YTD** is currently selected.



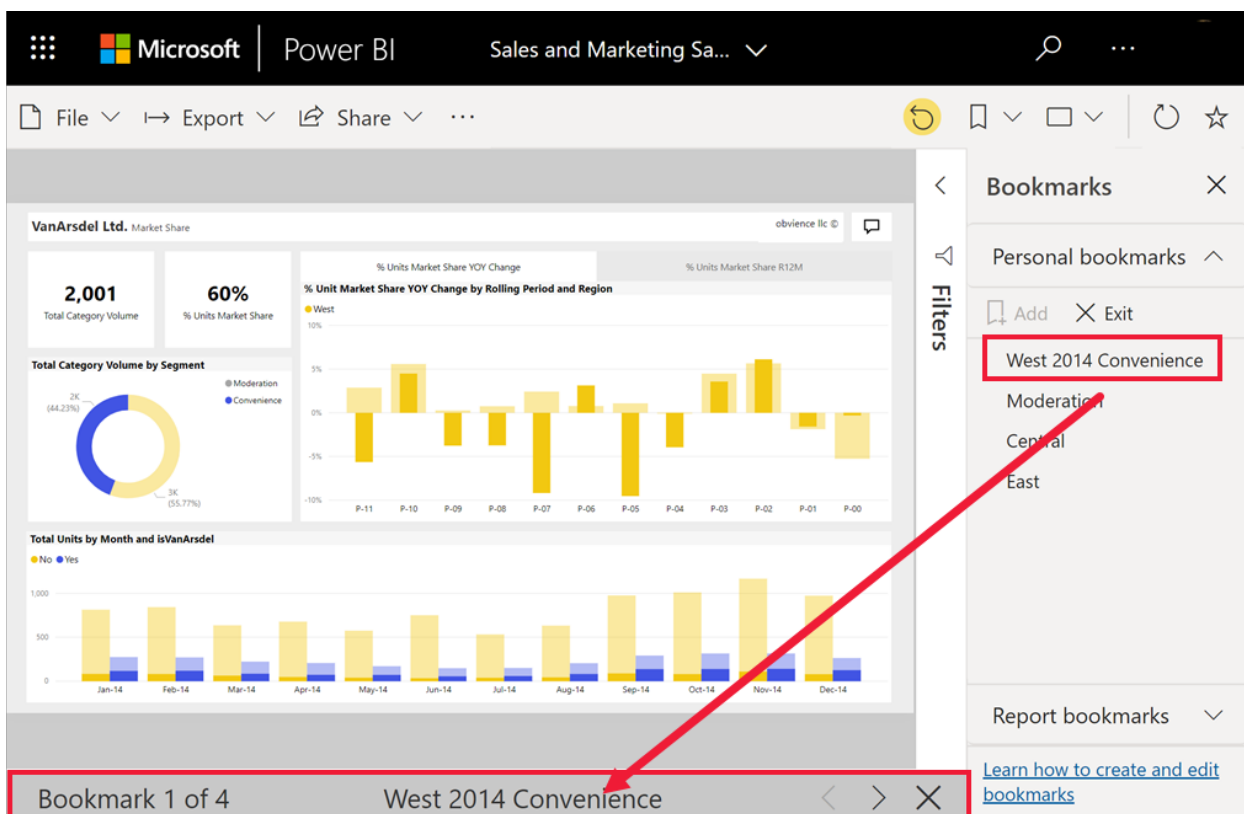
Select a bookmark to change to that report view.

## Bookmarks as a slide show

To present or view bookmarks, in order, select **View** from the **Bookmarks** pane to begin a slideshow.

When in **View** mode, there are a few features to notice:

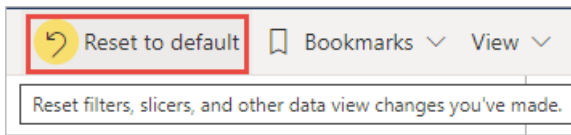
- The name of the bookmark appears in the bookmark title bar, which appears at the bottom of the canvas.
- The bookmark title bar has arrows that let you move to the next or previous bookmark.
- You can exit **View** mode by selecting **Exit** from the **Bookmarks** pane or by selecting the **X** found in the bookmark title bar.



When you're in **View** mode, you can close the **Bookmarks** pane (by clicking the X on that pane) to provide more space for your presentation. And, while in **View** mode, all visuals are interactive and available for cross-highlighting, just as they would otherwise be when interacting with them.

### Reset all your changes to a report

From the upper-right corner of your report canvas, select **Reset to default**. This removes all your changes in the report and sets it back to the designer's last saved view of the report.



## Considerations and limitations

In this release of **personal bookmarks**, there are a few considerations and limitations to keep in mind.

- The bookmark captures the state of the page at the time the bookmark was created. When someone selects the bookmark, Power BI attempts to show them that bookmark in its original report state. However, there are situations where showing the bookmark is not possible. For example, if the report owner changes the name of a field that is used by the bookmark, Power BI will no longer be able to display visuals, filters, or slicers that use that field. Certain visuals will display no data for the renamed field. Filtered or sliced visuals will revert to the default view.
- Most Power BI custom visuals should work well with personal bookmarking. If you run into trouble with bookmarking and a Power BI custom visual, contact the creator of that visual and ask them to add support for bookmarks.
- Generally, your personal bookmarks will not be affected if the report *designer* updates or republishes the report. However, if the designer makes major changes to the report, such as removing fields used by a personal bookmark, then you will receive an error message the next time you attempt to open that bookmark.
- This feature is supported in the Power BI mobile apps for iOS and Android tablets and in the Power BI Windows app; it is not supported in the Power BI mobile apps for phones. However, any change to a visual you save in a personal bookmark while in the Power BI service is respected in all the Power BI mobile apps.

## Next steps

[Personalize visuals in a report](#)

# Add spotlights to Power BI reports

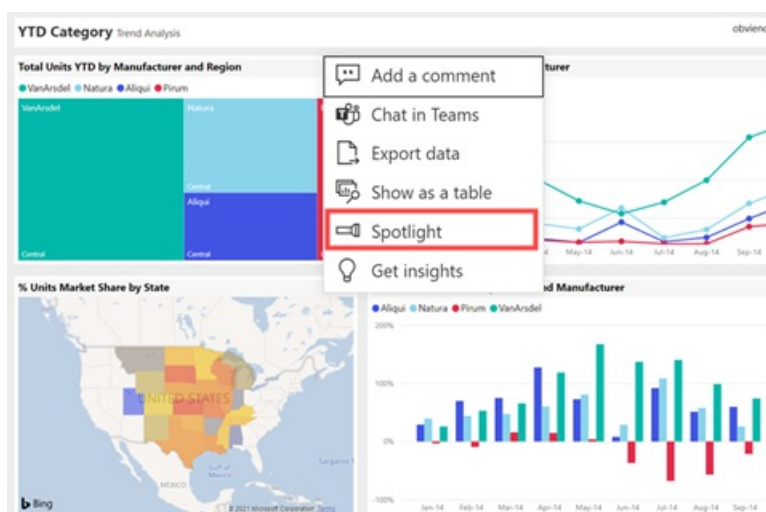
12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:** Power BI service for *business users* Power BI service for designers & developers   
Power BI Desktop Requires Pro or Premium license

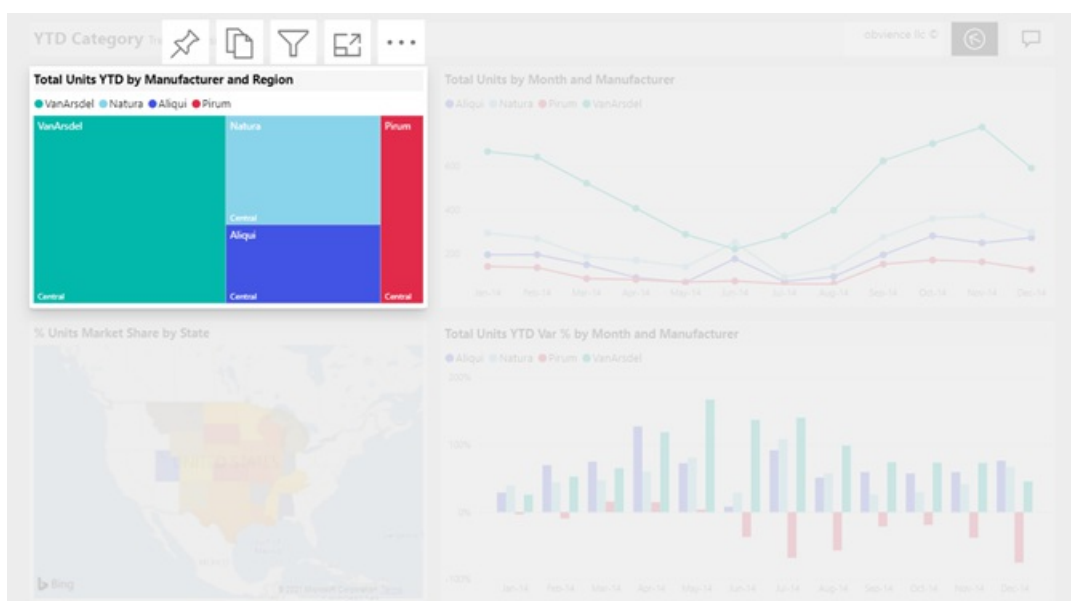
With spotlight, you can draw attention to a specific visual on a report page. If the spotlight mode is selected when you add a bookmark, that mode is retained in the bookmark.

## Add a spotlight

1. [Open a report](#) in the Power BI service.
2. Decide which visual you'd like to highlight on the report page. Select the **More actions (...)** dropdown.



3. Choose the option for **Spotlight**. The selected visual is highlighted, which causes all other visuals on the page to fade to near transparency.







## Next steps

- [Display a dashboard tile or report visual in focus mode](#)

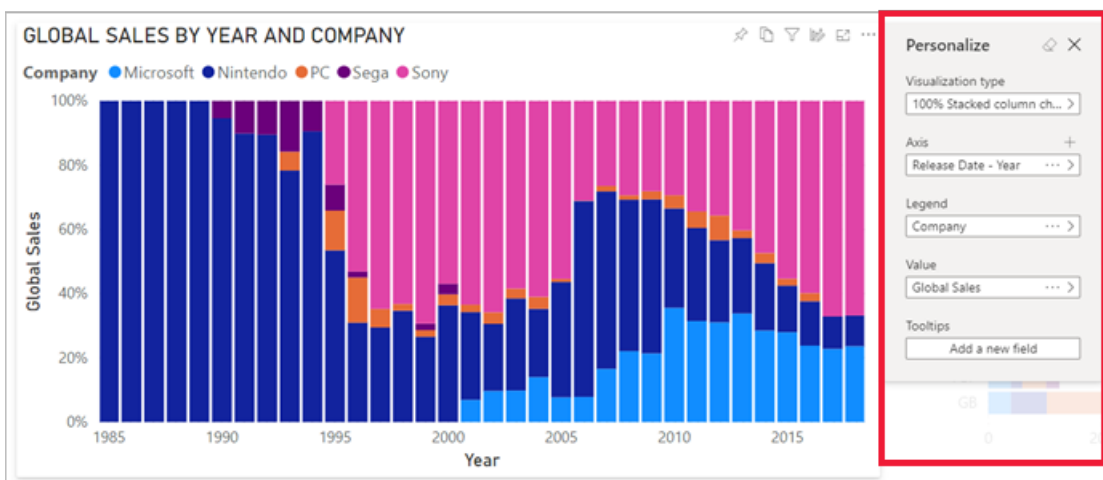
# Personalize visuals in a report

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

It's hard to make one visual that satisfies everyone's requirements. But, when a colleague shares a report with you, you may want to make changes to the visuals -- without having to ask your colleague to make the changes for you.

Maybe you'd like to swap what's on the axis, change the visual type, or add something to the tooltip. With the **Personalize this visual** feature, make the changes yourself and when you have the visual the way you want it, save it as a [bookmark](#) to come back to. You don't even need edit permission for the report.



## What you can change

This feature helps you gain further insights through ad-hoc exploration of visuals on a Power BI report. Here are some of the modifications that you can make. The available options vary by visual type.

- Change the visualization type
- Swap out a measure or dimension
- Add or remove a legend
- Compare two or more measures
- Change aggregations, etc.

Not only does this feature allow for new exploration capabilities. It also includes ways for you to capture and share your changes:

- Capture your changes
- Share your changes
- Reset all your changes for a report
- Reset all your changes for a visual
- Clear out your recent changes

## IMPORTANT


The ability to personalize a visual must be enabled by the report *designer*. If you don't see the **Personalize this visual**



icon, then the report designer has not enabled this feature for the current report. Check with the report owner or your Power BI administrator to have the feature enabled. To display contact information for the report owner, select the name of the report from the Power BI menu bar.

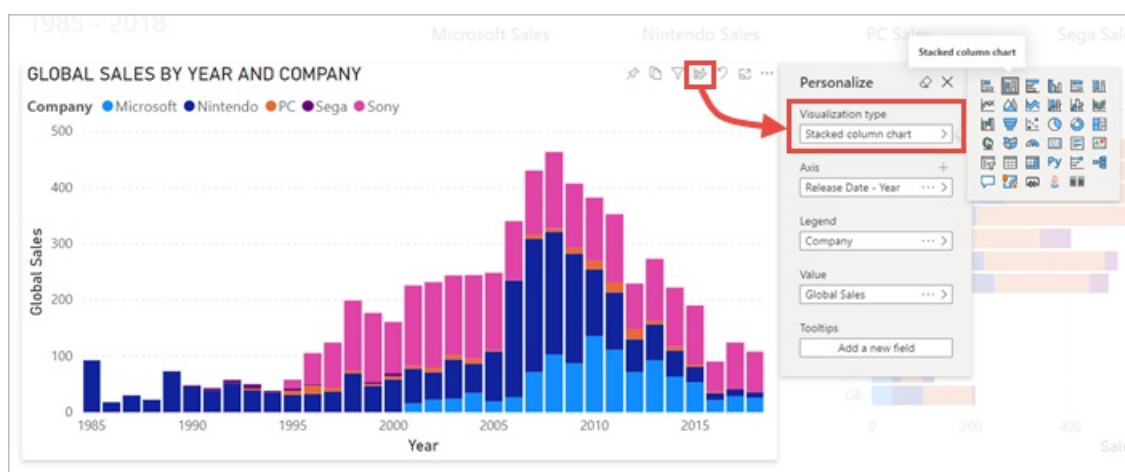
## Personalize visuals in the Power BI service

By personalizing a visual, you can explore your data in many ways, without leaving [report reading view](#). The following examples show different ways you can modify a visualization to meet your needs.

1. Open a report in reading view in the Power BI service.
2. In the menu bar for the visual, select the **Personalize this visual**  icon.

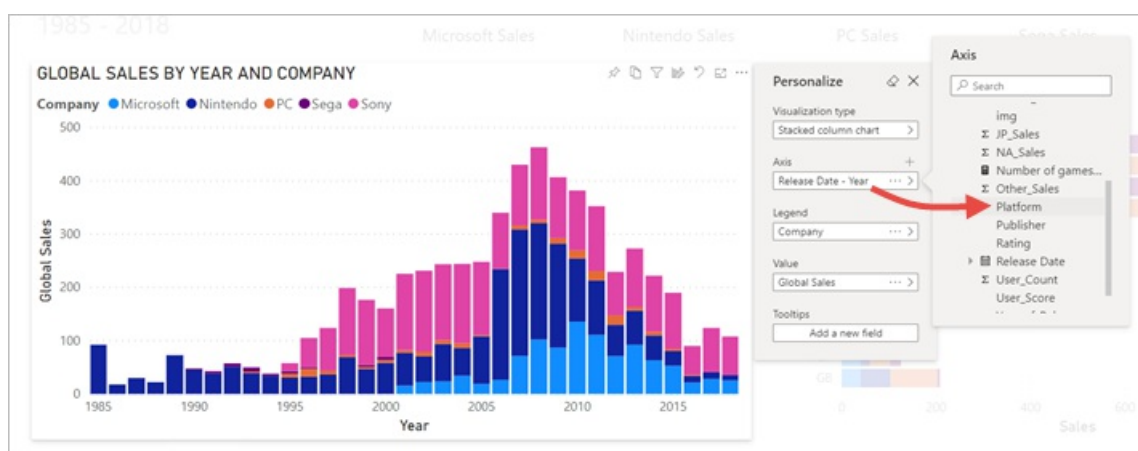
### Change the visualization type

Do you think the data would display better as a Stacked column chart? Change the **Visualization type**.



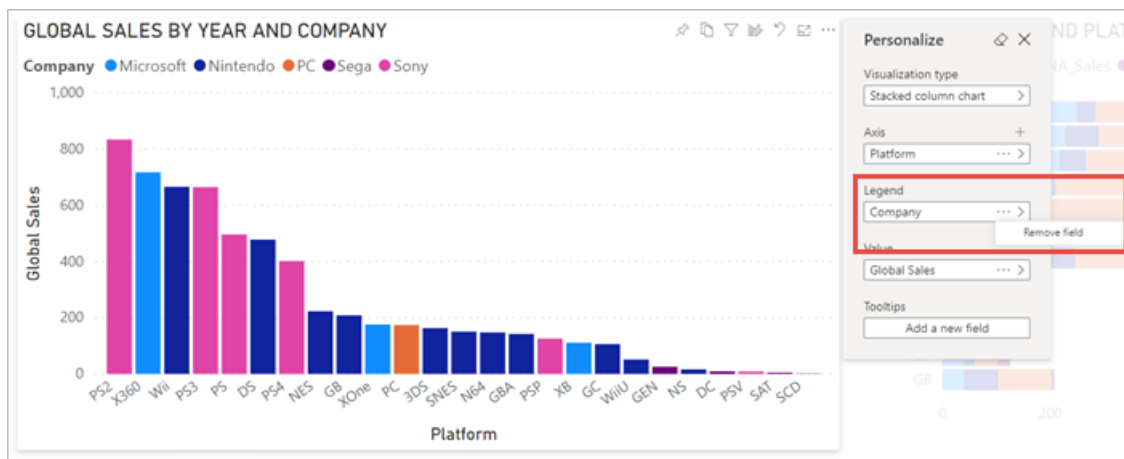
### Swap out a measure or dimension

Replace the field being used for the X axis by selecting the field that you want to replace, then selecting a different field.



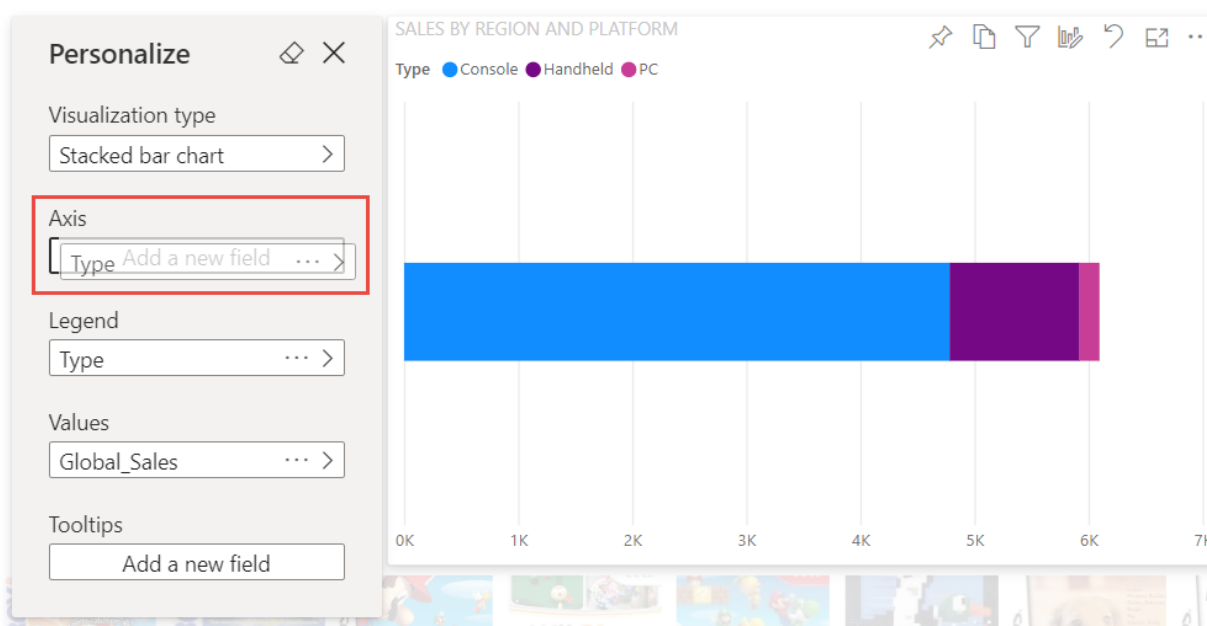
### Add or remove a legend

By adding a legend, you can color-code a visual based on a category. In this example, we're color-coding based on company name.



## Change the placement of fields

Using drag and drop, you can change the placement of fields within the same visual property or even across different visual properties. For example, you can quickly move a field in the legend to the axis of a visual.

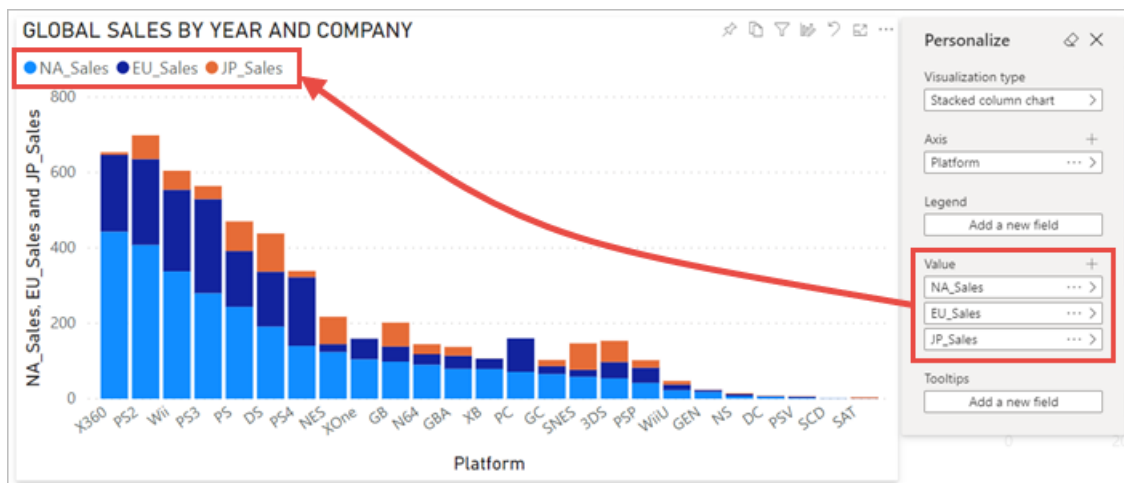


You can also quickly reorder the columns of a table or matrix.

Year	Type	Genre	Publisher	Name	Platform	Company	Global Sales
1985	Console	Action	Nintendo	Nintendo Entertainment System	NES	Nintendo	5.35
1985	Console	Platform	Nintendo	Nintendo Entertainment System	NES	Nintendo	41.74
1985	Console	Puzzle	Nintendo	Nintendo Entertainment System	NES	Nintendo	2.14
1985	Console	Racing	Nintendo	Nintendo Entertainment System	NES	Nintendo	4.16
1985	Console	Shooter	Nintendo	Nintendo Entertainment System	NES	Nintendo	29.58
1985	Console	Sports	Nintendo	Nintendo Entertainment System	NES	Nintendo	9.38
1986	Console	Action	Capcom	Nintendo Entertainment System	NES	Nintendo	2.78
1986	Console	Action	Hudson Soft	Nintendo Entertainment System	NES	Nintendo	1.15
1986	Console	Fighting	Namco Bandai Games	Nintendo Entertainment System	NES	Nintendo	1.05
1986	Console	Platform	Hudson Soft	Nintendo Entertainment System	NES	Nintendo	1.50
1986	Console	Platform	Konami Digital Entertainment	Nintendo Entertainment System	NES	Nintendo	1.20
1986	Console	Platform	Nintendo	Nintendo Entertainment System	NES	Nintendo	6.54
1986	Console	Shooter	Capcom	Nintendo Entertainment System	NES	Nintendo	1.00
1986	Console	Shooter	Konami Digital Entertainment	Nintendo Entertainment System	NES	Nintendo	2.56
1987	Console	Action	Nintendo	Nintendo Entertainment System	NES	Nintendo	9.24
1987	Console	Fighting	Nintendo	Nintendo Entertainment System	NES	Nintendo	5.42
1987	Console	Platform	Capcom	Nintendo Entertainment System	NES	Nintendo	0.81
Total							6,096.52

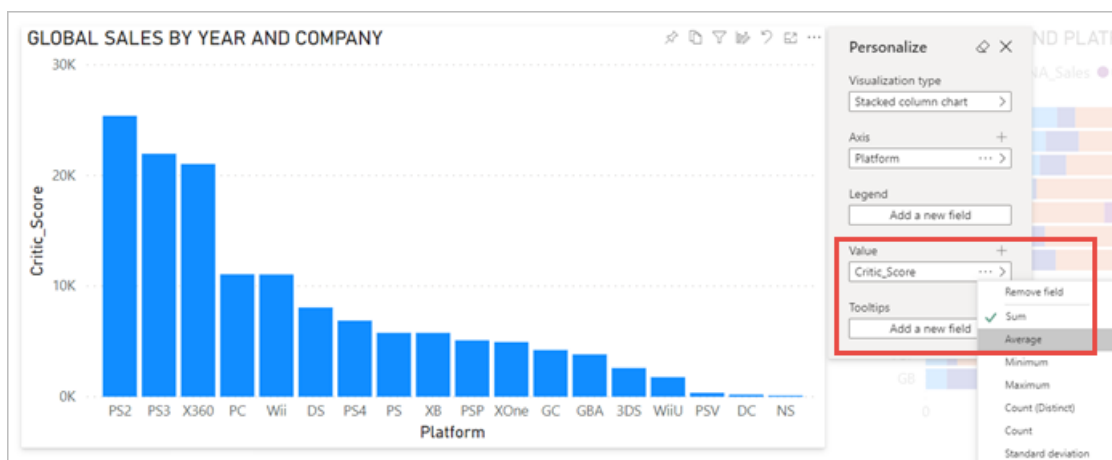
## Compare two or more different measures

Compare and contrast values for different measures by using the + icon to add multiple measures for a visual. To remove a measure, select **More options (...)** and choose **Remove field**.



## Change aggregations

Change how a measure is computed by changing the aggregation in the **Personalize** pane. Select **More options (...)** and choose the aggregation to use.



## Capture changes

Using personal bookmarks, capture your changes so you can return to your personalized view. Select **Bookmarks > Personal bookmarks** and give the bookmark a name.

**Personal bookmarks**

Capture this report's current state

My personalized view

☒ Make default view **Save**

Show more bookmarks

You can also make the bookmark your default view.

## Share changes

If you have read and reshare permissions, when you share the report you can choose to include your changes. This personalized version does not overwrite the author's version. The colleague who is viewing your personalized report can select **Reset to default** and return to the author's version of the report. If the colleague has editing permissions, they can save your personalized version as a new report.

## Share report

GAMING ANALYSIS

Share Access

Only users with Power BI Pro will have access to this report. Recipients will have the same access as you unless row-level security on the dataset further restricts them. [Learn more](#)

Grant access to

Ewan Tinitali X Enter email addresses

Include an optional message...

☐ Allow recipients to share your report

☐ Allow recipients to build new content using the underlying datasets

☐ Send an email notification to recipients

☒ Include my changes

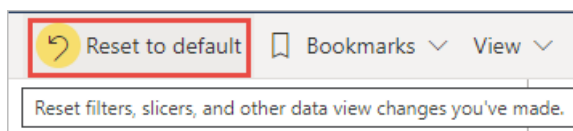
Report link ⓘ

<https://dxt.powerbi.com/groups/me/reports/125ef17a-5bcb-4acf-8db4-5393541>

Share Cancel

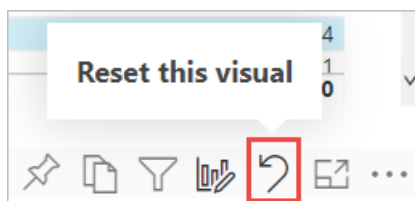
### Reset all your changes to a report

From the upper-right corner of your report canvas, select **Reset to default**. This removes all your changes in the report and sets it back to the author's last saved view of the report.



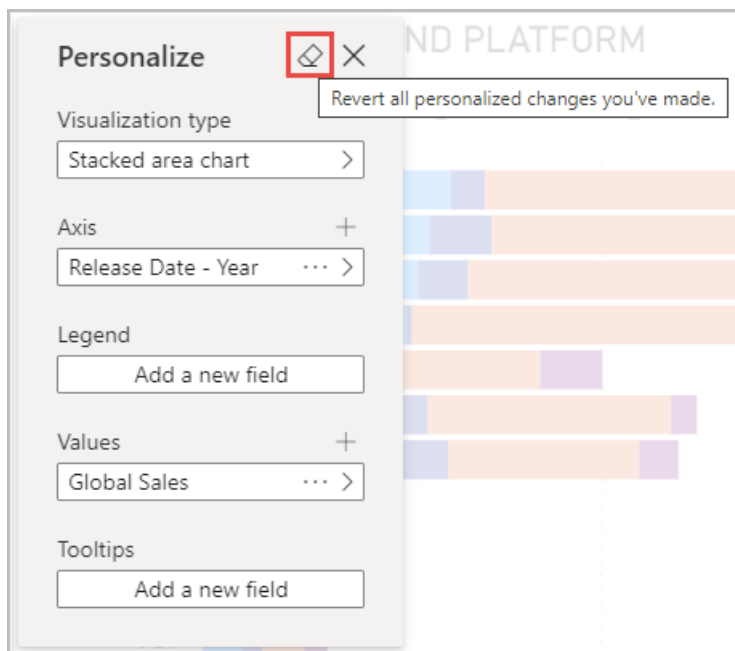
### Reset all your changes to a visual

From the menu bar for the visual, select **Reset this visual** to remove all your changes to a particular visual and set it back to the author's last saved view of that visual.



### Clear recent changes

Select the eraser icon to clear all recent changes you've made since you opened the **Personalize** pane.



## Considerations and limitations

Currently the feature has a few limitations to be aware of.

- **Personalize this visual** can be turned off for an entire report or for a particular visual. If you don't have an option to personalize a visual, check with your Power BI admin or the report owner. To display contact information for the report owner, select the name of the report from the Power BI menu bar.
- User explorations don't automatically persist. You need to save your view as a personal bookmark to capture your changes.
- This feature is supported in the Power BI mobile apps for iOS and Android tablets and in the Power BI Windows app; it is not supported in the Power BI mobile apps for phones. However, any change to a visual you save in a personal bookmark while in the Power BI service is respected in all the Power BI mobile apps.

## Next steps

[Copy a report visual as a static image](#)

More questions? [Try the Power BI Community](#)

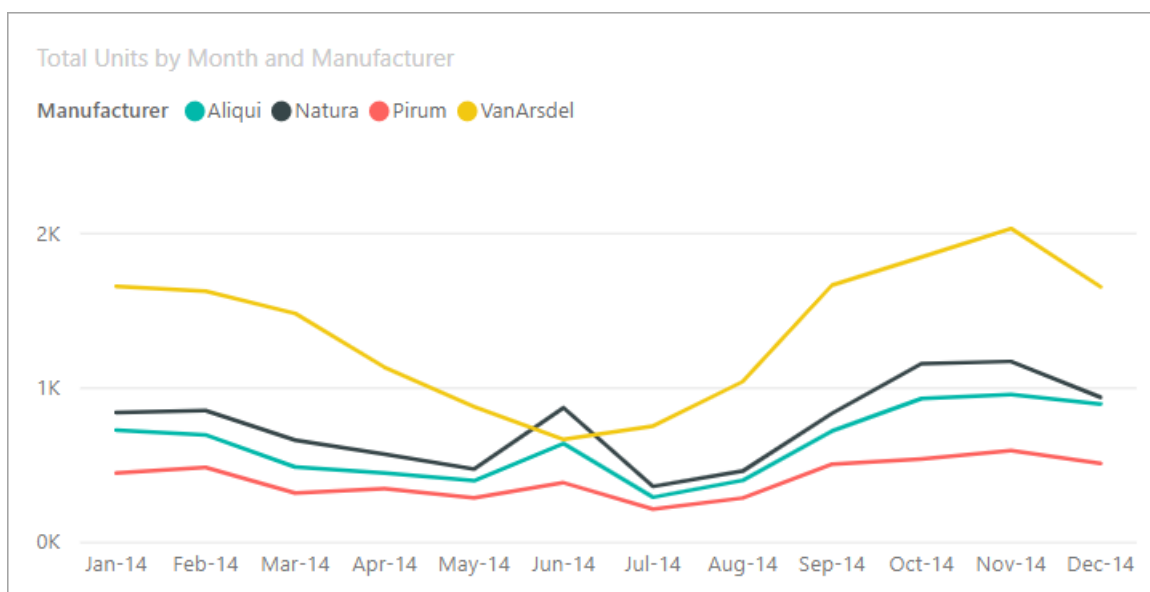
# Use the Analyze feature to explain fluctuations in report visuals

12/10/2021 • 5 minutes to read • [Edit Online](#)

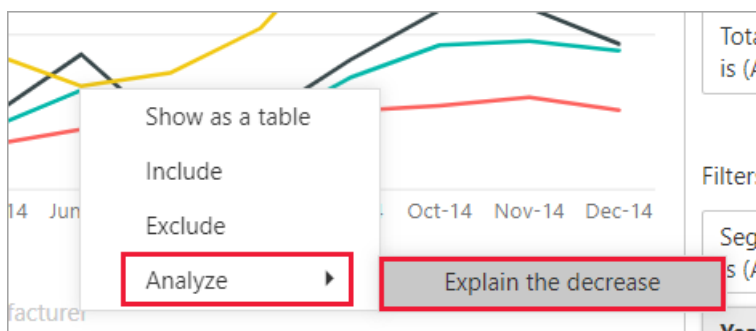
**APPLIES TO:** Power BI service for *business users* Power BI service for designers & developers Power BI Desktop Requires Pro or Premium license

Often in report visuals, you see a large increase and then a sharp drop in values, and wonder about the cause of such fluctuations. With **Analyze** in the **Power BI service**, you can learn the cause with just a few clicks.

For example, consider the following visual that shows *Total units by Month and Manufacturer*. VanArsdel is outperforming its competitors but has a deep dip in June 2014. In such cases you can explore the data, to help explain the change that occurred.



You can ask the Power BI service to explain increases, decreases, or unusual distributions in visuals, and get fast, automated, insightful analysis about your data. Right-click on a data point, and select **Analyze > Explain the decrease** (or increase, if the previous bar was lower), or **Analyze > Find where this distribution is different** and the insight is delivered to you in an easy-to-use window.



The Analyze feature is contextual, and is based on the immediately previous data point - such as the previous bar, or column.

## NOTE

This feature is in preview, and is subject to change. The insight feature is enabled and on by default (you don't need to check a Preview box to enable it).

### Which factors and categories are chosen

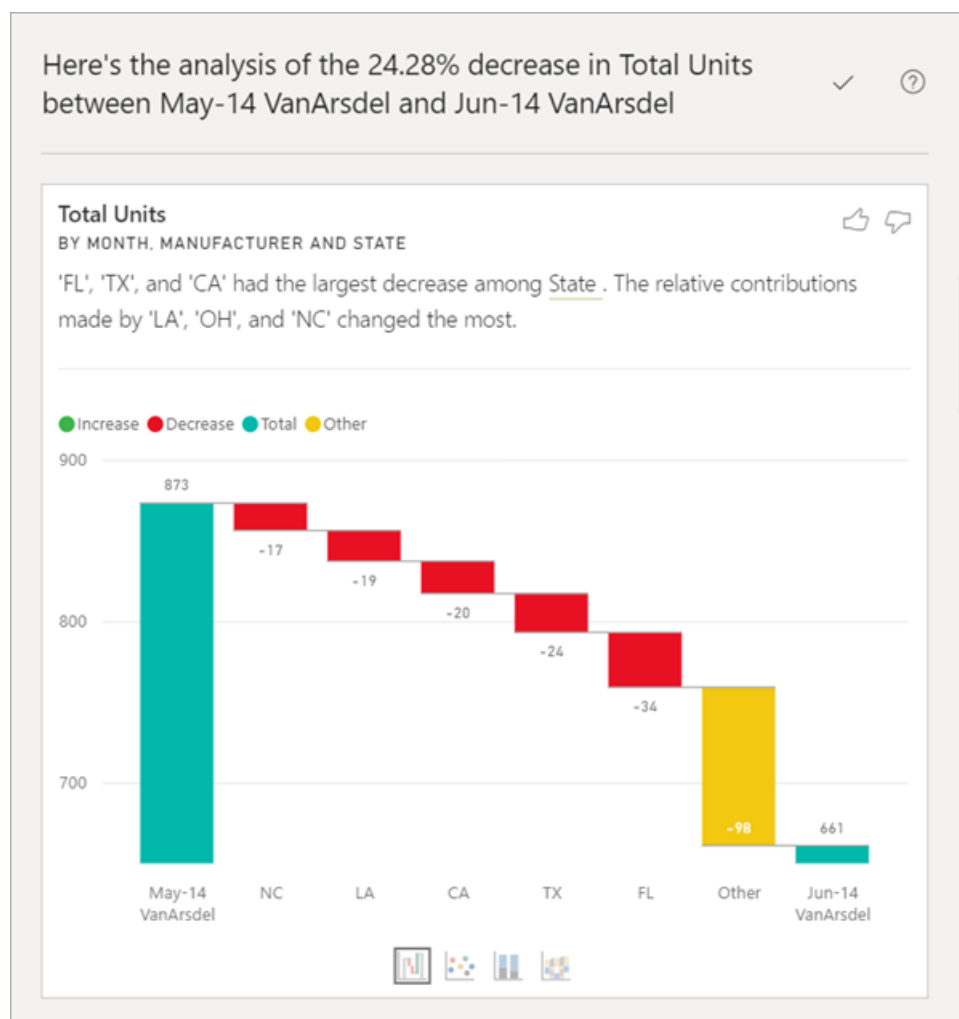
After examining different columns, Power BI selects and displays those factors that show the biggest change to relative contribution. For each, the values which had the most significant change to contribution are called out in the description. In addition, the values that had the largest actual increases and decreases are also called out.

To see all of the insights generated by Power BI, use the scrollbar. The order is ranked with the most significant contributor displayed first.

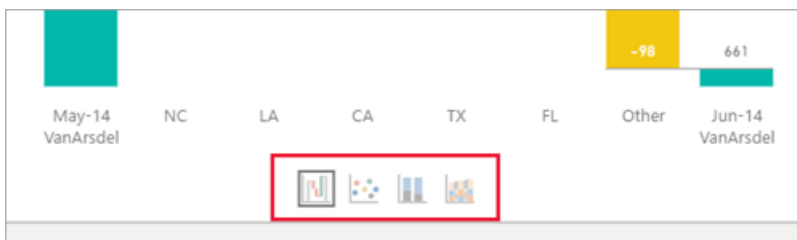
## Using insights

To use insights to explain trends seen on visuals, right-click on any data point in a bar or line chart, and select **Analyze**. Then choose the option that appears: **explain the increase**, **explain the decrease**, or **explain the difference**.

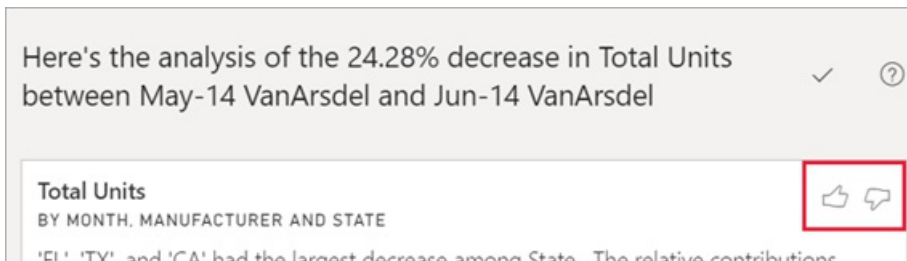
Power BI then runs its machine learning algorithms over the data, and populates a window with a visual and a description that describes which categories most influenced the increase or decrease or difference. For this example, the first insight is a waterfall chart.



By selecting the small icons at the bottom of the waterfall visual, you can choose to have insights display a scatter chart, stacked column chart, or a ribbon chart.



Use the *thumbs up* and *thumbs down* icons at the top of the page to provide feedback about the visual and the feature.



You can use insights when your report is in Reading or Editing view, making it versatile for both analyzing data, and for creating visuals you can easily add to your reports. If you have the report open in Editing view, you'll see a plus icon next to the thumb icons. Select the plus icon to add the insight to your report as a new visual.



## Details of the results returned

The details returned by insights are intended to highlight what was different between the two time periods, to help you understand the change between them.

The algorithm can be thought of as taking all the other columns in the model, and calculating the breakdown by that column for the *before* and *after* time periods, determining how much change occurred in that breakdown, and then returning those columns with the biggest change. For example, *State* was selected in the waterfall insight above, as the contribution made by Louisiana, Texas, and Colorado fell 13% to 19% from June to July, and contributed the most to the decrease in *Total units*.

For each insight returned, there are four visuals that can be displayed. Three of those visuals are intended to highlight the change in contribution between the two periods. For example, for the explanation of the increase from *Qtr 2* to *Qtr 3*. The ribbon chart shows change both before and after the selected data point.

### The scatter plot



The scatter plot visual shows the value of the measure in the first period (on the x-axis) against the value of the measure in the second period (on the y-axis), for each value of the column (*State* in this case). Data points are in the green region if they have increased, and in the red region if they have decreased.

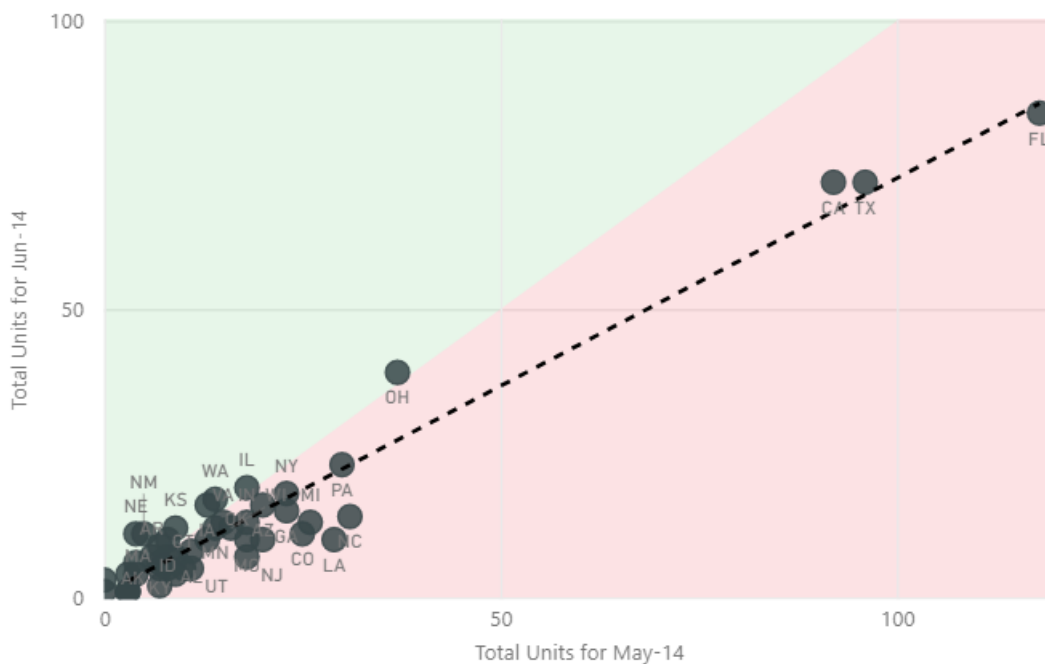
The dotted line shows the best fit, and data points above this line increased by more than the overall trend, and those below it by less.

## Total Units for May-14 and Total Units for Jun-14

BY STATE



'FL', 'TX', and 'CA' had the largest decrease among State. The relative contributions made by 'LA', 'OH', and 'NC' changed the most.



Data items whose value was blank in either period will not appear on the scatter plot.

### The 100% stacked column chart



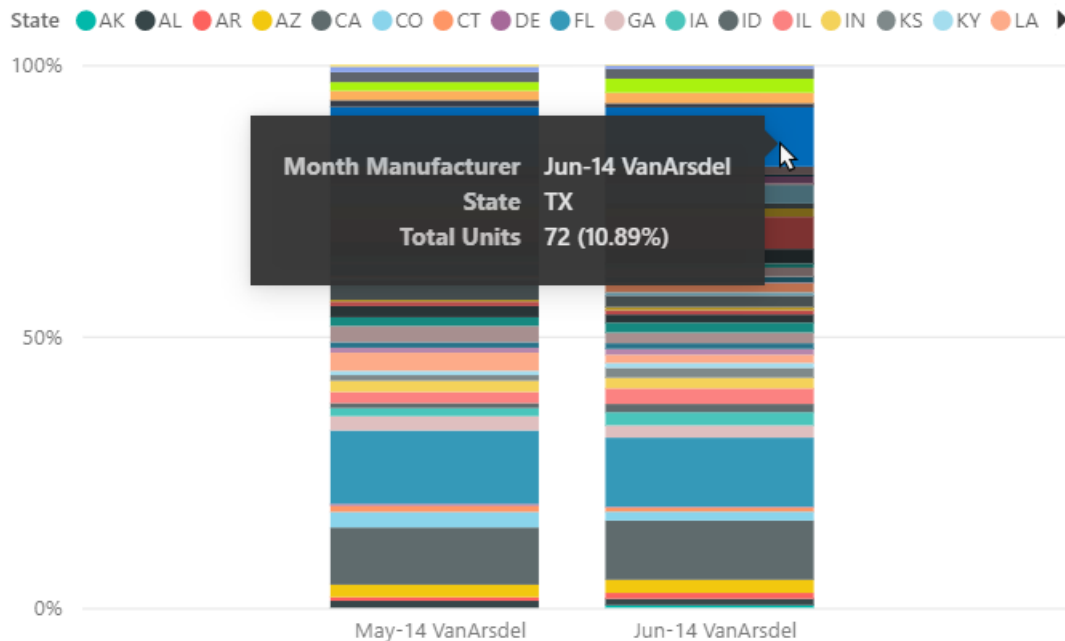
The 100% stacked column chart visual shows the value of the contribution to the total (100%), for the selected data point and the previous. This allows side-by-side comparison of the contribution for each data point. In this example, the tooltips show the actual contribution for the selected value of Texas. Because the list of states is long, tooltips help you see the details. By using the tooltips, we see that Texas contributed about the same percent to the total units (31% and 32%), but the actual number of total units decreased from 89 to 71. Remember, the Y axis is a percentage, not a total, and each column band is a percentage, not a value.

## Total Units

BY MONTH, MANUFACTURER AND STATE



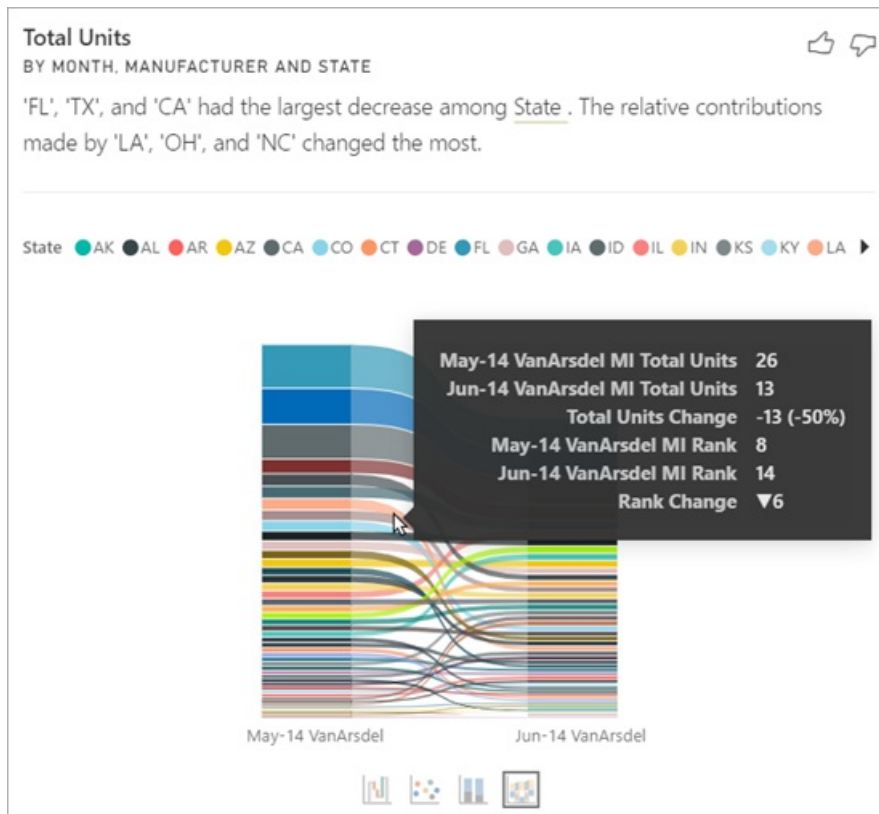
'FL', 'TX', and 'CA' had the largest decrease among State. The relative contributions made by 'LA', 'OH', and 'NC' changed the most.



### The ribbon chart



The ribbon chart visual shows the value of the measure before and after. It's particularly useful in showing the changes in contributions when the *ordering* of contributors changed (for example, *LA* dropped from number two contributor to number eleven). And, though *TX* is represented by a wide ribbon at the top signifying that it is the most significant contributor before and after, the drop shows that the value of the contribution dropped both during the selected period and after.

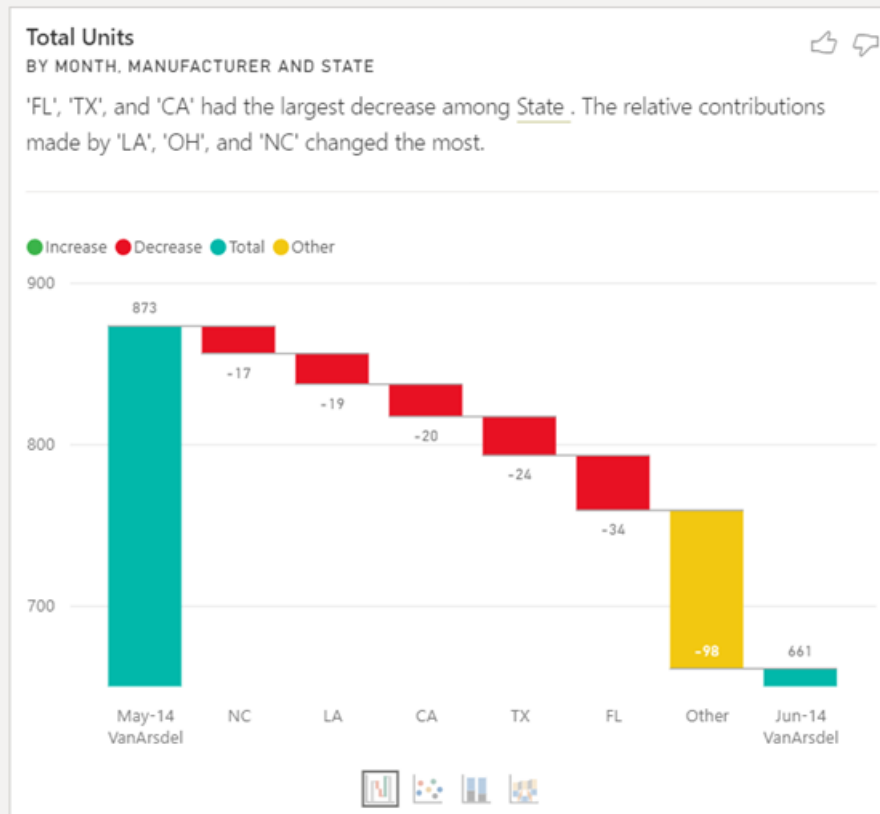


### The waterfall chart



The fourth visual is a waterfall chart, showing actual increases or decreases between the periods. This visual clearly shows one significant contributor to the decrease for June 2014 -- in this case, **State**. And the particulars of **State's** influence on total units are that declines in Louisiana, Texas, and Colorado played the most significant role.

Here's the analysis of the 24.28% decrease in Total Units between May-14 VanArsdel and Jun-14 VanArsdel



## Considerations and limitations

Since these insights are based on the change from the previous data point, they aren't available when you select the first data point in a visual.

**Analyze** is not available for all visual types.

The following list is the collection of currently unsupported scenarios for **Analyze - explain the increase/decrease/difference**:

- TopN filters
- Include/exclude filters
- Measure filters
- Non-numeric measures
- Use of "Show value as"
- Filtered measures - filtered measures are visual level calculations with a specific filter applied (for example, *Total Sales for France*), and are used on some of the visuals created by the insights feature
- Categorical columns on X-axis unless it defines a sort by column that is scalar. If using a hierarchy, then every column in the active hierarchy has to match this condition
- RLS or OLS enabled data models

## Next steps

[Waterfall charts](#)




[Scatter charts](#)

[Column charts](#)



# Paginated reports in the Power BI service


12/10/2021 • 4 minutes to read • [Edit Online](#)

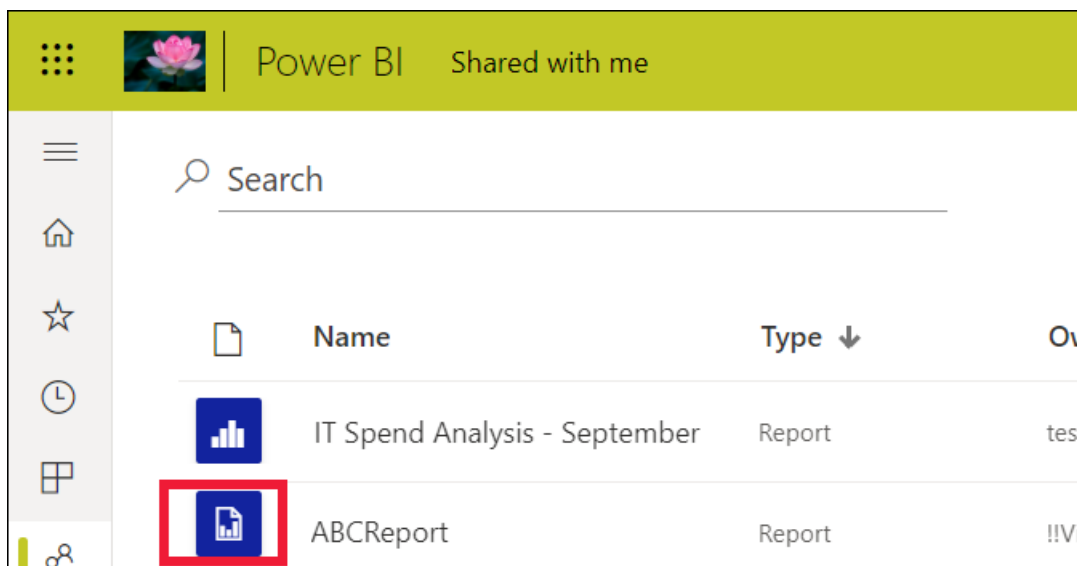
**APPLIES TO:**  Power BI service for **business users**  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

You've learned about [Power BI reports](#), and those are the types of report you're most likely to encounter. Power BI reports are optimized for exploration and interactivity. A sales report where different salespeople want to slice the data in the same report for their specific region/industry/customer and see how the numbers change would be best served by a Power BI report.

However, there is another type of report called a *paginated report*. Receiving and viewing paginated reports requires a Power BI Pro license for the report to be saved in Premium capacity. [Learn about licenses](#).

## Identify a paginated report

In content lists and on your Home landing page, paginated reports can be identified by their icon . A paginated report can be shared with you directly, or as part of a [Power BI app](#). If the report *designer* gave you permissions, you'll be able to re-share the paginated report and subscribe yourself and others.



## What is a paginated report?

These reports are called *paginated* because they're formatted to fit well on a printed page. One advantage is that they display all the data in a table, even if the table spans multiple pages. Paginated reports are sometimes called "pixel perfect" because report *designers* control the report page layout exactly.

Paginated reports are best for scenarios that require a highly formatted, pixel-perfect output optimized for printing or PDF generation. A profit and loss statement is a good example of the type of report you would probably want to see as a paginated report.

## How do paginated reports work?

When report *designers* create a paginated report, they're really creating a *report definition*. It doesn't contain the data. It specifies where to get the data, which data to get, and how to display the data. When you run the report, the report processor takes the report definition, retrieves the data, and combines it with the report

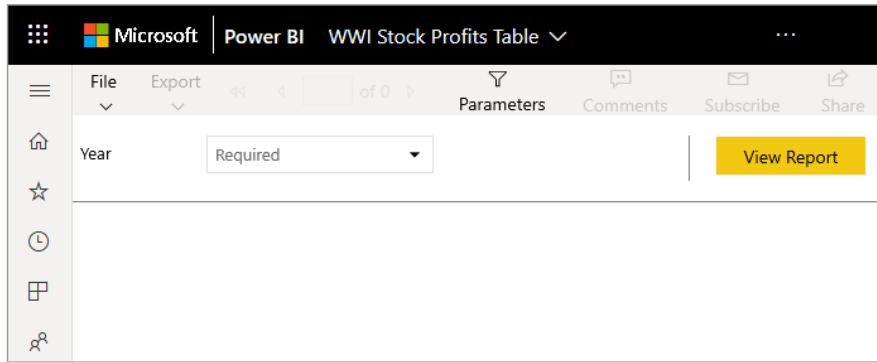
layout to generate the report. Sometimes, the report displays default data. Other times you need to enter parameters before the report can display any data.

Select a paginated report to open it in the Power BI service. If it has parameters, you need to select them before you can view the report.

Buying Group	Tailspin Toys	Location	Required	View Report
Invoices From Date:	05/01/2016	Invoices To Date:	<div><div>Select All</div><div>Absecon, NJ</div><div>Aceitunas, PR</div><div>Airport Drive, MO</div><div>Alstead, NH</div><div>Amanda Park, WA</div><div>Andrix, CO</div></div>	

And that's typically the extent of the interaction - setting the parameters. If you're a billing analyst, you may use paginated reports to create or print invoices. If you're a sales manager, you may use paginated reports to view orders by store or sales person.

This simple paginated report generates profit by year, after you select the **Year** parameter.

A screenshot of the full Power BI report. The 'Year' parameter is now set to '2015' and is highlighted with a red rectangle. The 'View Report' button is highlighted with a yellow rectangle. Below the header is a table with two columns: 'Stock Item' and 'Sum Profit'.

Stock Item	Sum Profit
20 mm Double sided bubble wrap 50m	1782040
Air cushion machine (Blue)	1329768
32 mm Anti static bubble wrap (Blue) 50m	1120560
10 mm Anti static bubble wrap (Blue) 50m	1094580
20 mm Anti static bubble wrap (Blue) 50m	927780
32 mm Double sided bubble wrap 50m	922730
10 mm Double sided bubble wrap 50m	885430
32 mm Anti static bubble wrap (Blue) 20m	456000
32 mm Double sided bubble wrap 20m	445970
Void fill 400 L bag (White) 400L	435120

Compared to paginated reports, Power BI reports are much more interactive. Power BI reports allow for ad hoc reporting, and support many more types of visuals, including custom visuals.

## Interact with a paginated report

The way you interact with a paginated report is different from other reports. You can do things like print, bookmark, export, and comment, but there is less interactivity. Often, paginated reports require input from you to populate the report canvas. Other times the report displays default data and you can enter parameters to see different data.

### Print a paginated report

*Paginated* reports are formatted to fit well on a page and to print well. What you see in the browser is what you see when you print. Plus, if the report has a long table, the entire table prints, even if it spans multiple pages.

Paginated reports can have many pages. For example, this report has 563 pages. Each page is laid out exactly,

with one page per invoice and repeating headers and footers. When you print this report, you'll get page breaks between invoices.

Microsoft

Power BI

WWI - Account Statement

FileExport400 of 563ParametersCommentsSubscribeShare

Buying Group

Tailspin Toys

Location

Absecon, NJ,Aceitunas, PR,...

View Report

Invoices From Date:

5/1/2016

Invoices To Date:

5/31/2016

Buying Group Account Statement

Invoice Range: May 01, 2016 to May 31, 2016


Buying Group: Tailspin Toys, 201 Customers Selected

Floor 20, Import Plaza

105 Silk Road

Tradesville

WA 99999



Invoice No: 72327-69322

Invoice 2 of 3

Invoice Date: May 12, 2016

Purchase Order No: 13494

Billed To: Tailspin Toys (Head Office)

Delivery Information: Shop 251, 835 Bach Crescent

Delivery Time: 11:45 May 13, 2016

Received By: Steven Frasier

Item	Quantity	Unit Price	Tax	LineTotal
RC vintage American toy coupe with remote control (Red) 1/50 scale	8	\$30.00	\$36.00	\$276.00
3 kg Courier post bag (White) 300x190x95mm	125	\$0.66	\$12.38	\$94.88
Developer joke mug - understanding recursion requires understanding recursion (White)	2	\$13.00	\$3.90	\$29.90
TOTAL			\$52.28	\$400.78

Generated 11/26/2019 4:59:49 PM

Page 400

### Navigate the paginated report

In this sales order report, there are three parameters: Business type, Reseller, and Order number.

	PRODUCT	QTY	EXTENDED	DISC	SALES	TAX	FREIGHT
01	Road-250 Red, 48	3	4,398.03	0.00	4,398.03	351.84	109.95
02	Men's Bib-Shorts, L	4	215.98	0.00	215.98	17.28	5.40

To change the information being displayed, enter new values for the three parameters and select **View report**. Here, we've selected **Specialty bike shop**, **Alpine Ski House**, and order number **SO46085**. Selecting **View report** refreshes our report canvas with this new sales order.

	PRODUCT	QTY	EXTENDED	DISC	SALES	TAX	FREIGHT
01	Road-250 Red, 48	3	4,398.03	0.00	4,398.03	351.84	109.95
02	Men's Bib-Shorts, L	4	215.98	0.00	215.98	17.28	5.40

The new sales order displays, using the parameters we selected.

Microsoft | Power BI | WWI Sales | Sales Order

File View Export 1 of 1 Parameters Comments Subscribe Share

Business Type: Specialty Bike Shop Reseller: Alpine Ski House Order: SO46085 View report

**ADVENTURE WORKS**

## Sales Order SO46085

DATE NOV, 01, 2014

TO AW00000528  
**ALPINE SKI HOUSE**  
 7505 Laguna Boulevard  
 Elk Grove, CA, 95624  
 United States

YOUR REF PO4698157727

	PRODUCT	QTY	EXTENDED	DISC	SALES	TAX	FREIGHT
01	Road-650 Red, 48	1	419.46	0.00	419.46	33.56	10.49
02	Road-650 Black, 58	2	838.92	0.00	838.92	67.11	20.97
03	Road-450 Red, 58	3	2,624.38	0.00	2,624.38	209.95	65.61
	<b>TOTAL</b>	<b>6</b>	<b>3,882.76</b>	<b>0.00</b>	<b>3,882.76</b>	<b>310.62</b>	<b>97.07</b>

Sales Order SO46085 Page 1 of 1

Some paginated reports have many pages. Use the page controls to navigate through the report.

Microsoft | Power BI | WWI - Acc

File View Export 4 of 9

### Export the paginated report

You have a variety of options for exporting paginated reports, including PDF, Word, XML, PowerPoint, Excel, and more. When exporting, as much of the formatting as possible is preserved. Paginated reports exported to Excel, Word, PowerPoint, MHTML, and PDF, for example, keep the "pixel perfect" formatting.

Export ▾



1

of 1



Microsoft Excel (.xlsx)



PDF (.pdf)



Accessible PDF (.pdf)



Comma Separated Values (.csv)



Microsoft PowerPoint (.pptx)



Microsoft Word (.docx)



Web Archive (.mhtml)



XML (.xml)

The collage displays four different views of a sales order report for 'Adventure Works' (SO47398) dated March 01, 2015, for 'Active Life Toys'.

**Top Left: Slide Show View**  
 The report is presented as a multi-page slide show. The first slide shows the header information, and subsequent slides show the product list table. The interface includes a slide navigation pane on the left.

**Top Right: PDF View**  
 The report is shown as a PDF document. It contains the same header and product list information. The interface includes a standard PDF viewer toolbar at the top.

**Bottom Left: Excel View**  
 The report is shown as an Excel spreadsheet. The product list is displayed in a table format with columns for Product, Qty, Extended, Disc, Sales, Tax, and Freight. The interface includes the Excel ribbon and formula bar.

**Bottom Right: Power BI Paginated Report View**  
 The report is shown as a Power BI paginated report. It features a dark header bar, the report content, and a navigation pane on the right side with buttons for back, forward, and search.

## Subscribe to the paginated report

When you subscribe to a paginated report, Power BI sends you an email with the report as an attachment. In setting up your subscription, you choose how often you want to receive the emails: daily, weekly, hourly, or monthly. The subscription contains an attachment of the entire report output, up to 25MB in size. Export the entire report or choose the parameters ahead of time. Choose from many different attachment types, including Excel, PDF, PowerPoint, and more.

Subscribe to emails  
SALES ORDER

+ Add new subscription

^ Sales Order Run Now On

Format

PDF (.pdf) ▼

XML (.xml)

Comma Separated Values (.csv)

PDF (.pdf)

Accessible PDF (.pdf)

Microsoft Excel (.xlsx)

Microsoft Word (.docx)

Microsoft PowerPoint (.pptx)

Scheduled Time

10 30 PM (UTC-05:00) Eastern Time (US ar) ▼

Start date End date

10/11/2020 M/d/yyyy

Also Include

☒ Access to this report

☒ Link to report in Power BI

☒ Preview image

Emails will be sent daily at 10:30 PM Eastern Standard Time starting 10/11/2020.

[Manage all subscriptions](#)

Save and close Cancel

## Considerations and troubleshooting


- A paginated report can appear blank until you select parameters and choose **View report**.
- If you don't have any paginated reports, it could be because nobody has shared this type of report with you. It could also mean that your system administrator hasn't enabled paginated reports for you.


## Next steps

- [Power BI reports](#)
- [Paginated reports in Power BI: FAQ](#)
- More questions? Try the [Power BI Community](#).

# View a paginated report in the Power BI service

12/10/2021 • 2 minutes to read • [Edit Online](#)

In this article, you learn about viewing a paginated report in the Power BI service. Paginated reports are reports created in Report Builder and uploaded to any workspace in a Premium capacity. Look for the diamond icon  next to the workspace name.

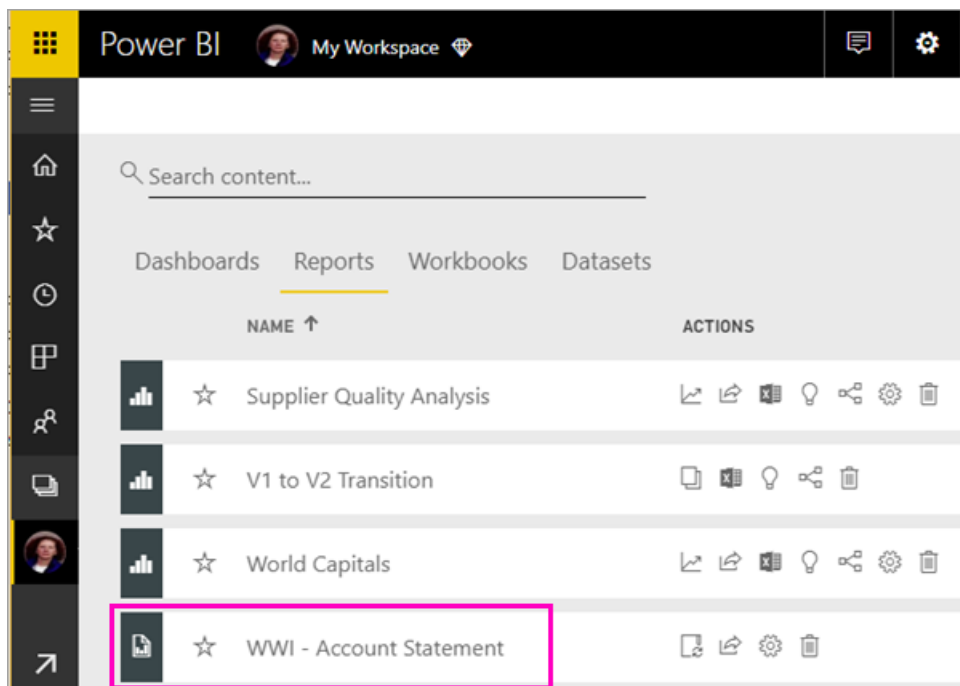
Paginated reports have their own icon .

You can also export paginated reports to a number of formats:

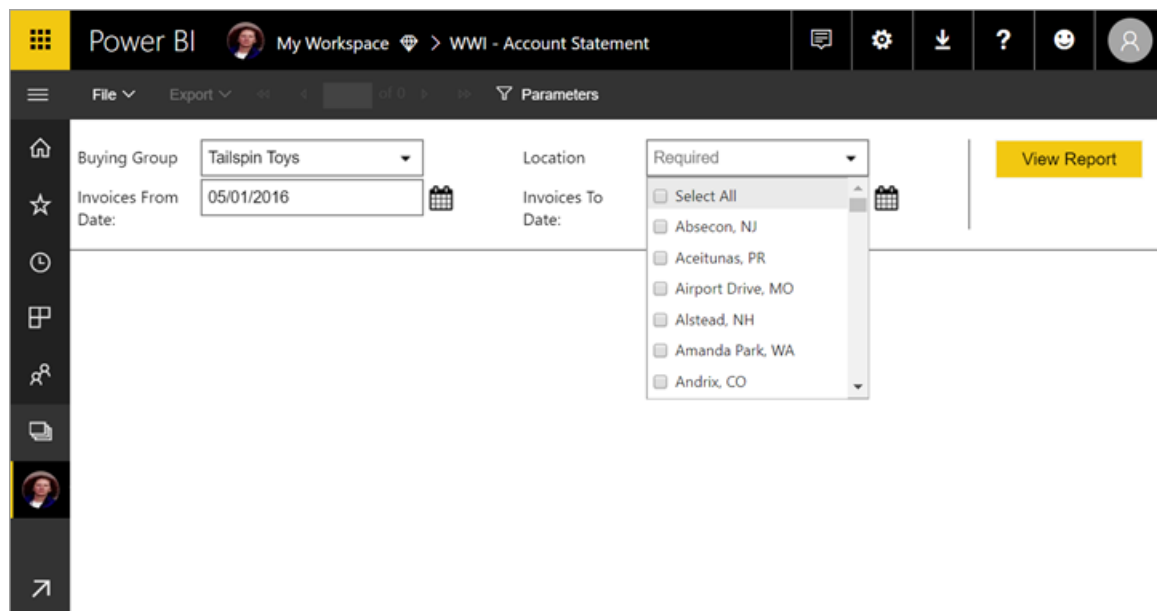
- Microsoft Excel
- Microsoft Word
- Microsoft PowerPoint
- PDF (and [Accessible PDF, or PDF/UA](#))
- Comma-separated values
- XML
- Web archive (.mhtml)

## View a paginated report

1. Select the paginated report in the workspace.

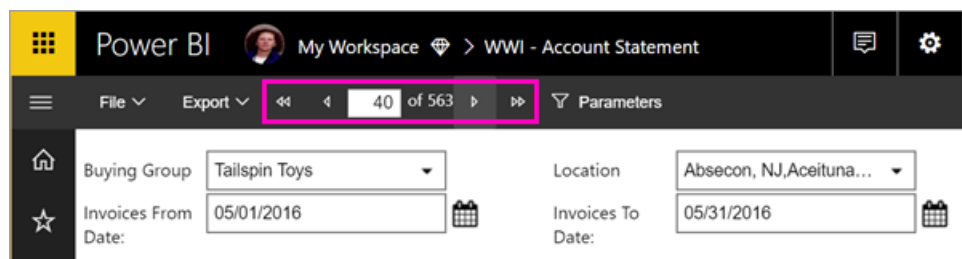


2. If the report has parameters, as this one does, you may not see the report when you first open it. Select parameters, then select **View Report**.

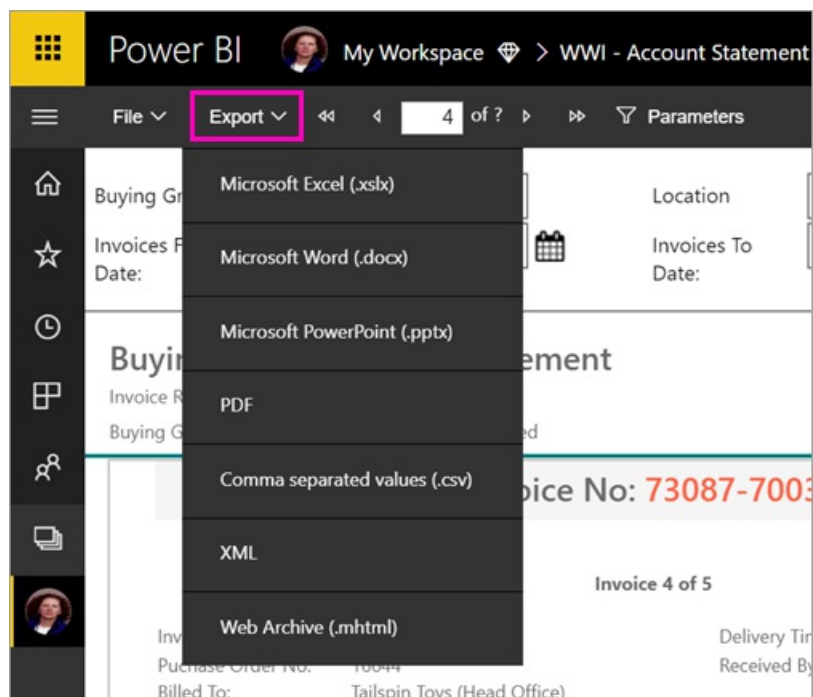


You can also change the parameters at any time.

3. Page through the report by selecting the arrows at the top of the page, or by typing a page number in the box.



4. Select Export to find a format to export your paginated reports.



## Next steps

[Paginated reports in the Power BI service](#)

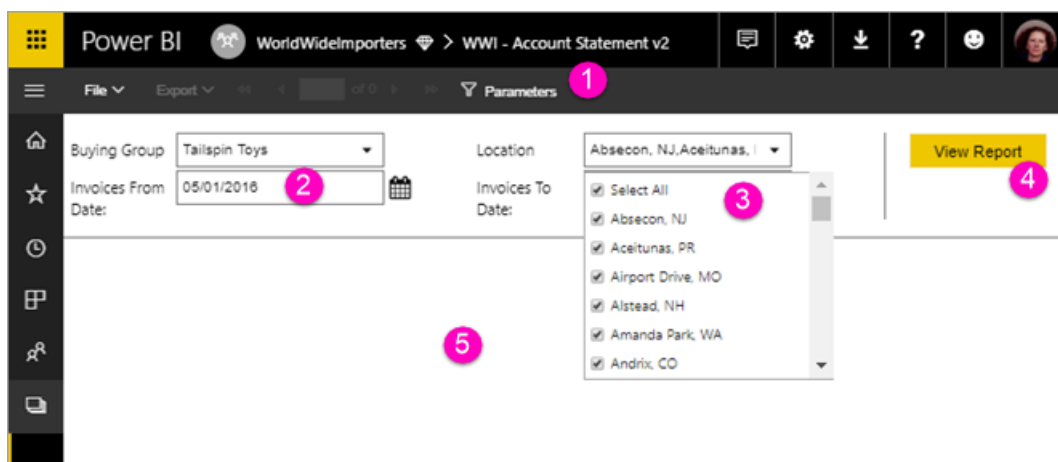
# View parameters for paginated reports in the Power BI service

12/10/2021 • 2 minutes to read • [Edit Online](#)

In this article, you learn how to interact with parameters for paginated reports in the Power BI service. A report parameter provides a way to filter report data. Parameters offer a list of available values. You can choose one or many values, or type in a parameter text box to search for values. Sometimes parameters have a default value, and sometimes you have to choose a value before you see the report.

When you view a report that has parameters, the report viewer toolbar displays each parameter so you can interactively specify values. The following illustration shows the parameter area for a report with parameters for **Buying Group**, **Location**, a **From Date**, and a **To Date**.

## Parameters pane in the Power BI service



1. **Parameters pane** The report viewer toolbar displays a prompt such as "Required" or a default value for each parameter.
2. **Invoices From / To Date parameters** The two date parameters have default values. To change the date, type a date in the text box or choose a date in the calendar.
3. **Location parameter** The Location parameter is set to allow you to select one, many, or all values.
4. **View Report** After you enter or change parameter values, click **View Report** to run the report.
5. **Default values** If all parameters have default values, the report runs automatically on first view. Some parameters in this report didn't have default values, so you don't see the report until you select values.

## Next steps

[Paginated reports in the Power BI service](#)

# Subscribe yourself and others to paginated reports in the Power BI service

12/10/2021 • 2 minutes to read • [Edit Online](#)

You can now set up email subscriptions for yourself and others for paginated reports in the Power BI service. In general, the process is the same as [subscribing to reports and dashboards in the Power BI service](#). This article spells out the differences and considerations.

In setting up subscriptions, you choose how often you want to receive the emails: daily, weekly, monthly, or hourly. You can also choose the time(s) you'd like the subscription to run. There is no limit to the number of subscriptions you may set for every report.

## Considerations for paginated report subscriptions

- You don't need edit permissions to the paginated report to create a subscription for yourself, but you must have edit permissions to create one for someone else in your organization. If you have at least a Contributor role in the workspace where the paginated report is, then you can create subscriptions for others in your organization. Read more about [Roles in workspaces](#).
- To subscribe external users who are not members of your organization, the external user must first [onboard using B2B \(Business to business\)](#).
- Unlike subscriptions for dashboards or Power BI reports, your subscription contains an attachment of the entire report output. The following attachment types are supported: PDF, PowerPoint presentation (PPTX), Excel Workbook (XLSX), Word Document (DOCX), CSV file, and XML.
- You may include a preview image of the report in the email body. This is optional, and may differ slightly than the first page of your attached report document, depending on the attachment format you select.
- The maximum report attachment size is 25 MB.
- You can subscribe other users in your organization to paginated reports that connect to any currently supported data sources, including Azure Analysis Services or Power BI datasets. Keep in mind the report attachment reflects the data based on your permissions.
- Email subscriptions can be sent with either the currently selected or default parameters for your report. You may set different parameter values for each subscription you create for your report.
- If your report author has set expression-based parameters (for example, the default is always today's date), the subscription uses that as the default value. You can change other parameter values and choose to use current values, but unless you explicitly change that value as well, the subscription uses the expression-based parameter.
- There is no **After Data Refresh** option for frequency with paginated reports. You always get the latest values from the underlying data source.

## Next steps

[Subscribe yourself and others to reports and dashboards in the Power BI service](#)

[Paginated reports in the Power BI service](#)

# Visualization types in Power BI

12/10/2021 • 11 minutes to read • [Edit Online](#)

This article lists visualizations available in Power BI. We'll be adding new visualizations, stay tuned!

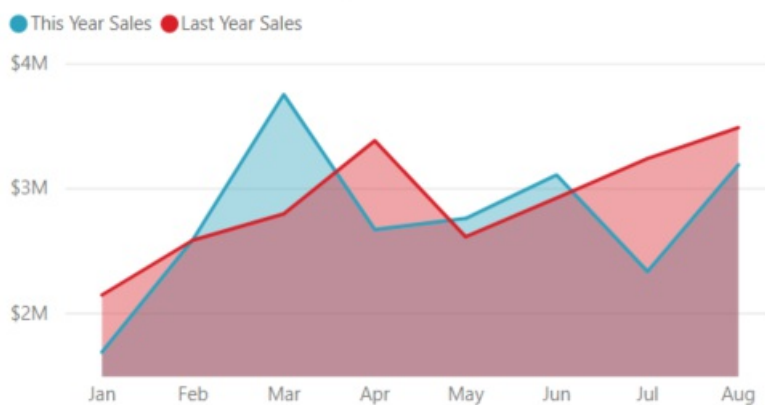
And check out the [Microsoft AppSource](#), where you'll find a growing list of [Power BI visuals](#) you can download and use in your own dashboards and reports. Feeling creative? [Learn how to create and add your own visuals to this community site.](#)

## Visualizations in Power BI

All of these visualizations can be added to Power BI reports, specified in Q&A, and pinned to dashboards.

### Area charts: Basic (Layered) and Stacked

This Year Sales and Last Year Sales by FiscalMonth

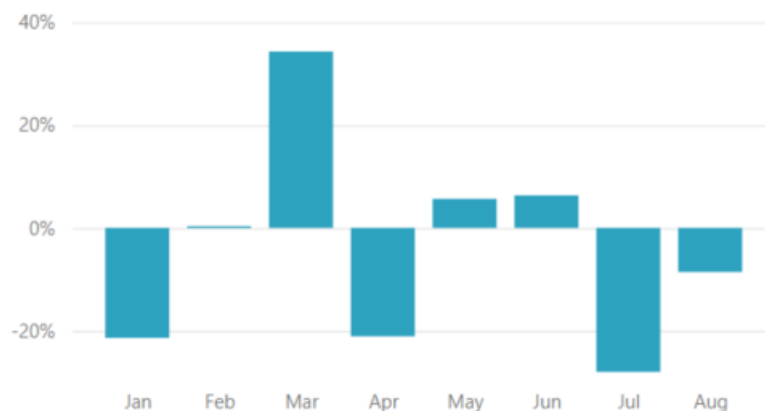


The basic area chart is based on the line chart with the area between the axis and line filled in. Area charts emphasize the magnitude of change over time, and can be used to draw attention to the total value across a trend. For example, data that represents profit over time can be plotted in an area chart to emphasize the total profit.

For more information, see [Basic Area chart](#).

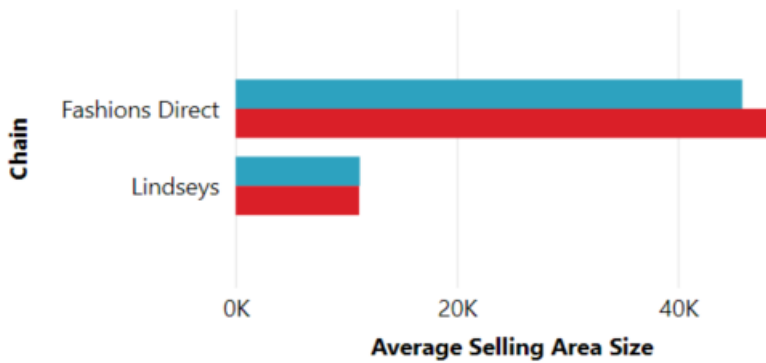
### Bar and column charts

Total Sales Variance % by FiscalMonth



Average Selling Area Size by Store Type, Chain

Store Type ● New Store ● Same Store



Bar charts are the standard for looking at a specific value across different categories.

## Cards

### Multi row

030-Kids

\$5.30

Average Unit Price

Multi row cards display one or more data points, one per row.

### Single number

104

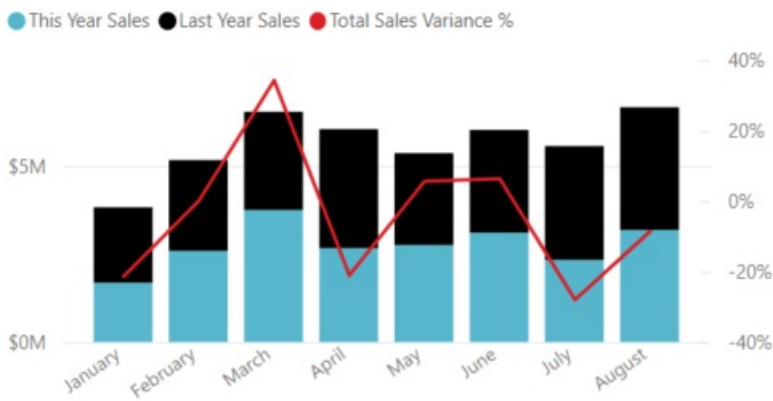
Total Stores

Single number cards display a single fact, a single data point. Sometimes a single number is the most important thing you want to track in your Power BI dashboard or report, such as total sales, market share year over year, or total opportunities.

For more information, see [Create a Card \(big number tile\)](#).

## Combo charts

This Year Sales, Last Year Sales and Total Sales Variance % by Month



A combo chart combines a column chart and a line chart. Combining the two charts into one lets you make a quicker comparison of the data. Combo charts can have one or two Y axes, so be sure to look closely.

Combo charts are a great choice:

- When you have a line chart and a column chart with the same X axis.
- To compare multiple measures with different value ranges.
- To illustrate the correlation between two measures in one visual.
- To check whether one measure meets the target which is defined by another measure.
- To conserve canvas space.

For more information, see [Combo charts in Power BI](#).

## Decomposition tree



The decomposition tree visual lets you visualize data across multiple dimensions. It automatically aggregates data and enables drilling down into your dimensions in any order. It is also an artificial intelligence (AI) visualization, so you can ask it to find the next dimension to drill down into based on certain criteria. This makes it a valuable tool for ad hoc exploration and conducting root cause analysis.

## Doughnut charts

This Year Sales by Chain

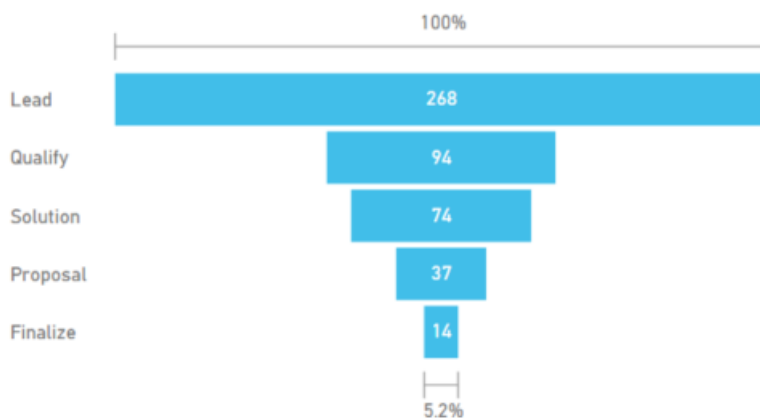


Doughnut charts are similar to pie charts. They show the relationship of parts to a whole. The only difference is that the center is blank and allows space for a label or icon.

For more information, see [Doughnut charts in Power BI](#).

## Funnel charts

Opportunity Count by Sales Stage

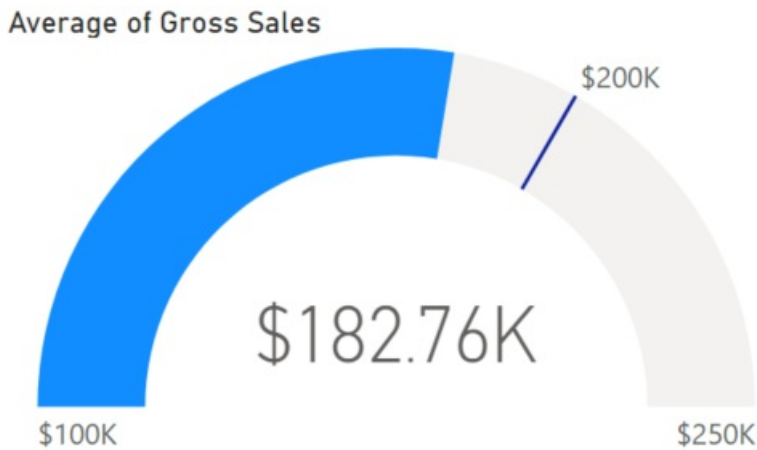


Funnels help visualize a process that has stages, and items flow sequentially from one stage to the next. One example is a sales process that starts with leads and ends with purchase fulfillment.

For example, a sales funnel that tracks customers through stages: Lead > Qualified Lead > Prospect > Contract > Close. At a glance, the shape of the funnel conveys the health of the process you're tracking. Each funnel stage represents a percentage of the total. So, in most cases, a funnel chart is shaped like a funnel -- with the first stage being the largest, and each subsequent stage smaller than its predecessor. A pear-shaped funnel is also useful -- it can identify a problem in the process. But typically, the first stage, the "intake" stage, is the largest.

For more information, see [Funnel Charts in Power BI](#).

## Gauge charts



A radial gauge chart has a circular arc and displays a single value that measures progress toward a goal/KPI. The goal, or target value, is represented by the line (needle). Progress toward that goal is represented by the shading. And the value that represents that progress is shown in bold inside the arc. All possible values are spread evenly along the arc, from the minimum (left-most value) to the maximum (right-most value).

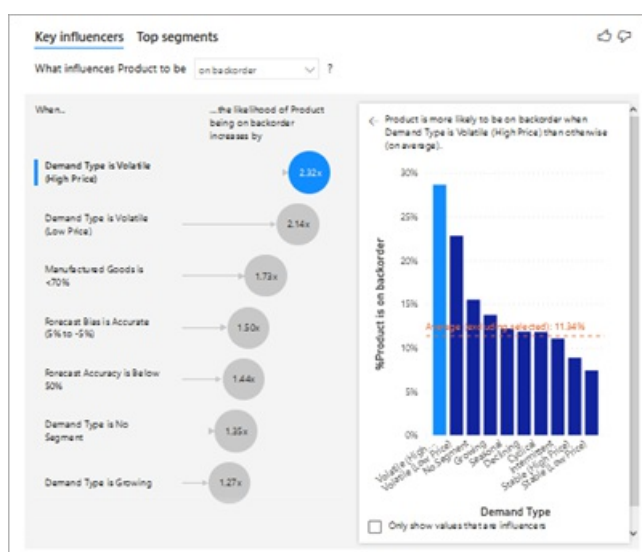
In the example above, we are a car retailer, tracking our Sales team's average sales per month. Our goal is 140 and represented by the black needle. The minimum possible average sales is 0 and we've set the maximum as 200. The blue shading shows that we're currently averaging approximately 120 sales this month. Luckily, we still have another week to reach our goal.

Radial gauges are a great choice to:

- Show progress toward a goal.
- Represent a percentile measure, like a KPI.
- Show the health of a single measure.
- Display information that can be quickly scanned and understood.

For more information, see [Gauge Charts in Power BI](#).

## Key influencers chart



A key influencer chart displays the major contributors to a selected result or value.

Key influencers are a great choice to help you understand the factors that influence a key metric. For example, *what influences customers to place a second order* or *why were sales so high last June*.

For more information, see [Key influencer charts in Power BI](#)

# KPIs

Total Units This Year and Total Units Last Year by Month



A Key Performance Indicator (KPI) is a visual cue that communicates the amount of progress made toward a measurable goal.

KPIs are a great choice:

- To measure progress (what am I ahead or behind on?).
- To measure distance to a goal (how far ahead or behind am I?).

For more information, see [KPIs in Power BI](#).

## Line charts

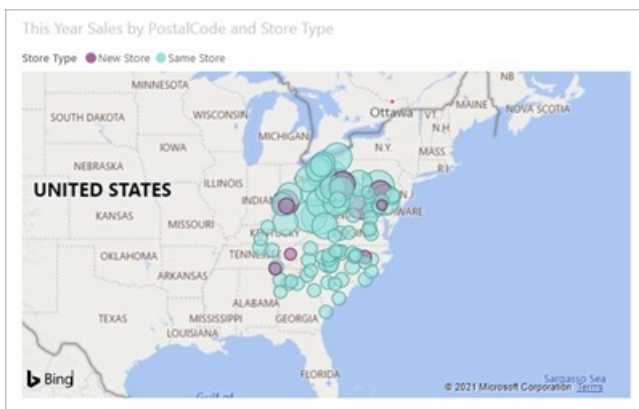
This Year Sales and Last Year Sales by FiscalMonth



Line charts emphasize the overall shape of an entire series of values, usually over time.

## Maps

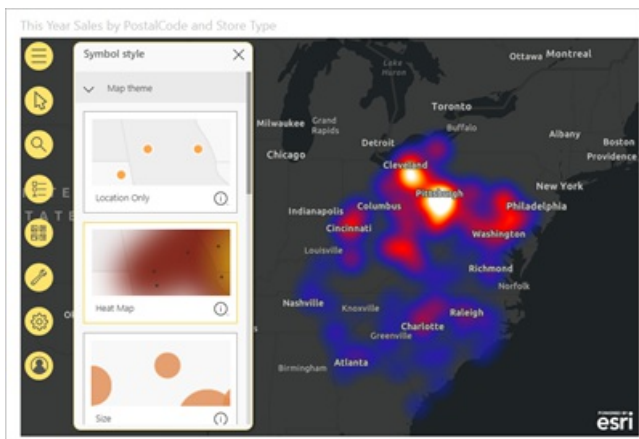
### Basic map



Use a basic map to associate both categorical and quantitative information with spatial locations.

For more information, see [Tips and tricks for map visuals](#).

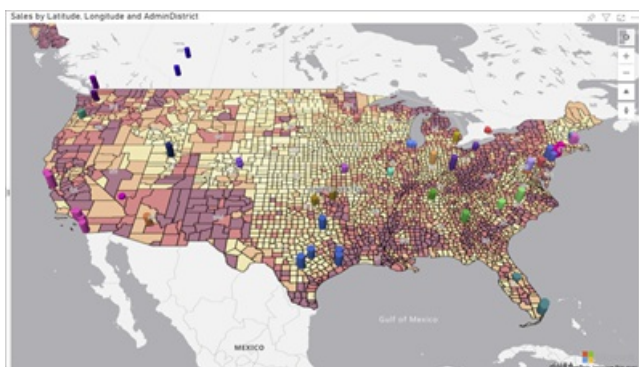
### ArcGIS map



The combination of ArcGIS maps and Power BI takes mapping beyond the presentation of points on a map to a whole new level. The available options for base maps, location types, themes, symbol styles, and reference layers creates gorgeous informative map visuals. The combination of authoritative data layers (such as census data) on a map with spatial analysis conveys a deeper understanding of the data in your visual.

For more information, see [ArcGIS maps in Power BI](#).

### Azure map



#### TIP

Used to associate both categorical and quantitative information with spatial locations.

For more information, see [Azure Maps visual for Power BI](#).

### Filled map (Choropleth)



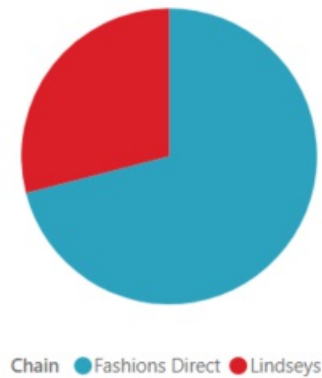
### TIP

The matrix automatically aggregates the data and enables drilling down into the data.

For more information, see [Matrix visuals in Power BI](#).

## Pie charts

This Year Sales by Chain



Pie charts show the relationship of parts to a whole.

## Power Apps visual

Customer Fusion Tomo

Fusion Tomo

Account Manager Elisabeth Iversen

Sales Region Northwest

Estimated Value \$458,707

In FastTrack Program ☒

Contact Sales Team  
Request call with customer

Submit

Report designers can create a Power App and embed it into a Power BI report as a visual. Consumers can interact with that visual within the Power BI report.

For more information, see [Add a Power Apps visual to your report](#).

## Q&A visual

Help Q&A understand people's questions better by adding synonyms... [Add synonyms now](#) ✕

Ask a question about your data 📄 ⚙️

Try one of these to get started

what is the total store by city

what is the total sales by category

what is the total sales LY by category

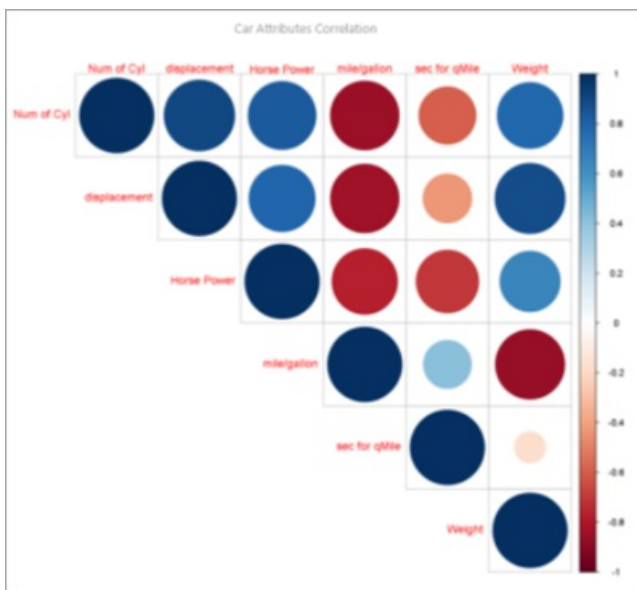
[Show all suggestions](#)

#### TIP

Similar to the [Q&A experience on dashboards](#), the Q&A visual lets you ask questions about your data using natural language.

For more information, see [Q&A visuals in Power BI](#).

## R script visuals



#### TIP

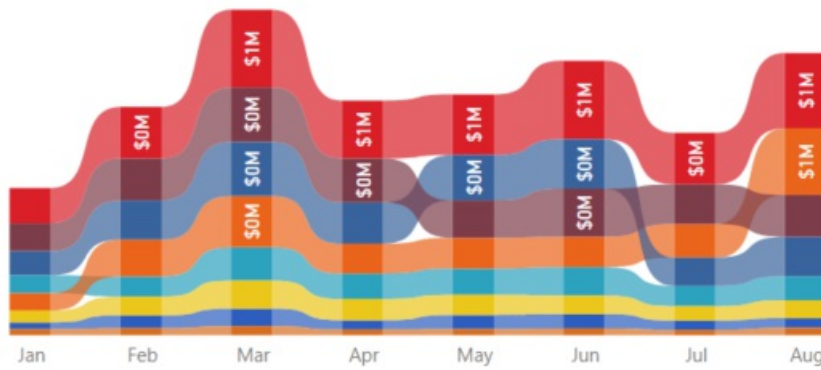
Visuals created with R scripts, commonly called *R visuals*, can present advanced data shaping and analytics such as forecasting, using the rich analytics and visualization power of R. R visuals can be created in Power BI Desktop and published to the Power BI service.

For more information, see [R visuals in Power BI](#).

## Ribbon chart

This Year Sales by FiscalMonth and Category

Category 010-Womens 020-Mens 030-Kids 040-Juniors 060-Intimate 070-Hosiery



Ribbon charts show which data category has the highest rank (largest value). Ribbon charts are effective at showing rank change, with the highest range (value) always displayed on top for each time period.

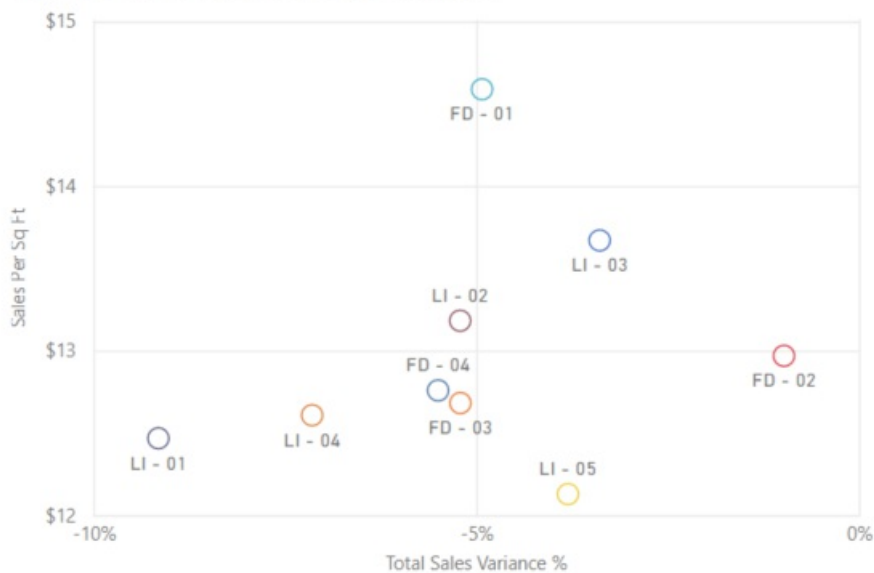
For more information, see [Ribbon charts in Power BI](#).

## Scatter

### Scatter, bubble, and dot plot chart

A scatter chart always has two value axes to show one set of numerical data along a horizontal axis and another set of numerical values along a vertical axis. The chart displays points at the intersection of an x and y numerical value, combining these values into single data points. These data points may be distributed evenly or unevenly across the horizontal axis, depending on the data.

Total Sales Variance % and Sales Per Sq Ft by District



A bubble chart replaces data points with bubbles, with the bubble size representing an additional dimension of the data.

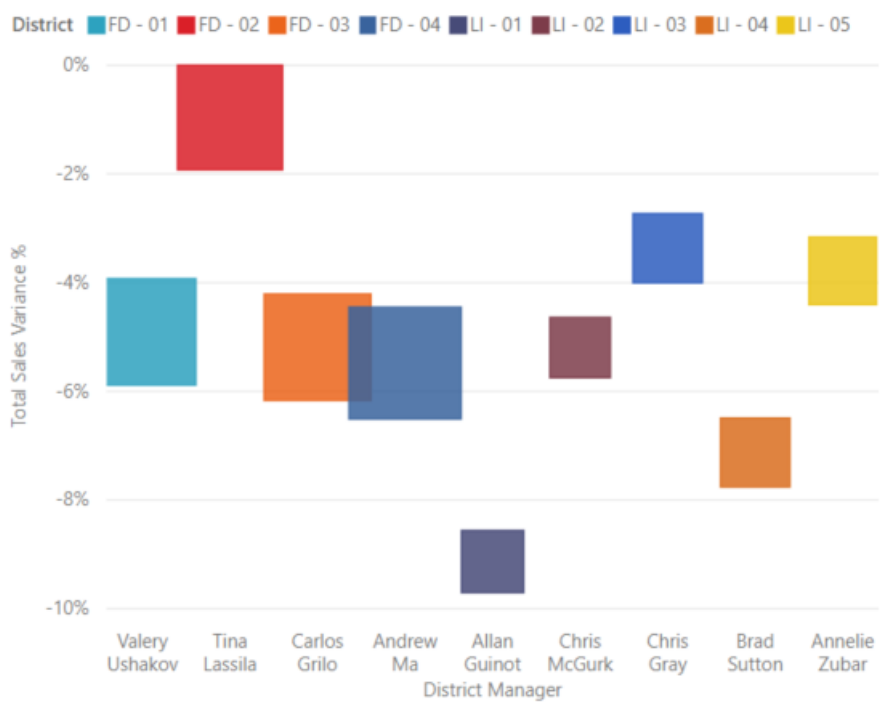
Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District



Both scatter and bubble charts can also have a play axis, which can show changes over time.

A dot plot chart is similar to a bubble chart and scatter chart except that it can plot numerical or categorical data along the X axis. This example happens to use squares instead of circles and plots sales along the X axis.

Total Sales Variance % and This Year Sales by District and District Manager



For more information, see [Scatter charts in Power BI](#).

## Scatter-high density

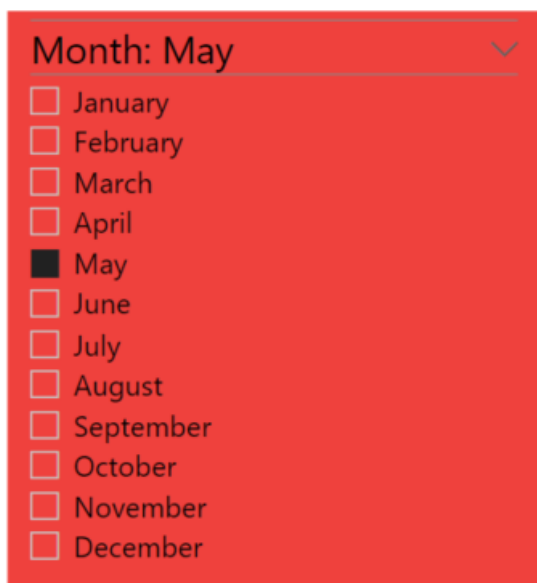


By definition, high-density data is sampled to create visuals reasonably quickly that are responsive to interactivity. High-density sampling uses an algorithm that eliminates overlapping points, and ensures that all points in the data set are represented in the visual. It doesn't just plot a representative sample of the data.

This ensures the best combination of responsiveness, representation, and clear preservation of important points in the overall data set.

For more information, see [High Density Scatter charts in Power BI](#).

## Slicers



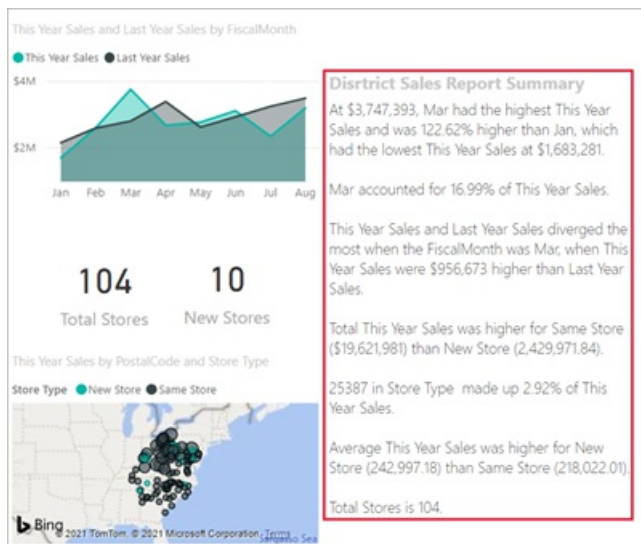
A slicer is a standalone chart that can be used to filter the other visuals on the page. Slicers come in many different formats (category, range, date, etc.) and can be formatted to allow selection of only one, many, or all of the available values.

Slicers are a great choice 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.

For more information, see [Slicers in Power BI](#).

## Smart narrative



The Smart narrative adds text to reports to point out trends, key takeaways, and add explanations and context. The text helps users to understand the data and identify the important findings quickly.

For more information, see [Create smart narrative summaries](#).

## Standalone images



A standalone image is a graphic that has been added to a report or dashboard.

For more information, see [Add an image widget to a dashboard](#).

## Tables

Category	This Year Sales Status	Average Unit Price	Last Year Sales	This Year Sales	This Year Sales Goal
080-Accessories	●	\$4.84	\$1,273,096	\$1,379,259	\$1,273,096
090-Home	●	\$3.93	\$2,913,647	\$3,053,326	\$2,913,647
100-Groceries	●	\$1.47	\$810,176	\$829,776	\$810,176
020-Mens	●	\$7.12	\$4,453,133	\$4,452,421	\$4,453,133
030-Kids	●	\$5.30	\$2,726,892	\$2,705,490	\$2,726,892
050-Shoes	●	\$13.84	\$3,640,471	\$3,574,900	\$3,640,471
010-Womens	●	\$7.30	\$2,680,662	\$1,787,958	\$2,680,662
040-Juniors	●	\$7.00	\$3,105,550	\$2,930,385	\$3,105,550
060-Intimate	●	\$4.28	\$955,370	\$852,329	\$955,370
070-Hosiery	●	\$3.69	\$573,604	\$486,106	\$573,604
Total	●	\$5.49	\$23,132,601	\$22,051,952	\$23,132,601

A table is a grid that contains related data in a logical series of rows and columns. It may also contain headers and a row for totals. Tables work well with quantitative comparisons where you are looking at many values for a single category. For example, this table displays five different measures for Category.

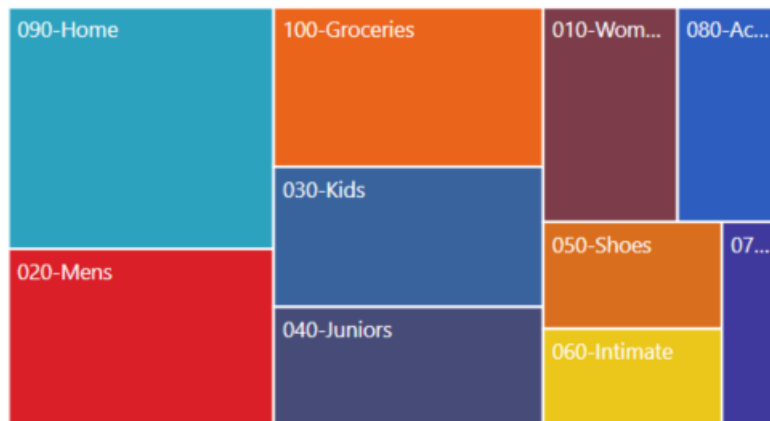
Tables are a great choice:

- To see and compare detailed data and exact values (instead of visual representations).
- To display data in a tabular format.
- To display numerical data by categories.

For more information, see [Working with tables in Power BI](#).

# Treemaps

Total Units Last Year by Category



Treemaps are charts of colored rectangles, with size representing value. They can be hierarchical, with rectangles nested within the main rectangles. The space inside each rectangle is allocated based on the value being measured. And the rectangles are arranged in size from top left (largest) to bottom right (smallest).

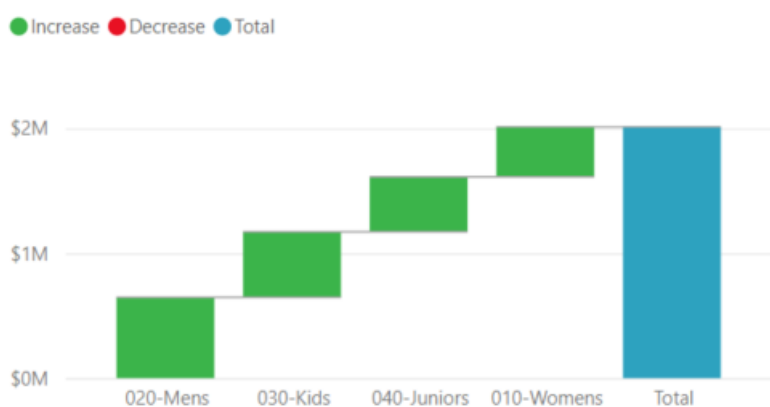
Treemaps are a great choice:

- To display large amounts of hierarchical data.
- When a bar chart can't effectively handle the large number of values.
- To show the proportions between each part and the whole.
- To show the pattern of the distribution of the measure across each level of categories in the hierarchy.
- To show attributes using size and color coding.
- To spot patterns, outliers, most-important contributors, and exceptions.

For more information, see [Treemaps in Power BI](#).

# Waterfall charts

Total Units Last Year by Category



A waterfall chart shows a running total as values are added or subtracted. It's useful for understanding how an initial value (for example, net income) is affected by a series of positive and negative changes.

The columns are color coded so you can quickly tell increases and decreases. The initial and the final value columns often start on the horizontal axis, while the intermediate values are floating columns. Because of this "look", waterfall charts are also called bridge charts.

Waterfall charts are a great choice:

- When you have changes for the measure across time or across different categories.

- To audit the major changes contributing to the total value.
- To plot your company's annual profit by showing various sources of revenue and arrive at the total profit (or loss).
- To illustrate the beginning and the ending headcount for your company in a year.
- To visualize how much money you make and spend each month, and the running balance for your account.




For more information, see [Waterfall charts in Power BI](#).

## Next steps

[Visualizations in Power BI reports](#) [Power BI Visuals Reference from sqlbi.com](#), guidance for picking the right visual for your data

# Show data with Power BI reports

12/10/2021 • 2 minutes to read • [Edit Online](#)

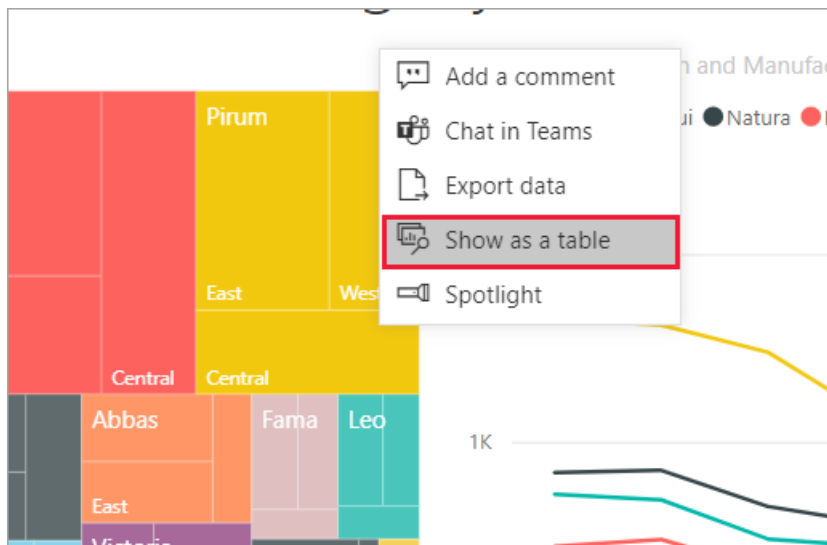
**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

A Power BI visual is constructed using data from underlying datasets. If you're interested in seeing behind-the-scenes, the Power BI service lets you *display* the data that is being used to create a visual in a report. When you select **Show as a table**, Power BI displays the data below (or next to) the visual.

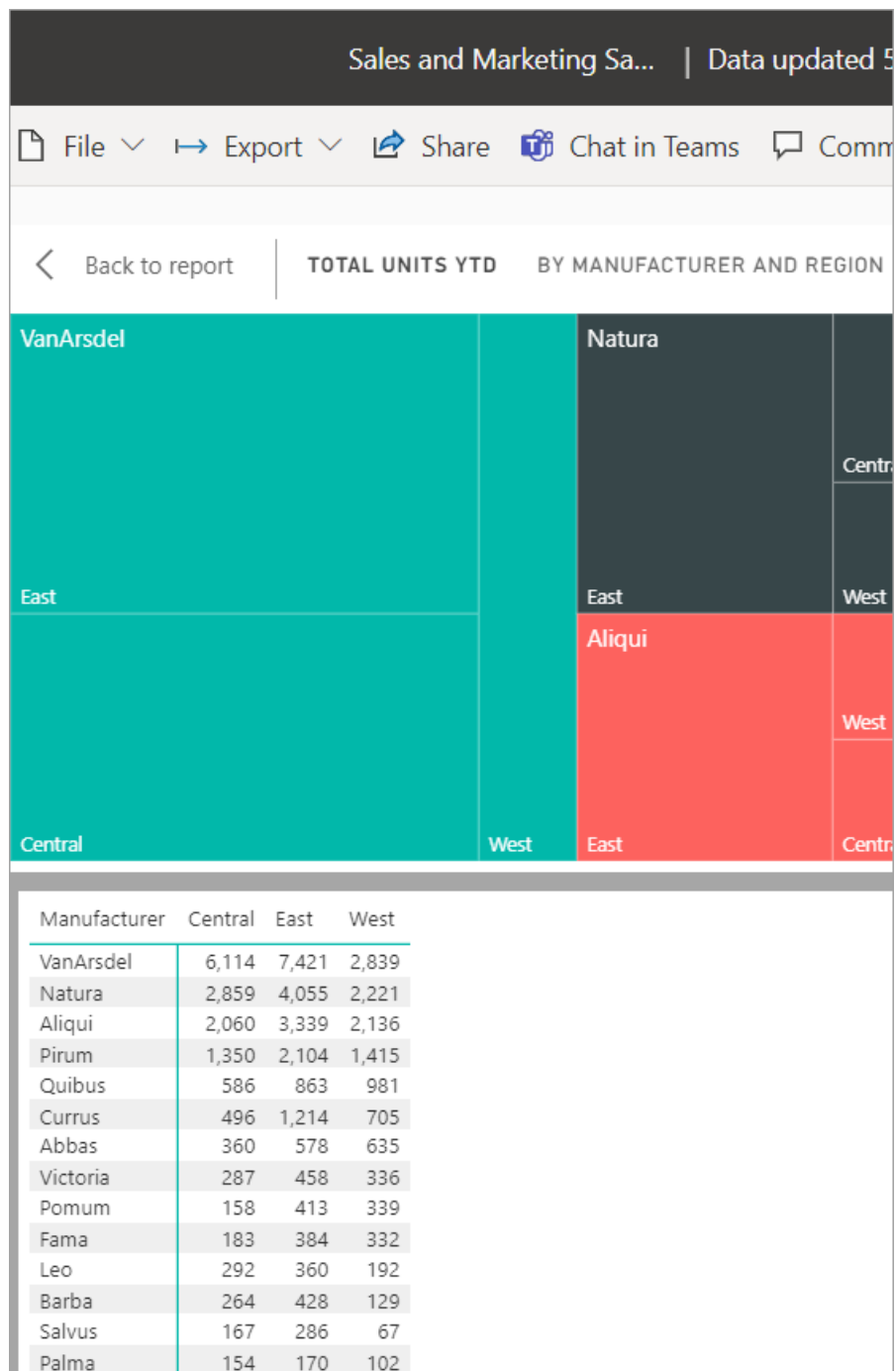
On a dashboard, to see the underlying data, use [Export to Excel](#)

## Show the data being used to create a report visual

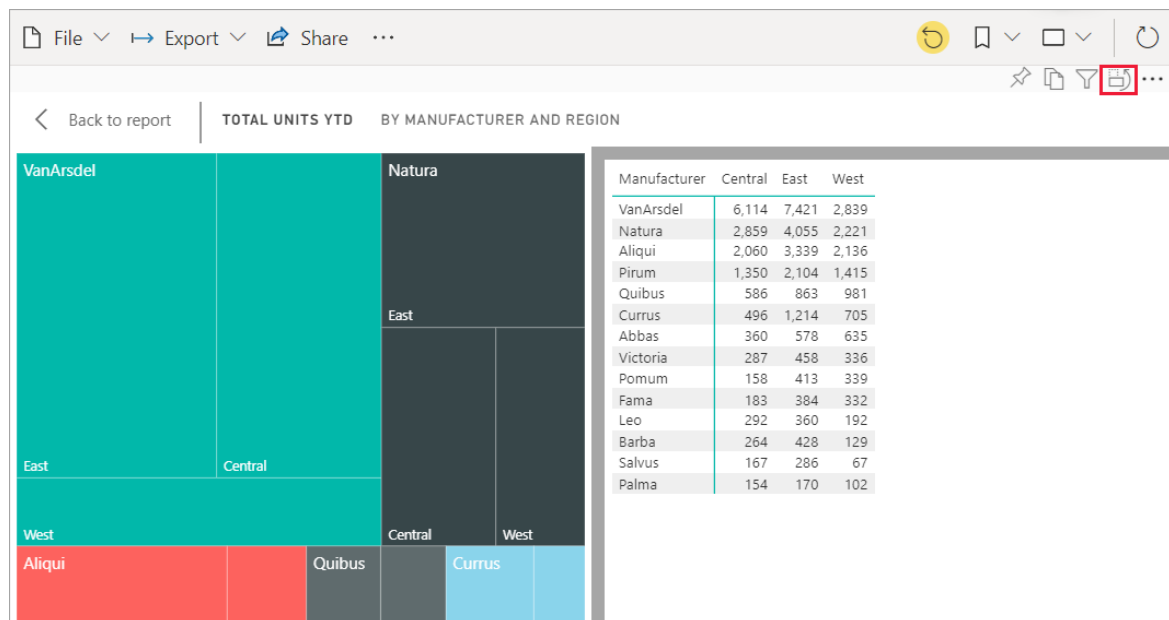
1. In the Power BI service, [open a report](#) and select a visual.
2. To display the data behind the visual, select **More options (...)** and choose **Show as a table**.



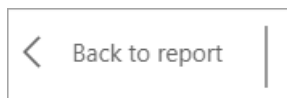
3. By default, the data displays below the visual.



4. To change the orientation, select vertical layout  from the top-right corner of the visualization.



To return to the report, select **Back to report** from the upper left corner.



## Next steps

[Visuals in Power BI reports](#)

[Power BI reports](#)

# Copy a visual as an image to your clipboard

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

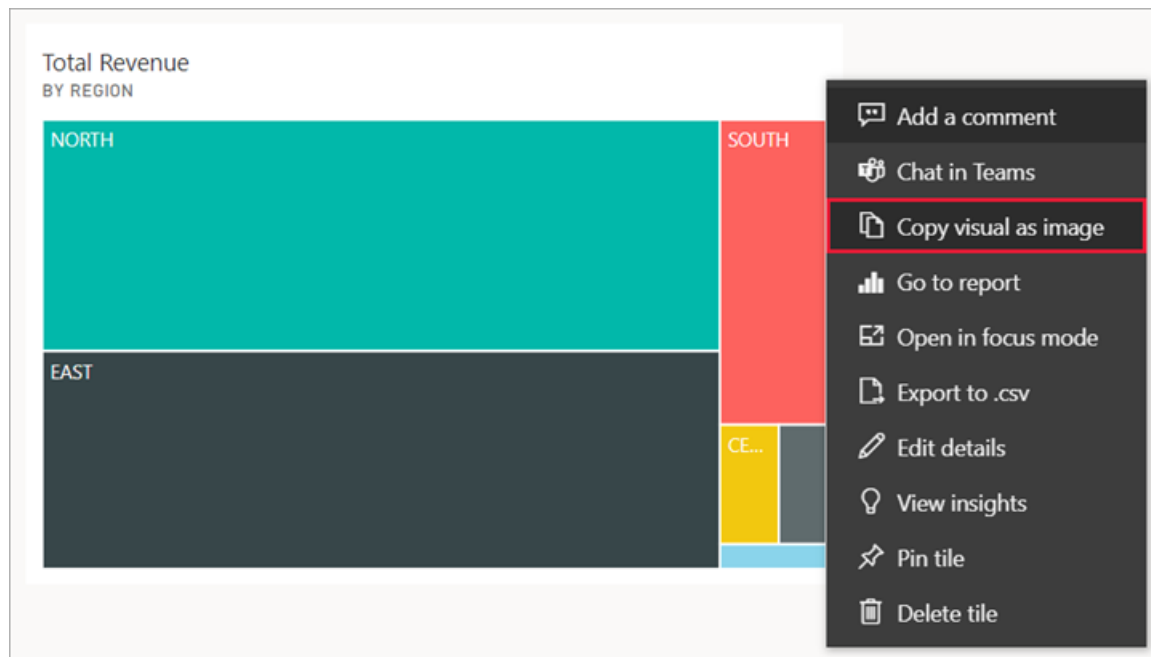
Have you ever wanted to share an image from a Power BI report or dashboard? Now you can copy the visual and paste it into any other application that supports pasting.

When you copy a static image of a visual, you get a copy of the visual along with the metadata. This includes:

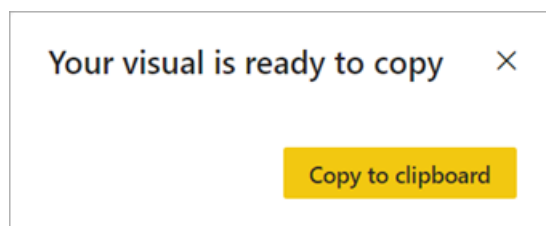
- link back to the Power BI report or dashboard
- title of the report or dashboard
- notice if the image contains confidential information
- last updated time stamp
- filters applied to the visual

## Copy from a dashboard tile

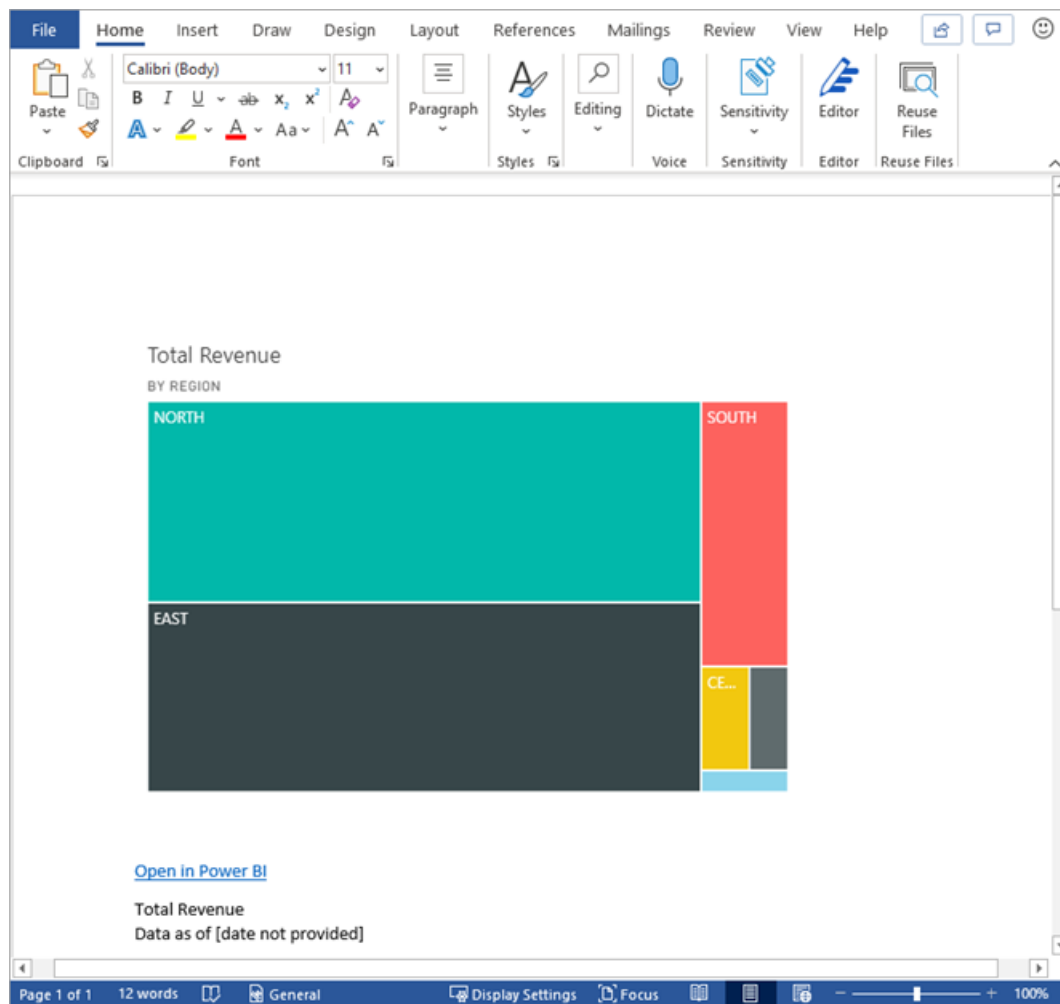
1. Navigate to the dashboard you want to copy from.
2. From the upper right corner of the visual, select **More actions (...)** and choose **Copy visual as image**.



3. When the **Your visual is ready to copy** dialog appears, select **Copy to clipboard**.

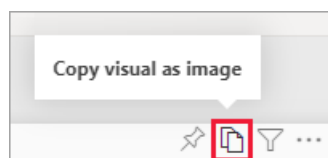


4. After your visual is copied, paste it into another application using **Ctrl + V** or **right-click > Paste**. In the screenshot below, we've pasted the visual into Microsoft Word.

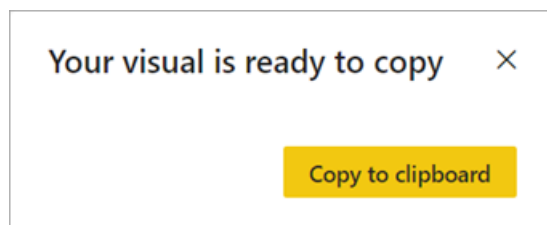


### Copy from a report visual

1. Navigate to the report you want to copy from.
2. From the upper right corner of the visual, select the icon for **Copy visual as image**.

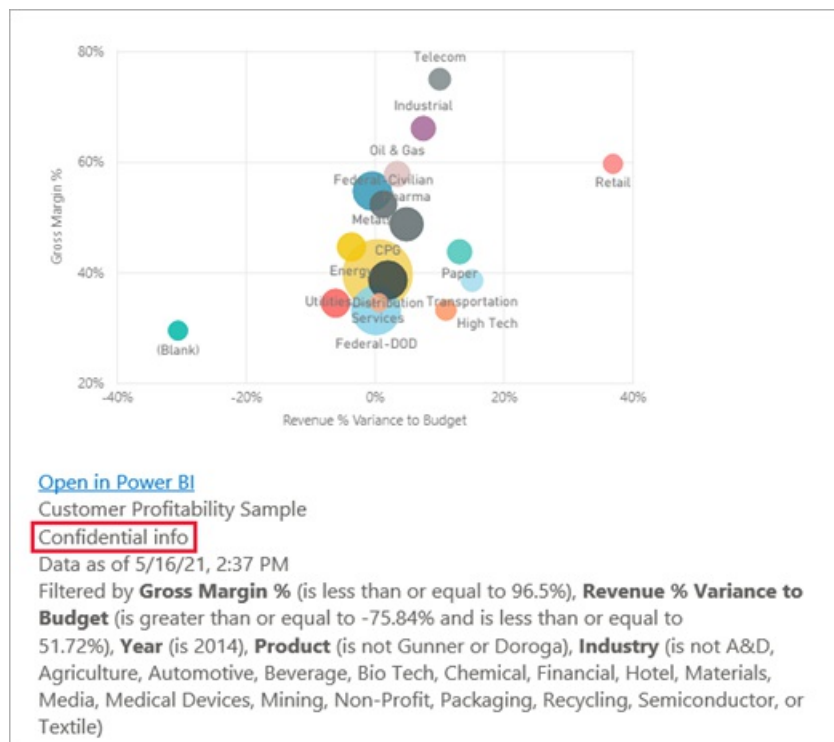


3. When the **Your visual is ready to copy** dialog appears, select **Copy to clipboard**.

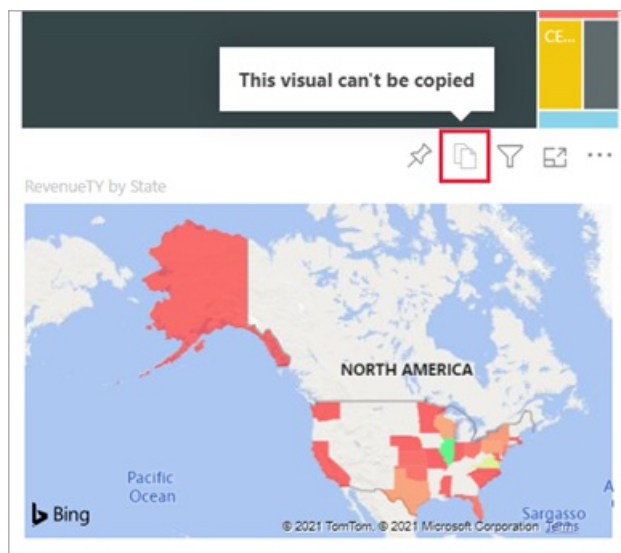


4. After your visual is copied, paste it into another application using **Ctrl + V** or **right-click > Paste**. In the screenshot below, we've pasted the visual into an email.





## Considerations and troubleshooting



Q: Why is the Copy icon disabled on a visual?

A: We currently support native Power BI visuals and certified custom visuals. There is limited support for certain visuals including:

- ESRI and other map visuals
- Python visuals
- R visuals
- PowerApps visuals

A: The ability to copy a visual can be turned off by your IT department or Power BI administrator.

Q: Why is my visual not pasting correctly?

A: There are limitations for custom visuals and animated visuals.

## Next steps



More about [Visualizations in Power BI reports](#)

If you have edit permissions to a report, you can [copy and paste visuals within the same report](#).

More questions? [Try the Power BI Community](#)

# Drill mode in a visual in Power BI

12/10/2021 • 6 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

This article shows how to drill down in a visual in the Microsoft Power BI service. Using drill down and drill up on your data points, you can explore in-depth details about your data.

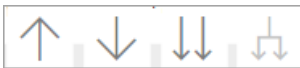
## Drill requires a hierarchy

When a visual has a hierarchy, you can drill down to reveal additional details. For example, you might have a visual that looks at Olympic medal count by a hierarchy made up of sport, discipline, and event. By default, the visual would show medal count by sport: gymnastics, skiing, aquatics, and so on. But, because it has a hierarchy, selecting one of the visual elements (like a bar, line, or bubble), would display an increasingly more-detailed picture. Selecting the **aquatics** element would show you data for swimming, diving, and water polo. Selecting the **diving** element would show you details for springboard, platform, and synchronized diving events.

Dates are a unique type of hierarchy. Report *designers* often add date hierarchies to visuals. A common date hierarchy is one that contains year, quarter, month, and day.

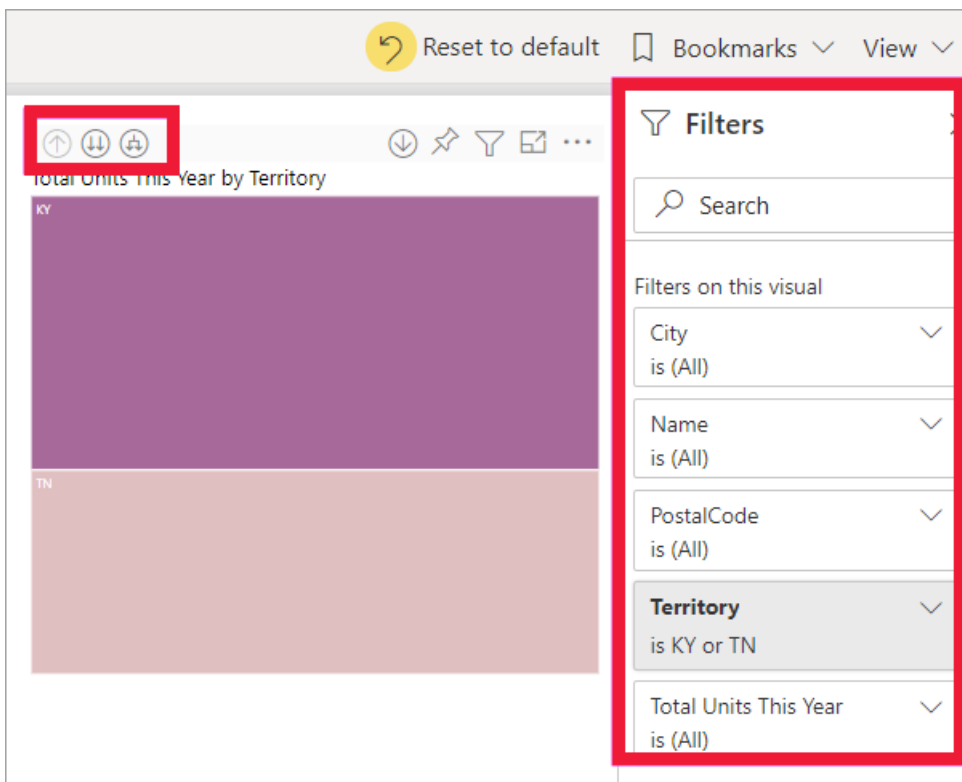
## Figure out which visuals can be drilled

Not sure which Power BI visuals contain a hierarchy? Hover over a visual. If you see a combination of these drill controls at the top, your visual has a hierarchy.



## Learn how to drill down and up

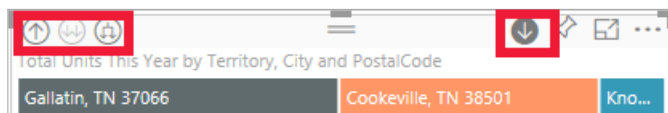
In this example we're using a treemap that has a hierarchy made up of territory, city, postal code, and store name. The treemap, before drilling, looks at total units sold this year by territory. Territory is the top level of the hierarchy.



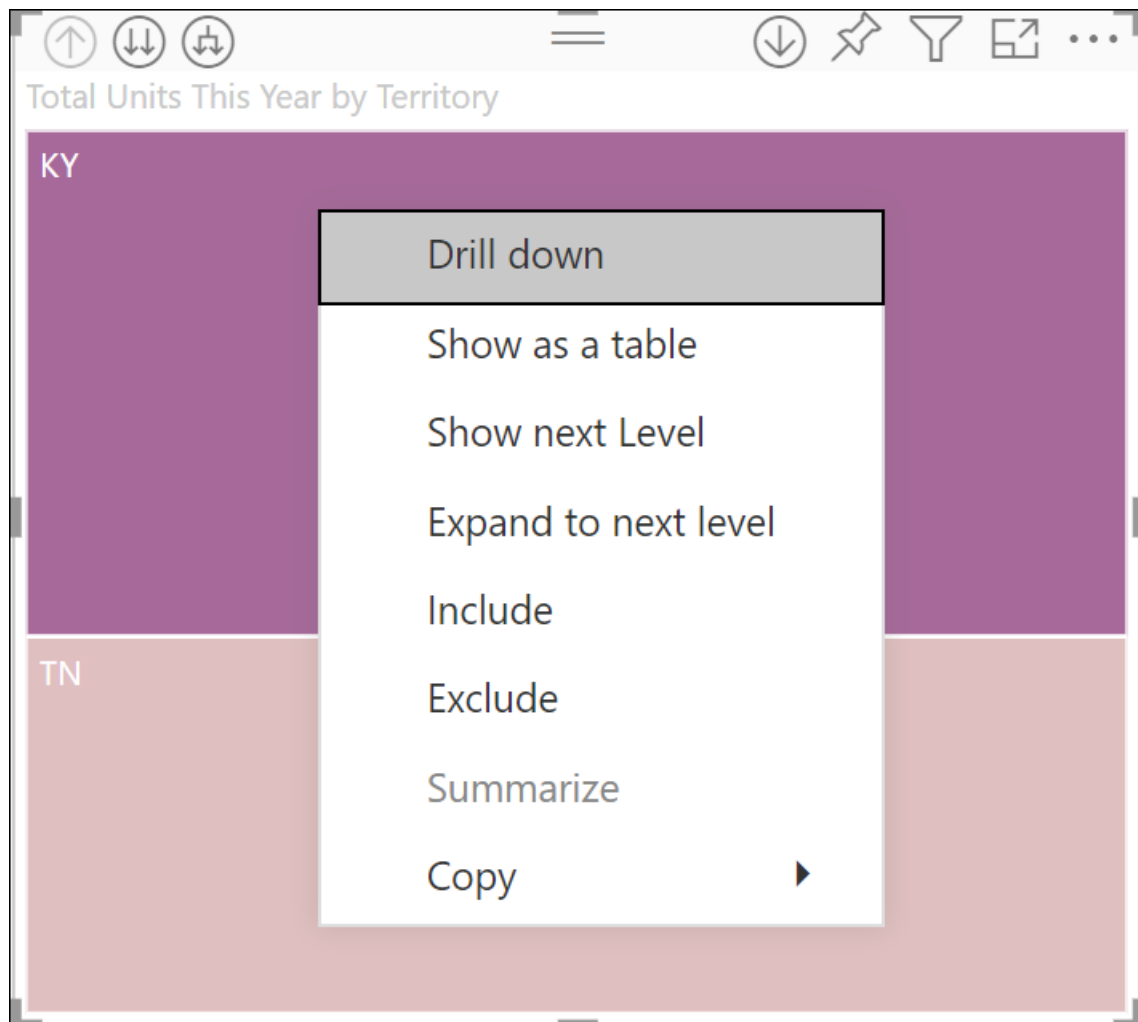
### Two ways to access the drill features

You have two ways for accessing the drill-down, drill-up, and expand features for visuals that have hierarchies. Try them both, and use the one that you enjoy the most.

- First way: hover over a visual to see and use the icons. Turn on the drill-down feature first by selecting the downward arrow. The grey background lets you know that the drill-down option is active.




- Second way: right-click a visual to reveal and use the menu.




## Drill pathways

### Drill down all fields at once



You have several ways to drill into your visual. Selecting the double arrow  drill-down icon takes you to the next level in the hierarchy. If you're looking at the **Territory** level for Kentucky and Tennessee, you can drill down to city level for both states, then postal code level for both states, and, finally, the store name level for both states. Each step in the path shows you new information.



Select the drill-up icon  until you get back to "Total units this year by territory".


### Expand all fields at once



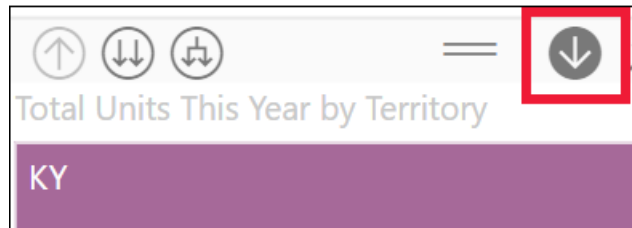
**Expand** adds an additional hierarchy level to the current view. So if you're looking at the **Territory** level, you can expand all current leaves in the tree at the same time. Your first drill adds city data for both **KY** and **TN**. The next drill adds postal code data for both **KY** and **TN**, and keeps city data as well. Each step in the path shows you the same information and adds on one level of new information.



## Drill down one field at a time

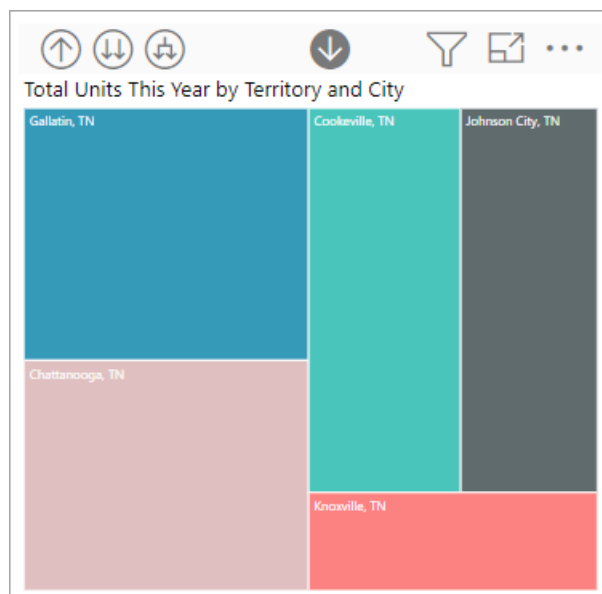
1. Select the drill-down icon to turn it on .

Now you have the option of drilling down **one field at a time** by selecting a visual element. Examples of visual elements are: bar, bubble, and leaf.



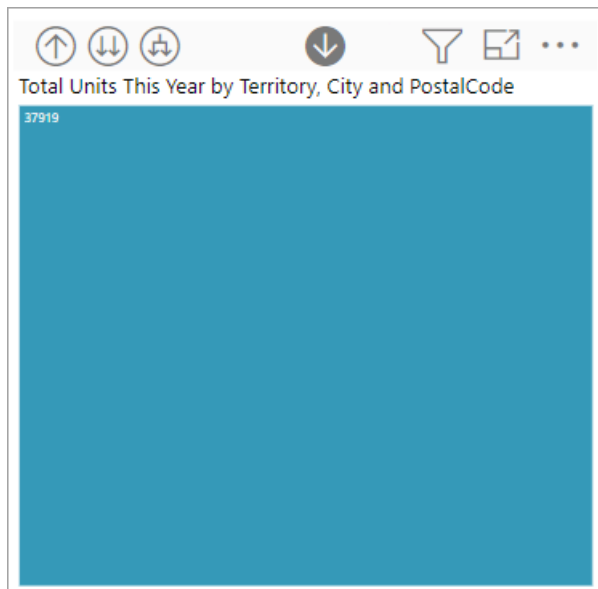
If you don't turn on the drill-down option, selecting a visual element (like a bar, bubble, or leaf) won't drill down. Instead, it will cross-filter the other charts on the report page.

2. Select the leaf for **TN**. Your treemap now shows all the cities and territories in Tennessee that have a store.



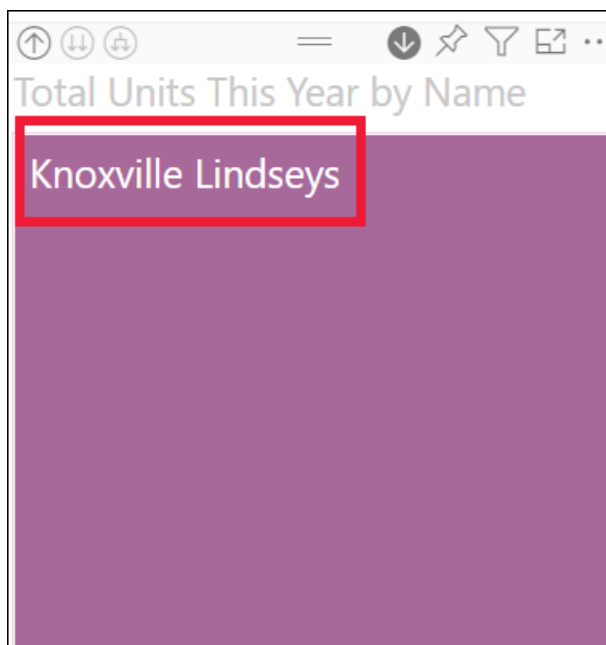
3. At this point, you can:
  - a. Continue drilling down for Tennessee.
  - b. Drill down for a particular city in Tennessee.
  - c. Expand instead.

Let's continue to drill down one field at a time. Select **Knoxville, TN**. Your treemap now shows the postal code for your store in Knoxville.



Notice that the title changes as you drill down and back up again.

And drill down one more field. Select postal code 37919 and drill down to store name.

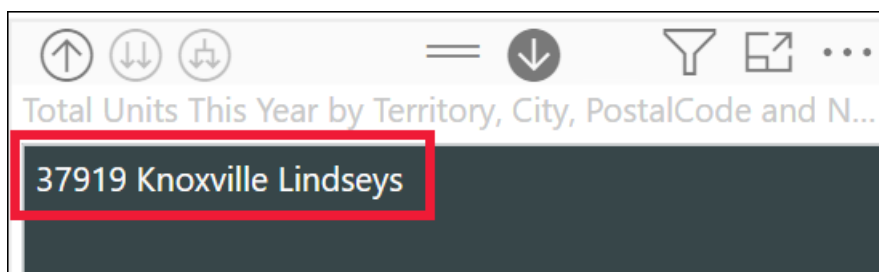


For this particular data, drilling down all levels at once may not be interesting. Let's try expanding instead.

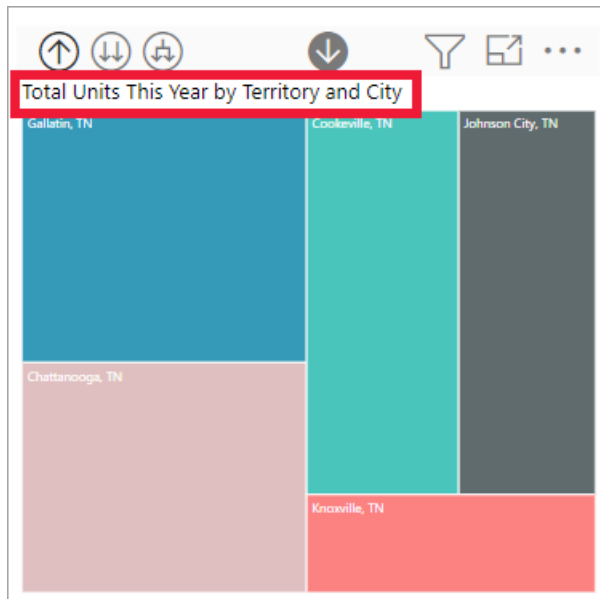
### Expand all and expand one field at a time



Having a treemap that shows us only a postal code or only a store name isn't informative. So let's *expand* down one level in the hierarchy.

1. First, drill back up to the postal code level.
2. With the treemap active, select the *expand down* icon . Your treemap now shows two levels of the hierarchy: postal code and store name.



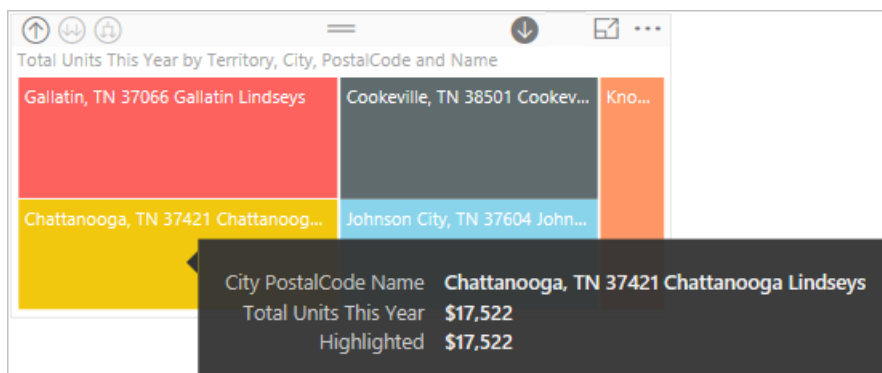
3. To see all four hierarchy levels of data for Tennessee, select the drill-up arrow until you reach the second level, **Total units this year by territory and city**.



4. Make sure the drill-down option is still turned on,  and select the *expand down* icon . Your treemap now shows the same number of leaves (boxes), but each leaf has additional detail. Instead of only showing city and state, it now also shows us postal code.



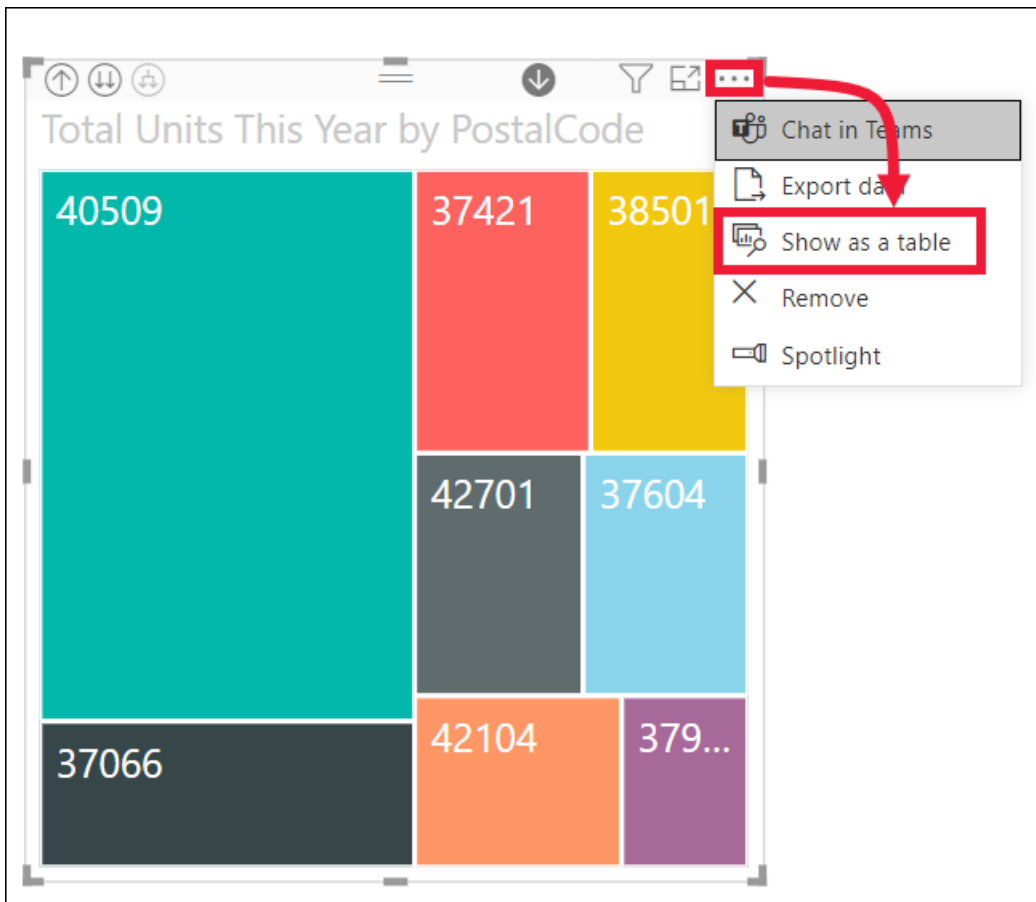
5. Select the *expand down* icon one more time to display all four hierarchy levels of detail for Tennessee on your treemap. Hover over a leaf to see even more detail.



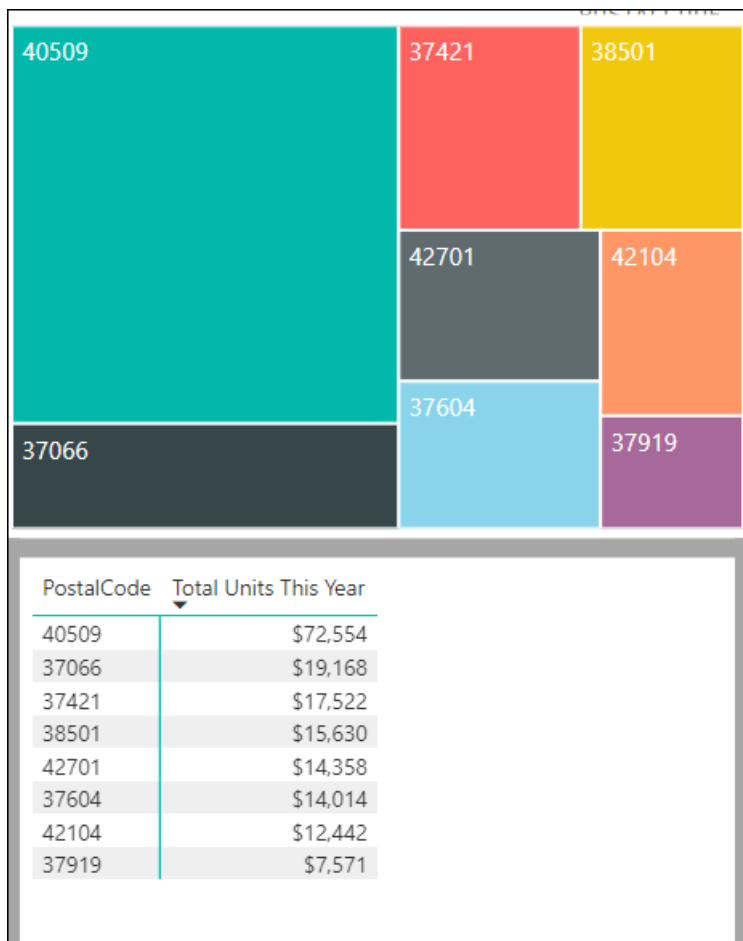
## Show the data as you drill

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 being used to build the visual. This may help you understand how hierarchies, drill, and expand work together to build visuals.

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



Power BI opens the treemap so that it fills the canvas. The data that makes up the treemap displays below the visual.



With the visual alone in the canvas, continue drilling. Watch the data in the table change to reflect the data being used to create the treemap. The following table shows the results of drilling down all fields at once from territory to store name. The first table represents the top level of the hierarchy, the treemap showing two leaves, one for KY and one for TN. The next three tables represent the treemap's data as you drill down all levels at once--from territory to city to postal code to store name.

Territory	Total Units This Year		City	Total Units This Year		PostalCode	Total Units This Year		Name	Total Units This Year
KY	\$99,354	→	Lexington, KY	\$72,554	→	40509	\$72,554	→	Lexington Fashions Direct	\$72,554
TN	\$73,905	→	Gallatin, TN	\$19,168	→	37066	\$19,168	→	Gallatin Lindseys	\$19,168
			Chattanooga, TN	\$17,522		37421	\$17,522		Chattanooga Lindseys	\$17,522
			Cookeville, TN	\$15,630		38501	\$15,630		Cookeville Lindseys	\$15,630
			Elizabethtown, KY	\$14,358		42701	\$14,358		Elizabethtown Lindseys	\$14,358
			Johnson City, TN	\$14,014		37604	\$14,014		Johnson City Lindseys	\$14,014
			Bowling Green, KY	\$12,442		42104	\$12,442		Bowling Green Lindseys	\$12,442
			Knoxville, TN	\$7,571		37919	\$7,571		Knoxville Lindseys	\$7,571

Notice that the totals are the same for **City**, **PostalCode**, and **Name**. Matching totals won't always be the case. But for this data, there's only one store in each postal code and in each city.

## Considerations and limitations

- By default, drilling won't filter other visuals in a report. However, the report designer can change this default behavior. As you drill, look to see if the other visuals on the page are cross-filtering or cross-highlighting.
- Viewing a report that has been shared with you requires a Power BI Pro or Premium license or for the report to be stored in Power BI Premium capacity. [Which license do I have?](#)

## Next steps

[Visuals in Power BI reports](#)

[Power BI reports](#)

Power BI - Basic Concepts

More questions? [Try the Power BI Community](#)

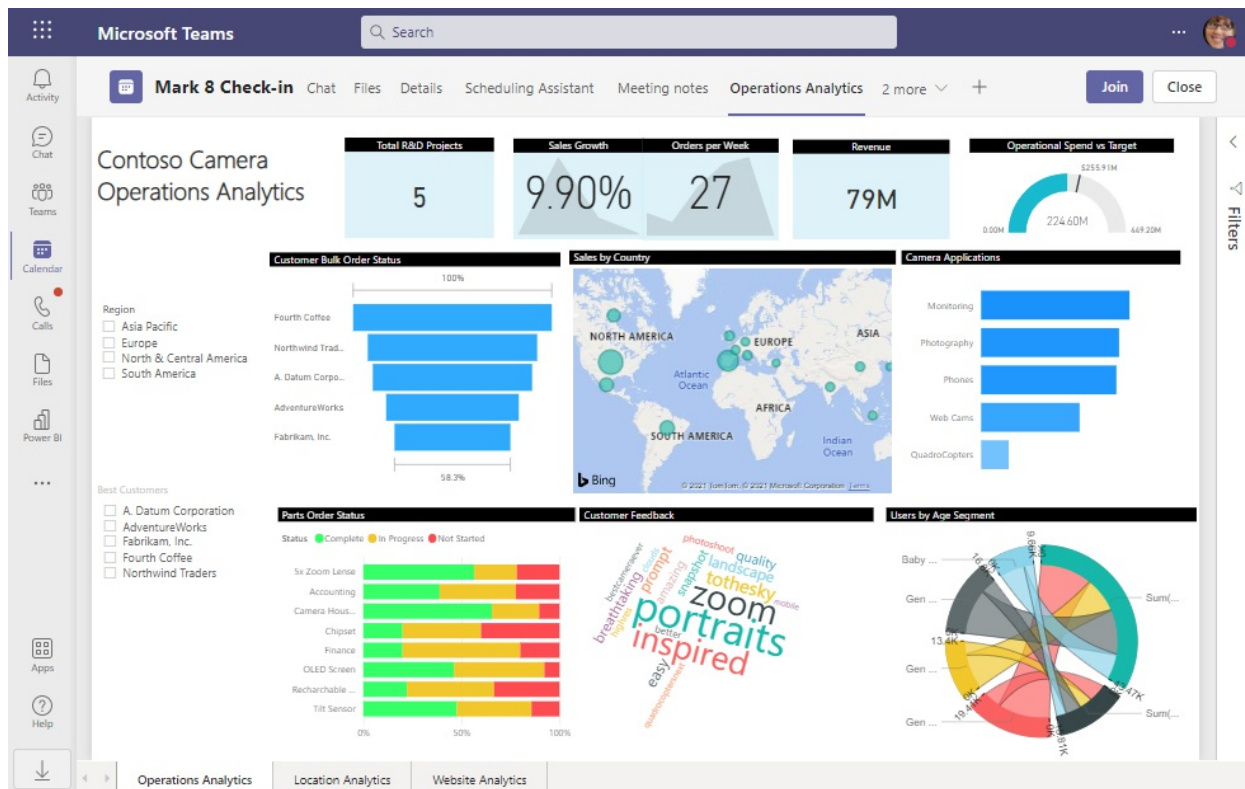
# Use data to make meetings productive in Microsoft Teams

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:** Power BI service for **business users** Power BI service for designers & developers   
Power BI Desktop Requires Pro or Premium license

In meetings, keeping everyone on track towards shared objectives is important. Use data, trends, and metrics to show the impact of the work you and your team are doing.

It's easy to use Power BI in meetings to help keep important data top of mind. It helps everyone know which data is the most important, and builds skills that help your team make agile decisions based on your progress towards objectives. By staying focused on driving towards measurable outcomes, your team gains a sense of the positive impact their work is having.



Here's how you can use data before, during, and after your meetings.

- **Before the meeting**, add the reports and scorecards directly to the meeting invite so everyone has access to them.
- **During the meeting**, open and present these reports from the calendar. You can even use chat to share more reports and scorecards, or to quickly find the right data to answer questions raised in the meeting.
- **After the meeting**, send a summary with key results that you discussed and actions the team decided to take to help achieve the desired outcomes.

## Ask data-driven questions

Here are the kinds of questions you can add to your meeting agenda, to jump start discussion and determine the best actions to take to achieve your desired outcomes:

- **Are we making progress** toward our objectives as quickly as we expected to?
- **What actions can we take** in the next week or month that are most likely to improve our metrics?
- **What metrics can we start tracking** to get a better sense of if we're making progress towards our desired outcomes?

Review your data weekly, or at least monthly, to get in the habit of asking questions, discussing the best actions to take in the next week or two, and helping the team learn to leverage data as they plan their work.

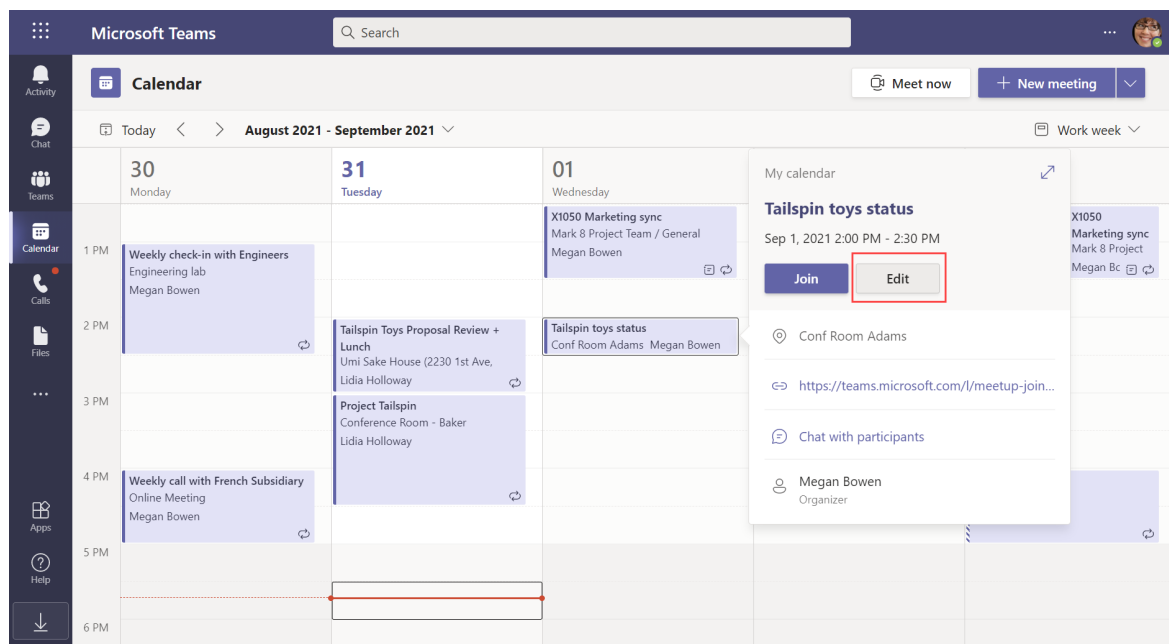
## Before the meeting

To get ready for the meeting, add a Power BI report or scorecard to the meeting invite. You review the data in the report or scorecard, and encourage other participants to do the same. Then everyone is ready for the meeting.

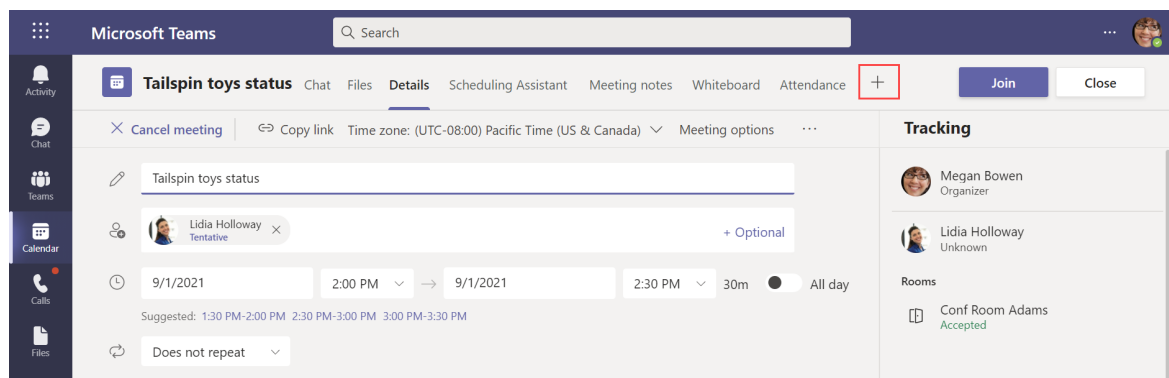
### Add Power BI

Here's how to add a Power BI report or scorecard to a meeting.

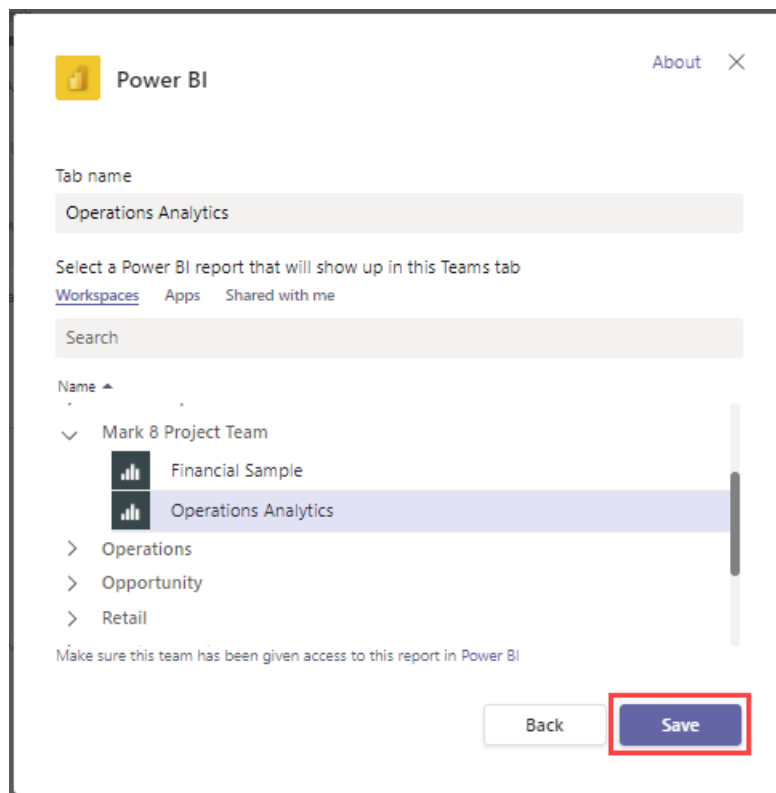
1. Create the meeting and invite others.
2. Send the meeting invite.
3. Select **Edit** to open the meeting in the calendar. You only see the option to edit if you're the meeting organizer.



4. Select the **+ Add a tab** button to add the Power BI tab to the meeting.



5. Navigate to a report or scorecard and select it.
6. Select **Save**.



7. See [Give team members permission](#) in the "Lead data-driven discussions in Microsoft Teams" article for how to share with your colleagues.
8. Add an agenda item to the meeting to review and discuss the data.

### Review the data

It's a good idea to review your data in Power BI before a meeting.

1. Open the meeting from the calendar.
2. Open the Power BI tab that has the report or scorecard.
3. Review the report or scorecard.

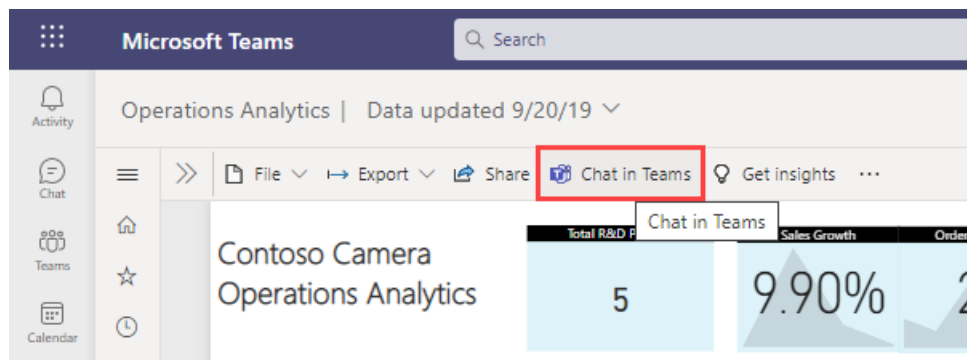
Consider setting a reminder for your meeting so attendees can also pre-read the data before the meeting. This helps everyone be aware of the latest data, and improves the discussion during the meeting.

## During the meeting

When you're in a meeting, data can help guide the discussion or answer questions raised by attendees. It's easy to present data in Power BI during the meeting, share links to data with meeting attendees, and find data that can answer questions.

1. After joining the meeting, navigate to the Teams window.
2. Open the calendar in Teams.
3. Open the meeting in the calendar.
4. Anyone in the meeting can select the Power BI tab to view the report that you added to the meeting.



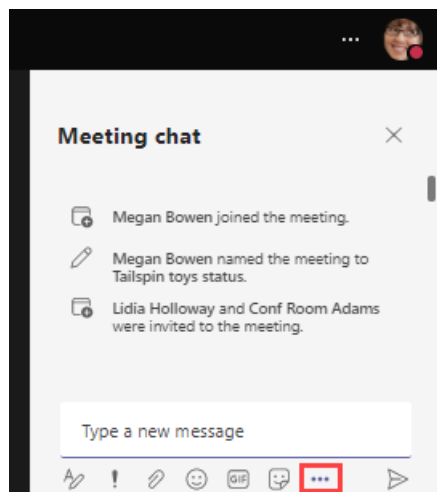


4. Select the meeting name to send to.
5. Type your message above the link that's provided.
6. Press **Send**.

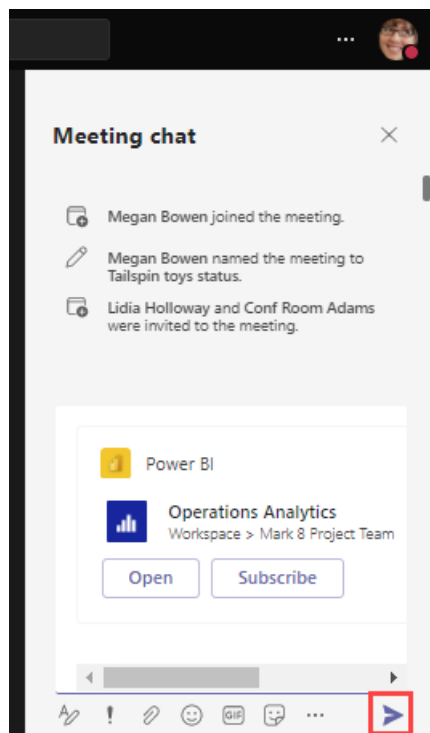
Your message appears as part of the meeting chat. Attendees can open it to see the data you wanted with the filters and slicers applied.

### Answer questions with data in chat

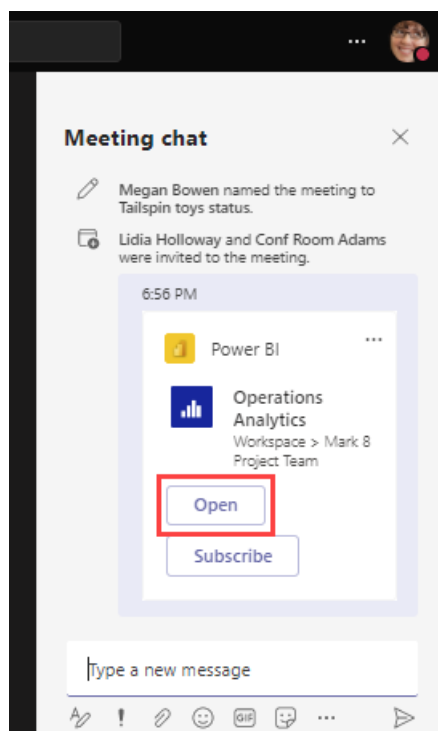
1. Open the meeting chat.
2. Select **Messaging extensions (...)**.



3. Select **Power BI**.
4. Search for content, or select from your list of recent items.
5. Pick a Power BI item.
6. Select **Send**.



7. Select **Open**.



## After the meeting

It's useful to share a summary of the most important data points discussed and the actions the team will take to help achieve outcomes. If you captured visuals during the meeting in chat, you can pull those into a meeting summary post in chat or a follow-up message.

Consider using key data points to create goals and track them in a scorecard. Consistently tracking progress against with a goal through a series of meetings is a great way to keep your team or project on track.





## Next steps

- [Add the Power BI app to Microsoft Teams](#)
- [Use Power BI goals to improve results in Microsoft Teams](#)

- [Share a data-driven discussion in Microsoft Teams](#)
- [Create reports from data in Microsoft Teams](#)
- [Analyze your Teams collaboration data](#)

# Use Power BI goals to improve results in Microsoft Teams

12/10/2021 • 3 minutes to read • [Edit Online](#)

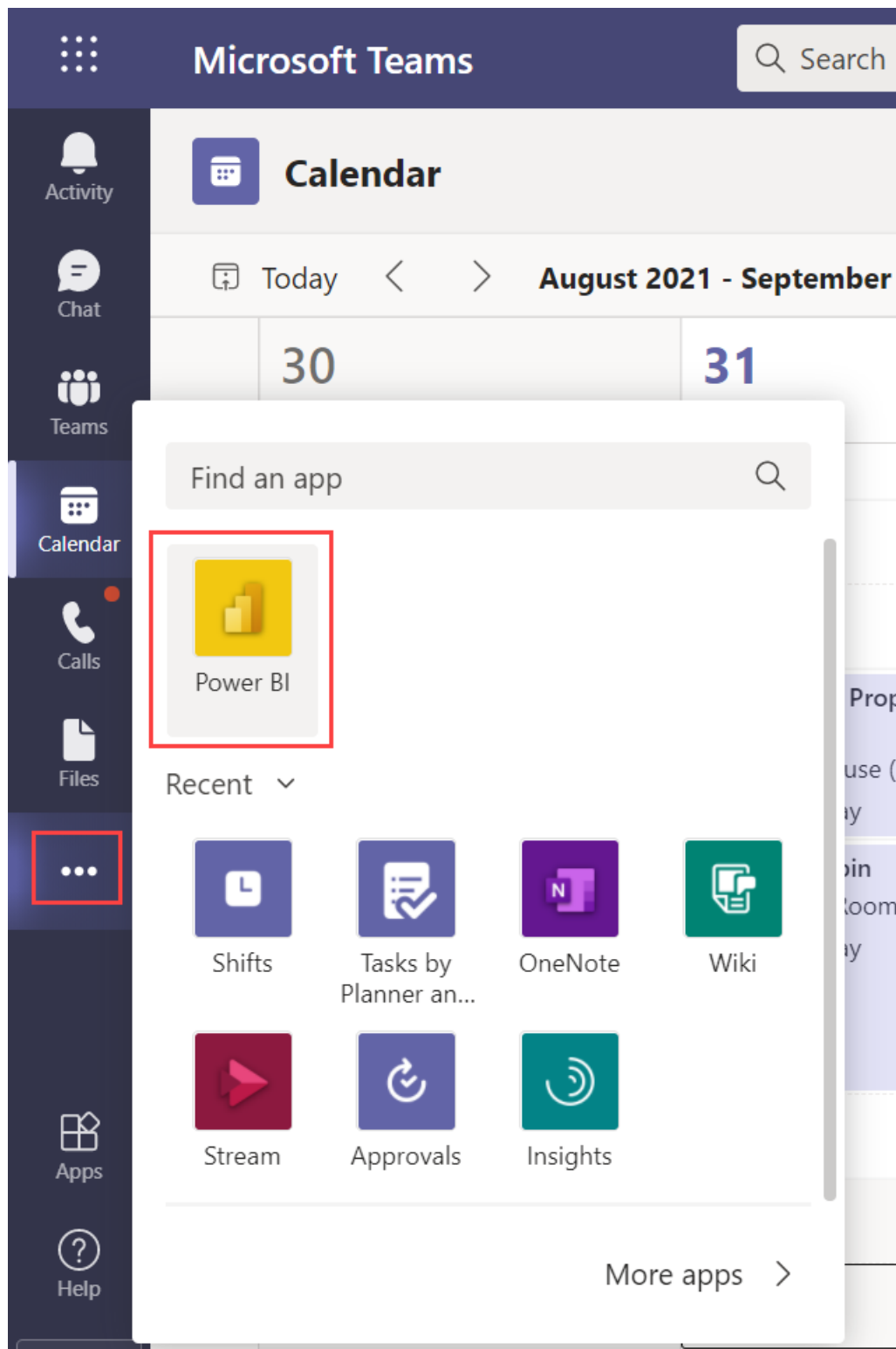
**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

Teams benefit from having clear and measurable objectives. Tracking goals in Microsoft Teams with your team helps the team stay on track, promoting accountability, alignment, and visibility. By tracking progress towards key objectives together, the team can engage in creative and agile decision-making that helps achieve objectives faster.

It takes just a minute to create a goal in Power BI. Each goal has a name, owner, the current value, the target, and a status. You can even add start and end dates for the goal. Sub-goals help you track key objectives that are needed to support a bigger goal.

## Add the Power BI personal app to Teams

- In Microsoft Teams, select **More added apps ...** > **Power BI**.

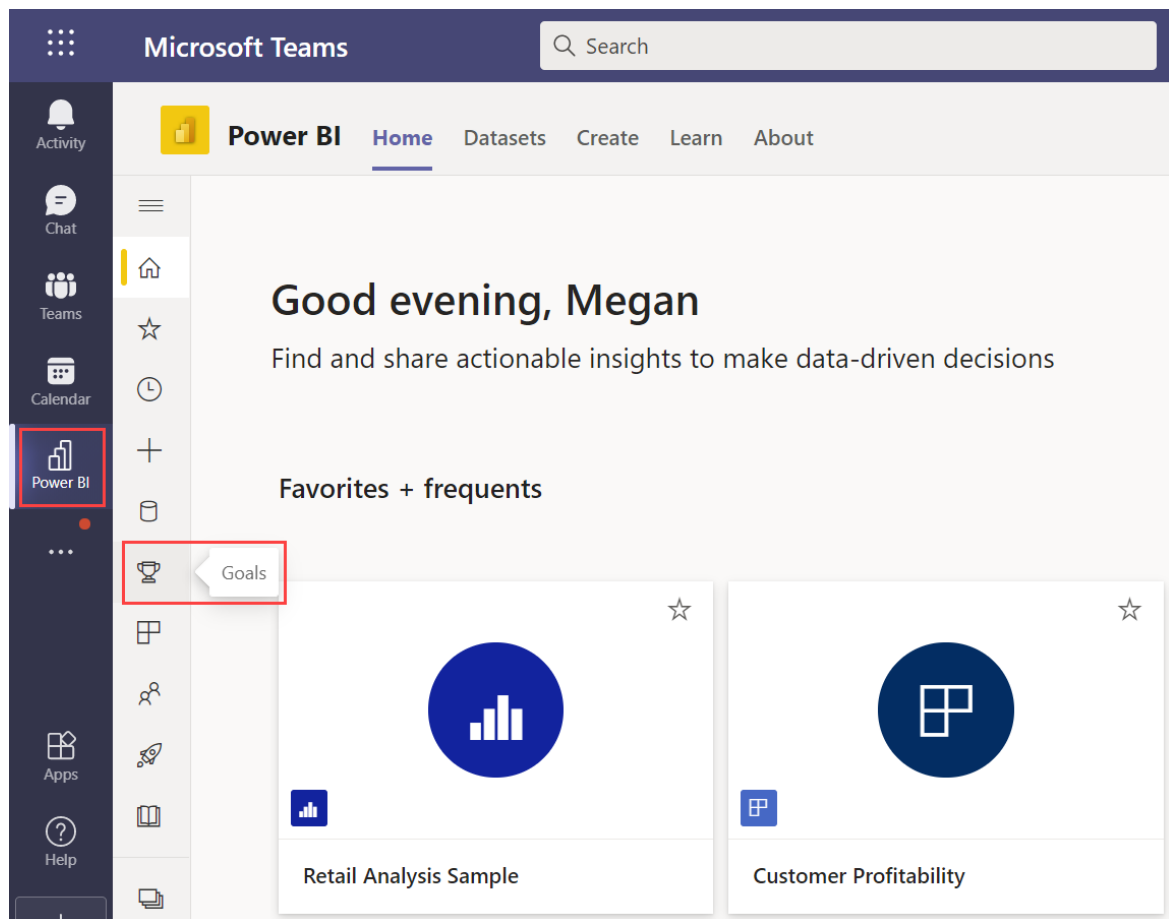


Now Power BI opens right inside Microsoft Teams.

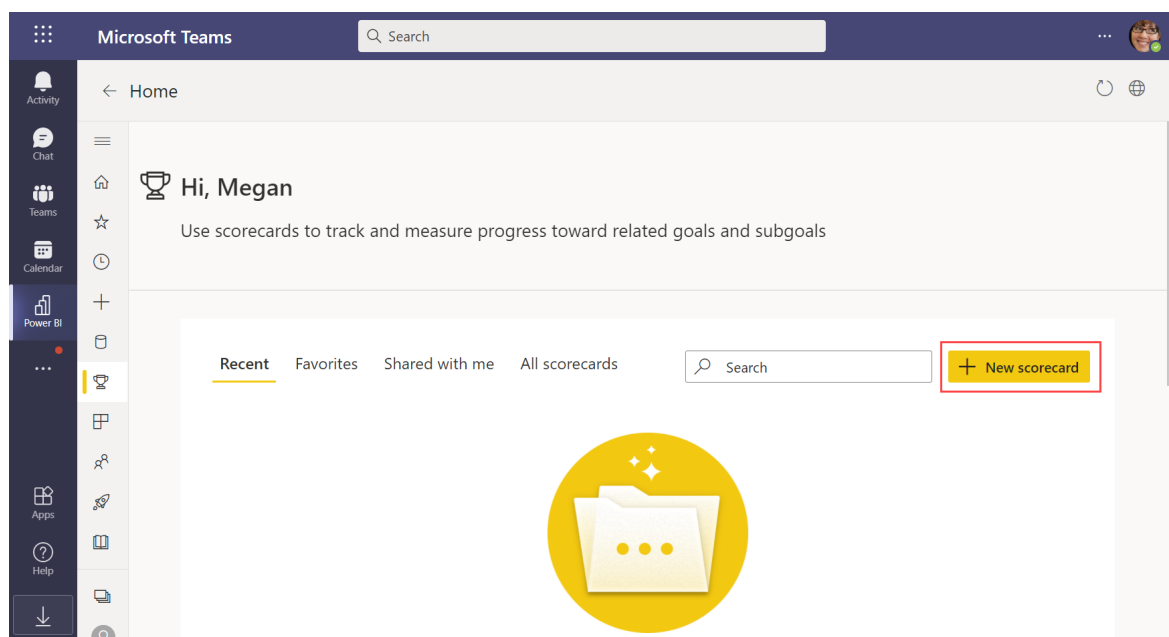
## Create your first goal in a scorecard

It's simple to start tracking goals by creating a scorecard.

1. Open Power BI in Teams.
2. Select **Goals** in the navigation pane to open the Goals hub.



3. Select **New scorecard**.



4. Give the scorecard a name and description.

5. Create a goal in the scorecard, with a **Goal name**, **Current** and **Target** values, **Status**, and **Start** and **Due dates**. You can type in numbers, or you select **connect to data** to get values from your reports.

Microsoft Teams

Tailspin project |

Share Chat in Teams Read mode

**Tailspin project**  
Tailspin project development progress

Goals: 1, On track: 0, At risk: 0, Behind: 0, Not started: 1, Overdue: 0, Completed: 0

+ New goal Add subgoal

100 %  
Percentage \$ % 0

Goal name: Completion rate  
Owner: Megan Bowen  
Current: 10 %  
Target: 1  
Status: Not started  
Start date: 08/31/2021  
Due date: 10/01/2021

Save Cancel

6. Select **Save**.

Microsoft Teams

Tailspin project |

Share Chat in Teams Read mode

**Tailspin project**  
Tailspin project development progress

Goals: 1, On track: 1, At risk: 0, Behind: 0, Not started: 0, Overdue: 0, Completed: 0

+ New goal Add subgoal

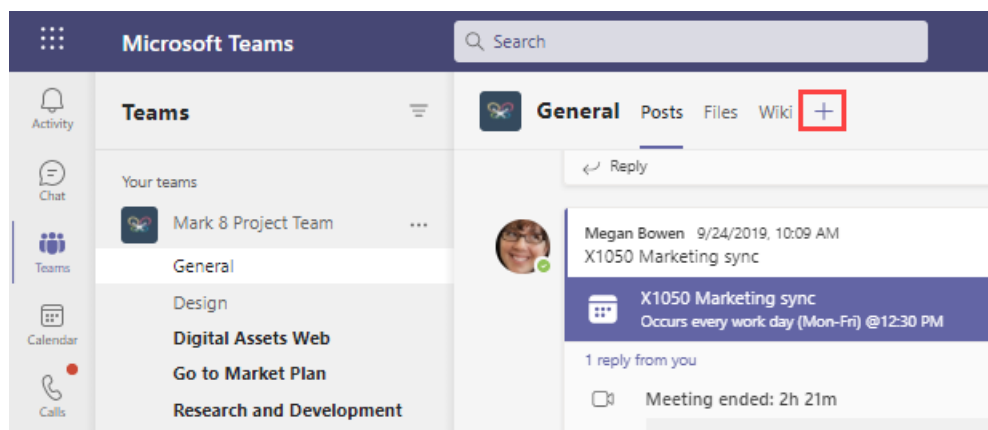
Name	Owner	Status	Value	Progress	Due date	Notes
Completion rate	Megan Bowen	On track	10 %/100 %		Oct 1, 2021	

After you've saved your scorecard with its goals, you can share with your team by adding it to a Teams meeting, channel, or chat as a tab or as a link in the meeting chat. Read more about [creating scorecards and goals in Power BI](#).

## Track goals with your team

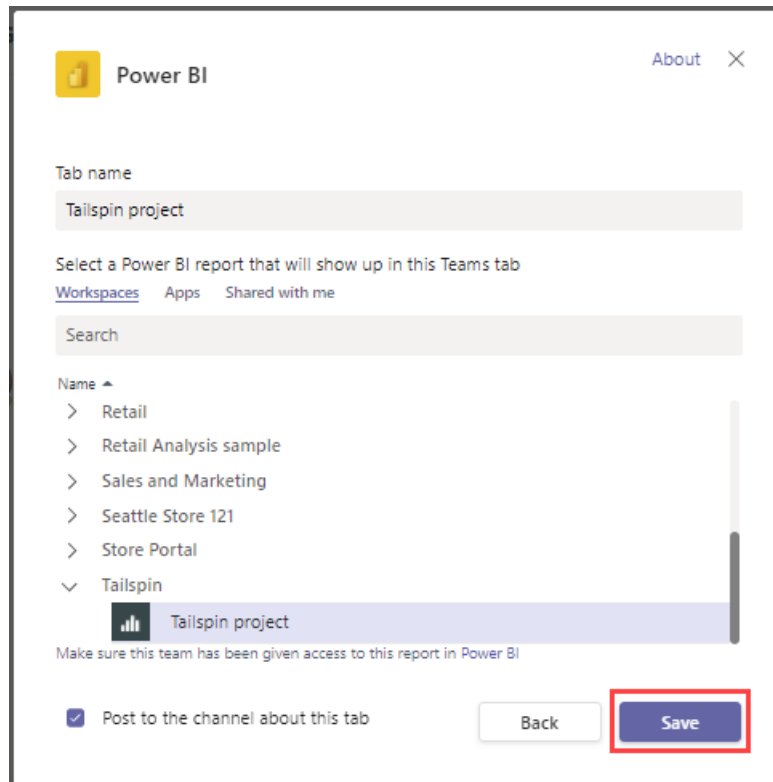
To keep your goals top of mind for your team, add your scorecards as tabs to your channels and meetings.

1. Open a channel or meeting.
2. Select the + **Add a tab** button and add the Power BI tab.



3. Pick a scorecard. If you keep **Post to the channel** about this tab selected, Teams adds a post to the chat, about the new tab.

4. Select **Save**.



Power BI

About X

Tab name

Tailspin project

Select a Power BI report that will show up in this Teams tab

Workspaces Apps Shared with me

Search

Name

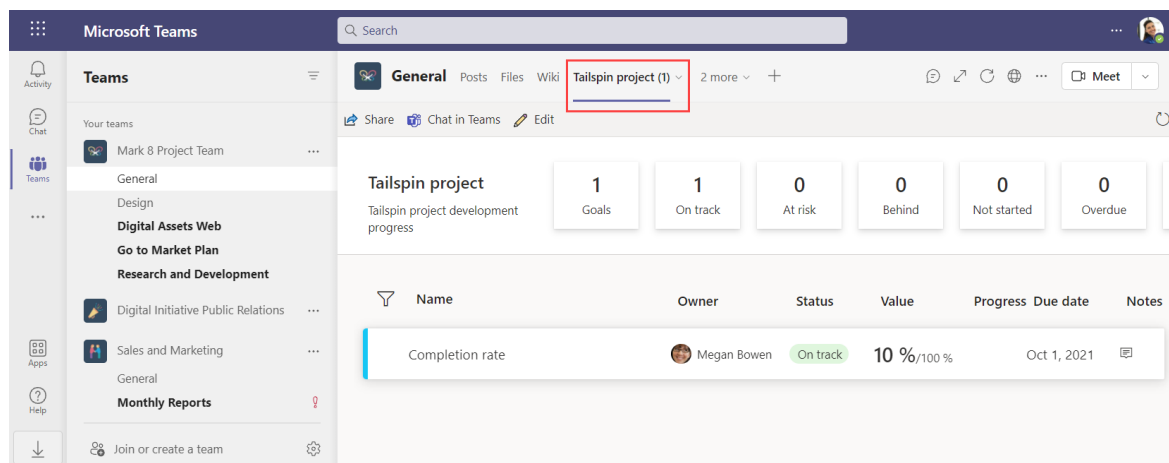
- > Retail
- > Retail Analysis sample
- > Sales and Marketing
- > Seattle Store 121
- > Store Portal
- ✓ Tailspin
  - Tailspin project

Make sure this team has been given access to this report in Power BI

☒ Post to the channel about this tab

Back Save

5. Now you see the scorecard as a tab in the channel.



Microsoft Teams

Search

Teams

General Posts Files Wiki Tailspin project (1) 2 more +

Share Chat in Teams Edit

Tailspin project

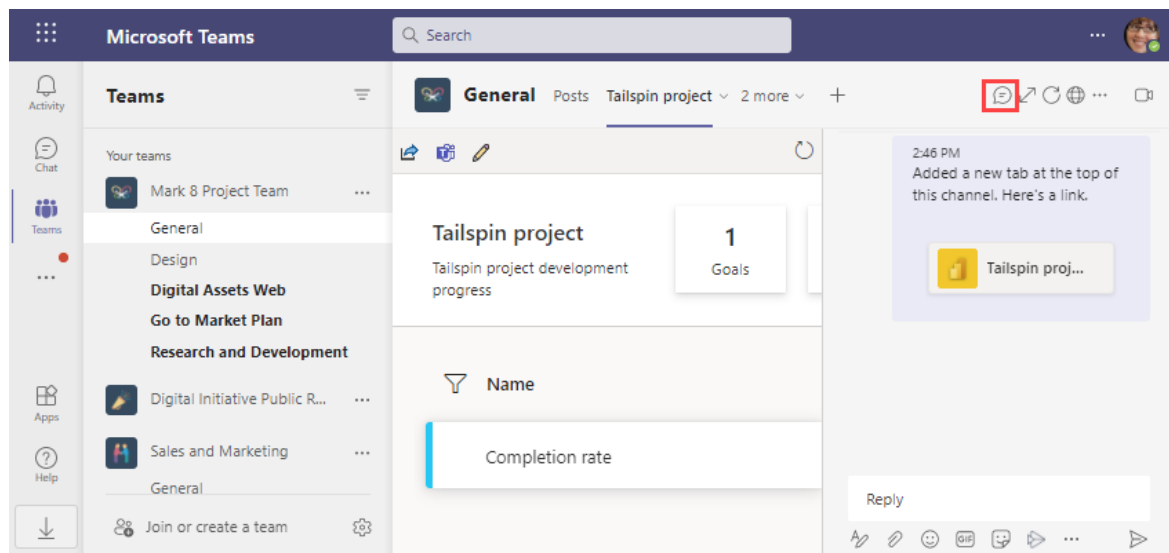
Tailspin project development progress

1 Goals 1 On track 0 At risk 0 Behind 0 Not started 0 Overdue

Name	Owner	Status	Value	Progress	Due date	Notes
Completion rate	Megan Bowen	On track	10 %/100 %		Oct 1, 2021	

6. You may need to share it with colleagues. See [Give team members permission](#) in the "Lead data-driven discussions in Microsoft Teams" article for how to share with your colleagues.

7. Open the chat window in Teams to see the post about the scorecard.



## Make tracking goals part of your team rhythm

Make keeping your goals up to date easier with just a little more work. Here are a few capabilities to explore:

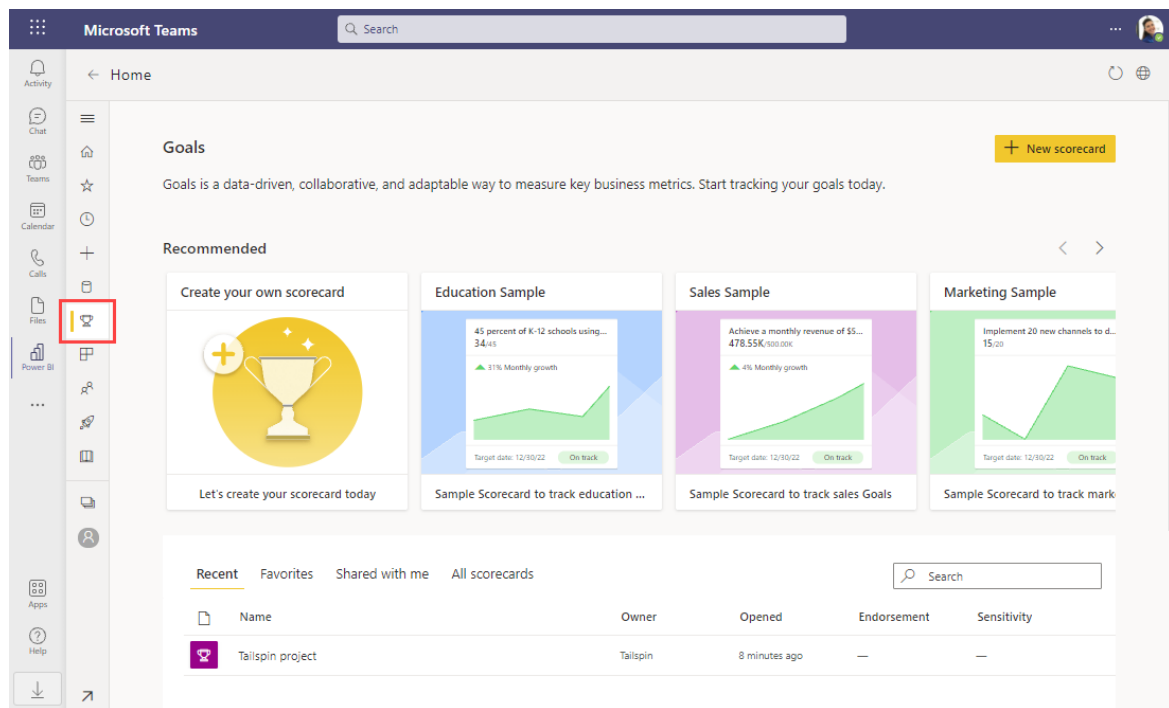
- Use check-ins for goals to share context about goals. By encouraging and reviewing check-ins on goals, your team can share the *why* behind the numbers so they're visible to everyone.
- Automatically update your goals' current values. By connecting your goal to a report, whenever the data in the report refreshes, the goal's current value is automatically kept up to date.
- Set the goal status automatically. By creating automated rules to set the status of goals, the goal's status always reflects the data correctly.

These capabilities help your team save time by eliminating manual updates, and helps keep scorecards fully updated.

## Find all your goals in the Goals hub

Each project and organization can have its own goals. You can find all your goals in one place in the Goals hub that is part of the Power BI app for Microsoft Teams. Here's how to find it.

1. Open the Power BI app for Teams from the Teams left navigation.
2. Select **Goals** in the Power BI navigation pane to open the Goals hub.







## Next steps

- [Add the Power BI app to Microsoft Teams](#)
- [Create scorecards and goals in Power BI](#)
- [Use data to make better meetings in Microsoft Teams](#)
- [Share a data-driven discussion in Microsoft Teams](#)
- [Create reports from data in Microsoft Teams](#)
- [Analyze your Teams collaboration data](#)

# Lead data-driven discussions in Microsoft Teams

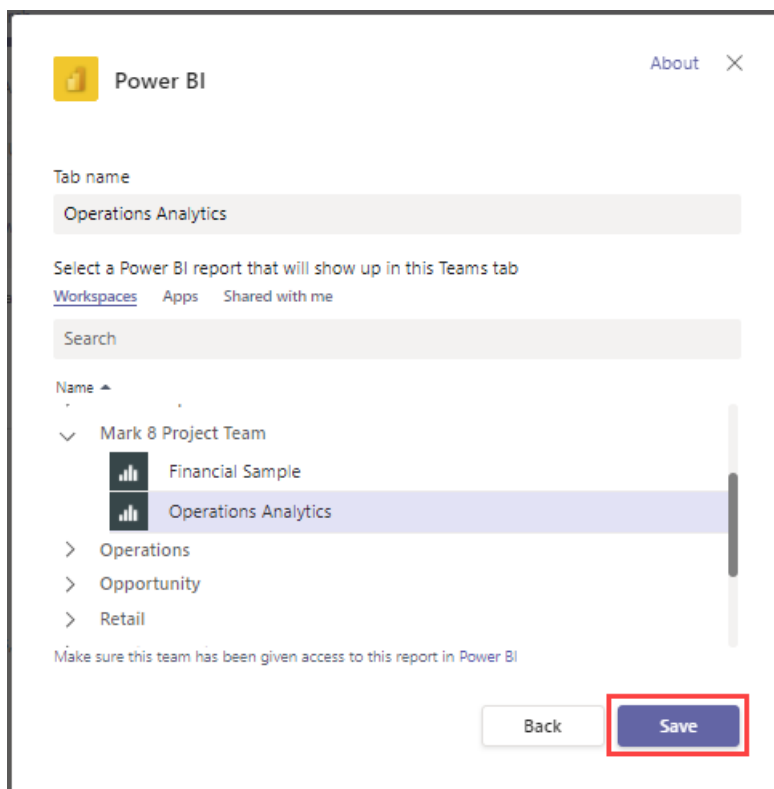
12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

Data helps everyone get on the same page before important decisions. Sharing data with your team is important and easy with Power BI in Microsoft Teams. You can share data in Teams in channels, in chats, and in meetings.

## Share in channels, chats, and meetings

1. Open the channel, chat, or meeting where you'd like to share.
2. Select the + **Add a tab** button and add the Power BI tab.
3. Pick the Power BI item you'd like to share.
4. Select **Save**.

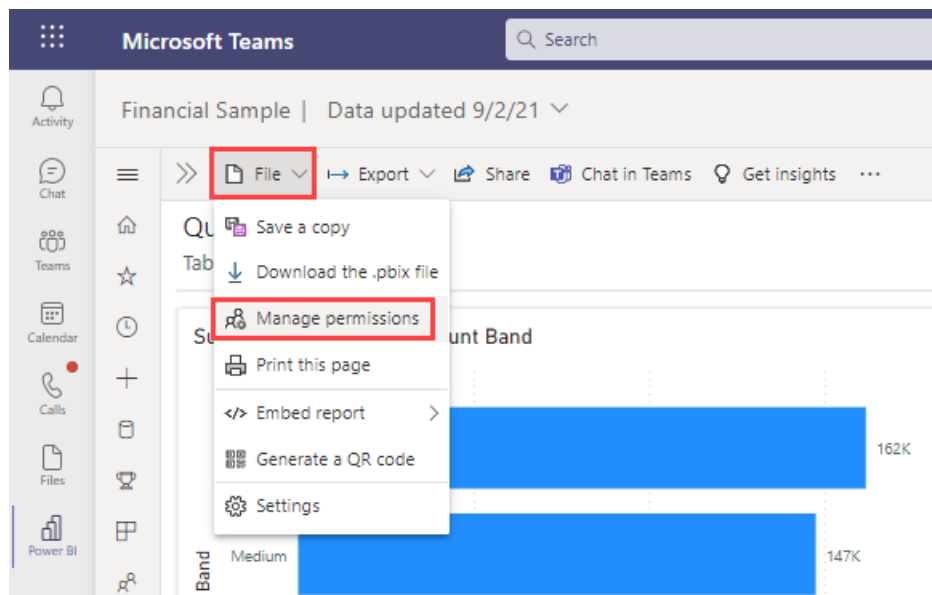


This works in channels, meetings, and even in chats.

## Give team members permission

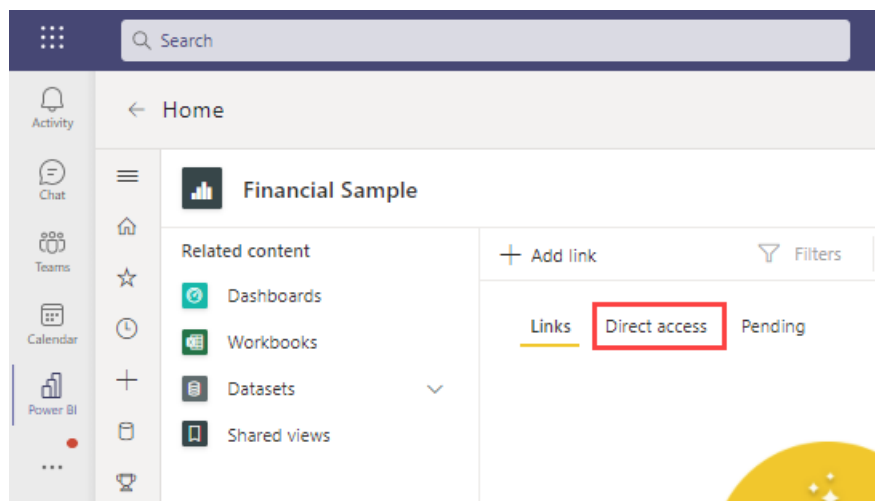
Make sure your team has permission to the report or scorecard by sharing it with them.

1. Open the item in Power BI in Teams, or in the Power BI service, and select **File > Manage Permissions**.

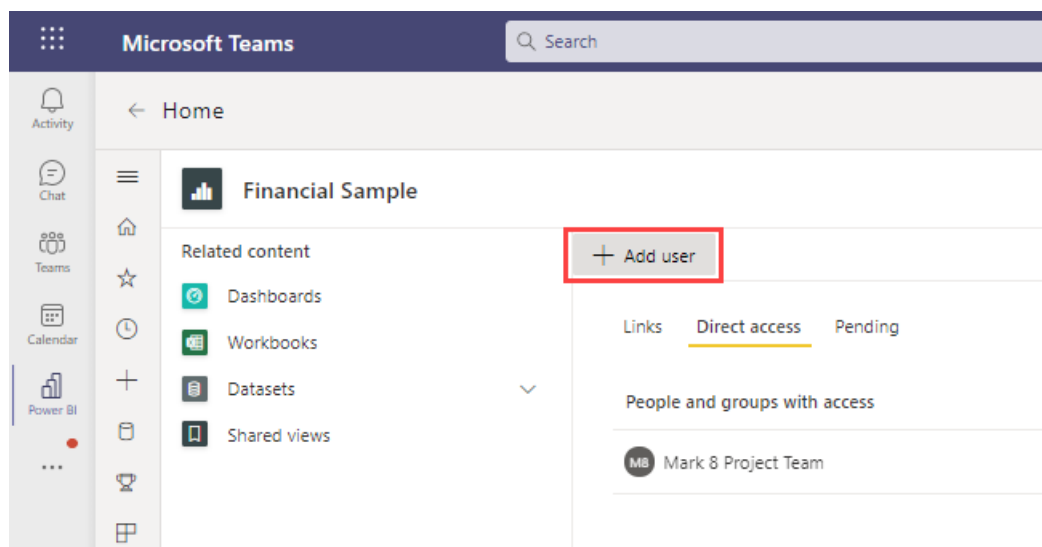


If you don't see this option, you may not have permission to share the item. If not, don't worry. The attendees can request access themselves when they try to view the report.

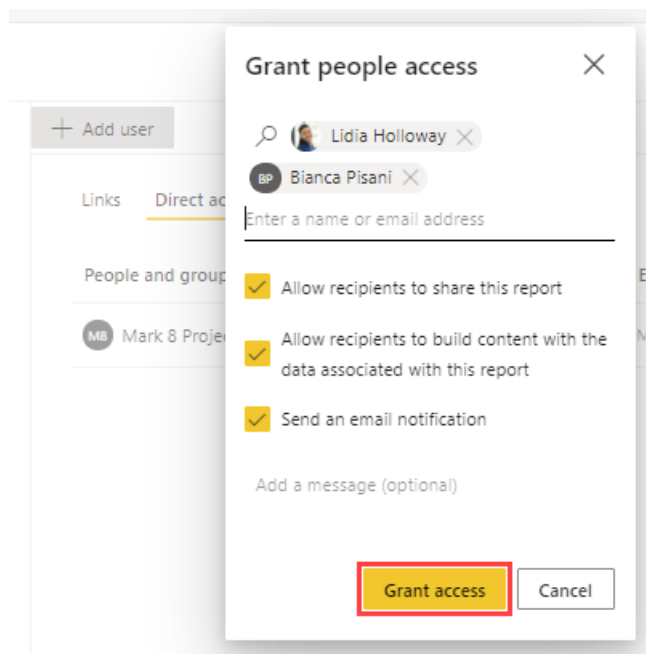
## 2. Select Direct access.



## 3. Select Add user.



## 4. Add the names of your colleagues. Decide what permissions you want them to have, whether to send them an email, and select **Grant access**.

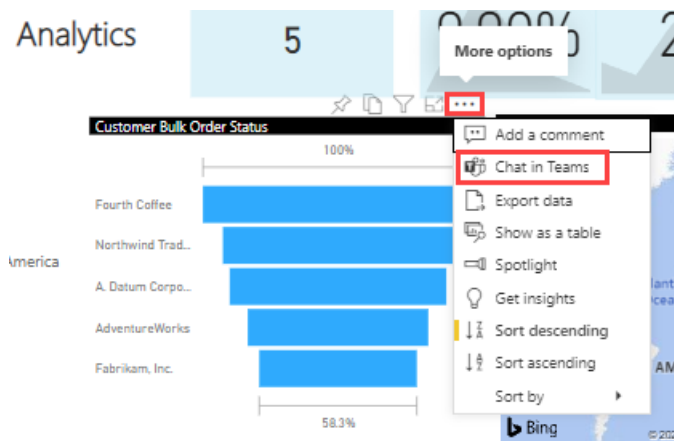


## Chat about data with rich links and cards

When discussing data, it's important that your colleagues can open the underlying data to see and explore trends. This helps them answer questions and understand the full context of requests you're making. It's also an easy way to encourage more use of data in decision making.

### Discussing data is easy

1. Open a report in the Power BI app in Teams, or in the Power BI service.
2. (Optionally) If you want, select **More options (...)** on a specific visualization > **Chat in Teams**.

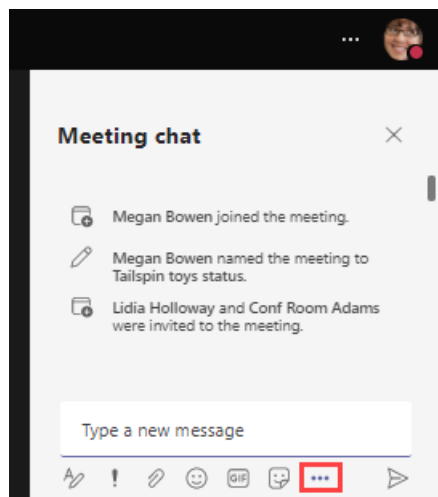


3. Send a message to a channel where you work with your team.

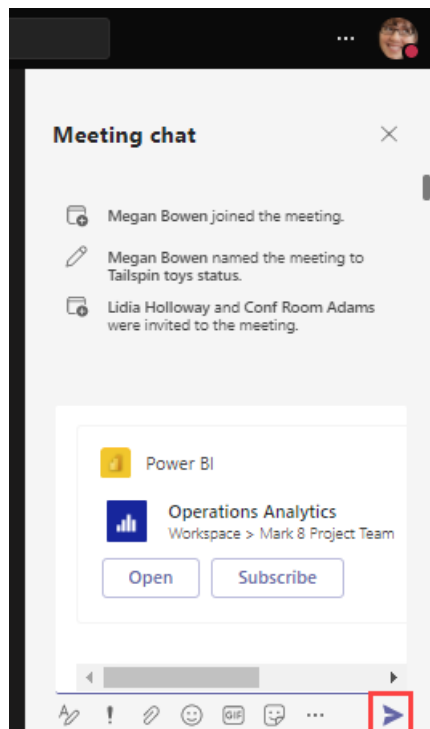
The link will include the full context of the data you were looking at, including the page, the visual, and any filters you applied. When your colleagues open the link, they quickly see the data you're referring to.

### Send your colleagues links to reports

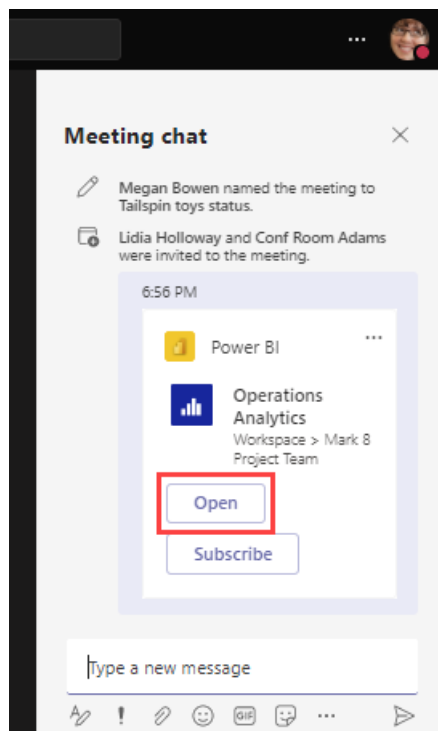
1. In the Teams channel or chat, start a new conversation.
2. In the command bar for the editor, select **Messaging extensions (...)**.



3. Select **Power BI**.
4. Search for the content you want to share, or select from your list of recent items.
5. Pick a Power BI item.
6. Select **Send**.



A rich card is added to the conversation, making it easy for anyone to open the item.

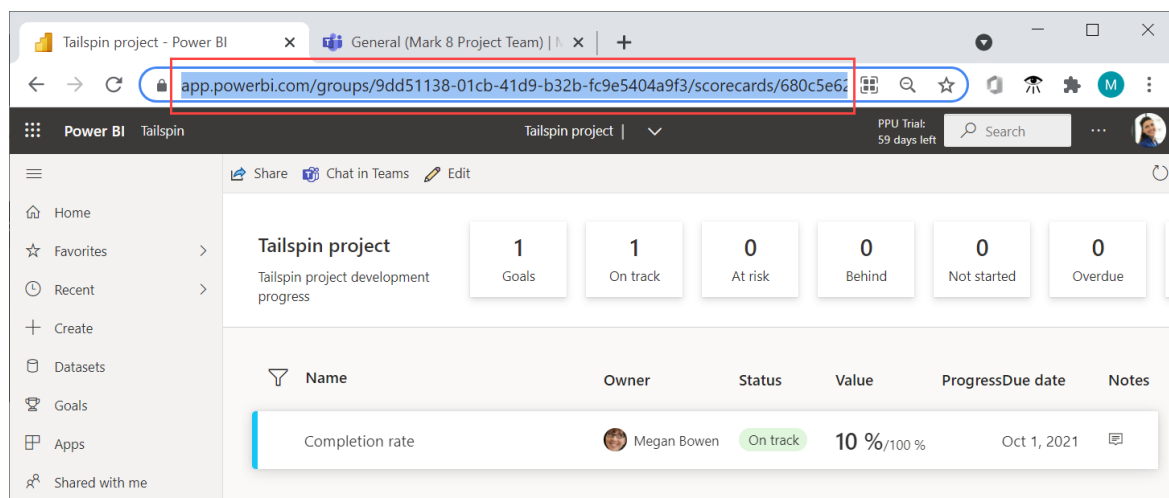


It's a great way to help without leaving the conversation, and saves everyone time.

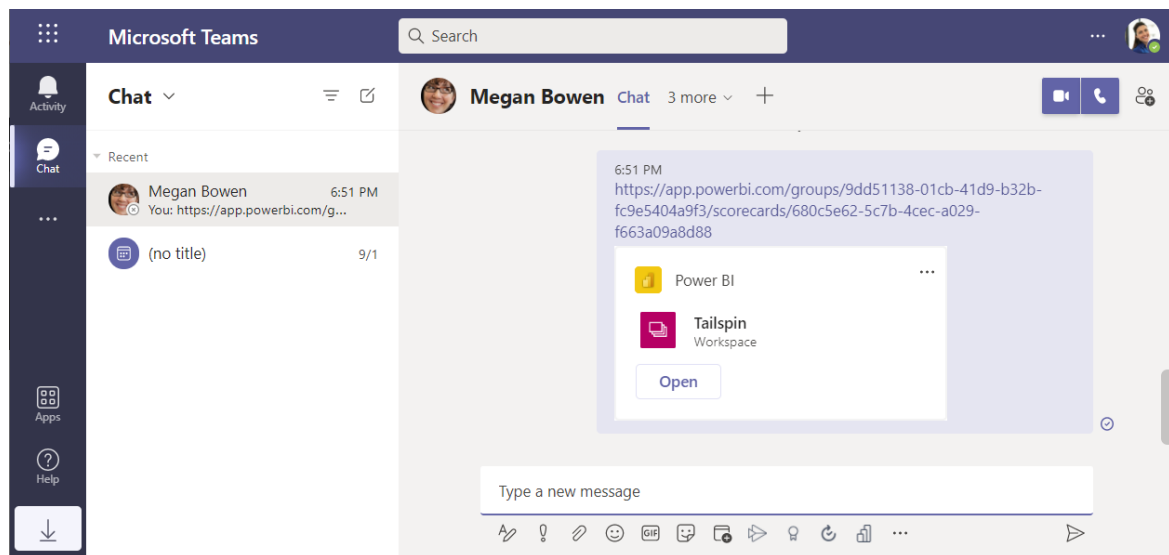
## Create rich cards to paste in chat

If you use Power BI in a web browser, it's easy to send a link to a colleague.

1. Open a report in the Power BI service in the browser, and copy the link.



2. Start a conversation and paste the link. Teams automatically creates a rich card.
3. Select **Send**.
4. Your colleague sees a rich card with a link to open the report.







## Next steps

- [Add the Power BI app to Microsoft Teams](#)
- [Use data to make better meetings in Microsoft Teams](#)
- [Use Power BI goals to improve results in Microsoft Teams](#)
- [Create reports from data in Microsoft Teams](#)
- [Analyze your Teams collaboration data](#)

# Create reports from data in Microsoft Teams

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

It's easy to create Power BI reports with just a few clicks in Microsoft Teams. This article gives a few examples of those quick reports you can create. When you're ready you can also use tools like Power BI Desktop for more advanced report authoring.

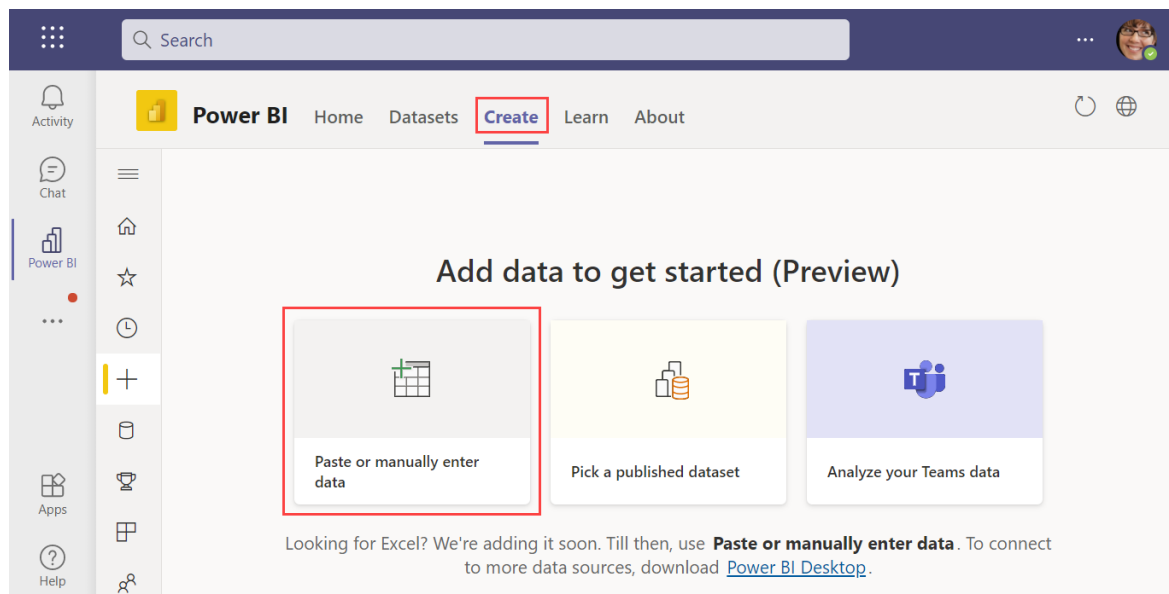
## Create an automatic report from data you have

Say you have a table with data that you'd like to try visualizing in Power BI, maybe from Excel. To create your first report, follow these steps.

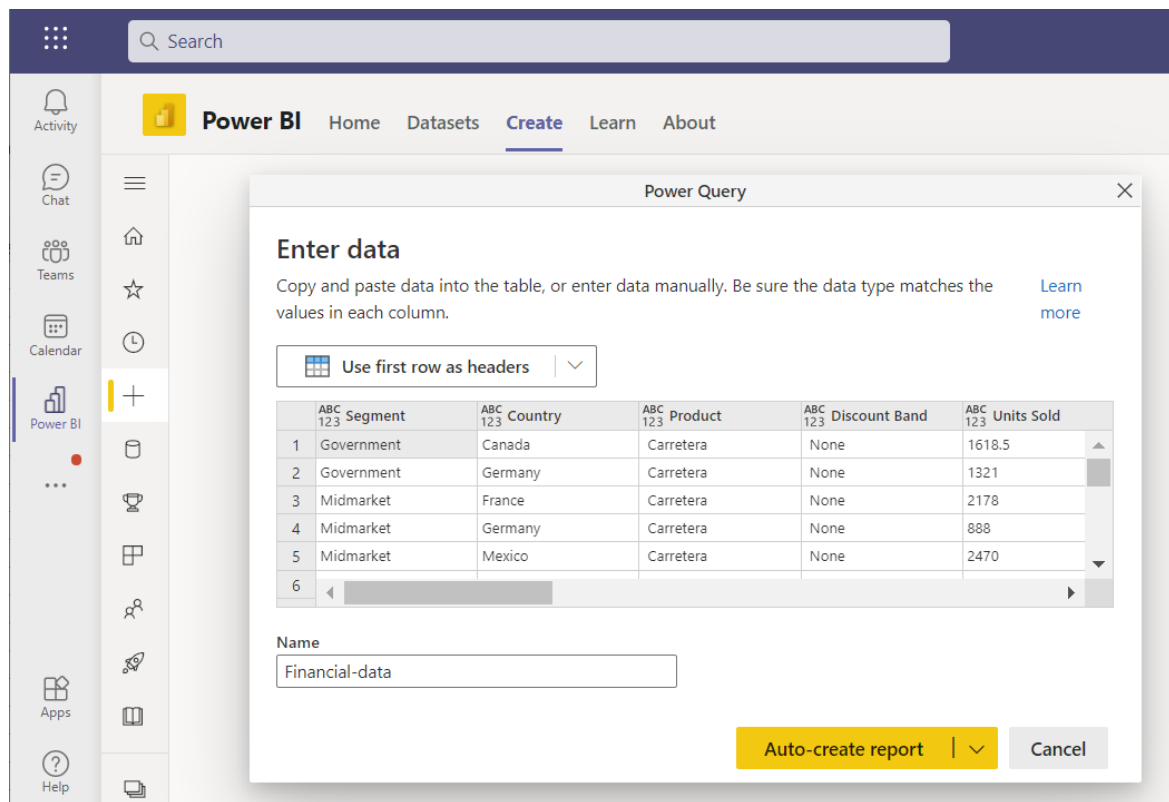
1. Copy the table of data.
2. Open the Power BI app for Microsoft Teams.

Need to install the Power BI app first? [install the app and then pin it](#) to the Teams navigation pane.

3. Select the **Create** tab.
4. Select **Paste or manually enter data**.

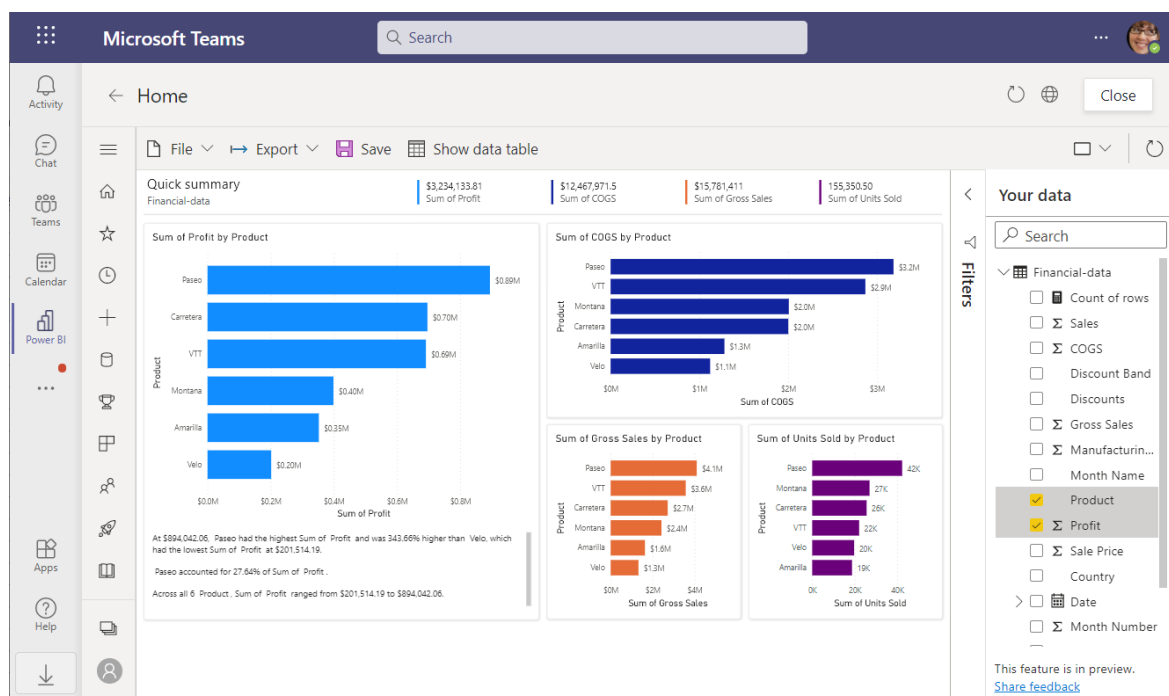


5. Select the first cell and paste the data.
6. Select **Use first row as headers** if appropriate, give the table a name, then select **Auto-create report**.

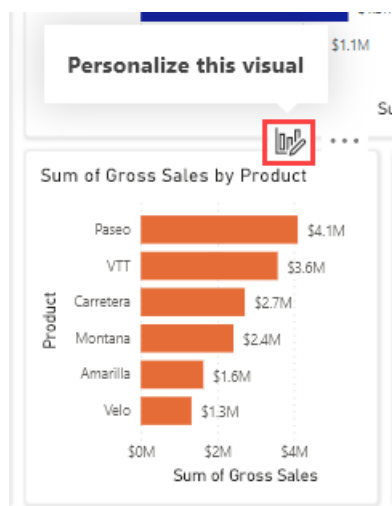


7. Set a sensitivity label, if prompted.

Power BI automatically analyzes and visualizes your data in a pre-built report.

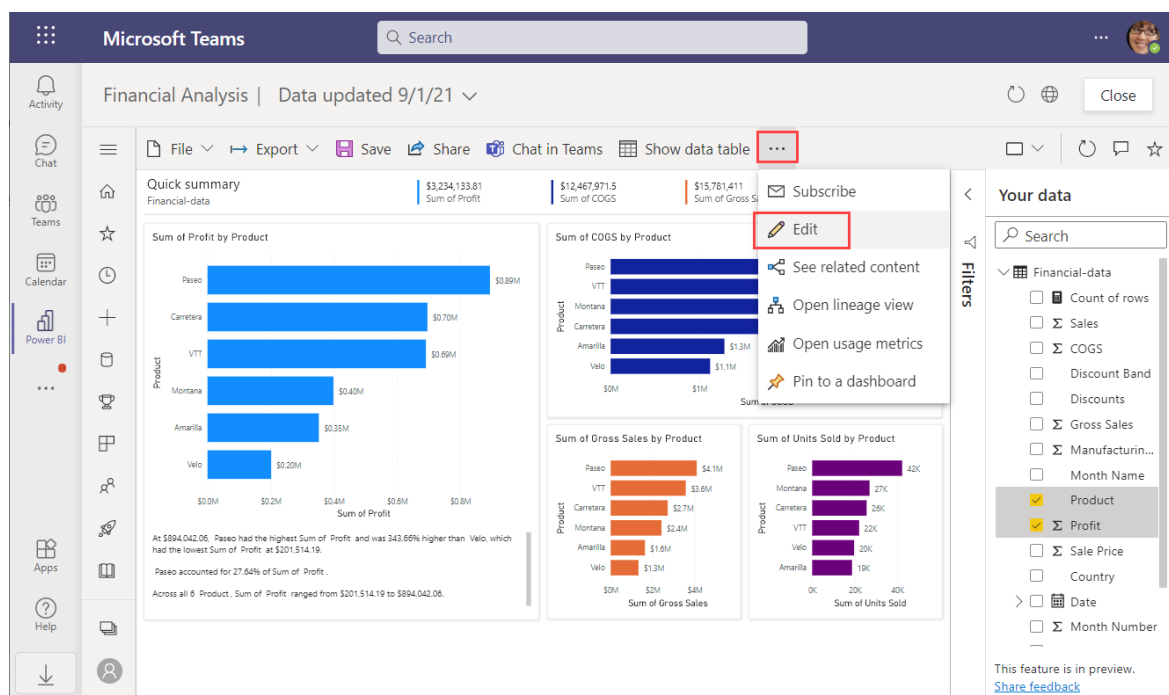


8. Select **Personalize this visual** to customize a single visual.



9. Save the report.

10. Select **More options (...)** > **Edit** to customize the whole report.



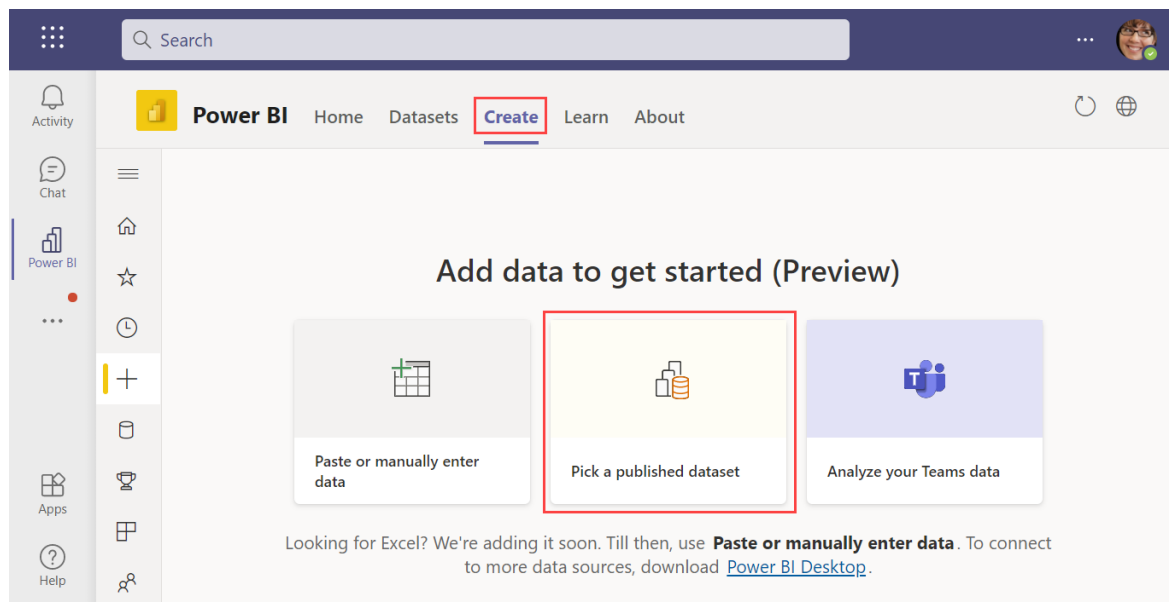
When you're done, save and share the report with your colleagues in Teams.

## Create a report from a dataset in your organization

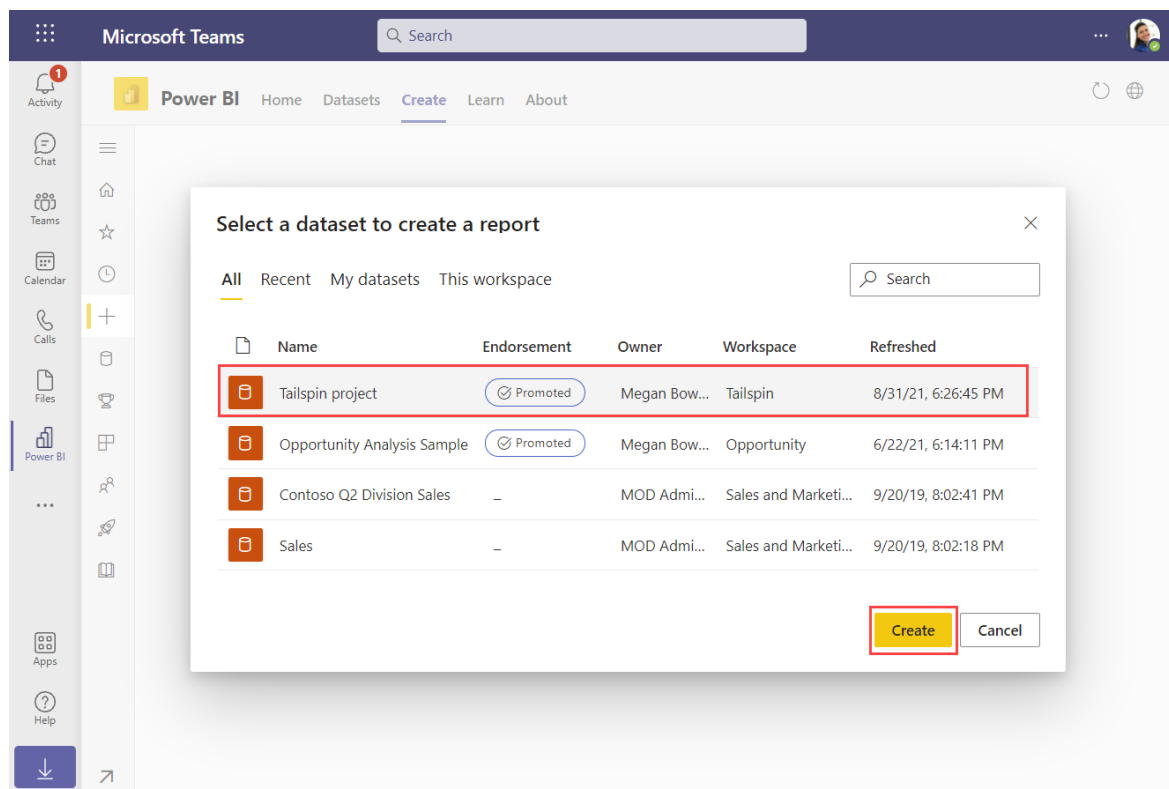
Many organizations share datasets that you can use to build your reports. These datasets are great because they offer up-to-date authoritative data. Datasets that are marked *certified* or *promoted* are likely to be higher quality and better maintained, so your reports will keep working longer.

To build a report from a dataset shared with you, follow these steps.

1. Open the Power BI app for Microsoft Teams.
2. Select the **Create** tab > **Pick a published dataset**.



3. Select a dataset > **Create**.



4. Start exploring the data.

- Use visualizations like charts, tables, and maps to show data in various ways.
- Select data points to see other visuals update to filter data to your selection. Change formatting to make the report useful and readable by your colleagues.

5. When you're done, save and then share the report.

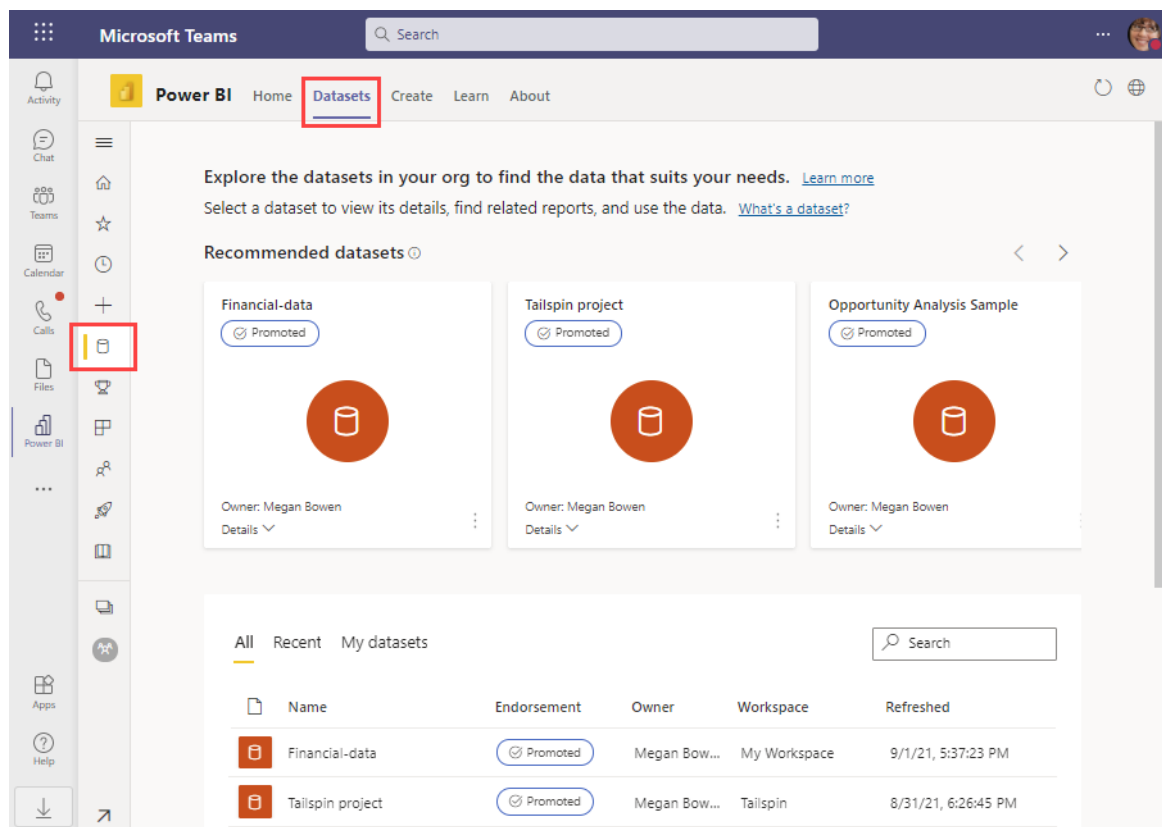
## Explore datasets and reports shared with you

It's easy to find all the datasets your organization has shared with you. They're in the Datasets hub in the Power BI app for Microsoft Teams. Again, datasets that are marked *certified* or *promoted* are likely to be higher quality and better maintained.

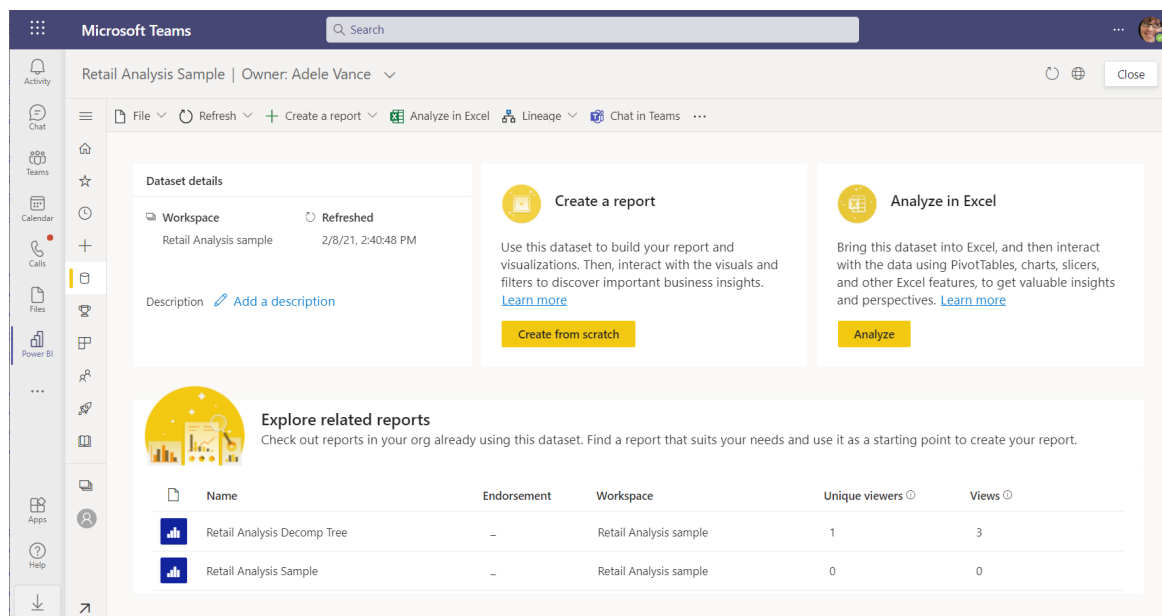
1. Open the Power BI app for Microsoft Teams.

Need to install the Power BI app first? [install the app and then pin it](#) to the Teams navigation pane.

2. Go to the **Datasets** tab.
3. Select a dataset from the list or from recommended datasets.



4. Explore the **Dataset details** page.



- Discover pre-built reports that use the dataset.
- Create a report in Power BI from the dataset with **Create from scratch**.
- Create an Excel workbook connected to the dataset with **Analyze in Excel**.

When you find interesting reports that are relevant to your team, bring them into your collaboration by adding them to channels, meetings, and chats as tabs or in a conversation.

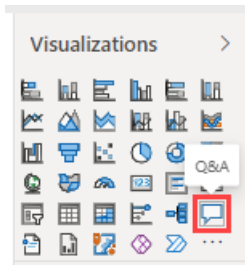
## Enhance reports in the Power BI service and in Teams

It's easy to keep working on your reports, right in the Power BI service and in Power BI in Teams. Take advantage of the artificial intelligence capabilities built into Power BI.

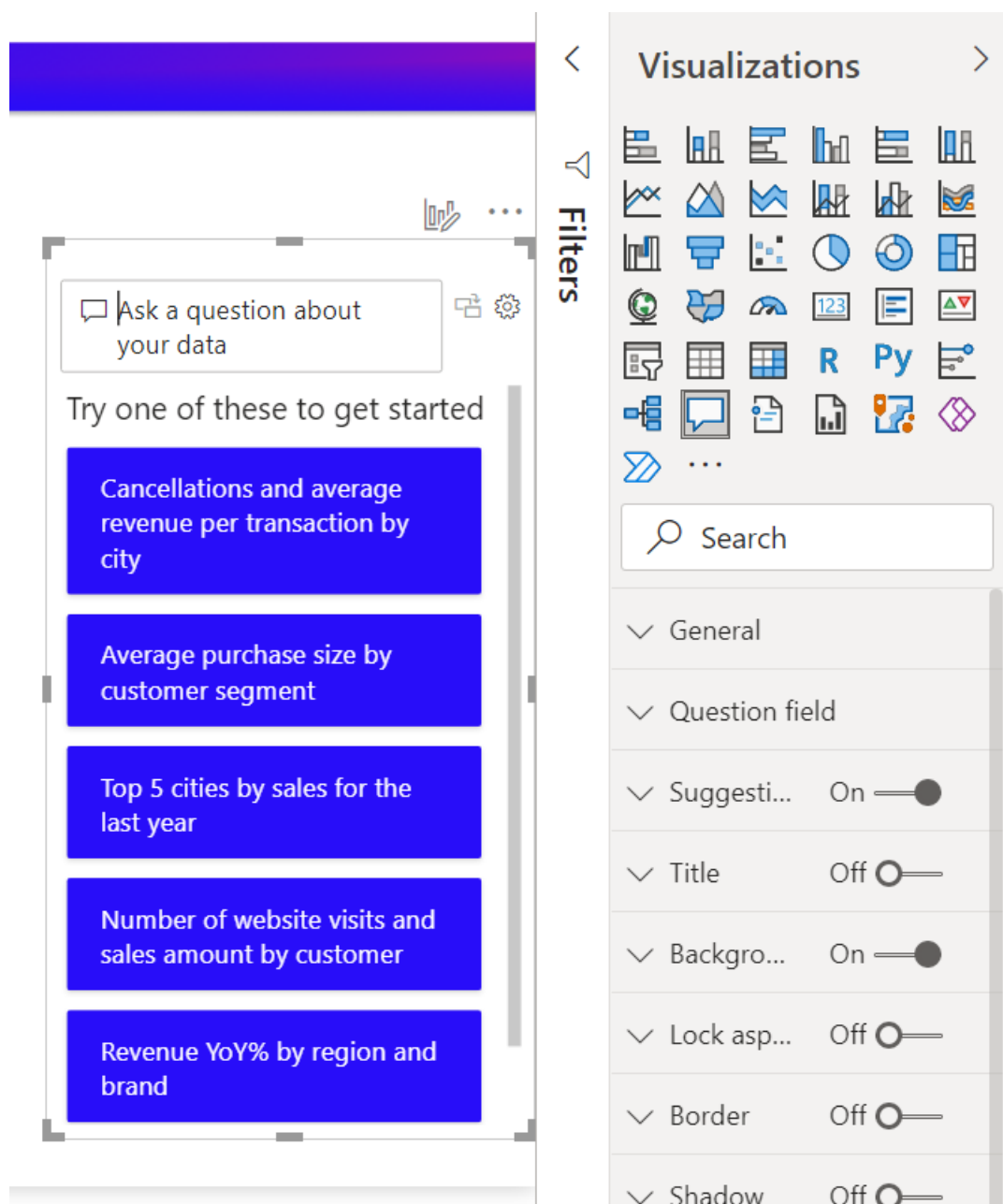
## Q&A visual

For example, ask a question of your data by adding a *Q&A visual*, where you can ask natural language questions and get answers in the form of a visual.

1. In the Visualizations pane, select the **Q&A** icon.



Power BI generates a list of suggested questions you can choose from, or type your own.



2. If you like the visual that Power BI created, you can convert it from a Q&A visual to a standard visual on the page.

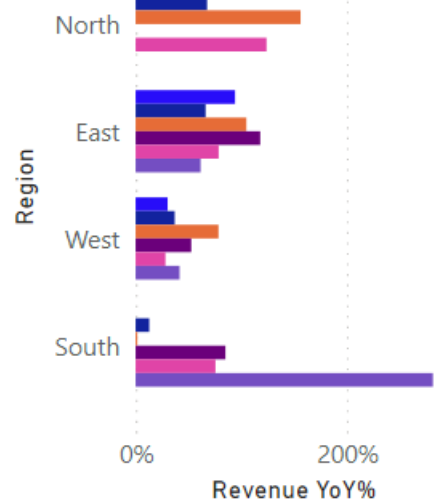
Turn this Q&A result into a standard visual.

Revenue YoY% by  
region and brand



Showing Online sale region that  
results online sales are in, brand,  
for and revenue YoY%

Brand ● Adventure ... ● Aweso...

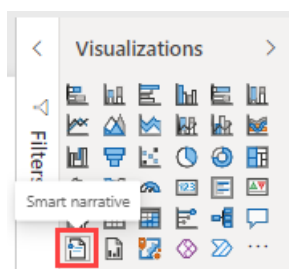


Read more about [creating Q&A visuals](#).

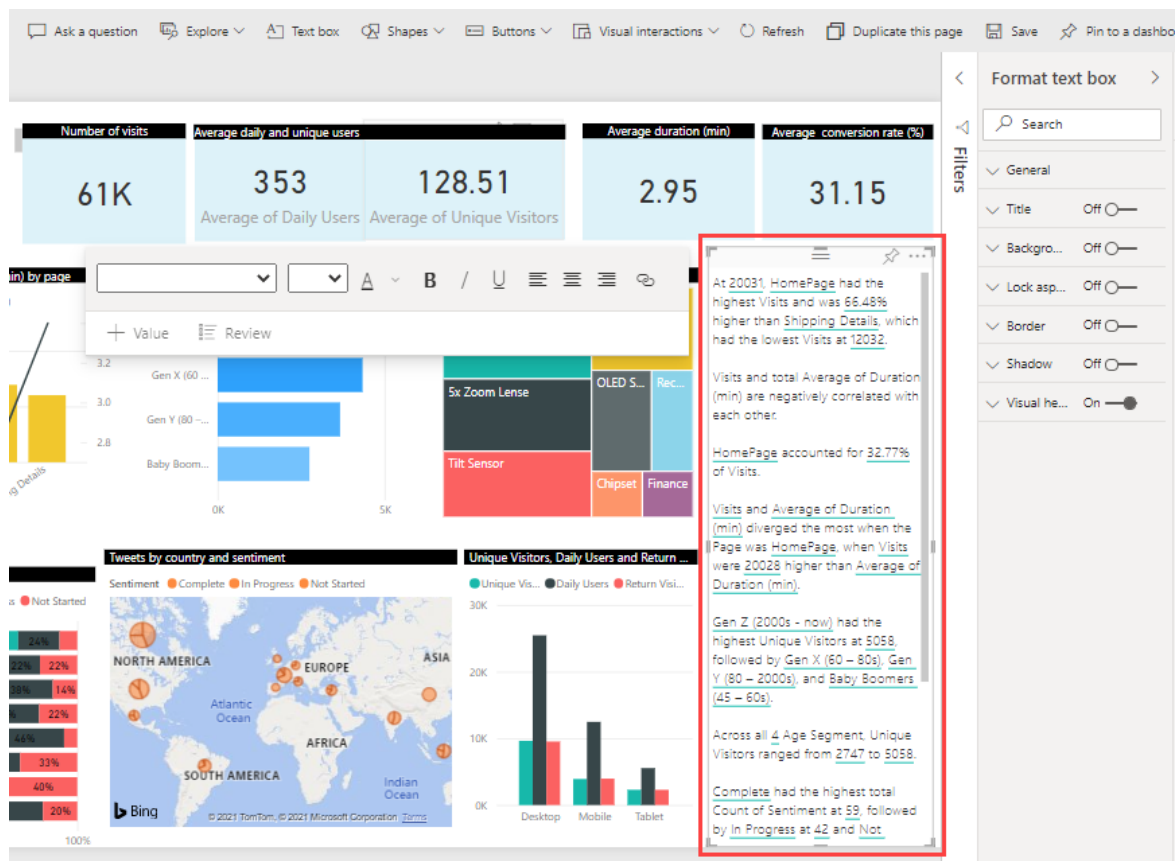
### Smart narrative visual

You can also easily create a *smart narrative* visual, a dynamically generated text box that provides relevant insights that you can customize.

1. In the Visualizations pane, select the **Smart narrative** visual icon.



Power BI generates a text description of key takeaways in your report.



2. You can edit the visual, changing the way it looks and also the inline values it generates.

Here's a tutorial about [creating smart narrative visuals](#).

## Create sophisticated reports in Power BI Desktop

Power BI Desktop is a downloadable Windows app you can use to make more sophisticated reports. It's like PowerPoint, but it uses data visualizations to help you find insights in your data. Power BI Desktop also has powerful capabilities like data import, cleaning, modeling, and much more.

To get started with Power BI Desktop, follow these steps.

1. To install Power BI Desktop, this link takes you directly to the [Power BI Desktop page](#) of the Microsoft Store.
2. Create a report in Power BI Desktop. In this sample tutorial, you prepare and model your data, both tasks you can't do in a report in the Power BI service. Then you create a report based on the model you've created.

[From dimensional model to stunning report in Power BI Desktop](#)





3. [Publish the report](#) to the Power BI service.
4. Share the report with your colleagues in Teams.

## Next steps

- [Add the Power BI app to Microsoft Teams](#)
- [Use data to make better meetings in Microsoft Teams](#)
- [Use Power BI goals to improve results in Microsoft Teams](#)
- [Share a data-driven discussion in Microsoft Teams](#)
- [Analyze your Teams collaboration data](#)

# Analyze your Teams collaboration data

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

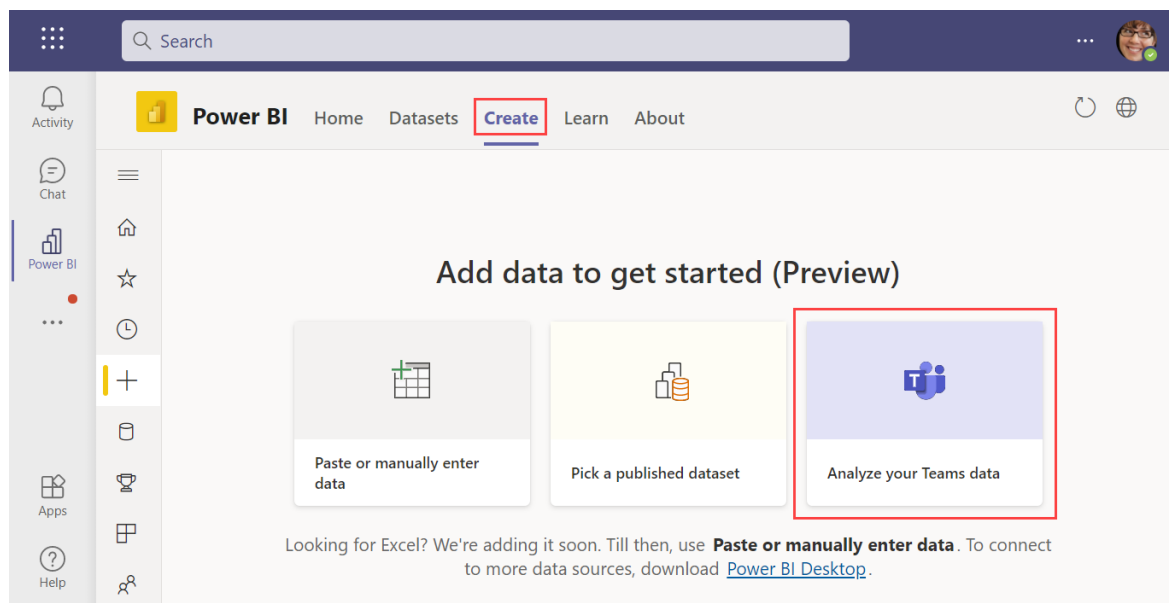
Many of us spend a lot of time collaborating in Microsoft Teams. With Power BI, you can get insights into where you're spending your time and how you and your team collaborate. By reviewing this data, you and your team can plan improved ways of working to be more responsive, agile, and productive.

Follow these steps to start getting insights about collaboration in Microsoft Teams.

1. Open the Power BI app for Microsoft Teams.

Need to install the Power BI app first? [install the app and then pin it](#) to the Teams navigation pane.

2. Go to the **Create** tab and select **Analyze your Teams data**.



3. Explore your personal usage in the automatically generated report.
4. Explore engagement in the Teams you participate in.

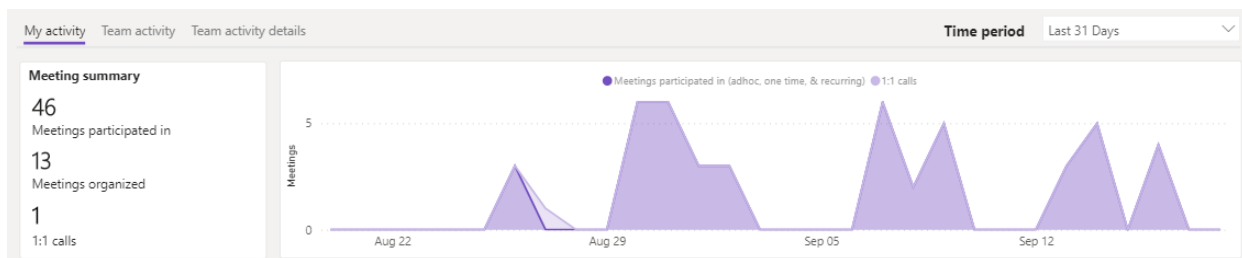
The report gets saved in your Power BI account and stays refreshed. You can keep coming back every few days to see how actions you take change the trends. When working in a Teams team, it's great to discuss the data and ways your team can improve.

## Questions to ask about your collaboration

### Am I effective in meetings?

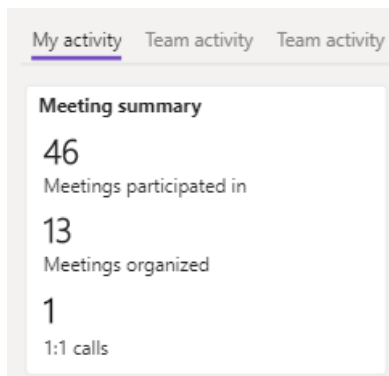
When looking at your meeting participation, you can see where you spend your time. Look at whether you spend most of your time in meetings, or if you have enough focus time to get work done. You can see if you're mostly participating in or organizing meetings. Depending on your organization and your role, the balance of what's "right" might change, but it's important to ask:

- Are the meetings I'm in clearly furthering the objectives of my role and my organization?
- Am I setting the pace of delivery effectively by organizing important meetings to support my objectives?



### Am I building relationships with my colleagues?

Remote and hybrid work enable many of us to work from anywhere, which can impact the relationships we build with colleagues. Building strong relationships with colleagues helps you succeed, overcome challenges, and build a cohesive work environment. Look at the 1:1 calls metric to see if you're making the connections you need for the future.



### Am I using chat effectively?

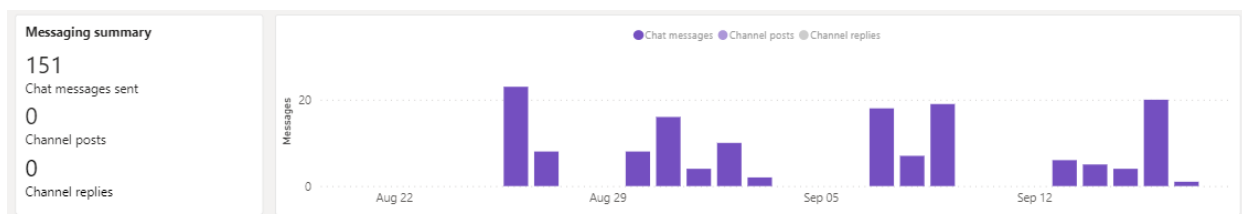
Chat experiences help us communicate quickly with others, without interrupting their flow of work. Chat messages are fast, easy to write, and allow the recipient to multi-task by responding when they're able. However, to use chat effectively, it's important to consider how you're using chat across the experiences Teams offers.

#### TIP

Start a chat with a coworker by stating why you're contacting them, rather than just typing "Hi" or "Are you busy?" Just ask your question. That way, they can be coming up with a response rather than waiting for you to ask the question.

### Am I sending too many chats?

Look at the number of chat messages you send in a day, and the trend. If you're sending a lot of messages (20, 30, 40, 50), see what they were and review them. Consider whether a meeting or a 1:1 call could achieve the same outcome while creating a stronger connection with your colleague. You may even want to send a document rather than writing chats. Consider asking your colleague which option would be the most effective for them.

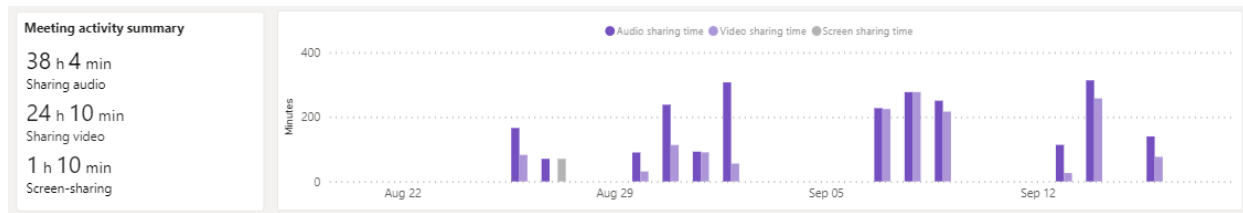


### Am I using channels effectively?

Teams and channels help keep your entire workgroup or project team up to date. Sometimes, it's easier to just message someone directly instead of posting in a channel. This practice can raise challenges, since others teammates lack visibility into work happening around them, and don't have the opportunity to offer input. It's also harder for them to jump in and help to finish something when someone goes on vacation, for example. If you're primarily using Chats, consider if Channels would be a good option to add to your collaboration habits.

## Am I using in-meeting experiences in the best way?

Looking at meeting activities such as audio, video, and screen-sharing, you can gain insight into how effectively you're using in-meeting experiences. If you're sharing audio but not video, you may be missing opportunities to make a stronger connection with other meeting attendees. If you're screen-sharing a lot, it could indicate that you're driving the discussion forward in these meetings.



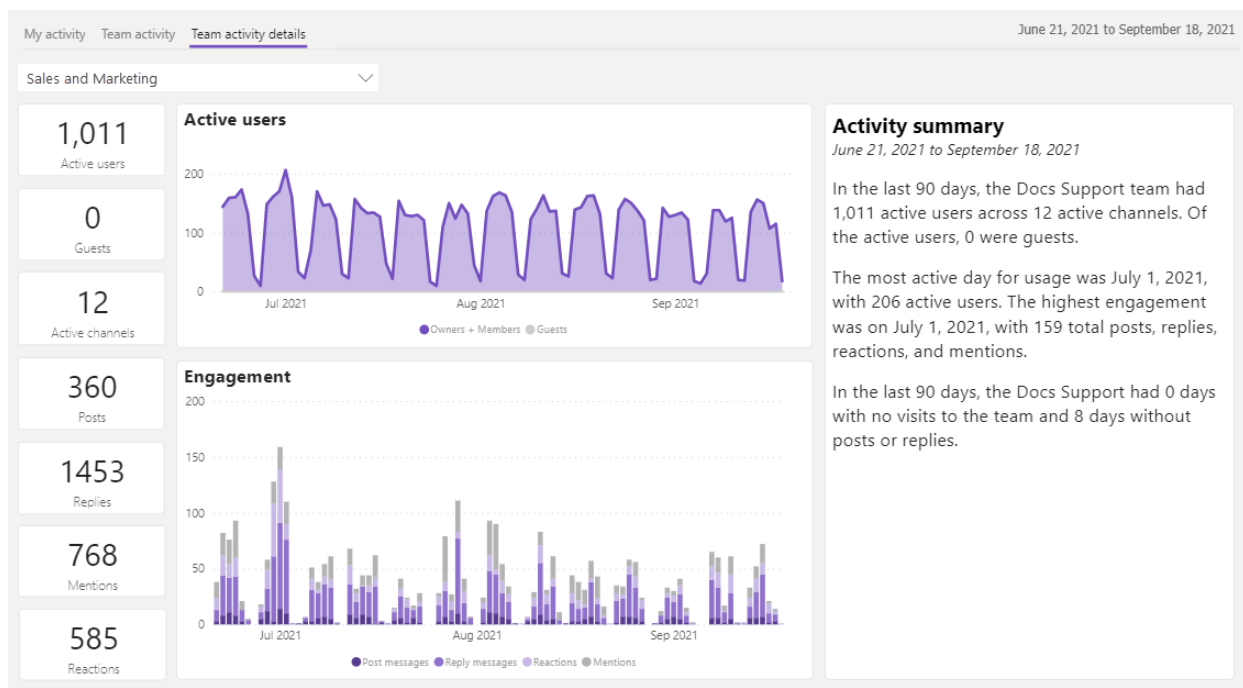
## Understand activity in teams you access and own

Sometimes where you work is as important as how you work. The **Teams activity** view gives you a summary of how your teams collaborate. You can quickly see which teams you might be missing out on and potentially which you might close. If multiple teams cover the same topic, consider merging them to help everyone work together.

My activity **Team activity** Team activity details June 21, 2021 to September 18, 2021

Team name	Posts and replies last 7 days	Active users	Guests	Active channels	Total Posts	Total Replies	Meetings organized	Days without active users	Days without posts or replies
Customer Profitability	403	2,707	3	4	1,260	3,322	12	0	2
Public Relations	110	1,011	0	12	360	1,453	0	0	8
Sales and Marketing	61	325	0	9	56	166	4	1	30
Retail Analysis	40	19,869	3	66	188	309	2	0	12
Store Portal	35	2,855	1895	27	135	380	0	0	3
Leadership	32	859	0	22	79	150	0	0	32
Human Resources	6	334	0	11	33	77	0	1	40

When you view the details for a specific team, you can get more detailed usage data. As a Teams team owner, you might show this view in a meeting with your colleagues to seek input on how to improve your collaboration. It's also a great way to evaluate if you should retire a team if it has few active users or low engagement.



## Next steps

- Add the Power BI app to Microsoft Teams
- Use data to make better meetings in Microsoft Teams
- Use Power BI goals to improve results in Microsoft Teams
- Share a data-driven discussion in Microsoft Teams
- Create reports from data in Microsoft Teams

# Tutorial: export data from a visual to Excel

12/10/2021 • 5 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

To see the data that's used to create a visual, [you can display that data in Power BI](#), or export it to Excel. This article shows you how to export to Excel. Data can be exported to Excel from a Power BI dashboard tile and from a report visual.

Exporting data to Excel requires a Power BI paid license, or for the dashboard or report to be shared with you using Premium capacity. To learn more, see [Which license do I have?](#).

## IMPORTANT

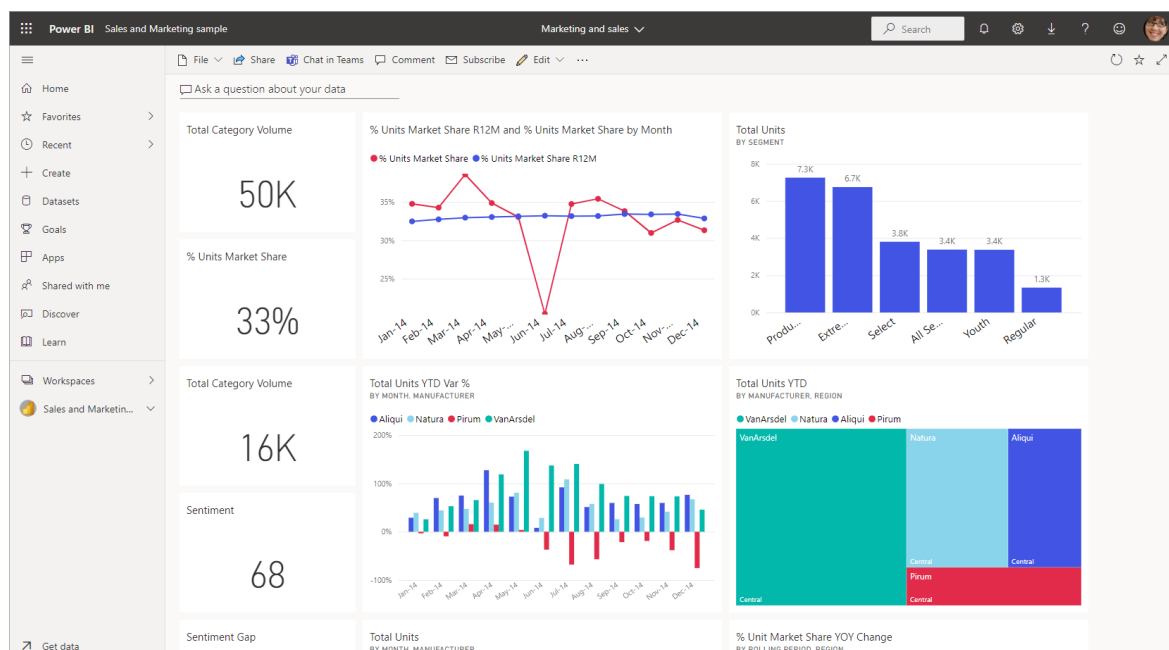
If you are unable to export to Excel, it's possible that the report author or your Power BI administrator has disabled this feature. This is often done to protect private data.

## Requirements

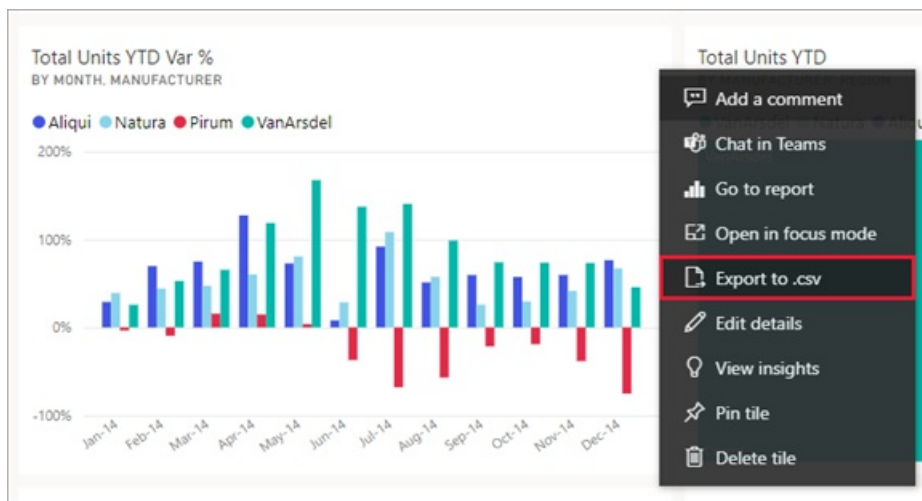
- Power BI license, free or paid.
- Sales and Marketing sample. If you have a paid license, you can [download this app from AppSource.com](#). If you have a free license, you can [open the Sales and marketing sample](#) from Power BI using **Get data**. Depending on which source you use, your visuals may or may not exactly match what you see in this tutorial.

## Export data from a visual on a dashboard

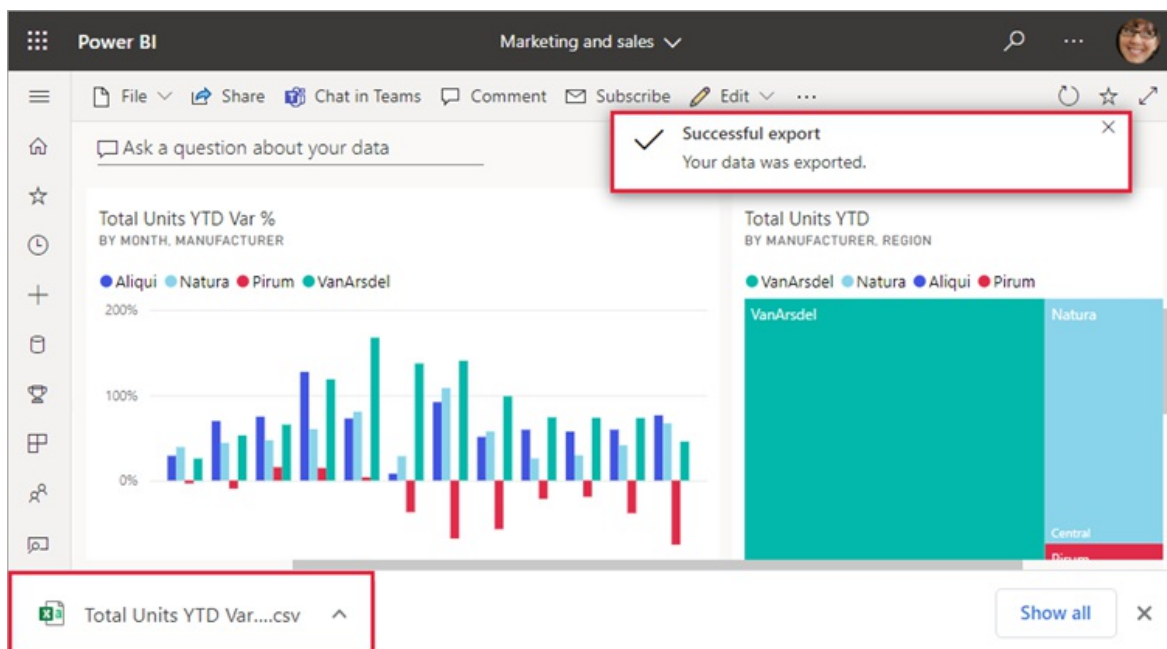
1. Start on a Power BI dashboard. Here we're using the dashboard from the *Sales and marketing sample* app.



2. Hover over a visual to reveal **More options (...)** and click to display the action menu.



3. Select **Export to .csv**.
4. What happens next depends on which browser you're using. You may be prompted to save the file or you may see a link to the exported file at the bottom of the browser. By default, your export is saved to your local Downloads folder.

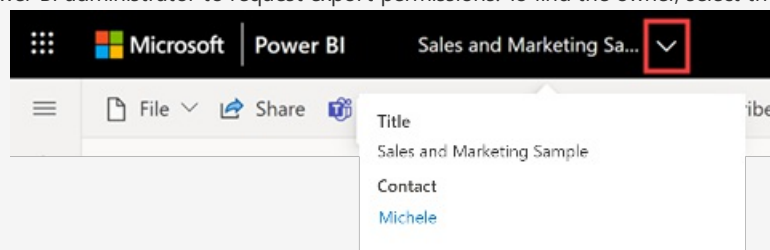


5. Open the file in Excel.

Month	Manufacturer	Total Units	YTD Var %
14-Jan	Aliqui	28.95%	
14-Jan	Natura	39.15%	
14-Jan	Pirum	-3.38%	
14-Jan	VanArsdel	25.71%	
14-Feb	Aliqui	69.72%	
14-Feb	Natura	44.08%	
14-Feb	Pirum	-9.52%	
14-Feb	VanArsdel	52.76%	
14-Mar	Aliqui	74.83%	
14-Mar	Natura	47.26%	
14-Mar	Pirum	15.63%	

#### NOTE

If you don't have permissions to the data, you won't be able to export or open in Excel. Contact the dashboard owner or your Power BI administrator to request export permissions. To find the owner, select the dropdown next

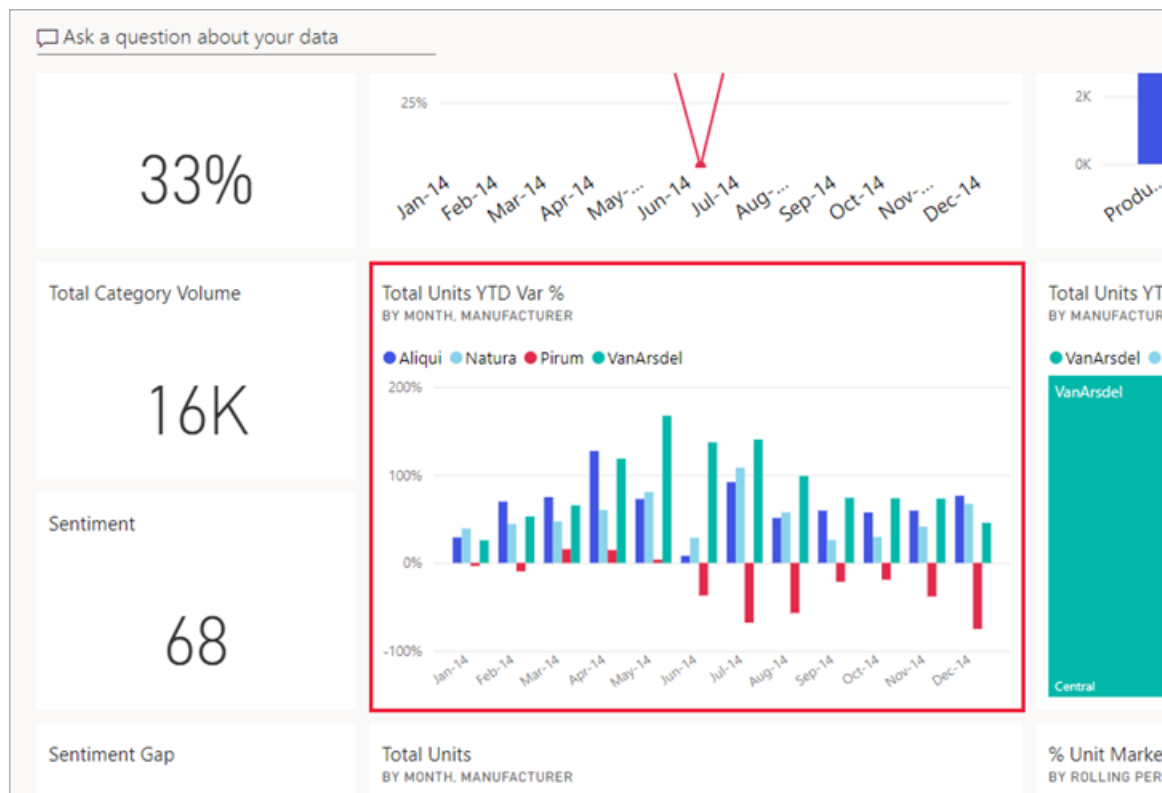


to the report title.

## Export data from a visual in a report

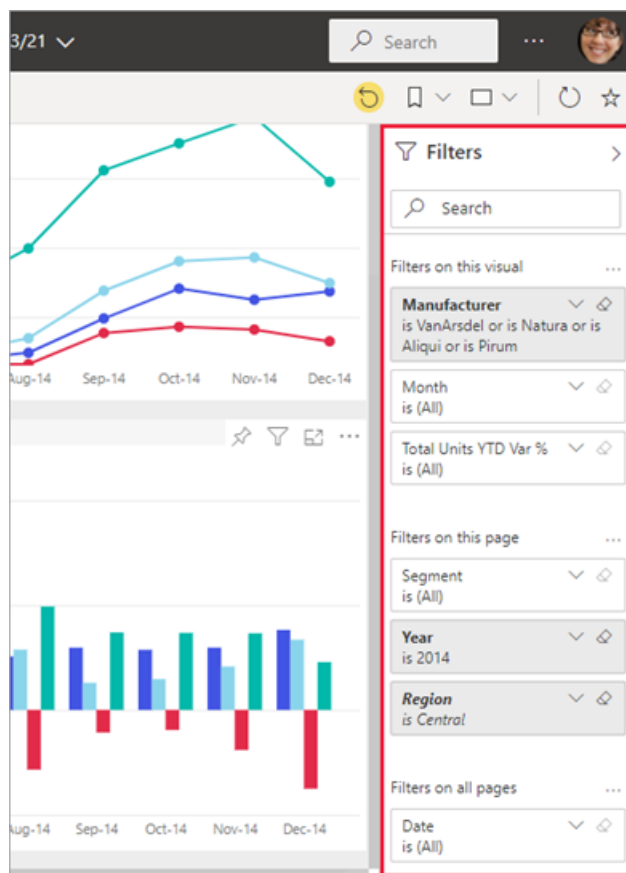
You can export data from a visual in a report as .csv or .xlsx (Excel) format.

1. On a dashboard, select a tile to open the underlying report. In this example, we're selecting the same visual as above, *Total Units YTD Var %*.

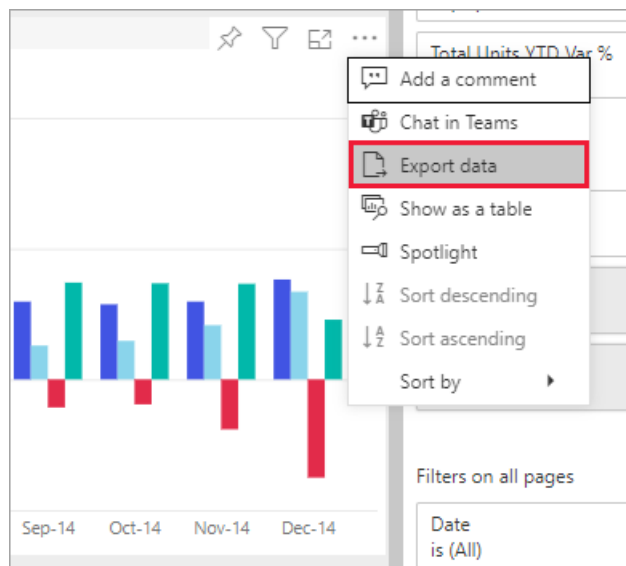


Since this tile was created from the *Sales and Marketing Sample* report, that is the report that opens. And, it opens to the page that contains the selected tile visual.

2. Select the visual in the report. Notice the **Filters** pane to the right. This visual has filters applied. To learn more about filters, see [Use filters in a report](#).



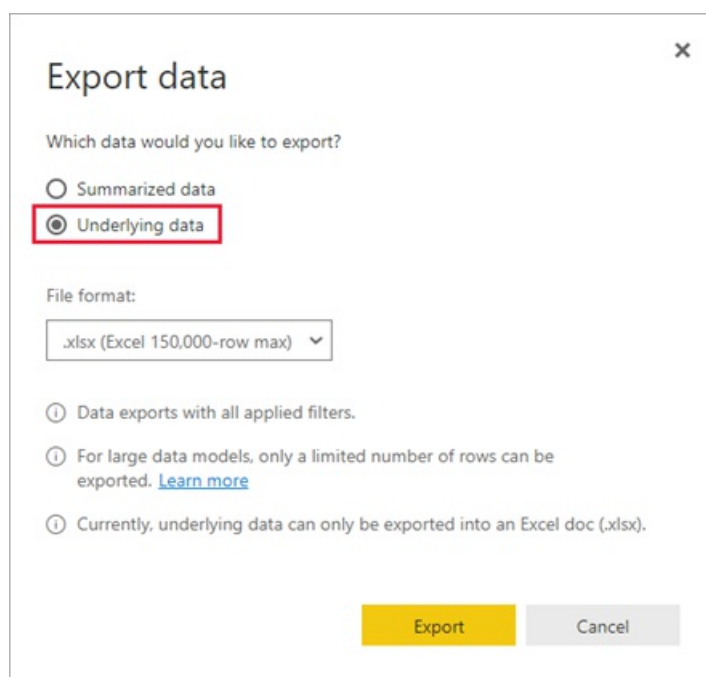
3. Select **More options (...)** from the upper right corner of the visualization. Choose **Export data**.



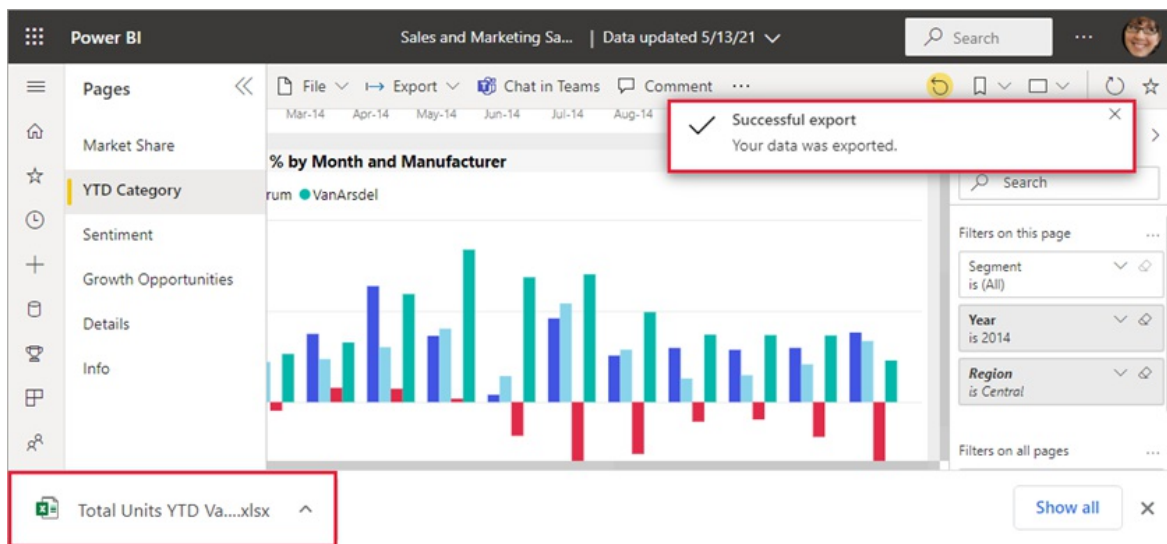
4. You'll see options to export either summarized data or underlying data. If you're using the *Sales and marketing sample* app, **Underlying data** will be disabled. Additional permissions are required to see more data than is displayed in the visual (underlying data). These permissions protect the data from being inappropriately viewed, re-used, or shared with anyone other than the intended audience.

**Summarized data:** select this option if you want to export data for what you currently see in the visual. This type of export shows you only the data that was used to create the current state of the visual. If the visual has filters applied, then the data you export will also be filtered. For example, for this visual, your export will include only data for 2014 and the central region, and only data for four of the manufacturers: VanArsdel, Natura, Aliqui, and Pirum. If your visual has aggregates (sum, average, and so on), the export will also be aggregated.

**Underlying data:** select this option if you want to export data for what you see in the visual **plus** additional data from the underlying dataset. This may include data that is contained in the dataset but not used in the visual. If the visual has filters applied, then the data you export will also be filtered. If your visual has aggregates (sum, average, etc.), the export will remove the aggregation; essentially flattening the data.



5. What happens next depends on which browser you're using. You might be prompted to save the file or you might see a link to the exported file at the bottom of the browser. If you're using the Power BI app in Microsoft Teams, your exported file is saved in your local Downloads folder.



## NOTE

If you don't have permissions to the data, you won't be able to export or open in Excel. Contact the report owner or your Power BI administrator to request export permissions.

- Open the file in Excel. Compare the amount of data exported to what we exported from the same visual on the dashboard. The difference is that this export includes **Underlying data**.

## Considerations and troubleshooting

There are many considerations related to exporting to Excel. This is one of those features that report designers and Power BI administrators may disable for individuals or even for an entire organization. They do this to ensure that private data isn't exposed to the wrong audience.

If you find that you are unable to use this feature, reach out to the report owner and your administrator to understand why you are unable to export data from a particular visual or from all visuals. It may be that this feature has been purposely disabled and perhaps they can enable it for you. Other times, there may be particular reasons an export does not work. It could be related to permissions, data contents, data type, visual type, how the designer named the fields, and more. When contacting the report owner or administrator, refer them to these articles: [Admin tenant settings](#), [Row level security](#), and [Data protection](#).

- There is a limit to the number of rows that can be exported to Excel. For .xlsx files, the limit is 150,000 rows. For .csv files, the limit is 30,000 rows.
- The dataset may have RLS (role level security) applied to the data. This means that some data may be hidden from you because it is not appropriate for you to see it. For example, if you are a people manager, the HR dataset may have RLS applied that only allows you to see data for employees who report directly to you.





- Certain types of visuals are not supported. These include custom visuals, R visuals, and more.

## Next steps

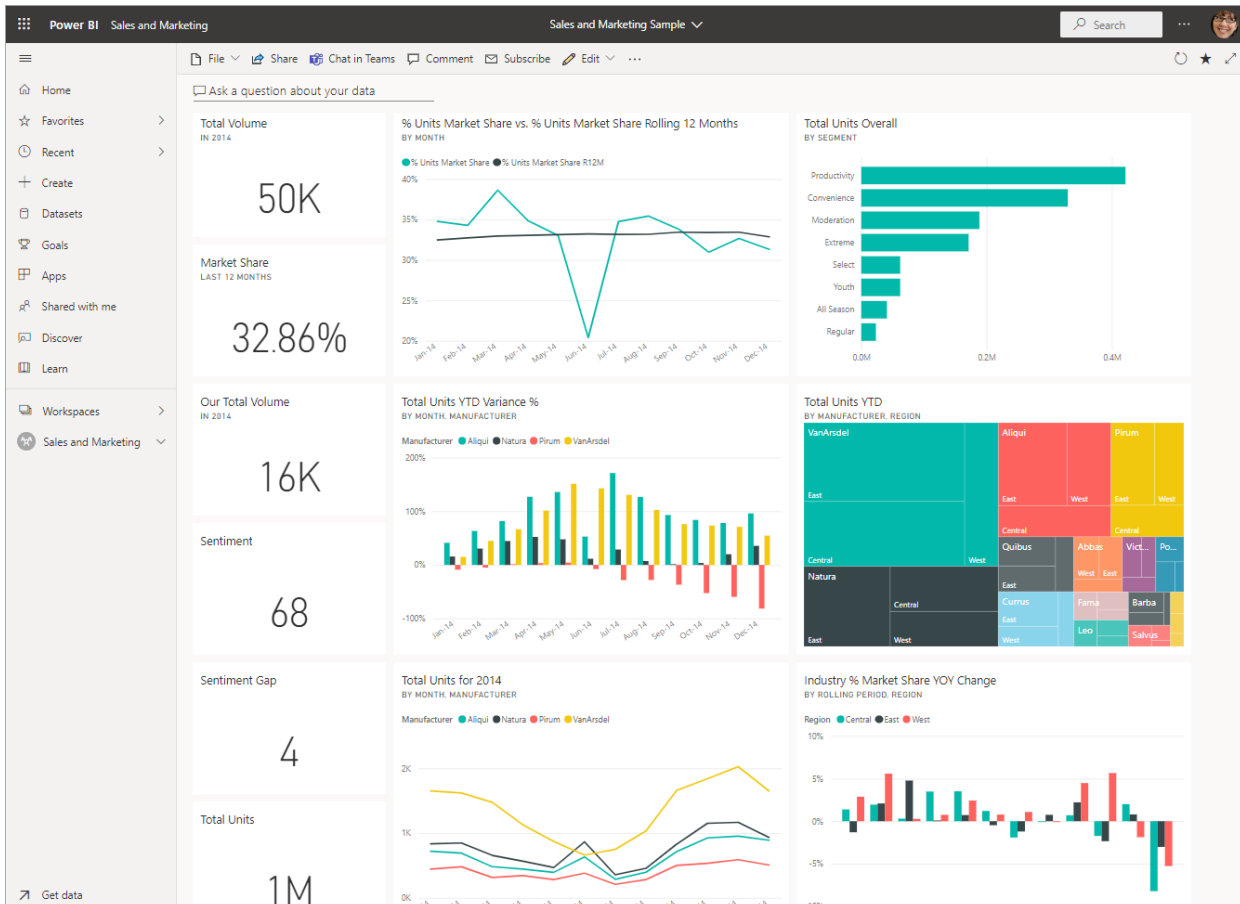
[Display the data used to create a visual](#)

# How to be sure that content is up to date

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for **business users**  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

As a *business user*, you interact with content that is created by *designers* and shared with you. You might wonder if that content is up to date, or maybe you just want to know when that content was last refreshed. Knowing that you are working with the freshest content gives you confidence.



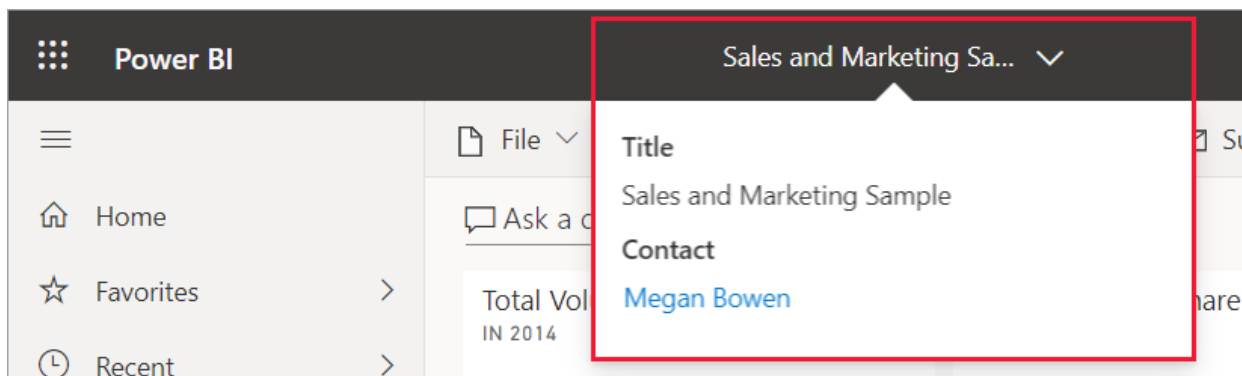
Making sure you're using the latest data is often critical in making the right decisions. What can you do to ensure you're using the latest content? In most cases, you don't need to do anything at all. Apps that have been shared with you are automatically refreshed and updated on a schedule set by the app designer. Same goes for dashboards and reports that have been shared with you -- the designer either manually, or using an automated refresh schedule, ensures that the content is fresh.

If you have questions about the data freshness, contact the designer.

## How to locate the name of the designer or owner

### Dashboard or report

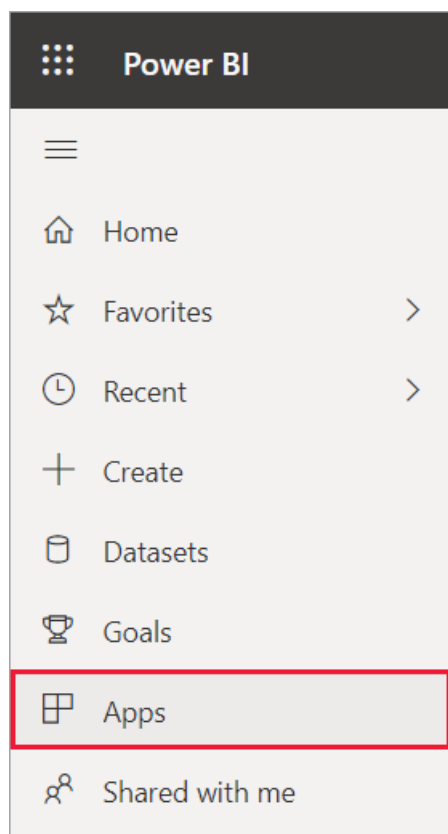
The name of the owner is available from the title bar of dashboards and reports. Select the report or dashboard name to reveal additional details, including the **Owner**.



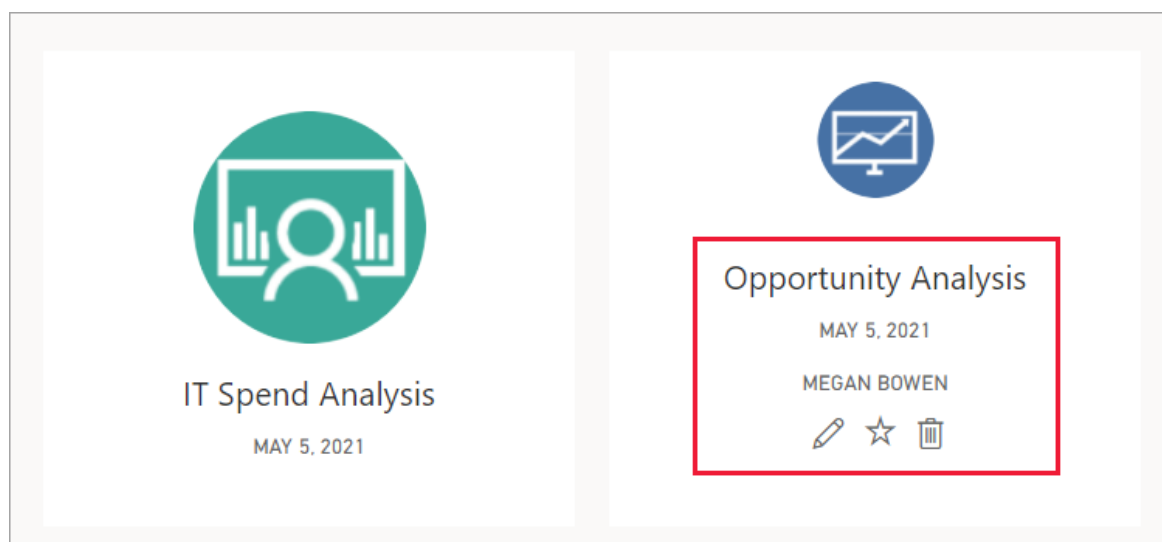
## Apps

The app screen shows you both the name of the designer as well as the date the app was last updated.

1. From the nav pane, select **Apps**.

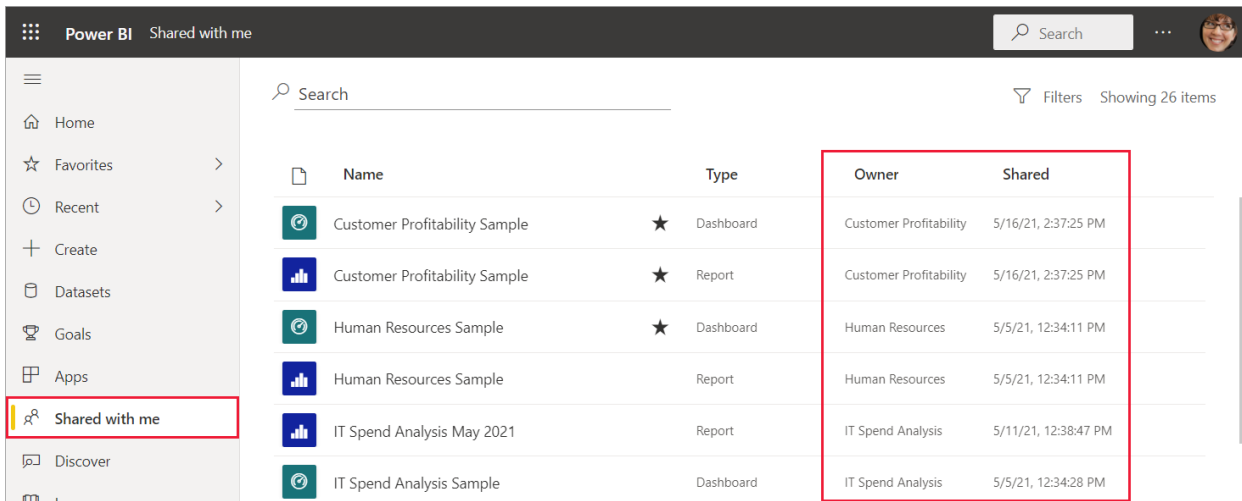


2. Hover over the app to display the title, freshness date, and name of the designer.



## Shared with me

The **Shared with me** screen shows you the name of the content owner, as well as the date the content was last shared with you.



Name	Type	Owner	Shared
Customer Profitability Sample	Dashboard	Customer Profitability	5/16/21, 2:37:25 PM
Customer Profitability Sample	Report	Customer Profitability	5/16/21, 2:37:25 PM
Human Resources Sample	Dashboard	Human Resources	5/5/21, 12:34:11 PM
Human Resources Sample	Report	Human Resources	5/5/21, 12:34:11 PM
IT Spend Analysis May 2021	Report	IT Spend Analysis	5/11/21, 12:38:47 PM
IT Spend Analysis Sample	Dashboard	IT Spend Analysis	5/5/21, 12:34:28 PM

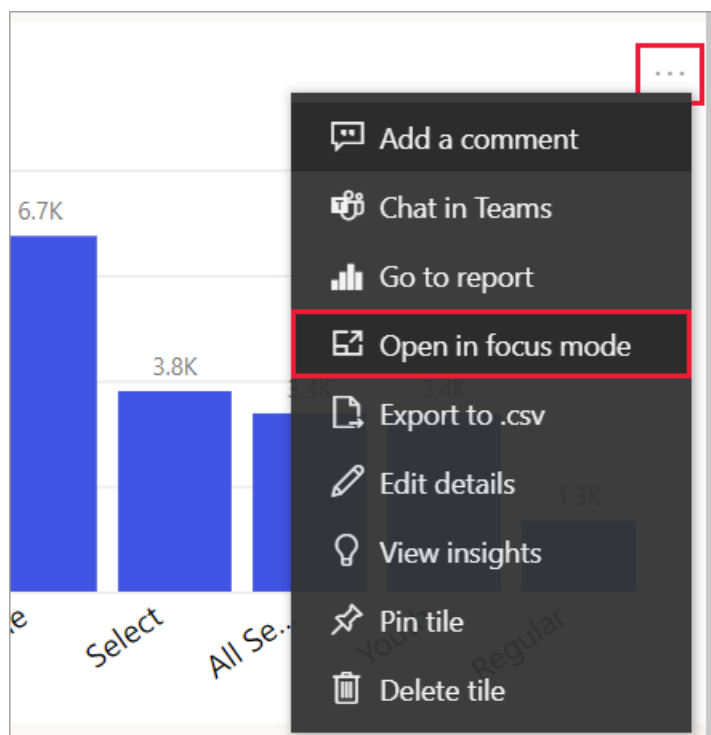
## How to look up the last refresh date

If interested, you can look up the last refreshed date for most content.

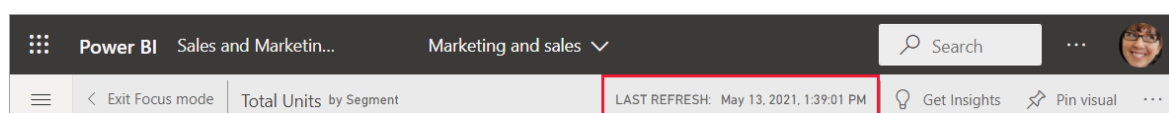
### Dashboard tiles

For dashboard tiles, view the tile in Focus mode to see the Last refresh timestamp.

1. On a dashboard tile, select **More options (...)** and choose **Open in Focus mode**.

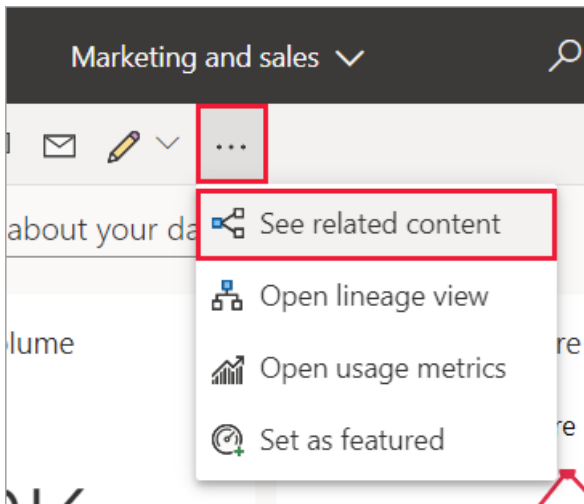


2. The last refresh date displays in the upper right corner. If you don't see it, expand your browser to make it wider.

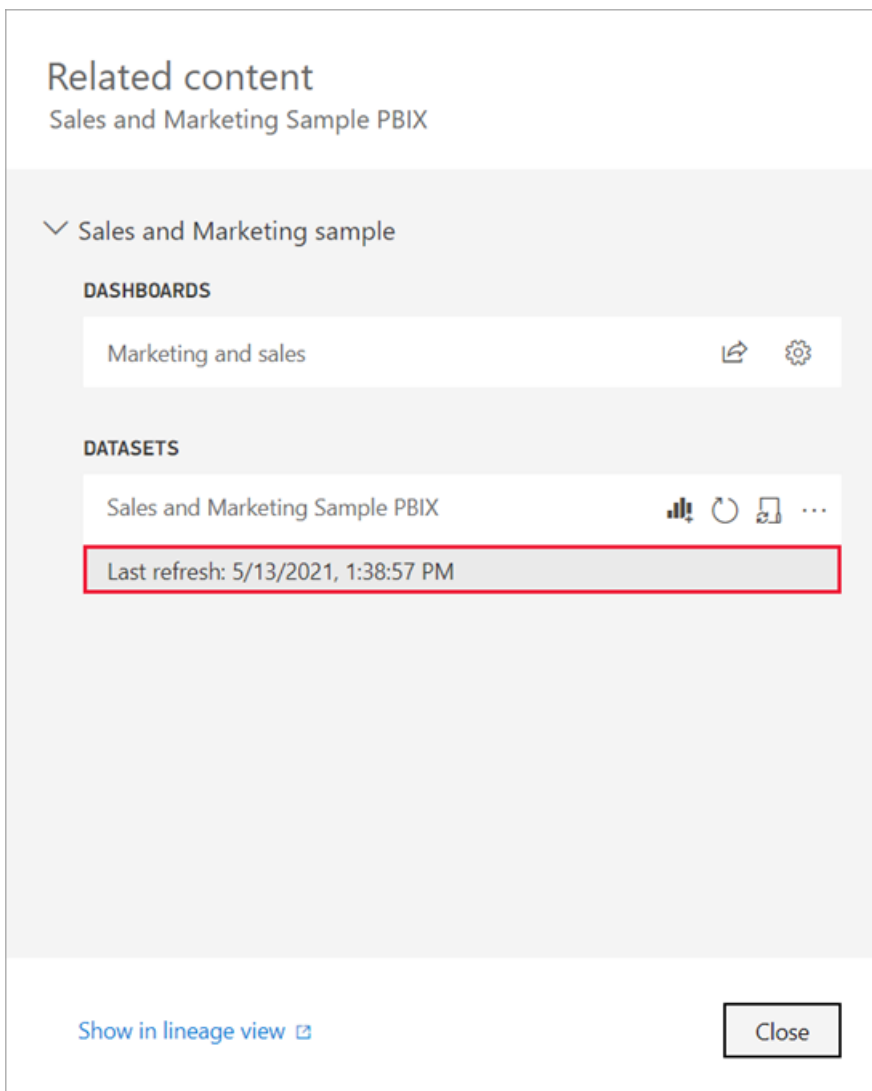


## Dashboards and reports

Another way to look up a last refreshed date is by using **See related content**. **See related content** is available by selecting **More actions** (...) from the Power BI upper menu bar.



The **Related content** pane displays the last refresh information for the dashboard's or report's underlying dataset.



## What happens if an app is deleted by the designer

If a designer deletes an app, the dashboards and reports associated with that app are automatically removed from your Power BI workspace as well. They're no longer available, and the app doesn't appear in the Apps container or elsewhere in the nav pane.

## Subscribe to see changes

Another way to stay up-to-date, is to subscribe to a report or dashboard. Instead of having to log in and open a report or dashboard, you tell Power BI to send you a snapshot on a schedule you set. For more information, see [subscribe to dashboards and reports](#).

## Set data alerts

Want to be notified if data changes above or beyond a limit you set? [Create a data alert](#) for a dashboard. It's easy to stay up-to-date using data alerts. With data alerts, you tell Power BI to send you an email if a value in a report passes a specific threshold. For example, if inventory falls below 25 units or if sales exceed goals.

## Next steps

[Create a data alert](#)

[Subscribe to dashboards and reports](#)

[View related content](#)

# Display content in more detail: focus mode and full screen mode

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:** Power BI service for **business users** Power BI service for designers & developers Power BI Desktop Requires Pro or Premium license

## NOTE

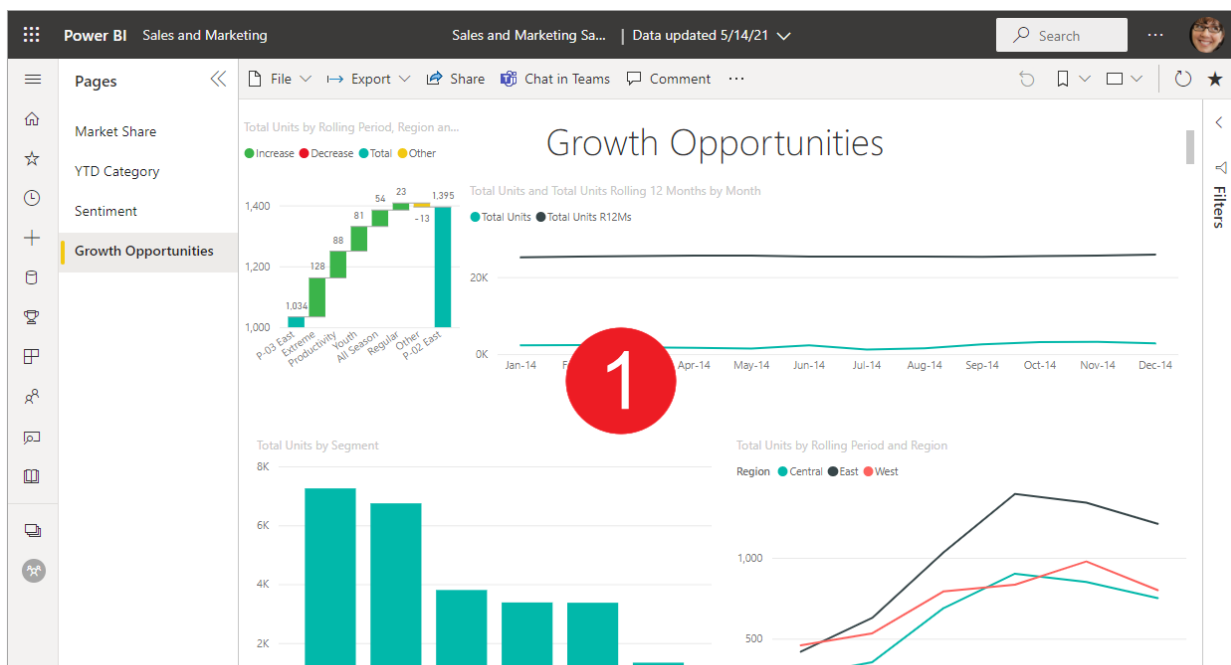
This video might use earlier versions of Power BI Desktop or the Power BI service.

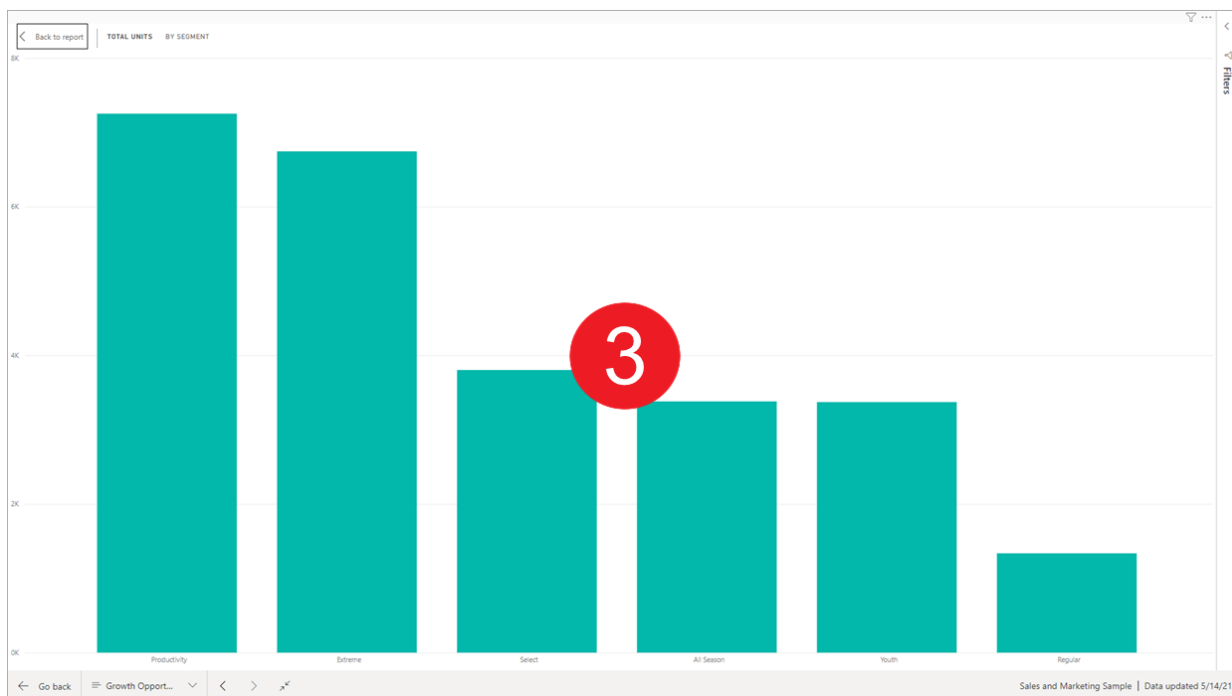
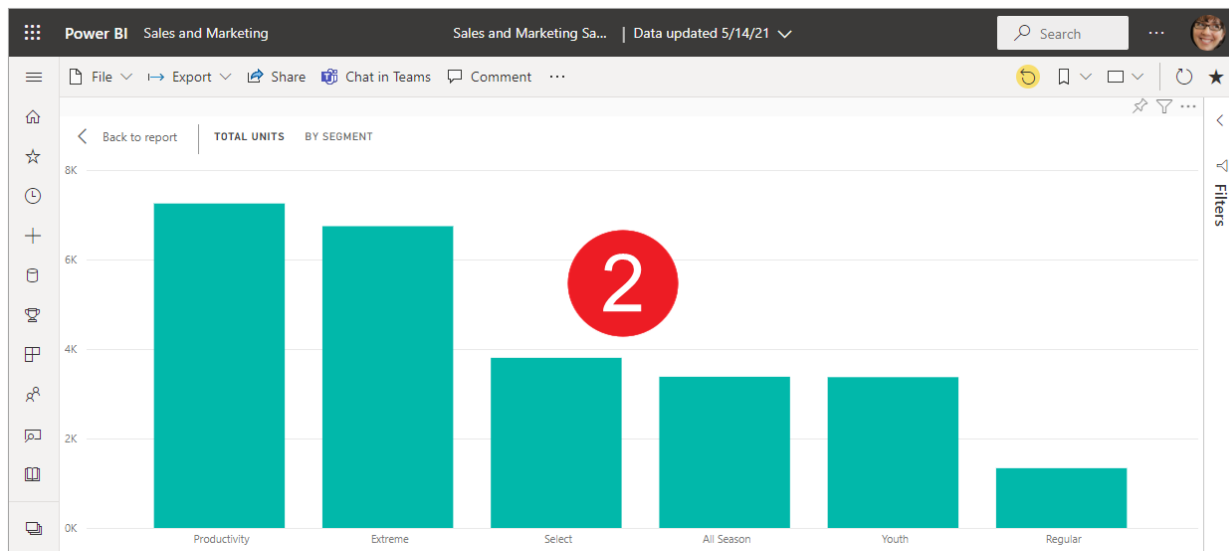
<https://www.youtube.com/embed/dtdLul6otYE>

Focus mode and full screen mode are two different ways to see more detail in your visuals, reports, and dashboards. The main difference between the two is that full screen removes all the panes surrounding your content while focus mode allows you to still interact with your visuals. Let's take a closer look at the similarities and differences.

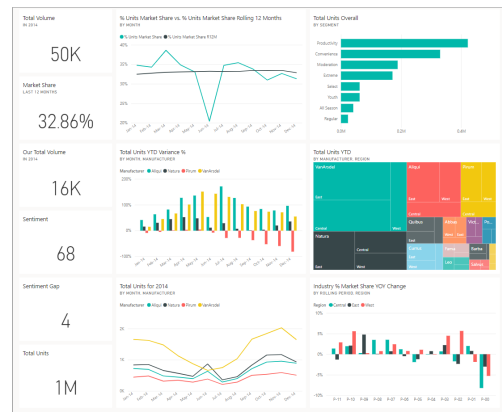
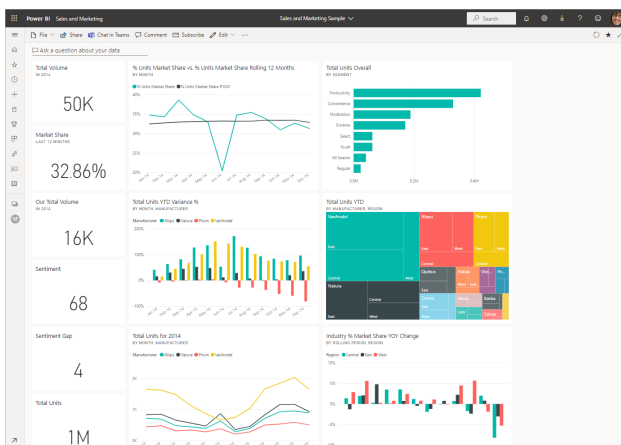
CONTENT	FOCUS MODE	FULL SCREEN MODE
Dashboard	Not possible	yes
Report page	Not possible	yes
Report visual	yes	yes
Dashboard tile	yes	Not possible
Windows 10 mobile	Not possible	Yes

In this example below, we started with a report (1), opened one of the visuals in focus mode (2) and then opened that same visual in full screen mode (3).





When to use full screen mode



Display your Power BI service content (dashboards, report pages, and visuals) without the distraction of menus and nav panes. You get an unadulterated, full view of your content at a glance, all the time. This is sometimes referred to as TV mode.

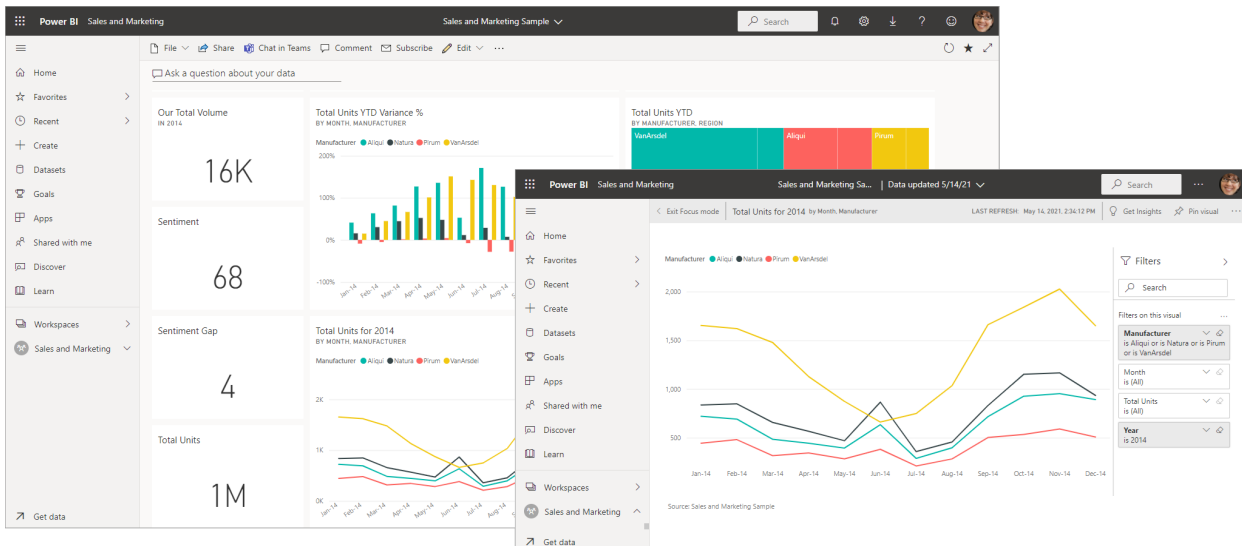
If you're using Power BI mobile, [full screen is available for Windows 10 mobile apps](#).

Some uses for full screen mode are:

- presenting your dashboard, visual, or report at a meeting or conference
- displaying in an office on a dedicated large screen or projector
- viewing on a small screen
- reviewing in locked mode -- you can touch the screen or mouse over tiles without opening the underlying report or dashboard

## When to use focus mode?

**Focus** mode lets you expand (pop out) a visual or tile to see more detail. Maybe you have a dashboard or report that is a little crowded and you want to zoom in on only one visual. This is a perfect use of focus mode.



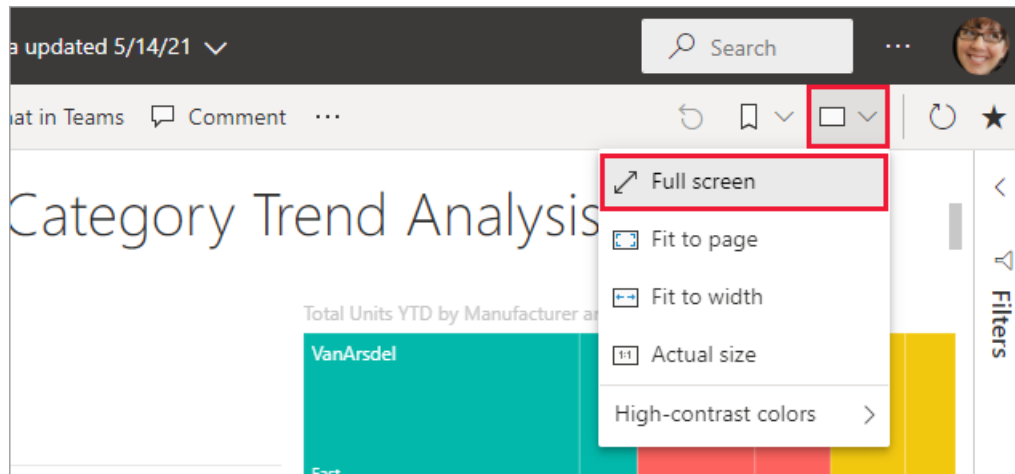
While in focus mode, a Power BI *business user* can interact with any filters that were applied when this visual was created. In the Power BI service, you can use focus mode on a dashboard tile or report visual.

## Working in full screen mode

Full screen mode is available for dashboards, report pages, and report visuals.

- To open a dashboard in full screen mode, select the full screen icon  from the top menu bar.


- To open a report page in full screen mode, select **View > Full screen**.



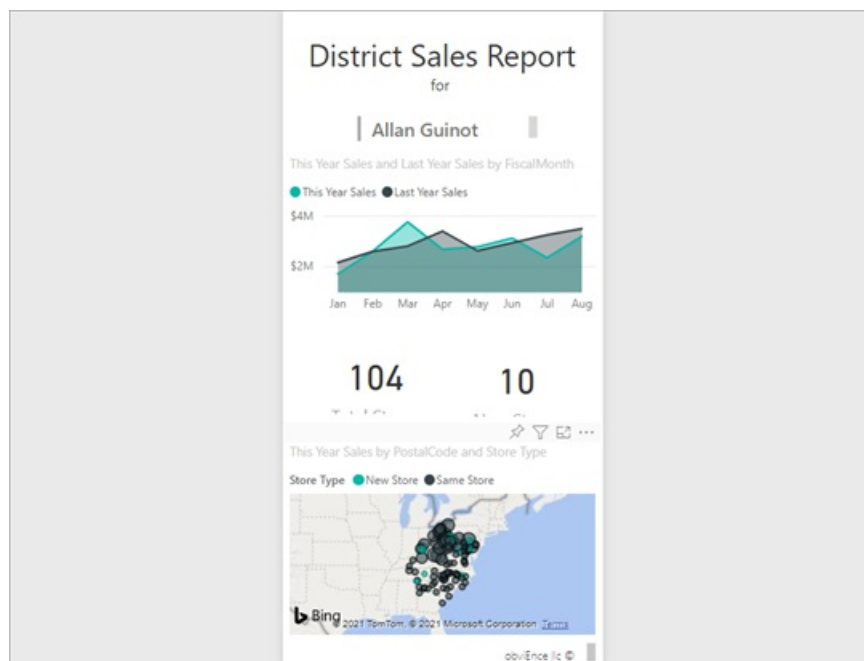
- To see a visual in full screen mode, first open it in focus mode and then select **View > Full screen**.


Your selected content fills the entire screen. Once you're in full screen mode, navigate using either the menu bars at the top and bottom (reports) or the menu that appears when you move your cursor (dashboards and visuals). Because full screen is available for such a wide variety of content, the navigation options vary.

- Select the **Back**, **Go back**, or **Back to report** button to navigate to the previous page in your browser. If the previous page was a Power BI page, it too will display in full screen mode. Full screen mode will persist until you exit out.

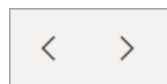
 Fit to page

- Use the **Fit to page** button to display your dashboard at the largest size possible without resorting to scrollbars.



 Fit to width

- Sometimes you don't care about scrollbars, but want the dashboard to fill the entire width of the available space. Select the **Fit to width** button.



- In full screen reports, use these arrows to move between the pages in the report.

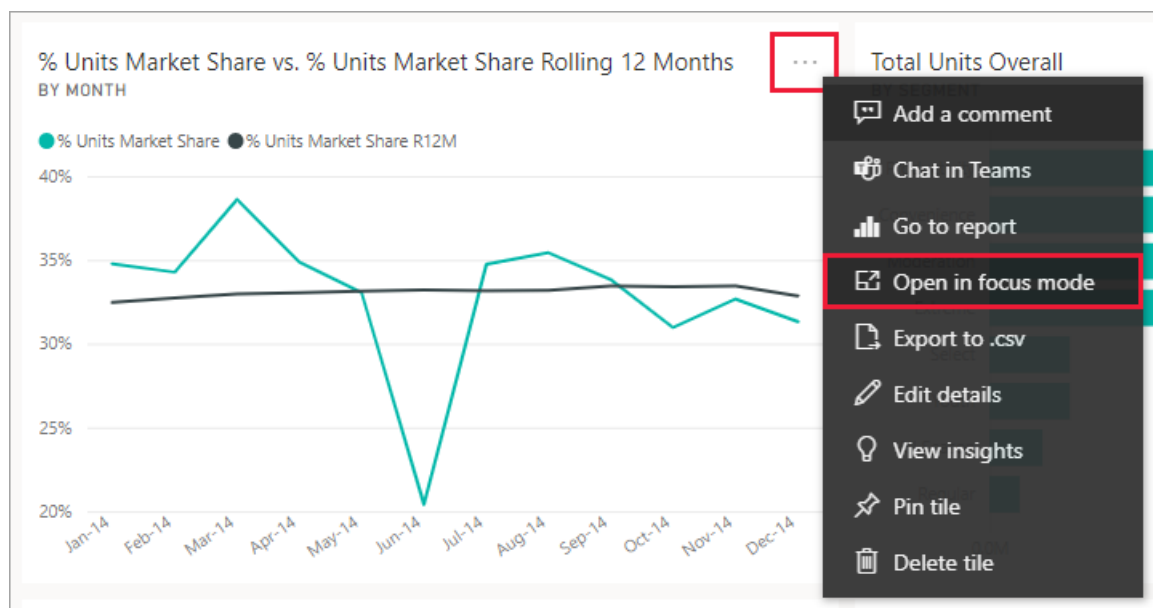


- To exit full screen mode, select the **Exit full screen** icon.

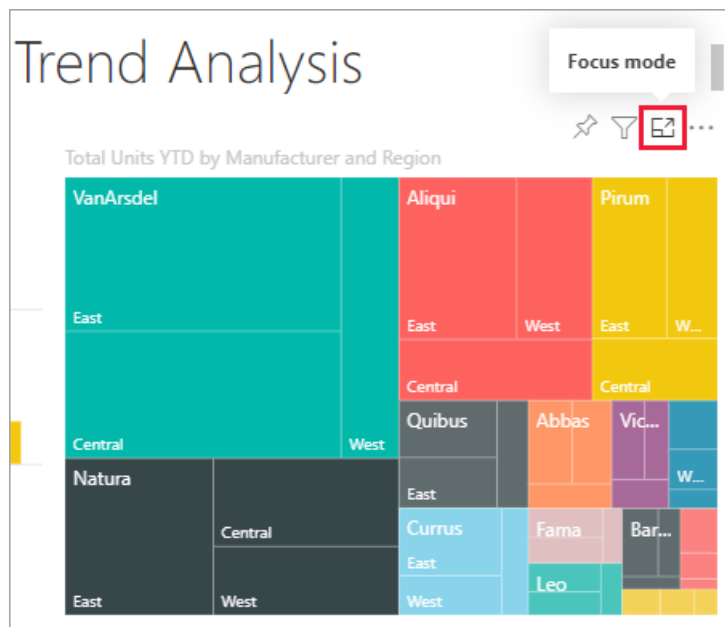
## Working in focus mode

Focus mode is available for dashboards tiles and report visuals.

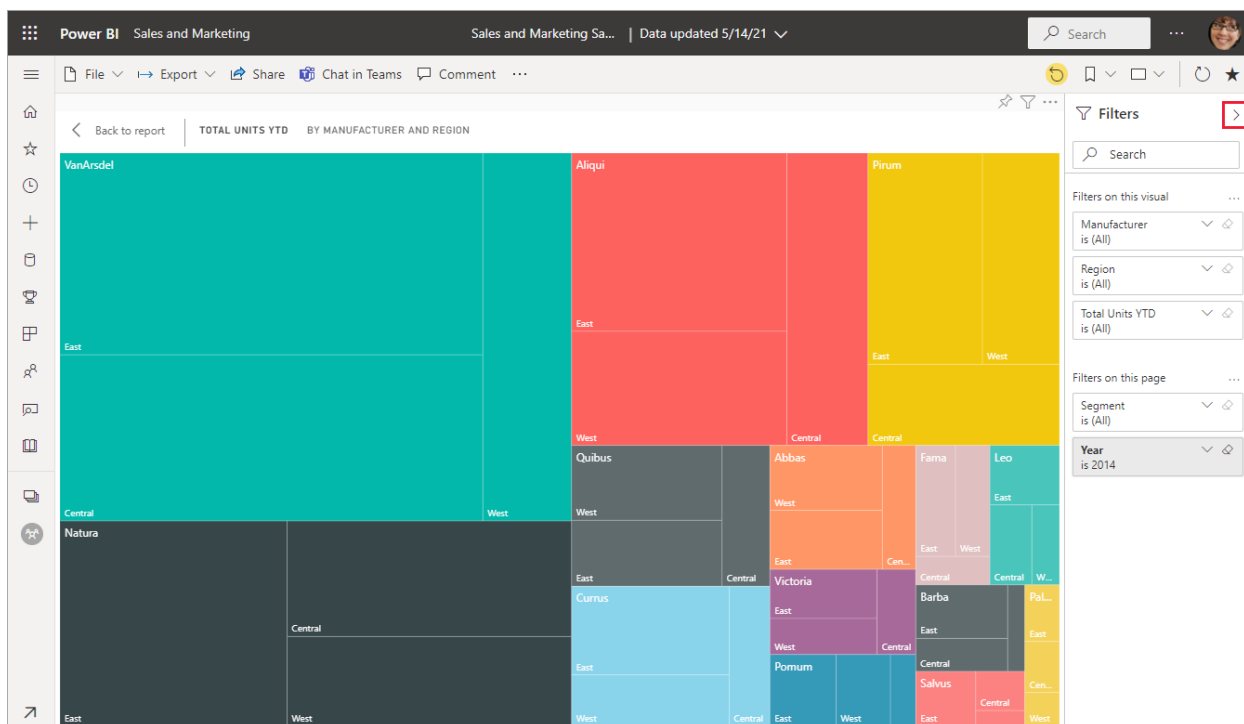
- To open a dashboard tile in focus mode, hover over a dashboard tile or report visual, select **More options** (...) and choose **Open in focus mode**.

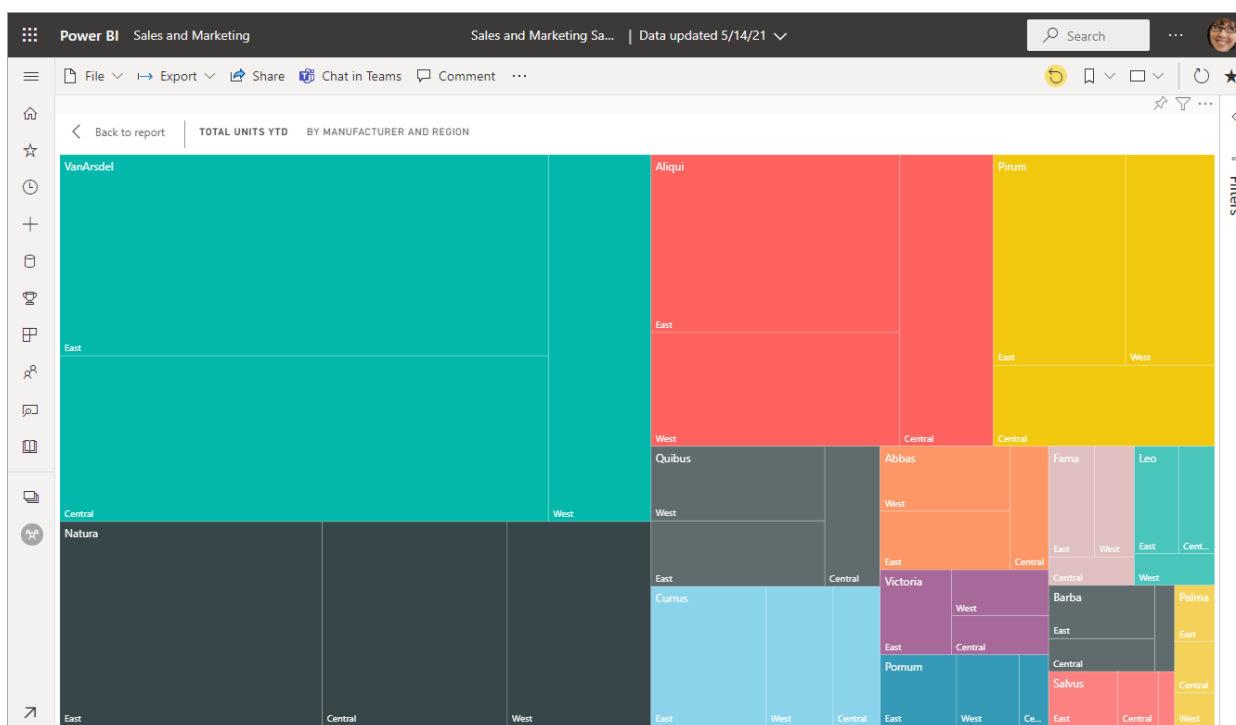


- To open a report visual in focus mode, hover over the visual and select the **focus mode** icon .




The visual opens and fills the entire canvas. Notice that you still have a **Filters** pane that you can use to interact with the visual. The Filters pane can be collapsed.



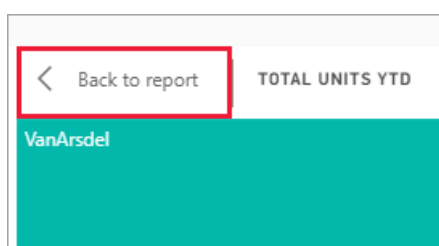
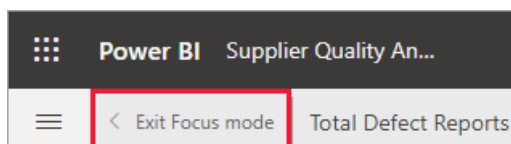


Explore further by [modifying the filters](#) and looking for interesting discoveries in your data. As a *business user*, you can't add new filters, change the fields being used in the visuals, or create new visuals. However, you can interact with the existing filters.

For a dashboard tile, your changes can't be saved. For a report visual, any modifications you make to the existing filters are saved when you exit Power BI. If you don't want Power BI to remember your modifications,

select the **Reset to default** button. 

Leave focus mode and return to the dashboard or report by selecting either **Exit focus mode**, or **Back to report** (in the upper left corner of the visual).



## Considerations and troubleshooting

- When using focus mode with a visual in a report, you'll be able to view and interact with all filters: Visual level, Page level, Drillthrough, and Report level.
- When using focus mode with a visual on a dashboard, you'll be able to view and interact with only the Visual level filter.

## Next steps

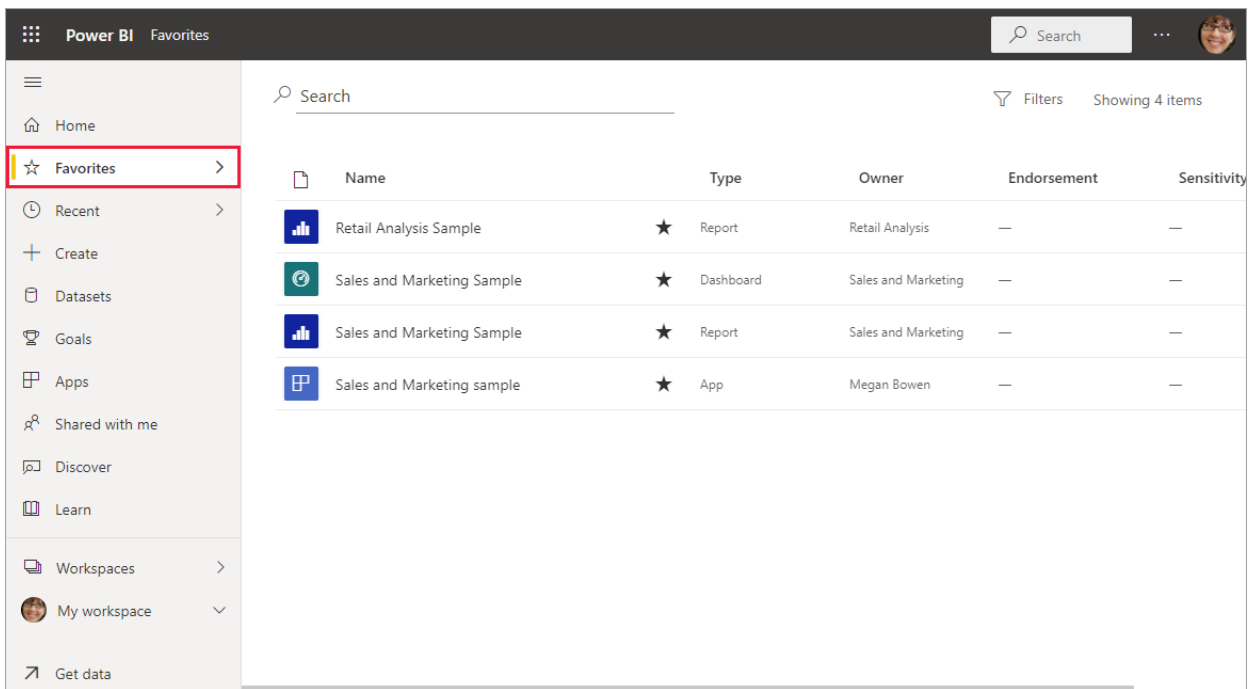
[View settings for reports](#)

# Favorite dashboards, reports, and apps in the Power BI service

12/10/2021 • 2 minutes to read • [Edit Online](#)

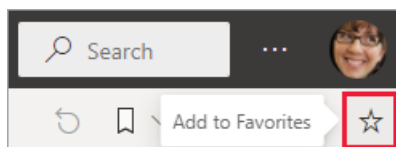
**APPLIES TO:** Power BI service for *business users* Power BI service for designers & developers Power BI Desktop Requires Pro or Premium license

When you make content a *favorite*, you can access it quickly from the **Favorites** content list. Favorites are typically content that you visit most often and are identified with a filled star.



## Add a dashboard or report as a favorite

1. Open a dashboard or report that you use often. Even content that has been shared with you can be a favorite.
2. From the upper menu bar of the Power BI service, select **Favorite** or the star icon.



You can also favorite a dashboard or report from anywhere you see the star icon, such as Home, Recent, Apps, and Shared with me.

Home

Favorites

Recent

Create

Datasets

Goals

Search

Name

Type

Opened

Customer Profitability

Workspace

40 seconds ago

Customer Profitability Sample

Report

2 minutes ago

Customer Profitability Sample

Dashboard

4 minutes ago

## Add an app as a favorite

- From the nav pane, select **Apps**.

☰

Home

Favorites >

Recent >

Create

Datasets

Goals

**Apps**

Shared with me

Discover


Learn

Workspaces >

My workspace ▾


Get data ↗

🔍 Search content...




Human Resources

MAY 5, 2021




IT Spend Analysis

MAY 5, 2021




Procurement Analysis


MAY 5, 2021



Retail

MAY 7, 2021




- Hover over an app to display more detail. Select the star  icon to set as a favorite.



IT Spend Analysis


MAY 5, 2021

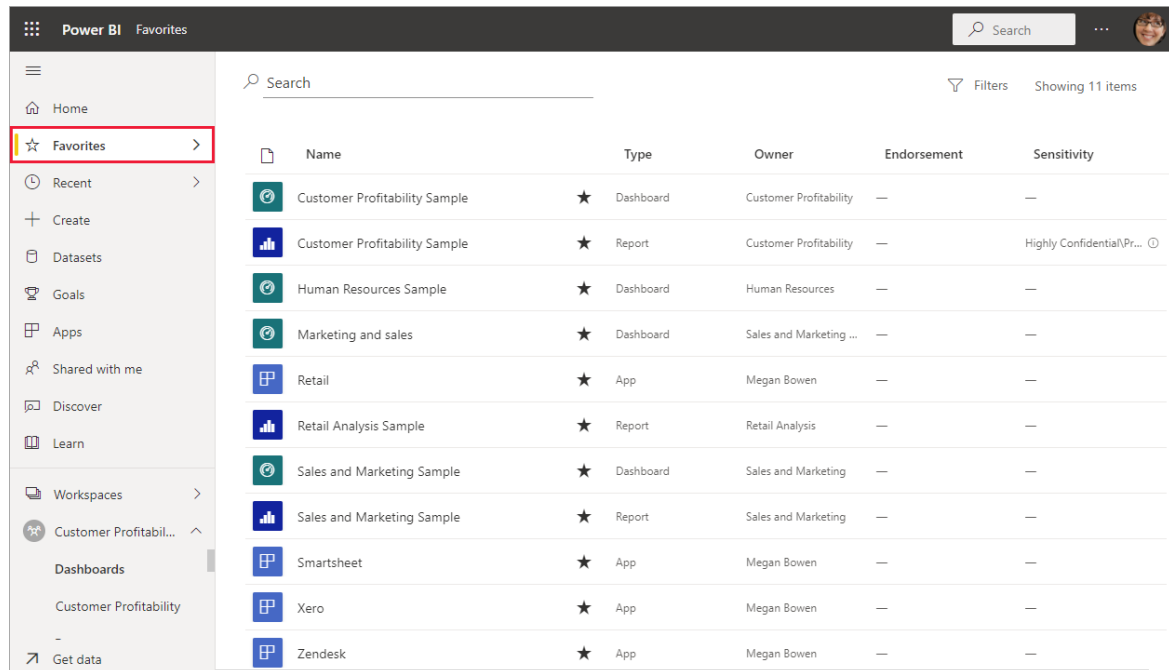
MEGAN BOWEN

# Work with favorites

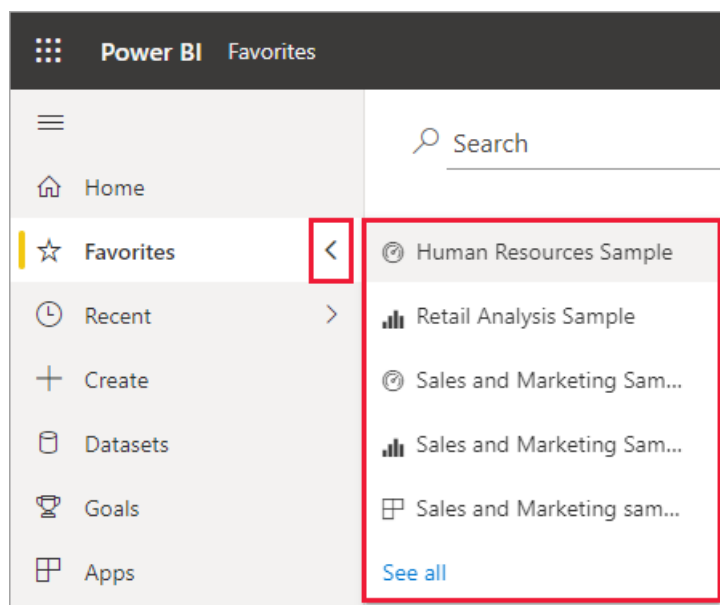
You have several options for viewing your favorites.

1. To see all the content that you've added as favorites, in the nav pane, select **Favorites** or the Favorites  icon.

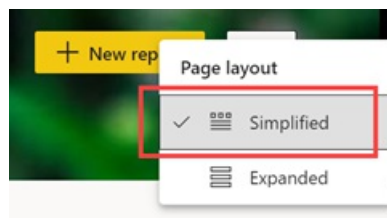


From here, you can take action. You can open a favorite, identify owners, and even share favorites with your colleagues.




2. To access your most visited favorites, select the flyout arrow to the right of **Favorites**. From here, you can select a favorite to open it. Up to five favorites are listed alphabetically. If you have more than five, select **See all** to open the favorites content list.



3. Favorites are also available from Power BI Home. If you've selected the **Expanded** display mode, your favorites are listed in the **Favorites + frequents** section. If you've selected the **Simplified** display mode, your favorites are listed in the **Favorites** tab.

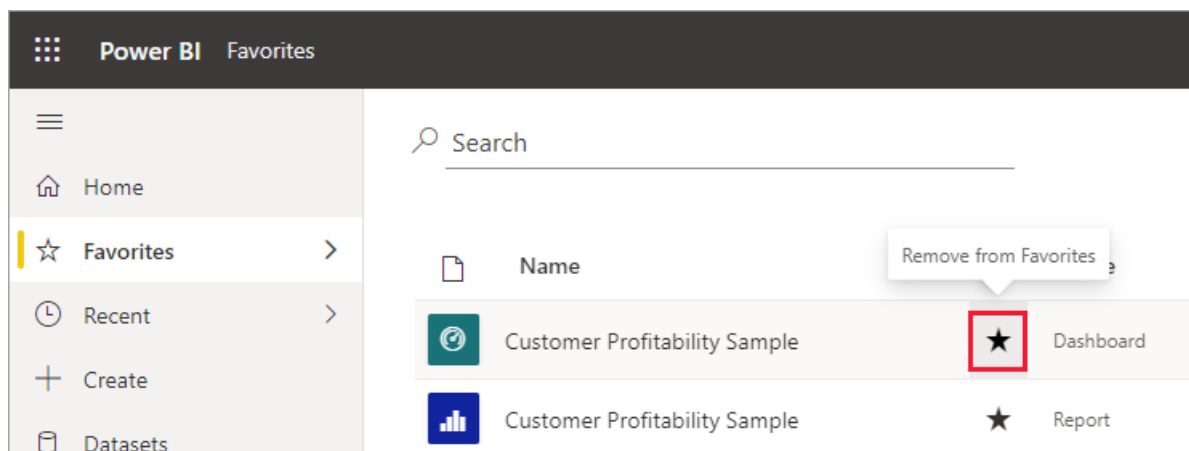


Recent **Favorites** My apps

	Name	Type	Opened	Loca
	Customer Profitability Sample	★	Dashboard	52 minutes ago
	Customer Profitability Sample	★	Dashboard	! Neh
	Customer Profitability Sample	★	Report	14 hours ago

## Unfavorite content

If you no longer use a report, dashboard, or app as often as you used to, you can unfavorite it. When you unfavorite content, it's removed from your Favorites list but not from Power BI. Just select the black star to turn it back to a white star.



## Considerations and limitations



- At the current time, you can favorite an app and this automatically favorites all the reports and dashboards for that app. It isn't possible to favorite individual app reports or dashboards.
- Effective January 2022, Power BI Home will no longer display *tiles* from your favorited dashboard.

## Next steps

- [Power BI: Basic concepts](#)
- More questions? Try the [Power BI Community](#).

# Printing from the Power BI service

12/10/2021 • 3 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

## What can be printed

Print an entire dashboard, a dashboard tile, a report page, or a report visual from the Power BI service. If your report has more than one page, you'll need to print each page separately.

## Printing considerations

Most Power BI dashboards and reports are created by report *designers* to be used online and to look amazing when displayed on a variety of devices. When you print a report, how that content displays on paper is controlled by your browser.

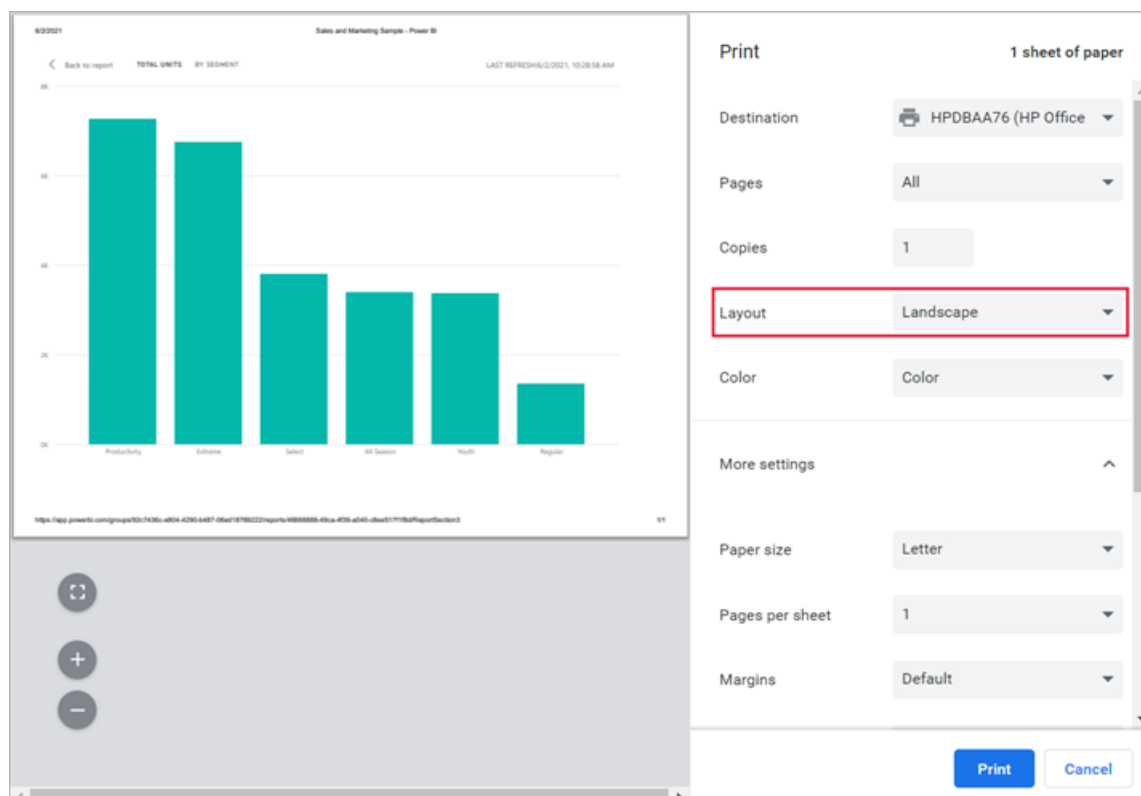
There are browser settings you can use to adjust the printout, but even then you still may not get the result you want. Consider [exporting to PDF](#) first and printing the PDF instead.

## Adjust your browser print settings

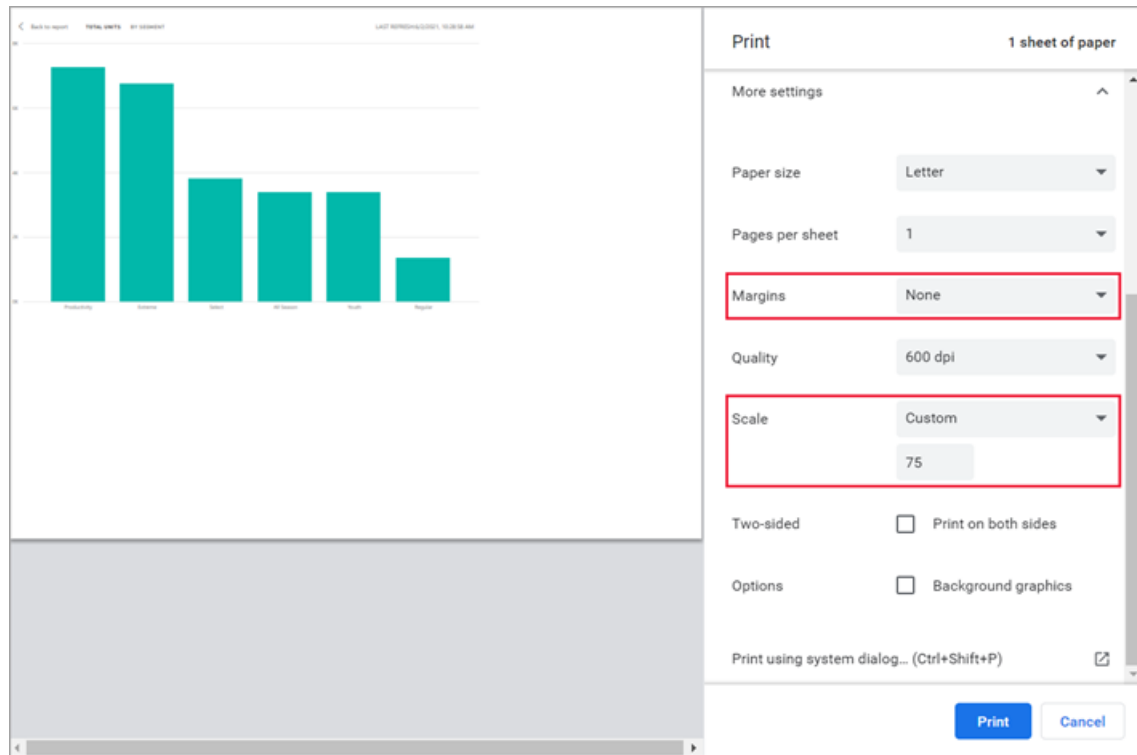
When you print from Power BI, your browser opens a Print window. Each browser's Print window is different from the others. But, you'll find that they all have similar options available for you to use to control the look of your printout.

Here are a few quick tips you can use to format your printout.

1. If your dashboard, report, or visual is more wide than it is tall, consider using the **Landscape** layout.



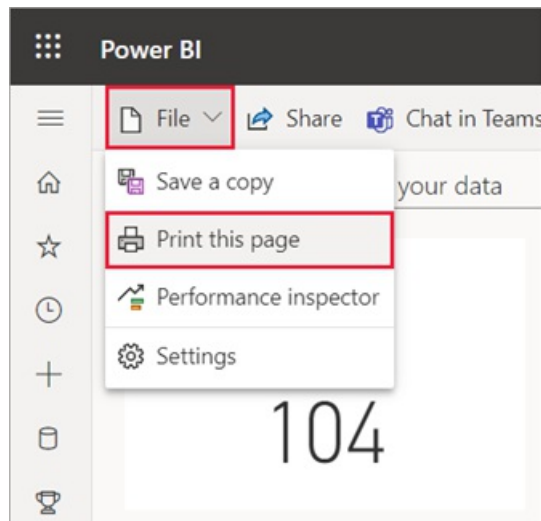
2. To fit more onto a printed page, adjust things like margins and scale.



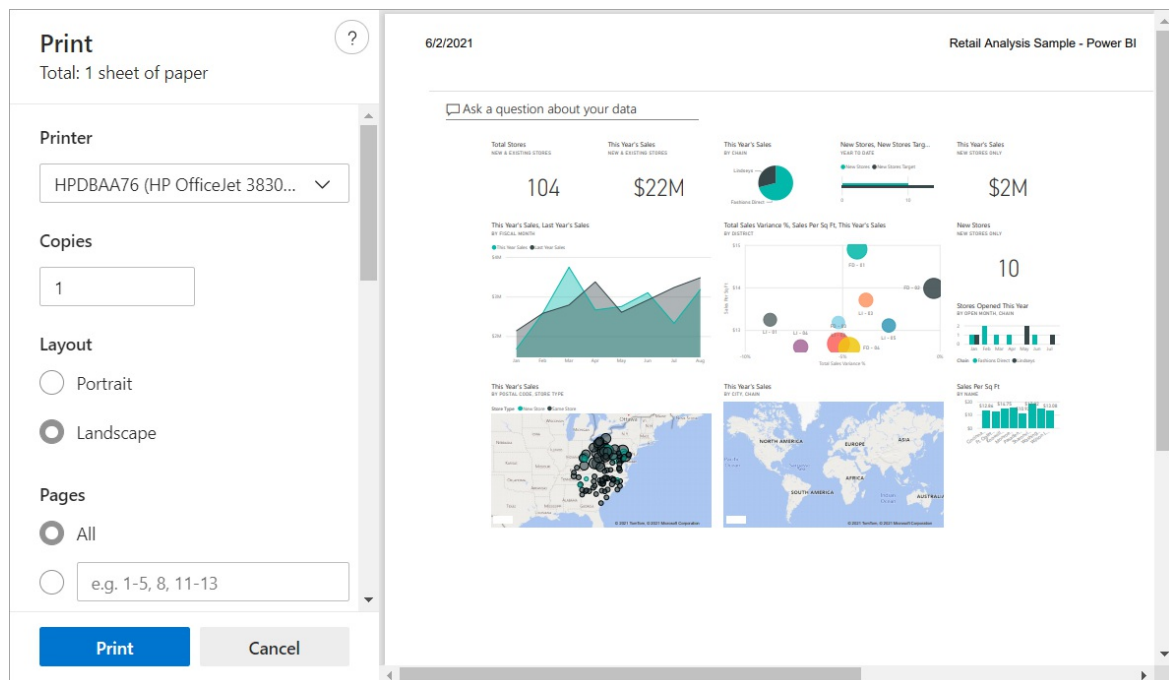
Experiment with your particular browser's settings until you get the look that you like. Some browsers even have options to print background graphics.

## Print a dashboard



1. Open the dashboard that you'd like to print.
2. In the upper left corner, select **File** and choose **Print this page**.

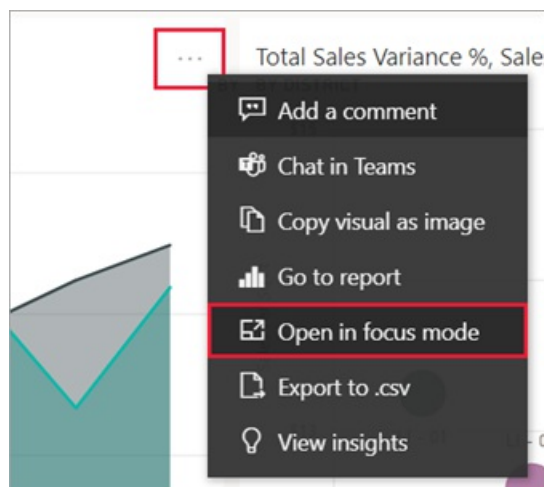


3. The Print window for your browser opens. Choose the settings. For example, if your dashboard is wider than it is long, you may want to change the layout to **Landscape**. Select **Print**.



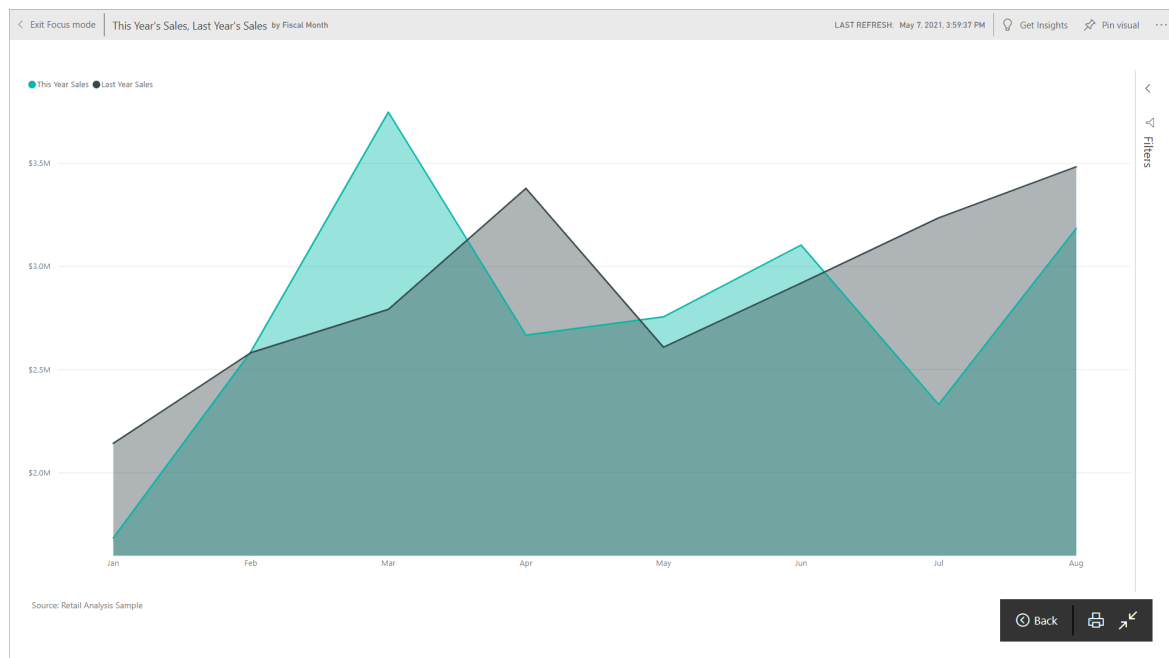
## Print a dashboard tile

1. Open the dashboard in **full screen mode** by selecting the full screen icon  from the upper menu bar.
2. **Open the tile in Focus mode** by hovering to reveal **More options (...)** and choosing **Open in focus mode** .



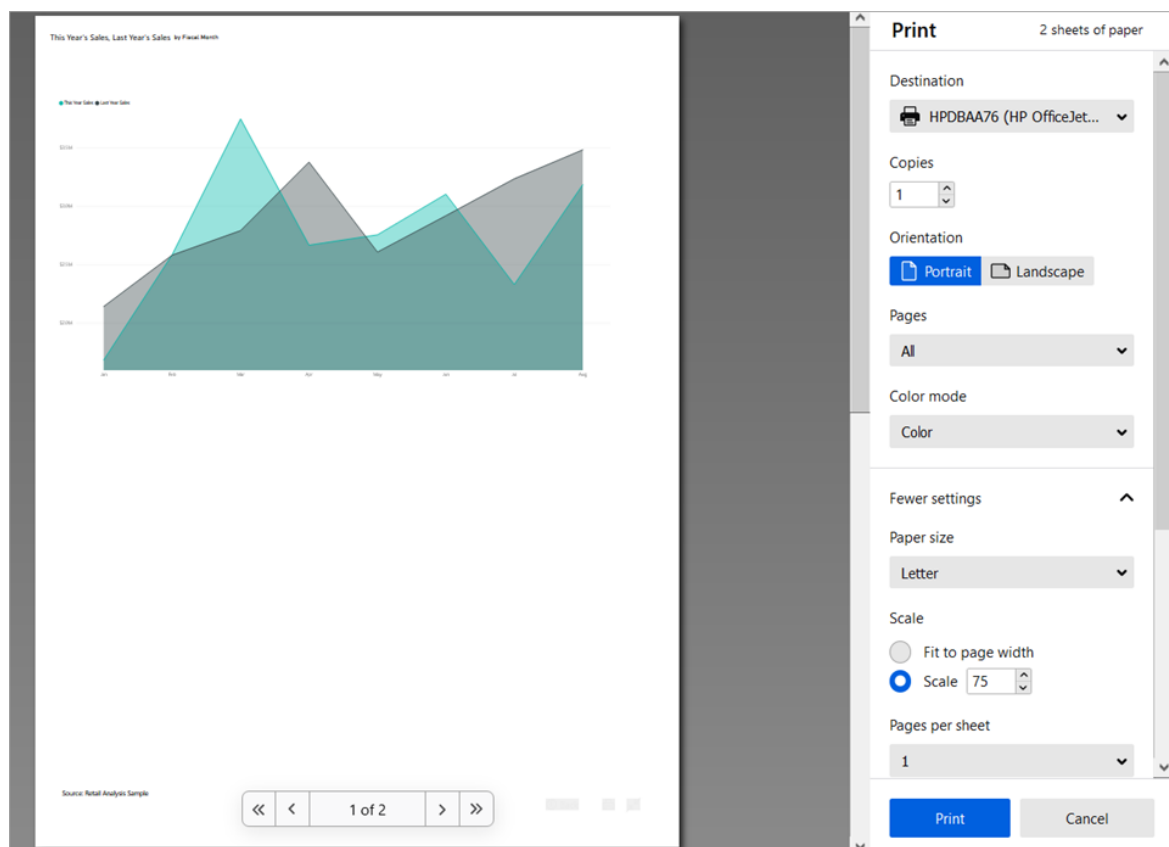
3. Hover over the tile to reveal the Options menu.





4. Select the Print icon

5. The Print window for your browser opens. Choose the settings. For example, if your tile isn't fitting on the page, you may want to change the scale to 75%. Select **Print**.



### TIP

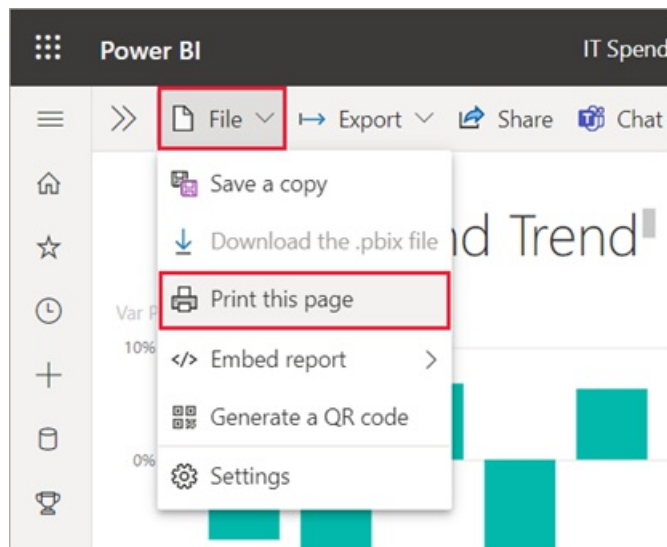
If you've followed all of these steps and your tile still isn't displaying the way you want it to, try the following.

1. Open the Print window and make the changes to the print settings that you believe will result in the best printout. For example, change the layout, margins, and scale.
2. But, instead of printing, select **Cancel**.
3. Go through steps 1-5 again. Your tile will adjust to the new Print window settings and be ready to print.

## Print a report page


Reports can be printed one page at a time.

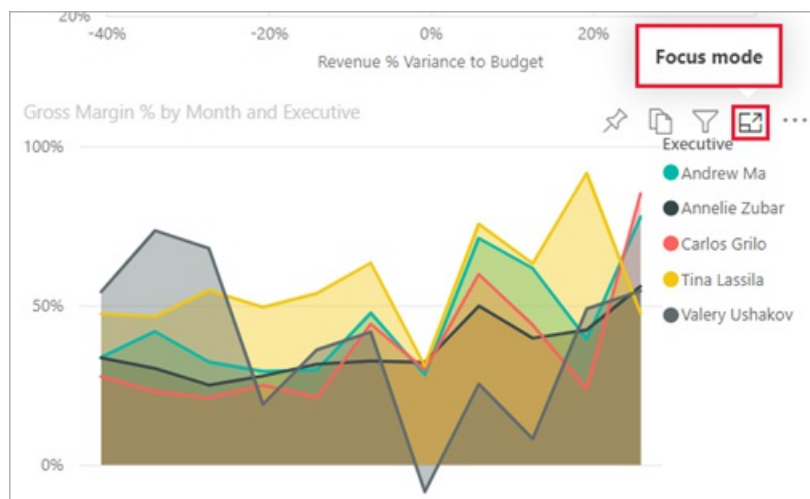
1. Open the report and select **File > Print this page** to print the current report page.



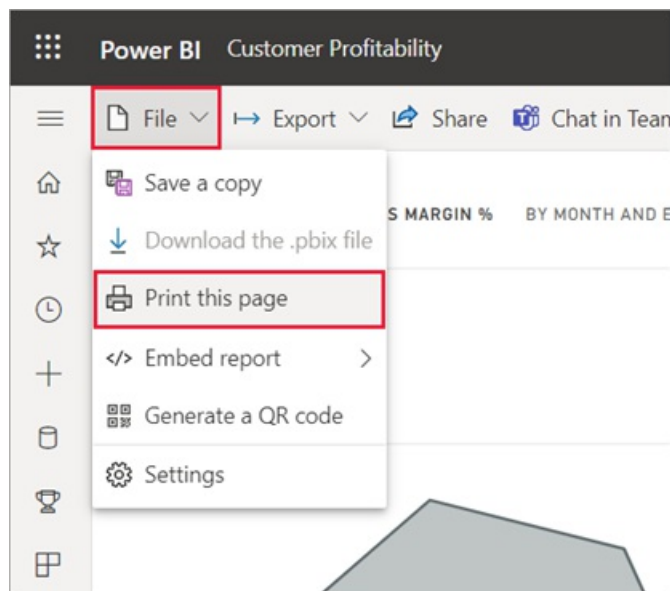
2. The Print window for your browser opens.
3. Follow the printing steps from **Print a dashboard**, above.

## Print a report visual

1. [Open the visual in Focus mode](#) by hovering over the tile and selecting the Focus icon  from the top-right corner.



2. From the upper left corner, select **File > Print this page** to print the visual.



3. Follow the printing steps from **Print a dashboard**, above.

## Considerations and troubleshooting

- Q: I cannot print all the report pages at once.
- A: That is correct. Report pages can only be printed one page at a time.
- Q: I cannot print to PDF.
- A: You will only see this option if you've already configured the PDF driver in your browser.
- Q: What I see when I select **Print** doesn't match what you're showing me here.
- A: The Print screens vary by browser and software version.
- Q: My printout isn't scaled correctly. My dashboard doesn't fit on the page. Other scaling and orientation questions.
- A: We cannot guarantee that the printed copy will be exactly the same as it appears in the Power BI service. Things like scaling, margins, visual details, orientation, and size are not controlled by Power BI. Try adjusting the print settings for your browser. Some of the ones we suggest above are page orientation (portrait or landscape), margin size, and scale. If these don't help, refer to the documentation for your specific browser.
- Q: When I'm printing from Full screen mode, I don't see the print option when I hover over the visual.
- A: Go back to the dashboard or report in default view and re-open the visual in Focus mode and then Full screen mode.

## Next steps

[Share dashboards and reports with colleagues and others](#)

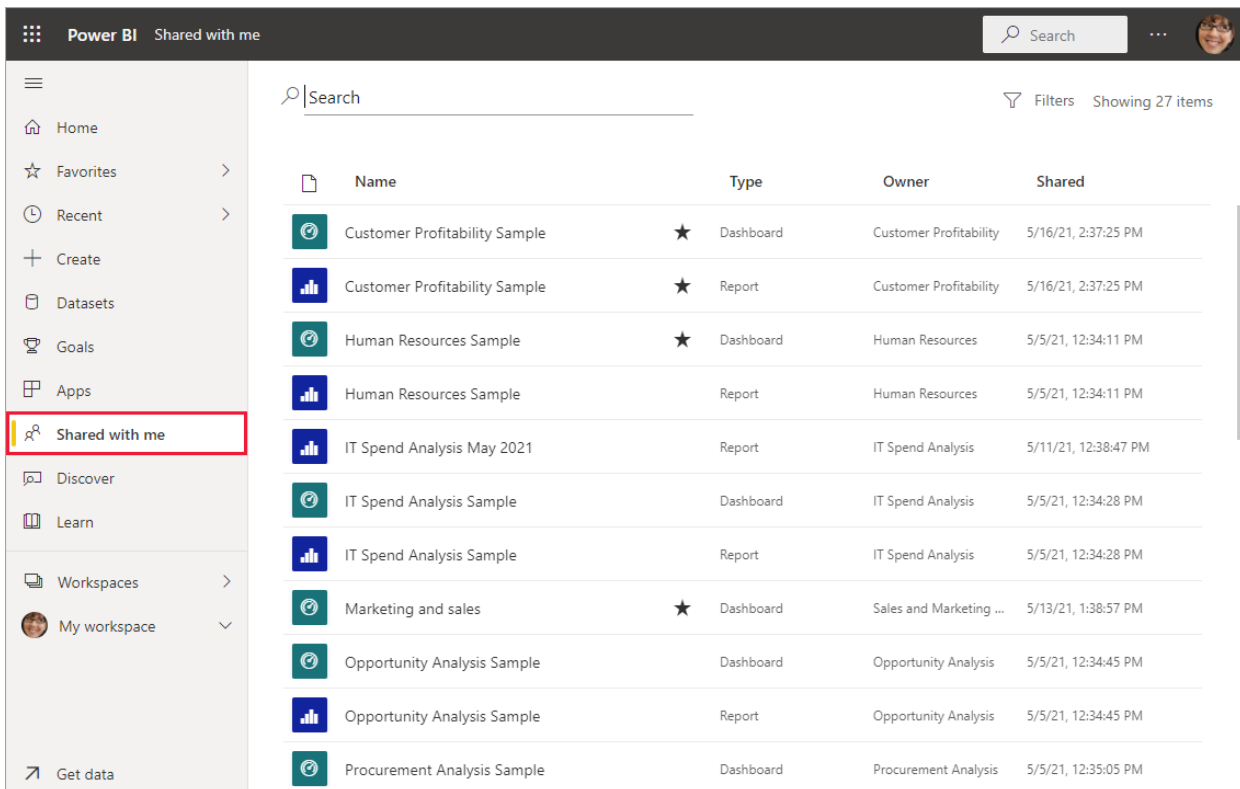
More questions? [Try the Power BI Community](#)

# Display the dashboards and reports that have been shared with me

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

When a colleague shares a dashboard or a report with you, it appears in your **Shared with me** container. When a colleague shares an app with you, the app appears in your **Apps** container, and the app's reports and dashboards appear in your **Shared with me** container.



Name	Type	Owner	Shared
Customer Profitability Sample	★ Dashboard	Customer Profitability	5/16/21, 2:37:25 PM
Customer Profitability Sample	★ Report	Customer Profitability	5/16/21, 2:37:25 PM
Human Resources Sample	★ Dashboard	Human Resources	5/5/21, 12:34:11 PM
Human Resources Sample	Report	Human Resources	5/5/21, 12:34:11 PM
IT Spend Analysis May 2021	Report	IT Spend Analysis	5/11/21, 12:38:47 PM
IT Spend Analysis Sample	Dashboard	IT Spend Analysis	5/5/21, 12:34:28 PM
IT Spend Analysis Sample	Report	IT Spend Analysis	5/5/21, 12:34:28 PM
Marketing and sales	★ Dashboard	Sales and Marketing ...	5/13/21, 1:38:57 PM
Opportunity Analysis Sample	Dashboard	Opportunity Analysis	5/5/21, 12:34:45 PM
Opportunity Analysis Sample	Report	Opportunity Analysis	5/5/21, 12:34:45 PM
Procurement Analysis Sample	Dashboard	Procurement Analysis	5/5/21, 12:35:05 PM

Watch Amanda explain the **Shared with me** content list and demonstrate how to navigate and filter the list. Then follow the step-by-step instructions below the video to try it out yourself. For you to view dashboards shared with you, you need to have a Power BI Pro or Premium Per User (PPU) license. Read [What is Power BI Premium?](#) for details.

## NOTE

This video might use earlier versions of Power BI Desktop or the Power BI service.

<https://www.youtube.com/embed/G26dr2PsEpK>

## Interact with shared content

You'll have options for interacting with the shared dashboards and reports, depending on the permissions the *designer* gives you. These include being able to make copies of the dashboard, subscribe, open the report in [Reading view](#), and re-share with other colleagues. Select a dashboard or report to open it.

# Search and sort shared dashboards and reports

If your **Shared with me** content list gets long, you have several options for finding what you need. Use the search field (1), sort by one of the columns (2), or use the Filters pane. To open the Filters pane, select **Filters** from the upper right corner.

The screenshot displays the Power BI 'Shared with me' interface. A red box labeled '1' highlights the search field at the top. A red box labeled '2' highlights the 'Type' column header in the list of items. A red box labeled '3' highlights the 'Filters' pane on the right, which is currently open and showing options to filter by Type (Dashboard, Report) and Owner (Customer Profitability, Human Resources).

Name	Type
Customer Profitability Sample	Dashboard
Human Resources Sample	Dashboard
IT Spend Analysis Sample	Dashboard
Marketing and sales	Dashboard
Opportunity Analysis Sample	Dashboard
Procurement Analysis Sample	Dashboard

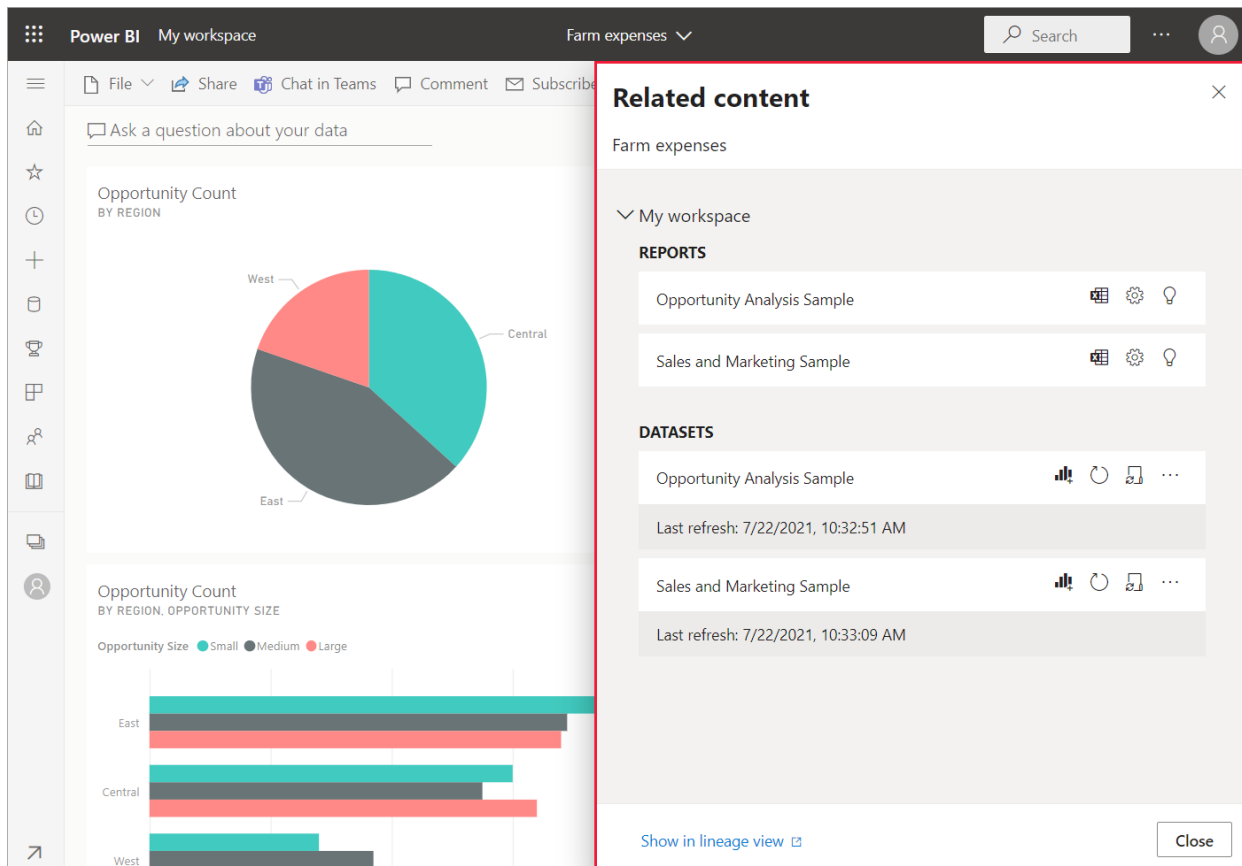
# See related content in the Power BI service

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

The **Related content** pane shows you how your Power BI service content -- dashboards, reports, and datasets -- are interconnected. The **Related content** pane is also a launching pad for taking action. From here you can do things like open a dashboard, open a report, generate insights, analyze the data in Excel, and more.

In the Power BI service, reports are built on datasets, report visuals are pinned to dashboards, and dashboard visuals link back to reports. But how do you know which dashboards are hosting visuals from your Marketing report? And how do you locate those dashboards? Is your Procurement dashboard using visuals from more than one dataset? If so, what are they named and how can you open and edit them? Is your HR dataset being used in any reports or dashboards at all? Or, can it be moved without causing any broken links? Questions like these can all be answered on the **Related content** pane. Not only does the pane display the related content, it also allows you to take action on the content and easily navigate between the related content.



The screenshot shows the Power BI service interface. The main workspace displays a pie chart titled "Opportunity Count BY REGION" and a horizontal bar chart titled "Opportunity Count BY REGION, OPPORTUNITY SIZE". The "Related content" pane on the right shows a tree view under "My workspace" with "REPORTS" and "DATASETS" sections. The "REPORTS" section lists "Opportunity Analysis Sample" and "Sales and Marketing Sample". The "DATASETS" section lists "Opportunity Analysis Sample" and "Sales and Marketing Sample", each with a "Last refresh" timestamp. A "Show in lineage view" link and a "Close" button are at the bottom of the pane.

## NOTE

The related content feature does not work for streaming datasets.

## See related content for a dashboard or report

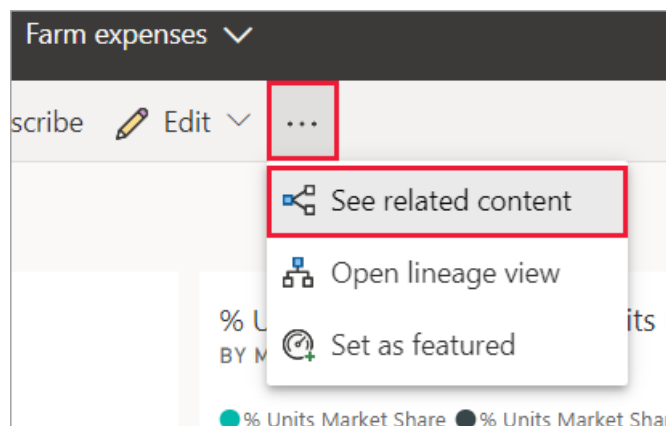
Watch Will view related content for a dashboard. Then follow the step-by-step instructions below the video to try it out yourself with the Procurement Analysis sample.

## NOTE

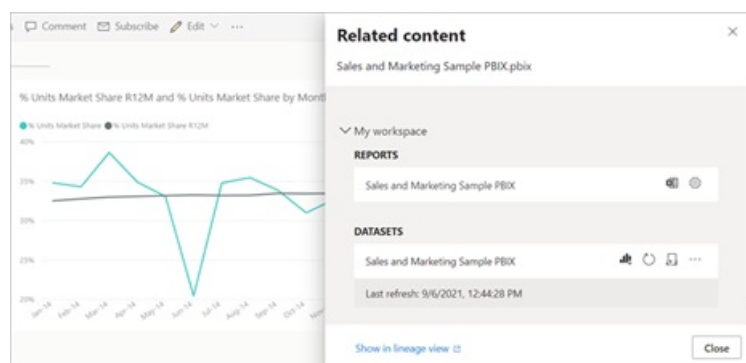
This video might use earlier versions of Power BI Desktop or the Power BI service.

<https://www.youtube.com/embed/B2vd4MQrz4M?t=3m05s>

With a dashboard or report open, select **More options** (...) in the menu bar and choose **See related content** from the dropdown.



The **Related content** pane opens. For a dashboard, it shows all the reports that have visualizations pinned to the dashboard and their associated datasets. For this dashboard, there are visualizations pinned from only one report and that report is based on only one dataset. If you look at the image at the beginning of this article, you'll see related content for a dashboard that has visualizations pinned from two reports, and two datasets.



From here, you can take direct action on the related content, depending on your permissions. For example, select a report or dashboard name to open it. For a listed report, select an icon to open and edit the settings for the report, [get insights](#), and more. For a dataset, review the last refresh date and time, [analyze in Excel](#), [get insights](#), refresh, and more.

## Considerations and limitations

- If you don't see "See related", look for the icon instead . Select the icon to open the **Related content** pane.
- To open related content for a report, you need to be in [Reading view](#).
- The related content feature doesn't work for streaming datasets.

## Next steps

- [Get started with Power BI service](#)
- More questions? [Try the Power BI Community](#)

# Recent content in the Power BI service

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

**Recent** content contains the last items you visited in the Power BI service. This include: dashboards, reports, apps, workspaces, and workbooks. When you select **Recent** from the nav bar, Power BI displays this content in descending order by date. To change the sort order, select one of the headings and choose ascending or descending.

Home

Favorites

Recent

Create

Datasets

Goals

Apps

Shared with me

Discover

Learn

Workspaces










My workspace

Get data

Search

Filters

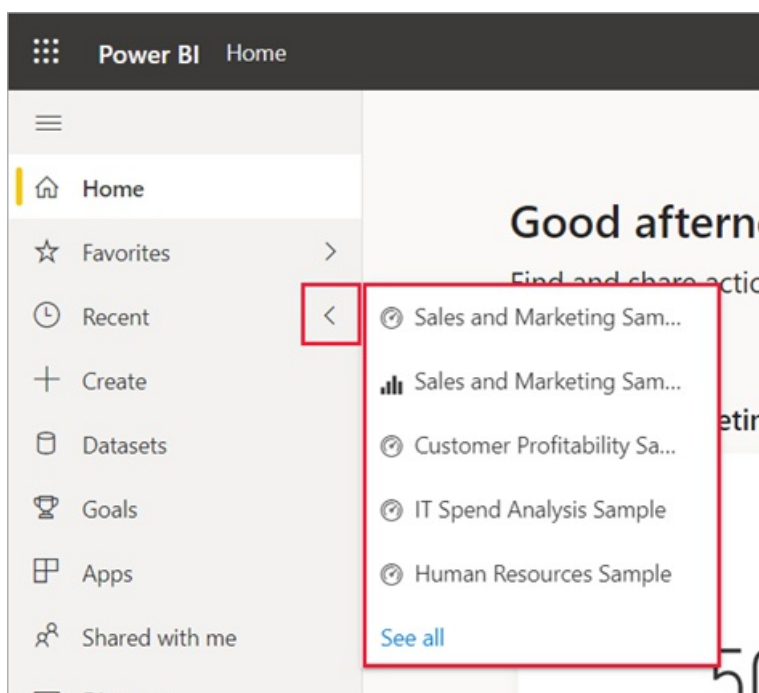
Showing 34 items

	Name		Type	Opened	Location
	Sales and Marketing Sample	★	Dashboard	a day ago	Sales and Marketing
	Sales and Marketing Sample	★	Report	a day ago	Sales and Marketing
	Customer Profitability Sample	★	Dashboard	5 days ago	Customer Profitability
	Customer Profitability		Workspace	5 days ago	Workspaces
	My workspace		Workspace	5 days ago	Workspaces
	IT Spend Analysis Sample		Dashboard	6 days ago	IT Spend Analysis
	IT Spend Analysis		Workspace	6 days ago	Workspaces
	Human Resources Sample	★	Dashboard	6 days ago	Human Resources
	Human Resources		Workspace	6 days ago	Workspaces


Notice that two items are **favorites**, they have a star icon. And one item, the Customer Profitability Sample, is stored in **Premium capacity**.

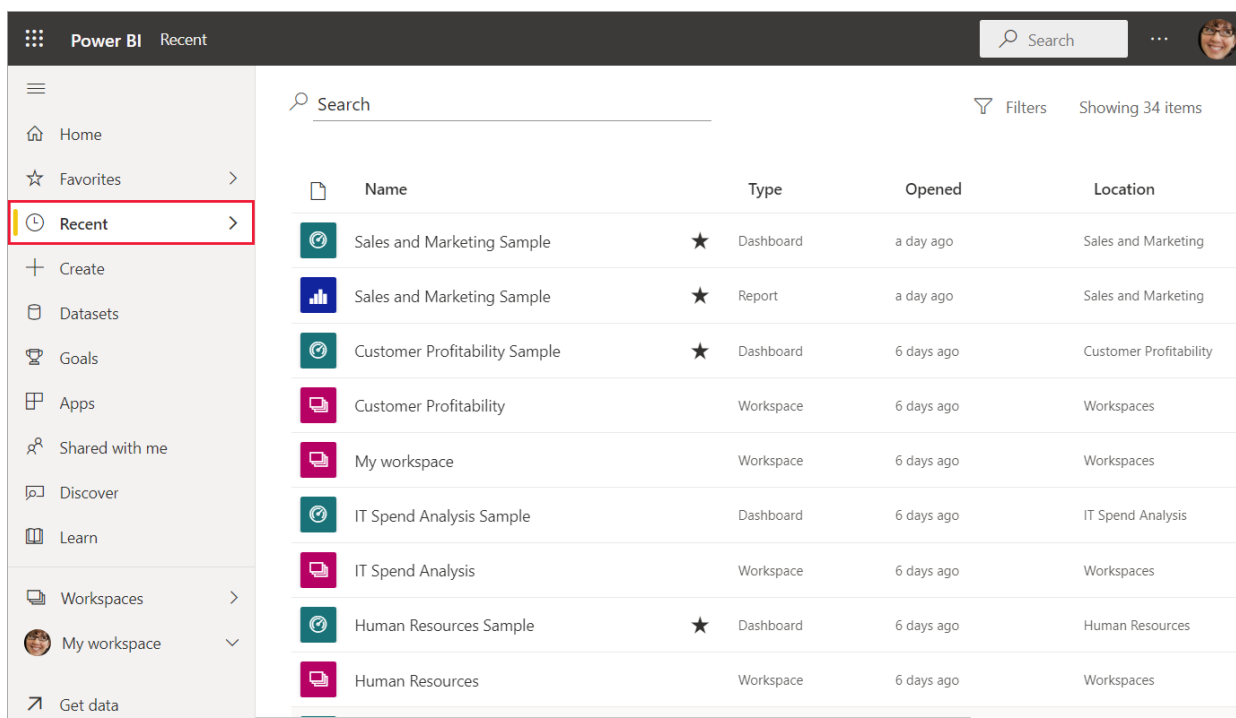
## See your five most recent

To display only your five most recently visited items, from the nav pane, select the arrow to the right of **Recent**. From here, select content to open it.







## See all of your recent content

If you have more than five recently visited items, select **See all** to open the **Recent** screen. As we did at the beginning of this article, you can skip the flyout and open the **Recent** screen by selecting the word **Recent**, or its icon , from the nav pane.



## Search and sort your list of recent content

If your lists get long, [use the search field and sorting to find what you need](#). To find out if a column can be sorted, hover to see if an arrow appears. In this example, hovering over **Type** reveals an arrow -- your recent content can be sorted alphabetically by type of content.

<div>  Search </div>			
	Name	Type ↑	
	Sales and Marketing Sample	★	Dashboard
	Sales and Marketing Sample	★	Report

Watch Amanda demonstrate how the Power BI service **Recent** content lists are populated, then follow the step-by-step instructions below the video to try it out yourself.

#### NOTE

This video might use earlier versions of Power BI Desktop or the Power BI service.

<https://www.youtube.com/embed/G26dr2PsEpk>

#### NOTE

This video uses an older version of the Power BI service.

## Next steps

[Power BI service apps](#)

More questions? [Try the Power BI Community](#)

# Subscribe to a report or dashboard in the Power BI service

12/10/2021 • 10 minutes to read • [Edit Online](#)

**APPLIES TO:** ✕ Power BI Desktop ✓ Power BI service

It's never been easier to stay up-to-date on your most important dashboards and reports. Subscribe to reports and dashboards that matter most to you, and Power BI will email a snapshot to your inbox. You tell Power BI how often you want to receive the emails: daily, weekly, or when the data refresh. You can even set a specific time for Power BI to send the emails or have it run now. Set up to 24 subscriptions per report or dashboard, and provide unique recipients, times, and frequencies for each subscription.

## Subscription for Sales Analysis (Overview)

# 1

MB

Microsoft Power BI (No Reply)

Thu 10/21/2021 2:14 PM

To: Michael

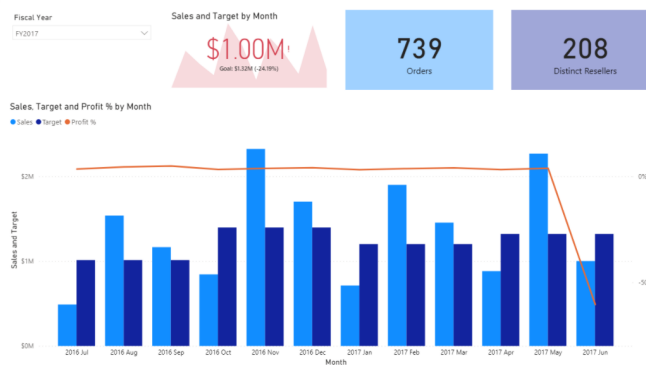


Microsoft

Power BI

## Weekly Sales Update

[Go to report >](#)



You're receiving this email because you subscribed to the 'Overview' page of the 'Sales Analysis' report. The image above was generated at October 21, 2021 21:14 UTC.

[Manage subscription >](#)

[Privacy Statement](#)

Microsoft Corporation, One Microsoft Way, Redmond, WA 98052

Microsoft

[Reply](#)

[Forward](#)

## Requirements

To create a subscription for yourself or others, you'll need either:

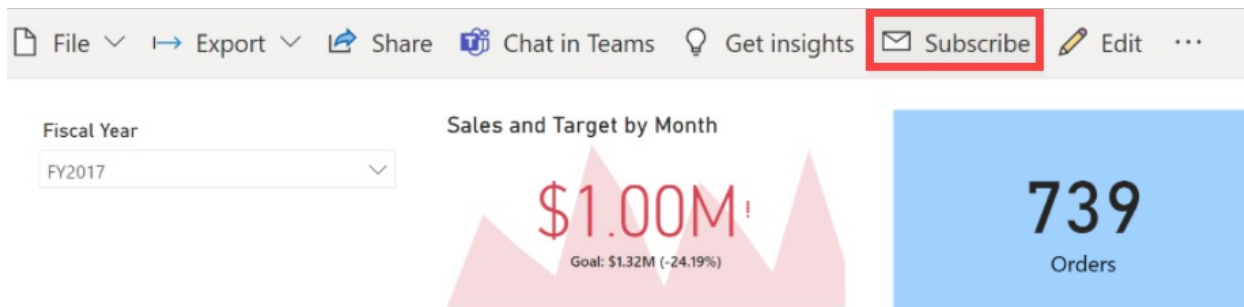
- A Power BI Pro or Premium Per User (PPU) [license](#) or
- Access to a workspace backed by a [Power BI Premium capacity](#).

Your Power BI admin also needs to enable subscriptions in your tenant. If you're an admin, see [Enable subscriptions in the Power BI admin portal](#).


## Subscribe to a report or dashboard

Whether you're subscribing to a dashboard or to a report page, the process is similar. The same button allows

you to subscribe to the Power BI service dashboards and reports.



Subscribing to a paginated report is slightly different, as outlined in [Subscribe to paginated reports](#).

1. Open the dashboard or report, and from the top menu bar, select **Subscribe** . When subscribing to a report, first navigate to the report page that you'd like to display in your subscription email, and then select **Subscribe**.
2. Select **Add new subscription** and give your subscription a name. By default, your subscription will be given the same name as your report page or dashboard.

# Subscribe to emails



## SALES ANALYSIS

+ Add new subscription



Weekly Sales Update

▶ Run Now ☒ On

### Subscribe



Alex

Enter email addresses

### Subject

Subject

Include an optional message...

### Report page

New Hires

### Frequency

Weekly



Sun



Mon



Tue



Wed



Thu



Fri



Sat

### Scheduled Time

1

30

PM

(UTC-05:00) Eastern Time (US and

### Start date

11/18/2021

### End date

12/2/2021

### Also Include



Access to this report



Link to report in Power BI



Preview image



Full report attachment as

Emails will be sent weekly at 01:30 PM Eastern Standard Time starting 11/18/2021, 12:00:00 AM.

[Manage all subscriptions](#)

Save and close

Cancel

3. To subscribe to more than one page in a report: Either select **Add new subscription** and choose a different page from the dropdown near the top, or select the **Full report attachment as** checkbox under **Also include**.
4. Use the yellow slider to turn the subscription on and off. Setting the slider to **Off** doesn't delete the subscription. To delete the subscription, select the trashcan icon.
5. Edit or add recipients by email address, ensuring that you have at least one. Optionally, add a subject and email message details.
6. For Power BI reports, select the **Report page** you want to appear in the preview image.
7. Select a **Frequency** for your subscription. You may choose Daily, Weekly, or After data refresh (Daily).

**TIP**

To receive a subscription email only on certain days, select **Weekly** and then select the checkboxes. If you select **Monthly**, enter the day(s) of the month you wish to receive the subscription email.


- If you choose Daily, Hourly, Monthly, or Weekly, you can also choose a Scheduled Time for the subscription. You can have it run on the hour, or at 15, 30, or 45 minutes past. Select morning (AM) or afternoon/evening (PM).
  - You can also specify the time zone. If you choose Hourly, select the Scheduled Time you want the subscription to start, and it will run every hour after that.
8. Select a Start date and optionally, an End date for your subscription. By default, the start date will be the date you created the subscription and the end date will be one year later. You can change it to any date in the future (up to the year 9999) at any time before the subscription ends. When a subscription reaches an end date, it stops until you re-enable it. You will receive notification(s) before the scheduled end date to ask if you'd like to extend it.
  9. Include additional information in the email. Select one or more of these checkboxes.
    - **Access to this report/dashboard:** Give recipients permission to open and view the report or dashboard in the Power BI service (app.powerbi.com).
    - **Link to report/dashboard in Power BI:** Include a "Go to report" button in the body of the email that links to the report or dashboard in the Power BI service.
    - **Preview image (for Power BI reports only):** Include a preview of the report page in the body of the email.
    - **Full report attachment as (for Power BI reports only):** If the report is in a workspace backed by a Premium capacity or Premium Per User (PPU) license, add the full report as an attachment instead of only a single report page. Select PDF or PowerPoint for the attachment format. The attachment respects all privacy labels for the report. The size of the attachment is limited to no more than 20 pages and less than 25 MB.
  10. To review your subscription and test it out, select **Run now**. This immediately sends the email to you and everyone you've subscribed. This action doesn't count against your limit of 24 scheduled subscription runs per day per report or dashboard. It does NOT trigger a data refresh of the underlying dataset.
  11. If everything looks good, select **Save and close** to save the subscription. You will receive an email and snapshot of the dashboard or report on the schedule you set. Subscriptions that have the frequency set to **After data refresh** will only send an email after the first scheduled refresh on that day.


For reports with live connections, for example a live connection to Analysis Services, Power BI will check the Analysis Services instance for changes. If you have the subscription set to run after data refreshes, it will run the first time the Power BI service detects a change in your on-premises model. Power BI checks every hour for a change in the Analysis Services data model, to determine when to send the subscription.


## NOTE


To avoid subscription emails going to your spam folder, add the Power BI email alias (no-reply-powerbi@microsoft.com) to your contacts. If you're using Microsoft Outlook, right-click the alias and select **Add to Outlook contacts**.

### Subscription for Spend Overview

**Microsoft Power BI** <no-reply-powerbi@microsoft.com>  
Thu 6/17/2021 9:07 AM  
To: Megan Bowen







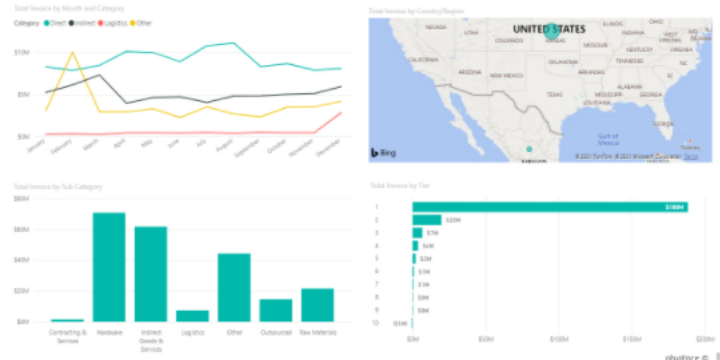
Power BI

## Spend Overview

Please review each week.

Go to report >

### Spend Overview



The visualization displays four charts related to spend overview:


- Total Invoice by Month and Category:** A line chart showing trends for Travel, Lodging, Other, and Other categories over time.
- Total Invoice by Country/Region:** A map of the United States showing regional distribution.
- Total Invoice by Sub-Category:** A bar chart showing spend across categories like Computing & Services, Hardware, Cloud Services & Services, Logistics, Other, Consulting, and Non-Resident.
- Total Invoice by Tier:** A horizontal bar chart showing spend across different tiers, with Tier 1 being the highest.

You're receiving this email because you subscribed to the 'Spend Overview' page of the 'Procurement Analysis Sample' report. The image above was generated at June 17, 2021 16:07 UTC.

[Manage subscription >](#)

[Privacy Statement](#)

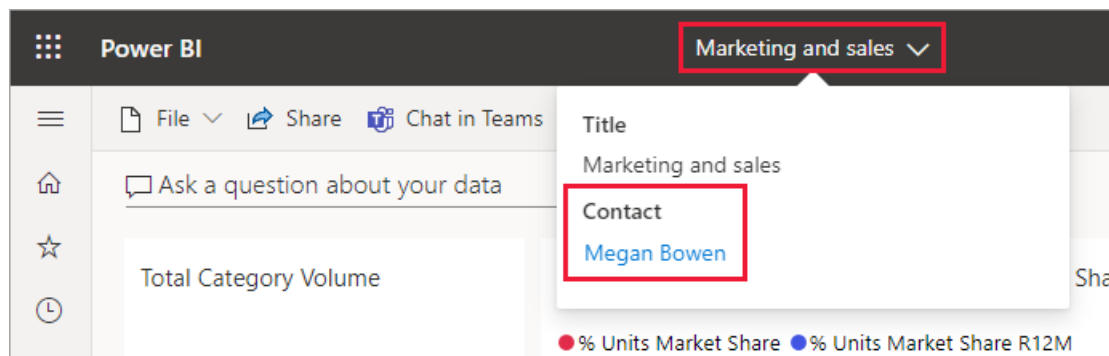
Microsoft Corporation, One Microsoft Way, Redmond, WA 98052



Reply

Forward

You will be able to refresh the report page but not the dataset. Only the dataset owner can manually refresh a dataset. To look up the owner name of the underlying dataset(s), open the report and select the dropdown from the menu bar.



## Manage subscriptions

Only you can manage the subscriptions you create. Open the report and select **Subscribe** from the top menu again. In the lower-left corner of the subscriptions pane, select **Manage all subscriptions**.

Alternatively, select the gear icon from the header bar, then choose **Settings** and then select the **Subscriptions** tab.

All the subscriptions for the current workspace are displayed. For help understanding workspaces, see [Workspaces in Power BI](#).

AdventureWorks Inc.

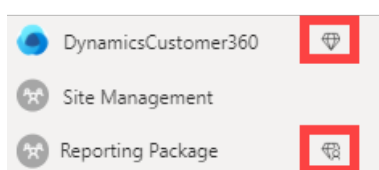
	CONTENT NAME ▾	ACTIONS	OVERVIEW
	Adventure Works Sales Summary		1 subscription
	Customer Profitability Sample		1 subscription
	Sales Analysis		1 subscription
	Salesperson Directory		4 subscriptions

To see all your subscriptions across all workspaces, navigate to **My workspace** and then select the gear icon, **Settings** and then the **Subscriptions** tab.

## Subscribe others

Subscribing others has two requirements.

**Subscribing others** is only available to the dashboard or report owners who have a Power BI Pro or Premium Per User (PPU) license and also have the Contributor, Member or Admin role to the dashboard's or report's workspace.



If your report isn't hosted in a Premium capacity or workspace backed by a PPU license, you can subscribe others if they have a Power BI Pro or PPU license.

## Use group email aliases

When creating a subscription, you can add other email addresses in the same domain to the subscription. If the report or dashboard is hosted in a [Premium capacity](#), you can subscribe group aliases, whether they're in your domain or not. You don't have to subscribe individual email addresses. The aliases are based on the current active directory.

### NOTE

Workspaces backed by a Premium Per User (PPU) license are different from those backed by a Premium capacity, and do not support subscribing group aliases.

## Subscribe external users

You can subscribe external users to a report or dashboard if your report or dashboard is hosted in a Premium capacity.

- If you subscribe external users to a report or dashboard, they will receive a share notification immediately after you select **Save and close** in the subscription pane. This notification is sent only to external users, not internal users, because they require an invitation link to view the report or dashboard.
- Premium Per User workspaces do not qualify as Premium capacity workspaces.
- *Sharing* content with a colleague outside of your domain does not require a Premium capacity. For example, if you are `areaaron@contoso.com`, you can `sharewithanyone@fabrikam.com`, but you can't `subscribeanyone@fabrikam.com`, and they can't subscribe to shared content unless that content is hosted in a Premium capacity.

## Subscribe to paginated reports

In general, the process for subscribing to paginated reports is the same as [subscribing to reports and dashboards](#), but there are a few differences worth noting. This section spells out these differences and other considerations to keep in mind when subscribing to paginated reports.

### Paginated reports parameters

Paginated reports allow you to specify the view of the report people will receive in the subscription by setting the parameters in the subscription pane.

- Subscriptions can be sent with either the currently selected or default parameters for your report. You may set different parameter values for each subscription you create for your report.
- If your report author has set expression-based parameters (for example, the default is always today's date), the subscription uses that as the default value. You can change other parameter values and choose to use current values, but unless you explicitly change that value as well, the subscription uses the expression-based parameter.

### Create a paginated report subscription for yourself or others

You don't need edit permissions to the paginated report to create a subscription for yourself, but you must have edit permissions to create one for someone else in your organization. If you have at least a Contributor role in the workspace where the paginated report is hosted, then you can create subscriptions for others in your organization. Read more about [Roles in workspaces](#).

- You can subscribe other users in your organization to paginated reports that connect to any currently supported data sources, including Azure Analysis Services or Power BI datasets. Keep in mind the report attachment reflects the data based on your permissions.

- For paginated and Power BI report email subscriptions, if the dataset uses row-level security (RLS), you can create subscriptions for yourself and others. Those subscriptions will run using your security context.
- You can set up an unlimited number of subscriptions per paginated report.
- Unlike subscriptions for dashboards or Power BI reports, your subscription contains an attachment of the entire report output. The following attachment types are supported: PDF, PowerPoint presentation (PPTX), Excel Workbook (XLSX), Word Document (DOCX), CSV file, and XML.
- You may include a preview image of the report in the email body. This is optional, and may differ slightly from the first page of your attached report document, depending on the attachment format you select.
- There is no **After Data Refresh** option for frequency with paginated reports. You always get the latest values from the underlying data source.

For more information, visit [Subscribe to a paginated report in the Power BI service](#) for details.

## Subscription controls for administrators

Power BI administrators have levers of control over subscriptions. The following links point to the relevant sections of the admin portal:

- [Enable email subscriptions](#) for all members of the organization.
- Enable specific users to send email subscriptions to external users. See [Invite external users to your organization](#).

### View subscription audit and activity logs

Power BI administrators can use the Power BI audit and activity logs to view details around subscriptions. These details include:

- Created by
- Creation date
- Content subscribed to
- Workspace of content
- Frequency
- Modified by
- Modified date

See [Operations available in the audit and activity logs](#) in "Track user activities in Power BI" for details.

## Considerations and limitations

For help with troubleshooting for the subscriptions feature, see [Troubleshoot subscriptions](#).

### General

- If you aren't able to use the subscription feature, contact your system administrator or IT help desk. Your organization may have disabled this feature or a maximum subscriber limit may have been reached.
- Power BI automatically pauses refresh on datasets associated with dashboards and reports that haven't been visited in more than two months. However, if you add a subscription to a dashboard or report, it won't pause even if it goes unvisited.

### Power BI reports

- Report page subscriptions are tied to the name of the report page. If you subscribe to a report page, and it gets renamed, you will have to re-create your subscription.

- Email subscriptions are sent with the report's default filter and slicer states. Any changes to the defaults that you make before or after subscribing will not show up in the email. However, when you select the link to open the report, you will see changes that you've made and saved.

## Apps

- For [Power BI apps](#) you have installed, you can only create subscriptions for others if you are the owner of the app.

**Unsupported features** Email subscriptions do not support:

- R-powered Power BI visuals
- bookmarks
- most [custom visuals](#). The exception is those Power BI custom visuals that have been [certified](#).

## Next steps

[Search for and sort content](#)

# Troubleshooting Power BI subscriptions

12/10/2021 • 8 minutes to read • [Edit Online](#)

Here are some common issues that may come up when you're subscribing yourself or others to a dashboard or report. Please also refer to the Considerations and Limitations section in [Subscribe to reports and dashboards](#)

If you encounter a scenario that is not listed below, and it's causing you issues, you can ask for further assistance on the [community site](#), or you can create a [support ticket](#).

## I can't use the subscription feature

The **Subscribe** option is missing or greyed out.

### Contact your Power BI administrator or IT help desk

- If you can't use the subscription feature, contact your Power BI administrator or IT help desk. Your organization may have disabled this feature, generally or specifically for external users, or a maximum subscriber limit may have been reached.
- Your organization may configure certain settings in Azure Active Directory that limit the ability to use email subscriptions in Power BI. These limitations include, but aren't limited to, having multifactor authentication or IP range restrictions when accessing resources.

### You've reached the maximum of 24 subscriptions

There is a limit of 24 scheduled subscription runs per day per report or dashboard.

## I've stopped receiving a subscription

I've set up a subscription but am not receiving the subscription emails.

### Account or license issues

- A subscription will end if the Power BI Pro or Premium Per User (PPU) license expires, the report or dashboard is deleted by the owner, or the user account used to create the subscription is deleted.

### Email issues

- To avoid subscription emails going to your spam folder, add the Power BI email alias (no-reply-powerbi@microsoft.com) to your contacts. If you're using Microsoft Outlook, right-click the alias and select **Add to Outlook contacts**.
- Subscriptions may fail on reports or dashboards with extremely large images due to email size limits.
- Make sure that your User Principal Name (UPN) can receive emails.
- Though you have a Power BI Pro or Premium Per User (PPU) license, you may not have a Microsoft Exchange license. If not, your Azure Active Directory account may not have an email or alternate email address specified. In this case, though the subscription appears to go out, you never receive a copy. If your Power BI admin assigns an email address, Power BI will synchronize the update the next time you sign in, and use that email address for the subscription.
- If you have an alternate email address but no primary, Power BI uses that to deliver the subscription.


### Admin portal settings

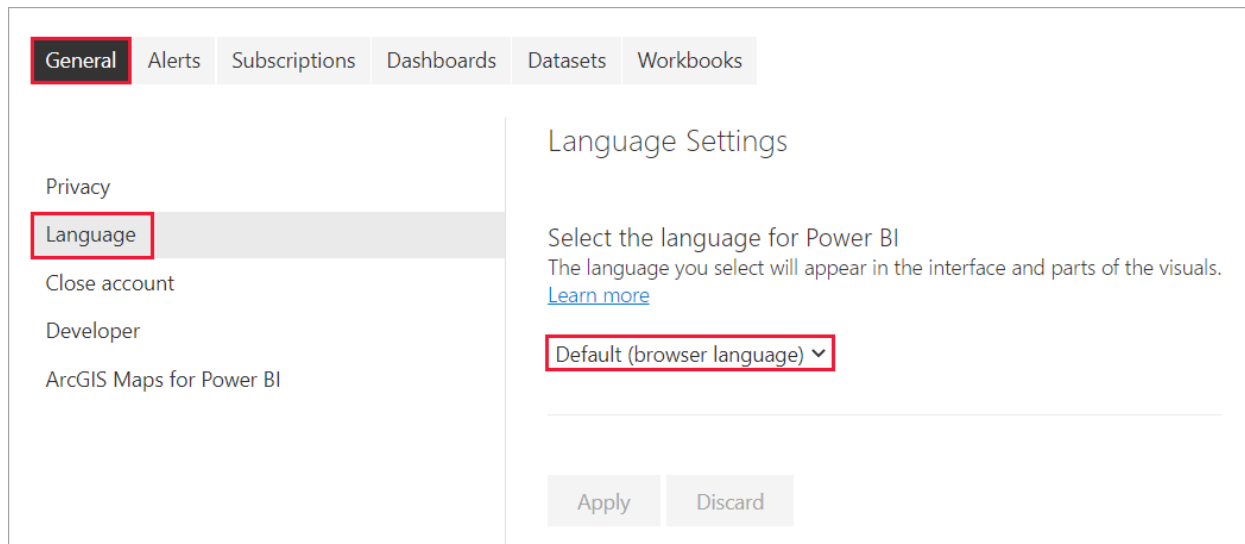
- Email subscriptions are not supported when Block Public Internet Access is enabled in the Power BI admin portal.

## The links in my email subscription no longer work

If the links in your email (to the content) stop working, it may be that the content was deleted. In the email, beneath the screenshot, you can look to see if you subscribed yourself or if someone else subscribed you. If someone else, ask that co-worker to either cancel the emails or re-subscribe you.

## The language in my subscription is not correct

The email and snapshot will use the language set in Power BI settings (see [Supported languages and countries/regions for Power BI](#)). If no language is defined, Power BI uses English as a fallback. To see or set your language preference, select the cog icon  > **Settings** > **General** > **Language**.



## My dashboard subscription is missing tiles

You receive your subscription email, open the dashboard, and notice that one or more tiles are missing

### Too many dashboard tiles

Dashboards with more than 25 pinned tiles, or four pinned live report pages, may not render fully in subscription emails sent to users. We suggest that you contact the dashboard designer and ask them to reduce pinned tiles to less than 25 and pinned live reports to less than four to ensure that the email renders correctly.

### Row level security (RLS)

- For dashboard email subscriptions, if any tiles have row level security (RLS) applied, those tiles will not display.
- For paginated and Power BI report email subscriptions, if the dataset uses row-level security (RLS), you can create subscriptions for yourself and others. Those subscriptions will run using your security context.

### Tile type not supported

For dashboard subscriptions, certain types of tiles aren't yet supported. These include: streaming tiles, video tiles, custom web content tiles.

## My subscription is delayed

You notice that your subscription emails aren't being delivered as expected.

### Periods of peak demand

- The time you set your subscription to begin is when the subscription starts to process. Once the report processing is complete, the subscription is queued and sent to the e-mail recipients. At times of peak

demand, you may see a delay, but not more than 15 minutes. On occasion, it may take up to 30 minutes, but should never exceed 60 minutes. If you experience a longer delay, ensure that the address `no-reply-powerbi@microsoft.com` is on the safe sender list. If the email isn't being blocked, contact your Power BI administrator or IT help desk for assistance.

- On rare occasions, email subscriptions may take longer than fifteen minutes to be delivered to their recipients. If this happens, we recommend running your data refresh and email subscription at different times to ensure timely delivery. If the issue persists, contact Power BI support.

### **Email software is blocking delivery**

Another possibility is that your email software is blocking the Power BI sender. To avoid subscription emails going to your spam folder, add the Power BI email alias (`no-reply-powerbi@microsoft.com`) to your contacts. If you're using Microsoft Outlook, right-click the alias and select **Add to Outlook contacts**.

## **My report or dashboard has multiple data refreshes**

I'm not receiving subscription emails each time my data refreshes.

### **Check the Frequency setting for your subscription**

Subscriptions set to **After Data Refresh** for the report or dashboard will only send an email after the first scheduled refresh on that day.

### **Your data uses a live connection**

Currently, email subscriptions for reports and dashboards using live connection datasets aren't supported when subscribing users other than yourself, except for paginated reports. Read more about [subscribing to paginated reports](#).

## **My subscription has over 200 recipients**

There's a limit to the number of subscribers for one report or dashboard. After you pass 200 subscribers, you may encounter issues with delivery. To reduce the number, use group email aliases instead. Each email alias counts as one subscriber.

## **I get an error that my subscription has over 20 pages**

You may get an error message that the report has more than 20 pages even though your view of the report shows less than 20. One reason for this is that the report designer has hidden pages in the report. When Power BI counts the report pages, it includes hidden pages in that count.

## **Data security for subscription email content**

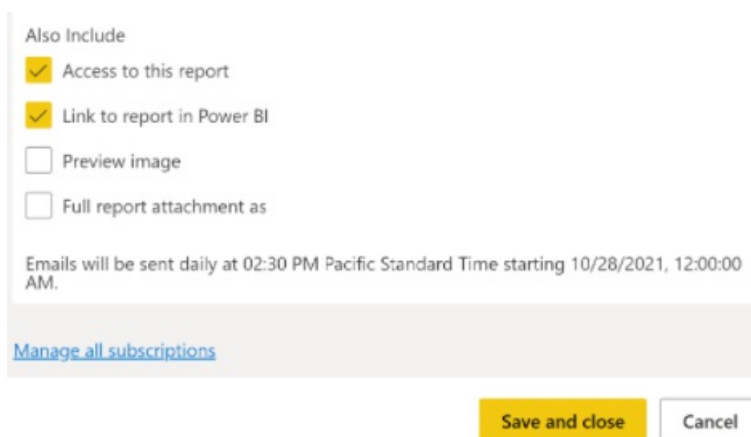
You can choose to give subscription recipients access to open and view the content in Power BI by selecting **Access to this report/dashboard** and whether to include a link to this content by selecting **Link to report/dashboard in Power BI**.

### **Row level security**

For dashboard subscriptions, if any tiles have row level security (RLS) applied, those tiles will not display.

### **Recipients don't have access to the report or dashboard**

If you choose to include a link, ensure that all users also have access to the content. Subscribed users receive report attachments, with data based on your permissions.



Also Include

- ☒ Access to this report
- ☒ Link to report in Power BI
- ☐ Preview image
- ☐ Full report attachment as

Emails will be sent daily at 02:30 PM Pacific Standard Time starting 10/28/2021, 12:00:00 AM.

[Manage all subscriptions](#)

[Save and close](#) [Cancel](#)

### **I removed access for others, but they can still open the report or dashboard**

Clearing the **Access to this report/dashboard** option does not revoke access for users who have already been granted access this report in the Power BI service (app.powerbi.com). To remove access, see [Manage permissions to a dashboard](#) and see [Manage permissions to a report](#).

### **I can't tell if access is enabled or disabled**

The option to provide **Access to this report/dashboard** always shows as enabled when you edit an existing subscription. If you clear this option and save the subscription, this state is saved. However, if you edit the subscription again, the option will be checked again by default.

## On a mobile device, the email link opens the app instead of the Power BI service website

### **If you have the Power BI app installed, this is expected behavior**

When you receive the subscription email, it includes a link to **Go to report or dashboard**. On mobile devices with Power BI apps installed, selecting this link launches the app (as opposed to the default action of opening the report or dashboard on the Power BI website).

## I can't create a report attachment, full report attachment greyed out

The full report attachment feature is available for reports that meet the following three conditions. Any existing subscriptions with full reports as attachments that do not meet these conditions are disabled and you will receive an email explaining the error.

- They're in an upgraded workspace with [Power BI Premium or Premium Per User](#).
- The report has fewer than 20 pages (see [this issue described above](#)).
- The attachment file is under 25 MB in size.

## Which Power BI features are not supported in subscriptions

There are certain Power BI features that will not work when using the subscription feature.

- Email subscriptions do not support most [custom visuals](#). The exception is those Power BI custom visuals that have been [certified](#).
- For dashboard subscriptions, certain types of tiles aren't yet supported. These include: streaming tiles, video tiles, custom web content tiles.
- For dashboard subscriptions, if any tiles have row level security (RLS) applied, those tiles will not display.

## Next steps

- [Share Power BI dashboards and reports with coworkers and others](#)
- [How should I collaborate on and share dashboards and reports?](#)
- [Share a filtered Power BI report](#)
- Questions? [Try the Power BI Community](#)

# Navigation for Power BI business users: global search

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:** ✓ Power BI service for *business users* ✓ Power BI service for designers & developers ✕  
Power BI Desktop ✓ Requires Pro or Premium license

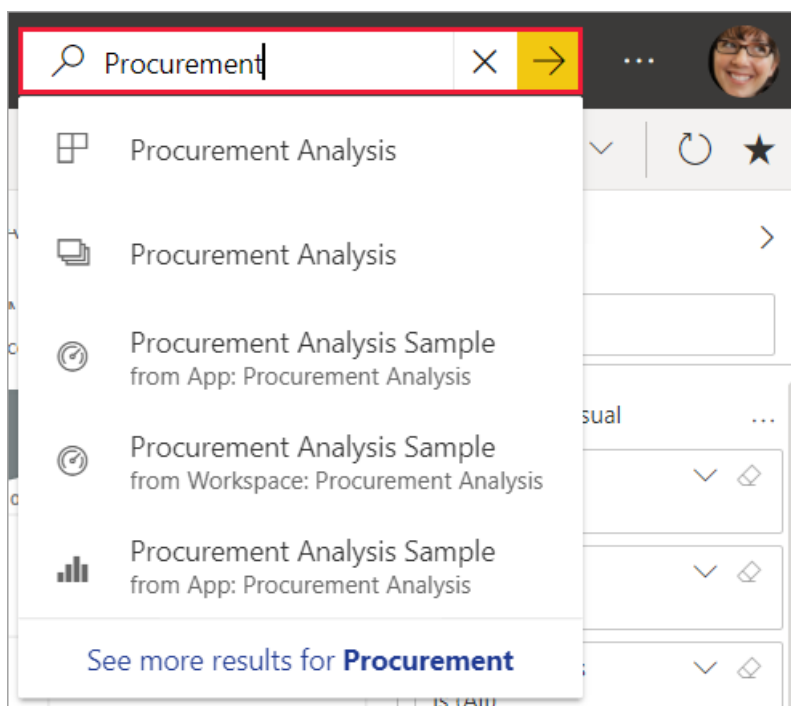
When you're new to the Power BI service, you'll have only a few pieces of content (dashboards, reports, apps). But as colleagues begin sharing content with you and you begin downloading apps, you may end up with long lists of content. That's when you'll find searching and sorting extremely helpful.

## Searching for content

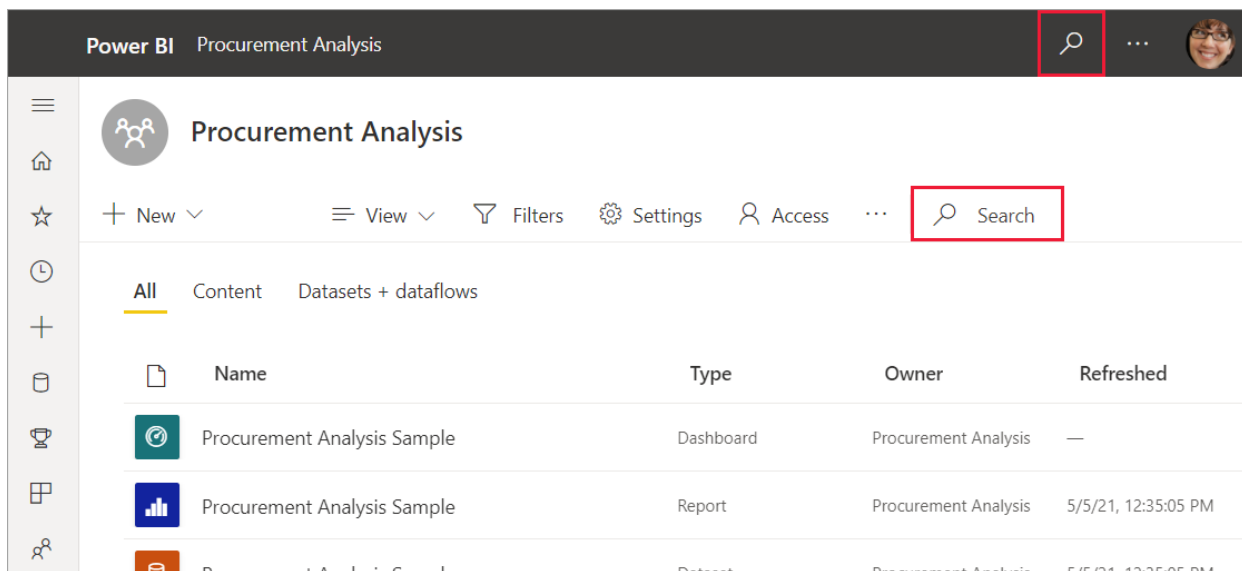
Search is available from almost every part of the Power BI service. Just look for the search box or search icon



In the Search field, type all or part of the name of a dashboard, report, workbook, workspace, app, or owner. Power BI searches all of your content.

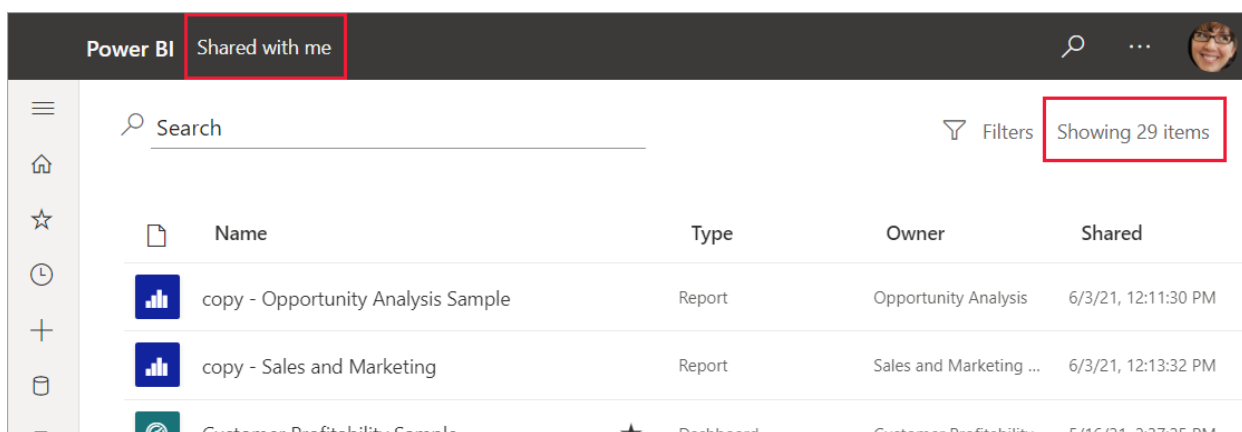


In some areas of Power BI, such as workspaces, you'll find two different search fields. The search field in the menu bar searches all of your content while the search field on the workspace canvas searches only that workspace.

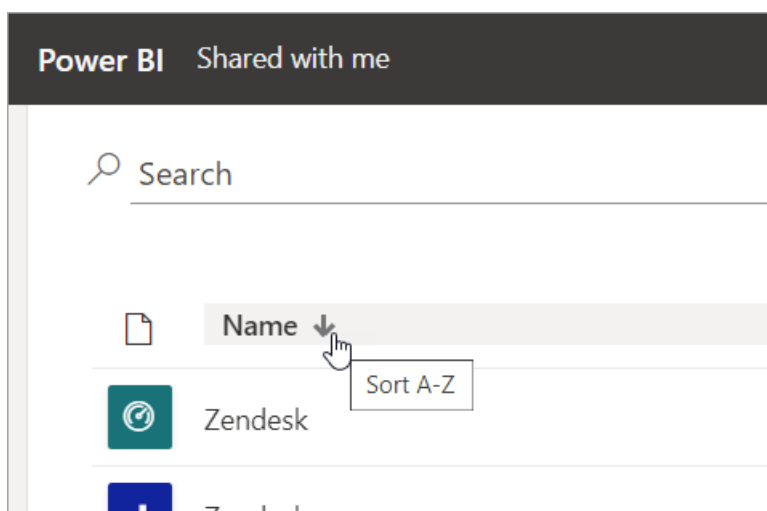


## Sorting content lists

If you only have a few pieces of content, sorting may not be necessary. But when you have long lists of dashboards and reports, sorting will help you find what you need. For example, this **Shared with me** content list has 29 items.



Right now, this content list is sorted alphabetical by name, from Z to A. To change the sort criteria, select the arrow to the right of **Name** (A-Z).






Sorting is also available in workspaces. In this example, the content is sorted by **Refreshed** date. To set sorting criteria for workspaces, select column headers and select again to change sorting direction.

Power BI Sales and Marketing sample 6/11/2021 12:03:55 PM

Sales and Marketing sample 6/11/2021 12:03:55 PM

+ New View Filters Settings Access Search

All Content Datasets + dataflows

	Name	Type	Owner	Refreshed ↓
	Sales and Marketing Sample PBIX	Report	Sales and Marketing ...	5/13/21, 1:38:57 PM
	Sales and Marketing Sample PBIX	Dataset	Sales and Marketing ...	5/13/21, 1:38:57 PM
	Marketing and sales	★ Dashboard	Sales and Marketing ...	—

Not all columns can be sorted. Hover over the column headings to discover which can be sorted.

## Filtering content lists

Another way to locate content quickly is by using the content list **Filters**. Display the filters by selecting **Filters** from the upper right corner. The filters available will depend on your location in the Power BI service. The example below is from a **Recent** content list. It allows you to filter the list by content type. On a **Shared with me** content list, the **Filters** available include Owner as well as content type.

Search

Filters Showing 9 items

**Filters** X

Clear all

**Type**

☐ App

☐ Dashboard

☐ Report

## Next steps



[Sort visuals in reports](#)

[Sorting data in visuals](#)

More questions? [Try the Power BI Community](#)

# Opt in for Power BI service preview features

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for **business users**  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

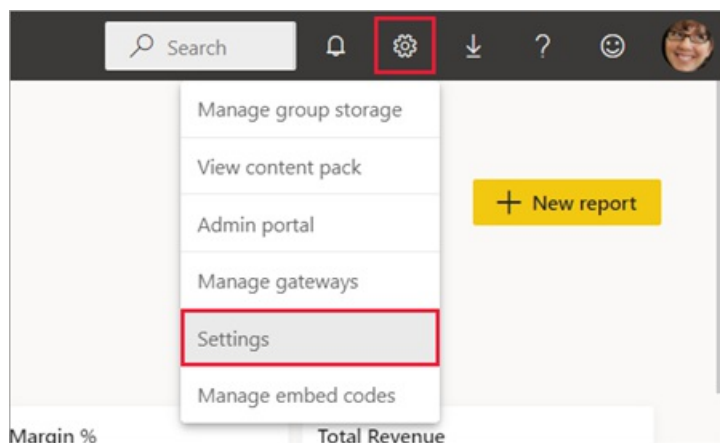
## What are *preview features*?

As we make improvements to the Power BI service, we'll release some new functionality as *preview features*. Preview features can be turned on and off, giving you the opportunity to try them out.

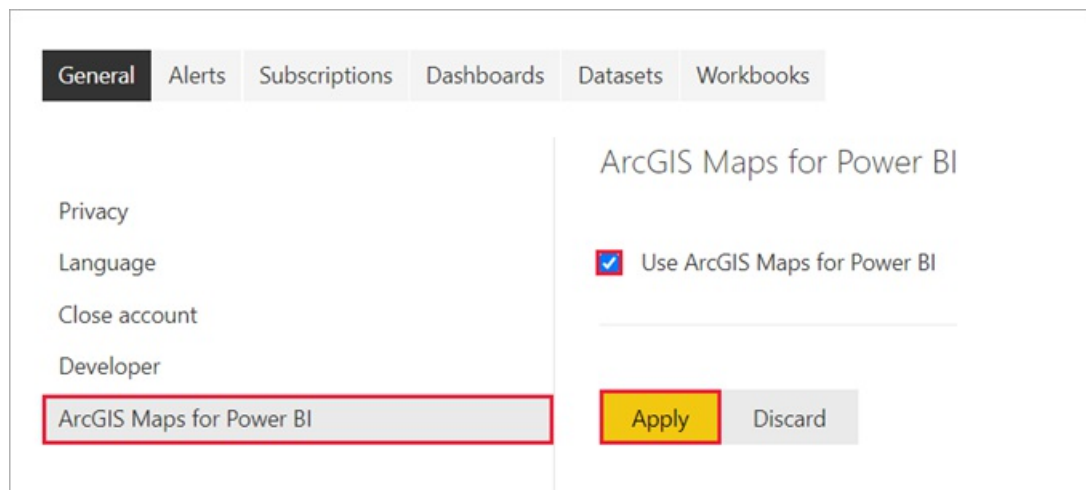
Some preview features can be toggled on and off from your Power BI dashboard, Home, or report itself. While other preview features are made available from your *Settings* menu. This article shows you how to access preview features via the Settings menu.

## Find previews and turn them on (and off)

1. Open your Settings menu by selecting the gear icon in the upper-right corner of your Power BI screen and choosing **Settings**.



2. Select the **General** tab. If previews exist, you'll either see an option for **Preview features** or you'll see a preview feature listed on the left. In this example, there is a preview listed for ArcGIS Maps.



3. Select the **On** radio button, or mark the checkbox, to try out the new experience. Then select **Apply**.
4. To turn off preview features, follow steps 1-3 above, and in step 3, choose **Off**, or remove the checkmark,

and select **Apply**.

Have questions or feedback? [Visit the Power BI community forum](#).

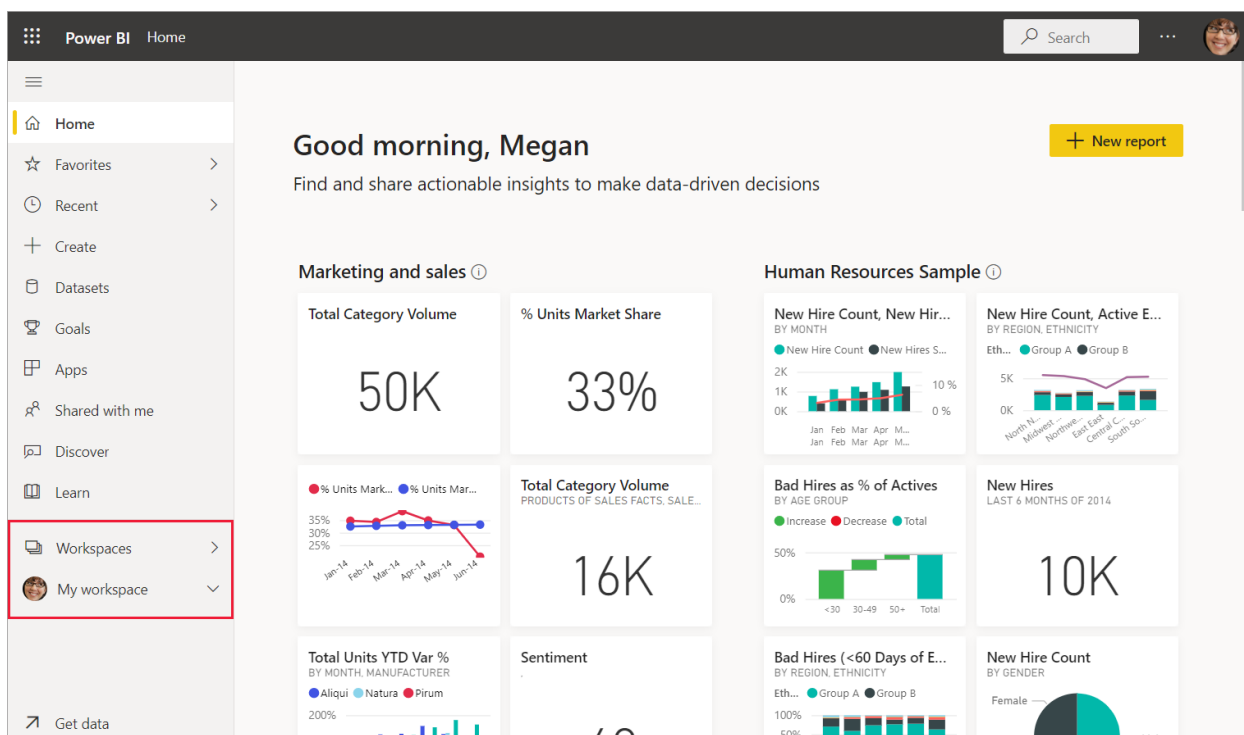
# Collaborate in workspaces

12/10/2021 • 2 minutes to read • [Edit Online](#)

*Workspaces* are places to collaborate with colleagues on specific content. Workspaces are created by Power BI *designers* to hold collections of dashboards and reports. The designer can then share the workspace with colleagues. Designers can also bundle a collection of dashboards and reports into an *app* and distribute it to the entire community, to their organization, or to specific people or groups. Certain types of apps, called *template apps*, create a workspace when the app is installed. [Learn more about apps.](#)

Everyone using the Power BI service also has a **My workspace**. My workspace is your personal sandbox where you can create content for yourself.

You can see your workspaces in Power BI by selecting **Workspaces** from your navigation pane.



## Types of workspaces

**My Workspace** stores all the content that you own and create. Think of it as your personal sandbox or work area for your own content. For many Power BI *business users*, **My workspace** remains empty because your job doesn't involve creating new content. *Business users*, by definition, consume data created by others and use that data to make business decisions. If you find that you are creating content, consider reading [the Power BI articles for designers](#) instead.

**Workspaces** contain all the content for a specific app. When a *designer* creates an app, they bundle together all the content that is necessary for that app to be utilized. Content may include dashboards, reports, and datasets. Not every app will contain these three pieces of content. An app may contain only one dashboard, or three of each content type, or even twenty reports. It all depends on what the *designer* includes in the app. Commonly, app workspaces shared with *business users* don't include the datasets.

The **Customer Profitability** workspace below contains a dashboard, a report, a workbook, and a dataset.

The screenshot shows the Power BI interface with the 'Customer Profitability' workspace selected. The left sidebar lists various navigation options, and the main area displays a table of workspace items. The table has columns for Type, Owner, and Refreshed. The items listed are Dashboard, Report, Workbook, and Dataset, all owned by 'Customer Profitability'.

Type	Owner	Refreshed
Dashboard	Customer Profitability	—
Report	Customer Profitability	5/16/21, 2:37:25 PM
Workbook	Customer Profitability	5/16/21, 2:37:25 PM
Dataset	Customer Profitability	5/16/21, 2:37:25 PM

## Permissions in the workspaces

Access permissions determine what you can do in a workspace, so teams can collaborate. When granting access to a new workspace, *designers* add individuals or groups to one of the workspace roles: **Viewer**, **Member**, **Contributor**, or **Admin**.

As a Power BI *business user*, you'll typically interact in workspaces using the **Viewer** role. But a *designer* could also assign you to the **Member** or **Contributor** role. The Viewer role lets you view and interact with content (dashboards, reports, apps) created by others and shared with you. And because the Viewer role can't access the underlying dataset, it's a safe way to interact with content and not have to worry that you'll "hurt" the underlying data.

For a detailed list of what you can do as a *business user* with the Viewer role, see [Power BI features for business users](#).

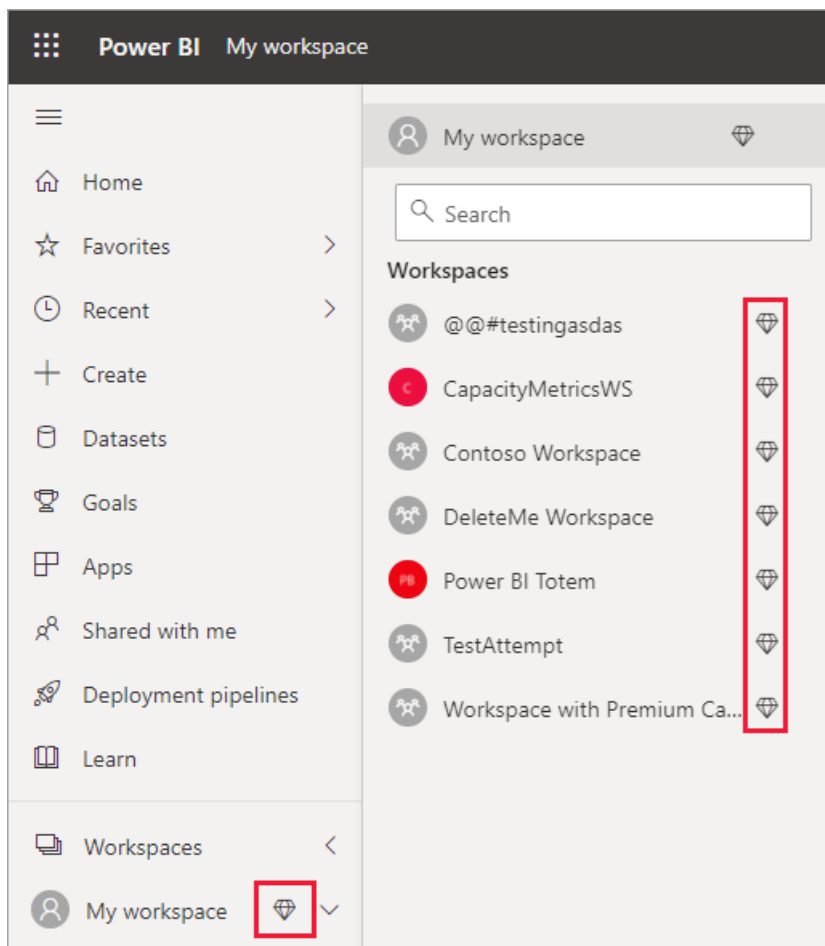
For a detailed list of all four roles and their capabilities, see [workspace roles](#).

## Licensing, workspaces, and capacity

Licensing also plays a part in determining what you can and can't do in a workspace. Many features require the user to have a Power BI *Pro* or *Premium Per User (PPU)* license or for the workspace to be stored in Premium capacity.

Often, *business users* work with a free license. [Learn more about licensing](#). If the content isn't stored in Premium capacity, the business user won't have access.

If the workspace is stored in Premium capacity, *business users* will be able to view and interact with the content in that workspace. A diamond icon identifies the workspaces that are stored in Premium capacity.







To learn more, see [Which license do I have?.](#)

## Next steps

- [Apps in Power BI](#)
- Questions? [Try asking the Power BI Community](#)

# Apps in Power BI

12/10/2021 • 3 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

## What is a Power BI app?

Power BI *designers* can create official packaged content, then distribute it to a broad audience as an *app*. Apps are created in workspaces, where members can collaborate on Power BI content with their colleagues before publishing the finished app to individuals, large groups of people in an organization, or an entire organization. By using an app, it's easier for designers to manager permissions on these collections since the app can have permissions that are different than those set on the workspace.

An *app* combines related content -- dashboards, spreadsheets, datasets, and reports -- all in one place. An app can have one or more of each content type, all bundled together. There are many different ways a *designer* can share an app. To learn more, see the **Get a new app** section, below.

There is a special type of app called a *template app*. To install, customize, and distribute a template app requires a Power BI Pro or Premium Per User license. Power BI template apps are used by Power BI partners to build and package analytical content into an app. They then deploy that app to other Power BI tenants through any available platform, including AppSource or their own web service.

## App *designers* and app *users*

Depending on your role, you may be someone who creates apps (*designer*) for your own use or to share with colleagues. Or, you may be someone who receives and downloads apps (*business user*) created by others. This article is for *business users*.

Seeing and opening an app require certain permissions. The recipient must either have a Power BI Pro or Premium Per User (PPU) license or the app must be shared with the recipient in a special type of cloud storage called **Premium capacity**. To learn more about licenses and Premium capacity, see [Licensing for the Power BI service](#).

## Advantages of apps

Apps are an easy way for *designers* to share different types of content at one time. App *designers* create the dashboards and reports and bundle them together into an app. The *designers* then share or publish the app to a location where you, the *business user*, can access it. Because related dashboards and reports are bundled together, it's easier for you to find and install in both the Power BI service (<https://powerbi.com>) and on your mobile device. After you install an app, you don't have to remember the names of a lot of different dashboards or reports because they're all together in one app, in your browser or on your mobile device.

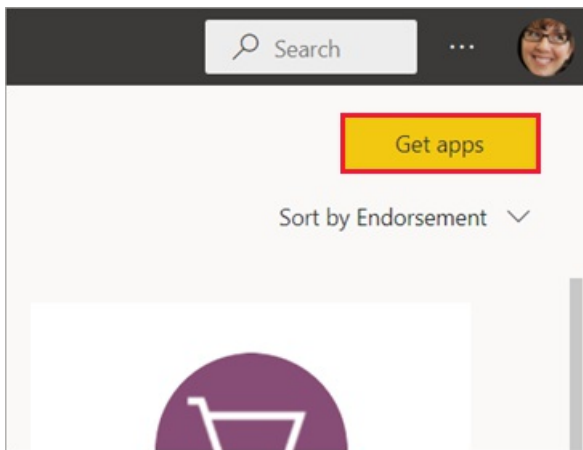
With apps, whenever the app author releases updates, you either get a notification or you automatically see the changes. The author also controls how often the data is scheduled to refresh, so you don't need to worry about keeping it up to date.

## Get a new app

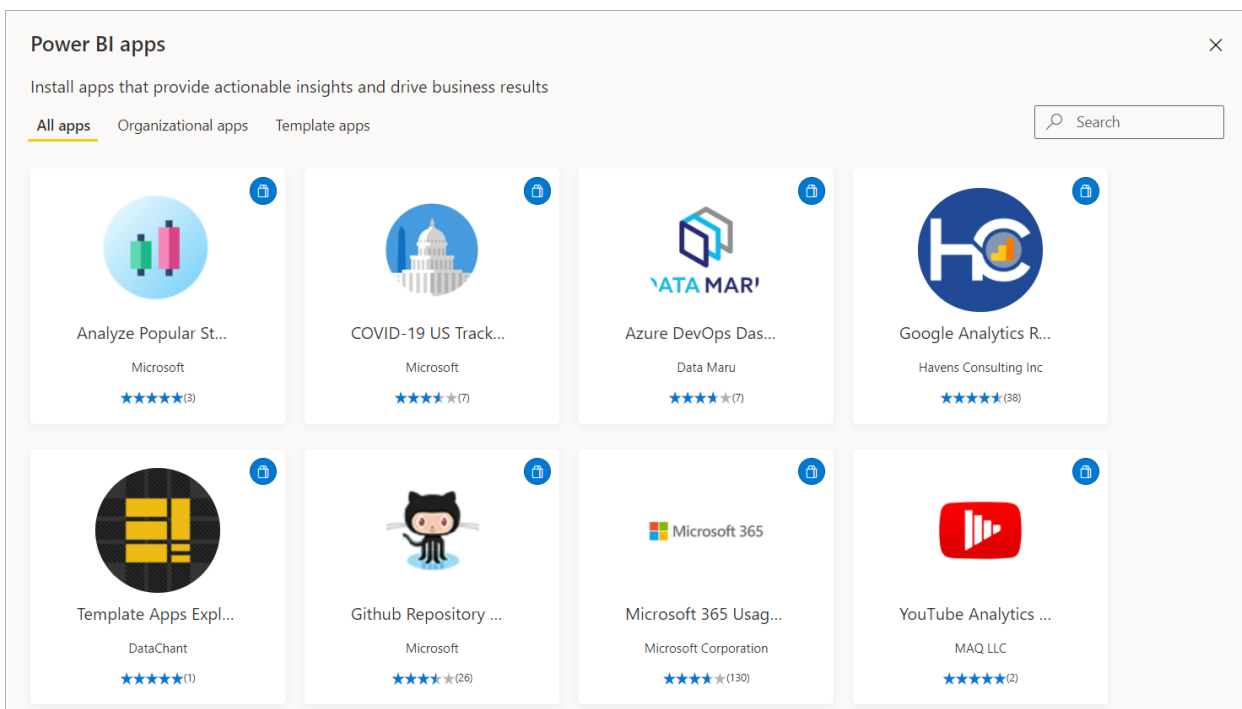
There are several different ways to get a new app. You can search, find, and install apps and app designers can share apps with you.

## Find and install apps from the Power BI apps marketplace

One way to find apps is to select **Get app** from the Power BI **Apps** screen.



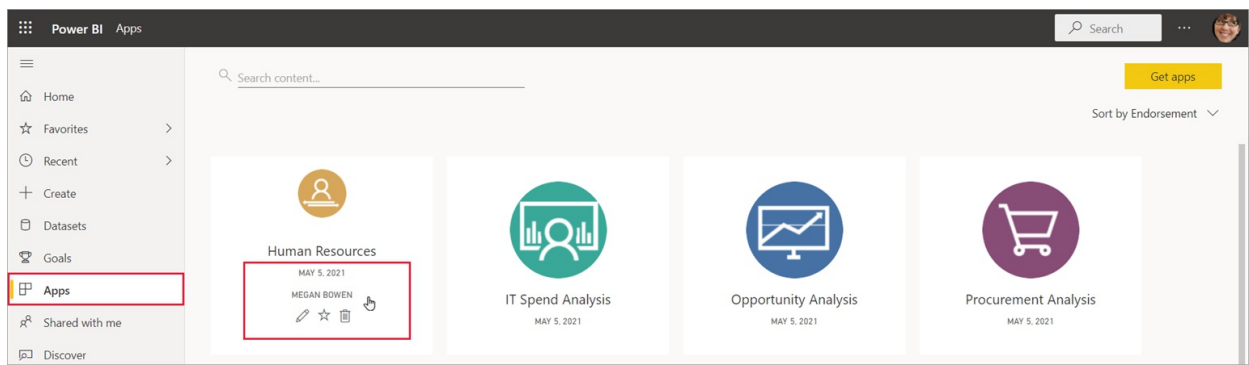
Browse through the list of apps in the Power BI apps marketplace until you find one to install. Choose from **Organizational apps**, which are only available to people in your company, or **Template apps**, which are published by Microsoft and the community for any Power BI user to install.



There are a few other ways to get apps. Some of these ways are listed below. But for detailed step-by-step instructions for getting and exploring an app, see [Open and interact with an app](#).

- The app designer can install the app automatically in your Power BI account, and the next time you open the Power BI service, you'll see the new app in your **Apps** content list.
- The app designer can email you a direct link to an app. Selecting the link opens the app in the Power BI service.
- In Power BI on your mobile device, you can only install an app from a direct link, and not from the apps marketplace. If the app author installs the app automatically, you'll see it in your list of apps.

Your apps are organized in the **Apps** content list. Just select **Apps** to display your apps. Hover over an app to see the last updated date and the owner.







## Next steps

- [Open and interact with an app](#)
- [Other ways to share content](#)

# Install and use apps with dashboards and reports in Power BI

12/10/2021 • 6 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

Now that you have a [basic understanding of apps](#), let's learn how to open and interact with apps.

## Ways to get a new app

There are several ways to get a new app:

- You can get it from the Power BI app marketplace in the Power BI service.
- You can use a direct link to an app that you have received from the app designer.
- An app designer in your organization can install the app automatically in your Power BI account.

With Power BI mobile, you can only install an app from a direct link. If the app designer installs the app automatically, you'll see it in your list of apps.

## Apps and licenses

Not all Power BI users can view and interact with apps.

- If you have a free license, you can open apps that are stored in Premium capacity and have then been shared with you.
- If you have a Pro license or a Premium Per User license, you can open apps that have been shared with you.

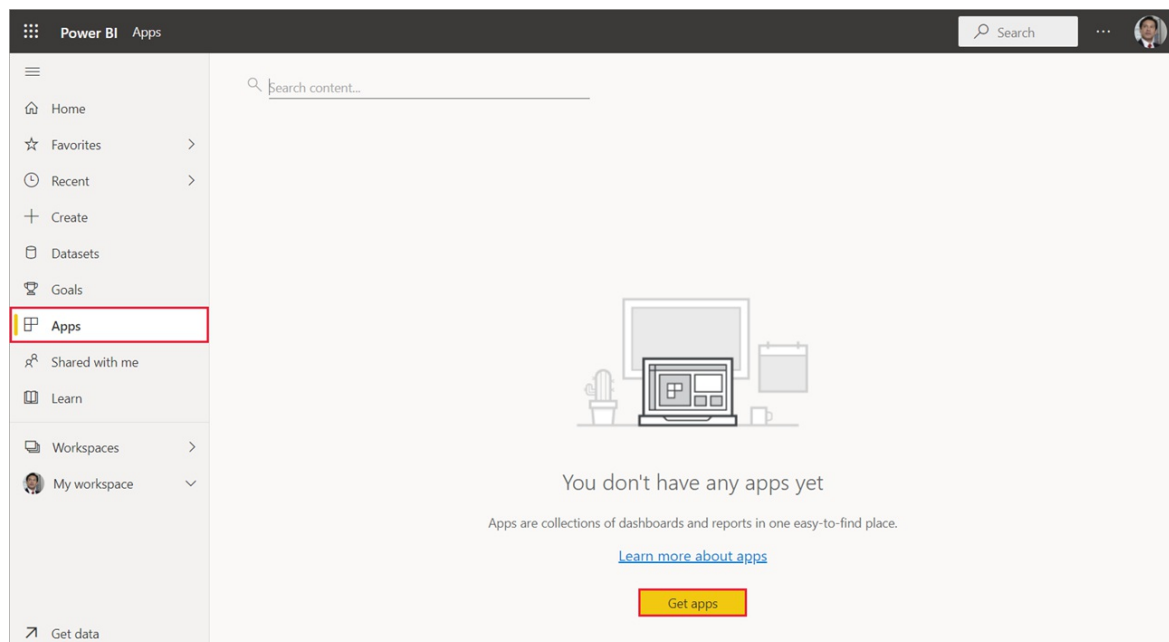
So, if you cannot open an app, contact your administrator or help desk. For information about licensing, see [Power BI licensing](#).

## Get the app from the Power BI apps marketplace

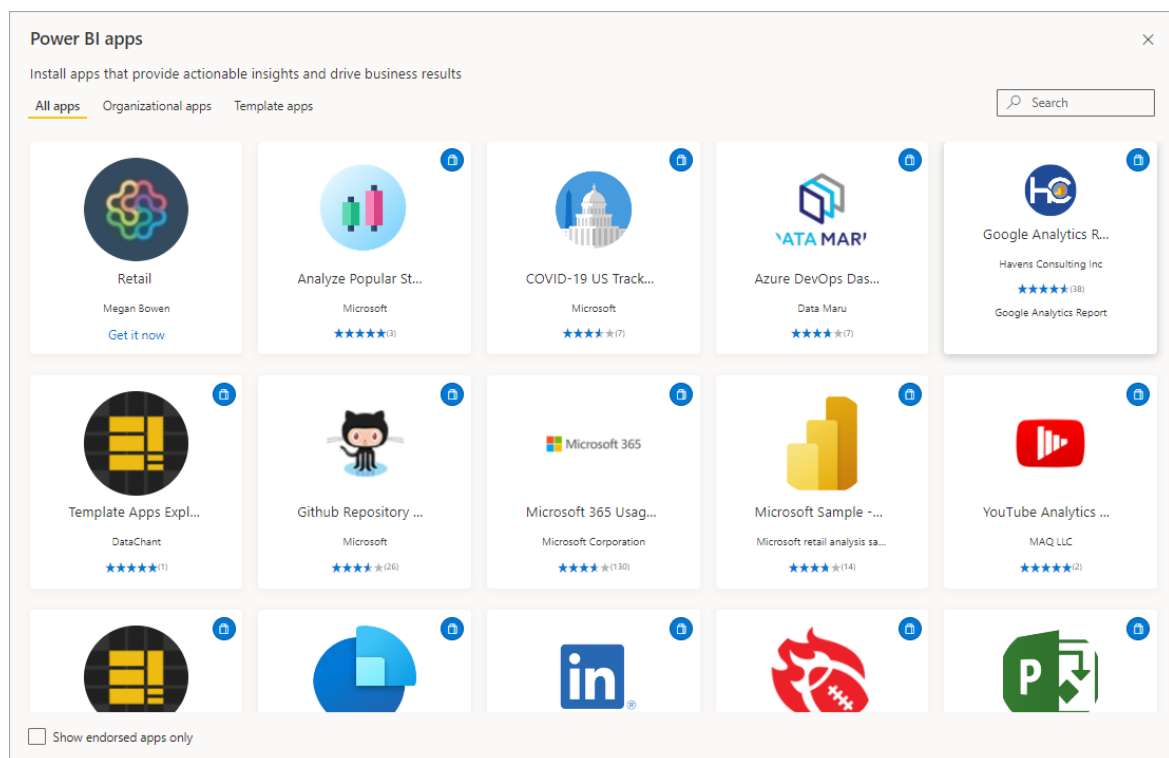
You can find and install apps from the Power BI apps marketplace. In the apps marketplace you'll find both organizational apps and template apps.

- An *organizational app* is available to Power BI users in your organization. These apps also include pre-built dashboards and reports that you can use as-is or customize and share. Your organization may have apps for things like tracking sales, measuring performance, or analyzing hiring success.
- A *template app* comes with pre-built dashboards and reports that you can use to connect to many of the services you use to run your business, such as Salesforce, Microsoft Dynamics, and Google Analytics.

1. [Sign in to the Power BI service](#) if you aren't already signed in.
2. Once the Power BI service is open, select **Apps > Get apps**.



### 3. The Power BI apps marketplace opens.



Three tabs are available for you to use:

- **All apps** - Browse both template apps and all the organizational apps that are available to you. Template apps are distinguished by the shopping bag icon in the upper right corner of their tiles.
- **Organizational apps** - Browse organizational apps that have been shared with you.
- **Template apps** - Browse template apps that are hosted on AppSource.

Alternatively, you can use the search box to get a filtered selection of apps. Typing part of the name of an app, or of a category such as finance, analytics, marketing, etc., will make it easier to find the item you're looking for.

The search box is sensitive to the tab you have open - only apps of the selected type will be returned. If the **All apps** tab is open, both organizational and template apps are returned. This can be confusing when an organizational app and a template app have the same name. Just remember that the template app tiles have a shopping bag icon in the top right corner.

- When you find the app that you want, select **Get it now** to install it.



- If you're installing an organizational app, it will immediately be added to your list of apps.
- If you're installing a template app, you will be taken to the template app offering in AppSource. See [an example](#) of how to download and install a sample template app from the Power BI apps marketplace. The app is installed, along with a workspace of the same name.

#### NOTE

If you are using a free user license, you'll be able to download apps but won't be able to view them unless you upgrade to a Power BI Pro or Premium Per User license or unless the app is stored in a Premium capacity. For more information, see [licenses for business users](#).

## Install an app from a direct link

You can also install an organizational app from a direct link.

### On your computer

When you select the link in email, the Power BI service (<https://app.powerbi.com>) opens the app in your browser.

### On your iOS or Android mobile device

When you select the link in email on your mobile device, the app installs automatically and opens in the mobile app. You may have to sign in first.

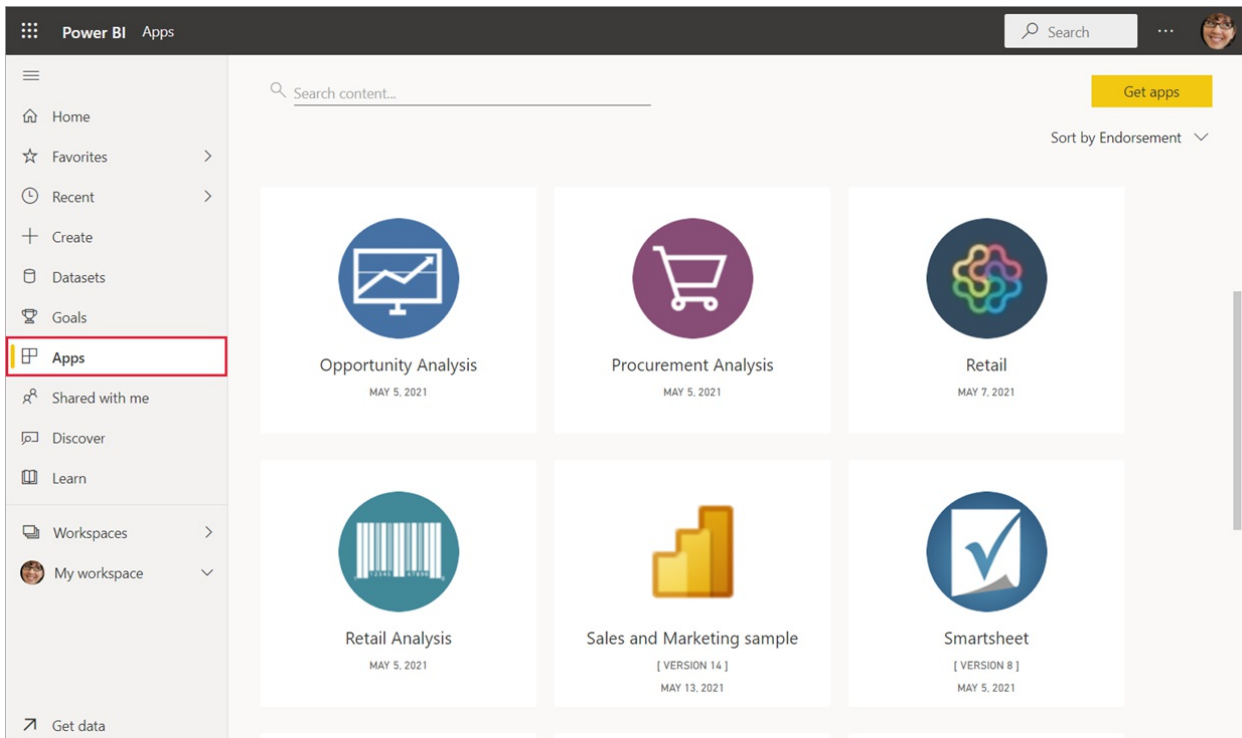
## Interact with the dashboards and reports in the app

Take some time to explore the data in the dashboards and reports that make up the app. You have access to all of the standard Power BI interactions such as filtering, highlighting, sorting, and drilling down. The extent of what you can do with an app is controlled by the permissions that the *designer* assigned to you. How you can interact with the app's dashboards and reports is controlled by the access and roles that the *designer* assigned to you.

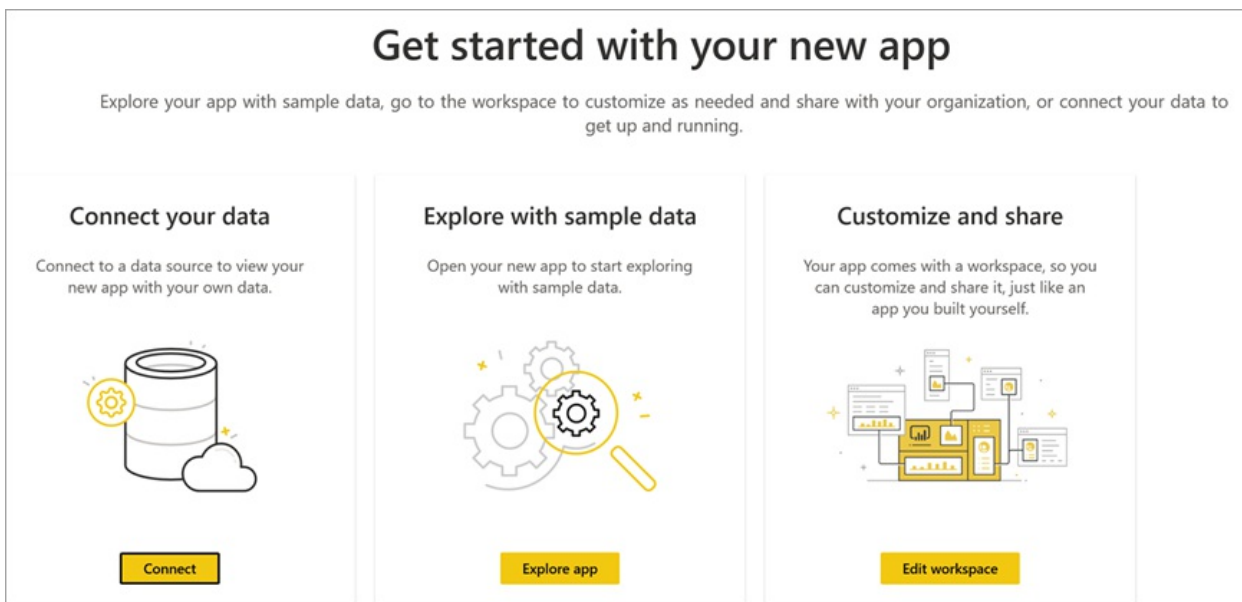
Still a little confused by the difference between dashboards and reports? Read the [article about dashboards](#) and the [article about reports](#).

## Open an app

You've installed an app, or have received an app from a colleague. To view that app, open your Apps content list by selecting **Apps** from the navigation pane.

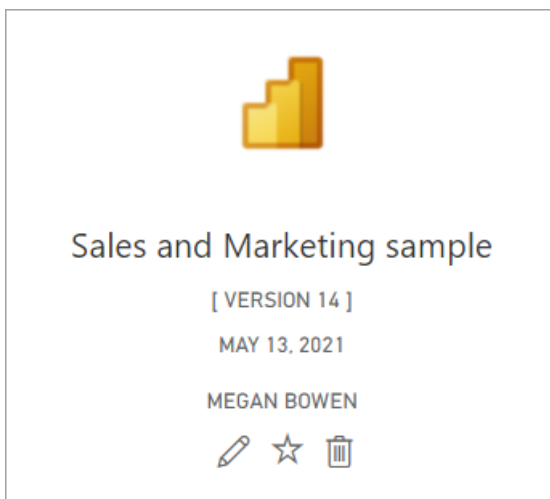


Hover and select the app to open. Depending on the app, you may receive a prompt that looks similar to the one below. Some apps ask you for contact information (e.g., name and email) or for product details (e.g., customer ID, subscription number, parameters). Many apps load with sample data and provide a link for you to connect your own data.

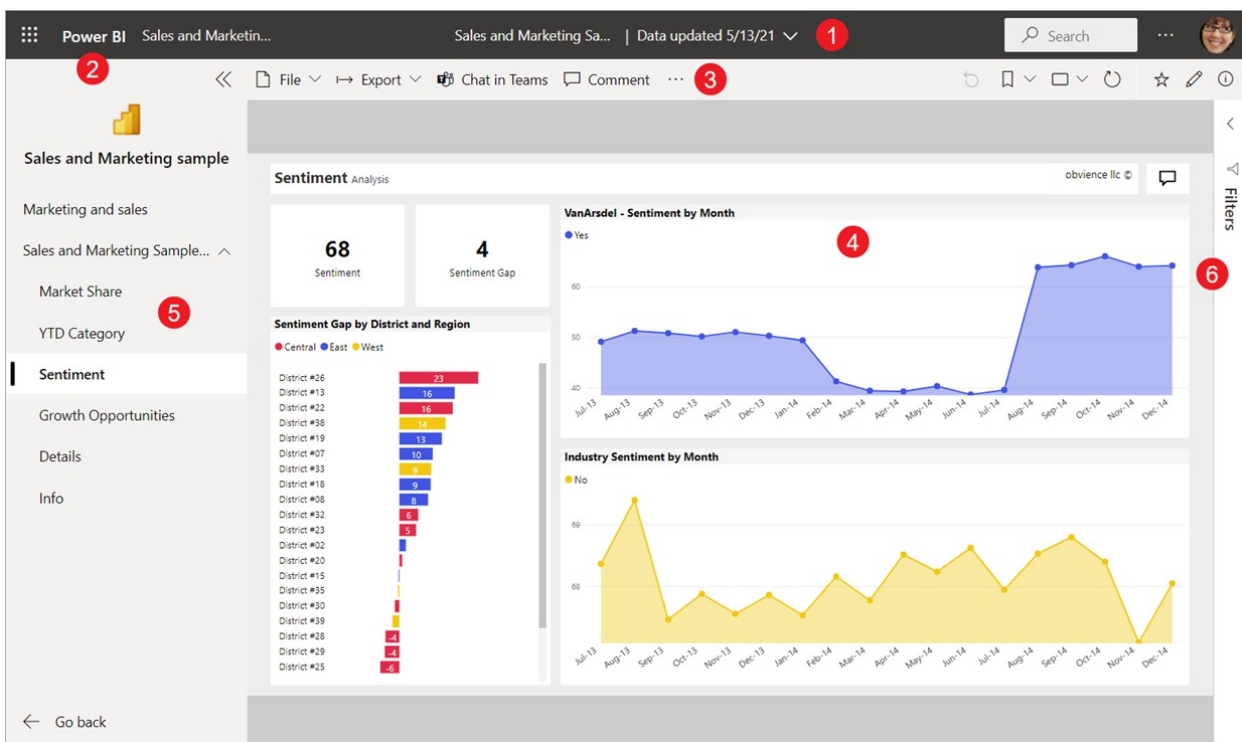


For guidance on which option to select, see [Install template apps](#).

Hover over the app to see details, and select the app card to open the app.

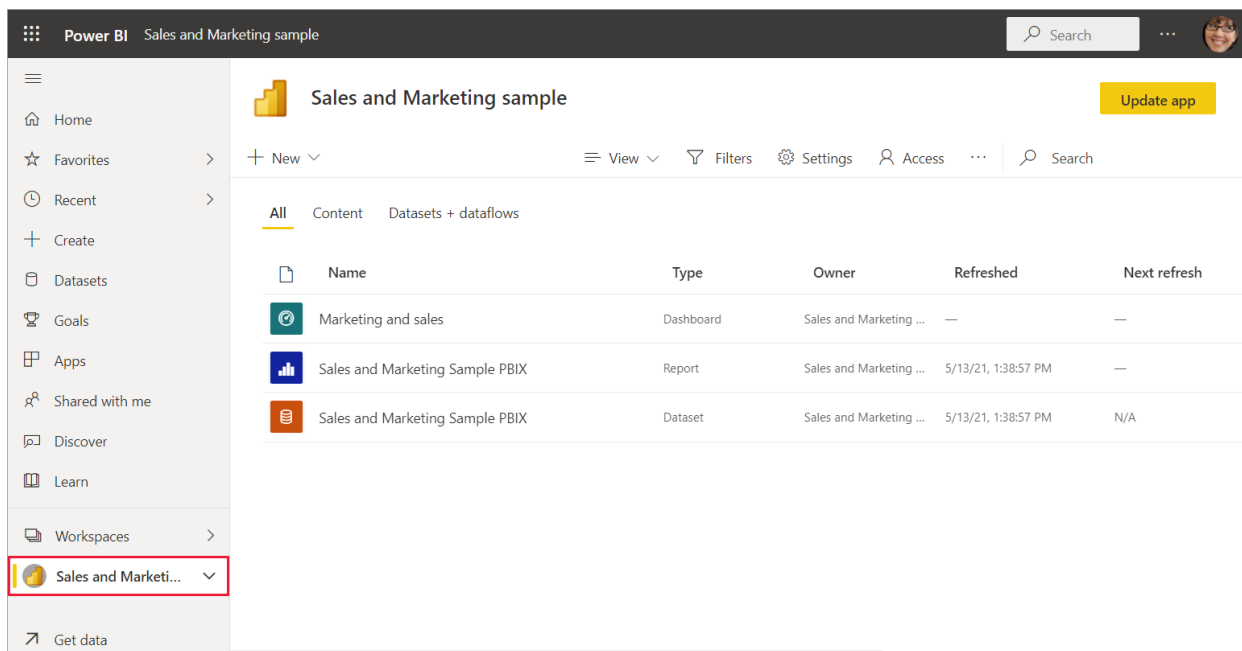


The app opens. Every app will look different - different layout, visuals, colors, options. But all apps do have some common features.



1. Name of the app and last updated time. Select the dropdown arrow to look up the owner and Help contact.
2. Select **Power BI** to return to [Home](#).
3. Your action bar.
4. The report page canvas.
5. The app navigation pane. Below the name of the app is the list of content. This app has one report with six pages. Select a report page name to open it. We currently have the *Return rate* page open.
6. Select the arrow to expand the **Filters** pane.

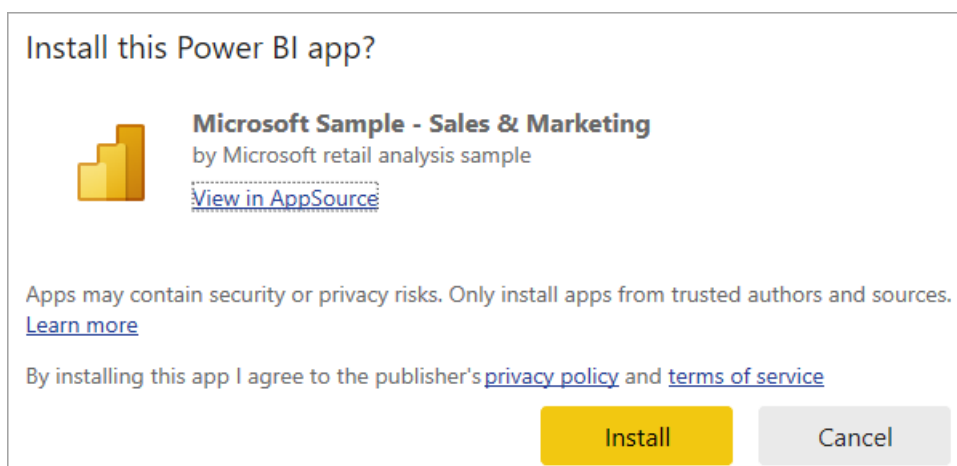
You can also explore the associated workspace if you've been given access. When you install or download a template app, the Power BI service creates a workspace for you. When you install an organizational app, it may not include access to the workspace. [Learn about workspaces](#). Select **Power BI** (number 2) to return to **Home** and choose **Workspaces**.



## Update an app


From time to time, app designers may release new versions of their apps. How you get the new version depends on how you received the original.

- If you got the app from your organization, the update to the new version is entirely transparent - you don't have to do anything.
- If you got a template app from AppSource, the next time you open the app you'll see a notification banner. The notification lets you know that a new version is available.
  1. Select **Get it** to update.
  2. When prompted to install the updated app, select **Install**.



3. Since you already have a version of this app, decide whether you want to replace the existing version, update only the workspace content *without* updating the app, or install the updated app in a new workspace.


### Update app



**Microsoft Sample - Sales & Marketing**  
by Microsoft retail analysis sample  
[View in AppSource](#)

Select how to update this app:

☒ Update the workspace and the app

 Any changes you've made to the workspace content or app settings may be overwritten. [Learn more](#)

☐ Update only workspace content without updating the app

☐ Install another copy of the app into a new workspace

Install

Cancel

#### NOTE

Installing a new version overwrites any changes you may have made to the app's reports and dashboards. To keep your updated reports and dashboards, you can save them under a different name or in a different location before installing.

- Once you've installed the updated version, select **Update app** to complete the update process.

## Considerations and troubleshooting

- The ability to install apps can be turned on and off by your Power BI administrator. Contact your IT department or help desk if you need this feature enabled.
- The use of apps requires either a Pro or Premium Per User license or for the app to be stored in a workspace in Premium shared capacity. [Learn about licenses](#).

## Next steps

- [Back to the apps overview](#)
- [View a Power BI report](#)
- [Other ways content is shared with you](#)

# Discover datasets using the datasets hub

12/10/2021 • 2 minutes to read • [Edit Online](#)

The datasets hub helps you find, explore, and use the datasets and reports in your organization. It provides information about the datasets as well as reports built using those datasets. In this way, report consumers can find reports based on trustworthy datasets.

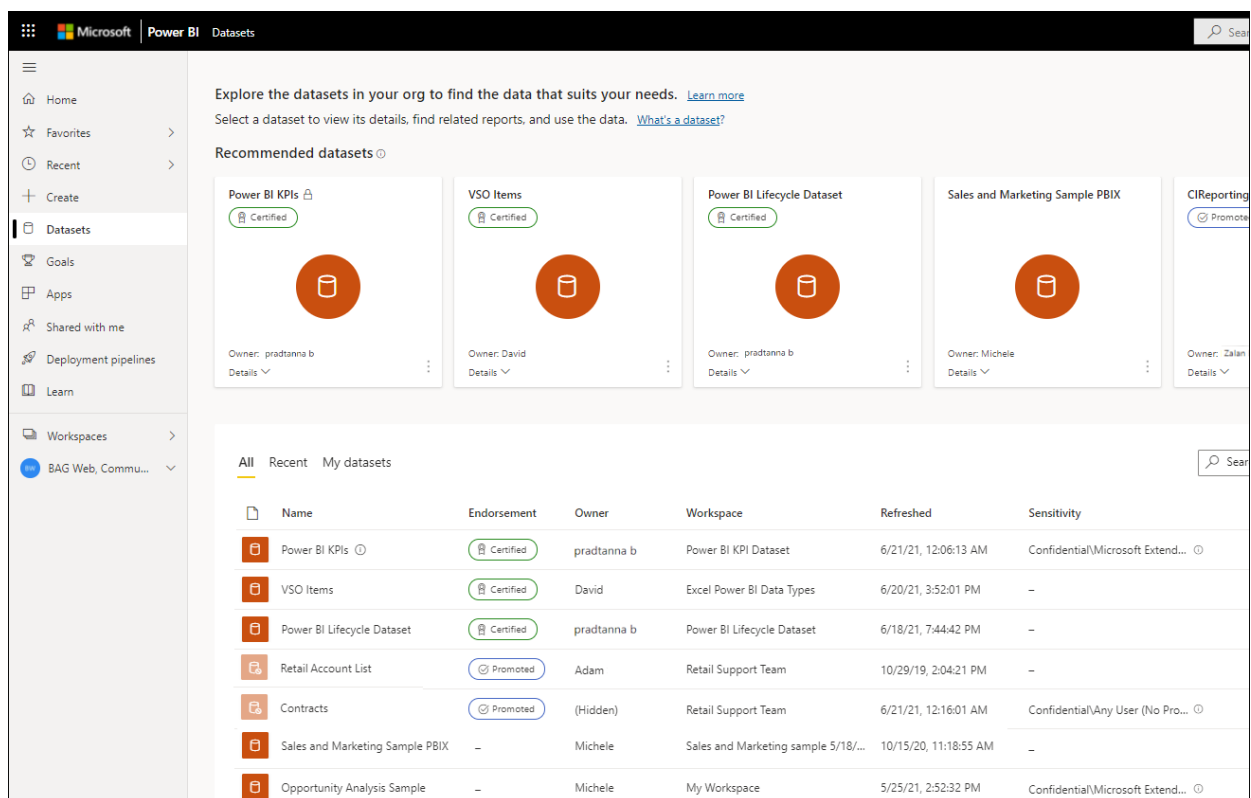
This article explains what you see on the datasets hub and describes how to use it. For more details and advanced features available from the datasets hub, see [Dataset discovery using the datasets hub](#).

## Find the dataset you need

The dataset discovery experience starts on the datasets hub page. To get to the datasets hub page:

- In the Power BI service left navigation pane, select **Datasets**.
- In the Power BI app in Teams, select either the **Datasets** tab or **Datasets** in the navigation pane.

The image below shows the datasets hub in the Power BI service.



The datasets hub presents you with a selection of recommended datasets and a list of all the datasets in the organization that you have permissions to access. If [dataset discoverability](#) is enabled for you, you also see datasets you don't have access to.

[Continue learning about the datasets hub](#) and explore additional information, including how to select a dataset, how to explore reports built using a dataset, and how to create a new report yourself.

## Next steps

[Continue learning about the datasets hub](#)

[Power BI Home](#)

# Connect to the services you use with Power BI

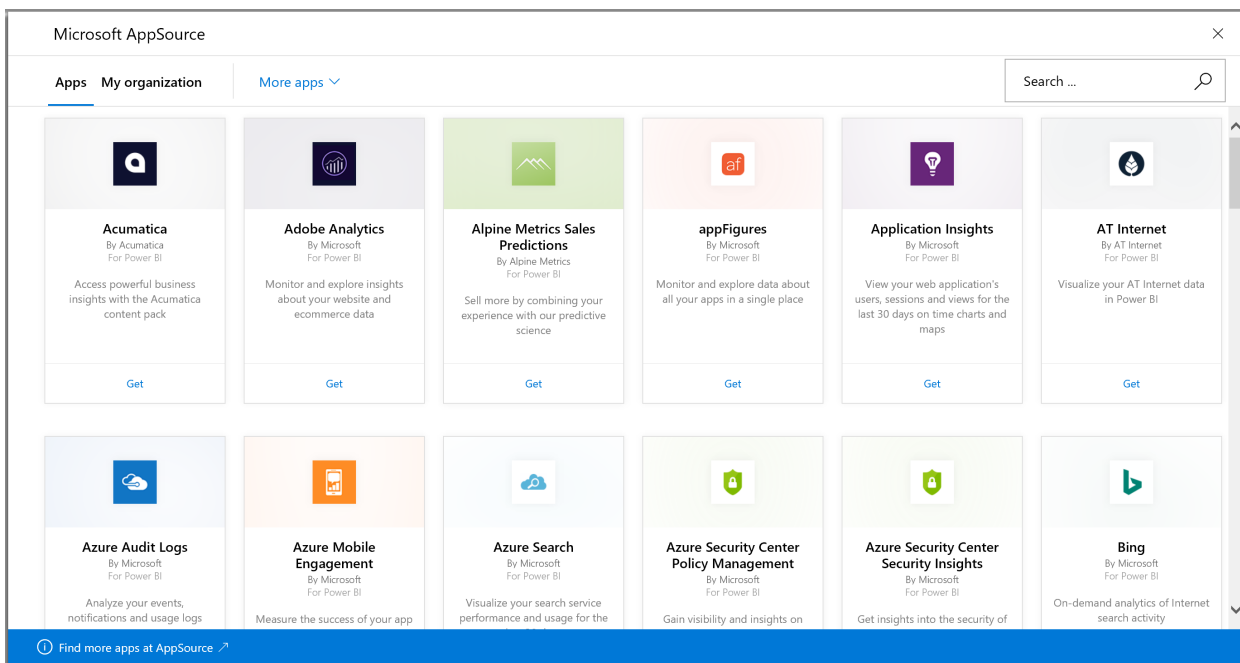
12/10/2021 • 2 minutes to read • [Edit Online](#)

With Power BI, you can connect to many of the services you use to run your business, such as Salesforce, Microsoft Dynamics, and Google Analytics. Power BI starts by using your credentials to connect to the service. It creates a Power BI *workspace* with a dashboard and a set of Power BI reports that automatically show your data and provide visual insights about your business.

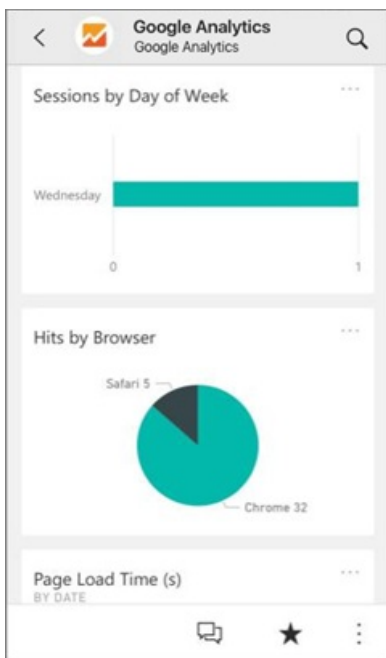
## IMPORTANT

Service content packs are being replaced by [Template apps](#). A number of content packs have already been deprecated. Any deprecated content pack that you have installed will remain in your account, but no documentation or support will be provided for it, nor will it be possible to install it again.

Sign in to Power BI to view all of the [services you can connect to](#).

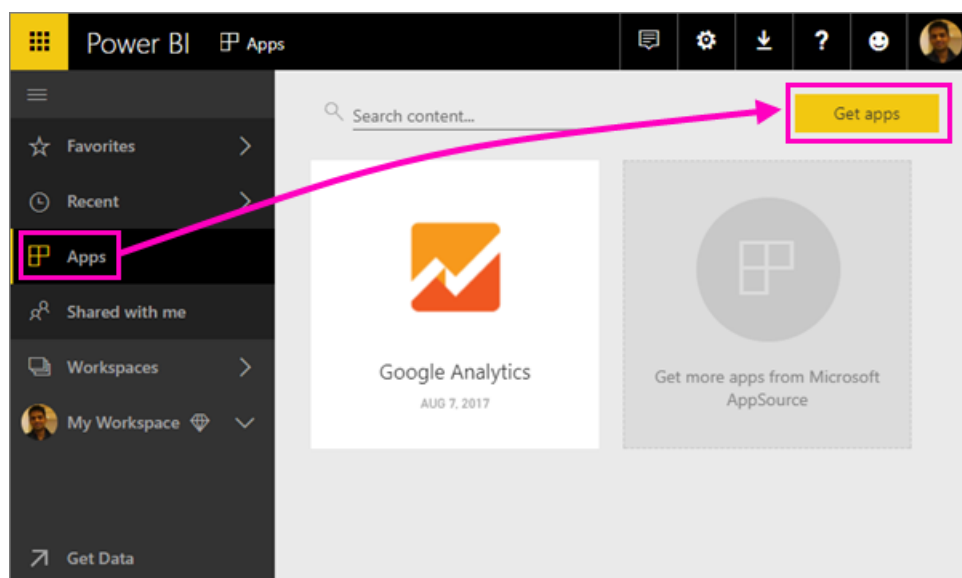


After you install the app, you can view the dashboard and reports in the app and the workspace in the Power BI service (<https://app.powerbi.com>). You can also view them in the Power BI mobile apps. In the workspace, you can modify the dashboard and reports to meet the needs of your organization, and then distribute them to your colleagues as an *app*.

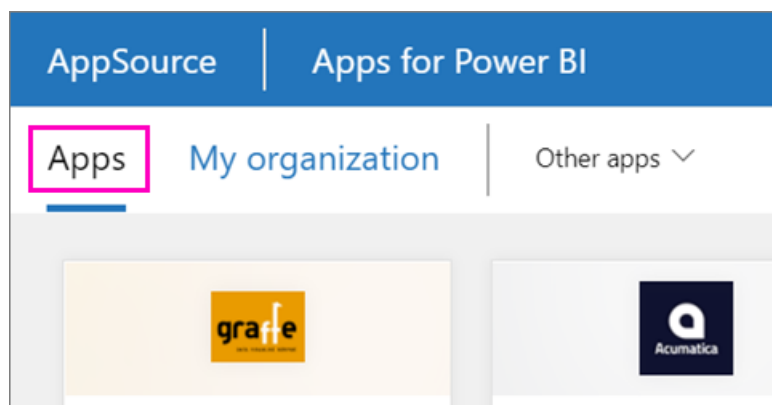


## Get started

1. Select **Apps** in the nav pane > select **Get apps** in the upper-right corner.



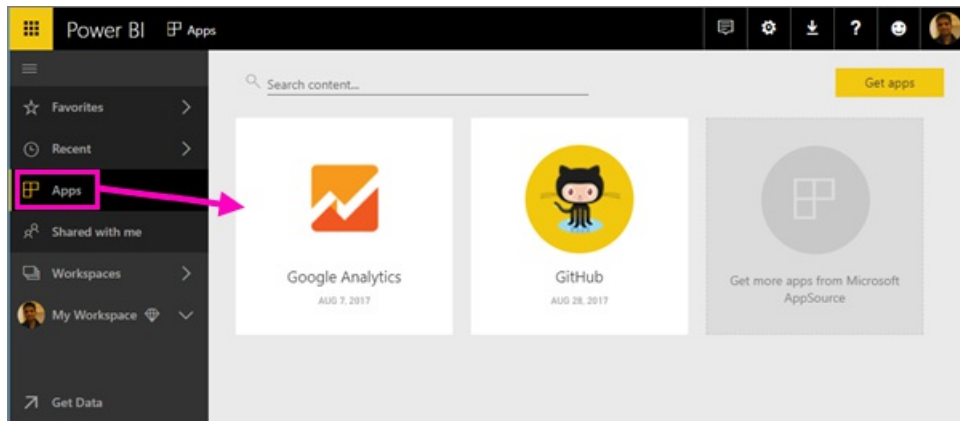
2. In AppSource, select the **Apps** tab, and search for the service you want.



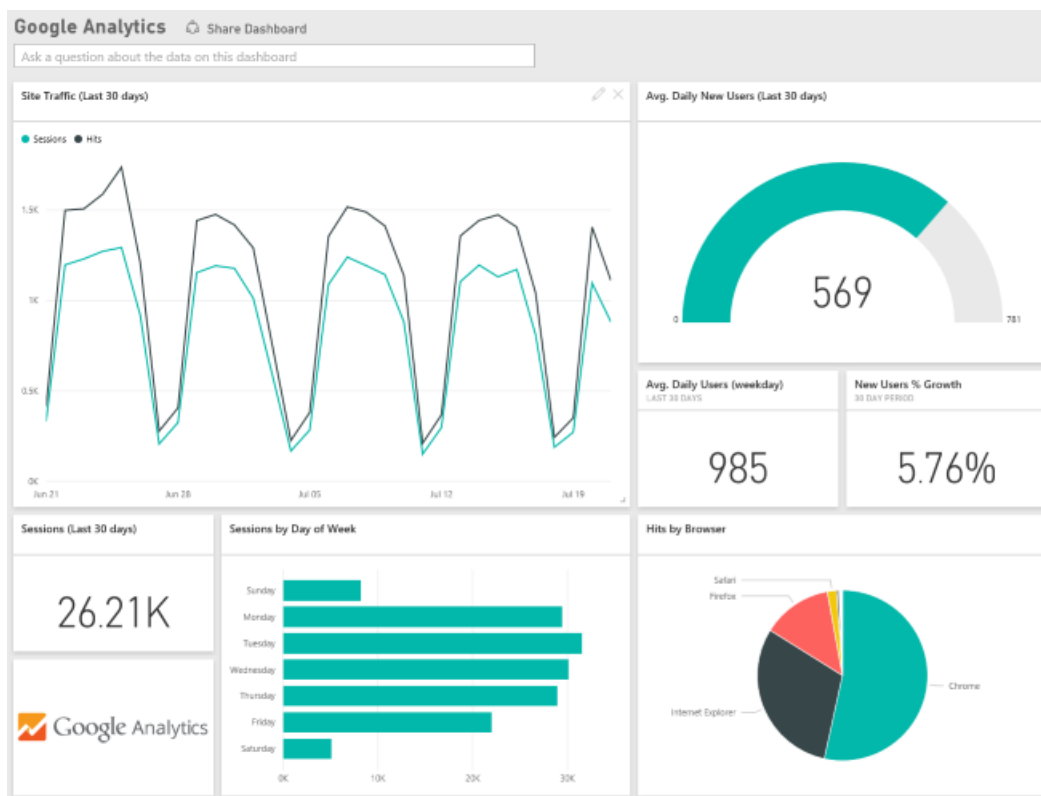
## Edit the dashboard and reports

When the import is complete, the new app appears on the Apps page.

1. Select **Apps** in the nav pane > select the app.



2. You can ask a question by typing in the Q&A box, or click a tile to open the underlying report.



Change the dashboard and report to fit the needs of your organization. Then [distribute your app to your colleagues](#)

## What's included

After connecting to a service, you see a newly created app and workspace with a dashboard, reports, and dataset. The data from the service is focused on a specific scenario and may not include all the information from the service. The data is scheduled to refresh automatically once per day. You can control the schedule by selecting the dataset.

You can also [connect to many services in Power BI Desktop](#), such as Google Analytics, and create your own customized dashboards and reports.

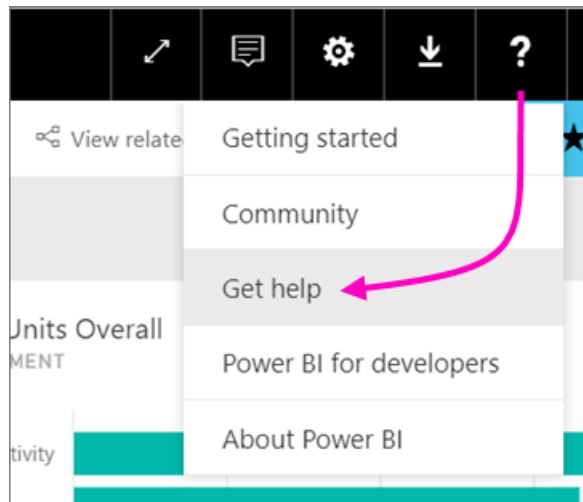
For more details on connecting to specific services, refer to the individual help pages.

## Troubleshooting

### Empty tiles

While Power BI is first connecting to the service, you may see an empty set of tiles on your dashboard. If you still see an empty dashboard after 2 hours, it's likely the connection failed. If you didn't see an error message with information on correcting the issue, file a support ticket.

- Select the question mark icon (?) in the upper-right corner > **Get help**.



### Missing information

The dashboard and reports include content from the service focused on a specific scenario. If you're looking for a specific metric in the app and don't see it, add an idea on the [Power BI Support](#) page.

## Suggesting services

Do you use a service you'd like to suggest for a Power BI app? Go to the [Power BI Support](#) page and let us know.

If you're interested in creating template apps to distribute yourself, see [Create a template app in Power BI](#). Power BI partners can build Power BI apps with little or no coding, and deploy them to Power BI customers.

## Next steps

- [Distribute apps to your colleagues](#)
- [Create the new workspaces in Power BI](#)
- Questions? [Try asking the Power BI Community](#)

# Install and use the sample Sales and Marketing app in the Power BI service

12/10/2021 • 2 minutes to read • [Edit Online](#)

**APPLIES TO:** ✓ Power BI service for *business users* ✓ Power BI service for designers & developers ✕  
Power BI Desktop ✓ Requires Pro or Premium license

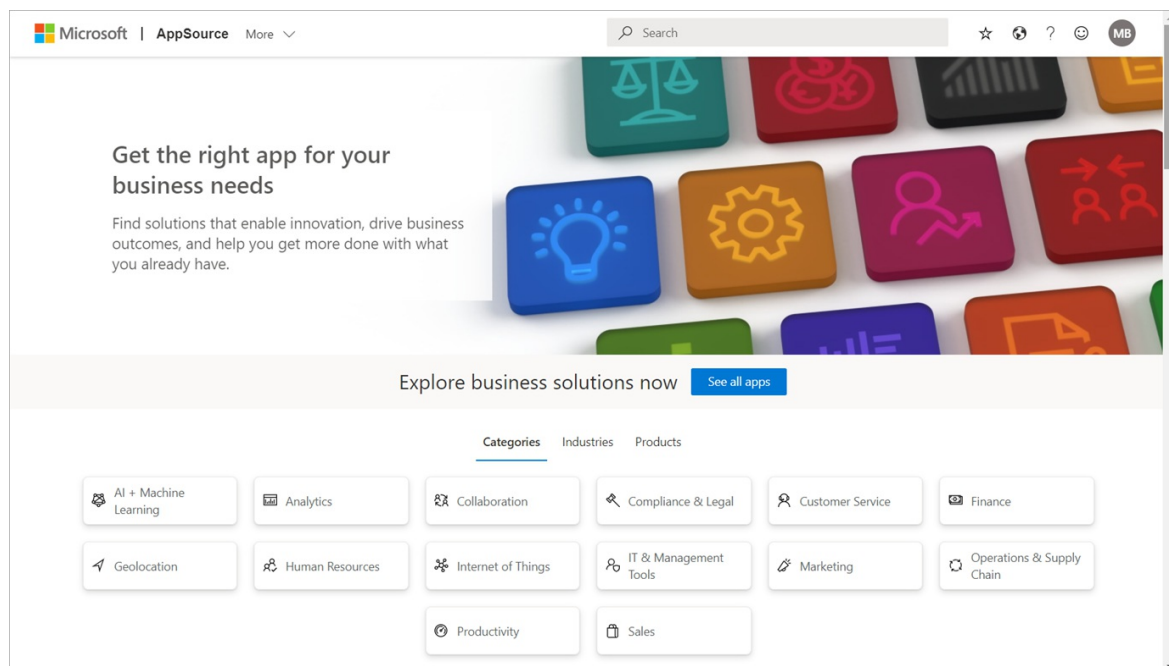
Now that you have a [basic understanding of how to get Power BI content](#), let's use Microsoft AppSource to get the Marketing and Sales template app. The Marketing and Sales template app contains sample data that you can use to explore the Power BI service. This particular app has one dashboard and several report pages.

## IMPORTANT

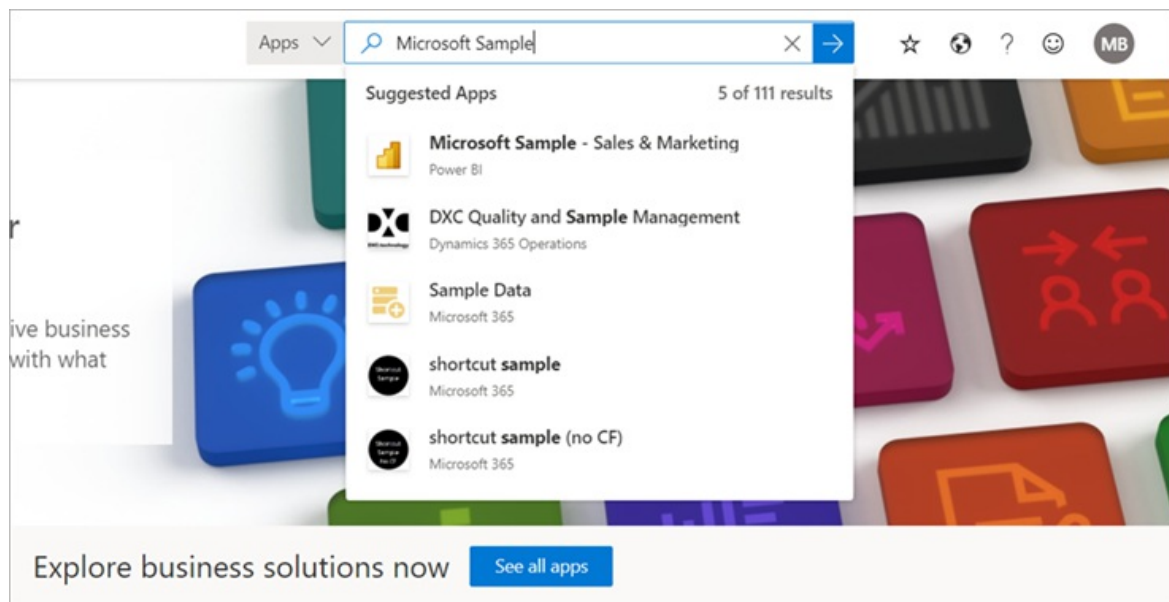
Installing this app from Microsoft AppSource requires that you have a **Power BI Pro** or **Premium Per User** license. For more information, see [licenses](#).

## Get the app from Microsoft AppSource

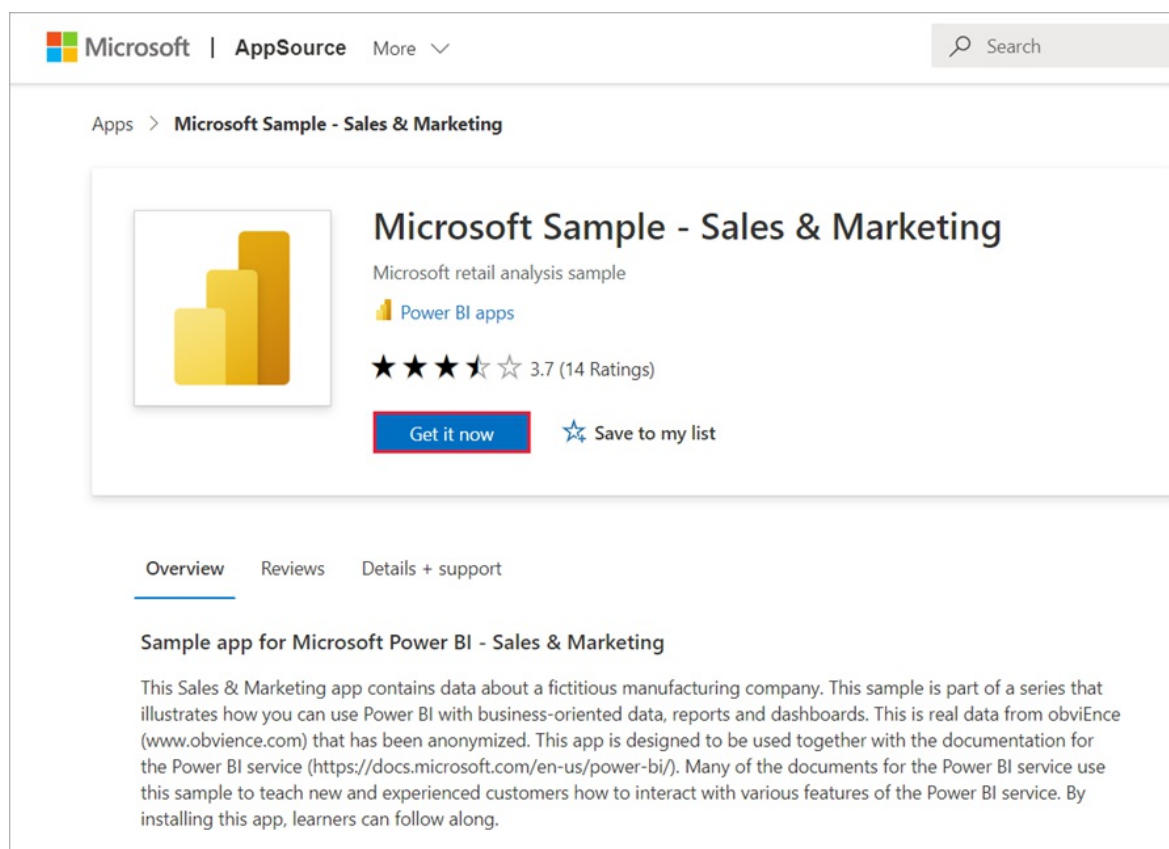
1. Open <https://appsource.microsoft.com>.



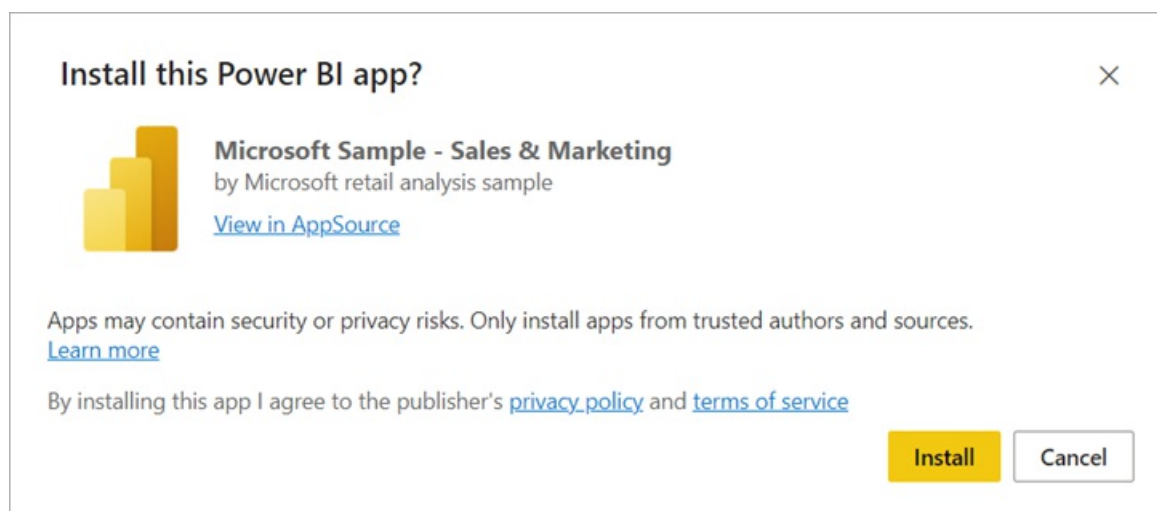
2. In the search box, enter **Microsoft sample** and select **Microsoft sample - Sales & Marketing**.



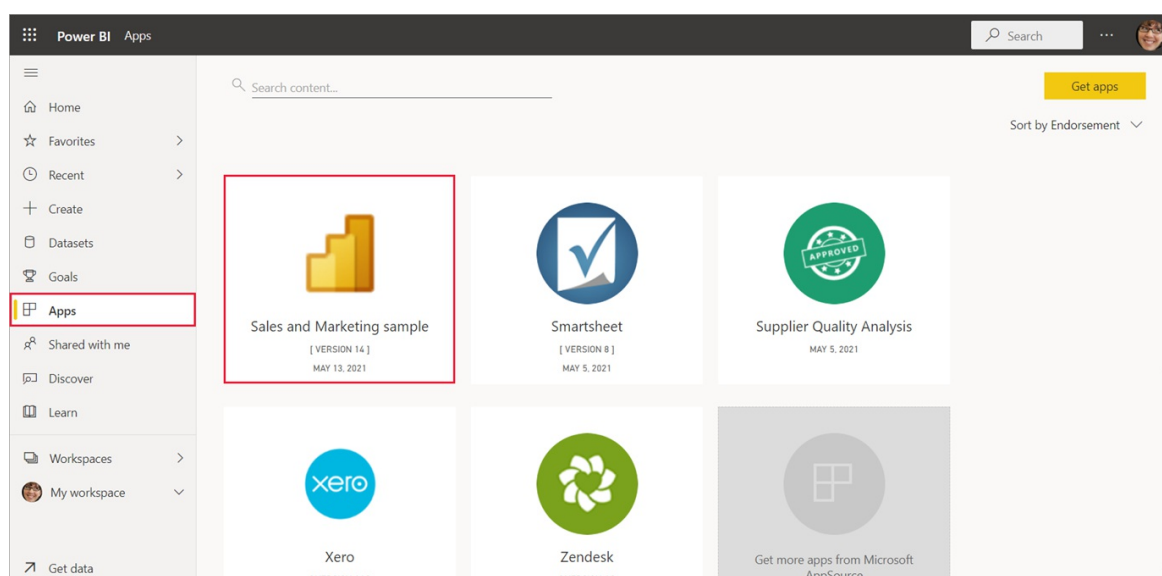
- Optionally, read through the overview and reviews and take a look at the images. Then, select **Get it now**.



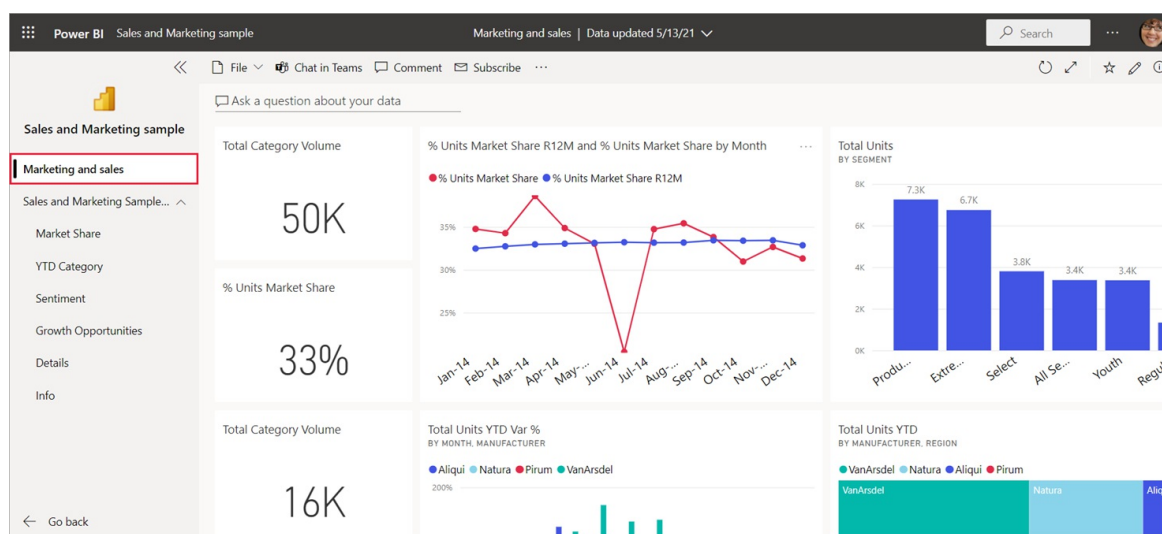
- Confirm that you want to install this app.



- The Power BI service displays a success message once the app is installed. Select **Go to app**. Or select the app itself from your **Apps** container. Depending on how the designer created the app, either the app dashboard or app report will display.



- This template app is set to open to the dashboard. The app *designer* could have set the app to open to one of the report pages instead.



## Interact with the dashboards and reports in the app

Take some time to explore the data in the dashboards and reports that make up the app. You have access to all



of the standard Power BI interactions such as filtering, highlighting, sorting, and drilling down. Still a little confused by the difference between dashboards and reports? Read the [article about dashboards](#) and the [article about reports](#).

## Next steps

- [Back to the apps overview](#)
- [View a Power BI report](#)
- [Other ways content is shared with you](#)

# Q&A for Power BI business users

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for **business users**  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

## What is Q&A?

Sometimes the fastest way to get an answer from your data is to ask a question using natural language. For example, "what were total sales last year."

Use Q&A to explore your data using intuitive, natural language capabilities and receive answers in the form of charts and graphs. Q&A is different from a search engine -- Q&A only provides results about the data in Power BI datasets.

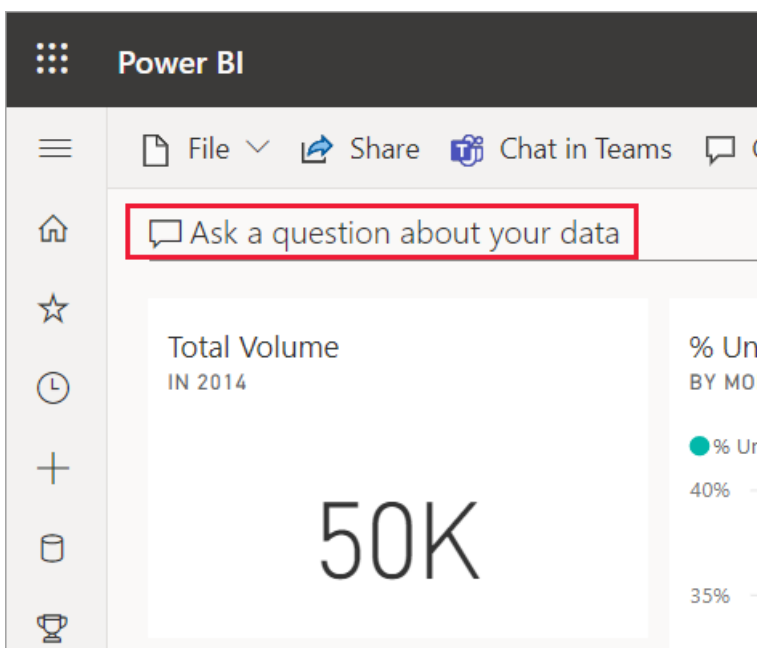
## Which visualization does Q&A use?

Q&A picks the best chart or graph based on the data being displayed. Sometimes data in the underlying dataset is defined as a certain type or category and this helps Q&A know how to display it. For example, if data is defined as a date type, it is more likely to be displayed as a line chart. Data that is categorized as a city is more likely to be displayed as a map.

You can also tell Q&A which visual to use by adding it to your question. But keep in mind that it may not always be possible for Q&A to display the data using the visual type you requested. Q&A will prompt you with a list of workable visual types.

## Where can I use Q&A?

You'll find Q&A on dashboards in the Power BI service, and at the bottom of the dashboard in Power BI mobile. Unless the designer has given you edit permissions, you'll be able to use Q&A to explore data but won't be able to save any visualizations created with Q&A.



You'll also find Q&A on reports, if the report *designer* added an interactive [Q&A visual](#).

Ask a question about your data

Try one of these to get started

top geo states by total units YTD

top geo states by total units ytd var %

what is the total category volume by geo state

what is the total OTHER units YTD by geo state

[Show all suggestions](#)

## Q&A on dashboards

Power BI Q&A is available with a Pro or Premium license. [Q&A in the Power BI mobile apps](#) and [Q&A with Power BI Embedded](#) are covered in separate articles. At the current time, **Power BI Q&A** only supports answering natural language queries asked in English, although there is a preview available for Spanish that can be enabled by your Power BI administrator.



Asking the question is just the beginning. Have fun traveling through your data refining or expanding your question, uncovering trust-worthy new information, zeroing in on details and zooming out for a broader view. You'll be delighted by the insights and discoveries you make.

The experience is truly interactive...and fast! Powered by an in-memory storage, response is almost instantaneous.

## The Q&A visual in Power BI reports

In Power BI reports, there is a specific type of interactive visual called the Q&A visual. When a report designer adds this visual to a report, report end users can ask natural language questions and create a new report visual that represents the answer to that question. The Q&A visual behaves like other visual in a report, it can be cross-filtered/cross-highlighted and also supports bookmarks and comments.

You can identify a Q&A visual by its question box across the top. This is where you'll enter or type questions

using natural language. The Q&A visual can be used over and over again to ask questions about your data. When you leave the report, the Q&A visual resets to its default.

Try one of these to get started

top geo states by total units YTD

top geo states by total units ytd var %

what is the total category volume by geo state

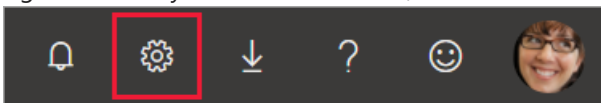
what is the total OTHER units YTD by geo state

[Show all suggestions](#)

## Considerations and troubleshooting

**Question:** I don't see Q&A on this dashboard.

**Answer 1:** If you don't see a question box, first check your settings. To do this, select the cog icon in the upper right corner of your Power BI toolbar, or from the **More options** (...) dropdown menu.



Then choose **Settings > Dashboards**. Make sure there is a check mark next to **Show the Q&A search box on this dashboard**.

General Alerts Subscriptions **Dashboards** Datasets Workbooks Dataflows App

Marketing and sales

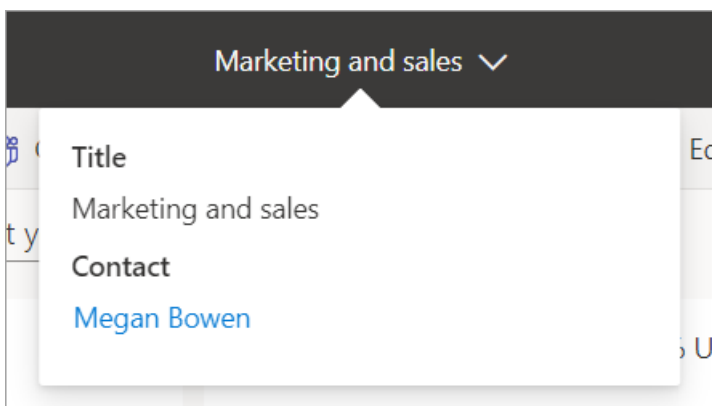
Settings for Marketing and sales

Q&A

Allow people to use natural language to ask questions about their data and let them create new visuals from it.  
[Learn more](#)

☒ Show the Q&A search box on this dashboard

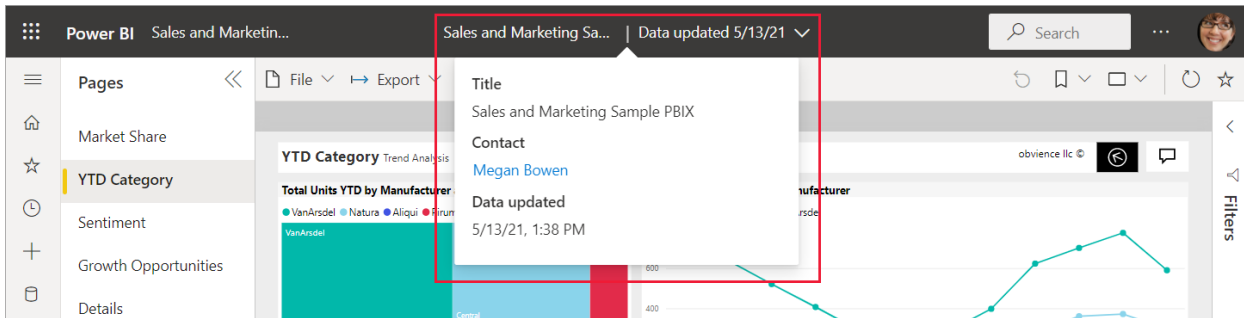
**Answer 2:** Sometimes you won't have access to the settings. If the dashboard owner or your administrator turned Q&A off, check with them to see if it's OK to turn it back on. To look up the owner, select the name of the dashboard from the top menu bar.



**Question:** I'm not getting the results I'd like to see when I type a question.

**Answer:** Select the option to contact the report or dashboard owner. You can do this directly from the Q&A

dashboard page or the Q&A visual. Or, you can look up the owner from the Power BI header. There are many things the owner can do to improve the Q&A results. For example, the owner can rename columns in the dataset to use terms that are easily understood ( `CustomerFirstName` instead of `CustFN` ). Since the owner knows the dataset really well, they can also come up with helpful questions and add them to the Q&A suggested questions.



## Privacy

Microsoft may use your questions to improve Power BI. Please review the [Microsoft Privacy Statement](#) for more information.

## Next steps

Learn how to ask your own natural language questions and create answers in the form of visuals. [Q&A Tutorial](#)

# Q&A tutorial

12/10/2021 • 6 minutes to read • [Edit Online](#)

**APPLIES TO:** ✓ Power BI Desktop ✓ Power BI service

This tutorial shows you how to:

- Import the Retail Analysis sample and the Sales and Marketing sample and add them to the Power BI service.
- Explore the samples in the service.
- Create a visual by using natural language in *Q&A*.

If you'd like more background information, see [Introduction to Q&A](#). In that article you learn about Q&A, where to use it, and the difference between Power BI Q&A on a dashboard and the Power BI Q&A visual for reports.

If you want to familiarize yourself with the built-in samples in this tutorial and their scenarios, see [Retail Analysis sample for Power BI: Take a tour](#) and [Sales and Marketing sample for Power BI: Take a tour](#) before you begin.

## Prerequisites

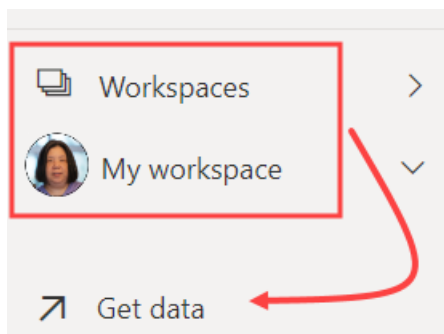
- To download a sample in the Power BI service, you can sign up for a [free or trial license](#).
- **Power BI Q&A** is available with a Pro or Premium license. [Q&A in the Power BI mobile apps](#) and [Q&A with Power BI Embedded](#) are covered in separate articles.
- At the current time, **Power BI Q&A** only supports answering natural language queries asked in English, although there is a preview available for Spanish that can be enabled by your Power BI administrator.

## Import the samples in the Power BI service

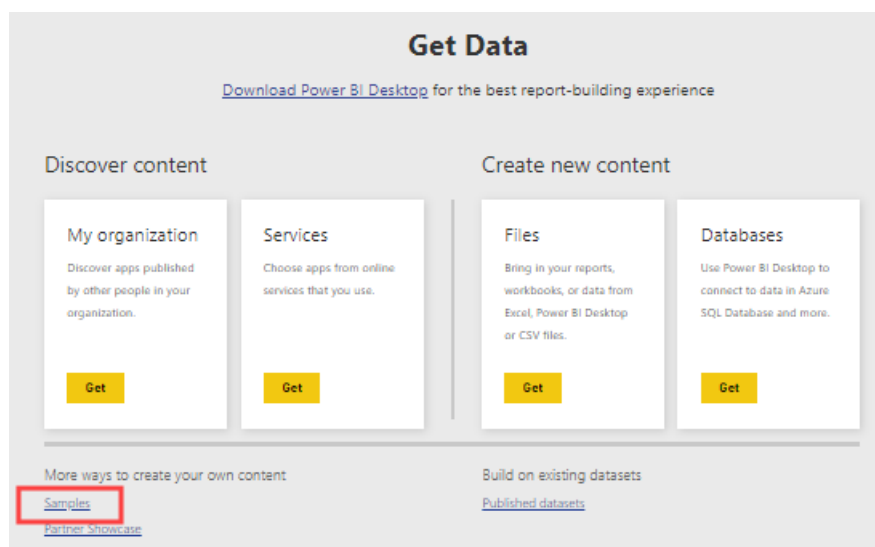
1. Open the Power BI service ([app.powerbi.com](https://app.powerbi.com)), sign in, and open the workspace where you want to save the sample.

If you don't have a Power BI Pro or Premium Per User (PPU) license, you can save the sample to your My Workspace.

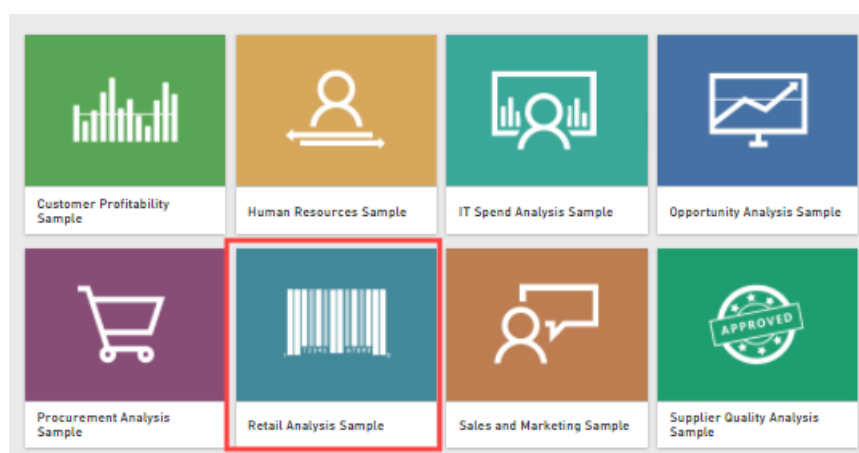
2. Select **Get data** at the bottom of the nav pane.



3. On the **Get Data** page that appears, select **Samples**.



4. Select **Retail Analysis Sample** > **Connect**.



5. Repeat steps 2-4 for the Sales and Marketing Sample.

## What was imported?

With the built-in samples, when you select **Connect**, Power BI gets a copy of that built-in sample and stores it for you in the cloud.

1. Power BI creates the new dashboard, report, and dataset in your workspace.

My workspace						
+ New ▾						
All Content Datasets + dataflows						
	Name		Type	Owner	Refreshed	Next refresh
	Retail Analysis Sample		Dashboard	MOD Administrator	—	—
	Retail Analysis Sample		Report	MOD Administrator	7/29/21, 10:46:16 AM	—
	Retail Analysis Sample		Dataset	MOD Administrator	7/29/21, 10:46:16 AM	N/A

2. On the **Content** tab, you see the dashboard and the report, both named *Retail Analysis Sample*.

Power BI

My workspace

Home

Favorites

Recent

Create

Datasets

Goals

Apps



My workspace

+ New

All

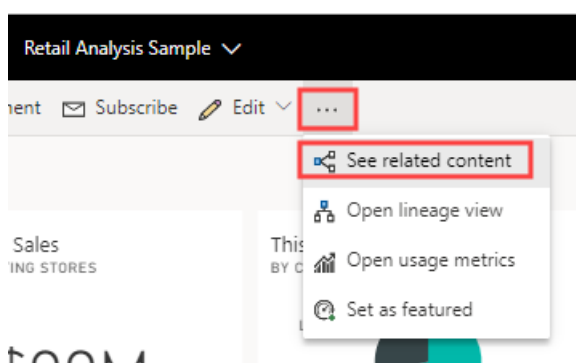
Content

Datasets + dataflows

	Name	Type	Owner	Refreshed
	Retail Analysis Sample	Dashboard	MOD Administrator	—
	Retail Analysis Sample	Report	MOD Administrator	7/29/21, 10:46:16 AM

## Use Q&A on a dashboard in the Power BI service

In the Power BI service (app.powerbi.com), a dashboard contains tiles pinned from one or more datasets, so you can ask questions about any of the data contained in any of those datasets. To see which reports and datasets were used to create the dashboard, select **See related content** from the **More actions** dropdown.



## How do I start?

First, get familiar with the content. Take a look at the visuals on the dashboard and in the report. Get a feel for the type and range of data that is available to you.

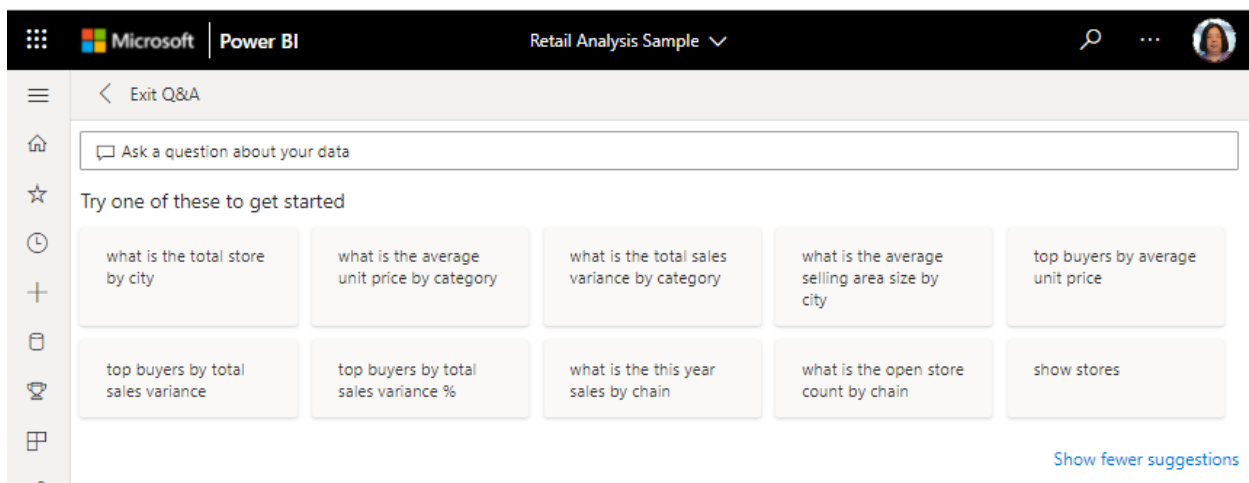
### NOTE

If you already feel comfortable with the data, just place your cursor in the question box to open the Q&A screen.

For example:

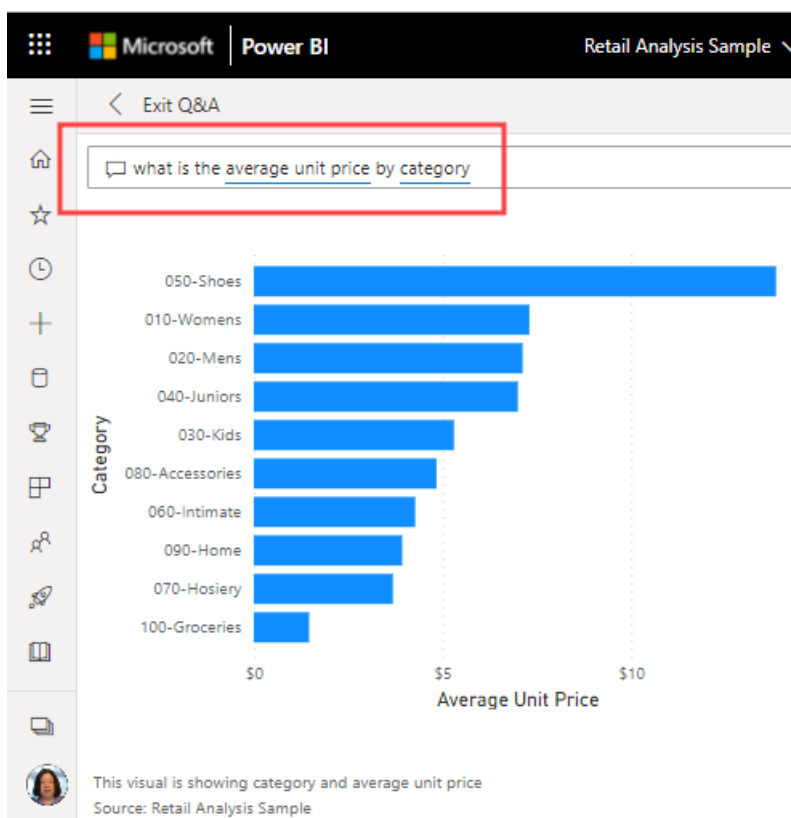
- If a visual's axis labels and values include "sales", "account", "month", and "opportunities", then you can confidently ask questions such as: "Which *account* has the highest *opportunity*, or show *sales* by month as a bar chart."
- If you have website performance data in Google Analytics, you can ask Q&A about time spent on a web page, number of unique page visits, and user engagement rates. Or, if you're querying demographic data, you might ask questions about age and household income by location.

Once you're familiar with the data, head back to the dashboard and place your cursor in the question box. This opens the Q&A screen.



Even before you start typing, Q&A displays a new screen with suggestions to help you form your question. You see phrases and questions containing the names of the tables in the underlying datasets and may even see *featured* questions created by the dataset owner.

You can select any of these to add them to the question box and then refine the question to find a specific answer.



Another way Power BI helps you ask questions is with features such as: prompts, autocomplete, and visual cues. Power BI provides this help for Q&A on dashboards and with the Q&A visual in reports. We'll discuss these features in detail below, in the section [Create a Q&A visual by typing your own natural language query](#)

## Use Q&A to ask natural language questions

Open the "Sales and Marketing Sample" dashboard. To use Q&A on a dashboard or to use the Q&A visual in a report, select one of the suggested questions or type your own natural language question.

### Create a visual by using a suggested question

Here, we've selected **top states by total business units**. Power BI does its best to select which visual type to use. In this case, it's a basic map.

top states by total business units

Showing results for *Top 10 geo state that geos are in by total unit of sales facts*



But you can tell Power BI which visual type to use by adding it to your natural language query. Keep in mind that not all visual types will work or make sense with your data. For example, this data wouldn't produce a meaningful scatter chart. But it works as a filled map.

< Exit Q&A

top states by total business units as a filled map

Showing results for *Top 10 geo state that geos are in by total unit of sales facts as color-filled map*



This visual is showing top 10 state that geos are in by total unit and that total unit as color-filled map  
Source: Sales and Marketing Sample

If you're unsure what type of questions to ask or terminology to use, expand **Show all suggestions** or look through the other visuals in the report. This will get you familiar with the terms and content of the dataset.

Ask a question about your data

Try one of these to get started

top country/regions by sum of taxes

top country/regions by total revenue

what is the sum of revenue by country/region

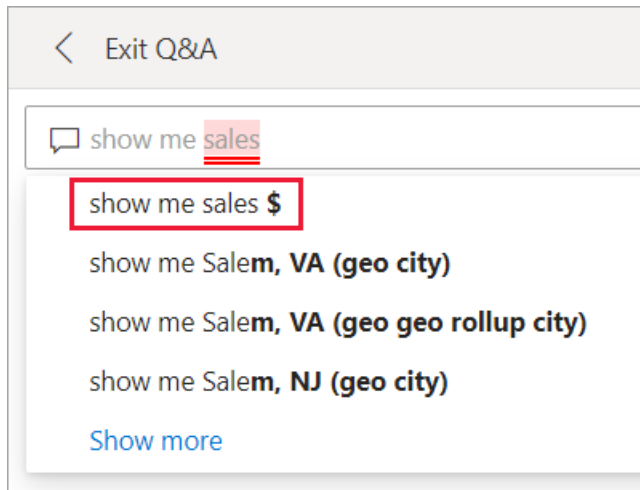
Show all suggestions

Create a visual using your own Q&A question

1. Type your question into the Q&A field using natural language. As you type your question, Power BI helps you with autocomplete, visual cues, restatement, and feedback.

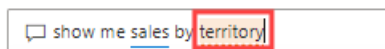
**Autocomplete** - as you type your question, Power BI Q&A shows relevant and contextual suggestions to help you quickly become productive with natural language. As you type, you get immediate feedback and results. The experience is similar to typing in a search engine.

In this example, the suggestion we want is the first one.

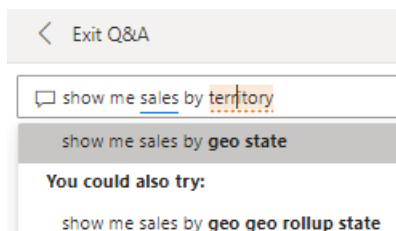


**Visual cues and feedback** Power BI Q&A shows words with solid and dotted underlines to identify which words Power BI did or did not recognize.

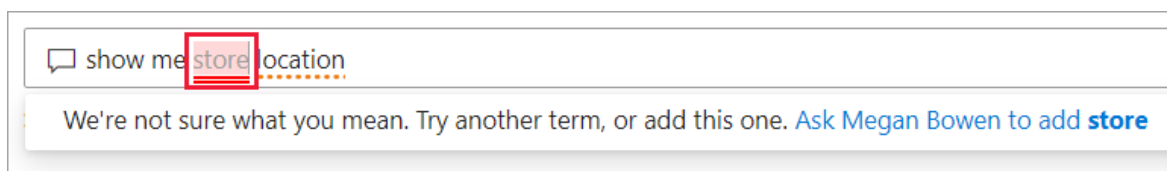
A solid underline indicates that Power BI recognized the word. The example below shows that Q&A recognized the term sales but not the term territory.



Select the unknown word to see suggestions.

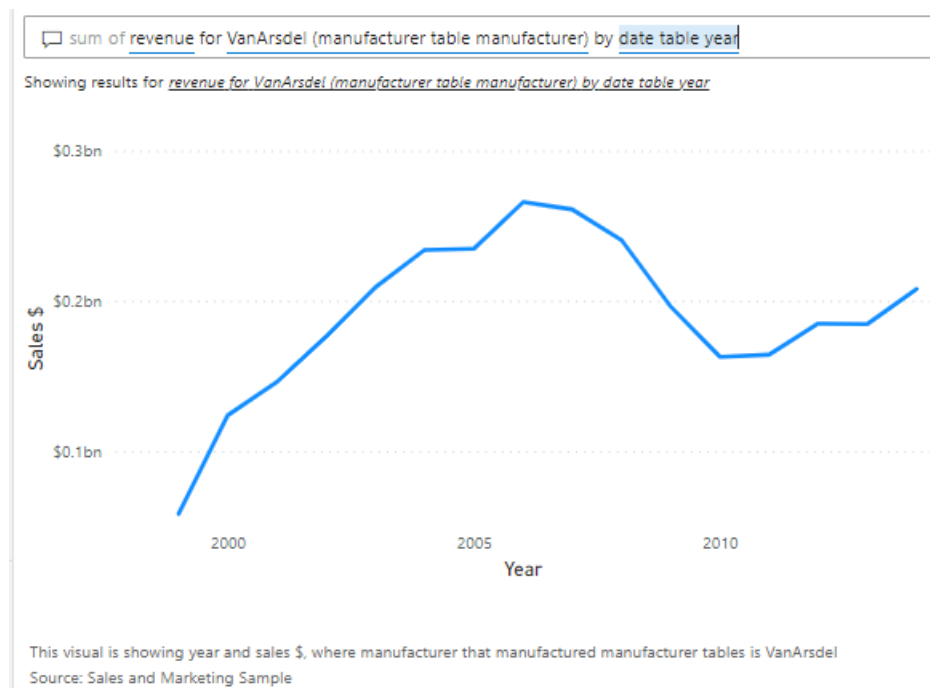


Sometimes, none of the suggestions make sense, or Power BI doesn't recognize the word at all. An example could be using the word 'geography' even though it doesn't exist anywhere in the data. The word is in the English dictionary, but Q&A marks this term with a double underline. Power BI may make some suggestions or it may suggest that you ask the report designer to add the term.



Power BI Q&A recognizes words that mean the same thing, thanks to the integration with Bing and Office. Q&A underlines the word so you know it's not a direct match

After selecting Power BI's suggestions, notice that all words are recognized and underlined in blue. These results display as a line chart. Power BI Q&A restates your question below the visualization.



## Change the visualization type

Don't like the default visualization that Power BI Q&A chose? Edit the natural language question to include the visualization type that you'd prefer.



## Next steps

This environment is a safe one to play in, because you can choose not to save your changes. And if you do save them, you can always select **Get data** for a new copy of this sample.

[Power BI Q&A tips and tricks](#)

More questions? [Try the Power BI Community](#)

# Tips for asking questions in Power BI Q&A

12/10/2021 • 4 minutes to read • [Edit Online](#)

**APPLIES TO:**  Power BI service for *business users*  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

## Words and terminology that Q&A recognizes

The list of keywords on this page isn't exhaustive. The best way to see if Power BI recognizes a keyword, is to try it out by typing it in the question box. If the word or term is greyed out, then Power BI doesn't recognize it.

The list below uses present tense, but all tenses are recognized in most cases. For example, "is" includes: **are, was, were, will be, have, has, had, will have, has got, do, does, did**. And "sort" includes: **sorted** and **sorting**. Power BI also recognizes and includes singular and plural versions of a word.

### NOTE

Q&A is also available in the [Microsoft Power BI app for iOS on iPads, iPhones, and iPod Touch devices](#).

CATEGORY	KEYWORDS
Aggregates	total, sum, amount, number, quantity, count, average, most, least, fewest, largest, smallest, highest, biggest, maximum, max, greatest, lowest, littlest, minimum, min
Articles	a, an, the
Blank and Boolean	blank, empty, null, prefixed with "non" or "non-", empty string, empty text, true, t, false, f
Comparisons	vs, versus, compared to, compared with
Conjunctions	and, or, each of, with, versus, &, and, but, nor, along with, in addition to
Contractions	Q&A recognizes almost all contractions, try it out. Here are a few examples: didn't, haven't, he'd, he's, isn't, it's, she'll, they'd, weren't, who's, won't, wouldn't
Dates	Power BI recognizes most date terms (day, week, month, year, quarter, decade, ...) and dates written in many different formats (see below). Power BI also recognizes the following keywords: MonthName, Days 1-31, decade. Examples: January 3rd of 1995, January 3rd 1995, jan 03 1995, 3 Jan 1995, the 3rd of January, January 1995, 1995 January, 1995-01, 01/1995, names of months
Relative dates	today, right now, current time, yesterday, tomorrow, the current, next, the coming, last, previous, ago, before now, sooner than, after, later than, from, at, on, from now, after now, in the future, past, last, previous, within, in, over, N days ago, N days from now, next, once, twice.

CATEGORY	KEYWORDS
	Example: count of orders in the past 6 days.
Equality (Range)	in, equal to, =, after, is more than, in, between, before
	Examples: Order year is before 2012? Price equals between 10 and 20? Is the age of John greater than 40? Total sales in 200-300?
Equality (Value)	is, equal, equal to, in, of, for, within, is in, is on
	Examples: Which products are green? Order date equals 2012. Is the age of John 40? Total sales that aren't equal to 200? Order date of 1/1/2016. 10 in price? Green for color? 10 in price?
Names	If a column in the dataset contains the phrase "name" (for example, EmployeeName), Q&A understands the values in that column are names. You can ask questions like "which employees are named robert."
Pronouns	he, him, himself, his, she, herself, her, hers, it, itself, its, they, their, them, themselves, theirs, this, these, that, those
Query commands	sorted, sort by, direction, group, group by, by, show, list, display, give me, name, just, only, arrange, rank, compare, to, with, against, alphabetically, ascending, descending, order
Range	greater, more, larger, above, over, >, less, smaller, fewer, below, under, <, at least, no less than, >=, at most, no more than, <=, in, between, in the range of, from, later, earlier, sooner, after, on, at, later than, after, since, starting with, starting from, ending with
Times	am, pm, o'clock, noon, midnight, hour, minute, second, hh:mm:ss
	Examples: 10 pm, 10:35 pm, 10:35:15 pm, 10 o clock, noon, midnight, hour, minute, second.
Top N	(order, ranking): top, bottom, highest, lowest, first, last, next, earliest, newest, oldest, latest, most recent, next
Visual types	all visual types native to Power BI. If it's an option in the Visualizations pane, then you can include it in your question. The exception to this rule is <a href="#">Power BI custom visuals</a> that you've manually added to the Visualization pane.
	Example: show districts by month and sales total as bar chart
Wh (relationship, qualified)	when, where, which, who, whom, how many, how much, how many times, how often, how frequently, amount, number, quantity, how long, what

## Q&A helps you phrase the question

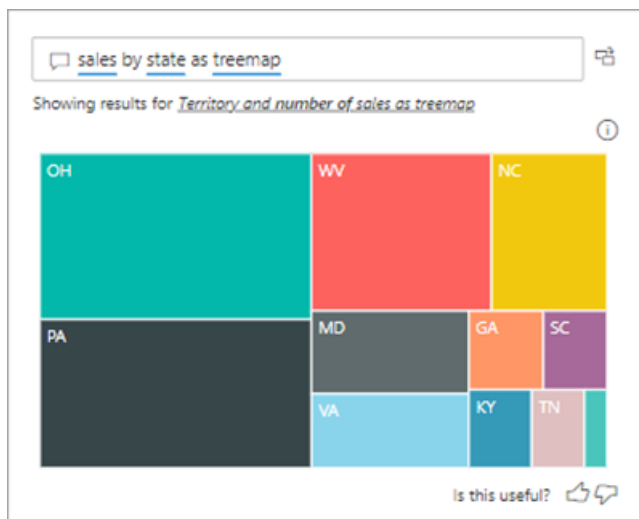
Q&A does its best to understand and answer the question being asked. It tries to understand in several ways. For all of these phrasings, you can accept the action in full, in part, or not at all. As you type your question, Q&A:

- autocompletes words and questions. It uses various strategies, including autocompleting recognized words, stored questions, and previously used questions that returned valid responses. If more than one autocomplete option is available, they're presented in a dropdown list.
- corrects spelling.
- provides a preview of the answer in the form of a visual. The visual updates as you type and edit the question (it doesn't wait for you to press Enter).
- suggests replacement terms from the underlying dataset(s) when you move the cursor back in the question box.
- restates the question based on the data in the underlying dataset(s). Q&A replaces the words you used with synonyms from the underlying dataset(s). By reading the restatement, you know whether Q&A understood your question or not.
- adds a double underline to words it doesn't understand.
- adds a single underline to words it does understand.
- allows you to contact the report or dashboard owner when your term isn't found or your question doesn't get results.

## Tell Q&A which visual to use

When typing natural language queries with Power BI Q&A, you can specify the visual type in your query. For example:

*"sales by state as treemap"*



## Don't stop now

After Q&A displays your results, keep the conversation going! Use the interactive features of the visual and of Q&A to uncover more insights.

## Next steps

Back to [Q&A in Power BI](#)

[Power BI - Basic Concepts](#)

More questions? [Try the Power BI Community](#)

# Glossary for business users of the Power BI service

12/10/2021 • 19 minutes to read • [Edit Online](#)

The Power BI service may introduce terminology that is unfamiliar or confusing. The glossary is a great place to look up terminology, you might even want to keep it bookmarked. Another great resource for learning about the building blocks that make up Power BI service is [Basic Concepts](#). Basic Concepts gives a high level overview of the Power BI *pieces* and how they're connected.

This glossary is a community effort. Don't see a word here? Please ask us to add it (you can use the documentation feedback button at the bottom of this article).

## A

### **account**

Use your work or school account to sign in to Power BI. Administrators manage work or school accounts in Azure Active Directory. Your level of access is determined by the Power BI license associated with that account and the capacity type where content is stored. See **license** and **Premium**, below.

### **admin portal**

The location where Power BI admins manage users, features, and settings for Power BI in their organization. (Note: Microsoft 365, Azure, and PowerApps use admin center.)

### **aggregates**

When the values of multiple rows are grouped together as input on criteria to form a single value of more significant meaning or measurement. Only implicit measures (see definition below) can be aggregated.

### **aggregation**

The reduction of rows in underlying data sources to fit in a model. The result is an aggregate.

### **alert, alerts**

A feature that notifies users of changes in the data based on limits they set. Alerts can be set on tiles pinned from report visuals. Users receive alerts on the service and on their mobile app.

### **annotate**

To write lines, text, or stamps on a snapshot copy of a tile, report, or visual on the Power BI mobile app for iOS and Android devices.

### **app, apps**

A bundle of dashboards, reports, and datasets. It also refers to the mobile apps for consuming content, such as Power BI app for iOS.

### **AppSource**

Centralized online repository where you can browse and discover dashboards, reports, datasets, and apps to download.

### **ArcGIS for Power BI**

ArcGIS is a mapping and analytics platform created by the company ESRI. The name of the visual included in the Power BI visuals library is called ArcGIS for Power BI.

### **Auto Insights**

Are now called *Quick Insights*.

## B

## BI, business intelligence

### bookmark

A view of data captured in the Bookmarks pane of a report in Power BI Desktop or service. In Desktop, the bookmarks are saved in the .pbix report file for sharing on the Power BI service

### breadcrumbs

The navigation at the top left to quickly navigate between reports and dashboards.

## C

### calculation

A mathematical determination of the size or number of something.

### Capacity

[Power BI Premium] Data models running on hardware fully managed by Microsoft in Microsoft cloud data centers to help ensure consistent performance at scale. BI solutions are delivered to the entire organization regardless of Power BI license.

### card (visual type)

A Power BI [visual type](#).

### card (Power BI Home)

Power BI Home displays rectangular and square pictures that represent dashboards, reports, apps, and more. These pictures are referred to as *cards*.

### certified custom visual

A Power BI custom visual that has met requirements and passed strict security testing.

### classification

Also called data classification. This option can be turned on by Power BI admins to raise awareness of the level of security required for a dashboard. The classification types can be customized by an organization.

### connect live

A method of connecting to SQL Server Analysis Services data models. Also called a live connection.

### connector

Power BI Desktop includes an ever-growing collection of data connectors that are built to connect to a specific data source. Examples include: GitHub, MailChimp, Power BI dataflows, Google Analytics, Python, SQL Server, Zendesk and more than 100 additional data sources.

### container

The areas on the navigation pane are *containers*. In the nav pane you'll find containers for: Favorites, Recent, Apps, Shared with me, and Home.

### content

Content for the Power BI service is generally dashboards, reports, and apps. It can also include workbooks and datasets.

### content list

The content index for an app.

### content pack

Deprecated. A collection of pre-packaged datasets, reports, and dashboards. These are replaced with **apps**, learn [about the new workspace experience](#).

### content view

### Continuous variable

A continuous variable can be any value between its minimum and maximum limits, otherwise it is a discrete variable. Examples are temperature, weight, age, and time. Continuous variables can include fractions or portions of the value. The total number of blue skateboards sold is a discrete variable since we can't sell half a skateboard.

### **Correlation**

A correlation tells us how the behavior of things are related. If their patterns of increase and decrease are similar, then they are positively correlated. And if their patterns are opposite, then they are negatively correlated. For example, if sales of our red skateboard increase each time we run a tv marketing campaign, then sales of the red skateboard and the tv campaign are positively correlated.

### **cross-filter**

Applies to visual interactions. Cross-filtering removes data that doesn't apply. For example, selecting **Moderation** in the doughnut chart cross-filters the line chart. The line chart now only displays data points that apply to the Moderation segment.

### **cross-highlight**

Applies to visual interactions. Cross-highlighting retains all the original data points but dims the portion that does not apply to your selection. For example, selecting **Moderation** in the doughnut chart cross-highlights the column chart. The column chart dims all the data that does not apply to the Moderation segment and highlights all the data that does apply to the Moderation segment.

### **custom visual**

Visuals that are created by the community and Microsoft. They can be downloaded from the Office store for use in Power BI reports.

## **D**

### **dashboard**

In the Power BI service, a dashboard is a single page, often called a canvas, that uses visualizations to tell a story. Because it is limited to one page, a well-designed dashboard contains only the most important elements of that story. Dashboards can only be created and viewed in the Power BI service, not in Power BI Desktop. For more information, see [basic concepts, dashboards](#).

### **data classification**

See classification

### **data connector**

See connectors

### **data model, Excel Data Model**

In Power BI content, a data model refers to a map of data structures in a table format. The data model shows the relationships that are being used to build databases. Report designers, administrators, and developers create and work with data models to create Power BI content.

### **dataflow**

Dataflows ingest, transform, integrate, and enrich big data by defining data source connections, ETL logic, refresh schedules, and more. Formerly data pool.

### **dataset vs data source**

A **dataset** is a collection of data used to create visualizations and reports.

### **Desktop or Power BI Desktop**

Free Power BI tool used primarily by report designers, admins, and developers.

### **diamond**

Power BI Premium. The shape of the icon that signifies a workspace is a Premium capacity workspace.

## Dimension

Dimensions are categorical (text) data. A dimension describes a person, object, item, products, place, and time. In a dataset, dimensions are a way to group *measures* into useful categories. For our skateboard company, some dimensions might include looking at sales (a measure) by model, color, country, or marketing campaign.

## drill up, drill down, drillthrough

In Power BI, "drill down" and "drill up" refer to the ability to explore the next level of detail in a report or visual. "Drill through" refers to the ability to select a part of a visual and be taken to another page in the report, filtered to the data that relates to the part of the visual you selected on the original page. Drill to details commonly means to show the underlying records.

# E

## Editing View

The mode in which report *designers* can explore, design, build, and share a report.

## ellipsis ...

Selecting an ellipsis displays additional menu options. Also referred to as the **More actions** menu.

## embed code

A common standard across the internet. In Power BI, the customer can generate an embed code and copy it to place content such as a report visual on a website or blog.

## Embedded

See Power BI Embedded.

## embedding

In the Power BI developer offering, the process of integrating analytics into apps using the Power BI REST APIs and the Power BI SDK.

## environment

[Power BI Desktop, Power BI Mobile, the Power BI service, etc.] Another way to refer to one of the Power BI tools. It's okay to use Power BI environment (tenant) in documentation where it may help business analysts who are familiar with the term tenant to know it's the same thing.

## explicit measures

Power BI uses explicit measures and implicit measures (see definition below). Explicit measures are created by report designers and saved with the dataset. They are displayed in Power BI as fields, and can therefore be used over and over. For example, a report designer creates an explicit measure *TotalInvoice* that sums all invoice amounts. Colleagues who use that dataset, and who have edit access to the report, can select that field and use it to create a visual. When an explicit measure is added or dragged onto a report canvas, Power BI does not apply an aggregation. Creating explicit measures requires edit access to the dataset.

# F

## favorite, unfavorite

Verb meaning to add to the Favorites list for quick access to frequently visited dashboards and reports in Power BI. When you no longer want them as a favorite, you unfavorite them.

## filter versus highlight

A filter removes data that does not apply. A highlight grays out the data that does not apply.

## **focus mode**

Use focus mode to pop out a visual or tile to see more detail. You can still interact with the visual or tile while in focus mode.

## **Free account**

See *account*

## **full screen, full-screen mode**

Use full screen mode to view Power BI content without the distraction of menus and navigation panes. This is sometimes referred to as TV mode.

# G

## **gateways or on-premises data gateways**

A bridge to underlying data sources. It provides quick and secure data transfer between the Power BI service and on-premises data sources that support refresh. Usually managed by IT.

# H

## **high-density visuals**

Visuals with more data points than Power BI can render. Power BI samples the data to show the shape and outliers.

## **Home**

The default landing page for Power BI service users. Doesn't modify anything. Can be called Power BI Home or simply Home.

# I

## **implicit measures**

Power BI uses implicit measures and explicit measures (see definition above). Implicit measures are created dynamically. For example, when you drag a field onto the report canvas to create a visual. Power BI automatically aggregates the value using one of the built-in standard aggregations (SUM, COUNT, MIN, AVG, etc.). Creating implicit measures requires edit access to the report.

## **insights**

See **quick insights**.

# J

# K

## **KPIs**

Key performance indicators. A type of visual.

# L

## **left navigation (left nav)**

This has been replaced with **nav pane** but may still appear in some documentation.  
The controls along the left edge of Power BI service.

First instance: navigation pane

Subsequent mentions or tight spaces: nav pane

## license

Your level of access is determined by the Power BI license associated with your account and the capacity type where content is stored. For example, in shared capacity a user with a Power BI Pro license can collaborate only with users who are also assigned a Pro license. In shared capacity, a free license enables access to only the user's personal workspace. However, when content is in Premium capacity, users with a Pro license can share that content with users who are assigned a free license.

A license is assigned to a user and can be a free or Pro license. Depending on how the license was acquired, it may be paid or unpaid. The accounts are either: per-user or organizational. Per-user accounts are available as *free* or *Pro*. A Power BI *free* user is either using stand-alone Power BI Desktop or is using Power BI service stand-alone or is using Power BI service within an organization that has a Premium organizational subscription. The Power BI per-user *Pro* account is a paid monthly subscription that allows for collaboration and sharing of content with other *Pro* users.

The organizational *Premium* (also known as *Premium capacity*) subscription adds a layer of features on top of per-user licenses. For example, *free* per-user account holders within an organization that has a *Premium* subscription, are able to do much more with Power BI than *free* users without *Premium*. For example, *free* users in *Premium* organizational accounts, can collaborate with colleagues and can view content that's hosted on Power BI Premium capacity.

## list page or content list

One of the section pages for the elements in the nav pane. For example, Favorites, Recents, My workspace, etc.

# M

## Measure

A measure is a quantitative (numeric) field that can be used to do calculations. Common calculations are sum, average, and minimum. For example, if our company makes and sells skateboards, our measures might be number of skateboards sold and average profit per year.

## Mobile app

Apps that allow you to run Power BI on iOS, Android, and Windows devices.

## modeling

[Power BI Desktop] Getting the data you've connected to ready for use in Power BI. This includes creating relationships between tables in multiple data sources, creating measures, and assigning metrics.

## My workspace

The workspace for each Power BI customer to use to create content. If they want to bundle anything created here into an app, and they have *designer* permissions, they upload it to the appropriate workspace or create a new one.

# N

## native

Included with the product. For example, Power BI comes with a set of *native* visualization types. But you can also import other types, such as Power BI visuals.

## navigation pane or nav pane

The controls along the left edge of the Power BI service.

First instance: navigation pane

Subsequent mentions or tight spaces: nav pane

## notification

Messages sent by and to the Power BI Notification Center.

## Notification Center

The location in the service where messages are delivered to users, such as notice of sunsetting certain features.

# O

## OneDrive for Business vs OneDrive

OneDrive is a personal account and OneDrive for Business is for work accounts.

## On-premises

The term used to distinguish local computing (in which computing resources are located on a customer's own facilities) from cloud computing.

# P

## PaaS

PaaS stands for platform as a service. For example, Power BI Embedded.

## page

Reports have one or more pages. Each tab on the report canvas represents a page.

## paginated reports

Paginated reports are designed to be printed or shared. They're called *paginated* because they're formatted to fit well on a page. They display all the data in a table, even if the table spans multiple pages. They're also called pixel perfect because you can control their report page layout exactly. Power BI Report Builder is the standalone tool for authoring paginated reports.

## pbviz

The file extension for a Power BI custom visual.

## pbix

The file extension for a Power BI Desktop file.

## permissions

What a user can and can't do in Power BI is based on permissions. As a *consumer* you won't have the same permissions as a *designer*, administrator, or developer.

## phone report

The name for a Power BI report that's been formatted for viewing on the phone.

## phone view

The user interface in the Power BI service for laying out a phone report.

## pin, unpin

The action a report *designer* takes of placing a visual, usually from a report, onto a dashboard.

## Power BI, Power BI service, Power BI Desktop, Power BI mobile

Some of the Power BI offerings. *Power BI* is the general term. It is often used in place of a full product name, such as *Power BI service* and *Power BI mobile*, after the first mention of the full product name.

## Power BI Desktop

Also referred to as *Desktop*. The free Windows application of Power BI you can install on your local computer that lets you connect to, transform, and visualize your data. Used by report designers and admins. For more information, see [What is Power BI](#).

## Power BI Embedded

A product used by developers to embed Power BI dashboards and reports into their own apps, sites, and tools.

### **Power BI Premium**

An add-on to the Power BI Pro license that enables organizations to predictably scale BI solutions through the purchasing of reserved hardware in the Microsoft cloud. See *account*.

### **Power BI Pro**

A monthly per-user license that provides the ability to build reports and dashboards, collaborate on shared data, keep data up-to date automatically, audit and govern how data is accessed and used, and the ability to package content to distribute (Power BI apps). See *account*.

### **Power BI Report Builder**

It is a free, standalone Windows Desktop application used for authoring paginated reports. Used by report designers. For more information see [Power BI Report Builder](#). Power BI Report Builder can be downloaded from the Power BI site.

### **Power BI Report Server**

An on-premises report server with a web portal in which you display and manage reports and KPIs. It allows organizations to build distributed, hybrid BI systems (a mix of cloud and on-premises deployments).

### **Power BI service**

An online SaaS (Software as a service) service. For more information, see [What is Power BI](#).

### **Premium workspace**

A workspace running in a capacity, signified to customers by a diamond icon.

### **Pro license or Pro account**

See *account*.

### **publish**

Power BI service report *designers* bundle the contents of a Power BI workspace to make it available to others as a Power BI app. Power BI Desktop report *designers* use publish to refer to sending a Power BI Desktop report in .pbix format to the Power BI service so that they can build dashboards from it and easily share it with others.

## **Q**

### **Q&A**

The ability to type natural language questions about a dataset and get responses in the form of visualizations. Appears in the Power BI service and Desktop.

### **Q&A virtual analyst**

[Power BI Mobile] For iOS, the conversational UI for Q&A.

### **QR codes**

[Power BI Mobile] A matrix barcode that can be generated for dashboards or tiles in the Power BI service to identify products. QR codes can be scanned with a QR code reader, or with the Power BI Mobile app on iOS or Android, to link directly to the dashboard or tile.

### **query string parameter**

Add to a URL to pre-filter the results seen in a Power BI report. In the broadest sense, a query string recovers information from a database.

### **Quick Insights**

Quick Insights refer to automatically generated insights that reveal trends and patterns in data.

## **R**

## **R, Microsoft R**

R is a programming language and software environment for statistical computing and graphics.

## **Reading View**

Read-only view for reports (as opposed to Editing View).

## **real-time streaming**

The ability to stream data and update dashboards in real time from sources such as sensors, social media, usage metrics, and anything else from which time-sensitive data can be collected or transmitted.

## **Recent**

The container in the nav pane that holds all the individual artifacts that were accessed last.

## **related content**

Shows the individual pieces of content that contribute to the current content. For example, for a dashboard, you can see the reports and datasets providing the data and visualizations on the dashboard.

## **relative links**

Links from dashboard tiles to other dashboards and reports that have been shared directly or distributed through a Power BI app. This enables richer dashboards that support drillthrough.

## **report**

A multi-perspective view into a single dataset, with visualizations that represent different findings and insights from that dataset. Can have a single visualization or many, a single page or many pages.

## **report editor**

The report editor is where new reports are created and changes are made to existing reports by report *designers*.

## **report measures**

Also called custom calculations. Excel calls these *calculated fields*. See also *measures*.

## **responsive visuals**

Visuals that change dynamically to display the maximum amount of data and insights, no matter the screen size.

## **row-level security, RLS**

Power BI feature that enables database administrators to control access to rows in a database table based on the characteristics of the user executing a query (for example, group membership).

Administrators can configure RLS for data models imported into Power BI with Power BI Desktop.

# **S**

## **SaaS**

Software as a service (or SaaS) is a way of delivering applications over the internet—as a web-based service. Also referred to as: web-based software, on-demand software, or hosted software.

## **screenshot**

Simple screenshots of a report can be emailed using the send a screenshot feature.

## **service**

See *Power BI service* A standalone resource available to customers by subscription or license. A service is a product offering delivered exclusively via the cloud.

## **Settings**

The location for Power BI users to manage their own general settings, such as whether to preview new features, set the default language, close their account, etc. Also, users manage individual settings for content assets, alerts, and subscriptions. Represented by a cog icon.

## **share, sharing**

In Power BI, sharing typically means directly sharing an individual artifact (a dashboard or report) with one or more people by using their email address. Requires a Power BI Pro license for sender and recipient. On mobile devices, share can refer to native OS share functionality, such as "annotate and share."

## **Shared with me**

The container in the nav pane that holds all the individual artifacts that were directly shared by another Power BI user.

## **snapshot**

In Power BI, a snapshot is a static image vs. a live image of a tile, dashboard, or report.

## **SQL Server Analysis Services (SSAS)**

## **SQL Server Reporting Services (SSRS)**

A set of on-premises tools and services to create, deploy, and manage report servers and paginated reports.

## **streaming data**

See *real-time streaming*.

## **subscriptions, Subscribe**

You can subscribe to report pages, apps, and dashboards and receive emails containing a snapshot. Requires a Power BI Pro license.

## **summarization**

[Power BI Desktop] The operation being applied to the values in one column.

# **T**

## **tiles**

Power BI dashboards contain report tiles.

## **Time series**

A time series is a way of displaying time as successive data points. Those data points could be increments such as seconds, hours, months, or years.

# **U**

# **V**

## **value, values**

Numerical data to be visualized.

## **visual, visualization**

A chart. Some visuals are: bar chart, treemap, doughnut chart, map.

## **Visual interaction**

One of the great features of Power BI is the way all visuals on a report page are interconnected. If you select a data point on one of the visuals, all the other visuals on the page that contain that data change, based on that selection.

## **Visualizations pane**

Name for the visualization templates that ship in the shared report canvas for Power BI Desktop and the Power BI service. Contains small templates, also called icons, for each native visualization type.

# **W**

**workbook**

An Excel workbook to be used as a data source. Workbooks can contain a data model with one or more tables of data loaded into it by using linked tables, Power Query, or Power Pivot.

**workspace**

Containers for dashboards, reports, and datasets in Power BI. Users can collaborate on the content in any workspace except My workspace. The contents can be bundled into a Power BI app. Those stored in Premium capacity can be shared with Free users. Personal workspaces (under My workspace) can be hosted in Premium capacity.

**X****x-axis**

The axis along the bottom, the horizontal axis.

**Y****y-axis**

The axis along the side, the vertical axis.

**Z****Next steps**

[Basic concepts for Power BI service consumer](#)

# Supported browsers for Power BI

12/10/2021 • 2 minutes to read • [Edit Online](#)

Power BI is designed to work with any of the supported modern browsers mentioned below. However, performance differs depending on your choice of a browser. If you're using Internet Explorer in particular, which is no longer supported by Power BI, you may encounter worse performance. We strongly recommend a supported modern browser, like Microsoft Edge. If you still encounter unacceptable performance, test other supported modern browsers to see if they provide better results for your Power BI solution.

Power BI supports these browsers on all platforms where they're available:

- Microsoft Edge Chromium.
- Chrome desktop latest version.
- Safari Mac latest version.
- Firefox desktop latest version. Firefox may change the fonts used in Power BI.

## NOTE

Power BI doesn't run in any browsers in iOS10 or previous versions.

## Fonts

Power BI uses the **Segoe UI** font for text as its default, and the **Din** font for numbers, and other fonts when creating reports, dashboards, and other artifacts, which may not be available on non-Windows computers such as Macs. As a result the font, alignment of artifacts, and visuals for the same report will look different when viewed on a Windows computer versus a Mac.

The **Calibri** and **Cambria** fonts are only installed on Macs that have Microsoft Office installed, but aren't included in the default set of fonts on Macs.

If you're creating reports viewed on Mac computers, select fonts that will display properly on Macs.

The following links provide information about which fonts are available on Macs. The links are not maintained by Microsoft, and are provided only for reference and further reading.

- [List of typefaces included with macOS](#)
- [Where to find Calibri and Cambria for Macs](#)
- [How to fix missing Calibri, Cambria and Segoe UI fonts on a Mac](#)

## Next steps

- [What is Power BI?](#)
- Ask the [Power BI Community](#)
- Still have an issue? Visit the [Power BI support page](#)

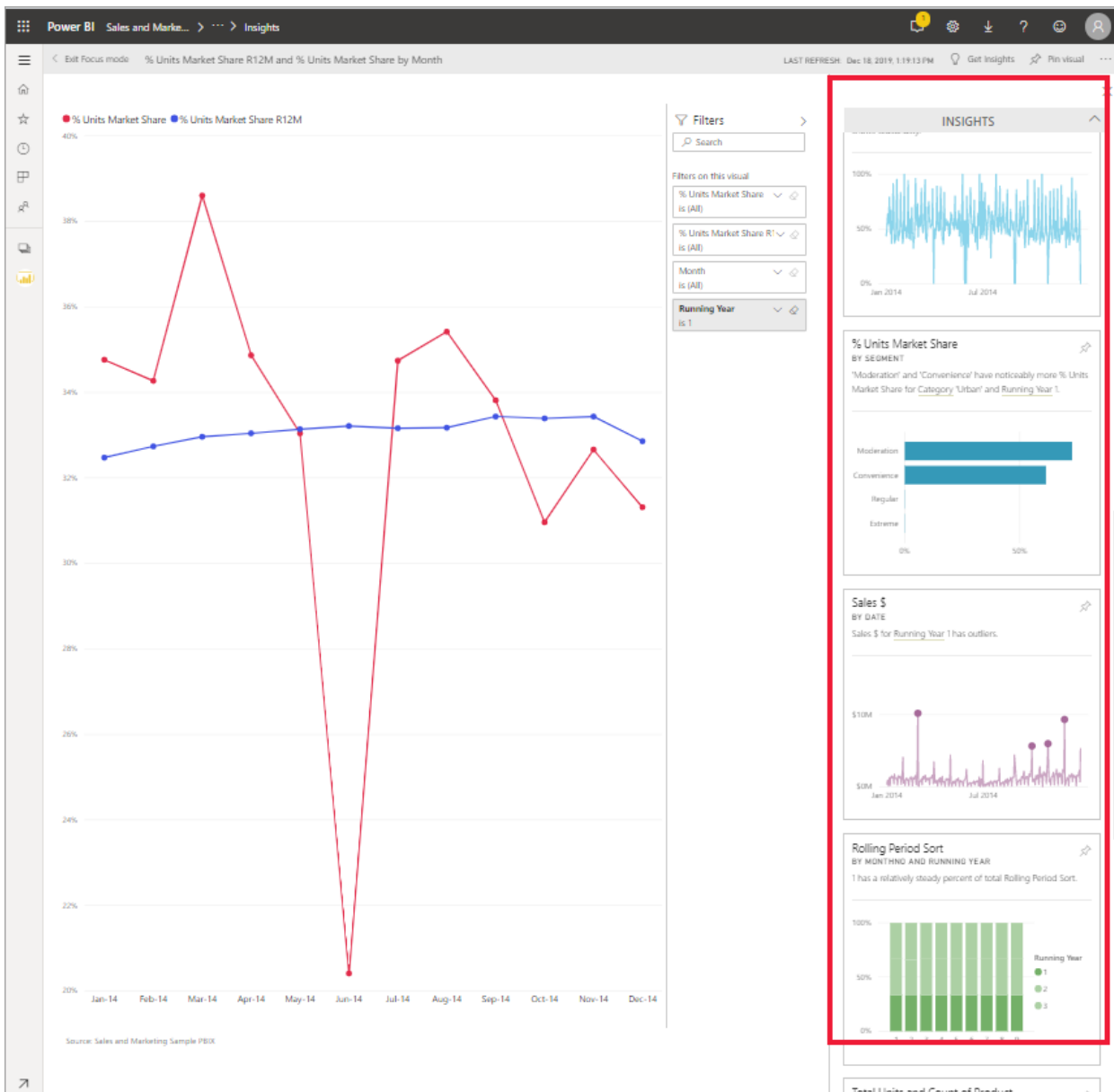
# Types of insights supported by Power BI

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**APPLIES TO:**  Power BI service for **business users**  Power BI service for designers & developers   
Power BI Desktop  Requires Pro or Premium license

You can ask Power BI to look through your data and find interesting trends and patterns. These trends and patterns are presented in the form of visuals that are called *Insights*. Insights are available for visuals on dashboards, visuals in reports, and entire report pages.

To learn how to use Insights, see [Power BI Insights](#)



## How does Insights work?

Power BI quickly searches different subsets of your dataset. As it searches, Power BI applies a set of sophisticated algorithms to discover potentially interesting insights. You can run Insights on dashboard tiles, report visuals, and report pages.

## Some terminology

Power BI uses statistical algorithms to uncover Insights. The algorithms are listed and described in the next section of this article. Before we get to the algorithms, here are definitions for some terms that may be unfamiliar.

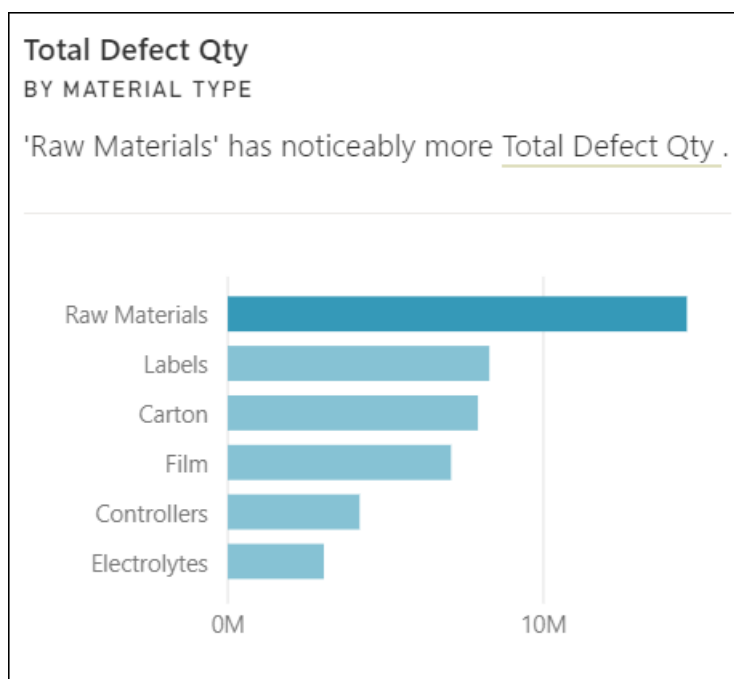
- **Measure** - a measure is a quantitative (numeric) field that can be used to do calculations. Common calculations are sum, average, and minimum. For example, if our company makes and sells skateboards, our measures might be number of skateboards sold and average profit per year.
- **Dimension** - dimensions are categorical (text) data. A dimension describes a person, object, item, products, place, and time. In a dataset, dimensions are a way to group *measures* into useful categories. For our skateboard company, some dimensions might include looking at sales (a measure) by model, color, country, or marketing campaign.
- **Correlation** - a correlation tells us how the behavior of things are related. If their patterns of increase and decrease are similar, then they are positively correlated. And if their patterns are opposite, then they are negatively correlated. For example, if sales of our red skateboard increase each time we run a tv marketing campaign, then sales of the red skateboard and the tv campaign are positively correlated.
- **Time series** - a time series is a way of displaying time as successive data points. Those data points could be increments such as seconds, hours, months, or years.
- **Continuous variable** - a continuous variable can be any value between its minimum and maximum limits, otherwise it is a discrete variable. Examples are temperature, weight, age, and time. Continuous variables can include fractions or portions of the value. The total number of blue skateboards sold is a discrete variable since we can't sell half a skateboard.

## What types of insights can you find?

Power BI can find ten types of insights for dashboard tiles and these ten are described below. For reports, Power BI proactively performs analyses for anomalies, trends, and KPIs.

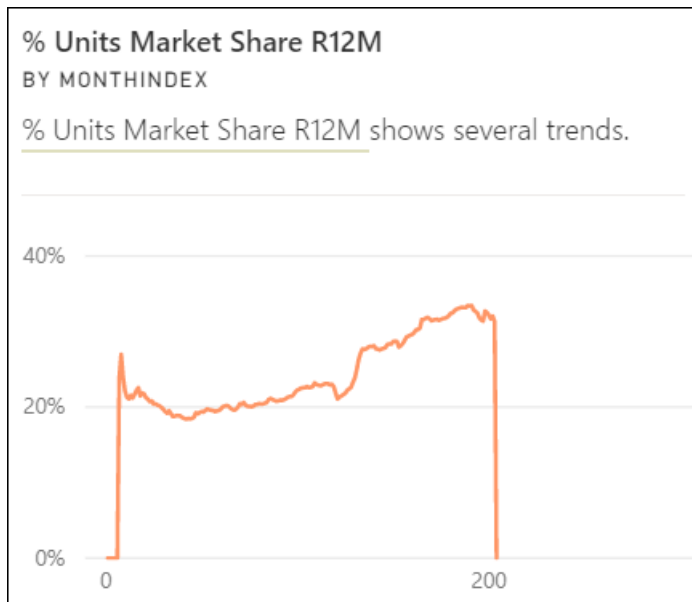
### Category outliers (top/bottom)

Highlights cases where one or two categories have much larger values than other categories.



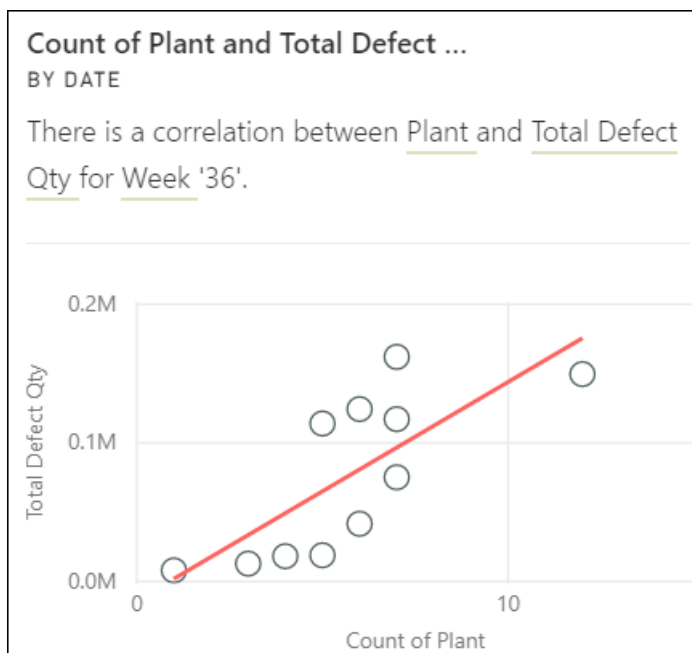
### Change points in a time series

Highlights when there are significant changes in trends in a time series of data.



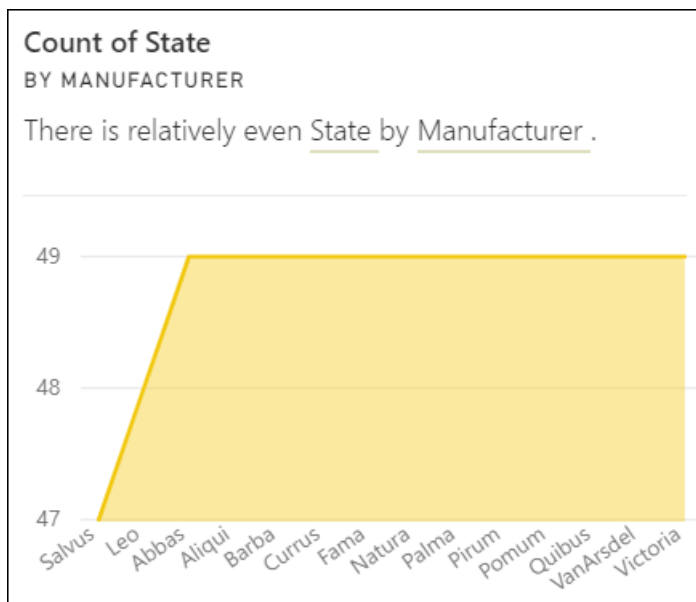
### Correlation

Detects cases where multiple measures show a similar pattern or trend when plotted against a category or value in the dataset.



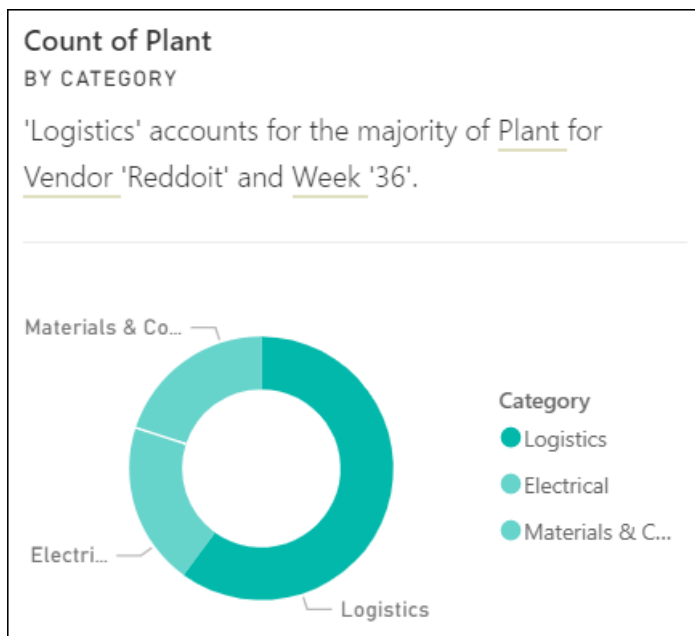
### Low Variance

Detects cases where data points for a dimension aren't far from the mean, so the "variance" is low. Let's say you have the measure "sales" and a dimension "region". And looking across region you see that there is very little difference between the data points and the mean (of the data points). The insight triggers when the variance of sales across all regions is below a threshold. In other words, when sales are pretty similar across all regions.



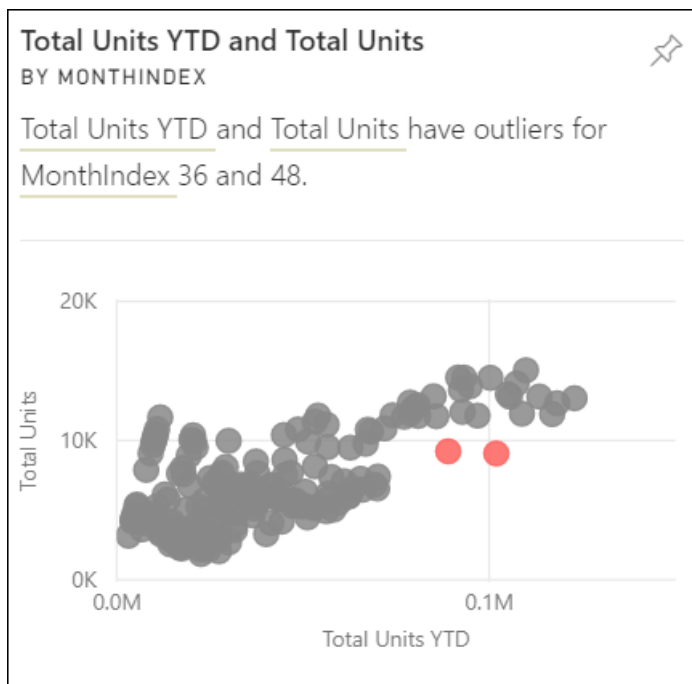
### Majority (Major factors)

Finds cases where a majority of a total value can be attributed to a single factor when broken down by another dimension.



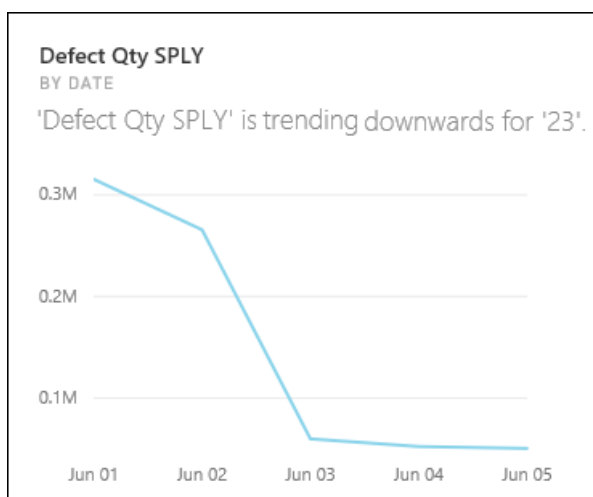
### Outliers

This insight type uses a clustering model to find outliers in non-time series data. Outliers detects when there are specific categories with values significantly different than the other categories.



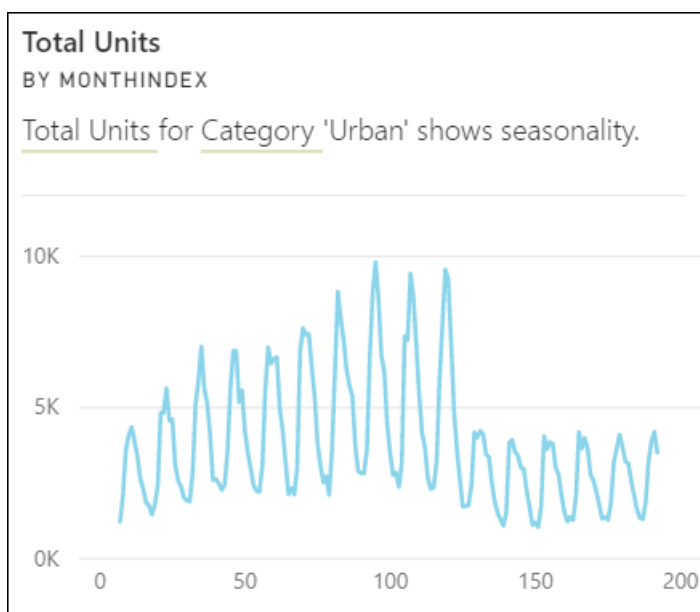
### Overall trends in time series

Detects upward or downward trends in time series data.



### Seasonality in time series

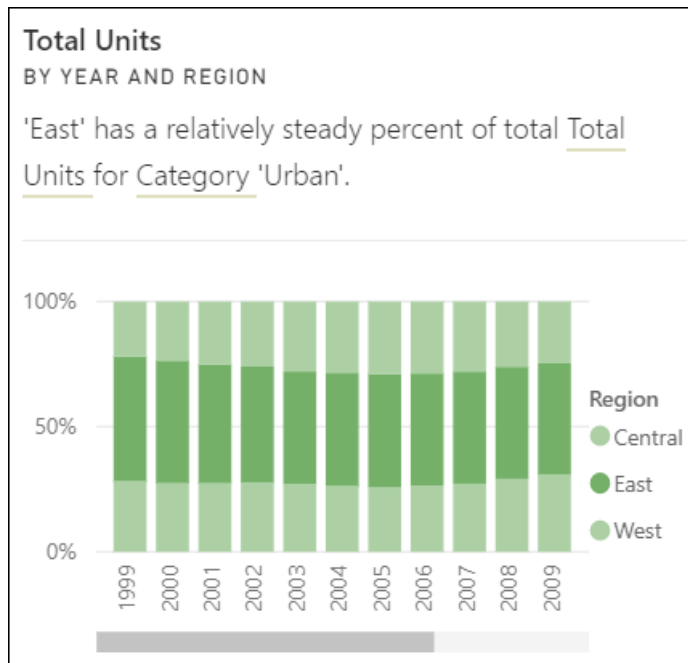
Finds periodic patterns in time series data, such as weekly, monthly, or yearly seasonality.



## Steady share

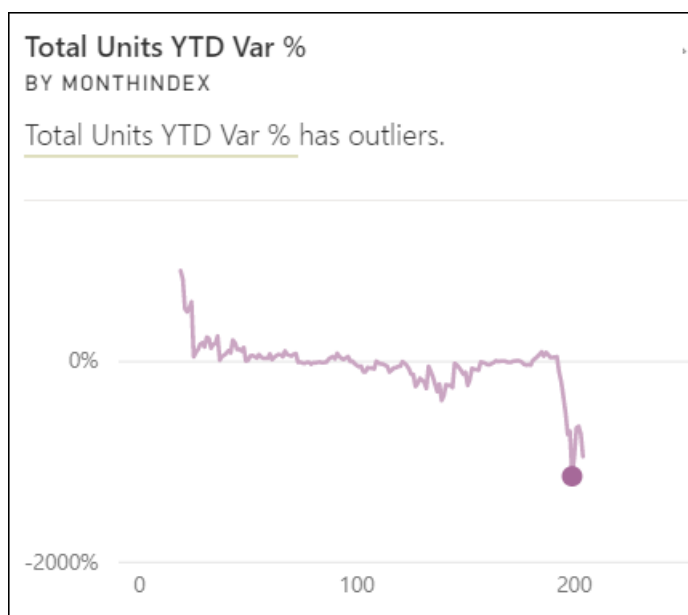
Highlights cases where there is a parent-child correlation between the share of a child value in relation to the overall value of the parent across a continuous variable. The steady share insight applies to the context of a measure, a dimension, and another date/time dimension. This insight triggers when a particular dimension value, e.g. "the east region", has a steady percentage of overall sales across that date/time dimension.

The steady share insight is similar to the low variance insight, because they both relate to the lack of variance of a value across time. However, the steady share insight measures the lack of variance of the **percentage of overall** across time, while the low variance insight measures the lack of variance of the absolute measure values across a dimension.



## Time series outliers

For data across a time series, detects when there are specific dates or times with values significantly different than the other date/time values.



## Next steps

[Power BI insights](#)

More questions? [Try the Power BI Community](#)