

# Power BI – Visualizations

April 2018

Insights & Data



## Power BI Desktop and Power BI Service

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# Power BI Desktop – Quick Review

## ➤ Connect to your data, any data

- Explore your data wherever it is—in the cloud or on-premises—including big data sources such as Hadoop and Spark

## ➤ Prep and model your data with ease

- Data prep can take most of your time. But it doesn't have to, with Power BI Desktop data modeling

## ➤ Provide advanced analytics with the familiarity of Excel

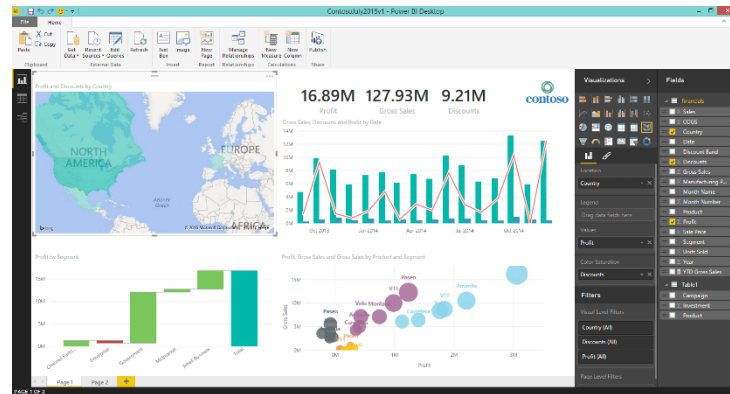
- Enable business users to dig deeper into data and find patterns they may have otherwise missed, with Power BI features like quick measures

## ➤ Create interactive reports customized for your business

- Create stunning reports with interactive data visualizations

## ➤ Author for everyone, anywhere

- Get visual analytics to the people who need it. Create mobile-optimized reports for viewers to consume on the go. Publish from Power BI Desktop to the cloud or on-premises. Embed reports created in Power BI Desktop into existing apps or websites.



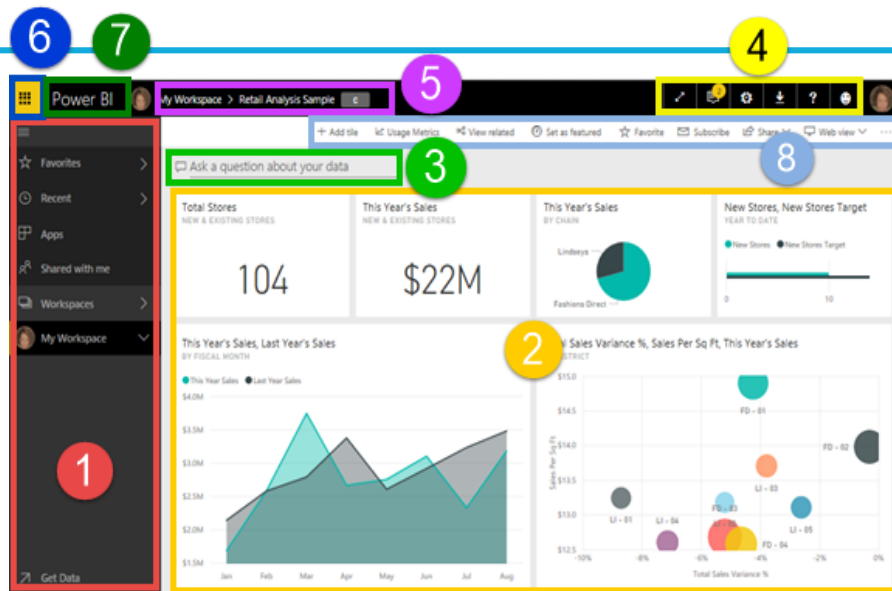


# Power BI Service – Introduction

When you open the Power BI service, you'll see a **dashboard** displayed or a list of All Dashboards on your workspace. Dashboards are something that differentiates Power BI service from Power BI Desktop.































The main features of your Power BI service UI are the following:

- 1) navigation pane (left nav)
- 2) canvas (in this case, dashboard with tiles)
- 3) Q&A question box
- 4) icon buttons, including help and feedback
- 5) dashboard title (navigation path, aka breadcrumbs)
- 6) Office 365 app launcher
- 7) Power BI home button
- 8) Labeled icon buttons





# Power BI Service – Dashboard Tab

Dashboards			Showing 5 item(s)	Name (A-Z) ▾
NAME		ACTIONS	OWNER	
 ☆ Bing - Microsoft		    	Shriniwas Dixit	
 ☆ VanArsdel Sales		    	Shriniwas Dixit	
 ☆ eDX2		    	Shriniwas Dixit	
 ☆ Human Resources Sample		    	Shriniwas Dixit	
 ☆ VanArsdel Sales		    	Shriniwas Dixit	

➤ When you click on MyWorkspace; you can see 4 options

- Dashboards
- Reports
- Workbooks
- Datasets

➤ Actions in dashboard

- View Usage Metrics Report
- Share
- View Related
- Settings
- Delete

**Usage Metric Report:** Provides an usage insight on the report

**Share:** To share dashboard



















































**Delete:** To delete an dashboard

**Settings:** To rename Dashboard or enable/disable Q&A on dashboard.

**Related :** To view related contents of this dashboard, like Reports & Datasets that are used.



# Power BI Service – Reports Tab

Dashboards <u>Reports</u> Workbooks   Datasets				Showing 12 item(s)   Name (A-Z) ▾	
NAME		ACTIONS	OWNER		
	☆ Customer Profitability Sample	      	Shriniwas Dixit		
	☆ CustomerFact	      	Shriniwas Dixit		
	☆ eDX Labs	      	Shriniwas Dixit		
	☆ GDP	      	Shriniwas Dixit		
	☆ Human Resources Sample	      	Shriniwas Dixit		
	☆ Lab 4 - Starting	      	Shriniwas Dixit		



➤ When you click on the Reports, All the published reports will be displayed.

➤ Actions

- Usage Metrics
- Share
- Analyze in Excel
- Quick Insights
- View Related
- Settings
- Delete



# Power BI Service – Datasets Tab

Dashboards

Reports

Workbooks

Datasets

Showing 11 item(s)

Name (A-Z)

NAME	ACTIONS	LAST REFRESH	NEXT REFRESH	API ACCESS
<div><div></div><div>Customer Profitability Sample</div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	7/21/2017, 5:27:39 PM	N/A	--
<div><div></div><div>CustomerFact</div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	8/18/2017, 3:20:41 PM	N/A	--
<div><div></div><div>eDX Labs</div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div></div> 4/13/2018, 5:04:09 PM	N/A	--
<div><div></div><div>GDP</div></div>	<div><div></div><div></div><div></div><div></div><div></div></div>	<div></div> 8/24/2017, 4:21:57 PM	N/A	--

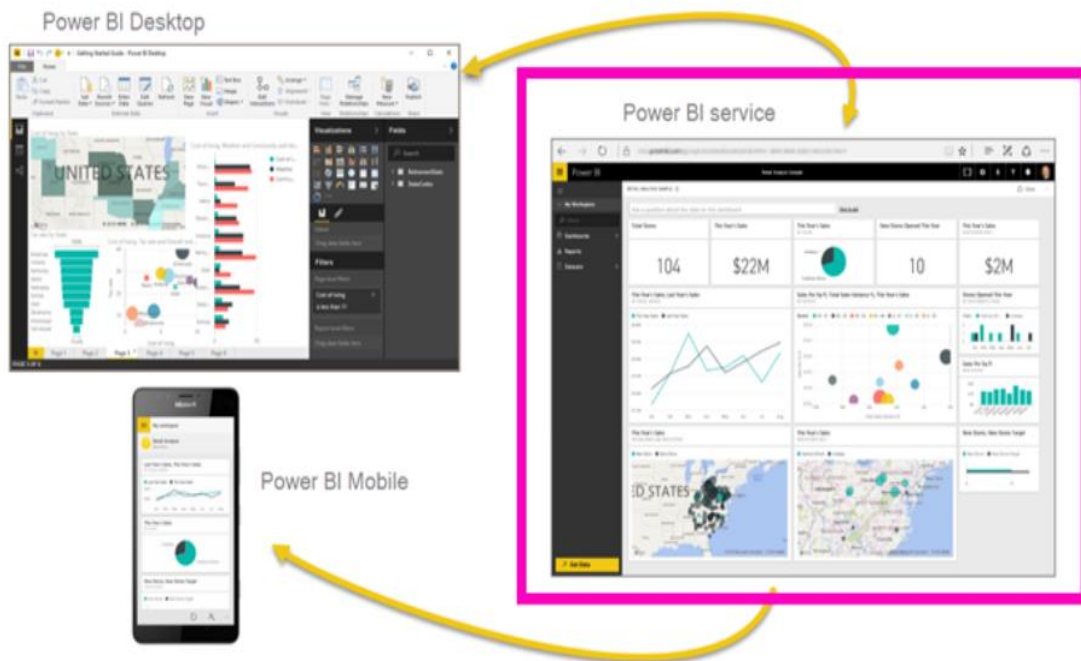
Datasets tab shows the “Last Refresh” and “Next Refresh” if Scheduled Refresh is enabled. It also shows the API access.

Last Refresh will show any errors in the Data Refresh activity.



# Power BI Service - Introduction

- The Power BI service is the natural extension of Power BI Desktop, and its features include uploading reports, creating dashboards, and asking questions of your data using natural language. You can use the service to set data refresh times, share data with your organization, and create customized service packs.

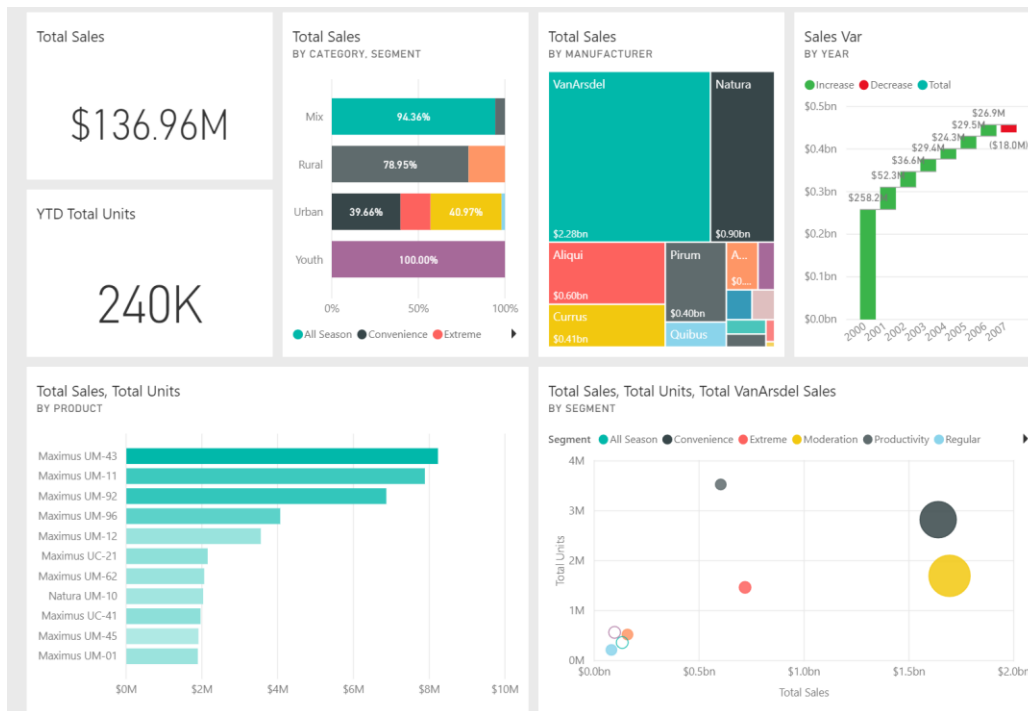




# Overview of Dashboards and Service



- Dashboards in Power BI are one-page collections of visualizations that are created from reports within the Power BI service.
- You create dashboards by pinning visualizations from reports that you authored and published using Power BI Desktop, or visualizations you created within the Power BI service.



# Configuring a Dashboard



- Pin Visual - You create dashboards by pinning visualizations from reports that you authored and published using Power BI Desktop
- Pin to dashboard - Where you select a destination dashboard for the visual from the drop-down menu, or you can create a new dashboard. You also get a preview of what the pinned visual will look like in the dashboard
- You can change the layout of visuals on a dashboard however you'd like
- You can add the title and sub-title by opening Tile details.



Revenue

BY MONTH, MANUFACTURER

Manu... Aliqui Currus Natura

50M

0M

Jan Feb Mar Apr May Jun Jul Aug Sep

Pin to dashboard

Select an existing dashboard or create a new one.

Where would you like to pin to?

☒ Existing dashboard

☐ New dashboard

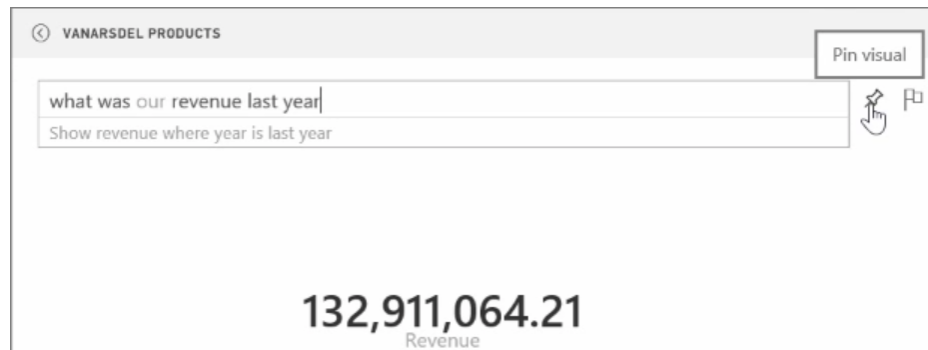
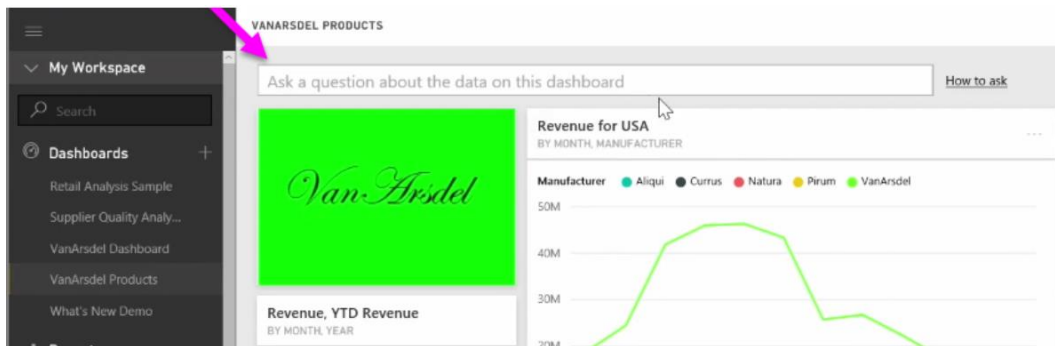
Supplier Quality Analysis Sample

Pin Cancel



# Asking Questions to your Data

- You can create charts and graphs just by asking simple questions.
- This feature is sometimes referred to as *Questions & Answers*, or more often, this feature is just referred to as **Q&A**.
- Also called as NLP – Natural Language Processing
- You can also ask questions using natural language, such as "What was our revenue last year?" or "What product had the highest sales in March 2014?".





# Sharing a Dashboard

- You can share your insights with others in your organization
- fill in the Email address input box with people you'd like to grant access to your dashboard
- you can also use a distribution list, security group, or Office 365 group to reach multiple people at once.
- If you selected the checkbox to send email notification to recipients, then your recipients will receive an email including a link with the dashboard
- You can manage access and permissions in the Access tab.

## Share dashboard

VANARSDEL SALES

Share Access

Recipients will have the same access as you unless row-level security on the dataset further restricts them. [Learn more](#)

Grant access to

Enter email addresses

Include an optional message...

☒ Allow recipients to share your dashboard

Share Cancel



# Alters in PBI Service

- You can set alerts to some visuals in your dashboard
- Alerts can only be set on tiles pinned from report visuals, and only on gauges, KPIs and cards
- They are not available for Power BI Desktop
- You will receive a notification in Power BI service and also get an email if you have selected “send email” option.

## MIND BELOW!!!

Alerts only work with numeric data types.

Alerts only work on data that is refreshed. They do not work on static data.

Alerts will only work on streaming datasets if you build a KPI/card/gauge report visual and then pin that visual to the dashboard.

YTD TOTAL UNITS

Manage alerts

+ Add alert rule

Alert title

Alert for YTD Total Units

Set alerts rule for

YTD Total Units

Condition Threshold

Above 0

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

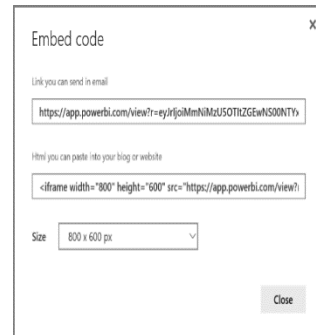
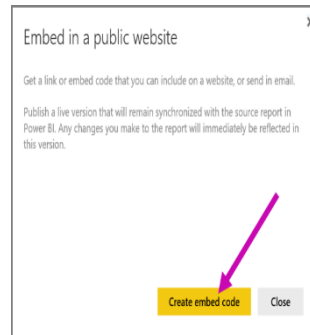
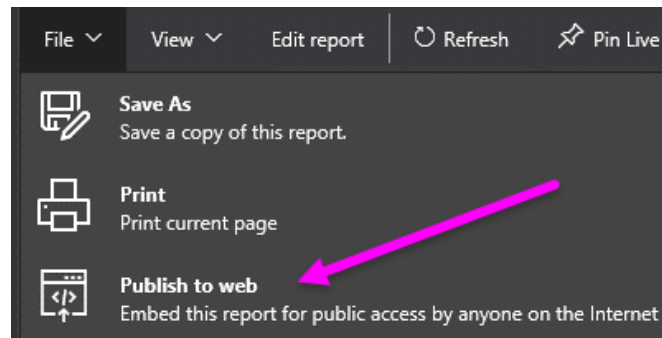
[Use Microsoft Flow to trigger additional actions](#)

Save and close Cancel

# Publishing to Web



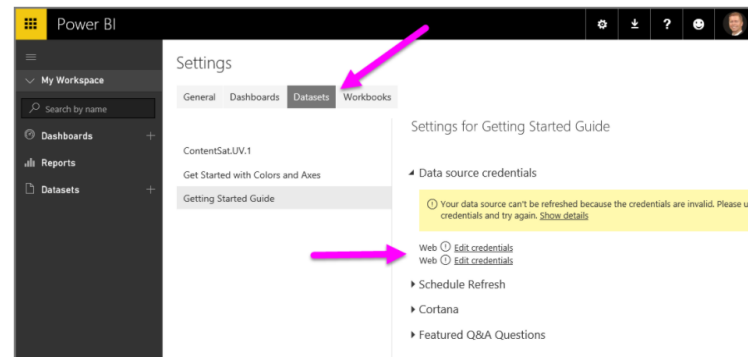
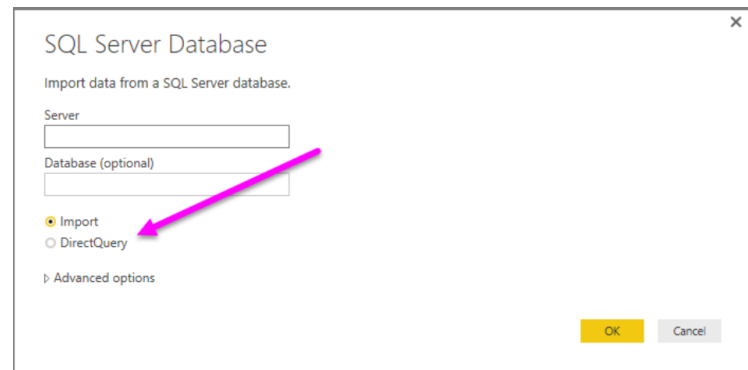
- With Power BI **Publish to web**, you can easily embed interactive Power BI visualizations online, such as in blog posts, websites, through emails or social media, on any device.
- **Warning:** When you use **Publish to web**, the report or visual you publish can be viewed by anyone on the Internet. There is no authentication used when viewing these reports.
- Once you create a **Publish to web** embed code, you can manage the codes you create from the **Settings** menu of the Power BI service.
- You cannot publish just any report on Web. Limitations:
  - 1.Reports using row level security.
  - 2.Reports using any Live Connection data source, including Analysis Services Tabular hosted on-premises, Analysis Services Multidimensional, and Azure Analysis Services.
  - 3.Reports shared to you directly or through an organizational content pack.
  - 4.Reports in a group in which you are not an edit member.
  - 5."R" Visuals are not currently supported in Publish to web reports.
  - 6.Exporting Data from visuals in a report which has been published to the web
  - 7.ArcGIS Maps for Power BI visuals





# Data Refresh - Direct Query

- **DirectQuery/Live Data** – no data is imported or copied into Power BI Desktop. For relational sources, the selected tables and columns appear in the Fields list.
- As you create or interact with a visualization, Power BI Desktop queries the underlying data source, which means you're always viewing current data.
- **ImportQuery** – The selected tables and columns are imported into Power BI Desktop. As you create or interact with a visualization, Power BI Desktop uses the imported data and not the current data.
- You must refresh the data, which imports the full data set again, to see any changes that occurred to the underlying data
- **Limitations**
  - Performance and load on the underlying source
  - Limited to a single source
  - Limited data transformations
  - Quick Insights is not supported
  - Q&A is not supported





# Automatic Refresh (Salesforce, OneDrive etc)

- Automatic refresh - This means no user configuration is necessary in order for the dataset to be refreshed on a regular basis. Data refresh settings are configured for you by Power BI.
- In many cases, you don't need to do anything at all. Some data, like from a Salesforce or Marketo content pack is automatically refreshed for you.
- OneDrive Refresh-  
This synchronizes your Power BI Desktop, or Excel, file between the Power BI service and OneDrive, or SharePoint Online. This does not pull data from the original data source. The dataset in Power BI will only be updated with what is in the file within OneDrive, or SharePoint Online.

OneDrive Refresh

By default, OneDrive updates files hourly. Do you want your files to be kept up to date?

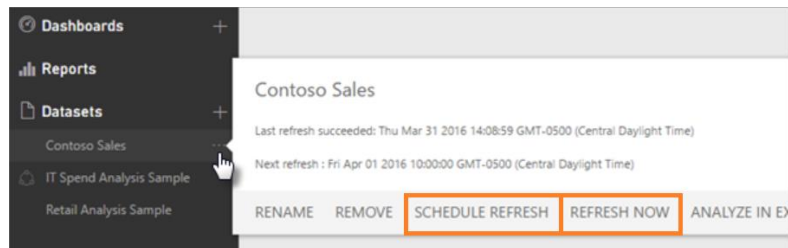
Yes ☒





# Manual Refresh & Scheduled Refresh

- **Manual Refresh:** This type of refresh is not automatic. Whenever a user wants to refresh the data, by clicking "Refresh Now" the PowerBI will connect to the data-source and get the latest data.
- **Scheduled Refresh:** The scheduled refresh section is where you define the frequency and time slots to refresh the dataset. Some data sources do not require a gateway present in order to be available to configure. Others will require a gateway.
- Any visualizations in your reports or dashboards based on the data are updated automatically.
- Note:
  - You are updating the data in the dataset that is stored in Power BI from your data source. This refresh is a full refresh and not incremental
  - After two months of inactivity, scheduled refresh on your dataset is paused. At that time, the dataset owner is sent an email indicating the scheduled refresh is paused



Schedule Refresh

Keep your data up to date  
Yes ☒

Refresh frequency  
Daily

Time zone  
(UTC-06:00) Central Time (US and Canada)

Time  
10:00 AM

[Add another time](#)

☒ Send refresh failure notification email to me

Apply Discard



# Types of refresh happen within PBI

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- **Package Refresh:** This synchronizes your Power BI Desktop, or Excel, file between the Power BI service and OneDrive, or SharePoint Online. This is automatically updated.
- **Model/Data Refresh:** This is referring to refreshing the dataset, within the Power BI service, with data from the original data source. This is done by either using scheduled refresh, or refresh now. This requires a gateway for on-premises data sources.
- **Tile Refresh:** Tile refresh updates the cache for tile visuals, on the dashboard, once data changes. This happens about every fifteen minutes. You can also force a tile refresh by selecting the menu "Refresh dashboard tiles"
- **Visual Container Refresh:** Refreshing the visual container updates the cached report visuals, within a report, once the data changes.



# PowerBI Mobile – Mobile App

- If you want to keep track of your data while you're on the move, you can use one of Power BI's mobile applications for iOS, Android, and Windows devices.
  - App for iOS
  - App for Android
  - App for Windows devices
- When you create a report in Power BI Desktop, you can improve the experience of using it in the mobile apps on phones by creating a version of the report specifically for the phone.
- you can create responsive visuals and responsive slicers that resize well for viewing on a phone



iPhones



iPads



Android  
phone

Android  
phones

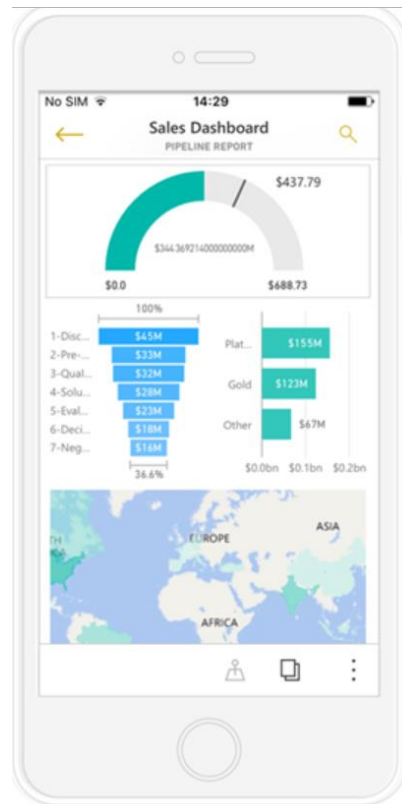


Android  
tablet

Android  
tablets



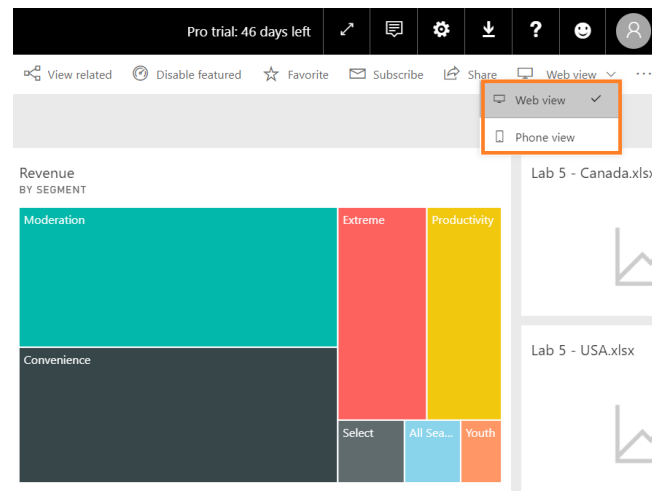
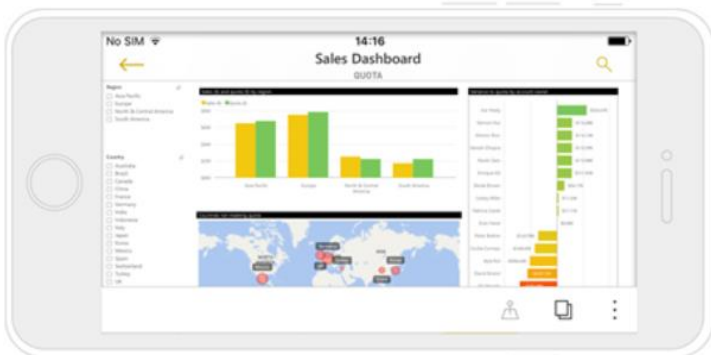
Windows 10  
devices





# Mobile Dashboard Layout

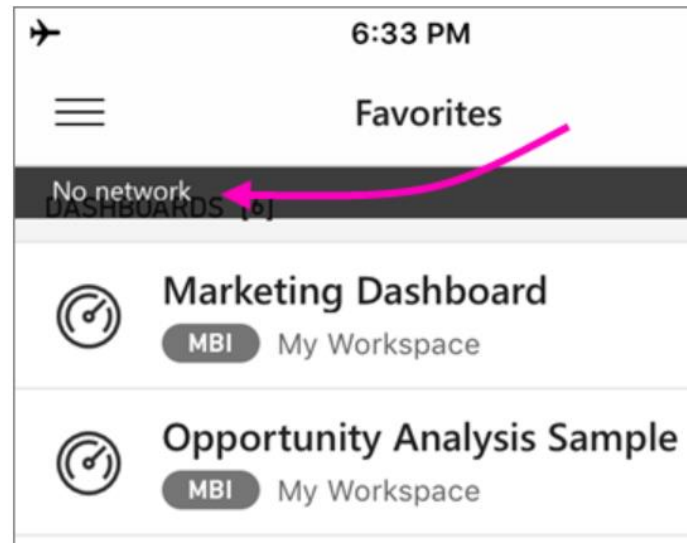
- Enable the Phone View option from the dashboard. By using this menu all the Dashboard contents will be adjusted as per the mobile view.
- You can set the visuals in your dashboard or report to be *responsive*, to change dynamically to display the maximum amount of data and insight, no matter the screen size.
- You can't modify formatting settings for just the phone. Formatting is consistent between master and mobile layouts
- If you only optimize some pages, readers will see a message in portrait view, indicating the report is available in landscape.





# Taking Mobile Content Offline

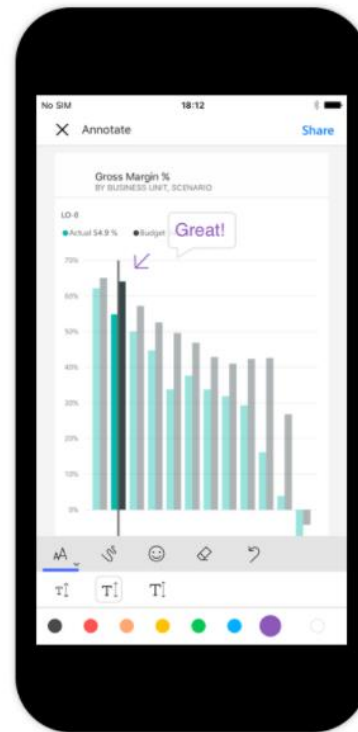
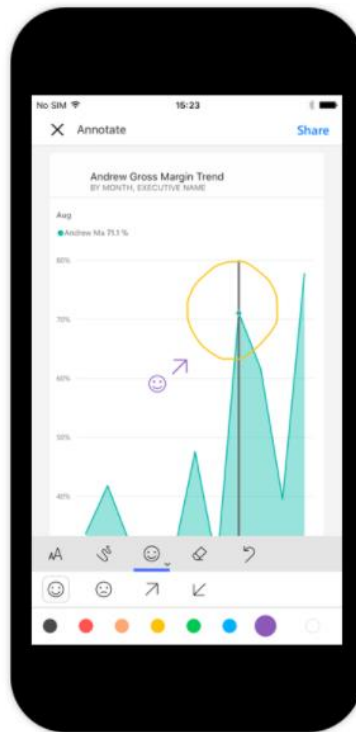
- You can view your Dashboards even with limited connectivity.
- The app updates your dashboards every couple of hours and caches them for future use.
- There's no need to prepare for an offline period – updates occur automatically in the background while you do your work.
- What you can access offline
  - All dashboards listed under “My workspace”
  - All group dashboards that were previously opened in the mobile app
- The "No network" notification bar will be visible whenever you're offline. While it's visible, you'll know that you're working off previously updated elements.
- Limitations
  - Power BI can cache up to 250 MB of data offline.
  - Some tile types require an active server connection, so they aren't available offline — for example, Bing map tiles and some custom tiles.
  - Whole Excel workbooks in Power BI aren't available offline.





# Sharing and Annotating in Power BI Mobile

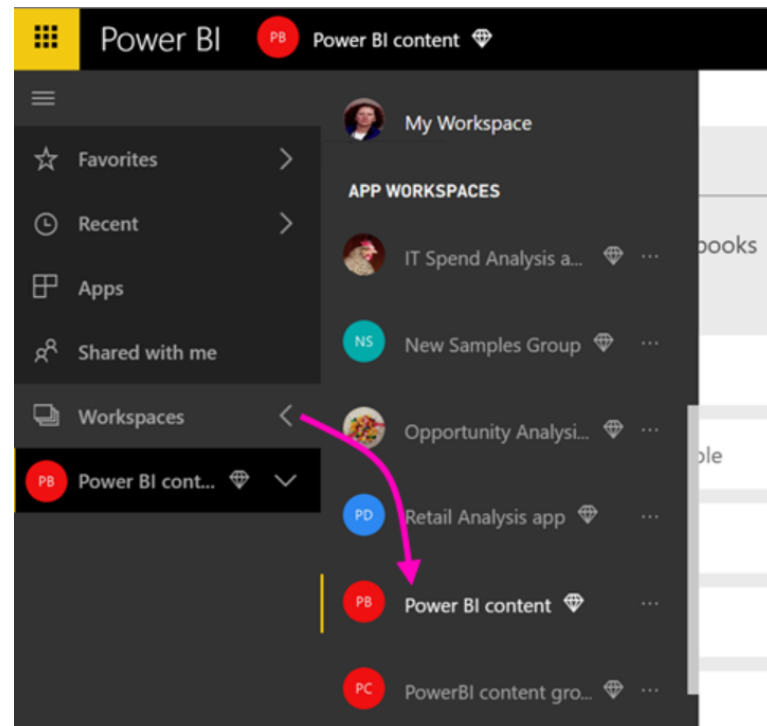
- You can annotate and share a snapshot of a tile, report, or visual from the Power BI mobile app for iOS and Android devices.
- You can send snapshots of tiles to anyone — not just colleagues in the same email domain. You can add annotations — lines, text, or stamps — before you share it.
- After annotating, tap Share in the upper-right corner. This will take you to the email app in your mobile
- The recipients can click the link and go straight to that tile, report, or visual, if you and they have Power BI Pro licenses.





# PowerBI Groups – App WorkSpace

- Power BI app workspaces are great places to collaborate with your colleagues on dashboards, reports, and datasets to create apps
- After you create a Power BI Desktop file, if you publish it to your Power BI app workspace, then everyone in your workspace can collaborate on it.
- Office 365 offers other group services such as sharing files on OneDrive for Business, conversations in Exchange, shared calendar and tasks, and so on
- App workspaces are only available with Power BI Pro
- If you choose Public, anyone in your organization can see what's in the workspace. Private, on the other hand, means only members of the workspace can see its contents





# Workspace Members

- You can add members to the workspace. The members will have edit/Read-Only options.
- You can also choose if members can edit or have view-only access.
- Only add people to the app workspace so they can edit the content. If they're only going to view the content, don't add them to the workspace. You can include them when you publish the app.
- Admins can edit the workspace itself, including adding other members. Members can edit the content in the workspace, unless they have view-only access. Both admins and members can publish the app.

## Edit workspace

Name

Lab

Privacy

Private - Only approved members can see what's inside

Members can edit Power BI content ▼

Workspace members

Enter email addresses

Add

stuart.henderson@capgemini.com

Admin ▼



Delete workspace

Save

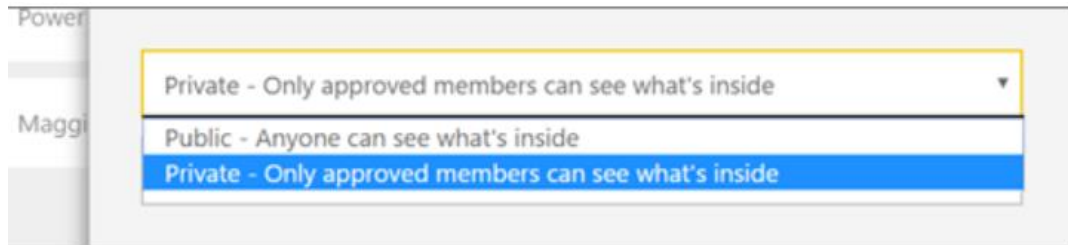
Cancel





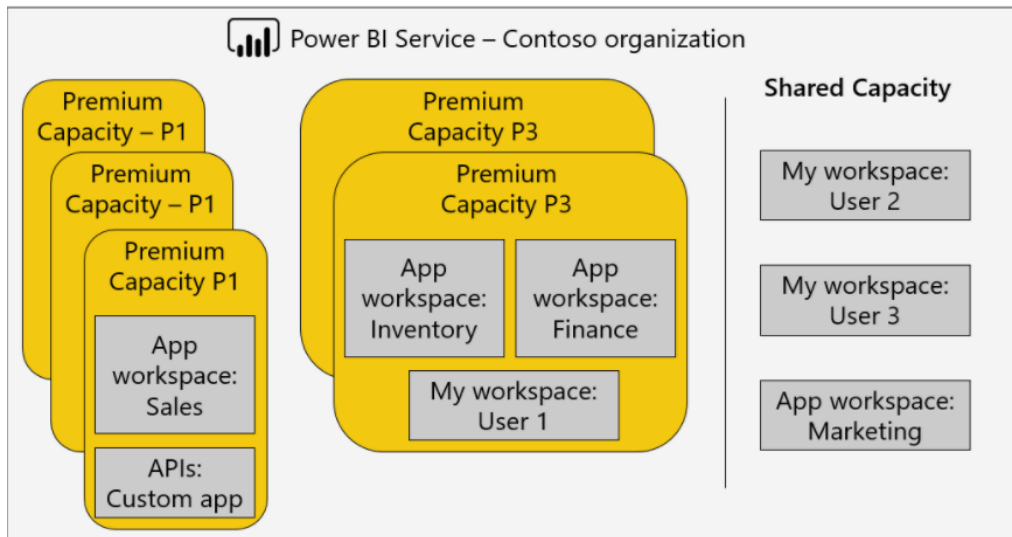
# WorkSpace Privacy

- You have a few options to set. If you choose Public, anyone in your organization can see what's in the workspace. Private, on the other hand, means only members of the workspace can see its contents
- You can't change the Public/Private setting after you've created the group.
- Chose Public if you want to cascade the information in the organization to everyone.
- Choose Private if the information is private and not be forwarded to anyone.





# Dedicated Capacity

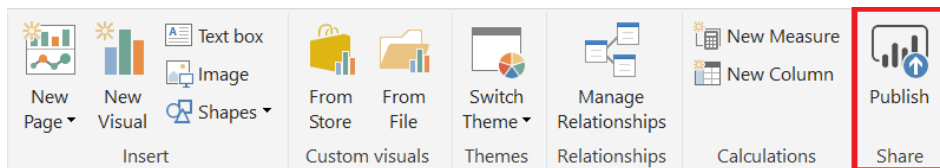


- Capacity is the set of resources reserved for the exclusive use by you. Having capacity allows you to publish dashboards, reports, and datasets to users throughout your organization without having to purchase licenses for them.
- Sharing requires a Power BI Pro license but recipients can be Power BI Pro or free users

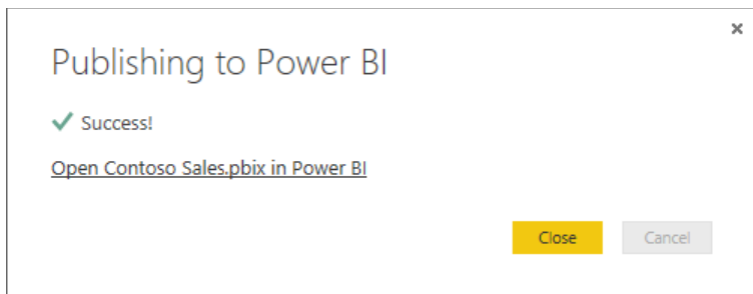


# Manual Re-Publish

- When you publish a Power BI Desktop file, the dataset and any reports you created in Power BI Desktop are uploaded to your Power BI site.
- When you re-publish your Power BI Desktop file, the dataset in your Power BI site will be replaced with the updated dataset from the Power BI Desktop file.



- When complete, you'll get a link to open your report in your Power BI site



# Questions, Notes, Open Forum, Etc...



Thank You!

