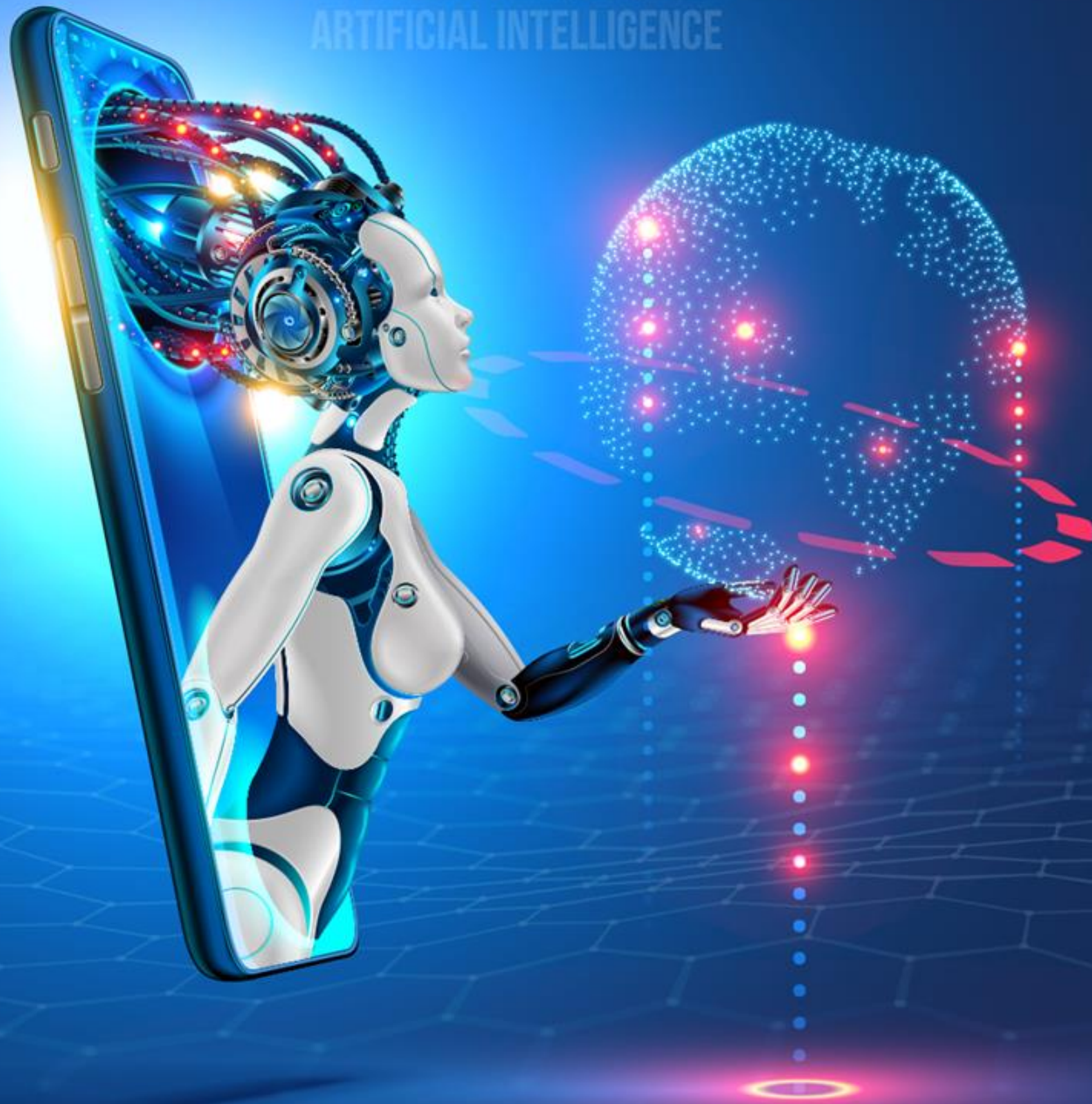


DATA AND ARTIFICIAL INTELLIGENCE



Data Manipulation and Reporting with Power BI

DATA AND ARTIFICIAL INTELLIGENCE



Creating Dashboards and Power BI Administration

Learning Objectives

By the end of this lesson, you will be able to:

- 🕒 Create dashboard using reports
- 🕒 Create separate views for mobile and web
- 🕒 Add text widgets, image widgets, HTML widgets, and video widgets to dashboard
- 🕒 Explore queries using natural language
- 🕒 Setting up gateway for auto refresh



Creating Dashboards and Power BI Administration

Create Dashboard Using Reports

1

Power BI dashboards are created after combining datasets, facts, and key performance indicators across different reports.

2

Report data can be viewed in multiple pages once the report is created after collecting information from multiple datasets.

3



The report creators have Edit permissions. They can also provide grantor access to their colleagues.

4



In the Power BI service account there are different views to see reports under reports tab and dashboards under dashboard tab.

Create Dashboard Using Reports

Report View

Dashboards Reports Workbooks Datasets			
NAME ↑			
		Aster Report	

Dashboard View

Dashboards Reports Workbooks Datasets			
NAME			
		Dashboard	

How to Create a Dashboard Using Reports?

To following are the steps to create a dashboard using reports:

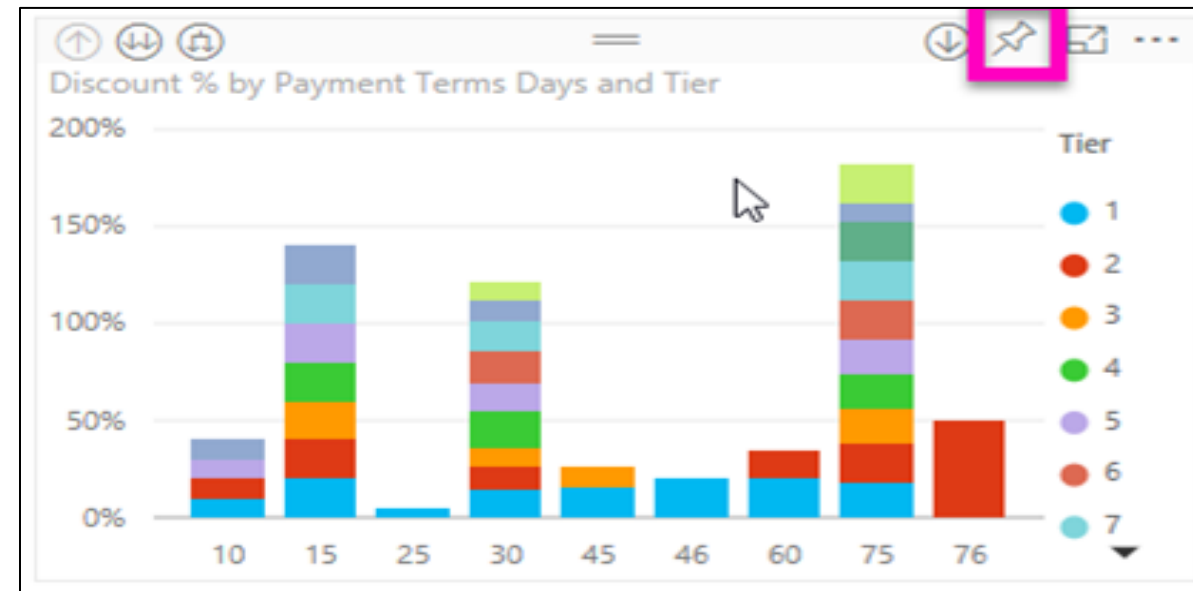
- 1 Login to Power BI service account and select a report.
- 2 Click on edit report and select the visualization from the report which you want to pin on the dashboard.
- 3 To reveal the available options, hover over a visualization.
- 4 Select the pin icon. This will add the visualization to the dashboard.
- 5 Select New dashboard option and name it accordingly.

How to Create a Dashboard Using Reports?

To following are the steps to create a dashboard using reports:

- 5 To create a new dashboard in the current workspace, select Pin. The Pinned to dashboard message will appear.
- 6 Click Go to dashboard. Choose Save once you are prompted to save the report.
- 7 To return to the report, select tile. You can pin some more tiles to the new dashboard.
- 8 Select Existing dashboard in the new prompt window. This can be done with different visuals from the same report for creating dashboard.

How to Create Dashboard Using Reports?



Discount %
BY PAYMENT TERMS DAYS, TIER

100%
0%

10 15 25 30 45 46

Tier

- 1
- 2

Pin to dashboard

Select an existing dashboard or create a new one.

Where would you like to pin to?

- ☐ Existing dashboard
- ☒ New dashboard

Procurement 2017

Tile Theming

- ☐ Use destination theme
- ☒ Keep current theme

Pin Cancel

A dialog box titled 'Pin to dashboard' with a close button (X). It contains a preview of the 'Discount %' report. Below the preview, there are radio buttons for 'Existing dashboard' and 'New dashboard', with 'New dashboard' selected. A text input field contains 'Procurement 2017'. At the bottom, there are radio buttons for 'Tile Theming': 'Use destination theme' and 'Keep current theme' (selected). 'Pin' and 'Cancel' buttons are at the bottom right.



Total Invoice
BY MON, CATEGORY

\$10M
\$5M

1Q17 4Q17 1Q18 4Q18

Category

- Direct
- Indirect

Pin to dashboard

Select an existing dashboard or create a new one.

Where would you like to pin to?

- ☒ Existing dashboard
- ☐ New dashboard

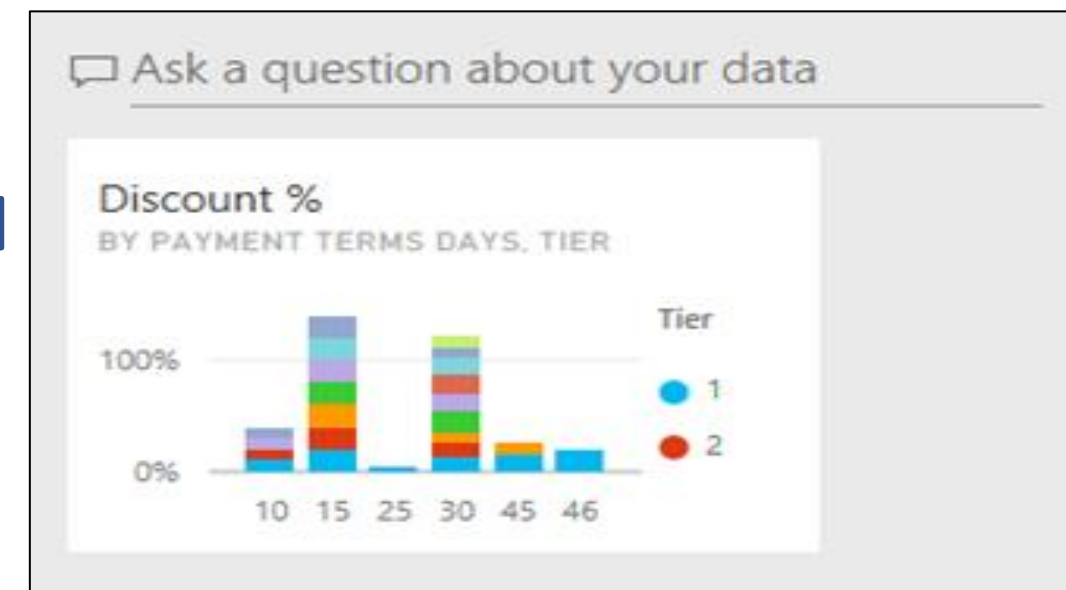
Procurement 2017

Tile Theming

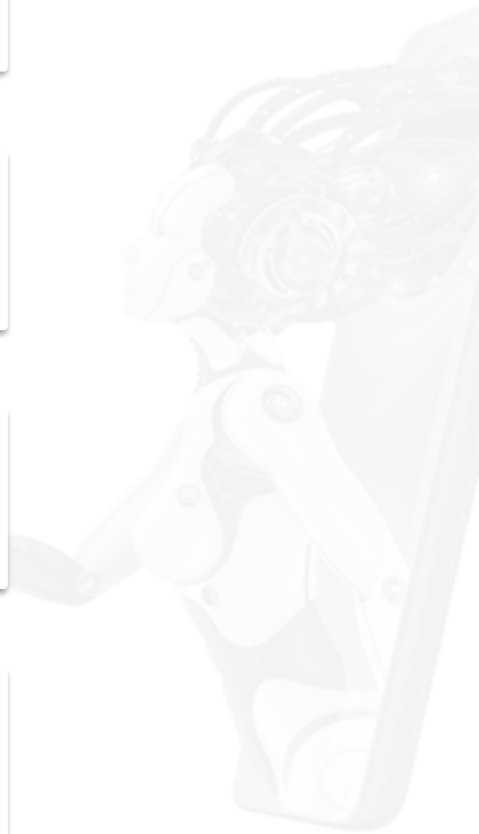
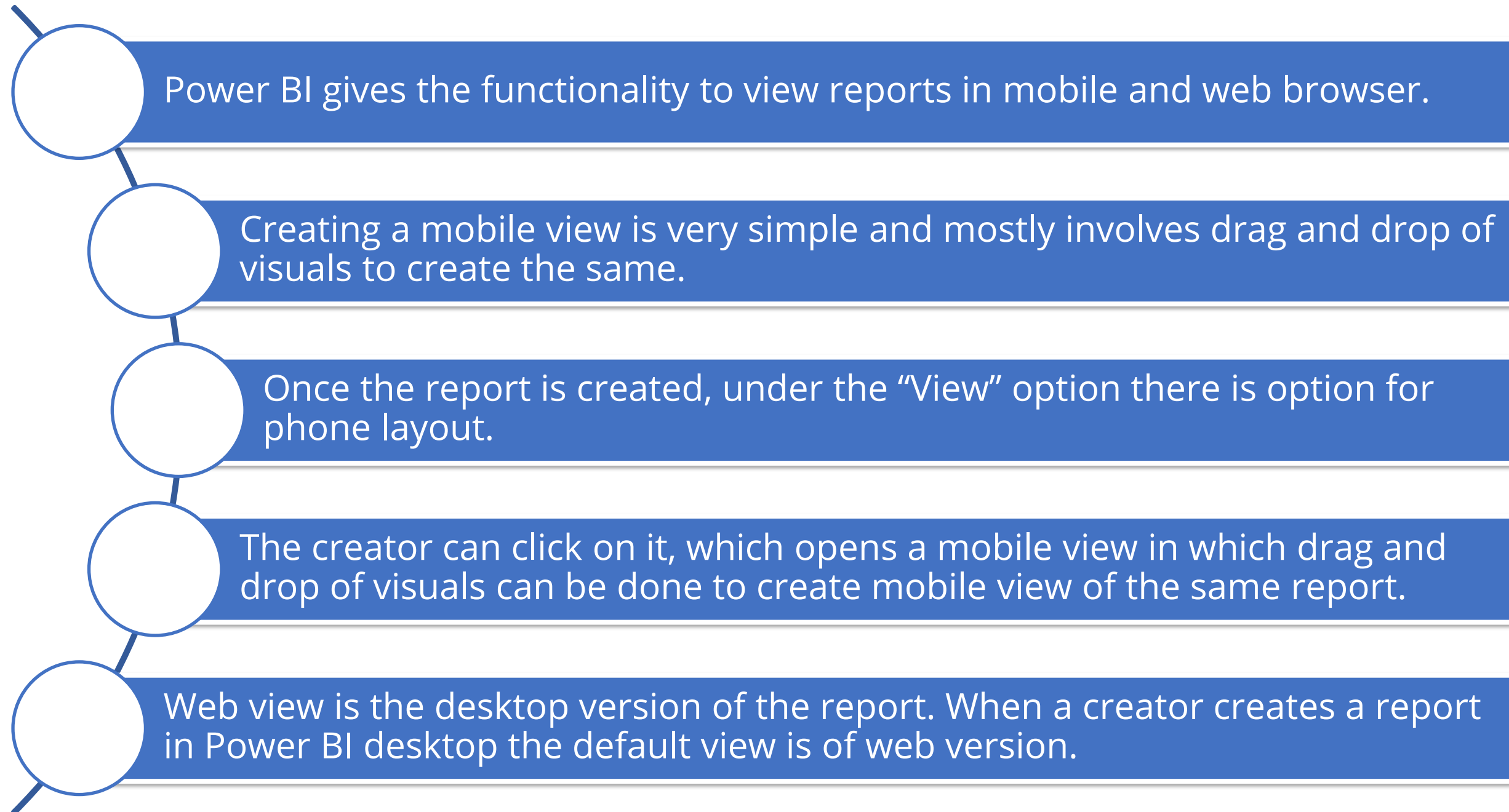
- ☐ Use destination theme
- ☒ Keep current theme

Pin Cancel

A dialog box titled 'Pin to dashboard' with a close button (X). It contains a preview of the 'Total Invoice' report. Below the preview, there are radio buttons for 'Existing dashboard' and 'New dashboard', with 'Existing dashboard' selected. A dropdown menu shows 'Procurement 2017'. At the bottom, there are radio buttons for 'Tile Theming': 'Use destination theme' and 'Keep current theme' (selected). 'Pin' and 'Cancel' buttons are at the bottom right.

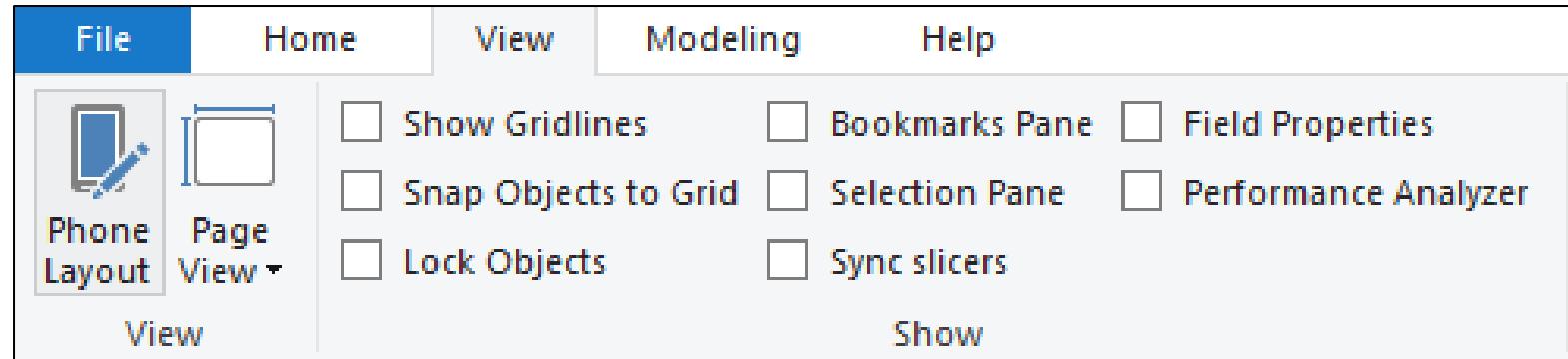


Create Separate Views for Mobile and Web

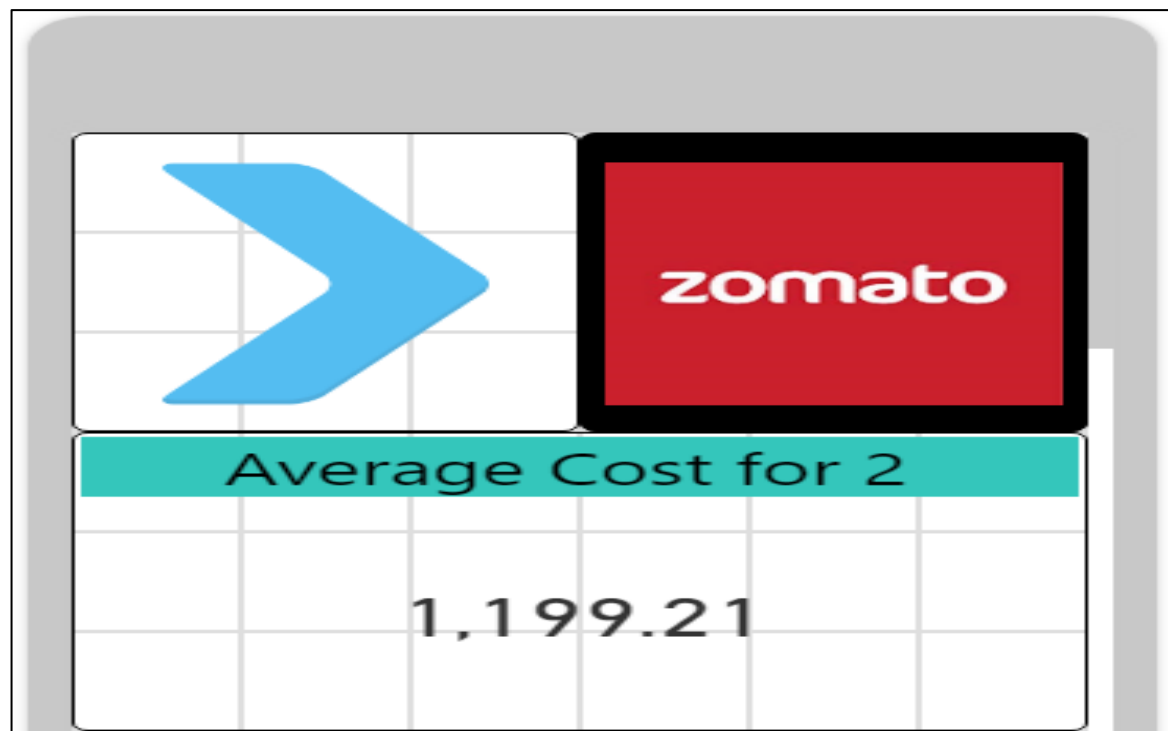


Create Separate Views for Mobile and Web

To access Phone Layout, Go to View > Phone layout to select the phone layout and open the window.



Once the phone layout is selected, drag and drop visuals and arrange as you want the report to be viewed in the mobile view.



Add Text Widgets to Dashboard

By adding a tile to your dashboard, you can place an several objects such as an image, video, text box, web code, or streaming data on your dashboard.

1

Login into Power BI service account. Open the dashboard and click on “Add tile” from the top menu bar of your dashboard. This will open a tile which will show various options.

2

From the Add tile window, select Text box > Next.

Add Text Widgets to Dashboard

The following are the steps to format the textbox:

1

To display a title above the text box, select Display title and subtitle and enter a title and an optional subtitle.

2

Enter and format the content for the text box.

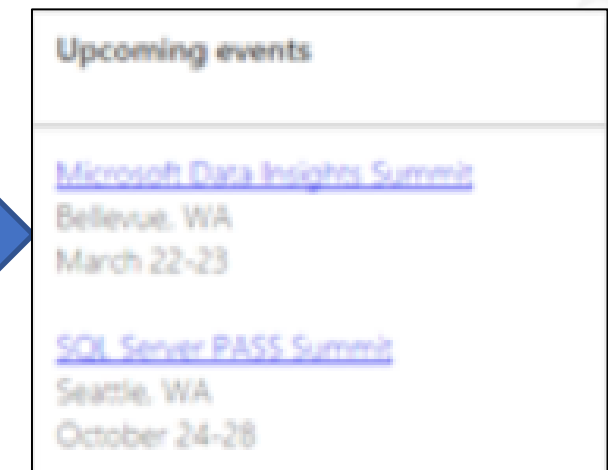
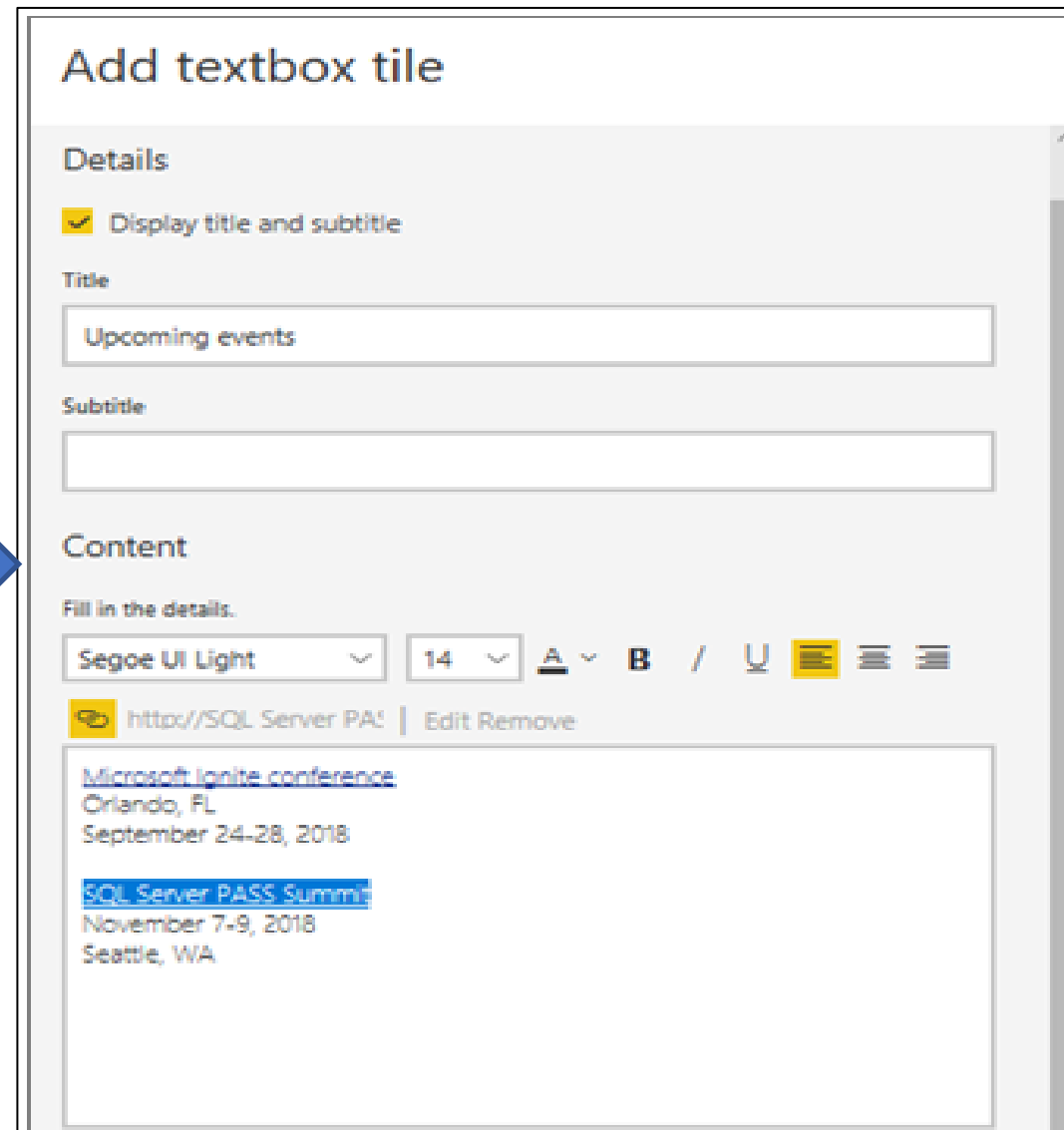
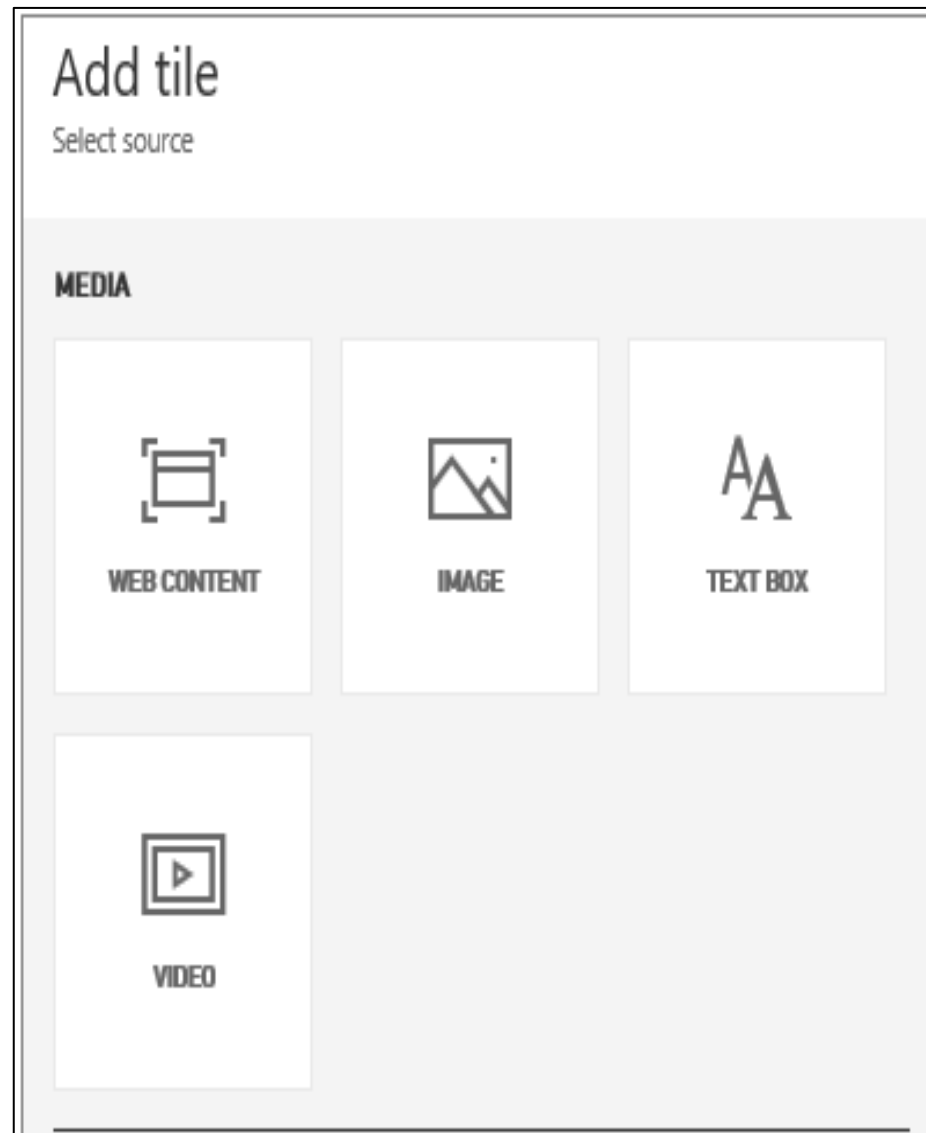
3

Optionally, set a custom link for the title. A custom link can be an external site or a dashboard or report in your workspace.

4

Select Apply.

Add Text Widgets to Dashboard



Add Image Widgets to Dashboard

To add an image widget to the Power BI Dashboard:

1

Login into Power BI service account. Open the dashboard and click on “Add tile” from the top menu bar of your dashboard.

2

From the Add tile window, select Image > Next.

3

From the Add image tile window, add the image information.

4

To display a title above the image, select Display title and subtitle and enter a Title and an optional Subtitle.

Add Image Widgets to Dashboard


To add an image widget to the Power BI Dashboard:


- 5 Enter the image URL.
- 6 To make the tile a hyperlink, select Set custom link and enter the URL.
- 7 When colleagues click the image or title, they will be taken to this URL.
- 8 Select Apply.


Add Image Widgets to Dashboard


Add a tile
Select source

MEDIA



Web content


Image

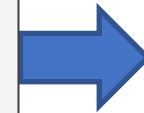

Text box


Video

REAL-TIME DATA


Custom Streaming Data

Next Cancel



Add image tile

* Required

Details

☒ Display title and subtitle

Title

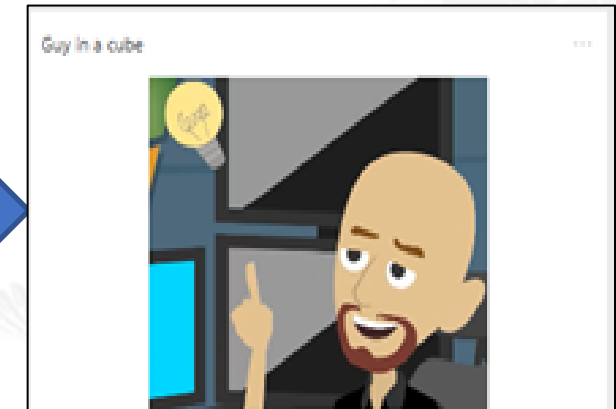
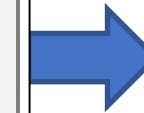
Guy in a cube

Subtitle

Content

URL *

https://pbs.twimg.com/profile_images/592671442547904512/10iuulab.png



Add HTML Widgets to Dashboard

To add the HTML widget to the Power BI Dashboard:

- 1 Login into Power BI service account. Open the dashboard and click on "Add tile" from the top menu bar of your dashboard.
- 2 From the Add tile window, select Web content > Next.
- 3 Add information to the Add web content tile window.
- 4 To display a title above the tile, select Display title and subtitle and enter a Title and an optional Subtitle.
- 5 Enter the embed code. In the example, we have copied and pasted a Twitter feed.
- 6 Select Apply.

Add HTML Widgets to Dashboard

Add a tile

Select source

MEDIA

Web content

Image

Text box

Video

REAL-TIME DATA

Custom Streaming Data

Next

Cancel

Add web content tile

Required

Details

Display title and subtitle

Title

Follow guyinacube on Twitter

Subtitle

Content

Embed code

<blockquote class= "twitter-tweet" data- partner="tweetdeck" > "><p lang="en" dir="ltr">Listen to @GuyInACube talk to us about



Add Video Widgets to Dashboard

To add the Video widget to the Power BI Dashboard:

1

Login into Power Bi service account. Open the dashboard and click on “Add tile” from the top menu bar of your dashboard.

2

From the Add tile window, select Video > Next.

3

Add video information in the Add video tile window.

4

To display a title and subtitle at the top of the video tile, select Display title and subtitle and enter a Title and an optional Subtitle.

Add Video Widgets to Dashboard

To add the Video widget to the Power BI Dashboard:

5

In this example, we will add a Subtitle, and then convert it to a hyperlink to the entire YouTube playlist. Enter the Video URL for the video.

6

Add a hyperlink for the Title and Subtitle, so that your colleagues can view the entire playlist on YouTube after they watch the embedded video.

7

To do so, under Functionality, select Set custom link, and then enter the URL for the playlist.

8

Select Apply.

Add Video Widgets to Dashboard

Add a tile

Select source

MEDIA

Web content

Image

AA

Text box

Video

REAL-TIME DATA

((o))

Custom Streaming Data

Next

Cancel

Add video tile

Required

Details

☒ Display title and subtitle

Title

Who is the Guy in the Cube?

Subtitle

Watch entire playlist on YouTube

Content

Video URL (YouTube or Vimeo)

Required

https://youtu.be/RStHl_RSqBw



Exploring Queries Using Natural Language

1

Power BI gives a powerful feature to interact with data using natural language.

2

In this feature the user can just type the question and based on the question the Power BI will give results accordingly.

3

Enter the Power BI service account and Open a dashboard.

4

Place your cursor in the question box. In the top-right corner, choose the New Q&A experience.

5

Even before the user start typing, Q&A displays a new screen with suggestions to help the user form the question.

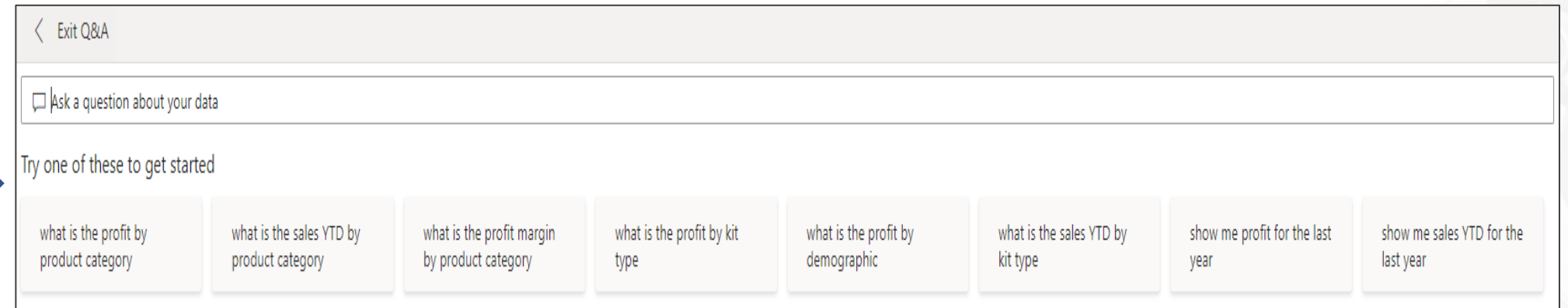
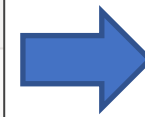
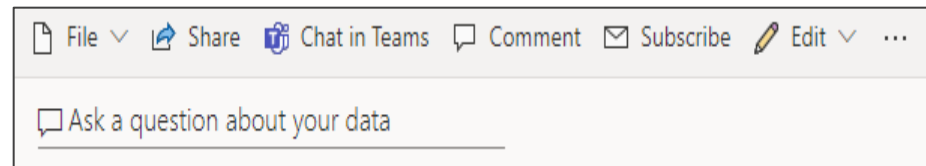
6

The user see phrases and complete questions containing the names of the tables in the underlying datasets.

7

The user may even see complete questions listed if the dataset owner has created featured questions.

Exploring Queries Using Natural Language



Setting Up Gateway for Auto Refresh

In order to refresh data in the Power BI report, a scheduled refresh plan must be created. This is done within the Manage area of the report.

- 1 In the web portal, right-click on the Power BI report and select Manage.
- 2 In the left menu, select the Data Sources tab.
- 3 For each data source that appears, choose the type of authentication to use when connecting to that data source. Enter the appropriate credentials.
- 4 For creating a scheduled refresh plan, in the Power BI service account, right click on the Power BI report.

Setting Up Gateway for Auto Refresh

In order to refresh data in the Power BI report, a scheduled refresh plan must be created. This is done within the Manage area of the report.

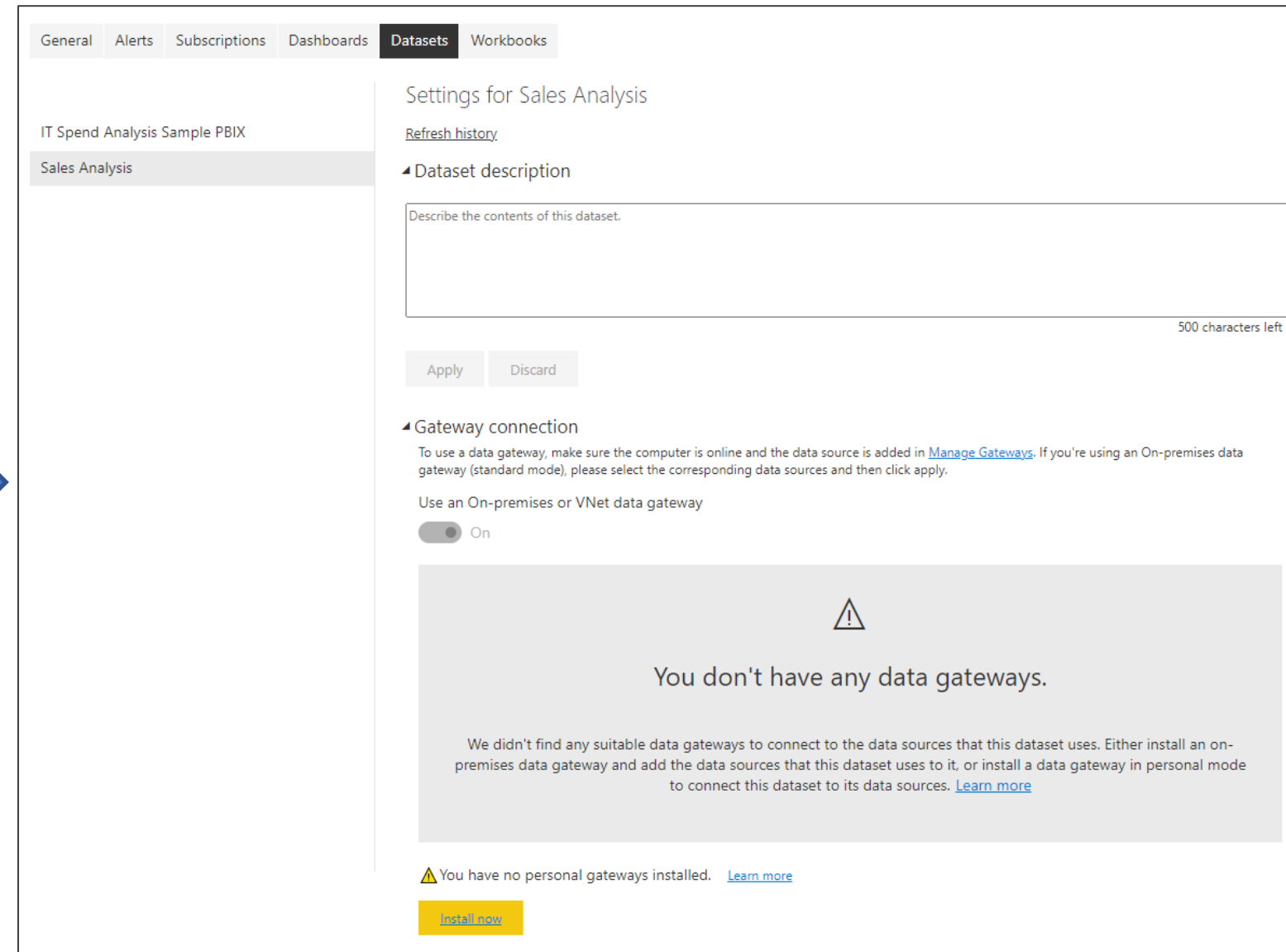
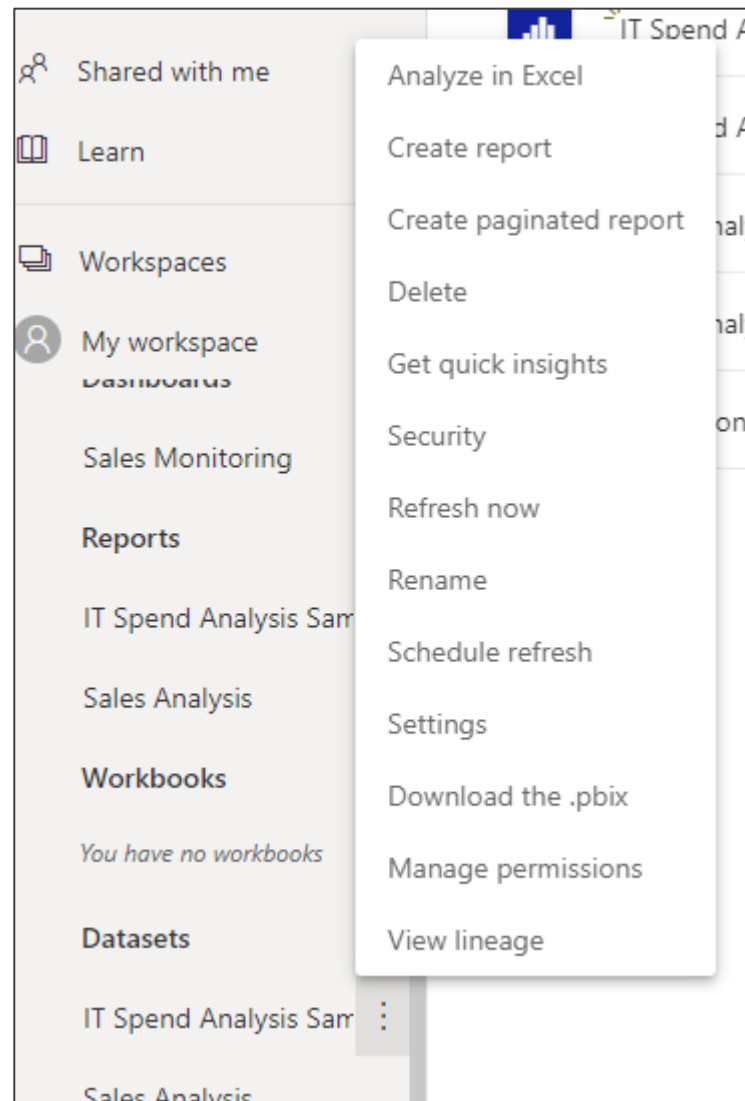
5 In the left menu, select the Scheduled refresh tab.

6 Choose New scheduled refresh plan.

7 Enter a description and create a schedule for refreshing your data model.

8 Select Create scheduled refresh plan when done.

Setting Gateway for Auto Refresh



Roles and Permissions

In the Power BI Desktop, row-level security (RLS) is used to restrict certain users from specific data access. The applied Filters, filter the data at the row level. These filters can be defined within roles.

1

In the Power BI Desktop report, Import data. Alternatively, you can also configure a DirectQuery connection.

2

Choose the Modeling tab.

3

Choose Manage Roles.

4

Choose Create.

Roles and Permissions

In the Power BI Desktop, row-level security (RLS) is used to restrict certain users from specific data access. The applied Filters, filter the data at the row level. These filters can be defined within roles.

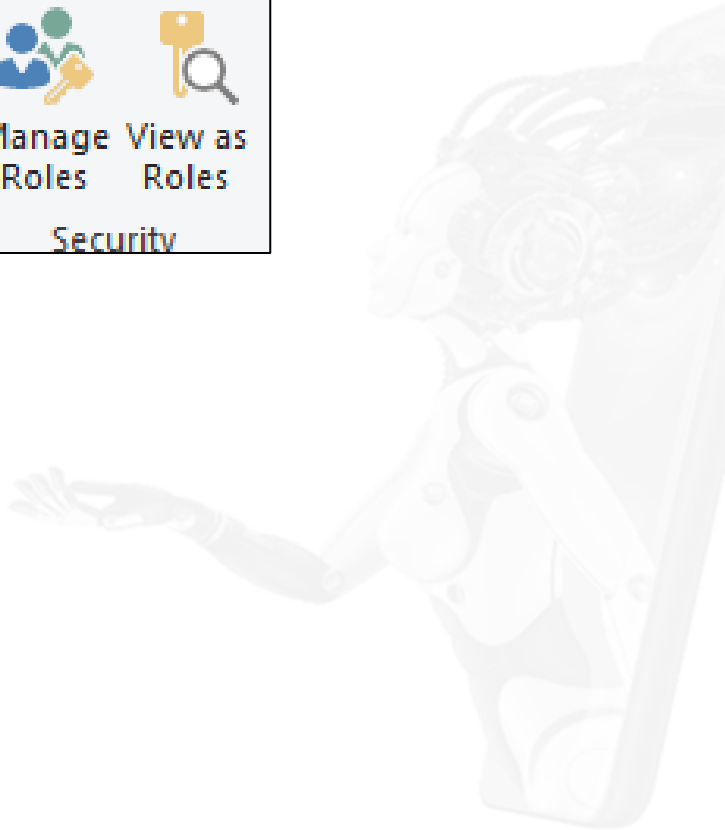
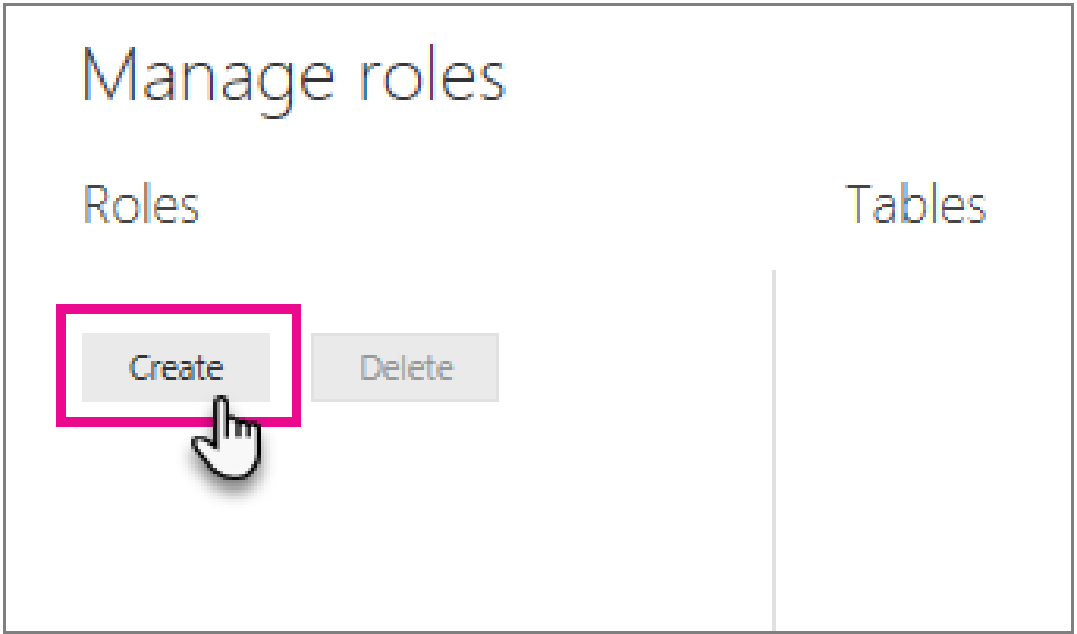
5 Give a name to the role.

6 Choose the table that you want to apply a DAX rule.

7 Enter the DAX expressions. This expression will return 'True' or 'False'. For example, [Entity ID] = "Value".

8 Once the DAX expression is created, you can validate the expression by selecting the check box above and click on Save.

Roles and Permissions



Creating a Dashboard Using Graphs



Objective: To use retail analysis dataset and create a dashboard using graphs.

Access: To execute the practice, follow these steps:

Note: In this section, we will dig into our Retail Analysis dataset and create a few key visualizations.

Step 1: Open a report and add a new blank page.

Open the Retail Analysis sample.PBIX file in the Power BI Desktop.

Add a new page by selecting the yellow-colored plus icon at the bottom of the canvas.

Step 2: Add a visualization that shows this year's sales compared to the last year.

From the **Sales** table, select **This Year Sales > Value** and **Last Year Sales**. Power BI creates a column chart. This is somewhat interesting, and you want to dig deeper. What do the sales look like month-wise?

Step 3: From the "Time" table, drag **FiscalMonth** into the **Axis** area.

Creating a Dashboard Using Graphs



Objective: To use retail analysis dataset and create a dashboard using graphs.

Access: To execute the practice, follow these steps:

Note: In this section, we will dig into our Retail Analysis dataset and create a few key visualizations.

- Change the visualization to an **Area chart**. There are many visualization types to choose from - see descriptions of each, tips for best practices, and tutorials for help deciding which type to use. From the **Visualizations** pane, select the **Area chart** icon.
- Sort the visualization by selecting the ellipses and choosing **Sort by FiscalMonth**.
- Resize the visualization by selecting the visualization, grabbing one of the outline circles and dragging it. Make it wide enough to eliminate the scrollbar and small enough to give us enough room to add another visualization.

ASSISTED PRACTICE

DATA AND ARTIFICIAL INTELLIGENCE



Knowledge Check

Knowledge Check

1

Power BI gives the functionality to type questions and interact with data using natural language.

- a. True
- b. False



Knowledge Check

1

Power BI gives the functionality to type questions and interact with data using natural language.

- a. True
- b. False



The correct answer is **a.**

Yes, Power BI gives the functionality to type questions and interact with data using natural language.

Knowledge Check

2

Is it possible to schedule auto refresh in Power BI?

- a. Yes
- b. No



Knowledge Check

2

Is it possible to schedule auto refresh in Power BI?

- a. Yes
- b. No



The correct answer is **a.**

Yes, it is possible to schedule auto refresh in Power BI.

Knowledge Check

2

Can specific roles and permissions be given to different users?

- a. Yes
- b. No



Knowledge Check

2

Can specific roles and permissions be given to different users?

- a. Yes
- b. No



The correct answer is **a.**

Yes, specific roles and permissions can be given to different users

Key Takeaways

You are now able to:

- 🕒 Create dashboard using reports
- 🕒 Create separate views for mobile and web
- 🕒 Add text widgets, image widgets, HTML widgets, and video widgets to dashboard
- 🕒 Explore queries using natural language
- 🕒 Setting up gateway for auto refresh

