



# Keep everyone in the loop with Microsoft Power BI

Adobe Analytics Cloud

How are you keeping your stakeholders informed? Are those email attachments really cutting it? Learn about the integration options with Adobe Analytics and Power BI. See how they can help your organization stay up to date with data that is easy to access and understand.

*Summit Lab 767 – Workbook*



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## Overview

This workbook teaches you how to use Adobe Analytics with Microsoft Power BI. The Adobe Analytics Cloud is provided by Adobe and can be accessed at <https://marketing.adobe.com>. And Power BI is a service available from Microsoft and can be accessed at <https://powerbi.microsoft.com>. Microsoft offers a free trial of Power BI that we will use throughout this workbook. There will be some Power BI features covered in this workbook not available in the free version and those features will be called out by your instructor.

### Module 1: Adobe Report Builder and Excel

- Workflow
- Exercise 1.x: Publish the Excel Workbook
- Exercise 2.x: Formatting workbook to publish Data Tables
- Exercise 3.x: Visualizations and reports

### Module 2: Adobe Analytics Connector (beta)

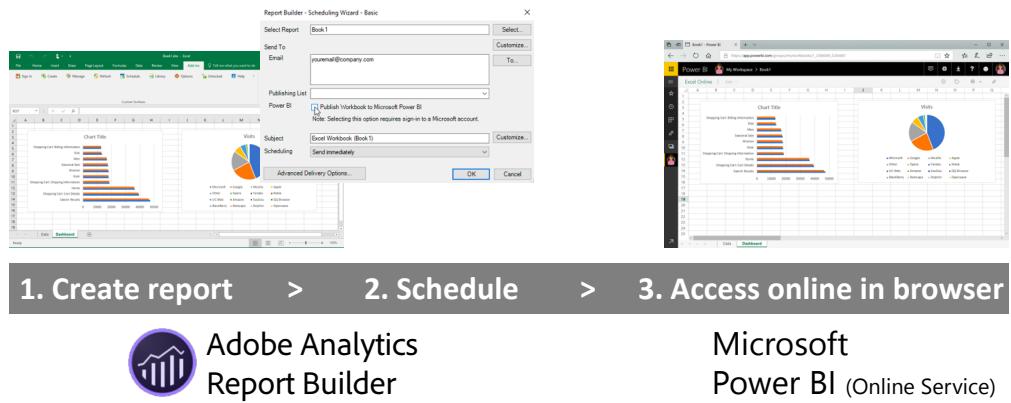
- Workflow
- Exercise 1: Building requests
- Exercise 2: Custom reporting date ranges
- Exercise 3: Managing date granularity



## Module 1

In this module you will use Adobe Report Builder and Excel to create and publish reports to Power BI. We all know there are Excel reports flying around your inbox. Let's take those reports online and improve the delivery method with Power BI.

### Workflow from Adobe Report Builder



Adobe Analytics  
Report Builder



Microsoft  
Power BI (Online Service)

- Create a report** with Adobe Report Builder. The Add-in can be downloaded from the Adobe Analytics UI under Tools. This Add-in can be installed in Excel on a Windows OS.
- Schedule a report** to be run and published on a regular interval to Power BI. *This feature requires a Power BI account.* There is an option available in the initial scheduling dialog to “Publish Workbook to Microsoft Power BI”. This option publishes the Excel file to Power BI. More integration options can be found by selecting the “Advanced Delivery Options...” and navigating to the “Power BI Publishing Options” tab. These additional options allow for the creation of datasets in Power BI.
- Once published the Workbook can be **accessed in an Excel Online like experience from Power BI.** *This service requires a Power BI account.* Go to <https://powerbi.microsoft.com> and navigate to “My Workspace” > “Workbooks” after authenticating.



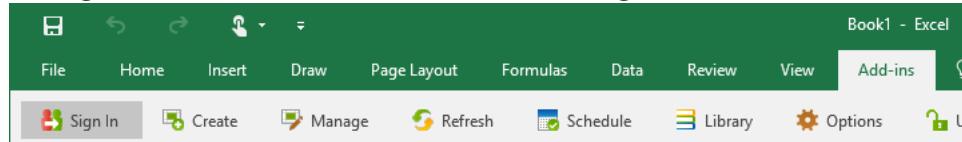
## Excel Workbook Integration

In this first exercise, you will use Report Builder to create a simple report (1.1). Configure a scheduled job to publish the Excel workbook to Power BI (1.2). Access the workbook in Power BI (1.3). Create a web and mobile dashboard to share across your organization (1.4).

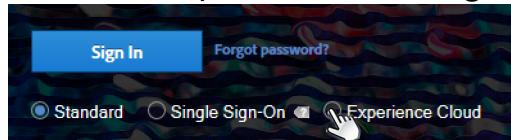
### Exercise 1.1 – Create an Excel Report

- Launch Excel

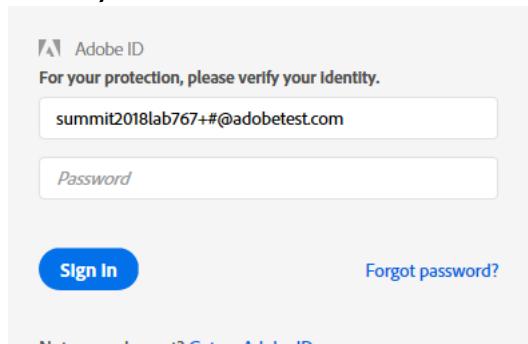
- Select a new Blank Workbook
- Navigate to the Add-ins tab and select Sign In



- Select the Experience Cloud login option below the "Sign In" button



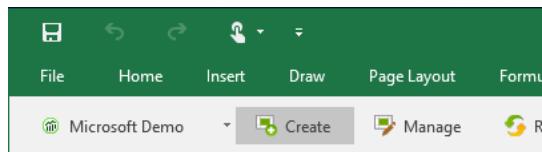
- Enter your credentials. For this lab credentials have been provided,



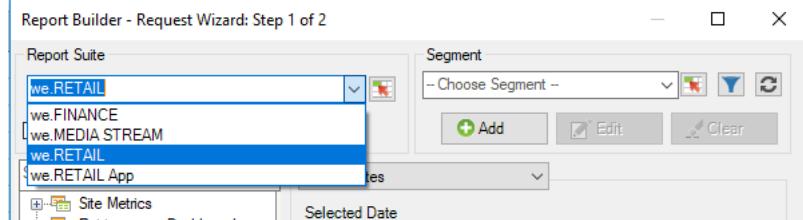
- Skip the "Add a mobile phone number" prompt, if presented.



- Click Create under the Add-ins ribbon menu to create a new data request

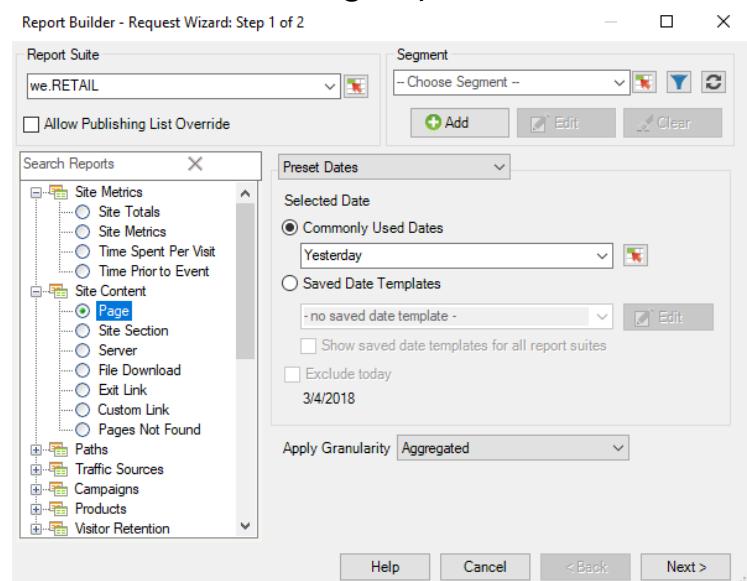


- Select your report suite. For this exercise we will use "we.RETAIL"



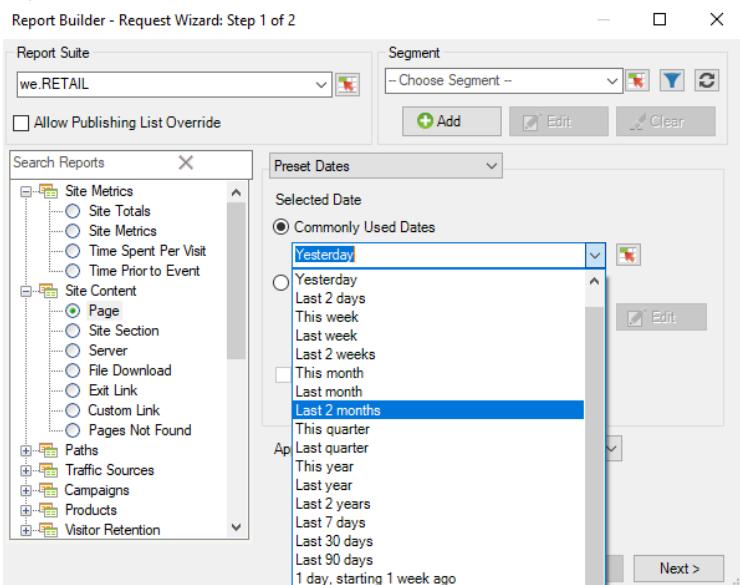
- Start building a request

- Find and select the Page report

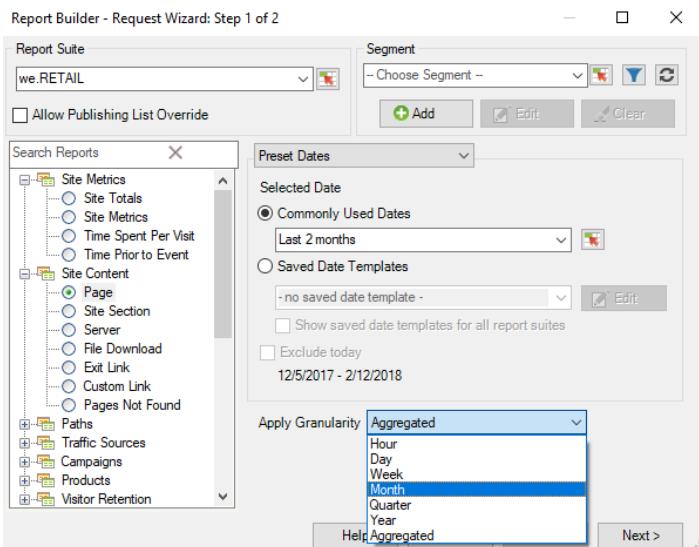




- Update the Selected Date to the "Last 2 months"



- Set the "Apply Granularity" to Month



- Click "Next"



- Find and select the Page Views metric

Report Builder - Request Wizard: Step 2 of 2 - Page

Metrics Dimensions

Pivot Layout Custom Layout

All Metrics

Select 1 cell

Format Options: headers

Month Format

Row Labels Metrics

<Drop Metric>

Preview

	Month 1	Month 2
Page 1		
Page 2		

Help Cancel < Back Finish

- Click "Next"
- Choose a cell \$A\$1 in workbook for output

Report Builder - Please select an output range for this request.

All cells in range First cell of range

Select 1 cell

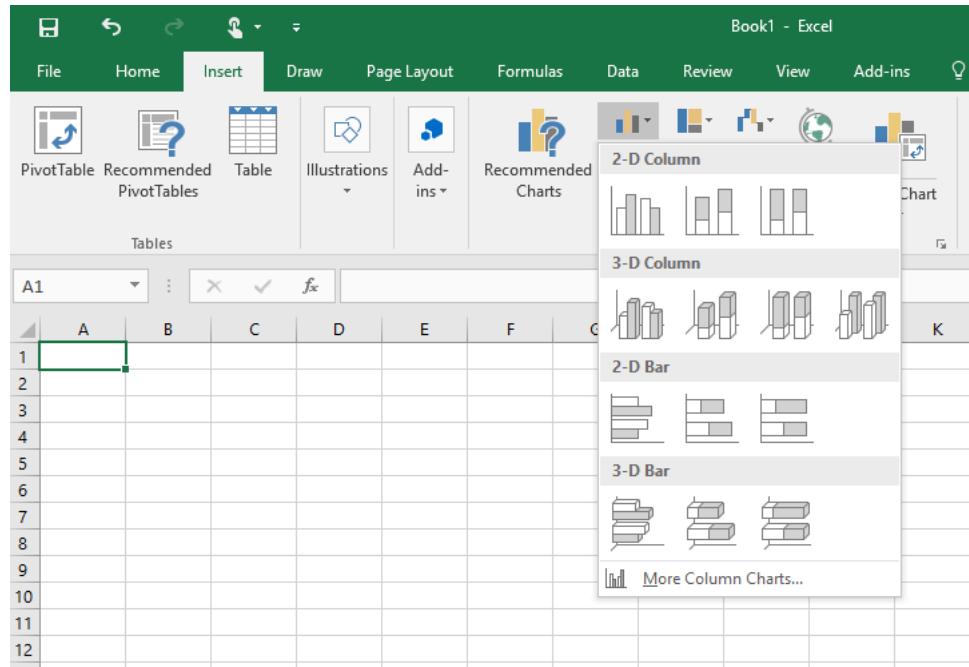
\$A\$1

### Example output

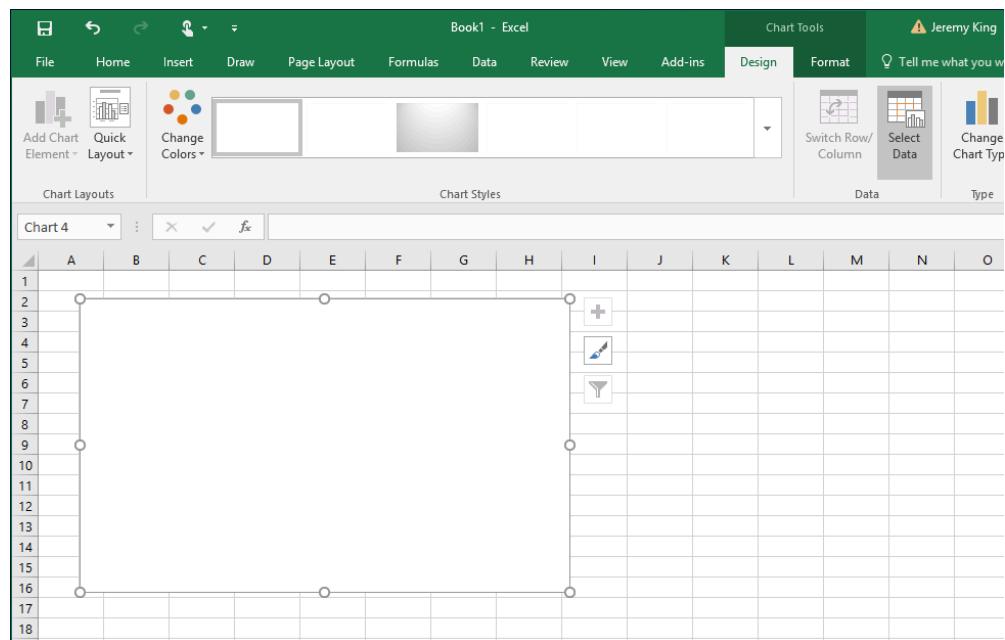
1	2017/12/05	2018/01/09
2	Page	Page Views
3	Search Resul	47264
4	Shopping Cai	39366
5	Home	36475
6	Shopping Cai	18612
7	Gear	18077
8	Women	17975
9	Seasonal Sal	17745
10	Men	16866
11	Kids	13350
12	Shopping Cai	12712



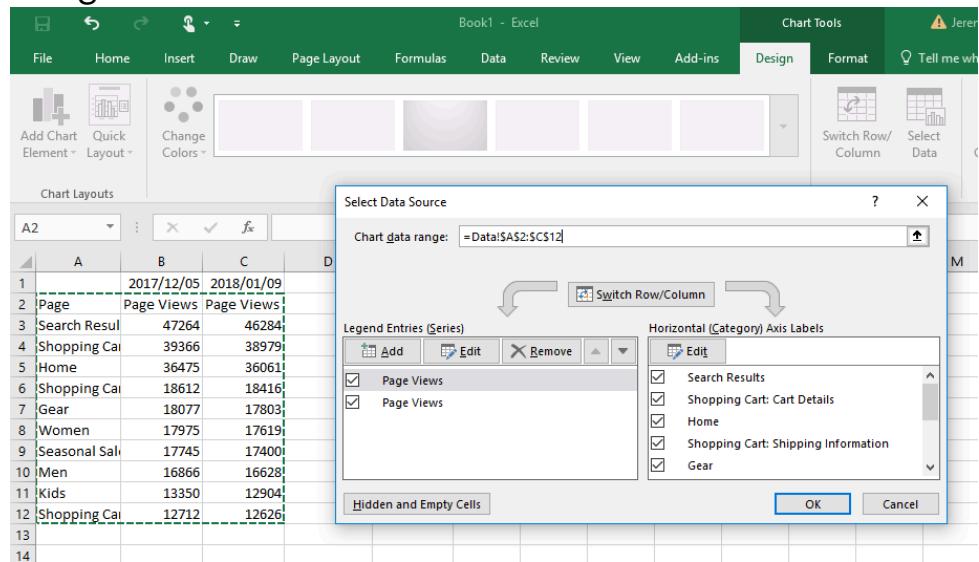
- Rename worksheet to Data and add a new worksheet, label it Dashboard
- Switch to the Dashboard worksheet and choose a bar graph, from Insert ribbon menu



- Choose "Select Data"

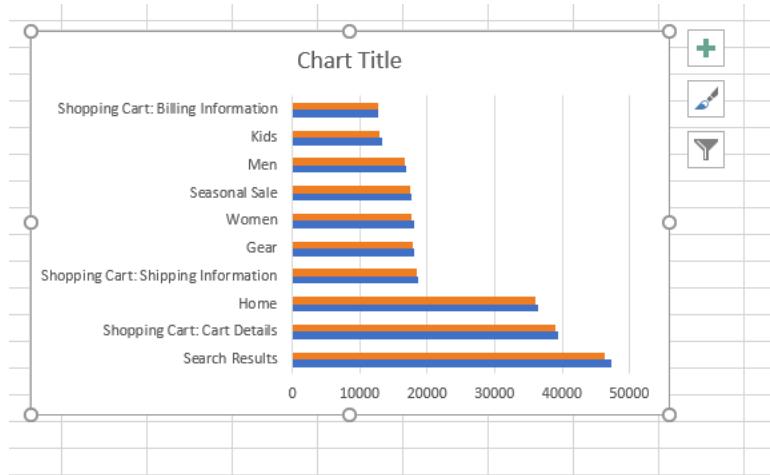


- Navigate back to the Data Worksheet and select the data



- Click OK

### Example bar graph



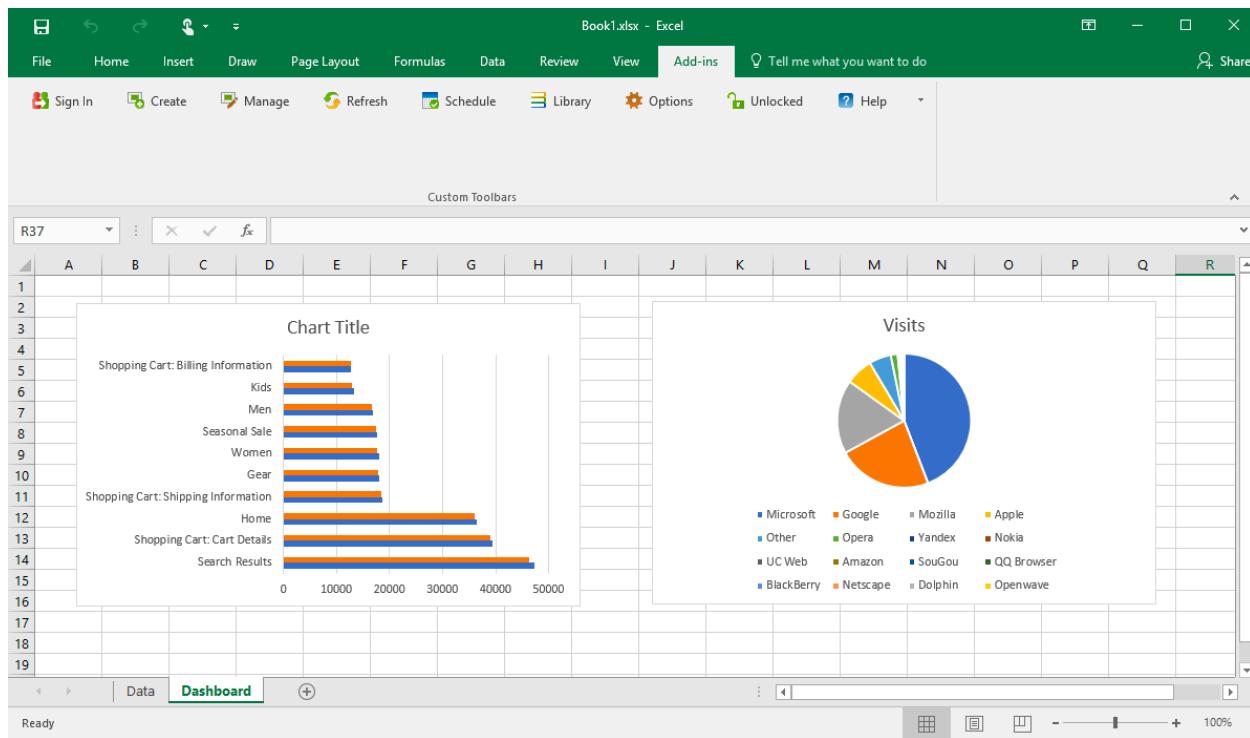
- Repeat this process to add another data request, to the Data worksheet, and visualization, to the Dashboard worksheet.

➤ Build data request

- Switch to the Data worksheet
- Select Create under the Add-in menu
- Find and select Browser Type
- Set Selected Date to Last 2 months
- Set Apply Granularity to Aggregated
- Click Next



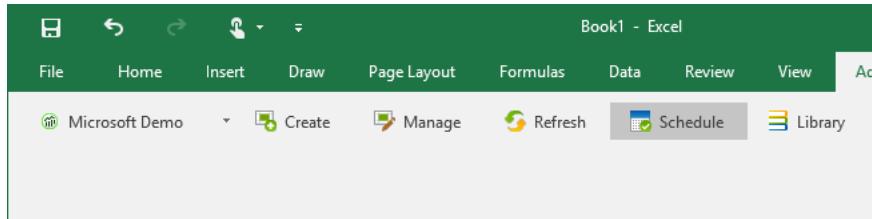
- Find and select Visits metric
  - Click Finish and select \$E\$1 for output
- Create visualization
- Switch to the Dashboard worksheet
  - Choose a pie chart from the Insert ribbon menu
  - Choose Select Data in the Design ribbon menu
  - Navigate back to the Data worksheet and select the Browser Type and Visits data
  - Click OK and position the pie chart



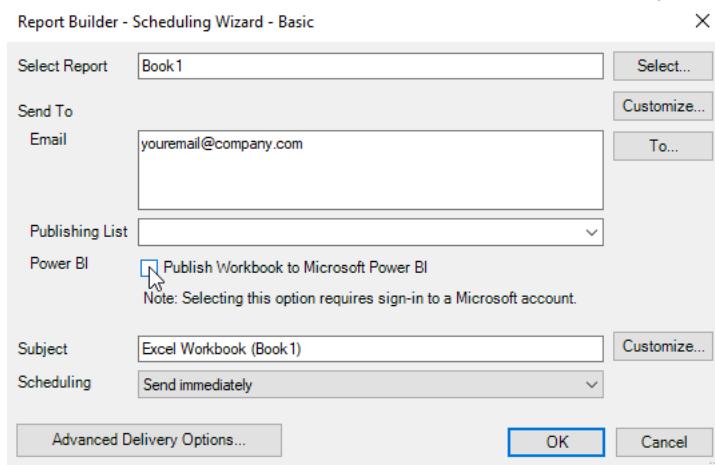


## Exercise 1.2 – Publish an Excel Workbook to Power BI

- Click Schedule under the Add-ins ribbon menu



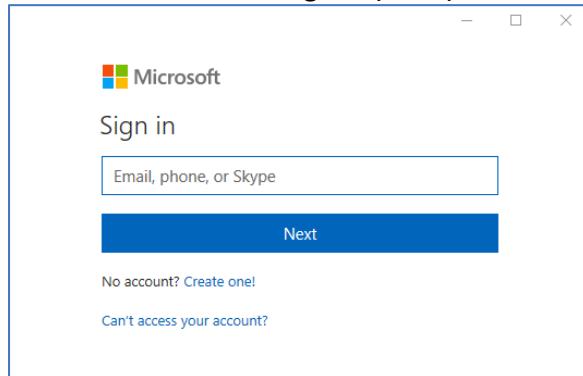
- Update the Sent To Email to your email address. *Note: At least one email address is required. This address will receive notifications about job status and output.*



- Select "Publish Workbook to Microsoft Power BI."

*Note: This option requires you to sign-in with a Microsoft account with access to Power BI. If you are unsure if you have access to Power BI trying logging in at <https://app.powerbi.com> from a browser.*

- For this exercise, leave the Scheduling interval set to "Send immediately"
- Click OK
- Follow the Microsoft Sign In prompts to complete the scheduling

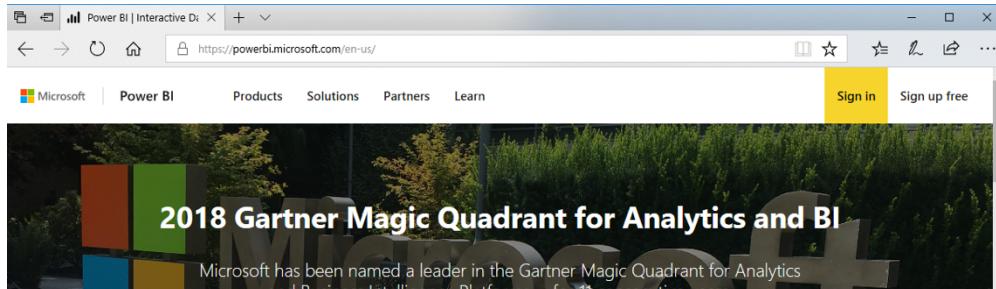




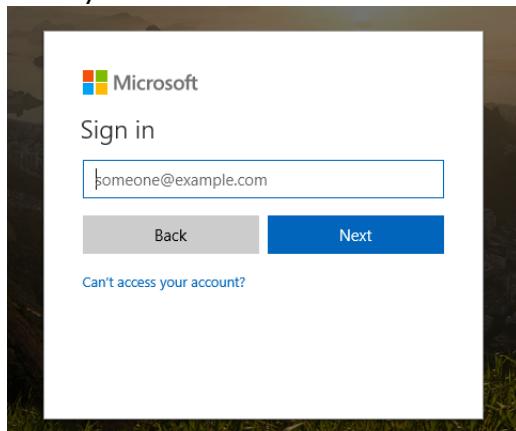
## Exercise 1.3 – Access Workbook in Power BI

*Note: For the following portions of Module 1 you will need to use your Microsoft account with access to Power BI.*

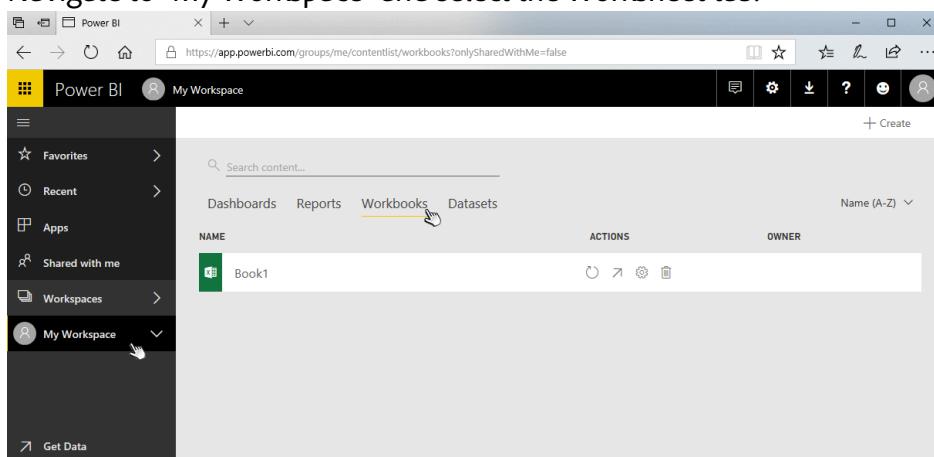
- Go to Power BI using the bookmark or by typing <https://powerbi.microsoft.com> in the address bar of the browser



- Click Sign In
- Enter your Microsoft account credentials



- Navigate to “My Workspace” and select the Worksheet tab.





- Select the “Book 1” workbook (*Don’t see a workbook? No problem. See Appendix A to load the Excel directly into Power BI and Simulate the output of Report Builder.*)

The screenshot shows the Power BI web interface. The top navigation bar includes icons for back, forward, search, and settings. Below the bar, the URL is https://app.powerbi.com/groups/me/contentlist/workbooks?onlySharedWithMe=false. The main area is titled 'My Workspace' and contains sections for Dashboards, Reports, Workbooks, and Datasets. Under 'Workbooks', there is a table with one item: 'NAME' (Book1), 'ACTIONS' (Edit, Share, Delete), and 'OWNER'. On the left sidebar, there are links for Favorites, Recent, Apps, Shared with me, Workspaces, and My Workspace. At the bottom left is a 'Get Data' button.

- Interact with the workbook. It will behave like Excel Online.

The screenshot shows the 'Book1' workbook in 'Edit' mode. The top navigation bar includes icons for back, forward, search, and settings. Below the bar, the URL is https://app.powerbi.com/groups/me/workbooks/1\_2586099\_5284987. The main area is titled 'Book1' and shows an 'Excel Online' dashboard. The dashboard features a chart titled 'Chart Title' with categories like 'Shopping Cart: Billing Information', 'Kids', 'Men', 'Seasonal Sale', 'Women', 'Gear', 'Home', and 'Search Results'. To the right is a pie chart titled 'Visits' showing browser usage. The legend for the pie chart includes Microsoft, Google, Mozilla, Apple, Other, Opera, Yandex, Nokia, UC Web, Amazon, SouGou, QQ Br, BlackBerry, Netscape, Dolphin, and Open. The left sidebar shows the 'My Workspace' section. At the bottom, there are tabs for 'Data' and 'Dashboard', with 'Dashboard' being active.

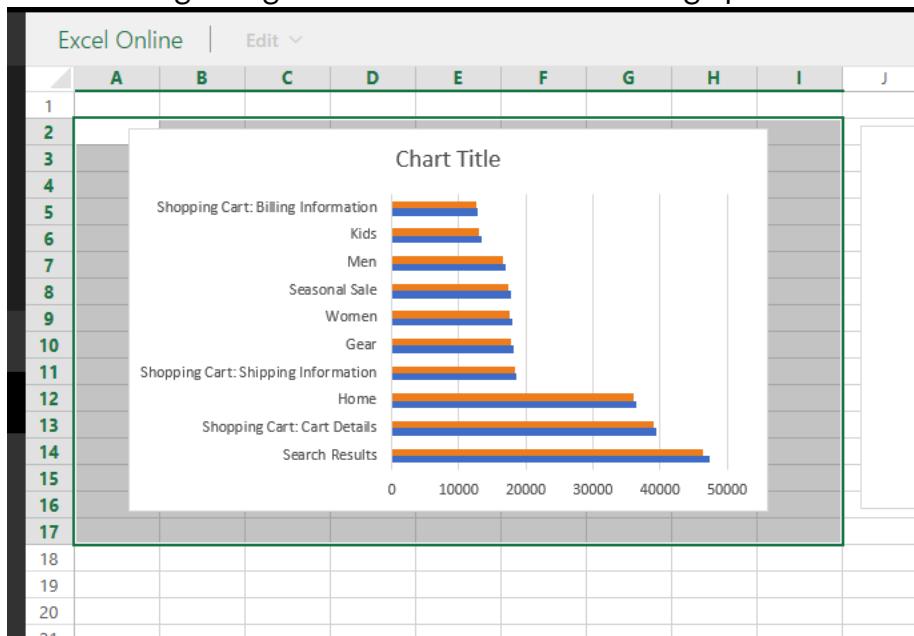


## Exercise 1.4 – Web and Mobile dashboards

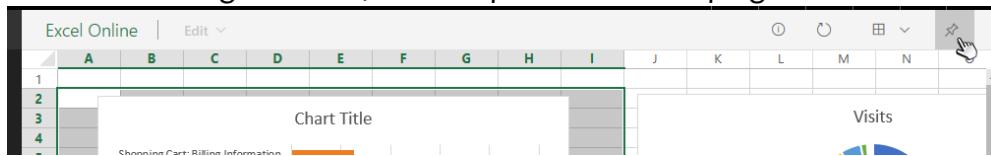
In Power BI, the dashboard is a single page of visualizations meant to tell a story. The visualizations in a dashboard come from reports and each report is based on one dataset. Dashboards are only available in the Power BI service. They provide a simple way to monitor your business and share that view with others in your organization, along with the supporting reports and datasets.

This next set of instructions will walk you through creating a dashboard using visualizations (cell ranges) from your Excel workbook.

- Start out on the Dashboard worksheet of the workbook loaded in Power BI
- Click and drag a range of cells that include the Chart graphic

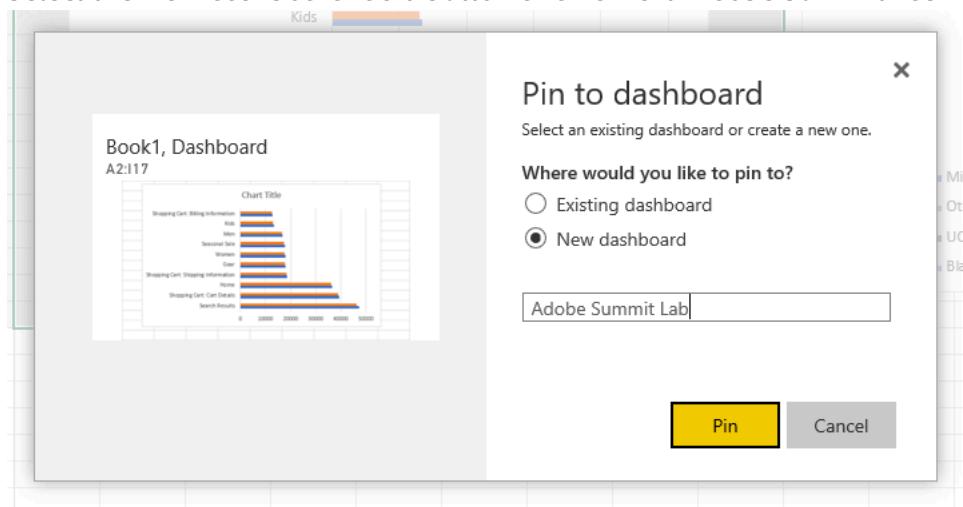


- With the cell range selected, click the pin icon in the top right corner of the workbook

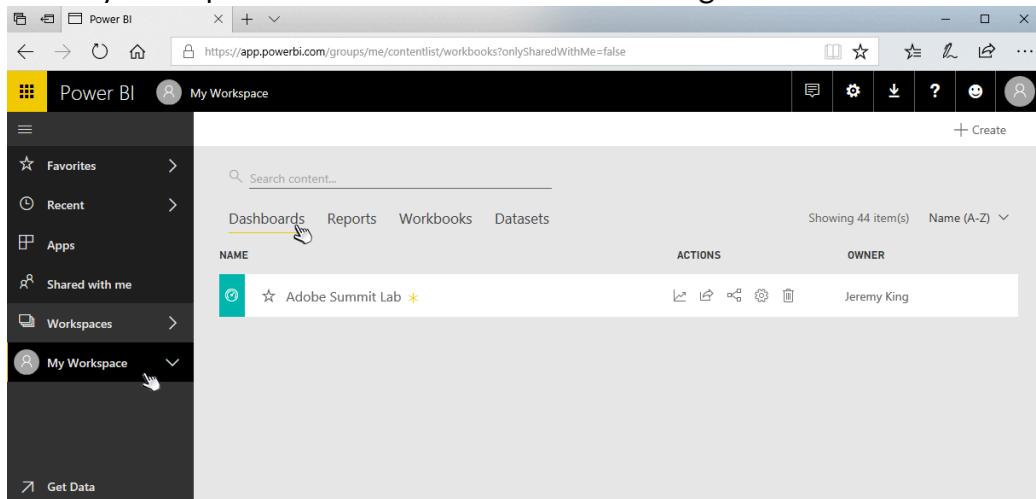




- Select the New dashboard radio button and name it "Adobe Summit Lab"



- Click Pin
- Now select a range of cells for Pie Chart graphic
- Click the pin
- Select the Existing dashboard radio button
- Find and select the "Adobe Summit Lab" dashboard
- Click Pin
- Click My Workspaces then the Dashboards tab to navigate to the new dashboard





- Click the new dashboard, Adobe Summit Lab

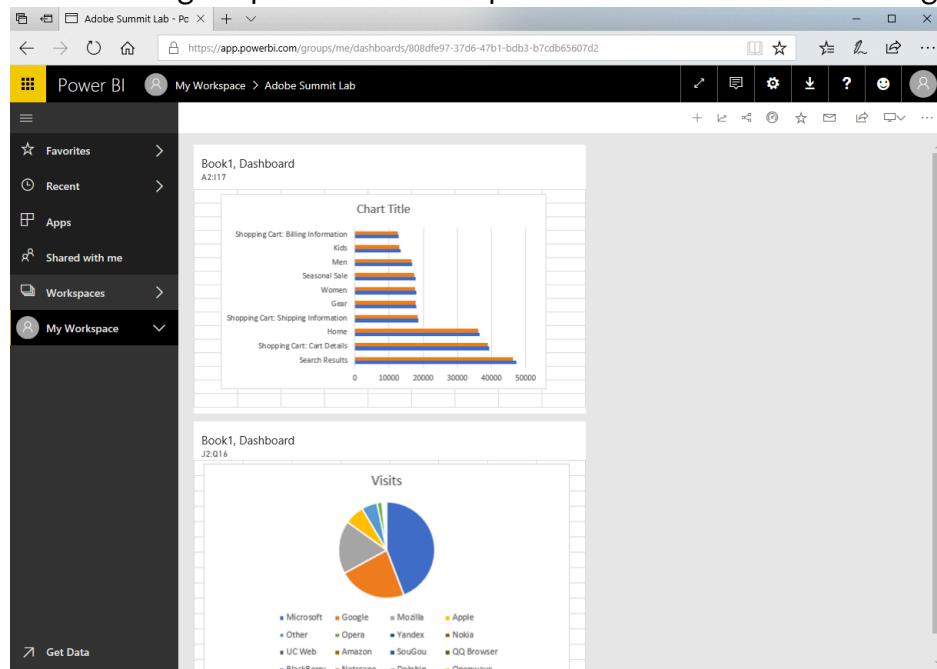
The screenshot shows the Power BI desktop application window. The left sidebar has a yellow header bar with the 'Power BI' logo. Below it are sections for 'Favorites', 'Recent', 'Apps', 'Shared with me', 'Workspaces', and 'My Workspace'. Under 'My Workspace', there is a 'Get Data' option. The main area has a search bar at the top with the placeholder 'Search content...'. Below the search bar are tabs for 'Dashboards', 'Reports', 'Workbooks', and 'Datasets'. The 'Workbooks' tab is selected. A table lists workbooks with columns for 'NAME', 'ACTIONS', and 'OWNER'. One row is highlighted with a blue background: 'Adobe Summit Lab' by Jeremy King. The URL in the browser bar is <https://app.powerbi.com/groups/me/contentlist/workbooks?onlySharedWithMe=false>.

- The Adobe Summit Lab dashboard will load with a default tile organization based on the order the tiles were pinned

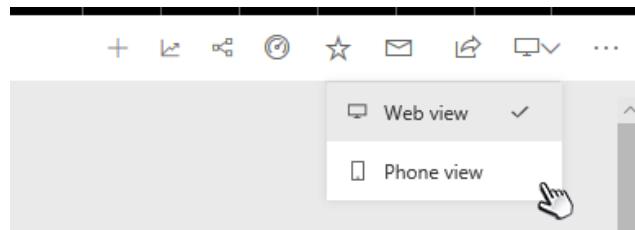
The screenshot shows the Power BI desktop application window with the 'My Workspace' sidebar selected. The main area displays a dashboard titled 'Book1, Dashboard' with two pinned tiles. The first tile is a horizontal bar chart titled 'Chart Title' with categories like 'Shopping Cart: Billing Information', 'Seasonal Sale', 'Women', 'Gear', 'Home', and 'Search Results'. The second tile is a pie chart titled 'Visits' showing browser usage, with categories including Microsoft, Google, Mozilla, Apple, Opera, Yandex, Nokia, UC Web, Amazon, SouGou, QQ Browser, BlackBerry, Netscape, Dolphin, and Openwave. The URL in the browser bar is <https://app.powerbi.com/groups/me/contentlist/workbooks?onlySharedWithMe=false>.



- Click and drag the pie chart to a new position in the dashboard to change the layout

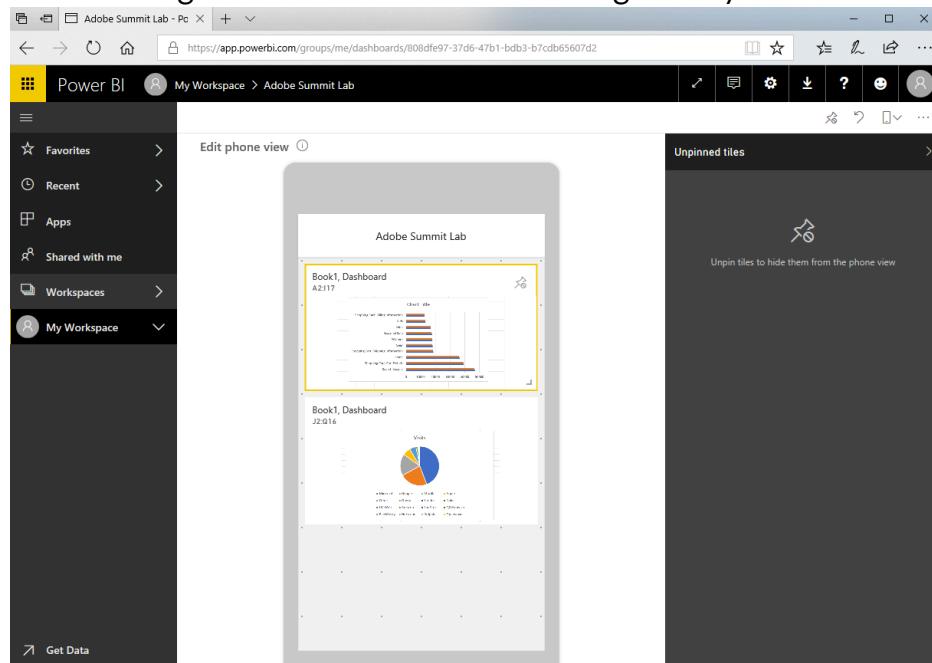


- Try resizing the tiles
- Click on the desktop monitor icon in the top right corner of the dashboard to switch over to the "Phone view."

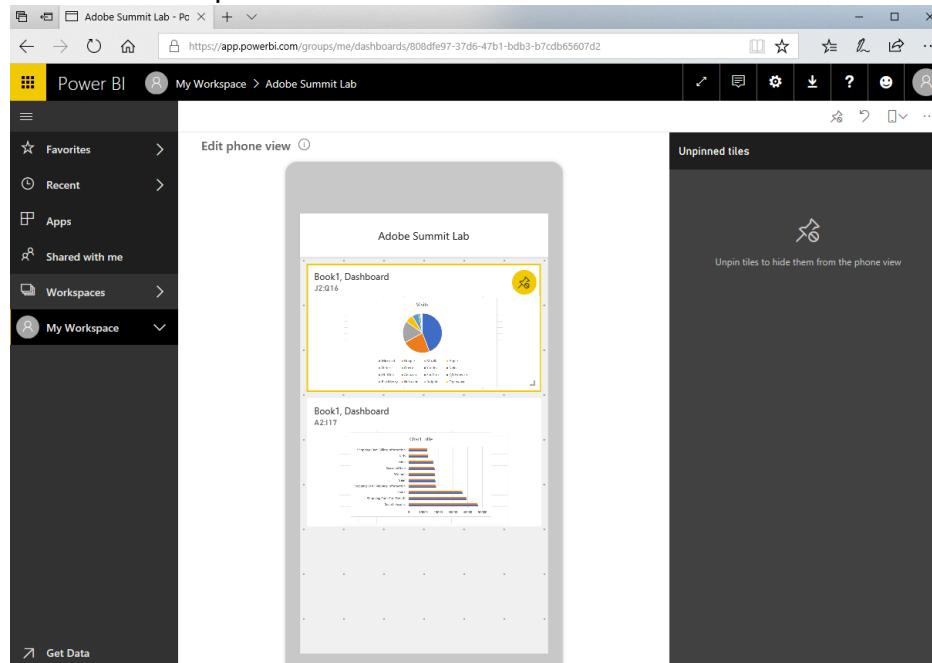




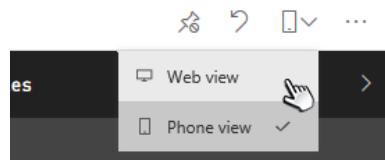
- Click and drag a tile in the mobile view to change the layout



- Pin and unpin tiles as desired. Unpinned tiles will stay linked to the dashboard but not viewable in the phone view.

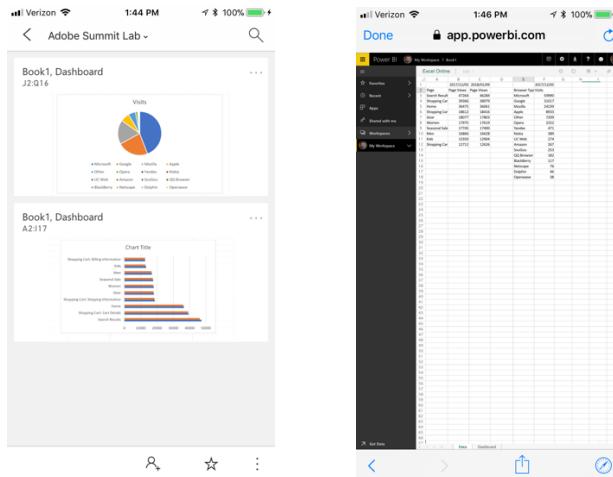


- Change back to the Web view



*Here is an example of the dashboard accessed in the Power BI mobile app:*

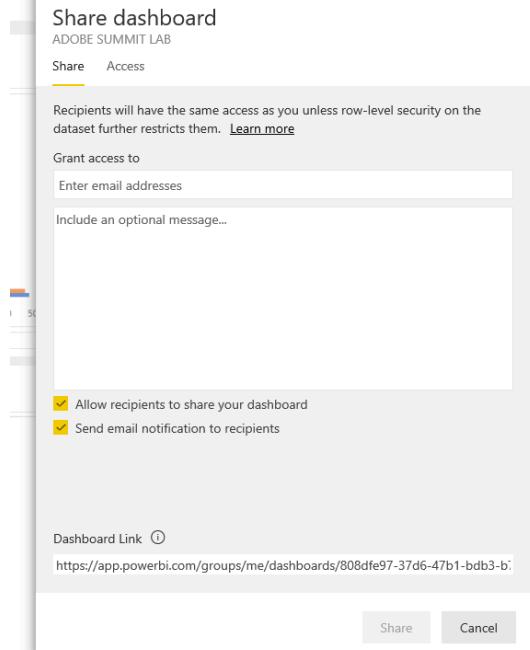
Copyright © 2018 Adobe Systems Incorporated. All rights reserved.



- Select the share this dashboard option in the top right of the dashboard



- Share the dashboard and included assets with users in your organization



- Enter email addresses
- Include an optional message  
“Here is the dashboard you’ve been looking for!”
- Click Share



## Excel Dataset Table Integration Options

In the prior exercise we published an Excel Workbook directly into the Power BI service. This is a quick-win feature to move delivery of all those existing Report Builder reports circulating across your organization from email to a more accessible and manageable online experience in Power BI. And there are a two other integration options you will take a look at next.

The additional integration options create Dataset Tables in Power BI that can be used to create visualizations. Letting you leave your Excel visualization skills at the door.

Additional integration options:

Integration option name	Description
Publish All Report Builder Requests as Power BI Dataset Tables	Use this option to turn all requests made with Report Builder into dataset tables in Power BI.  Create requests > Schedule
Publish all Formatted Tables as Power BI Dataset Tables	Use this option to only publish the content of all formatted tables in the workbook into dataset tables in Power BI. This feature should be enabled when there are custom formulas or formatted tables defined in the workbook.  Create requests > format > Schedule

During Exercise 2 we will extend the Excel file from exercise 1 to include the proper formatting for the integrations (2.1), publish the workbook to Power BI (2.2), and walkthrough using the Dataset Tables (2.3) and how to create visualizations (2.4).

### Exercise 2.1 – Formatting the workbook for other integrations

- Open Excel with the workbook we created in exercise 1.
- Add a new Report Builder request. Configure this one for Product with metrics of Revenue and Orders.

*To use "Publish All Report Builder Requests as Power BI Dataset Tables" this is all you need to do. Simply create your requests and schedule the workbook with the option enabled.*

For "Publish all Formatted Tables..." we need to do a bit more.



- Label the cell K2 "Revenue per Order"
- Calculate the Revenue divided by Orders for each Product.

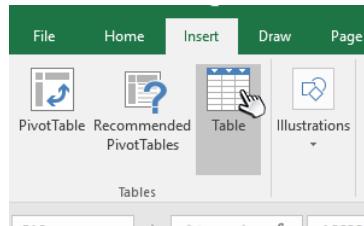
H	I	J	K
	2017/12/05	2017/12/05	
Product	Revenue	Orders	Revenue per Order
Timberlin	478294.1	1087	=I3/J3
Wasatch X	413251.3	841	491.38
Wasatch X	264747.98	305	868.03
Cobalt Car	256513.35	334	768.00
Uintas Tec	238374.3	488	488.47
Salt City C	227880	65	3505.85
Black Run	184639.4	426	433.43
Uintas Tec	180215.5	630	286.06
Slickrock 1	162493.75	65	2499.90
Blackcom	127642.6	88	1450.48

- Insert a new column after column C.
- Label the cell D2 "MoM"
- Calculate the Month over Month different.  $(\text{this\_month} - \text{last\_month}) / \text{last\_month}$

A	B	C	D
1	2017/12/05	2018/01/09	
2	Page	Page Views	Page Views2
3	Search Result	47264	=C3-B3/B3
4	Shopping Cat	39366	38979
5	Home	36475	36061
6	Shopping Cat	18612	18416
7	Gear	18077	17803
8	Women	17975	17619
9	Seasonal Sale	17745	17400
10	Men	16866	16628
11	Kids	13350	12904
12	Shopping Cat	12712	12626

With all our custom formulas added we need format the data we want imported to Power BI. To do this we need to define Tables in Excel.

- Navigate to the Insert tab in the ribbon menu.
- Click on Table



- Select the range of cells that include Page, the two Page Views metrics, and the custom formula MoM columns. (Note: Don't select dates at the top because the table format



needs to be flat.)

The screenshot shows a Microsoft Excel spreadsheet with data in columns A through E. The first row contains headers: 'Page' (A), 'Page Views' (B), 'Page Views2' (C), 'MoM' (D), and 'Browser Type' (E). Rows 2 through 13 contain data. A context menu is open over the data range, with the 'Create Table' option selected. A sub-menu dialog box is displayed, asking 'Where is the data for your table?' with the range '\$A\$2:\$D\$12' selected. The checkbox 'My table has headers' is checked. Buttons for 'OK' and 'Cancel' are visible at the bottom of the dialog.

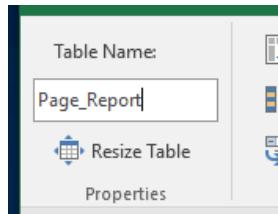
Page	Page Views	Page Views2	MoM	Browser Type
Search Result	47264	46284	-2%	
Shopping Cai	39366	38979	-1%	
Home	36475	36061	-1%	
Shopping Cai	18612	18416	-1%	
Gear	18077	17803	-2%	
Women	17975	17619	-2%	
Seasonal Sale	17745	17400	-2%	
Men	16866	16628	-1%	Nokia
Kids	13350	12904	-3%	UC Web
Shopping Cai	12712	12626	-1%	Amazon
				SouGou

- Keep the "My table has headers" box checked and click OK. You will see a formatted table appear like this one.

The screenshot shows the same Excel spreadsheet after applying the 'Create Table' settings. The table now has a header row with dropdown arrows for sorting. The data rows below show the page names and their corresponding page view counts, MoM percentage changes, and browser types.

Page	Page Views	Page Views2	MoM
Search Result	47264	46284	-2%
Shopping Cai	39366	38979	-1%
Home	36475	36061	-1%
Shopping Cai	18612	18416	-1%
Gear	18077	17803	-2%
Women	17975	17619	-2%
Seasonal Sale	17745	17400	-2%
Men	16866	16628	-1%
Kids	13350	12904	-3%
Shopping Cai	12712	12626	-1%

- Click Design and find the Table Name on the left side of the ribbon menu.
- Rename the table to Page\_Report



- Repeat the last few steps to define tables for both Browser\_Type\_Report and Product\_Report. What you end up with will look like this:

The screenshot shows three separate tables defined in the Excel spreadsheet. The first table, 'Page\_Report', spans columns A through E and rows 2 through 13. The second table, 'Browser\_Type\_Report', spans columns F through H and rows 2 through 19. The third table, 'Product\_Report', spans columns I through M and rows 2 through 19. Each table has its own set of headers and data rows.

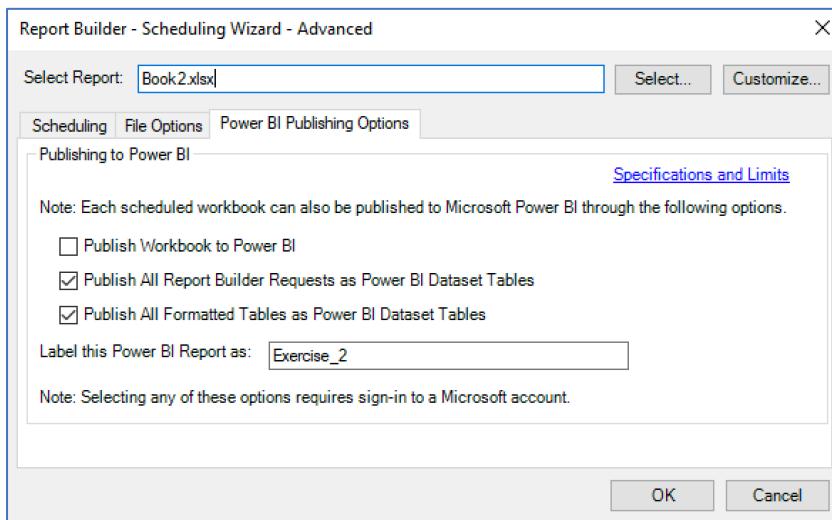
Page	2017/12/05 2018/01/09			2017/12/05	2017/12/05			Product	Revenue	Orders	Revenue per Order
	Page Views	Page Views2	MoM		Browser Type	Visits					
Search Result	47264	46284	-2%	Microsoft	59990			Timberline	478294.1	1087	440.01
Shopping Cai	39366	38979	-1%	Google	31017			Wasatch Xt	413251.3	841	491.38
Home	36475	36061	-1%	Mozilla	24239			Wasatch Xt	264747.98	305	868.03
Shopping Cai	18612	18416	-1%	Apple	8933			Cobalt Can	256513.35	334	768.00
Gear	18077	17803	-2%	Other	7209			Uintas Tech	238374.3	488	488.47
Women	17975	17619	-2%	Opera	2252			Salt City Cy	227880	65	3505.85
Seasonal Sale	17745	17400	-2%	Yandex	471			Black Run S	184639.4	426	433.43
Men	16866	16628	-1%	Nokia	389			Uintas Tech	180215.5	630	286.06
Kids	13350	12904	-3%	UC Web	274			Slickrock Tr	162493.75	65	2499.90
Shopping Cai	12712	12626	-1%	Amazon	267			Blackcomb	127642.6	88	1450.48
				SouGou	253						
				QQ Browser	182						
				BlackBerry	117						
				Netscape	76						
				Dolphin	46						
				Openwave	38						



## Exercise 2.2 – Publishing Dataset Tables to Power BI

With requests defined and Excel Tables formatted in the Workbook you are ready to publish to Power BI.

- Click Schedule found under the Add-in ribbon menu
- Click New
- Click “Advanced Delivery Options...” located in the bottom left corner of the Scheduling Wizard – Basic
- Navigate to the Power BI Publishing Options tab
- Check the second option, Publish All Report Builder Requests to Power BI Dataset Tables
- Check the third option, Publish All Formatted Tables as Power BI Dataset Tables
- Set “Label this Power BI Report as” to Exercise\_2



- Click OK
- Follow the Microsoft prompts to authenticate to complete the scheduled task

## Exercise 2.3 – Working with Dataset Tables in Power BI

Moving on to Power BI, the workbook will publish to the Power BI service (online). Ask the instructor if you would like a version of an already published workbook to use with Power BI Desktop and see Appendix B.

- Log in to the Power BI service



- Navigate to the Datasets tab in the My Workspace section

The screenshot shows the Power BI web interface with the URL <https://app.powerbi.com/groups/me/contentlist/datasets>. The navigation bar at the top has tabs for Dashboards, Reports, Workbooks, and Datasets, with 'Datasets' being the active tab. On the left, there's a sidebar with links for Favorites, Recent, Apps, Shared with me, Workspaces, and My Workspace. The main content area shows a table with columns: NAME, ACTIONS, LAST REFRESH, NEXT REFRESH, and API. There is one item listed: 'Exercise\_2'.

- Click the Create Report icon for Exercise\_2 in the Actions column

This screenshot is similar to the previous one, but the 'Actions' column for the 'Exercise\_2' dataset row is highlighted, specifically the icon for creating a report.

The Report experience comprises of 3 different sections. From left to right you will find the (1) canvas, (2) visualization controls, and (3) dataset tables.

This screenshot shows the Power BI Report experience. The interface is divided into three main sections: 1. The central canvas area where visualizations are placed. 2. The right-hand side panel containing the 'VISUALIZATIONS' and 'FIELDS' panes. 3. The bottom-right pane showing dataset tables. The number '1' is overlaid on the canvas area, '2' is over the visualization controls, and '3' is over the dataset tables.



And the Dataset Tables imported from Report Builder are found under the FIELDS section. And the table below provides more detail about the imported Dataset Tables

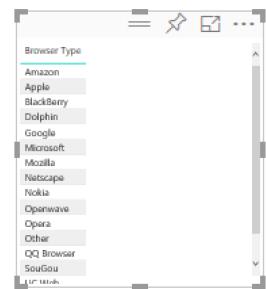
Name	Publishing Option	Detail
_Legend	Report Builder Requests	If you take a request out of the Report Builder context, it may be difficult to remember what each request stands for. The purpose of the Legend table is, for example, to show you the name of each request under Table ID.
Browser_Type1 Page1 Product_Report1 <i>(Dimension#)</i>	Report Builder Requests	<p>Each scheduled Report Builder request will be published as a table in the dataset. Each request table is named after the primary dimension in the request and incremented based on when it was added to the workbook, and it contains an additional Report Suite and a Segments column.</p> <p><b>Note:</b> No matter how you configured your Report Builder request to be laid out on the worksheet (pivot layout, custom layout, some columns invisible), Report Builder will always publish your request in the same two-dimensional, single header row format: Date, Dimensions, Metrics, Report Suites, Segments.</p>
Browser_Type_Report Page_Report Product_Report	Formatted Tables	Instead of importing the entire workbook, you can import only the content from all the formatted tables within the workbook. This allows you to create custom formulas and organize the tables, for example consolidating requests from multiple report suites.



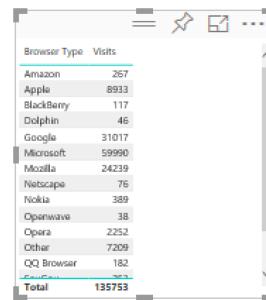
- Click Browser\_Type\_Report on the right side to expand the dataset table

The screenshot shows the Power BI desktop application. On the left, the 'My Workspace' navigation pane is open, showing 'Favorites', 'Recent', 'Apps', 'Shared with me', 'Workspaces', and 'My Workspace'. In the center, there is a blank workspace area. On the right, the 'VISUALIZATIONS' and 'FIELDS' panes are visible. The 'VISUALIZATIONS' pane has a section for 'Browser\_Type\_Report'. The 'FIELDS' pane shows a tree structure with 'Browser Type' expanded, showing 'Visits' under it. Other items listed include 'Page1', 'Page\_Report', 'Product1', and 'Product\_Report'. A mouse cursor is hovering over the 'Visits' item.

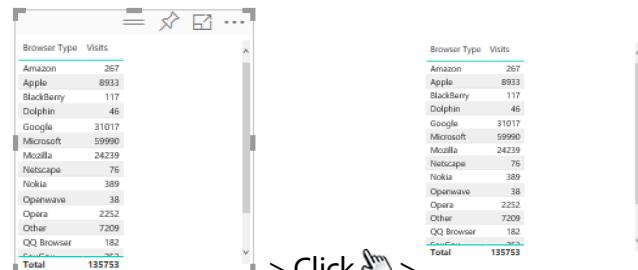
- Click the Browser Type dimension. It will add a new visualization to the work area listing the elements of the dimension.



- Now click the Visits metric. Take note of the sigma  $\Sigma$  next to the item, it represents metrics and numerical values.



- Click anywhere in the white space of the canvas area to deselect the current table visualization. Note: You need to do this before you work with another dataset table, otherwise it will add the item to the current table visualization.



- Click Page1 and expand the available columns



- Click Date, Page, and Page Views

Date	Page
2017/12/05	Gear
2017/12/05	Home
2017/12/05	Kids
2017/12/05	Man
2017/12/05	Search Results
2017/12/05	Seasonal Sale
2017/12/05	Shopping Cart: Billing Information
2017/12/05	Shopping Cart: Cart Details
2017/12/05	Shopping Cart: Shipping Information
2017/12/05	Women
2018/01/09	Gear
2018/01/09	Home
2018/01/09	Kids
<b>Total</b>	

- Click and drag the right side of the table visualization to bring all the columns into view

Date	Page	Page Views
2017/12/05	Gear	18077
2017/12/05	Home	36475
2017/12/05	Kids	13350
2017/12/05	Man	16866
2017/12/05	Search Results	47254
2017/12/05	Seasonal Sale	17745
2017/12/05	Shopping Cart: Billing Information	12712
2017/12/05	Shopping Cart: Cart Details	39366
2017/12/05	Shopping Cart: Shipping Information	18612
2017/12/05	Women	17975
2018/01/09	Gear	17803
2018/01/09	Home	36061
2018/01/09	Kids	12904
<b>Total</b>		473162

- Click anywhere in the white area of the canvas to deselect the table
- Now try selecting the same columns again but in a different order; Page, Date, Page Views. And resize the table visualization.

Page	Date	Page Views
Gear	2017/12/05	18077
Gear	2018/01/09	17803
Home	2017/12/05	36475
Home	2018/01/09	36061
Kids	2017/12/05	13350
Kids	2018/01/09	12904
Man	2017/12/05	16866
Man	2018/01/09	16628
Search Results	2017/12/05	47254
Search Results	2018/01/09	46284
Seasonal Sale	2017/12/05	17745
Seasonal Sale	2018/01/09	17400
Shopping Cart: Billing Information	2017/12/05	12712
Shopping Cart: Billing Information	2018/01/09	13676
<b>Total</b>		473162

Notice how the initial column layout in the table visualization is ordered by your selections. The order of selection will determine which visualization Power BI defaults to. For example, try selecting the Page Views metric first and then Page. Power BI will start with a column graph instead of the table visualization.



The fields tab, , under the VISUALIZATIONS section will allow you to manage the data and filters applied in the canvas and for each visualization.

	<p>Select a table in the canvas and the Values and Value level filters will appear.</p> <p>Use the Values section to reorder, rename, remove, and summarize the columns.</p> <ul style="list-style-type: none"><li>• Click and drag an item to move its position</li><li>• Click the downward triangle or right-click for the other options</li></ul> <p>The Visual level filters apply to the currently selected visualization and can be used constrain what is shown. The default filter of All exposes all values.</p>
	<p>Page level filters work within the current page of a report.</p> <p>Drillthrough filters can be used to create a custom drill down page in the report.</p> <p>Report level filters work across all pages within a report.</p>



## Exercise 3.1 – Visualizations in Power BI

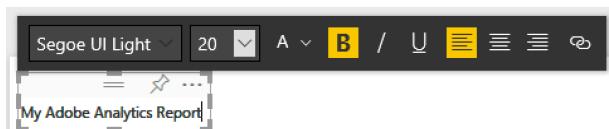
Now that you have the basics down for working with Dataset Tables let us move on to the visual aspects of Power BI.

- Click the “+” next to Page 1 at the bottom of the canvas to create a new page in the report.



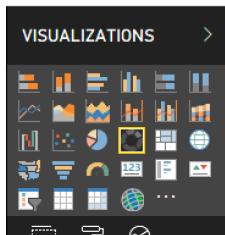
Add a page report title

- Click the Text box option, , to add a text box to the page
- Enter **My Adobe Analytics Report** in the text box
- Increase the font size to 20
- Set the font to bold

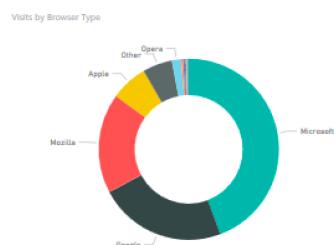


Add a visualization

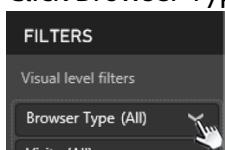
- Expand the **Browser\_Type\_Report** dataset table in the field section
- Click Visits
- Click Browser Type
- While the Visits by Browser Type bar graph is selected in the canvas click the donut chart visualization. The visualization in the canvas will change.



- Resize the visualization as necessary

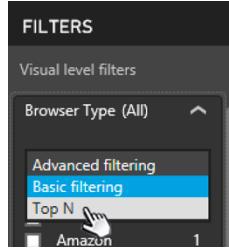


- Click **Browser Type (All)** under the FILTERS

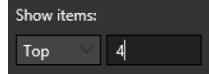




- Click the Filter Type dropdown and click Top N



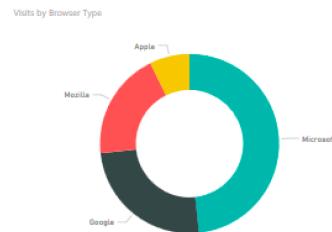
- Enter 4 next to Top



- Click and drag Visits from the Browser\_Type\_Report dataset to the "by value" input

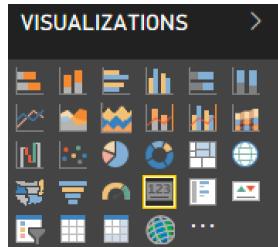


- Click Apply Filter



### Add a dynamic card

- Click the Report Suite dimension under Page1 (make sure no visualization is selected in the canvas)
- Click the Card visualization type



- Click the Format icon,
- Turn off the Category label. This will remove the "first Report Suite" label under the Report Suite name.



- Resize and position the Card visualization in the top-right corner of the canvas

### Add a Bar graph

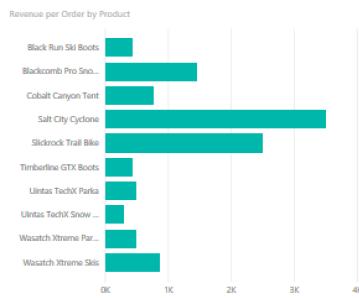
- Expand Product\_Report
- Click Product



- Click Orders
- Click Revenue
- With the visualization still selected. Change the visualization to clustered bar chart.

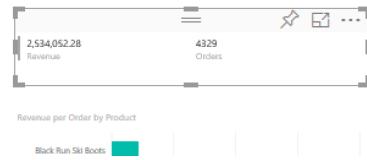


- Resize the clustered bar chart and position it in the canvas.



## Add a Multi-row card

- Click Orders and Revenue.
- Change the visualization to the multi-row card.
- Resize and position above the bar chart.



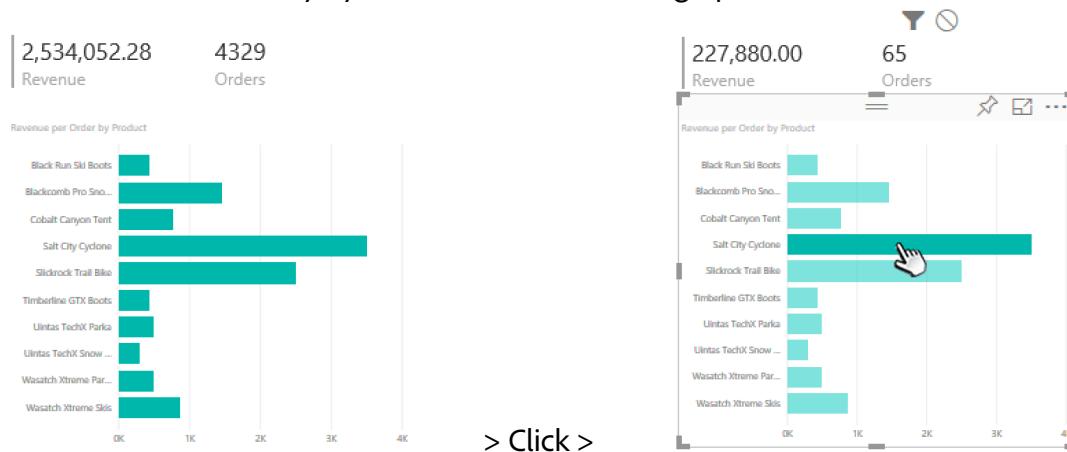
## Increasing label and value size

- Select a visualization
- Navigate to the format controls,
- Increase the "Text size" found under the following sections (if enabled)
  - Data labels
  - Category labels
  - Title
  - Y-Axis (for the bar chart)
- Repeat these steps for each visualization to get the desired result

## Exercise 3.2 – Relationships between visualizations

The visualizations placed on the canvas are more than static representations of the data. Selecting an item from one visualization can apply a filter to a relating visualization. The relationships are based on the dataset tables and any schema relationships defined (this latter feature is definable in the Power BI Desktop)

- Click the bar for Salt City Cyclone in the Product bar graph



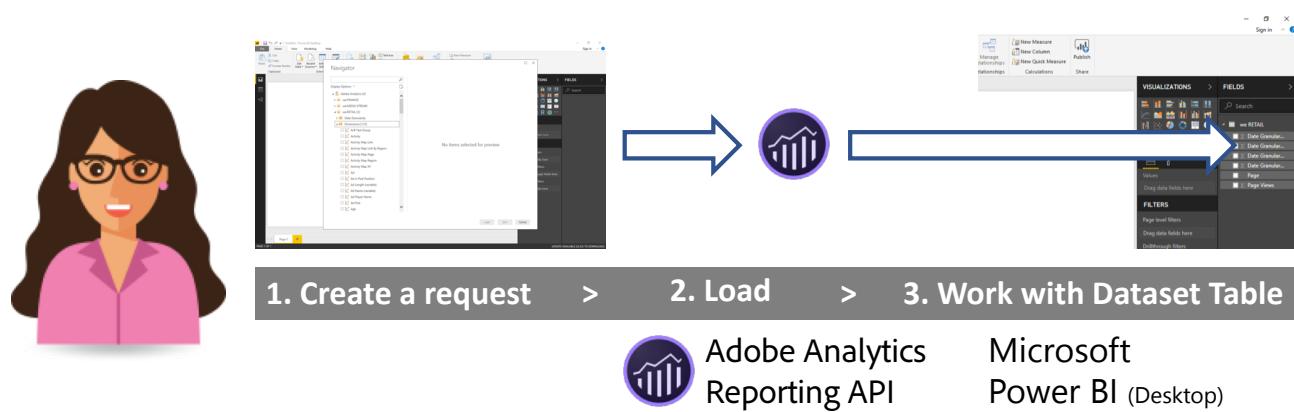
Notice the change in the multi-card visualization with Revenue and Orders? And none of the other visualizations changed. This is because those two visualizations are built from the same dataset table, published by Report Builder. You can toggle the Filter / No-Filter option, , per visualization to disable any possible relationship filtering that is unwanted in the report.



## Module 2

In this next module you will use Power BI Desktop to build and request data from Adobe Analytics and load them into Dataset Tables for reporting in Power BI. This integration is an early preview available when enabled in Power BI. (*We've enabled it for you in this lab. See Appendix B, if you would like to learn how to enable it on your own computer.*)

### Workflow from Microsoft Power BI desktop



- Create a request** within the Get Data framework of Power BI.
- Load** the request after it is built for the reporting needs. You will have access to Dimensions, Metrics, and Segments. The completed request will appear in the FIELDS section.
- Work with Dataset Table** in the report creation experience of the desktop. The desktop offers a robust feature set for changing, managing, and building relationships across the dataset tables. You can also create dataset tables from other data sources and use them side-by-side in the report.

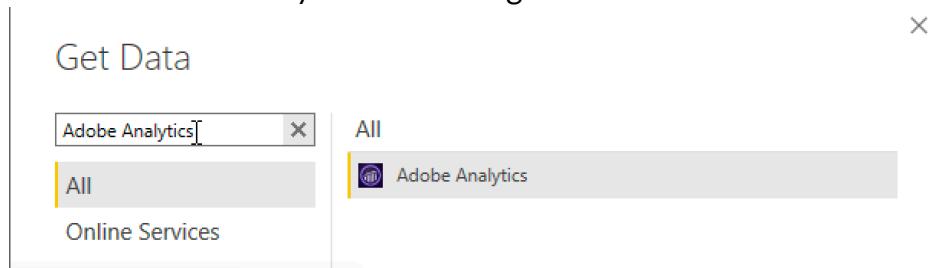
### Exercise 1 – Build a request

- Click the Get Data button in the ribbon menu

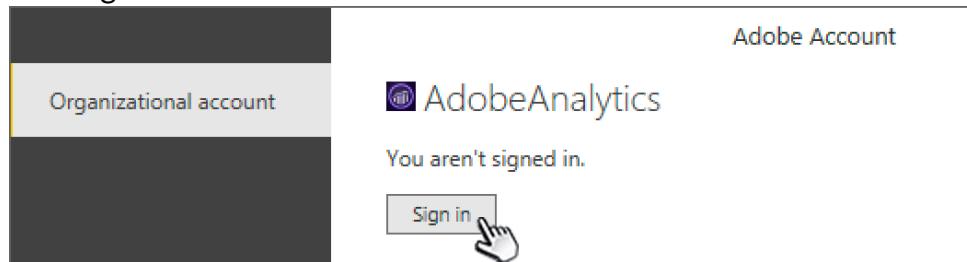




- Search for Adobe Analytics in the dialog



- Click Adobe Analytics in the right section of the dialog
- Click Connect
- Click Sign in



- **IMPORTANT NOTE:** Progress through the dialogs and **sign in with the Adobe ID provided to you for this lab.** This will help us save time, in the event your corporate Adobe ID doesn't have sufficient Adobe Analytics API privileges, and the data references will match.
- Click Connect



The Navigator will display the list of report suites available to use. You will click the report suite tree to navigate the date granularity, dimensions, and metrics. As you build your request from those assets a preview will appear on the right side with more configuration options.



## Navigator

The screenshot shows the 'Display Options' dropdown menu open, revealing several items under 'Adobe Analytics [4]': we.FINANCE, we.MEDIA STREAM, we.RETAIL, and we.RETAIL App. A search bar and a refresh icon are also visible.

Display Options ▾

- Adobe Analytics [4]
  - we.FINANCE
  - we.MEDIA STREAM
  - we.RETAIL
  - we.RETAIL App

No items selected for preview

- Click We.RETAIL to expand the asset tree

The screenshot shows the 'we.RETAIL [3]' node expanded, revealing three sub-items: Date Granularity, Dimensions, and Measures. The 'Dimensions' item is highlighted with a blue border.

- we.RETAIL [3]
  - Date Granularity
  - Dimensions
  - Measures

- Use Date Granularity to apply a Power BI date friendly column
- Dimensions will contain all the report dimensions from Adobe Analytics
- Measures will contain the Adobe Analytics metrics

- Click Dimensions
- Search for Page



- Check the box next to Page

### Navigator

The screenshot shows the Adobe Analytics Navigator interface. On the left, there's a sidebar titled 'Page' with a tree view of dimensions and measures. Under 'Dimensions', the 'Page' node is expanded, with its children 'Page', 'Page - Conversion', and 'Page Type' visible. A cursor is hovering over the 'Page' node. To the right of the sidebar, there are optional filters for 'Date Range (optional)' (Start: 3/12/2018, End: 3/12/2018), 'Segment (optional)' (Segment: 'Select one or more values'), and 'Top (optional)' (Top: 'Dimension'). Below these filters is a preview section titled 'we RETAIL' showing a list of pages: 'Page', 'Search Results', 'Shopping Cart: Cart Details', 'Home', 'Women', 'Shopping Cart: Shipping Information', 'Seasonal Sale', 'Gear', 'Men', 'Kids', and 'Shopping Cart: Billing Information'. At the bottom of the preview section are buttons for 'Load' (highlighted in yellow), 'Edit', and 'Cancel'.

- Remove the search criteria. This will bring the full tree back.
- Click the Dimensions to collapse the list.
- Click the Measures
- Search for Page Views



- Check the box next to Page Views

The screenshot shows the Adobe Analytics Navigator interface. On the left, there's a sidebar with 'Page Views' selected under 'Measures'. The main area displays a table titled 'we RETAIL' with a preview downloaded on Tuesday, February 20, 2018. The table lists various pages and their page views:

Page	Page Views
Search Results	393
Shopping Cart: Cart Details	334
Home	332
Women	187
Shopping Cart: Shipping Information	157
Seasonal Sale	152
Gear	147
Men	127
Kids	113
Shopping Cart: Billing Information	107

At the bottom right, there are 'Load', 'Edit', and 'Cancel' buttons.

- Update the Start under the Date Range option, one day behind the End. For example,

Start  End

- Scroll down in the same options panel to expose Top
- Enter a Top of 50
- Click Apply
- Click Load and you will find a new Dataset Table added under FIELDS

The screenshot shows the 'Fields' panel. It contains two dataset tables: 'we RETAIL' and 'Page'. The 'Page' table is expanded, showing its sub-table 'Page Views'.

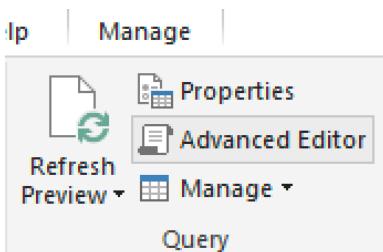
- Click the ellipsis or right-click on the dataset table name
- Click Rename
- And rename it to Page Report



## Exercise 2 – Custom reporting date ranges

The reporting date range is an important aspect of the reporting that comes from Adobe Analytics. It provides context and relevance to current customer behavior activity. The Navigator used in Exercise 1 is designed to build the request template. From there you can customize it with a custom reporting date range. For this exercise we will set it to yesterday.

- Click the ellipsis or right-click on the dataset table name, Page Report
- Click Edit Query
- Find the Queries [1] list on the left side of the new dialog
- Select the Page Report
- Click Advanced Editor in the ribbon menu



- You will be presented with a low-level editor

```
let
    Source = AdobeAnalytics.Cubes(),
    geo1xxpnw1218 = Source{[Id="geo1xxpnw1218"]}[Data],
    #"Added Items" = Cube.Transform(geo1xxpnw1218,
        {
            {Cube.ApplyParameter, "DateRange", {#date(2018, 3, 11), #date(2018, 3, 12)}},
            {Cube.ApplyParameter, "Top", {50, null}},
            {Cube.AddAndExpandDimensionColumn, "page", {"page"}, {"Page"}},
            {Cube.AddMeasureColumn, "Page Views", "pageviews"}
        }
    )
in
    #"Added Items"
```

✓ No syntax errors have been detected.

Done Cancel

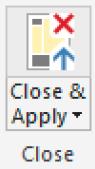
- We will be editing the Cube.ApplyParameter of DateRange  
`{Cube.ApplyParameter, "DateRange", {#date(2018, 3, 11), #date(2018, 3, 12)}},`
- Enter the new specification within the body of this parameter  
`{Cube.ApplyParameter, "DateRange", {`  
    `...`  
`}},`
- Enter  
`DateTime.Date(DateTime.LocalNow() - #duration(1,0,0,0)),`  
`DateTime.Date(DateTime.LocalNow() - #duration(1,0,0,0))`



- You will end up with this new query

```
let
    Source = AdobeAnalytics.Cubes(),
    geo1xxpnw1218 = Source{[Id="geo1xxpnw1218"]}[Data],
    #"Added Items" = Cube.Transform(geo1xxpnw1218,
        {
            {Cube.ApplyParameter, "DateRange", {
                DateTime.Date(DateTime.LocalNow() - #duration(1,0,0,0)), DateTime.Date(DateTime.LocalNow() - #duration(1,0,0,0))
            }},
            {Cube.ApplyParameter, "Top", {50, null}},
            {Cube.AddAndExpandDimensionColumn, "page", {"page"}, {"Page"}},
            {Cube.AddMeasureColumn, "Page Views", "pageviews"}
        })
in
    #"Added Items"
```

- Click Done
- Click Close and Apply in the ribbon menu of the Query Editor.



- Let us also rename the Dataset Table to reflect the change we made
- Click the ellipsis or right-click on the dataset table name
- Click Rename
- And rename it to Pages from Yesterday

*Find more details on Power Query M functions here:*

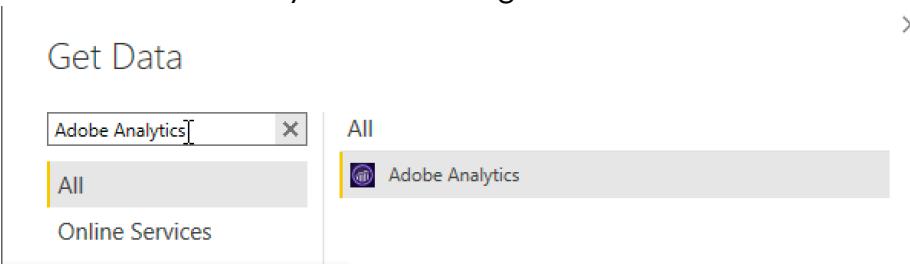
<https://msdn.microsoft.com/en-us/library/mt779182.aspx>

### Exercise 3 – Managing date granularity

- Click the Get Data button in the ribbon menu



- Search for Adobe Analytics in the dialog



- Click Adobe Analytics in the right section of the dialog
- Click Connect
- Click we.Retail
- Click Measures
- Find and click Page Views
- Fully expand the Date Granularity hierarchy
- Click Level 1: Year



- Click Level 2: Month
- Click Level 3: Day
- Update the Start date to 1/1/2018
- Click Apply
- Click Load
- Rename the new Dataset Table from we RETAIL to Page Views
- Click the ellipsis or right-click on the dataset table name
- Click Edit Query
- Click the header of the month column to select it.
- In the Query Editor you can CTRL+ALT+click multiple columns to select them. Select the other two columns in this order Day and Year.
- Click Merge Columns found under the Add Column section of the ribbon menu.
- At this step you can define the separator. Select –Custom—from the drop down.
- Enter /
- Type Day in the New column name field

### Merge Columns

Choose how to merge the selected columns.

Separator

New column name (optional)

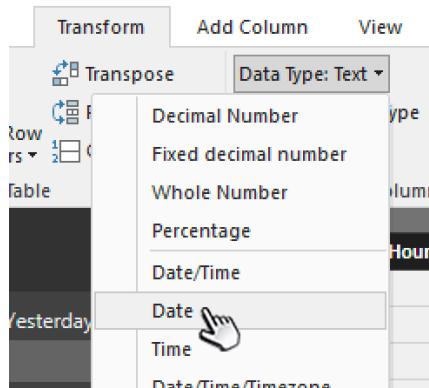
- Click OK
- Scroll in the Query Editor to find the new column.

ID	Date	Day
357	1/1/2018	
358	1/1/2018	
381	1/1/2018	
368	1/1/2018	
394	1/1/2018	
387	1/1/2018	
363	1/1/2018	
382	1/1/2018	
399	1/1/2018	

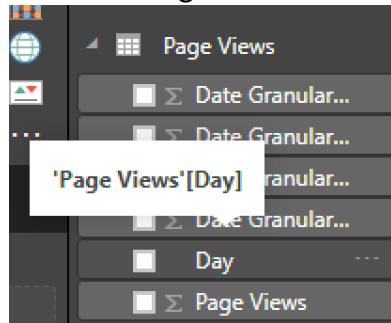
- It will default to type String. Select the new Day column by clicking the header.



- Navigate to Data Type: Text under the Transform section of the ribbon menu
- Select Date in the drop-down list



- Click Close and Apply found under the Home section of the ribbon menu.
- Check the Page Views dataset table and you will find a new column ready to use.





## *Wrap up*

In this lab we focused on how to get data from Adobe Analytics into Power BI. We also covered a few core concepts for working with the data and a couple basics on visualizations. I trust you found this lab to be informative. The integrations presented can help your organization share findings and insights from Adobe Analytics more broadly and intuitive way.

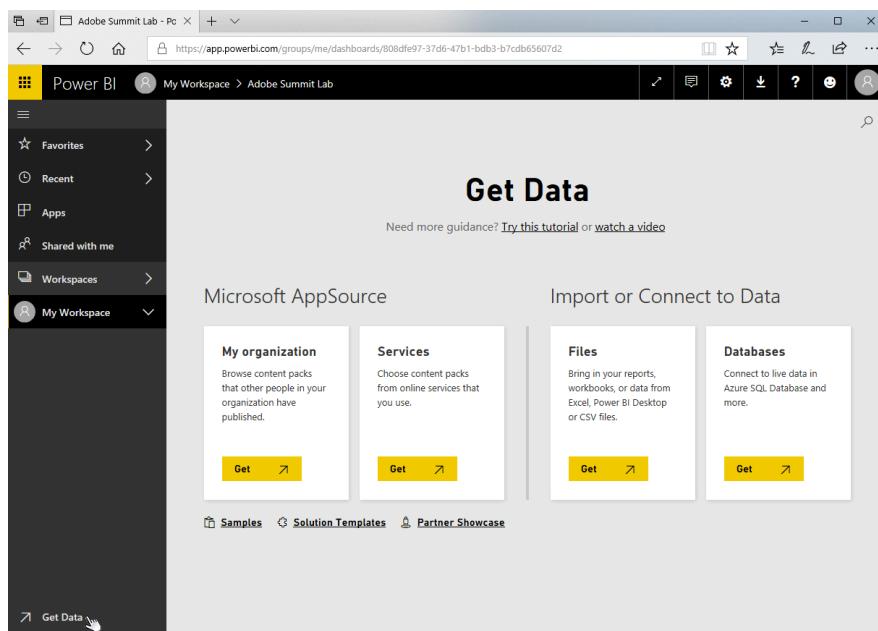


## Appendix A

### Uploading an Excel workbook directly to the Power BI online service

If the Report Builder schedule job hasn't been published to Power BI you can still try out the experience by loading an Excel workbook directly to the Power BI online service. Here are the steps:

- Save the Excel workbook you are using locally to the desktop
- Log in to the Power BI service, <https://app.powerbi.com>
- Click Get Data in the bottom left corner





- Choose Files found under “Import or Connect to Data” section

The screenshot shows the Microsoft AppSource 'Get Data' page within a Power BI workspace. The left sidebar includes 'Favorites', 'Recent', 'Apps', 'Shared with me', and 'Workspaces'. The main area has sections for 'My organization', 'Services', 'Files', and 'Databases'. The 'Files' section is highlighted with a yellow border, and its 'Get' button is also highlighted with a yellow box. Below these sections are links for 'Samples', 'Solution Templates', and 'Partner Showcase'.

- Select “Local File” on the next screen

The screenshot shows the 'Import or Connect to Data' screen in Power BI. The left sidebar highlights the 'Import or Connect to Data' section, which contains 'Files' and 'Databases & More'. The main area displays icons for 'Local File', 'OneDrive – Business', 'OneDrive – Personal', 'SharePoint – Team Sites', and a 'Learn about importing files' link. The 'Local File' icon is highlighted with a yellow box.



- Click Upload found under the “Upload your Excel file to Power BI” section

The screenshot shows the Power BI desktop application's main interface. On the left, there's a sidebar with navigation links like Favorites, Recent, Apps, Shared with me, Workspaces, and My Workspace. The central area is titled 'Local File' with the sub-instruction 'Choose how to connect to your Excel workbook'. It offers two paths: 'Import Excel data into Power BI' (represented by a chart icon) or 'Upload your Excel file to Power BI' (represented by a grid icon). Below these, detailed descriptions explain each option. At the bottom, there are 'Import' and 'Upload' buttons, with the 'Upload' button being the one highlighted with a yellow box.

- Navigate to your Workbooks to find the uploaded Excel

This screenshot shows the 'Workbooks' section of the Power BI desktop interface. The sidebar on the left remains the same. In the center, there's a list of workbooks. A tooltip message 'Your Excel workbook Book2 is now in your list of workbooks.' is displayed above the 'Go to workbook' button for the 'Book2' entry. The 'Go to workbook' button is highlighted with a yellow box.

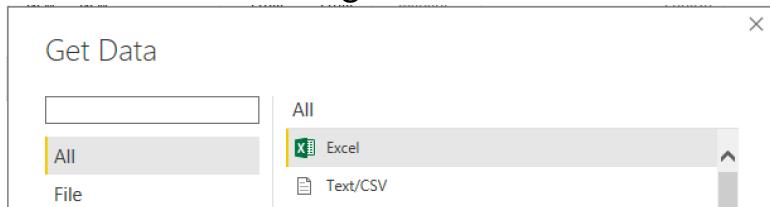
## Loading Excel Dataset Tables directly to Power BI Desktop

- Save the Excel workbook you are using locally to the desktop
- Launch the Power BI Desktop application by-clicking the Power BI icon in the task bar, next to start in the bottom left corner.
- Click “Already have a Power BI account? Sign in” on the bottom left of the first dialog
- Sign in to your Power BI account **or click the X to proceed** in the next dialog.
- (If you did not sign in in the prior dialog, click the X to proceed again.)
- Click Get Data in the ribbon menu.





- Click Excel in the dialog



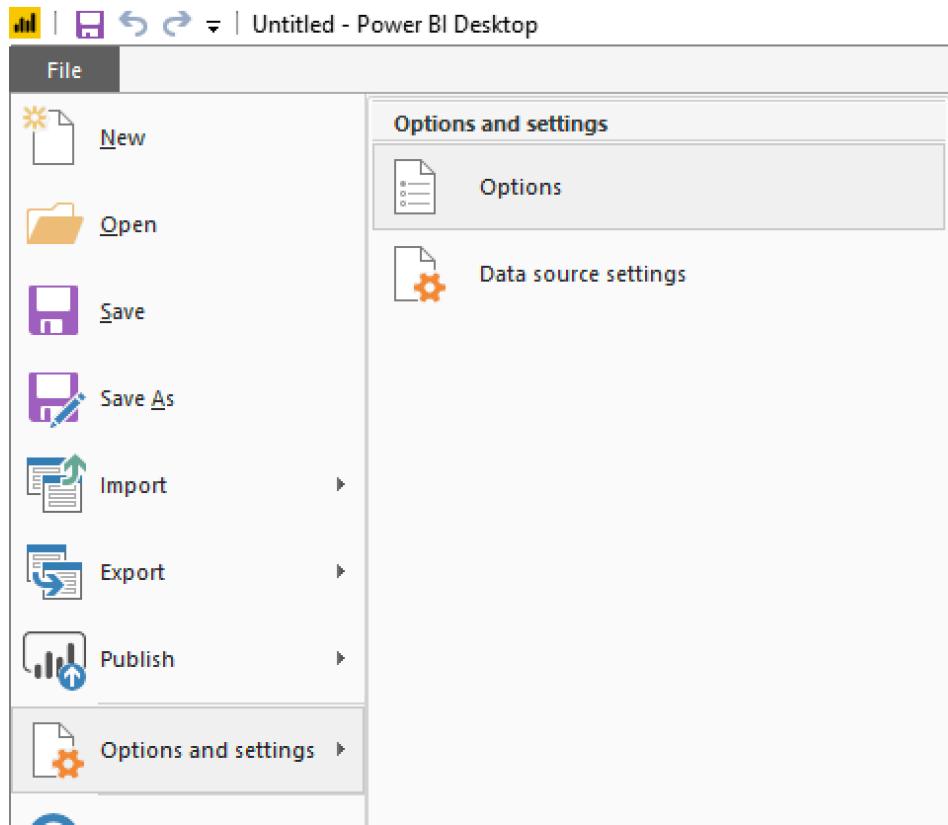
- Click Connect
- Navigate to the workbook you saved on the Windows desktop
- Select the workbook and click open
- Power BI will open the Excel and present all the available Dataset Tables for you to review.
- Select the Dataset Tables you would like to load into Power BI.
- Click Load



## Appendix B

### Enabling the Adobe Analytics preview feature in Power BI Desktop

- Download the latest version of Power BI Desktop from <https://app.powerbi.com>
- Launch the application
- Navigate to Options under File > Options and settings.



- Click the Preview features



- Check the box for Adobe Analytics Connector  
**Options**

#### GLOBAL

Data Load

Query Editor

DirectQuery

R scripting

Security

Privacy

Updates

Usage Data

Diagnostics

Preview features

Auto recovery

#### Preview features

The following features are available for you to use. Some of these features might change or be removed in future releases.

- Shape map visual [Learn more](#)
- Custom report themes [Learn more](#)
- Numeric range slicer [Learn more](#)
- Spanish language support for Power BI Q&A
- Custom data connectors [Learn more](#)
- Bookmarks [Learn more](#)
- Adobe Analytics connector [Learn more](#)
- Q&A [Learn more](#)
- Show dates as a hierarchy in the fields list

- Click OK
- Close and Restart Power BI

#### Adobe Analytics permissions

Here is a quick note before you use the connector for the first time in Power BI.

Check with your administrator to confirm you are using an Adobe ID, linked to your Adobe Analytics account. And that analytics account has the proper permissions to use the Analytics Reporting API.



# Your Notes



## Your Notes

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