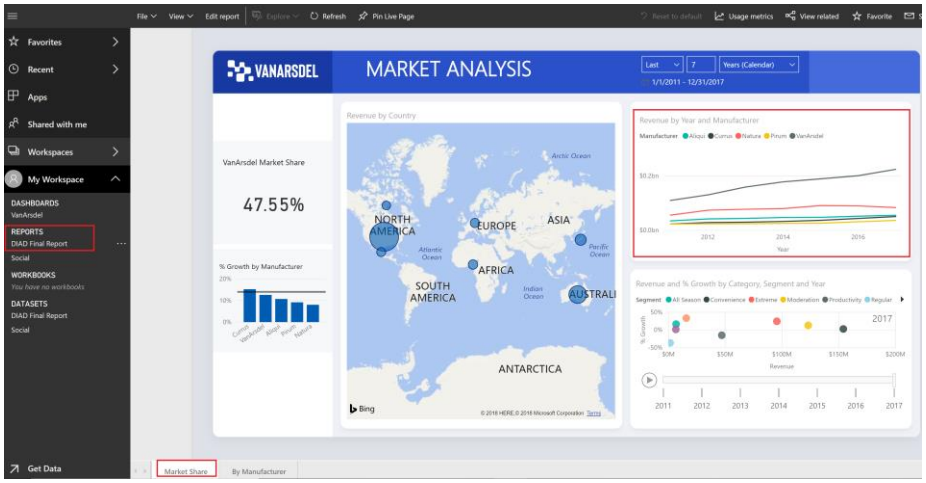
DIAD Power BI Desktop Demo Instructions

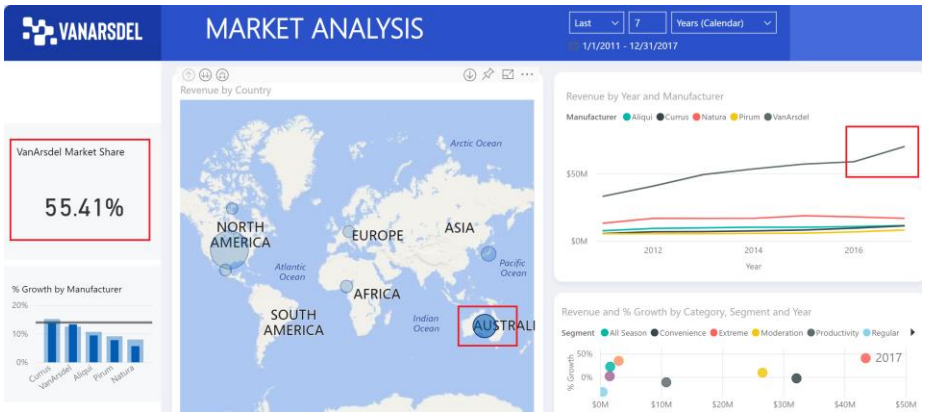
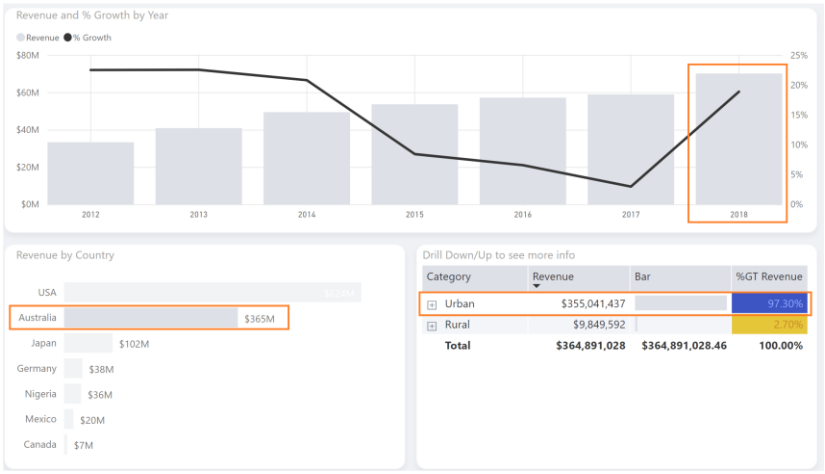
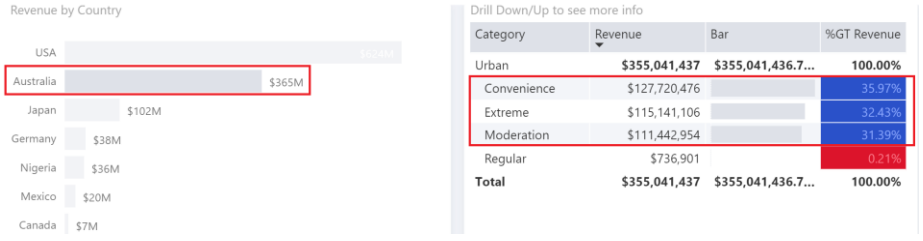
Prerequisites

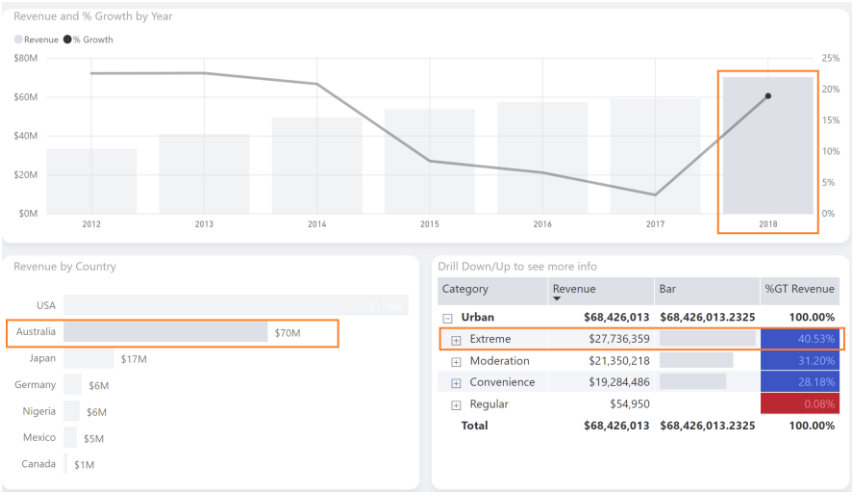
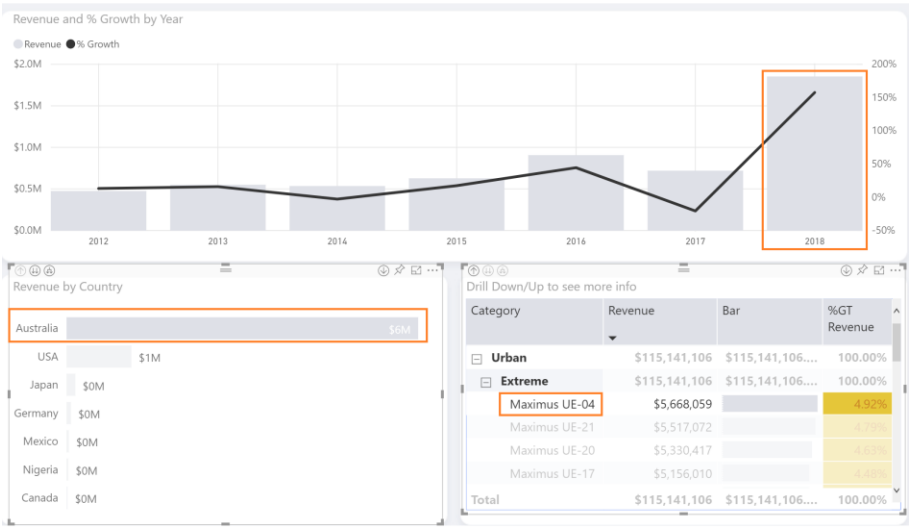
- Download a copy of the demo assets locally
- Install Power BI Desktop

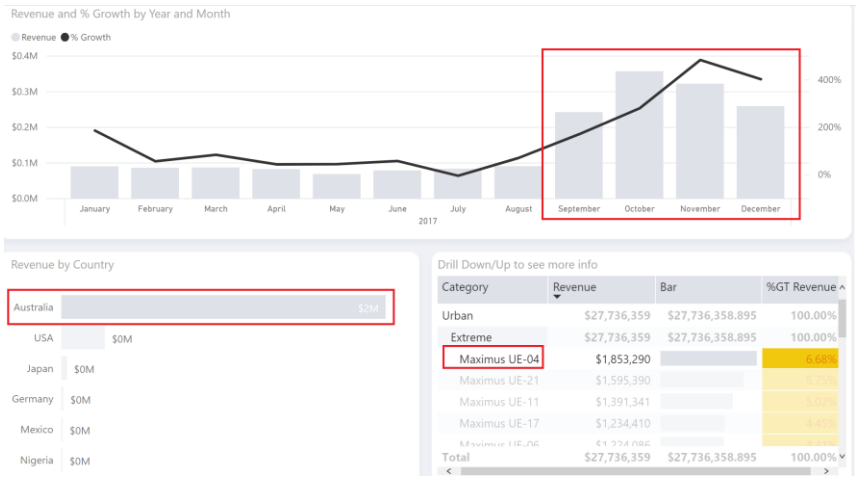
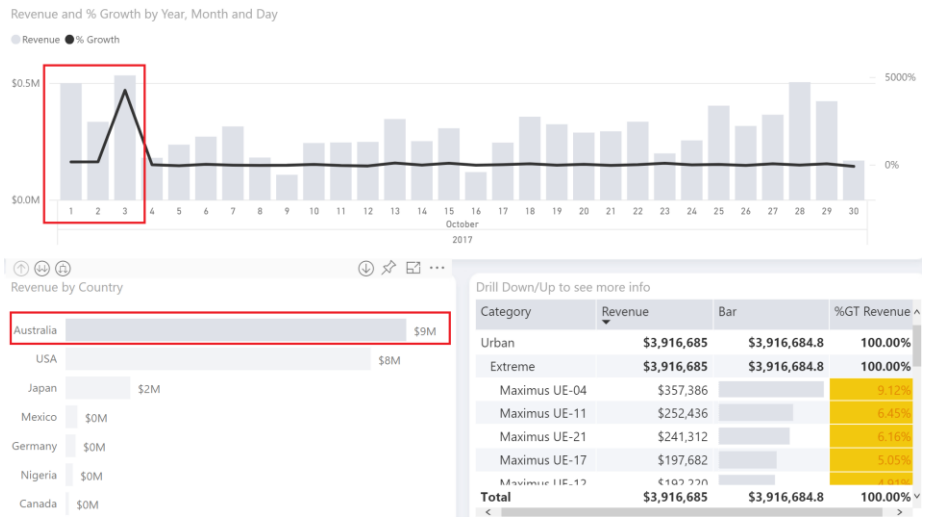
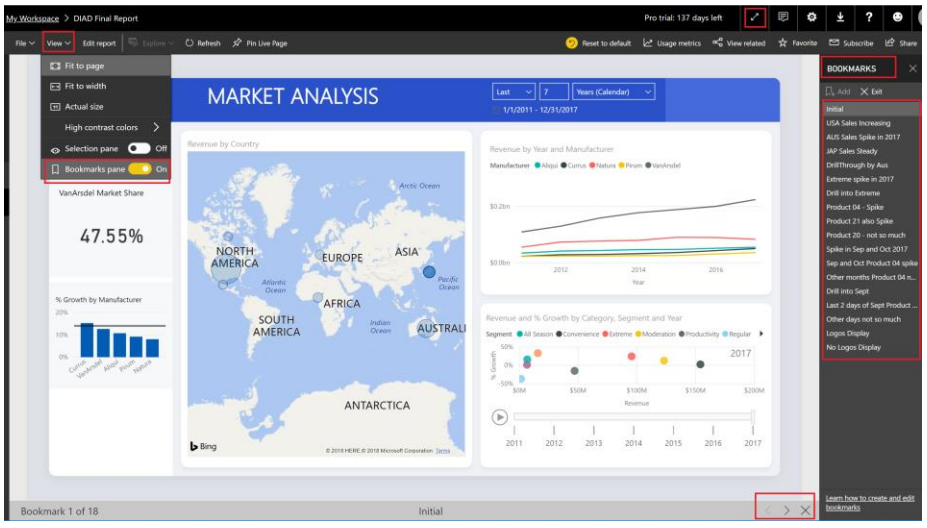
Pre Demo	
1. Open DIAD Final Report.pbix file 2. Open bi_dimensions.xlsx 3. Open Canada.csv 4. Login to https://app.powerbi.com 5. Create a new **workspace** called **DIAD** 6. Publish DIAD Final Report.pbix to the workspace 7. Follow the lab to create VanArsdel dashboard 8. Create **DIAD app**	

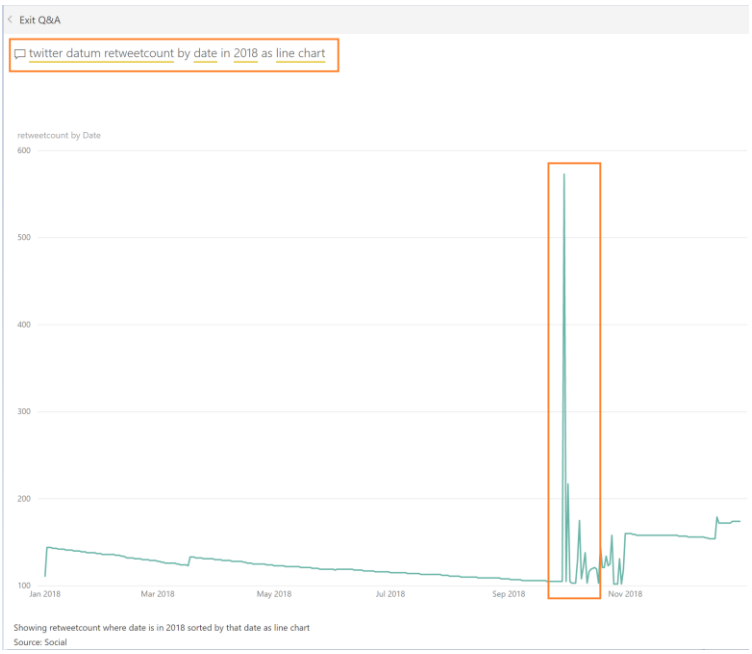
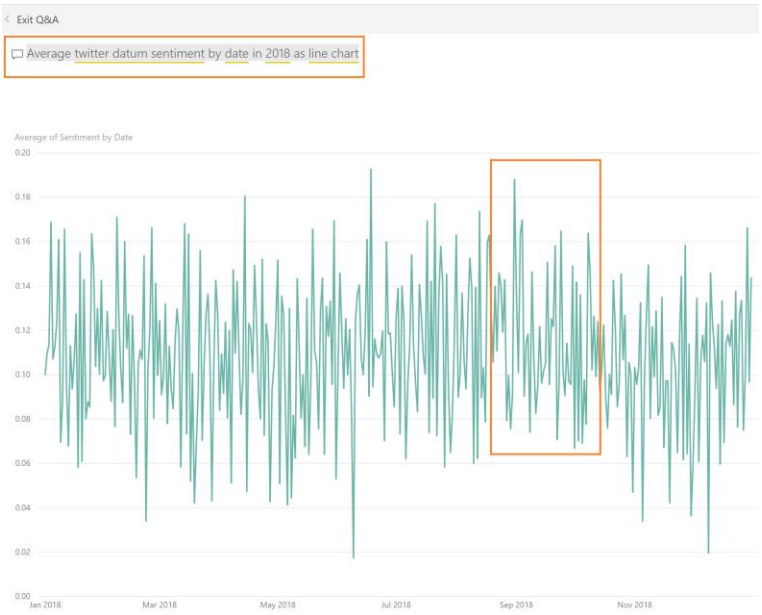
Power BI Demo

9. Talk about the Dataset VanArsdel, manufactures expensive electronic products that could be used for fun as well as work and it sells them directly to consumers nationwide as well as several other countries VanArsdel and its competitors have retained a 3rd party marketing company to collect and anonymize industry sales so that all participants can benchmark themselves We are going to compare VanArsdel's performance with that of the competitors and in the process try to figure out if there are any scenario that stands out. Based on this information, executives can make decisions.	
10. Login to https://app.powerbi.com impersonating an end user. Launch DIAD app 11. Navigate to Market Share page of DIAD Final Report 12. Using the line chart talk about the fact that VanArsdel has a large market share compared to other manufacturers. Also notice that sales are increasing YoY.	

13. Notice USA has the maximum sales. Select USA bubble in the map visual 14. Notice VanArsdel Market Share in USA is 43% 15. Now select other countries like Canada, Japan and notice VanArsdel Market Share 16. Select Germany and notice VanArsdel Market Share is 64%. Also notice in the line chart the growth is steady 17. Select Australia bubble and notice VanArsdel Market Share is 55% and in the line chart notice there is a big spike in 2018	
18. Let's investigate further, navigate to By Manufacturer page 19. Using Manufacturer slicer filter down to VanArsdel	
20. Select USA in the Revute by Country visual 21. Notice sales has increased marginally in 2018 and Urban category is 99% of the revenue 22. Select Australia in the Revenue by Country visual 23. Notice sales has spiked in 2018 and Urban category is 97% of the revenue 24. Similarly select Japan and again Urban category in 99%	
25. Let's drill down Urban category and investigate further 26. Select USA in the Revenue by Country visual 27. Notice Convenience is the biggest Segment followed by Moderation and Extreme segments 28. Select Japan in the Revenue by Country visual 29. Notice Convenience is the biggest Segment followed by Moderation and Extreme segments 30. Select Australia in the Revenue by Country visual	

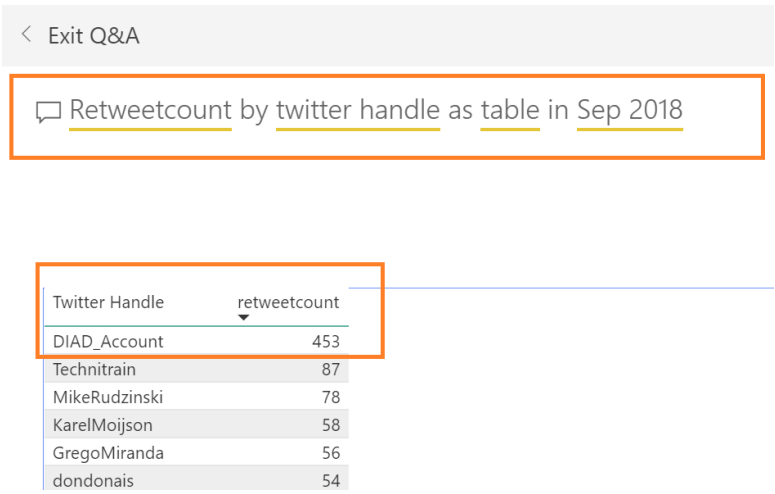
31. Notice sales in Convenience, Moderation and Extreme segments are both in mid-30%. Let's investigate this further. Sales in Australia is out of the norm.	
32. Make sure Australia is selected in Revenue by Country visual 33. Ctrl select 2016 from Revenue and %Growth by Year visual 34. No major change is sales by Product segment 35. Ctlr uncheck 2016 and select 2017 36. No major change is sales by Product segment 37. Ctlr uncheck 2017 and select 2018 38. Notice there is a spike is sales of Extreme in 2018 Let's drill down to Product level and check if there is anything interesting happening	
39. Drill down Extreme Segment in the matrix 40. With Australia selected in Revenue by Country visual select Maximus UE-04. Notice there is a spike in 2018 41. Similarly, there is a spike for the Top 5 products	

42. Make sure Australia is selected in Revenue by Country visual 43. Let's drill down 2018 to month level and investigate 44. Notice there is spike the last 4 months of 2018 45. Select Maximus UE-04 in the matrix visual and notice the spike in last 4 months and % Growth is positive as well 46. Similar situation for Maximus UE-21 This is good, let's drill down to day level to check if spikes was on particular days	
47. Make sure Australia is selected in Revenue by Country visual 48. Make sure Maximus UE-04 is selected in the matrix visual 49. Drill down September 2018 to day level 50. Notice there is a spike the last couple of days of September 51. Similarly drill down October and notice there is a spike the first few days and then it holds steady Ok something happened end of September and early October to cause the spike	
52. From the menu, select View. Enable Bookmarks Pane 53. Notice Bookmarks has been created for the story we just discovered. Talk about the ability to create bookmarks and use it for presentation or to highlight insights 54. Enable Full screen mode and navigate through a few bookmarks in presentation mode	

We have captured Twitter data for VanArsdel. Let's use this information and investigate if there was any social activity that triggered the spike in sales in September and October 55. Navigate to VanArsdel dashboard 56. In QnA text box type in "twitter datum retweetcount by date". Notice a line chart is created and there is a spike in retweets during our Spike period 57. Let's focus in on 2018. Continue typing "twitter datum retweetcount by date in 2018". This creates a bar chart 58. Continue typing "twitter datum retweetcount by date in 2018 as line chart" **NOTE**: make sure you chose fields from Twitter data as you type	
There is a noticeable spike during end of September and early October. Guess there is a correlation. Let's analyze the sentiment of these tweets. 59. In the QnA box, type "Average twitter datum sentiment". Notice it's 0.11 60. Continue typing "Average twitter datum sentiment by date in 2018 as line chart" Notice the sentiment score around September and October of 2018 is around the average of 0.11. So that doesn't help much. Let's look at the data by twitter handle	

61. This time in QnA box, enter "Retweetcount by twitter handle as table in Sep 2018"
62. Sort by Twitter handle column. Notice there is many tweets from a single tweet handle. This handle belongs to the marketing department of VanArsdel. We found the cause for the spike. The social initiative by the marketing department lead to the spike in sales.

We found the reason for the spike is sales. This information could be shared with other regions and they could potentially have a similar social initiative to boost sales.



Pre-Lab Pointers

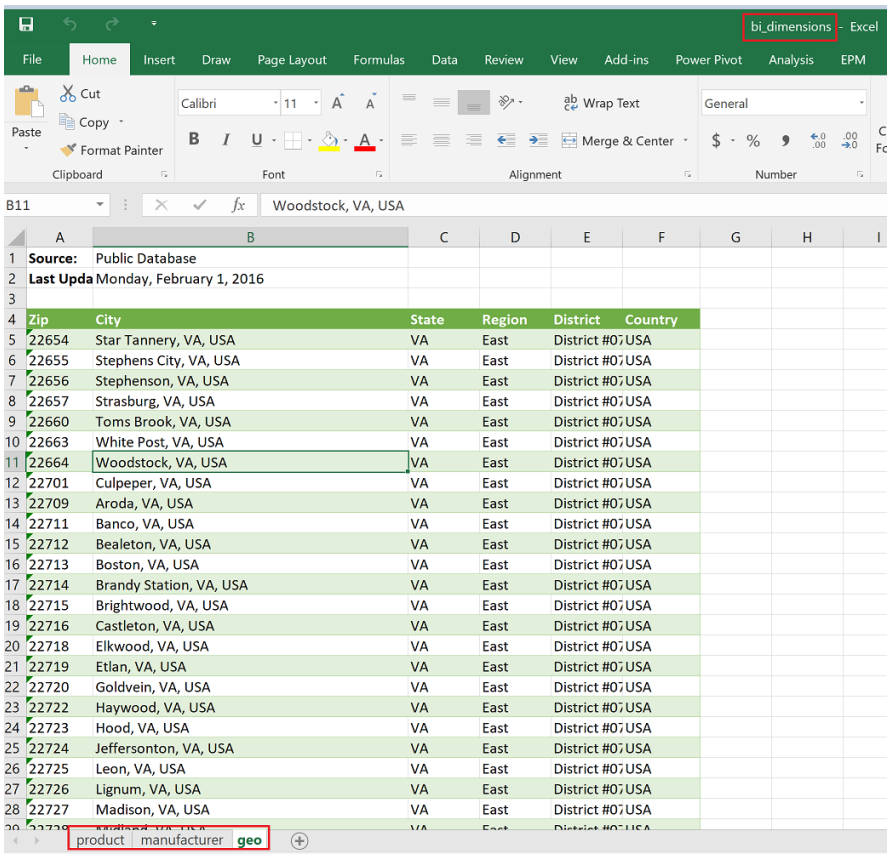
63. Navigate to bi_dimensions.xlsx window (opened in Step 2)
64. Walk through each of the sheets and talk about the dimension data, layout and challenges to consume this data
65. Navigate to Canada.csv window (opened in Step 3)
66. Talk about the sales data

Product, Geography, Date, Manufacturer and Sentiment data is available in bi_dimensions.xlsx (in folder DIAD\Data\USSales)

Sales data for USA is available in bi_salesFact.xlsx (in folder DIAD\Data\USSales)

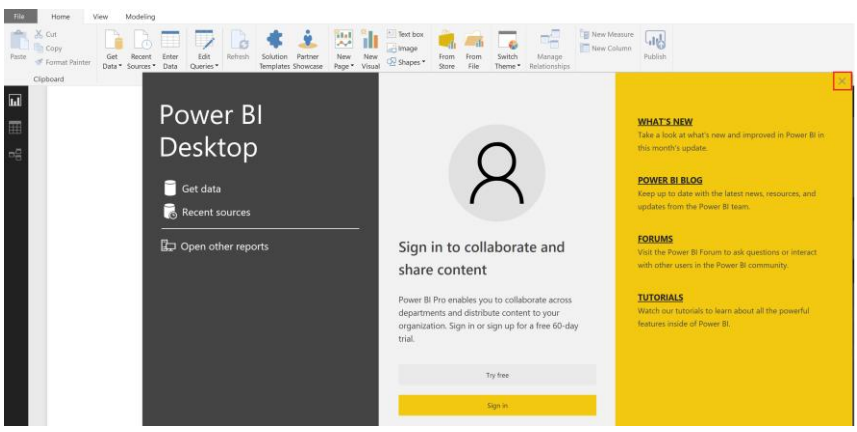
Sales data for other countries is available in folder DIAD\Data\InternationalSales

Data from these sources need to be brought together to analyze and report on



Power BI Desktop

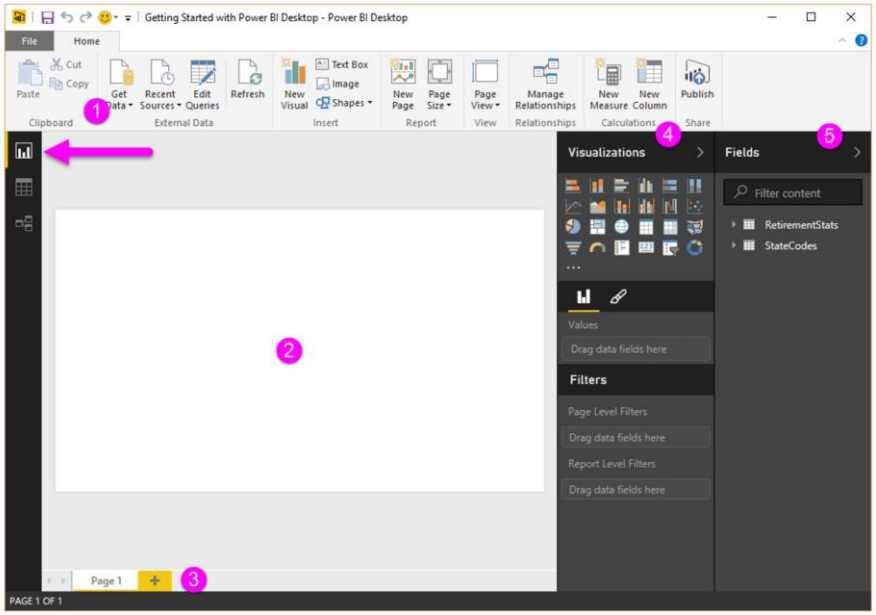
67. Launch new instance of Power BI Desktop
68. Once Power BI Desktop opens, startup screen opens as well
69. Close startup screen by clicking on "x" on the top right corner



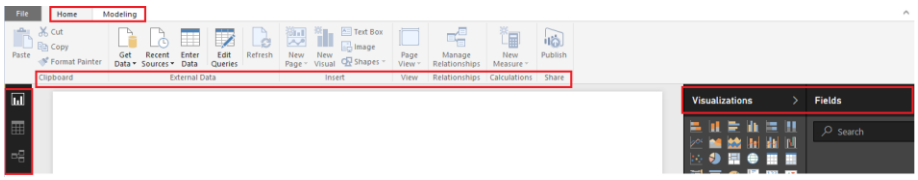
The **Report** view has five main areas:

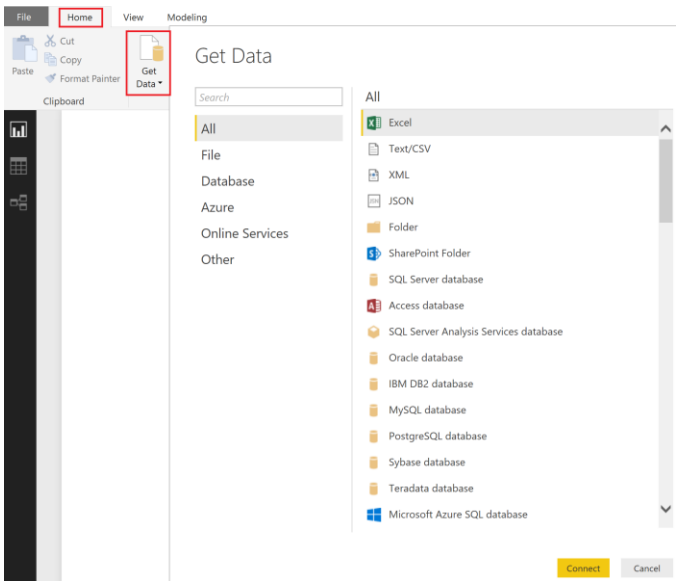
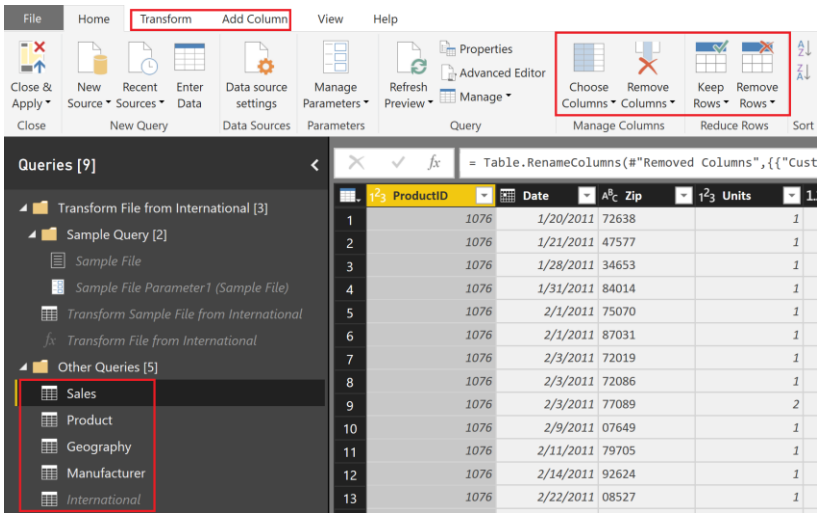
1. The ribbon, which displays common tasks associated with reports and visualizations
2. The **Report** view, or canvas, where visualizations are created and arranged
3. The **Pages** tab area along the bottom, which lets you select or add a report page
4. The **Visualizations** pane, where you can change visualizations, customize colors or axes, apply filters, drag fields, and more

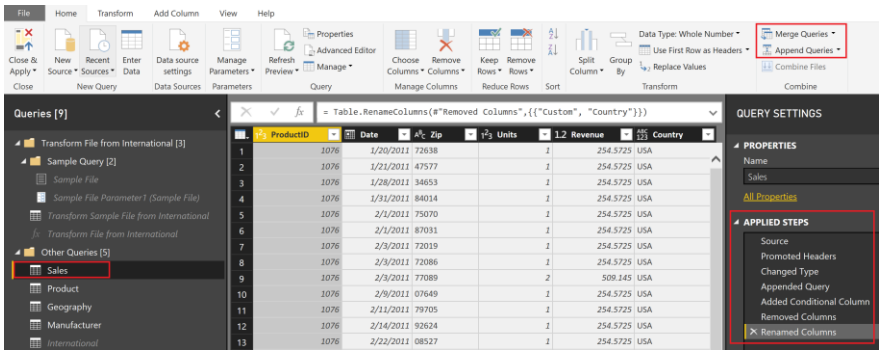
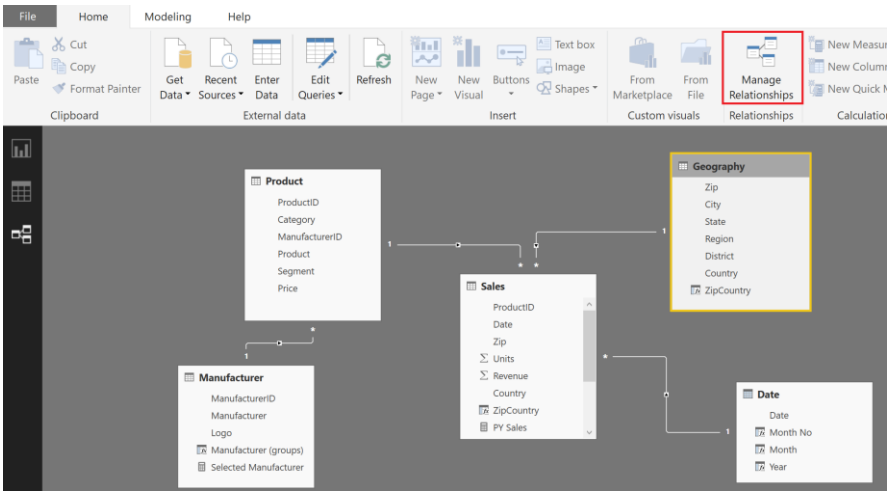
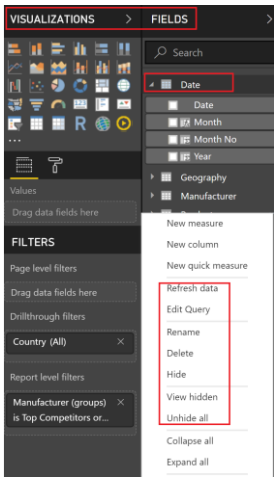
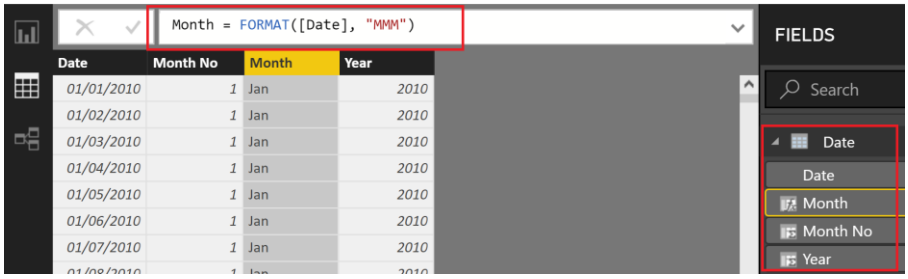
The **Fields** pane, where query elements and filters can be dragged onto the **Report** view, or dragged to the **Filters** area of the **Visualizations** pane



70. This opens Power BI Desktop
71. Notice in the ribbon under Home, there are following categorization
    - Clipboard
    - External Data: This section is equivalent to Power Query for Excel. It is used to connect to various data sources and transform data
    - Insert: Used to create elements in the report. Similar to Power View for Excel
    - View: This section is used to customize Page View
    - Relationships: This section is used to create/edit relationships in the data model. It's similar to Power Pivot for Excel
    - Calculations: This section is used to create/edit measures and calculated columns. It's similar to Power Pivot for Excel
    - Share: This is used to Publish data model to Power BI Service

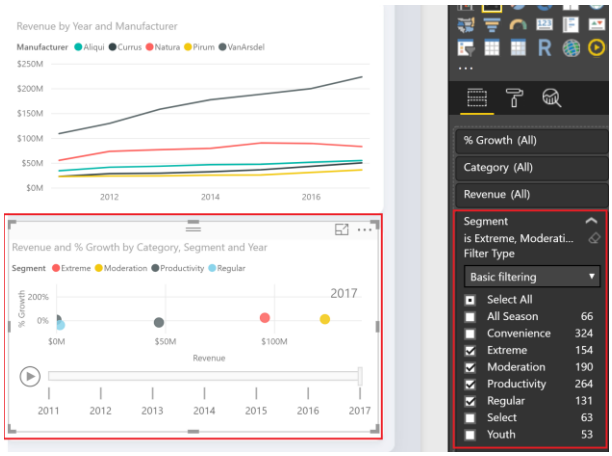


72. Notice on the left panel, there is reports, data and relationship sections. These views provide capability to view data and relationships between tables 73. The center panel is the canvas used to create visuals or view data 74. Right panel is used to add/edit report elements 75. Also notice the Modeling ribbon option, that provides option to Add Columns, Add Measures and other modeling options	
76. From the ribbon select Home -> Get Data -> More… 77. Talk about the variety of sources that are supported • File • Database • Azure • Other	
78. Switch to DIAD- Final Report.pbix window (opened in Pre-Demo step 1) 79. Click on Home -> Edit Queries to open Query Editor 80. 5 queries are created from the 1 workbook, a csv file and a folder data source 81. There are data preparation and transformation options. Talk about • Add/Delete Columns and Rows • Change Data Type • Operations under Transform menu • Operations under Add Column menu	

82. Select Sales query 83. Walk through the APPLIED STEPS 84. Talk about Append in Sales and difference between Append and Merge 85. Talk about Add Conditional column 86. Talk about Query Dependencies 87. Close Query Editor window 88. If you have time, talk about data transformations performed in the other queries	
89. Navigate to Relationships section 90. Talk about the relationships that are created to connect all the queries 91. Click on Manage Relationships and show the dialogue 92. Talk about 1:1 and 1:M relationships that are supported by Power BI Desktop 93. Depending on the audience might want to talk about bi-direction relationship 94. Talk about Synonyms	
95. Navigate back Reports section, 96. Talk about Fields and Visualization section 97. Talk about ability to Hide/Unhide fields and tables	
98. Notice we have a Date table which was not part of the query in Query Editor 99. Select Date table and talk about the DAX capability to create a table 100. Navigate to each of the columns in Date table and talk about calculated column feature	

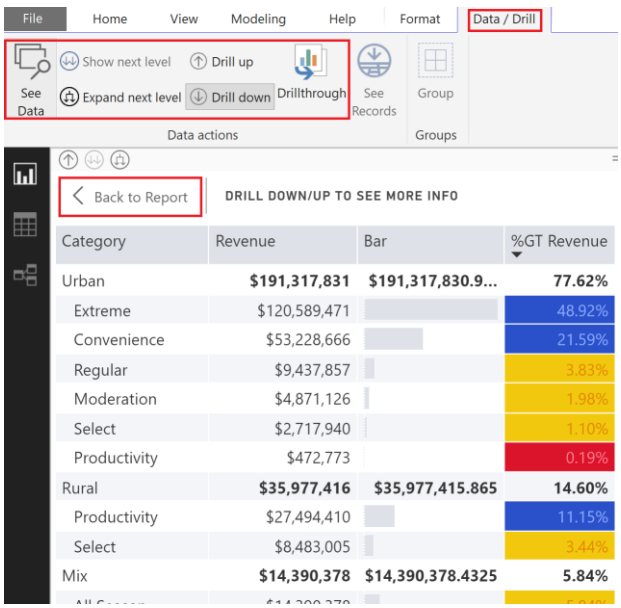
101. Talk about filtering options:
- Visual level filters
- Page level filters
- Report level filters
- Drillthrough filters

102. In Market Share report page, select Scatter chart to explain Visual level filter

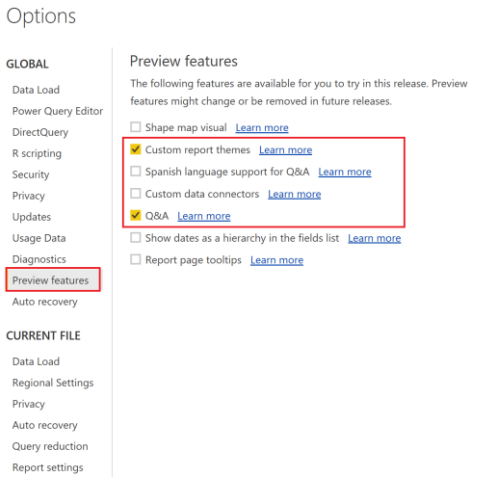
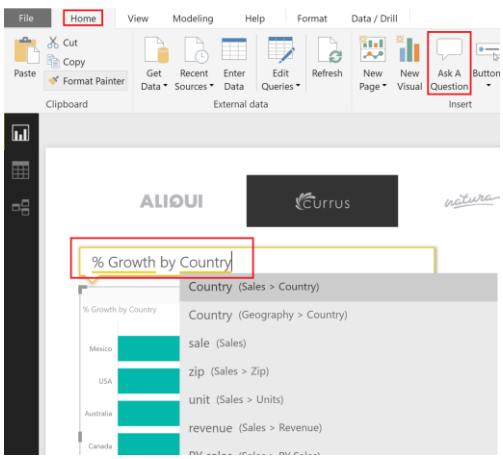
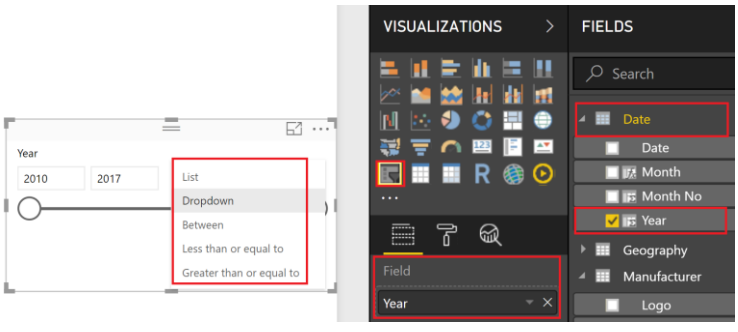


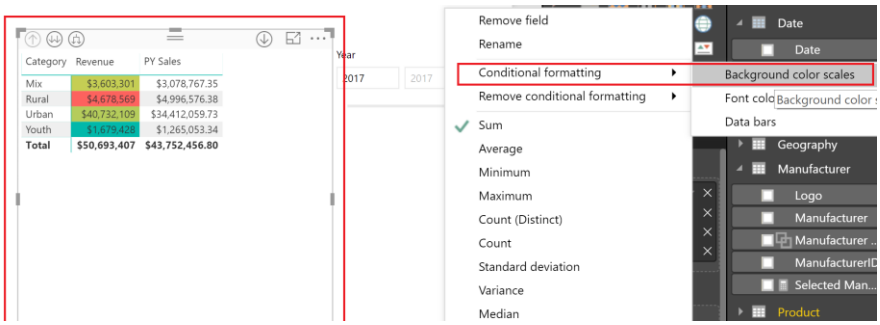
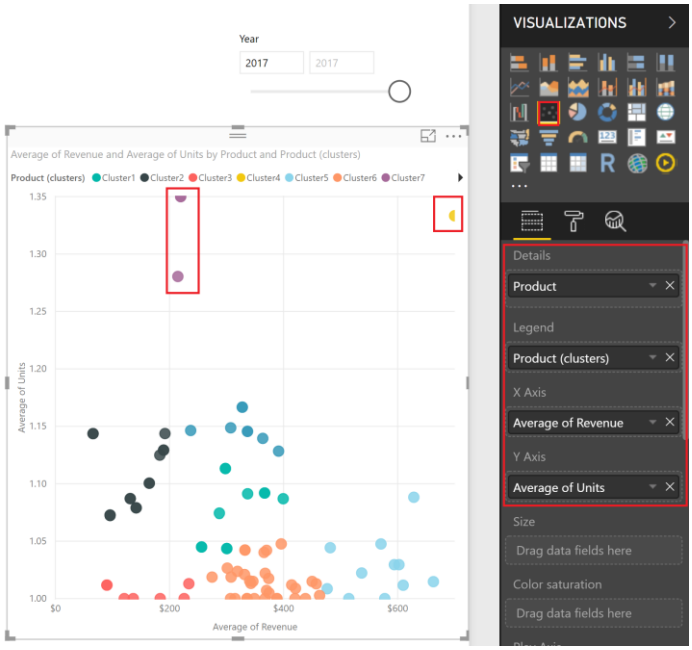
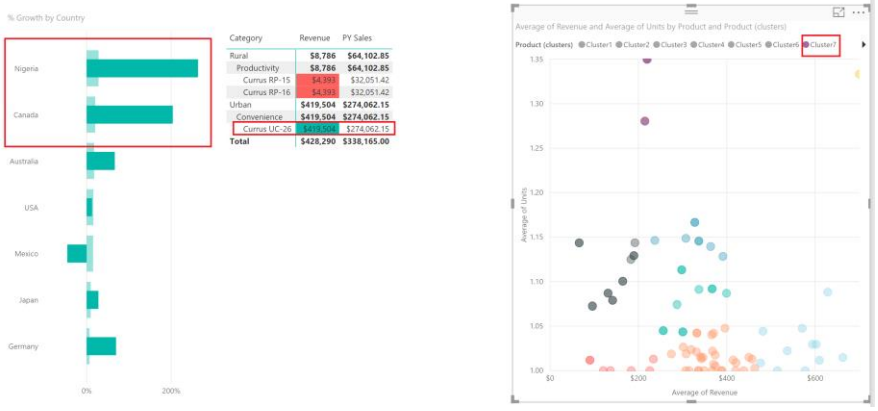
103. Navigate to By Manufacturer report page
104. Add Manufacturer to Drillthrough filter section
105. Navigate back to Market Share report page
106. Notice in % Growth by Manufacturer column chart, Currus has the best growth. Let's investigate.
107. Right click on Currus bar and select Drillthrough -> By Manufacturer to be navigated to By Manufacturer page

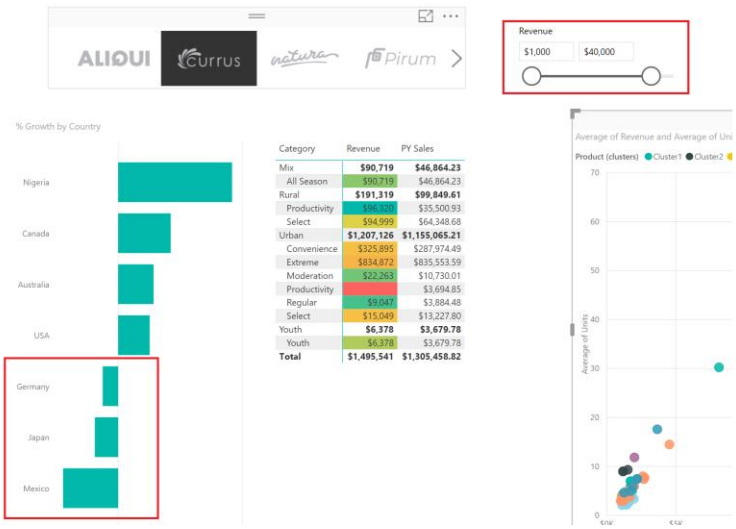
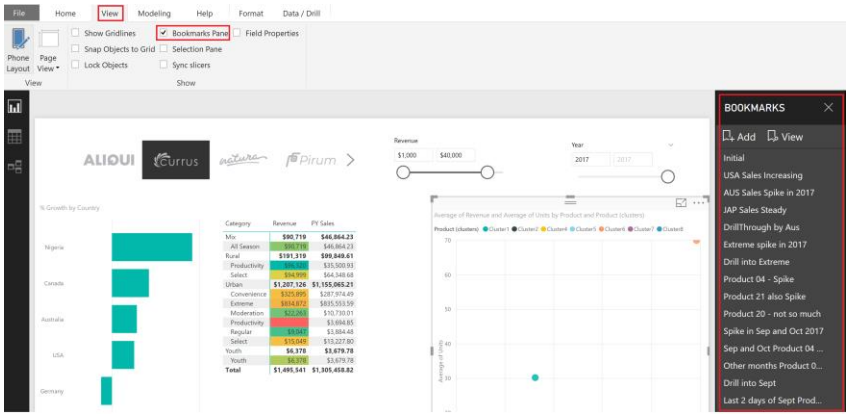
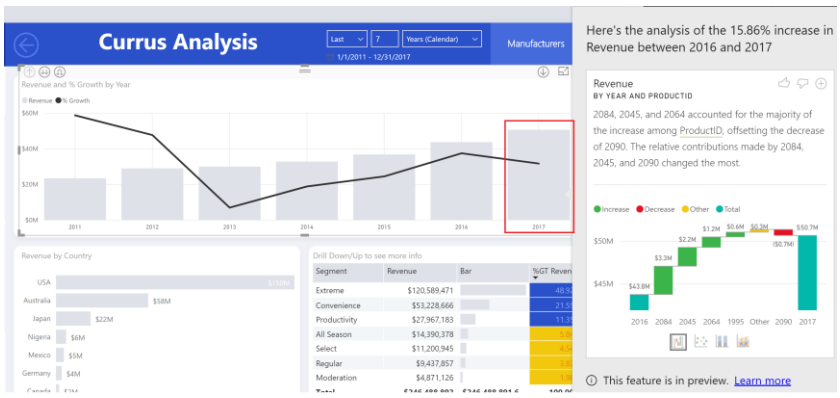
108. Use the matrix visual in By Manufacturer page to talk about Drill up/down capability
109. Use focus mode on the matrix visual
110. Talk about all the other features in Data/Drill menu
111. Notice the most growth is in Extreme and Convenience segment
112. Once done, click Back to Report

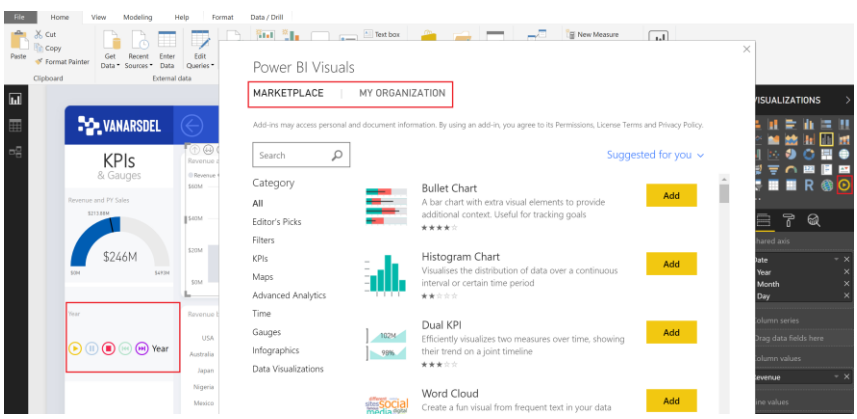
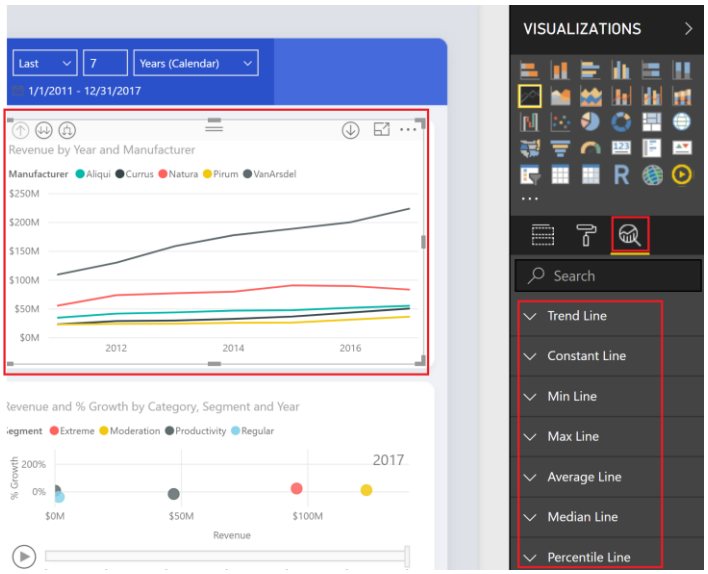
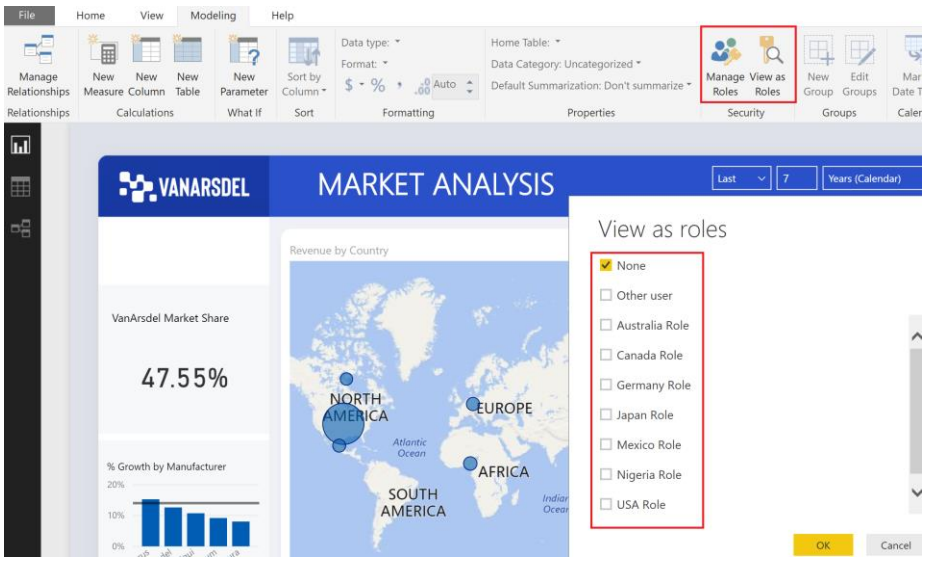


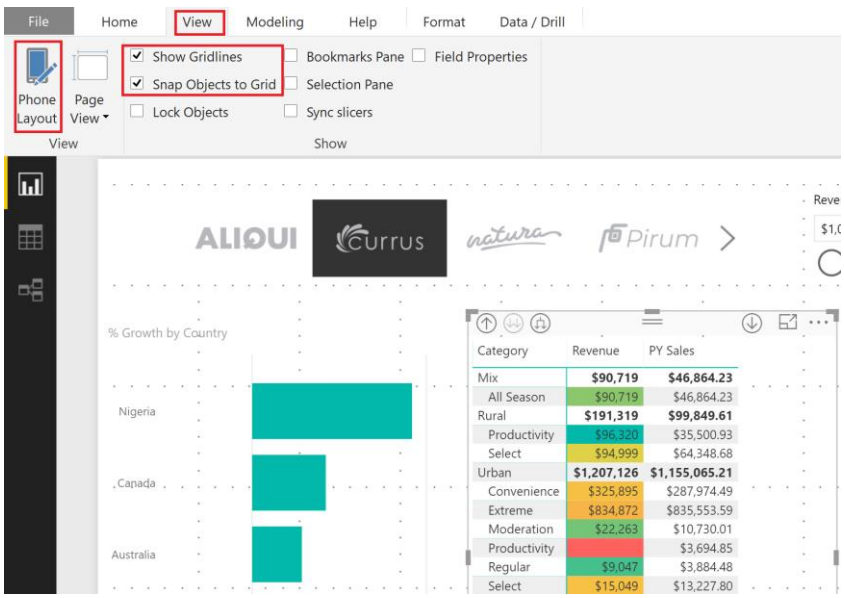
Category	Revenue	Bar	%GT Revenue
Urban	$191,317,831	$191,317,830.9...	77.62%
Extreme	$120,589,471		48.92%
Convenience	$53,228,666		21.59%
Regular	$9,437,857		3.83%
Moderation	$4,871,126		1.98%
Select	$2,717,940		1.10%
Productivity	$472,773		0.19%
Rural	$35,977,416	$35,977,415.865	14.60%
Productivity	$27,494,410		11.15%
Select	$8,483,005		3.44%
Mix	$14,390,378	$14,390,378.4325	5.84%

113. Add a new page to investigate Currus 114. From By Manufacturer page copy the Manufacturer logo slicer 115. Sync the slicer 116. Talk about the ability to Sync slicers 117. Filter by Currus	
118. From the ribbon, select Home -> Options & Settings -> Options 119. In the Options dialog select Preview Features. Talk about how Microsoft introduces Preview features… 120. Enable Custom Report Themes and Q&A. 121. Select OK 122. Close and open DIAD- Report Final.pbix	
123. From the ribbon, select Home -> Ask A Question 124. Enter % Growth by Country 125. Notice Currus has a big presence in Mexico	
126. Create a Year slicer. 127. Talk about the various ways to fomat a slicer 128. Select 2018 in the slicer 129. Notice that Currus had a big impact in Nigeria in 2018	

130. Create a matrix visual with Product Hierarchy in Rows and Revenue and PY Revenue in Values section 131. Apply conditional formatting on Revenue so that Revenue is formatted based on % Growth. Thus, highlighting capability to format based on another field 132. Select Nigeria in the bar chart and notice that Currus has growth in Urban and Youth Product categories. 133. You can investigate further by drilling down the Product hierarchy	
134. From the Visualization section, select Scatter chart visual 135. From the Fields section, add Average of Units to X-axis 136. From the Fields section, add Average of Revenue to Y-axis 137. From the Fields section, add Product to Details 138. Hover over the Scatter chart and click on the ellipsis on the top right corner 139. Select Automatically find clusters 140. Cluster dialog opens. Change the number of clusters if you wish to, if not leave the default 141. Click OK 142. Notice the Scatter chart is updated to show clusters using the clustering algorithm 143. Talk about how you can use cluster to identify outliers and patterns	
144. Select the outlier – Cluster 7 in the Scatter chart 145. Notice that these outliers make a huge chunk of the revenue in Nigeria and Canada. 146. One particular product, Currus UC – 26 sells a lot in Nigeria and Canada. Something to look into…	

Note: This demo is to show slicers is available on numeric and dimension fields 147. Add a Revenue slicer 148. Let's use the slicer to take out the outliers 149. Use the slicer to keep Revenue between 1000 and 40000. 150. Notice with this selection, Germany, Japan and Mexico have negative growth	
151. Enable Bookmark pane. 152. Walk through the existing Bookmarks and the use case for bookmarks. 153. Feel free to add new bookmarks for Currus story that we started investigating	
154. Navigate to By Manufacturer report page 155. From the Revenue and % Growth by Year column chart right click on 2018 156. Select Analyze -> Explain Increase 157. Talk about Power BI's capability to provide insights	

158. Talk about the Custom visuals available in Microsoft store 159. Use the Play axis custom visual to demo the feature	
160. Navigate to Market Share report page 161. Using the Line chart, talk about the various analytics features available	
162. Using DIAD Final Report with RLS.pbix file talk about the ability to create and manage roles hence implementing	

163. From the View menu, talk about Grid lines, Snap to Grid which helps in formatting 164. Format the new page you created using this feature 165. Talk about Phone Layout	
166. Talk about the ability to Publish to Service