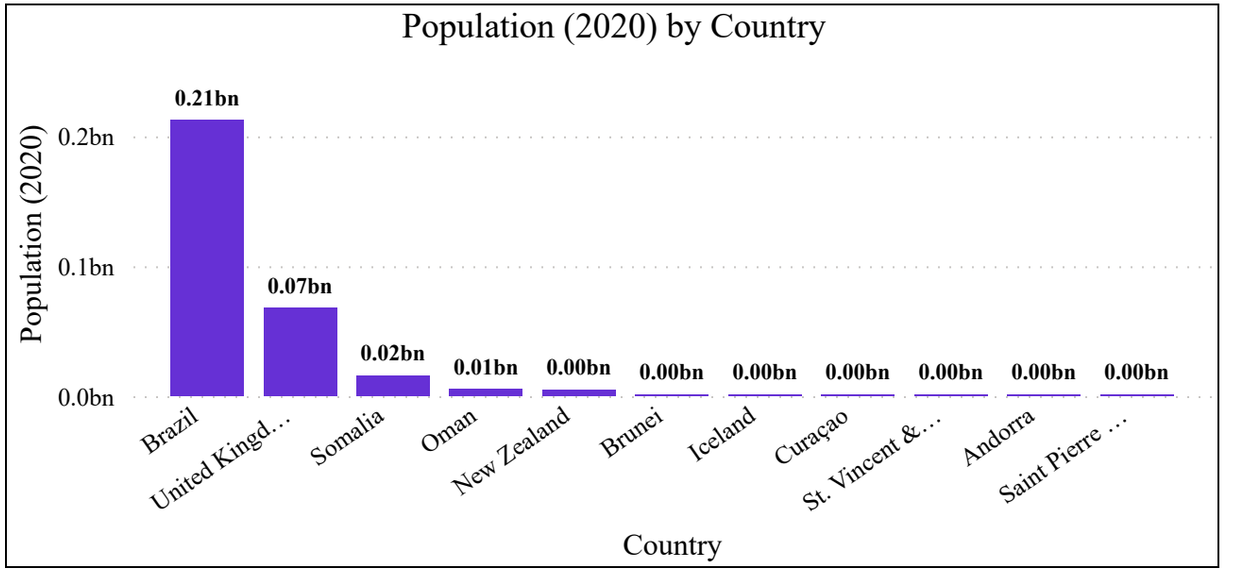
Visualize data in Power BI

Let's Play a game . You have 5 sec to answer which country has the largest population??

Country	Population (2020)
United Kingdom	67886011
St. Vincent & Grenadines	110940
Somalia	15893222
Saint Pierre & Miquelon	5794
Oman	5106626
New Zealand	4822233
Iceland	341243
Curaçao	164093
Brunei	437479
Brazil	212559417
Andorra	77265



Give me more time, Please

Ohh!!!, it's easy, the first column, Brazil has the largest population.

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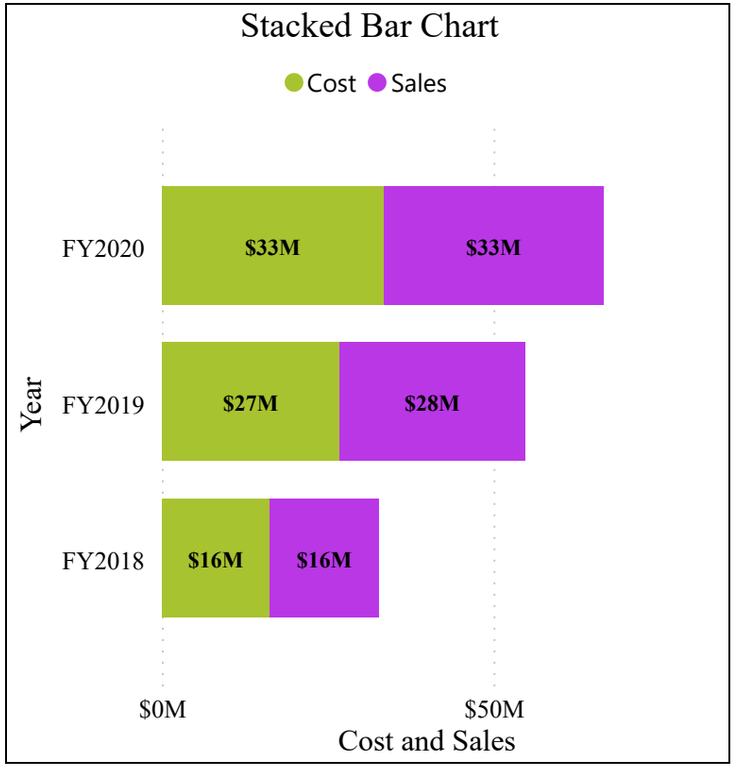
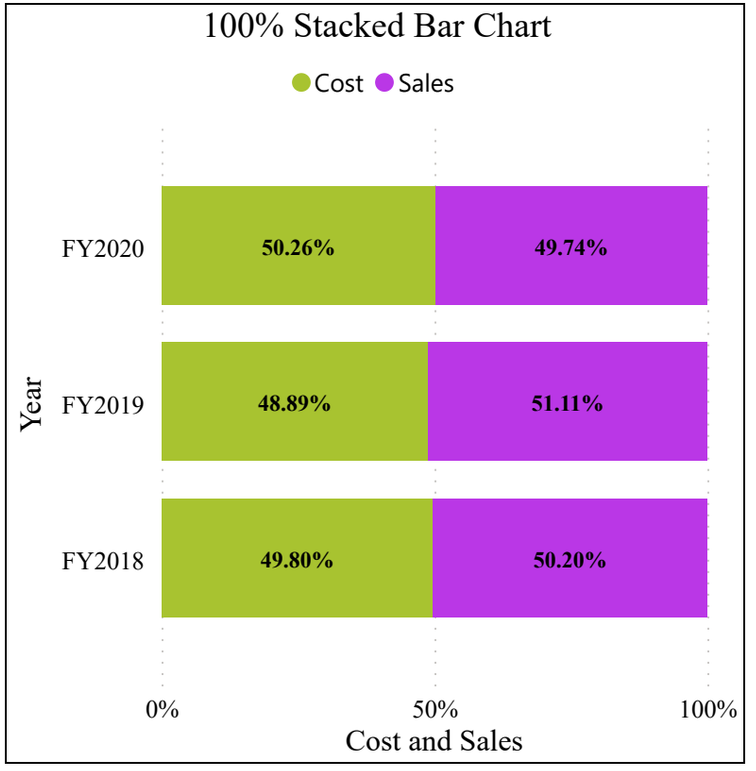
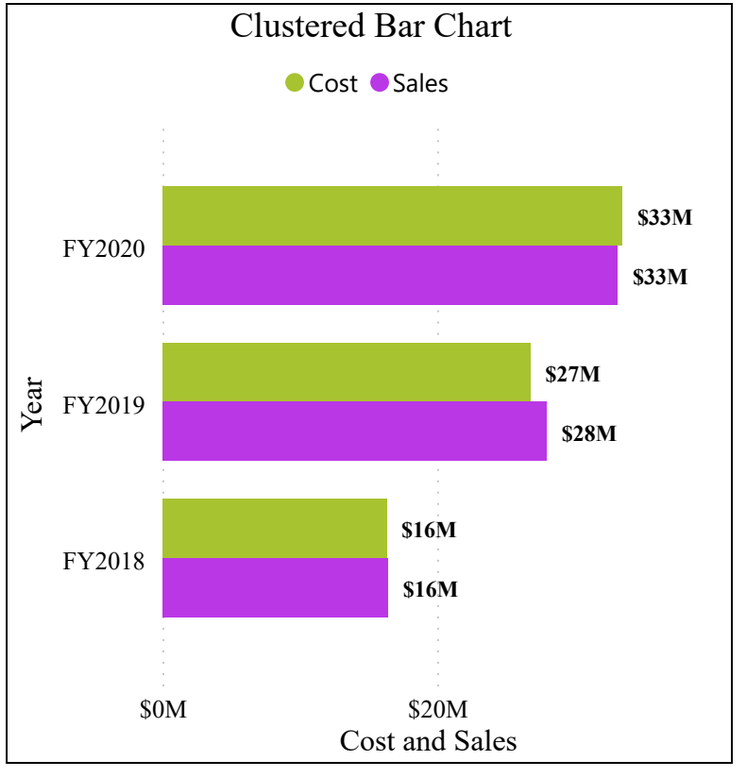
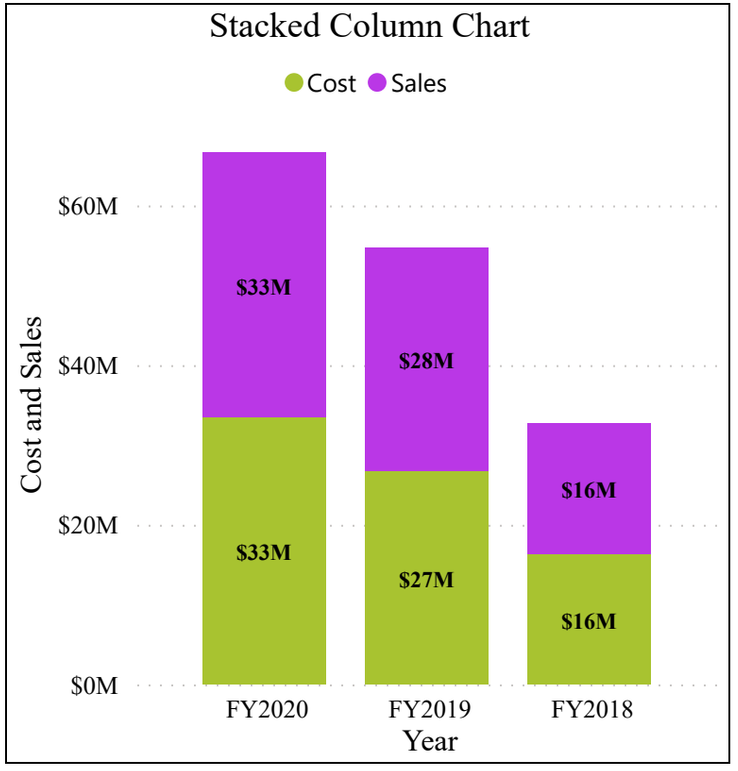
Create Reports

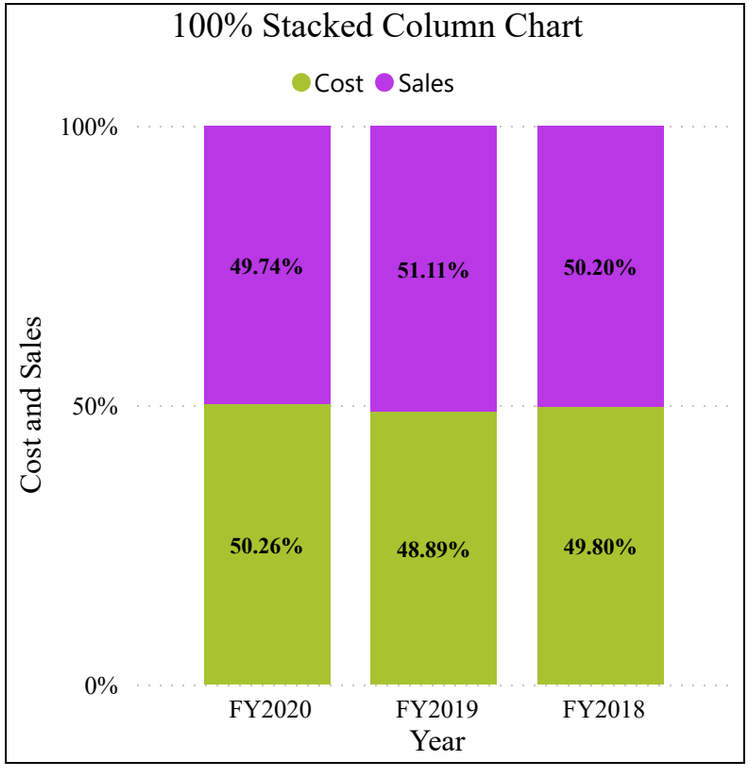


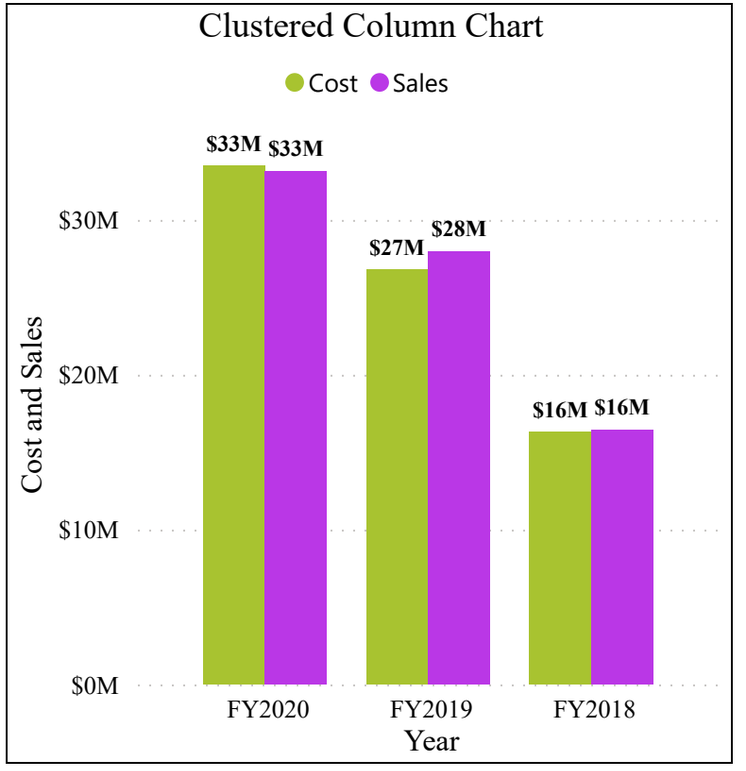




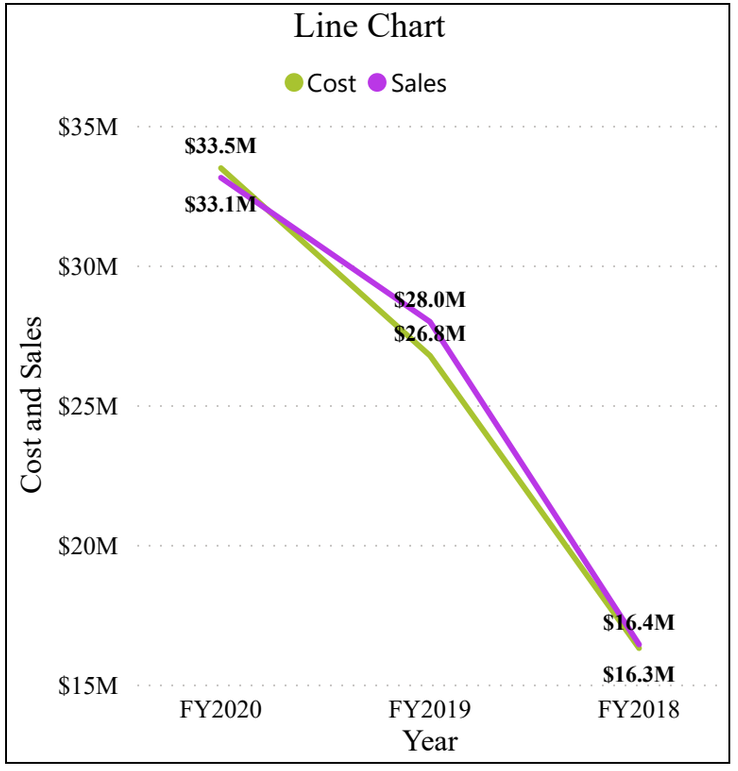
Bar charts are also called horizontal charts that represent the absolute data, and its main objective is to compare numeric values between levels of a categorical variable. They are useful to display the data that include negative values because it is possible to position the bars above and below the x-axis. A stacked bar chart also achieves this objective, but also targets a second goal. Clustered Bar Chart (also known as Grouped bar chart, Multi-series bar chart) is great for displaying and comparing multiple sets of data over the same categories (like sales revenue of various departments of the company over several years).

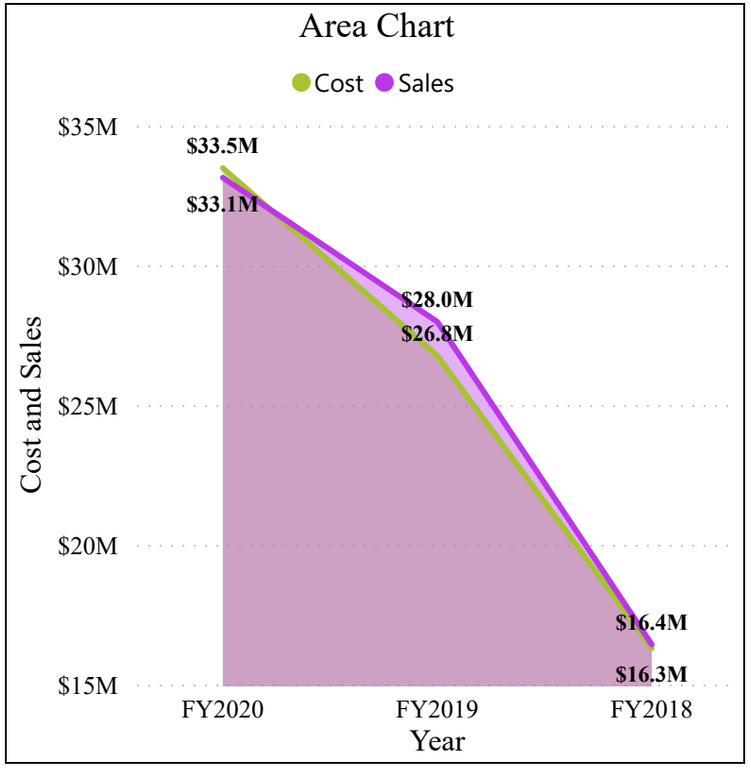


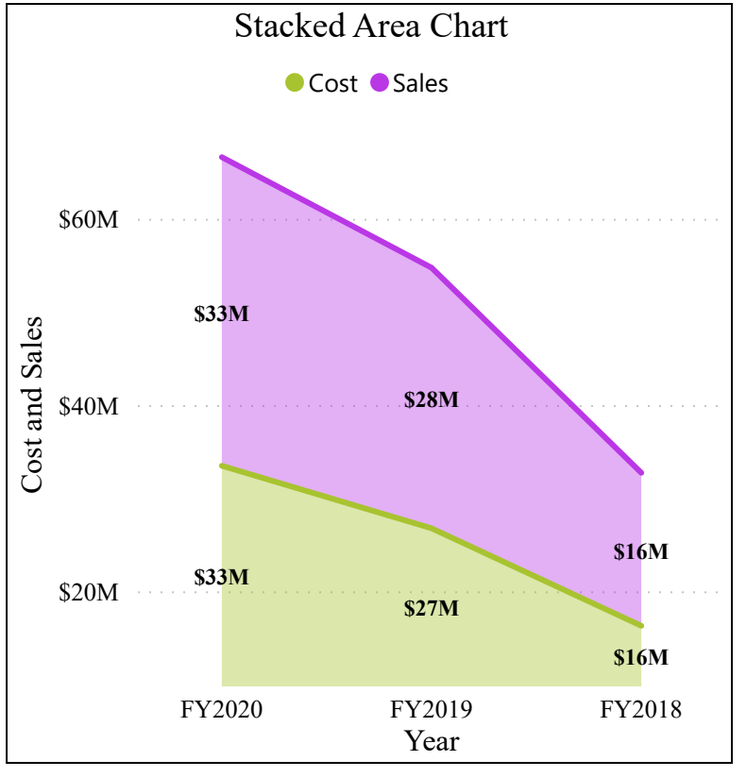




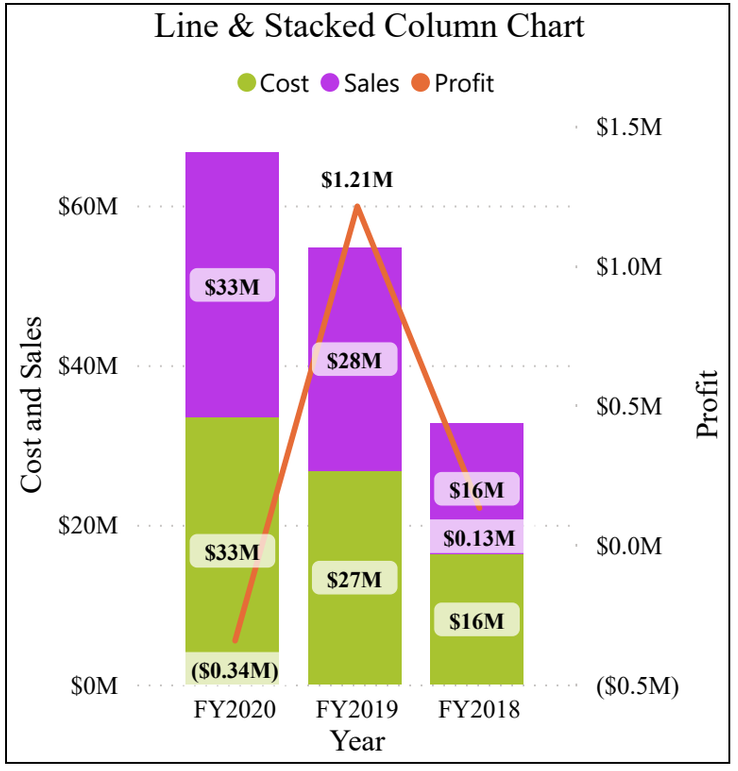
Column charts are most useful to compare different categories by a single measure. Comparisons allow end users to judge how each category is performing relative to the others. By sorting the columns, users can gain a quick understanding of the highest and lowest categories. Stacked column charts are very helpful in showing the magnitude of how much contribution to the total is coming from the different members of a category (a part-to-whole perspective of the data). Clustered or Grouped Column Charts are used to plot data for multiple datasets. They are also used to analyze and compare data points grouped in sub-categories. Grouped Column Charts have vertically aligned rectangular bars on one axis with discrete values shown on the other.

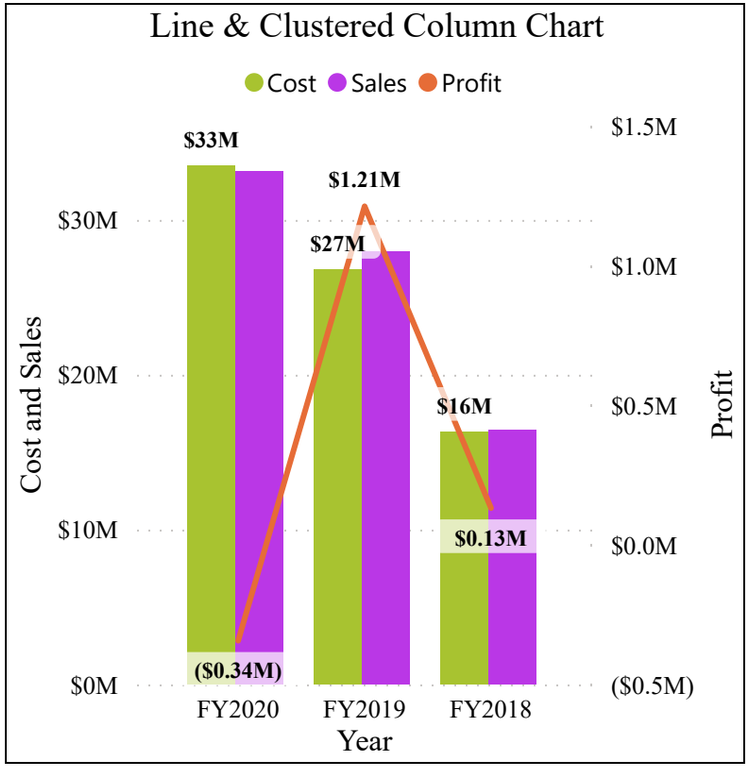


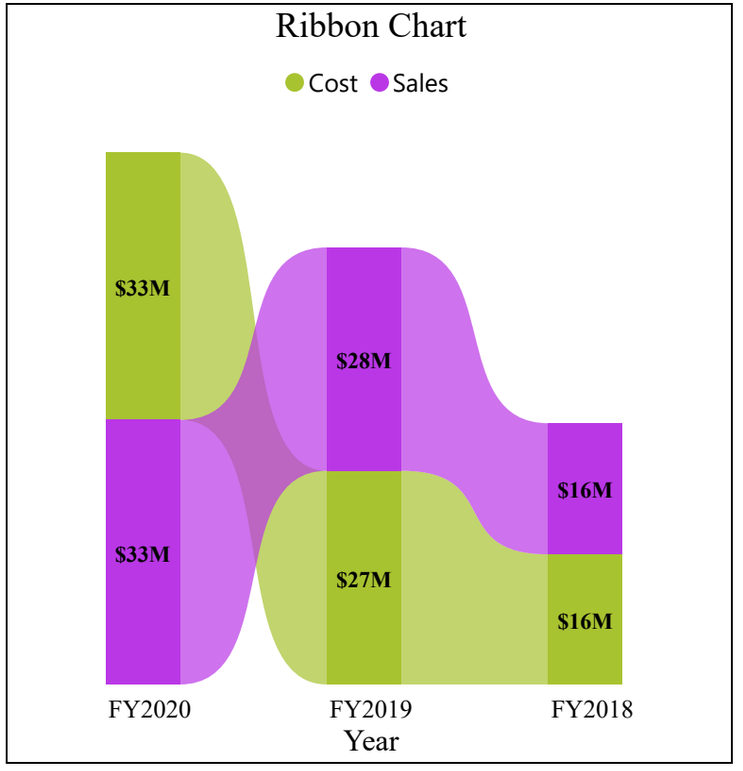




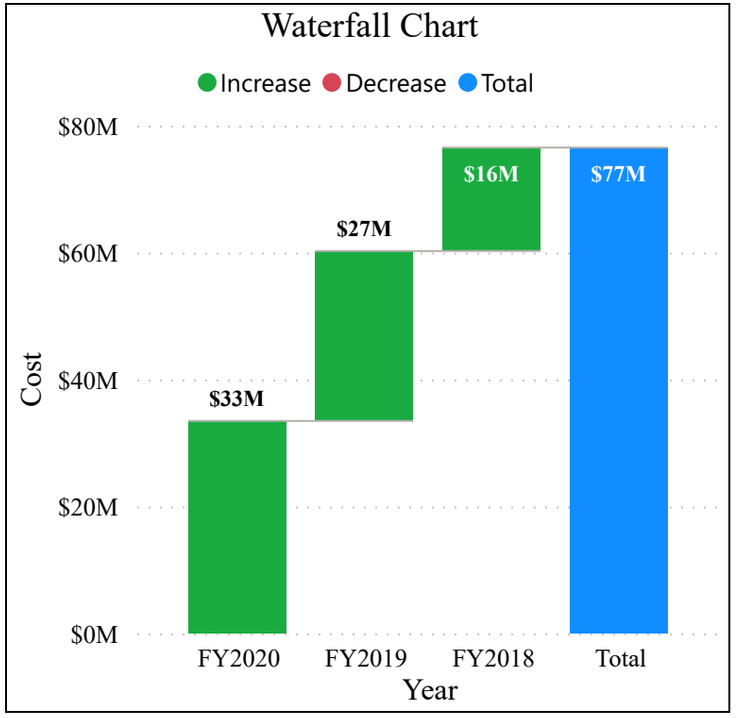
Line charts are mostly used charts to represent the data and are characterized by a series of data points connected by a straight line. Each point in the line corresponds to a data value in the given category. It shows the exact value of the plotted data. Line charts should only be used to measure the trends over a period of time, e.g. dates, months, and years. The area chart depends on line charts to display quantitative graphical data. The area between the axis and lines is commonly filled with colors, textures, and patterns. You can compare more than two quantities with area charts. It shows the trend changes over time and can be used to attract the attention of the users to know the total changes across the trends. Stacked charts help to compare the quantitative values each series brings to the whole category.

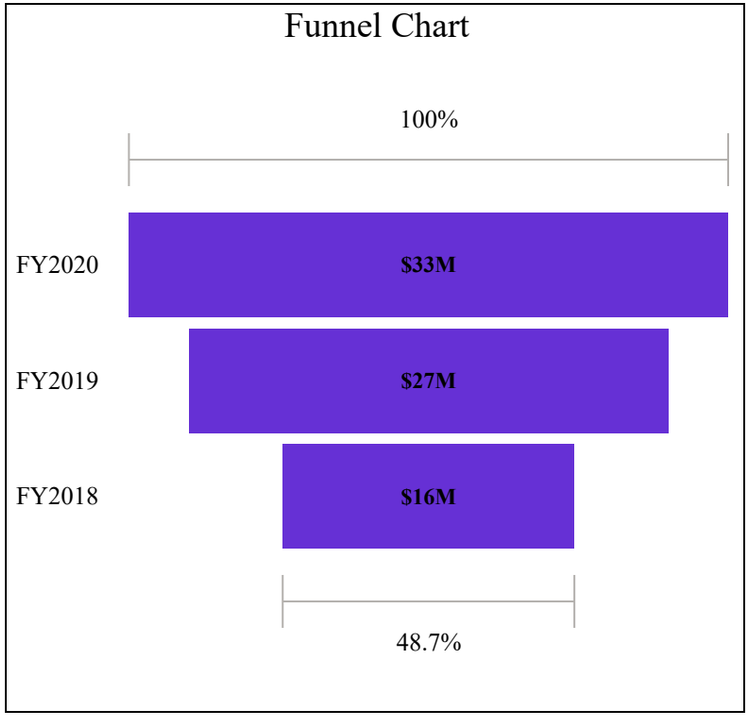


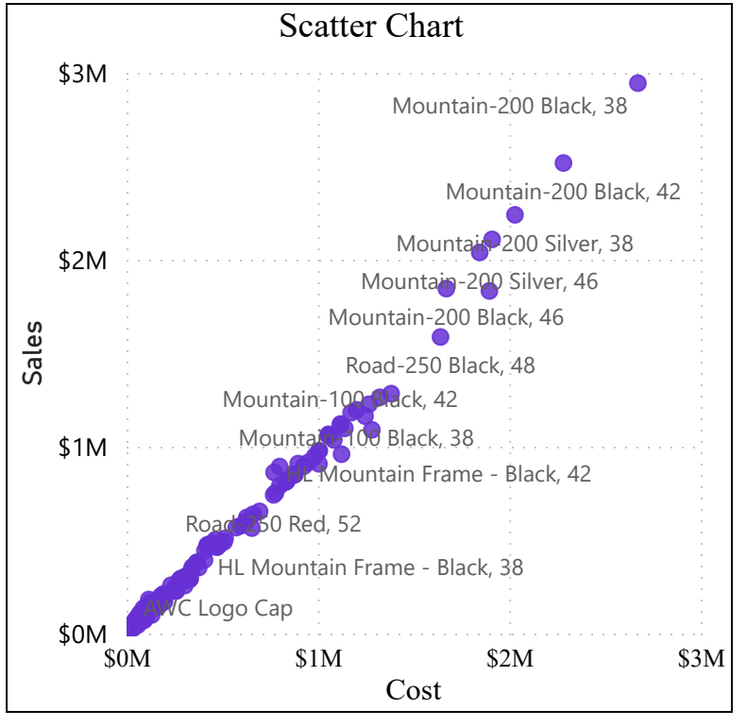




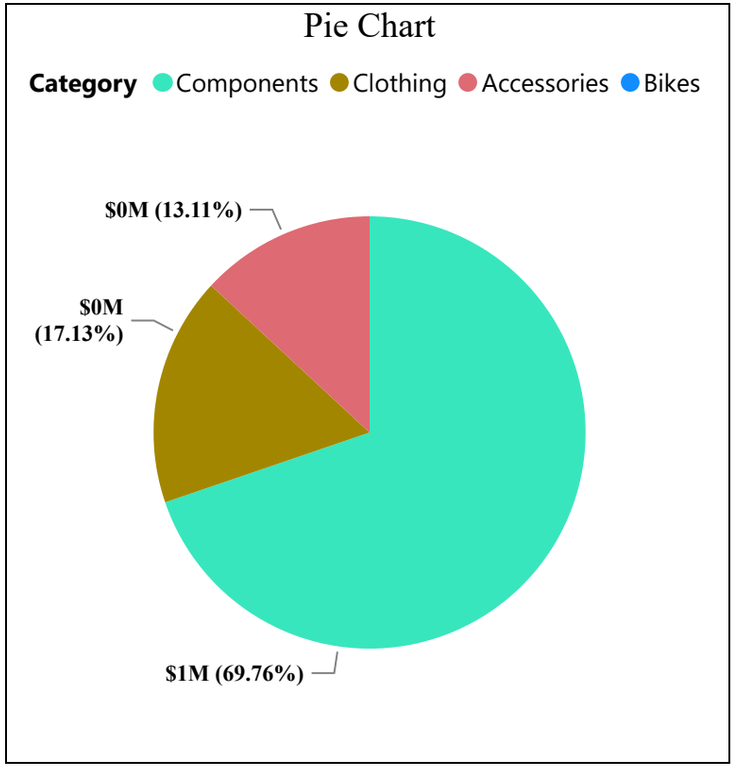
A combo chart is a combination of both the column charts and line charts that help you to make a quicker comparison of the data. The combo chart shows the relationship between two measures in a single visualization and Identify whether one measure meets the target that is defined by another measure. It also helps to compare multiple measures with different values. A ribbon chart consists of a stacked column chart, where each column is connected by a series of ribbons. It's useful when we want to track the growth of a field over time, as well as tracking ranking, within that field.

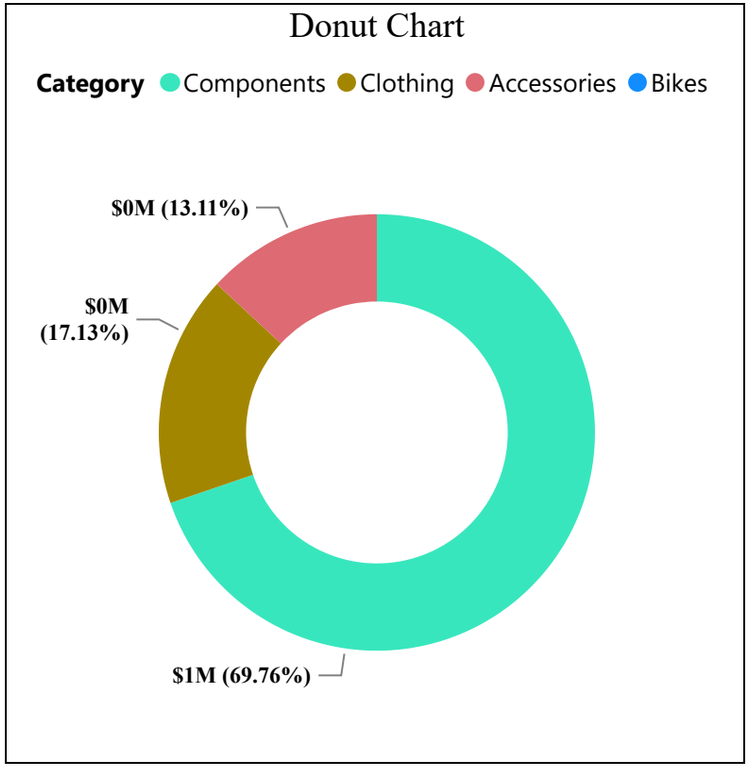


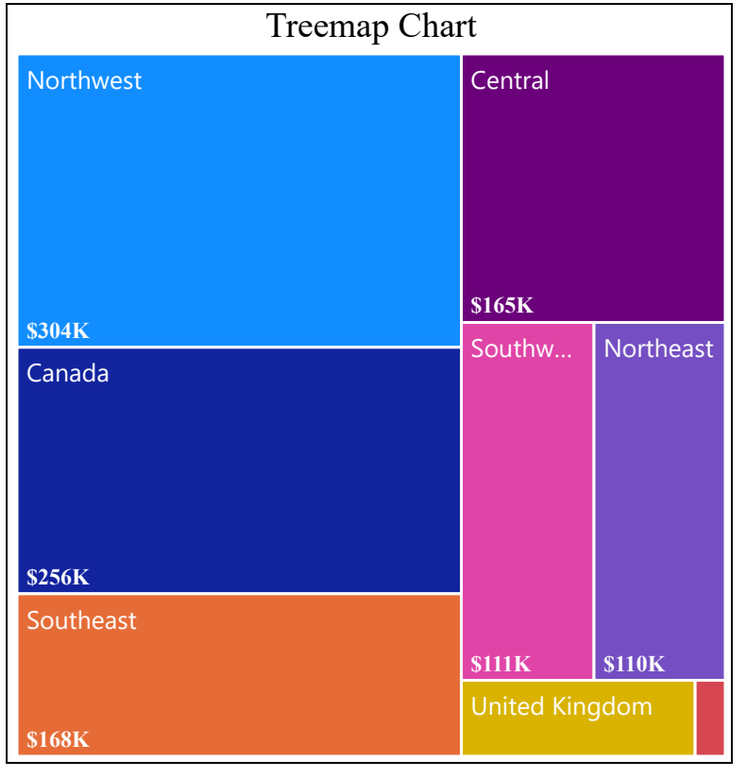




The **waterfall** visualization (also known as a bridge chart) shows a running total as values are added or subtracted (ex: money earned or spend in each month within a year), which is useful in displaying a series of positive and negative changes. The chart consists of color-coded columns, so you can quickly identify increases and decreases. It can be used for innumerable purposes, like as for, Visualizing changes over time or across different categories, or Auditing major changes that contribute to the total value, or Plotting annual profit by showing various sources of revenue to help determine the total profit (or loss).
The **funnel** visualization displays a linear process that has sequential connected stages (at least 4), where items flow sequentially from one stage to the next (First stage > Last stage). Most often seen in business or sales contexts, for example, they are useful for representing a workflow, such as moving from a sales lead to a prospect, through to a proposal and sale. Another reason for using funnel chart is to reveal bottlenecks in a linear process.
The **scatter** chart visualization is effective for comparing large numbers of data points without regard to time. For demonstrating relationship between two measures, it displays points at the intersection of an X and Y numerical value, combining these values into single data points. You can set the number of data points, up to a maximum of 10,000. It shows patterns in large sets of data, for example, by showing linear or non-linear trends, clusters, and outliers.







Pie charts and **Donut** charts present data by dividing it into slices (parts to the whole by dividing the data into segment), while the **Treemap** visualization displays data as a set of nested rectangles. Each level of the hierarchy is represented by a colored rectangle (branch) containing smaller rectangles (leaves). The space inside each rectangle is allocated based on the value that is being measured. The rectangles are arranged in size from top left (largest) to bottom right (smallest). The pie chart is a solid circle, whereas the donut chart has a center that is blank and allows space for a label or icon. Best cases to use Treemaps are: Large amounts of hierarchical data when a bar chart can't effectively handle the large number of values, distribution pattern of the measure across each level of categories in the hierarchy, Spot patterns, outliers, most-important contributors, and exceptions. **Not Recommended**

Map and filled map visuals aren't enabled for your org. Contact your tenant admin to fix this. See details

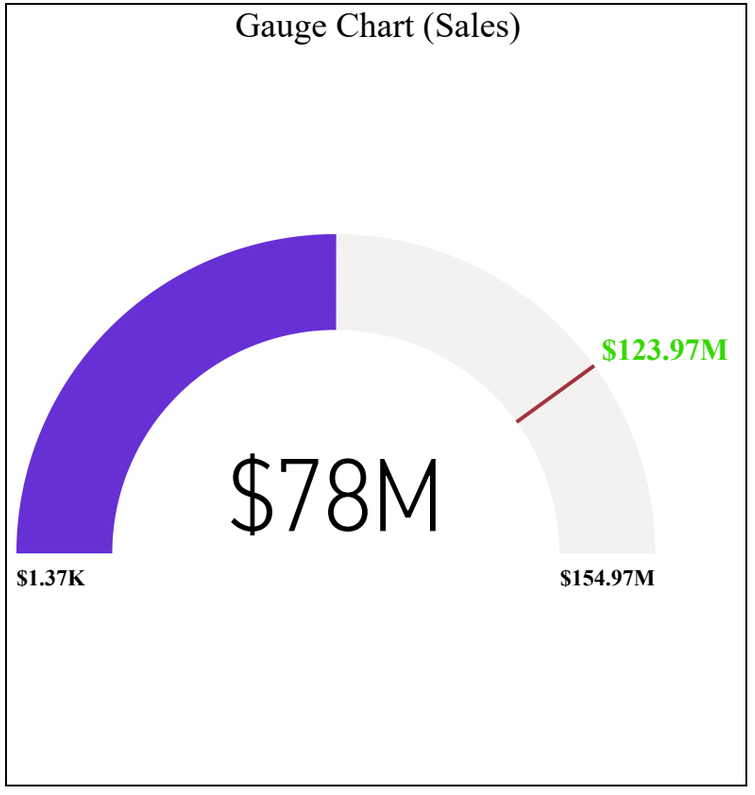
Map and filled map visuals aren't enabled for your org. Contact your tenant admin to fix this. See details

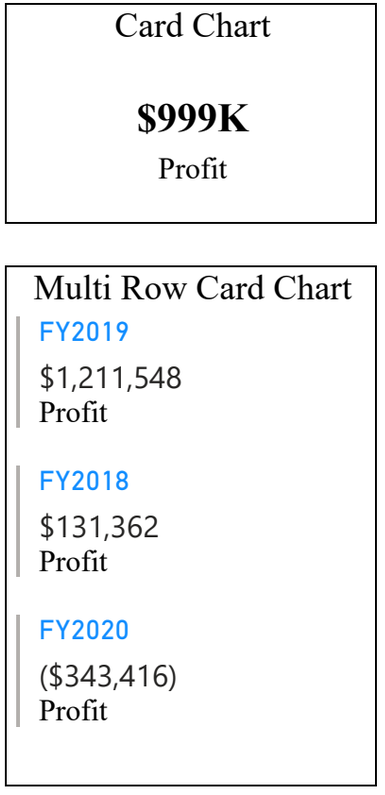
Shape Map Chart

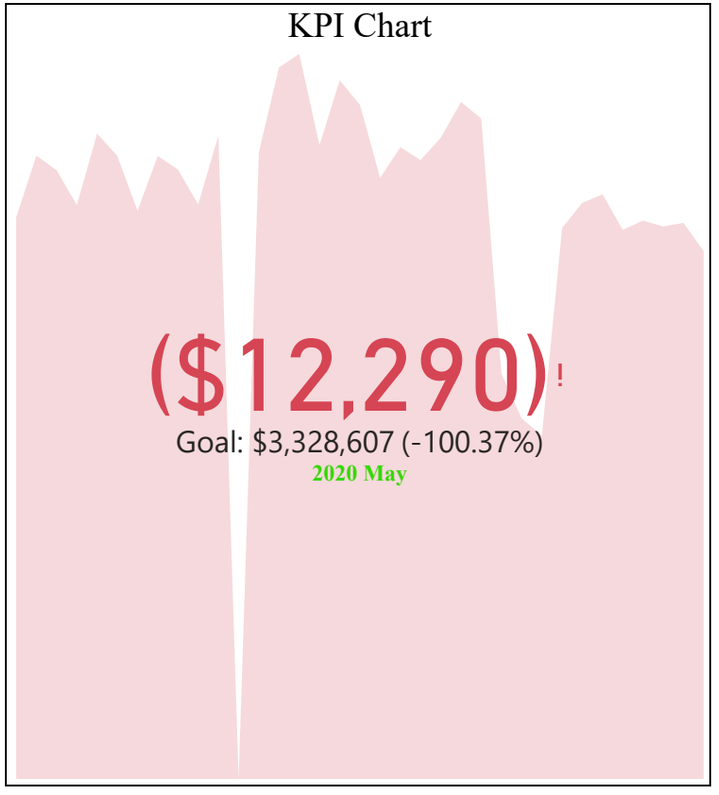
Azure Maps visuals are not enabled for your organization. Contact your tenant admin to fix this. See details

Power BI integrates with Bing Maps to provide default map coordinates (a process called geocoding). A basic map (bubble map) is used to associate categorical and quantitative information with spatial locations. This type of map visual displays precise geographical locations of data points on a map . A fill map uses shading, tinting, or patterns to display how a value differs in proportion across a geographical region. Similarly, shape maps use colors to display relative comparisons of geographical regions. You can also use an ArcGIS map to display graphical information in a more interactive way.

Due to permission issues mine 3 types of maps are not showing here.







A R**adial Gauge** chart has a circular arc and displays a single value that measures progress toward a goal or target. To create a realistic visual, you have to define the Target value, Minimum value, and Maximum value fields on the Visualization. The shading in the arc represents the progress toward that target. The value inside the arc represents the progress value. **Not Recommended**

The C**ard** visualization displays a single value: a single data point, text, date, or number. It helps you to track on your Power BI dashboard or report, such as total value, YTD sales, or year-over-year change. The **Multi-row card** visualization displays one or more data points, with one data point for each row.

A Key Performance Indicator (KPI) is a measurable value that demonstrates how effectively a company is achieving key business objectives. Organizations use KPIs to evaluate success at reaching targets. Requires a tracking measurement, goal, a time series data.

The **Slicer** visualization is a standalone chart that can be used to filter the other visuals on the page. Slicers come in many different formats, including list, drop-down, and buttons, and they can be formatted to allow the selection of only one, many, or all available values.

Table Chart

Category	Subcategory	Product	Cost	Sales	Profit
Components	Saddles	LL Road Seat/Saddle	$120	$163	$42
Clothing	Vests	Classic Vest, L	$285	$457	$172
Clothing	Socks	Mountain Bike Socks, L	$306	$513	$207
Components	Touring Frames	LL Touring Frame - Blue, 58	$799	$800	$1
Accessories	Tires and Tubes	Patch Kit/8 Patches	$520	$831	$311
Components	Mountain Frames	LL Mountain Frame - Black, 40	$1,094	$1,199	$105
Components	Saddles	LL Touring Seat/Saddle	$1,096	$1,481	$385
Components	Mountain Frames	ML Mountain Frame-W - Silver, 38	$1,396	$1,529	$134
Components	Handlebars	LL Touring Handlebars	$1,146	$1,548	$402
Components	Saddles	ML Touring Seat/Saddle	$1,408	$1,902	$494
Components	Headsets	LL Headset	$1,442	$1,949	$507
Components	Mountain Frames	LL Mountain Frame - Black, 52	$2,052	$2,248	$196
Components	Touring Frames	LL Touring Frame - Blue, 62	$2,998	$3,001	$3
Total			**$76,549,076**	**$77,548,570**	**$999,495**

Matrix Chart

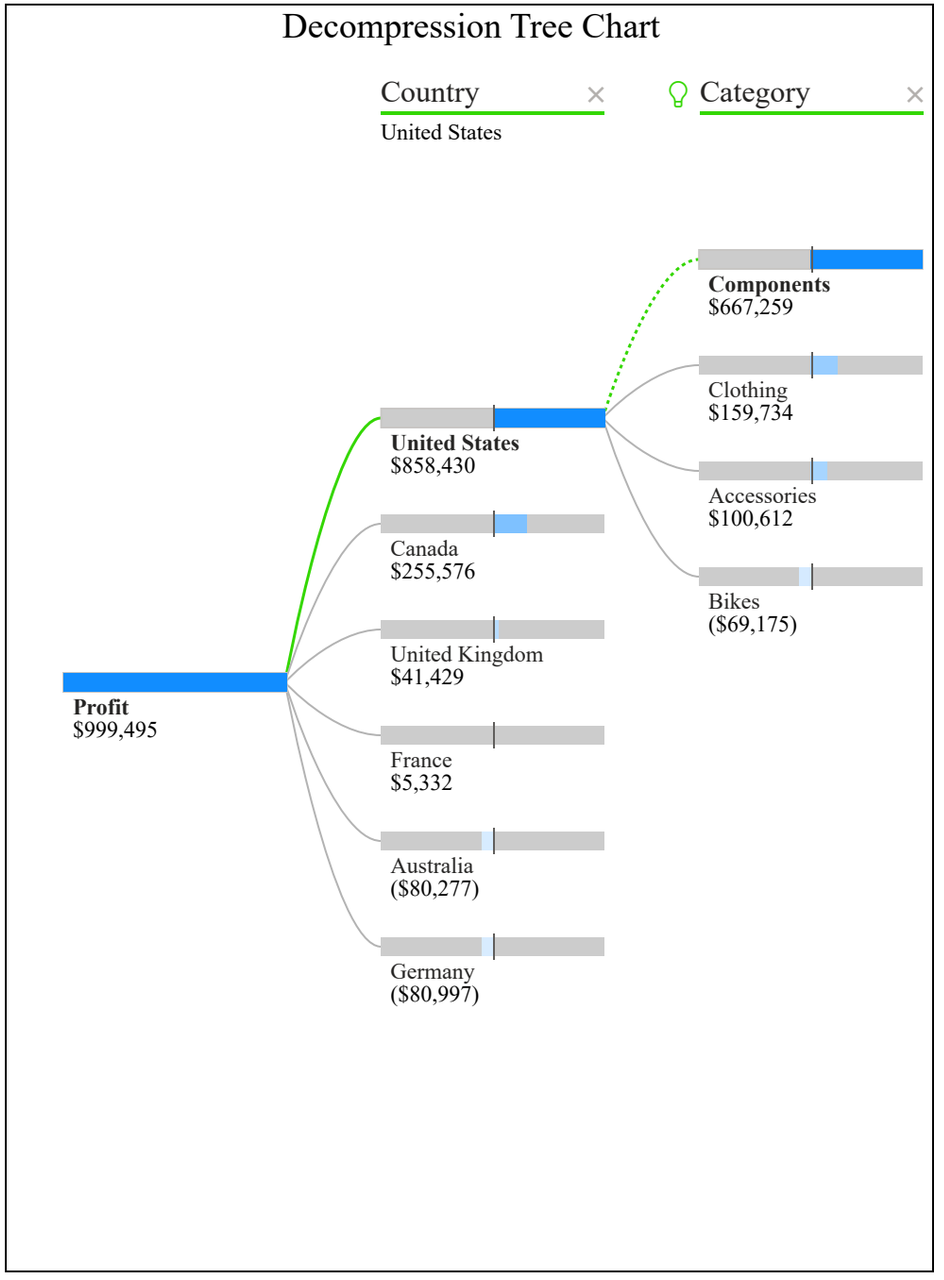
Category	FY2018	FY2019	FY2020	Total
⊞ Components	$104,365	$575,213	$321,657	**$1,001,235**
⊞ Clothing	($3,532)	$181,839	$67,550	**$245,857**
⊞ Accessories	$14,879	$37,628	$135,574	**$188,081**
⊞ Bikes	$15,650	$416,868	($868,197)	**($435,679)**
Total	**$131,362**	**$1,211,548**	**($343,416)**	**$999,495**

The table is a grid that contains related data in a logical series of rows and columns. The table supports two dimensions, and it can also contain headers and a row for totals.

Matrix visualization looks similar to the table visualization; however, it allows you to select one or more elements (rows, columns, values) in the
matrix to cross-highlight other visuals on the report page.

Key Influencer Chrt

Decompression Tree Chart

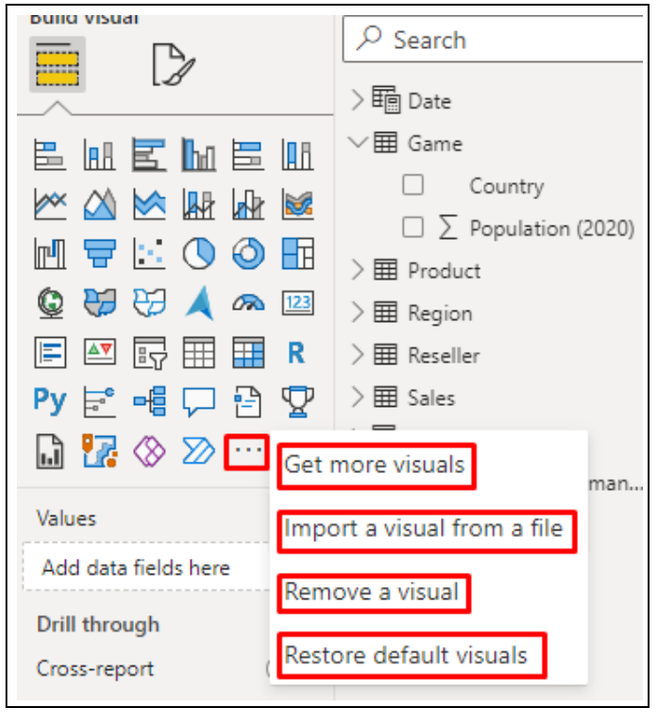


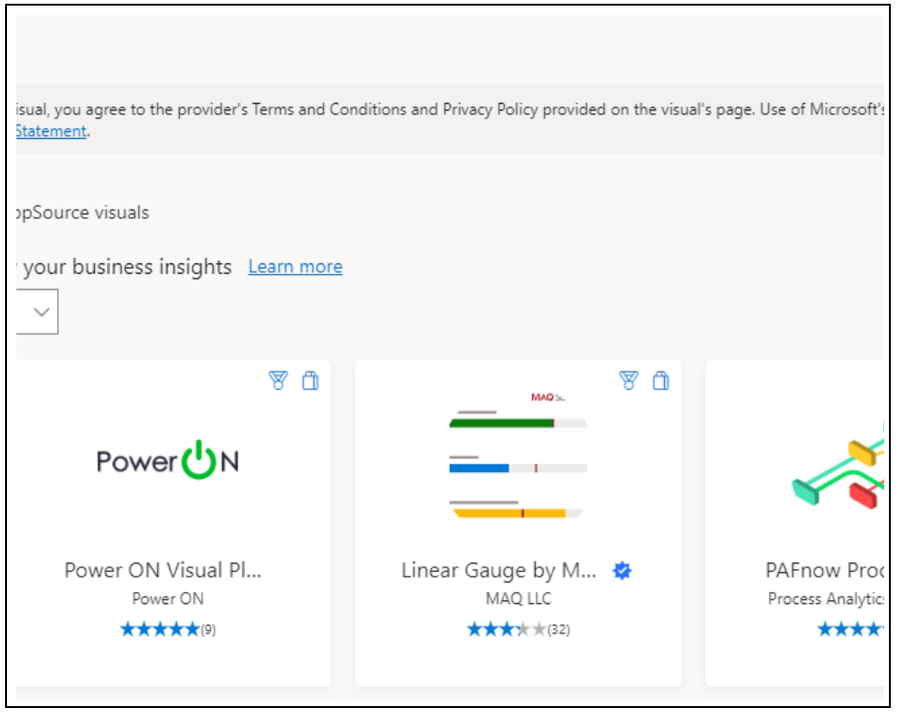
Key Influencer helps to understand the factor that drive a metric you are interested in. It analyzes the data, ranks the factor that matter and display them as key influencers.
The **Decomposition Tree** visual automatically aggregates your data and lets you drill down into your dimensions so that you can view your data across multiple dimensions. At the top of the list of dimensions that you added are two additional options that are marked with lightbulb icons. These options are referred to as AI splits, and they'll automatically find high and low values in the data for you. You can use the results of these splits to find out where you should look next in the data.

Q & A Chart

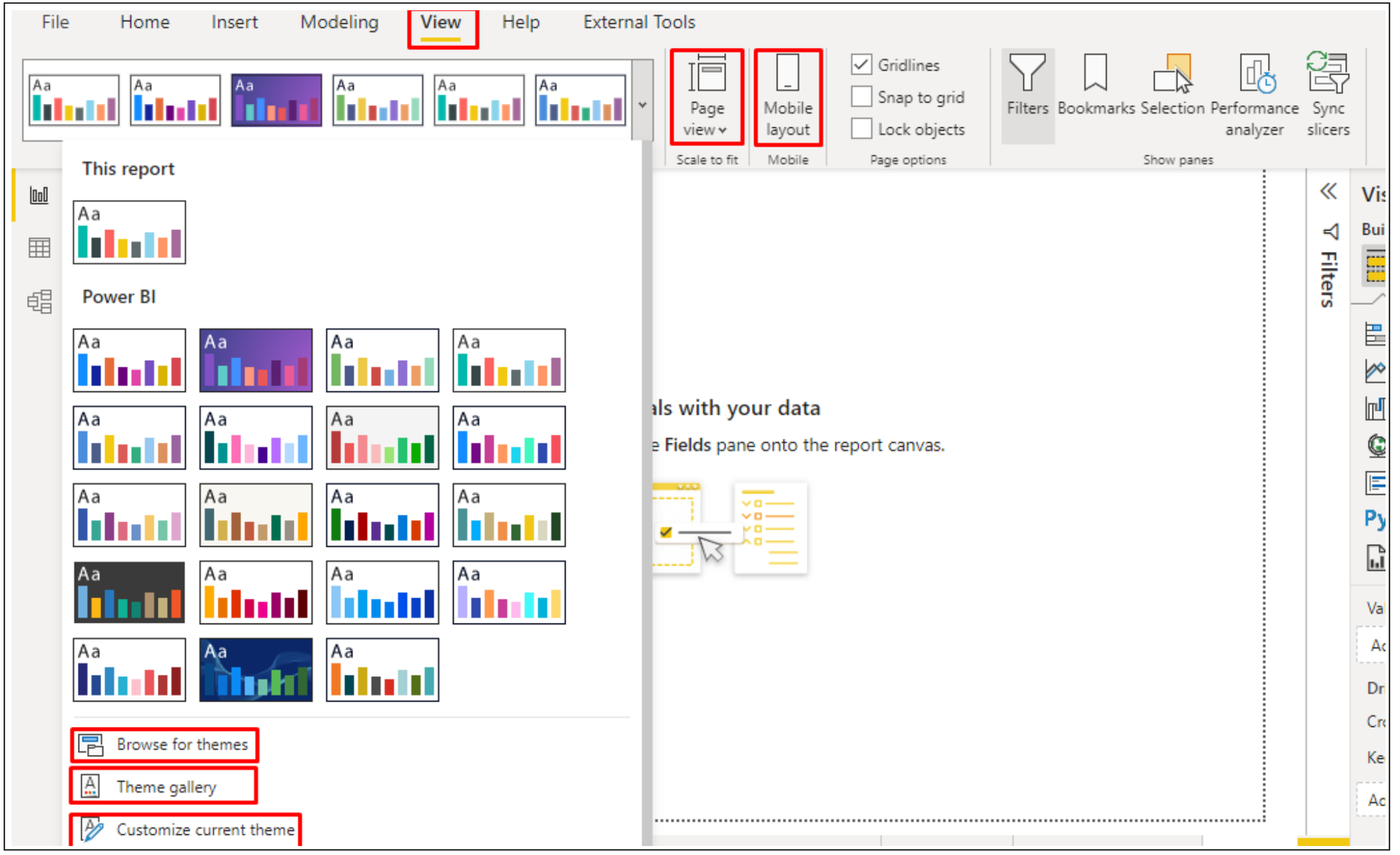
Preparing Q&A

Want more Visuals ??





The **Q&A** feature in Power BI lets you explore your data in your own words by allowing you to ask natural language questions and then providing you with answers to those questions. It gives you ideas for the type of visuals that you can display in your report and lets you quickly add those visuals. Additionally, it gives your report users an effective tool that they can use to get quick answers to their questions about the data, independently. This self-help aspect to Power BI saves time for everyone involved.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Lock objects
Filters
Bookmarks
Selection
Performance analyzer
Sync slicers
Scale to fit
Mobile
Page options
Show panes
This report
Power BI
Browse for themes
Theme gallery
Customize current theme
Filters
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e Fields pane onto the report canvas.