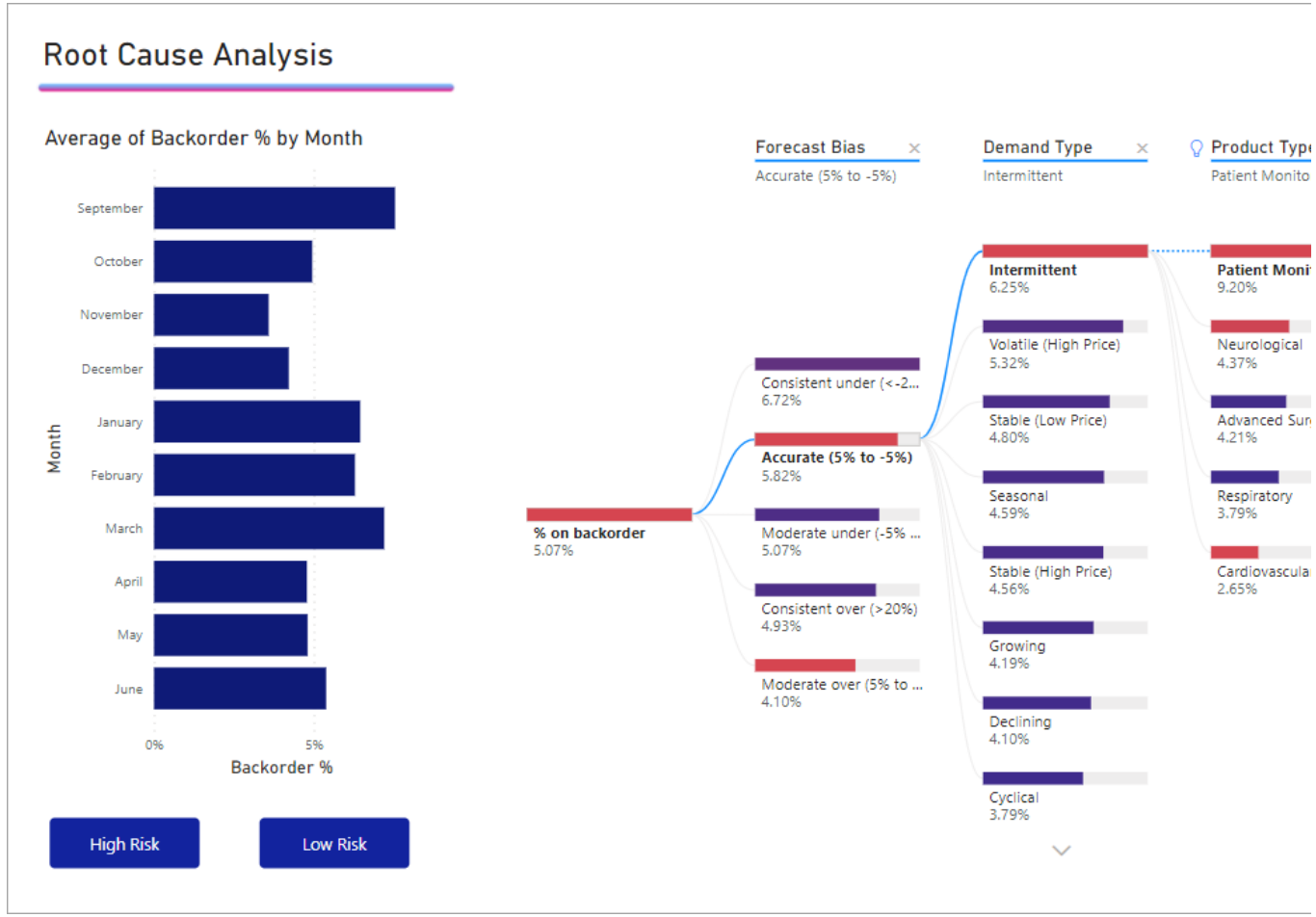
PowerBI Part II

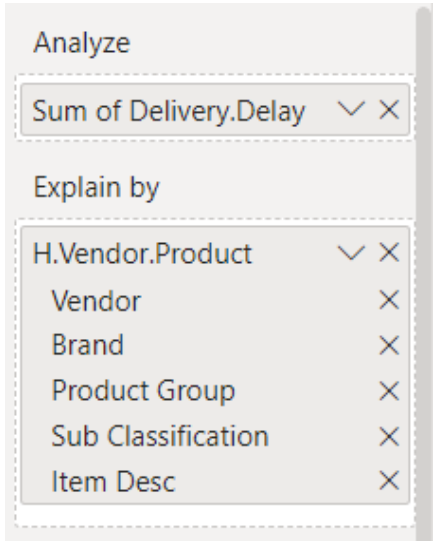
CS 459 Business Intelligence

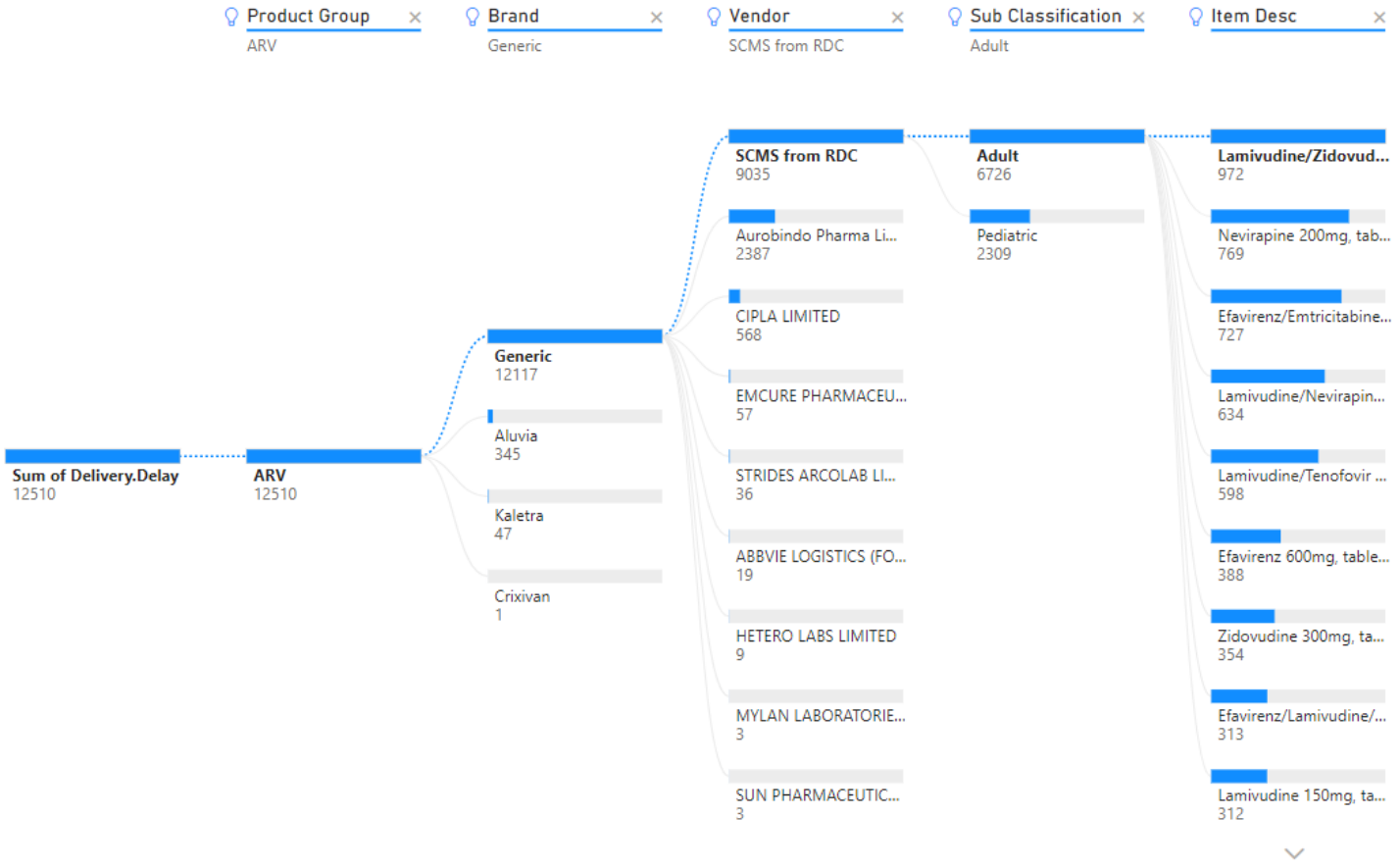
Decomposition tree

- The decomposition tree visual lets you visualize data across multiple dimensions.
- It automatically aggregates data and enables **drilling down** into your dimensions in any order.
- An artificial intelligence (AI) visualization, so you can ask it to find the next dimension to drill down into based on **certain criteria**.
- Valuable tool for ad hoc exploration and conducting root cause analysis.



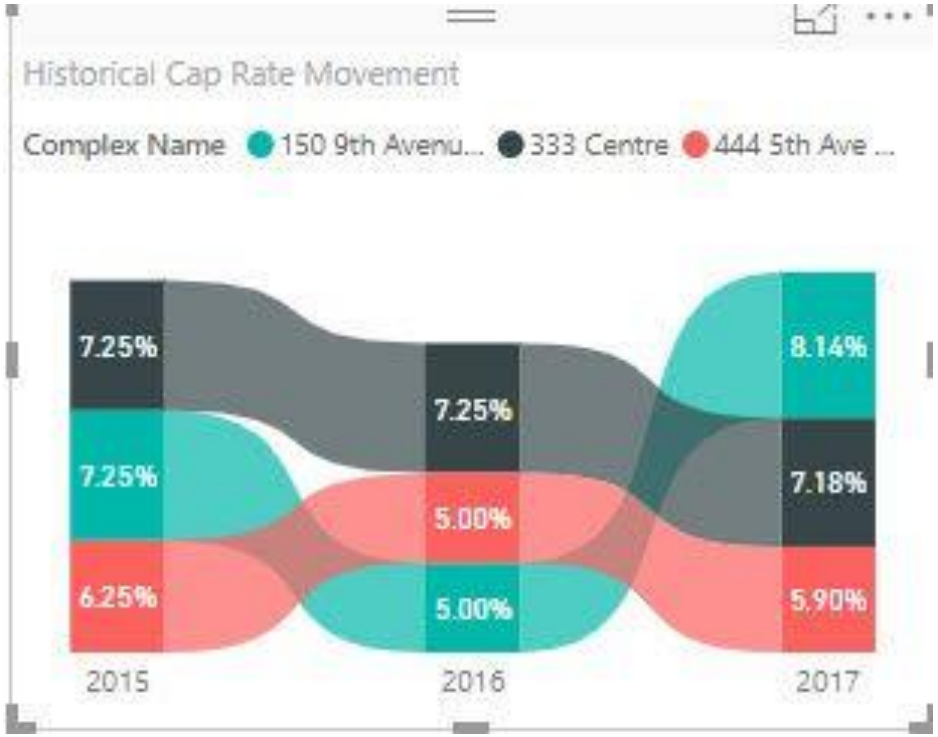
Decomposition Tree - Example

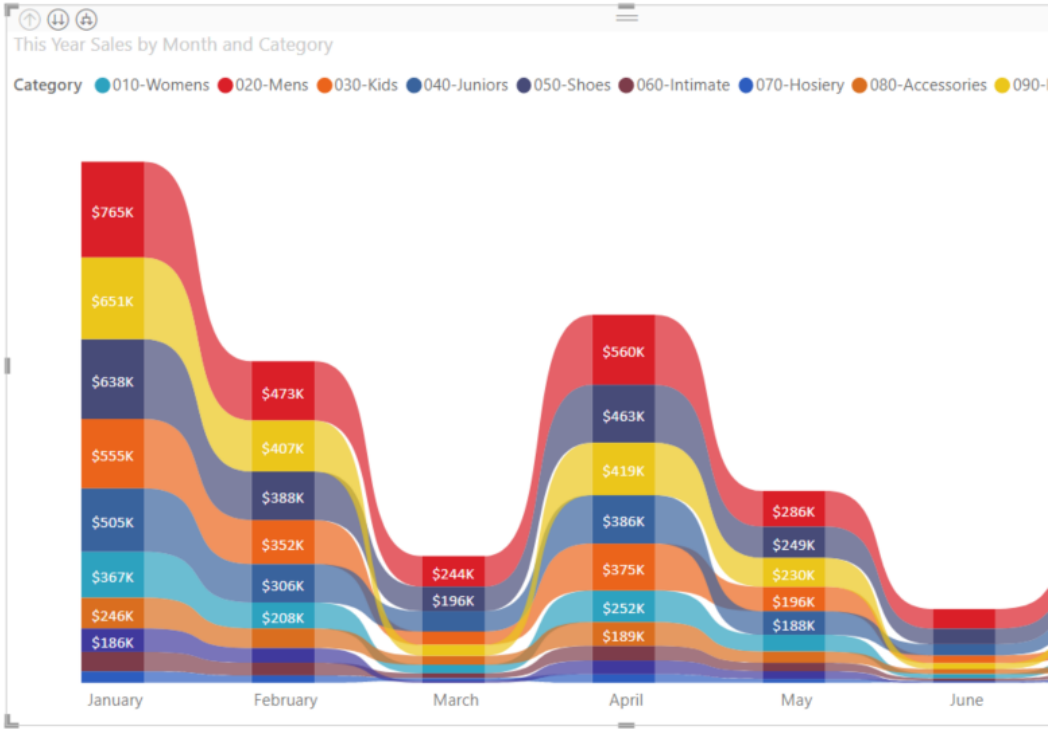




Ribbon Chart

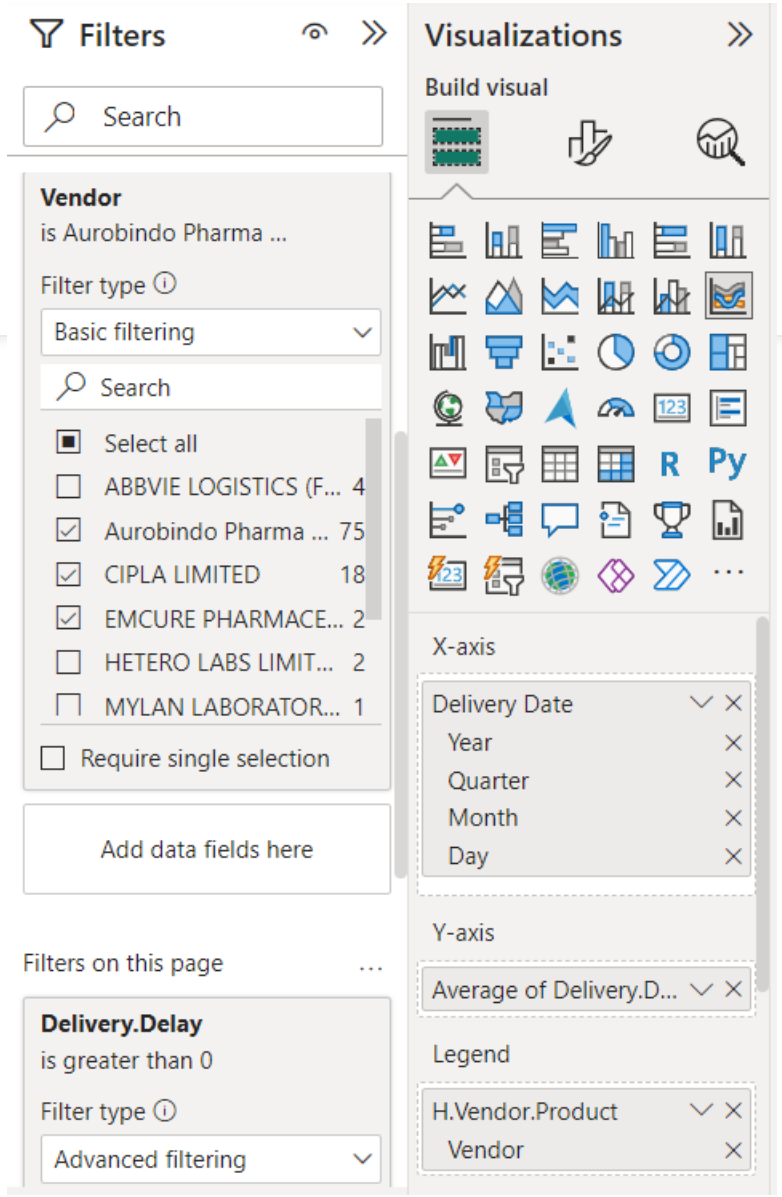
- Power BI Ribbon Chart is useful to quickly identify which categorical data has the highest rank (large values).



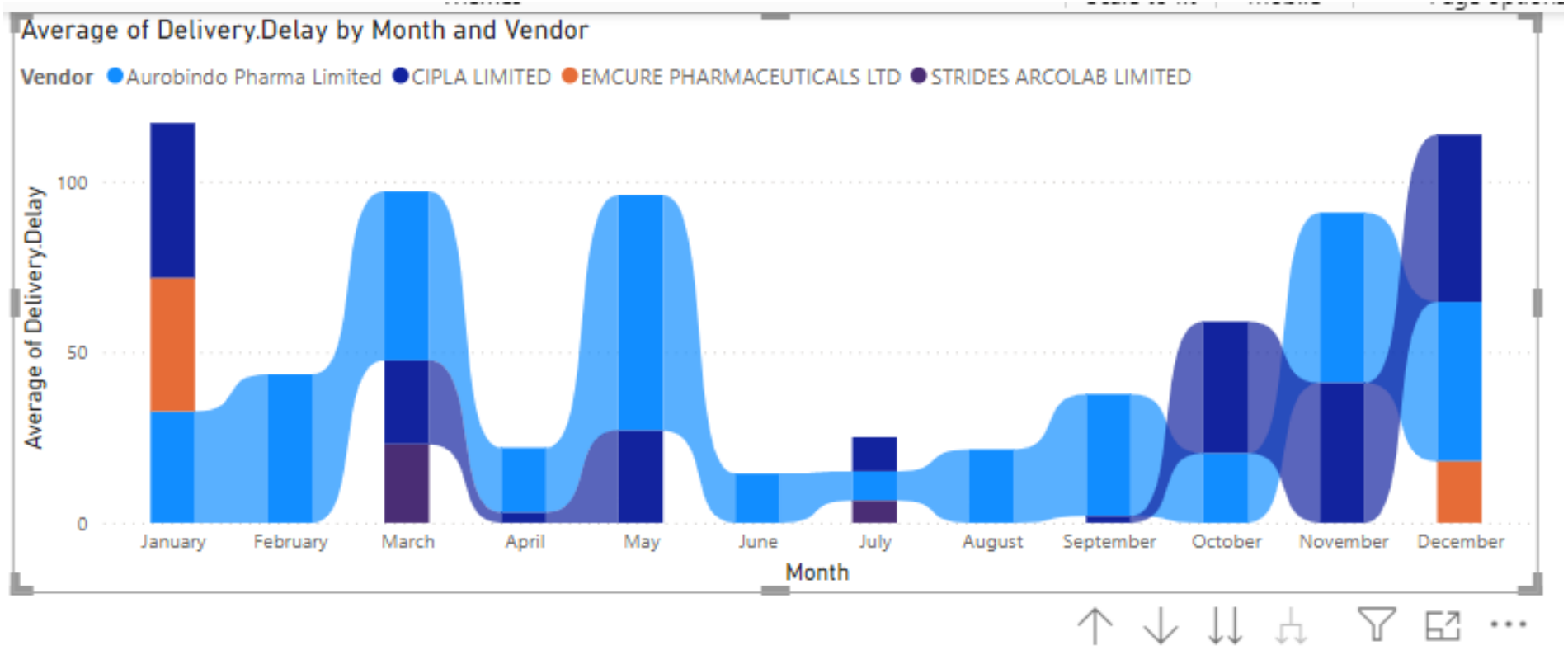


Ribbon - Example

Delay with respect to time and Vendor
Y- axis: Average Delivery Delay X-axis: Delivery Date
Legend: H.Vendor.Product Select Top 4 vendors as identified earlier Filter delay > 0

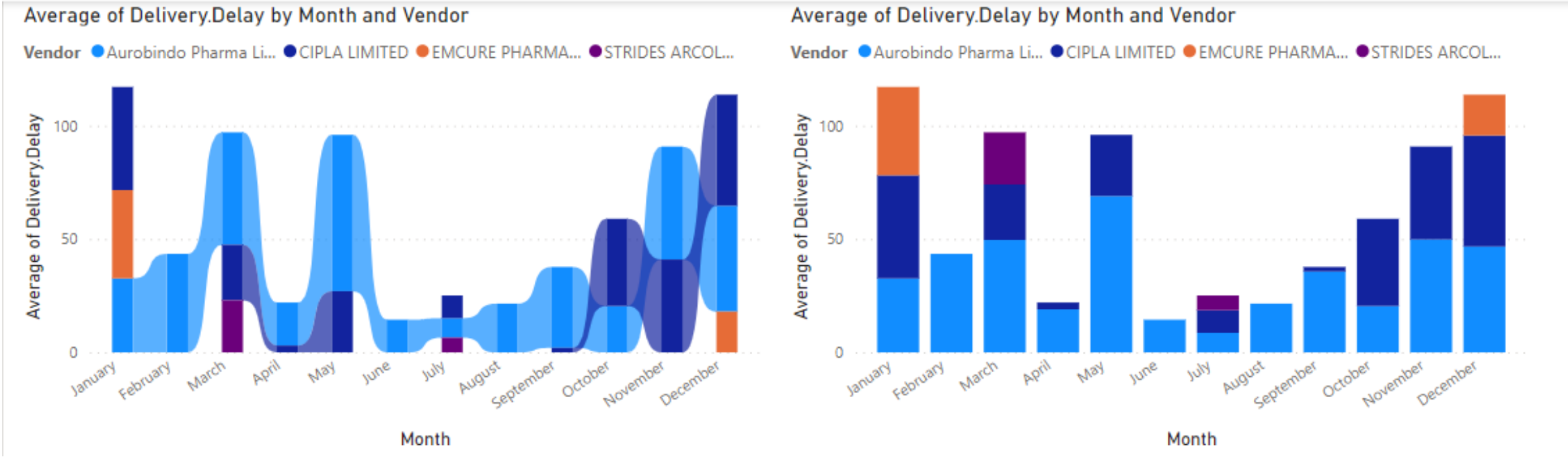


Ribbon - Example



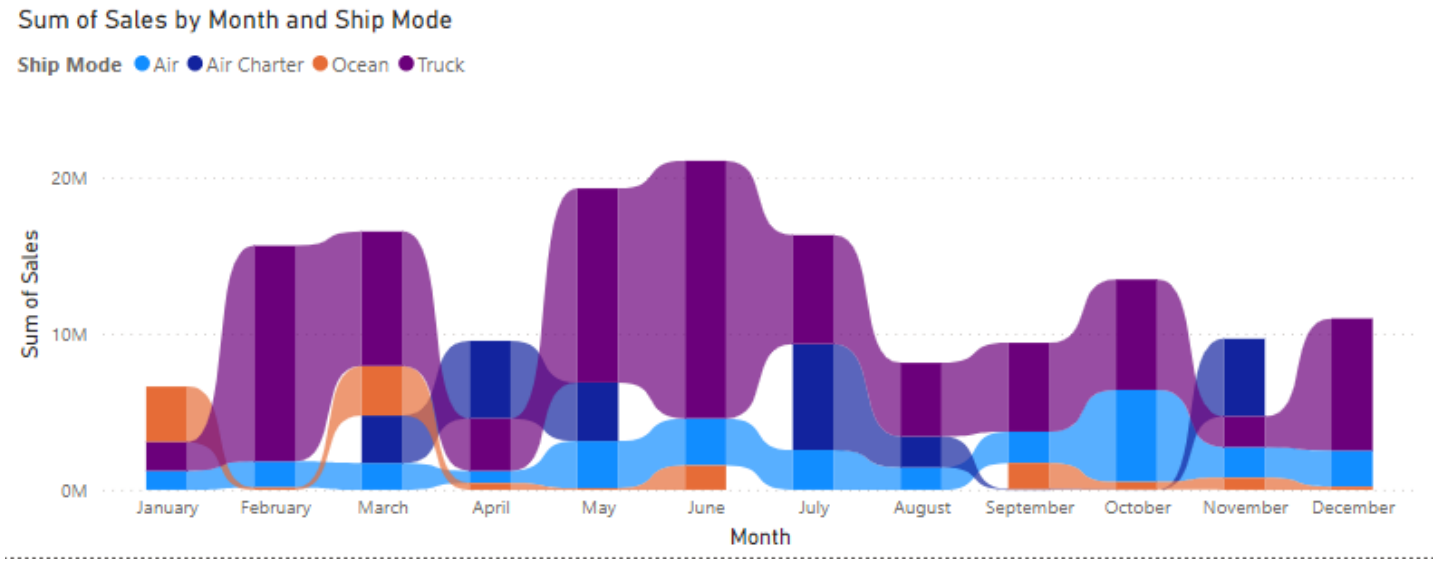
Ribbon Vs Stacked

- Create a copy and change to stacked column chart

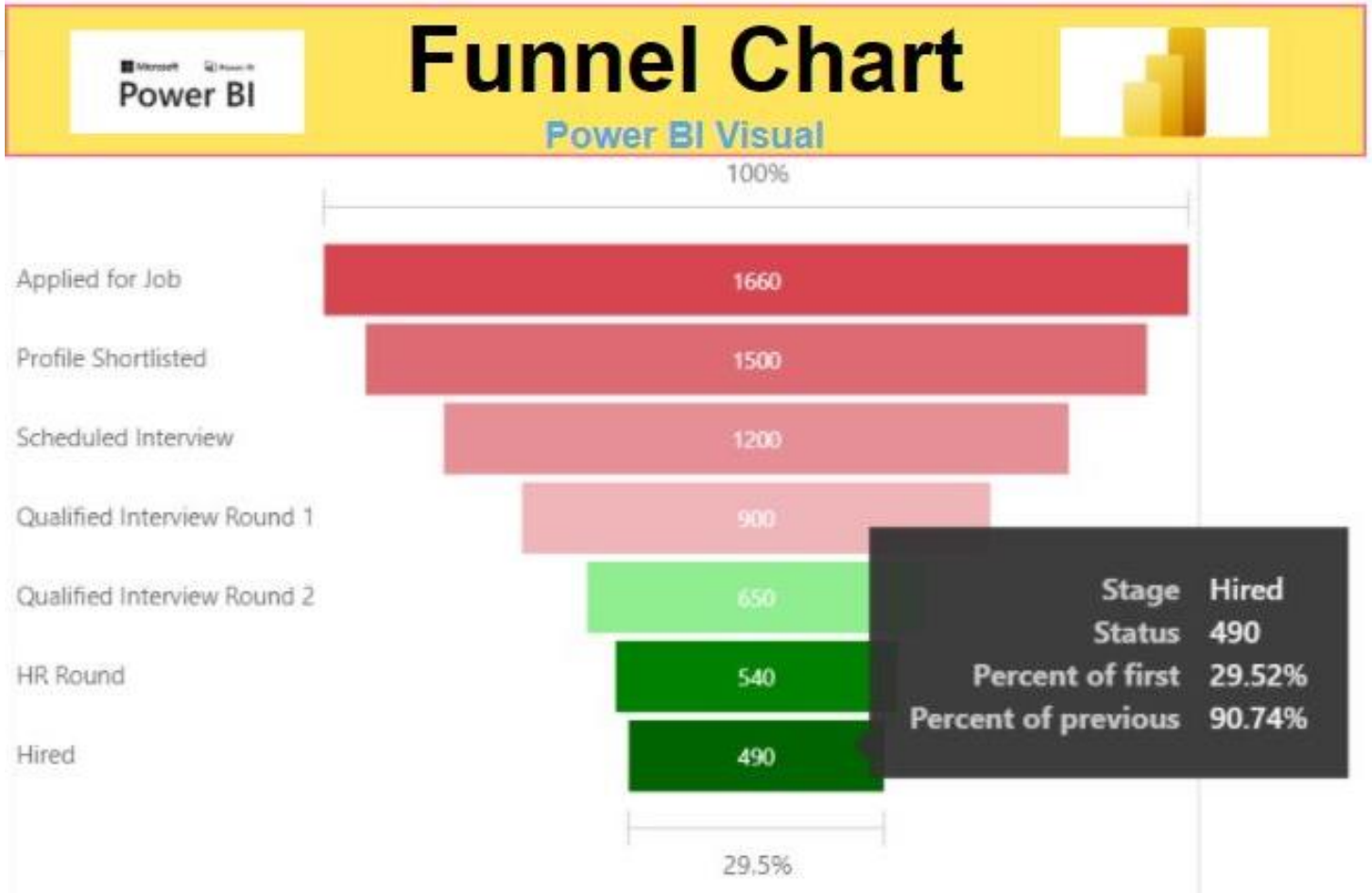


Ribbon - Example

Sales with respect to time and Ship Mode
Y- axis: Sum of Sales X-axis: Delivery Date
Legend: Ship Mode



Funnel chart



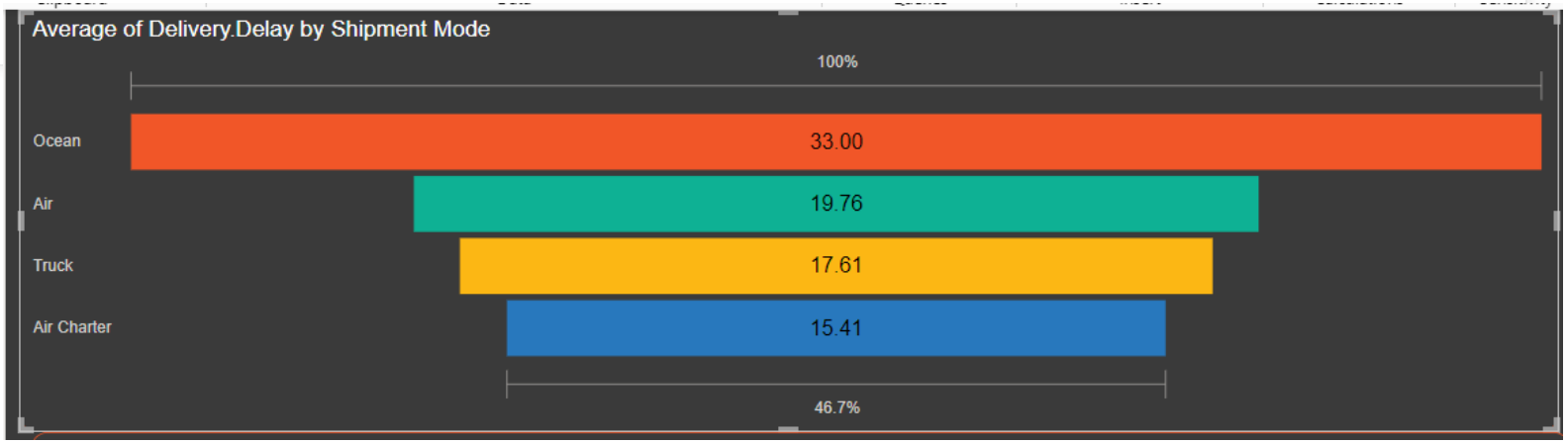
- Funnel charts show values across multiple stages in a process.
- For example, you could use a funnel chart to show the number of sales prospects at each stage in a sales pipeline.
- Typically, the values decrease gradually, allowing the bars to resemble a funnel.

Funnel - Example

- By this time, you have understood that we need to have a filter for Delay>0 for every page for our analysis.

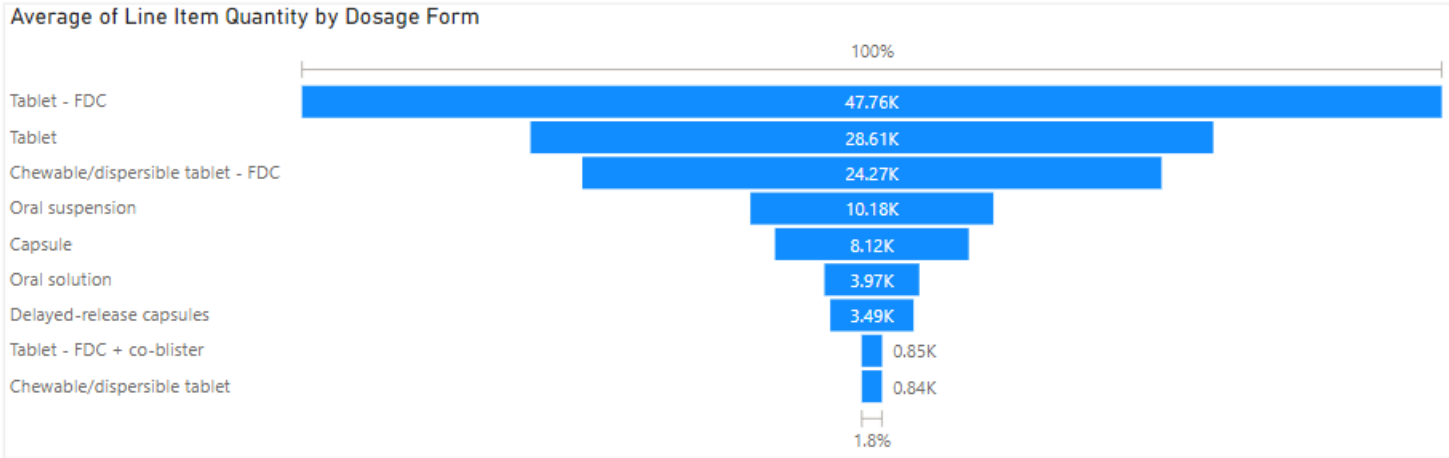
Avg Delay by Ship Mode

Category: Ship Mode
Values: Average of Delivery Delay



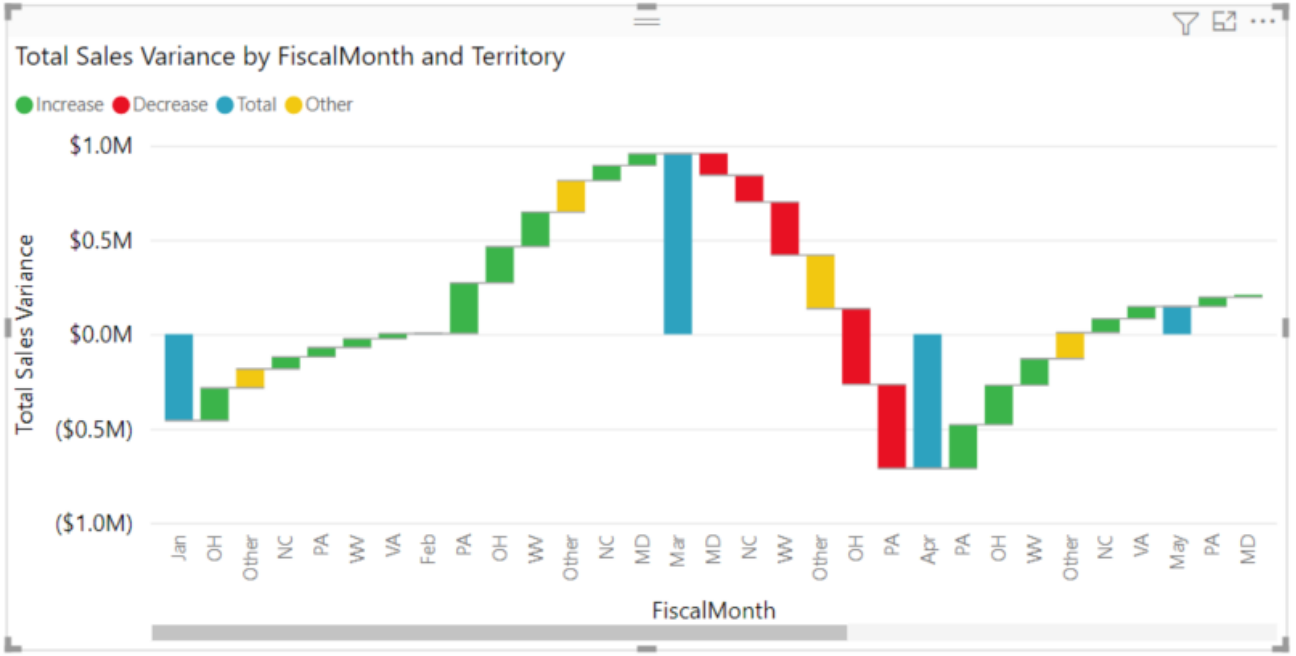
Avg Line Item Quantity by Dosage Form

Category: Dosage Form
Values: Average of Line Item Quantity

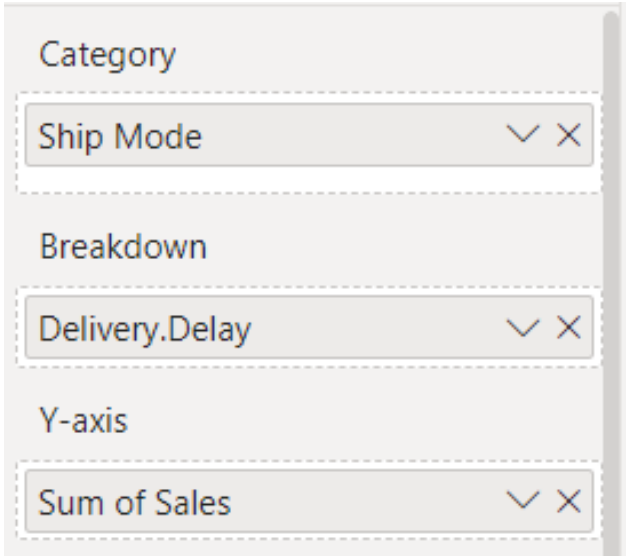


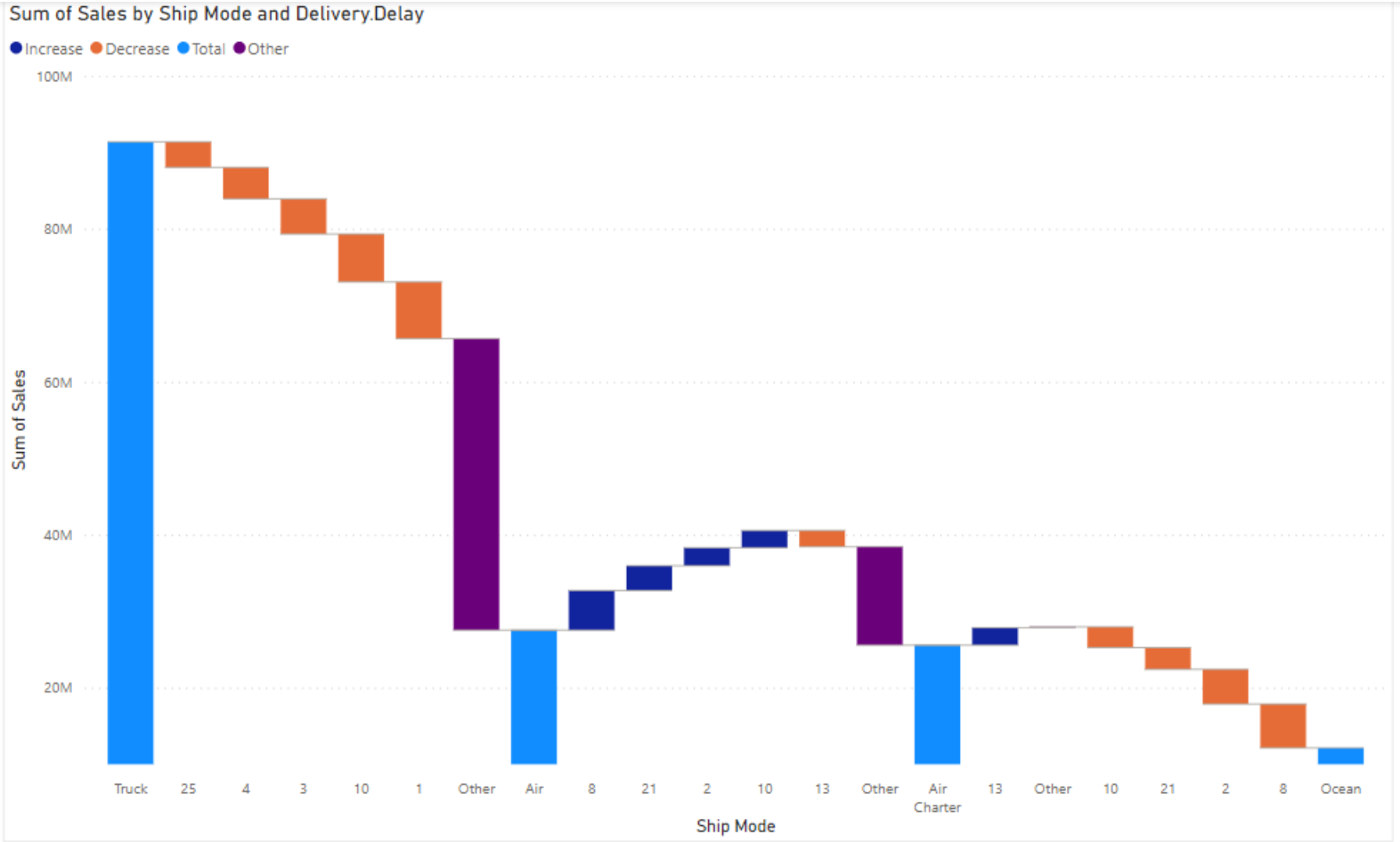
Waterfall chart

- Waterfall charts show a running total as Power BI adds and subtracts values.
- These charts are useful for understanding how an initial value (like net income) is affected by a series of positive and negative changes.
- The columns are color coded so you can quickly notice increases and decreases.

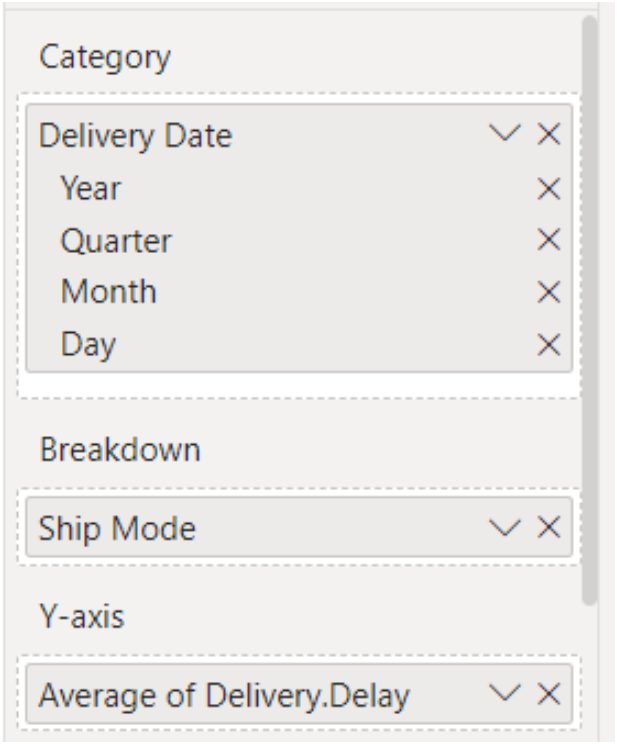


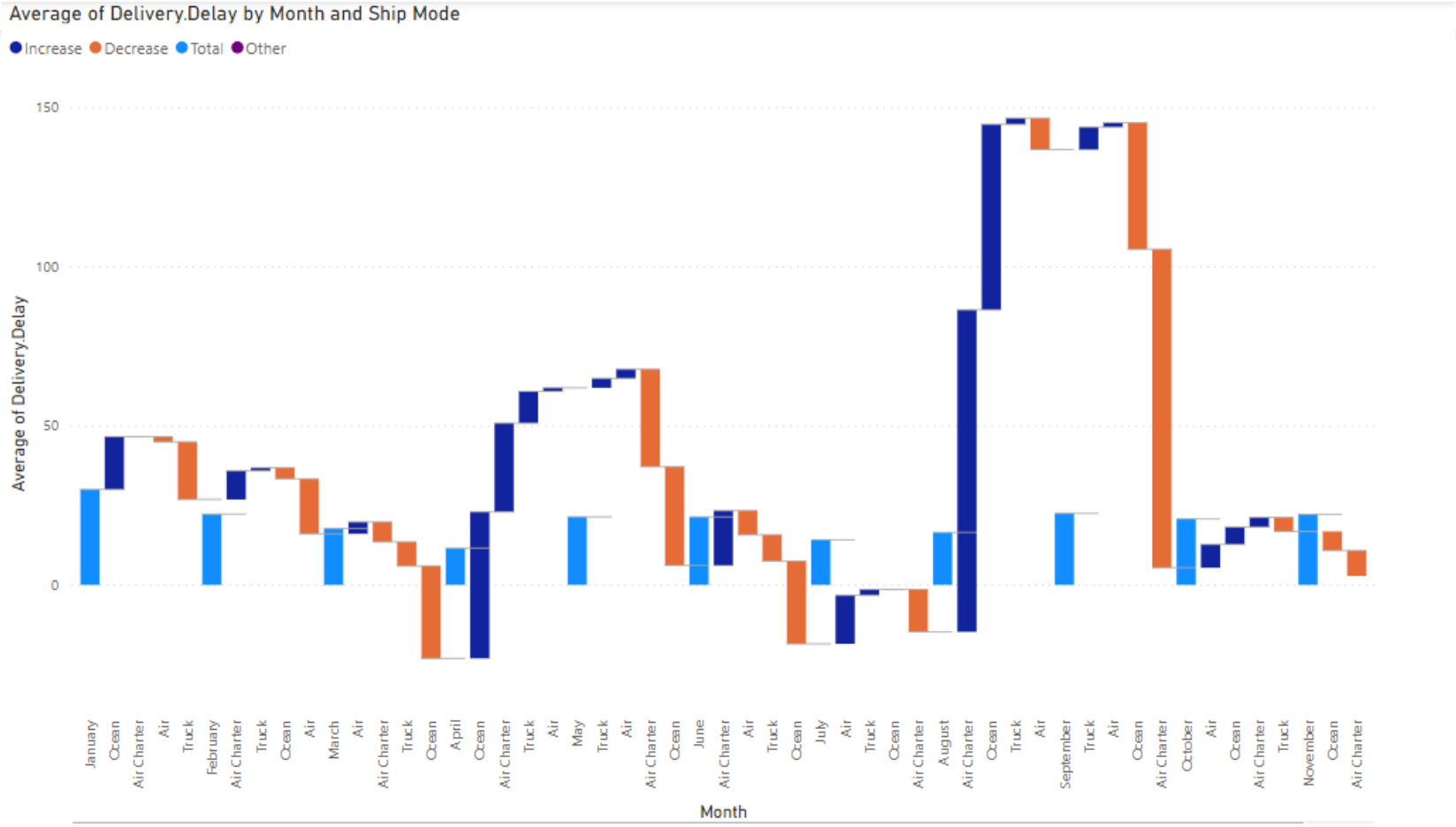
Waterfall – Example





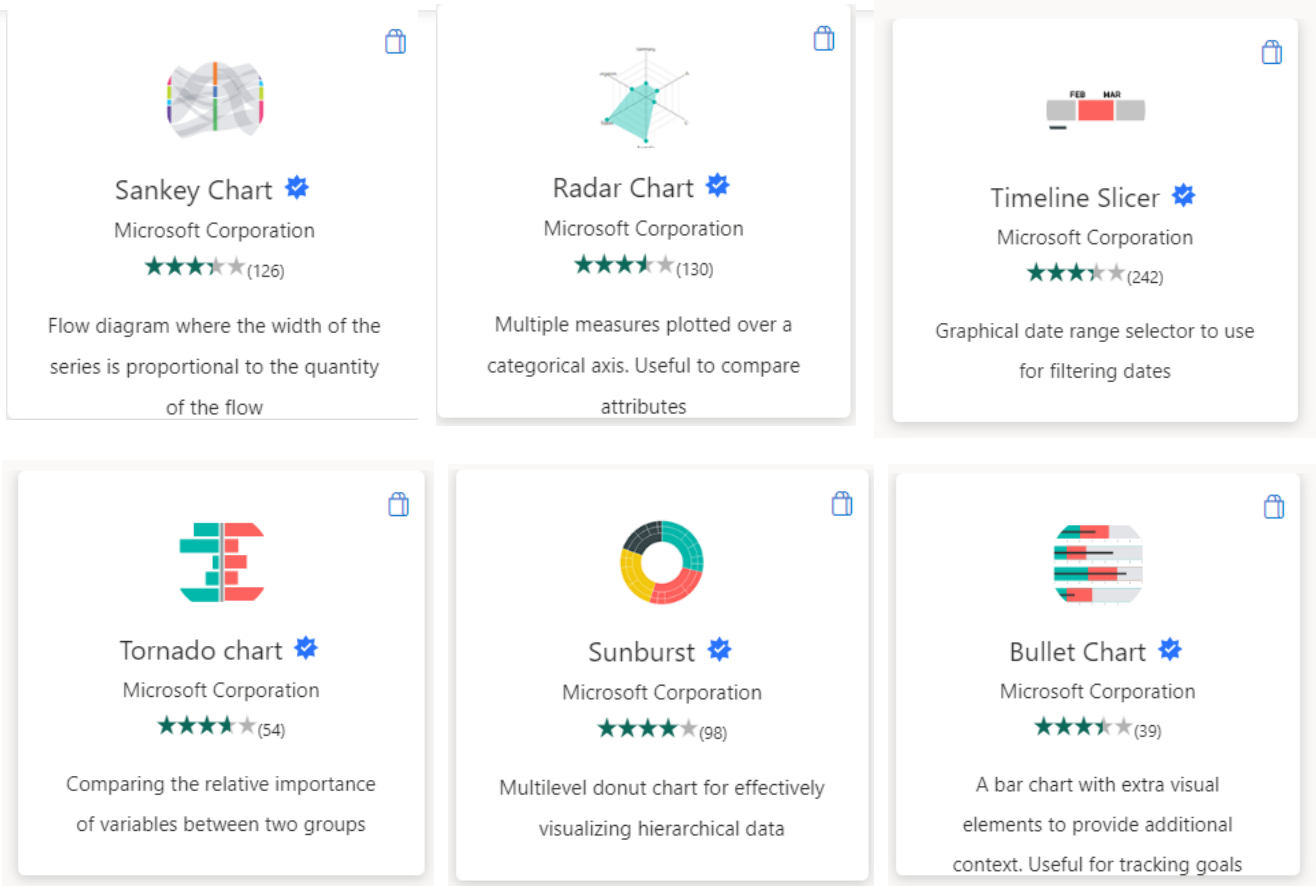
Waterfall with Time - Example





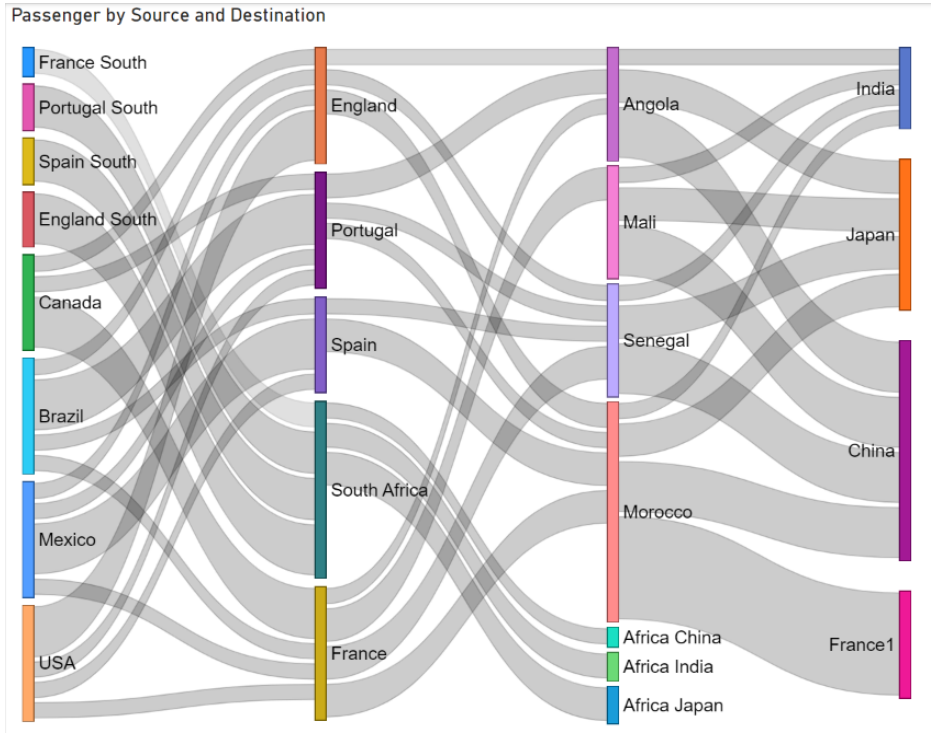
Get more visuals...

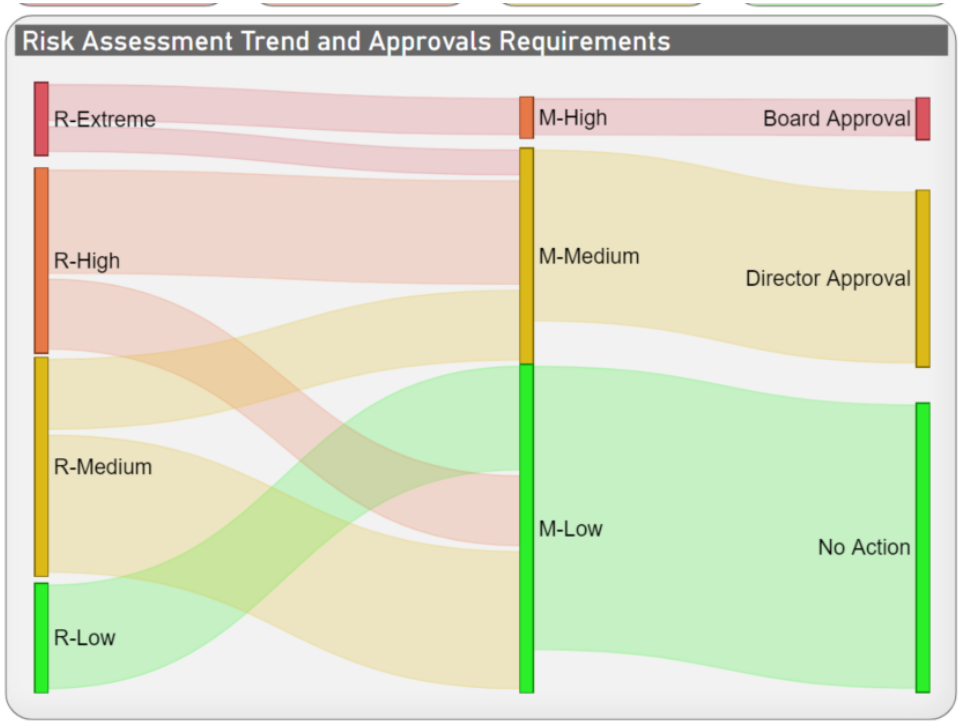
- Sankey
- Radar
- Timeline Slicer
- Tornado
- Sunburst
- Bullet



Sankey chart

- The Sankey chart is a beautiful visualization used to illustrate a flow of data (source –destination) from multiple levels and to multiple destinations. The things being connected are called nodes and the connections are called links.





Sankey - Example

Source

Manuf.Country

Destination

Delivery.Country

Weight

Average of Delivery.Delay

Filters on this visual

Average of Delivery....
is greater than 20.00

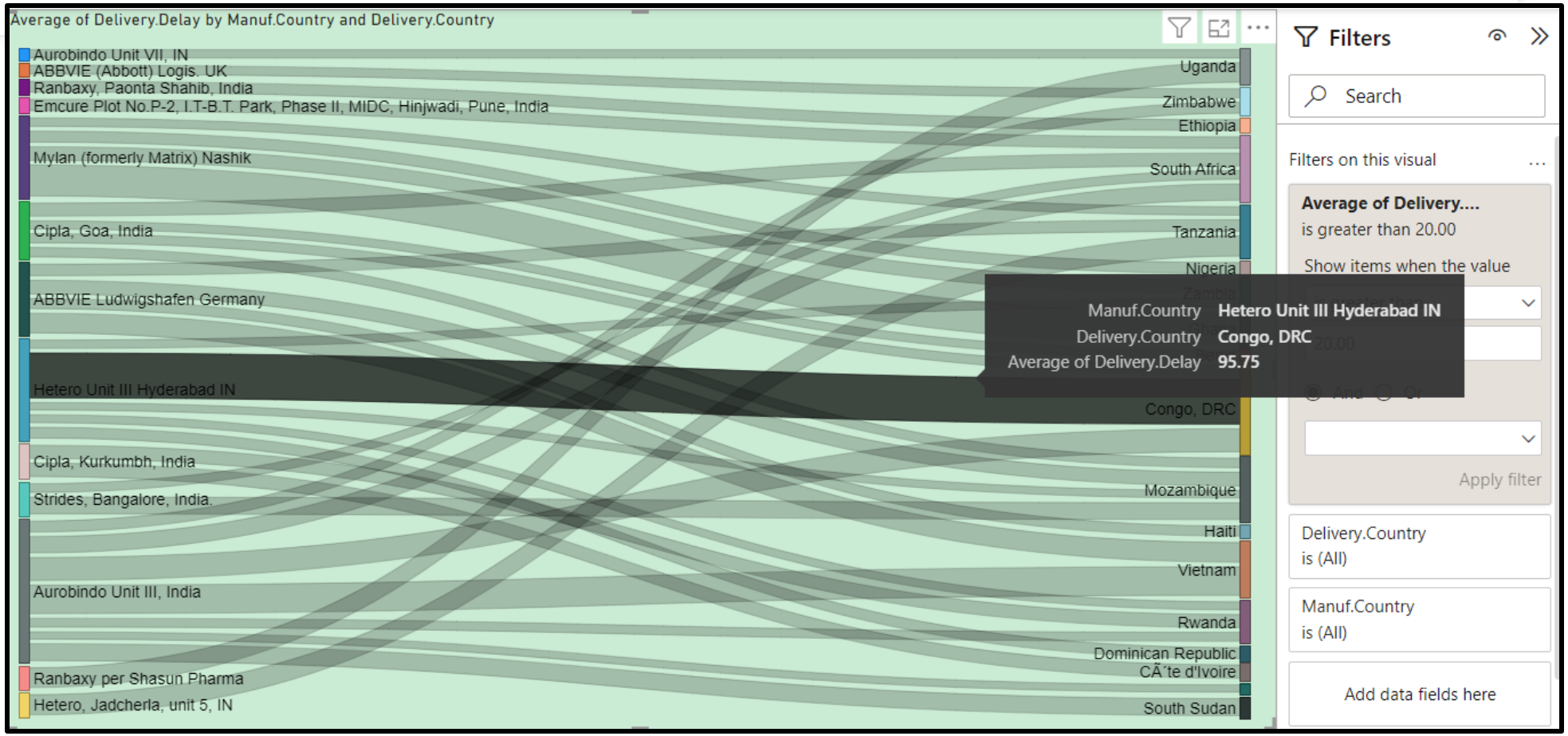
Show items when the value

is greater than

20.00

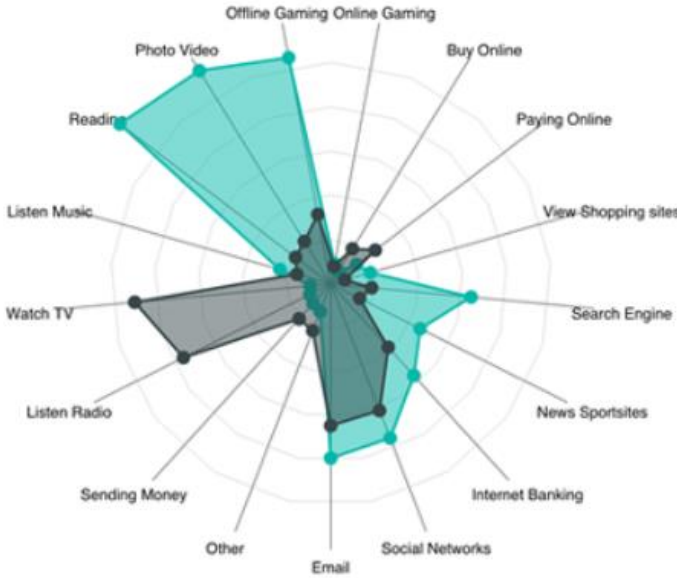
And Or

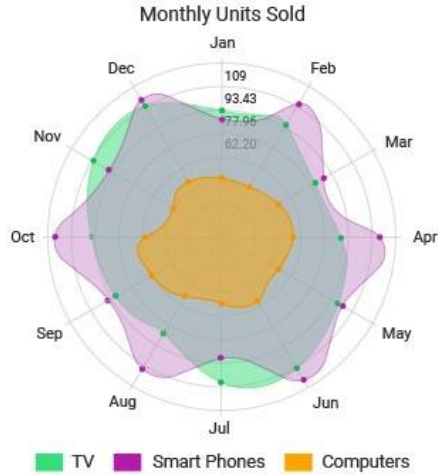
Apply filter

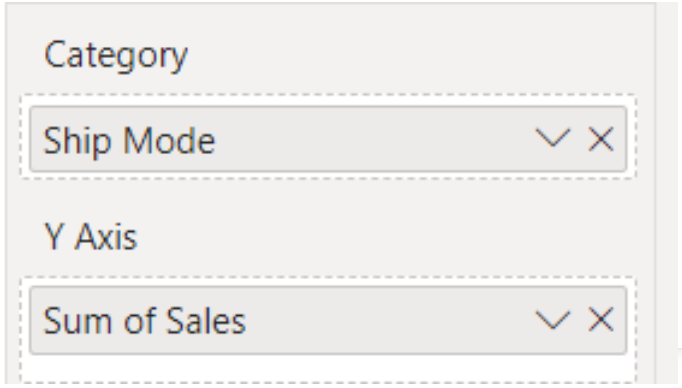


Radar chart

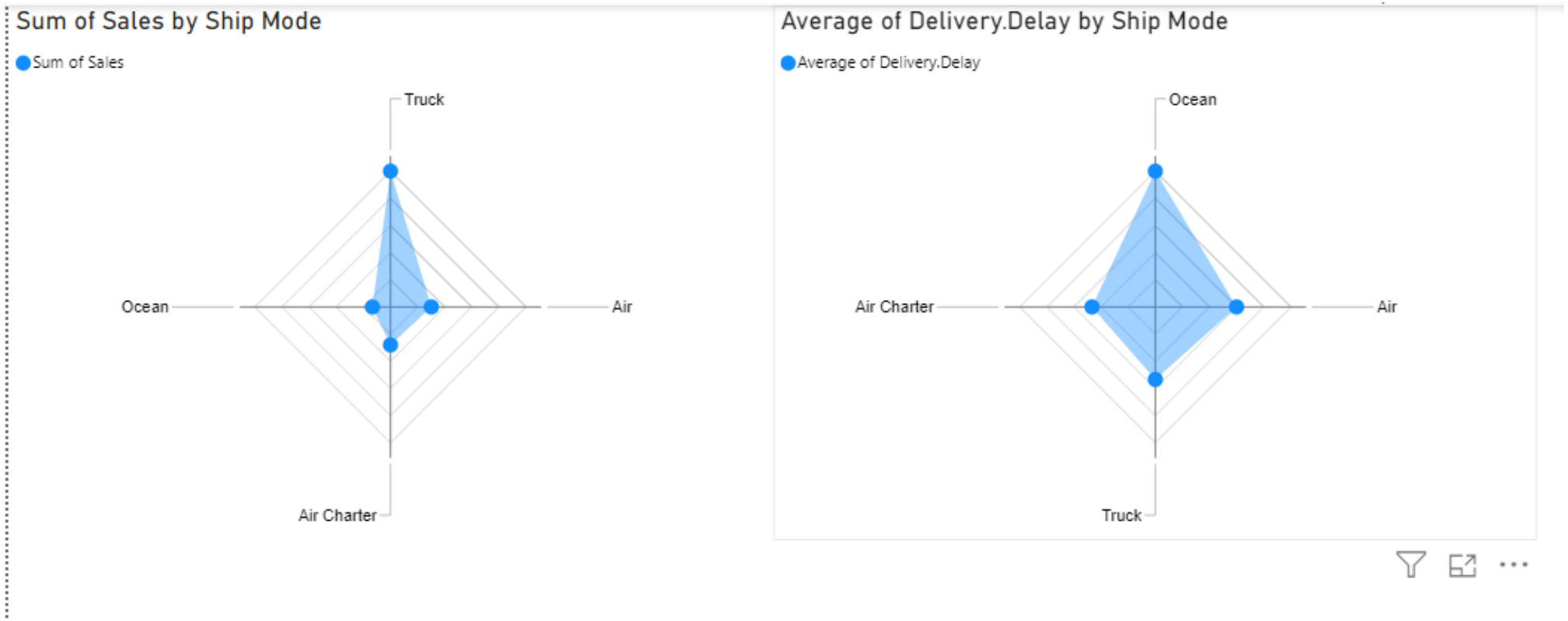
- A radar chart is used to display multiple categories of data on the chart. It is also known as a web chart, spider chart.






Category
Ship Mode
Y Axis
Sum of Sales

Category
Ship Mode
Y Axis
Average of Delivery.Delay


Sum of Sales by Ship Mode
Sum of Sales
Truck
Ocean
Air
Air Charter
Average of Delivery.Delay by Ship Mode
Average of Delivery.Delay
Ocean
Air Charter
Air
Truck

Category

Molecule/Test Type

Y Axis

Average of Delivery.Delay

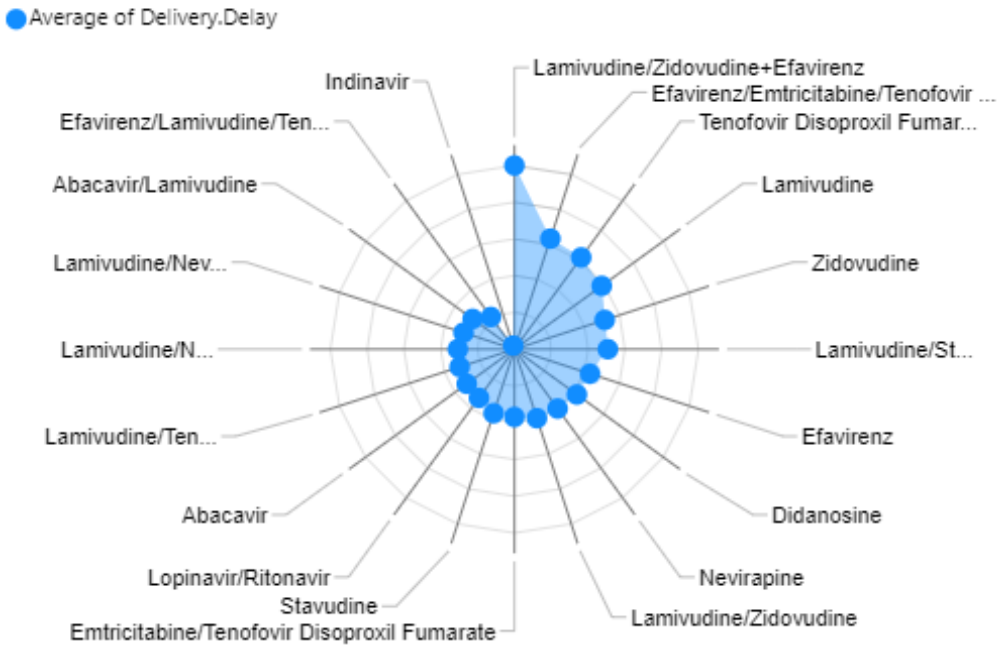
Category

Vendor

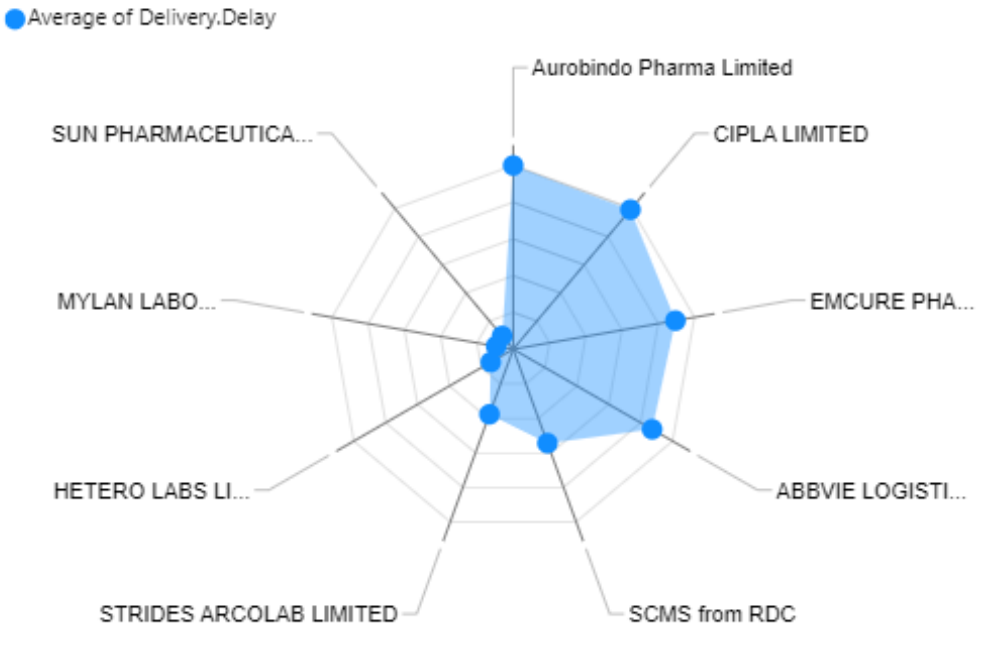
Y Axis

Average of Delivery.Delay

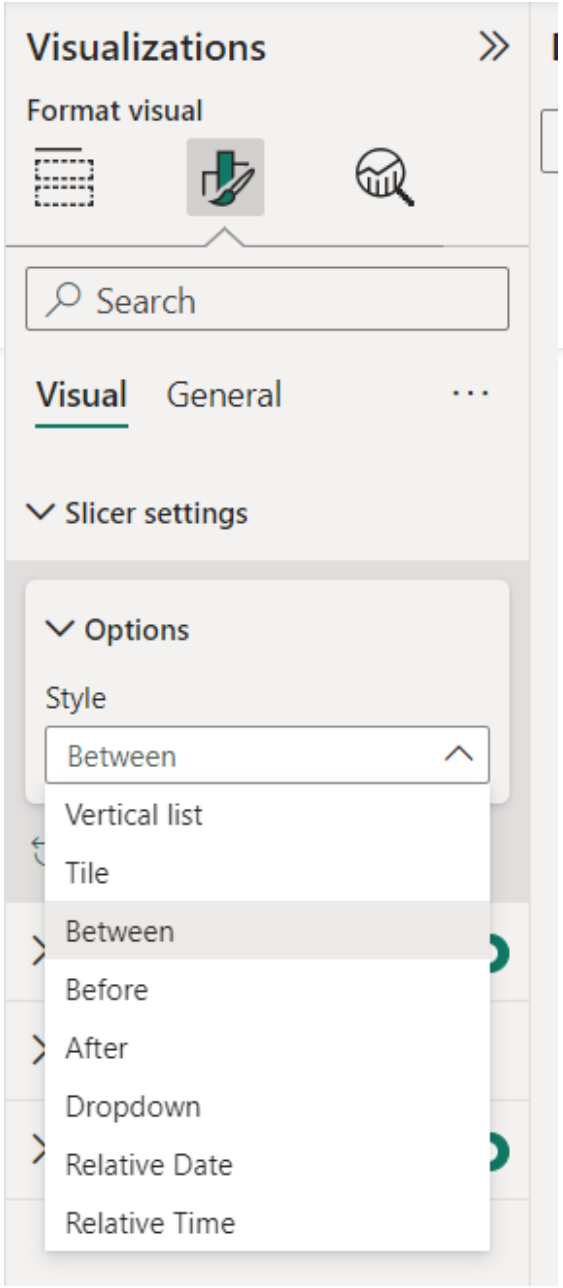
Average of Delivery.Delay by Molecule/Test Type



Average of Delivery.Delay by Vendor



Slicer Types

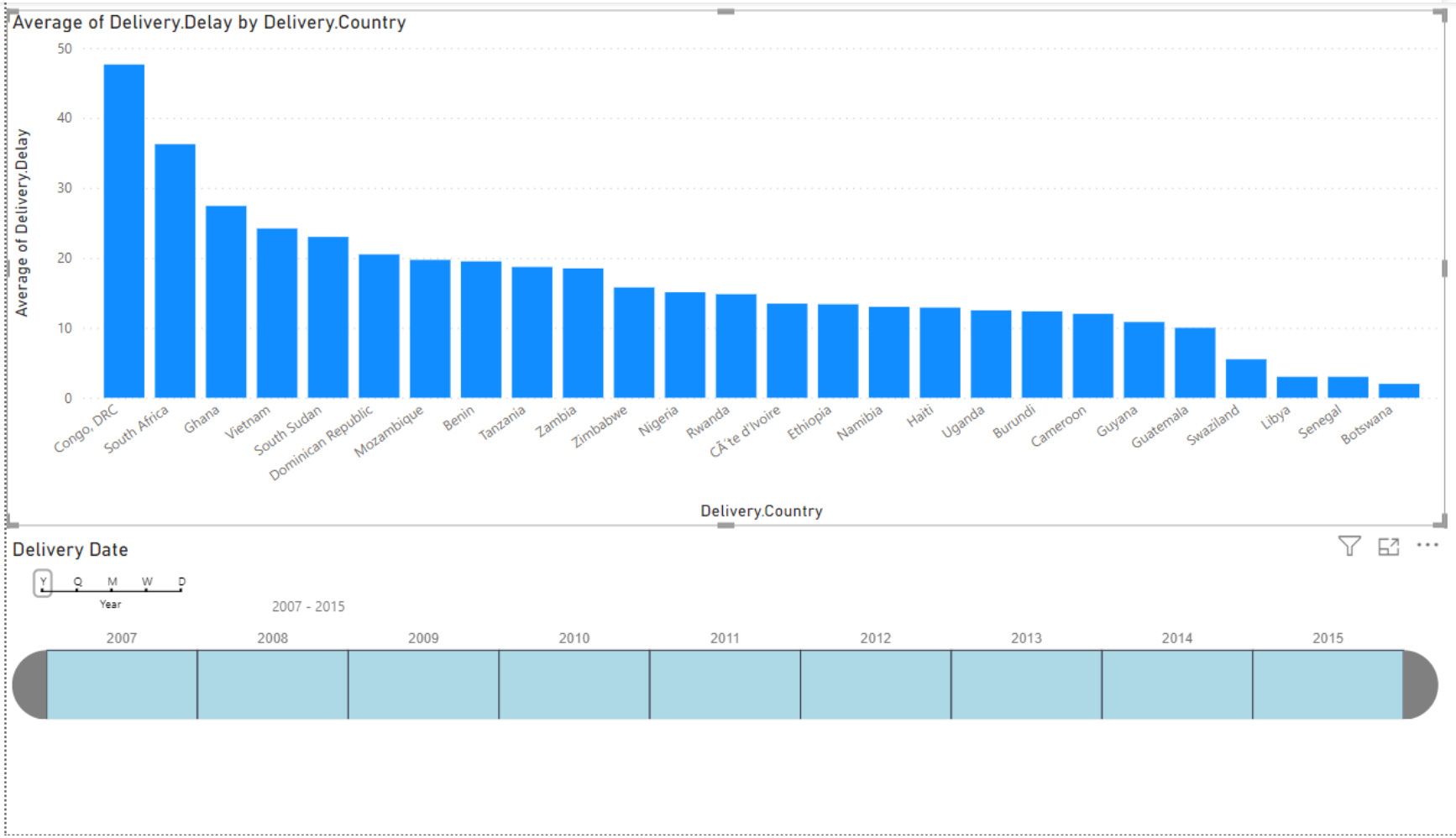


- Default – Time Slicer due to Date format
- Switch to Vertical List
- Adjust the Date hierarchy to show years only
- You may try other slicer settings to explore.

Timeline Slicer

- Graphical date range selector to use for filtering dates

Try it Yourself

Delivery country with Average of Delivery Delay.

Explore the timeline slicer.