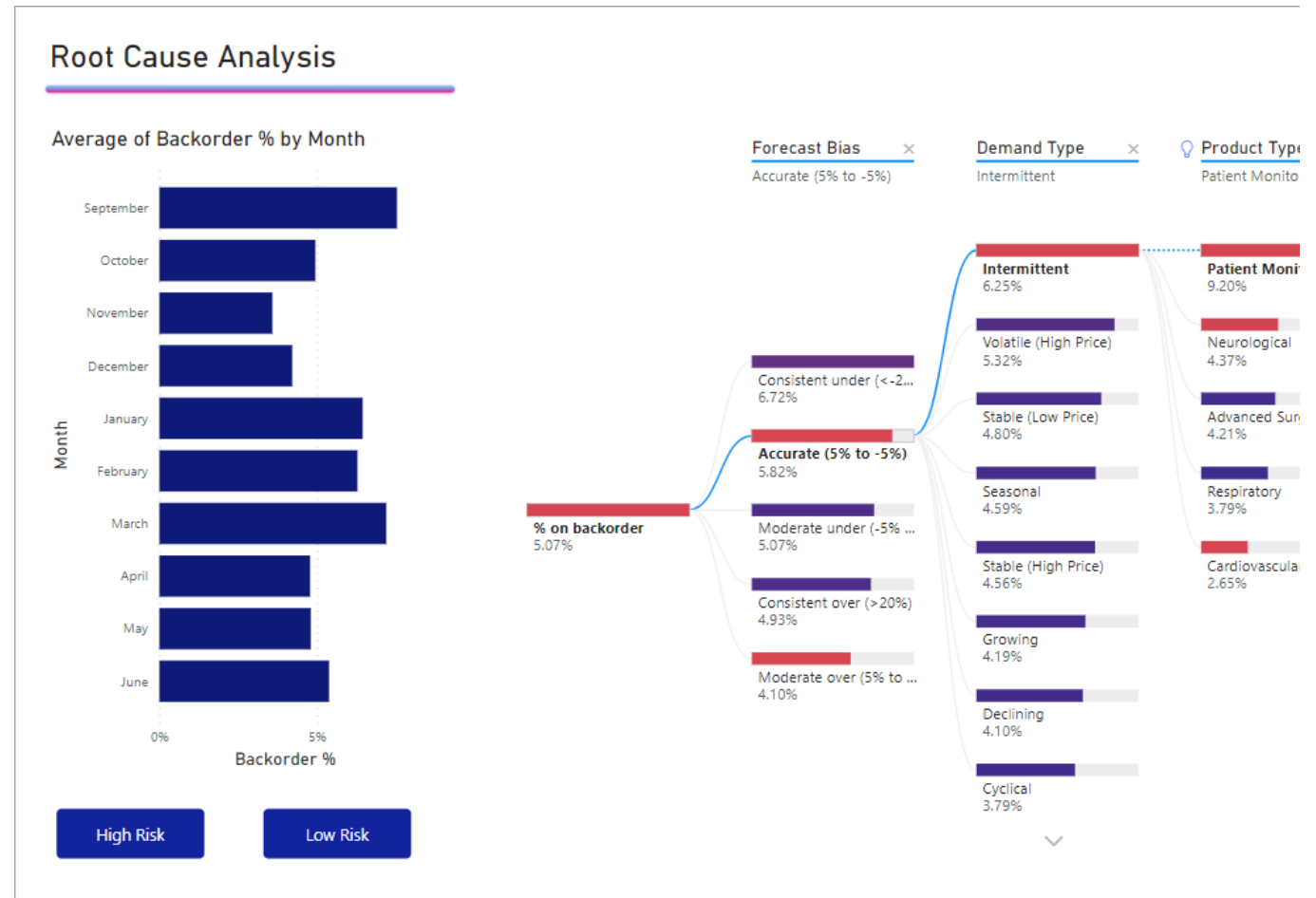


PowerBI Part II

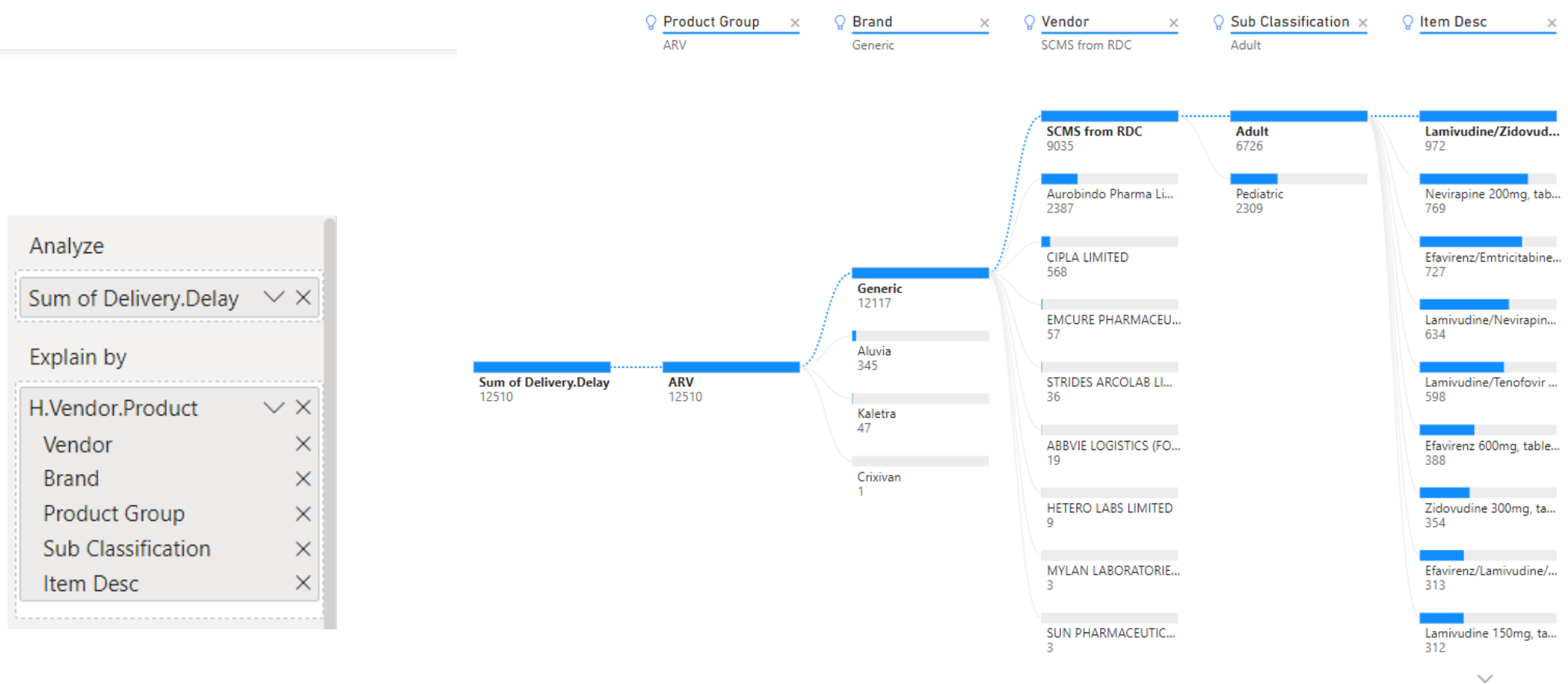
CS 459 Business Intelligence

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.

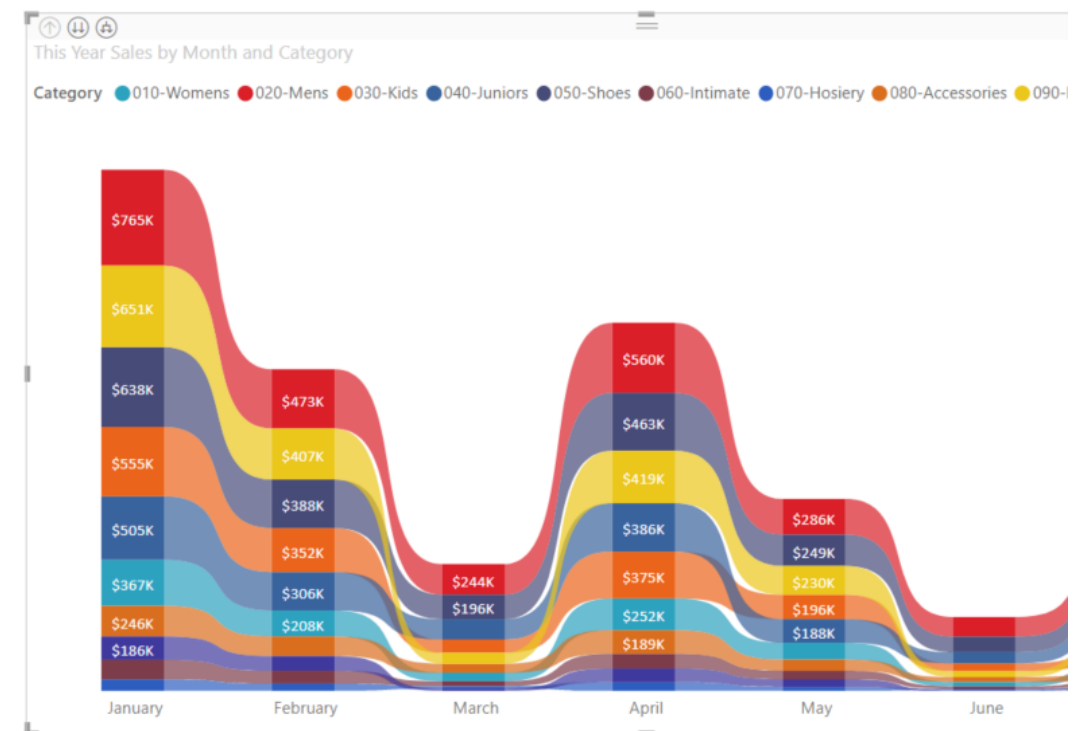
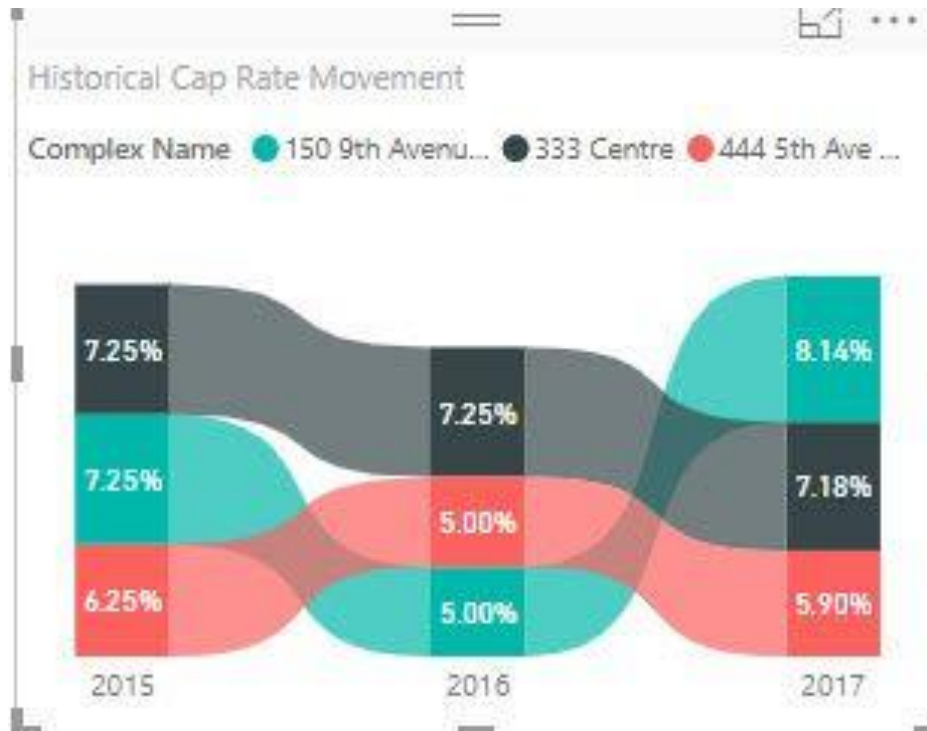


Decomposition Tree - Example



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

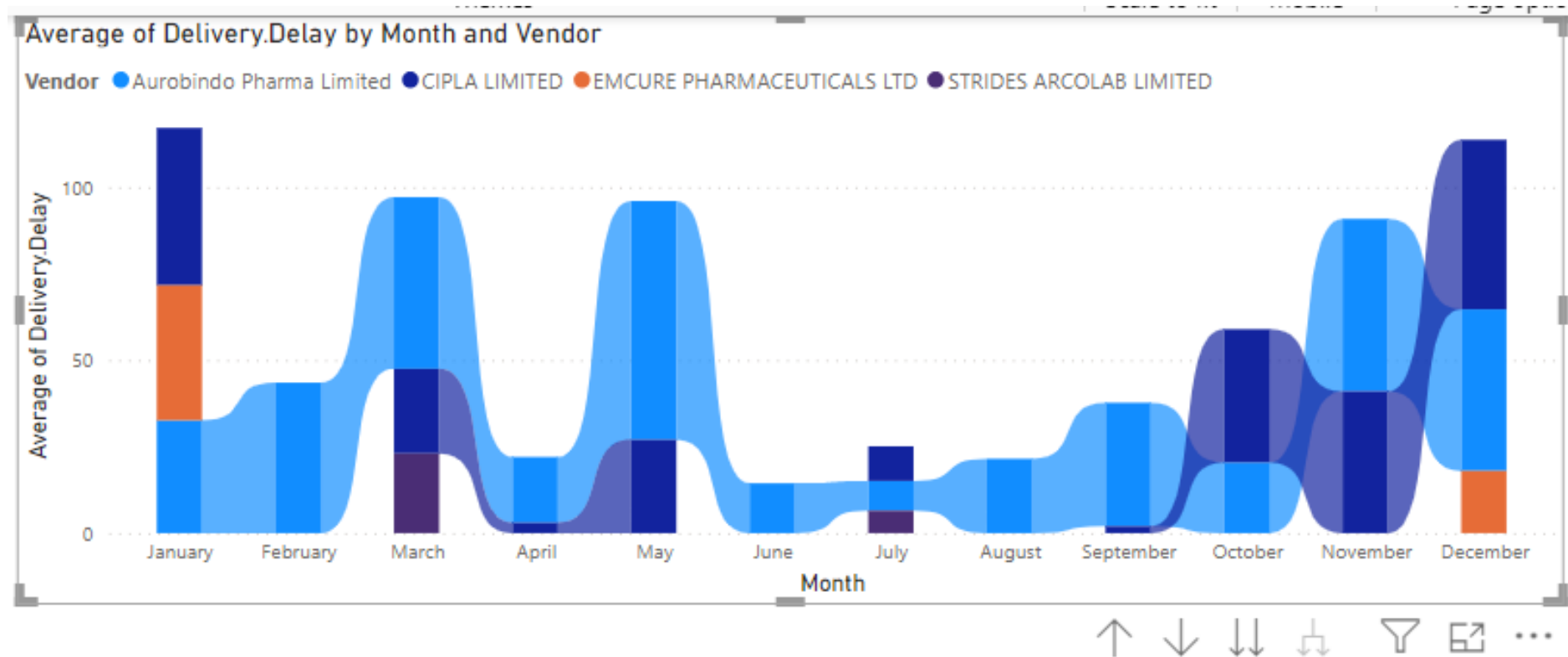
Legend:

H.Vendor.Product

Select Top 4 vendors as identified earlier
Filter delay > 0

The screenshot displays the QlikView ribbon interface. On the left, the 'Filters' section shows a search bar and a list of vendors: Aurobindo Pharma, CIPLA LIMITED, EMCURE PHARMACE, HETERO LABS LIMIT, and MYLAN LABORATOR. The 'Vendor' filter is set to 'Basic filtering'. Below this, a list of vendors is shown with checkboxes: 'Select all', 'ABBVIE LOGISTICS (F... 4', 'Aurobindo Pharma ... 75', 'CIPLA LIMITED 18', 'EMCURE PHARMACE... 2', 'HETERO LABS LIMIT... 2', and 'MYLAN LABORATOR... 1'. The 'Require single selection' checkbox is unchecked. A button 'Add data fields here' is present. Below the vendor list, the 'Filters on this page' section shows a filter for 'Delivery.Delay' with the condition 'is greater than 0' and 'Advanced filtering' selected. On the right, the 'Visualizations' section shows a search bar and a grid of visualization icons. The 'Build visual' section shows a list of visualization types: Bar chart, Line chart, Pie chart, Map, etc. The 'X-axis' section shows 'Delivery Date' selected with a dropdown arrow and a close button. Below it, 'Year', 'Quarter', 'Month', and 'Day' are listed with close buttons. The 'Y-axis' section shows 'Average of Delivery.D...' selected with a dropdown arrow and a close button. The 'Legend' section shows 'H.Vendor.Product' and 'Vendor' selected with dropdown arrows and close buttons. In the top right corner, the IBA logo is visible.

Ribbon - Example

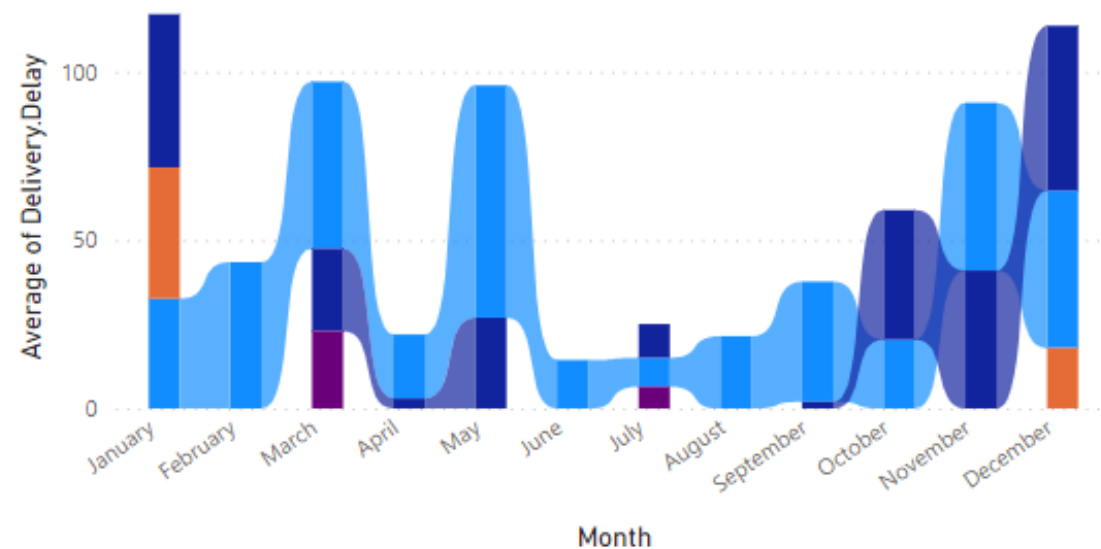


Ribbon Vs Stacked

- Create a copy and change to stacked column chart

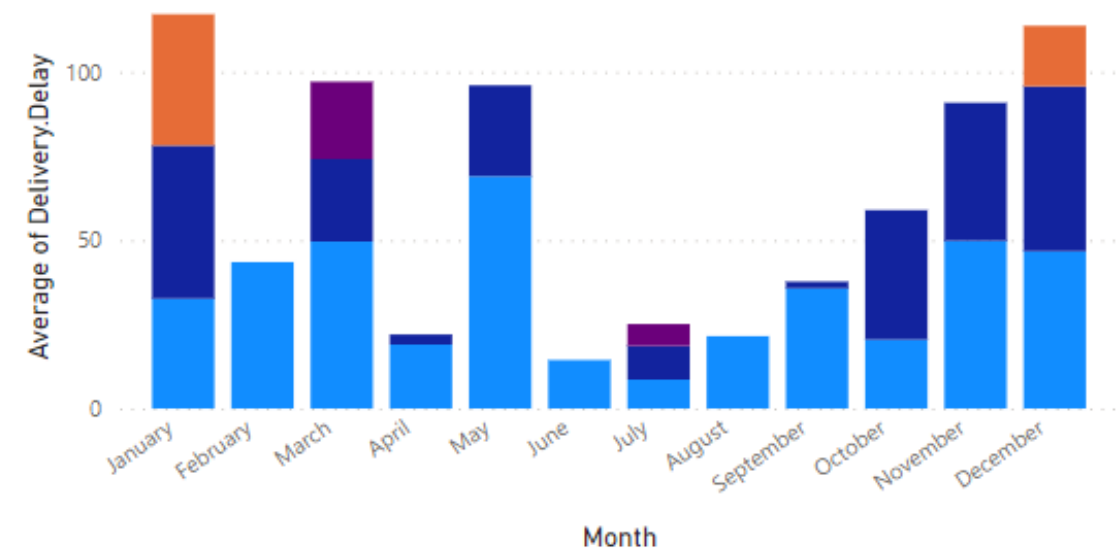
Average of Delivery.Delay by Month and Vendor

Vendor ● Aurobindo Pharma Li... ● CIPLA LIMITED ● EMCURE PHARMA... ● STRIDES ARCOL...



Average of Delivery.Delay by Month and Vendor

Vendor ● Aurobindo Pharma Li... ● CIPLA LIMITED ● EMCURE PHARMA... ● STRIDES ARCOL...



Ribbon - Example

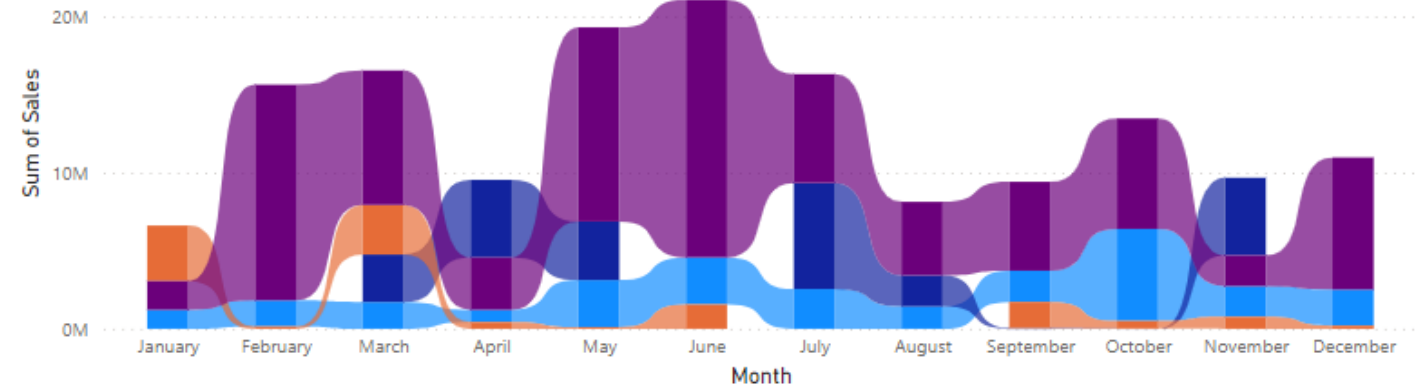
Sales with respect to time and Ship Mode

Y- axis: Sum of Sales
X-axis: Delivery Date

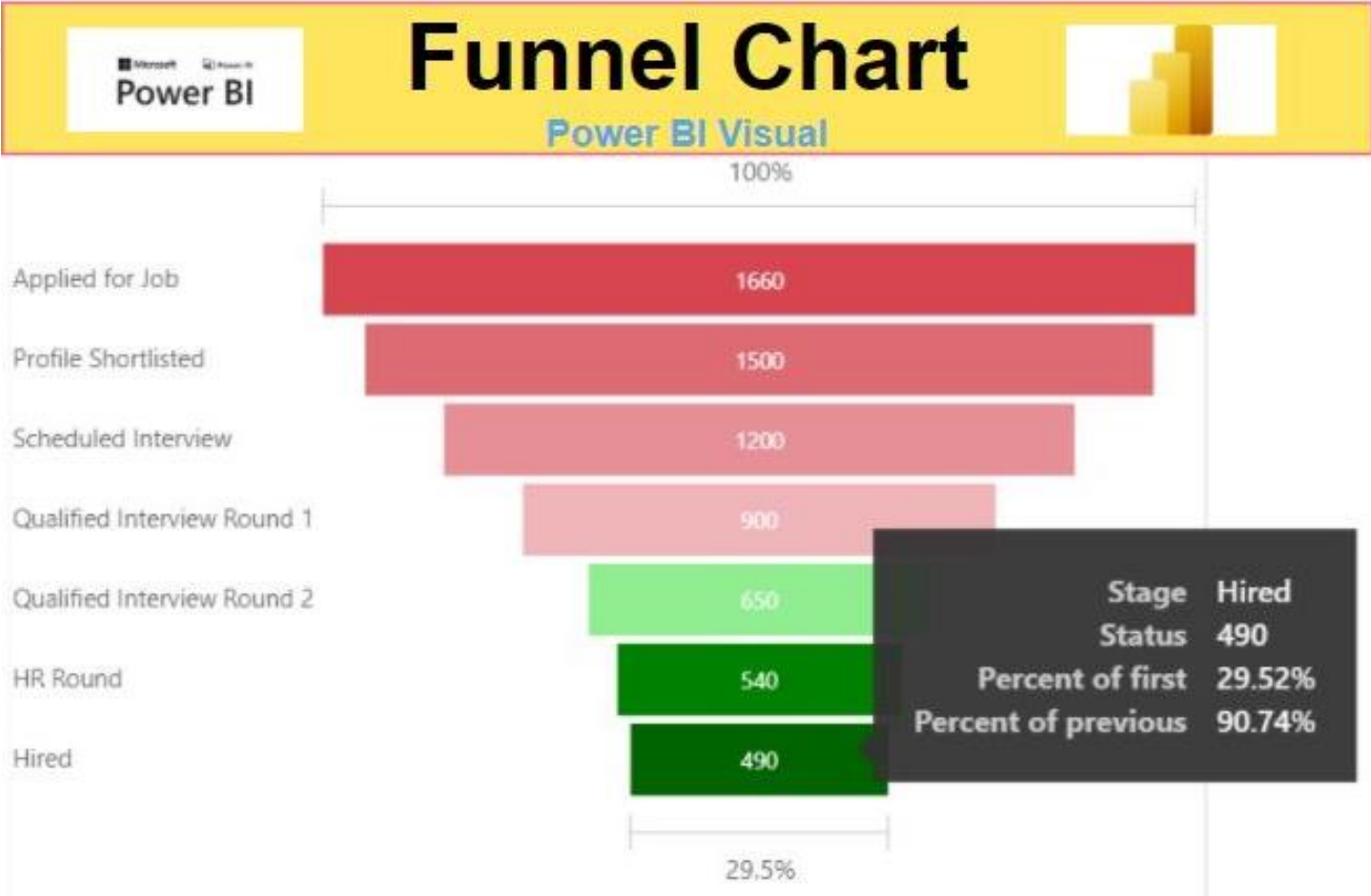
Legend:
Ship Mode

Sum of Sales by Month and Ship Mode

Ship Mode ● Air ● Air Charter ● Ocean ● Truck



Funnel chart



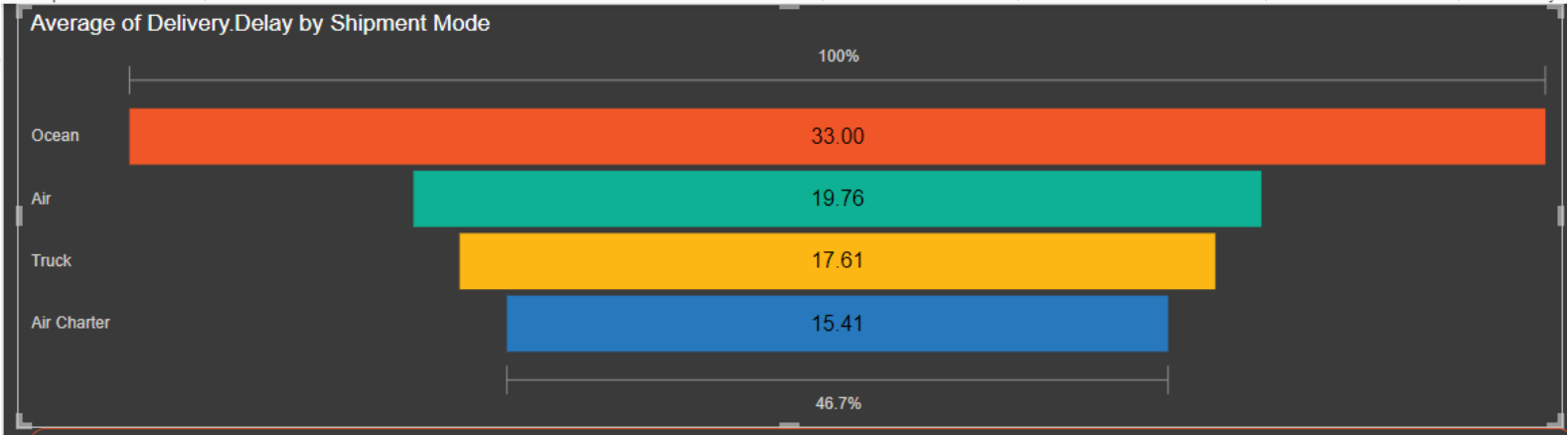
- Funnel charts show values across multiple stages in a process.
- For example, you could use a funnel chart to show the number of sales prospects at each stage in a sales pipeline.
- Typically, the values decrease gradually, allowing the bars to resemble a funnel.

Funnel - Example

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

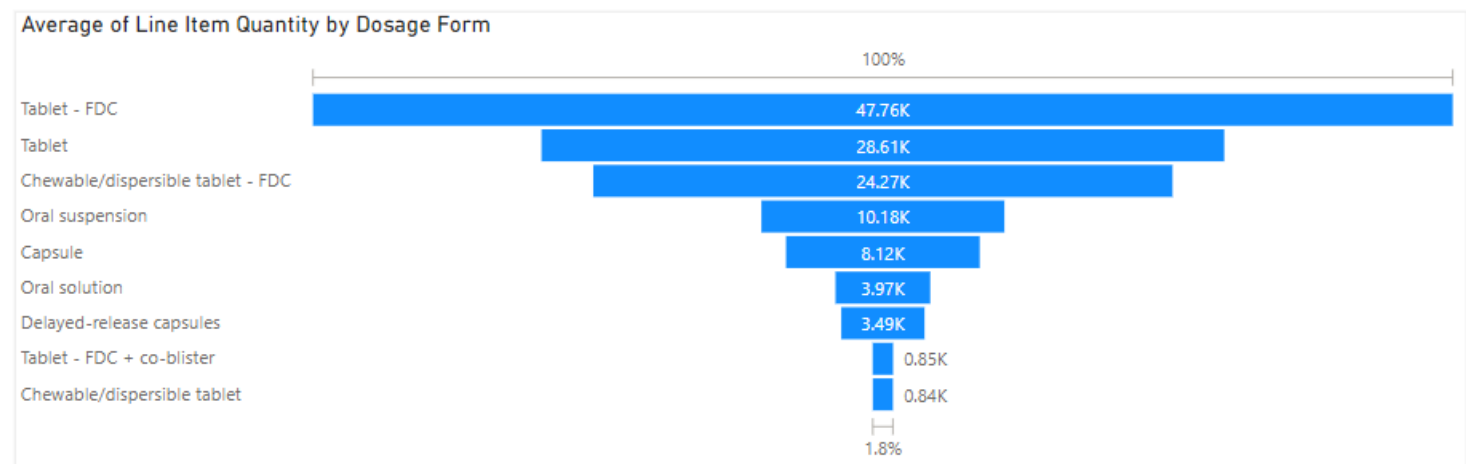
Avg Delay by Ship Mode

Category: Ship Mode
 Values: Average of Delivery Delay



Avg Line Item Quantity by Dosage Form

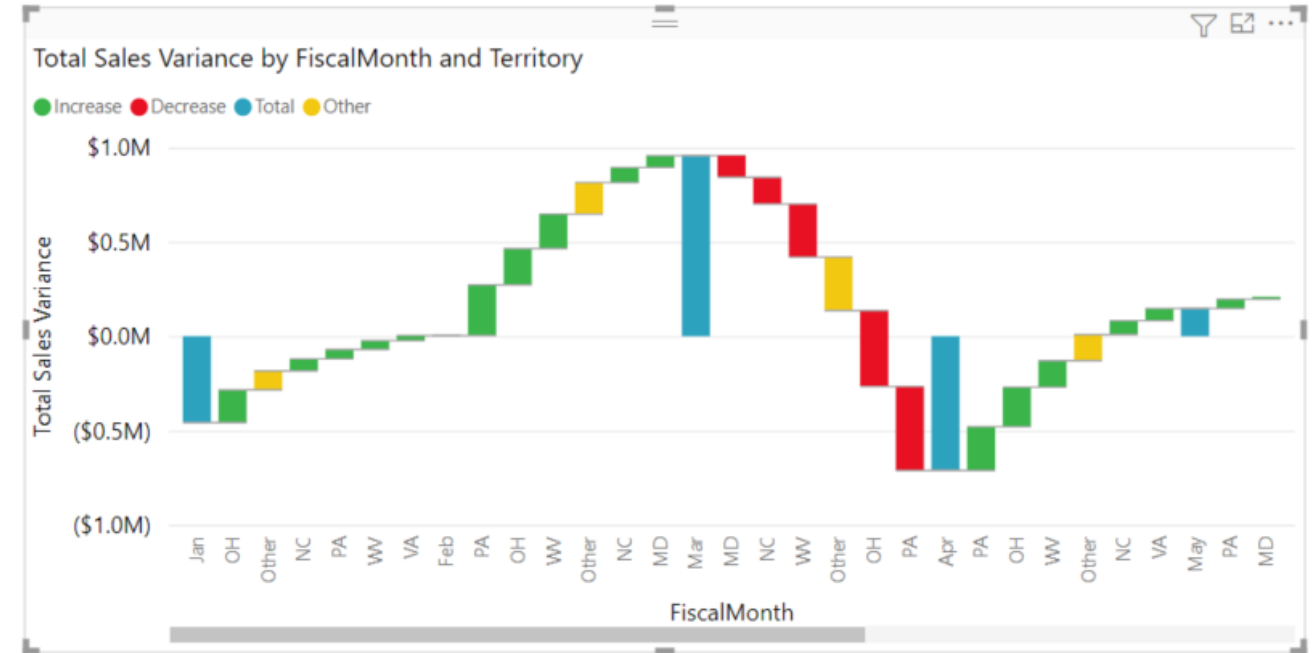
Category: Dosage Form
 Values: Average of Line Item Quantity



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

Category

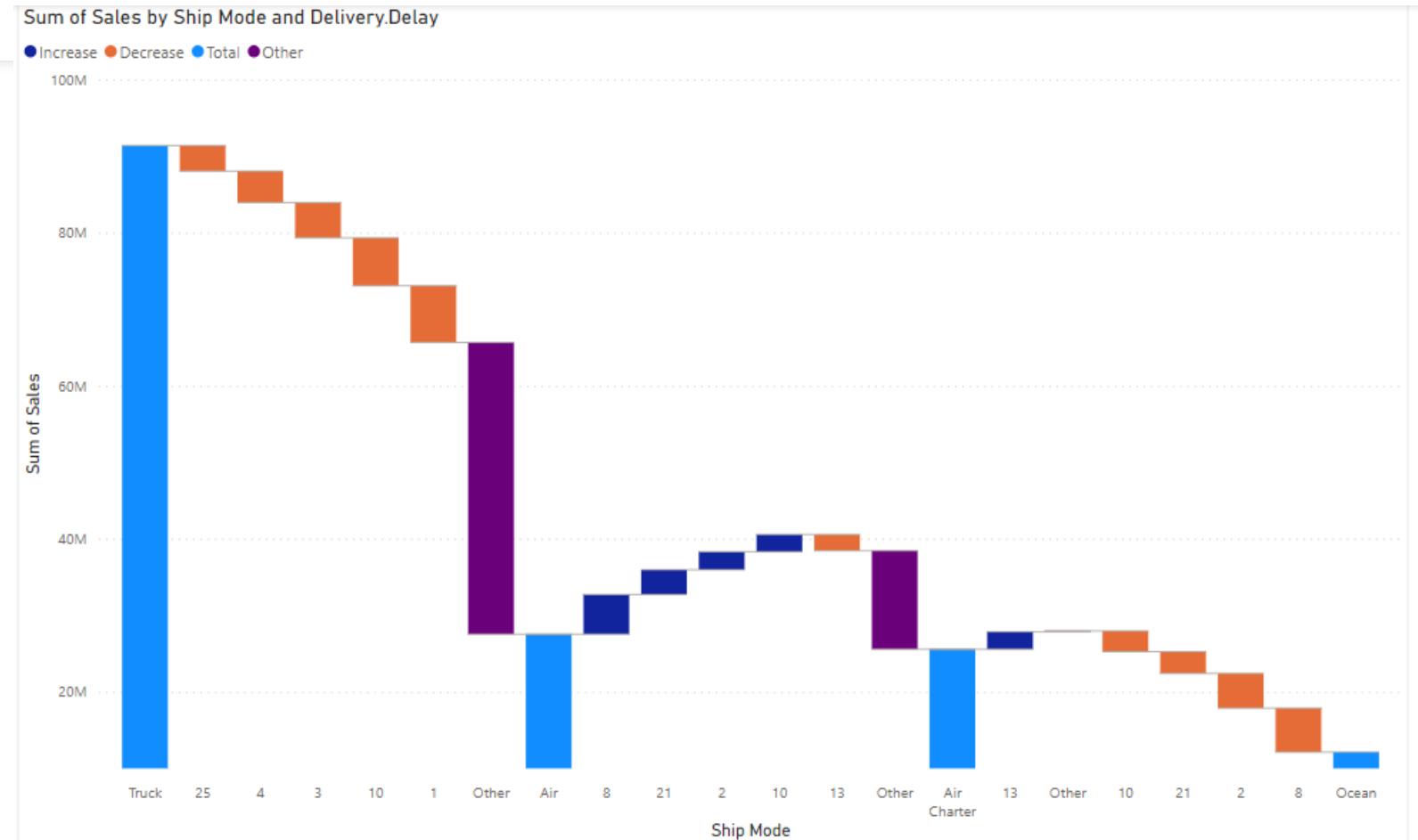
Ship Mode

Breakdown

Delivery.Delay

Y-axis

Sum of Sales



Waterfall with Time - Example

Category

Delivery Date

Year

Quarter

Month

Day

Breakdown

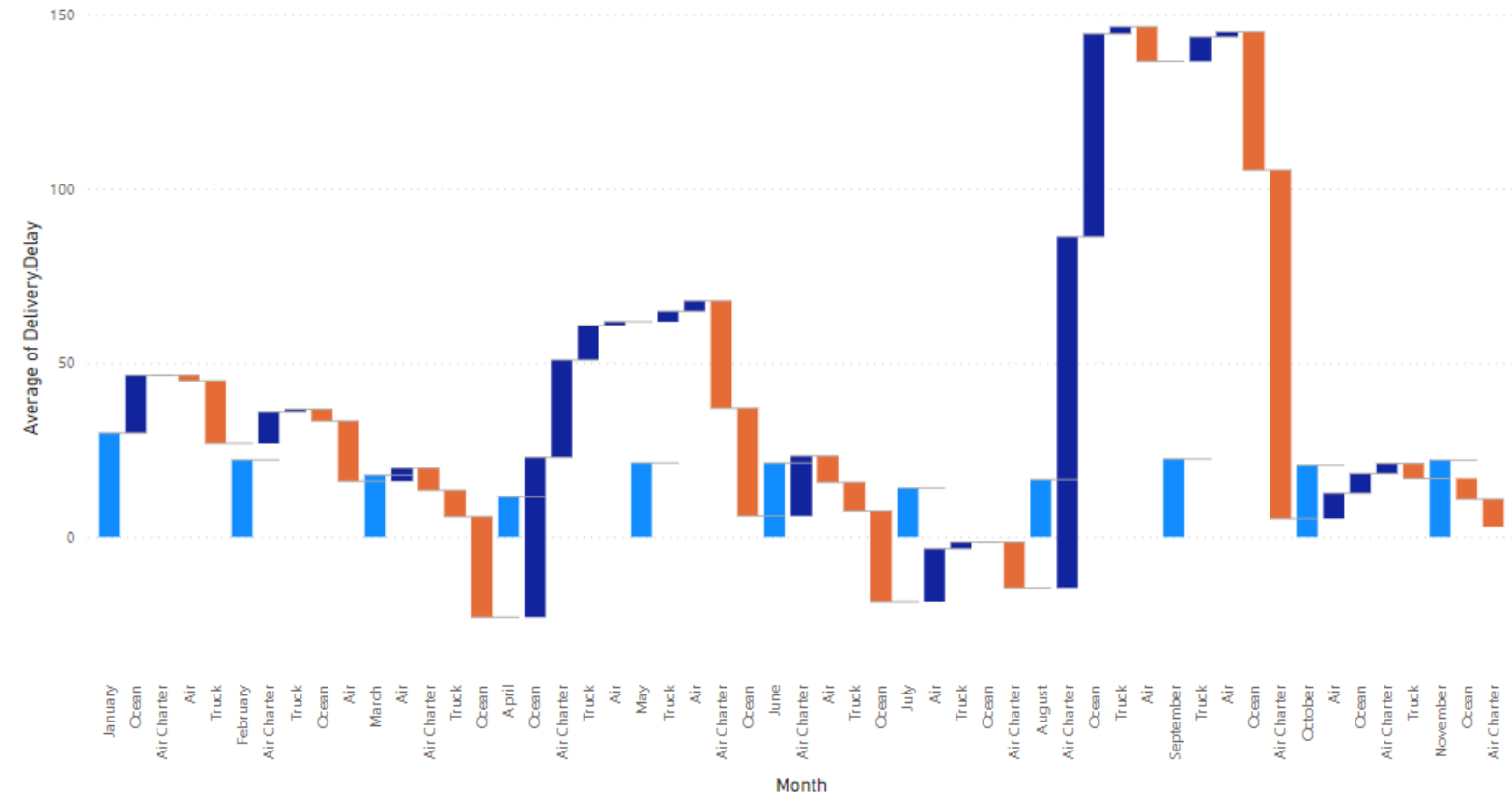
Ship Mode

Y-axis

Average of Delivery.Delay

Average of Delivery.Delay by Month and Ship Mode

● Increase ● Decrease ● Total ● Other



Get more visuals...

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



Sankey Chart ⚙️

Microsoft Corporation

★★★★★ (126)

Flow diagram where the width of the series is proportional to the quantity of the flow



Radar Chart ⚙️

Microsoft Corporation

★★★★★ (130)

Multiple measures plotted over a categorical axis. Useful to compare attributes



Timeline Slicer ⚙️

Microsoft Corporation

★★★★★ (242)

Graphical date range selector to use for filtering dates



Tornado chart ⚙️

Microsoft Corporation

★★★★★ (54)

Comparing the relative importance of variables between two groups



Sunburst ⚙️

Microsoft Corporation

★★★★★ (98)

Multilevel donut chart for effectively visualizing hierarchical data



Bullet Chart ⚙️

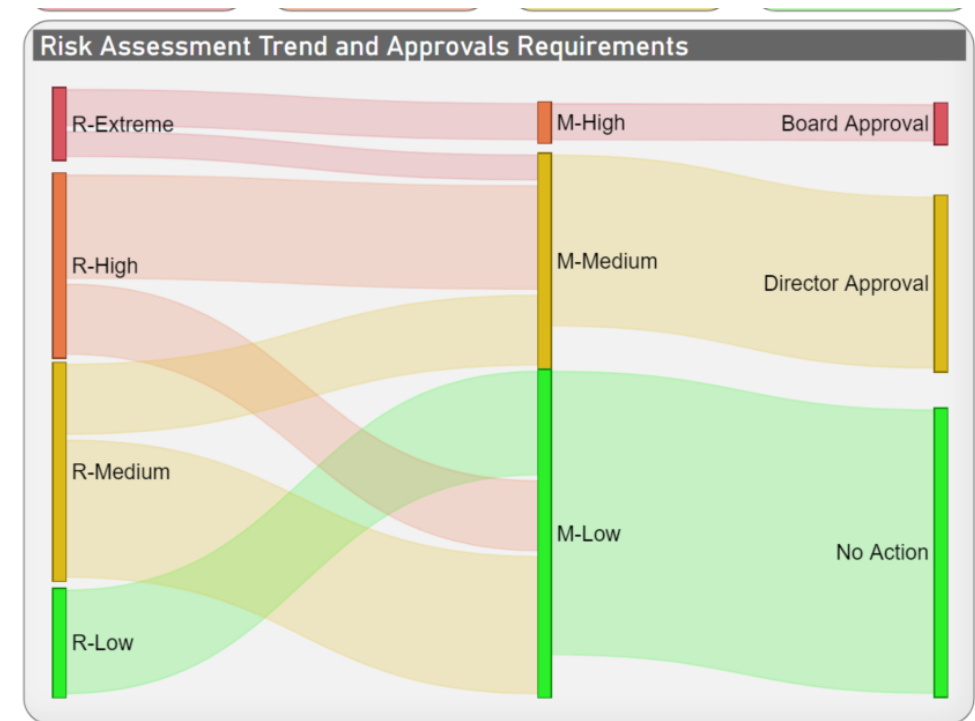
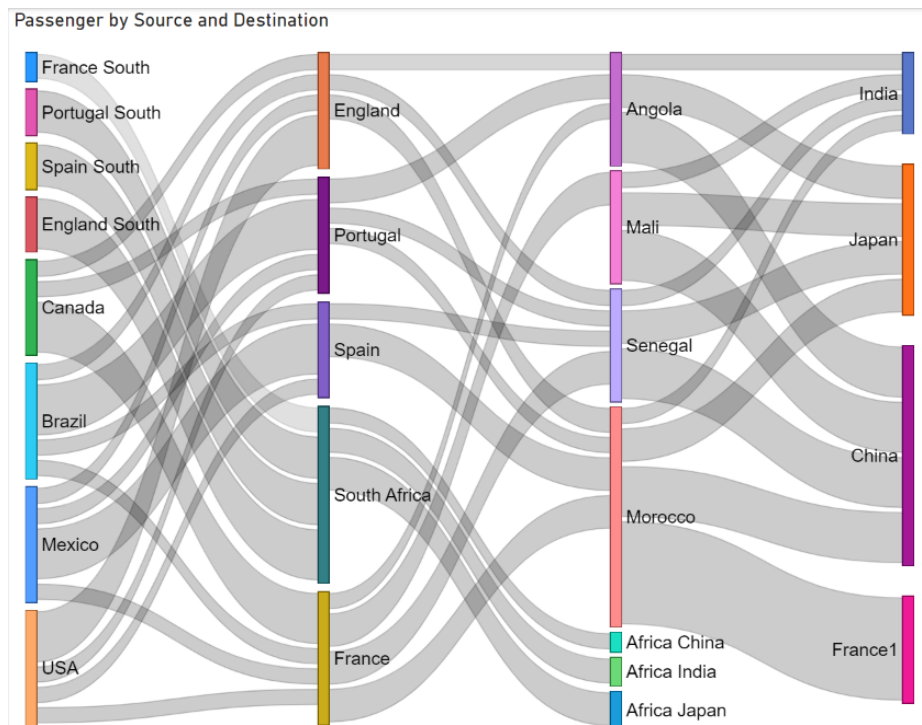
Microsoft Corporation

★★★★★ (39)

A bar chart with extra visual elements to provide additional context. Useful for tracking goals

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

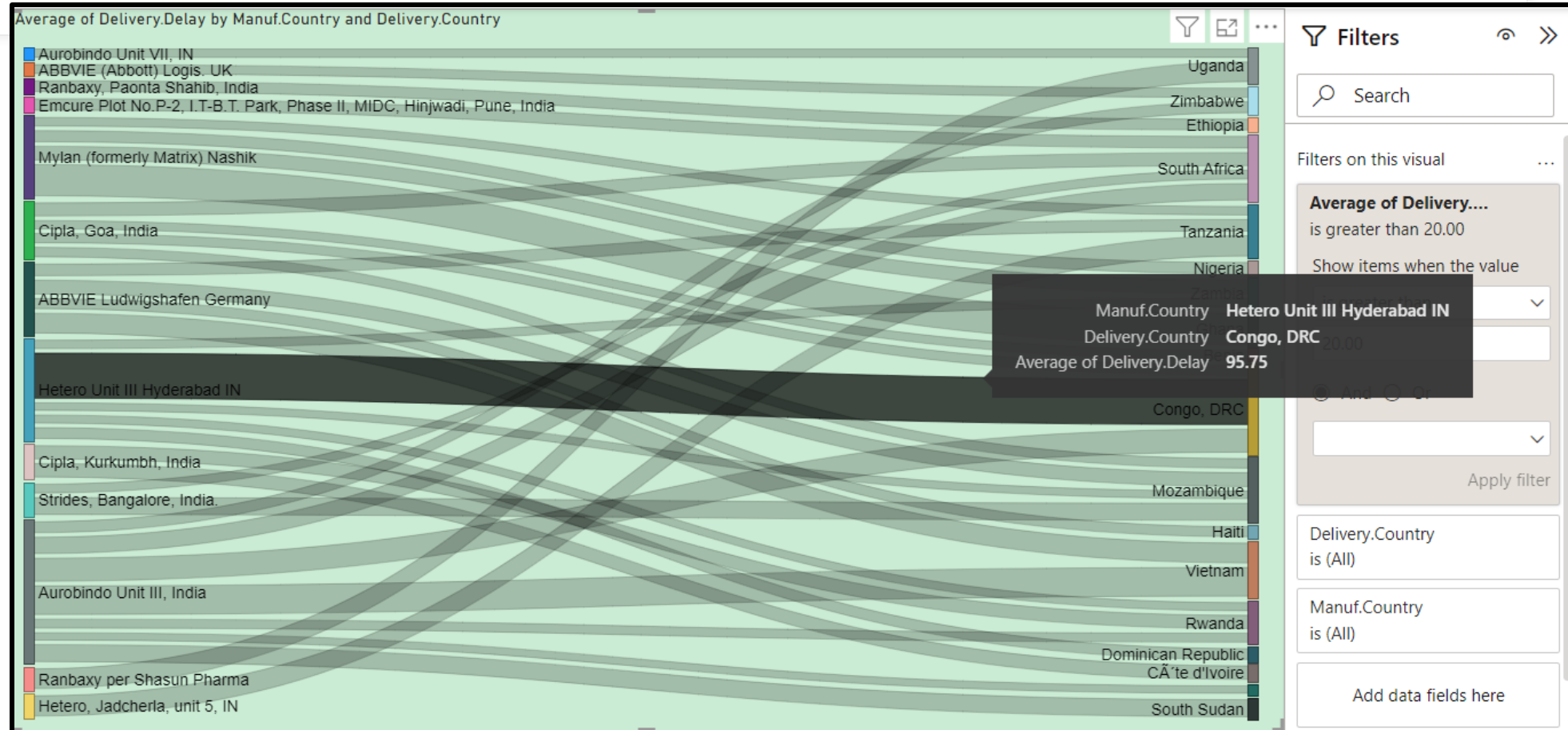
Show items when the value

is greater than

20.00

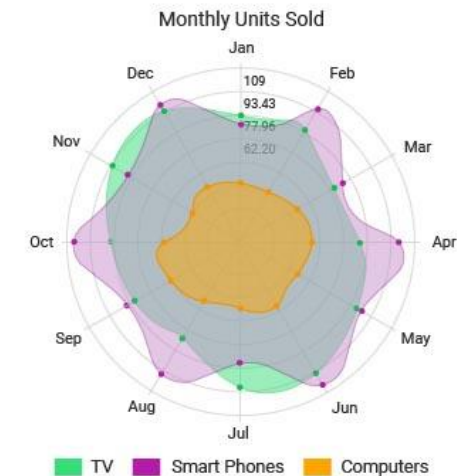
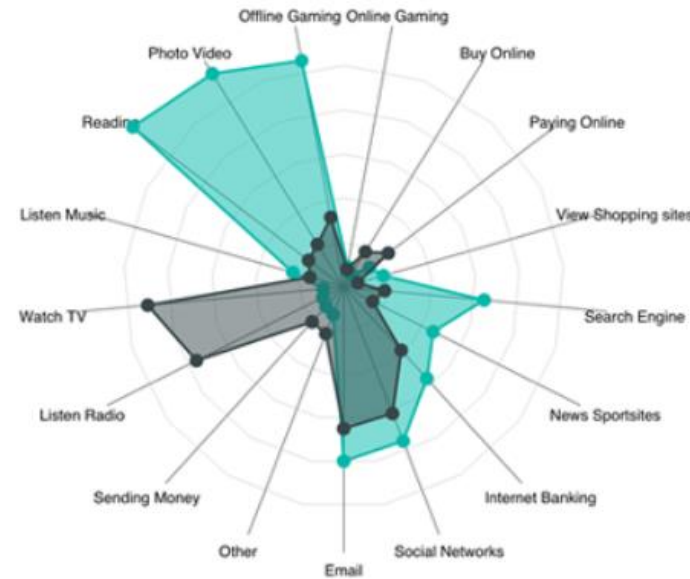
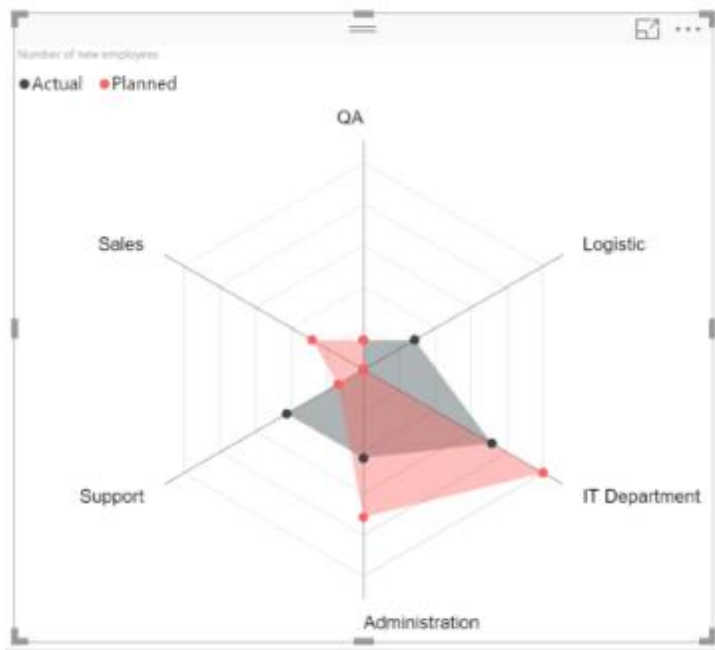
☒ And ☐ Or

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

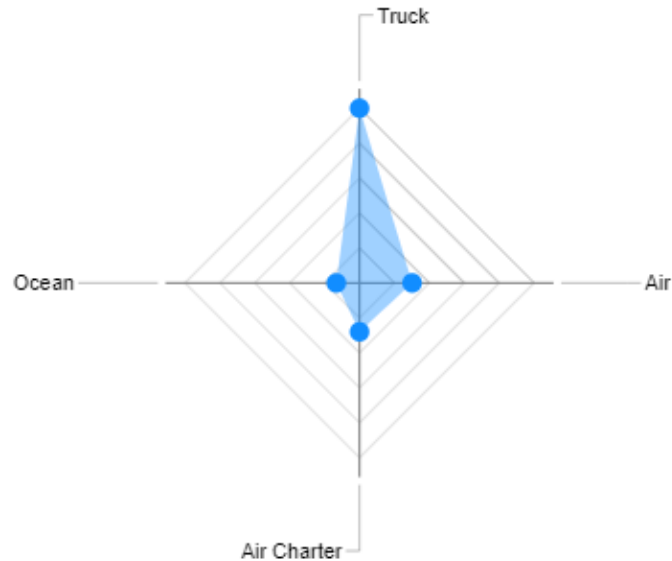
Ship Mode

Y Axis

Average of Delivery.Delay

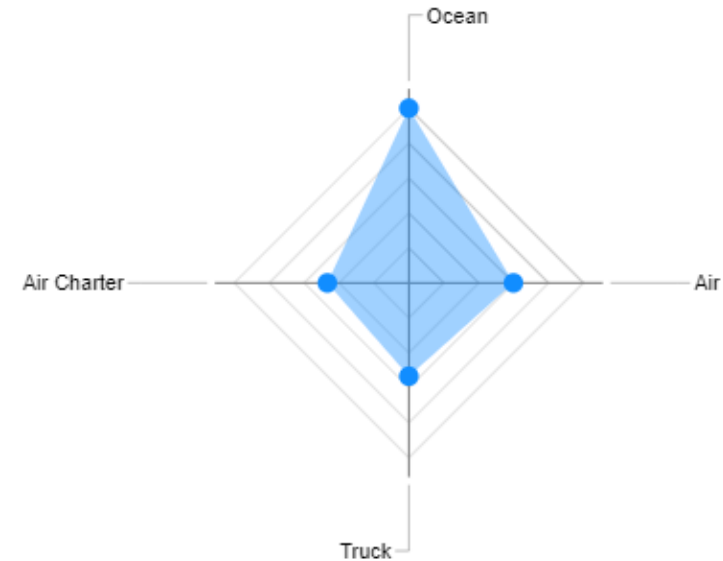
Sum of Sales by Ship Mode

● Sum of Sales



Average of Delivery.Delay by Ship Mode

● Average of Delivery.Delay



Category

Molecule/Test Type

Y Axis

Average of Delivery.Delay

Category

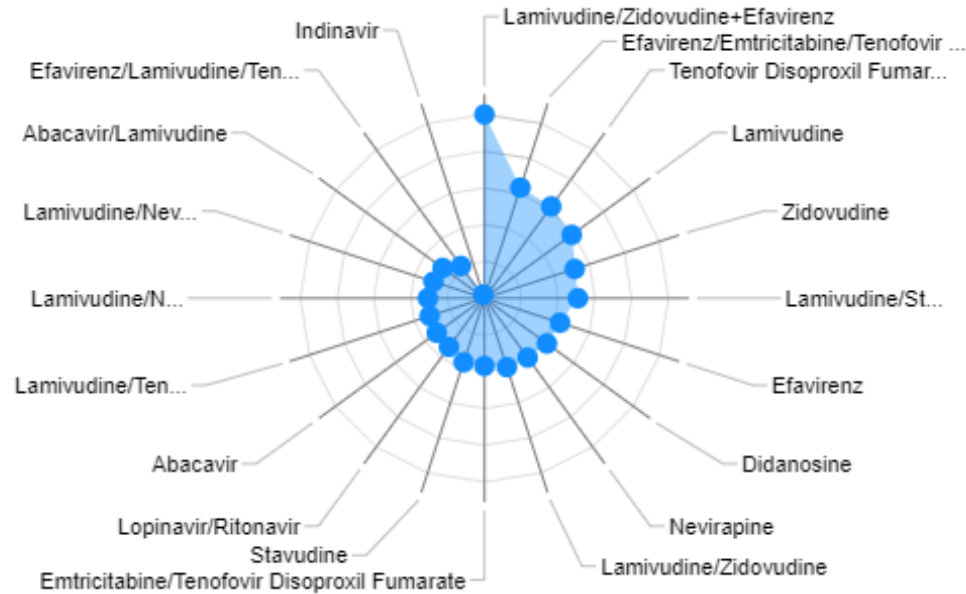
Vendor

Y Axis

Average of Delivery.Delay

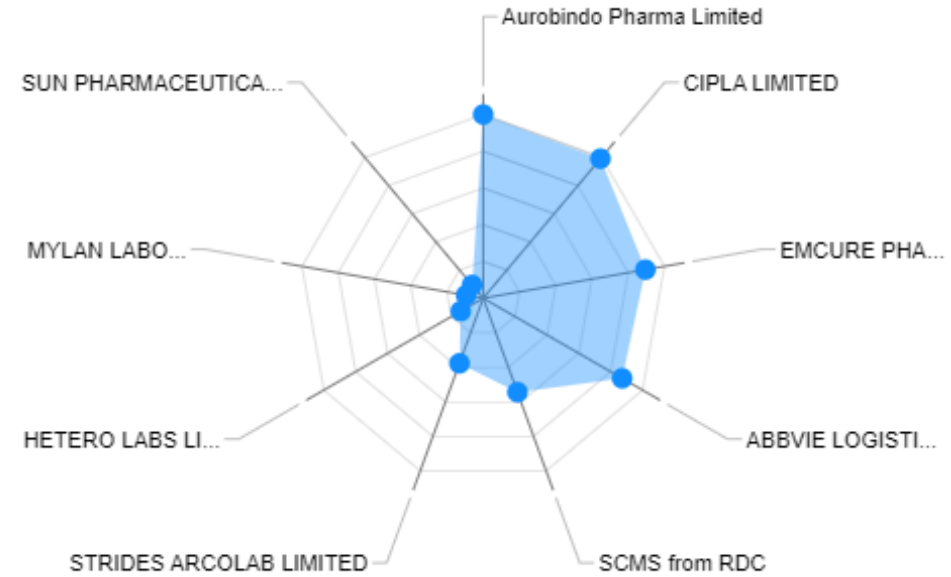
Average of Delivery.Delay by Molecule/Test Type

● Average of Delivery.Delay



Average of Delivery.Delay by Vendor

● Average of Delivery.Delay



Slicer Types

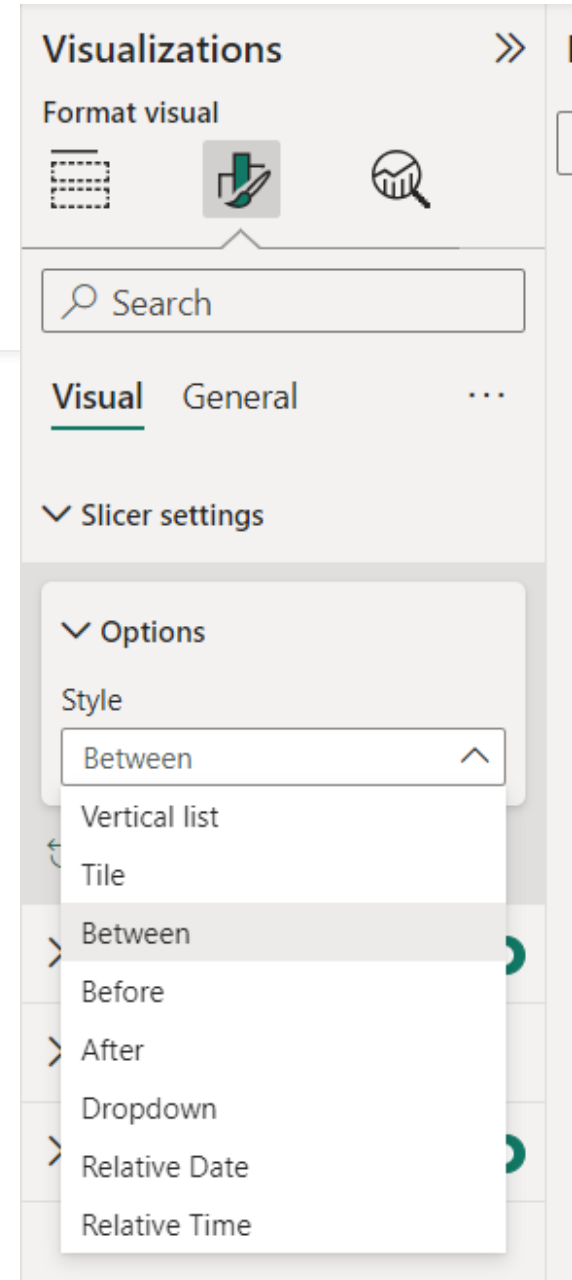
< Back to report

Delivery Date

3/8/2007

8/25/2015

- 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.

