Basic axis that can be considered

1. X-Axis
2. Y-Axis
3. Color
4. Text
5. ToolTip

Data Types used among the charts

1. String
2. Number
3. Date

Axis

1. Merged Axis
2. Split axis

The Axis parameter is used when Multiple Y-dimensions comes into picture and doesn't effect the below constraints.

Chart Types and combination of columns is really important as **few charts doesn't support all the combination of columns**.

- **Dimension:** a column that has discrete values (eg. **String** and **date** column).
- **Aggregate:** a column with an **aggregate** function applied contains aggregate values like **sum, average** etc. This even includes aggregate formula columns.

- **Measure:** Measure column is nothing but a column containing numerical values that can be measured.

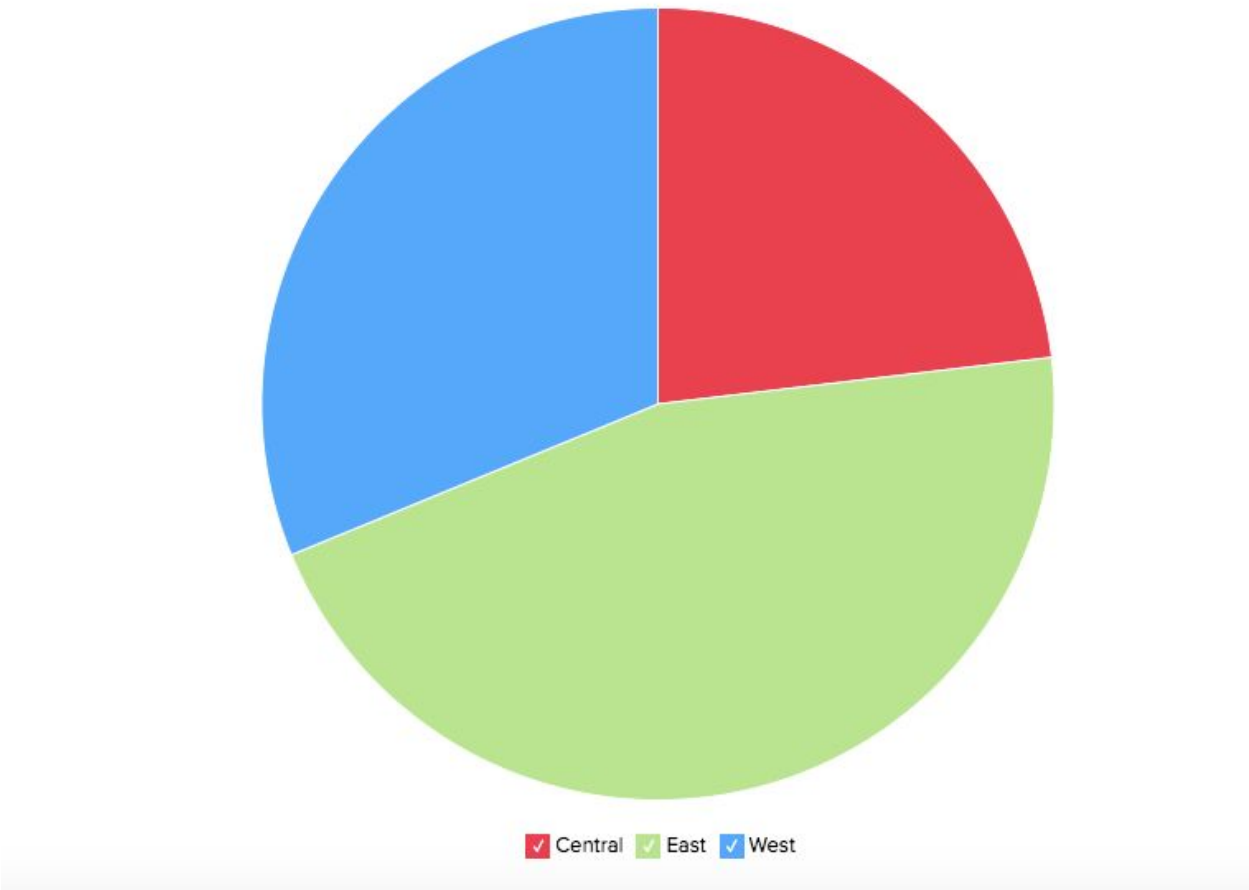
Pie Chart

Pie charts are used to represent a percentage or proportional data. A pie chart can be converted to any of its equivalents like **ring chart, funnel chart, bar chart, line chart, scatter chart, area chart or web chart**.

The following combination of column types allows you to create a pie chart.

	X axis	**Y axis**	**Color**	**Text**	**Tooltip**
Case 1	Dimension	Aggregate	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*
Case 2	Dimension / Aggregate	*Optional*	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*

Case 3	*Optional*	Aggregate / Dimension	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*

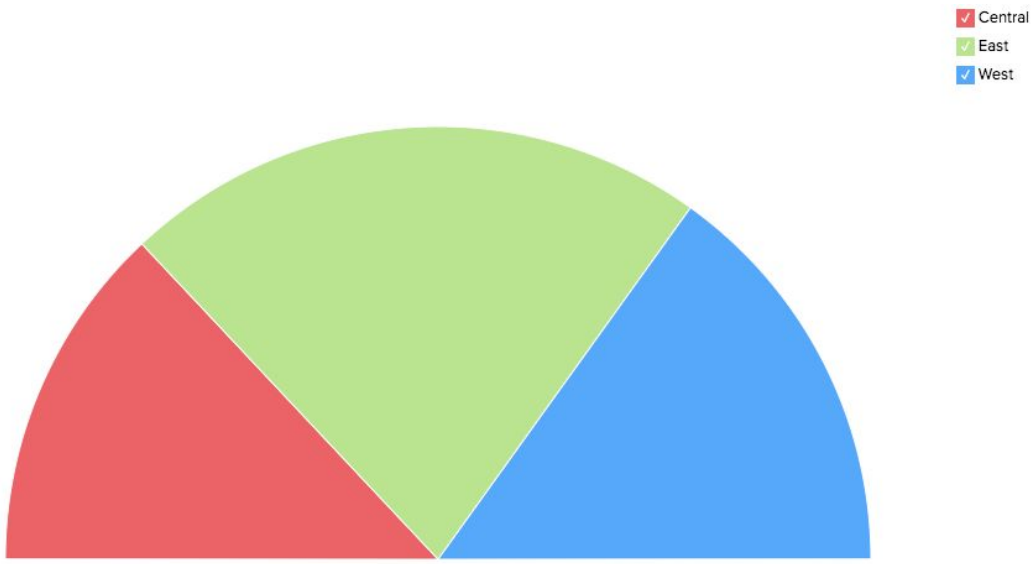


Half Pie Chart

The Half Pie Chart is similar to the pie chart but has a semi-circular shape. This chart is used to represent a percentage or proportional data. It can be converted to any of its

equivalents like pie chart, ring chart, funnel chart, bar chart, line chart, scatter chart, area chart or web chart.

The following combination of column types allows you to create a half pie chart.



	X axis	**Y axis**	**Color**	**Text**	**Tooltip**
Case 1	Dimension	Aggregate	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*
Case 2	Dimension / Aggregate	*Optional*	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*

Case 3	*Optional*	Aggregate / Dimension	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*

Ring Chart

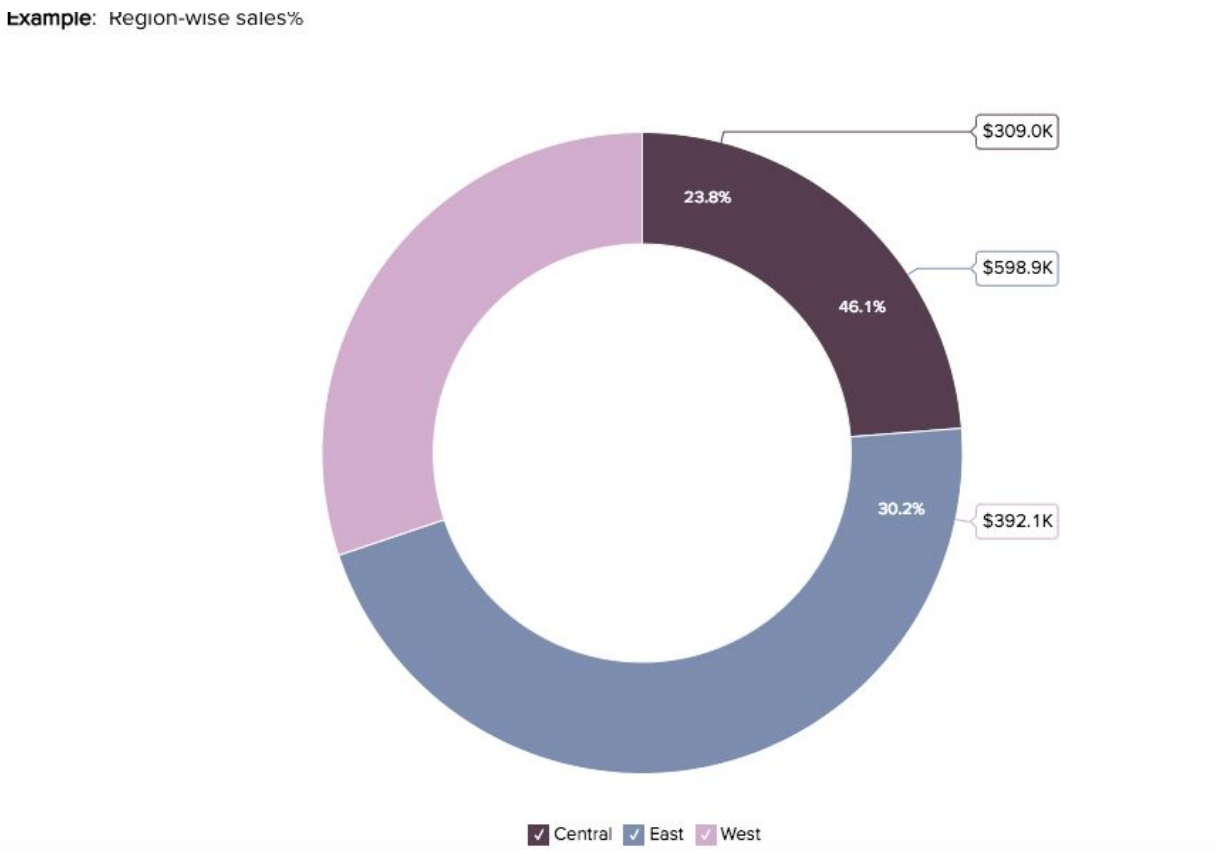
Ring chart or otherwise called as a doughnut chart is used to represent data in rings. A ring chart displays the contribution of each value to the overall total expressed in percentage. Ring chart can be converted to any of its equivalents like pie chart, funnel chart, bar chart, line chart, scatter chart, area chart or web chart.

The following combination of column types allows you to create a ring chart.

	X axis	**Y axis**	**Color**	**Text**	**Tooltip**
Case 1	Dimension	Aggregate	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*

Case 2	Dimension / Aggregate	*Optional*	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*
Case 3	*Optional*	Aggregate / Dimension	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*

Example: Region-wise sales%



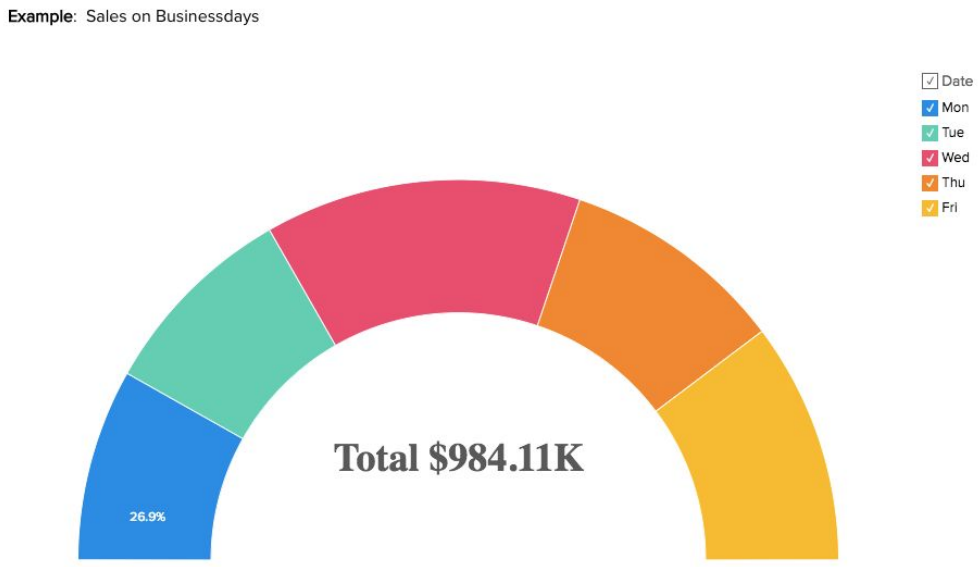
Half Ring Chart

Half Ring chart is used to represent data in half rings. This displays the contribution of each value to the overall total expressed in percentage. Half ring chart can be converted to any of its equivalents like pie chart, half pie chart, ring chart, funnel chart, bar chart, line chart, scatter chart, area chart or web chart.

The following combination of column types allows you to create a half ring chart.

	X axis	**Y axis**	**Color**	**Text**	**Tooltip**
Case 1	Dimension	Aggregate	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*
Case 2	Dimension / Aggregate	*Optional*	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*
Case 3	*Optional*	Aggregate / Dimension	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*

Example: Sales on Businessdays



Bar Chart

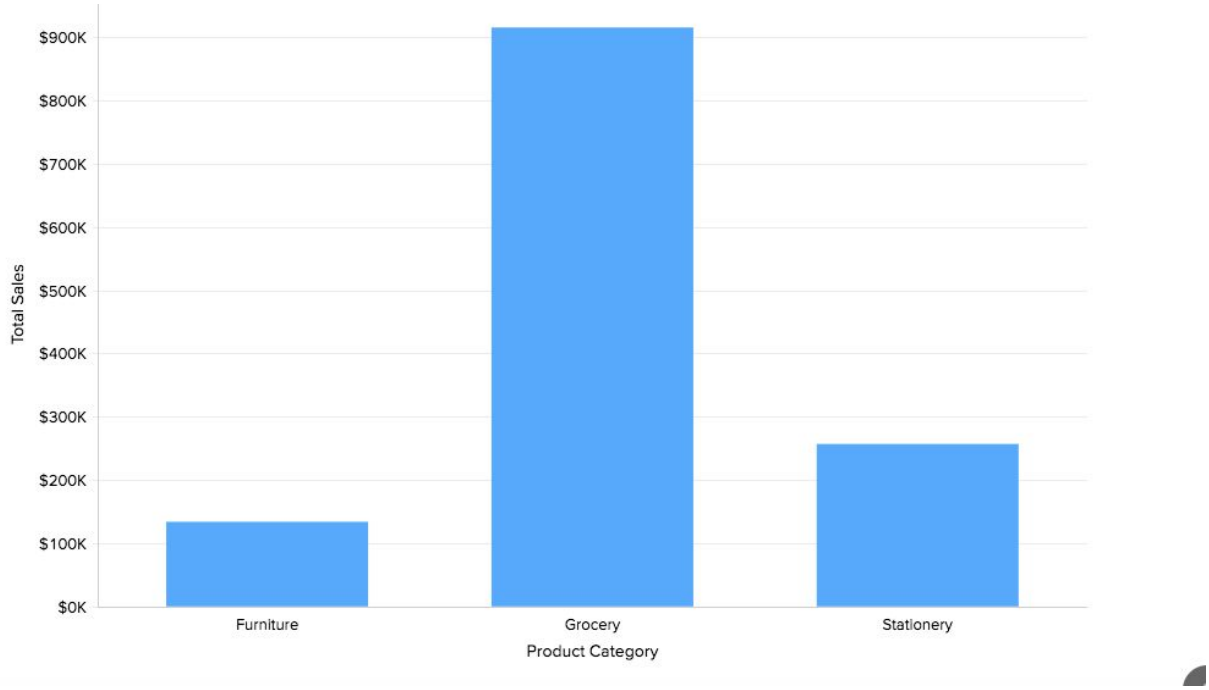
Bar charts are used when you have to compare data classified into discrete groups. They are generally used to categorize data or represent two or more metrics of a particular category. They display values as individual bars whose height is determined by the value plotted and grouped by each category. A Bar chart can be converted into any of its equivalents like **Line, Scatter, Area, Stacked Bar, Stacked Area or Combo chart depending on the category.**

The following combination of column types allows you to create a bar chart.

	X axis	Y axis	Color	Text	Tooltip

Case 1	Dimension	Aggregate	Dimension/ Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*
Case 2	Dimension	Multiple Aggregate fields	Dimension/ Aggregate/Measure/ *Optional*	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*
Case 3	Dimension/ Aggregate	*Optional*	Aggregate/Measure/ *Optional*	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*
Case 4	*Optional*	Dimension/ Aggregate	Aggregate/Measure/ *Optional*	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*

Example: Product Category wise sales



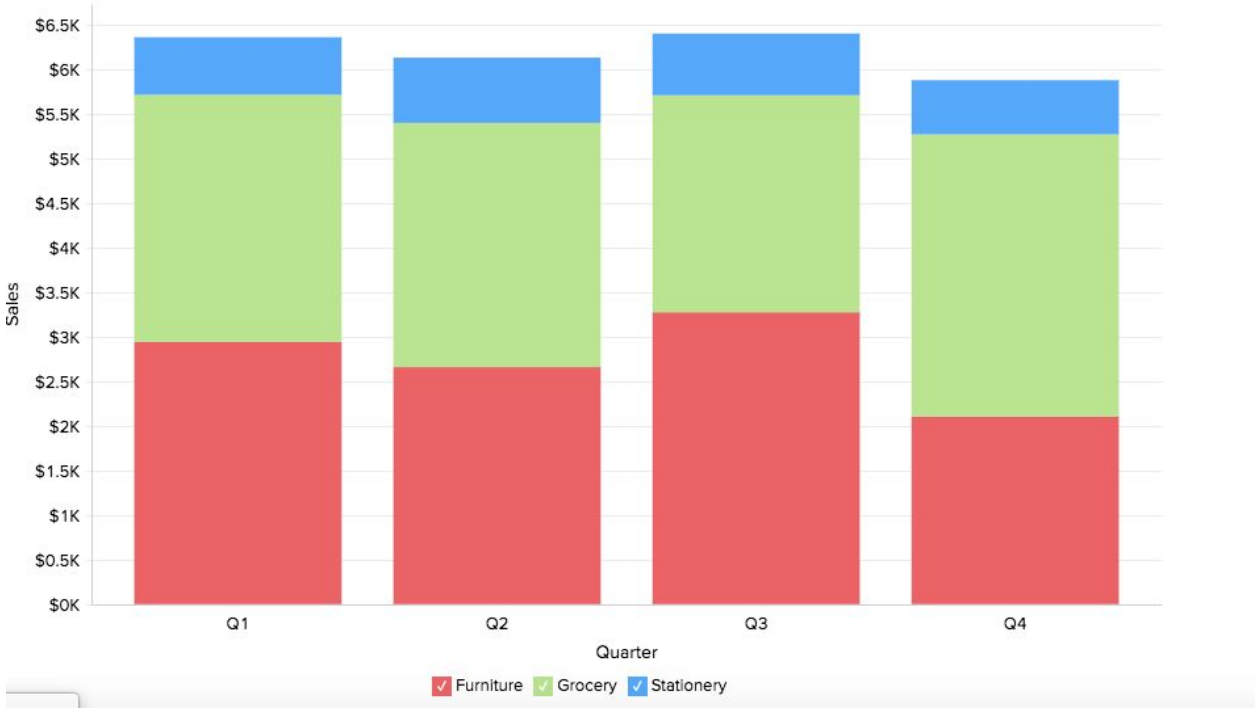
Stacked Bar Chart

The following combination of column types allows you to create a stacked bar chart.

	X axis	**Y axis**	**Color**	**Text**	**Tooltip**
Case 1	Dimension	Aggregate	Dimension/ Aggregate/Measure	Dimension/ Aggregate/ *Optional*	Dimension/ Aggregate/ *Optional*

Case 2	*Optional*	Dimension/ Aggregate	Dimension/ Aggregate/Measure	Dimension/ Aggregate/ *Optional*	Dimension/ Aggregate/ *Optional*
Case 3	Dimension/ Aggregate	*Optional*	Dimension/ Aggregate/Measure	Dimension/ Aggregate/ *Optional*	Dimension/ Aggregate/ *Optional*

Example: Quarter wise sales for each region.

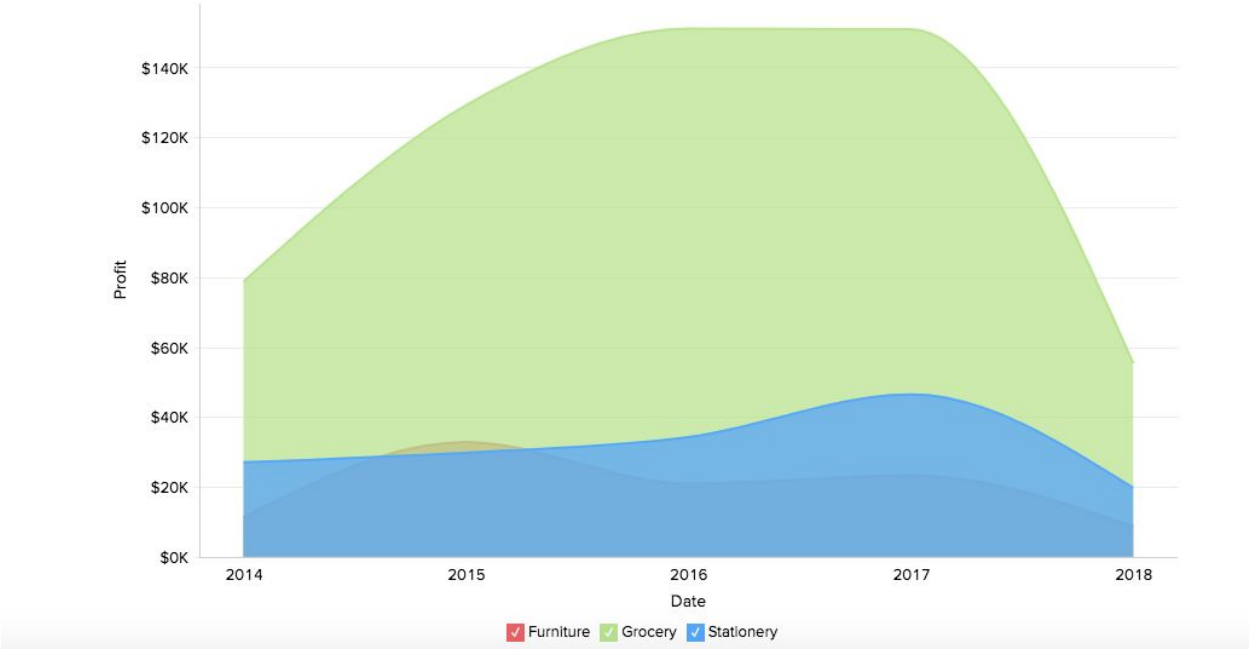


Stacked Area Chart

The following combination of column types allows you to create a stacked area chart.

	X axis	**Y axis**	**Color**	**Text**	**Tooltip**
Case 1	Dimension	Aggregate	Dimension / Aggregate/ Measure	Aggregate/ *Optional*	--
Case 2	Dimension	Multiple Aggregate fields	--	Aggregate/ *Optional*	--

Example: Yearly profit obtained for each product category



Scatter Chart

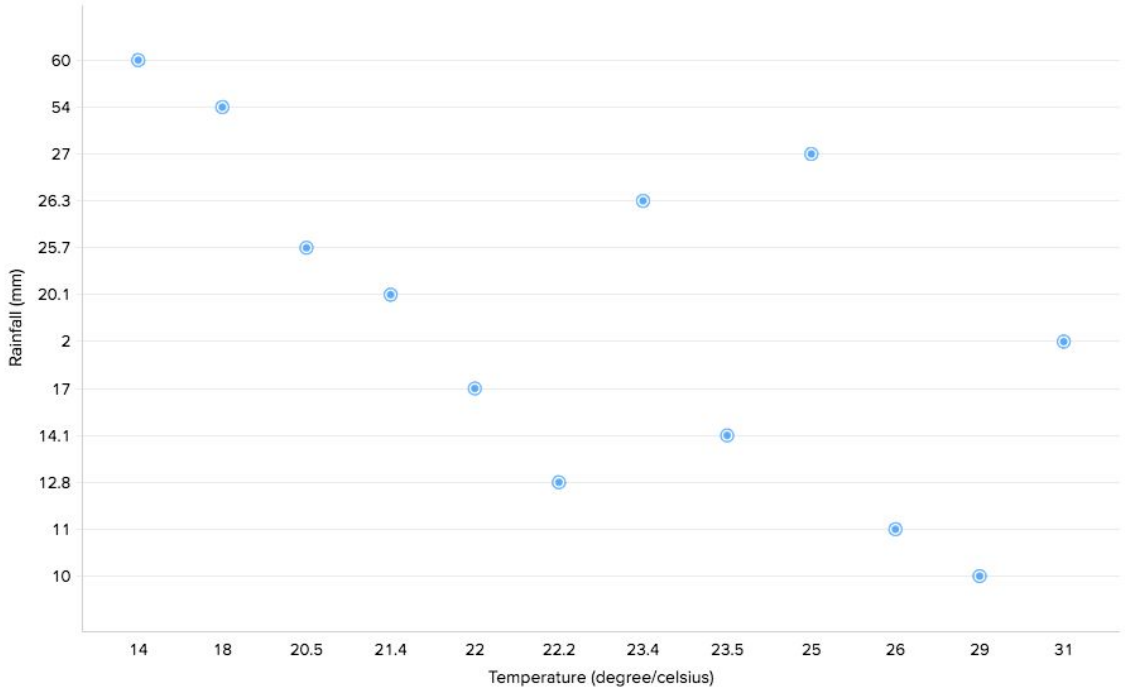
Scatter charts are commonly used for plotting and comparing numeric values, such as scientific, statistical, and engineering data. It is generally used for comparison between two numerical axes with uneven intervals and ranges. **You can interchange a scatter chart with a line chart.**

The following combination of column types allows you to create a scatter chart.

	X axis	Y axis	Color	Text	Tooltip
Case 1	Dimension	Aggregate/	Aggregate/ Dimension/	Aggregate/ Dimension/	Aggregate/ Dimension/

		Dimension	Measure/ *Optional*	Measure/ *Optional*	Measure/ *Optional*
Case 2	Aggregate	Aggregate/ Dimension	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate/ Dimension/ Measure/ *Optional*
Case 3	Dimension/ Aggregate	*Optional*	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate/ Dimension/ Measure/ *Optional*
Case 4	Aggregate/ Dimension	*Optional*	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate/ Dimension/ Measure/ *Optional*

Example: Temperature Vs Rainfall



Line Chart

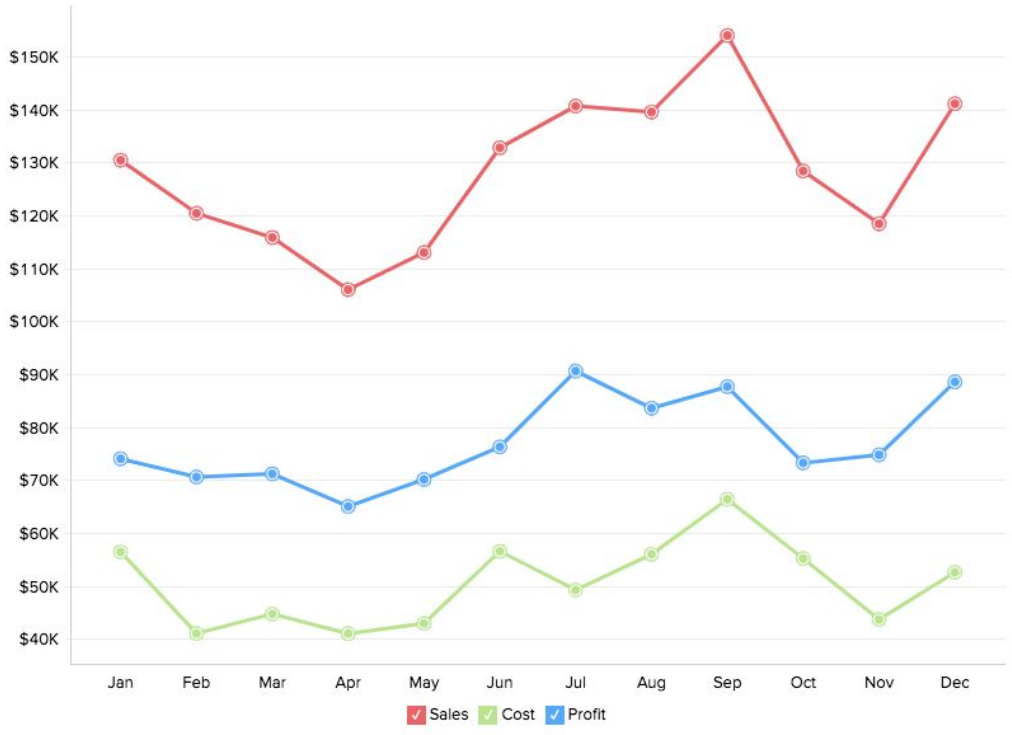
A line chart is used to analyze series trend across a time period. You can interchange a line chart with a scatter chart.

The following combination of column types allows you to create a line chart.

	X axis	**Y axis**	**Color**	**Text**	**Tooltip**
Case 1	Dimension	Aggregate/ Dimension/ *Optional*	Dimension/ Aggregate/ Measure/ *Optional*	Dimension/ Aggregate/ Measure/ *Optional*	Dimension/ Aggregate/ Measure/ *Optional*

Case 2	*Optional*	Aggregate/ Dimension	Dimension/ Aggregate/ Measure/ *Optional*	Dimension/ Aggregate/ Measure/ *Optional*	Dimension/ Aggregate/ Measure/ *Optional*
Case 3	Aggregate/ Dimension	*Optional*	Dimension/ Aggregate/ Measure/ *Optional*	Dimension/ Aggregate/ Measure/ *Optional*	Dimension/ Aggregate/ Measure/ *Optional*

Example: Sales vs Cost vs Profit.



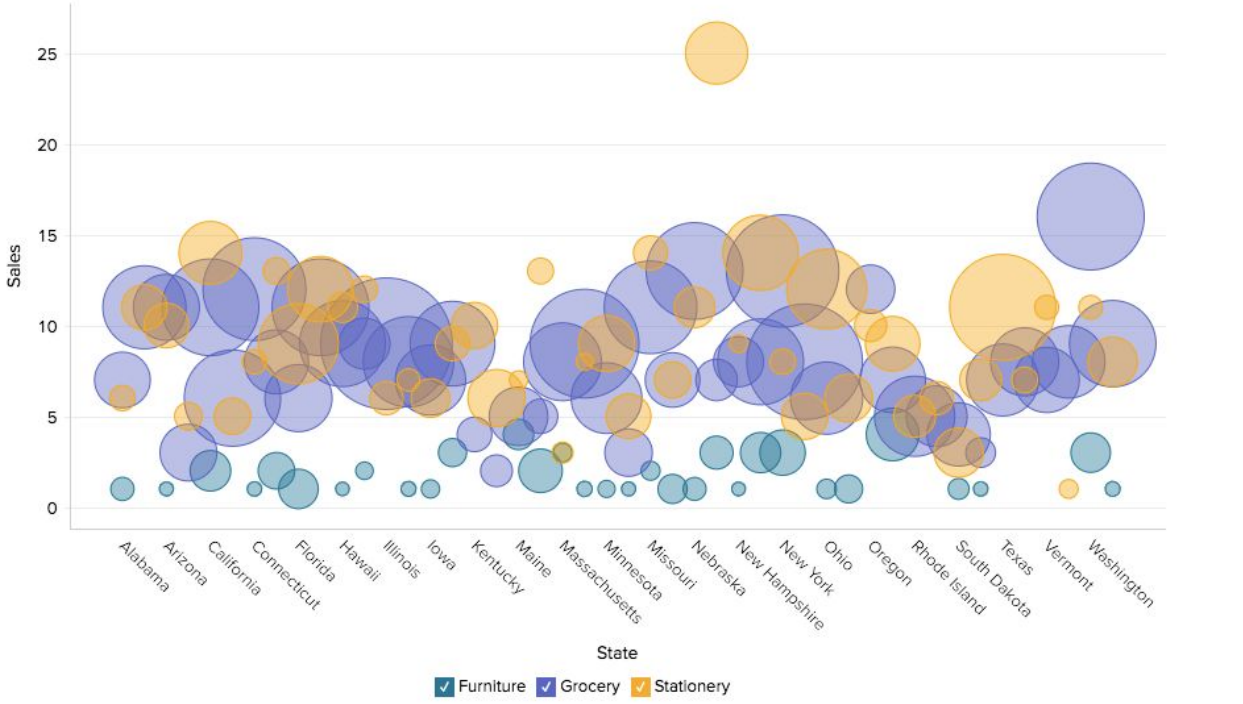
Bubble Chart

Bubble charts are really useful if you want to visualize your data highlighting the magnitude/weight of a data point with sizing. You can use a bubble chart wherever a Scatter plot is used, with scatters points being replaced by bubbles. The size of the bubble will be determined by the data column dropped in the new **Size** shelf of the Chart designer.

The following combination of column types allows you to create a bubble chart.

	X axis	**Y axis**	**Color**	**Text**	**Size**	**Tooltip**
Case 1	Dimension	Aggregate/ Dimension	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*
Case 2	Aggregate	Aggregate/ Dimension	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*
Case 3	Dimension	*Optional*	Aggregate	Aggregate/ Dimension/	Aggregate	Aggregate/ Dimension/

				Measure/ *Optional*		Measure/ *Optional*
Case 4	Aggregate	*Optional*	Dimension	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*
Case 5	*Optional*	Dimension	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*
Case 6	*Optional*	Aggregate	Dimension	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*



Packed Bubble Chart

The Packed Bubble chart type is used to display data in a cluster of circles or bubbles. They are used to display the values disregarding the axes. The difference between a normal bubble chart and a packed bubble is that the latter is tightly packed rather than spread over a grid. You can use a packed bubble chart to visualize large amount of data in a small space.

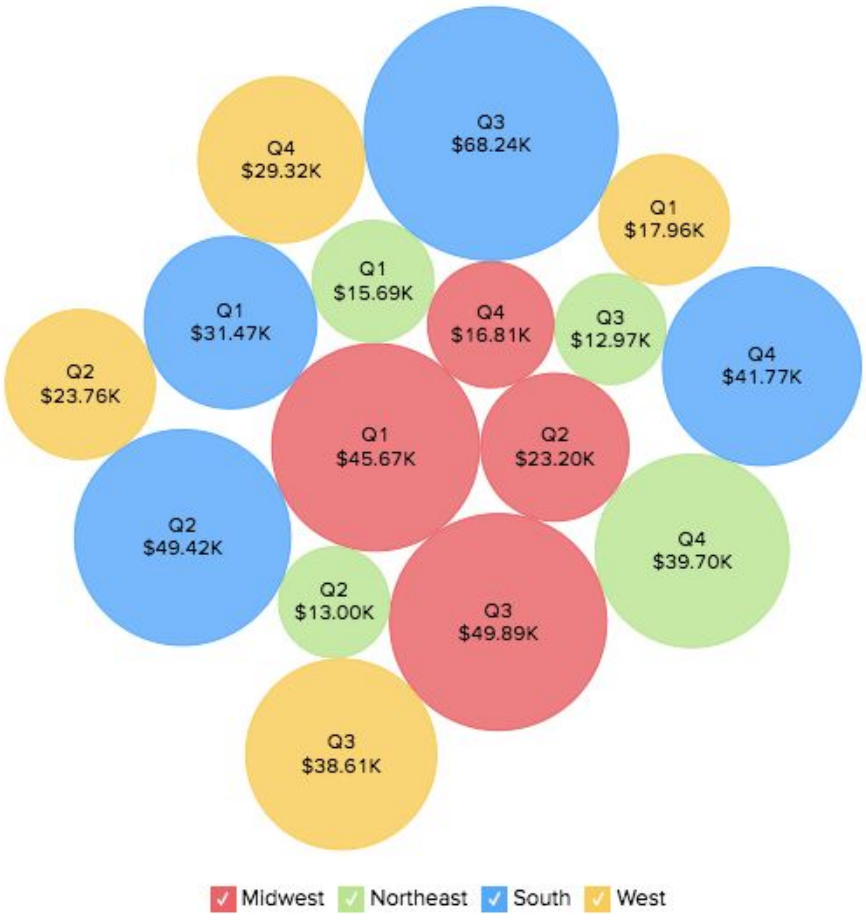
The following combination of column types allows you to create a packed bubble chart.

	X axis	Y axis	Color	Text	Size	Tooltip

Case 1	Dimension	Aggregate/ Dimension	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*
Case 2	Aggregate	Aggregate/ Dimension	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*
Case 3	Dimension	*Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*
Case 4	Aggregate	*Optional*	Dimension	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*

Case 5	*Optional*	Dimension	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*
Case 6	*Optional*	Aggregate	Dimension	Aggregate/ Dimension/ Measure/ *Optional*	Aggregate	Aggregate/ Dimension/ Measure/ *Optional*

Example: Region-wise Sales metric for each Quarter



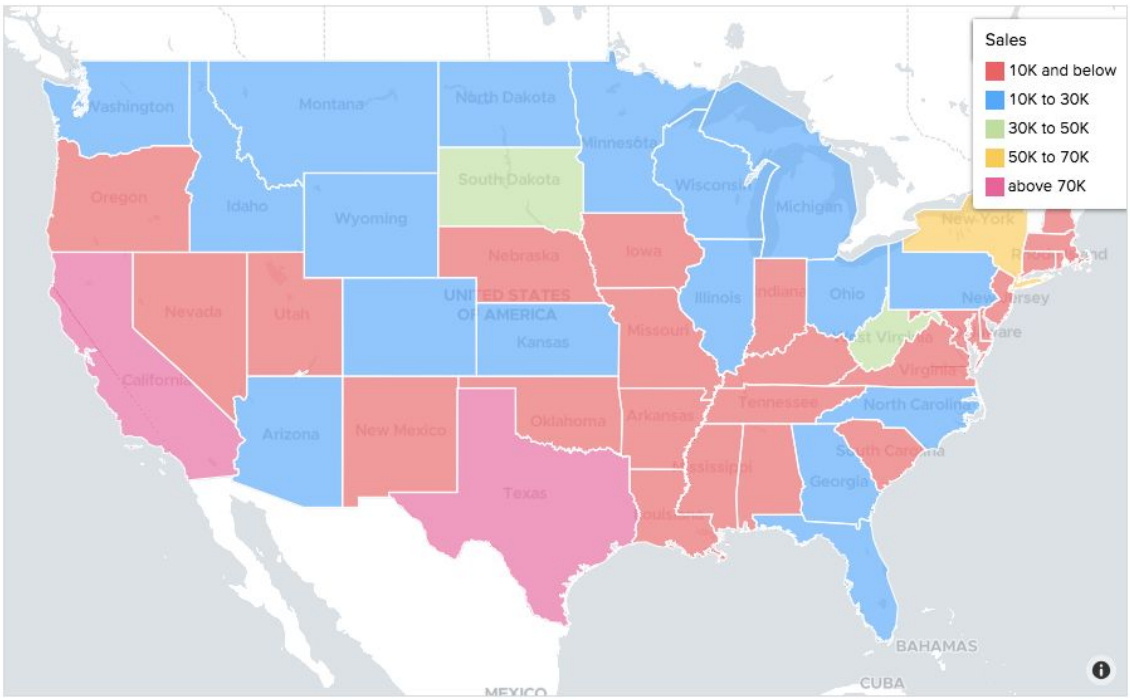
Map Filled Chart

Map Filled Chart plots the data across regions by filling a particular color for each region. This is used for emphasizing the change in metrics across regions.

The following combination of column types allows you to create a Map Filled Chart.

X axis	Y axis	Color	Size	Text	Tooltip
Geo (Country/State/County)	Aggregate / Dimension / Measure/ Optional	Aggregate / Dimension / Measure/ Optional	--	Aggregate / Dimension / Measure/ Optional	Aggregate / Dimension / Measure/ Optional

Example: Sales across State.



Heat Map Chart

Heat map is a chart that displays data values as colors inside a matrix. This is a two-dimensional grid chart, where each color represents the data.

You can also choose to derive the size and color intensity of each cell based on the data. This will be pretty useful for categorizing and visualizing data based on factors like volume of occurence, intensity, performance scale (bad to good) etc.,

The following combination of column types allows you to create a Heat Map chart.

X axis	Y axis	Color	Size	Text	Tooltip
Dimension	Dimension	Aggregate	Optional	Aggregate (Optional)	Aggregate (Optional)

Example: Sales across a Year by Month and Week.

Combination Chart

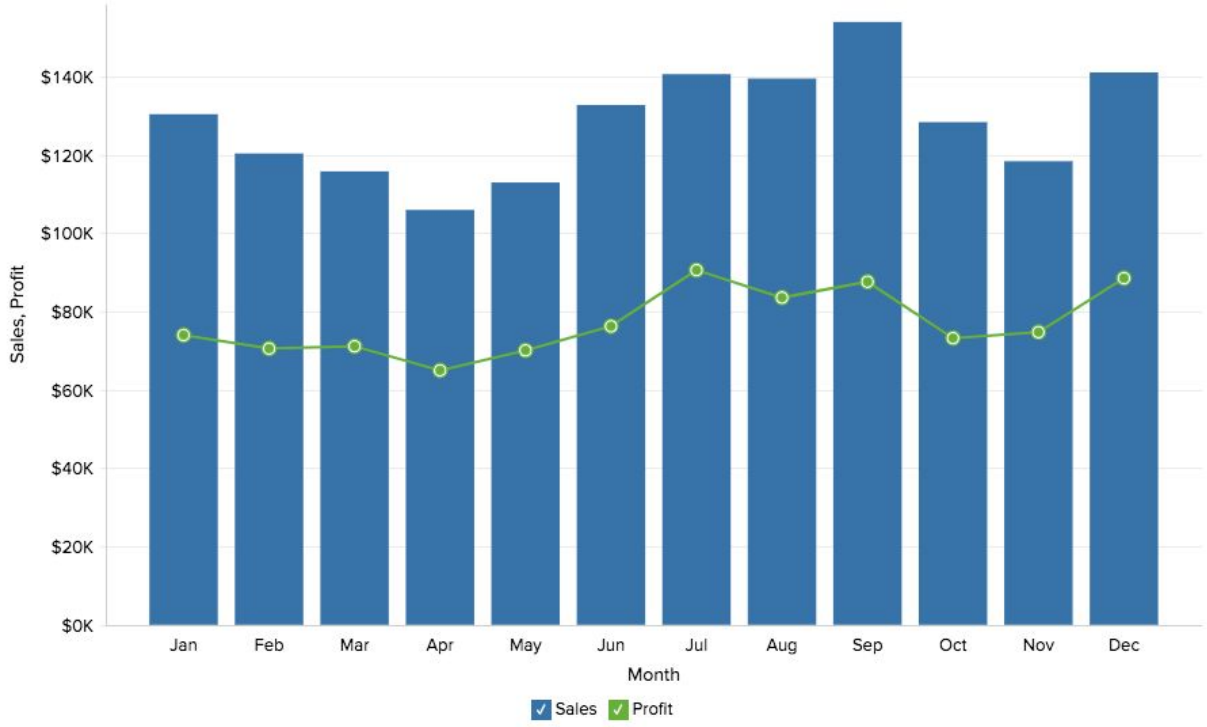
The combination chart is a combination of bar and line chart and is used when you have a mixed type of data to represent.

The following combination of column types allows you to create a combination chart.

	X axis	**Y axis**	**Color**	**Text**	**Tooltip**
Case 1	Dimension	Multiple Aggregate fields	--	--	--
Case 2	Dimension	Multiple Aggregate fields	--	Aggregate	Aggregate

Please do note that you cannot build a combination chart when the **Color** shelf is occupied.

Example: Profit Vs Sales - if total sales across products is represented in bars, the profit can be represented as an individual line in the same chart.



Area Chart

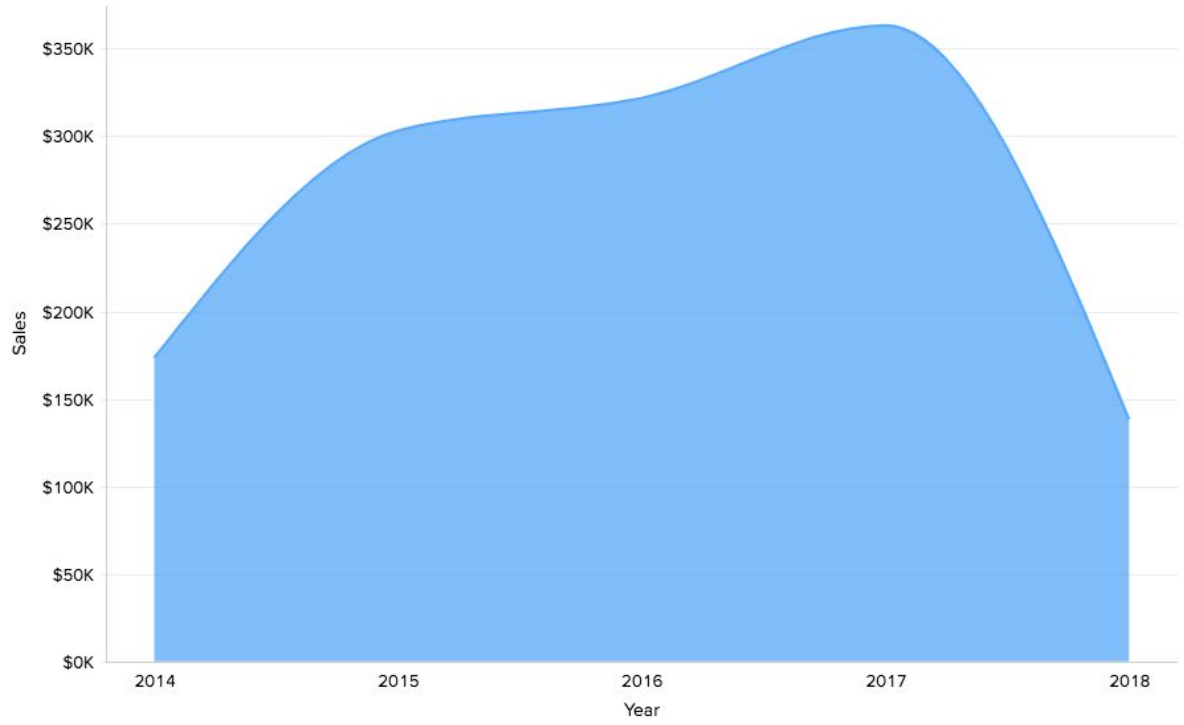
Area charts shade the area beneath the lines and therefore help you more readily to compare data magnitudes. They are mainly used for emphasizing the change in metrics across time. You can interchange an area chart with a web chart.

The following combination of column types allows you to create an area chart.

	X axis	**Y axis**	**Color**	**Text**	**Tooltip**
Case 1	Dimension	Aggregate	Dimension/ Aggregate/	--	--

			Measure/ *Optional*		
Case 2	Dimension	Aggregate	Dimension/ Aggregate/ Measure/ *Optional*	Aggregate	Aggregate

Example: Year wise Sales



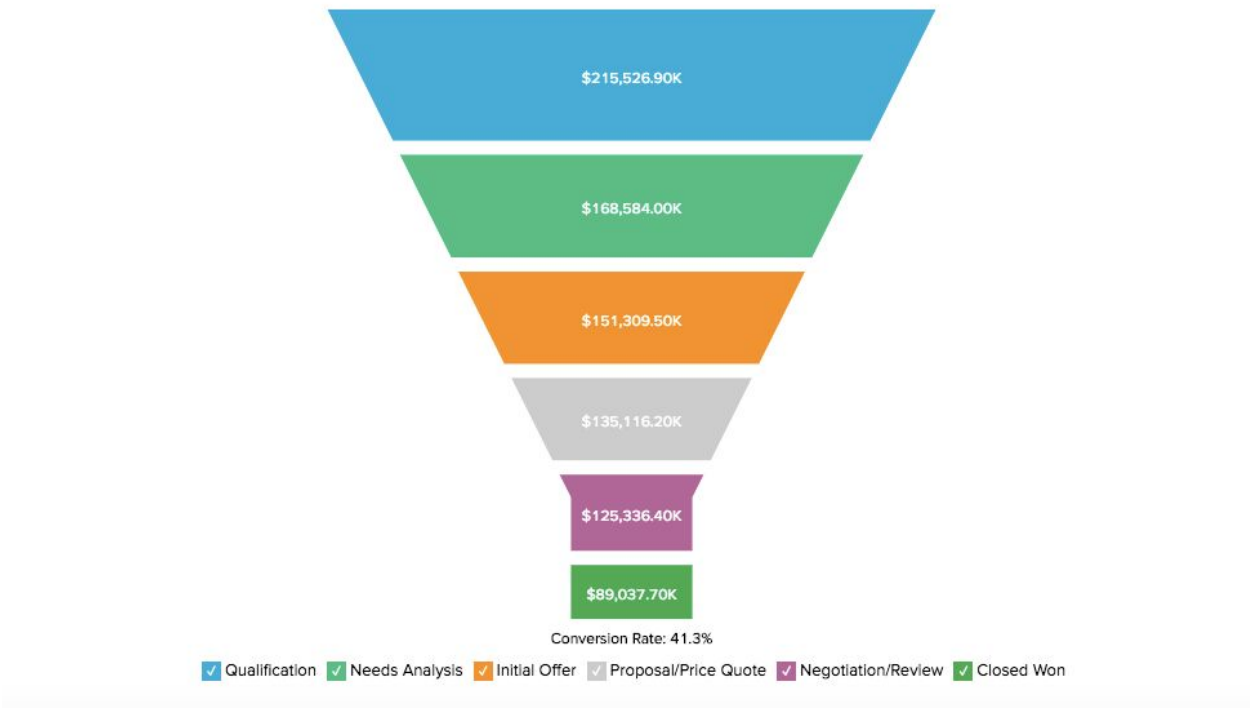
Funnel Chart

The funnel chart is used to represent a progressive flow/reduction of a business metric across phases.

The following combination of column types allows you to create a funnel chart.

	X axis	**Y axis**	**Color**	**Text**	**Tooltip**
Case 1	Dimension	Aggregate	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*
Case 2	*Optional*	Aggregate	--	Aggregate/ Measure/ *Optional*	Aggregate/ Measure/ *Optional*

Example: Sales Pipeline - To visualize potentials across each stage



Web Chart

Web charts help in studying the comparison between different data series. It compares the values of a number of data series represented with data markers in proportion with a center point.

The following combination of column types allows you to create a web chart.

	X axis	**Y axis**	**Color**	**Text**	**Tooltip**
Case 1	Dimension	Aggregate	Dimension/ *Optional*	--	Aggregate/Measure/ *Optional*

Example: Cost Vs Sales for 2016