



Identify which chart
Is the right pick
for your data?

Dashboard Designer Charting Components



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1. Area

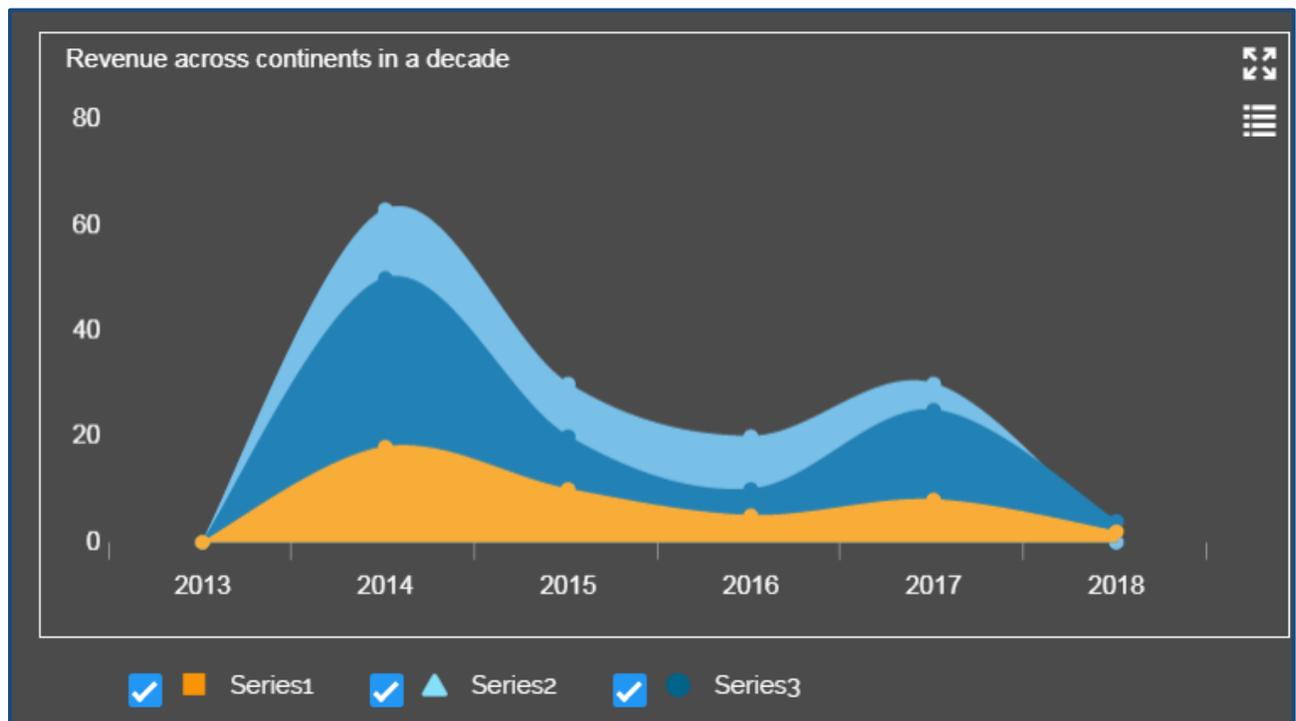
An area chart or area graph displays graphically quantitative data. It is based on the line chart. The primary use of area charts is to display trends over a period.

Best Situations to Use Area Chart: To showcase data that depicts a time-series relationship, to interpret a part-to-whole analysis

Examples:

To view the automobile sales of a manufacturer over a period

To view quarter wise revenue growth of an organization



2. Bar

Bar Charts are useful for comparing classes or groups of data. They are one of the most commonly used types of graph because they are simple to create and very easy to interpret. Several variations are included in the standard bar chart like stacked bar charts, grouped bars chart, and horizontal bar charts.

Best Situations to Use Bar chart: To interpret small data sets. User can perform observations over a period

Examples: Quarterly sales of an organization, Percentage of change in sales or revenue

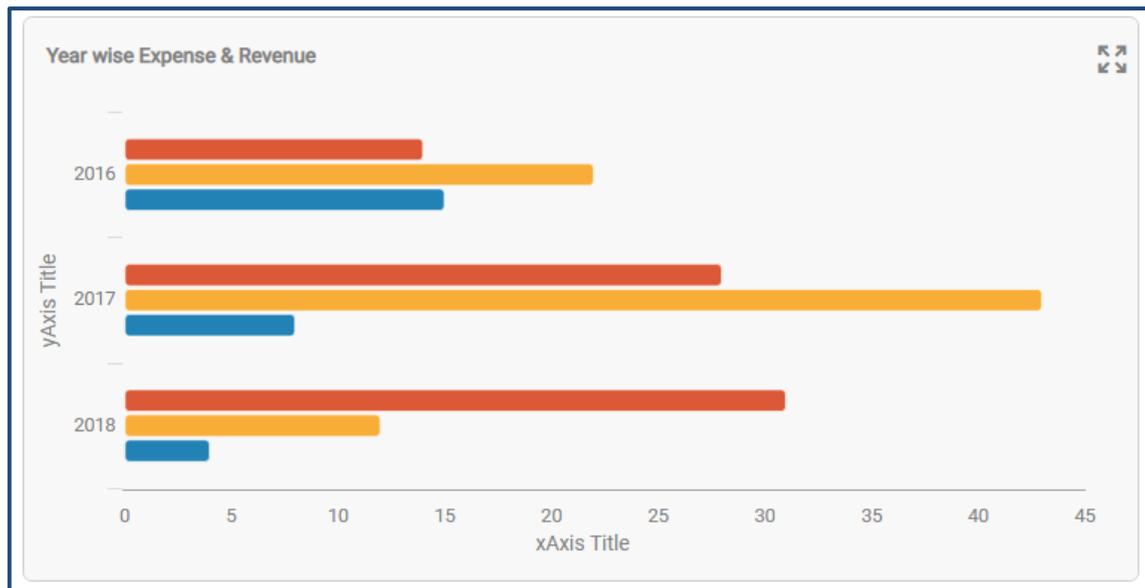
Variations of this chart:

Use stacked bar charts: Where multiple categories can be clubbed together on top of each other, which makes addressing multiple questions easy.

Use bars side by side: Where comparison between multiple categories becomes easier instead of toggle between charts.

Add color for quick insight: Displaying the bars with colors will make users to pay quick attention to important tasks.

Plotting data on both axis: Data can be plotted both on positive and negative axis for identifying the trends.



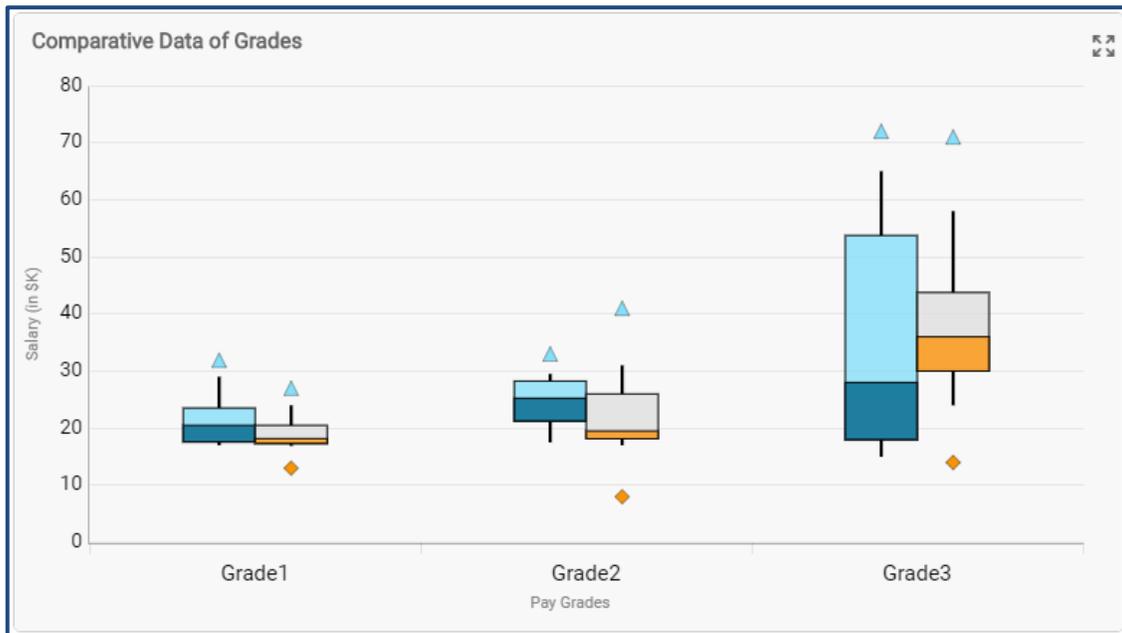
3. Box Plot

Box Plot charts are commonly used to show the distribution of data. The body of a box plot chart consists of a box which contains the median of the data located between 1st and 3rd quartiles. It also contains the whiskers which generally represents the data within 1.5 x IQR below Q1 and 1.5 x IQR above Q3 (anything outside of this range is called an outlier). The whiskers are used to show maximum and minimum points within the data.

Best Situations to Use a Box Plot chart:

To represent information about the shape of a dataset

To identify outliers in your data

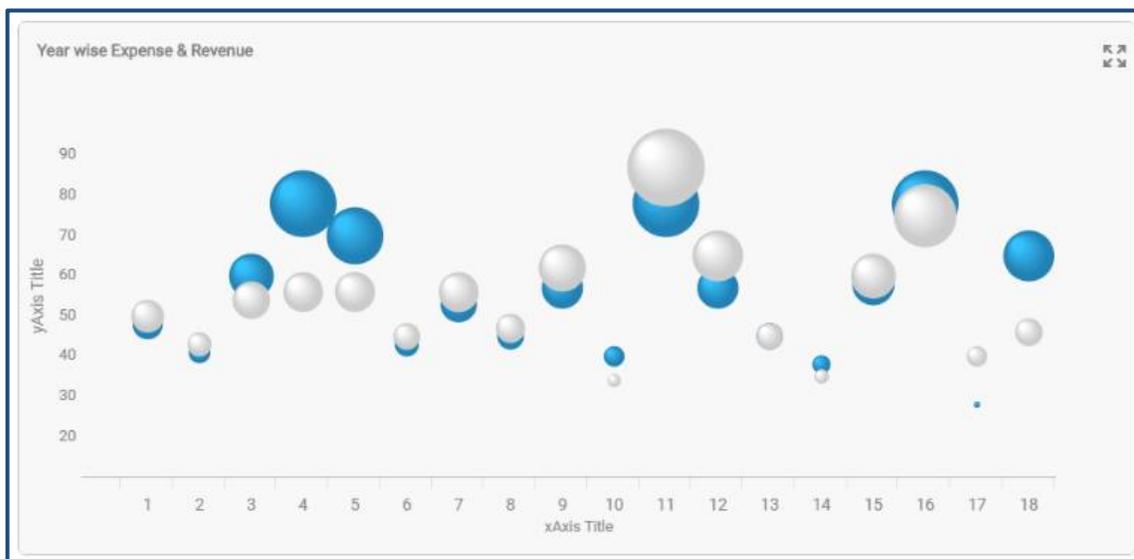


4. Bubble

A bubble chart visualizes data set in three or four dimensions. Where the first two dimensions are used as co-ordinates like x-axis and y-axis. The remaining two are used to represent the color and size of the bubbles. Mostly used to plot financial data.

Best Situations to Use Bubble chart:

Three Data Series: If your data has three series each containing values, then you can use bubble chart for better representation. Generally, the sizes of the bubble are determined by the values.

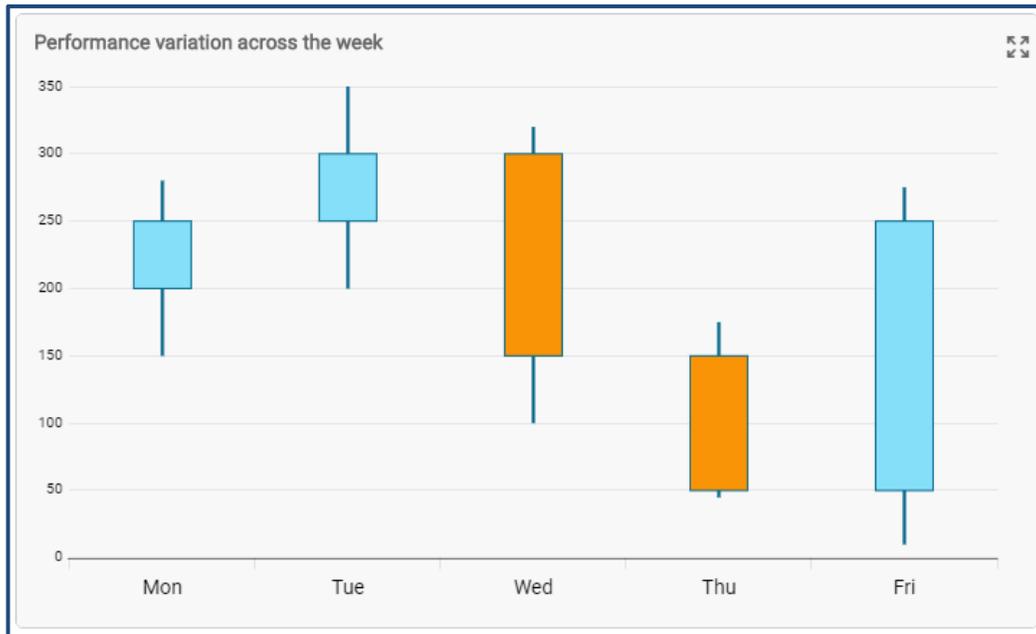


5. Candle Stick

Candlestick chart is a popular way of representing price fluctuations like opening, closing, high and low prices for a given period. The candle chart has shadows coming out of each end, representing the high and low prices of each trading day. The candles are colored sky-blue when the prices increased and orange

when the price has decreased.

Best Situations to Use a Candlestick chart: To perform technical analysis in financial markets

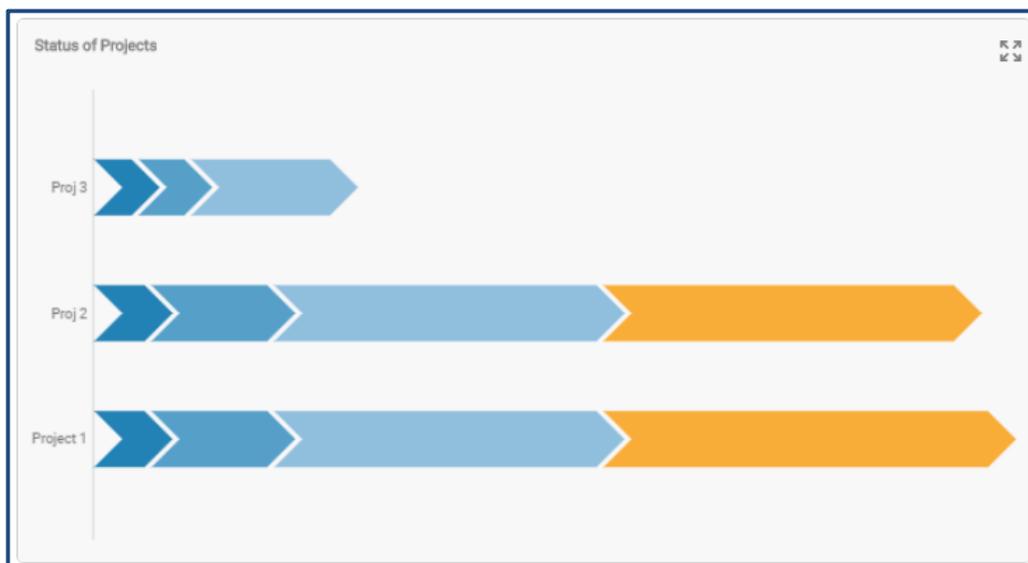


6. Chevron

Chevron charts are used to represent the process flow or steps involved in a life cycle of any activity. They are represented using arrows.

Best Situations to Use a Chevron chart:

Combination of phases defines a project lifecycle. The chevron chart can provide in-depth information about each phase involved in the project and its status.



7. Circumplex

The Circumplex chart, also known as Polar Area chart or Nightingale Rose chart, is a combination of the Bar chart and Pie chart. The Circumplex chart can be drawn on a polar coordinate grid. Each category or interval in data is divided into equal segments on the radial chart. The distance of each segment from the center, as per the denoted values, depends on a polar axis. Therefore, each ring from the center of the polar grid can be used as a scale to plot the segment size and represent higher value.

Each category may have more than one sub-category, where a section of the disc shows that each sub-category and each section has the same angle. The value of the corresponding sub-category is shown through the area. By changing the radius in a Circumplex chart, users can adjust the area of each segment (based on data).

Best Situations to Use a Circumplex chart:

To display manifold data in the form of a two-dimensional chart of three or more measurable variables represented on axes starting from the same point.



8. Column

Column charts are used when you want to compare the values of individual data points with another. They help in bringing out the highs and lows of the data set.

Best Situations to Use a Column chart:

Column charts are suitable for displaying data sets with negative values

Example:

To find the best and worst performers in an organization

Variations of this chart

Use stacked Column charts: Where multiple categories can be clubbed together on top of each other, which makes addressing multiple questions easier.

Use column side by side: Where comparison between multiple categories becomes easier instead of toggling between charts.

Add color for quick insight: Displaying the columns with colors will make users to pay quick attention to important tasks.



9. Decision Tree

The Decision Tree presents outcomes from a series of decisions via a flow-chart like a diagram. Users can easily understand the sequence presented through this graph, so frequently it has been used as a decision making tool, for analysis, or planning strategy.

The chart can either be used in a predictive or descriptive manner. The best situation to use this chart is to study the current market in response to an existing or new product, or to understand the sequential elements involved in the financial matter (loan approval, etc.)

Best Situations to Use a Decision Tree Chart:

To show several courses of actions

To display a calculable measure of the benefit of the various alternatives



10. Funnel

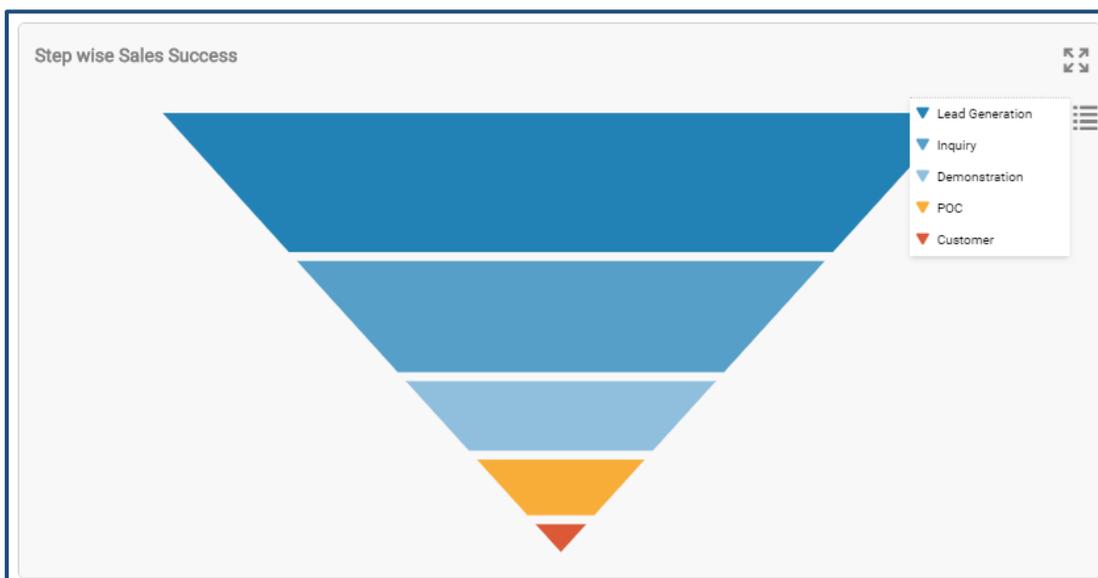
The Funnel chart can represent various stages in a process. As the shape suggests it widens at the top and narrows at the bottom this chart helps to pinpoint a phase where the maximum dropout occurred. This type of chart can describe a progressive reduction of data as it passes from one phase to the other. Where each phase represents a different percentage of data contributing to the whole.

Best Situations to Use a Funnel chart: Funnel charts are suitable for displaying sales conversation data.

Example:

To evaluate the success of a promotional campaign

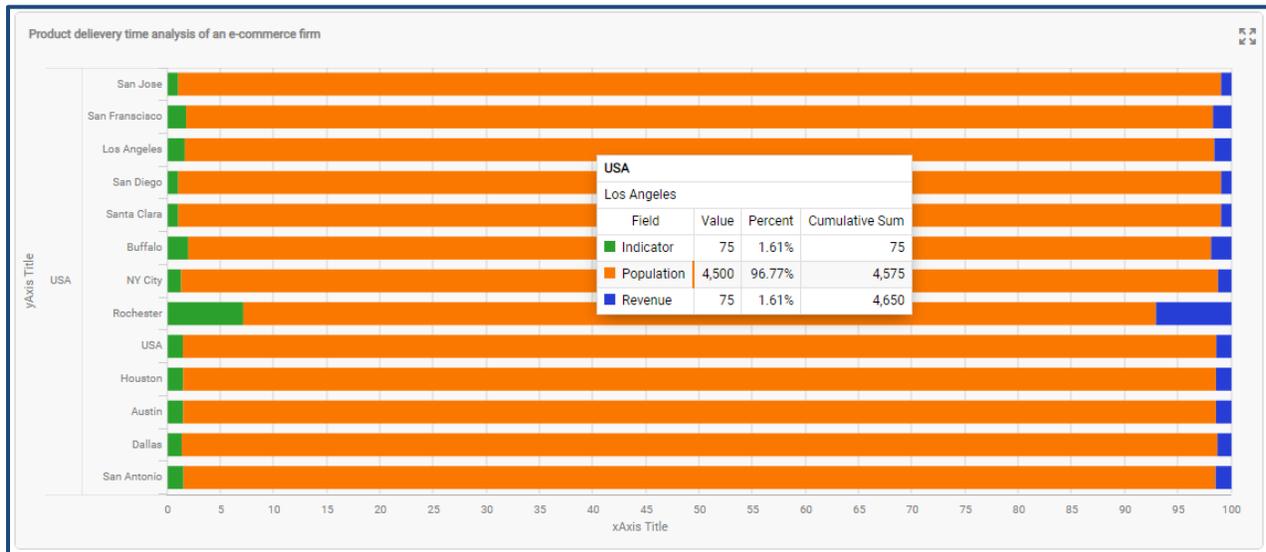
To analyze the recruitment process



11. Group Bar

The group bar chart becomes complicated to read or interpret if loaded with too much information.

Best Situations to Use a Group Bar chart: To display data sets containing negative values and multiple sub-categories.



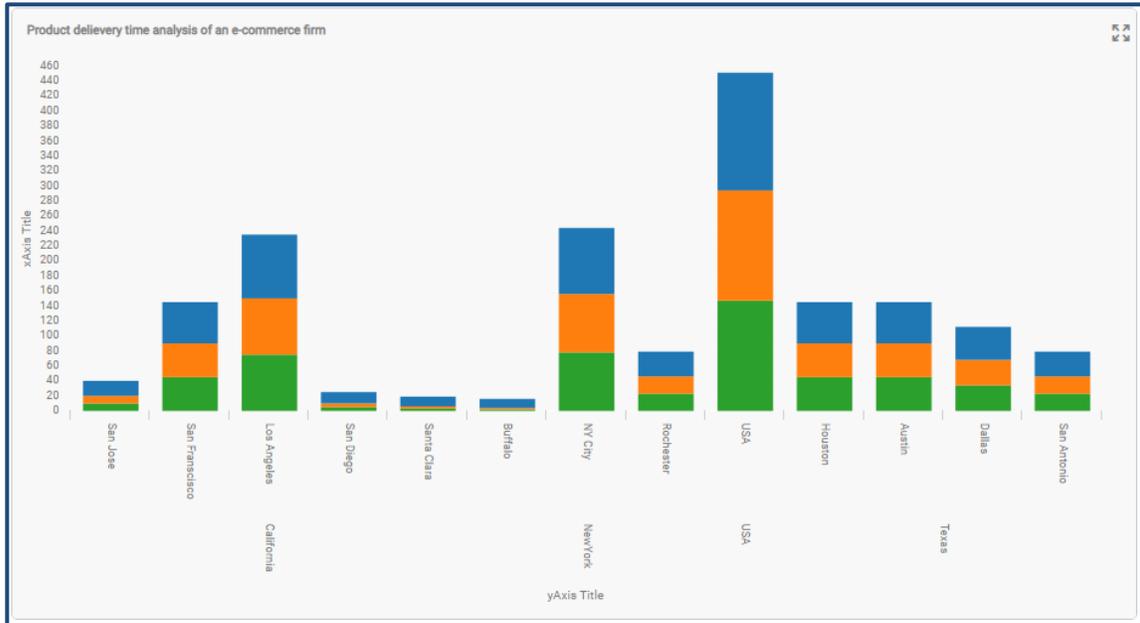
12. Group Column

The grouped column chart presents measurable values for categories and additional categorical dimensions. It is perfect if you want to give a quick overview of something as you would do with a bar chart or column chart but add more information with the help of additional columns. The user can provide more information in one chart, preferably by visualizing a specific pattern.

Best Situations to Use a Group Column chart: To compare various relative values based on a common parameter

Example:

If you want to compare your region-wise sales for 2012. A Column chart can easily facilitate that comparison. The Stacked/group chart is beneficial as it can facilitate both comparisons as well as part-to-whole relationship.



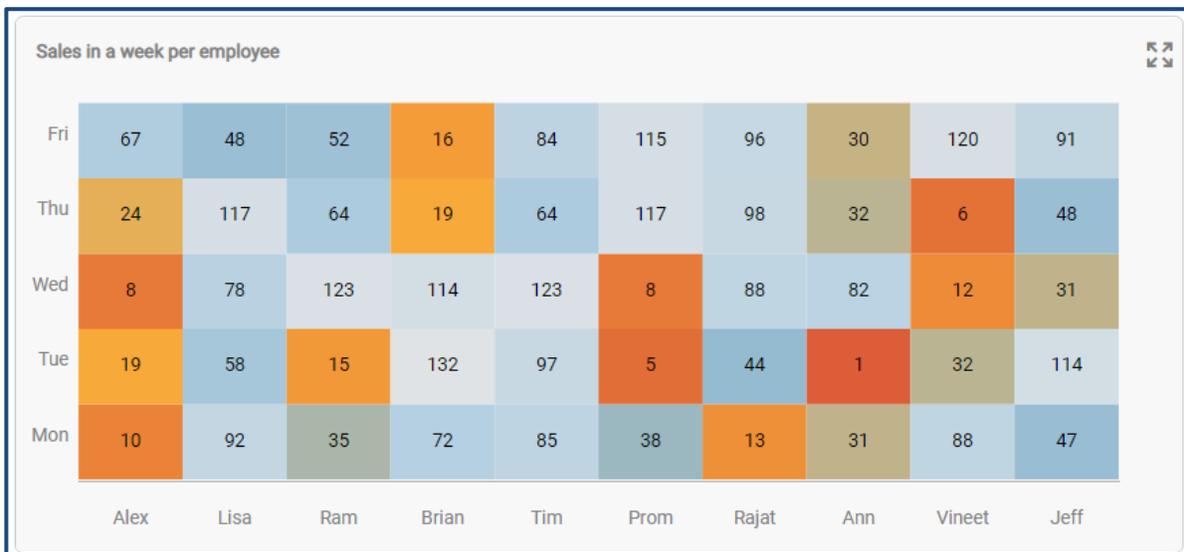
13. Heat Map

A heat map visualizes data in a two-dimensional image where it uses colors to represent data values. Heat Maps allows users to understand complex data sets easily as they are represented in different color ranges. They provide a quick visual summary of information.

Best Situations to Use a Heat Map chart: To show the relationship between two factors

Variations of this chart:

Geographic Type Heat Maps: For instance, a geographical heat map with the colors red and blue will quickly inform the user which state each candidate has won.



14. Histogram

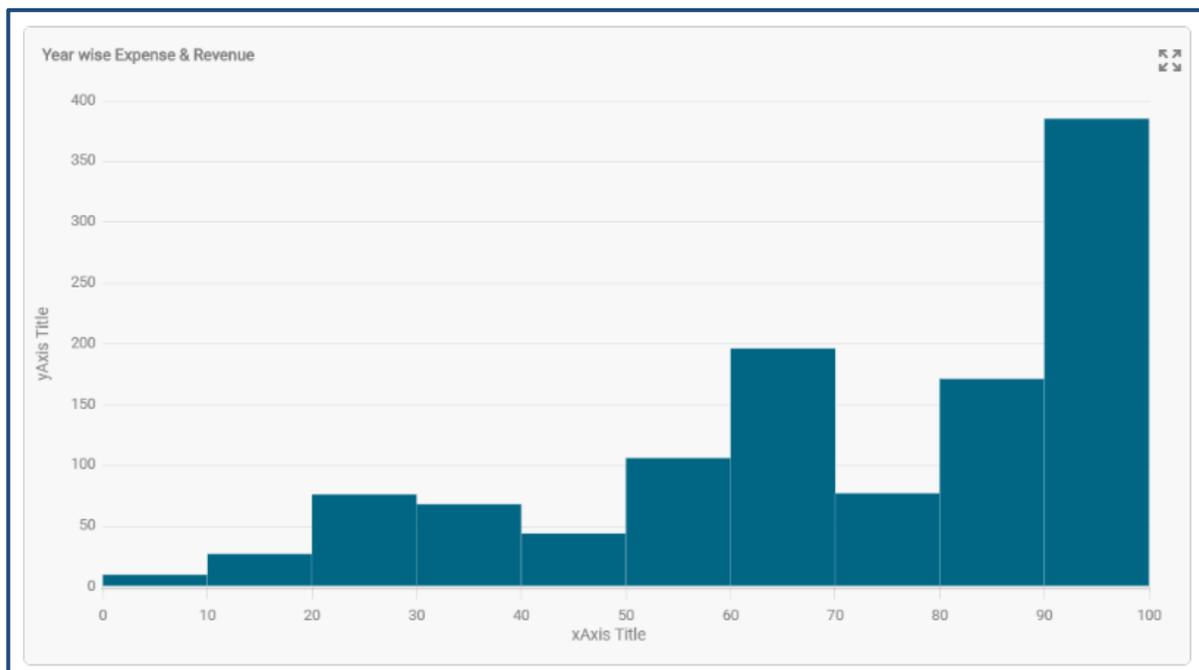
The X-Axis remains a continuous scale in the Histogram chart that makes it different from the Vertical Bar Chart. The Histograms make it easy to grasp where most values fall in a measurement scale, and how much variation is there. It is used to summarize a large amount of data or compare process results with specification limits.

Best Situations to Use a Histogram chart:

To summarize massive data sets graphically

To compare process results with specification limits

To communicate information graphically for the most frequent values



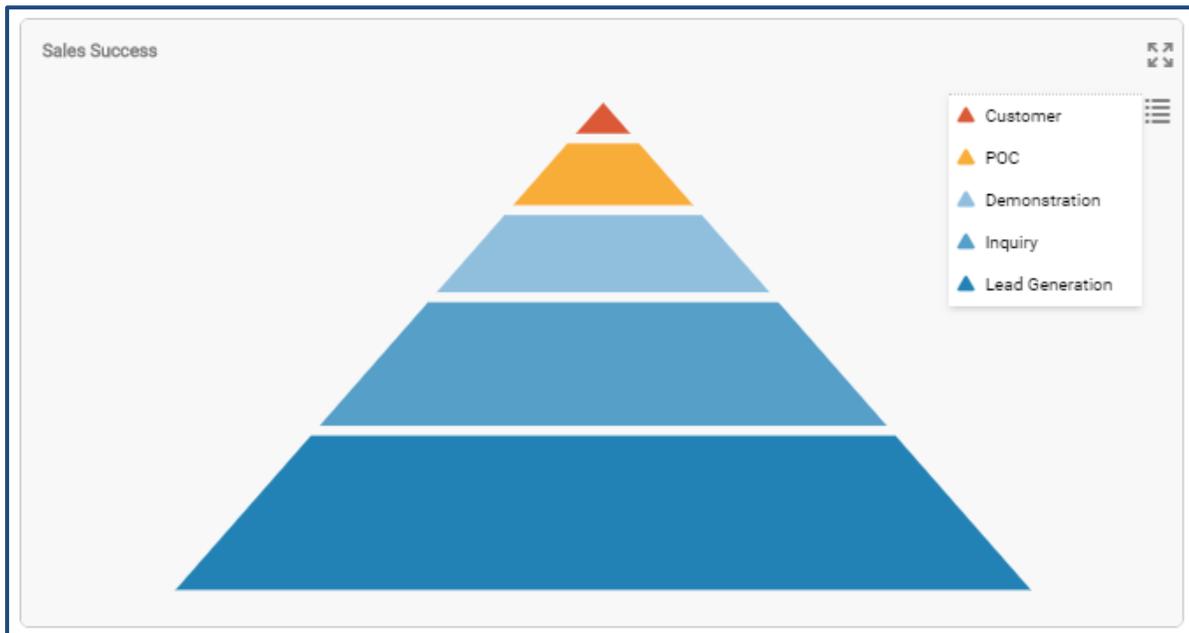
15. Inverted Funnel

Users can invert the funnel chart to see things from a different point of view. It widens at the bottom and narrows at the top pinpointing to the various phases in a classified structure. This chart can be used to see the hierarchical structure of an organization or distribution process of fund/salary/profit etc.

Best Situations to Use a Column chart: To display hierarchical pattern

Example:

To categorize the administrative structure in an organization



16. KPI Tile

KPI tiles display the sum of quantity for progressive evolution. KPI is a measurable value that demonstrates how effectively a company is achieving key business objectives. Users can get a quick view of prominent trends, indicators, and values based on the various metrics of the business. Proper use of KPI helps in reducing the number of components used in the dashboard for multiple parameters for better performance.

Best Situations to Use a KPI Tile: To provide information about the current performance of a company or organization at a glance



17. Line

Line charts connect individual numeric data points to create a sequence of values. They are primarily used to display trends over a period.

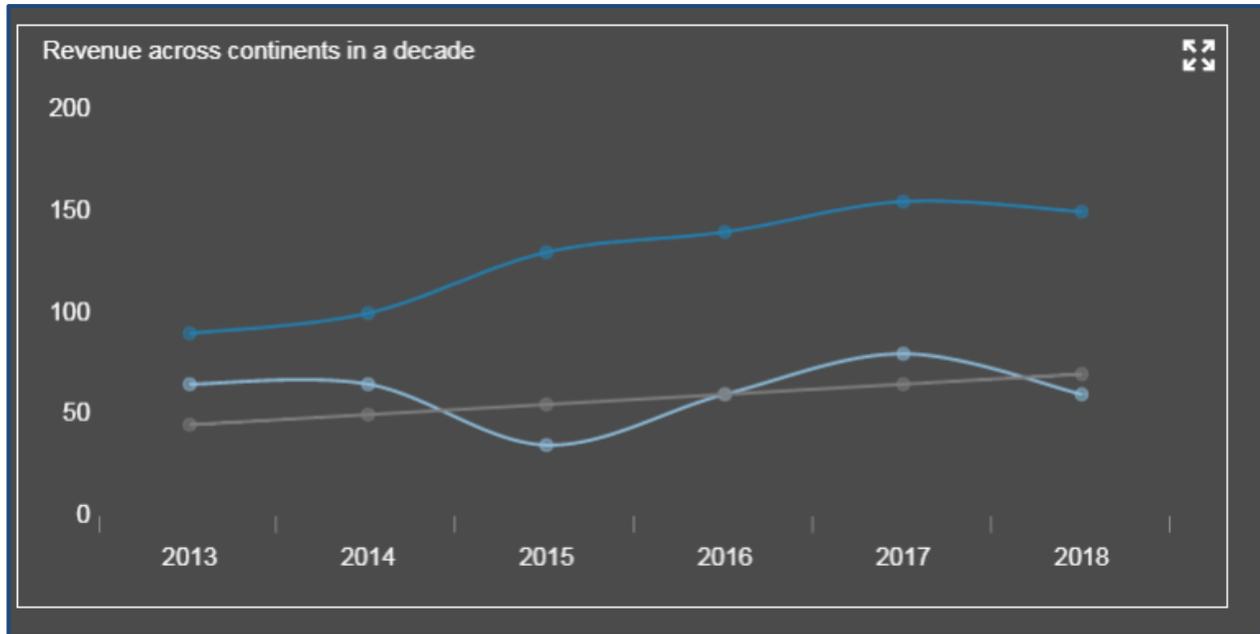
Best Situations to Use a Line chart: To view trends in data over a period

Example: To indicate increasing revenue or varying stock price

Variations of this chart

Mixed Chart- Combine a line graph with column charts to provide visual cues for further investigation

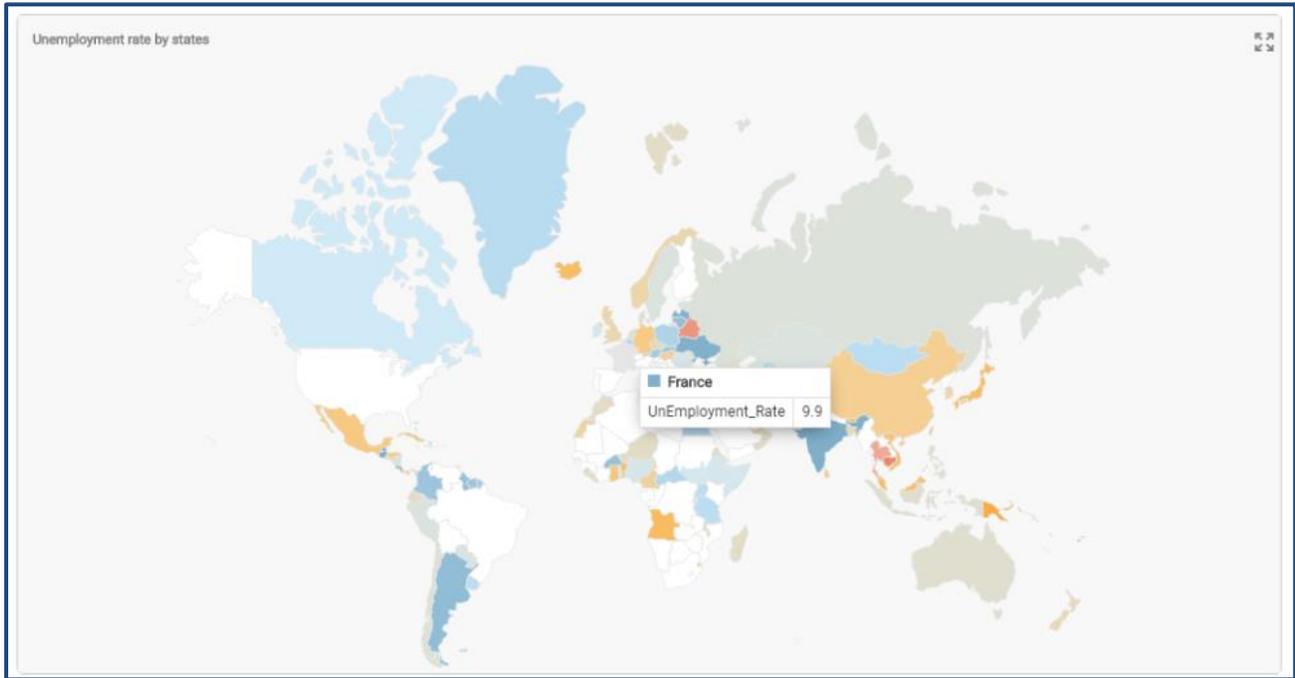
Example: A column chart representing the numeric score of students combined with the line chart corresponding proficiency score



18. Map

The Map chart is used to position data in a geographical context. Multiple layers are included to cover various information. Users can specify which layer to be marked as an interactive layer as it is the only layer wherein items can be marked.

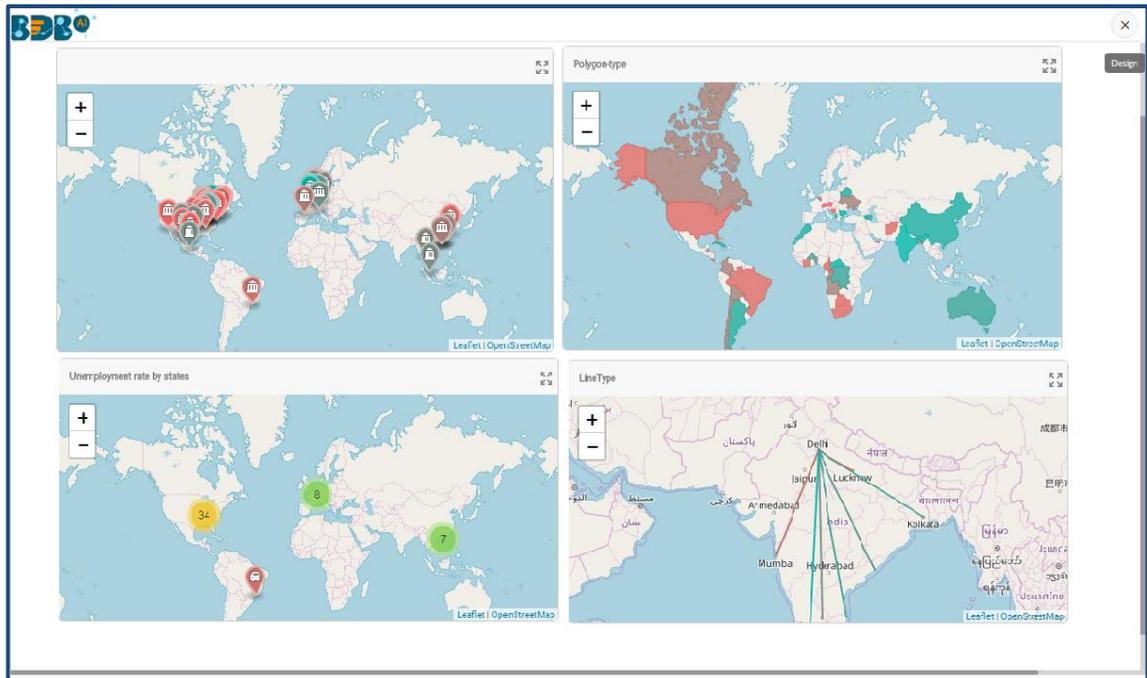
Best Situations to Use a Map chart: To display widely spread data or process in the geographical set up.



18.1. Leaflet

The leaflet is the leading open-source interactive map component that points the area (country, state, city) based on the latitude and longitude. This mobile-friendly map component allows users to avail all the mapping features requires for geospatial mapping. Leaflet maps are popular because of its simplicity and high performance.

Best Situations to Use a Leaflet chart: To analyze the Geospatial values based on Parent to Child hierarchy.



19. Milto Plot Chart

The Milto-plot chart shows the basic structure of mtDNA, as shown in the figure. Mito-Plot chart divided into different segments each segment produces a protein (RNA type) these proteins is essential during the cellular respiration cycle. These segments have been defined through the category, and its color depends on the RNA type what it contains. mtDNA has two strands, and that can be differentiated based on their nucleotide content, these two strands are a heavy strand or H-strand and light strand or L-strand. H-strand is genuine rich strand and represents through the segment which orientation towards outside. L-strand is a cytosine-rich strand that represents through the segment which orients towards inside.

Best Situations to Use a Milto Plot chart: It is beneficial for the prevention and diagnoses mtDNA disease.



20. Mixed Chart

The mixed chart is a combination of line-chart and column chart. It can plot 3-series of data on the chart. Mainly used to emphasize a different series of information on the chart.

Best Situations to Use a Mixed Chart: To compare multiple categories

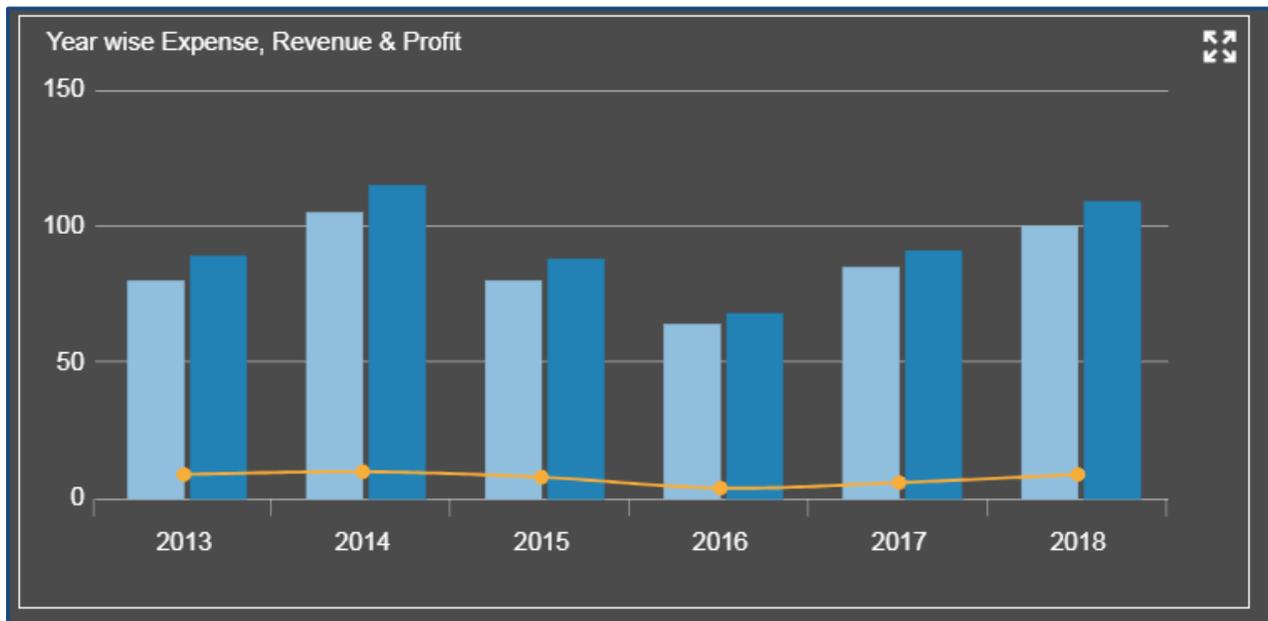
Example: To analyze company's budget v/s revenue.

Variations of this chart:

Use stacked Column charts: Where multiple categories can be clubbed together on top of each other which makes addressing multiple questions easier

Use columns side by side: Where comparison between multiple categories becomes easier instead of toggle between charts and data

Add color for quick insight: Where displaying columns with colors will make users to pay quick attention to important tasks



21. Pie Chart

The most widely used chart to show proportions, percentages, and categories of information. Users can use the Pie charts mainly to compare various categories. It is better to limit the categories up to 6 or fewer while visualizing them through a pie chart. Generally, Pie charts are used when values or sum of values meet 100%.

Best Situations to Use a Pie Chart:

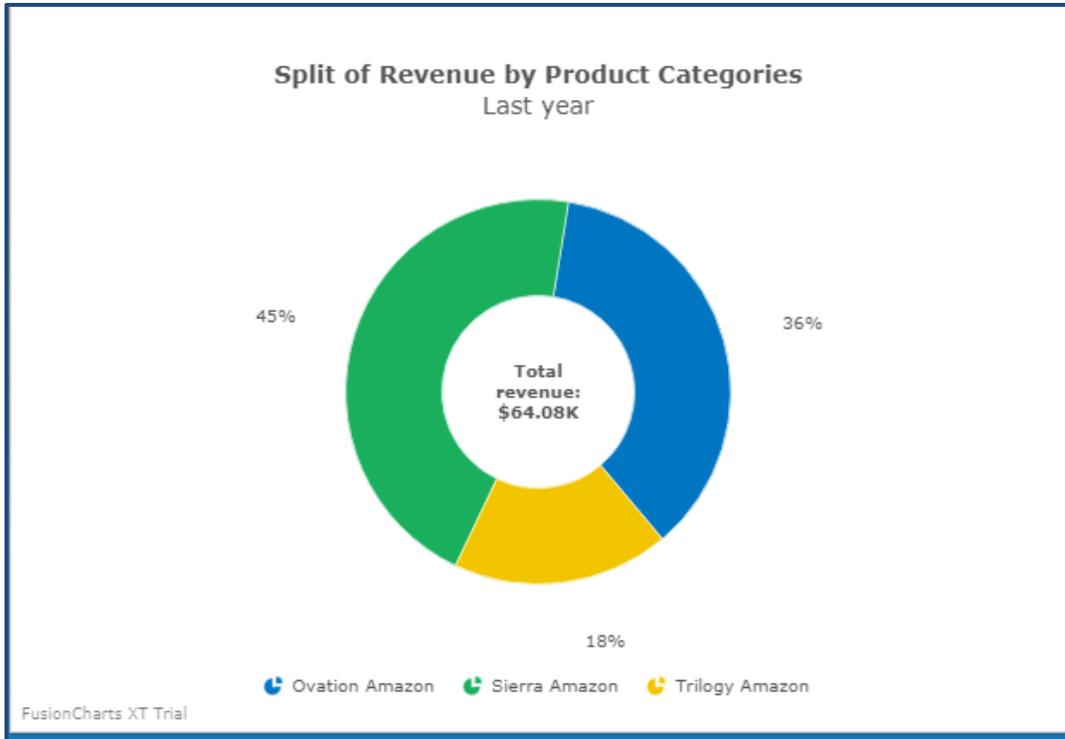
Top performers and least performers based on the comparison of categories

To illustrate break downs within a single dimension

To show differences within groups based on one variable

Variations of this chart:

Pie-Doughnut: Doughnut charts behave like a Pie-chart the user can switch the pie-chart to a doughnut.



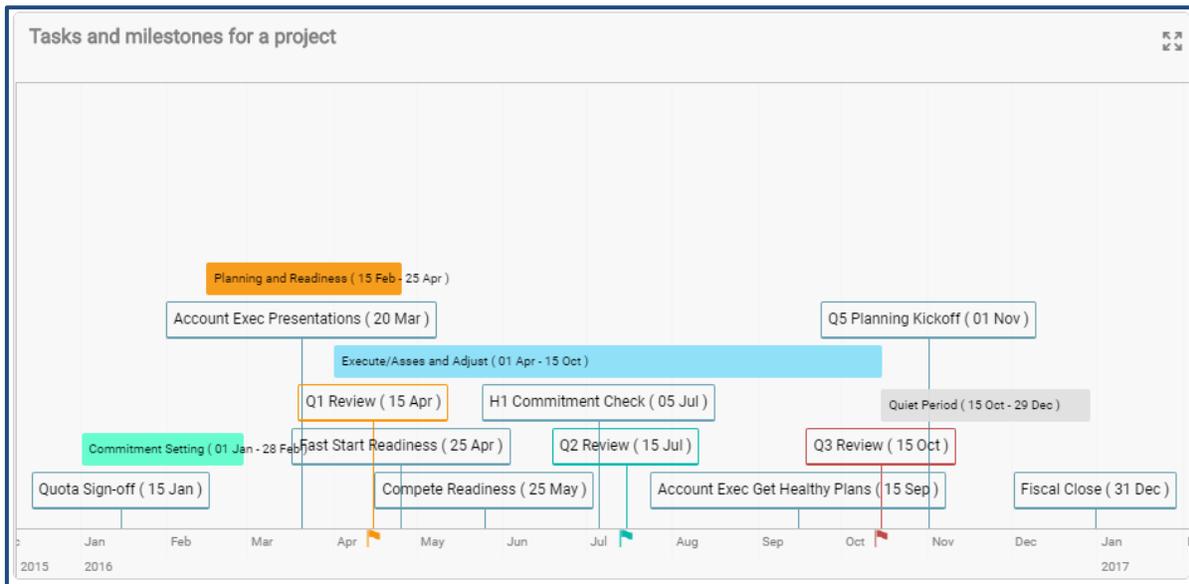
22. Project Timeline

The Project Timeline is an interactive visualization chart to visualize data in time. The data items can take place on a single date or have a start and end date (a range). Users can easily move and zoom in the timeline by using the drag-drop and scroll functionalities. The time scale on the axis is adjusted automatically, and it supports scales ranging from milliseconds to hours to days to years. The Project Timeline uses regular HTML DOM to render the timeline and items placed on the timeline. It allows for flexible customization using CSS styling.

Best Situations to Use a Project Timeline chart:

To track project deadlines and status with the timeline template.

To update status throughout the project.



23. Pyramid

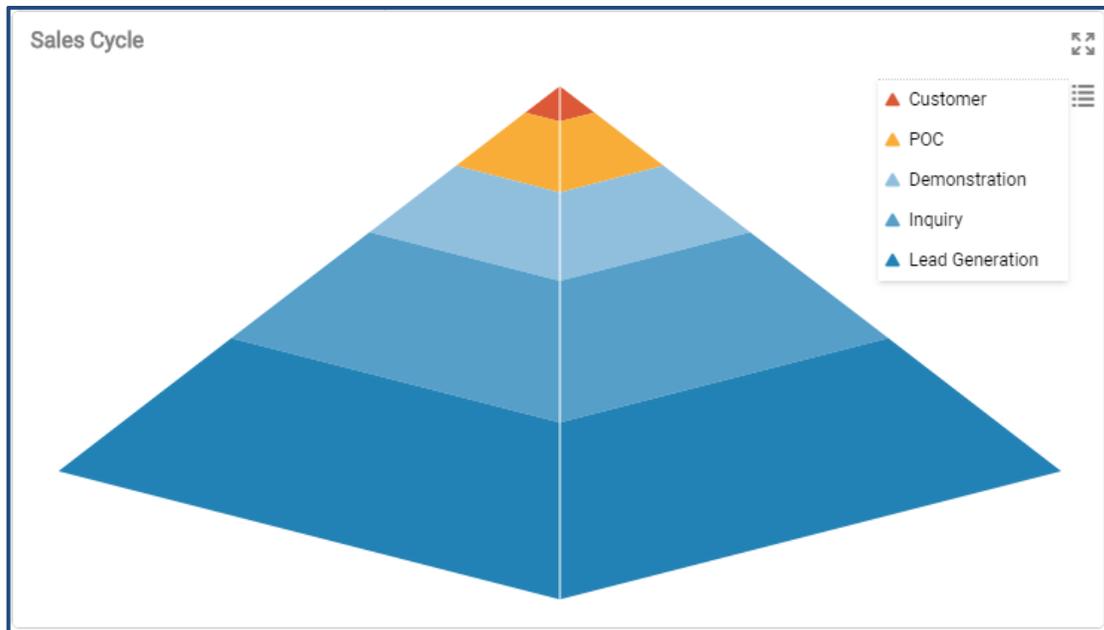
Pyramid charts are used when items need to be shown in a hierarchical structure. Generally, the chart will be a triangle sliced into several parts. The items and topics will be represented in a progressive order based on the quantity and size.

Best Situations to Use a Pyramid chart:

Hierarchical Breakdown: To represent levels of hierarchy in an organization or a process.

Variations of this chart: Inverted Funnel Chart

Funnel Chart: This is just a reversed format of Pyramid chart.



24. Scatter Plot

Scatter plots are used to analyze patterns in bivariate data. Data is plotted on the horizontal and vertical axis in the attempt to show how much one variable is related to another. They are the best visualizations which give users a sense of trends, correlations, and outliers from the data.

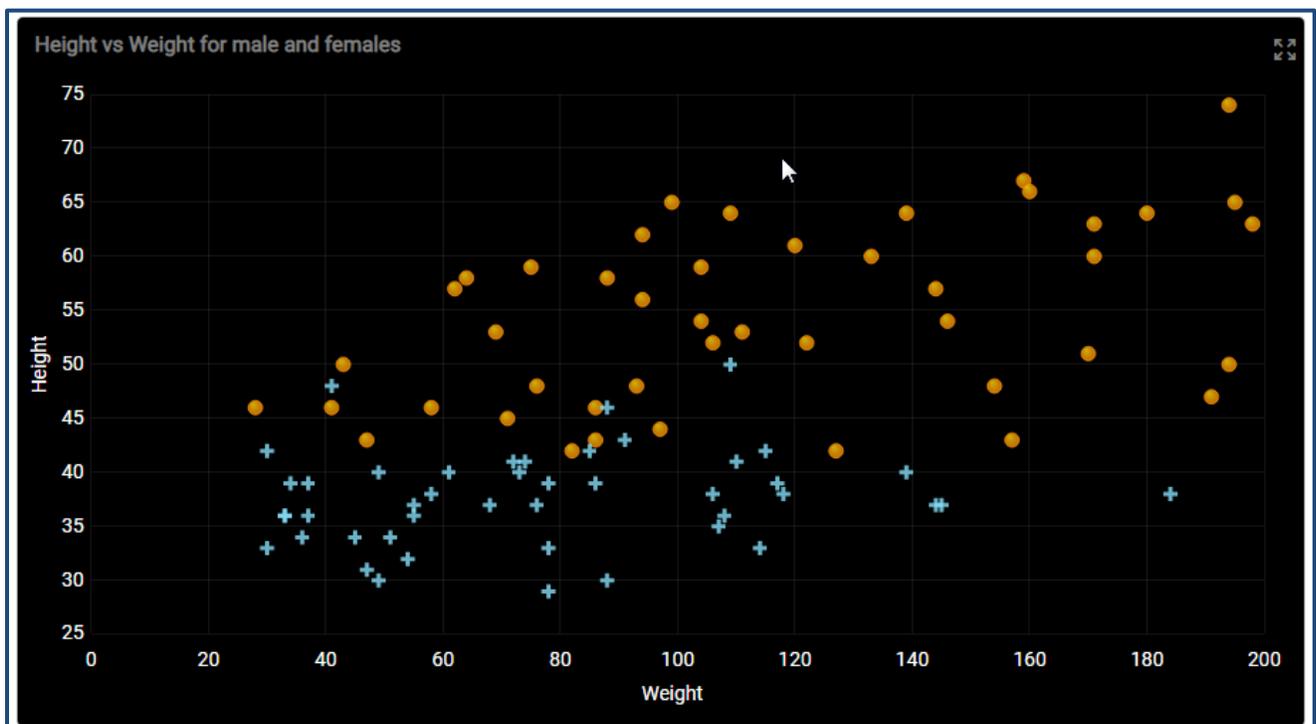
Best Situations to Use a Scatter Plot chart:

- To find the Relation between different variables
- To find the potential root cause of a problem

Variations of this chart:

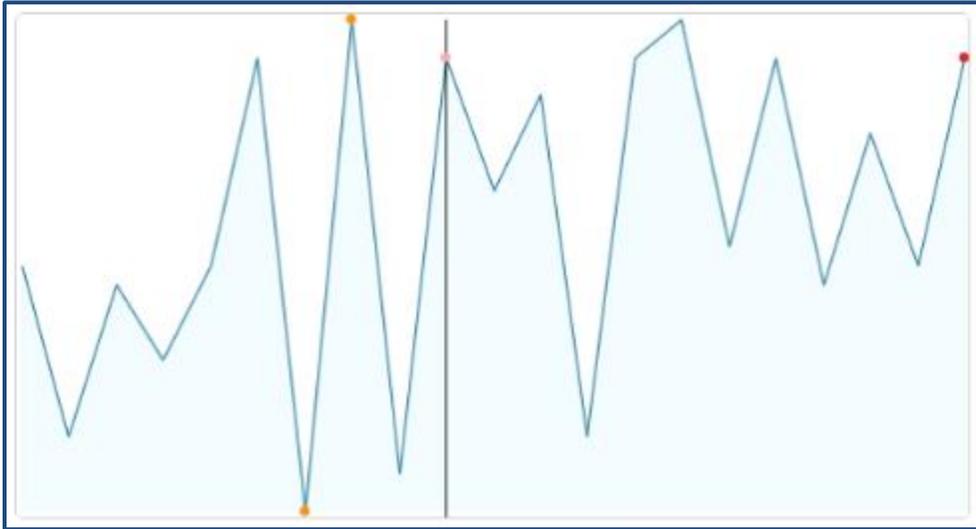
Add-up Filters: Filters like combo box can be added on to the scatter plot chart to filter data based on a condition.

Differentiate by Type: Data plotted on the charts may contain different categories. These categories can be identified by assigning different shapes.



25. Sparkline

A Sparkline is a small chart that is drawn without axes. It does not contain some chart-specific elements (such as legend, title, etc.). The Sparkline chart can be easily embedded in the text as it performs more like an inline element (rendered inside a span) as opposed to the standard charts, which behave like block elements. The primary purpose attached to the Sparkline Chart is to show a trend of something unique.

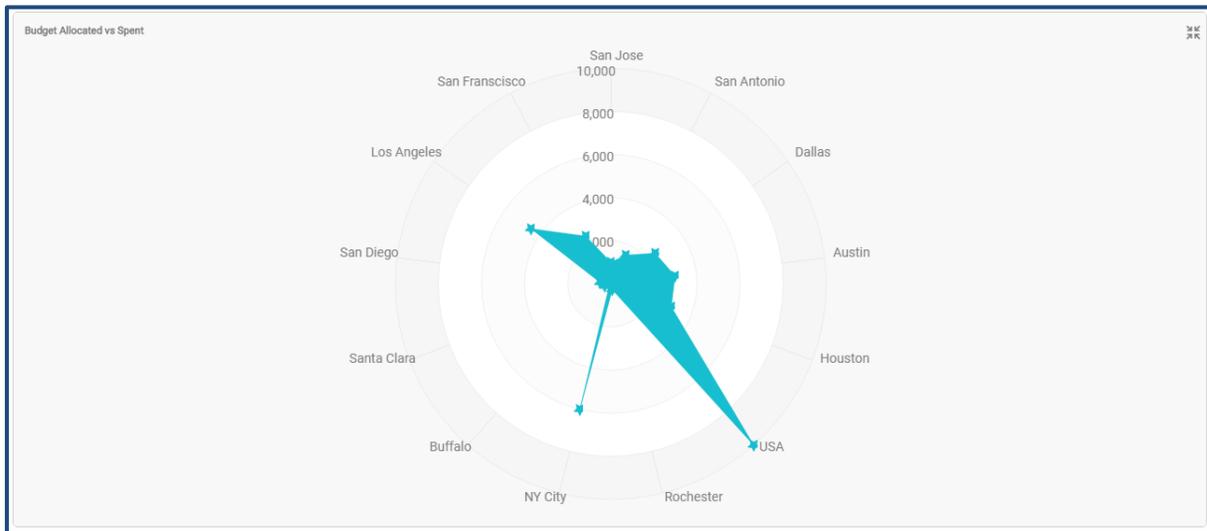


26. Spider

Spider chart is also known as Radar chart which is used to plot values of each category along the axis which starts at the center of the chart and extends up to the end of the radius. It is a two-dimensional chart type designed to plot one or more series of values arranged in the form of spokes.

Best Situations to Use a Spider chart:

To analyze performance areas in an organization

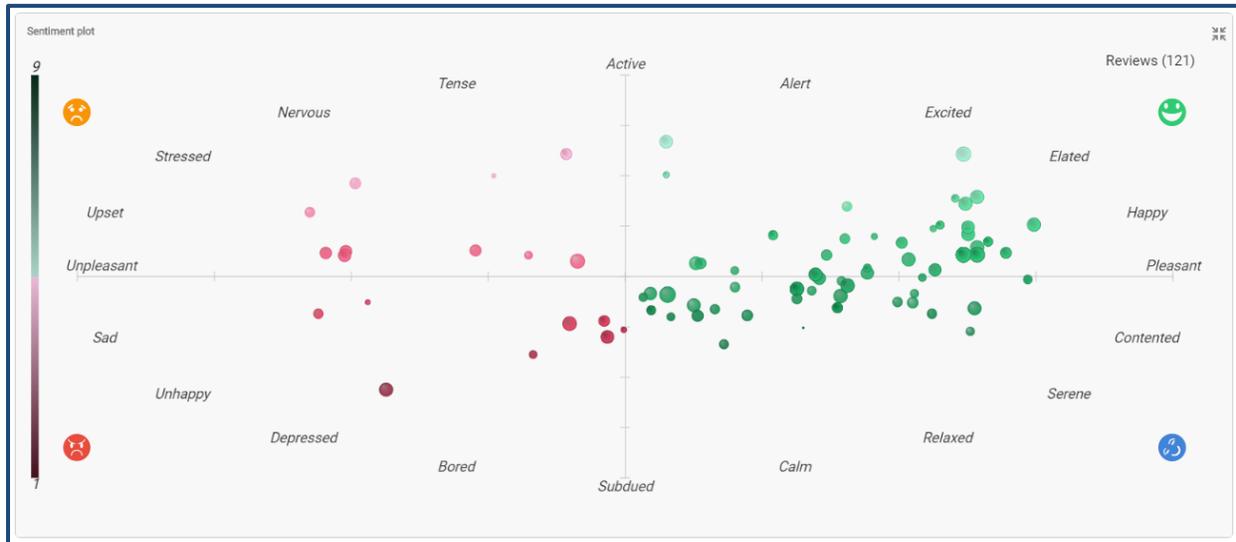


27. Text Analyzer

The Text Analyzer chart is suitable to plot the popularity and sentiment graphs of various products and to identify their relationships to the actual sales of these products. It provides visualizations based on 20 emotional properties embodied in text, with their measure of confidence, which we call 'Sentiment.'

Best Situations to Use a Text Analyzer chart:

- To identify customers' opinions
- To observe Churn Indicators
- To analyze customer Satisfaction and Segmentation
- To analyze social media data

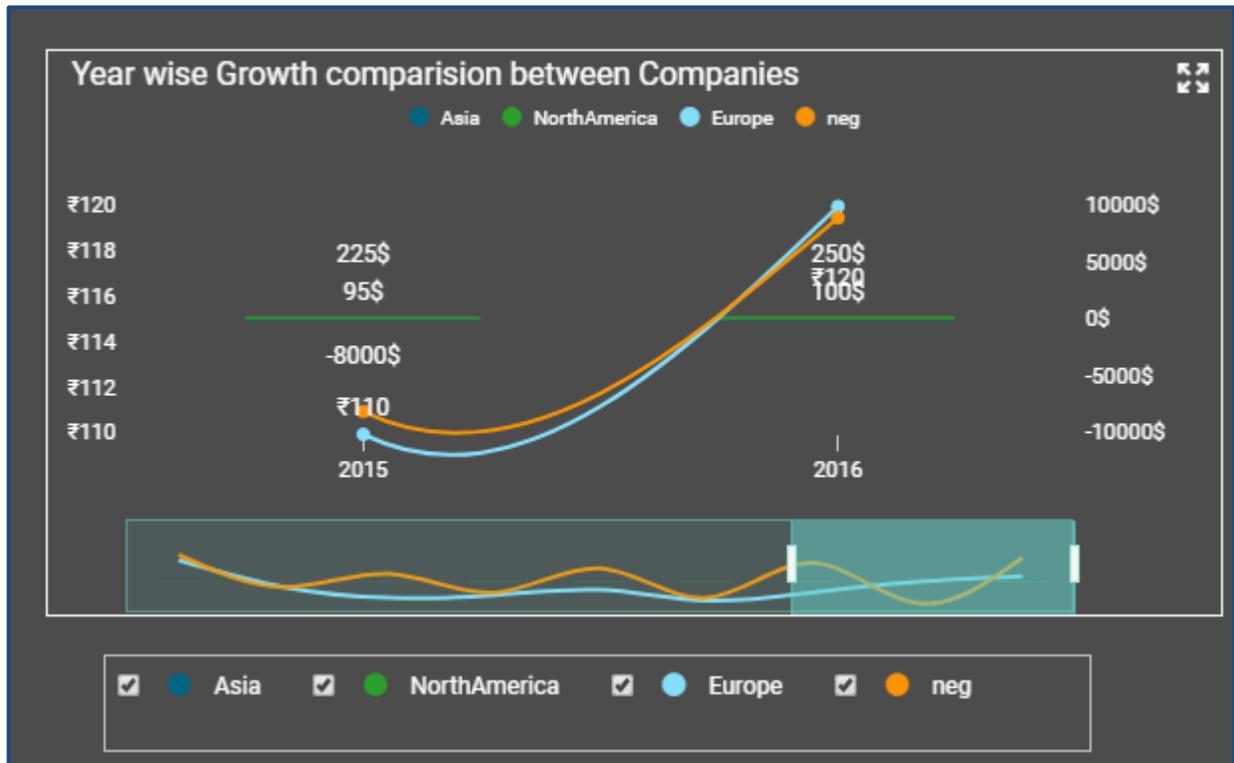


28. Time Series

Timeline chart can be used to evaluate patterns and behavior in data over time. Also called 'Time Series' graphs. They show how values change over time. Timeline charts display observations on the Y-axis against equally spaced time intervals on the X-axis.

Best Situations to Use a Timeline chart:

- When comparing data patterns of different groups
- When examining daily, weekly, and annual variations of a product or an entity



29. Treemap

Treemap charts are used to display large amounts of hierarchical data. When users want to view all their hierarchical data at one time, Treemaps can be used. Each rectangle represents a branch in a tree, and it also shows how much data it comprises. The size and position of the rectangles are based on the quantitative variable used for the chart. Patterns across the data can be identified using the size and color of the rectangles.

Best Situations to Use a Treemap chart:

When users want to view all their hierarchical data at one time.

Variations of this chart:

Each rectangle can be colored in a different color so users can understand how the hierarchical data is structured by a glance.



30. Trellis

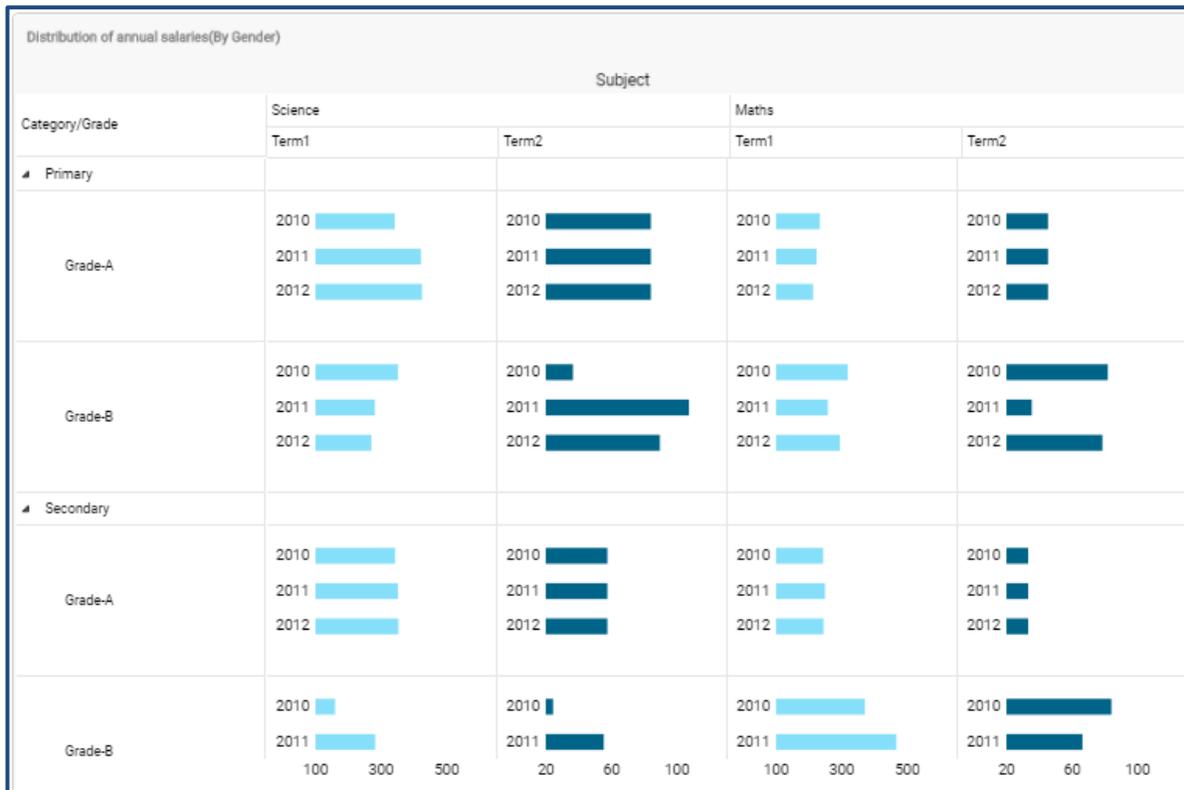
The Trellis chart is a network of small charts. It is a repetition of a chart across a grid. Generally, a minimum of two dimensions are used, one for the grid variable and another for the x-axis within each small chart. Users can analyze the metrics within each chart without a query (a selection) and compare with the rest of the group at the same time via a trellis chart. A chart will be shared on the same Y-axis, so it becomes easier for users to identify irregular behavior among the variables by accurately comparing the metrics across the grid.

Best Situations to Use a Trellis chart:

To analyze text data

To identify trends and patterns that would otherwise be unclear or difficult to see in a tabular format.

E.g., Year wise score for separate teams in different grade has been displayed in the below given image:



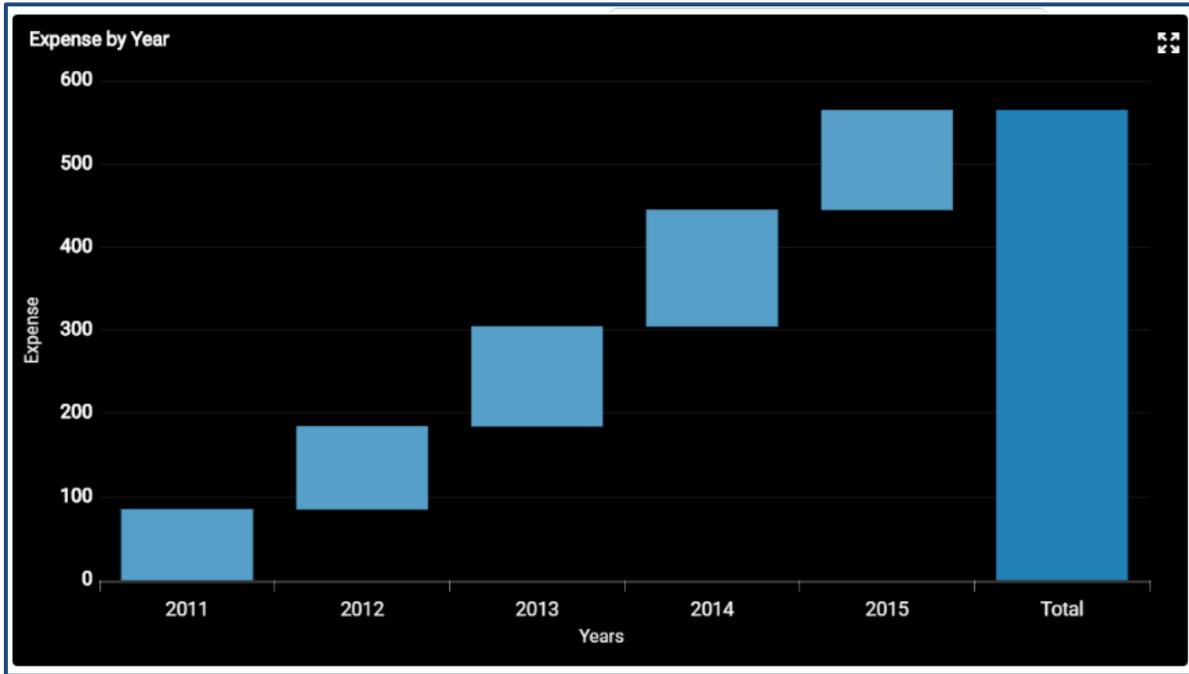
31. Waterflow

A Waterfall Chart is a form of data visualization that helps in understanding the cumulative effect of sequentially introduced positive or negative values. The waterfall chart is also known as a flying bricks chart or Mario chart due to the apparent suspension of columns (bricks) in mid-air.

The Waterfall Chart is used to show how an initial value is increased and decreased by a series of intermediate values, leading to a final value.

Best Situations to Use Waterflow chart:

To show incremental changes in the values over time



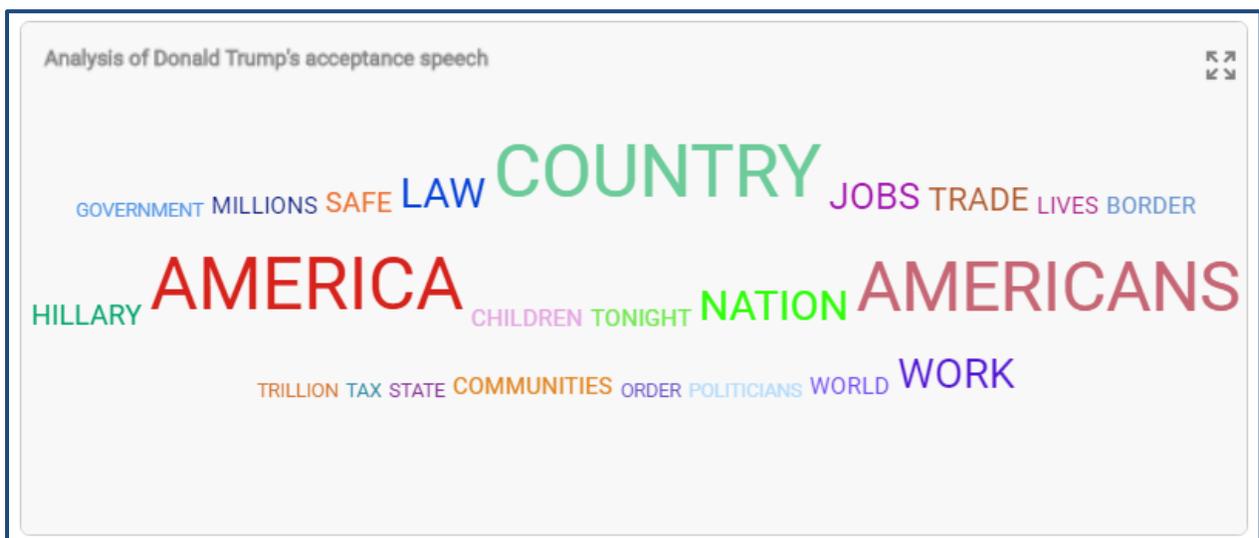
32. Word Cloud

Word Cloud is a visual representation of text data where the font size of a word depicts the frequency of this word in a set of text data. Even though Word clouds are not a perfect tool for data analysis and business data visualizations, they have their place in infographics. Word clouds can also reveal patterns in your responses that may guide future analysis.

Best Situations to Use a Word Cloud chart:

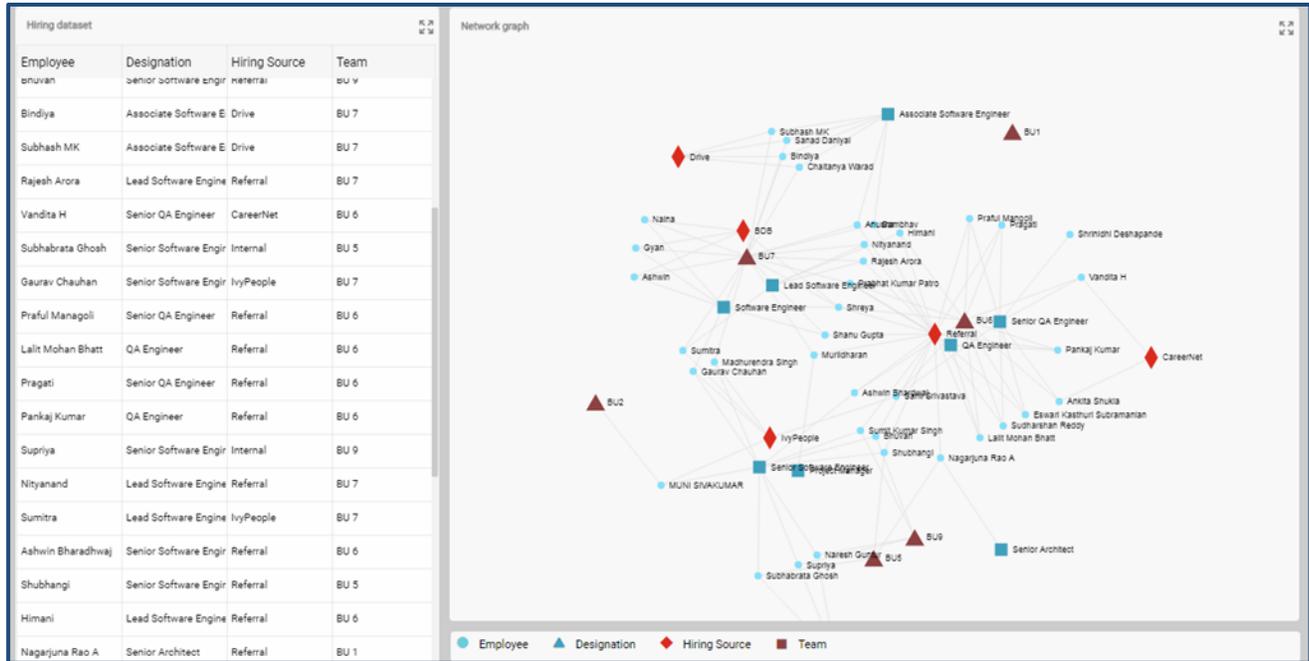
To analyze text data

To identify trends and patterns that would otherwise be unclear or difficult to see in a tabular format



Custom Charts:

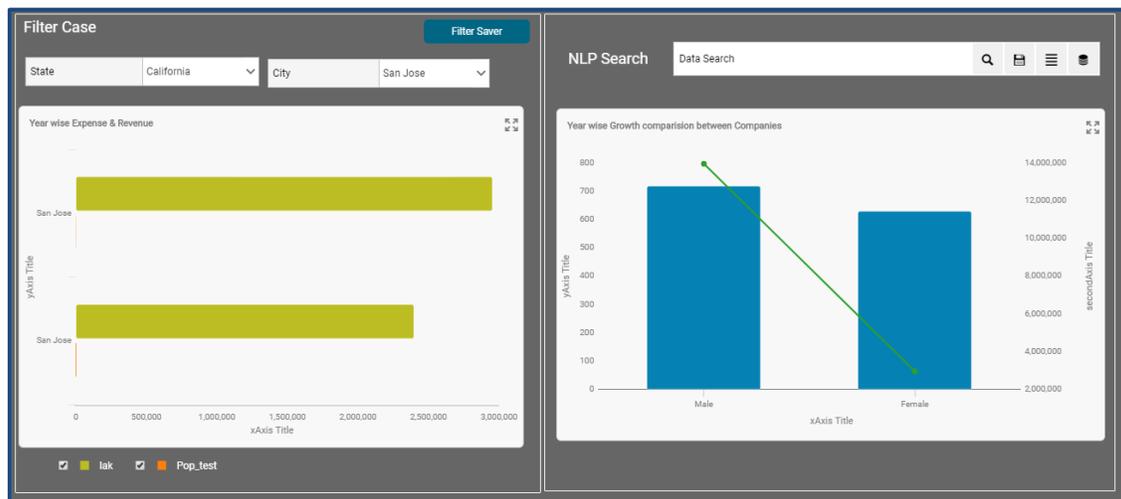
Apart from the charting components mentioned above, BDB Designer also provides users with Custom chart component to import any custom visual. BDB has the D3 charts included inside the Designer Component library to facilitate the user with more options.



Other Related Components:

BDB Designer has four types of Grid components, various filters, and modifiers to display your data in a more presentable manner.

Further, the user can search across a dashboard or save the applied filters with our innovative Search and Save Filter functionalities.



BDB Dashboard Designer

BDB's signature visualization tool, Dashboard Designer is a complete package to create governed dashboards with prebuilt capabilities which makes it simple enough for business users to understand yet robust enough to accommodate custom scripting and visual requirements. 65+ charting options (Charts, Filters, Grids, Labels) to build extensible and appealing dashboards.

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