Which Type of Chart or Graph is Right for You?

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You've got data and you've got questions, but what's the best way to visualize that data to get the answers you need? Transforming data into an effective visualization or dashboard is the first step towards making your data make an impact.

As Henry D. Hubbard, Creator of the Periodic Table of Elements said, "There is magic in graphs. The profile of a curve reveals in a flash a whole situation – the life history of an epidemic, a panic, or an era of prosperity. The curve informs the mind, awakens the imagination, convinces."

Types of Charts and Graphs

Bar Chart

Bar charts are one of the most common data visualizations. You can use them to quickly compare data across categories, highlight differences, show trends and outliers, and reveal historical highs and lows at a glance. Bar charts are especially effective when you have data that can be split into multiple categories.

Line Chart

The line chart, or line graph, connects several distinct data points, presenting them as one continuous evolution. Use line charts to view trends in data, usually over time (like stock price changes over five years or website page views for the month). The result is a simple, straightforward way to visualize changes in one value relative to another.

Pie Chart

Pie charts are powerful for adding detail to other visualizations. Alone, a pie chart doesn't give the viewer a way to quickly and accurately compare information. Since the viewer has to create context on their own, key points from your data are missed. Instead of making a pie chart the focus of your dashboard, try using them to drill down on other visualizations.

Maps

Maps are a no-brainer for visualizing any kind of location information, whether it's postal codes, state abbreviations, country names, or your own custom geocoding. If you have geographic information associated with your data, maps are a simple and compelling way to show how location correlates with trends in your data.

Density Maps

Density maps reveal patterns or relative concentrations that might otherwise be hidden due to an overlapping mark on a map–helping you identify locations with greater or fewer numbers of data points. Density maps are most effective when working with a data set containing many data points in a small geographic area.

Scatter Plot

Scatter plots are an effective way to investigate the relationship between different variables, showing if one variable is a good predictor of another, or if they tend to change independently. A scatter plot presents lots of distinct data points on a single chart. The chart can then be enhanced with analytics like cluster analysis or trend lines.

Gantt Chart

Gantt charts display a project schedule or show changes in activity over time. A Gantt chart shows steps that need to be completed before others can begin, along with resource allocation.

Bubble Chart

Although bubbles aren't technically their own type of visualization, using them as a technique adds detail to scatter plots or maps to show the relationship between three or more measures. Varying the size and color of circles creates visually compelling charts that present large volumes of data at once.

Treemap

Treemaps relate different segments of your data to the whole. As the name of the chart suggests, each rectangle in a treemap is subdivided into smaller rectangles, or sub-branches, based on its proportion to the whole. They make efficient use of space to show percent total for each category.

For more types of charts, visual examples, tips, and information, download our whitepaper. In this paper, you'll learn about different chart (and graph) types–from bar charts to density maps to box-and-whisker plots. You'll also learn when to use one chart over another, along with tips on how to leverage these chart types for maximum impact.

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Tracy Rodgers is a senior product marketing manager where she focuses on all things data. She started working at Tableau in 2011, and has worked in several roles since from support to managing the Tableau Community to product marketing. She loves connecting with customers, learning new ...

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