

Key Elements of a Memorable Data Visualization

This list of points is a helpful checklist to confirm that you've covered all the bases as you develop charts for your data visualization presentation.

Chart design:

1. Ensure that the chart element that stands out visually conveys your central idea.
2. Restrict each chart to a small amount of data related to the chart's message.
3. Use as many charts as necessary to develop your story.
4. Employ charts that show trends, not just facts, wherever possible.
5. Emphasize chart clarity to support communication clarity.
6. Decide if showing data values on the chart is necessary or just adds clutter.
7. Eliminate ornamentation such as cute graphics or fancy borders.

Use of colour:

1. Limit the number of colours.
2. Ensure colours are visually distinct.
3. Show a given variable or time series with the same colour on all charts.

Chart layout:

1. Create a prominent title and related subtitle.
2. Ensure text and numbers are large enough to be easily readable.
3. Show a Source: for your data source at the bottom of the chart.
4. Label axes well.
5. Avoid a legend if at all possible.
6. Avoid abbreviations.
7. Avoid or minimize grid lines.
8. Ensure all numeric values show a related unit of measure.
9. Use a mouse hover to reveal details about the data.

Animation:

1. Use motion to show trends.
2. Use animation to zoom in on the part of the data you want to emphasize.

3. Use animation to reveal successive parts of the chart as you tell the story of the data.

Use the entire slide for your chart:

1. Avoid showing multiple charts on one slide.
 - a. The data and text become too small for the audience to see.
2. Location of text:
 - a. Show only a slide title on the chart slide.
 - b. Place discussion points on a separate slide and not on the chart slide.
 - c. Place the accompanying words you intend to speak for the chart's story in the Notes Page and not on the slide.
3. Don't shrink the chart to fit on the slide.
 - a. If your chart doesn't fit on a slide, prepare a printed handout that the audience can look at up close.

Ethics:

1. Never design a chart to mislead your audience.
2. Don't manipulate the data to support the desired or pre-determined outcome that isn't backed by the data.

An outline for telling your story

A good approach is to design a series of data visualizations that develop the story leading to your recommendation. A helpful outline is as follows:

1. Start with a chart focused just on the data points that illustrate the problem you are trying to solve.
 - a. For example, show a chart of a high and growing defect trend in your manufacturing operations.
2. Then show a series of charts that illustrate what is causing the problem.
 - a. For example, show charts of the various issues that are contributing to the high defect rate.
3. Then show charts that illustrate the data for the alternatives you investigated.
 - a. For example, show charts that illustrate the estimated impact of various possible improvements.
4. Finally, illustrate your recommendations with predictive data that shows how you expect the world to unfold if your recommendations are implemented.
 - a. For example, show charts describing how your improvements will reduce the defect rate within the next year or two.