

Informational graphics step by step

Working with infographics doesn't have to be difficult or mysterious. If you remember two basic principles, you'll be on your way to success: **keep it simple**, and **have a reason for every choice you make**. The suggestions that follow are not rigid rules. Have some fun with them, and make your graphics shine!

1. Decide whether you need a graphic.

Do you want to

- make a complex trend or pattern easier to see?
- present a large dataset efficiently?
- help readers make detailed comparisons?
- add a human-interest element?
- show what an abstract idea looks like in real life?

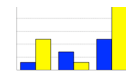
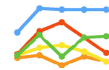
Make sure you can identify a specific way that the graphic will help readers understand your message.

2. Decide what type of graphic best suits your purpose.

Tables enable readers to look up and compare precise values.

Charts help readers visualize general patterns and trends.

- *Line charts* are good for showing continuous data, such as temperature change from month to month.
- *Bar charts* are good for comparing categories that are not on a continuum, such as different car models' gas mileage.
- *Pie charts* are popular, but most data-visualization specialists strongly advise against them—our brains are not wired to interpret them accurately. Most pie charts can be replaced with a bar chart or a simple bulleted list.



If you can get the job done with a bar or line chart, do it! Other chart types can be helpful but are often misused; use another format only when the data require it. (For more advice, see the resources listed at the end.)

Maps have an obvious purpose. **Photos** can serve many purposes, such as highlighting a cultural or geographical element or showing the concrete form of an abstract concept. **Boxes** can showcase a small amount of key information, such as the exact wording of a law or treaty, instructions for a procedure, or links to online sources.

3. Use best practices to create the graphic

Keep it simple! Remove any element that doesn't communicate essential information. If you have difficulty writing a concise caption, this may be a clue that the graphic itself needs to be simplified.

Give each graphic one job only, and make sure it does it well. Don't group dissimilar elements together.

A graphic should enhance the text, not substitute for it. Readers should be able to understand the graphic without referring to the text, and vice versa. Don't repeat the same information in the graphic and the text.

Sort data in a meaningful order. If the order isn't obvious, explain it in the caption.

Avoid abbreviations where possible.

Use type that is easy to read and an appropriate size (usually 7–10 points).

Don't vary features like size, color, thickness, and position except to make an intentional distinction.



Charts The main point (usually a contrast or change) should be clear at a glance. If the data don't suggest an obvious pattern, don't use the chart.

To avoid distorting the data, follow a few simple rules:

- On chart axes, ensure that the same distance always represents the same value.
- When multiple charts or sub-charts compare related elements, use identical axis scales in all of them. If that creates a problem (for example, an abnormally tall or wide chart), work with a designer or editor to solve the problem without affecting accuracy.
- The zero line should almost always be at the bottom of the vertical axis (or halfway up if showing +/- deviations from a norm). Partial ranges (such as 90–100%) can make differences look greater than they really are; avoid them if possible, and if you must use them, label them clearly.

Put independent variables (categories) on the horizontal axis and dependent variables (values) on the vertical axis.

Keep color schemes simple; monochrome is often best. Blue is the easiest color for most colorblind readers to see. Avoid using patterns—shades are easier to see, and they print out more reliably.

use this:  not this: 

Tables Explain any blank cells, and cells with dashes or “n/a” (which can mean either “not applicable” or “not available”), in a footnote. Within a given category, give all values to the same number of decimal places. Place footnotes at the bottom of the table, not the bottom of the page.

Maps Show only essential elements. Show all key locations mentioned in the text, and don't show locations that aren't mentioned. If you include a locator map, make it smaller than the main map, keep it simple, and make sure its features are instantly recognizable and clearly match the main map.

Photos These should have a resolution of 300 pixels per inch at a size slightly larger than you expect them to be printed (photos that will be viewed only online can be smaller). Crop photos so that the focus is on the most relevant elements, but crop them loosely so that the publisher has some flexibility during layout. If people are the focus, faces should be at least as large as your thumbnail.

Boxes Keep these short (1–3 paragraphs), and be sure to give a source citation for any quoted material.

4. Review and revise

Look for ways to simplify further. Show the graphic to colleagues who are not closely familiar with your work, and ask them if it's clear. Check the spelling and math. Don't unlink a data-driven chart from its data source (e.g., Excel table). Whenever possible, give reviewers and editors the source file, rather than a static image.

Remember: Simple is beautiful—and sophisticated! Don't use fancy features that you don't need. Evaluate those “bells and whistles” on only one criterion: whether they help you tell your story.

Working with infographics can be easy and fun if you take it one step at a time, **keep it simple**, and **have a reason for every choice you make**.

More resources

Few, Stephen. 2012. *Show me the numbers: Designing tables and graphs to enlighten*. Burlingame, CA: Analytics Press. The author also offers useful free publications on his website, www.perceptualedge.com/.

Tufte, Edward R. 2015. *The visual display of quantitative information*. Cheshire, CT: Graphics Press.

FlowingData (<http://flowingdata.com/>). Tutorials and articles on data visualization.

Gapminder (<https://www.gapminder.org/>). Statistics and infographics resources, especially relating to international development.