

Data Visualizations vs. Infographics:

Not All Visualizations Are Created Equal

What is Data Visualization?

Both data visualization and information graphics can leverage the power of graphic form, combined with human perception, to improve comprehension of large data sets, reveal patterns in complexity and, sometimes, to tell compelling stories with data. Often used loosely and interchangeably, however, the terms data visualization and information graphics (or infographics) are not actually synonymous.

Data vs. Information

To understand the difference between the two, it helps to define the terms data and information. Think of data as raw, unprocessed and unorganized facts or numbers; the raw ingredients, if you like. On its own, data is not very meaningful or useful, just like raw cake ingredients, on their own, are not very tasty. But processed and put into context data becomes meaningful. It can start to answer the all-important question: "compared to what?"

So the question becomes: what kind of processing took place between the raw ingredients and the finished product? For example, was all the data used in the visualization, or was it cherry picked? Was it cherry picked to support a pre-determined point of view or worse, a hidden agenda? Is the visualization a tool of persuasion? Telling a specific story to a particular audience, information graphics tend to be more subjective and custom made.

Data visualizations, on the other hand, tend to be less subjective. A good data visualization will contain the complete data set, not simply a summary of it. Better still, it will let you interact directly with that data; drill down into its details; see it from multiple perspectives; draw your own conclusions. Data visualization, therefore, lends itself to decision making, scenario testing and data analysis, whereas infographics are better suited to storytelling, explanation and persuasion.

Infographics tend to be topic and audience specific while data visualizations are more likely to rely on computer processing to handle large data sets and generate output. This difference can have an impact on the graphic treatment of the two. Being custom made, infographics are often designed to include topic-specific iconography and metaphor. By contrast, data visualizations are designed to maximize efficiency and clarity and to do away with an extraneous or unnecessary surface decoration. The graphic treatment of data visualizations tends to be more agnostic as a result of automated processes, so that it can be applied repeatedly to different data sets.

It would be wrong to suggest that infographics and data visualization are mutually exclusive. The reality is that things are not so black and white. Most visualizations fall somewhere in the grey zone between the two extremes. One would argue that with a modern data discovery tool like Dundas BI, the ability to quickly change the type of visualization, use advanced visualizations such as diagrams or sunburst charts, and create of custom slideshows for storytelling, can often yield visuals that are as persuasive - like standard infographics - but are faster to create and maintain as they don't require a graphic artist and can be hooked up to live data sources. To become an informed viewer, it is important to understand that not all visualizations are created equal, and to be able to explain why.

