

# Data Storytelling 2

## Data Visualization Essentials

### Summary

Data visualization is commonplace in the business world and there are countless data visualization styles. Unfortunately, many of them are (at best) ineffective and (at worst) confusing to audiences.

In this session, participants will learn what makes data visualizations effective in a range of applications. Impactful data visualizations allow the data to honestly reveal itself while focusing an audience's attention on insight that may not be immediately apparent. This session focuses on giving your audience clear ideas in the shortest time possible with the *minimum volume of ink*. Practical exercises will introduce and reinforce important skills for effective data visualization.



#### Prerequisites

There are no prerequisites for this course, though a familiarity with good data analysis and charting techniques (from “Excel 1: Core Data Analysis”, “Excel 2: Advanced Data Analysis” or “Excel 3: Dynamic Dashboarding”) would be helpful.



#### Timing

This course requires 4 hours.

### Learning Topics

#### 1. What Makes a Visualization Effective?

- ✓ Examine effective data visualizations and understand why they work well
- ✓ Use graphics to reveal insight about data that might otherwise remain hidden

#### 2. Selecting the Right Visualization

- ✓ Pick the right presentation; know when graphics are best and when tables may be more effective
- ✓ Learn key data visualizations types and when they are most effective: comparison, trend, composition, relationship, distribution, spatial & flow
- ✓ Use animation to increase data density while improving understandability

#### 3. Better Visualizations

- ✓ Follow a process to remove “noise” from an important “signal” and create visualizations that prompt action
  - **Remove noise:** remove data and “Chartjunk” that isn’t relevant to the question at hand
  - **Focus attention:** apply the Gestalt Principles and pre-attentive attributes to focus audience attention on what matters
  - **Approachability:** use labels, gridlines, shading and other formatting tactics to ensure that your message is clear to a range of viewers
  - **Instilling audience trust:** avoid common deceptive practices in visualization to ensure that you maintain credibility