

UNCG University Libraries  
Assessment Workshop

February 4, 2020

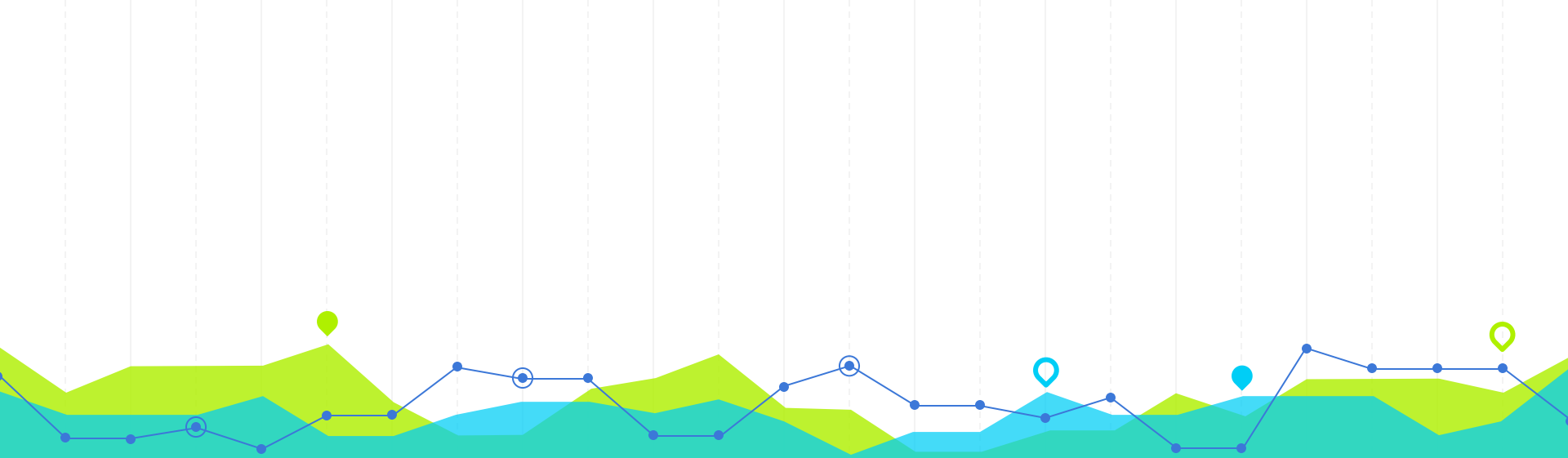


# Quantitative & Qualitative Data Visualization

## TODAY'S PLAN

- When to use data viz
- Which type(s) to use
- Best practices & work through two common tools





# When to use data viz

1



*Data visualization is another form of visual art that **grabs our interest** and keeps our eyes on the message. When we see a chart, we **quickly see trends and outliers**. If we can see something, we internalize it quickly. It's **storytelling with a purpose**.*

From Tableau's [Data visualization beginner's guide](#)

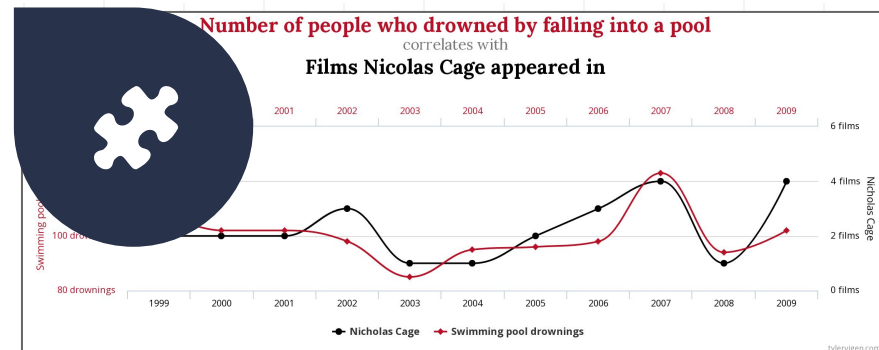
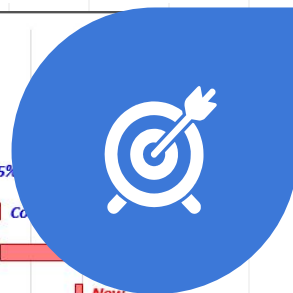
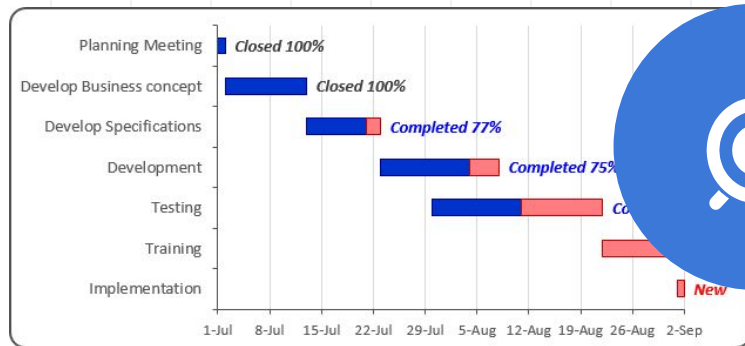
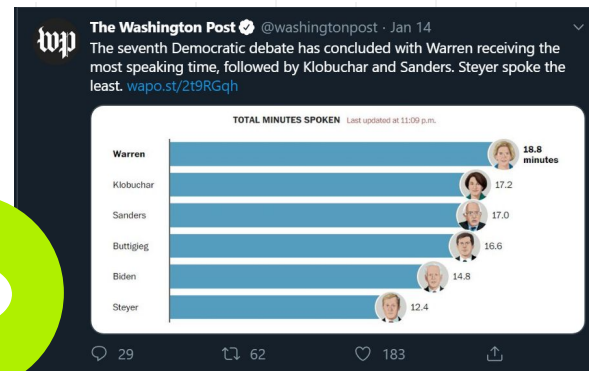
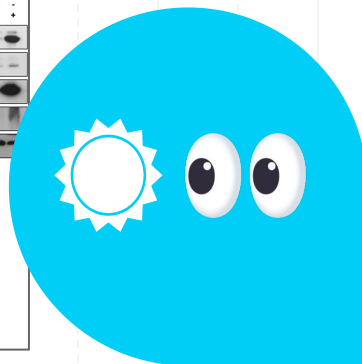
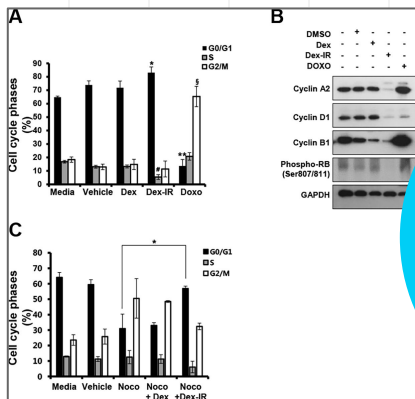


# WHAT'S THE PURPOSE OF YOUR DATA?

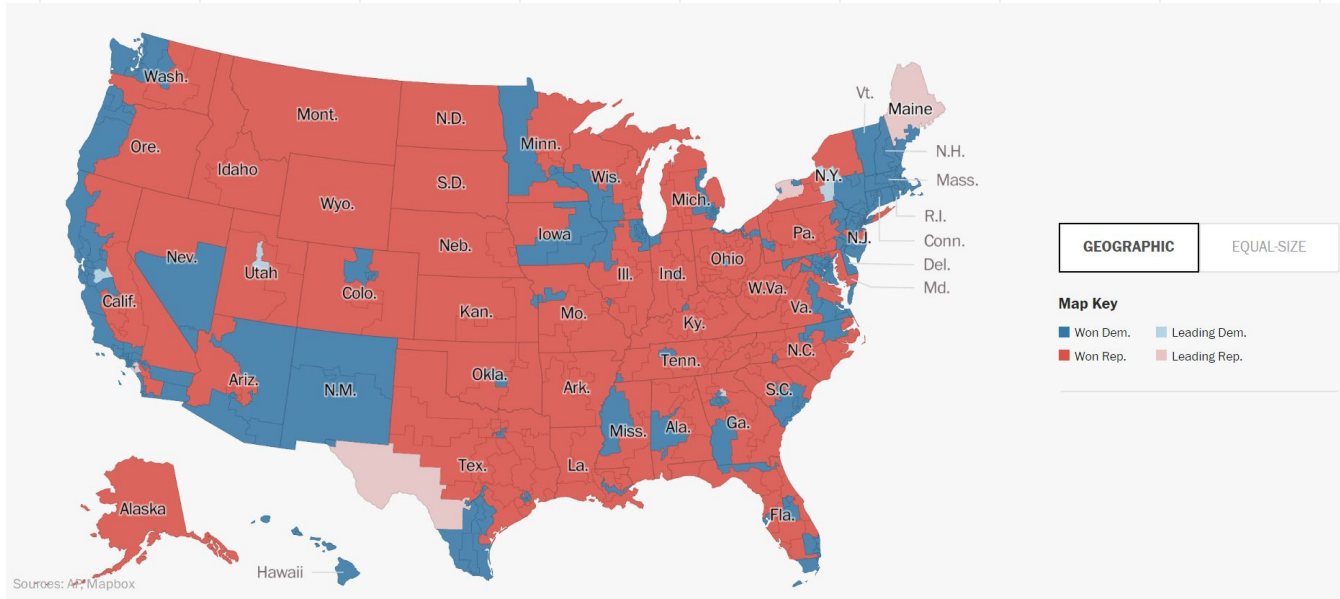
1. What's the purpose of the assessment/study?
  - a. What is the research question?
  - b. What is the audience?
2. What information is needed to meet that purpose?



# WHAT'S YOUR PURPOSE?

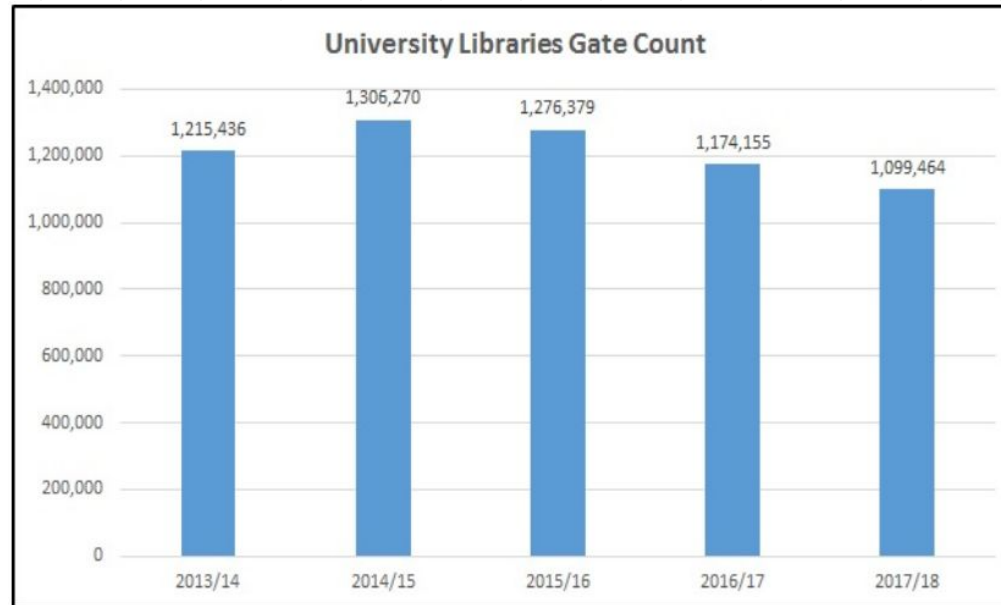


# DATA VIZ WITH A PURPOSE?



The Washington Post's Election 2018 “Live midterm results: House races”

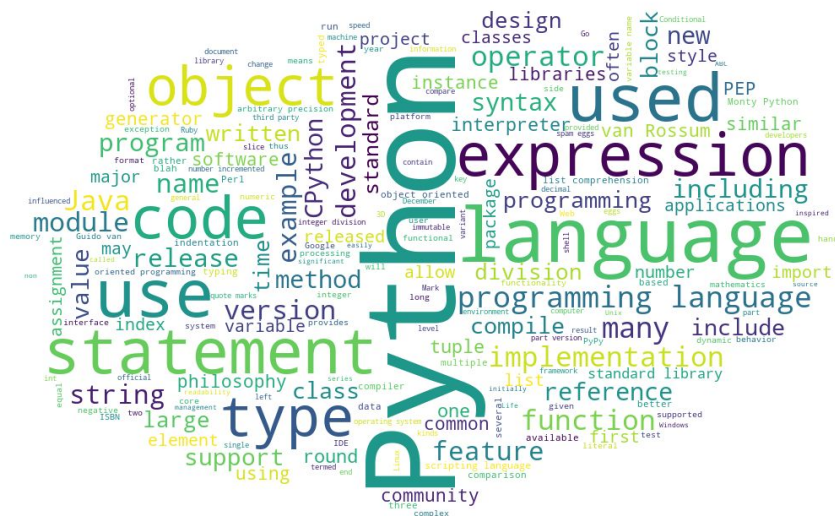
# DATA VIZ WITH A PURPOSE?



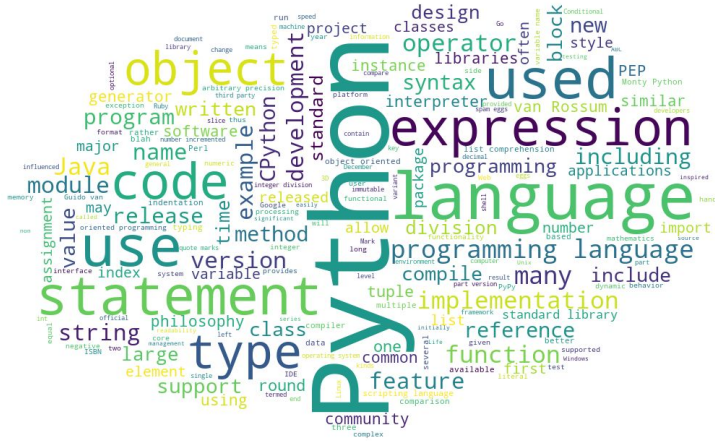
[UNCG University Libraries' Library Statistics Dashboard](#)



# DATA VIZ WITH A PURPOSE?



# CONTEXT



Article Talk

## Python (programming language)

From Wikipedia, the free encyclopedia

*For other uses, see [Python](#).*

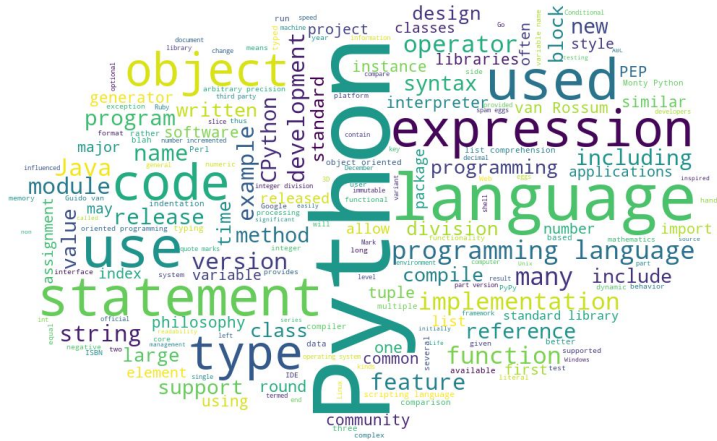
**Python** is an interpreted, high-level, general-purpose programming language. Its design philosophy emphasizes *code readability* with its notable use of *si* aim to help programmers write clear, logical code for small and large-sc

Python is dynamically typed and *garbage-collected*. It supports multiple functional programming. Python is often described as a "batteries includ

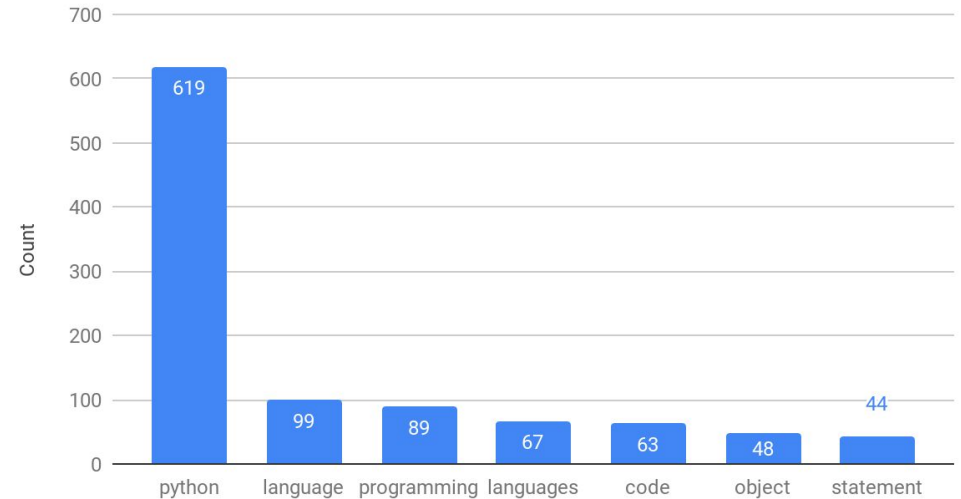
Python was conceived in the late 1980s as a successor to the *ABC* language. It features *comprehensions* and a *garbage collection* system capable of collecting *i* language that is not completely backward-compatible, and much Python

Example wordcloud generated to summarize the Wikipedia article on Python, to illustrate a Python script used to generate wordclouds. [Description, source code, and image source on GitHub.](#)

# RESEARCH QUESTION: “IS THE WORD ‘LANGUAGE’ REPEATED MORE THAN THE WORD ‘STATEMENT’?”



Words repeated the most in Wikipedia article on Python



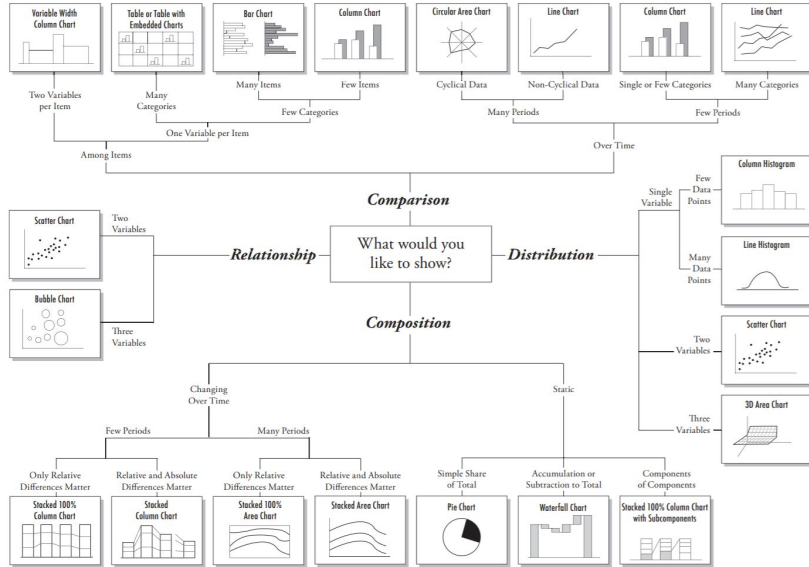


# What data viz to use

# 2

# WHICH CHART DO I CHOOSE?

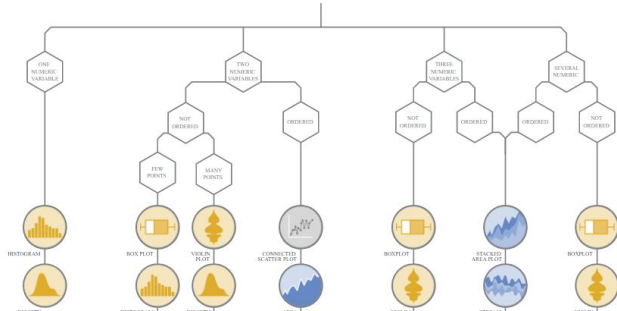
## Chart Suggestions—A Thought-Starter



www.ExtremePresentation.com  
© 2009 A. Abela — a.abela@gmail.com

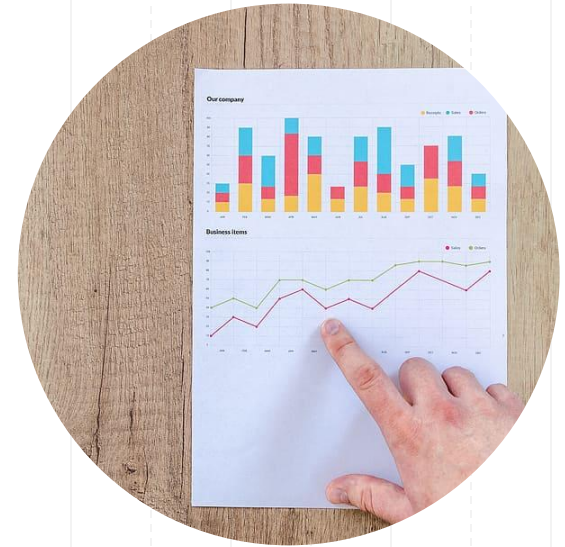
## from Data to Viz decision tree

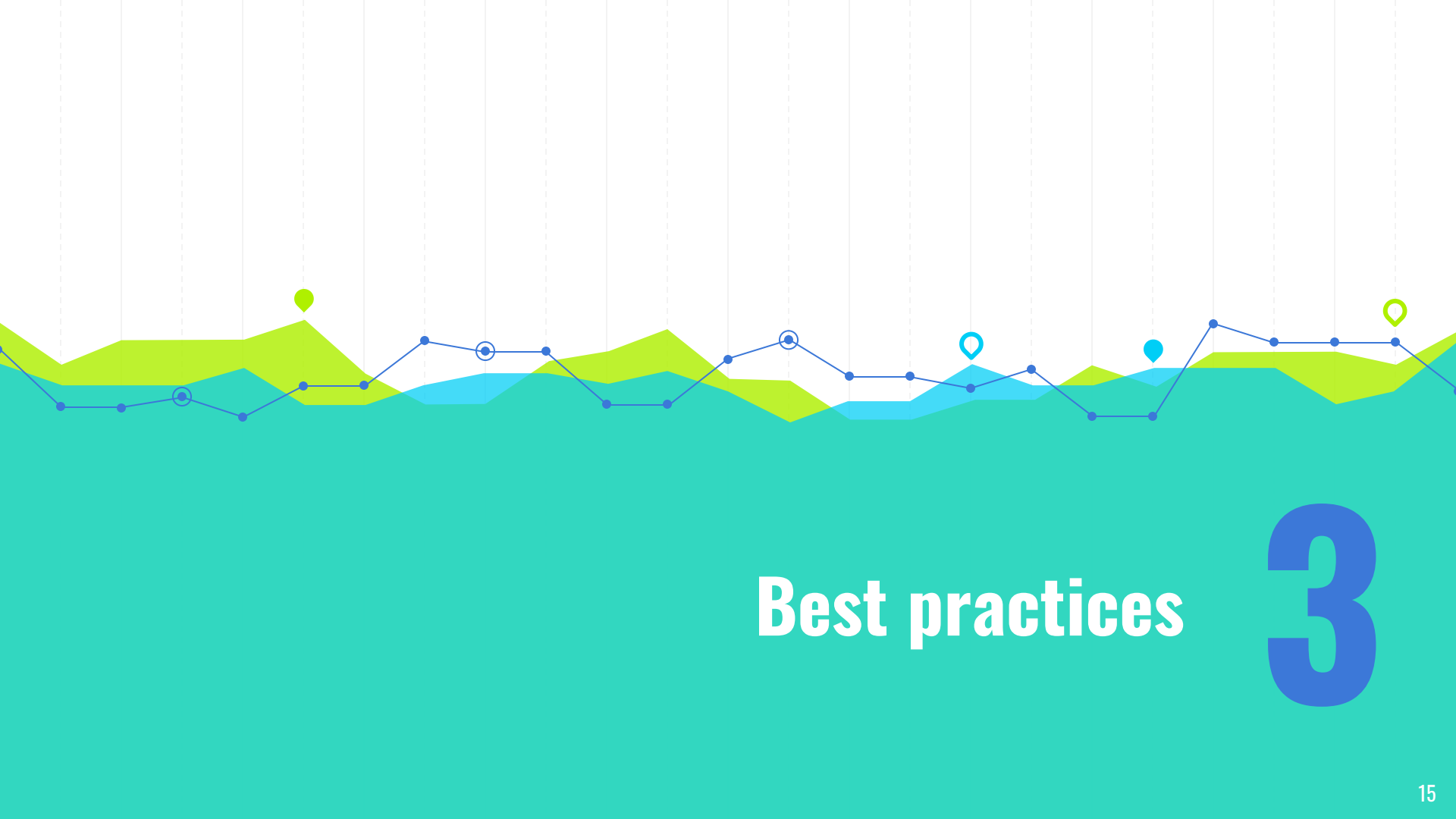
What kind of data do you have? Pick the main type using the buttons below. Then let the decision tree guide you toward your graphic possibilities.



# GET TO KNOW YOUR DATA

1. Is the data numeric or categorical?  
Discrete or continuous?
2. Is there spatial and/or temporal information?
3. Are you showing relationship, comparison, distribution, or composition?





# Best practices

3

# Example

<https://www.mojotech.com/blog/data-visualization-google-sheets/>

<https://docs.google.com/spreadsheets/d/1CAS5xUvERJ3lvichWABGkKsVFKjXednDgX4mz3rFQOI/edit#gid=1353220750>

<https://docs.google.com/spreadsheets/d/1CAS5xUvERJ3lvichWABGkKsVFKjXednDgX4mz3rFQOI/edit#gid=1353220750>





# THANKS!

## Any questions?

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