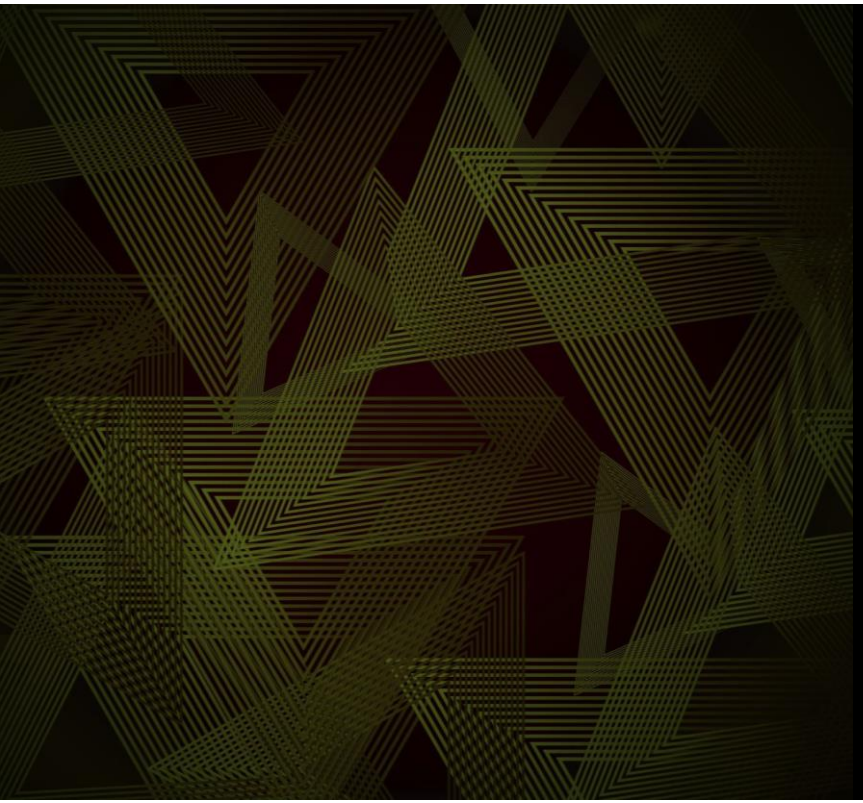
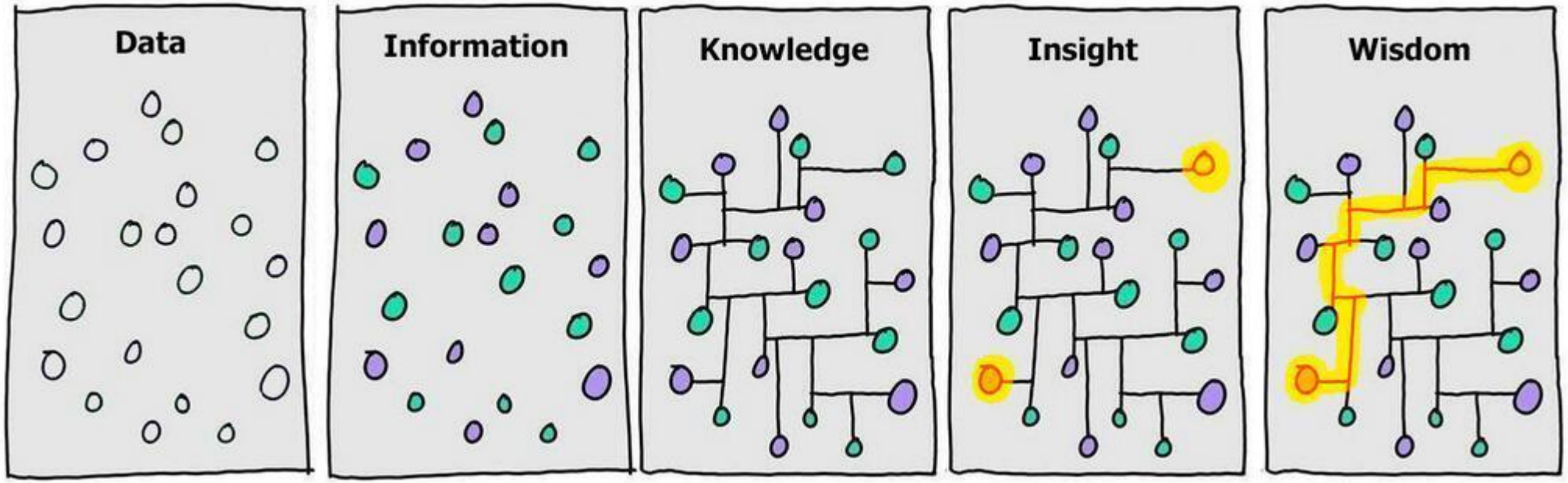


VISUALISASI DATA

UNIVERSITAS KRISTEN KRIDA WACANA

WHAT IS DATA

Data is a set of **fact** that can **give information** about an **event**



THE IMPORTANCE OF DATA

- Information
- Evaluation of some issues
- Basic Truth / Justification

KIND OF DATA

Qualitative (Categoric) – Ordinal, categorical

Characteristics and descriptors that can't be easily measured but can be observed subjectively. i.e : Gender, Color, Names, Smell.

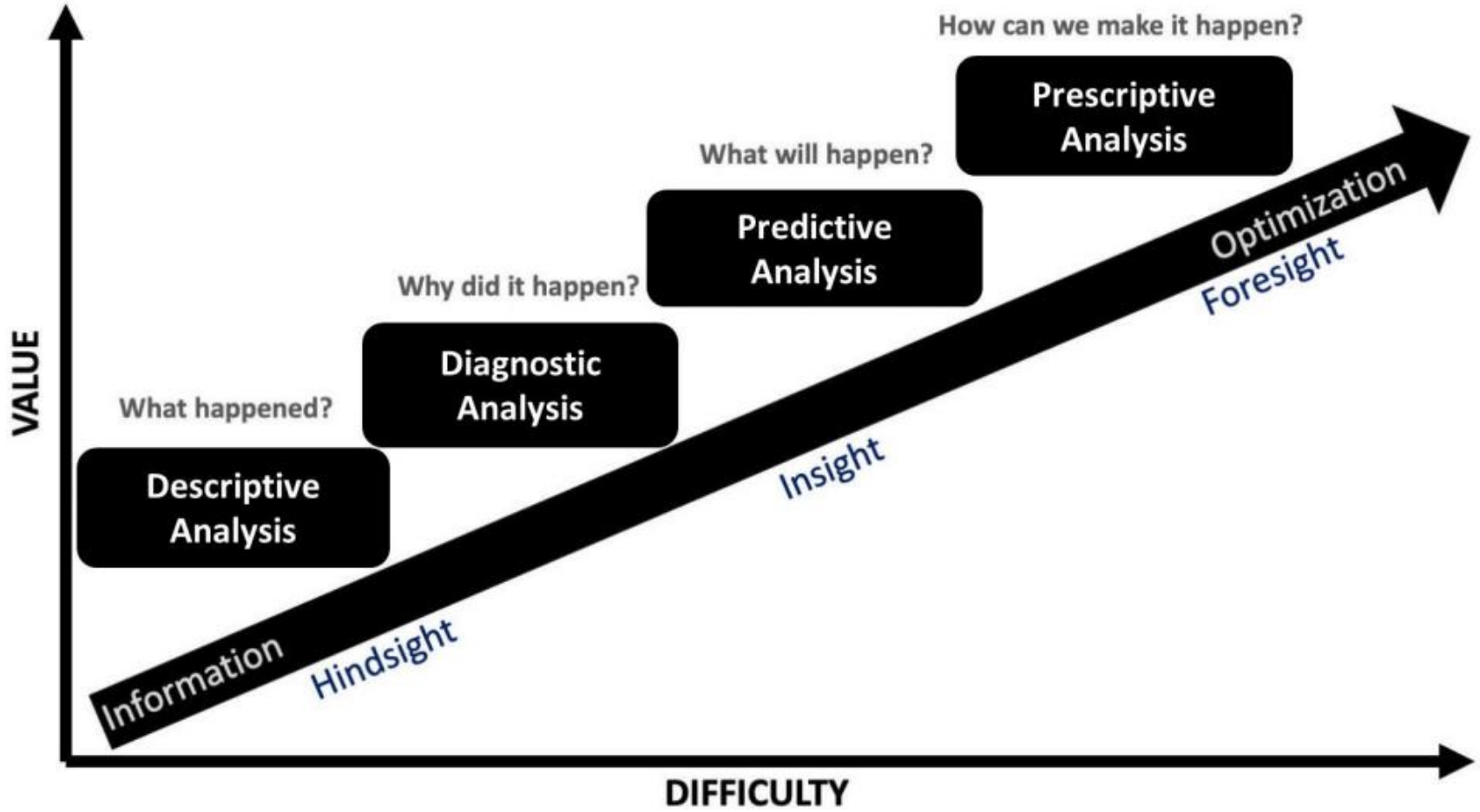
Quantitative (Numeric) – Discrete, continuous

Numbers and things you can measure objectively (0,1,2,3....). i.e : Height, Number of students in class, Temperature, Area, Volume.

WHAT IS DATA ANALYSIS

Data Analysis is a process **gathering, cleansing, modeling / analyze,** and **visualize** the data to get bunch of insight for better decision making.

WHAT IS DATA ANALYSIS



WHAT IS DATA VISUALIZATION

The **representation** of **data** to **communicates information** through graph

THE IMPORTANCE OF DATA VISUALIZATION

8362453575624389038262850625142338507498362526037585960764937362547597027253121315364859597583920272654586928734645242849503821513273859302547327645832202636459572647

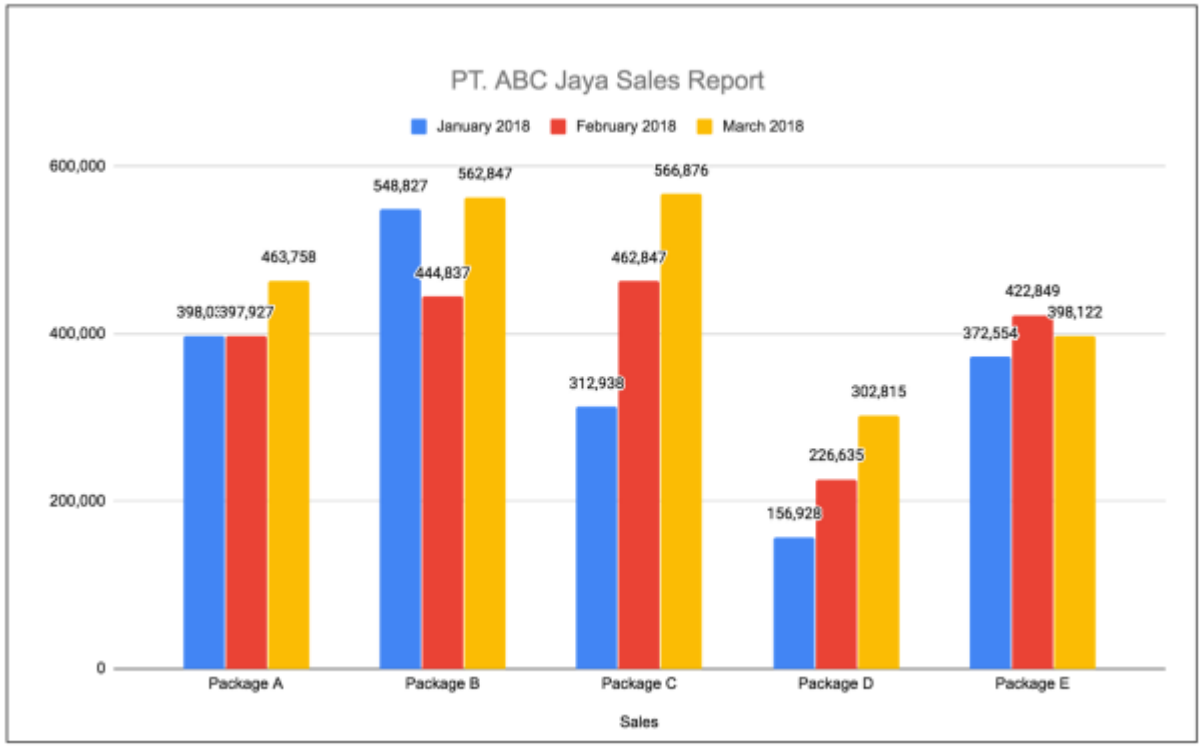
Can you spot how many “0” in this picture ?

THE IMPORTANCE OF DATA VISUALIZATION

Sales	January 2018	February 2018	March 2018
Package A	398,036	397,927	463,758
Package B	548,827	444,837	562,847
Package C	312,938	462,847	566,876
Package D	156,928	226,635	302,815
Package E	372,554	422,849	398,122

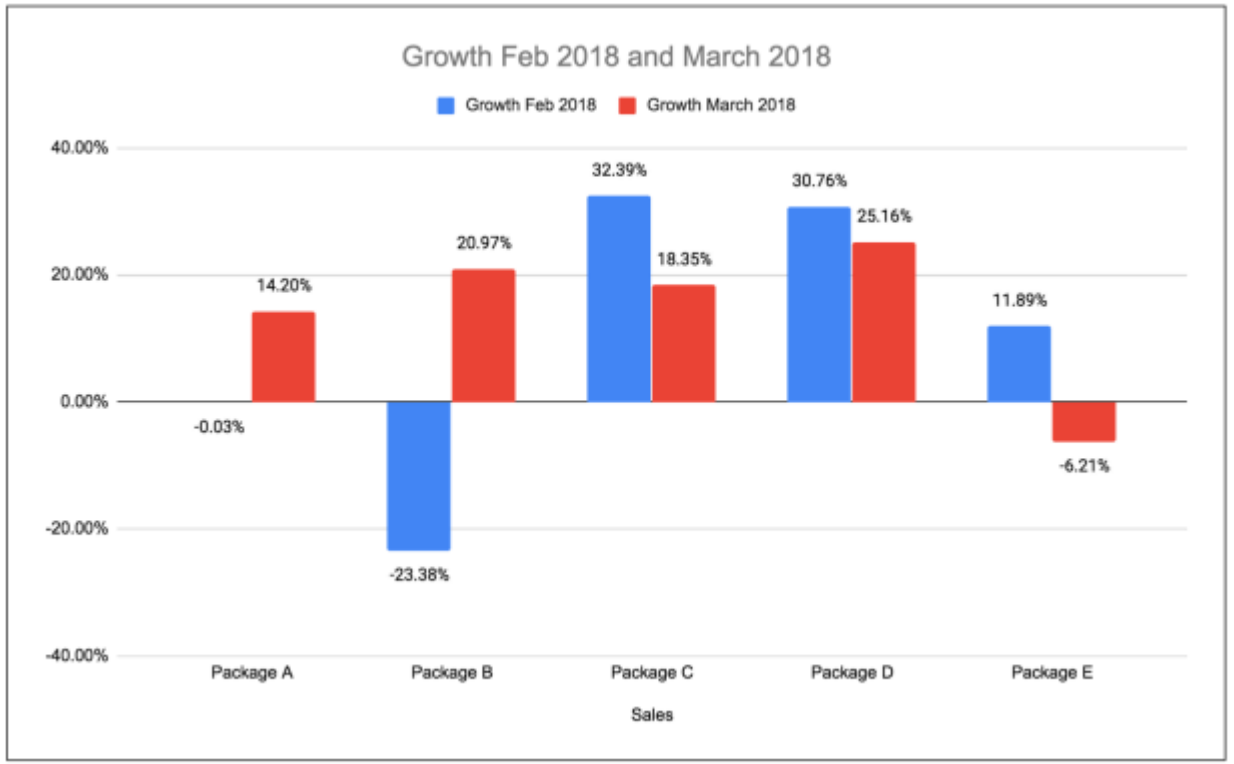
Do you know which package has highest sales on Feb 2018?
Can you answer in 5 seconds?

THE IMPORTANCE OF DATA VISUALIZATION



- Do you know which package has highest sales on Feb 2018 ?
- How fast can you find the answer?

THE IMPORTANCE OF DATA VISUALIZATION



Which package has low growth on February 2018 ?

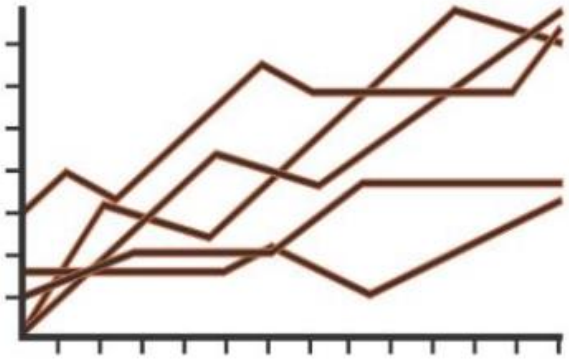
THE IMPORTANCE OF DATA VISUALIZATION

Data Visualization is important because a visual summary of information makes it easier for the human brain to understand and identify patterns and trends, than looking through hundred of rows data on a sheet.

THE IMPORTANCE OF DATA VISUALIZATION

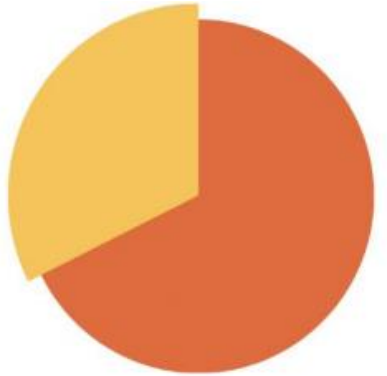
Two kind of Visualization, **INFOGRAFIS** and **DASHBOARD**

TYPES OF VISUALIZATION / CHART



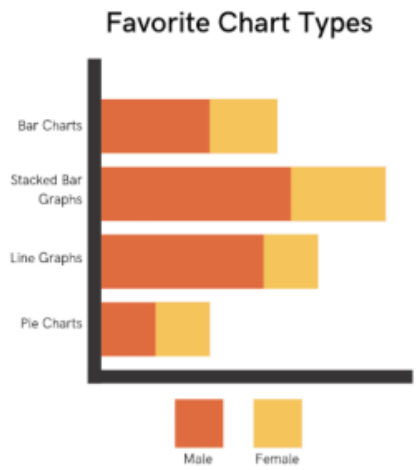
Line charts, or line graphs, are powerful visual tools that illustrate **trends** in data **over a period of time**. For example, one axis of the graph might represent a variable value, while the other axis often displays a timeline.

The simplest and and most straightforward way to **compare various categories** is the classic bar graph. One axis of a bar graph features the categories being compared, while the other axis represents the value of each.

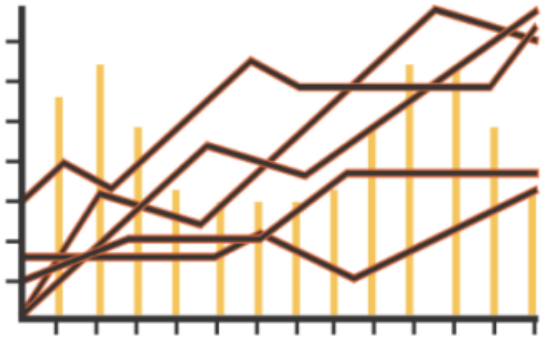


Pie charts are the simplest and most efficient visual tool for **comparing parts of a whole**. For example, a pie chart can quickly and effectively compare various budget allocations, population segments or market-research question responses.

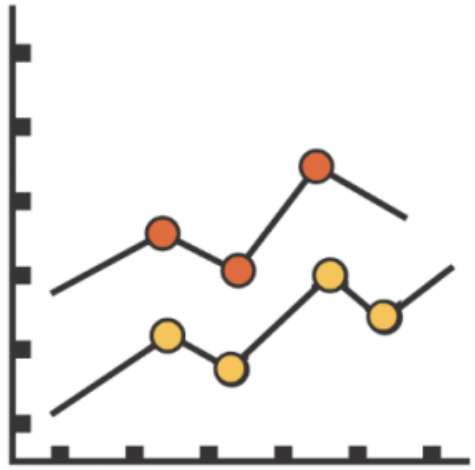
TYPES OF VISUALIZATION / CHART



Stacked Bar, The “stacked” layout **represents this chart’s contrasting color scheme.** These colors map back to a legend that accompanies your map.

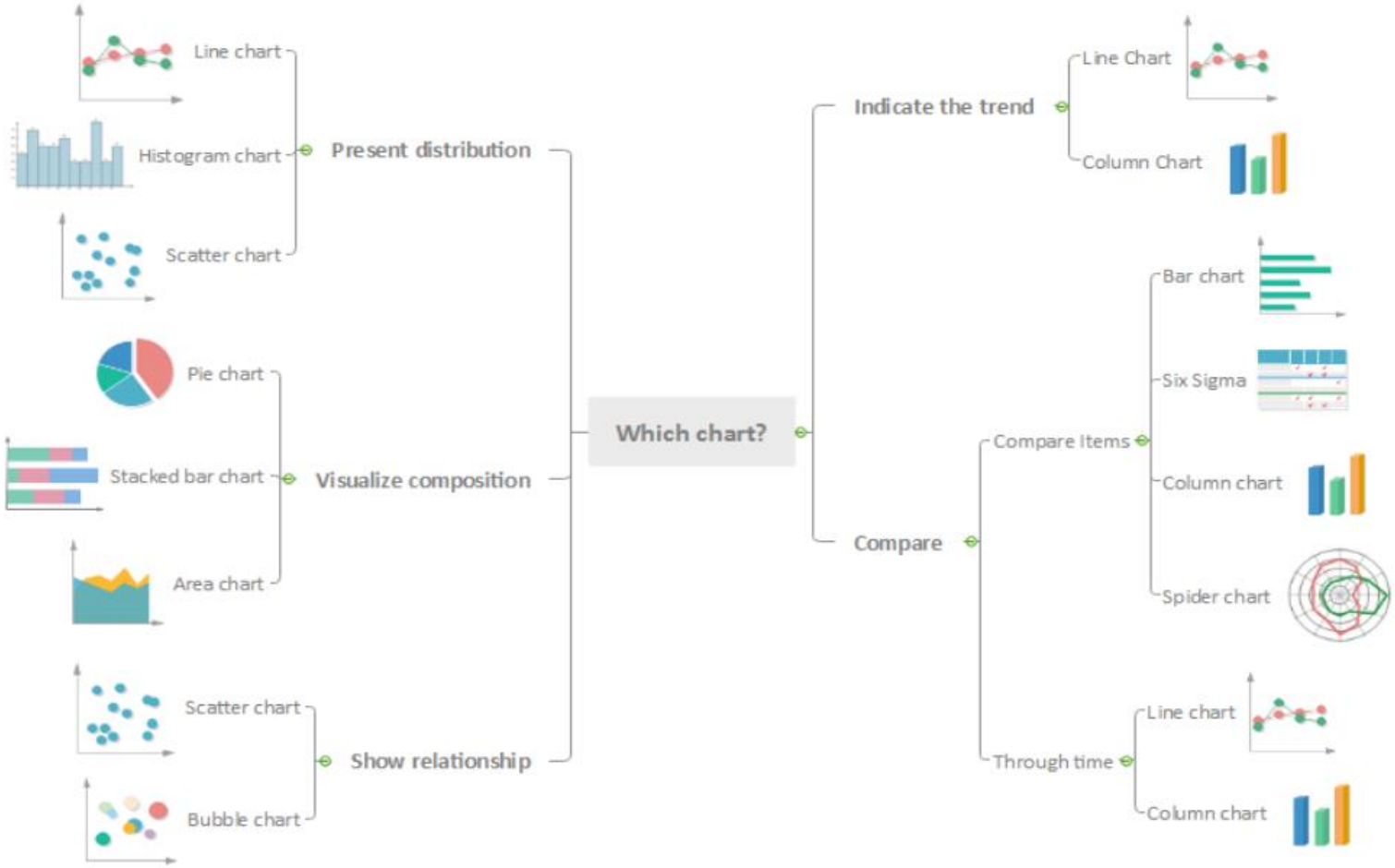


Dual-Axis Chart, This layout allows you to show a relationship between different variables. i.e : Transaction and Growth.

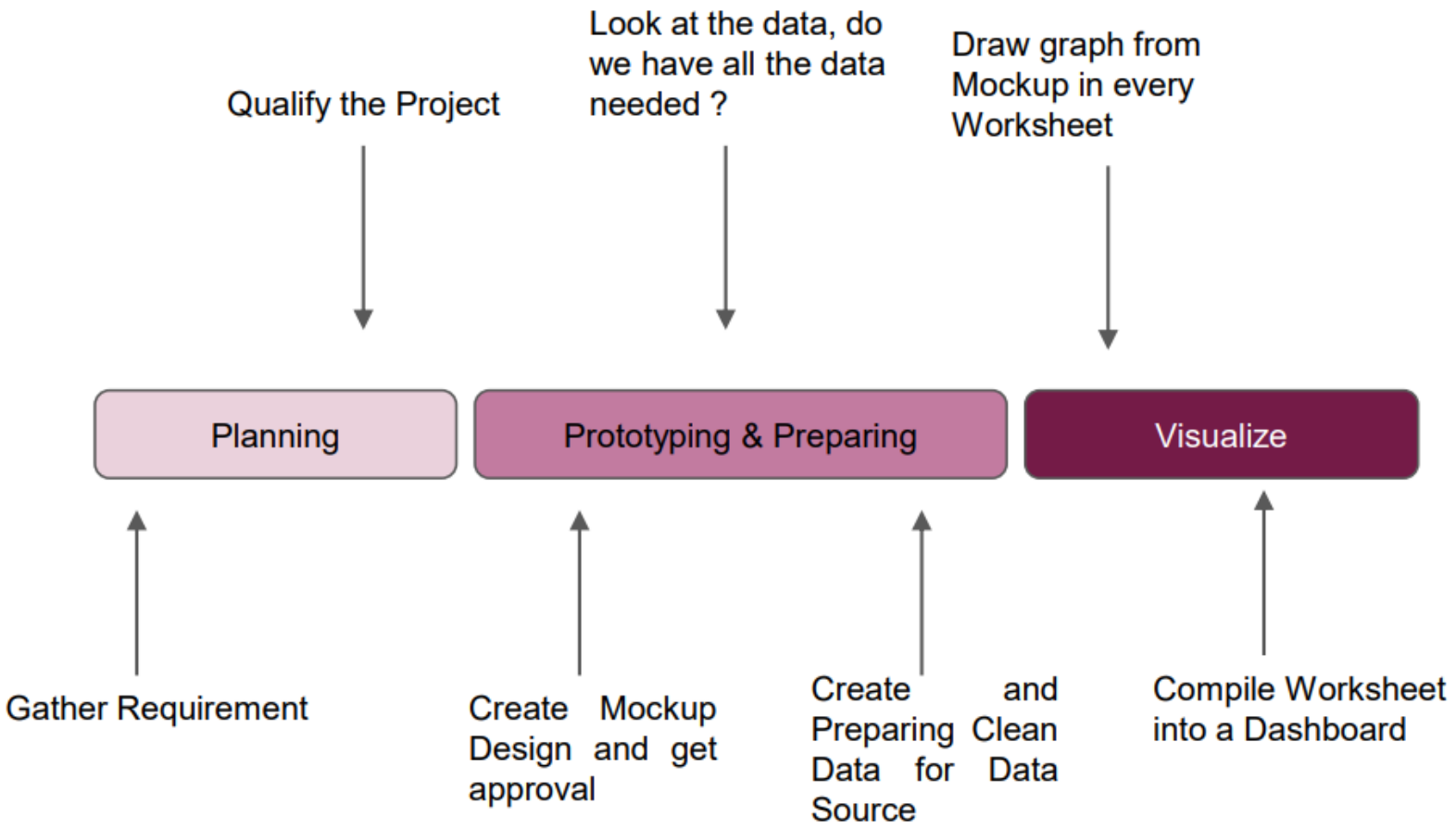


Scatter Plots, it represents different variables plotted along two axes.

TYPES OF VISUALIZATION / CHART

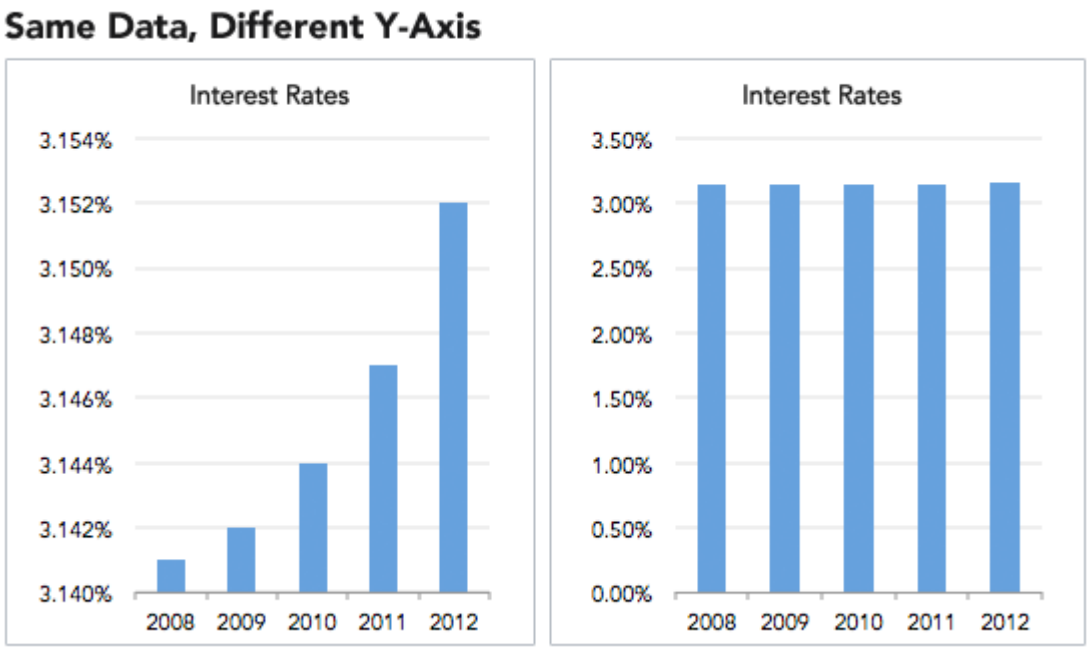


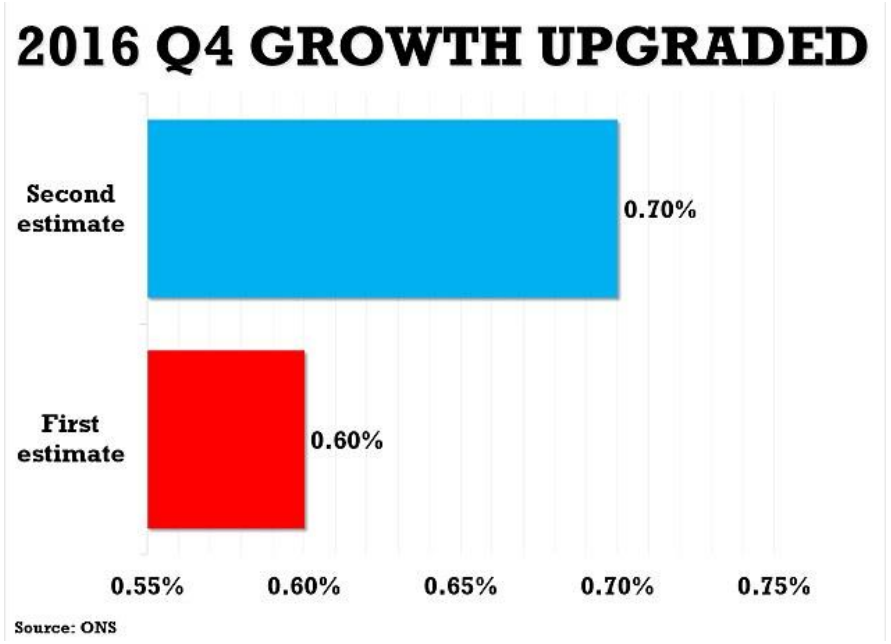
DASHBOARDING FLOW



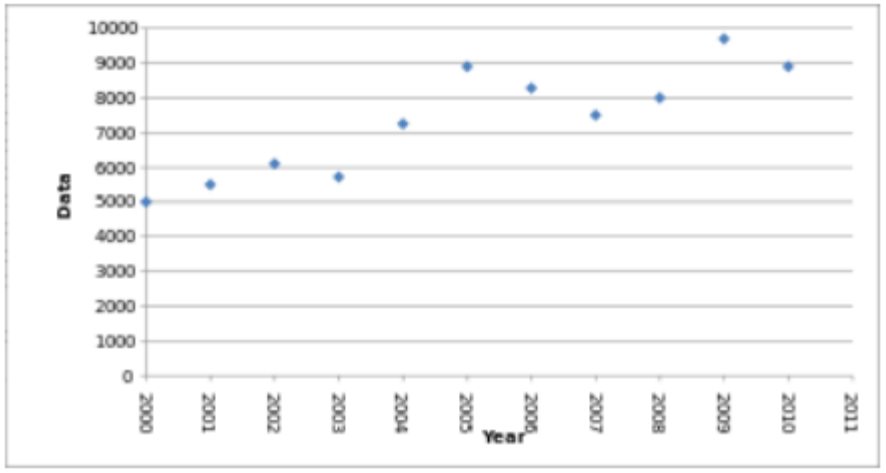
“A PICTURE IS WORTH A THOUSAND WORDS”
MISLEADING DATA VISUALIZATION

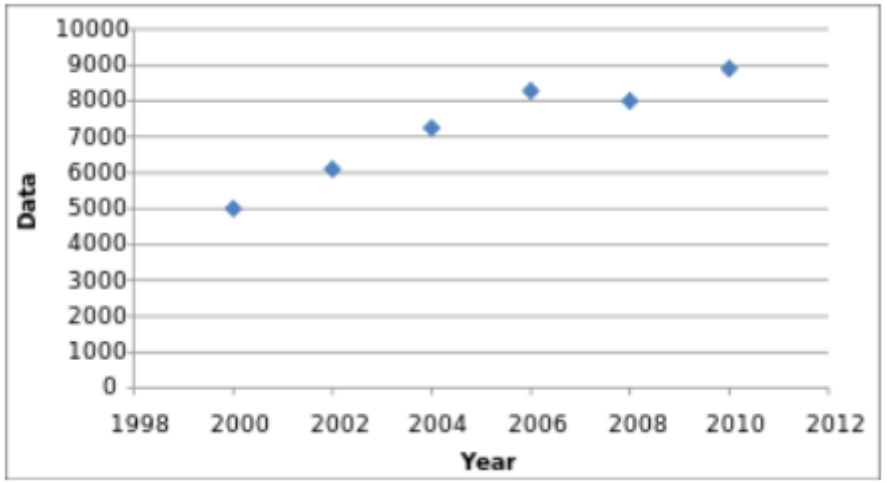
“A PICTURE IS WORTH A THOUSAND WORDS”
MISLEADING DATA VISUALIZATION



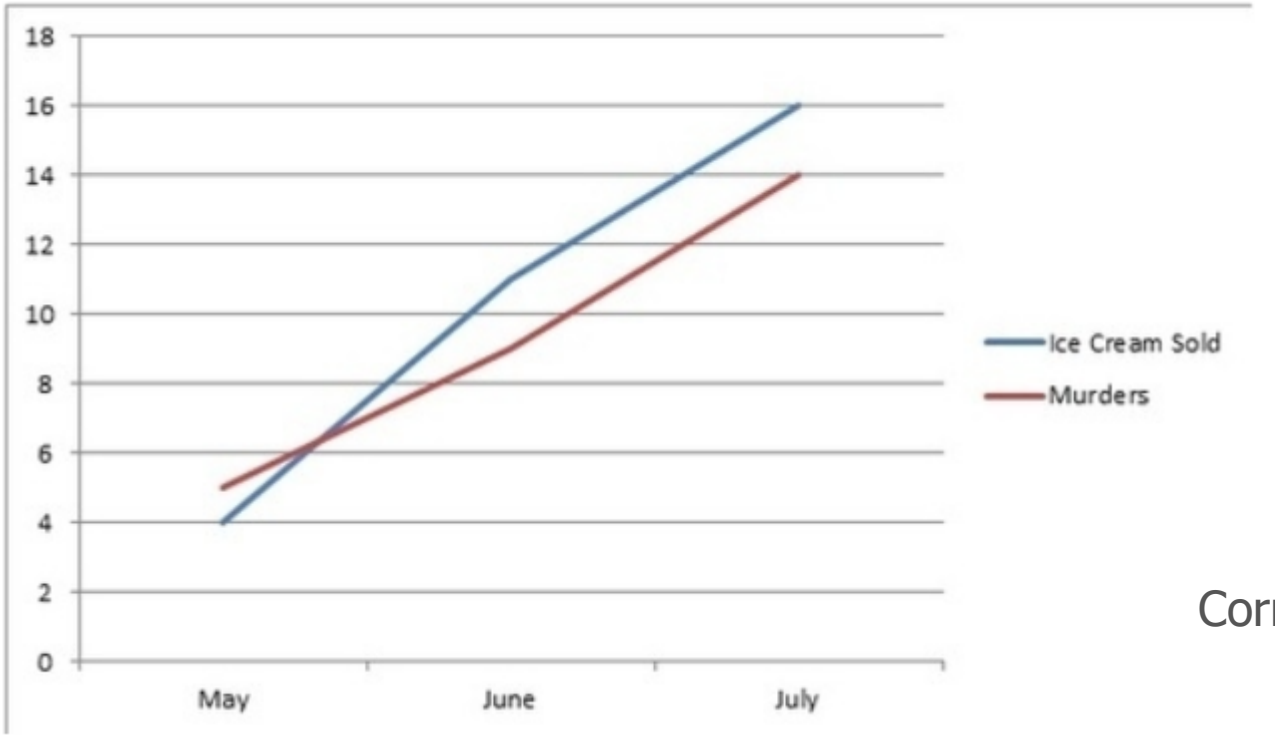


“A PICTURE IS WORTH A THOUSAND WORDS”
MISLEADING DATA VISUALIZATION



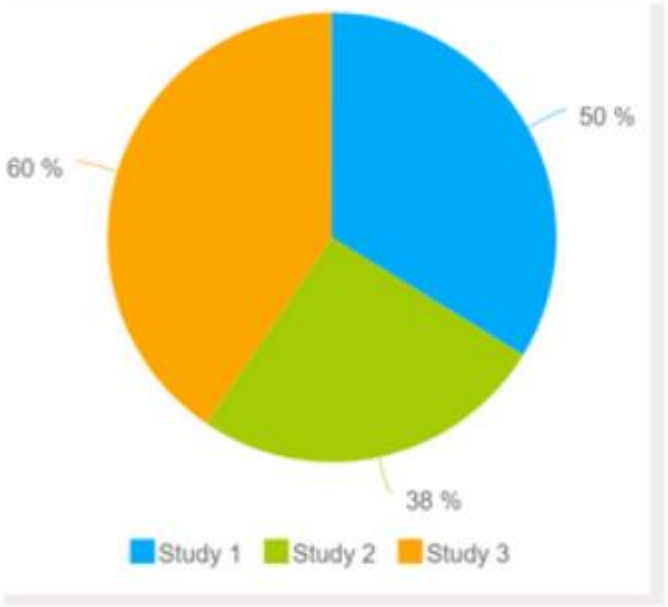


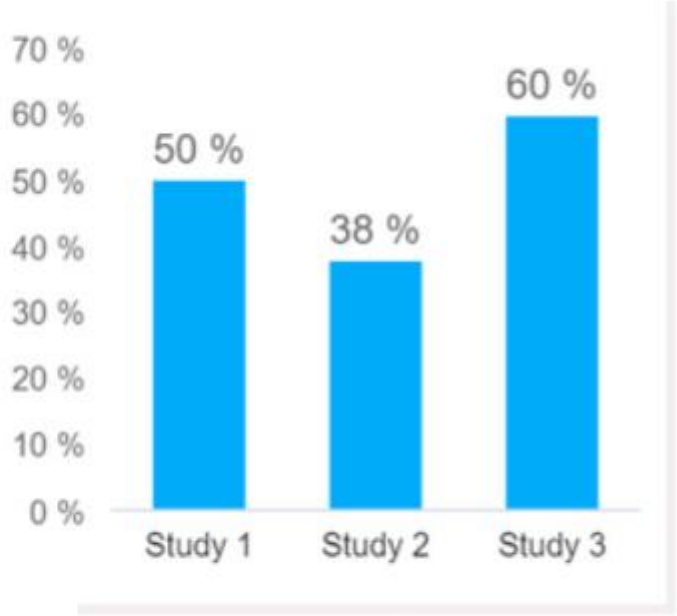
“A PICTURE IS WORTH A THOUSAND WORDS”
MISLEADING DATA VISUALIZATION



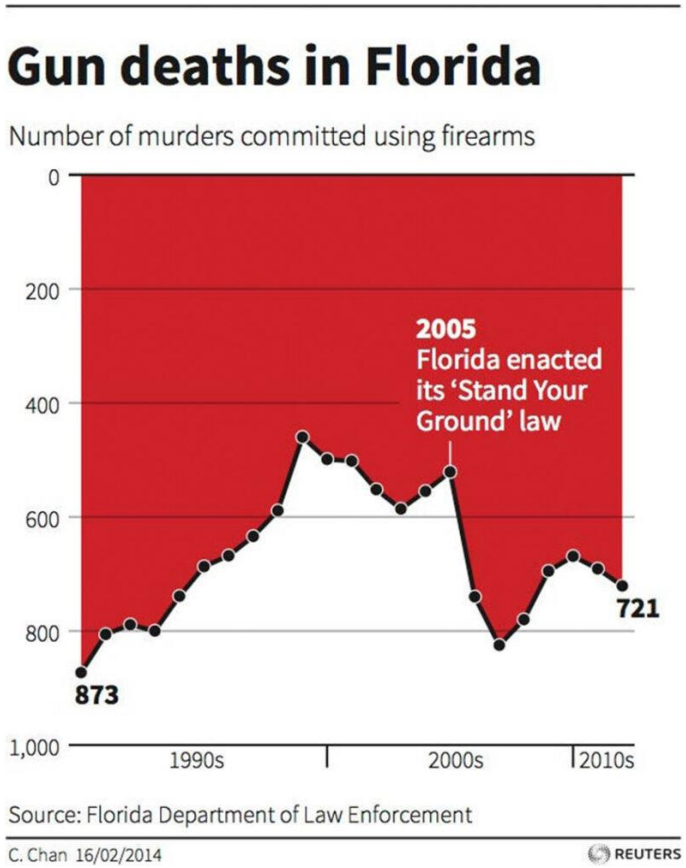
Correlation doesn't always mean causation

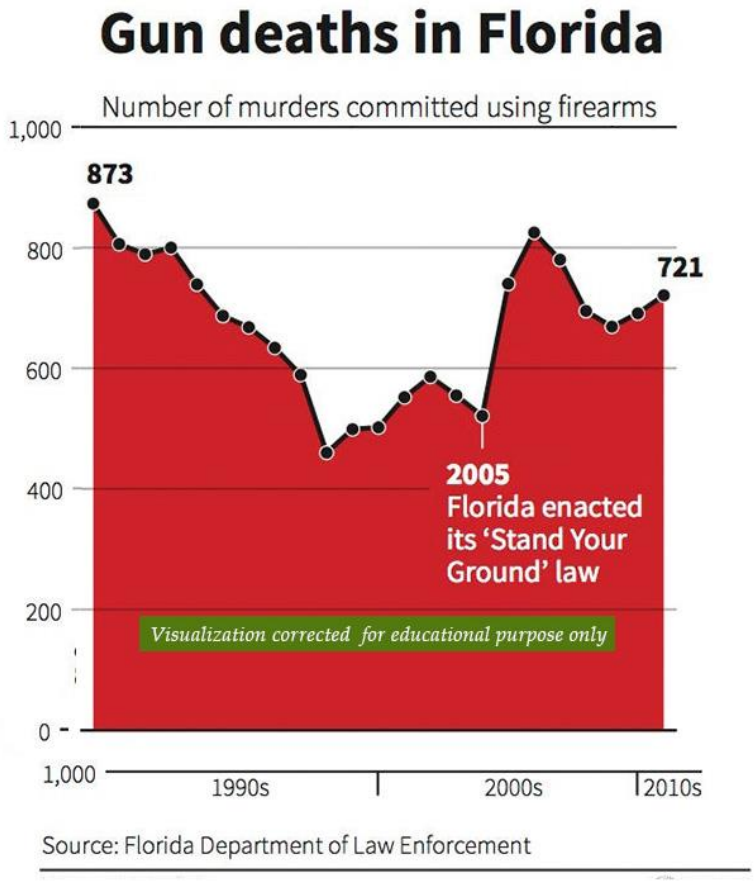
“A PICTURE IS WORTH A THOUSAND WORDS”
MISLEADING DATA VISUALIZATION



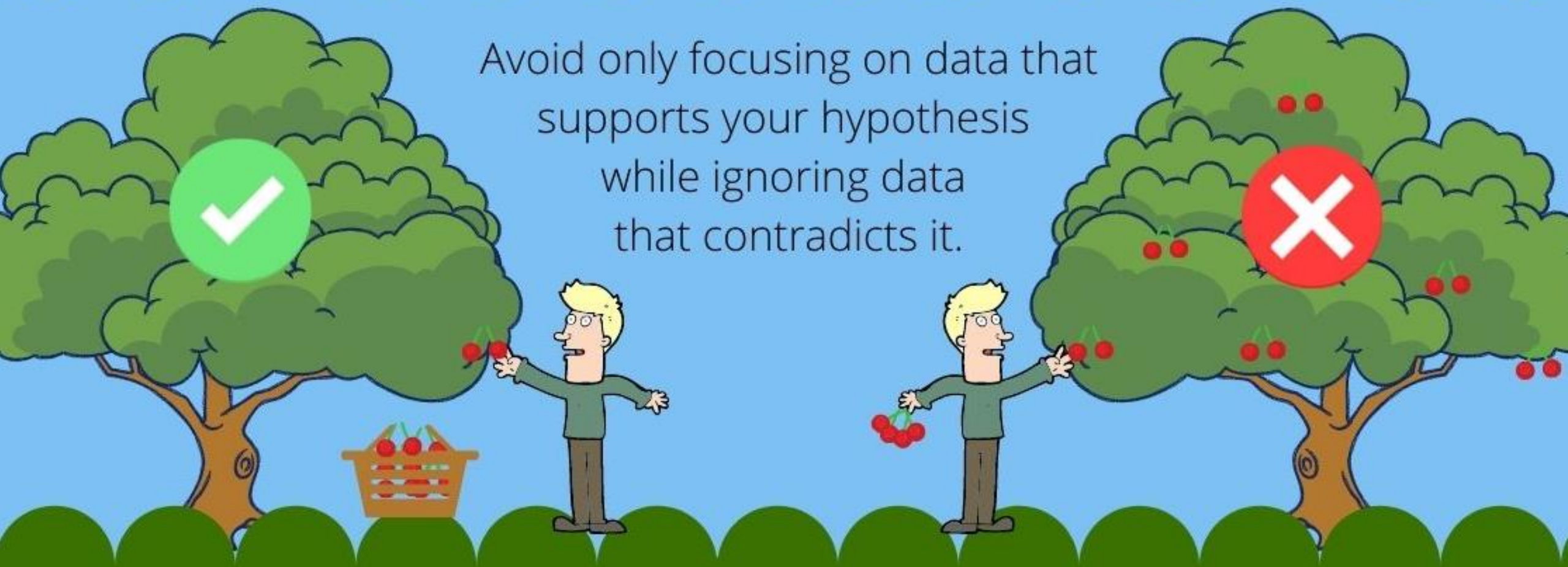


“A PICTURE IS WORTH A THOUSAND WORDS”
MISLEADING DATA VISUALIZATION





FALLACY: CHERRY PICKING



"There are three kinds of lies: lies, damned lies, and statistics."
Data should accurately reflect the entire reality.

W02 PREREQUISITES

Tableau Desktop Professional Edition 2019.2.3

https://drive.google.com/file/d/14EWsJ-d8Mdrz0Ws2mcD3HZuVaLTeF-FG/view?usp=sharing