HOW TO VISUALIZE DATA LIKE A PRO

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WHAT IS DATA VISUALIZATION?

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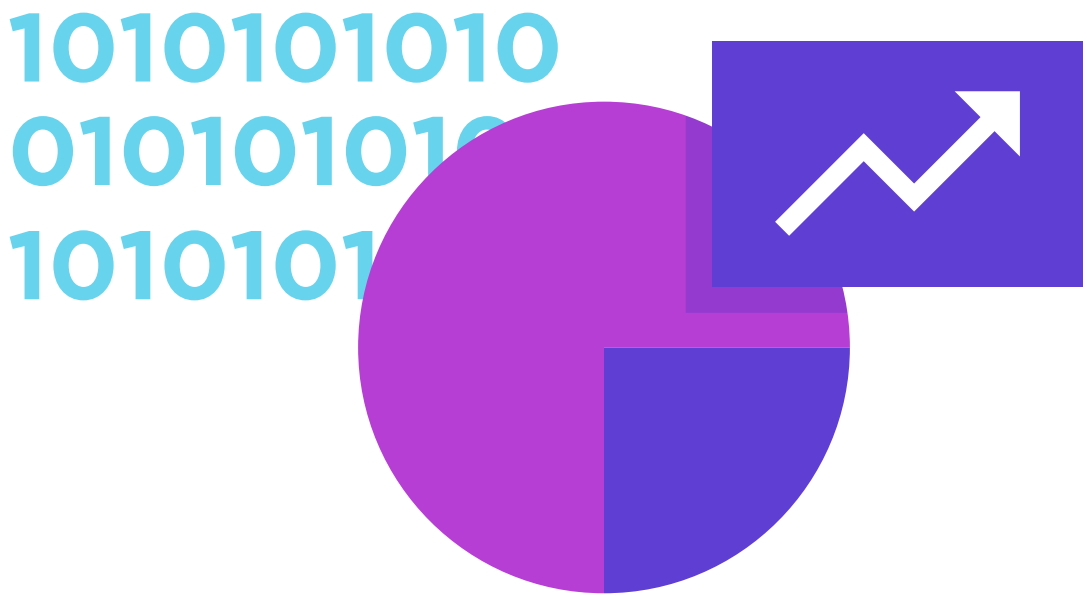

DATA VISUALIZATION INVOLVES INTERPRETING DATA SIMPLE, EASY TO UNDERSTAND INFORMATION USING VISUALS

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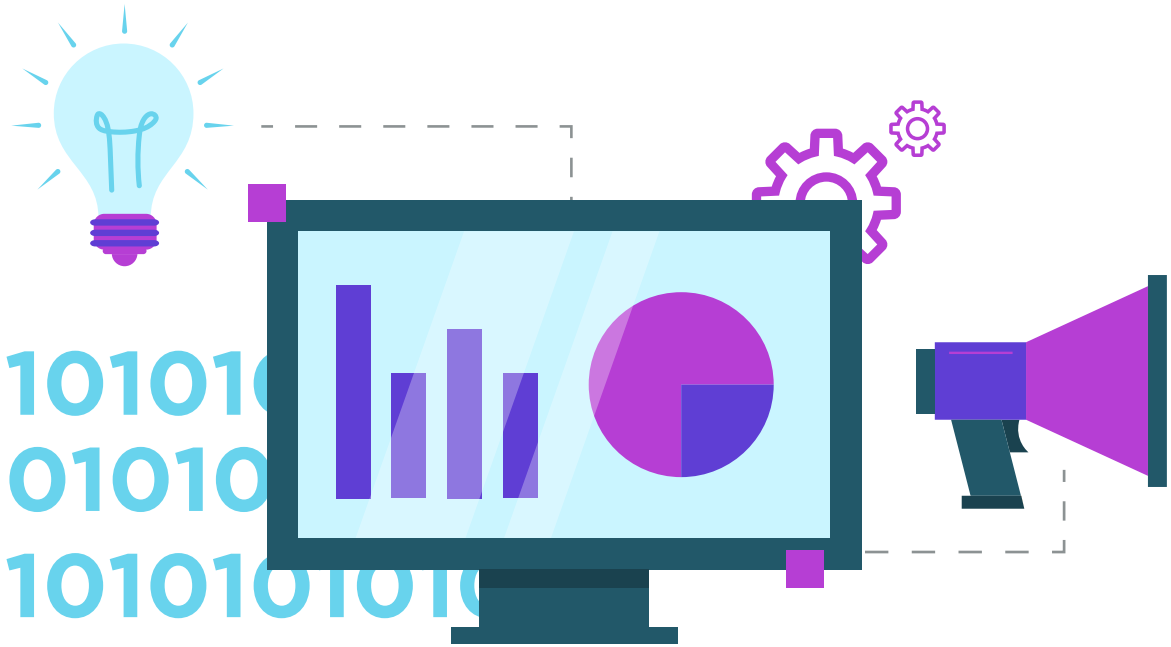
WHY DATA VISUALIZATION IS IMPORTANT?



VISUAL DATA HELPS US TO THINK AND COMMUNICATE

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GOLDEN RULES

OF CREATING A DATA VISUALIZATION POWERPOINT PRESENTATION

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A PICTURE TELLS A STORY BETTER THAN A THOUSAND WORDS COULD

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BY VISUALIZING YOUR DATA, YOU CAN COMMUNICATE YOUR STORY MORE EFFECTIVELY

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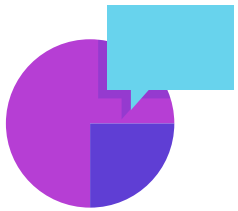
4 KEY QUESTIONS FOR SUCCESSFUL DATA VISUALIZATION



WHAT IS THE STORY
YOUR DATA IS TRYING TO TELL?

WHAT TYPE OF DATA
DO YOU WANT TO EXPLAIN?

WHAT CHART TYPE WILL DISPLAY
YOUR DATA IN THE SIMPLEST AND
MOST EFFICIENT WAY?

WHO IS YOUR AUDIENCE?

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WHAT IS YOUR STORY?

All data tells a story. Data visualization
makes the story easy to understand

Are sales up or down? Is the birthrate on the increase?
Are expenses under control?

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WHAT TYPE OF DATA DO YOU WANT TO EXPLAIN?

Quantitative data deals with numbers and things you can measure objectively. This can be:

POPULATION STATISTICS

SALES & EARNINGS

BUDGET FIGURES

EXPENSES ETC

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DATA TYPES

Nearly every organization has quantitative information to collect, dissect, understand and present

Data visualization allows you to present this data in a simple visual way so that it makes sense at a glance

Quantitative data is ideal for visualization.It summarizes the data's essential characteristics allowing to disregard exceptions

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WHO IS YOUR AUDIENCE?

Are you presenting to a board of directors,
healthcare professionals, prospective investors?

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KNOW YOUR AUDIENCE

Your audience should influence how you visualize your data. Understanding how your audience best digests data will influence which chart types you will use

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KNOW YOUR AUDIENCE

Get to the point.
As much as storytelling is an art, knowing what your audience need to know from the numbers is critical. Choose the simplest and clearest chart type which allows you to get straight to the point

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CHOOSE THE VISUAL AID THAT WILL SPEAK DIRECTLY TO YOUR AUDIENCE

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WHAT CHART TYPE WILL DISPLAY YOUR DATA EFFICIENTLY?

Each chart type is suited to telling a different story.
Common chart types include:

- PIE CHARTS
- BAR GRAPHS
- LINE GRAPHS
- SCATTER GRAPHS
- BUBBLE GRAPHS
- HEAT MAPS

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WHY VISUALIZE WITH GRAPHS

GRAPHS ALLOW YOU TO GET STRAIGHT TO THE POINT
A SIMPLE GRAPH CAN TELL A STORY OF A THOUSAND WORD

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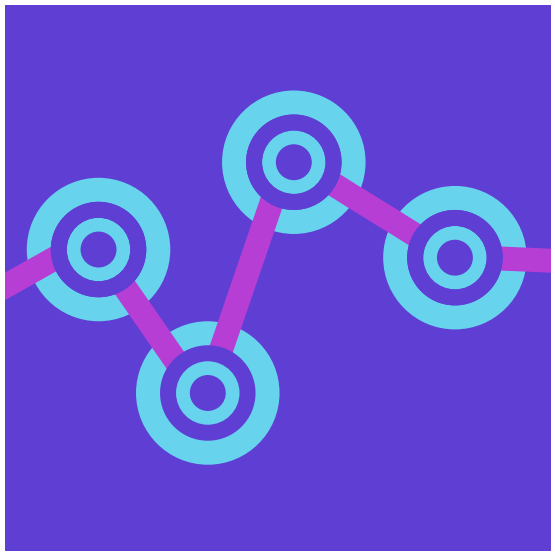
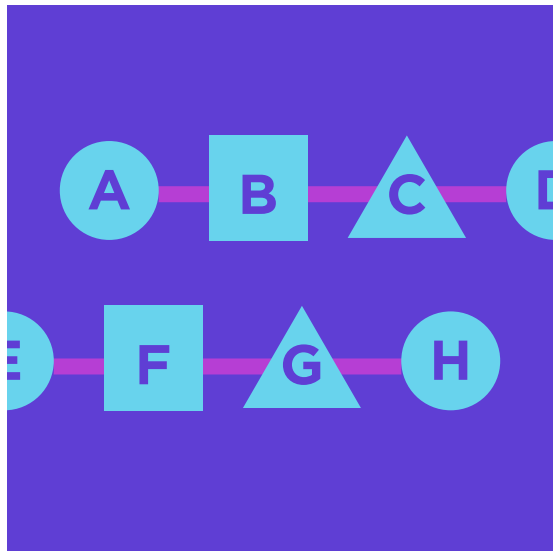
GRAPHS ALLOW YOU TO SHOW



TRENDS



PATTERNS

EXCEPTIONS

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DATA VISUALIZATION USING PIE CHARTS

Perfect for displaying proportions and percentages in a part-to-whole relationship

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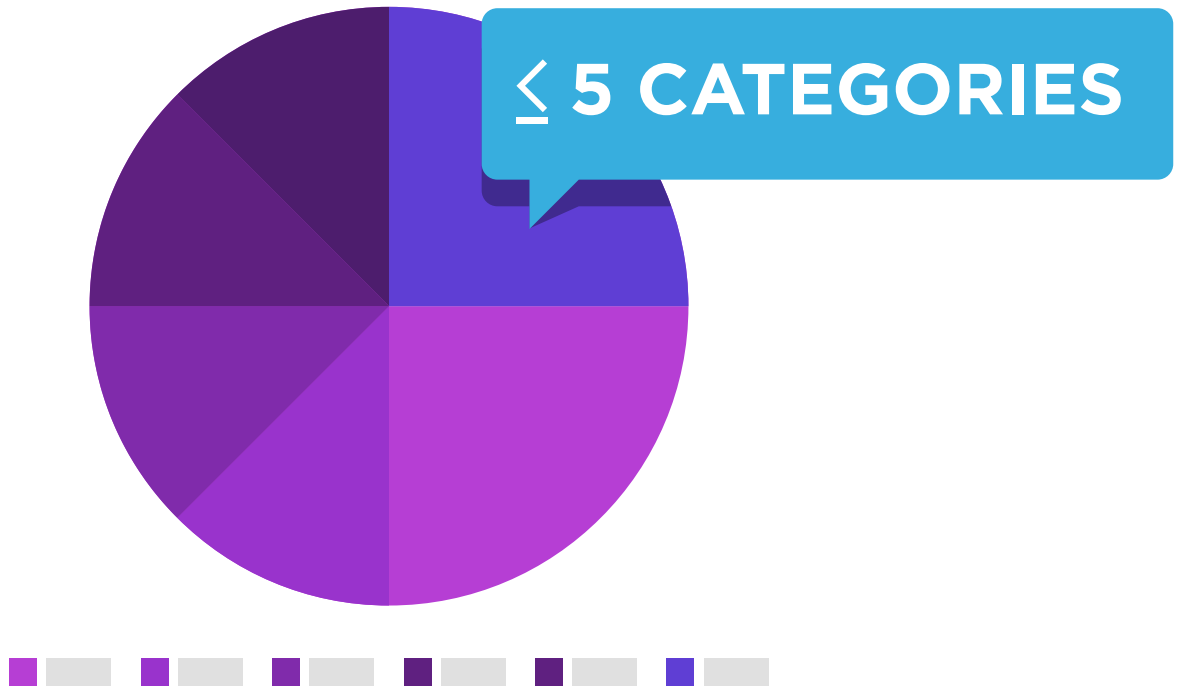
PIE CHART TIPS



Less is more:
limit the number of categories to 5 or less

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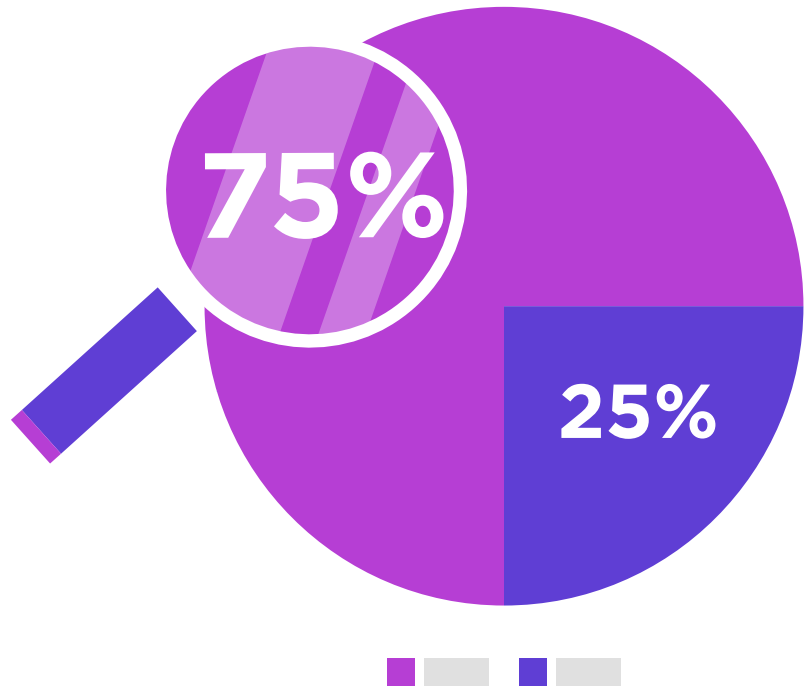
PIE CHART TIPS



Clearly label percentages
to avoid misinterpretation of the segment sizes

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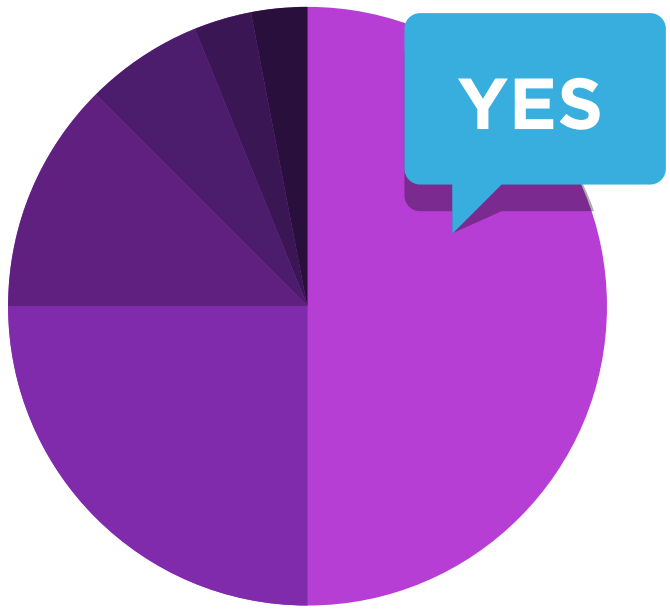
PIE CHART TIPS



Order slices so that
they are quickly understood

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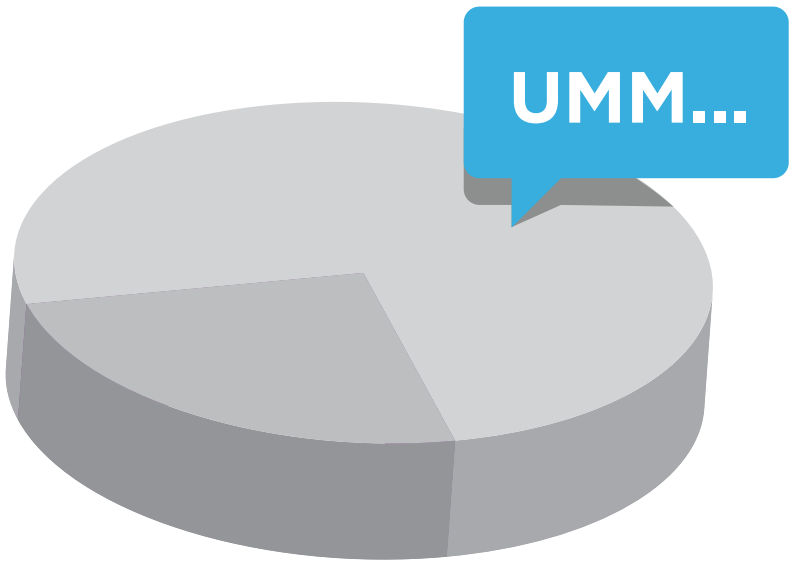
PIE CHART TIPS



Avoid the use of 3D pie charts,
they make the data more difficult to understand

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BAR GRAPH

Use a bar graph to show groups comparison.
They can be either horizontal or vertical

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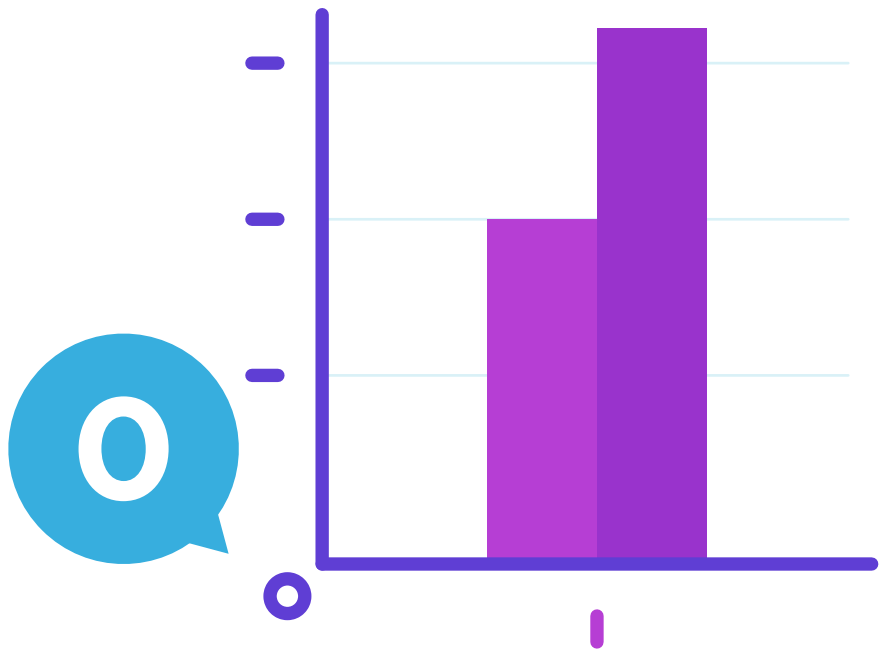
BAR GRAPH TIPS



Always start value axis at zero

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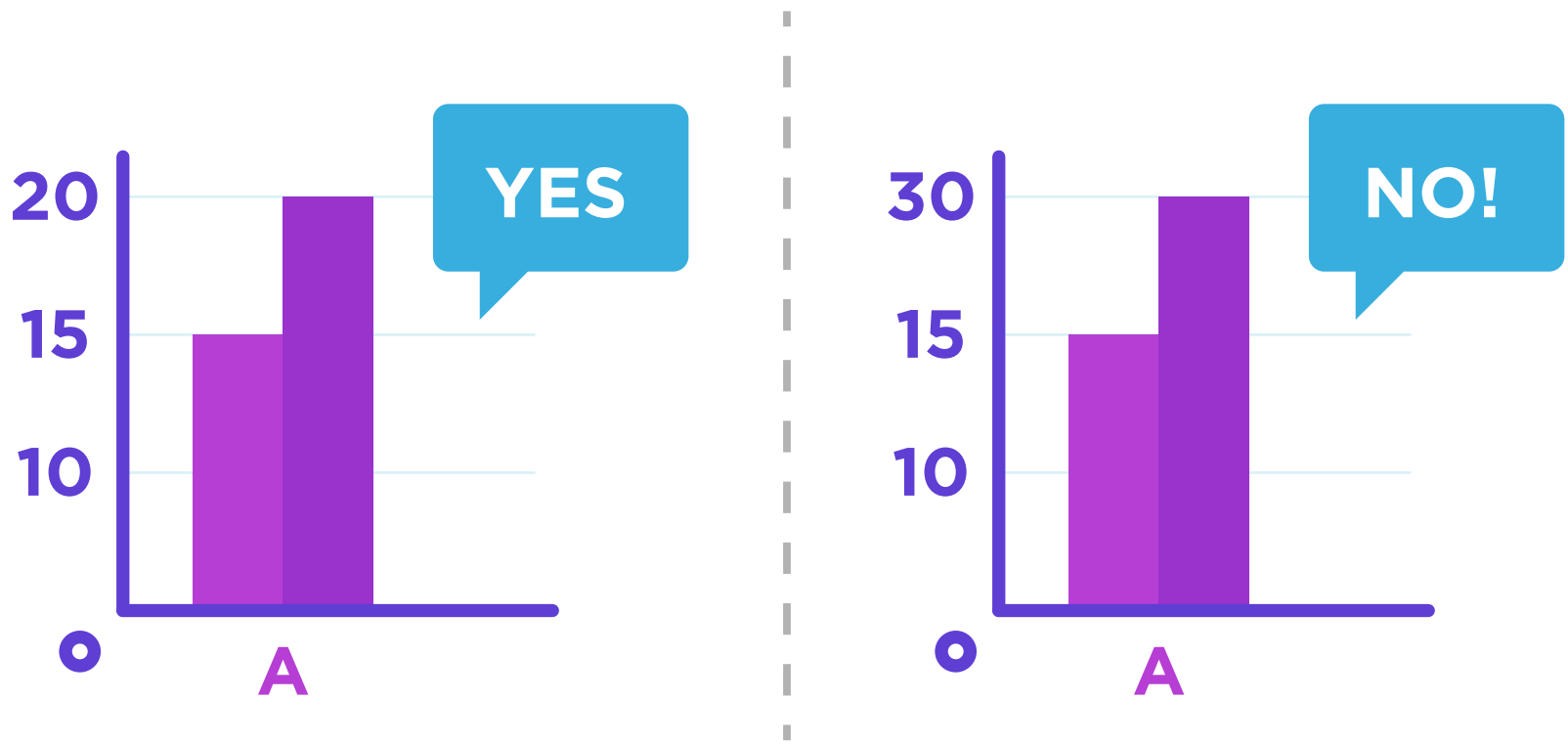
BAR GRAPH TIPS



Use a consistent scale

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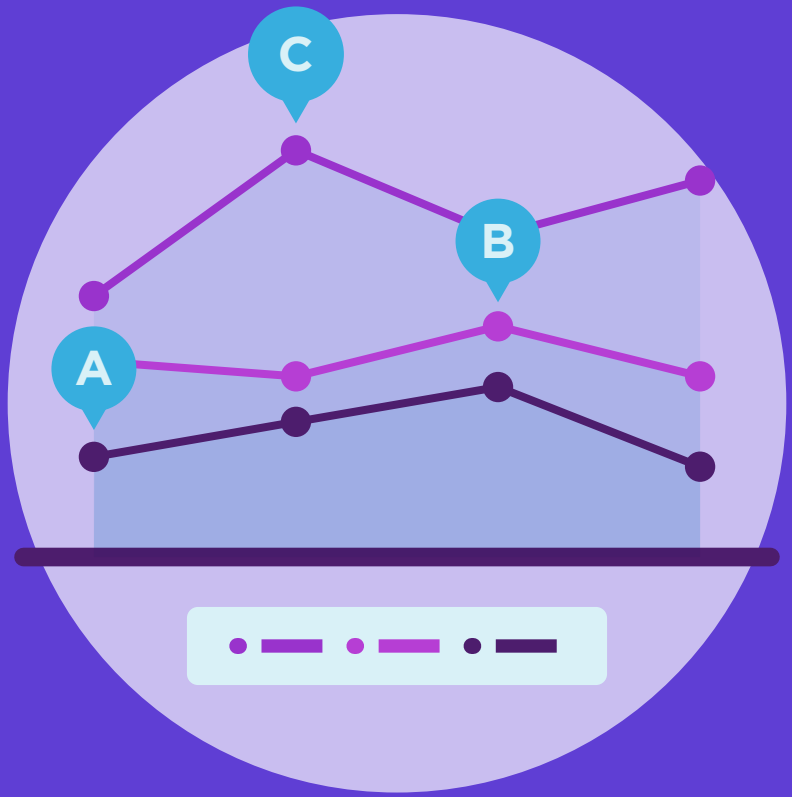
LINE GRAPH



A line graph uses a line to show time-series relationships of continuous data. They are great for showing trends and changes over time

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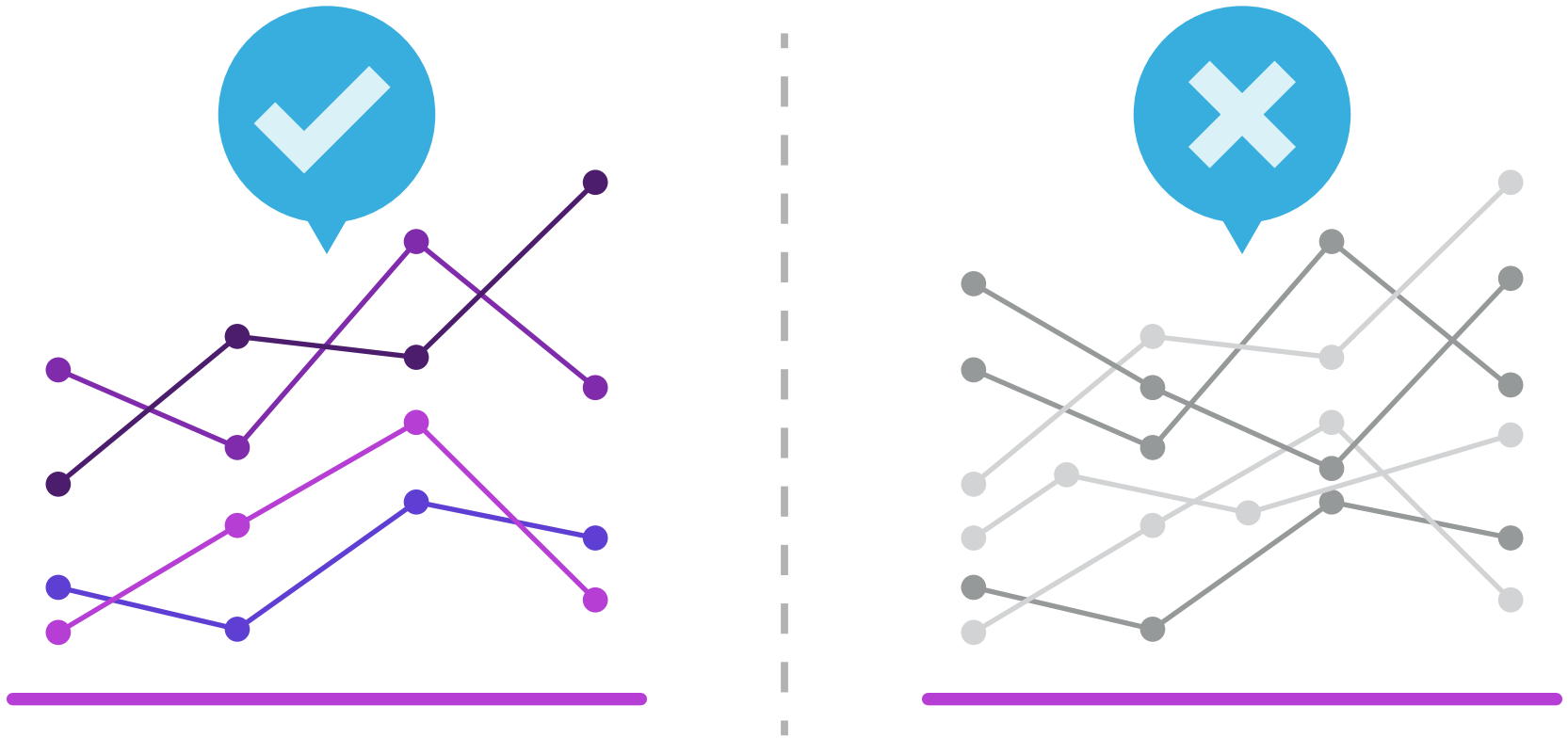
LINE GRAPH TIPS



Use a maximum of 4 lines when comparing

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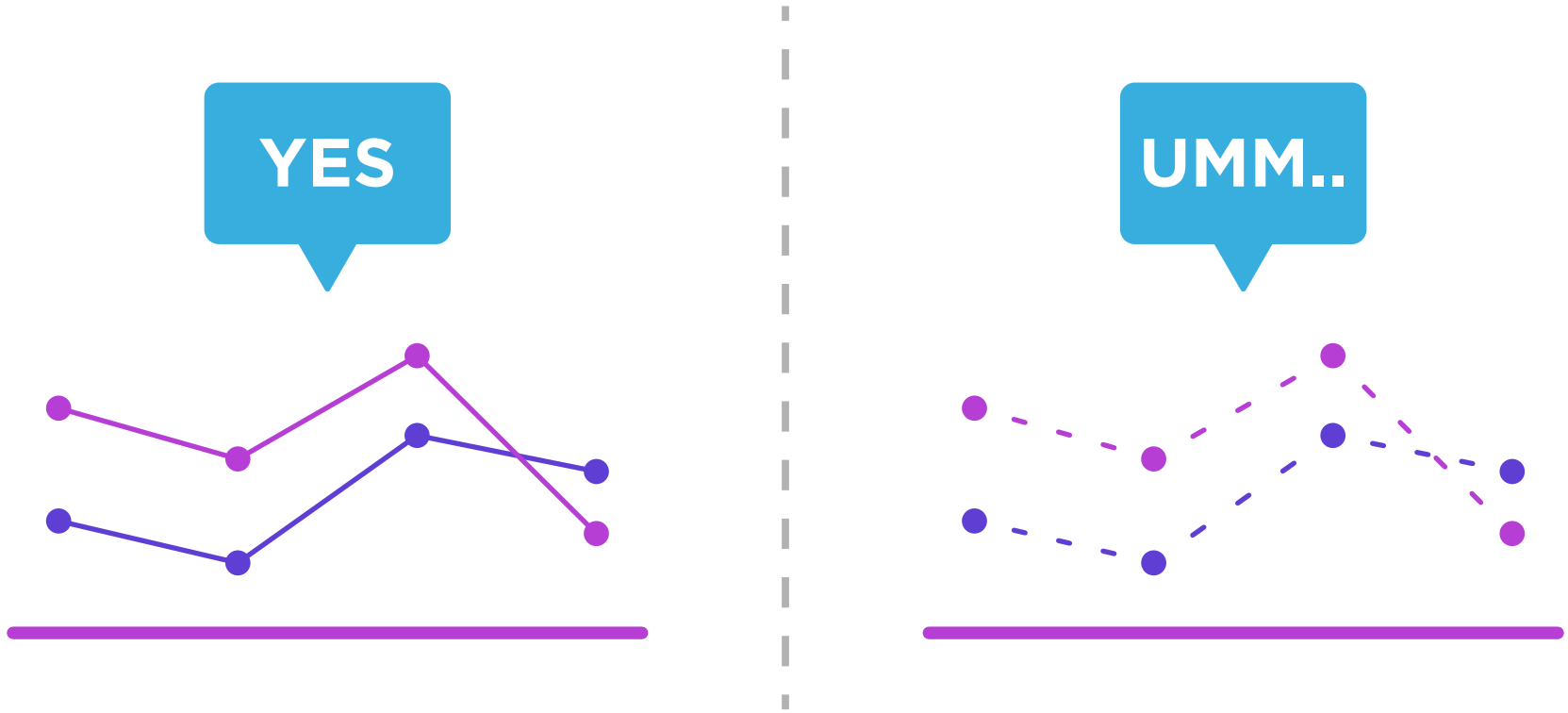
LINE GRAPH TIPS



Use solid lines and not dotted lines

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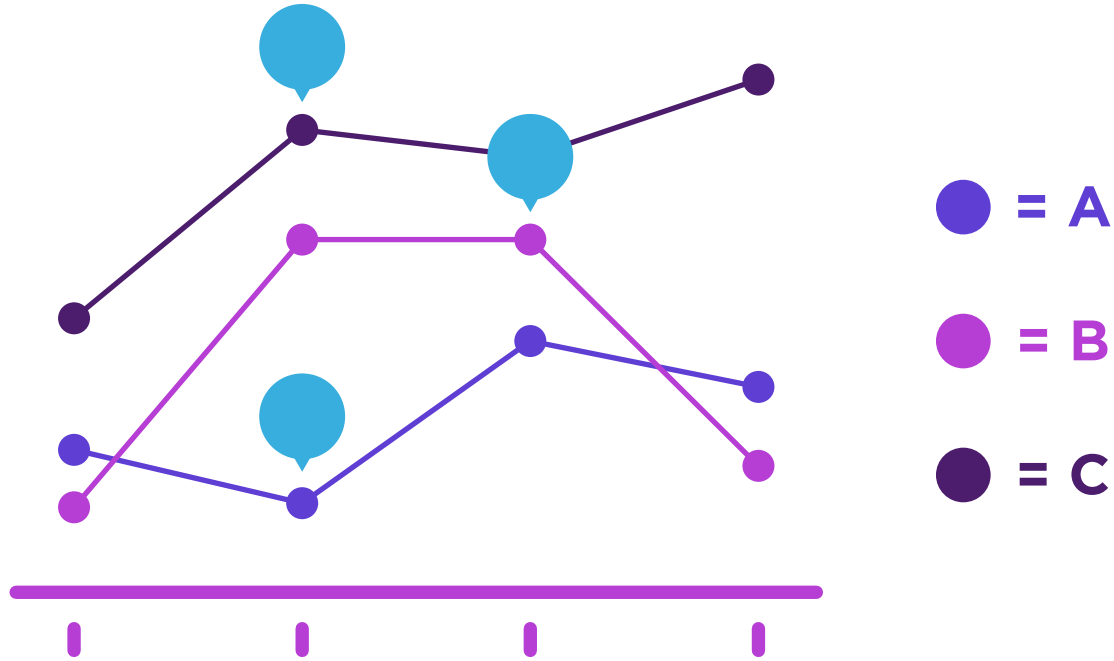
LINE GRAPH TIPS



Label each line separately

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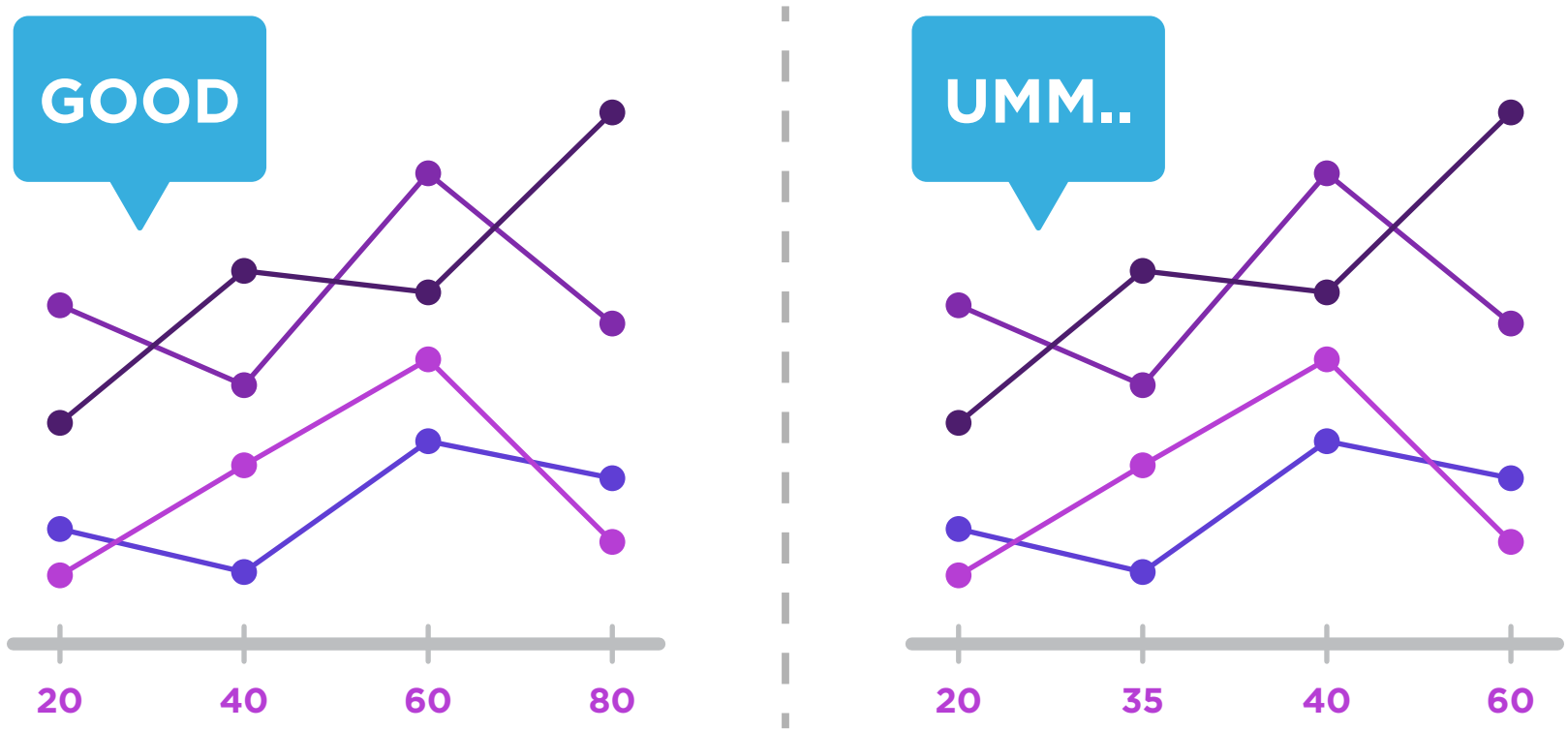
LINE GRAPH TIPS



Use a correct scale for the graph

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SCATTER GRAPH

Scatter graphs can be used to show the relationship between two variables. Perfect to use for large data sets such as population or epidemiology studies.

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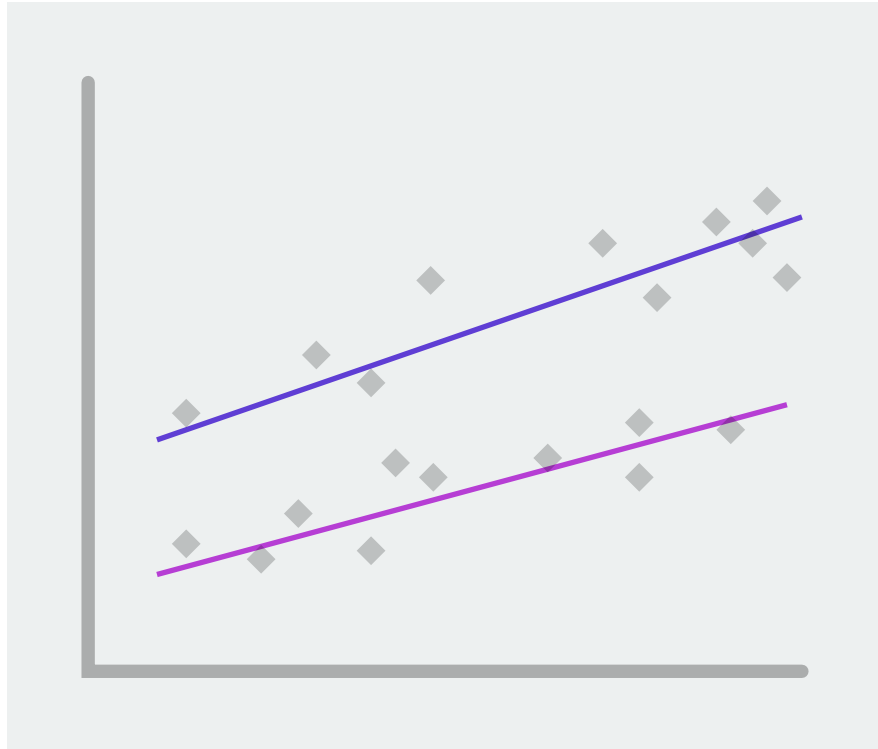
SCATTER GRAPH TIPS



Use lines to show trends & relationships.

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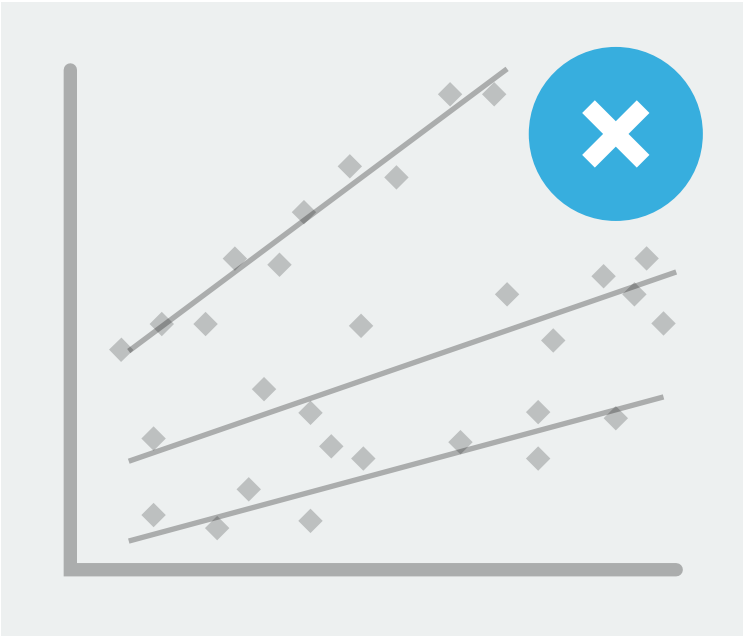
SCATTER GRAPH TIPS



Use as few lines as possible

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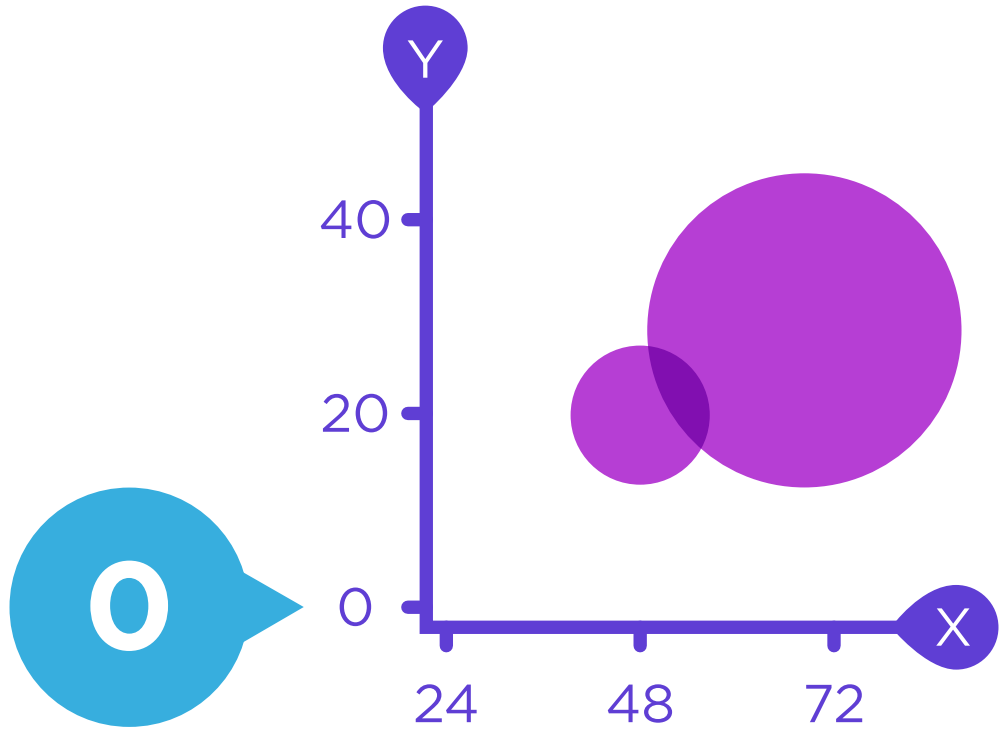
SCATTER GRAPH TIPS



Always start with the Y-axis at 0.

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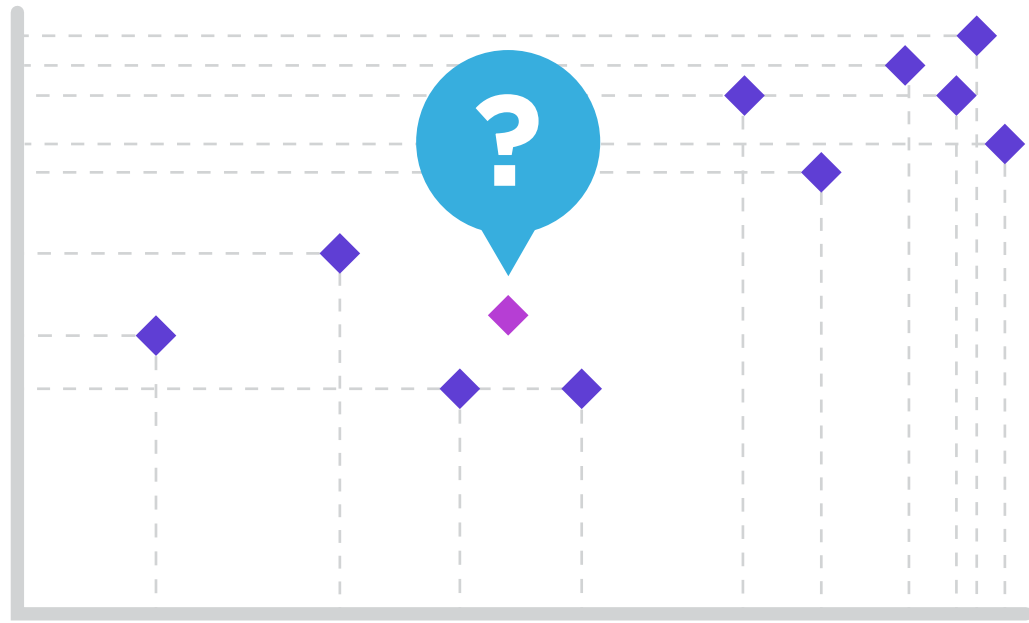
SCATTER GRAPH TIPS



WARNING:

Be wary of creating a non-existent cause-effect relationship

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BUBBLE GRAPH

Bubble graphs can be used to show 2, 3 or 4 variables on the same graph.

By using different size or colour of bubbles, a bubble graph can show relationships between data in a very clear manner.

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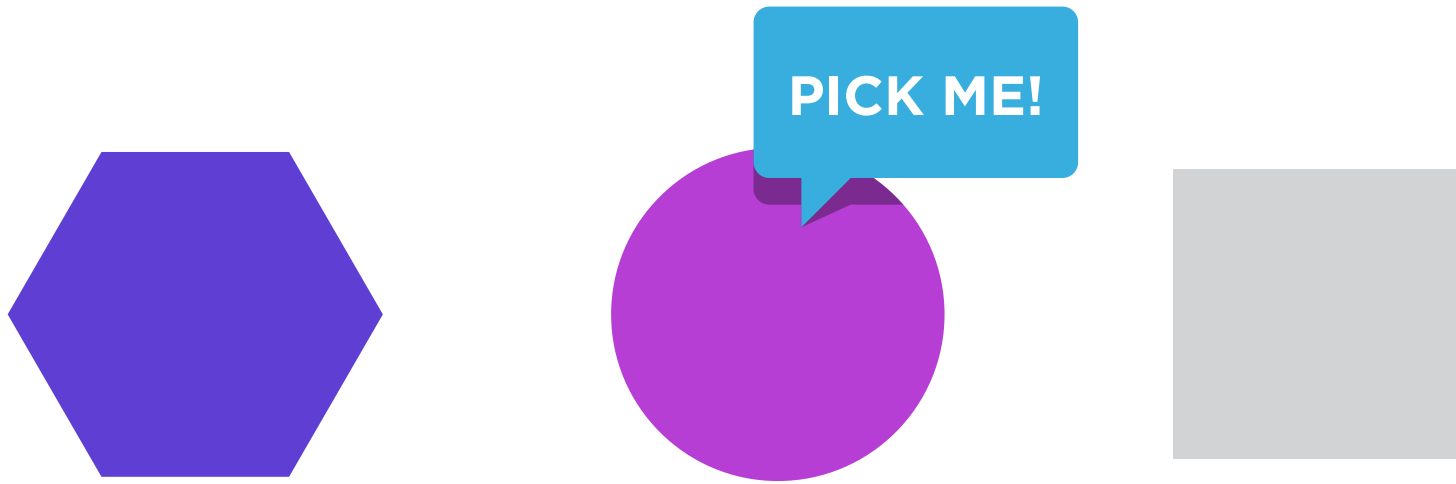
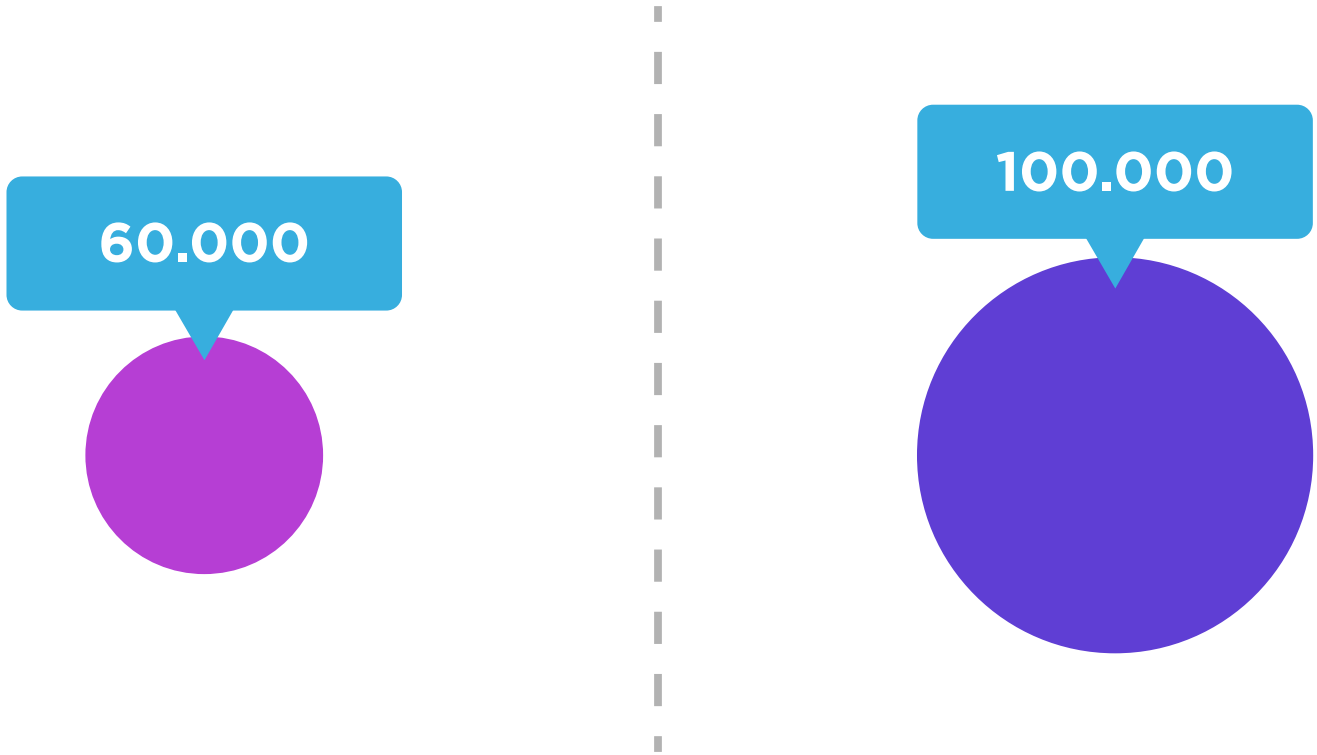
BUBBLE GRAPH TIPS



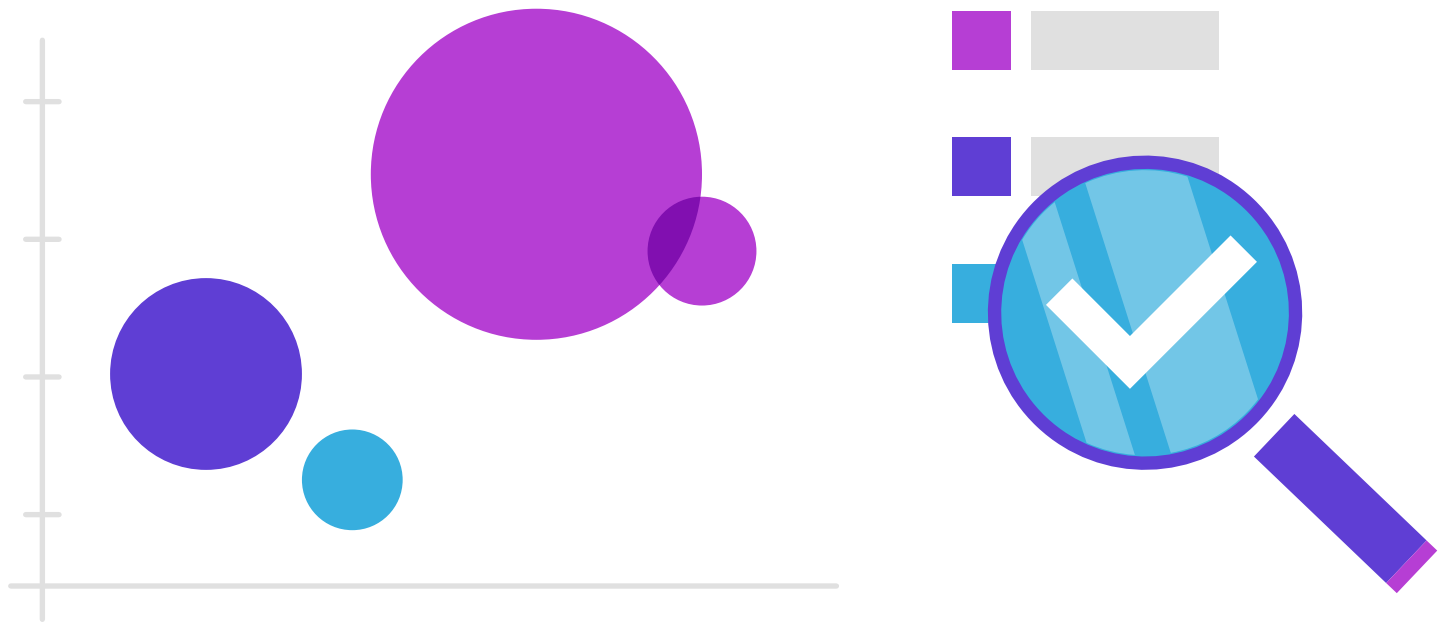
Use simple shapes. Circles work best.

BUBBLE GRAPH TIPS



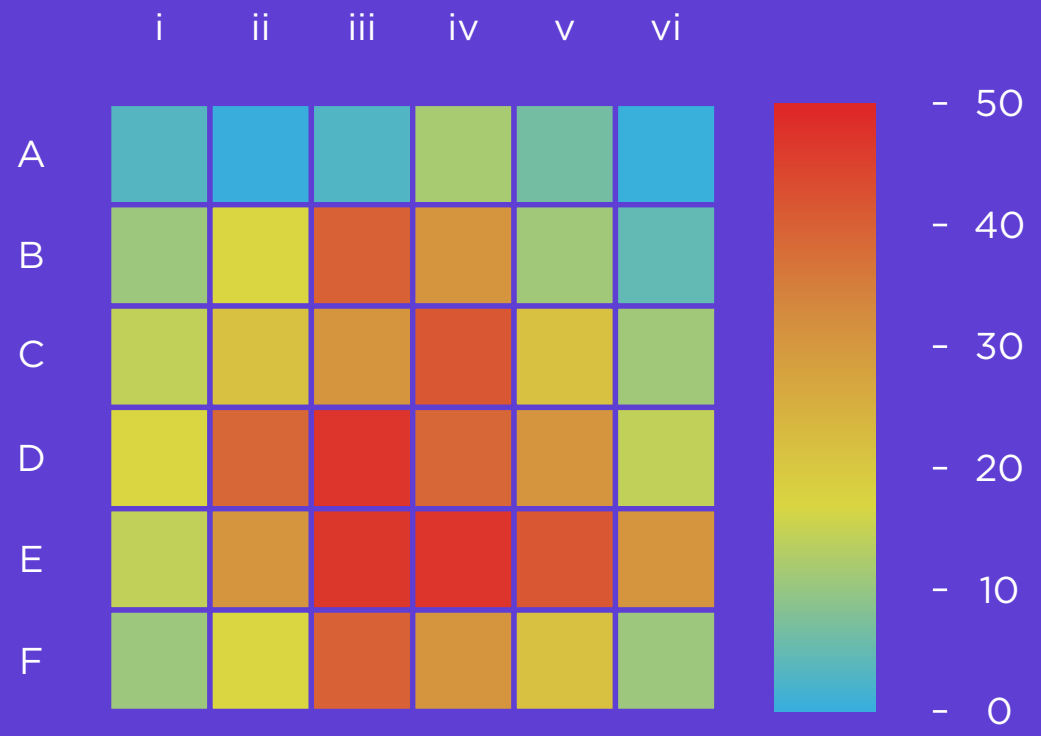
Size bubbles appropriately.

BUBBLE GRAPH TIPS



Use clear and visible labels.

HEAT MAP



Heat maps are great for showing geographical or complex data.
By using different shades of color, comparisons can be clearly shown

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HEAT MAP TIPS

Use simple color gradients

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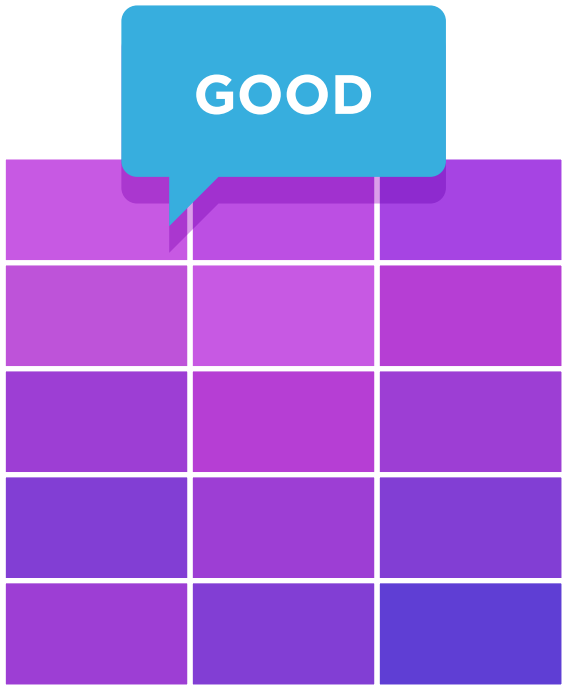
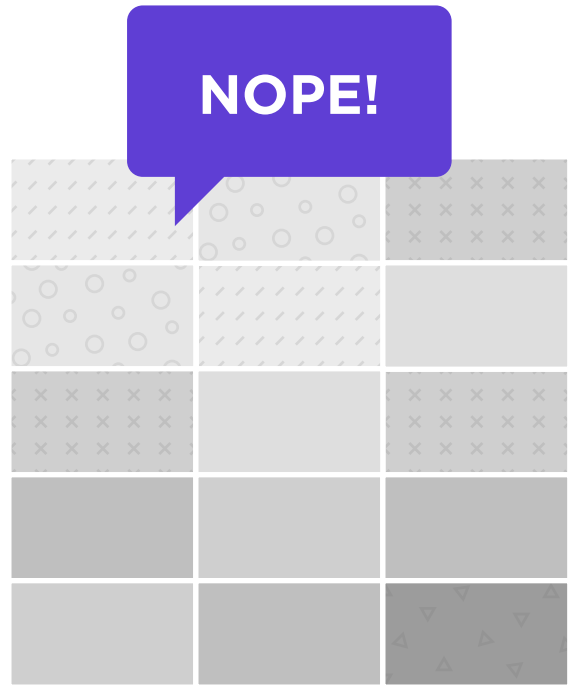
HEAT MAP TIPS





Keep patterns to a minimal

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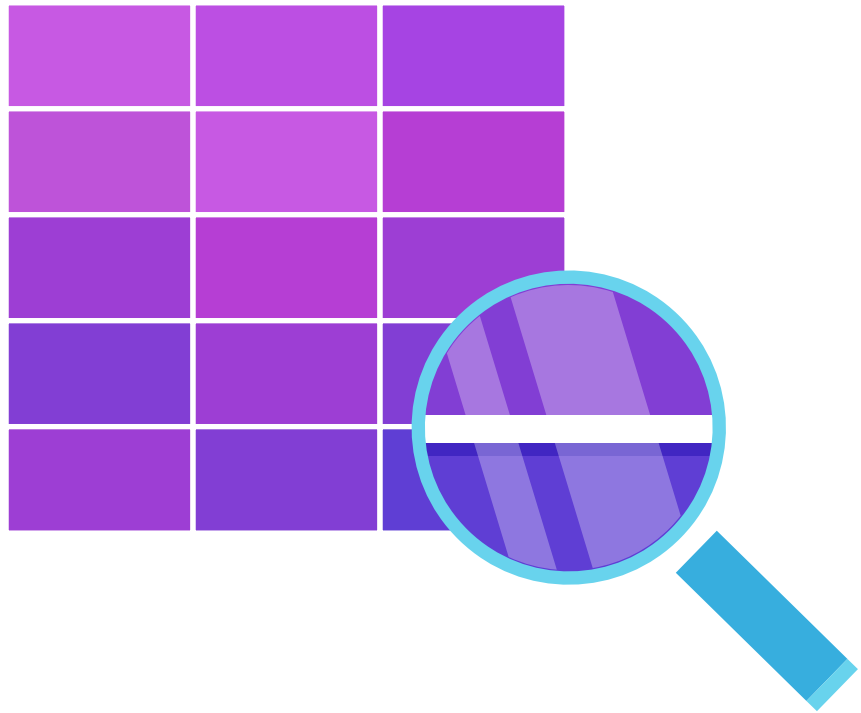
HEAT MAP TIPS



USE CLEAR MAP BOUNDARIES

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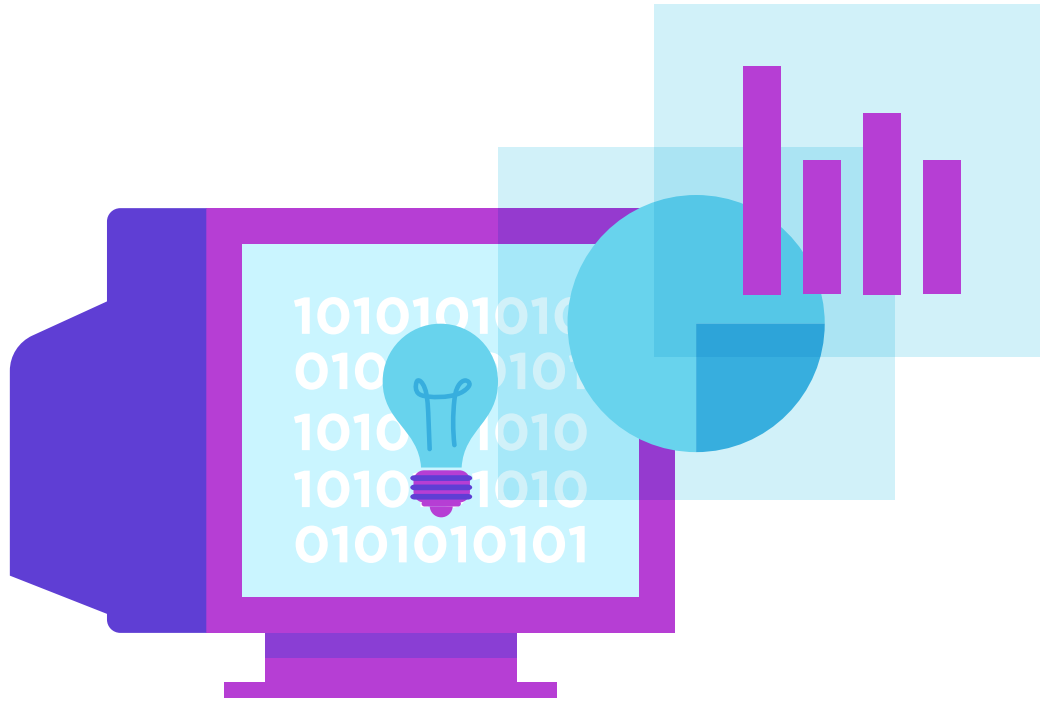
WHAT YOU HAVE LEARNT



YOU SHOULD KNOW MORE
ABOUT DATA VISUALIZATION BY NOW

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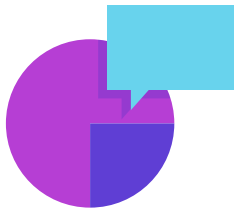
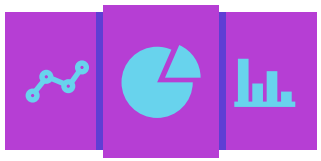
4 KEYS TO DATA VISUALIZATION

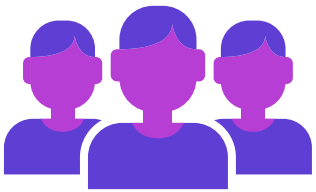


TELL A STORY

EXPLAIN DATA SIMPLY



CHOOSE THE RIGHT VISUAL (CHART TYPE) FOR EFFECTIVE COMMUNICATION



SPEAK TO YOUR AUDIENCE

VISUALIZE DATA TO TELL A BETTER STORY FOR YOUR AUDIENCE

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