Telling stories with data visualisation

Infosheet

This infosheet gives you a quick rundown of the key takeaways from the course. Become a better communicator with data by learning how to create compelling data visualisations.
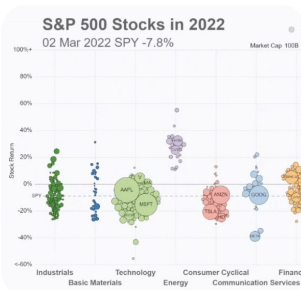
Contents
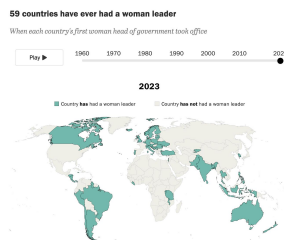
Power of data visualisation

What is data visualisation?

Data visualisation is defined as the graphical representation of information. By using visual elements like charts, plots, maps, infographics, and even animations, it turns complex data into clear, digestible stories.

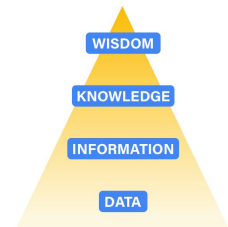## Four reasons why data visualisation matters

Communicates complex information

Makes data more memorable

Draws attention to key insights

Helps move people from data to action

Tools for your business

Google Sheets

Google My Maps

Canva

tableau

Looker Studio

Data GIF Maker

How to plan engaging data visualisations

Take four steps to plan your visualisations.

1

Know your audience

Firstly, you'll need to understand what your audience finds important, and consider how that impacts the story you tell. Different audiences will have different decisions to make and questions they want to answer.

2

Understand the story

Next, you'll need to carefully explore and analyse the data to identify any patterns that will inform your data insights and tell your story.

3

Look for patterns in the data

Once you're clear on the story you're telling, and have the data available to tell that story, the final stage is choosing and creating your visuals. A mix of different visuals might turn your analysis into the most compelling story for stakeholders.

4

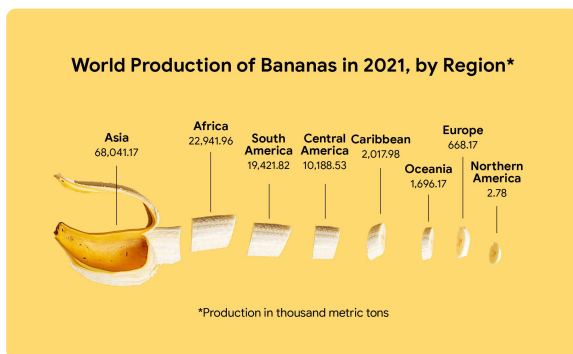### Choose and create the right visuals

If you're using spreadsheets to organise your data, you can use the built-in chart features like bar charts, pie charts to support your data visualisation.

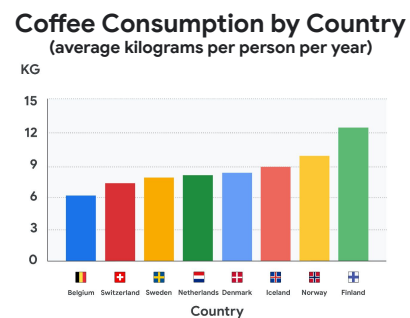# Why telling impactful stories with data visualisation matters

Humans have been telling stories for millenia, and used visual language to support the story they are trying to tell.

Data visualisation examples

For each of these examples, consider the following questions: What do you like about the visualisation? What do you dislike about it? Which one of the visualisations styles do you prefer? Which one makes the data easiest to understand?
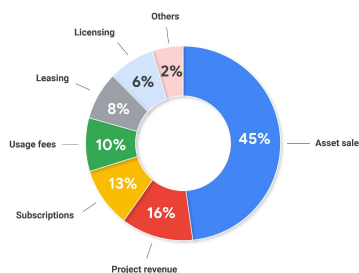

World Production of Bananas in 2021, by Region*

Asia 68,041.17
Africa 22,941.96
South America 19,421.82
Central America 10,188.53
Caribbean 2,017.98
Oceania 1,696.17
Europe 668.17
Northern America 2.78

*Production in thousand metric tons

This is a fun take on data visualisation for a general audience, using a style that directly references the topic — bananas.
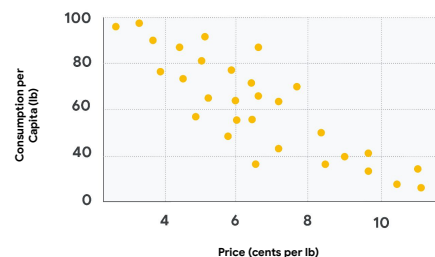

Coffee Consumption by Country
(average kilograms per person per year)

Belgium, Switzerland, Sweden, Netherlands, Denmark, Iceland, Norway, Finland

This one illustrates coffee consumption by country.

Business Profits by Revenue Stream

Asset sale 45%
Project revenue 16%
Subscriptions 13%
Usage fees 10%
Leasing 8%
Licensing 6%
Others 2%

This visualisation shows the different revenue streams of a business.

Analysis of Sugar Consumption vs Sugar Price
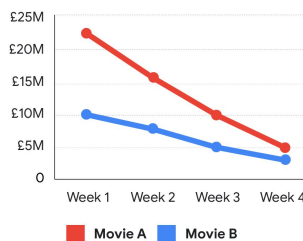
Consumption per Capita (lb)
Price (cents per lb)

This scatter plot shows the relationship between sugar consumption and its price.

Visuals that connect your story with your audience

Now that you know why telling impactful stories using data visualisation matters, you're ready to choose the right type of data visualisation to bring your story to life.

Different chart types

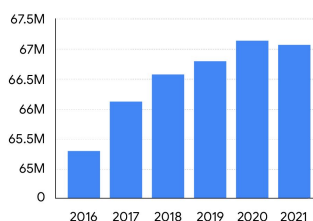**Box Office Sales Movie A vs Movie B**

Line Chart

Pros of a line chart

- Showing trends and changes
- Identifying relationships between two variables
- Showing small changes

Cons of a line chart

- Too many lines can make it confusing
- A wide range of data can be hard to plot
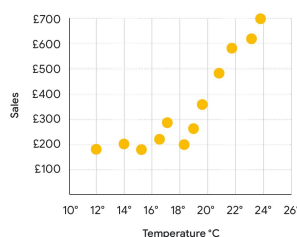
UK Population Number

Bar Chart

Pros of a bar chart

- Widely understood
- Estimate key values at a glance

Cons of a bar chart

- May require additional explanation
- Not suited to reveal cause and effect

Ice-Cream Sales vs Temperature over Q2

Scatter Plot

Pros of a scatter plot

- Easy to understand
- Patterns, correlations, and outliers are simple to spot
- Useful for plotting multiple series of data and making comparisons

Cons of a scatter plot

- Can be difficult to show the relationship for more than two variables
- Open to misinterpretation

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Different chart types

Monthly Staffing Expenses
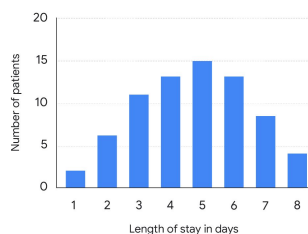

Salaries — Training — Travel Expenses

Pie Chart

Pros of a pie chart
- Easy to understand
- Widely used in business
- Display multiple classes of data and their proportions-

Cons of a pie chart
- People find it hard to perceive area
- Does not show exact values
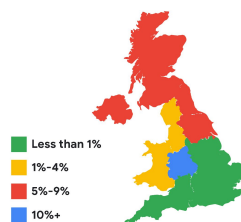
NHS Patient Ward Stay Length

Histogram

Pros of a histogram
- Reveals patterns and relationships
- Shows the frequency of data occurrences

Cons of a histogram
- Not rights for showing individual values that make up data
- Can be complex to setup

UK House Price Growth June 2023

Less than 1%
1%-4%
5%-9%
10%+

Choropleth map

Pros of a choropleth
- See a large amount of information
- Useful for finding hotspots and making geographical comparisons

Cons of a choropleth
- Map assumes the whole region has the same value, but there could be variations