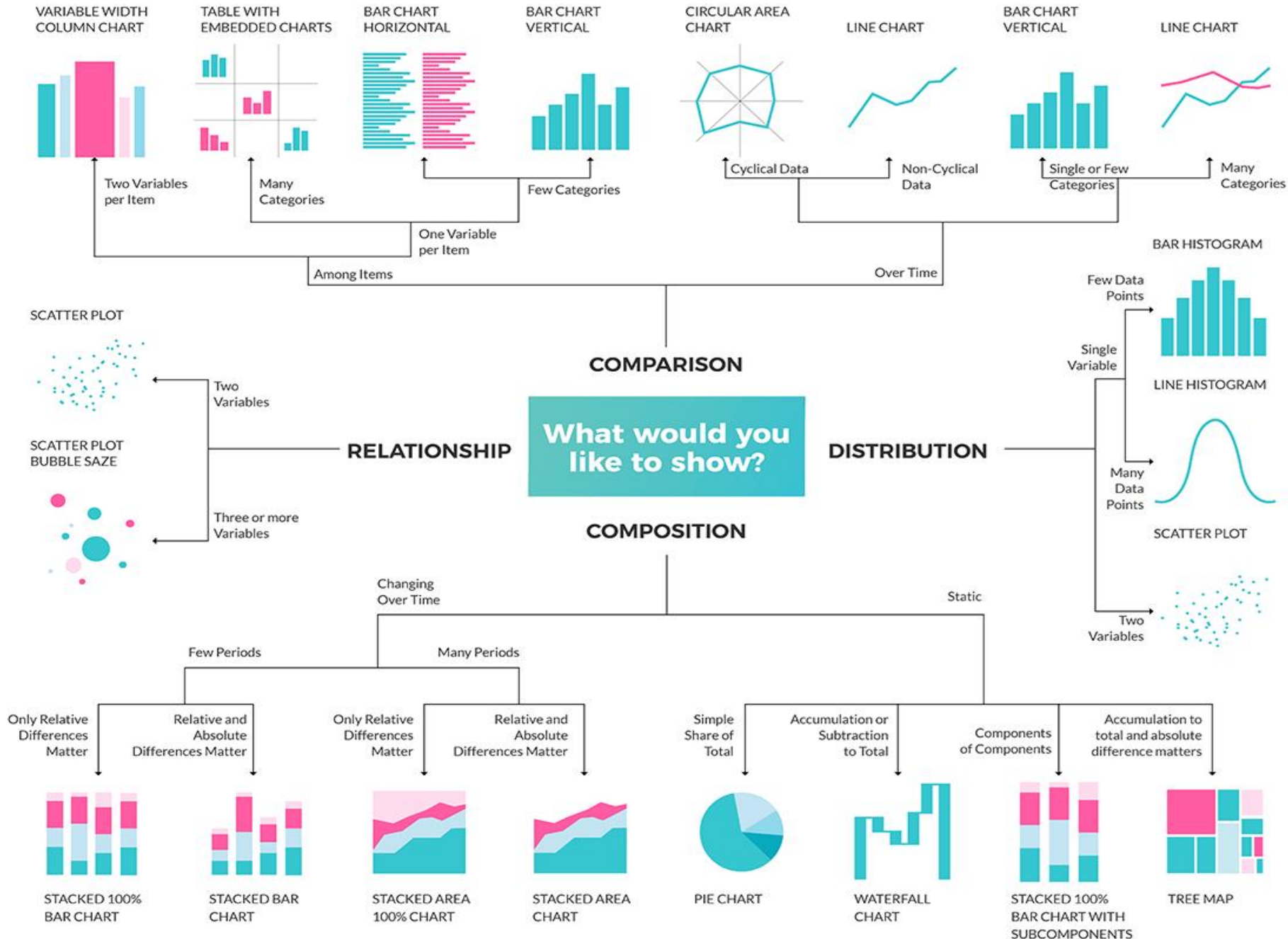


Charts with Excel and Datawrapper

What we'll cover...

- ✓ Choosing the right chart or graph
- ✓ Hands on with Excel
 - ✓ Column charts
 - ✓ Pie charts
- ✓ Hands on with Datawrapper
 - ✓ Column charts
 - ✓ Stacked bar charts
- ✓ Best practice in design
- ✓ Other charts & tool options



Charts & graphs to compare values

Bar & column charts

What is it?

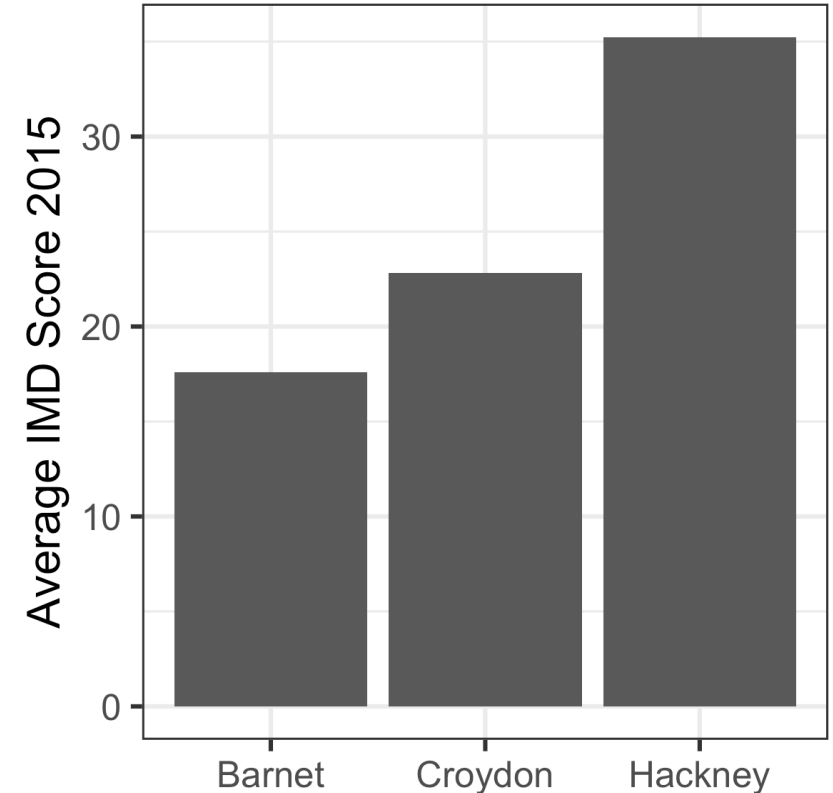
- ✓ The value for each entity in a category is shown as a bar, where the length corresponds to the value

Input data:

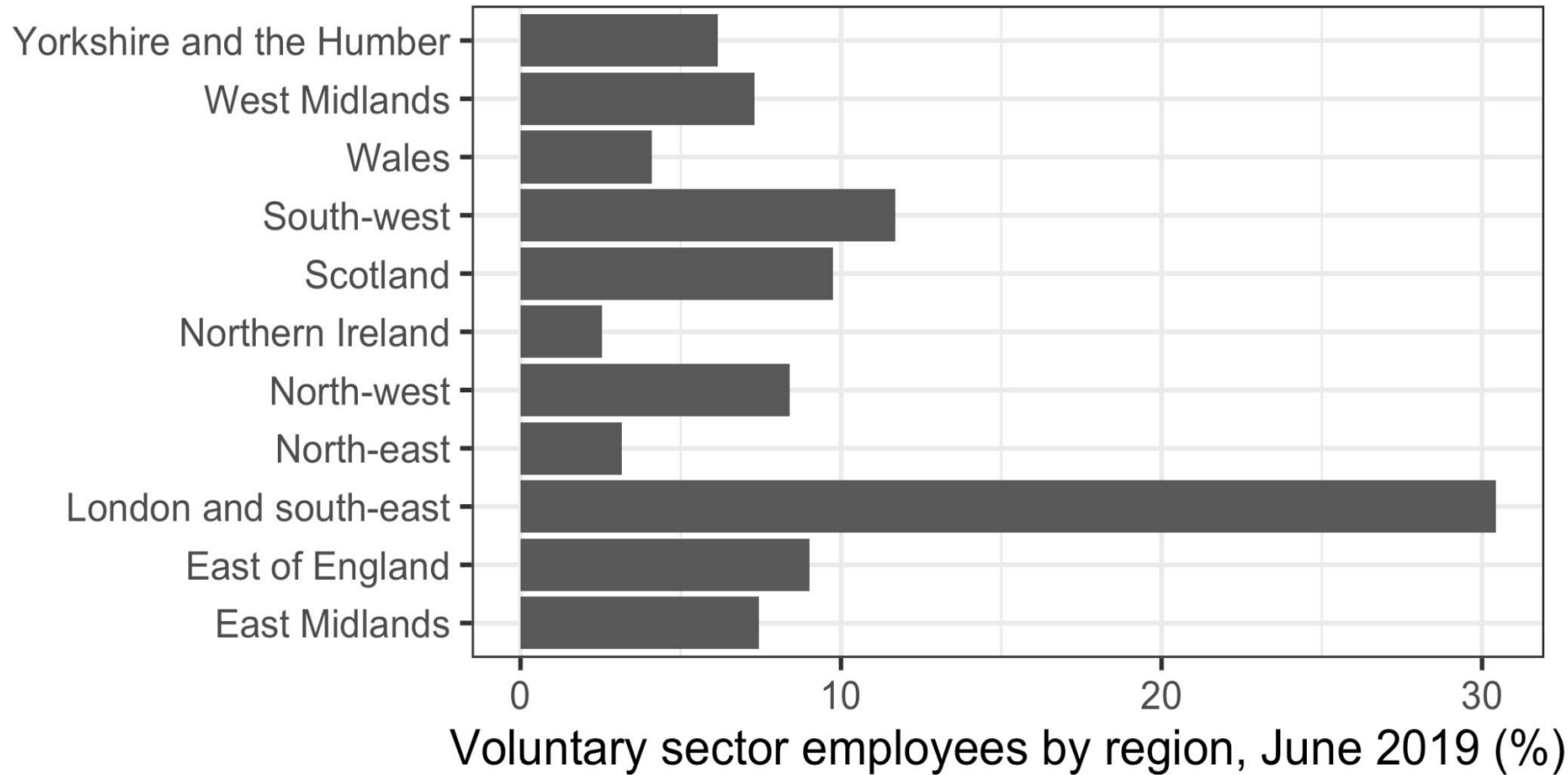
- ✓ One numeric variable for 1 or more categories

Why use it?

- ✓ To compare amounts



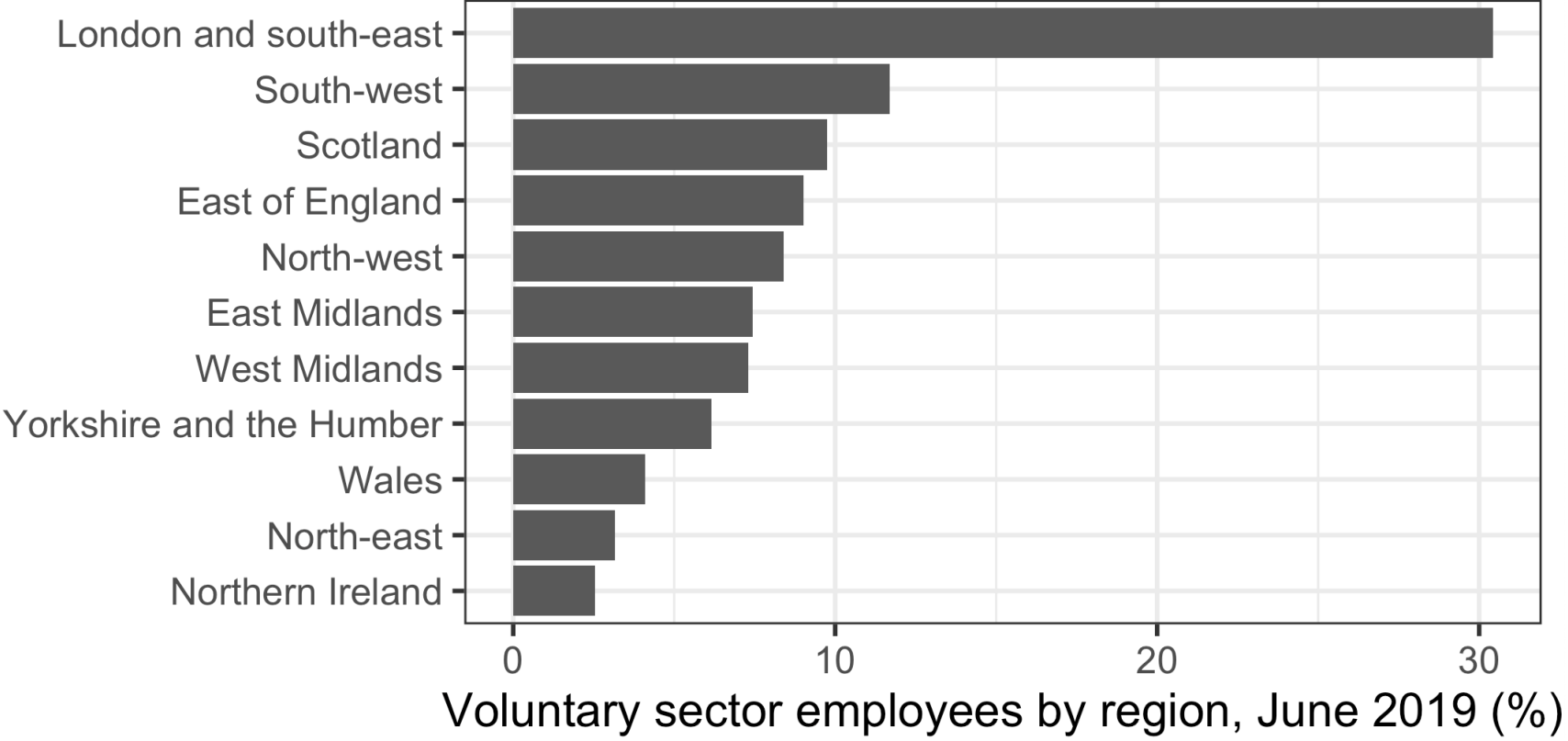
Bar & column chart tips



Flip charts
with long
labels
sideways



Bar & column chart tips



Reorder to enable comparison (only if there is no natural order)

Bar & column chart tips



Add value to bar if precise value is important



Charts & graphs to visualise
composition

Pie charts and donut charts

What is it?

- ✓ A circle divided into sections where each piece of the pie represents the proportion
- ✓ Donut chart uses ring vs circle

Input data:

- ✓ Proportion/Percentage for each value in a category

Why use it?

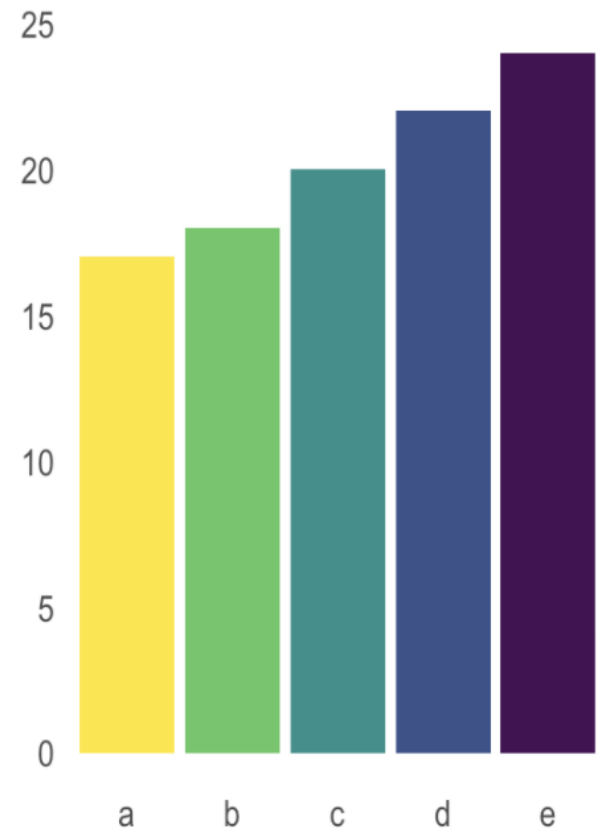
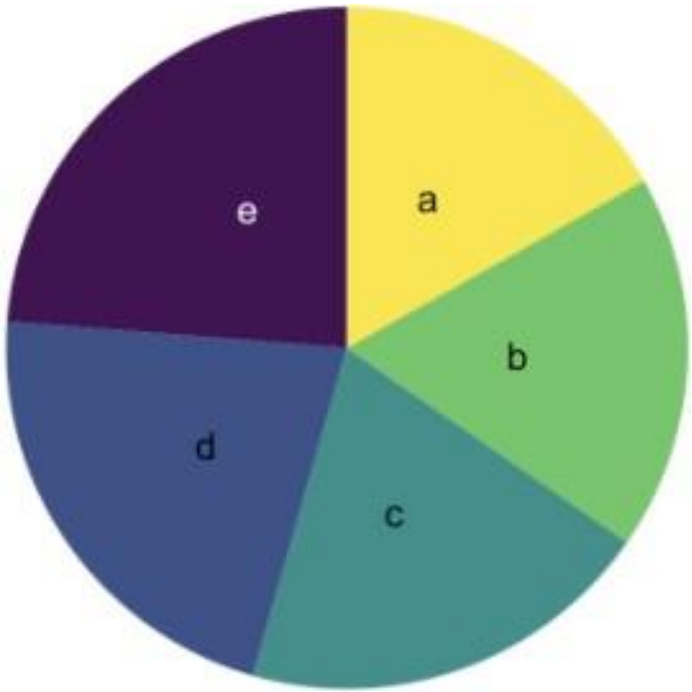
- ✓ To compare proportions

Pie charts – what does this tell you?



- Which slice is the biggest?
- Can you order these by value?

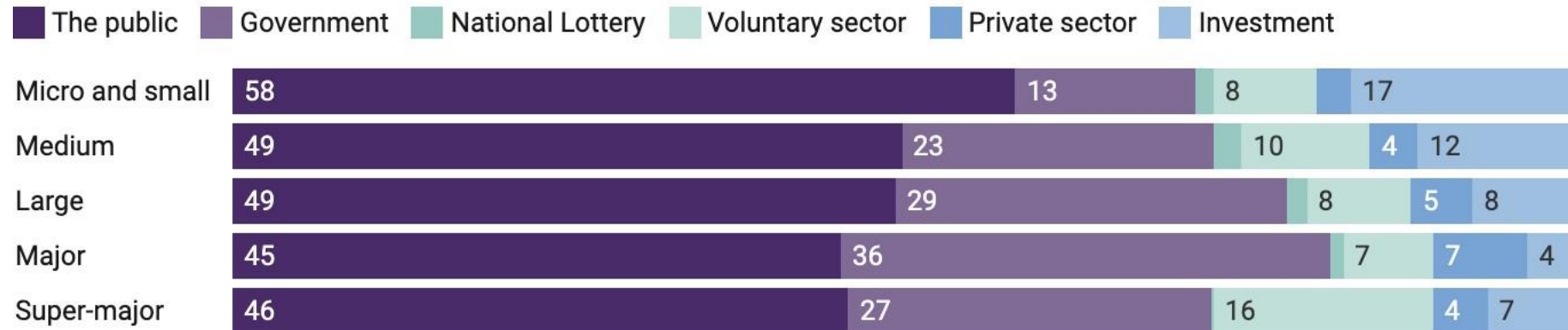
Pie chart alternatives: bar charts



Pie chart alternatives: stacked bar charts

Micro and small organisations receive a larger proportion of income from the public than other organisations

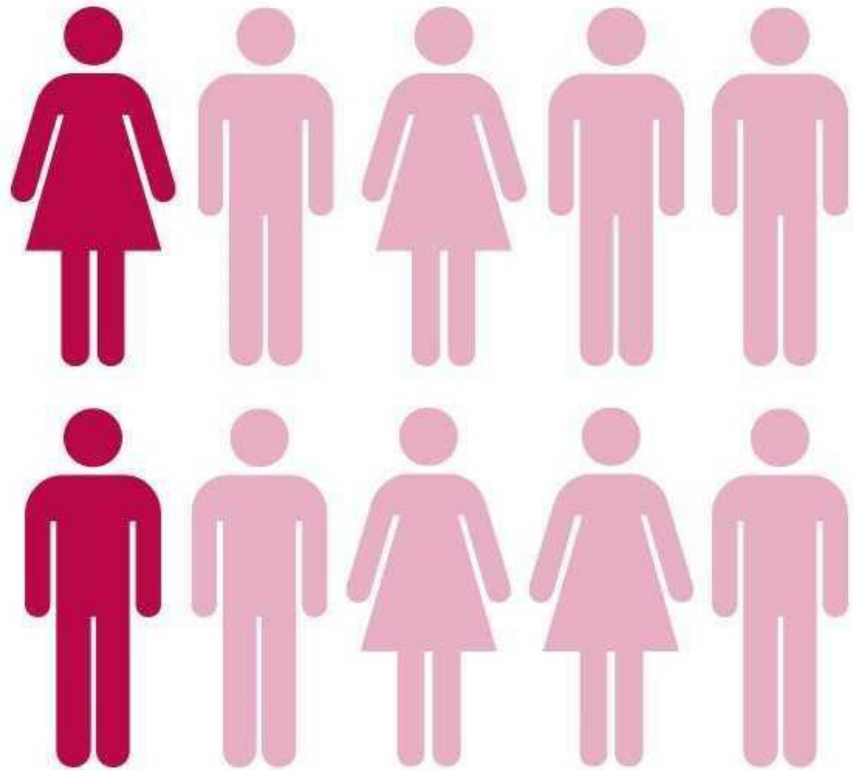
Breakdown of income by source and size of organisation, 2017/18 (%)



Source: NCVO, Charity Commission • [Get the data](#) • Created with [Datawrapper](#)



Pie chart alternatives: pictorial fraction chart



Only

19%



are aware that
people living with HIV
and on effective
HIV treatment
can't pass it on.

Reference: YouGov survey of 2,075 GN adults, June 2019



Charts & graphs to visualise
timelines

Line charts

What is it?

- ✓ Shows how one factor (variable) changes e.g. over time

Input data:

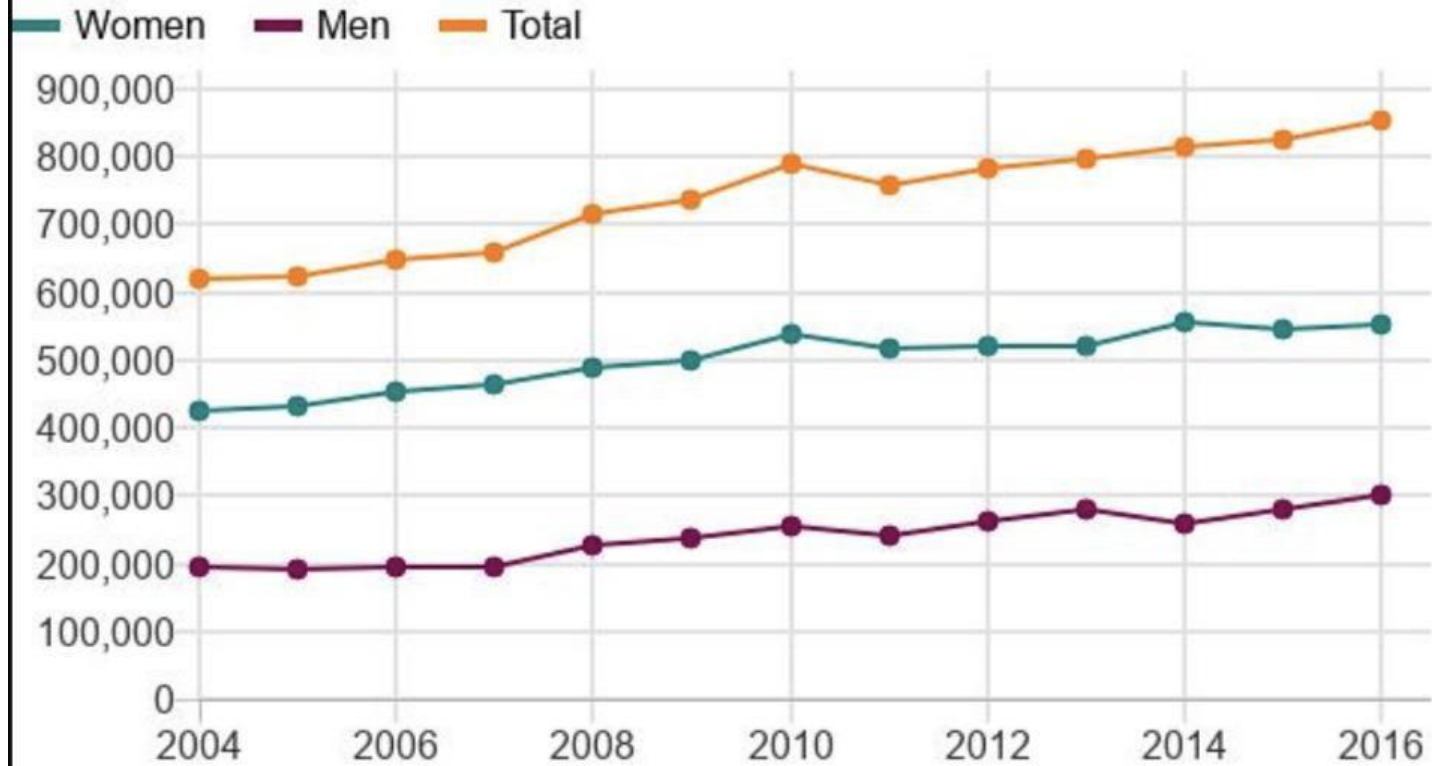
- ✓ Two numeric variables

Why use it?

- ✓ To understand relationships between two factors

Line charts

The number of people employed in the voluntary sector has risen steadily



Source: NCVO/Labour Force Survey

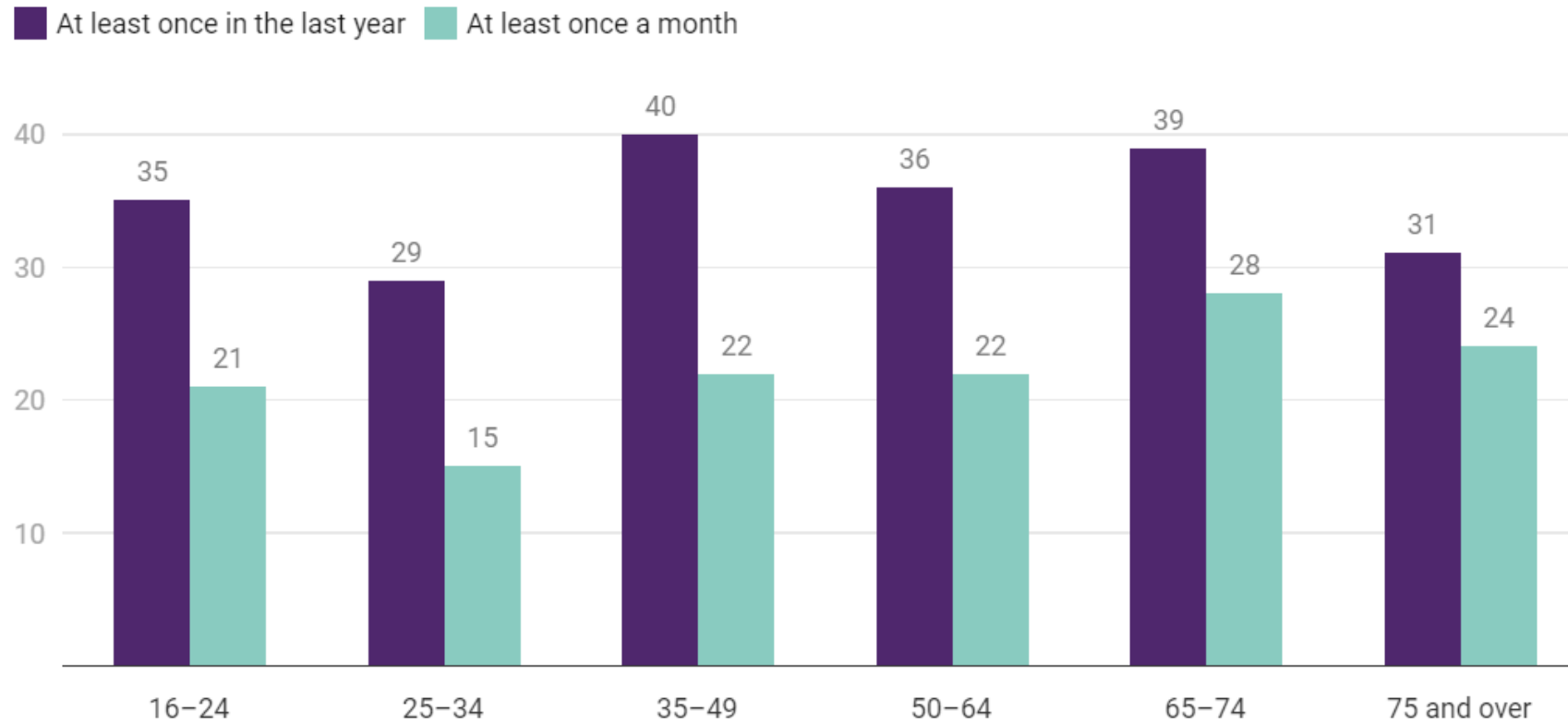
BBC

Why Datawrapper?

- ✓ Easy to use online tool
- ✓ Paste data or upload files
- ✓ Lots of customisation options
- ✓ Embed interactive charts online – choose whetherif people can download your data too
- ✓ Download as a PNG file
- ✓ Visualisations & data private until you Publish
- ✓ Link to a live dataset for real time updates
- ✓ Good accessibility options including alt text prompts & colourblind check
- ✓ Free version supports all of the above
- ✓ Great help & support, with an inbuilt learning academy including best practice in data visualisation

NCVO Almanac

Proportion of people formally volunteering by age group, 2018/19 (%)



Source: Community Life Survey • [Get the data](#) • Created with [Datawrapper](#)

Work Rights Centre

WoRC Clients' Tenancy Agreements

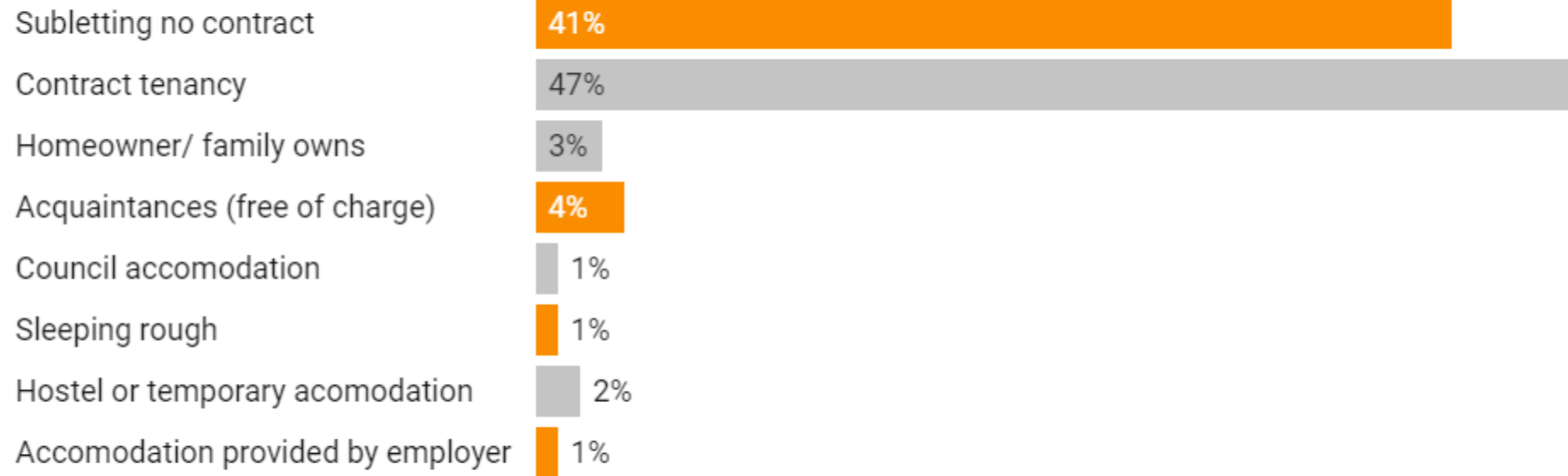


Chart: Work Rights Centre • Source: [Client assessment survey \(October 2020\)](#) • [Get the data](#) • Created with [Datawrapper](#)

Getting help...

<https://academy.datawrapper.de/>

Datawrapper

Welcome to the Datawrapper Academy!

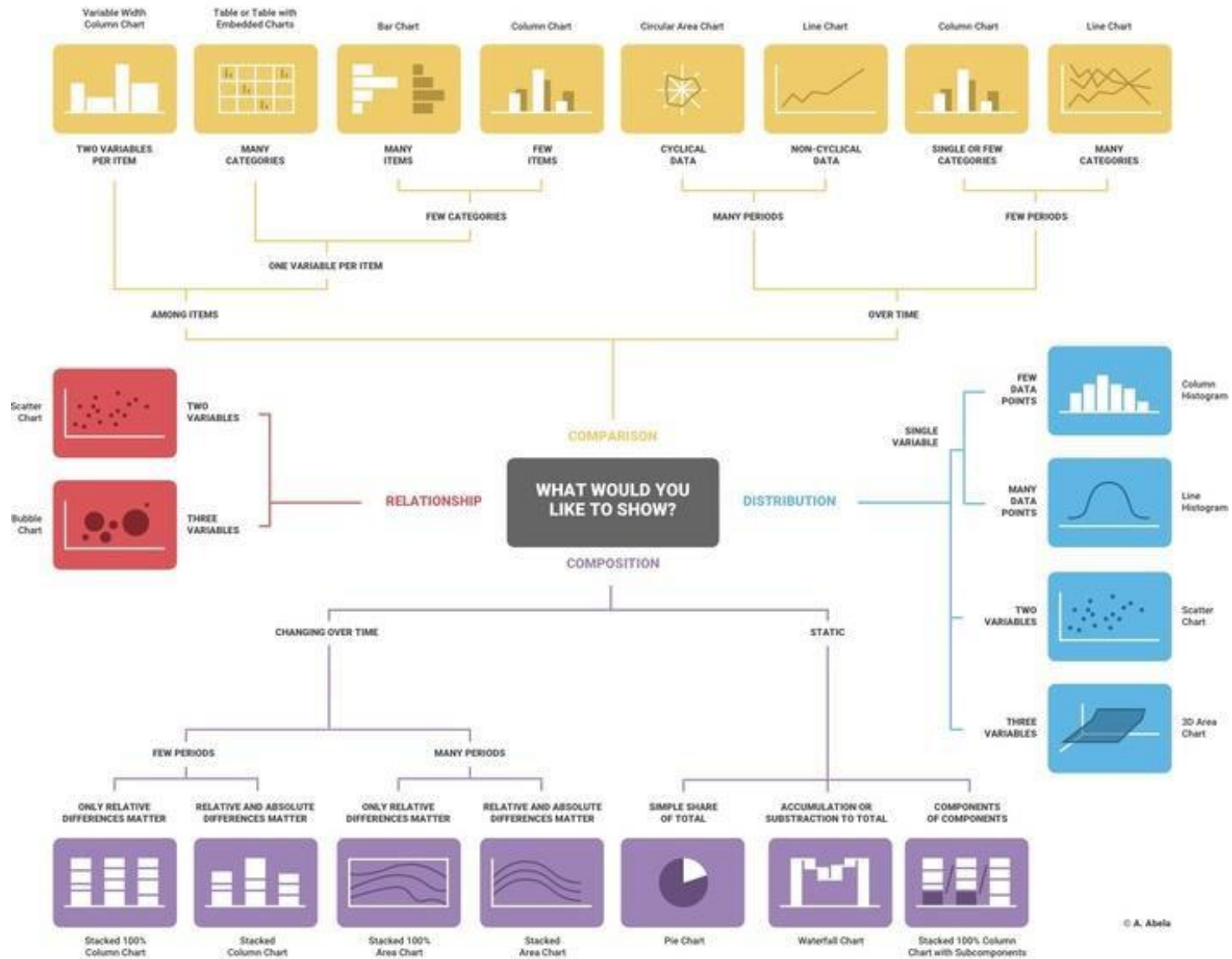
Here you can learn how to build charts, maps & tables with Datawrapper.

Search

Other chart options

CHART SUGGESTIONS - A THOUGHT-STARTER

[Infogram resource](#)





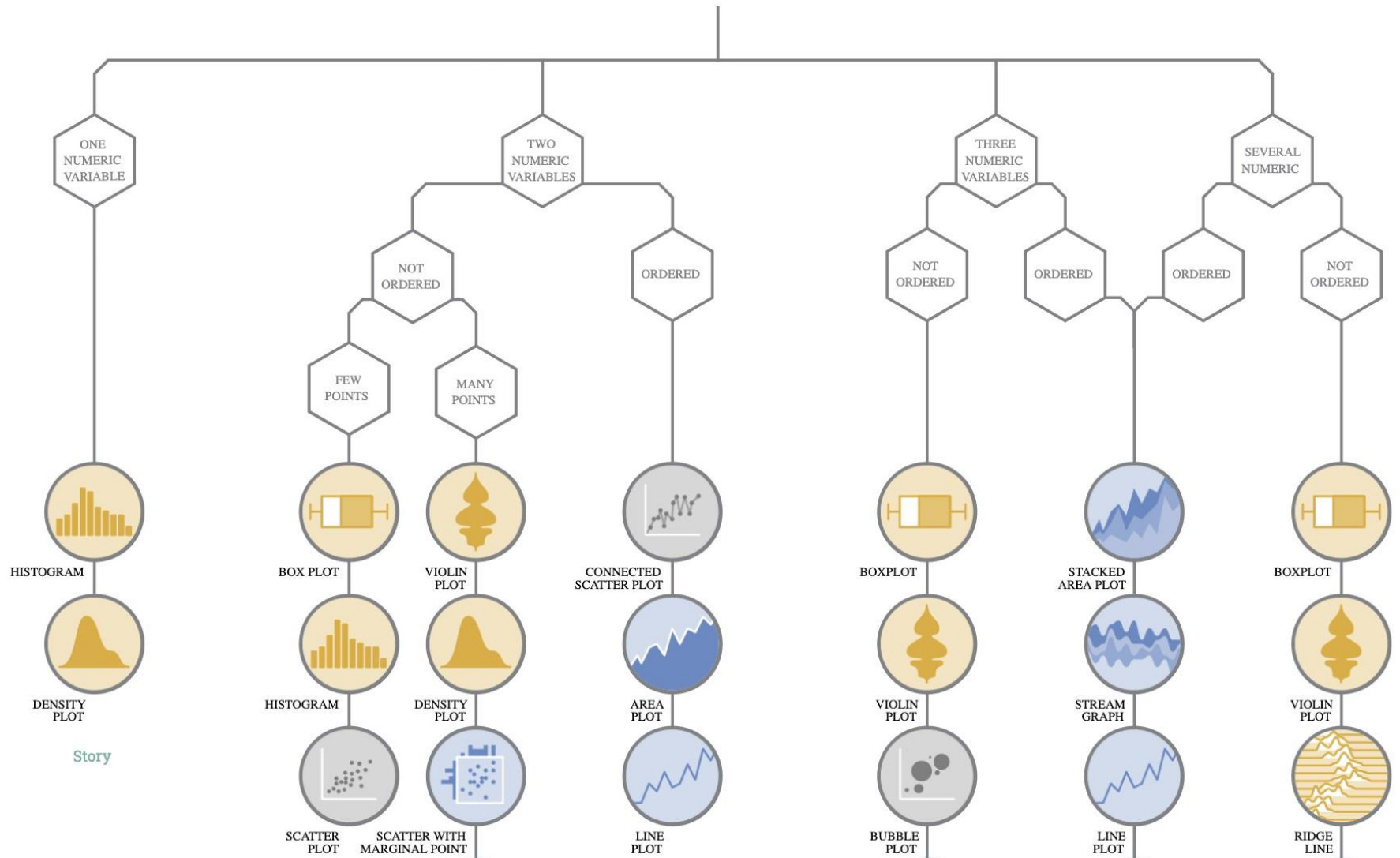
from Data to Viz

From Data
to Viz

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.

- Numeric
- Categoric
- Num & Cat
- Maps
- Network
- Time series

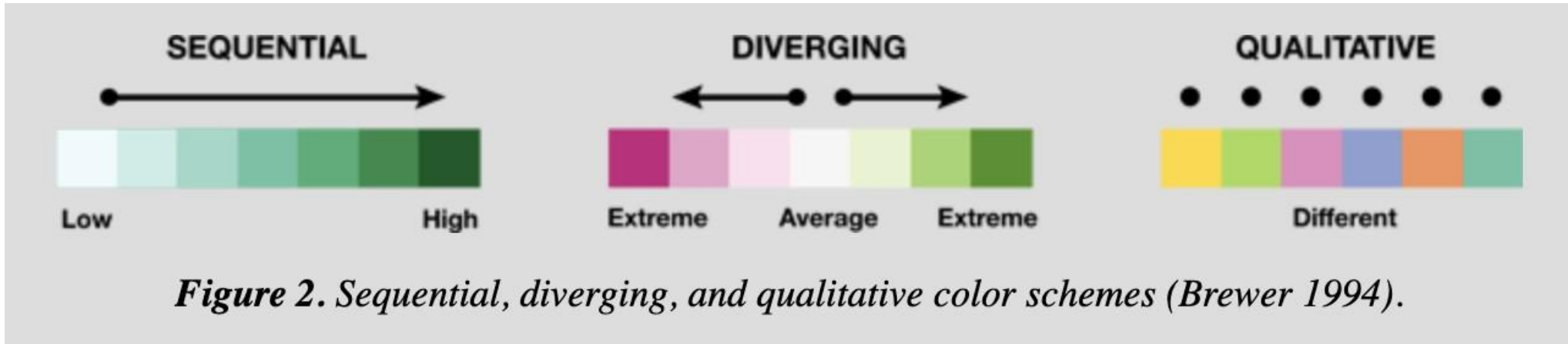


Story

Best practice checklist

- ✓ Does every part of the chart have a purpose?
- ✓ What can you remove?
- ✓ Do you need additional text for storytelling?
- ✓ Consider colours
 - ✓ Use consistently
 - ✓ Use to highlight important information
 - ✓ Consider accessibility

Use colour scales appropriately



<https://cartographicperspectives.org/index.php/journal/article/view/1538/1819>

Design for colour-vision deficiency

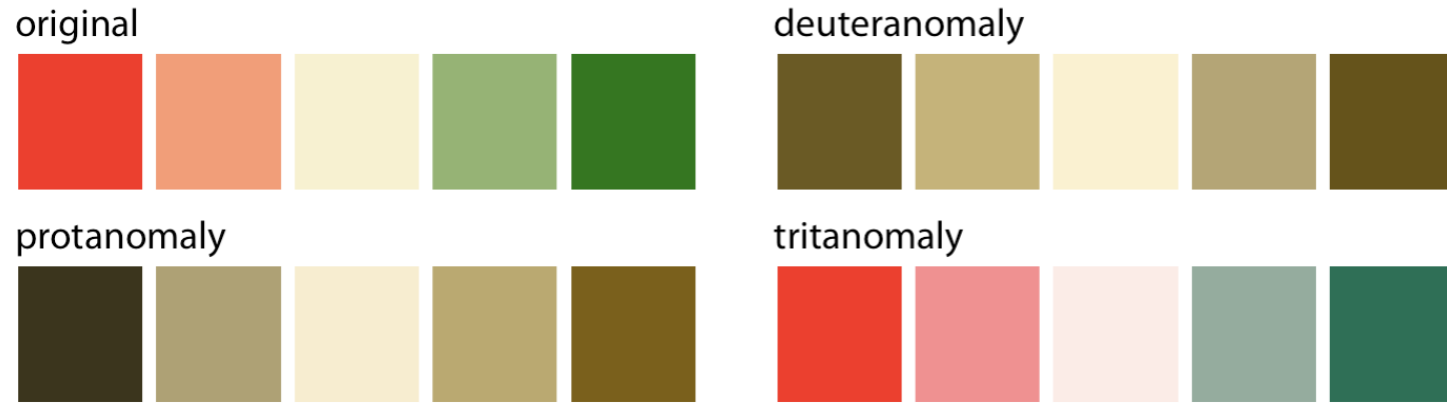


Figure 19.7: A red–green contrast becomes indistinguishable under red–green cvd (deuteranomaly or protanomaly).



Figure 19.8: A blue–green contrast becomes indistinguishable under blue–yellow cvd (tritanomaly).

Add Alt Text to describe visualisations

Dataset for charts and graphs participants

File Home Insert Page Layout Formulas Data Review View Help Acrobat Chart Design **Format** Comments Share

Chart Area Format Selection Reset to Match Style Current Selection Insert Shapes Change Shape Shape Styles WordArt Styles Accessibility Arrange Size

Month	HMP Holloway	HMP Bristol	HMP Pentonville	HMP Bronzefield	HMP Manchester	HMP Swansea
Total	93	97	68	134	48	208

Alt Text

How would you describe this object and its context to someone who is blind or low vision?

- The subject(s) in detail
- The setting
- The actions or interactions
- Other relevant information

(1-2 detailed sentences recommended)

Mark as decorative

Other tools

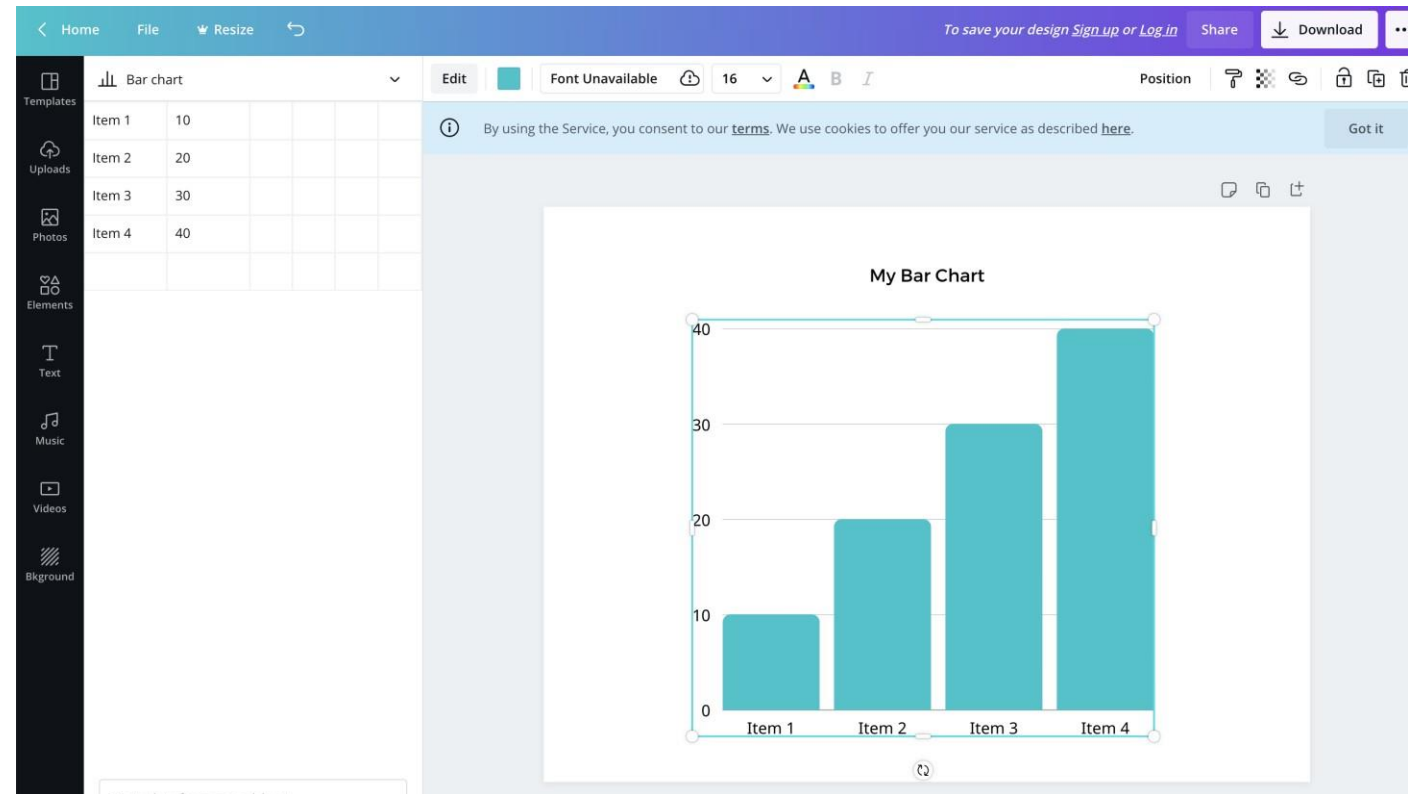


Good for:

- ✓ Helps you choose your graph
- ✓ Simple charts / info-graphics
- ✓ Drag-and-drop

Limitations:

- ✓ Data pasted from spreadsheet



<https://www.canva.com/graphs/>

Cost: Free (and free upgrade to the Pro account for non-profits)



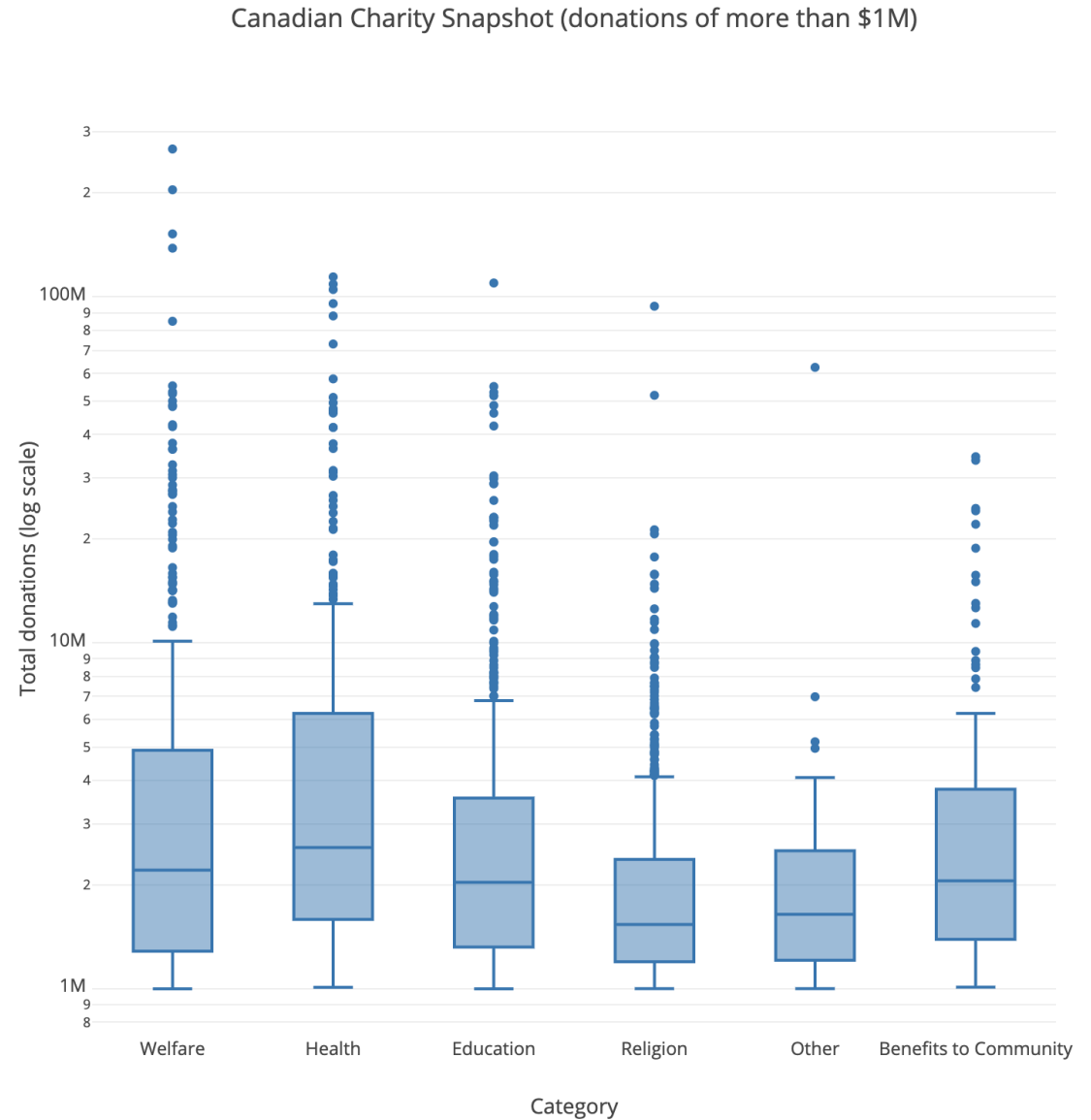
Good for:

- ✓ Interactive charts
- ✓ Embedding in websites
- ✓ Attractive default formats

Limitations:

- ✓ Paid option is very expensive

Cost: Free option, but limited to public charts



<https://plotly.com/chart-studio>

RAWGraphs

Good for:

- ✓ Lots of chart options
- ✓ Can import data
- ✓ Decent formatting options

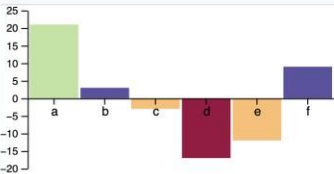
Limitations:

- ✓ No maps or interactive figures

Cost: Free
























2. Choose a chart

Show All charts ▾



Bar chart
It displays a categorical dimension and related amounts. Each bar represents a category, width is proportional to the quantitative dimension.

[Code](#) [Tutorial](#)

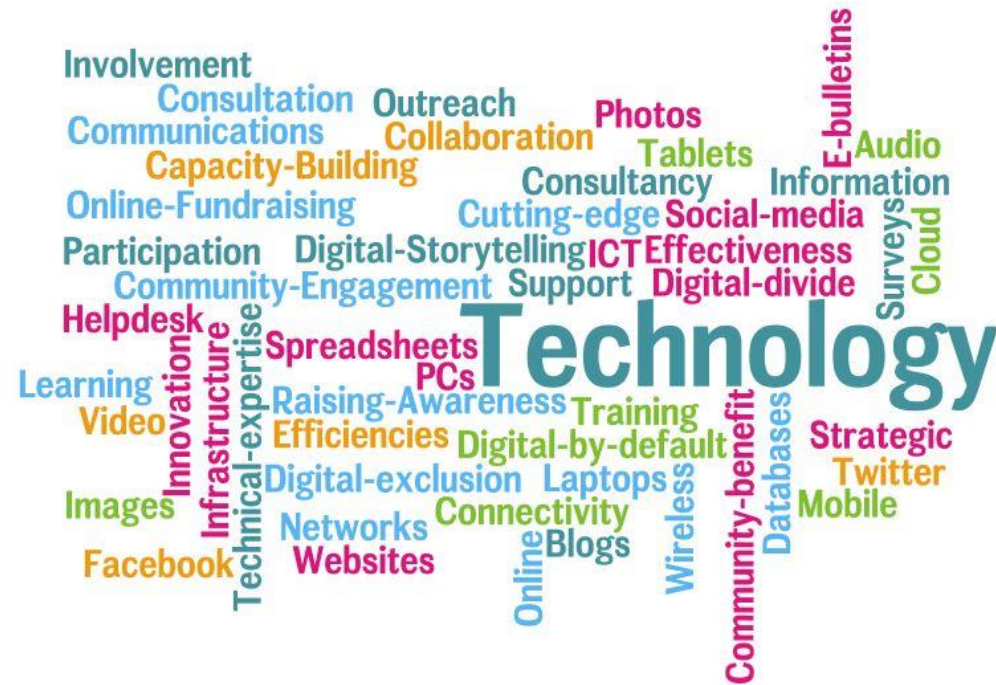
 Alluvial Diagram Correlations, proportions	 Arc Diagram Networks	 Bar chart Correlations
 Multi-set bar chart Correlations, proportions	 Stacked bar chart Correlations, proportions	 Beeswarm plot Distributions, time series, proportions
 Box plot Distributions	 Bubble chart Correlations, proportions	 Bumpchart Correlations, proportions
 Circle Packing Hierarchies, proportions	 Circular dendrogram Hierarchies, proportions	 Contour plot Correlation, density
 Convex hull Correlations, proportions	 Linear dendrogram Hierarchies, proportions	 Hexagonal binning Correlation, density
 Line chart Time series, correlations	 Matrix Plot Correlations, time series, proportions	 Radar Chart Correlations
 Sankey Diagram Flows, networks	 Streamgraph (area chart) Correlations, proportions	 Sunburst diagram Hierarchies, proportions
 Treemap Hierarchies, proportions	 Violin plot Distributions	

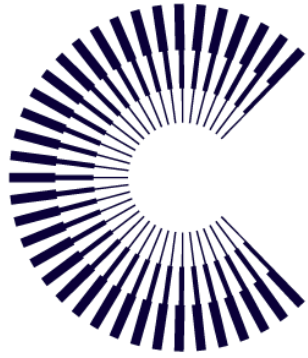
<https://www.rawgraphs.io>

About Superhighways

Providing tech, digital & data support to small local charities in London for 20+ years

- ✓ Support
- ✓ [Training](#)
- ✓ Consultancy
- ✓ Digital inclusion
- ✓ [Datawise London](#)
- ✓ [E-news sign up](#)





Catalyst

We help people
across civil society
grow in digital

Catalyst is a network helping UK civil society grow their digital skills and processes. We connect charities and supporting organisations with the best free resources and services to make digital easier.

- ✓ [Visit the website](#)
- ✓ [See the full range of support services](#)
- ✓ [Sign up to the newsletter](#)

Free Catalyst services

Training

- [Design Hops](#): A workshop to help charities redesign services for digital access
- [DigiShift](#): Monthly Zoom calls for charities, with advice on best digital practice
- [Learn Design Thinking course](#): Video course on the methods of design thinking
- [The Curve](#): 90-minute workshops on best digital practices and tools

Self-paced learning

- [Catalyst newsletter](#): Fortnightly newsletter with news, events, blogs & resources
- [Catalyst resource library](#): 100+ resources for charities using digital

Tools to help you implement digital projects

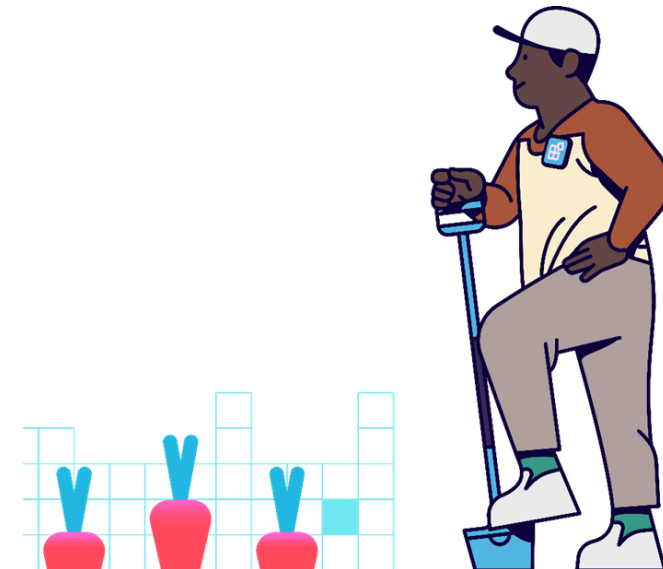
- [DigiSafe](#): A step-by-step digital safeguarding guide, designed for charities
- [Digital Toolkit](#): 25 tools to help guide the development of a digital product or service
- [Open working toolkit](#): Tools and templates designed to make open working easy

Connect with peers and digital experts

- [Coffee Connections](#): A service connecting third sector peers for a virtual chat
- [Data Collective](#): A community for people using data in the social sector
- [Digital Candle](#): One hour of expert digital advice for nonprofit organisations
- [Digital Trustees](#): 30-minute board sessions, and charity / digital expert events
- [Dovetail](#): A directory of Tech for Good specialist digital, data and design agencies

See what other nonprofits are doing in digital

- [Catalyst Medium](#): Regular weeknotes, reflections & thoughts from across the network
- [Service Recipes](#): Practical guides on digital services, written by charities for charities.





Thank you for listening

KATE WHITE

info@superhighways.org.uk

[@SuperhighwaysUK](https://twitter.com/SuperhighwaysUK)

