Data Visualisation and Infographics for Beginners

DISCOVER. LEARN. ANALYSE. SHAPE. REPEAT

Quick warm-up...

Grab your paper and pen
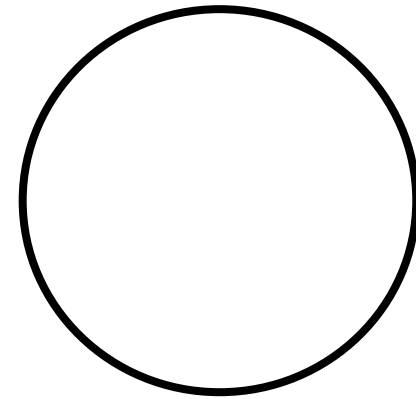Close your eyes
Draw a camel

What we'll cover today

✓ What is data visualisation?
✓ Why it matters
✓ When it's right (and wrong)
✓ How to create them
✓ Where will we share them

Quick task: image versus text

Textual description

A curved line with every point equal distance from the centre

Graphic description

I'm going to give you to the count of 5 to count the 5s…

34847874587563588989274599002294599092099492959490390904973739787837858737878274647384920945892884898002909736538828892067893 0

How many 5s did you see?
Write in chat

348478745877638898
927459900229459909
209949290949039090
497973978783788737
878527464538492094489
28848980029097338837⚲

How many 5s did you see?
Write in chat

WHAT IS...

a data visualisation? What are your thoughts?

A data visualisation is…

"Data visualization is the practice of translating information into a visual context, such as a map or graph, to make data easier for the human brain to understand and pull insights from" Tech Target Network
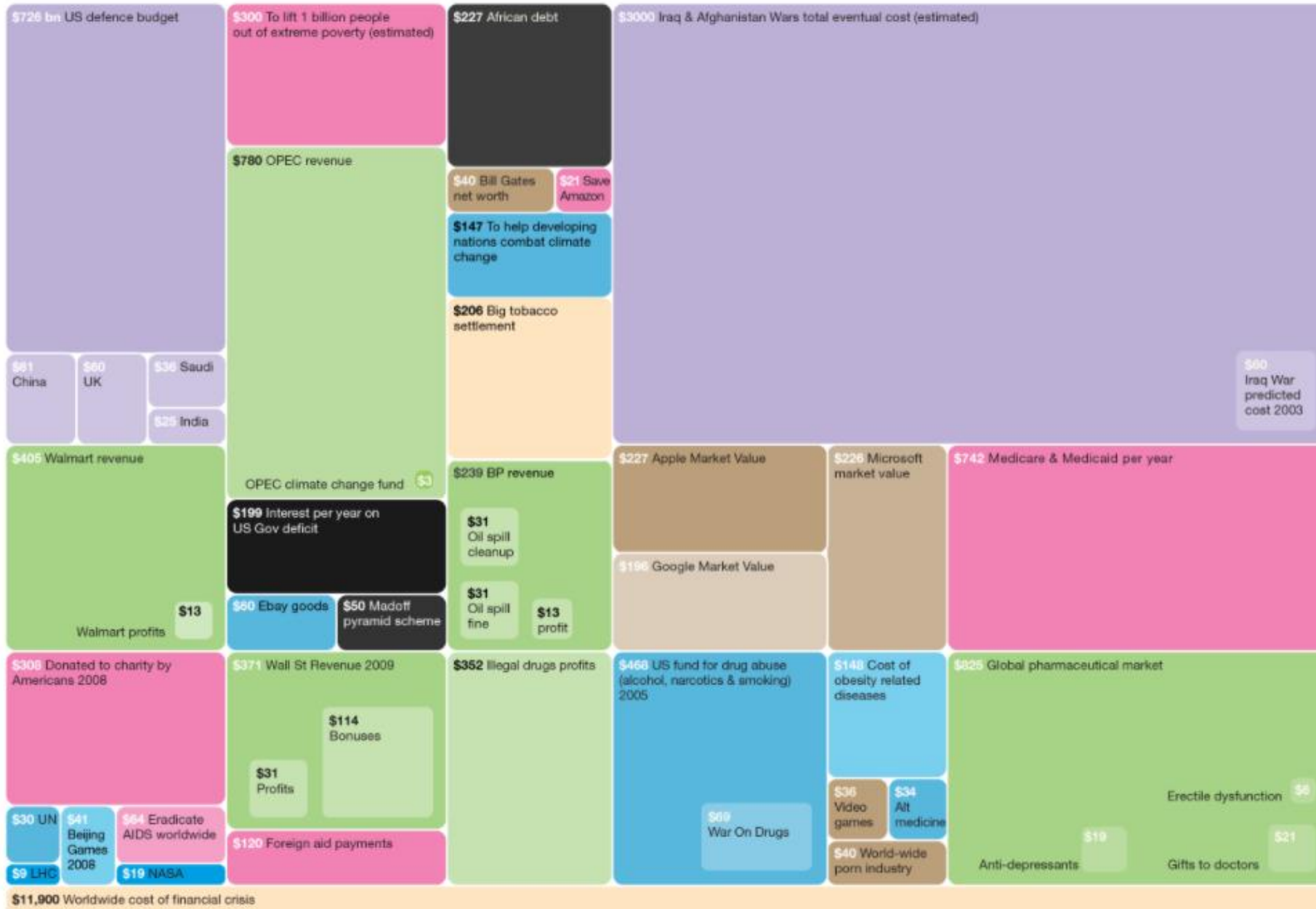
Making it easier to identify patterns, trends and outliers in large data sets.

The Billion Dollar-o-Gram

$726 bn US defence budget

$300 To lift 1 billion people out of extreme poverty (estimated)

$227 African debt

$3000 Iraq & Afghanistan Wars total eventual cost (estimated)

$780 OPEC revenue

$40 Bill Gates net worth

$21 Save Amazon

$147 To help developing nations combat climate change

$206 Big tobacco settlement

$61 China

$60 UK

$36 Saudi

$25 India

$90 Iraq War predicted cost 2003

$405 Walmart revenue

OPEC climate change fund

$239 BP revenue

$227 Apple Market Value

$226 Microsoft market value

$742 Medicare & Medicaid per year

$199 Interest per year on US Gov deficit

$31 Oil spill cleanup

$196 Google Market Value

$13 Walmart profits

$60 Ebay goods

$50 Madoff pyramid scheme

$31 Oil spill fine

$13 profit

$308 Donated to charity by Americans 2008

$371 Wall St Revenue 2009

$352 Illegal drugs profits

$468 US fund for drug abuse (alcohol, narcotics & smoking) 2005

$148 Cost of obesity related diseases

$825 Global pharmaceutical market

$114 Bonuses

$31 Profits

$30 UN

$41 Beijing Games 2008

$64 Eradicate AIDS worldwide

$120 Foreign aid payments

$69 War On Drugs

$36 Video games

$34 Alt medicine

Erectile dysfunction

$6

$9 LHC

$19 NASA

$40 World-wide porn industry

Anti-depressants

$19

Gifts to doctors

$21

$11,900 Worldwide cost of financial crisis

Information is Beautiful

What types of data visualisations are there?

- ✓ Charts & graphs
- ✓ Tables
- ✓ Wordclouds
- ✓ Timelines
- ✓ Diagrams e.g. Tree, Venn
- ✓ Maps
- ✓ Dashboards
- ✓ Infographics

Data viz versus infographics

✓Objective versus subjective?

✓Infographics can contain multiple data visualisations

✓Infographics have a narrative

Like the flow of any great story, a great infographic contains a beginning, a middle and an end, with an overarching narrative that makes the reader continue all the way to the bottom

Freddie Ossberg
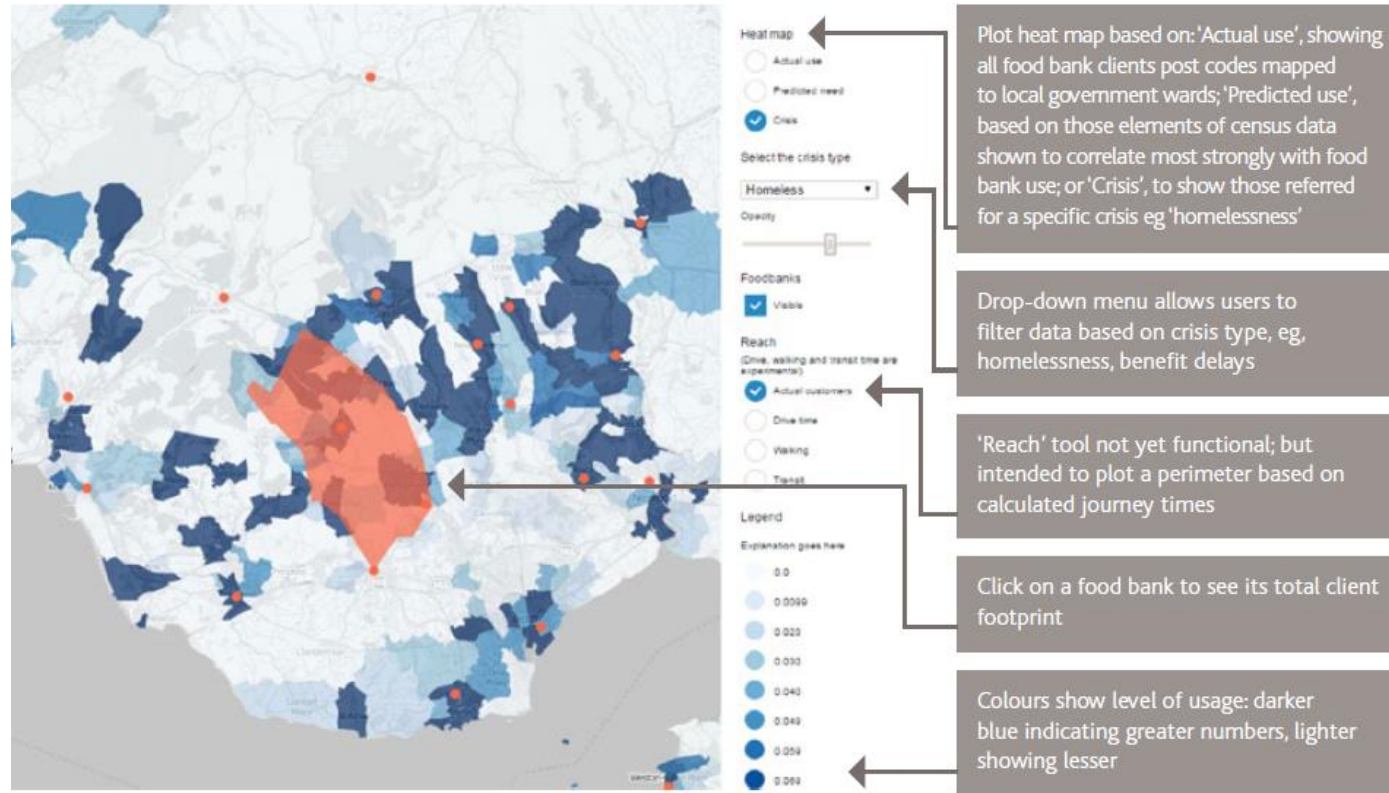Raconteur Media's founder and CEO

WHO'S IT FOR?

And how does it help us reach our goals?

Find a story – understand your data

Better for internal use or external expert audience such as researchers, policy makers, possibly funders
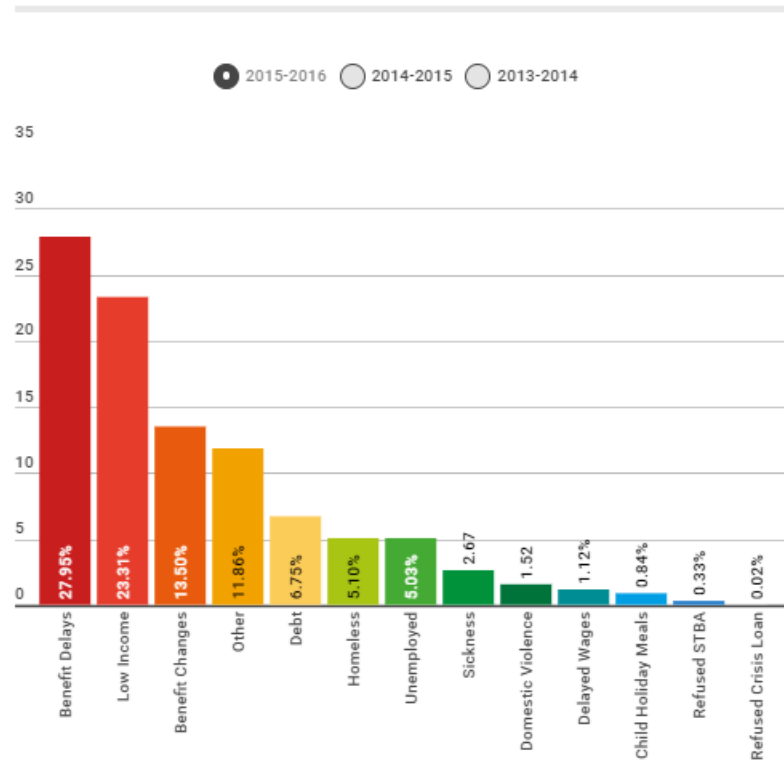
The Trussell Trust Mapping Hunger tool
Annotations from NPC's thinkNPC.org/8innovations
www.trusselltrust.org/wp-content/uploads/sites/2/2016/04/Mapping-Hunger-Report.pdf

Tell a story – share data with others

Primary reasons for referral to Trussell Trust foodbanks

● 2015-2016 ○ 2014-2015 ○ 2013-2014

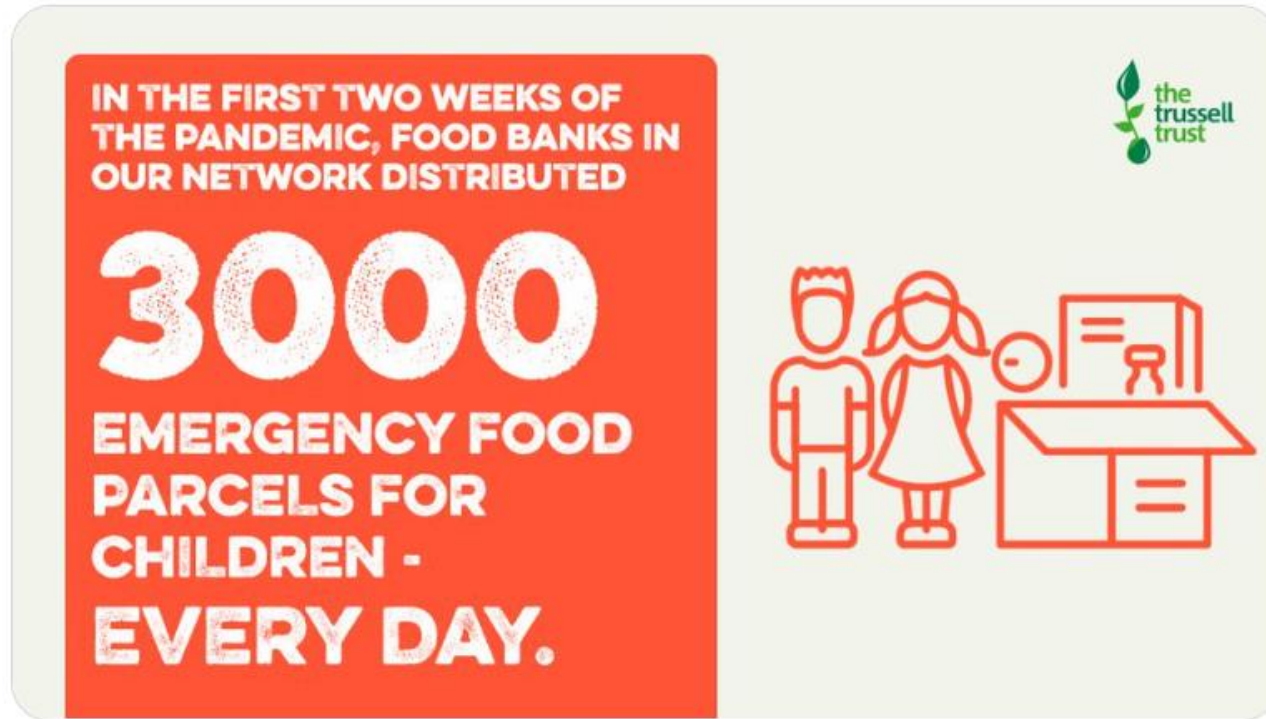| Category	Value
Benefit Delays	27.95%
Low Income	23.31%
Benefit Changes	13.50%
Other	11.86%
Debt	6.75%
Homeless	5.10%
Unemployed	5.03%
Sickness	2.67
Domestic Violence	1.52
Delayed Wages	1.12%
Child Holiday Meals	0.84%
Refused STBA	0.33%
Refused Crisis Loan	0.02%

Journalists, campaigning and policy change groups

Some interested supporters/general public.

Simple comparisons can also be used internally to drive change

Tell a story – share data with others

IN THE FIRST TWO WEEKS OF THE PANDEMIC, FOOD BANKS IN OUR NETWORK DISTRIBUTED

3000

EMERGENCY FOOD PARCELS FOR CHILDREN - EVERY DAY.

the trussell trust

83   64

General public, beneficiaries and donors

When things
go wrong

What can you see?

A light-hearted look at some visualisations.
Breakout rooms in small groups, 4 slides

1. Name what's wrong
2. And what you'd do about it
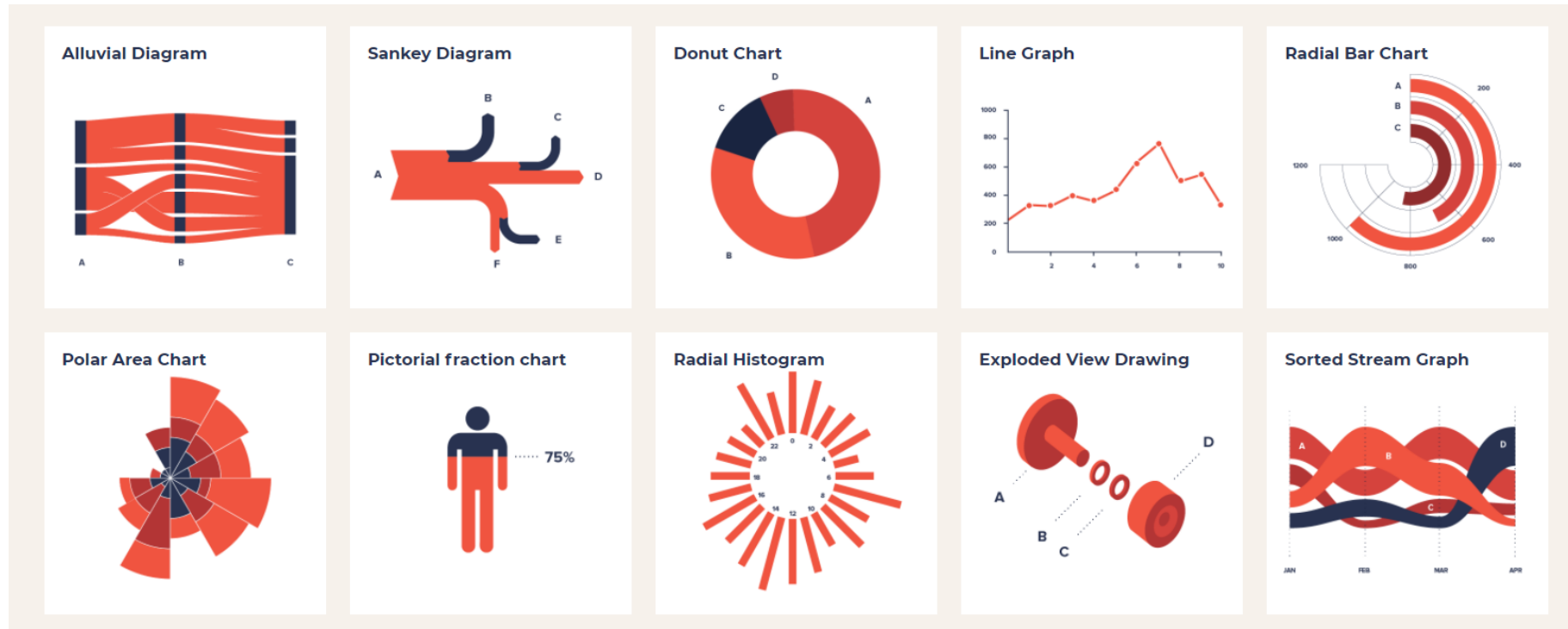3. We'll share back our findings after

The golden rule...

#ShouldveBeenABarChart

Not true, but you do need to think carefully about the right visual for to be true to your data

Choose the right data visualisation

Alluvial Diagram

Sankey Diagram

Donut Chart

Line Graph

Radial Bar Chart

Polar Area Chart

Pictorial fraction chart

Radial Histogram

Exploded View Drawing

Sorted Stream Graph

Simple explanations here at: https://datavizproject.com/

Choose the right chart or graph

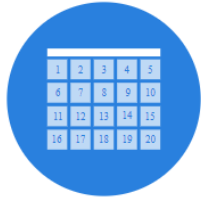|		
Arc Diagram	Area Graph	Bar Chart
Box & Whisker Plot	Brainstorm	Bubble Chart
Bubble Map	Bullet Graph	Calendar
Candlestick Chart	Chord Diagram	Choropleth Map
Circle Packing	Connection Map	Density Plot
Donut Chart	Dot Map	Dot Matrix Chart
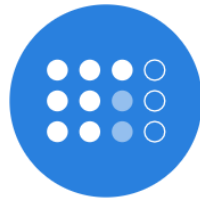
Simple explanations here at:
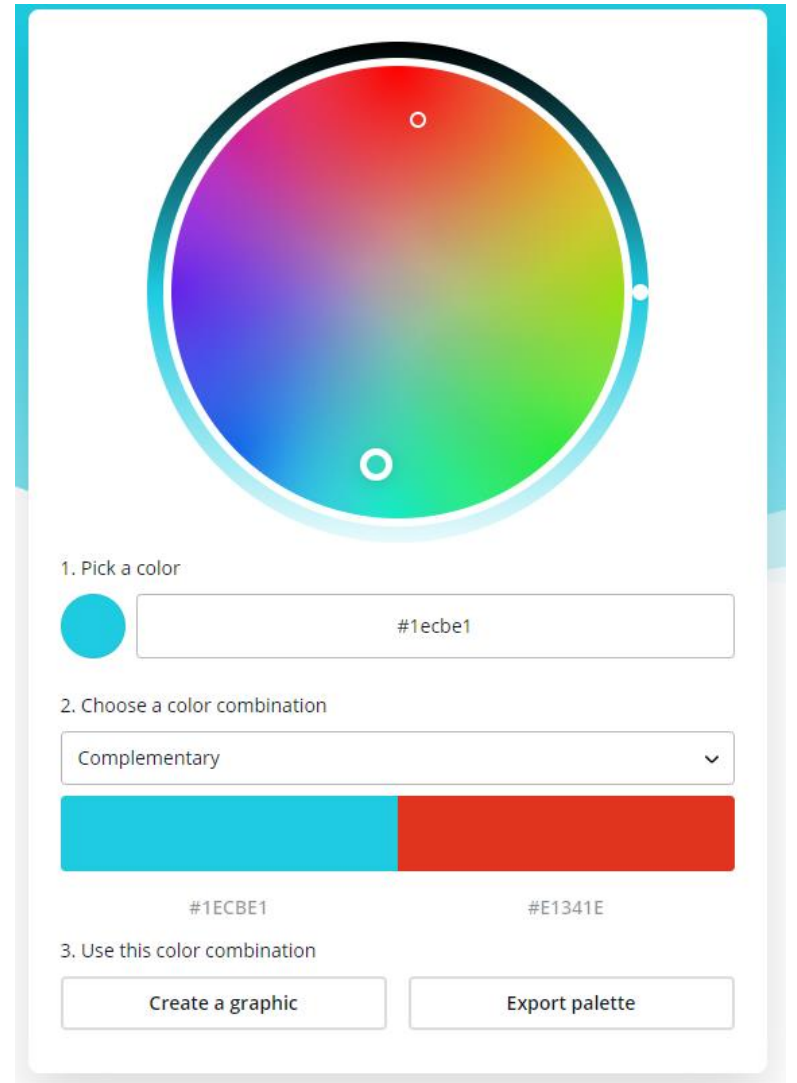https://datavizcatalogue.com/

Choosing the right colours

Use the colour wheel to find colours that are complementary, triadic, shades and more.

Some tools like Canva do this for you in charts based on the first colour you choose e.g. a brand colour

Let's take a quick look...

1. Pick a color

#1ecbe1

2. Choose a color combination

Complementary

#1ECBE1   #E1341E

3. Use this color combination

Create a graphic   Export palette

COMFORT BREAK

Let's make it right...

A simple Canva task

Did you know that women make up **48%** of migrants across the world?

Recreate this simple fact from the UN Global Compact for Migration.

It doesn't need to look the same! But try and use the similar dimensions and icons.

Choose two complementary colours if you want to change them.

Use a maximum of two font types.

Or try a short story?

The international migrant population has grown in size but has remained relatively stable as a proportion of the world's population
1995 – 174 million
2000 – 192 million
2005 – 221 million
2010 – 249 million
2015 – 258 million
2019 - 272 million

This means that migrants have grown from 2.8% to 3.4% of the world's population.

Migrants spend 85% of their earnings in their host communities and send 15% to their country of origin.

See where the other stats came from after the training

Quick demo of Canva and PiktoChart

OVER TO YOU

Complete 1 of the Canva tasks.

20 minutes

GETTING STARTED

Planning your own infographics

Tell a simple short story

Over the last **12 MONTHS** 38 **VOLUNTEERS** gave us **1126.5 HOURS** That equates to **140 WORKING DAYS**

Thanks to all our volunteers!

Or one with greater complexity

Breakfast Changes Lives infographic (No Kid Hungry)

BREAKFAST CHANGES LIVES
HOW?

KIDS WHO EAT SCHOOL BREAKFAST...

MISS LESS SCHOOL — They attend an average of 1.5 more days per year

DO BETTER IN MATH: They average 17.5% higher math test scores

MORE ATTENDANCE + HIGHER MATH SCORES =

20% more likely to graduate high school

AND KIDS WHO EAT BREAKFAST REAP THE BENEFITS AS ADULTS, TOO:

High school graduates on average earn $10,000 more annually

Less likely to experience HUNGER as adults

BUT HERE'S THE PROBLEM
NOT ENOUGH KIDS ARE EATING SCHOOL BREAKFAST.

21 MILLION U.S. kids get free or reduced-price school lunch

Only 1/2 of those kids get breakfast, even though they're eligible

Too many kids are showing up to school hungry. And hungry kids can't learn.

BREAKFAST CAN CHANGE THEIR LIVES

No Kid Hungry starts with breakfast

NO KID HUNGRY   Deloitte.   Supported by Kellogg's   EHC!

Syria: The Explosive Truth infographic (Action on Armed Violence)

SYRIA: THE EXPLOSIVE TRUTH
The impact of explosive weapons in the first two years of fighting

55,274 TOTAL RECORDED DEATHS

40% OF ALL DEATHS RECORDED WERE CAUSED BY EXPLOSIVE WEAPONS

93% OF DEATHS FROM EXPLOSIVE WEAPONS WERE REPORTED TO BE CIVILIANS

AT LEAST 2,330 CHILDREN WERE KILLED BY EXPLOSIVE WEAPONS

Data: VDC (March 2011-April 2013, as of 20 June 2013)

AOAV WORKS TO REDUCE THE WORLDWIDE HARM OF ARMED VIOLENCE

ACTION ON ARMED VIOLENCE
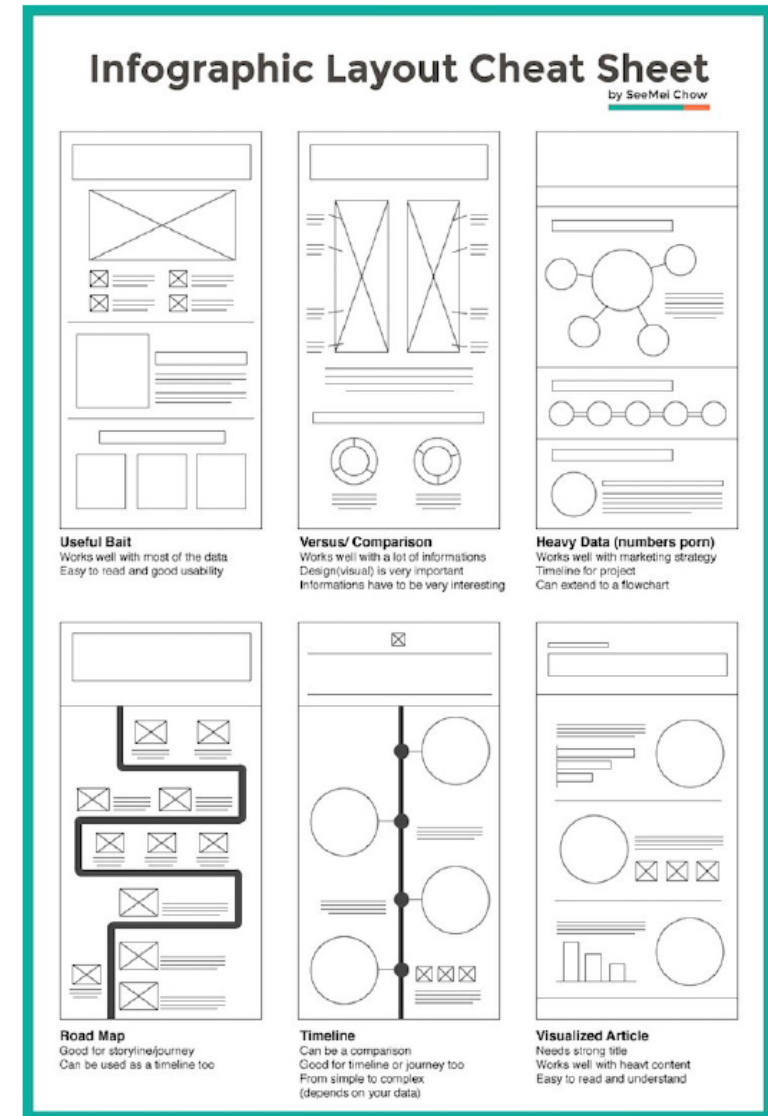
aoav.org.uk | @AOAV   AOAV

A few tips…

- ✓ Write down your narrative
- ✓ Sketch out your plan
- ✓ Look for the data that backs your message
- ✓ Don't overcrowd it
- ✓ Be careful with colour
- ✓ Be kind to you – it takes time
- ✓ Start with a template

Infographic Layout Cheat Sheet
by SeeMei Chow

Useful Bait
Works well with most of the data
Easy to read and good usability

Versus/ Comparison
Works well with a lot of informations
Design(visual) is very important
Informations have to be very interesting

Heavy Data (numbers porn)
Works well with marketing strategy
Timeline for project
Can extend to a flowchart

Road Map
Good for storyline/journey
Can be used as a timeline too

Timeline
Can be a comparison
Good for timeline or journey too
From simple to complex
(depends on your data)

Visualized Article
Needs strong title
Works well with heavt content
Easy to read and understand

What's your story?

What story are you going to tell?

(And who is your story for)

Jot down some ideas – 2 mins

Data viz tools to try

✓ Canva & upgrade to Canva for Work

✓ PiktoChart $40 annually for non-profits

✓ Infogram – 10 projects, 5 pages per project

✓ Easel.ly – free version

✓ Venngage – Need to screenshot for free, then $10 non-profit

✓ Batchgeo – free, paste postcodes

Useful resources

How people perceive visual information

[5 psychology studies with top tips](#)

Choosing the right charts

[Quickly choose the right type of chart](#) for your data (there are even Excel or PowerPoint templates to download).

What to consider when creating a pie chart - [Datawrapper](#)

Choosing the right colours

[The rule of three colours](#) – choosing your colour palette

[Adobe colour wheel](#) for finding complementary colours

[Upload a photo](#) to choose a colour scheme e.g. your logo

Being more accessible

[Writing](#) alt text and making them colour friendly

TRY IT FOR YOURSELF

✓ Write / draw out a short story about your work to share visually

✓ Use a free tool to create it

✓ Book your Ask the Expert 1:1 or share with a colleague for comments

Becoming more datawise

- ✓ Complete our session evaluation
- ✓ Register for [Datawise London support](#)
- ✓ Check training opportunities [on our Eventbrite page](#)
- ✓ Sign up to our [eNews](#)
- ✓ Get help with digital:
- ✓ [London Digital support access form](#)

Thank you for taking part

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