

COMMUNICATE YOUR RESEARCH VISUALLY

PURPOSE

The information on this flyer helps implementation researchers to apply clarity, cognitive load, and storytelling principles to turn complex ideas into clear, compelling, accessible visuals.

CONTRIBUTORS

Content is based on the workshop delivered by GACD in May 2026, applying the excellent work of [Tricia Aung](#) and [Philippa Bradbury](#).

WHAT YOU NEED TO KNOW



A PICTURE SPEAKS A THOUSAND WORDS

Developing an eye for what works (and why) can take your science communication from functional to influential. Our brains devote huge resources to visual processing, which means we grasp images far more quickly than words.



THE GOLDEN RULE: LESS IS MORE

A core principle of visual communication is to reduce cognitive load. Good visuals remove effort; if people think about how to read it, they lose capacity for what it means. By lowering cognitive load, you can improve understanding, recall, and persuasion.



CHOOSE THE RIGHT CHART FOR YOUR DATA

Whether it is a bar graph, a dot plot, or a pie chart, choosing the right type of chart directly affects how clearly and accurately your data is understood.



DESIGN WITH CONSISTENCY, SPACE, AND ACCESSIBILITY

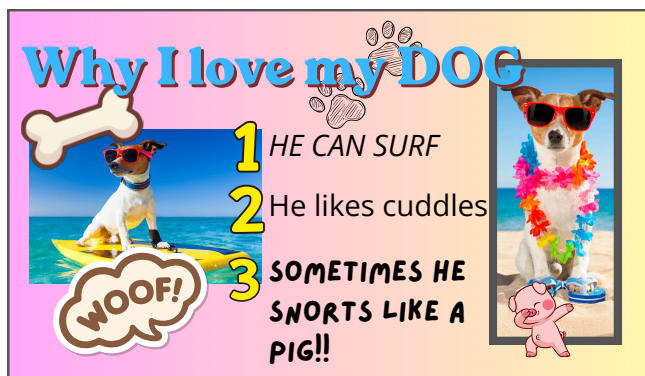
Consistency in fonts, hierarchy, and colour builds trust and reduces friction. Spacing, alignment, and layout guide attention and reduce effort. Accessibility through contrast, colour choice, and perceptual accuracy is better communication for all.

The golden rule: less is more

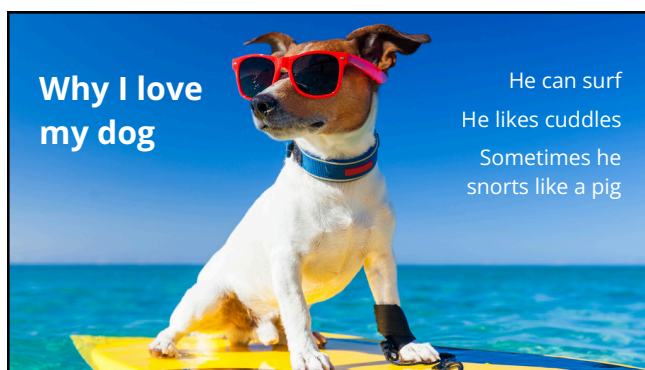
MAKE IT EASY

Visual communication is not just about making things look good. It is about how people understand meaning. Even simple symbols can carry a lot of shared meaning, because our brains are very good at spotting patterns and quickly assigning meaning to them. But once you start combining symbols with things like colour, layout, and size, you are no longer just showing information - you are shaping how people interpret and feel about it. Visuals are powerful, but also risky: people may not always interpret them in the way you expect.

Because of this, the most important principle is to reduce effort for your audience. Good visuals make things easier to understand, not harder. If people have to spend time figuring out how to read a slide or a chart, they have less mental energy left to think about what it actually means. "Less is more" is the golden rule. When you reduce clutter and focus only on what matters, people understand, remember, and are persuaded more easily.



versus



START WITH YOUR KEY MESSAGE

Start with your key message. What is the central idea or essence of what you want to communicate? (Refer back to the flyer 'Unlock your key message'.) Once you have that, you can develop an overview of your content. Only then should you develop your visuals.

1

Key message(s)

then

2

Content

A script outline, a draft poster,
a social media post...

then

3

Visuals

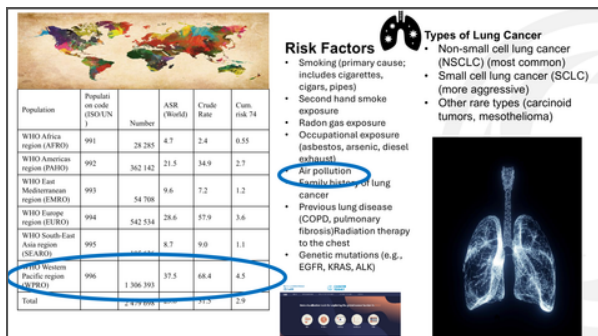
ENHANCE YOUR MESSAGE WITH VISUALS

There are three core ways to visually support what you are communicating. Each of these can be adapted, edited, combined, or reinvented. In each case, the aim is to focus attention on what matters most.

1. **One key message:** Focus your visuals around a single clear idea so your audience immediately understands the main takeaway without distraction.
2. **One data point:** Highlight one compelling statistic or figure to make your message concrete, memorable, and easy to grasp.
3. **One great image:** Use a strong, relevant image to capture attention and reinforce your message emotionally and visually.

One message, one data point, one image - in action.

ORIGINAL SLIDE



The issue with this slide is our audience do not know immediately what matters and what doesn't.

The signal-to-noise ratio is too low.

Signal = the key message you want remembered.

Noise = everything that distracts from it, such as excess detail, cluttered layouts, and decorative but irrelevant visuals.

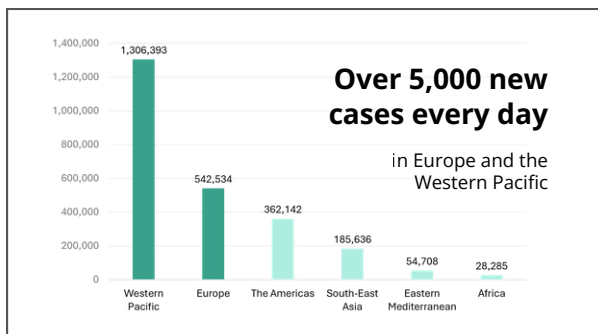
ONE KEY POINT

New cases of **lung cancer** are unacceptably high across the world but especially in Europe and the Western Pacific.

We can address this through stronger tobacco taxes and cessation support.

Showing your key message, with the most important words emphasised for this specific audience, can be a simple but powerful enhancer of your talk.

ONE PIECE OF DATA



It can be very tempting - especially as scientists - to show everything.

But clarity comes from relevance, not completeness. This means making tough decisions about editing

The data table has been edited aggressively, removing redundancies and aligning elements. Then it has been converted into a more digestible chart with a summary call-out.

ONE GREAT IMAGE



The right image does analytical work by setting context and cutting down the text needed. Essentially, it can explain, not just decorate.

When it earns its place, the right image adds clarity without losing rigour.

Be consistent

You can achieve a lot by simply being tidy and consistent with your font, hierarchy, and colour. This creates a sense of coherence, professionalism, and trust.

When you mix fonts and sizes, unintuitive layouts, and colour palettes the audience starts noticing those choices instead of the message.

Consistency should be the default, not the thing you fix at the end.

...WITH YOUR FONT

Use one readable font, with consistent sizing.

It helps with the cognitive load.

IT IS LESS DISTRACTING.

It creates coherence across your communication.

IT IS MORE PROFESSIONAL.

...WITH YOUR COLOUR PALETTE

Use a consistent colour palette for all the visuals in one output. Start by choosing one main colour and one accent, guided by colour theory or tools like the [Canva Colour Wheel](#).

Use colour sparingly as a signal to highlight key information or comparisons. Keep most content neutral. Ready-made or institutional palettes can simplify design and ensure consistency.



...WITH YOUR HIERARCHY

Decide what size your titles, headings, subheadings, and body text are, and stick to it. When these choices are consistent, the audience can immediately see the structure of your argument instead of decoding it.

Title



Heading



Subheading



Text body

Questions to ask:

What size is each level of the hierarchy?

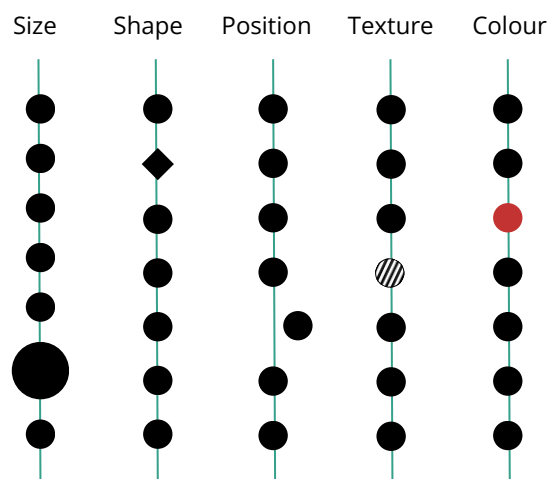
Are You Capitalising Every Word?

Are you using sentence case?

ARE YOU SHOUTING?

Is it in **bold**, *italics*, or neither?

When you are consistent, you can draw attention to where it matters using the pre-attentive system. This system processes certain visual features automatically before conscious attention kicks in. Pre-attentive cues you can use include:



Give yourself breathing space

...WITH LINES AND MARGINS

Effective spacing reduces cognitive effort by guiding the reader's eye and organising information. Twyman's theory stresses that spacing shapes readability through separation and grouping. Too little spacing increases errors, too much disrupts flow.

Too tight
Cluttered
Reading errors

The quick brown fox jumps over the lazy dog. Quick nymph bugs vex fjord waltz. Waltz, bad nymph, for quick jigs vex. Sphinx of black quartz, judge my vow. How vexingly quick daft zebras jump! The five boxing wizards jump quickly. Pack my box with five dozen liquor jugs.

Too loose
Disconnection
Loss of flow

The quick brown fox jumps over the lazy dog. Quick nymph bugs vex fjord waltz.

Waltz, bad nymph, for quick jigs vex.

Sphinx of black quartz, judge my vow. How

vexingly quick daft zebras jump! The five

boxing wizards jump quickly. Pack my box

with five dozen liquor jugs.

Margins matter, too, because they make content easier to process. White, blank, or negative space isn't wasted space: it helps separate ideas and gives the eye somewhere to rest.

Consistent spacing
Generous margins
Calm, clear, professional

The quick brown fox jumps over the lazy dog. Quick nymph bugs vex fjord waltz.

Waltz, bad nymph, for quick jigs vex. Sphinx of black quartz, judge my vow. How vexingly quick daft zebras jump! The five boxing wizards jump quickly. Pack my box with five dozen liquor jugs.

In short, good spacing creates a smooth visual path. Aim for balanced line spacing that supports smooth reading while clearly grouping ideas, using experimentation as needed.

...WITH ALIGNMENT

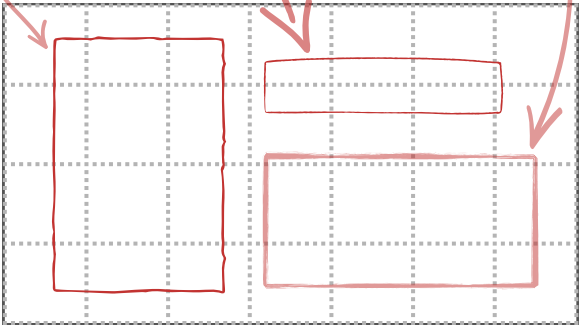
Human perception readily notices misalignment between text, images, and other elements.

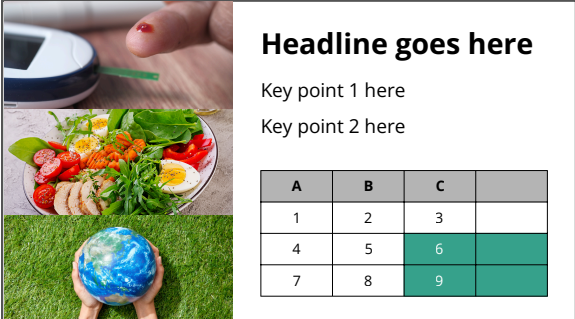
An invisible grid helps you organise content so it feels deliberate rather than accidental, making the layout easier to scan and easier to trust.

Headline goes here
Key point 1 here
Key point 2 here



A	B	C	
1	2	3	
4	5	6	
7	8	9	





Good accessibility is good communication for all

CHOOSE A COLOUR MAP THAT PRESERVES DATA INTEGRITY

Colour should be treated as a scientific choice, not a decorative one. Misuse of colour can quietly undermine effective communication.

A [Nature Communications](#) paper shows that common colour maps can undermine scientific accuracy - not due to aesthetics, but perception.

Many widely used scales (including rainbow or jet) are not perceptually uniform, so equal data changes do not appear equal to the eye. This can create false boundaries, exaggerate some values, and hide others, leading viewers to perceive patterns that are not present.

The authors advocate for perceptually uniform colour maps, grounded in vision science (such as [batlow](#) and [viridis](#)), where colour changes consistently reflect data changes. These scales preserve detail, remain interpretable in greyscale, and are accessible to people with colour-vision deficiencies.

ENSURE YOUR CONTRAST IS READABLE

Look at these colour blocks with text. Which is easiest to read and which is hardest?

Can you read this? 2.37 : 1	Can you read this? 6.11 : 1
Can you read this? 1.34 : 1	Can you read this? 1.3 : 1

We can assign a number to this difficulty called the contrast ratio. The higher the ratio, the easier it is to read.

The smaller the text, the higher the contrast ratio needs to be.

Rule of thumb

> 4.5 : 1 for normal text

> 3 : 1 for large text

and use an [online contrast checker](#).

INCLUDE ALL AUDIENCES

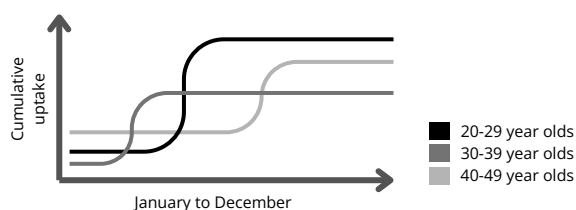
A substantial proportion of humans has some form of colour-vision deficiency. When figures rely on colour differences that some people cannot perceive, those audiences are effectively excluded from the information being presented.

Check if your figure is easily readable in greyscale.

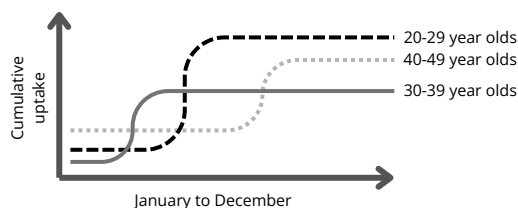
If not, use:

- Direct labels
- Different line strokes
- Different point shapes

✗ NOT APPROPRIATE FOR COLOUR-VISION DEFICIENCY

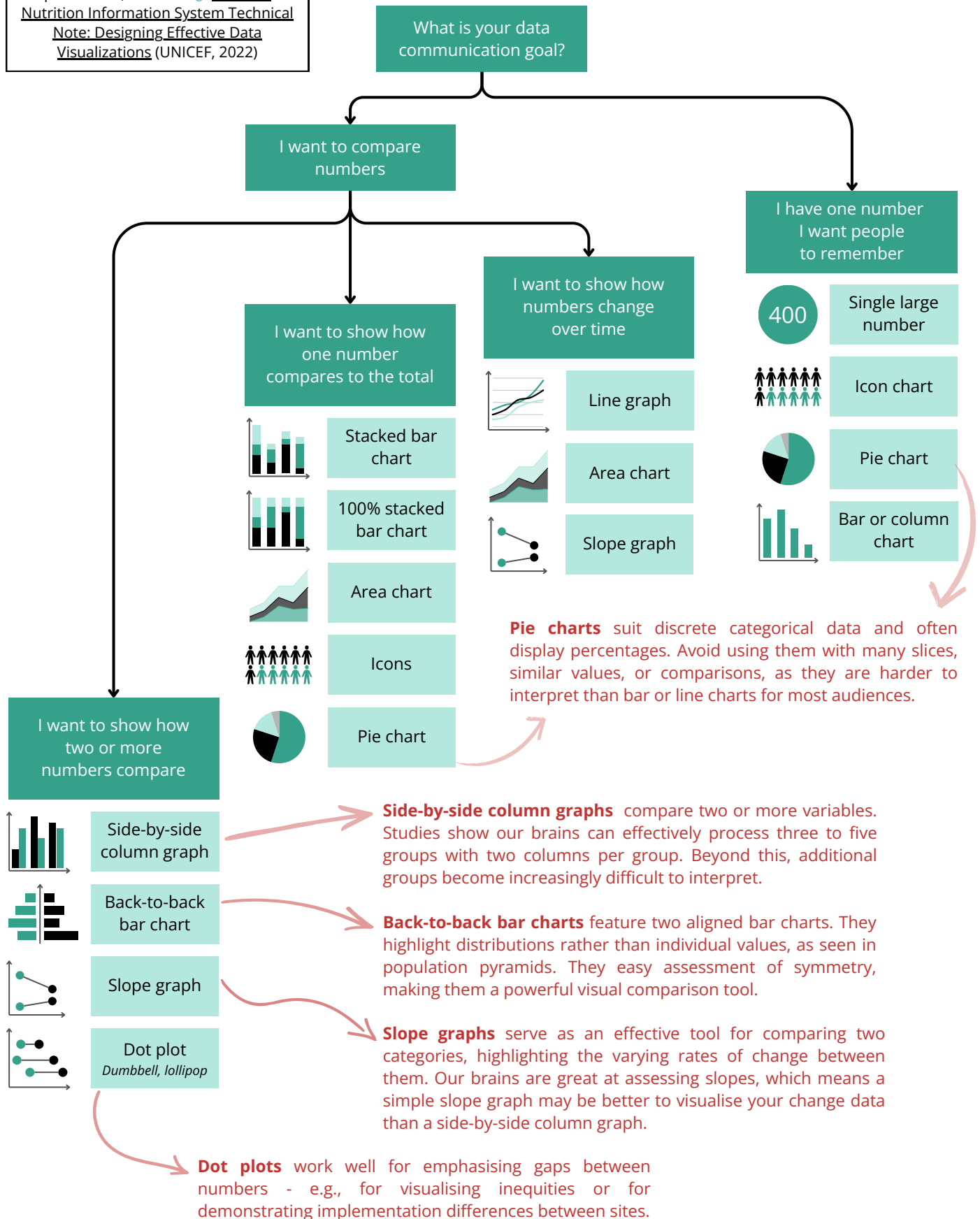


✓ APPROPRIATE FOR COLOUR-VISION DEFICIENCY



Choose the right chart for your data

This flow chart has been adapted, with permission, from the [National Nutrition Information System Technical Note: Designing Effective Data Visualizations](#) (UNICEF, 2022)



A final note on publication screenshots...

Your research publications are great! However, it is unlikely that a screenshot of the title, authorship, and journal reference is the best way to visually communicate about it...

Before taking a screenshot and adding it to a presentation, a report, or a social media post - pause. What is the key message you are hoping to communicate and what would be the best way to visualise that? Go back to the three core options: one key point, one piece of data, or one great image.

But how will your audience find your publication?

Any (shortened) signpost to it will work. Your audience need enough information to find your publication, no more.

PudMed ID	DOI
QR code	Tiny URL
Shortened citation (e.g.) Someone AB et al. 2026. Science. 12(3): 45-67	

Research visualisation checklist



DOES IT MAKE SENSE?

Is the visual clear, simple, and understandable?



DOES IT MATTER?

Is it relevant and intentionally chosen for this message?



CAN THE AUDIENCE USE IT?

Is it accessible, readable, and inclusive?



IS IT WELL-MADE?

Is the layout organised, consistent, and visually appealing?

FURTHER READING

[A guide to data storytelling in the public sector.](#) 2022. Center for Financial and Sustainability Reporting Reform (part of the World Bank Group).

[Science visualization framework toolkit.](#) Zhang A *et al* via Science Communication Institute.

[Data visualization for audiences in low and middle-income countries.](#) 2019. Aung T via Data Visualization Society Nightingale.

[Step-by-step tutorials on how to make dot plots and maps.](#) Tableau Public.

[Data visualization preferences and interpretation capacity among decision-makers in Tanzania.](#) 2019. Aung T et al. Global health research and policy. 4(1):4.

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