Data Visualisations – Best Practice Points to Consider

(based on *https://policyviz.com/wp-content/uploads/2018/08/PolicyViz-DataViz-Cheatsheet.pdf, additional resources available at https://www.data-to-viz.com/*)

Before deciding on a visualisation, it is important to look at some key questions:

➢ *What is your message?*
➢ *What data do you need for this?*
➢ *Who is your audience?*

All too often our motivation is *"we have all this data, let's turn it into data visualisation so that everybody can understand"* without identifying what we want to say or what our audience might want to know. This leads to confusion and information overload, not more knowledge. Once these questions have been answered, it is much easier to design appropriate visualisations.
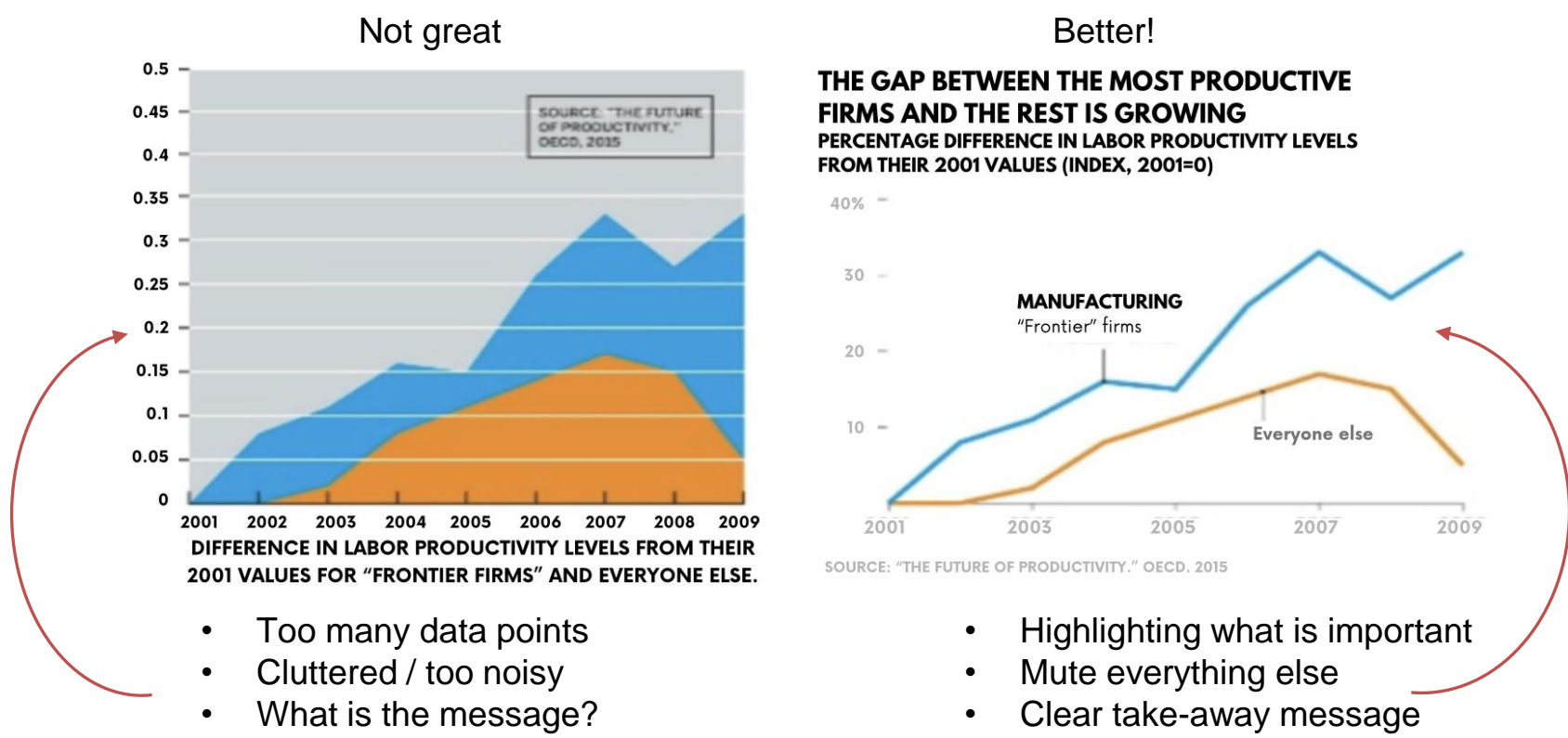
Identify Your Message, Data & Audience

➢ **Ask:** "What do we really want to say?" and "Who needs to see and understand this?"

➢ Tailor visuals to your target stakeholders—clinicians, public health practitioners, policymakers, or the general public.
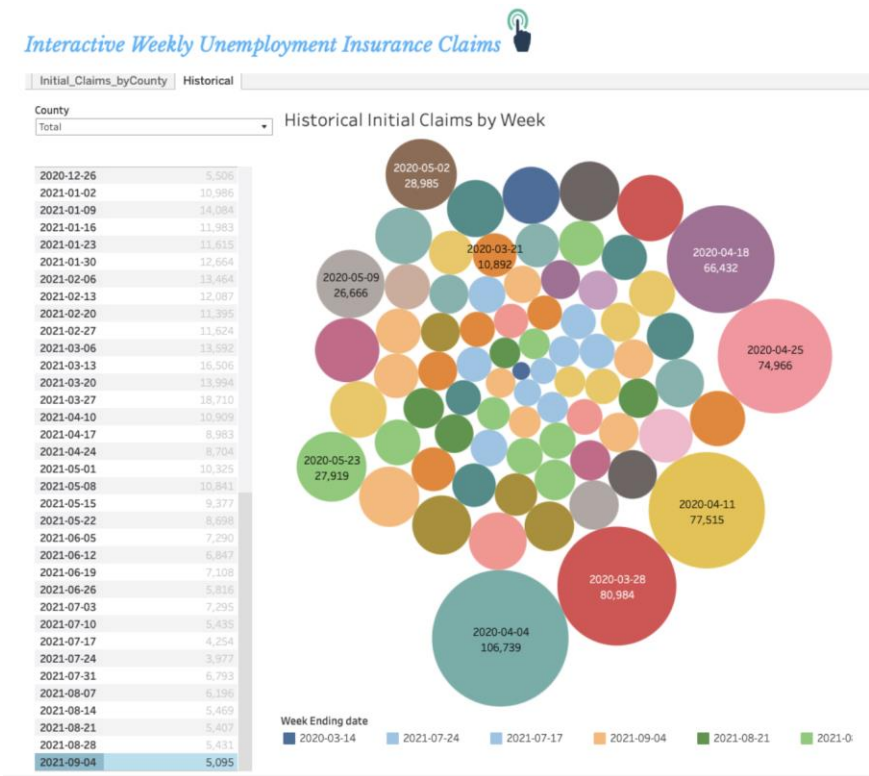
*Who is the audience here? Would this make sense to them or be of use?*

Make It Easy for Your Audience

➢ Use clear labels, explanatory text, and context-specific axis titles (e.g. "Number of hospital admissions (per month)").

➢ Avoid clutter—remove unnecessary gridlines and decorations that distract from key messages.

Not great

• Too many data points
• Cluttered / too noisy
• What is the message?

Better!

• Highlighting what is important
• Mute everything else
• Clear take-away message

Be Selective with Chart Types

➢ **Maps:** Only if you want to highlight geographic patterns.

➢ **Pie Charts:** Limit to comparing parts of a whole (preferably ≤5 slices).

➢ **Bar/Column Charts:** Great for quick comparisons - rotate labels if it improves readability.

➢ **Line Charts:** Illustrate trends over time. Keep multiple lines distinguishable through thoughtful use of colour and spacing.

➢ **Avoid 3D:** Using 3D effects can distort perception and mislead your audience.
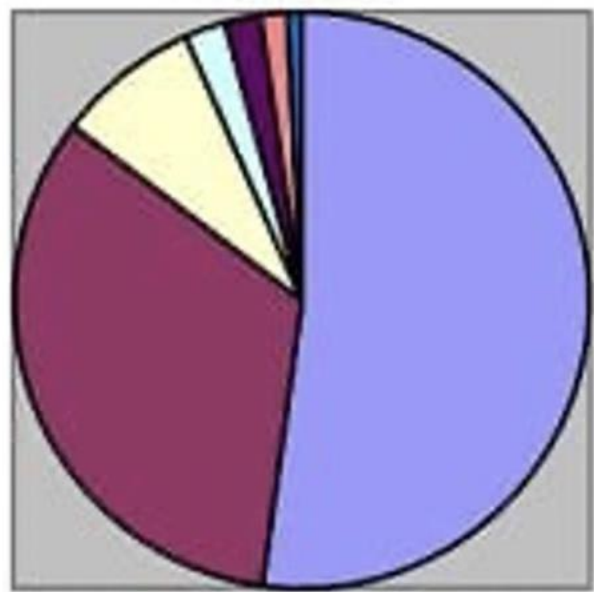

Too many slices, similar colours and not comparing parts to a whole = pie chart not the right choice.
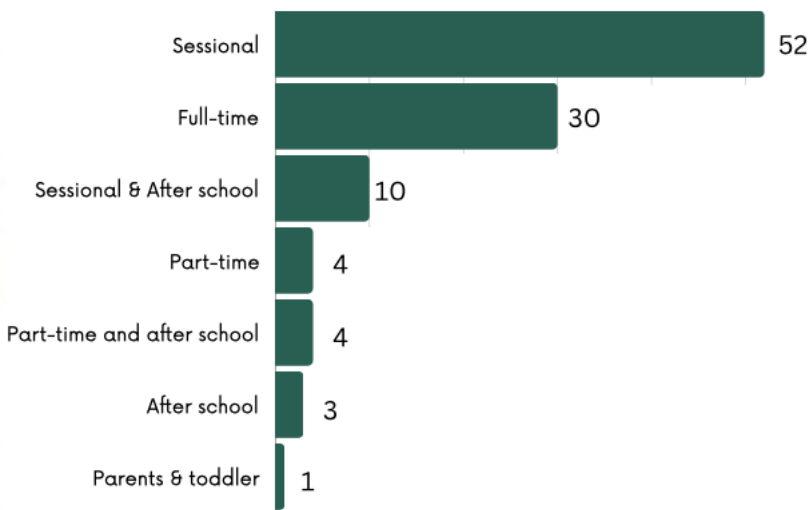
No need for a colour legend and easier to read = bar chart a better option here.

Use Colour Thoughtfully

➢ Enhance clarity, don't obscure it.

➢ Check for colour-blind-friendly palettes (about 10% of people have some form of colour blindness).

➢ Avoid the rainbow palette—try using thematic or sequential colour schemes.

➢ Maintain consistent colour-coding across all charts (blue = Category A, purple = Category B, etc.).
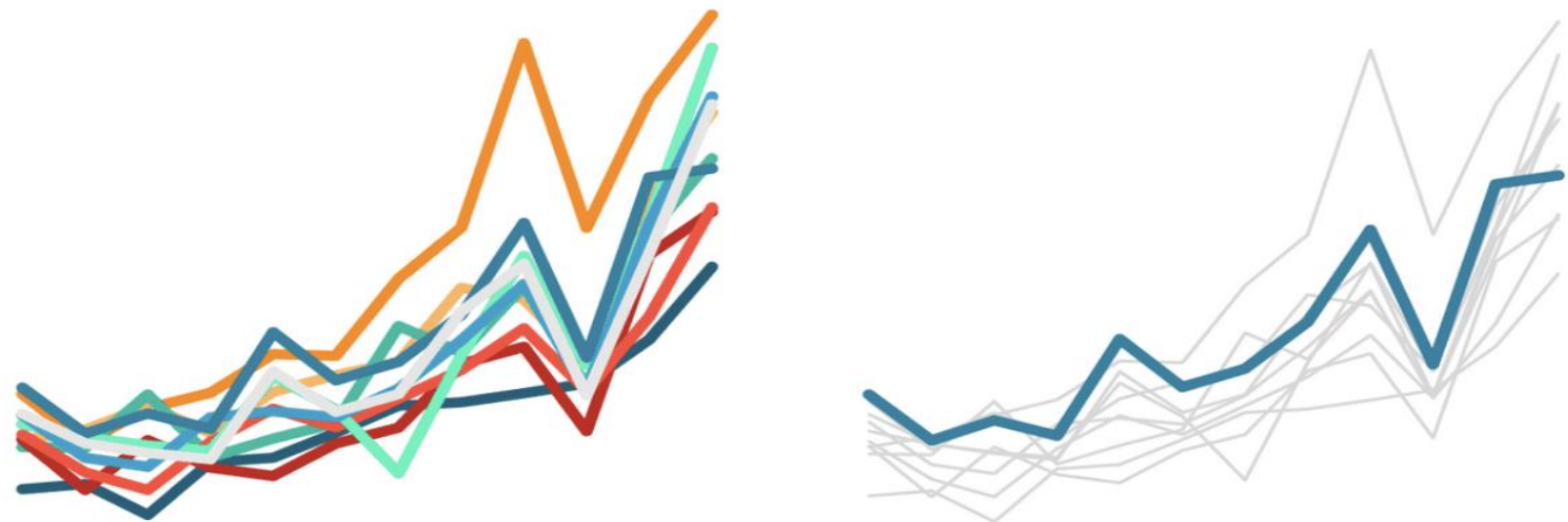
Clutter *vs* **Clarity**

Make Labels Clear & Legible

➢ If vertical labels are unavoidable, rotate the chart to keep them horizontal.

➢ Place the vertical axis label along the bottom or within the chart area if it aids readability.

➢ Keep text concise but informative.

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