

Creative data presentation

Introduction

No matter how comprehensive and revealing your data set might be, raw data do not mean very much to most people. Researchers are increasingly exploiting interactive tools, **data visualisation methods, story-telling methods and film** to make their research data more easily accessible and impactful.

Below are a summary of tips and a range of techniques you can use to present your data more effectively and make your findings stand out.

Setting clear objectives

The starting point is to be clear about the purpose of communicating your data. This will help you filter and prioritise areas of content. Consider the following.

- Who do you want to engage?
- How might your findings or data be relevant to their interests?
- What do you want to achieve through your communication with them?

Aiming for simplicity

The golden rule of communicating data to policy, practice and public audiences is to simplify wherever possible. Too much information is overwhelming. Here are some general principles.

- Try to identify an overarching story or argument that the findings or data illustrate or support.
- Strip out any unnecessary details that do not reinforce this.
- When developing interactive tools, ensure that users can get to the answer that is most relevant to them easily and quickly.
- If you are producing an infographic or image, aim to communicate just one message through the data visualisation.

If you have spent years gathering and refining a complex set of research data, it can be an uncomfortable process isolating just one or two aspects of your work to share with wider audiences.

It might help to think of some of the tools below as merely providing a gateway into your research. They can never do justice to the full picture, but they might serve to hook someone's interest in a way that enables you to start a conversation about what the research means and its relevance to them.

Enabling your audience to interact with your data

Whether it's through the use of spreadsheets that can be manipulated or online data sets that can be filtered (such as those provided through the Health Foundation and Nuffield Trust's **Quality Watch**), researchers have more options than ever before to enable others to interact with their data.

Dr Marisa Miraldo, Associate Professor in Health Economics at Imperial College London Business School, has used interactive tools to communicate her research data on regulation and competition in the health care sector.

Her research team has found that policymakers are more likely to respond positively to evidence if they can use it to generate further information or insights specific to their context. Her team also believe that data need to be presented in a way that enables health commissioners and service providers to assess where they sit on a given range of data points and/or to identify outliers.

“It is particularly powerful when we are able to present our data in formats that enable others to introduce their own figures to the model and interact with the results. If research users can quickly grasp the implications of the data for them, we've found they will engage much more fully with our findings.

Dr Marisa Miraldo

Associate Professor in Health Economics, Imperial College London Business School

Data visualisation techniques



Visualisation is merely a process. What we actually do when we make a good chart is get at some truth and move people to feel it – to see what couldn't be seen before. To change minds. To cause action.

Scott Berinato

Senior editor, Harvard Business Review and author of *Good Charts: The HBR Guide to Making Smarter, More Persuasive Data Visualizations*

Translating information or data into a simple graphic or chart is easy to achieve thanks to a wide range of tools now available. Use of these visuals can be particularly effective on social media channels like Twitter, where image-led updates are much more frequently shared and can help to prompt interest in your research.

Data visualisations tend to fall into one of the following two categories.

- **Declarative data visualisations** aim to communicate a specific message. This means your team needs to decide the one thing they would like to communicate above all else with each visual presentation. Your graphic or chart should then be designed around this single message, so that the headline, labelling, colour scheme and data points all reinforce it.
- **Exploratory data visualisations** enable users to explore the information for themselves. They depend on an intuitive user interface and clarity on the users' likely needs and interests. Producing them is also generally more intensive on time and resources. Remember also that the more complexity you add, the more likely it is that the data visualisation won't be compatible with mobile devices.

The Guardian's [data journalism site](#) is a good source of examples.

If you are commissioning design support for a data visualisation, expect to spend close to £1,000 for a single flat infographic and closer to £5,000 for an animated chart.

When your budget does not allow for this, there is a wide range of DIY tools available online. See the [resources](#) section for more information.

Using film

Film can also enable researchers to communicate their research in dynamic and compelling ways. However, producing films can be very time consuming, and creating an engaging film is likely to require some expertise in the medium.

The best films aim to communicate only one or two core arguments, and are designed around the needs and interests of their audience. They can combine interviews with reportage footage and animated graphs. They help researchers to tell a more human story about their research ideas.

Films must be kept short. Aim for no longer than 2–3 minutes, or less if used as part of a longer presentation.

The time and investment involved in making a film is normally only worthwhile if you have very engaging content, and a strategy for ensuring that the film is seen by the audience you want to reach.

Where this applies, you can use film on your website, share it through social media channels, embed footage in conference presentations and at meetings and events, or email it out to research users. By uploading film to YouTube, you can also increase visibility of content in Google searches.

Resources

With thanks to Anya Pearson at Soapbox, speaker at the think tank communicators' group WonkComms, for sharing tips on the tools and resources to use.

- Read this [article on the use of data visualisation](#) from Scott Berinato.
- Financial Times subscribers can access [The Chart Doctor](#) for practical ideas on how to present data.
- See this [profile of Professor Hans Rosling](#), who helped set a new standard in the communication of statistics.

Data visualisation tools

Visual tools

Canva: a quick and easy way to create slides that can be downloaded as images and dropped into PowerPoint. Large library of free visual elements.

www.canva.com

Easel.ly: provides a set of infographic templates that can be quickly adapted by changing text, colours and images.

www.easel.ly

Flat Icon: a constantly updated bank of free icons for use in your presentations, reports and other documents. These should always be attributed.

www.flaticon.com

The Noun Project: another source of useful icons. These should always be attributed.

<http://thenounproject.com>

Open Heat Map: this free tool allows you to create heat maps from a spreadsheet of data. Watch the introductory video to see how it works.

www.openheatmap.com

Interactive tools

Datawrapper: a tool for creating interactive charts and graphs. The results can either be captured as a screengrab or embedded into a website using the HTML code provided.

<http://datawrapper.de>

Highcharts: a tool for creating interactive visuals that is free for non-profit organisations.

www.highcharts.com

Google Charts: a set of HTML libraries for producing online charts.

<https://developers.google.com/chart>

Dygraphs: a fast and flexible open source JavaScript charting library.

<http://dygraphs.com>

Vis.js: a JavaScript library that's designed to handle large amounts of dynamic data.

<http://visjs.org>

D3.js: a powerful and popular JavaScript library for bringing data to life.

<http://d3js.org>

Paid-for tools

Adobe Illustrator, Photoshop and InDesign are the standard tools that could be used by a designer to create static infographics. Adobe has useful tutorials and forums related to using its tools.

Illustrator tutorials: <https://helpx.adobe.com/illustrator/tutorials.html>

InDesign tutorials: <https://helpx.adobe.com/indesign/tutorials.html>

Data visualisation examples

FiveThirtyEight: a data journalism start-up from journalist and statistician Nate Silver.
<http://fivethirtyeight.com>

FlowingData: the blog of Nathan Yau, author of Data Points, and Visualising Data.
<http://flowingdata.com>

DataViz: improving data visualisation for the public sector. This research was commissioned by the Department for Communities and Local Government to better understand the potential for data visualisation solutions.

www.gov.uk/government/publications/dataviz-improving-data-visualisation-for-the-public-sector

Improving Visualisation: an online resource with examples that link to the research above. A great source of inspiration for new ways of visualising data.

www.improving-visualisation.org

Information is Beautiful: the website of David McCandless, a data journalist and information designer. His blog showcases brilliant examples of beautiful data visualisations.

www.informationisbeautiful.net

Interactive examples

Fossil fuel companies: an example created by Kiln for The Guardian using JavaScript.
www.theguardian.com/environment/interactive/2013/nov/20/which-fossil-fuel-companies-responsible-climate-change-interactive

YouGov Profiler: a free tool from YouGov that utilises data it has gathered.
<https://yougov.co.uk/profileslite#>