Picture the Change Toolkit

## Data Visualisation

1. What is data visualisation?

Data visualisation is a way of presenting information in a graphic format. This can be as simple as a pie chart or graph or using more sophisticated techniques such as infographics or heat maps. Using these tools can help you to present a large amount of information in a simple format and get your message across quickly.

In this resource we outline how data can be presented and the free tools that are available to do this, we also give some examples of how this has been done and the impact it has had for influencing, fundraising and commissioning of services.

2. Why present data in a visual format?

For many people being given a huge list of numbers or spreadsheets of data can be both overwhelming and indigestible. You may be familiar with the data you have collected about your own service or key statistics about the area you are working in. However, for many people looking at this information for the first time they will be unaccustomed to it and it may take time to fully understand it. Translating the data into a visual format can simplify the information and it can also make it more impactful. Sometimes presenting data in a visual format can also help you to uncover patterns that you may not have previously noticed.

It is useful to think about data visualisation when you are trying to get your message across to different people. A commissioner may only spend a couple of minutes trying to understand what your service does or someone looking at your website or email may only spend a few seconds looking at what you do or what your service has achieved. The example below has been produced by Public Health England and illustrates the savings made by investing in drug treatment.
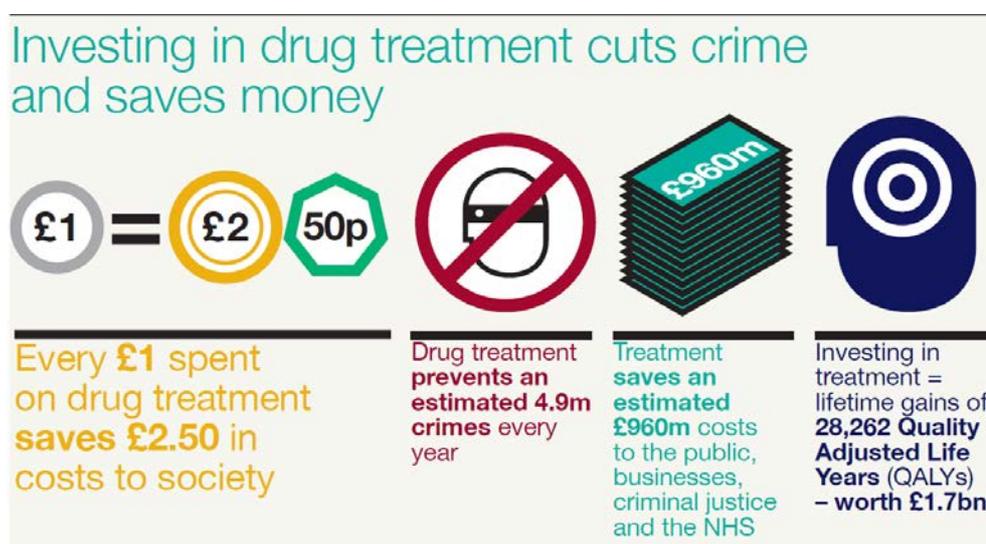
Visual data is also better suited to social media, an infographic can be tweeted or embedded on webpage. The example below is taken from Homeless Link's health needs audit, The Unhealthy State of Homelessness and presents headline findings from the research relating to the physical and mental health of homeless people, levels of substance misuse and hospital use as one image.

3. What data can be used?

Any data that is up to date, accurate and robust can be used. In the same way that data and information is used in normal reporting such as monitoring and outcomes, impact assessments and cost benefit analysis, you need to consider the quality of the data, how complete it is and what you intend to use it for. Some things to consider are:

- **Where has the information come from?** Sources of data still need to be referenced   to give accurate information and date to people looking at and using the image. This is especially important if you are using statistics that have come from more than one source or a secondary source such as a government department or another voluntary sector agency.
- **Is it comparable?** If two sources of information are being used in an image or graph were they collected in a similar timeframe or in the same survey or research study.
- **Is the data accurate and robust?** Would you be happy to use the information in a report or publish the table it is taken from? Presenting accurate data is still important even in pictorial format.

Numerical or quantitative data is not the only type of information that can be presented visually, for example a client's journey could be presented using pictures or a flow chart.

4. What are you trying to say with your data?

Different ways of presenting information may show slightly different things or tell a different story. The example below is taken from Homeless link's annual review of single homelessness.[1] In the first image one piece of

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[1] Homeless Link (2014) Support for Single Homeless People in England Annual Review 2014
http://www.homeless.org.uk/sites/default/files/site-attachments/Support%20for%20Single%20Homeless%20People.pdf

information is presented in relation to the proportion of services that reported that sanctions are concern for their clients. The second image compares this statistic to other welfare issues that are being experienced by homelessness clients using the same services. The second image is able to show that sanctions are by far the biggest issue for clients using accommodation services.
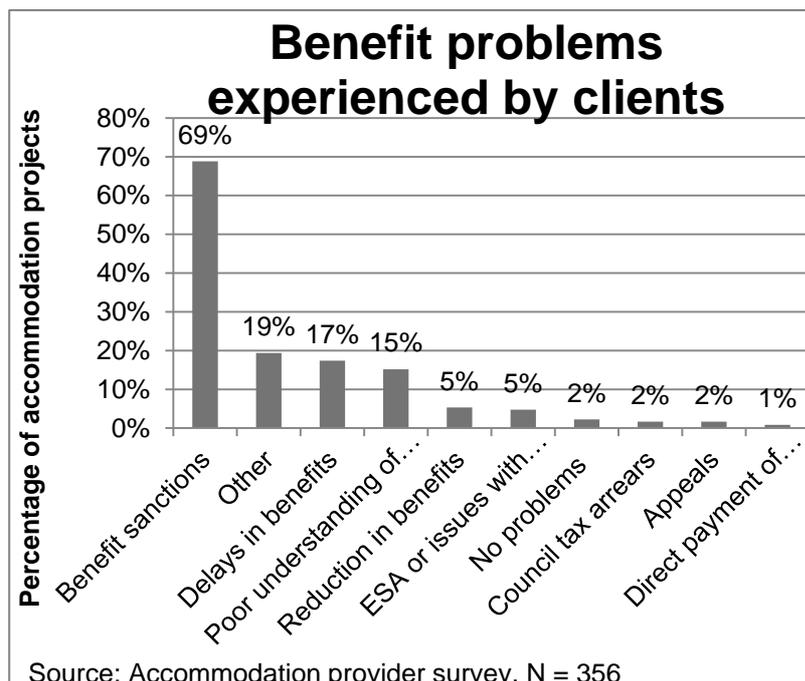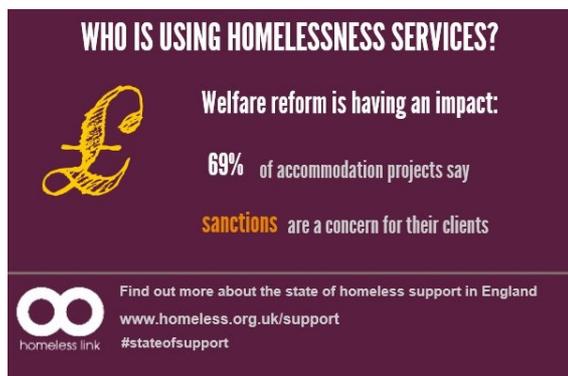
It may also be useful to show trends over time, for example it may be valuable to show how outcomes have improved for your clients since your service has been running or you have introduced a new way of working with clients. Another advantageous way of presenting data may be across different geographic locations. For example heat maps can show how figures vary across local authority areas.

Client case studies or testimonies could also be represented in a visual format, this can be useful if you are trying to present a large amount of complex information.

5. Choosing a tool

There are a number of free tools that are available to present data in a visual format. The websites below are not the only sources available but provide a range of resources that can help get you started with data visualisation.

- **Pictochart** - http://piktochart.com/ provides templates to create your own infographics
- **Tableau Public** - http://www.tableausoftware.com/public/ an interactive tool that allows you to publish information on the web. Once the data has been published anyone can interact with the data, download it, or create their own visualisations of it.
- **Data wrapper** - http://docs.datawrapper.de/en creates charts for the web
- **Google fusion tables** - https://support.google.com/fusiontables/?hl=en#topic=1652595 is an online data and mapping tool which provides means for visualising data with pie charts, bar charts, lineplots, scatterplots, timelines, and geographical maps.

What we do

Homeless Link is the national membership charity for organisations working directly with people who become homeless in England. We work to make services better and campaign for policy change that will help end homelessness.

Let's end homelessness together

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