Introduction to Infographics

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Introduction
By the end of this tutorial you will be able to:

- Define the term infographic.
- Understand different types of infographics.
- Create an effective infographic using a digital tool.

What is an Infographic?
Information + Graphics = Infographics.

“'A visual representation of information or data, for example as a chart or diagram. ‘a good infographic is worth a thousand words’”. (Oxford Dictionaries, n.d.)

The human brain is very well adapted to processing visual information.

This makes data visualizations and infographics very powerful tools for communicating lots of information in an easily digestible format.

You don’t need to be a graphic designer or an artist to make effective infographics - there are lots of free online tools available to help you.

Infographic Best Practice
The mark of a good infographic is its effectiveness in communicating a message concisely and quickly.

David McCandless (2010) – data journalist and information designer - describes this as “knowledge compression”.

- See his website: Information is beautiful.
- Watch his TED talk: The beauty of data visualization.
The Anatomy of an Infographic

Top 10 countries importing UK manufactured goods by Office for National Statistics used under CC BY 2.0

- Focused title with a key message that narrates a story worth telling.
- Simple but visually appealing design; brightly-coloured circles help convey the key message.
- Accurate and well-researched data.
- Produced by a reputable source.

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Types of Infographics

Chart: to present statistics, facts and figures

Household Taxes 2012/13

TAXES PAID BY THE POOREST AND RICHEST 20% OF HOUSEHOLDS
£ (per year) - Figures may not sum due to rounding

Households are grouped into quartiles (or fifths) based on their equivalized disposable income. Equivalence accounts for the fact that larger households are likely to need a higher income to achieve the same standard of living as smaller households. The richest 20% of households have the lowest equivalized disposable income.

**Poorest 20%**
- Capital Tax: 713
- Income Tax: 363
- VAT: 180

**Direct Taxes**
- Employer's NI contributions: 1,256
- Employees' NI contributions: 364
- Other: 180
- Total Direct Taxes: 4,743

**Indirect Taxes**
- 885
- Total Indirect Taxes: 3,488

**Total Taxes**
- 4,743
- 3,488
- 8,231

**Richest 20%**
- Income Tax: 14,559
- VAT: 3,976
- Commercial and industrial rates: 2,602

**Direct Taxes**
- Employer's NI contributions: 816
- Employees' NI contributions: 2,001
- Other: 259
- Total Direct Taxes: 29,462

**Indirect Taxes**
- 2,011
- Total Indirect Taxes: 9,140

**Total Taxes**
- 29,462
- 9,140
- 38,602

*Indirect taxes*
The amount of indirect tax a household pays is determined by their expenditure rather than their income. Indirect taxes can be divided into three types: taxes on goods and services and intermediate taxes, intermediate taxes are taxes paid by companies on inputs into the production of goods and services. It is assumed that companies pass on the value of these taxes onto the final consumer.

Household Taxes, 2012/13 by Office for National Statistics used under CC BY 2.0
Each year 1.7 million deaths of children under 5 are linked to the environment.

- **570,000** deaths: Respiratory infections, including pneumonia
- **360,000** deaths: Diarrhoea
- **270,000** deaths: Neonatal conditions, including prematurity
- **200,000** deaths: Unintentional injuries, such as burns, drowning
- **200,000** deaths: Malaria

Reducing environmental risks could prevent a quarter of these deaths.

Children's Deaths linked to the Environment by DES Daughter used under CC BY-NC-SA 2.0

Cloud computing by Office for National Statistics used under CC BY-NC-ND 2.0

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Girls who stay in education and complete secondary school are:

**More likely to**
- Marry later
- Have higher incomes
- Have fewer children
- Have healthier children
- Have children that go to school
- Take part in decision-making
- Escape poverty

**Less likely to**
- Contract HIV & AIDS
- Contract Malaria
- Undergo FGM
- Die in pregnancy
- Die in childbirth
- Have children who die in infancy

UK aid is supporting over 10 million children to get a good quality education.

Designed by @CPID_UK 13/06/15

[Girls Education Infographic](https://unsplash.com/photos/59Wz07FzGZI) by [UKaid](https://www.ukaid.gov.uk) used under [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/)
The Importance of Self-Care: WHY YOU SHOULD PAMPER YOURSELF

Benefits of relaxing:
- Reduce stress
- Promote the production of your body’s "feel-good" hormones
- Improve cellular function

Low-Cost Self-Care Ideas:
- Search YouTube for a relaxing yoga or meditation routine.
- Write a list of things that make you happy.
- Write down what’s stressing you and, if you want, rip up the paper.
- Find a relaxing hobby.
- Listen to relaxing music with your eyes closed.
- Get a massage from a friend or partner.
- Go for a walk.
- Make a homemade edible facemask.
- Play with a pet for 15 minutes.
- Take a break, alone or with friends.
- Take a bubble bath.
- Pick up or make your favorite treat and savor it.
- Spend some extra time getting ready in the morning.
- Find free local events at places like museums, botanical gardens, and zoos.

Self-care: Allow yourself to do things that make you feel great!

Connect with us:

Good self-care can prevent, delay, or reduce physical and mental health problems

Self-Care by Pain Pix used under CC BY 2.0
Advantages

Clean Energy

Obtaining energy from the wind emits zero emissions into the atmosphere, providing a clean alternative to fossil fuels, which contribute significantly to dangerously high levels of atmospheric CO2.

Less Space is Needed

Wind turbines take up much less space than what is required for a single power station, and the surrounding land can continue to be used for other purposes including agriculture.

Renewable Energy

Unlike fossil fuels, the wind will not run out, and can provide the planet with a limitless supply of ‘free’ power.

Generate Energy in Remote Locations

In remote mountainous or countryside regions, utilising wind power can provide a much cheaper and convenient source of energy.

Do the advantages outweigh the disadvantages?

Disadvantages

Unreliability

The main issue concerned with power from the wind, is that of its unreliability. Wind strength cannot be controlled and in some areas it is just not a viable source of power.

Lower Electricity Output

Wind power generates significantly less electricity than its fossil fuel equivalent, meaning more turbines are required to generate the same amount of power. Wind turbines are also highly inefficient in terms of output capacity.

Expensive Construction Process

Wind turbines are costly to build with one turbine costing up to $1 million per MW of nameplate capacity installed.

Costly to surrounding wildlife

With demand for renewable and cleaner energy sources growing it is likely that the need for land for windfarms will increase, which will potentially damage a high percentage of local wildlife in the process. It is also estimated that each wind turbine kills over 4 birds a year.

Noise Pollution

The noise produced from a singular wind turbine is similar to that of a small jet engine and can be a cause of major concern for those living near a windfarm.

The US accounts for 32% of new installed wind capacity in 2008

Wind Power provides 1.5% of total electricity consumed

In-shore farms could produce up to 40x the world’s total electricity

Wind Power Advantages and Disadvantages

Sources: Clean Energy Ideas and AWEA

Advantages and Disadvantages of Wind Power by GDS Infographics used under CC BY 2.0

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Timeline: to present development over a period

Stress vs Productivity by GDS Infographics used under CC BY 2.0
Lung Cancer

SURVIVAL OF LUNG CANCER IS AMONGST THE LOWEST OF ALL CANCERS

Five-year survival estimates among adults (aged 15-99 years) diagnosed with lung cancer between 2007 and 2011 and followed up to 2012.

LUNG CANCER INCIDENCE AND MORTALITY RATES

Rate per 100,000 population


Incidence Male: Line, Mortality Male: Dash, Incidence Female: Dot, Mortality Female: Dot Dash

Men
48% Decrease in incidence rates

Women
105% Increase in incidence rates

55% Decrease in mortality rates

76% Increase in mortality rates

SMOKING IS STRONGLY ASSOCIATED WITH AN INCREASED RISK OF DEVELOPING LUNG CANCER

Percentage of males smoking cigarettes

2011: 21%
1974: 51%

26% of men smoked heavily (20 cigarettes per day) in 1974 compared to 6% in 2011

Percentage of females smoking cigarettes

2011: 19%
1974: 41%

13% of women smoked heavily (20 cigarettes per day) in 1974 compared to 4% in 2011

The narrowing gap in lung cancer incidence rates between males and females may be due to increasingly similar smoking habits between the two sexes.

www.ons.gov.uk

Lung cancer 1971-2011 by Office for National Statistics used under CC BY 2.0

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Flowchart: to explain stages of a process

Can I upload by Giulia Forsythe used under CC BY-NC-SA 2.0
The journey of a tweet by GDS Infographics used under CC BY 2.0

Ten steps to building an IES system by GRID Arendal used under CC BY-NC-SA 2.0

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### Top 100 Baby Names in England and Wales 2012

<table>
<thead>
<tr>
<th>Boy's Name</th>
<th>Rank 2012</th>
<th>Rank 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARRY</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>OLIVER</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>JACK</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>CHARLIE</td>
<td>▲ 4</td>
<td>5</td>
</tr>
<tr>
<td>JACOB</td>
<td>▲ 5</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Girl's Name</th>
<th>Rank 2012</th>
<th>Rank 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMELIA</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>OLIVIA</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>JESSICA</td>
<td>▲ 3</td>
<td>4</td>
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<tr>
<td>EMILY</td>
<td>▲ 4</td>
<td>5</td>
</tr>
<tr>
<td>LILY</td>
<td>▼ 5</td>
<td>3</td>
</tr>
</tbody>
</table>

Top Baby Names by Office for national Statistics used under CC BY 2.0
ENVIRONMENTAL IMPACTS ON HEALTH

WHAT IS THE BIG PICTURE?

FACT:
23%
of all global deaths are linked to the environment.
That’s roughly 12.6 million deaths a year.

WHERE IS IT HAPPENING?

3.8 million
in South-East Asia Region

3.5 million
in Western Pacific Region

2.2 million
in Africa Region

1.4 million
in European Region

854 000
in Eastern Mediterranean Region

847 000
in the Region of the Americas

World Health Organization
#EnvironmentalHealth

What is the big picture? by DES Daughter used under CC BY-NC-SA 2.0
The most polluted places by GDS Infographics used under CC BY 2.0

Top 10 countries importing UK manufactured goods by Office for National Statistics used under CC BY 2.0

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Hierarchical: to present data according to levels

Waste management hierarchy by GRID Arendal used under CC BY-NC-SA 2.0

Hierarchy of Interface for Tabletop Games by Daniel Solis used under CC BY 2.0
Visualised numbers: to add visual interest to numbers

**British Cycling Infographic** by Andreas Kambanis used under **CC BY 2.0**
Creating Infographics: The Process

1. Choose your topic and ensure it is relevant and engaging.
2. Define your audience. This will dictate your content depending on their prior knowledge of the topic.
3. Define your aims and objectives to give the infographic purpose and structure.
4. Research your topic and find images to effectively illustrate your key points.
5. Organise your information, references and data in a clear and visually appealing design.
6. Choose a digital tool and get creating.

Digital Tools for Creating Infographics

Visme

- Standard version is free
- Create interactive and animated infographics
- Embed data widgets, voice, music and video
- Download the infographic for offline use
- Add others as collaborators
- Create up to five projects at a time

Getting Started with Visme Infographics (YouTube Video)

Visme website

Piktochart

- Standard version is free
- Create infographics with animated charts and graphs
- Embed videos
- Download your infographics
- Create unlimited projects

Introduction to Piktochart (YouTube video)

Piktochart website

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Summary
You have reached the end of this resource. This information has been adapted from the
Introduction to infographics tutorial.

Why not look at some of our other Research Skills and Critical Thinking resources? Book
onto a Workshop or take an Online Tutorial.

Visit our FAQs: Library FAQs

Get in touch: library@sheffield.ac.uk

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Full URLs
Information is beautiful website https://informationisbeautiful.net/

The beauty of data visualization (TED talk)

Information is beautiful (book)
https://find.shef.ac.uk/permalink/f/15enftp/44SFD_ALMA_DS21203368840001441

Top 10 countries importing UK manufactured goods https://flic.kr/p/ptkS7X

Office for National Statistics https://www.flickr.com/photos/statisticsons

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Household Taxes, 2012/13 https://flic.kr/p/oeaWU6

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Pain Pix https://flic.kr/p/uThEUo

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