

Introduction

There are multiple ways of making an infographic. Professional designers commonly use graphical illustration packages to compile the various components but a Data Scientist may use specialist software to produce one or more data visualisations, typically these will have an element of dynamism to allow for changes over time, for example when using dashboard software (when many graphical representations of various data can be manipulated for basic analysis).

Planning

Regardless of how you decide to create your infographic it is always good to sketch out your ideas before you start. The simplest way of doing this with a pen and paper is still the best and is especially useful when working within a group as changes can be made quickly and easily.

Production

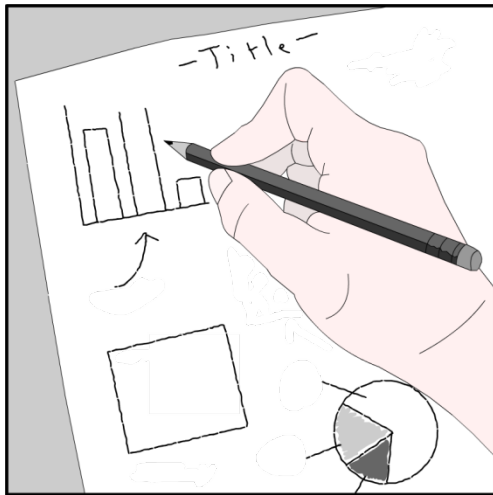
Below are three alternative methods of producing an infographic.

1. Produce everything by hand then scan the result so you have an electronic copy.
2. Create individual elements and then compile them e.g. using Excel and Word.
3. Use dedicated software to produce everything. This can be done using a programme like Photoshop or Illustrator, or software like <https://infoagr.am> or <http://piktochart.com>.

You could combine elements from all three, for example you could add a scanned image to a Word document or import an Excel graph into a graphics editing application.

Hand-Made

1. First decide on the size (no smaller than A4 and no bigger than A3) and proportions of your background and then make a rough plan on a separate bit of paper with these exact dimensions.
2. Produce all the graphs, illustrations and text you wish to use in your infographic.
 - If everything is by hand you will have to guesstimate proportions for each element, here your pen and paper plan will come in handy!
 - If you are producing parts of the infographic in Excel, or something similar, you should adjust the size of each part before printing.
3. Prepare all your graphs, illustrations and text by cutting them to size. For straight lines use a guillotine.
4. Prepare your background using white or coloured paper (white is recommended as it will scan better), then stick everything down. If you wish to experiment with the layout first use something like Blu-tack.
5. To make it easier to scan your work you may wish to laminate it at this stage, this will stop glue getting on the scanner screen.
6. You should now scan your work. You can save the file as a .JPEG or .PNG image or as a .PDF document. You may also save the file as Word .doc or .docx document but you will need to convert it to a .PDF in order to submit it for the competition.



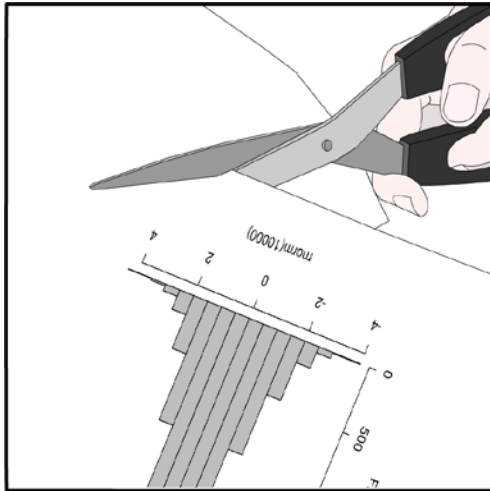
After you have discussed what to add to your infographic you should produce a rough layout.

This should be sized and proportioned the same as your final infographic, remember it should be no smaller than A4 and no bigger than A3.

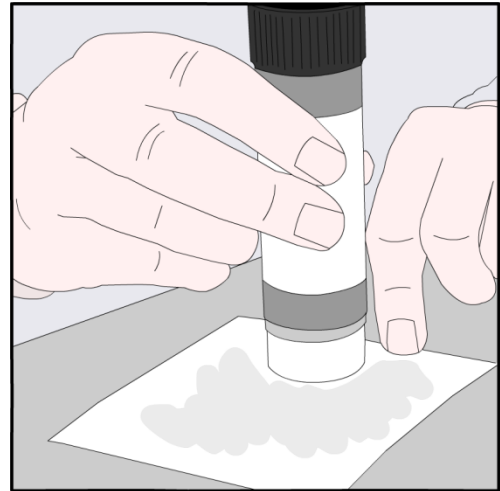


Create graphs, text and illustrations by hand or use a computer and print your work - use 'Print preview' to help gauge the size for each element before you print.

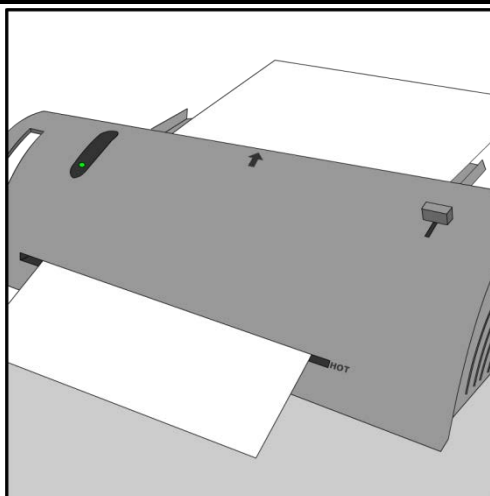
If you are producing content in Excel copy & paste it into Word as you may find it easier to manipulate and print multiple elements in this way.



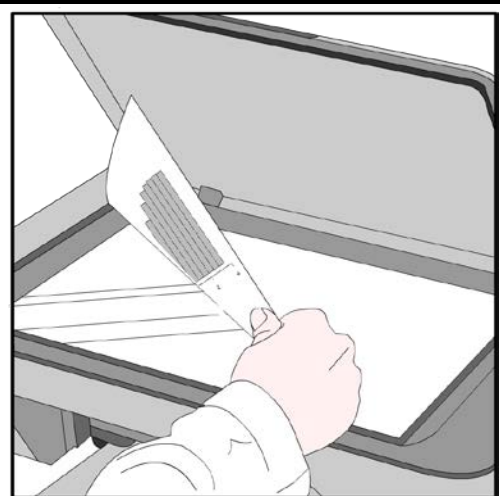
Carefully cut out all the graphs, text and illustrations. If the shapes are rectangular or square use a guillotine to get a straight cut.



Stick these to your background. Use your plan as a guide. If you want to see what it looks like before gluing anything down affix everything with Blu-tack first.



It is a good idea, but not necessary, to laminate the infographic. This will make it easier to scan.

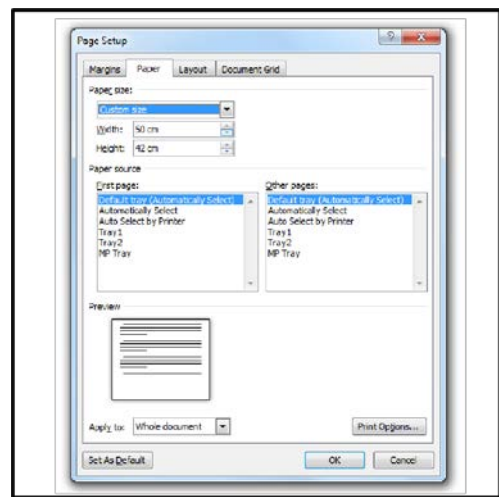
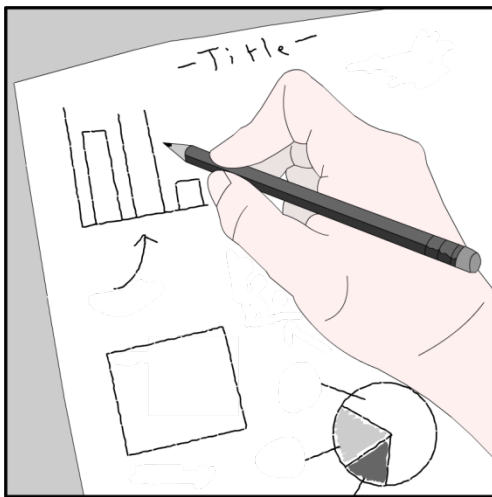


If the work is not laminated make sure the glue is dry and consider placing a transparency underneath to protect the scanner screen. Save the file as an image or as a .PDF document.

Excel & Word

This example uses Excel and Word to produce an infographic but you could use other software.

1. Decide on the size (no smaller than A4 and no bigger than A3) and proportions of your background and then make a rough plan on a separate bit of paper with these exact dimensions.
2. Set the background up in Word and then save the document. You should save your work regularly!
 - If your background is A4 there is no need to change the default settings. If the background is anything bigger than A4 you must change the page to A3 (roughly 29.7 cm x 42 cm).
 - You may wish to change the background colour, add a border or change the size of the margins.
3. Produce all the graphs, illustrations and text for your infographic. The best way to add text is to use a text box. You can add graphs and illustrations easily using 'Insert' on the toolbar.
4. You can adjust the size of elements in Word and move images around to see what works best. Once you are happy you should save your work as a .PDF document in order to submit it for the competition, if this is not possible save it as a Word document as it can always be converted later.

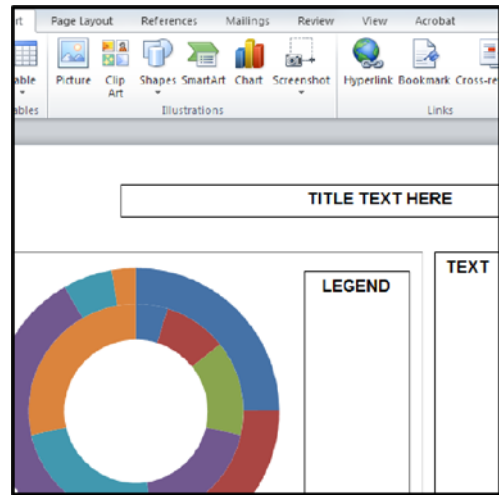


After you have discussed what to add to your infographic you should produce a rough layout.

This should be sized and proportioned the same as your final infographic, remember it should be no smaller than A4 and no bigger than A3.

If the size is A4 keep the default size settings and simply adjust the margins. However, if your background is bigger than A4 but smaller than A3 change the page size to A3.

You also can change orientation, background colour, add borders etc.



Produce all your graphs in Excel and then Copy & Paste them to Word. Text wrapping, found under the 'Format' tab when an object is selected, is useful, try 'In front of text' to move objects around easily.

Add any text, including titles to a text box. This makes it much easier to move elements around. You can hide the border of a text box by changing its colour.

Below are some common procedures to help construct your infographic using Excel and Word (this is using Office 2010 but the procedures will be similar for previous versions).

SET PAGE for A4

- Select the **'Page Layout'** tab from the main menu,
- Click on **'Margins'** in **'Page Setup'** and select **'Narrow'** or another margin pre-set,
- If don't intend to print your work select **'Custom Margins'** and set them to whatever you want.

SET PAGE for A3

- Select the **'Page Layout'** tab from the main menu,
- Click on **'Size'** in **'Page Setup'** and then select **'More Paper Sizes'**,
- Change the width and height to 29.7 cm x 42 cm and click **'Ok'**,
- You will get an error message about the margins being outside the printable area,
- Acknowledge the warnings. Click **'Fix'** or **'Ok'**. Set the margins as with the A4 instructions.

There is no need to print your work but if you wish to you will need to have the appropriate printer and printer software (printer driver).

SET BACKGROUND COLOUR

- Select the **'Page Layout'** tab from the main menu,
- Click **'Page Colors'** in **'Page Background'** and then select a new colour,
- You could choose custom colours by changing the Red, Green and Blue (RGB) mix,
- You may need to change the text colour. This can be done in **'Font'** under the **'Home'** tab.
- Remember you can change the background colour of text boxes too.

Consider accessibility, can the text be read? Would it be hard to read for someone with vision impairment?

ADDING IMAGES

- Select the **'Insert'** tab from the main menu,
- Click **'Picture'** in **'Illustrations'**, the file browser will open,
- Navigate to your to the image you wish to add, select it and click **'Insert'**.

It is best to change the **'Text Wrap'** to help position the image.

- Select the image on-screen and then click the **'Picture Tools'**, **'Format'** Tab.
- Click **'Text Wrap'** in **'Arrange'** and select **'In Front of Text'**.

ADDING TEXT BOXES

- Select the **'Insert'** tab from the main menu,
- Click **'Text Box'** in **'Text'**, the built in text box options will appear,
- Select **'Simple Text Box'**.
- Resize the text box by selecting it on-screen and then clicking, holding and dragging any of corners.

When selected you can use the **'Drawing Tools'** option to change aspects of the text box such as the background colour, borders, text style and position.

ADDING GRAPHS

It is possible to create your graphs in Word using the drawing tools but it is far easier to produce a graph from data in Excel this includes; Bar Chart, Pie Chart \ Donut Chart, Histogram, Box Plot, Population Pyramid, Scatter Plot.

- With both Word and Excel open select the graph in Excel.
- Right-click the graph to view additional options,
- Click '**Copy**' or use the keyboard shortcut '**Ctrl + C**',
- In Word right-click and click 'Paste' or use the keyboard shortcut '**Ctrl + V**'.

SAVE AS PDF

There is more than one way of saving a Word document as a PDF, this will depend on what version of Word you are using. You must make sure the document is already saved as a Word document first.

- Click '**File**' and then select '**Save As**',
- In the popup you can change the default file name, in the box below you can change the file type,
- Name the file and change the '**Save as type:**' dropdown to '**PDF**',
- There are some additional options but you can leave the defaults and simply click '**Save**'.

One alternative it to opt to print to PDF. Select '**Print**' and change the printer to '**Adobe PDF**' and click '**Print**'. The usual save dialogue box will open so that you may save and view the PDF.

SAVE AS A WEB PAGE

You may wish to display your work online, this can be done by saving as a PDF but Word has an easy way of saving documents as HTML (a web page). HTML restricts certain characters in file names so it may be best to use alphanumeric characters when you save your page.

- Click '**File**' and then select '**Save As**',
- In the popup you can change the default file name, in the box below you can change the file type,
- Name the file and change the '**Save as type:**' dropdown to '**Web Page**',
- There are some additional options but you can leave the defaults and simply click '**Save**'.

The resultant file is saved as a .htm page and can be published online in this form.

PRODUCING GRAPHS

You will probably want to add a graph to your Infographic, this can be done easily using Excel. Below is a link to a resource called 'Graph It' that shows you how to step-by-step produce various graphs.

- Bar Chart
- Pie Chart
- Histogram
- BoxPlot
- Population Pyramid
- Scatter Plot
- Time Series

You can find the resource here: http://iase-web.org/islp/apps/gov_stats_graphing