Effective Data Visualisation

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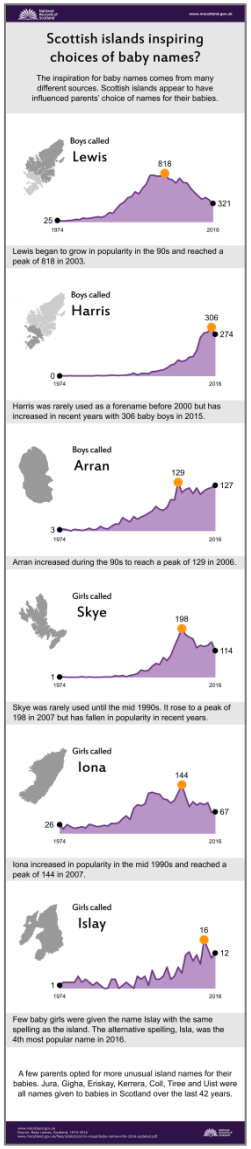
Assistant Statistician

National Records of Scotland

Preserving the past | Recording the present | Informing the future

scotland.shinyapps.io/babynames



Scottish islands inspiring choices of baby names?

The inspiration for baby names comes from many different sources. Scottish islands appear to have influenced parents' choice of names for their babies.

Boys called Lewis

818

321

25

1974

2016

Lewis began to grow in popularity in the 90s and reached a peak of 818 in 2003.

Boys called Harris

306

274

0

1974

2016

Harris was rarely used as a forename before 2000 but has increased in recent years with 306 baby boys in 2015.

Boys called Arran

129

127

3

1974

2016

Arran increased during the 90s to reach a peak of 129 in 2006.

Girls called Skye

198

114

1

1974

2016

Skye was rarely used until the mid 1990s. It rose to a peak of 198 in 2007 but has fallen in popularity in recent years.

Girls called Iona

144

67

26

1974

2016

Iona increased in popularity in the mid 1990s and reached a peak of 144 in 2007.

Girls called Islay

16

12

1

1974

2016

Few baby girls were given the name Islay with the same spelling as the island. The alternative spelling, Isla, was the 4th most popular name in 2016.

A few parents opted for more unusual island names for their babies. Jura, Gigha, Eriskay, Kerrera, Coll, Tiree and Uist were all names given to babies in Scotland over the last 42 years.

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Baby names trends in Scotland since 1974

Enter a **name**, select the **gender** and click on '**Apply**' to see how a name's popularity has changed over the years.

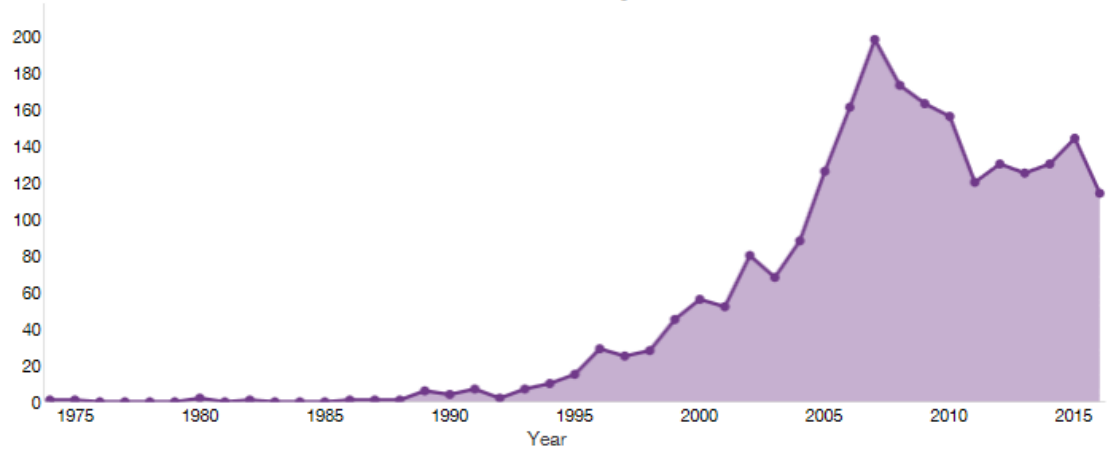
App might be slow at busy times. Please be patient.

Name: skye

Gender: Female

Apply

Girls named Skye



How to use this app

Hover over years to highlight individual values

Click and drag to zoom

Double-click to zoom out

Data: Baby names, Scotland, 1974-2016 (xlsx)

Data: Baby names, Scotland, 1974-2016 (csv)

Publications: Baby names, Scotland, 1974-2016

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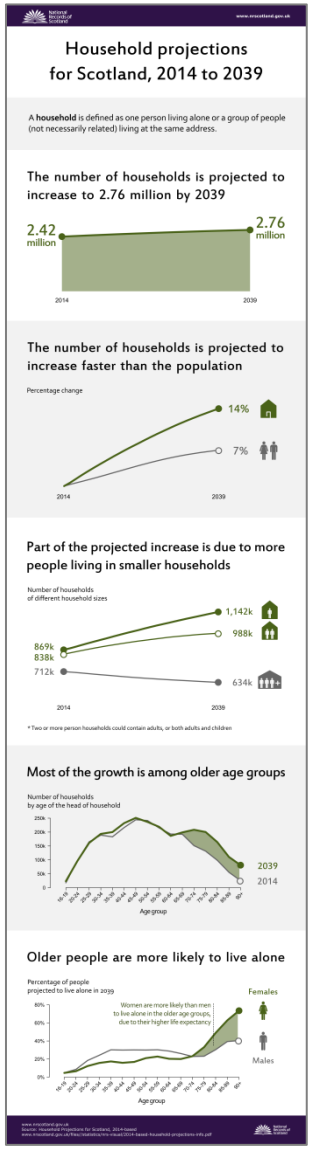
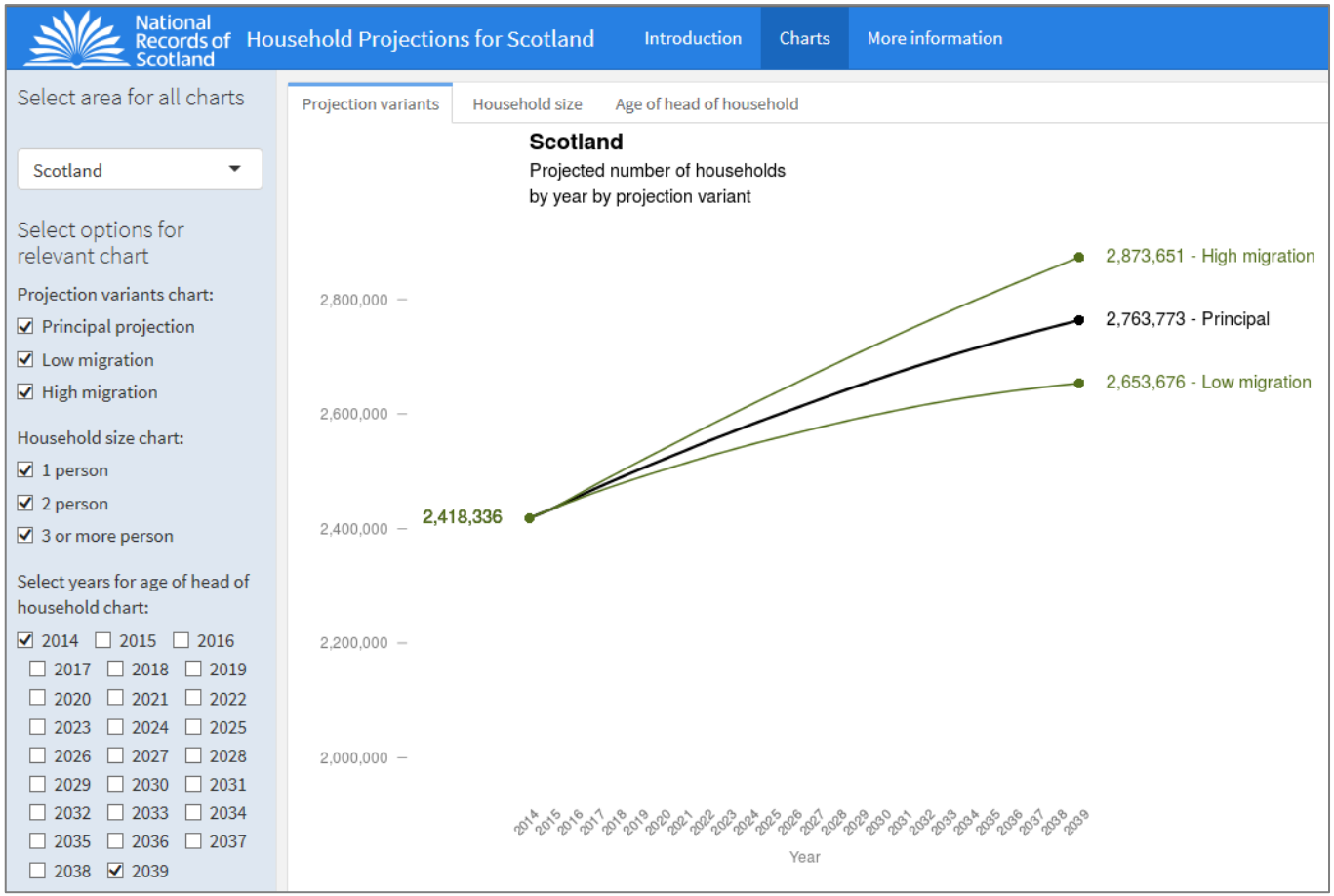
Any feedback about this visualisation? Get in touch!

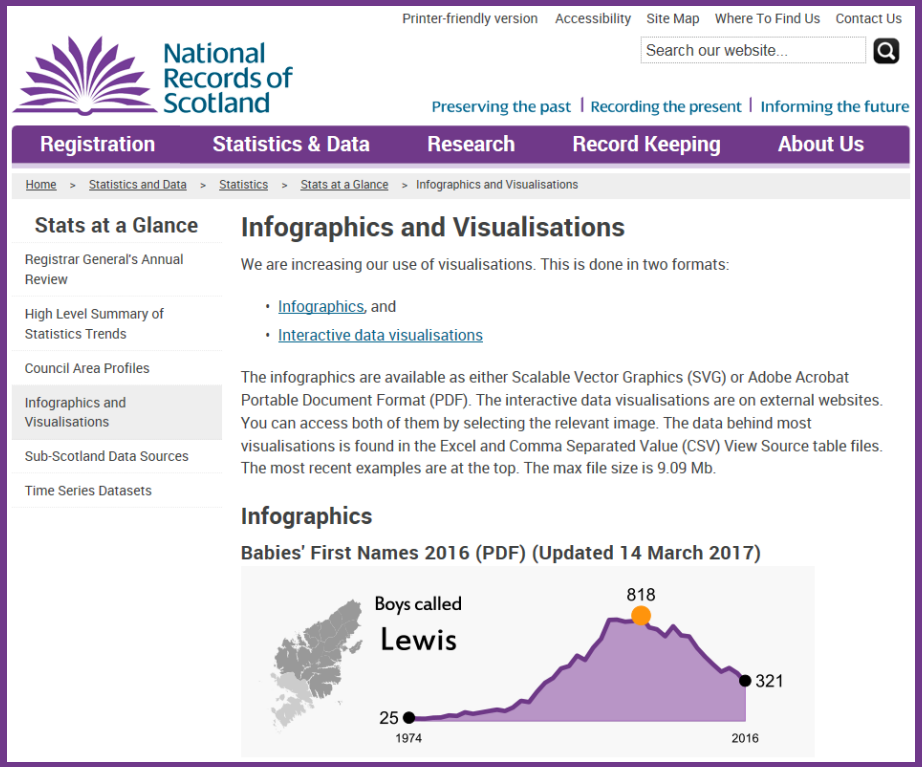
scotland.shinyapps.io/household-projection-variants





NRS infographics and visualisations

www.nrscotland.gov.uk/statistics-and-data/statistics/stats-at-a-glance/infographics-and-visualisations



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Checklist to create effective data visualisations

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#1 Audience

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#2 Message

What is the key **message**

and

what **action** you would like the user to take

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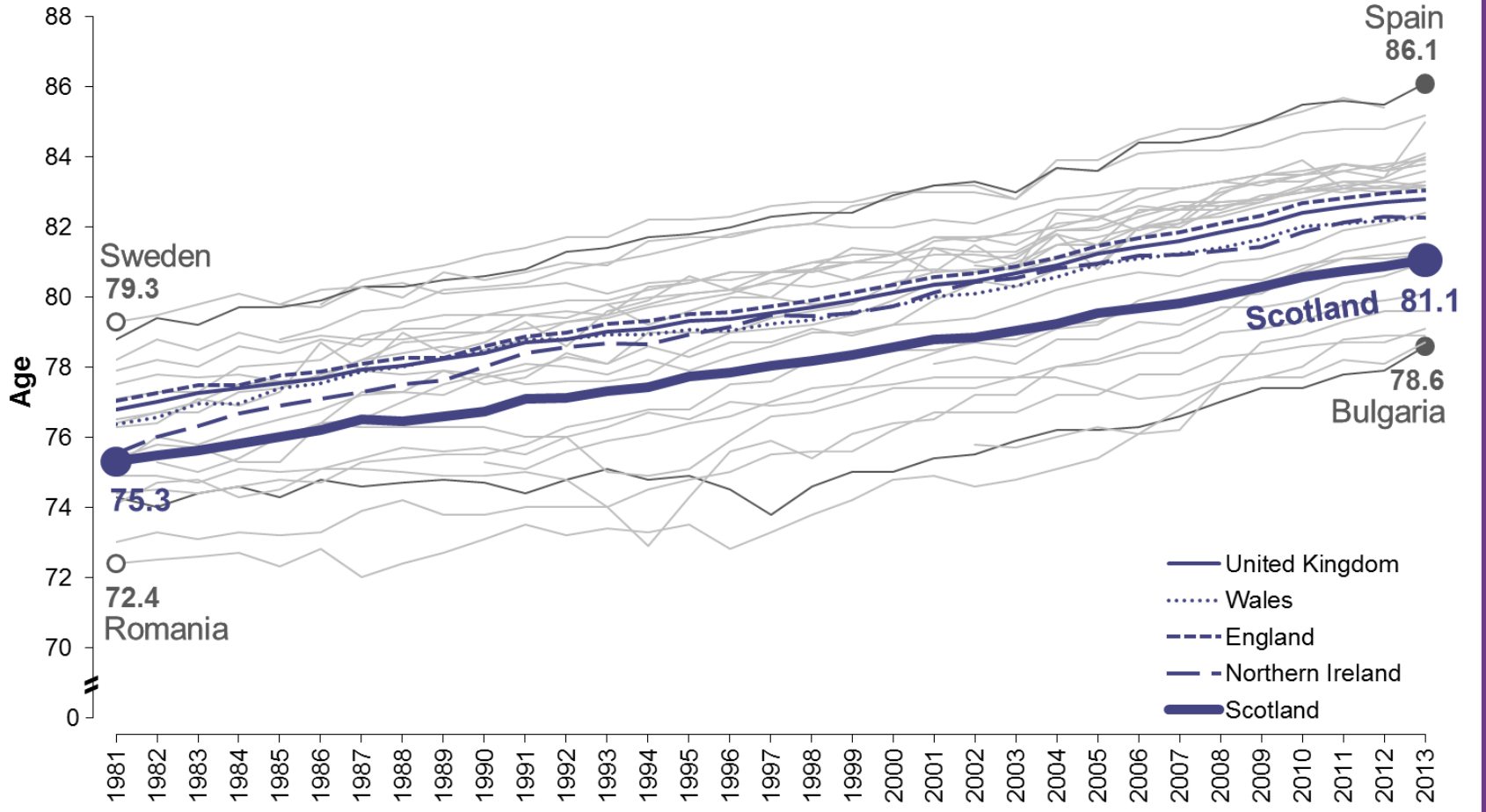
#3 Data

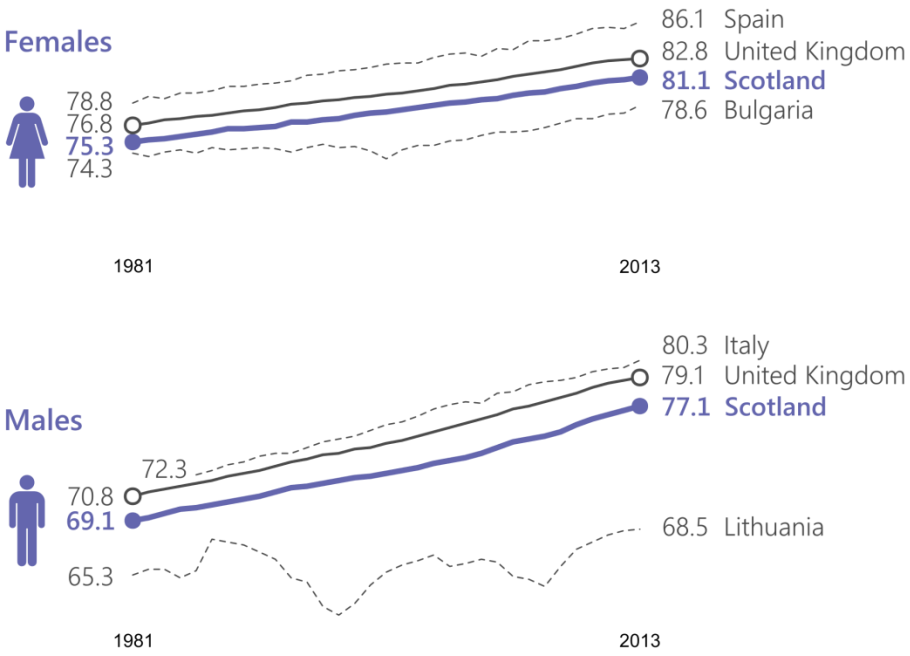
Figure 4.2b: Life expectancy at birth[1] in European Union countries, 1981 to 2013, females



Footnote
1) Figures are based on three years of data. For example, the 2013 figure uses data for 2012-2014.
Source: Office for National Statistics and Eurostat (tps00025). Note: The scale differs from the corresponding male figure.

#3 Data

Life expectancy in Scotland in a European context



Life expectancy in Scotland has been lower than the other UK constituent countries and most countries in Western Europe for both males and females for more than 30 years.

Life expectancy for Scotland, the UK and for the European countries with the highest and the lowest life expectancies for females and males born around 2013 are shown.

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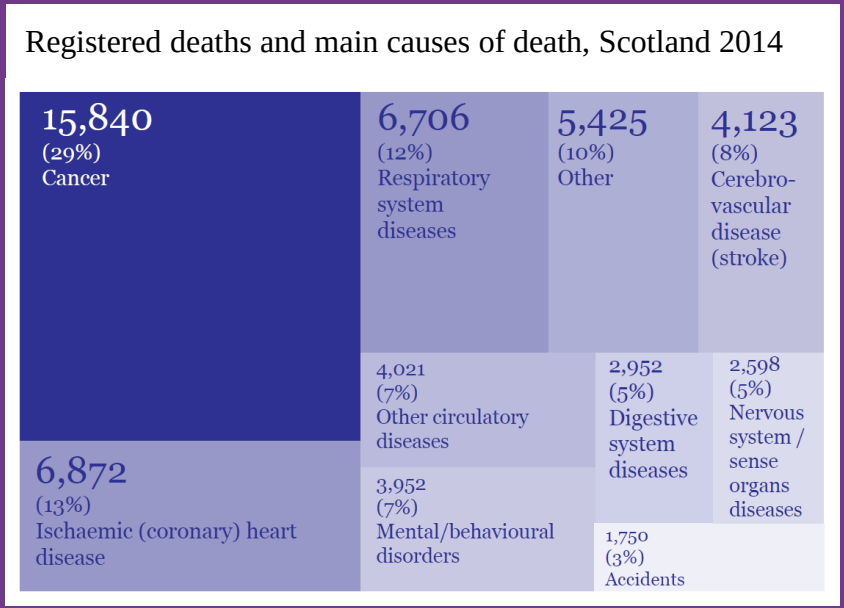
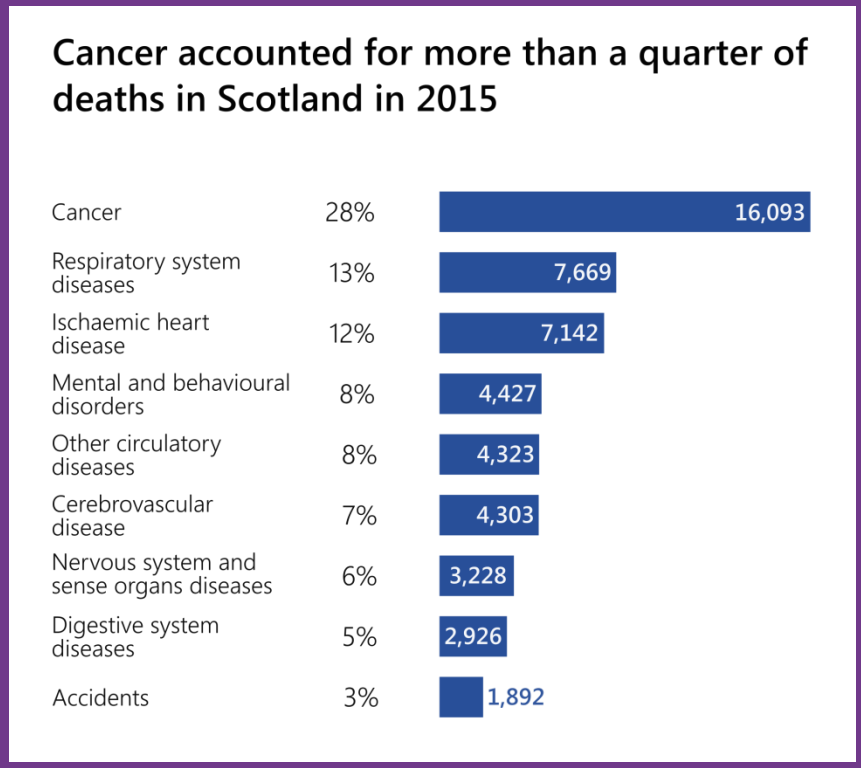
#4 Visuals





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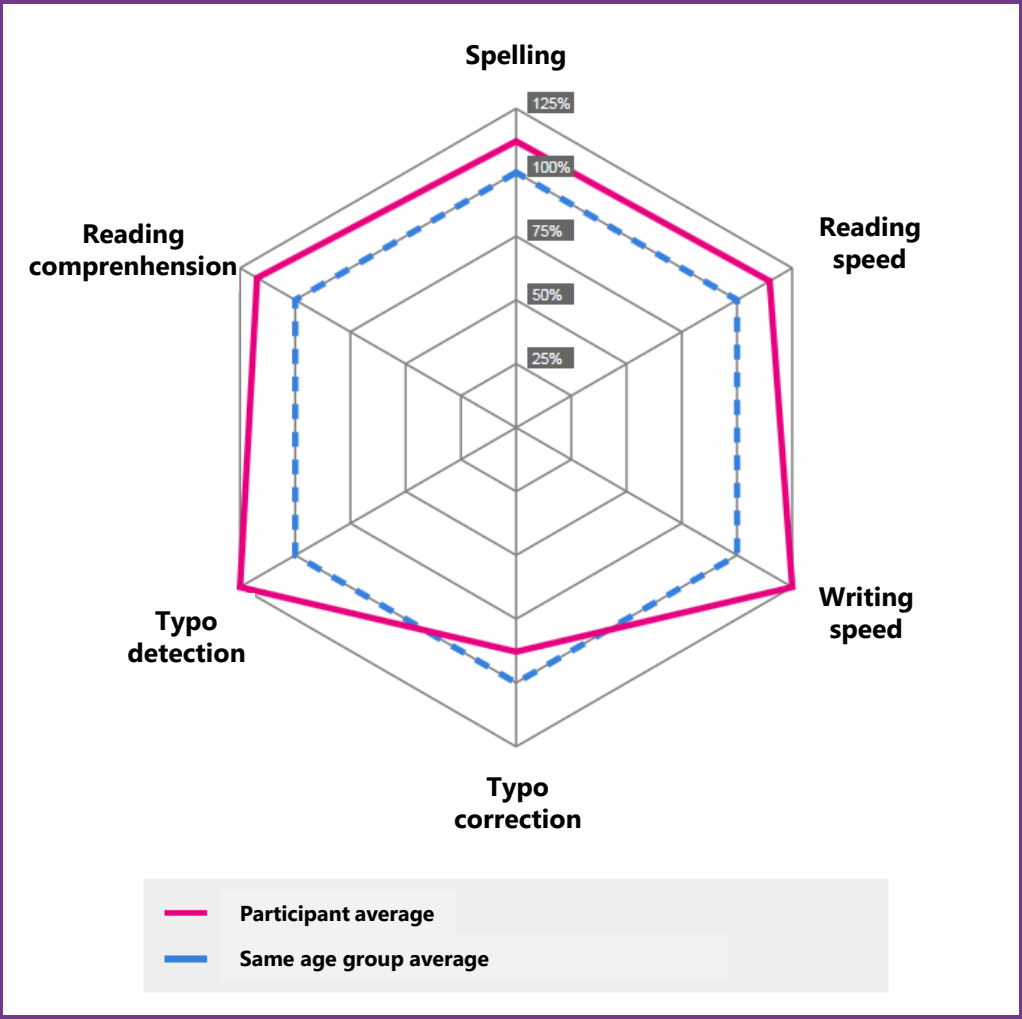
#4 Visuals



dytectivetest.org

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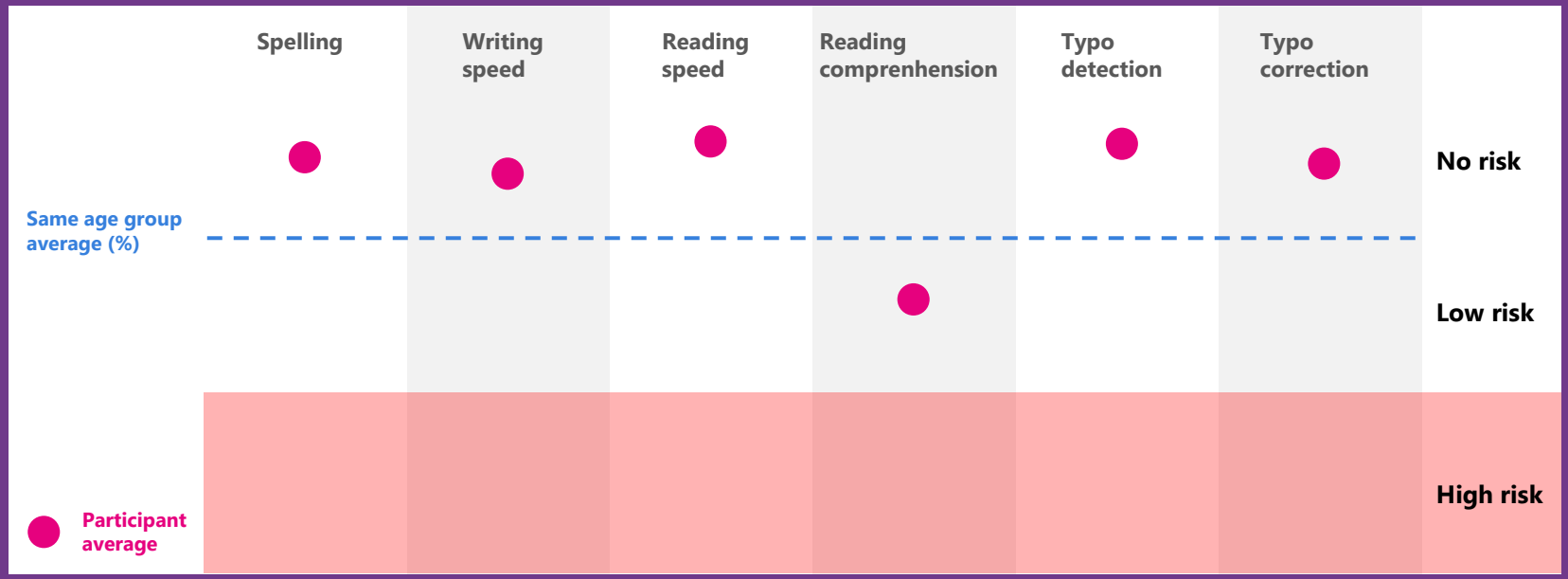
#4 Visuals



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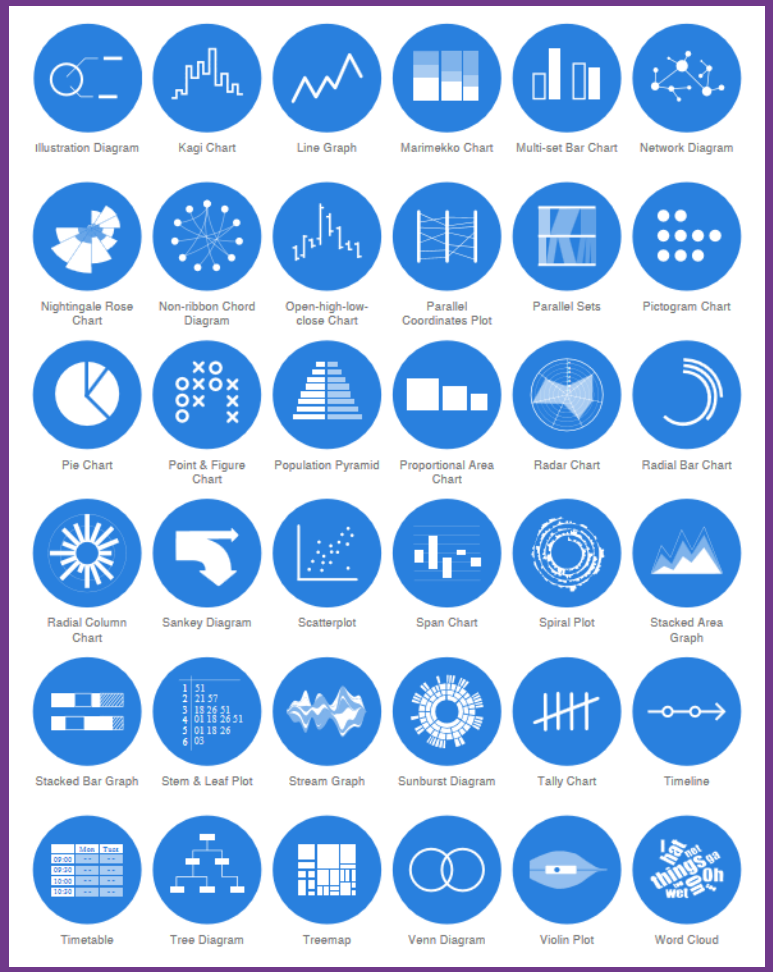
#4 Visuals

datavizcatalogue.com



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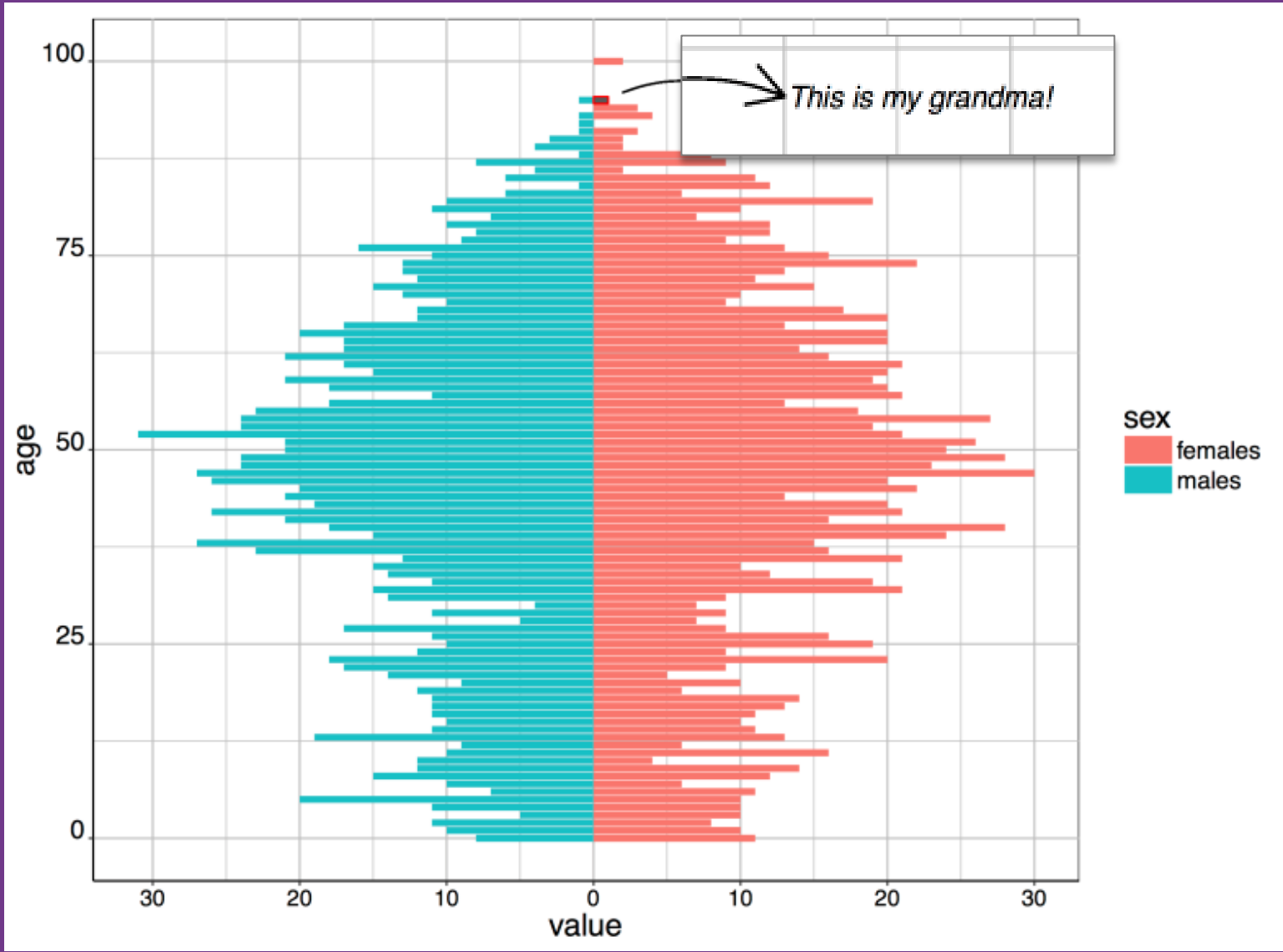
#5 Text

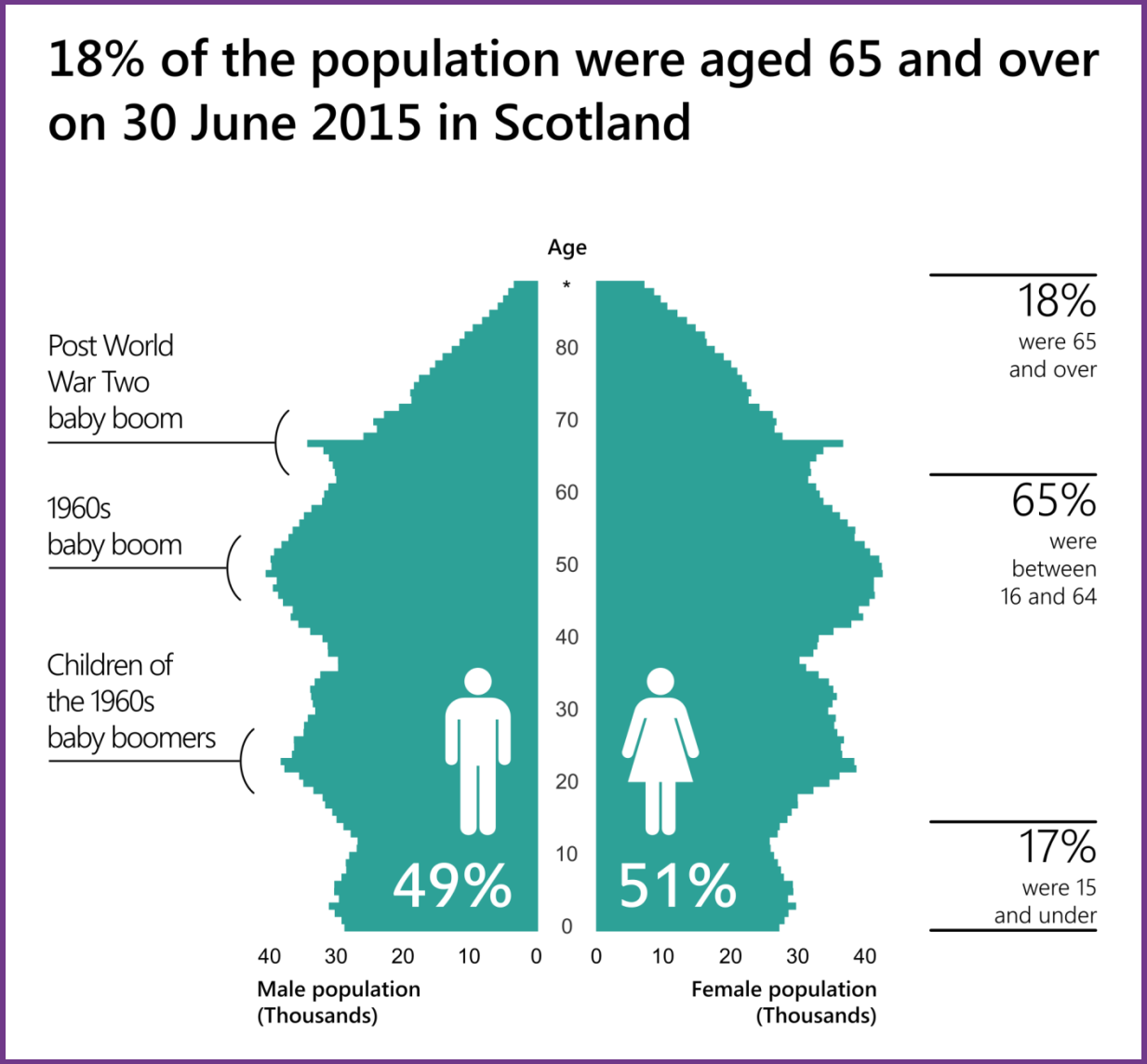
- Text size is hierarchical and readable
- Text is horizontal
- Data are labeled directly
- Labels are used sparingly

#5 Text



aledemogr.wordpress.com/2016/01/11/population-pyramids-in-ggplot

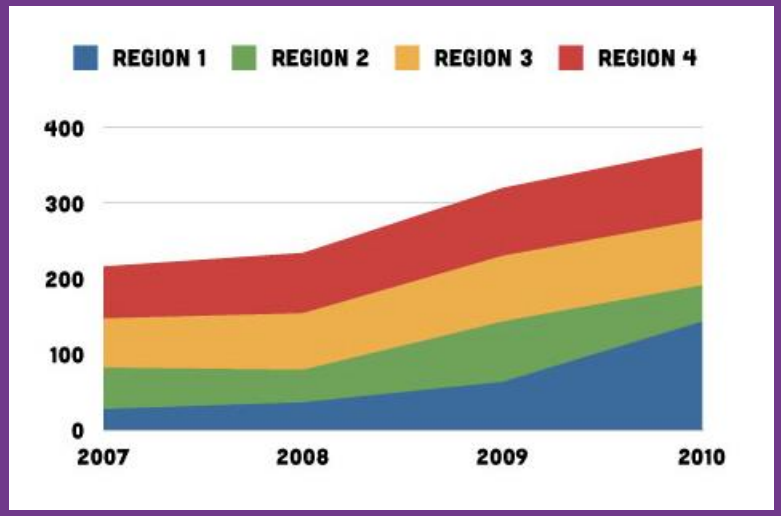
#5 Text

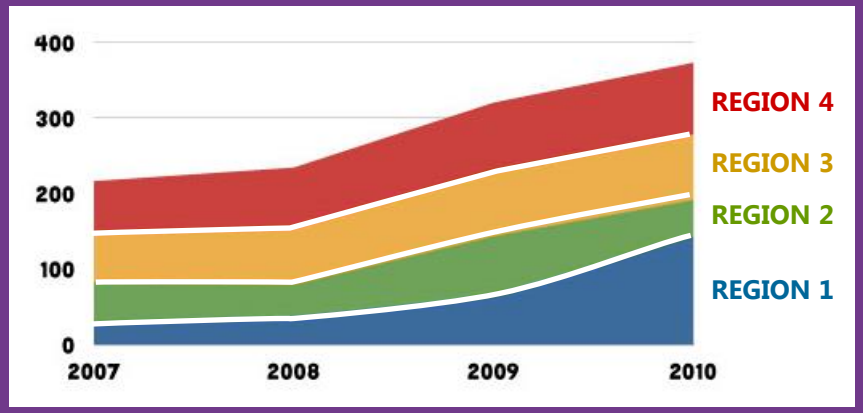

18% of the population were aged 65 and over on 30 June 2015 in Scotland
Age
*
80
70
60
50
40
30
20
10
0
Post World War Two baby boom
1960s baby boom
Children of the 1960s baby boomers
49%
51%
40 30 20 10 0
0 10 20 30 40
Male population (Thousands)
Female population (Thousands)
18% were 65 and over
65% were between 16 and 64
17% were 15 and under

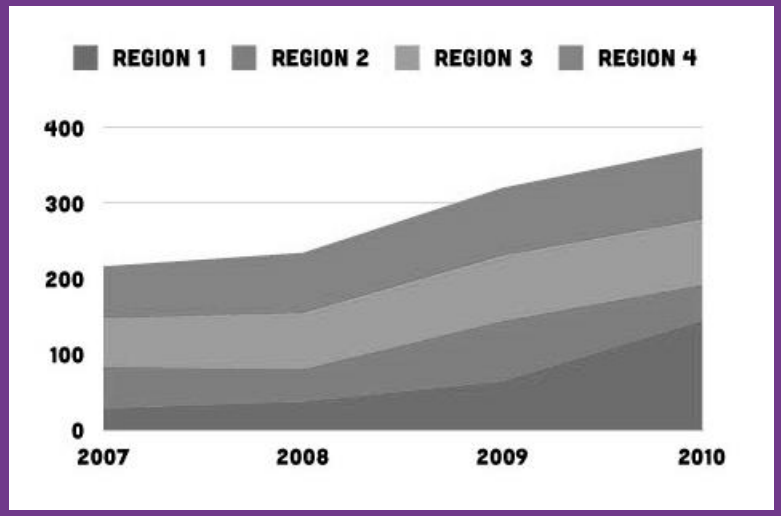
#6 Colour

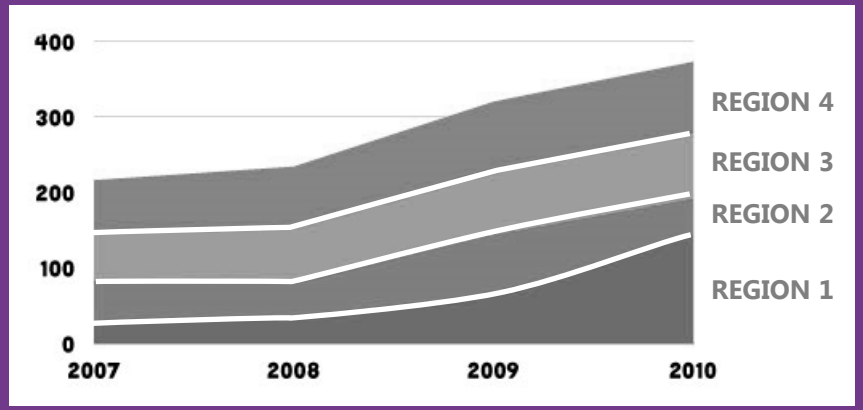
- Colour scheme is intentional
- Colour is used to highlight key patterns
- Colour is visible when printed in black and white
- Colour is distinguisible even if colourblind
- Text sufficiently contrasts background (contrastchecker.com)

colororacle.org
Normal Vision
Deuteranopia (Common) F5
Protanopia (Rare) F6
Tritanopia (Very Rare)
Save Filtered Screen Image...
Preferences...
About...
Quit Color Oracle









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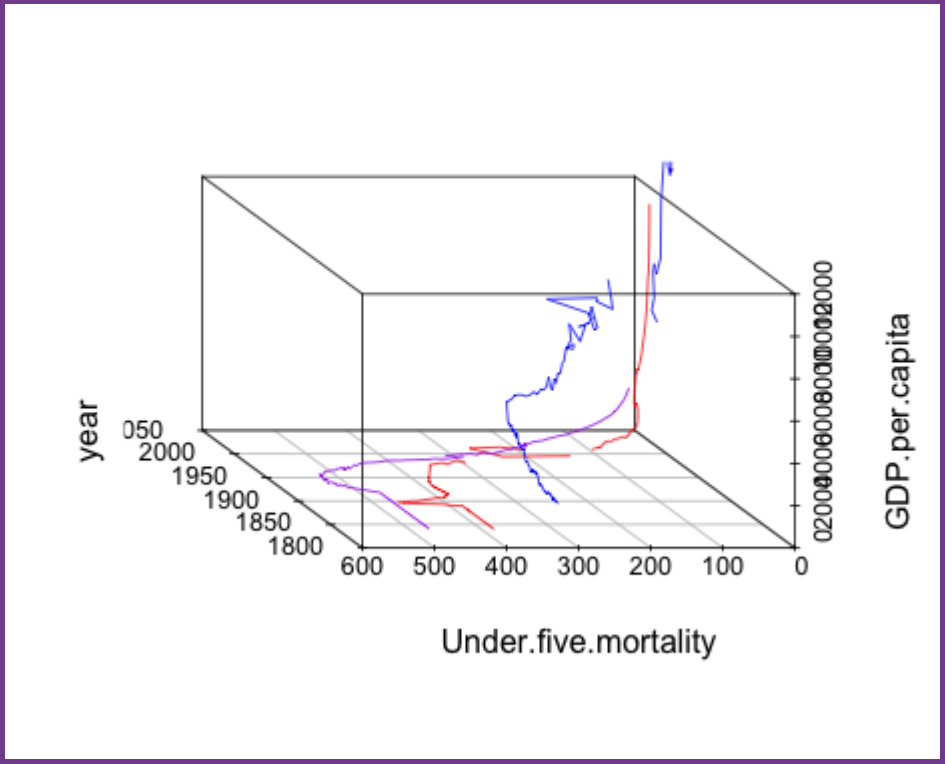
#7 Declutter

Are they necessary?

- Gridlines
- Graph border line
- Axis lines and tick marks
- More than one axis per dimension
- Decimal places

#8 Don’t use 3D

- Just don’t



blog.ouseful.info/2015/07/22/doodling-with-3d-animated-charts-in-r

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Statistician recruitment

- Around 35 staff at Assistant Statistician level
- Salaries range from £23,383 - £31,811
- Closing date: Tuesday, **9 May**
- Assessment between 12 and 26 June inclusive
- See **www.work-for-scotland.org**

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