

## Power BI Lab – Rosling

This is a lab in cleaning and transforming data in the Query Editor so that it is ready for visualisation. The objective is to implement the famous visualisation by Hans Rosling showing the changes in health and wealth over the last 200 years. You can view the talk [here](#) on youtube. It has about 8 million views.

The visual used by Hans Rosling is basically a motion scatter chart with a circle for each country. The size of the circle is proportional to the population of the country in a given year. The axes are

- Income (more accurately GDP per person per year in USD in purchasing power parity) on the x-axis - best to use a log scale for this as it stretches from 100 to 100K
- Life Expectancy (more accurately life expectancy at birth) on the y axis
- Year on the play axis (from 1800 to 2010)

For this visual, we need a dataset with several columns; Country, Year, Population, Income, Life Expectancy. For each country, we need a row for *every* year from when records begin for that country. Otherwise the circle for that country would disappear and reappear as we play through the years - which is not what we want.

The source data comes from Hans Rosling's [Gapminder foundation](#). There are four Excel datasets; gdp\_per\_capita, life\_expectancy\_at\_birth, population and country\_list. The country names are consistent between spreadsheets. These datasets are arranged with Year on columns and Country on the rows. Note that the population file has a column for each decade until 1950. A few cells of the Population dataset are shown below.

	A	B	C	D	E
1	<b>Total population</b>	<b>1800</b>	<b>1810</b>	<b>1820</b>	<b>1830</b>
2	Abkhazia				
3	Afghanistan	3280000	3280000	3323519	3448982
4	Akrotiri and Dhekelia				
5	Albania	410,445	423591	438671	457234
6	Algeria	2,503,218	2595056	2713079	2880355
7	American Samoa	8,170	8156	8142	8128
8	Andorra	2654	2654	2700	2835
9	Angola	1567028	1567028	1597530	1686390

You may end up with a visualisation that looks similar to the snapshot below.

