Report

I grabbed the datasets for my visualisations from a reliable source, StatsWales.

My intention was not only to show enthralling data about the “greenie side” of Wales but, above all, to create an insightful story, following a logical thread.

Fetching the “right” data was not easy, although - at the same time - I found it the very challenging part. I had to spend a few days just going through more than fifty different csv files, taken by <https://statswales.wales.gov.uk/Search?Query=waste>. Afterwards, I isolated the themes and figures that I considered the most relevant to tell the story I wanted to tell: the emergence of a new culture in Wales, concerned about waste, recycling and environmental issues.

I made an introduction section to set the scene and to furnish the reader with general information about the topic, explaining what the Towards Zero Waste Strategy was. All the data visualisations I made prove that the Welsh strategy is going well and show the big shift in the figures over a decade.

First and foremost, in Visualisation 1, I decided to represent the latest data I could find on the Internet about Municipal Waste Arising.

With “Municipal Waste” we refer to the Total Waste, technically formed by “Household” and “Not Household”. I retained a donut pie the best and straightforward way to display just three values. I also provided a tooltip that gives deeper information, related to Summer 2014, about each single authority type.

However, the figures provided from the StatsWales csv file were in thousand tonnes; I had to convert them in percentages, using equations, to display the data in a pie chart.

For Visualisation 2, I had to use data from two different spreadsheets and put them together in a new csv file. In this case, I looked closer only at the figures for Household. The double-bar graph compares the trend of Household waste with the Household recycling, by year, underlining a very interesting outcome: the waste rate went down, whilst the recycling one almost tripled.

Visualisation 3 displays the packaging waste recycled by year using a line graph. Even here, the figures are very interesting. Wood has a downward trend; paper, aluminium and plastic values do not surpass 20 kilotonnes. Glass and steel have a funny opposite pattern, that it might be explained by a price fluctuation.

Visualisation 4 is a simple bar chart that shows the materials recycled in 2012, and which ones were the most profitable. Organic Waste was at the head of the graph, with around 280 kilotonnes, followed by paper, rubble and glass.

For Visualisation 5, I created a simple line graph provided with a grid to “fill” the white background and a tooltip to help the interaction with the user.

To end on a high note, I wanted to represent this topic and show the enormous increase in the use of renewable sources to produce electricity.

Clean energy, in fact, has more than tripled over a decade, proving my point that people mentality is changing and we are investing in new technologies to make the world a “cleaner” place (or at least Wales).

Furthermore, I cut off the estimates for 2000 and 2001, since were produced using slightly different methodologies to those for more recent years and are therefore not strictly comparable.

**Evaluation**

Overall, I think I conducted a very good work.

I carried out a research in depth to find interesting real-world data.

The order in which the graphics are presented has been carefully thought. All the visualisations are provided with an introductory paragraph and a link to the sources in order for the user to have access to the data himself if he wants.

After the graphics were ready, I spent a day repositioning them and creating a logical thread. I made up a storyline that could be useful and, at the same time, could catch the audience’s attention.

I reckon I carried out a good analysis of the datasets and chose well when to cut some irrelevant data off and how to present the remaining ones. I used appropriately different types of visualisation to compare data and prove my points.

I have been extremely careful in Visualisation 2, 3 and 4, converting all the units of measure in tonnes, in order for the user to have an overall idea of the shift at first glance.

Although at the beginning it was hard for me to deal with a new program language, I decided to use D3 for all the visualisations because I like challenges and I wanted to prove myself that I could manage to finish everything off coding.

The end result is pretty much the one I was aiming for; the data is clearly visualized and integrated with a deep analysis. The code is clean and easy to read.