**Lab 4**

## Tech Used

The application is written using a combination of HTML, CSS and JavaScript using version 7 of the D3 library for data visualisation. To render the map, I have used the Mapbox API and used D3 to visualise data on the map; this will be described in more detail in the Map section.

## Overview

The data I have used in this lab is based on energy data produced by BP as part of their yearly ‘Statistical Review of World Energy’ (<https://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html>). The dataset is composed of a large quantity and variety of data regarding energy production and consumption in a large number of countries throughout the world from 1965 up until the current year. The dataset I have used spans from 1965 to 2020 and I have chosen to use data about the energy consumption of each country.

The idea behind my visualisation is that a user can scroll around the map, click on a country and then see how the consumption of energy in that country has changed over the past 55 years. For example, whether a country is consuming energy from more renewable sources compared to previously or to other countries.

In order to do this, I have used 2 visualisations int the pop up that appears when a user clicks on a country. Firstly, is a pie chart that animates to show the energy consumption break down of each year from 1965-2020; the pie shows one year per second. Secondly is a circle pack chart that shows the split of fuel consumption for 2020 for that country. The carless are grouped into energy type i.e. renewable and non-renewable and placed in a hierarchy whereby the user can zoom in to individual groups to see the energy sources that make up that group.