

## Summary

The focus of this walk through is to build on our barchart and make it interactive. We will use the same dataset we used to make the simple barchart in Walkthrough #1. We'll run into some issues however – in our next Walkthrough, we'll look into how we need to modify the data for “better” interactivity.

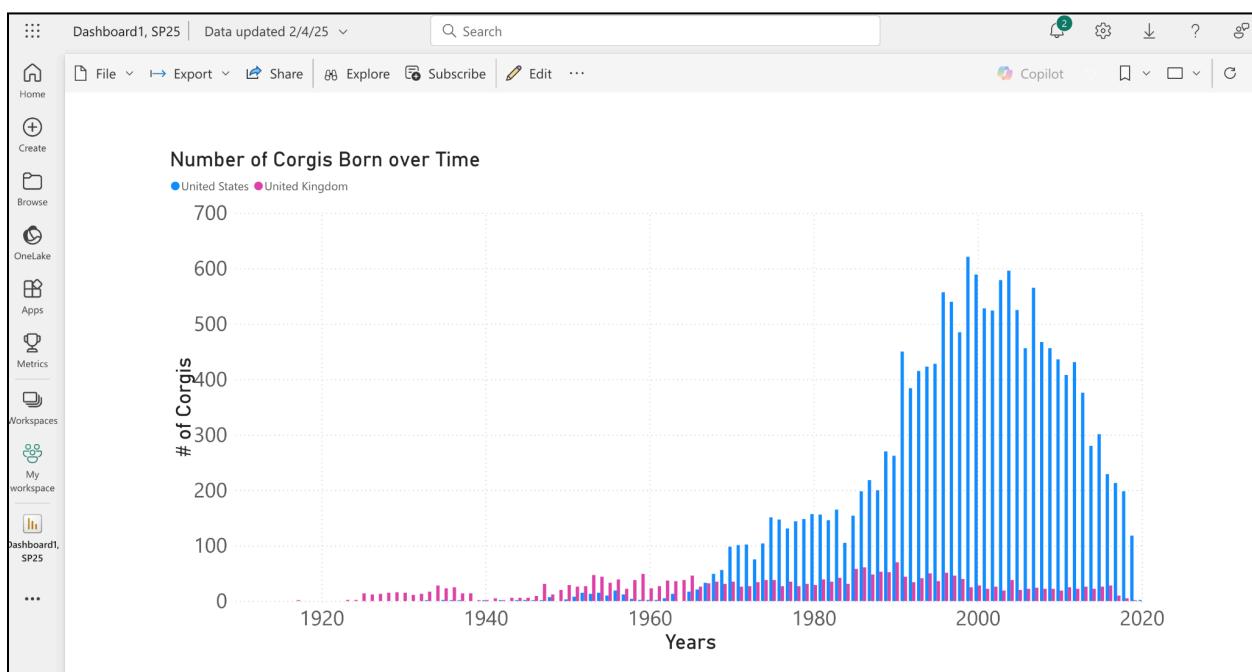
## Notes for instructors:

Example file is the “Dashboard2, SP25, Starting Interactivity (unpivoted dataset)” file in the “IS457 Prep Materials (SP25)” Workspace in outlook.

**Be sure you are using the Chrome browser for this exercise!** (Other browsers *may* work, but at present, Firefox is a bit buggy).

## Review from last time: Basic Bar Chart

Last time we built our first plot in PowerBI – a simple bar chart with the number of corgis born over time for 2 countries:



A few things we didn't do (that we did in Google Data Studio) were add some interactive filtering and, therefore, have to worry about the format of our “Years” column.

Looking forward, we probably also want to be able to select for different Countries to plot, and maybe even want to show the data on a map.

It turns out we'll have to modify our data a bit to get this all to work, but let's see how far we can get with our current data “as is”.

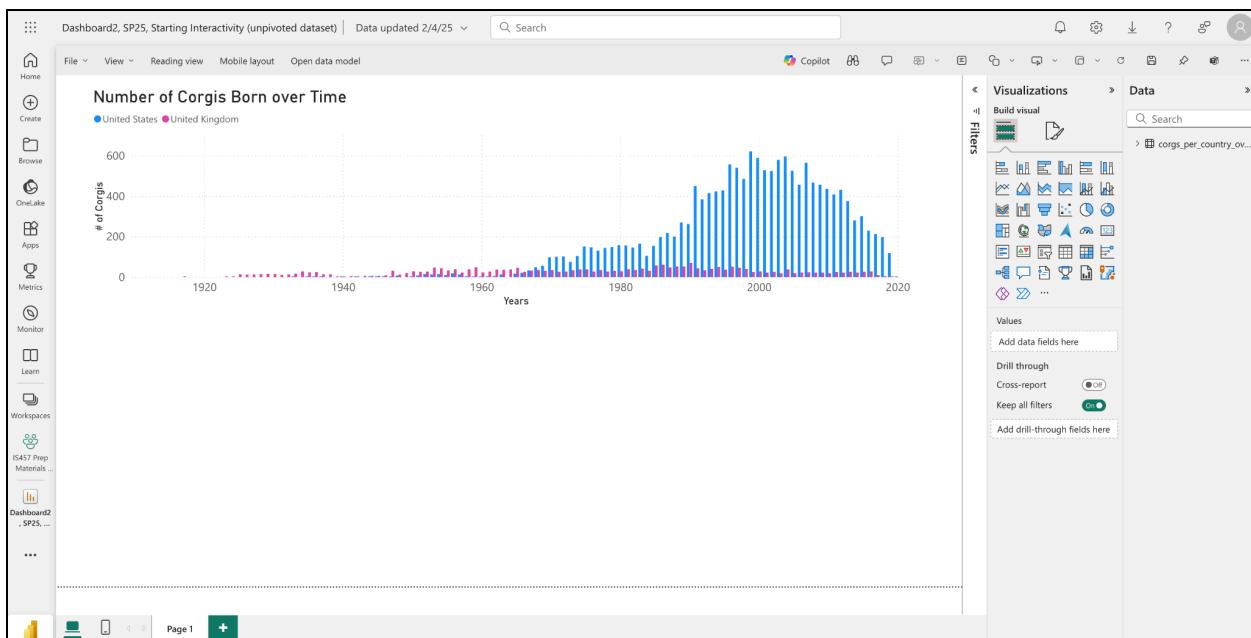
## Adding interactivity

Let's start by making the plot a little smaller on our workspace in order to add in some controls.  
Note, you may have to hit the "Edit" button if you are in view mode:



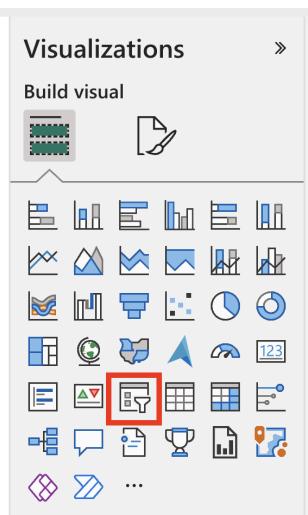
The screenshot shows the Power BI desktop interface. At the top, there is a navigation bar with icons for Home, Create, and Browse. Below the navigation bar is a search bar and a 'Edit' button, which is highlighted with a red box. The main workspace contains a bar chart titled 'Number of Corgis Born over Time'. The chart has two data series: 'United States' (blue bars) and 'United Kingdom' (pink bars). The x-axis represents years from 1920 to 2020, and the y-axis represents the number of corgis from 0 to 600. The chart is relatively small and positioned centrally.

Let's assume we want to put our plot on top and our controls on the bottom:



The screenshot shows the Power BI desktop interface with a different layout. The chart is now larger and positioned at the top of the workspace. The 'Edit' button is highlighted with a red box. The left sidebar shows various workspace items like OneLake, Apps, Metrics, Monitor, Learn, Workspaces, and IS457 Prep Materials. The right sidebar shows the 'Visualizations' and 'Data' panes. The chart displays the same data as before, with blue bars for the United States and pink bars for the United Kingdom from 1920 to 2020.

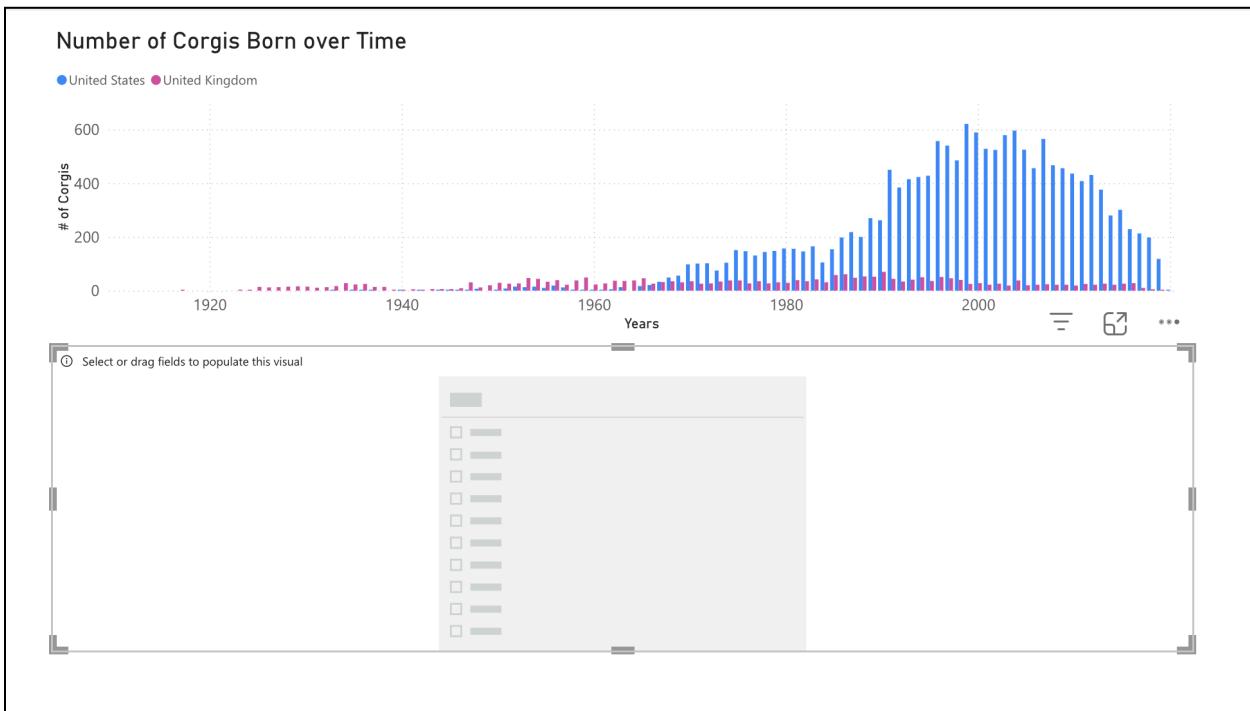
## Adding Slider for Years: Introduction to Slicers



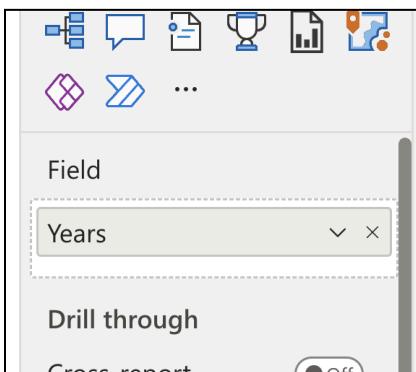
The screenshot shows the 'Visualizations' pane in Power BI desktop. It contains a grid of icons representing different visualization types. One icon, specifically the 'Slicer' icon (a grid with a dropdown arrow), is highlighted with a red box. Other icons include various charts, maps, and other data visualization tools.

Let's add some interactivity by allowing the user to select which years to visualize. We can do this with the "Slicer" visualization (in the "Visualizations" side panel).

When we insert a slicer, we'll see a "blank" slicer appear on our visualization:

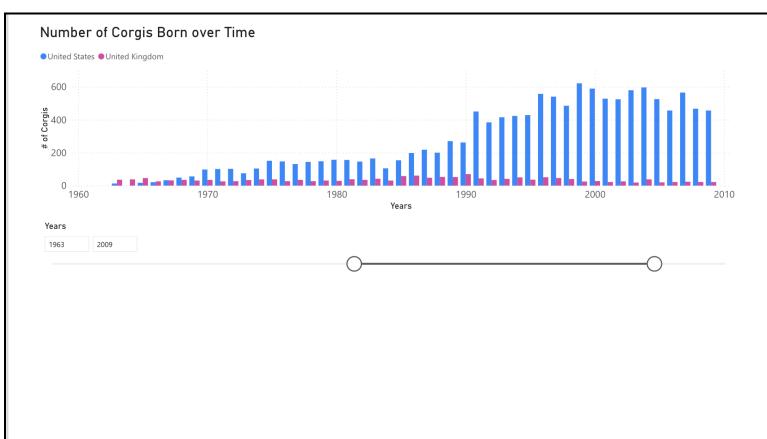


In the visualization panel, we need to add a “Field” in order for the slicer to know what to slice. This is similar to how we added columns to plot in our bar chart:

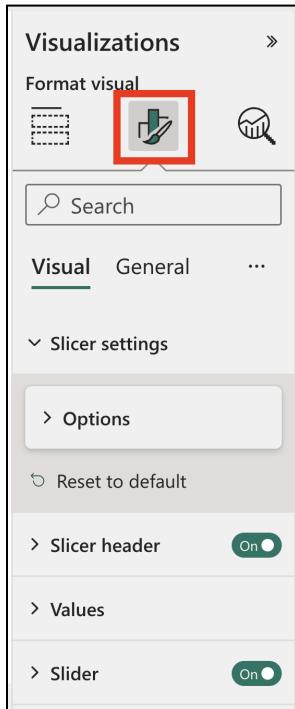


← Drag and drop (or click) on the “Years” column to add a slider for the years.

You should now see a slider that you can choose a set of Year values between and your bar chart should update:



There are several things we probably want to change on this slider. If you click on the “Format Visual” panel, you’ll see several different visual parameters pop up:

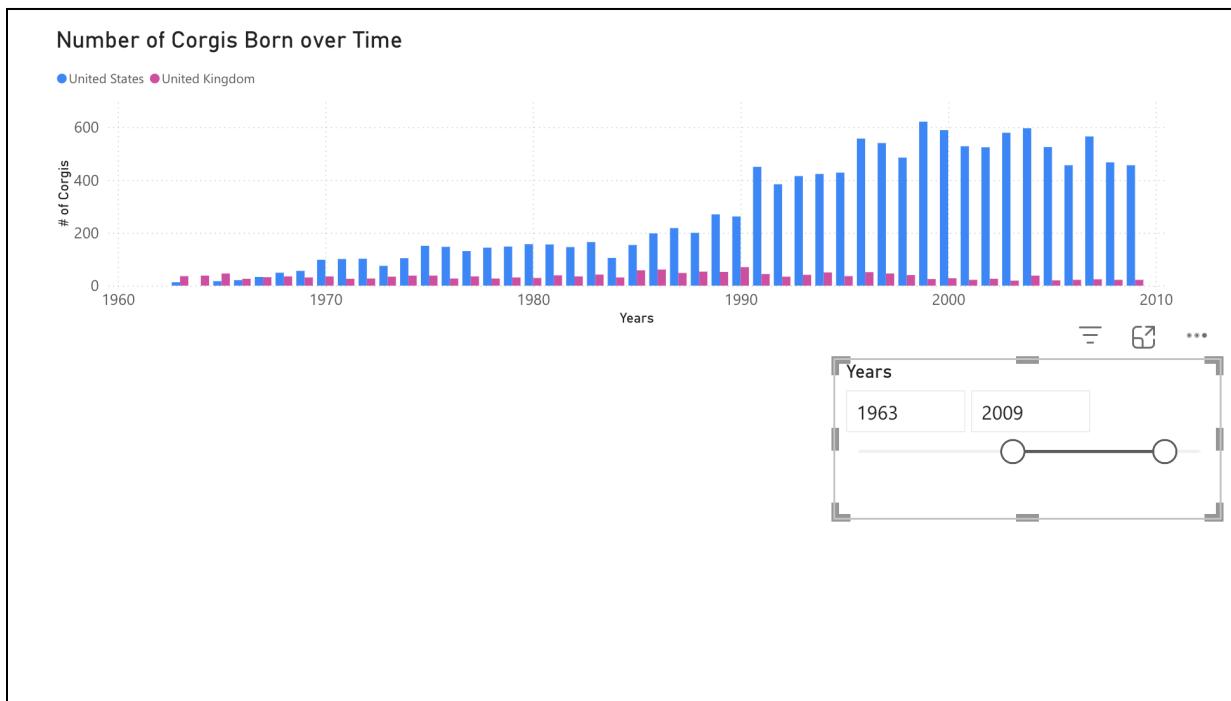


← select if you want “between” (default) or “less than”/“greater than” type sliders (leave as defaults)

← font size/color/etc of slider title (Years) – you probably want to increase the font size

← font size/color/etc of slider value text (numerical years) – you probably want to increase font size here too

After modifying the size and placement of our slider, we can make a little space to get ready to try to add some other interactive elements/plots:



One thing to note here: this is a *numerical* slider – i.e. it does not “know” that the “Years” column is representing a date. We’ll worry about this in our next Walkthrough.

Now, let's try adding some other interactive elements and see how we run into some issues that will point to how we need to modify our data in order to make it "friendly" to the types of plots we want to make.

#### Attempt #1: Adding a Country Slicer

We might be tempted to try to add in another slicer in order to pick different country columns. We'll run into some issues, but first let's see what happens.

I'll add a slicer and then drag some random country columns over:

The screenshot shows the Power BI desktop interface. On the left, there is a hierarchical slicer pane with the title 'Switzerland, Spain, Serbia' and a list of items from 0 to 6. On the right, there is a 'Field' list pane containing three entries: 'Switzerland', 'Spain', and 'Serbia'. Each entry has a dropdown arrow and an 'x' button next to it.

We can immediately see issues – the selections I'm allowed are individual *values* of the three countries I've selected and not the ability to select individual country names. This points to an issue with our data is formatted for this kind of plot.

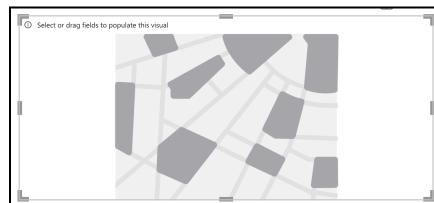
#### Attempt #2: Adding in a Map Visualization

Another thing we would probably like to be able to do is add a map visualization to show some summary info about the total number of corgis born in each country.

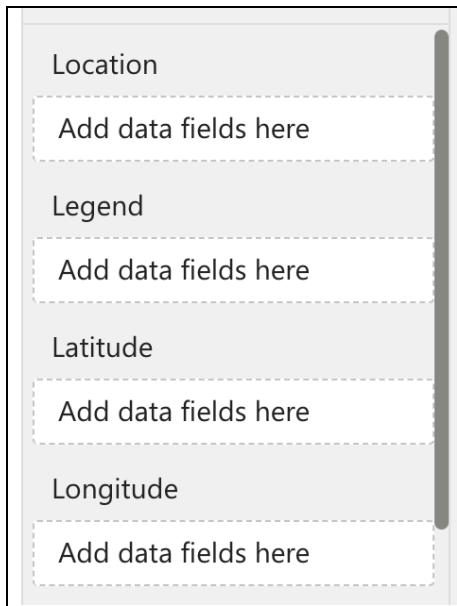
The screenshot shows the 'Visualizations' pane in Power BI. It lists various visualization types such as bar charts, line charts, maps, and tables. A specific icon for a 'Filled Map' visualization is highlighted with a red box.

Start by adding in a "Filled Map" visualization to your plotting space.

You should see a little "empty map" icon pop up on your page:



If you click on the “Visualizations” panel, you’ll see several options for where we can potentially add different fields to plot:



However, if we drag over a few countries, we'll see that they don't really fit to their appropriate place on the map:



This is again telling us something important about our data – it is not in the right shape!

### Moving forward

What we need to do next is to reformat our data a bit so its in a better “shape” for the kinds of visualizations that we want to do. For this, we'll need to download Excel and do some fancy things in Power Query to get our data into the format that we need.

Head on over the Walkthrough #3 to learn more about this!