ORCAVIZ

User Guide

OrcaViz.com/support

Overview

What can OrcaViz-LM Custom Visual do?

OrcaViz-LM Capability

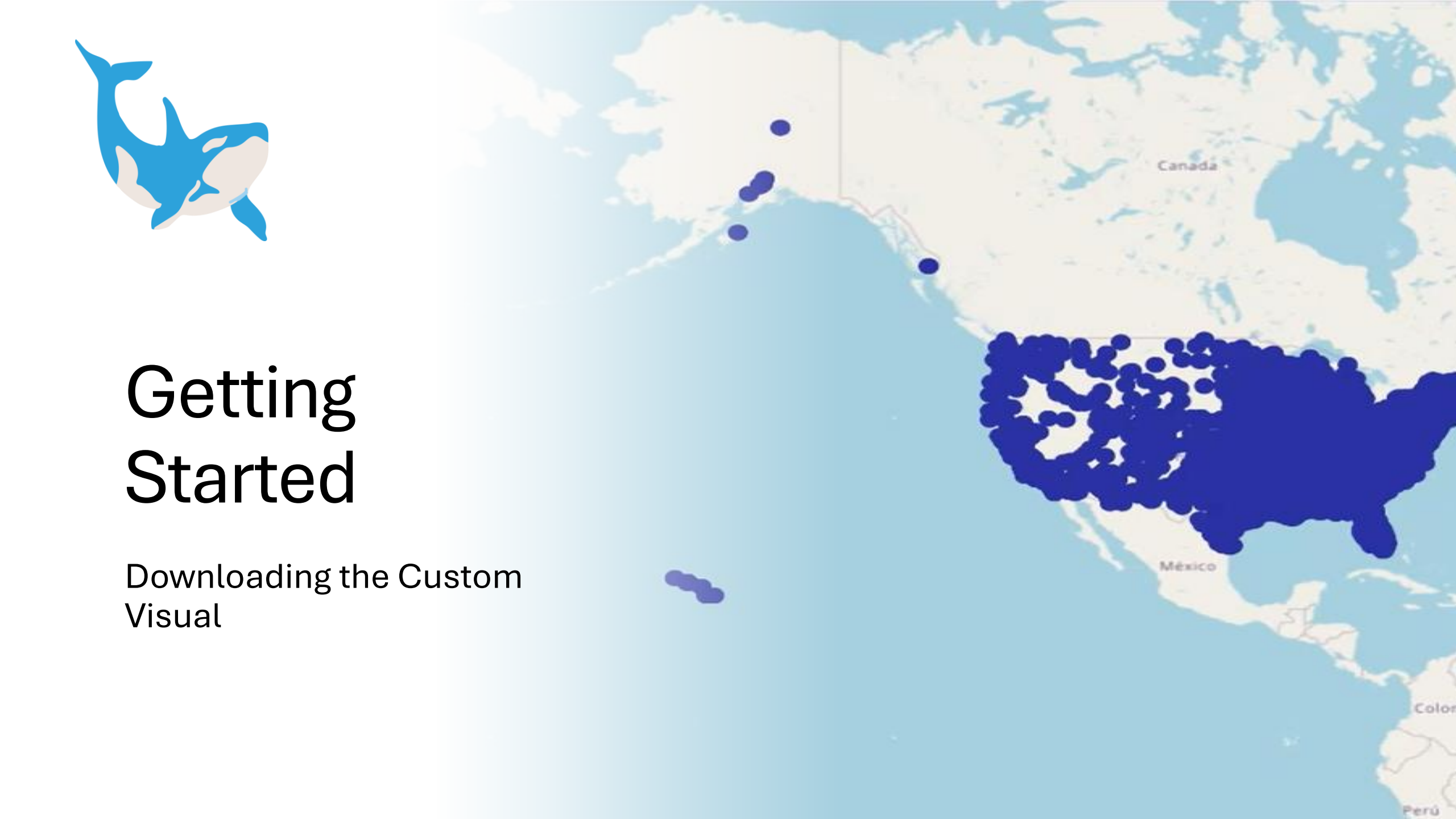
OrcaViz-LM brings location intelligence into your Power BI reports and dashboards. It enables you to:

- Visualise the data points on a map
- Use clickable pins to explore the data underneath the points
- Scale the datapoints in relation to a numeric value
- Create and overlay heatmaps and choropleth maps from your data
- Overlay geographic borders (states, territories, countries etc)
- Turn layers on/off and change their order
- Extract data within a geographic border or a hand drawn shape to create a new dataset
- Count or sum data within geographic boundaries or hand drawn shapes
- Add latitude and longitude coordinates to your data
- Overlay a second dataset on the same map loaded from your desktop. (NB: Additional datasets loaded onto the map cannot be stored with the map in the pbix file because Power BI only allows one dataset per map).

It supports standard Power BI cross-select and drill-through functionality in both directions (to the map and from the map).

Pre-Requisites and Limitations

- You will require latitude and longitude coordinates to visualise your data. However, if you do not have them, OrcaViz-LM provides functionality to add them to your data.
- OrcaViz-LM has 3 different licencing levels:
  - OrcaViz-LM-500 is limited to the display of 500 data points
  - OrcaViz-LM-10k is limited to the display of 10,000 data points
  - OrcaViz-LM-30k is limited to the display of 30,000 data points



Getting Started

Downloading the Custom Visual

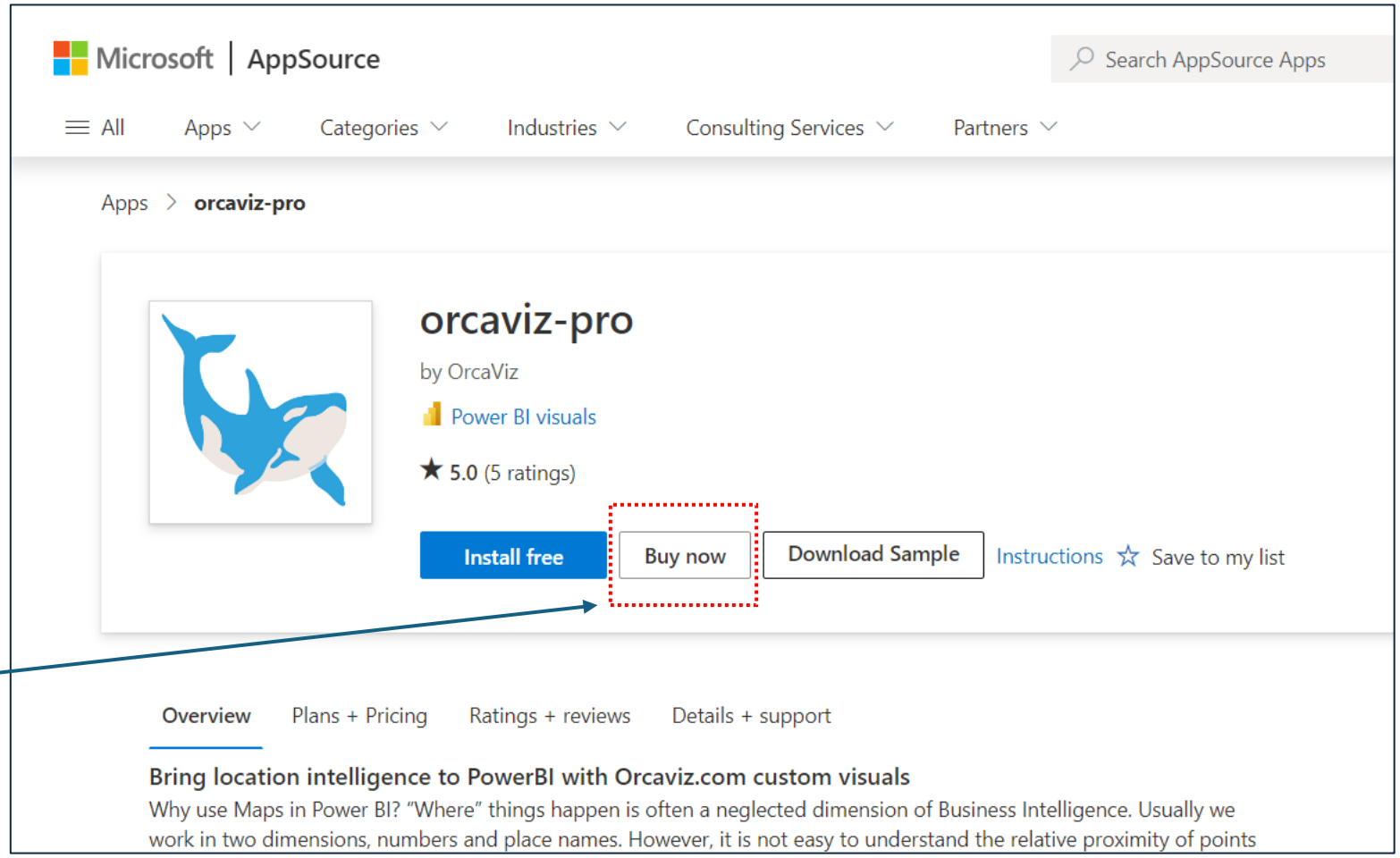
Downloading the Custom Visual

You will need to download it using the “buy now” button because the Microsoft Store manages the trial period and subscriptions.

There are 3 subscription levels:

OrcaViz-LM-500 is available free of charge from the Microsoft Store.

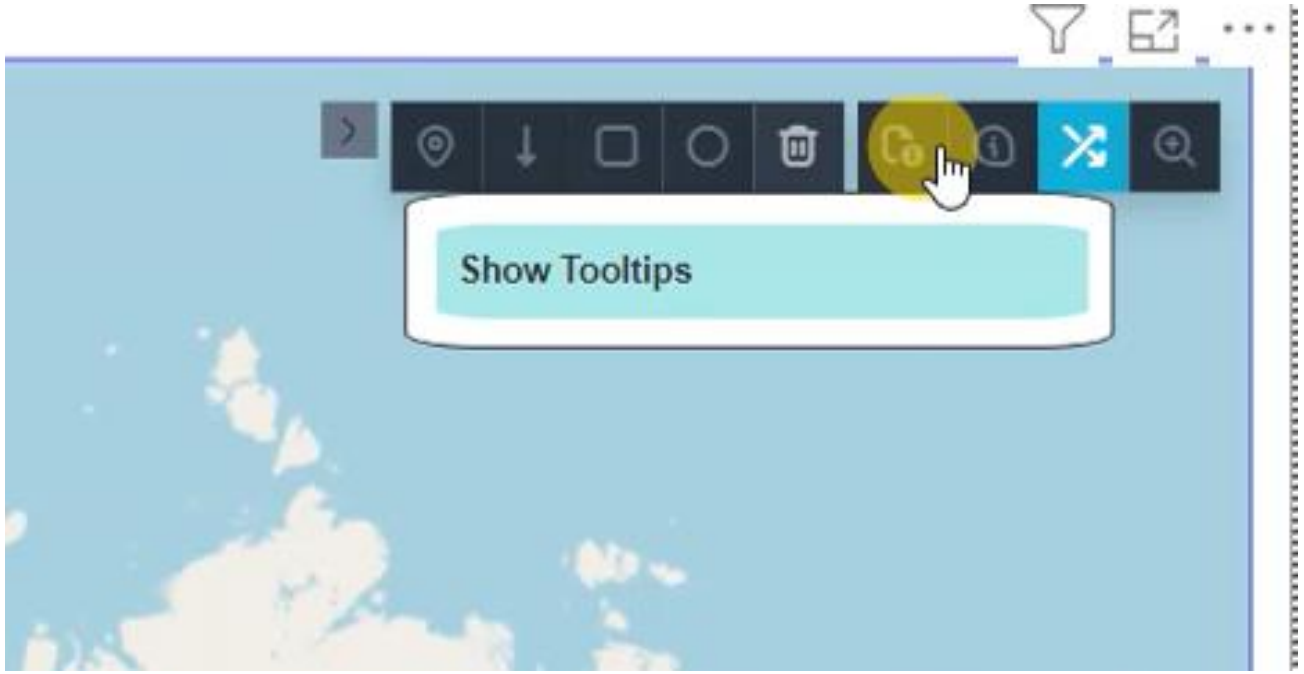
OrcaViz-LM-10k and 30k have no free trial period and handle 10,000 and 30,000 rows respectively.



Help:

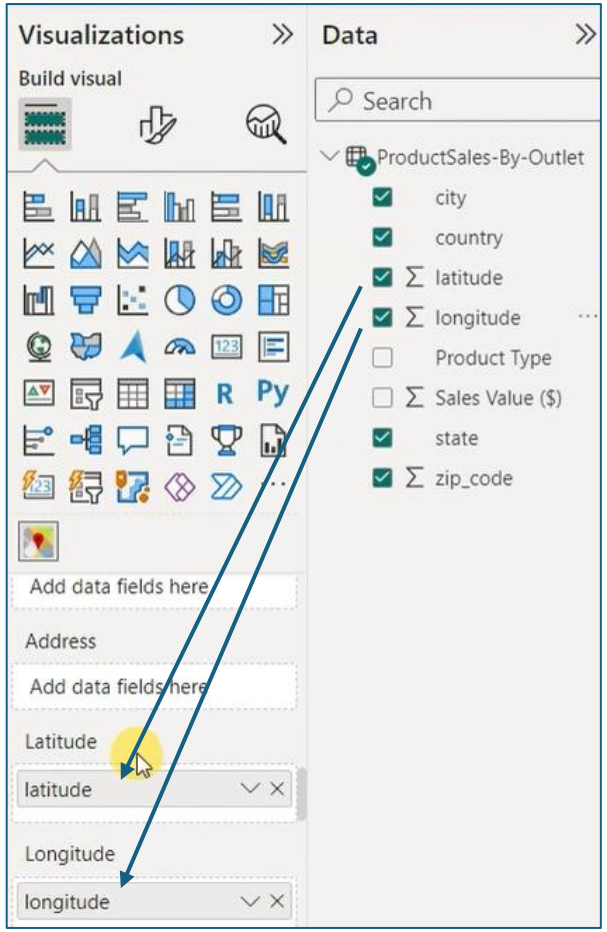
Each menu item has a tool tip, but more detailed tooltips can be switched on using the “Show tool tips” icon above the map.

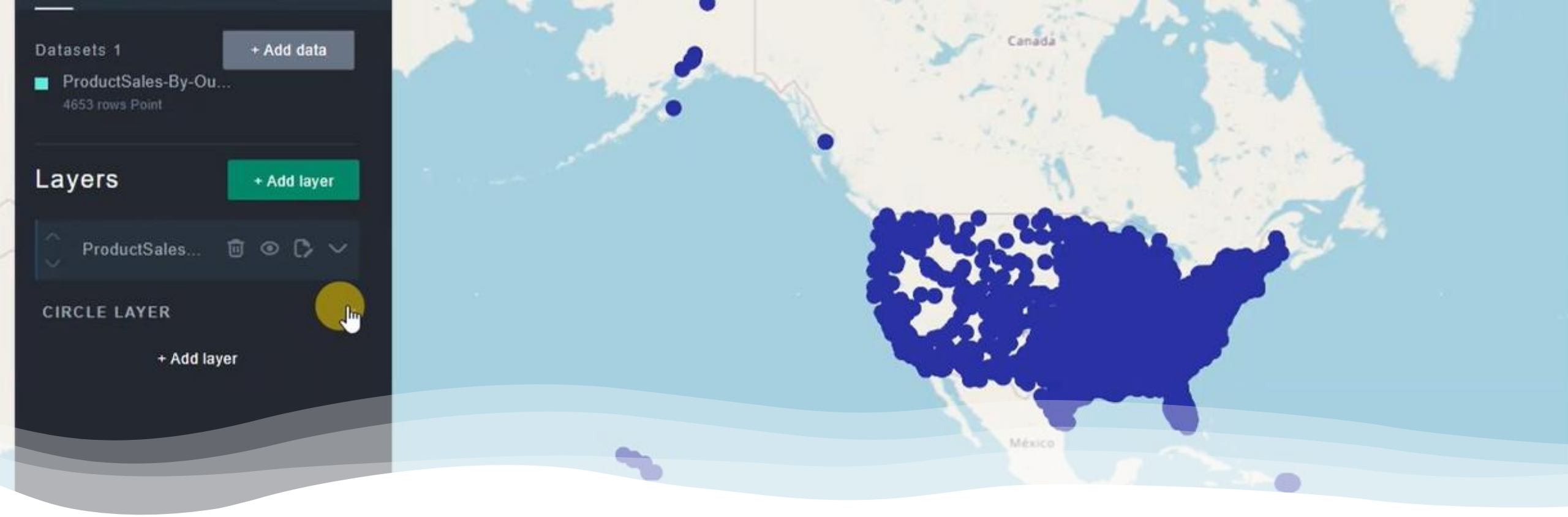
There are also videos of the most common functionality on https://orcaviz.com/support



Putting the data on the Map

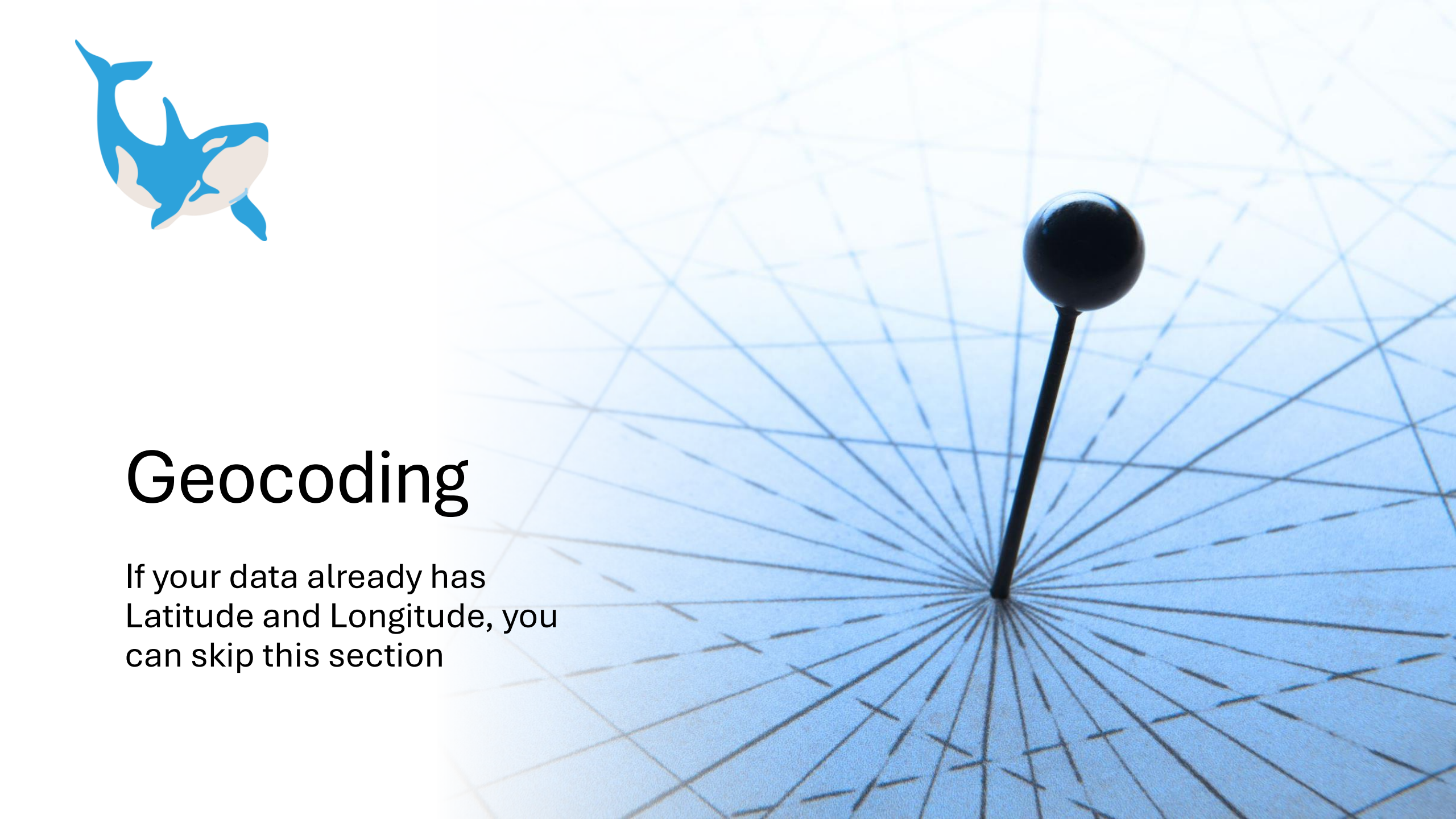
- Use the “Data” tab in Power BI to map the columns in your data to the fields supported by OrcaViz as shown in the “build visual” tab.
- Your data must have latitude and longitude coordinates (in decimal format), and these must be mapped to the Latitude and Longitude fields in the build visual tab.





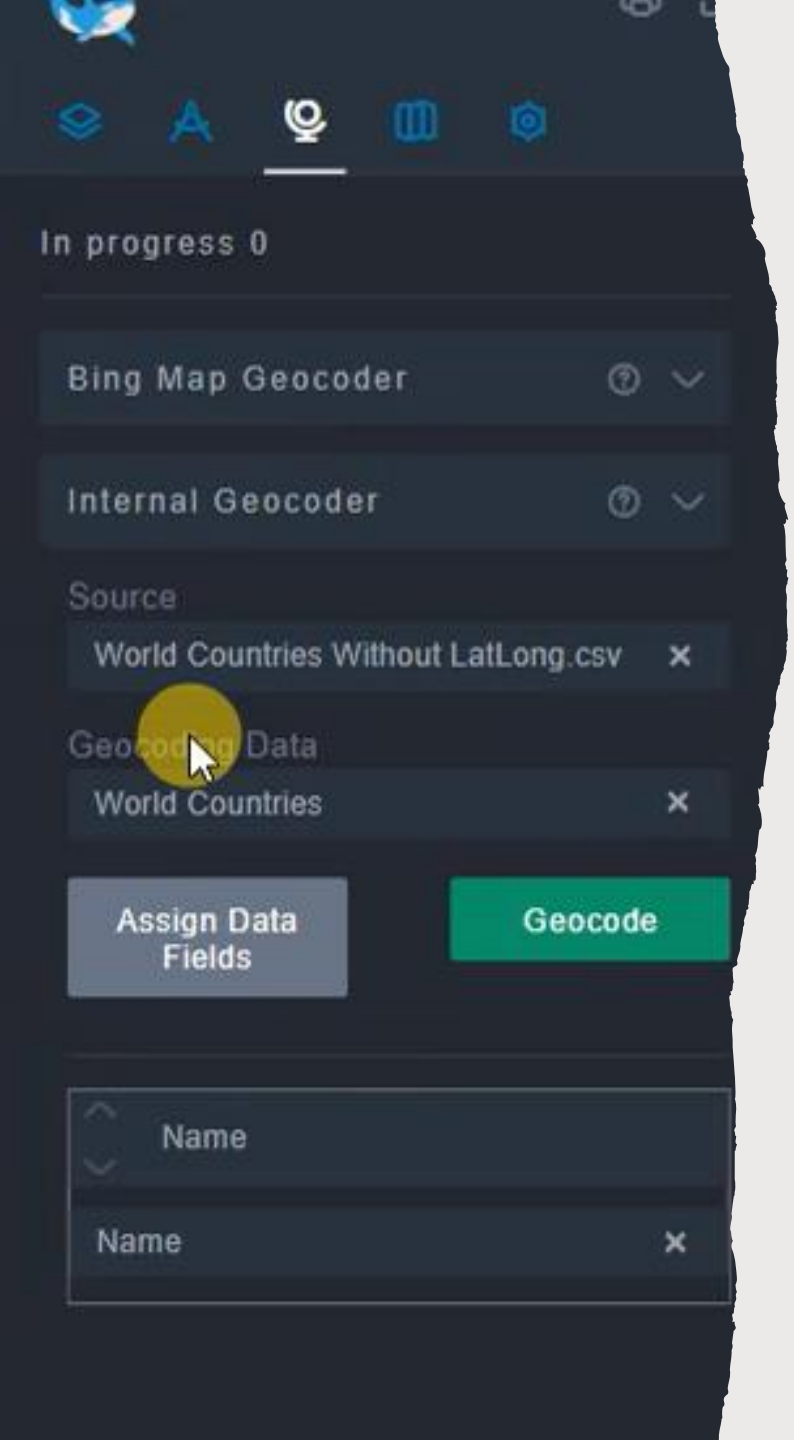
Putting the data on the Map

- Assuming you have completed the above, your data should show on the map as a circle visualization



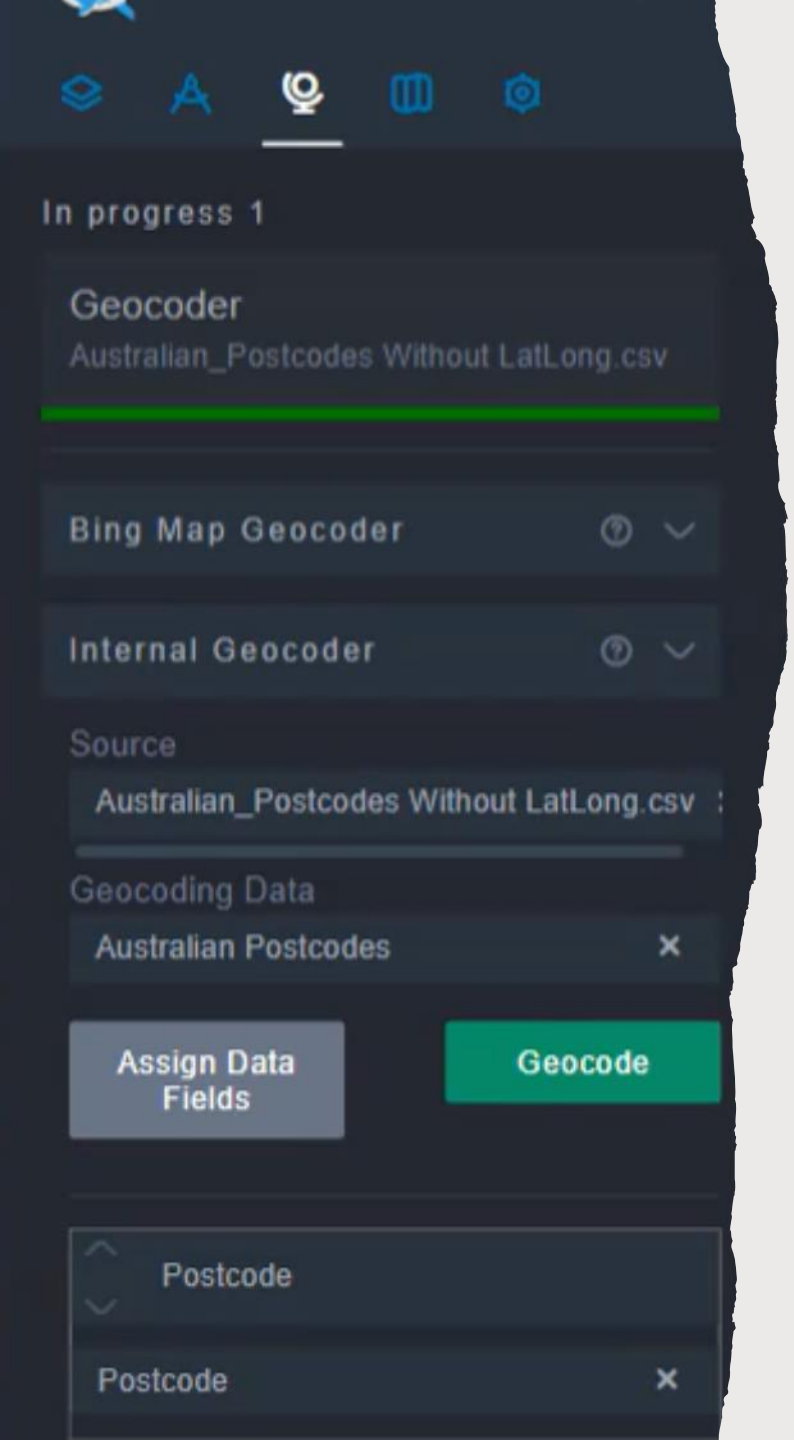
Geocoding

If your data already has Latitude and Longitude, you can skip this section



Geocoding your Data (if you do not have latitude and Longitude columns in your data)

- If you do not have latitude and longitude coordinates (in decimal format), you will need to add them using the Geocoder function in OrcaViz
- OrcaViz LM provides an internal geocoder:
  - An internal geocoder – will provide great results but for a limited range of data. This matches your data against datasets stored within the Custom Visual, so your data is not sent to an external service.



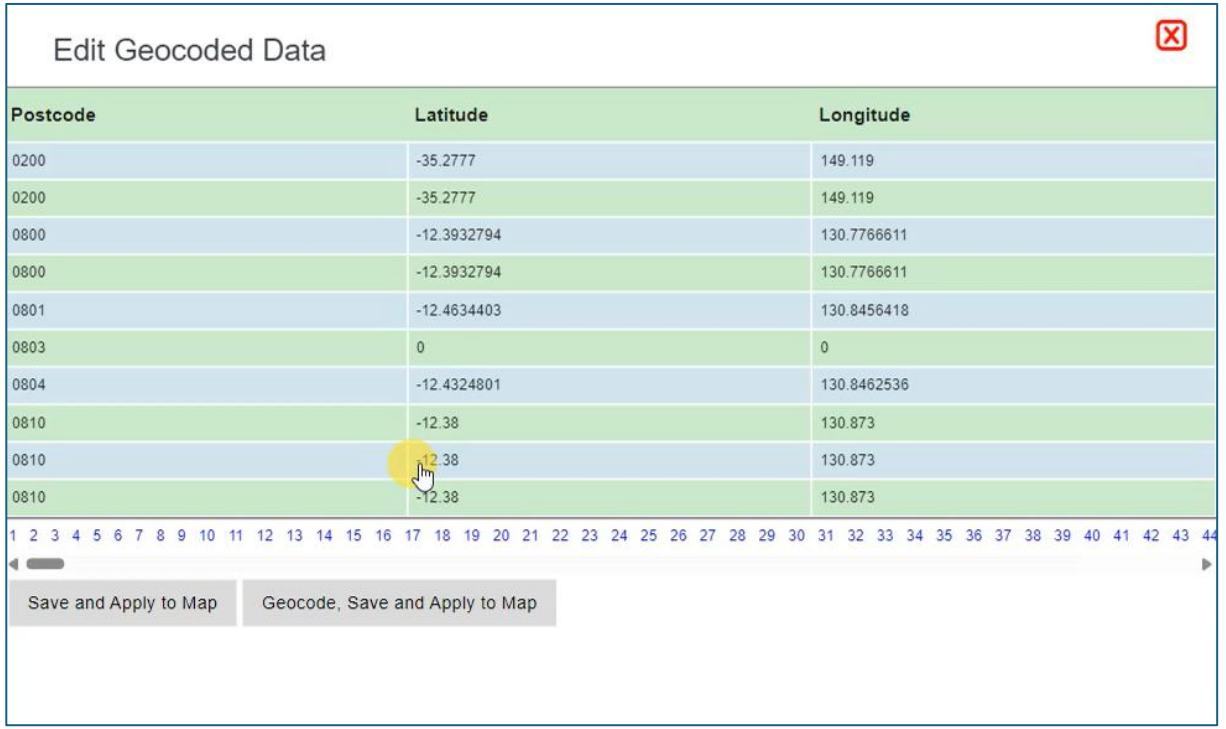
Geocoding your Data using the Internal Geocoder

- Select the Internal Geocoder
- Select the dataset you wish to geocode
- Select which internal dataset which contains similar data to your location data (i.e., Countries, cities, zip codes)
- Map the columns in your data to the ones required by the geocoder
- Press the Geocode button
- The Progress bar will indicate progress through the geocoding process

Reviewing the Geocoded Results

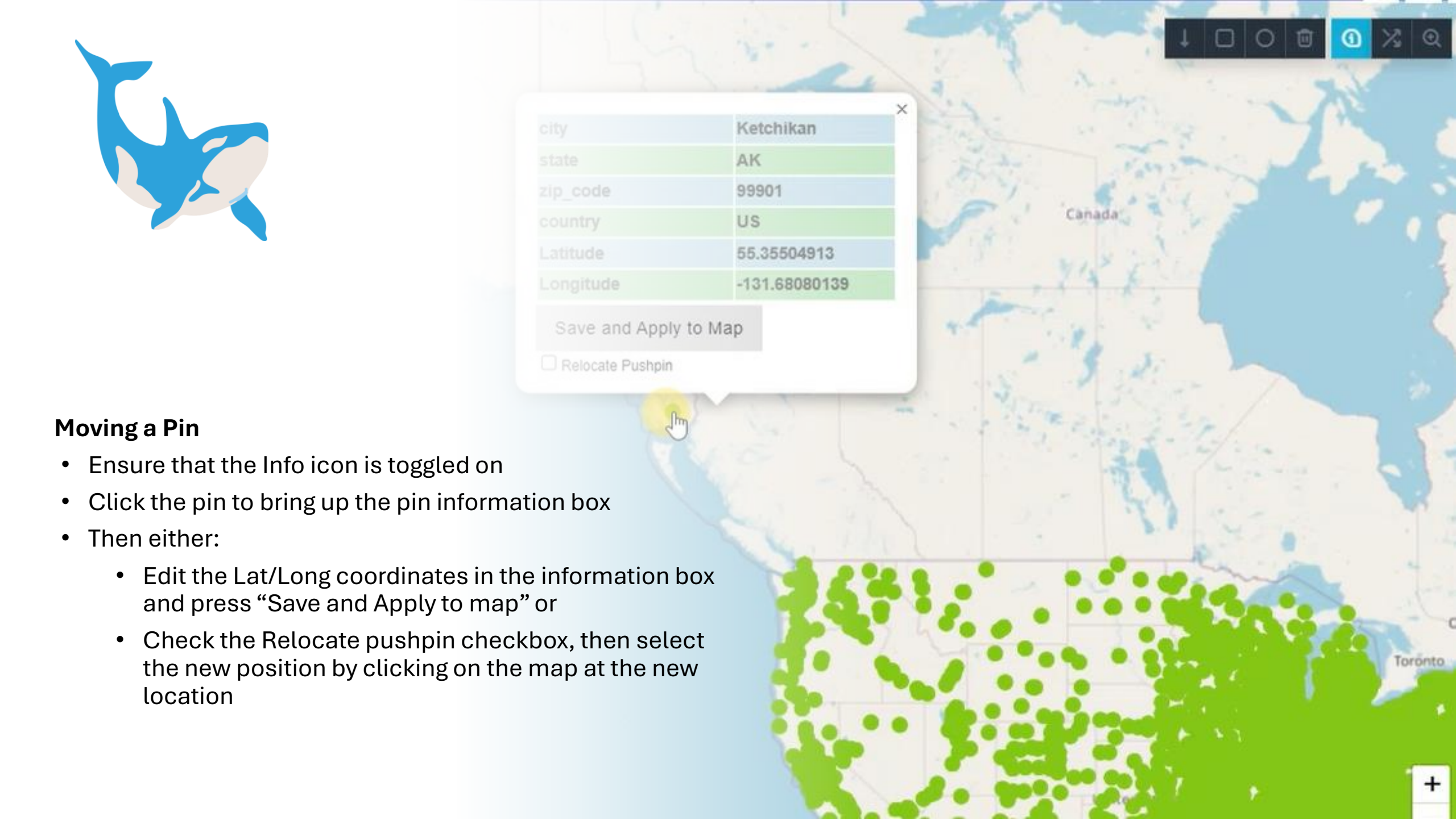
- On completion of the geocoding, your data will be shown with the added latitude and longitude data, in a table comprising multiple pages
- Links are provided to any pages containing entries that are likely to be incorrect or were unknown
- You can ignore the bad rows or review and edit them and re-process the edited rows.
- When complete, select Save and apply to map.

If you decide a pin is in an incorrect location, you can also move it on the map (see the next section).



Moving a Pin

If a pin is not in the correct location, you can move it.

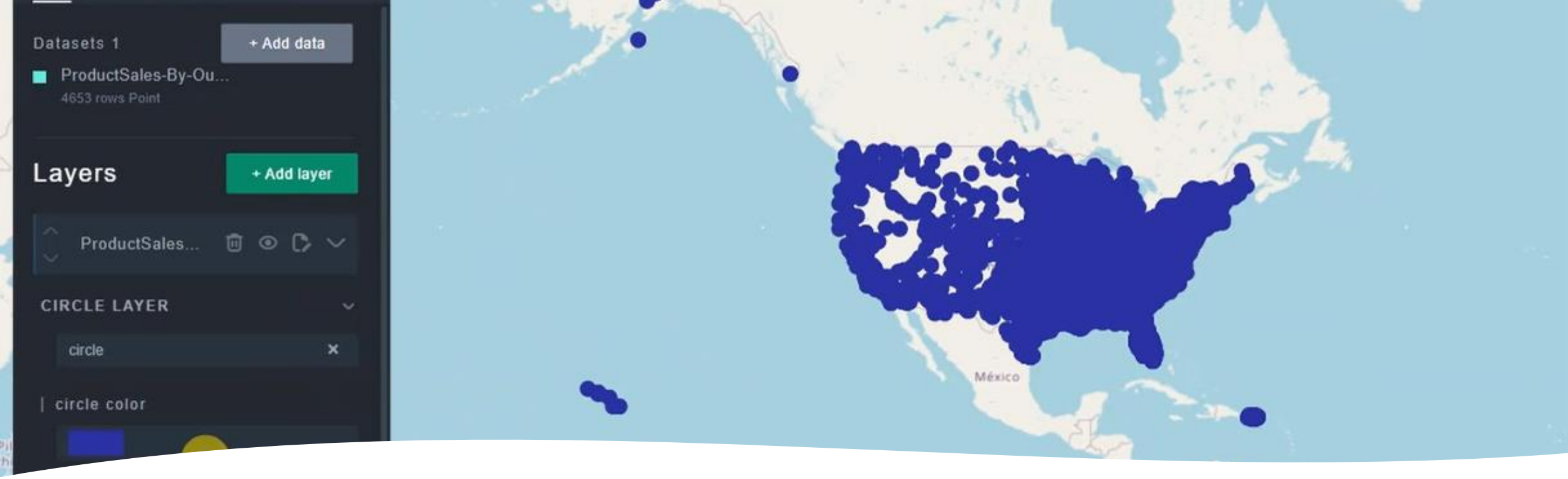


Moving a Pin

- Ensure that the Info icon is toggled on
- Click the pin to bring up the pin information box
- Then either:
  - Edit the Lat/Long coordinates in the information box and press “Save and Apply to map” or
  - Check the Relocate pushpin checkbox, then select the new position by clicking on the map at the new location

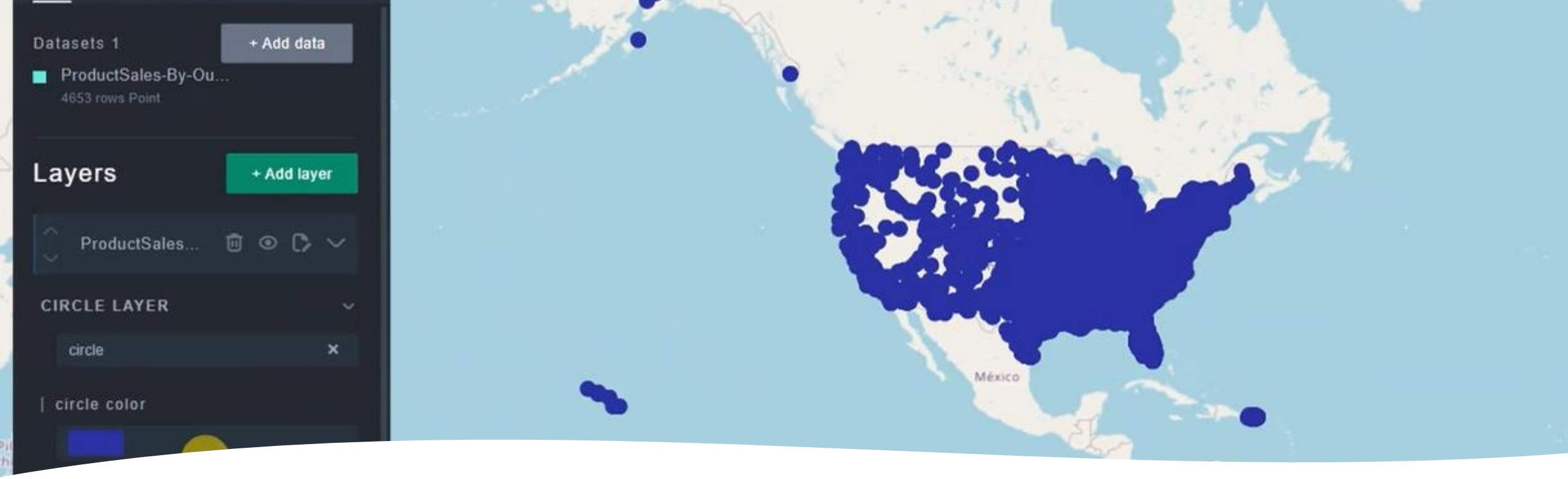
Visualising Your Data

How to change the way your data is displayed



Changing the Visualisation

- A Dataset can have multiple visualisations (e.g., as circles, pins or a heatmap)
- Each visualization has a “layer”
- The layer menu allows you to control the choice of icon, colour and sizing of the circle icons
- Circle icons can be coloured or sized based on a value in your data
- There are multiple colour palettes to choose from



Adding a Heatmap

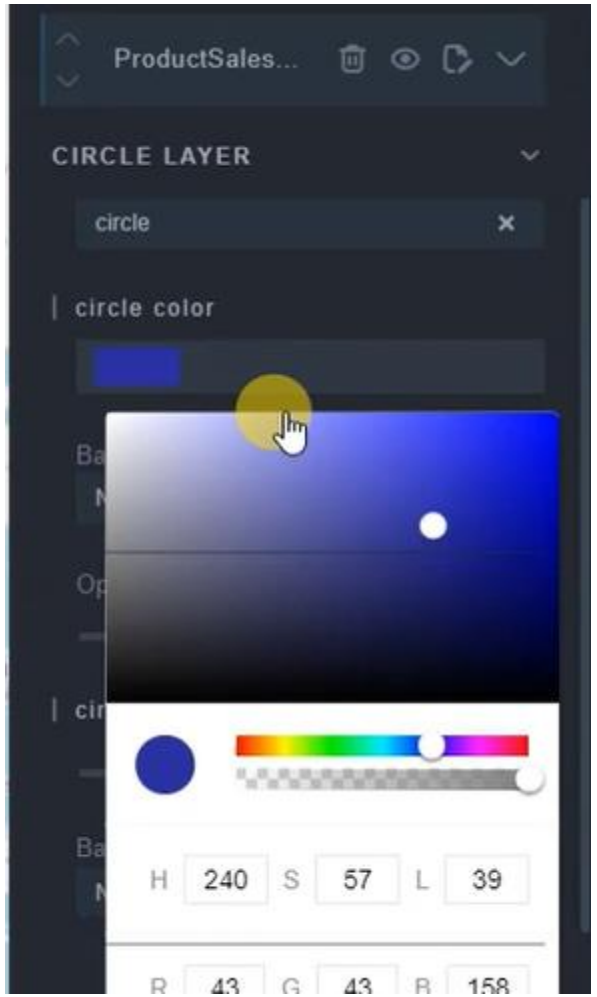
- Select Add Layer and select heatmap
- In the layer controls
  - choose the colour palette you wish to use
  - If you wish the heatmap to be driven by the number of pins only, do not choose a numeric value
  - If you wish the heatmap to be driven by a numeric value, select the field containing the value

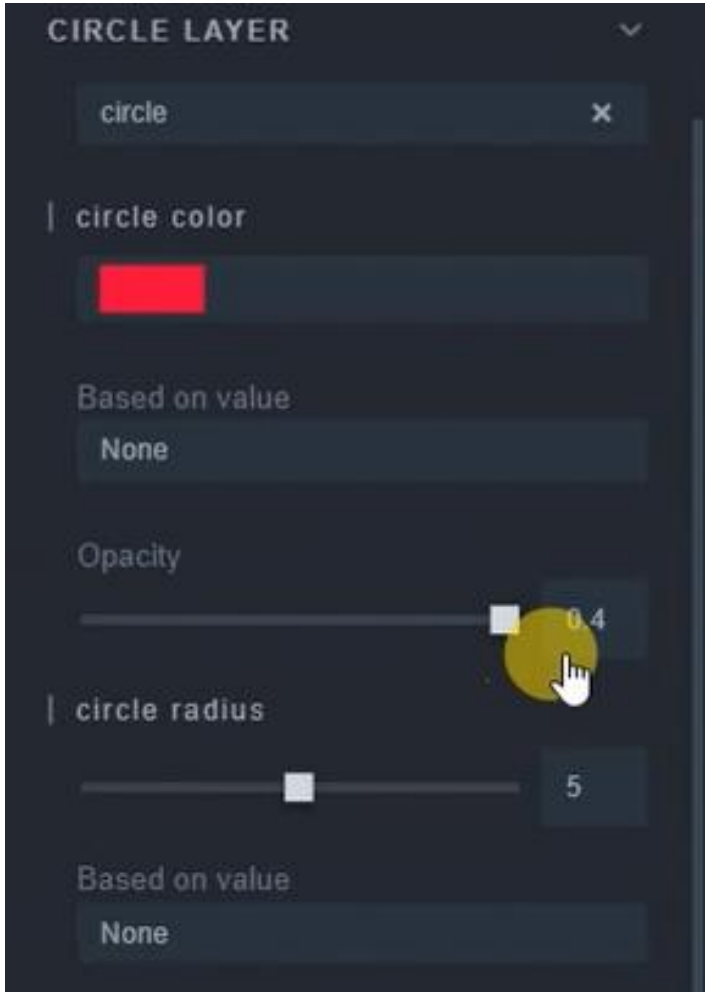
Changing the size and colour of a Circle Layer

- Select the layer
- Select the circle colour field and choose from the palette
- Choose the radius and opacity to suit your needs

You can also select:

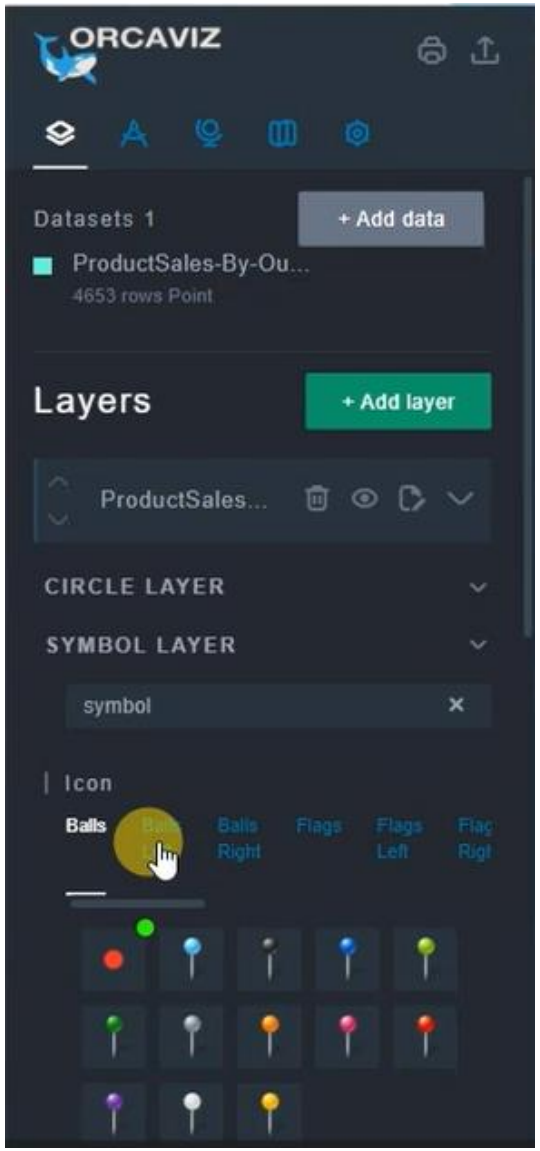
- Colour based on value
- Size based on value





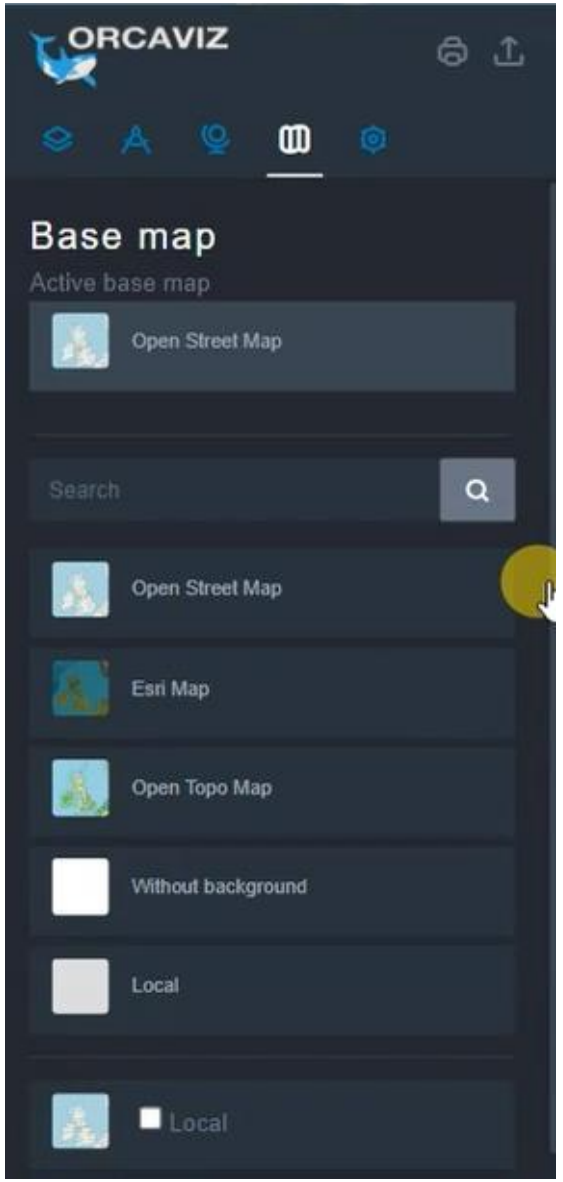
Adding a Pin Layer

- In the Layer menu, under the dataset you wish to use, add a New Layer and choose the symbol type
- Select the pin icon from the icon gallery



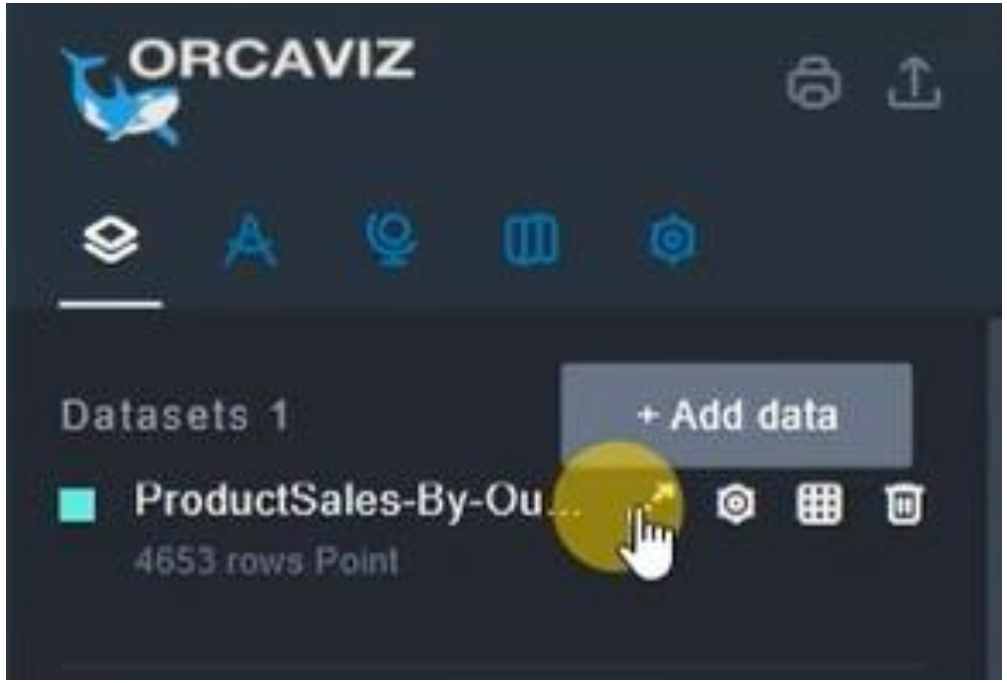
Choosing a different Base Map

- OrcaViz uses Open Street Maps as the default base map
- Select the Base Map icon
- Click the search icon and a list of base maps is shown
- Click to choose your selected base map



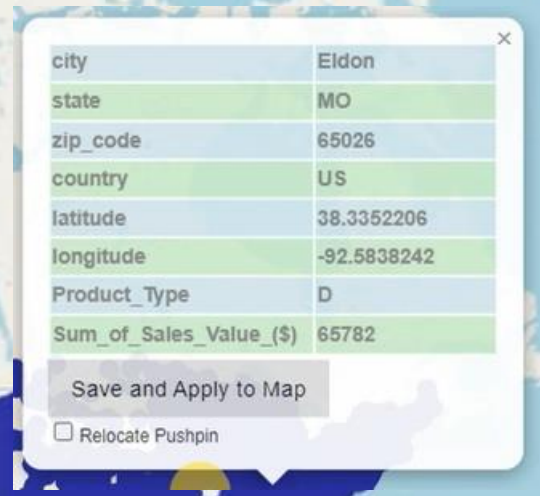
Setting the map view to reflect the full extent of your data

- Select the “extent” icon adjacent to the dataset of your choice
- This will zoom the map to ensure all your data is visible



Viewing information about a pin

- Select the “information” icon above the map
- Click the marker on the map to show the information about the pin



Configuring Information to be shown about a pin

- Select the Settings icon for your dataset under the Add Data button
- Click inside the dataset field and select all the fields from your data that you wish to be visible when you click a pin.

Clustered Data View

- Select the Gear icon adjacent to the chosen dataset
- Turn Clustering On
- Adjust the Clusters radius to suit your visualization

Adding Boundary Layers

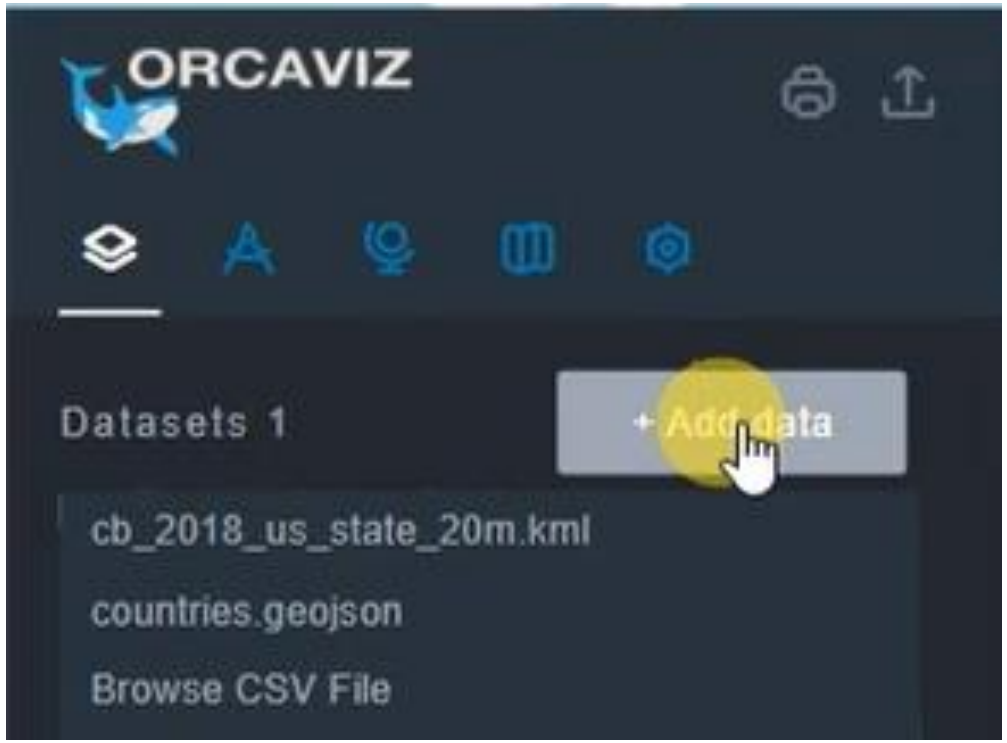
Add Boundary Layer

Select Add Data and choose a boundary set from the list. Orcaviz LM includes two boundary sets:

- US State boundaries
- Country Boundaries

Once loaded, the layer controls enable you to change the colour of boundaries based on a choice of criteria.

If you have any specific requirements, please email us at support@orcaviz.com and we will try and provide it.

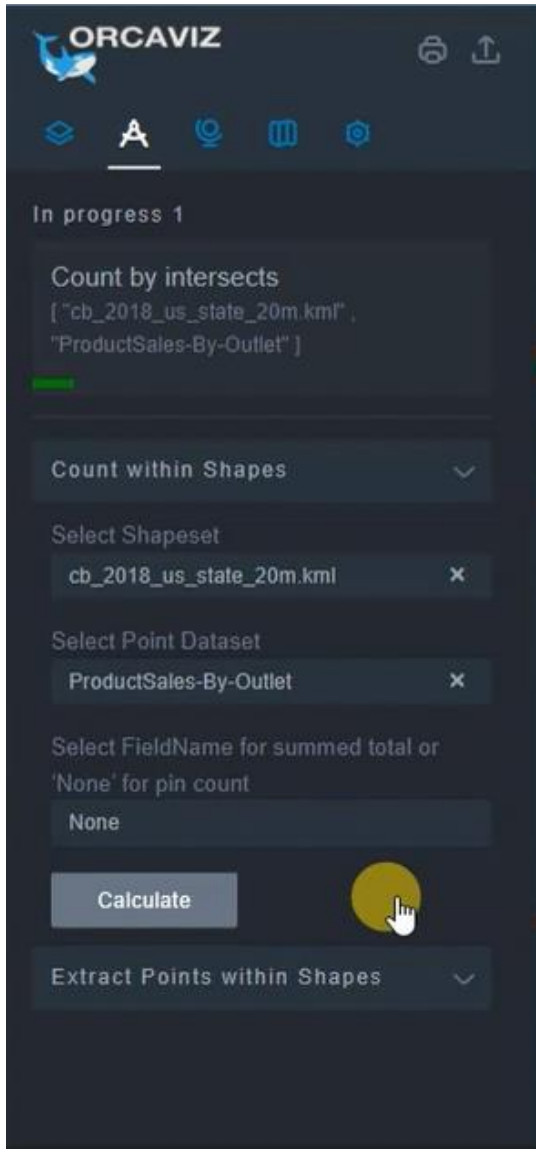


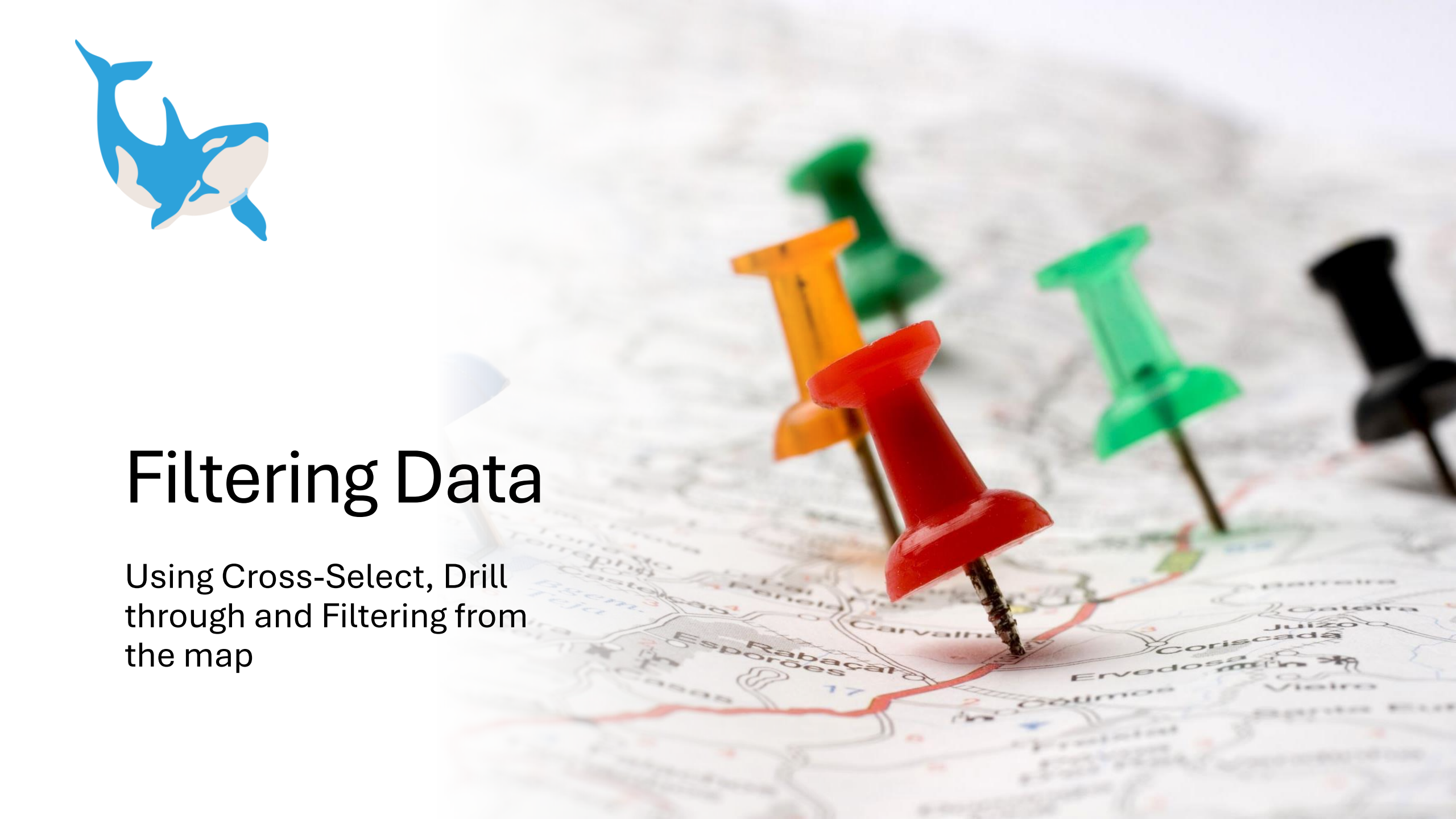
Creating a Choropleth Map

Choropleth maps allow you to colour shapes based upon the number of points in the shape or the sum of a numeric value held against the points inside the shape.

Choropleth Maps

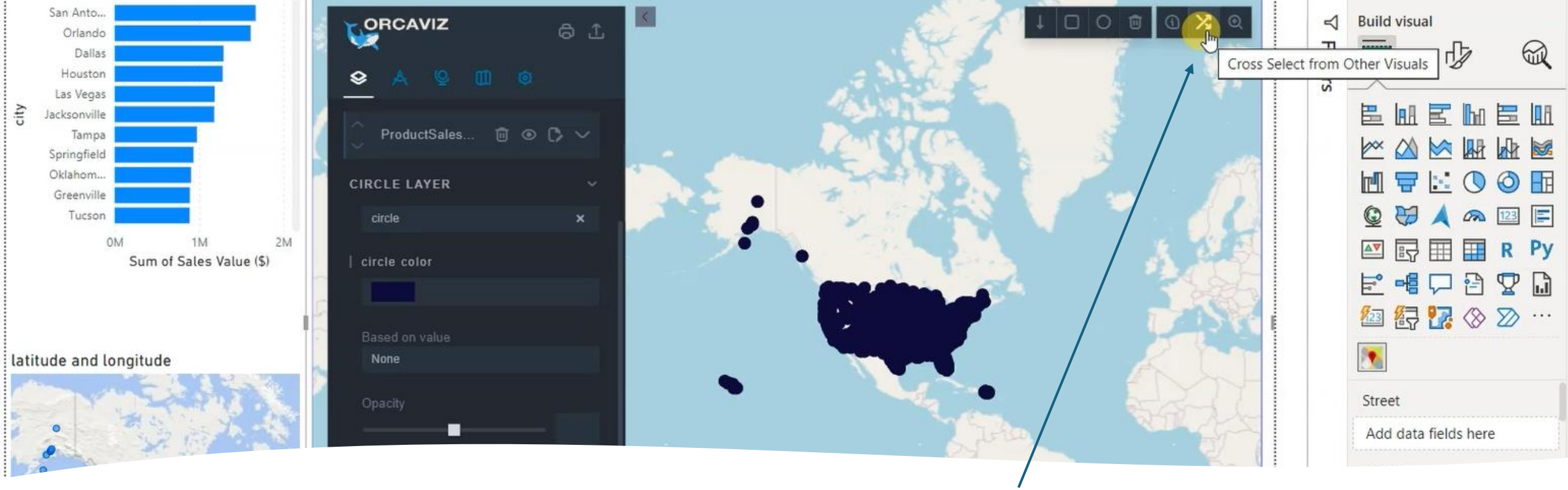
- Select the Analytics Tab in the left-hand menu
  - Select Count within Shapes
  - Select the Shape set you wish to use
  - Select the Point data set you wish to use
  - Select the numeric field you wish to be summed or leave as “None” if you wish to use the total count of pins.
  - Select “Calculate” to start the process
  - Progress is shown by a green bar.
  - The calculated value is added to a new field against the shape set.
- Once complete go back to the Data Layer tab
  - Choose the Shape set
  - Select Colour by Value
  - Select the field containing the calculated value





Filtering Data

Using Cross-Select, Drill through and Filtering from the map

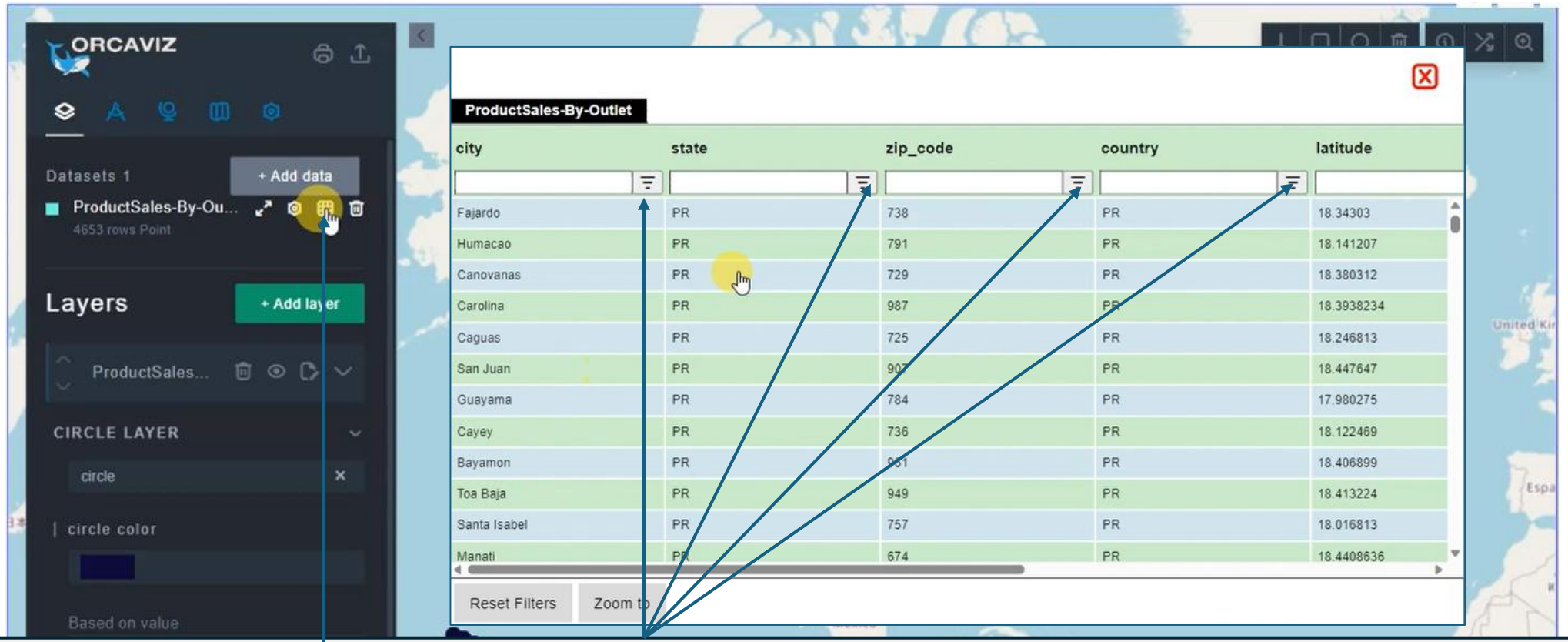


Cross Select from Power BI and Other Visuals

- You can turn Cross-Select from other visuals on/off by toggling the cross-select icon on the top right of the map
- When highlighted, the pins on the map visualization will reflect the filter choices made in other visuals (provided those filters are included in the data mapping for OrcaViz)
- This linkage is bi-directional, so choosing pins on the map should filter the other visualizations (assuming the filters are in the data mapping for the other visuals)

Drill Through

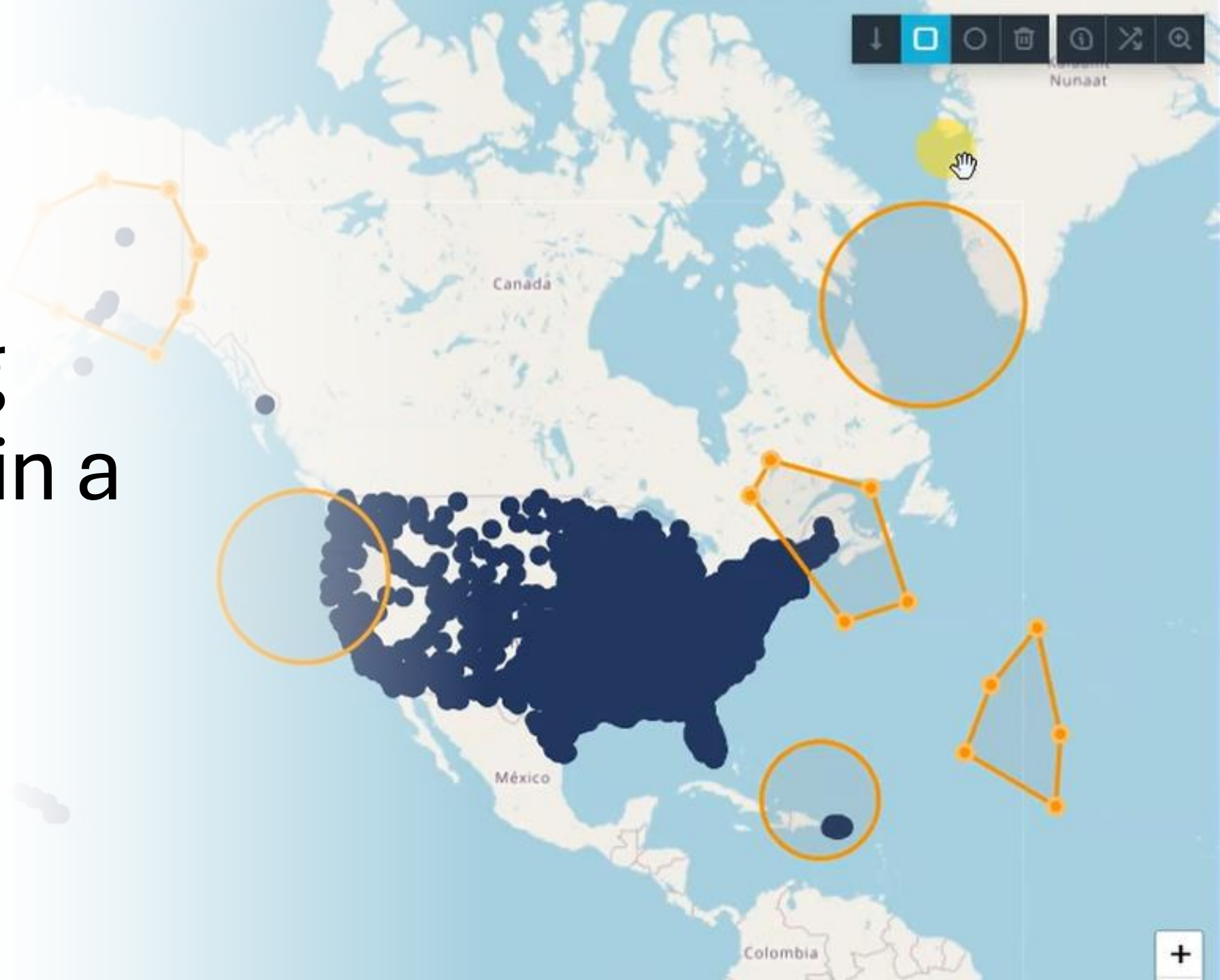
OrcaViz supports Drill Through



Filtering Data From The Map

- Select the grid icon next to the chosen dataset to display a column view of the data
- Filters are provided at the top of each column
- The filter choices depend on whether the data is text or numeric
- The filter choices should filter the other visualizations (assuming the filters are in the data mapping for the other visuals)

Extracting Data within a Shape

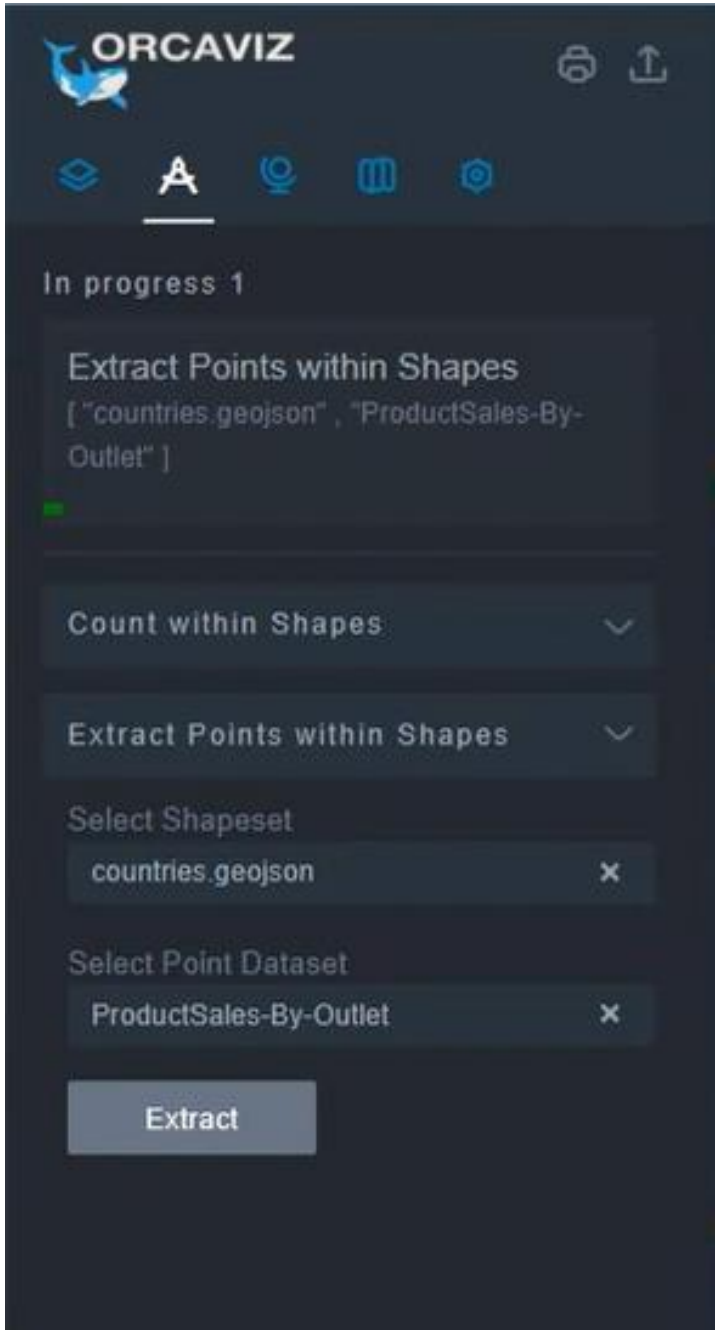


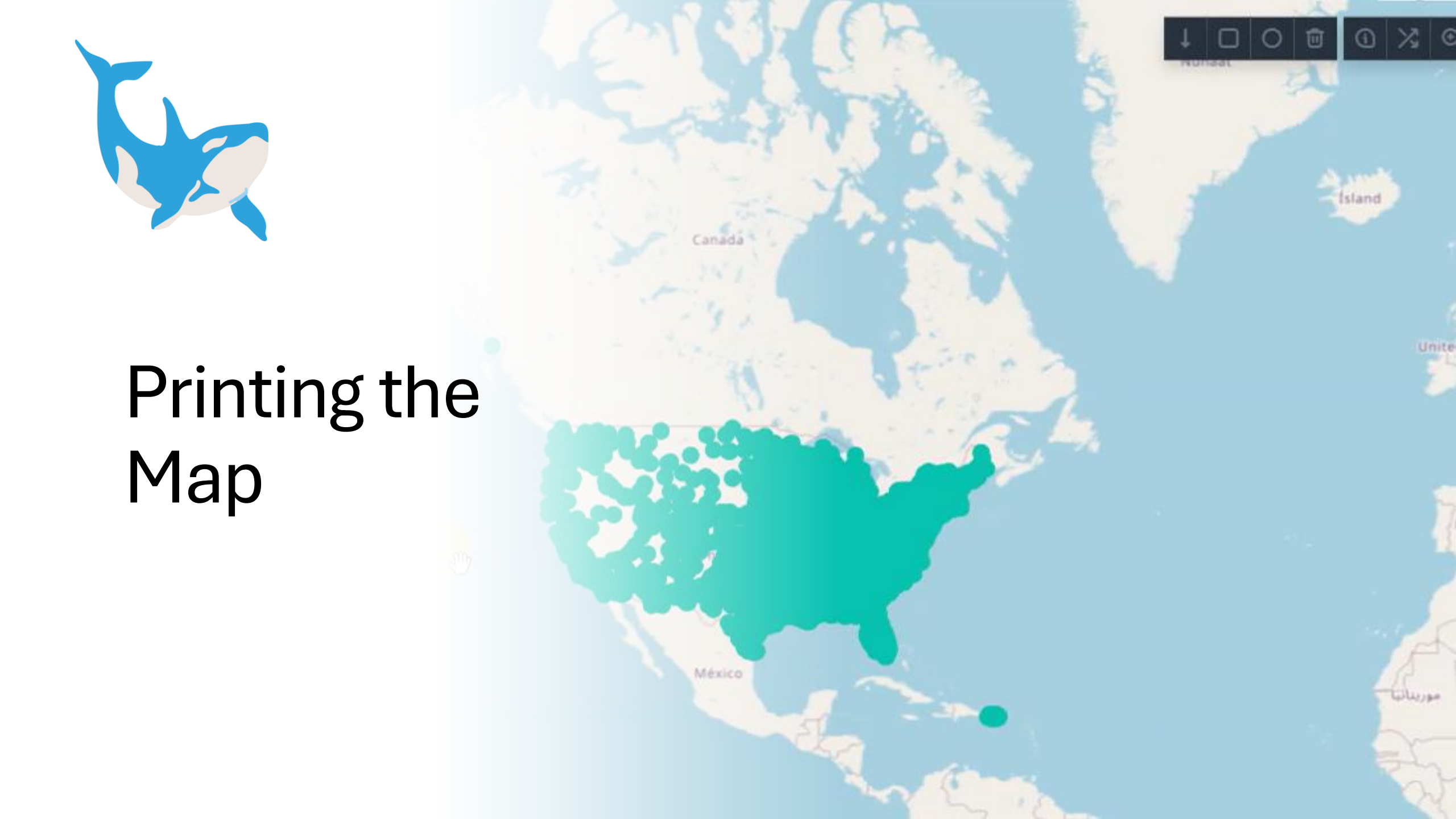
Drawing Shapes

- Use the circle or polygon icon on the top right of the map to initiate drawing on the map
- Use your mouse to create the chosen shape
- Select a node if you wish to edit the shape
- Create multiple shapes as required
- Select the down arrow to export the data contained within the shapes
- The extracted data forms a new dataset and new layer in the layer menu.

Extracting Data within Boundary Shapes

- Select the Analytics Tab in the left-hand menu
  - Select Extract Points within Shapes
  - Select the Shape set you wish to use
  - Select the Point data set you wish to use
  - Select “Extract” to start the process
  - Progress is shown by a green bar.
  - The extracted data becomes a new Data Set in the Data Layer tab.





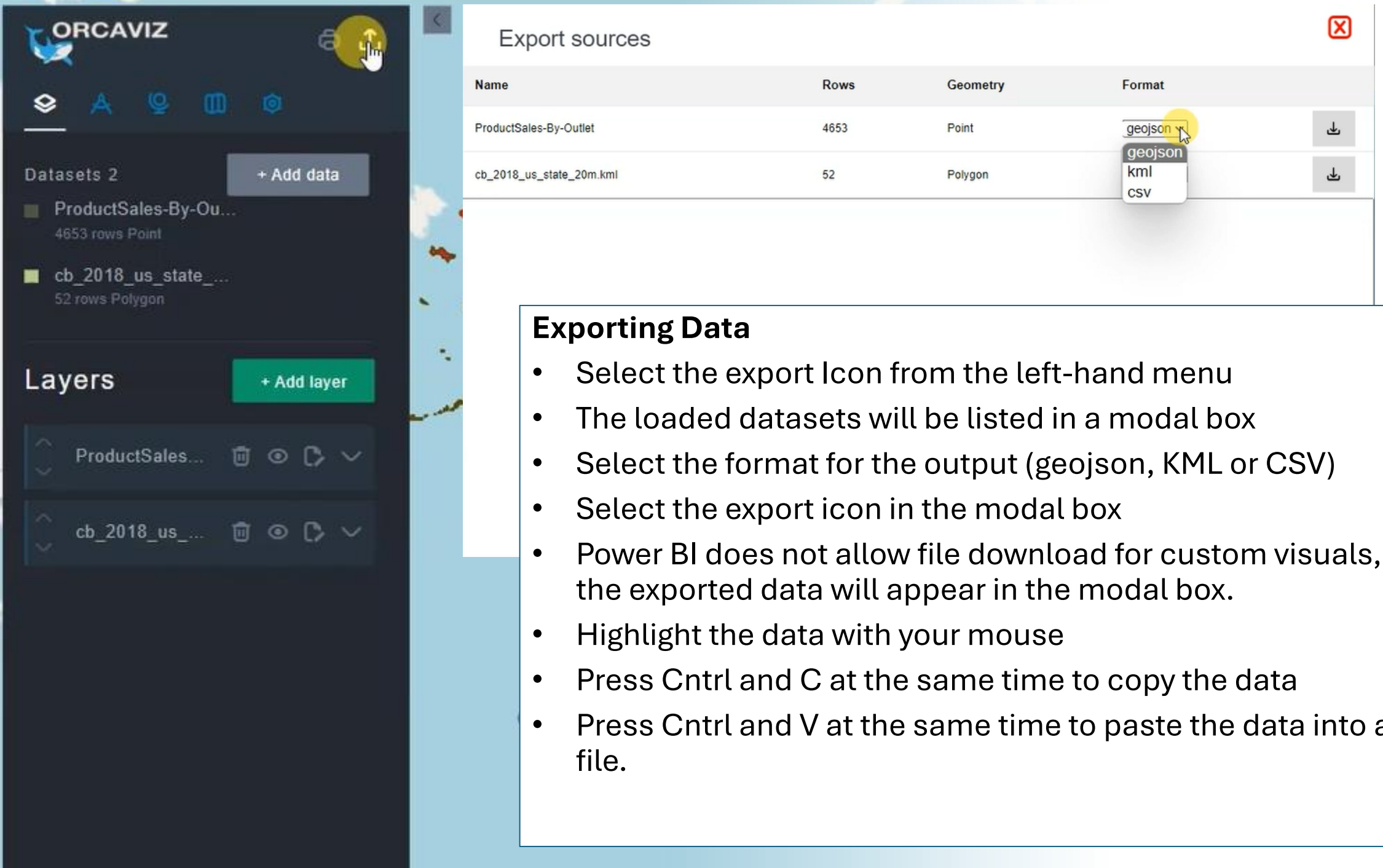
Printing the Map

Printing the Map

Power BI restricts this capability. So, there are three options:

- Take a screenshot using your keyboard and browser
- Use a clipping tool (e.g., Snip and Sketch in Windows)
- Use the Print icon in OrcaViz which will create a JPG image of the map that you can right click and copy with your mouse for saving on your machine.

Exporting the data



Exporting Data

- Select the export Icon from the left-hand menu
- The loaded datasets will be listed in a modal box
- Select the format for the output (geojson, KML or CSV)
- Select the export icon in the modal box
- Power BI does not allow file download for custom visuals, so the exported data will appear in the modal box.
- Highlight the data with your mouse
- Press Cntrl and C at the same time to copy the data
- Press Cntrl and V at the same time to paste the data into a file.