
Instruction Package for ArcGIS Online Web Applications

GeoConnect Prince Edward County: Strengthening Rural Connections through Mapping

GIS Collaborative Project 2409

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Academic Statement

This instruction package is presented in partial fulfilment of the academic requirements for APST62, GIS Collaborative Project course, Fleming College.



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1 Introduction

This document is prepared in partial fulfillment of the academic requirements for APST62, GIS Collaborative Project course at Sir Sandford Fleming College. Its intended purpose is to allow staff at The County Foundation, as well as future students of the GIS Program at Fleming College, to easily replicate steps to configure web maps and apps in ArcGIS Online.

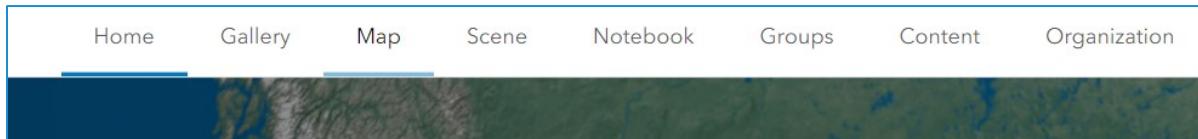
With an ArcGIS Online Creator account, web applications can be configured to display data in a meaningful and interactive way. For this project, web maps, dashboards, an experience, and a hub were created to effectively show social infrastructure, transit routes and stops, and spatial analysis results.

2 Configure an ArcGIS Web Map

Several web maps were created in Map Viewer to display data for the public and internal staff at The County Foundation. Many of these web maps were brought into other web applications, such as Dashboard and Experience Builder, to create visually appealing interfaces displaying geospatial data. For more information about creating web maps, visit Esri's [Get started with Map Viewer](#) help page.

2.1 Create a new web map

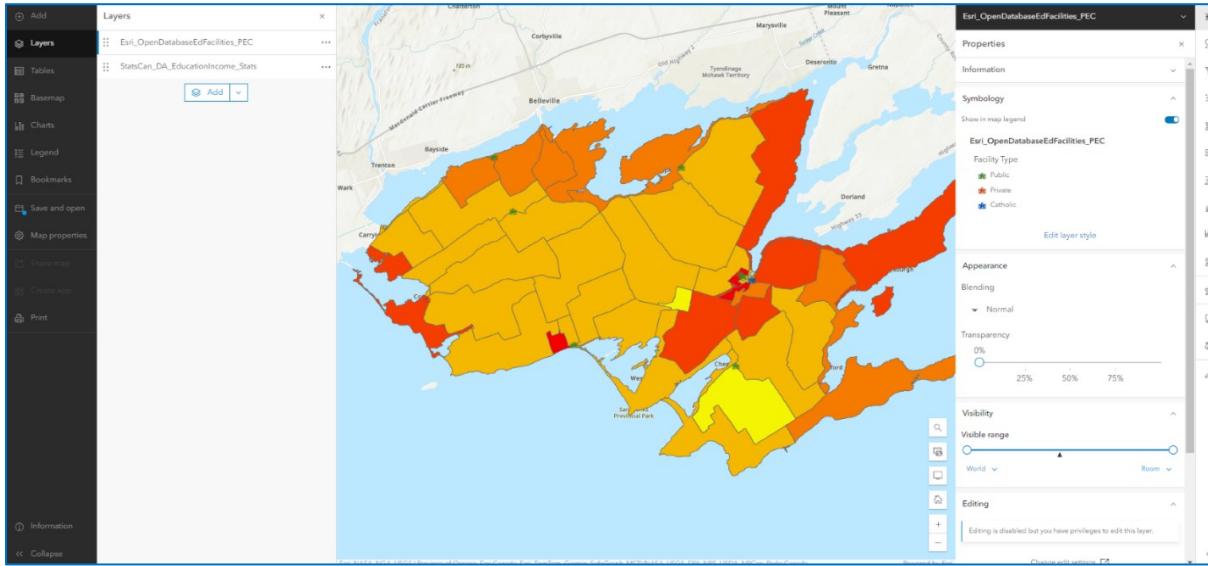
1. Navigate to the **ArcGIS Online** homepage and sign in to your account.
2. Click **Map** in the navigation bar to open a new web map.



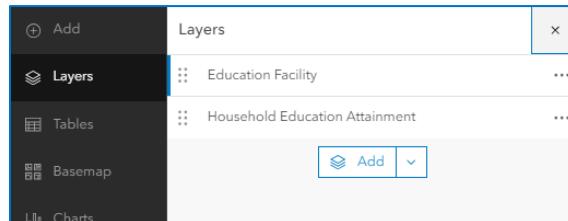
3. Click **Add** to browse your layers.



4. Add your desired layers from your ArcGIS Online content, group, organization, or Living Atlas. In this case, the educational facilities point data, and the education and income polygon layer are of interest. Rearrange them as you want them to appear, usually in the order of point, line, and polygon.



5. Click on the **three dots** next to the layer and then click **Rename**. Renaming the layers based on what is going to be shown in the map is best practise to ensure the data is being portrayed accurately by the viewers.

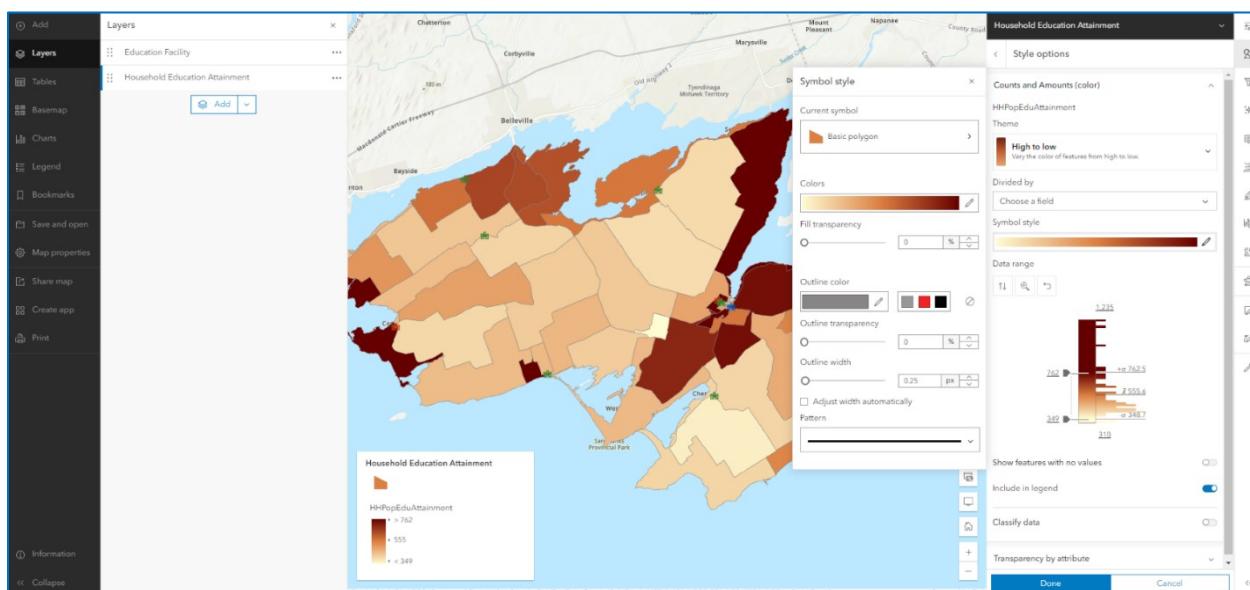


6. Click **Save** to open the saving window. Name your map, and optionally add tags and a summary.

2.2 Style options

The symbology of the layers when first added to the map adopts any symbology of the hosted feature layer upon importing it to ArcGIS Online. The map's style options in Map Viewer allow the map creator to symbolize each layer. Two key windows that aid with this are the Properties window and the Styles window.

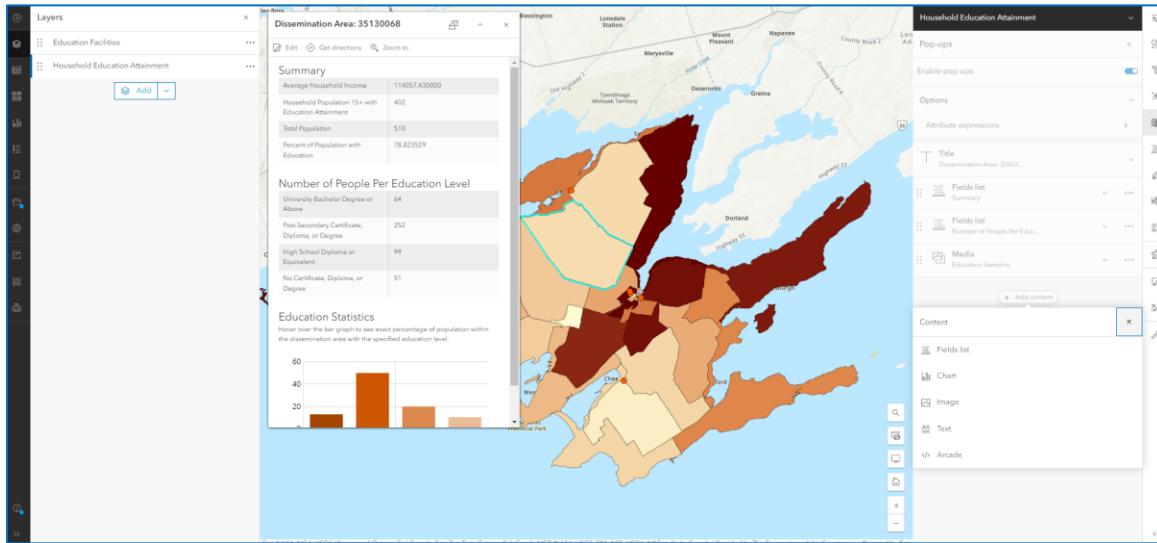
1. Click on the layer that needs to be styled. The **Properties** window for this layer will pop up on the right-hand side. Click **Edit layer style**. Ensure the attribute chosen is the one that needs to be symbolized on the map.
2. Next, click **Style options** to open the Styles window on the right-side to choose your desired symbol style. Toggle off **Classify data** so that the theme is set to **High to low**. Click **Symbol style color ramp** to change it and to change the outline of the polygons. Click **Done**.



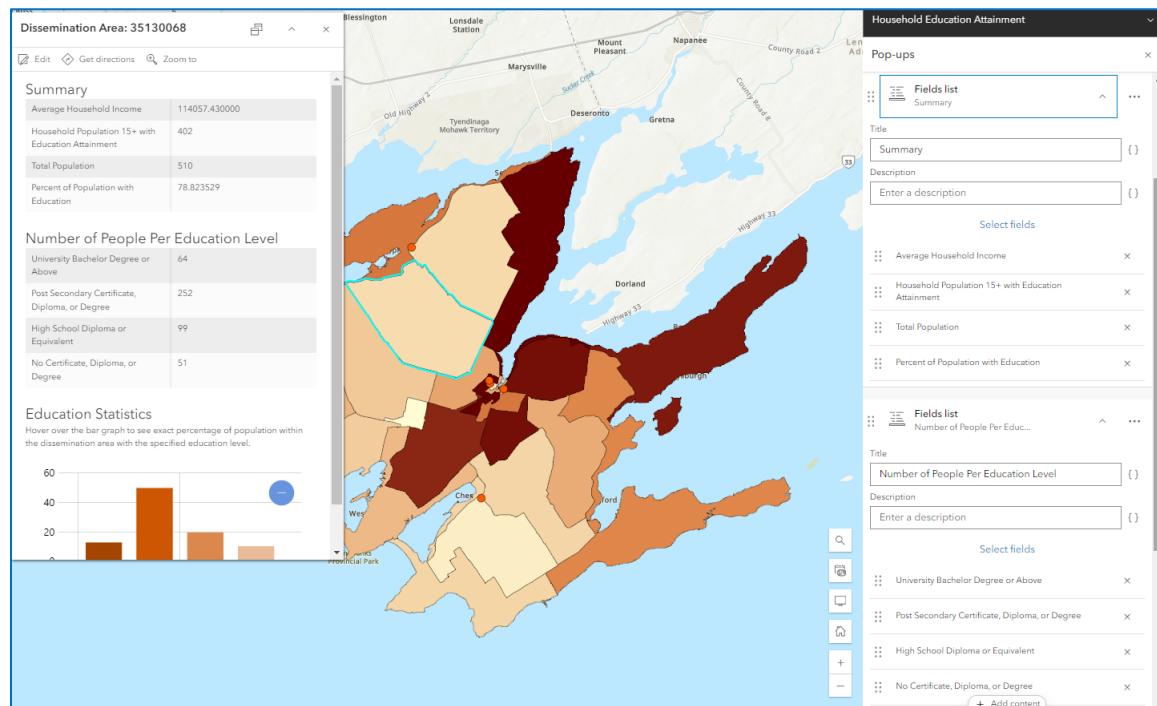
2.3 Configure pop-ups

1. Click on the layer and then click on the right-side Pop-ups window to configure the pop ups for this layer. Configuring one pop-up will configure them all within the layer. Click the **Add content** button to add a fields list, chart, image, text, or arcade code.

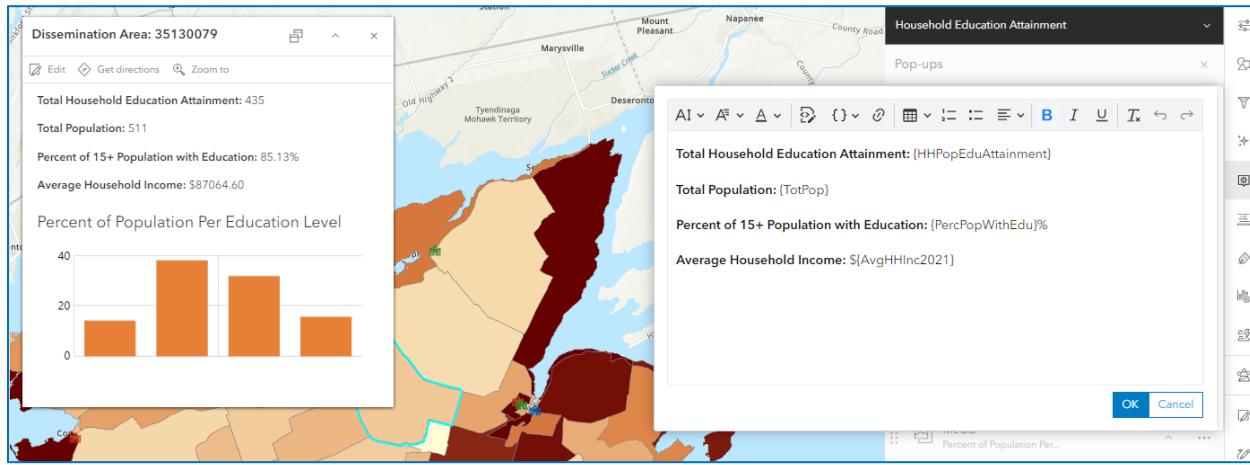
NOTE: For any layers that don't require a pop-up, toggle them off in the Pop-ups window.



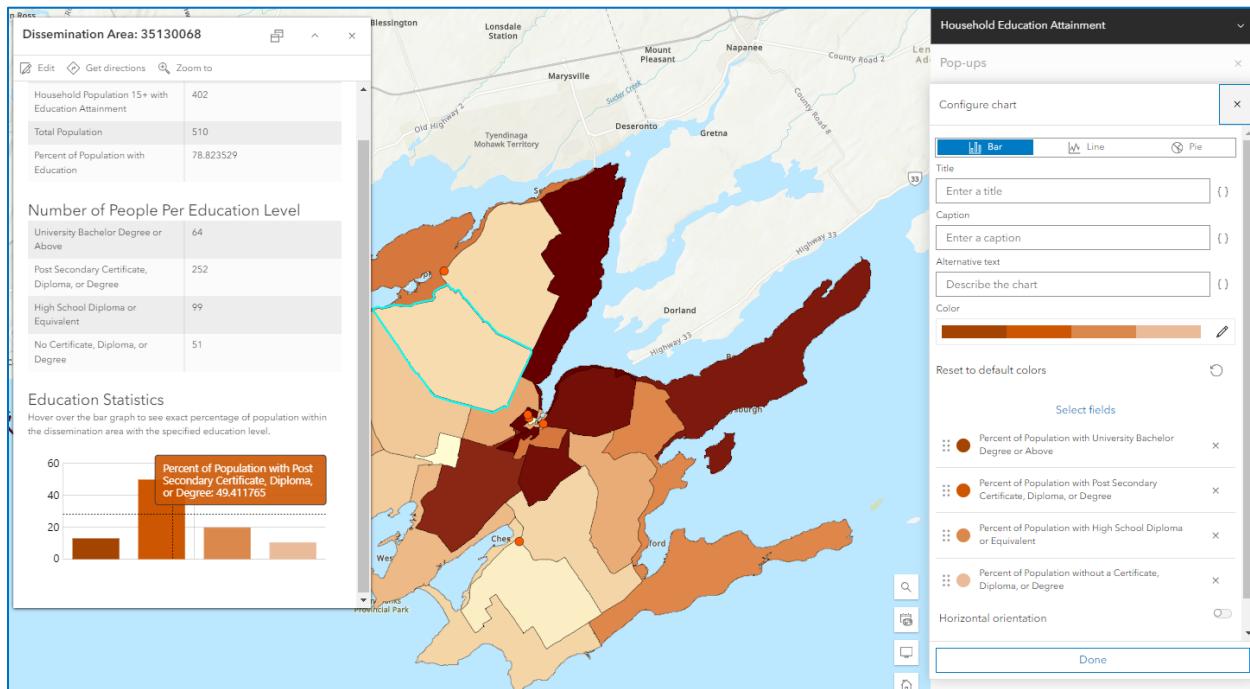
2. For **Fields list** content, by default, all of the fields are selected. Deselect the fields that aren't needed in the pop-up. The fields list will appear as a table in the pop-up. It is important to set aliases for each field, as these will show in pop-ups and will help users understand the content being displayed.



3. For **Text content**, text, tables, or lists can be added. The curly brackets indicate the field name, taken right from the data table when the feature is selected. Use the other font editing options to edit the text.



4. For **Media content**, graphs, images, and other embedded content can be added. For this map, the pop-ups are going to include a bar graph. Select the fields to be shown and choose appropriate colors by clicking the circle icon next to the field. Again, it is important to set aliases for each field, as these will show in the hover text and will help users understand the content being displayed.



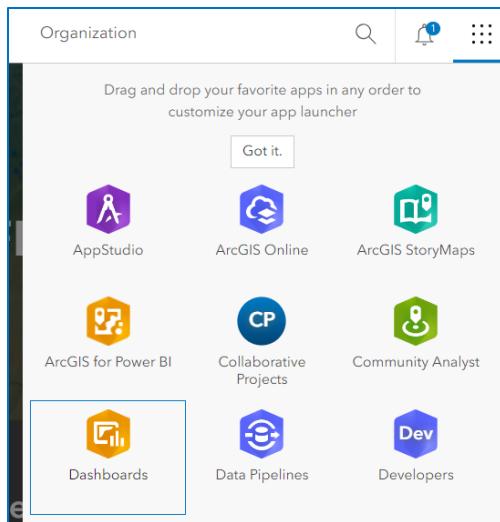
5. Explore the other elements you can add to pop-ups, including images, and be sure to save the map often to avoid losing the changes made to it.

3 Configure an ArcGIS Dashboard

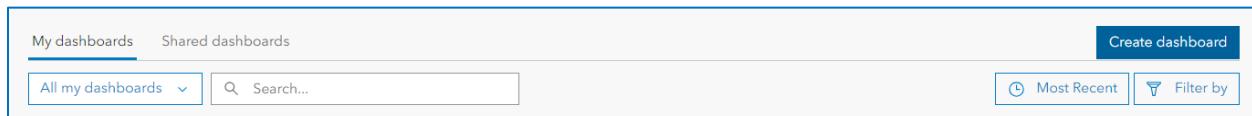
Dashboards are a great web application to display data and allow viewers to interact with it through pop-ups, filters, and other clickable elements. This subsection describes how to create an interactive ArcGIS Dashboard. For more information on ArcGIS Dashboards, visit Esri's [ArcGIS Dashboards](#) overview page.

3.1 Create a new ArcGIS Dashboard

1. Navigate to the **ArcGIS Online homepage** and sign in to your account. Then click the **waffle** in the top righthand corner and click Dashboards.



2. Click **Create dashboard** in the top-right corner.



3. Give your dashboard a title, indicate which folder you want to save it in, and optionally, add tags and a summary. Then click **Create dashboard**. You will automatically be redirected to the Dashboard editing interface.

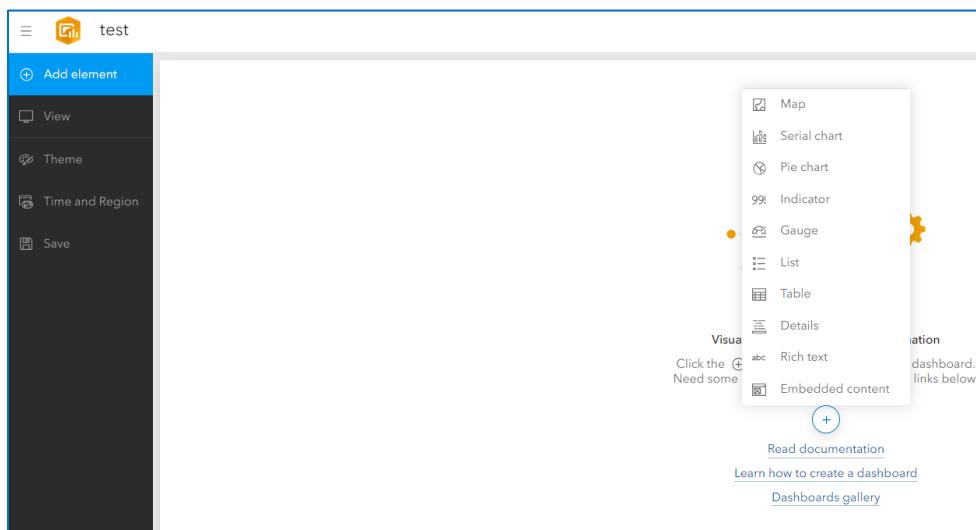
The screenshot shows a 'Create new dashboard' dialog box. It contains fields for 'Title*', 'Tags', 'Summary', and 'Folder'. The 'Folder' field is set to 'hplexko@flemingcollege.ca_Fleming'. At the bottom right are 'Cancel' and 'Create dashboard' buttons.

3.2 Add Dashboard elements

The components that make up a Dashboard are called elements. There are eleven elements that can be added to a dashboard: map; map legend; serial chart; pie chart; indicator; gauge; list; table; details; rich text; and embedded content. This section of the document reviews how to recreate the elements used in the Dashboards created for this project.

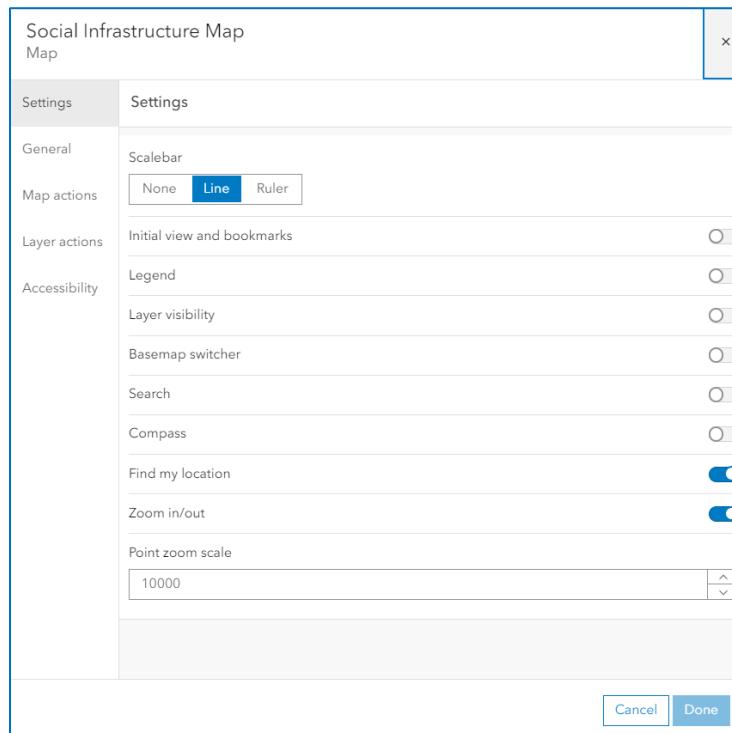
3.2.1 Map element

1. Click the **+** icon in the left sidebar menu to add an element. Then click **Map**.

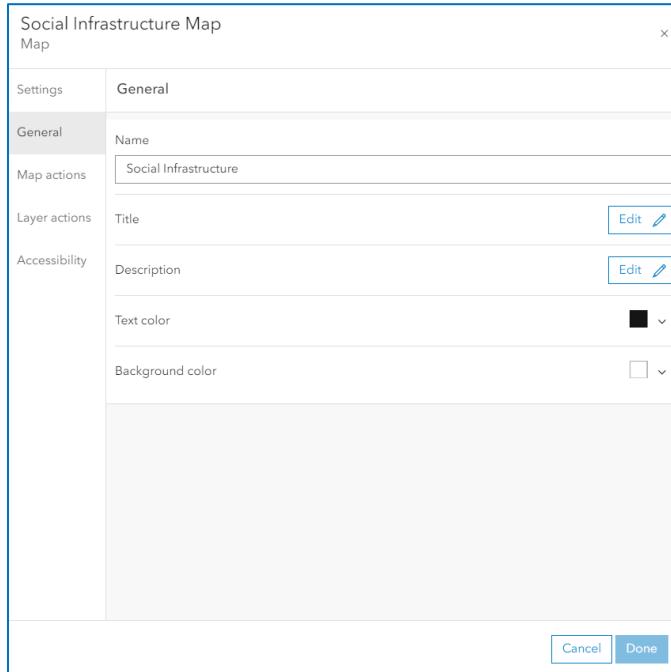


2. Find the layers needed for the dashboard and click Select. This will bring up the map editing window. In **Settings**, you can add or remove various interactive map elements. These include:

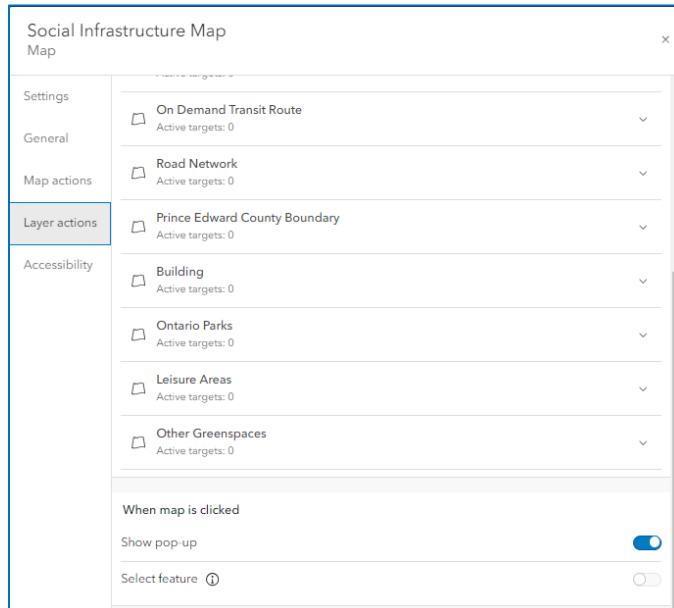
- Scalebar: shows the scale of map as the map extent changes
- Initial view and bookmarks: shortcuts to views and places on a map
- Legend: allows user to show or hide the map's legend
- Layer visibility: allows users to toggle on and off layers
- Basemap switcher: allows users to switch between basemaps, including Terrain, Imagery, Streets, and more.
- Search: adds a search bar to the map allowing users to search for points of interest
- Compass: adds a compass icon to the map
- Find my location: allows users to easily find their location when clicking this feature
- Zoom in/out: allows users to zoom in and out of map



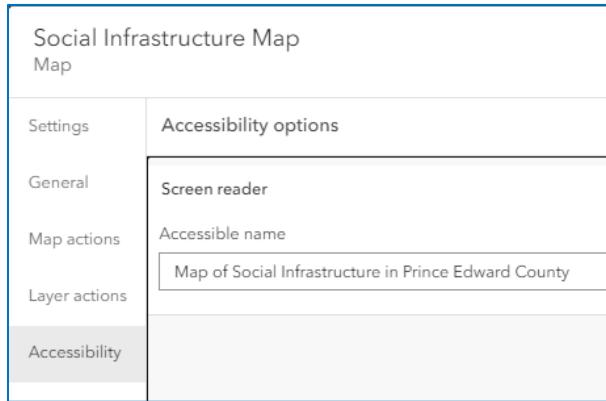
3. In **General**, name the map. You can optionally add a title and description and change the text color and background color of this text. If there is more than one map in the Dashboard, it is recommended to add a title.



4. In **Layer actions**, toggle on **Show pop-up** to allow the configured pop-ups to appear when a feature is selected.

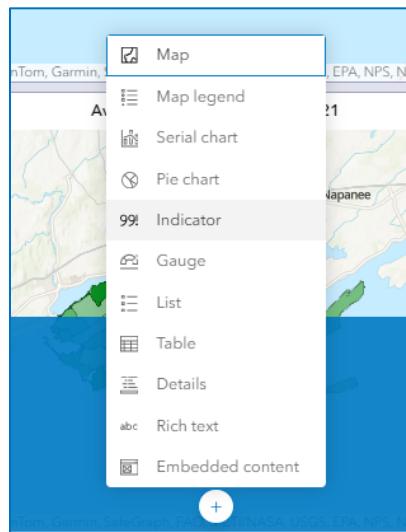


5. In **Accessibility**, add text to allow screen readers to describe the application.



3.2.2 Indicator element

1. Click the **+ icon** in the left sidebar menu to add an element. Then click the **+ icon** on an area of the Dashboard and choose **Indicator**.



2. Select the layer that will be shown in the indicator. For this project, the indicator will show the average household income within the map extent, so the layer with this data will be chosen. Once selected, the indicator editing window will appear.

3. In **Data**, different **Statistics** can be shown for number or feature data. **Average** will be chosen. Then choose the field for which the average will be calculated.

Indicator	
Data	Data options
Indicator	Settings
General	Layer: Average Household Income Change
Accessibility	Filter + Filter
Value type	
<input checked="" type="button"/> Statistic <input type="button"/> Feature	
Statistic	
Average ▼ <ul style="list-style-type: none"> Count Average • Minimum Maximum Sum Standard deviation Percentile discrete Percentile continuous 	

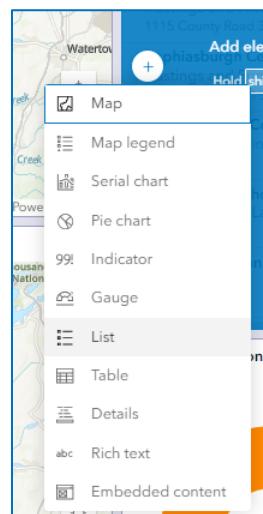
Indicator	
Data	Data options
Indicator	Settings
General	Layer: Average Household Income Change
Accessibility	Filter + Filter
Value type	
<input checked="" type="button"/> Statistic <input type="button"/> Feature	
Statistic	
Average ▼ <ul style="list-style-type: none"> Average Household Income [AvgHHInc2021] 123 Household Population 15+ with Education Attainment [HHPopEduAttainment] int University Bachelor Degree or Above [UniBachOrAbove] int Post Secondary Certificate, Diploma, or Degree [PostSecCertDipDeg] int High School Diploma or Equivalent [HighSchDipOrEquiv] int No Certificate, Diploma, or Degree [NoCertDipDeg] int Total Population [TotPop] int 	

4. In **Indicator**, an icon can be chosen to visually represent what the indicator is displaying. Since this indicator shows household income, an icon that represents that topic was chosen and green color was chosen to match with the green income map. Consistency is important as it aids in understanding of the data.

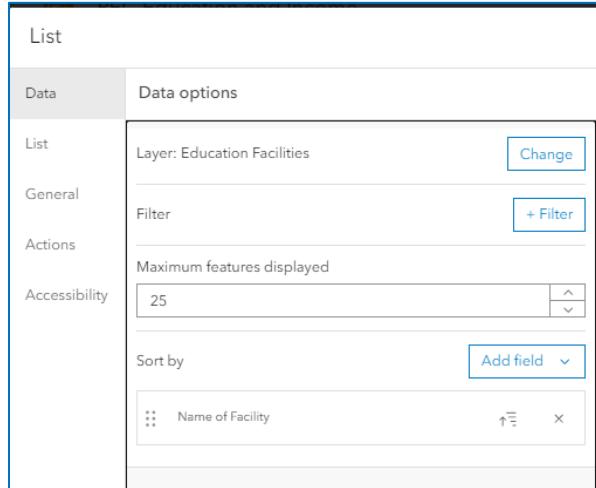
The screenshot shows the 'Indicator' configuration interface. On the left, there are tabs for Data, Indicator (which is selected), General, and Accessibility. Under the Indicator tab, there is a 'Settings' section with an 'Advanced formatting' button and an 'Enable' button. The main area contains fields for 'Top text', 'Middle text', and 'Bottom text', each with a calculated value placeholder and styling options. Below these is an 'Icon' section with a 'Change' button and a trash icon, followed by 'Position' (Left is selected), 'Fill' (green), and 'Outline' (green). To the right, a preview window displays a green house icon with a dollar sign inside, followed by the text '111.1k'.

3.2.3 List element

1. Click the **+ icon** in the left sidebar menu to add an element. Then click the **+ icon** on an area of the Dashboard and choose **List**.

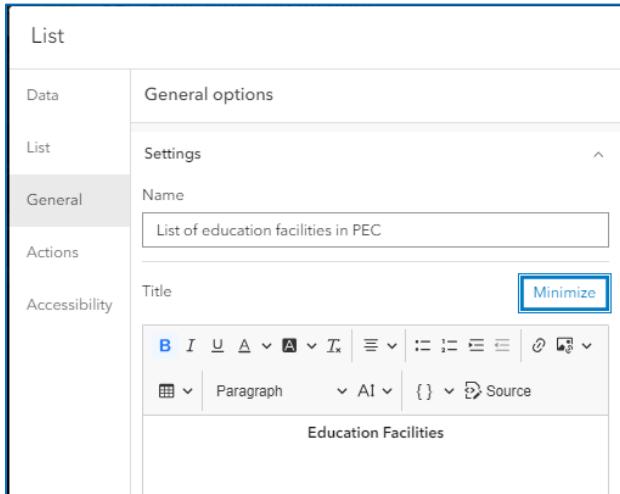


2. In **Data options**, ensure the correct layer has been chosen and sort the items in the list alphabetically by name. For this Dashboard, there aren't more than 25 features so this default will be kept; however, if a layer in a list has more than 25 features, in most cases it is best to increase this maximum, so that no information is kept from the user.

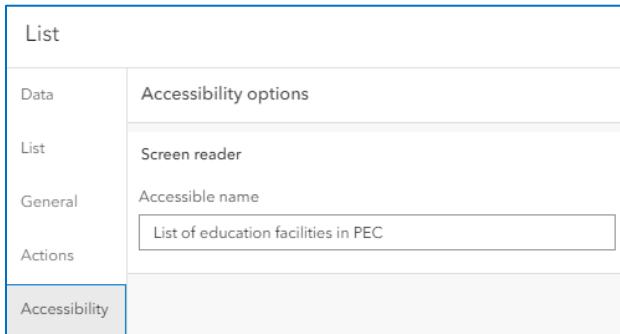


3. In **List options**, determine the text that is going to be shown in the list. Customize the font and the field values to create a visually appealing, yet informative list for the Dashboard.

3. In **General options**, add a title to the list and optionally a description, so that the user knows what information is being displayed.

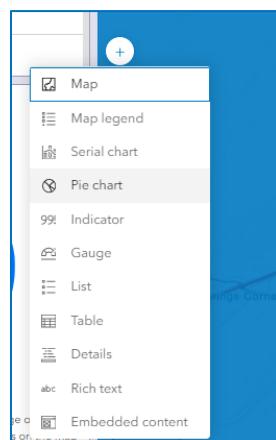


3. In **Accessibility options**, add a description for screen readers.

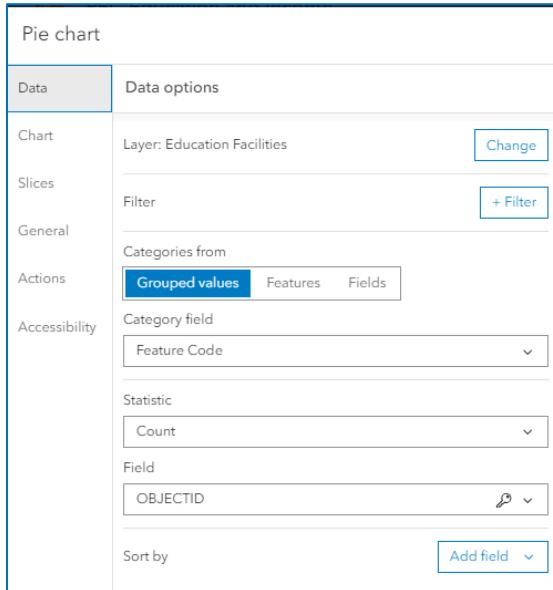


3.2.4 Pie chart element

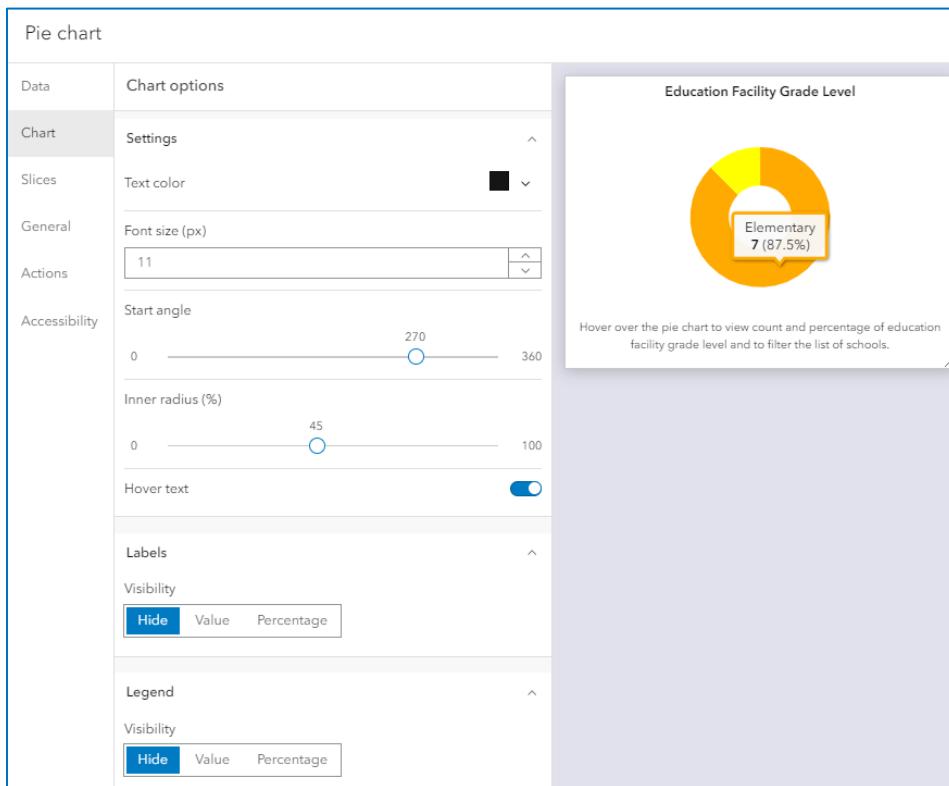
1. Click the **+** icon in the left sidebar menu to add an element. Then click the **+** icon on an area of the Dashboard and choose **Pie chart**.



2. In **Data options**, configure what is going to be shown in the pie chart. For this project, this pie chart is going to show the number of educational facilities in elementary schools and high schools. Thus, that field must be chosen as the **Category field** and the **Statistic** needs to be set to **Count**.



3. In **Chart options**, configure how the pie chart is going to look in terms of labelling, legends, and inner radius. To prevent overcrowding on the Dashboard, for this project, labels and legends were hidden. Instead, the labels will show when the mouse is hovered over the slices.



4. In **Slices**, configure the color scheme of the slices in the pie chart.

The screenshot shows the 'Slices' configuration panel for a pie chart. On the left, a sidebar lists categories: Data, Chart, Slices (which is selected and highlighted in grey), General, Actions, and Accessibility. The main area is titled 'Slices' and contains a 'Settings' section with an 'Opacity' slider set to 1. Below this is a table mapping categories to colors and labels:

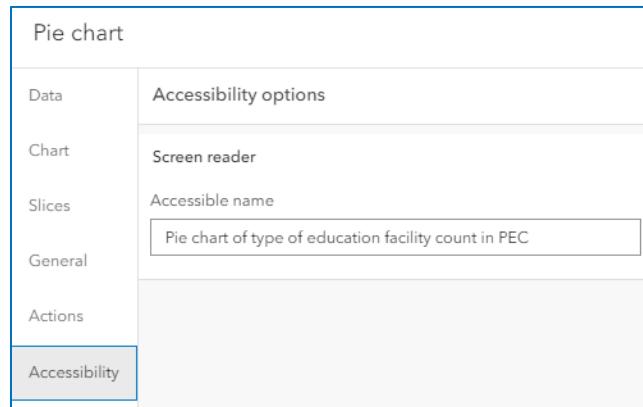
Category	Color	Label
School: Elementary	Orange	Elementary
School: High School	Yellow	High School
Null	Grey	null
Blank	Grey	blank
Undefined categories	Grey	

Below the table are three buttons: '+ category', 'Load categories', and 'Apply colors'. Further down are sections for 'Grouping (%)' (set to 0) and 'Grouping color' (set to grey). At the bottom is an 'Outline' section.

5. In **General options**, add a title and description, and optionally change the color background of the text.

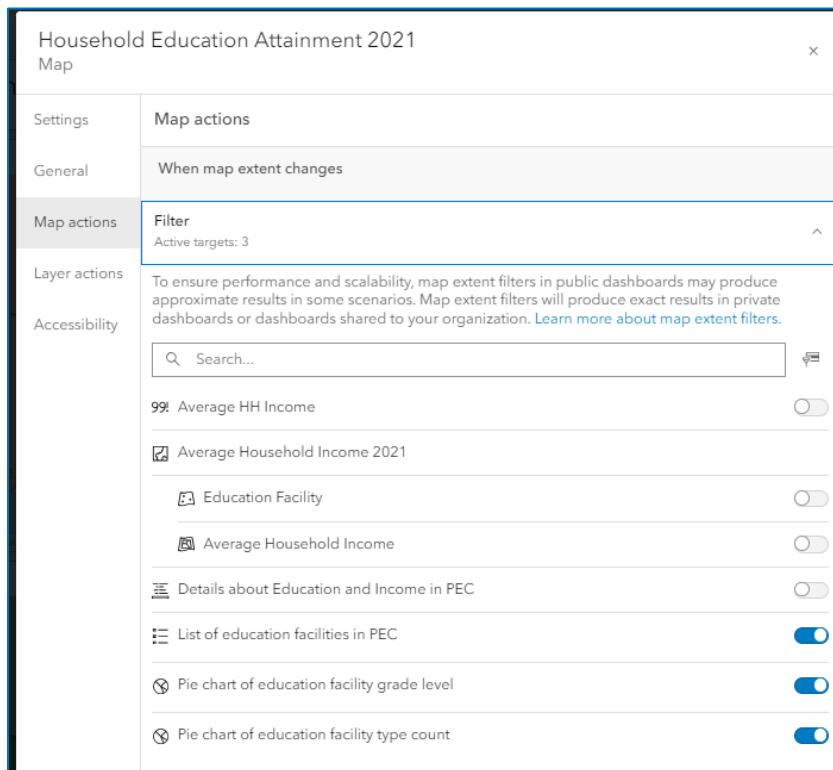
The screenshot shows the 'General options' configuration panel for a pie chart. The sidebar categories are the same as the previous panel: Data, Chart, Slices, General (selected and highlighted in grey), Actions, and Accessibility. The main area is titled 'General options' and contains a 'Settings' section with a 'Name' field containing 'Pie chart of education facility grade level'. Below this is a 'Title' section with rich text editing tools and a preview area showing 'Education Facility Grade Level'. The 'Description' section below it also has rich text editing tools and a preview area showing a placeholder message: 'Hover over the pie chart to view count and percentage of education facility grade level and to filter the list of schools.' There are 'Minimize' buttons for both the title and description sections.

6. In **Accessibility options**, add a description for screen readers.



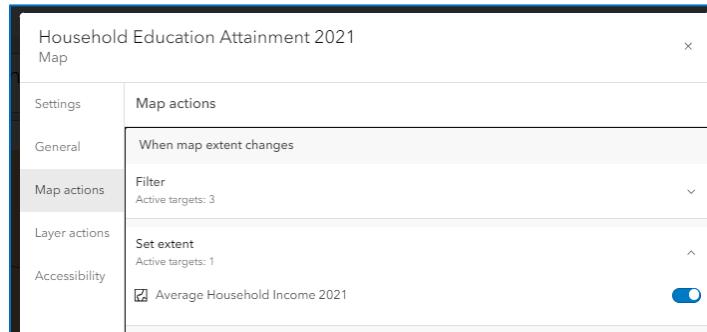
3.3 Make the elements change with map extent

Open a map's configuration window and go to **Map actions**. Under the **When map extent changes** section, expand the **Filter** dropdown. Select the layers that are to change when the user zooms in and out of the map.



3.4 Make the maps have the same extent

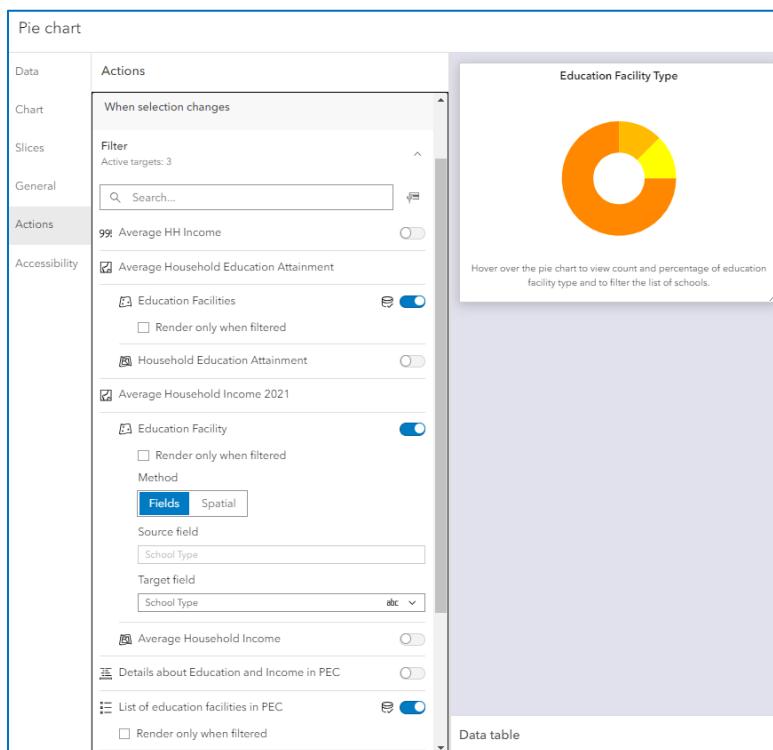
Open a map's configuration window and go to **Layer actions**. Under the **When map extent changes** section, expand the **Set extent** dropdown. Select the layers that are to have the same extent as this map's extent. Do this for each map.



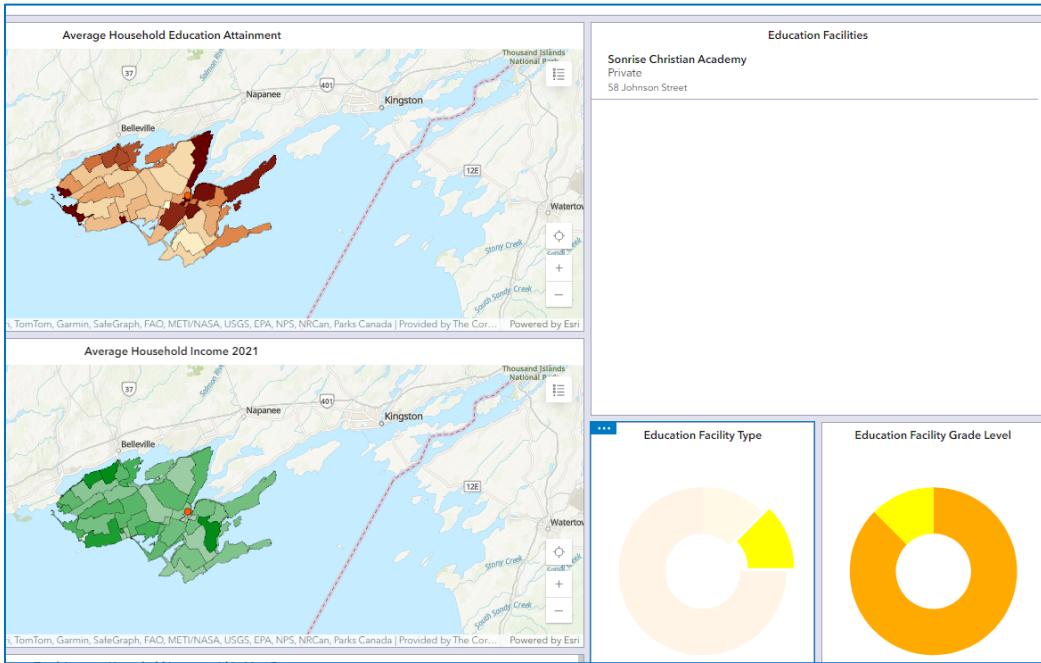
3.5 Filter data when selection changes

Data in the elements of a Dashboard can be filtered based on the selected data in another element. Although there are several ways to do this in a Dashboard, this subsection particularly shows how the selection of data in a pie chart filters the data in maps and lists.

1. In the configuration window of the pie chart, go to the **Actions tab**. Expand the **Filter** dropdown under **When selection changes** and click the Dashboard elements that will be filtered when the pie chart slices are selected.



2. For this project, the two maps and the list of schools are filtered when an education facility type is chosen in the pie chart. This was done for both pie charts.

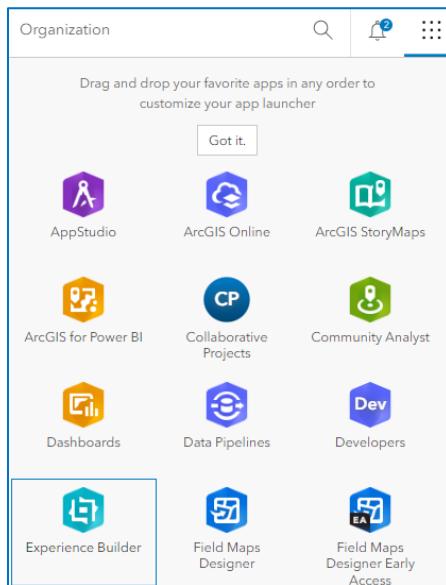


4 Configure an ArcGIS Experience Builder

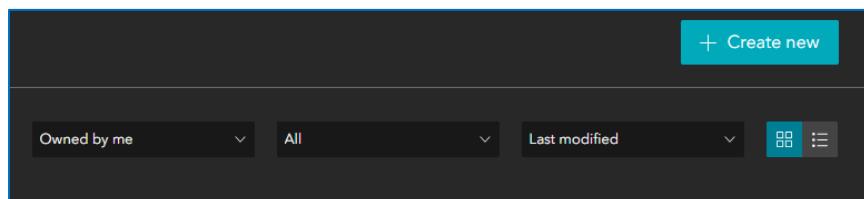
An ArcGIS Experience Builder is a great web application to configure for those who do not have any programming experience. There are several templates to choose from and an interactive interface can be created using drag-and-drop widgets. For this project, an Experience was created to display the results of the Least Cost Path Analysis for potential on-demand transit routes through Prince Edward County. For more information about ArcGIS Experience Builder, visit Esri's [ArcGIS Experience Builder](#) overview page.

4.1 Create a new ArcGIS Experience Builder

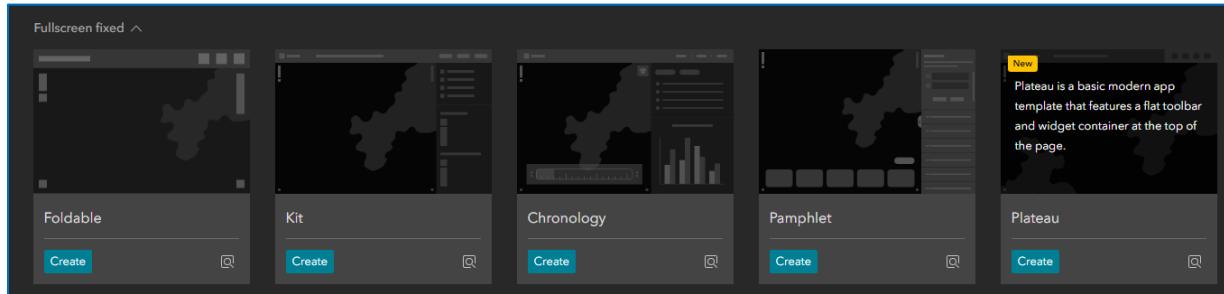
1. Navigate to the **ArcGIS Online homepage** and sign in to your account. Then click the **waffle** in the top righthand corner and click **Experience Builder**.



2. Click **Create new** at the top right hand corner of the page.



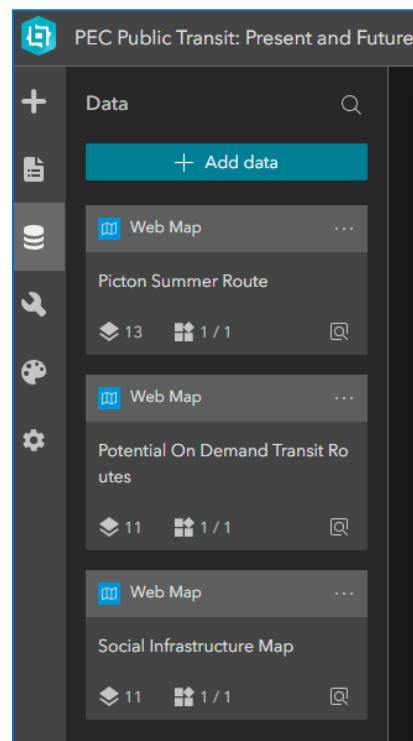
3. This will open the page with all of the templates to choose from. For this project, a **Fullscreen fixed Plateau** template was chosen.



4. This will automatically open the experience editing interface. Update the title of the experience to represent what will be shown.

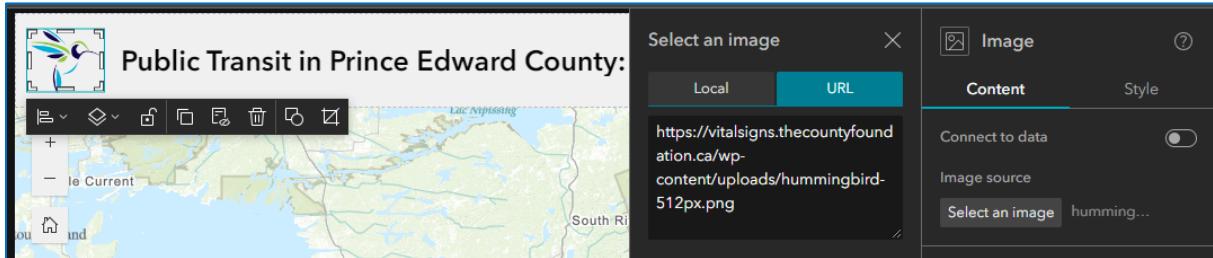
4.2 Add data to the experience

In the left sidebar, click the **Data** icon and then click **Add data**. Navigate through your ArcGIS Online content to find the maps, layers, or tables that are needed in this experience. This data can then be used in widgets.

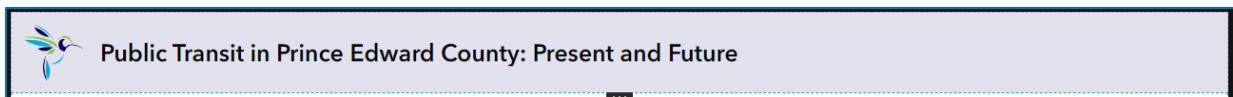
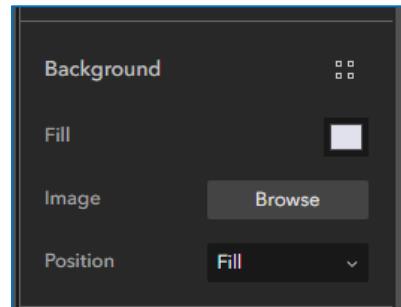


4.3 Customize the header

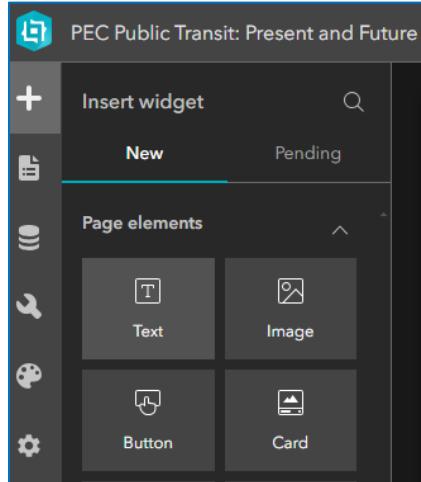
1. In the **header**, add a title and use the right sidebar to adjust the size of the font. Click the image and use the right sidebar options to add a URL image source. For this project, The County Foundation's bird logo is the chosen image. Resize it if necessary.



2. Click the **header**. Click and drag the sizing handles on the fixed header panel to resize it. In the right sidebar, scroll down until you see Background and change the color of it. Delete the widgets that won't be used in this experience.



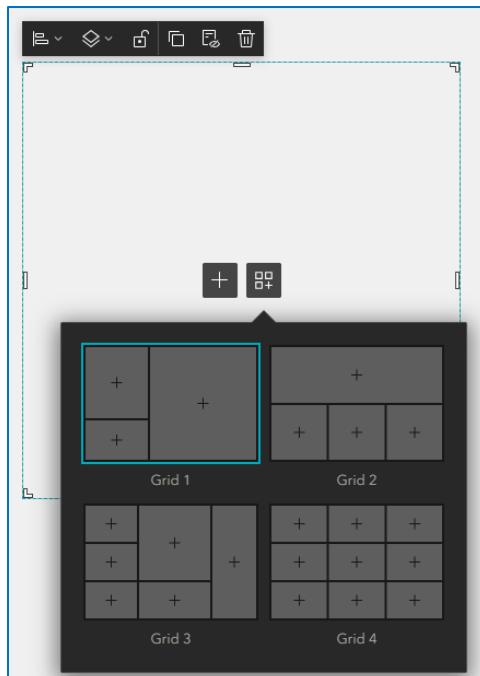
3. Click the **Insert** symbol in the sidebar and scroll to **Page elements**. Click and drag a **Text** widget under the header and add some introductory text to give context as to what the experience is displaying.



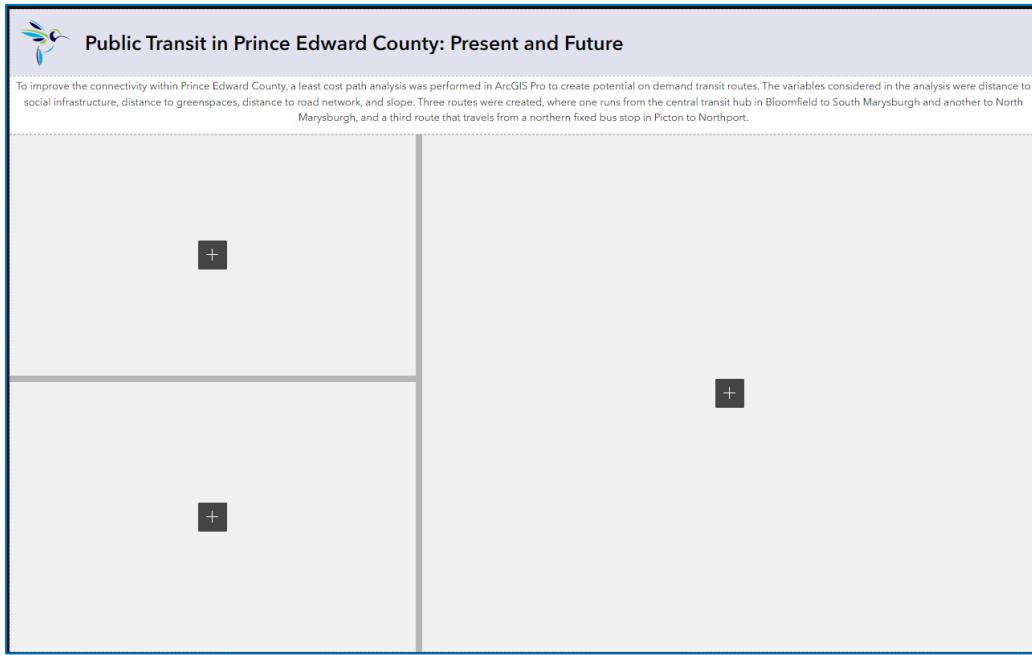
A screenshot of the 'Public Transit in Prince Edward County: Present and Future' experience. The title bar has a logo and the title. Below it is a text block: 'To improve the connectivity within Prince Edward County, a least cost path analysis was performed in ArcGIS Pro to create potential on demand transit routes. The variables considered in the analysis were distance to social infrastructure, distance to greenspaces, distance to road network, and slope. Three routes were created, where one runs from the central transit hub in Bloomfield to South Marysburgh and another to North Marysburgh, and a third route that travels from a northern fixed bus stop in Picton to Northport.' There is a blue border around the text block.

4.4 Configure the layout

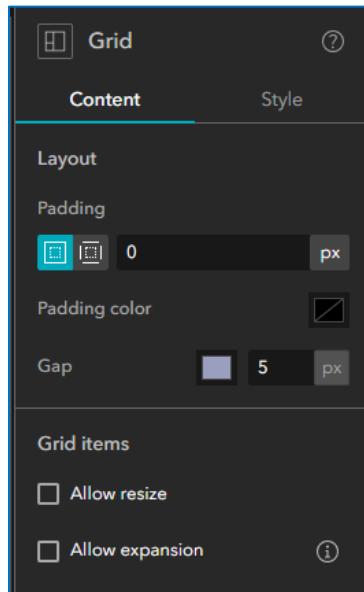
1. In the left sidebar, click the **Insert** icon and scroll down to **Layout**. Then click and drag **Grid** to the interface. Choose the appropriate grid template. For this project, three maps are going to be shown in the experience, so **Grid 1** would be most appropriate.



2. Click and drag the sizing handles on the edges of the grid to resize it.



3. Edit the grid gap color in the righthand editing sidebar.



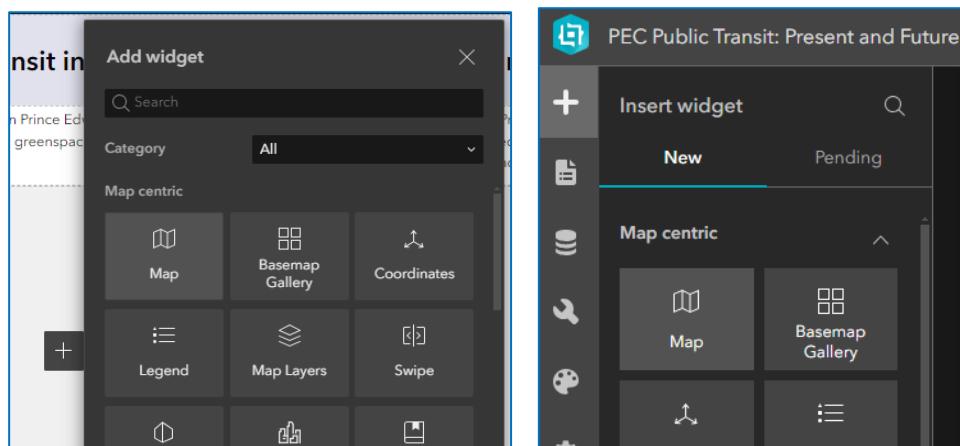
4.5 Add widgets

Widgets are the elements in the dashboard. There are many to choose from, within six categories: map centric; data centric; page elements; menu and toolbar; layout; and section. This section of the document provides instructions on how to create the widgets used in this project.

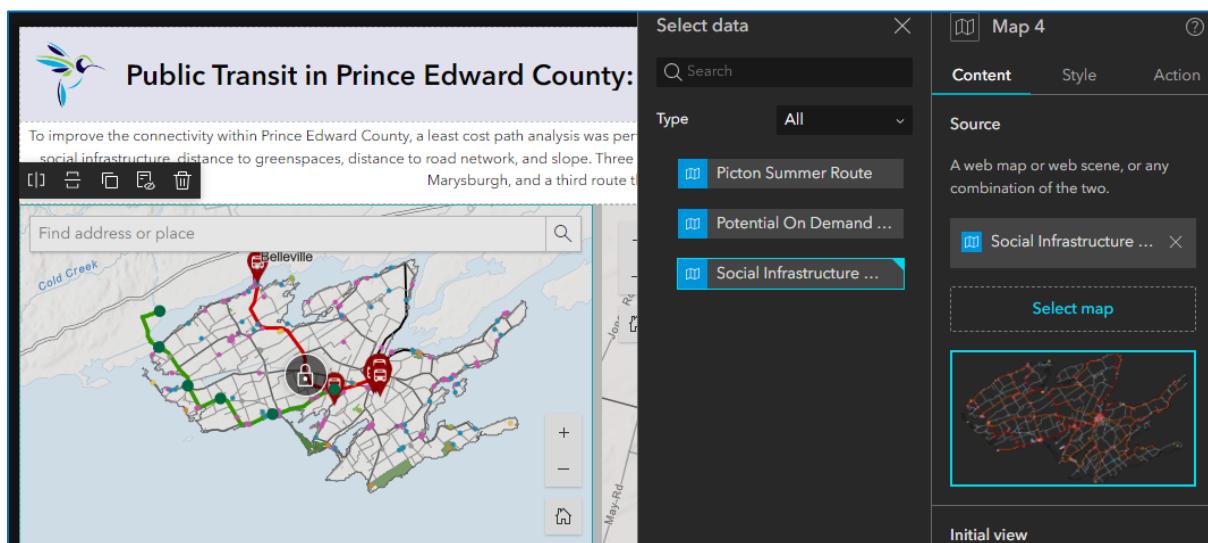
4.5.1 Map widget

NOTE: To complete this step, a web map must already be configured in ArcGIS Online and added to the experience in the Data tab.

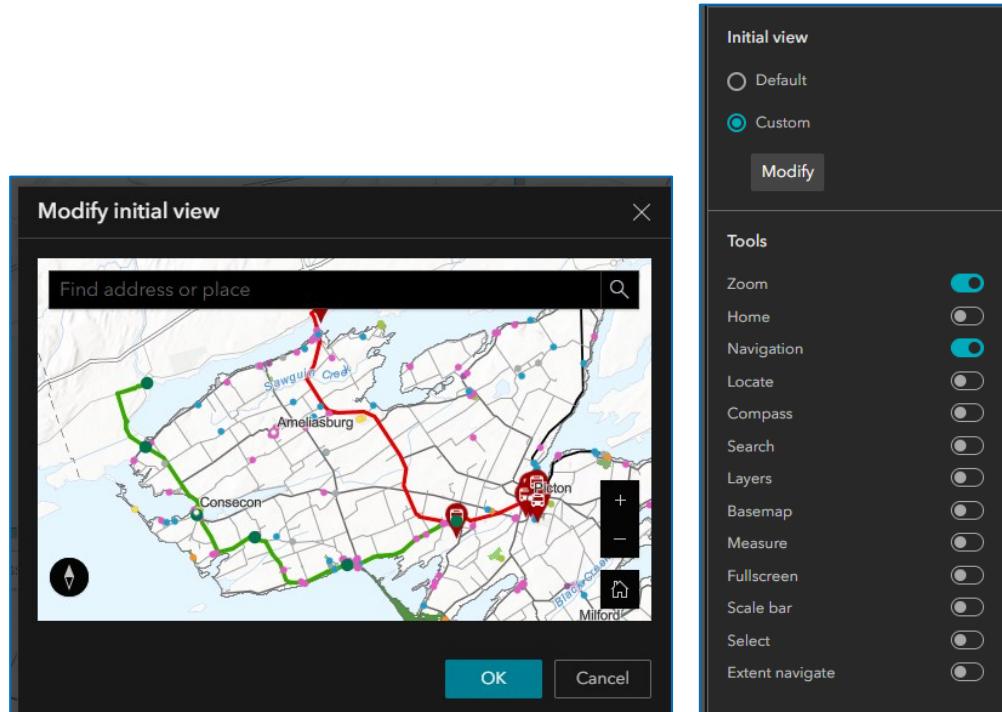
1. Click the **+** icon in the grid sections and add a **Map** widget to each of them. Alternatively, click the Insert button, scroll to **Map centric**, and click and drag a **Map** widget to the interface.



3. To link a map to the widget, click it, and in the righthand sidebar, click **Select map**. Choose the map from the list that is to be displayed in this widget.

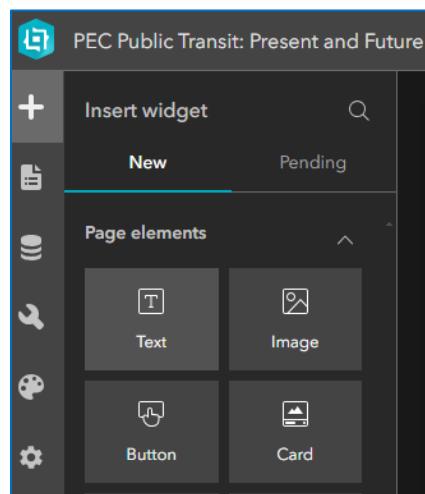


4. Edit the Initial view of the map to highlight what needs to be shown, as well as the available tools for the user.



4.5.2 Text widget

1. Click the **Insert** button, scroll to **Page elements**, and click and drag three **Text** widgets to the interface, placing one above each of the three maps.



2. In these textboxes, type in titles for each of the maps. Optionally, edit the text using the editing options in the righthand sidebar.

The screenshot shows the ArcGIS Pro ribbon at the top with 'File', 'Edit', 'View', 'Analysis', 'Map', 'Table', 'Search', and 'Help'. Below the ribbon, there's a 'Text' widget on the left with a title 'Text 5' and a map on the right titled 'Public Transit in Prince Edward County: Present and Future'. The map shows various transit routes and stops across the county. The sidebar on the left contains editing tools for the text, including 'Content' and 'Style' tabs, and a 'Connect to data' toggle.

4.5.3 Legend widget

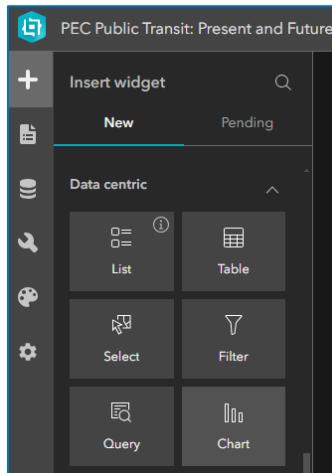
Click the **Insert** button, scroll to **Map centric**, and click and drag a **Legend** widget to the interface. Link it to the map by choosing the **Source map** in the right editing sidebar. Adjust the size of it if necessary.

The screenshot shows the ArcGIS Pro ribbon at the top with 'File', 'Edit', 'View', 'Analysis', 'Map', 'Table', 'Search', and 'Help'. On the left, there's an 'Insert widget' dialog with 'New' selected under 'Map centric'. On the right, there's a legend sidebar titled 'Legend 4' with sections for 'Potential On Demand Transit Stop', 'Fixed Transit Stop', 'Social Infrastructure', and 'Fixed Transit Route'. The legend sidebar also includes 'Content' and 'Style' tabs and an 'Advanced' section.

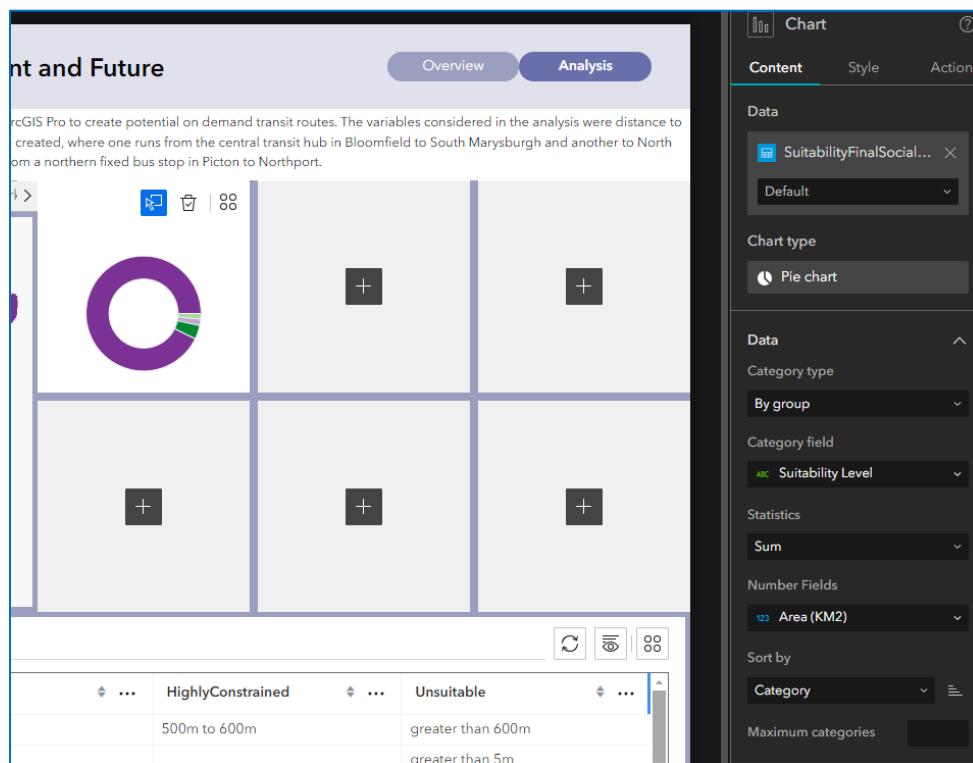
4.5.4 Chart widget

NOTE: To complete this step, a CSV file as a hosted feature layer must already be imported to ArcGIS Online and added to the experience in the Data tab.

1. Click the **Insert** button, scroll to **Data centric**, and click and drag a **Chart** widget to the interface.

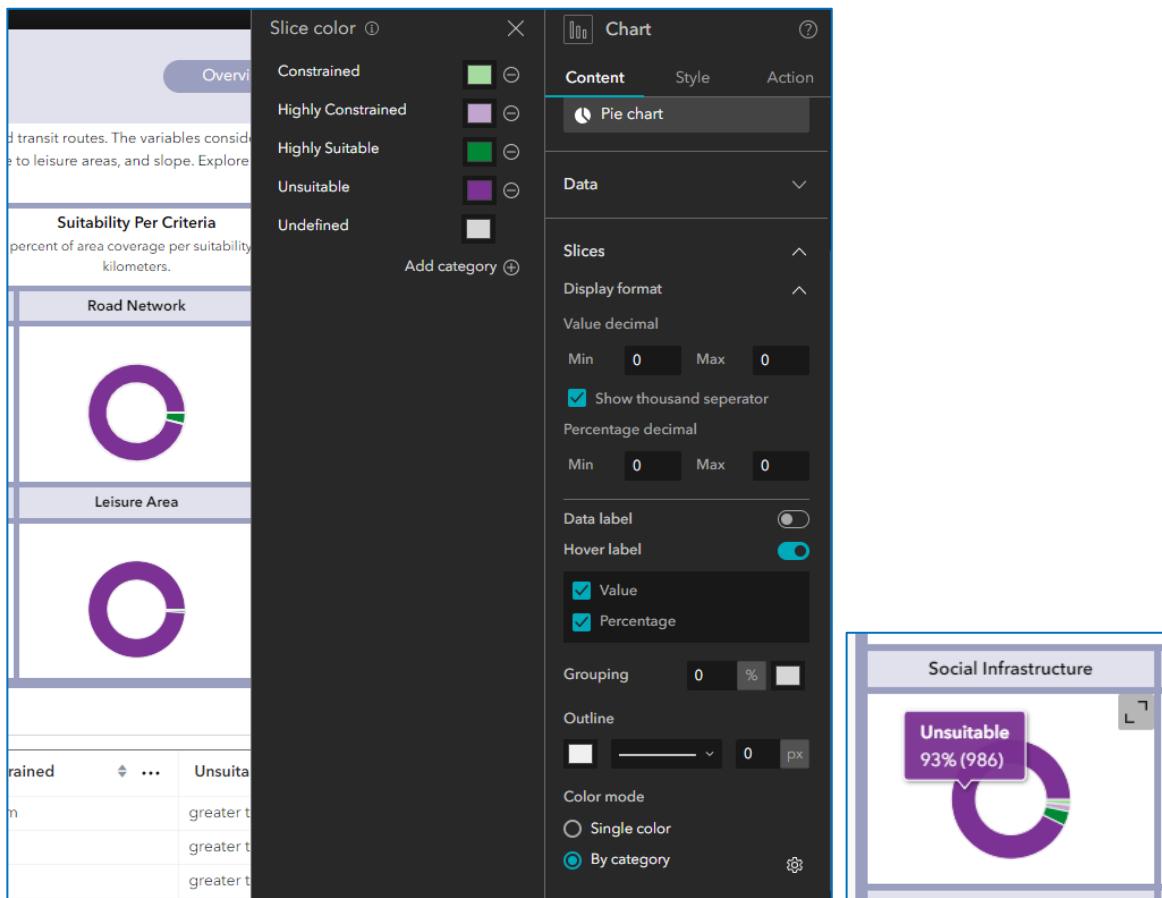


2. Choose the **Chart type**. For this project, there are going to be six **pie charts** displaying data. Select the feature layer with the data. For this project, the pie charts need to show the Area of each Suitability Level. So, under **Data**, choose **By group** as the **Category type**, **Suitability Level** as the **Category field**, **Sum as Statistics**, **Area (KM2)** as the **Number Field**, and **Sort by Category**.



The screenshot shows the ArcGIS Experience builder interface. On the left, there's a 3x2 grid of six empty placeholder boxes for widgets. The top-left box contains a pie chart with a large purple slice and a small green slice. On the right, a detailed configuration panel for the 'Chart' widget is open. It includes sections for 'Content', 'Style', and 'Action'. Under 'Content', 'Data' is set to 'SuitabilityFinalSocial...'. The 'Chart type' is set to 'Pie chart'. In the 'Data' section, 'Category type' is 'By group', 'Category field' is 'Suitability Level', 'Statistics' is 'Sum', and 'Number Fields' is 'Area (KM2)'. The 'Sort by' section has 'Category' selected. At the bottom, there's a 'Maximum categories' dropdown set to '10'.

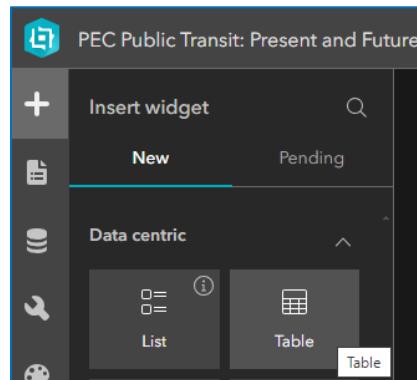
3. The pie chart can be further edited in **Slices**, where the colors can be chosen, the decimals in the display can be changed, and the hover label can be configured. Be sure to include a hover label if the chart is not accompanied by a legend.



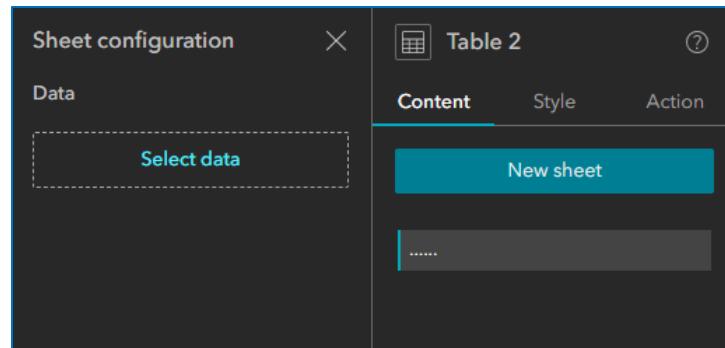
4.5.5 Table widget

NOTE: To complete this step, a CSV file as a hosted feature layer must already be imported to ArcGIS Online and added to the experience in the Data tab.

1. Click the **Insert** button, scroll to **Data centric**, and click and drag a **Table** widget to the interface.



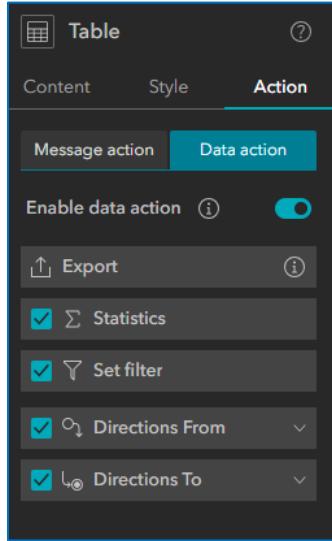
2. Click **New sheet** and then **Select data**. Select the data that is going to be displayed in the table.



3. Click on the sheet added and a configuration window will appear. In this window, edit the fields to be displayed and how the user will interact with them.

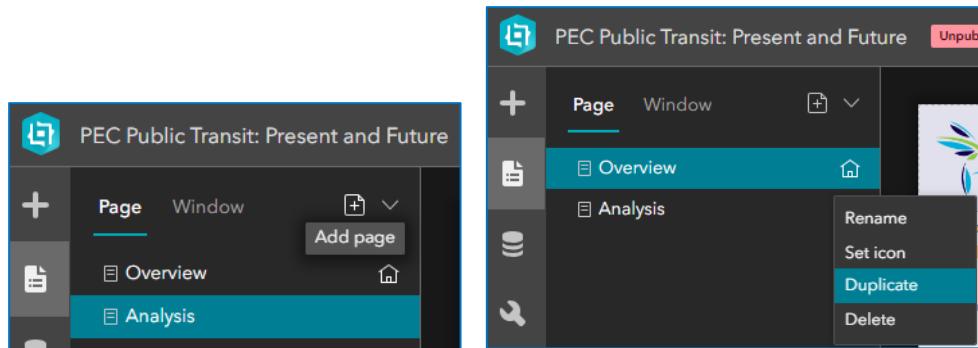
The screenshot shows the 'Table' configuration window. On the left, the 'Data' section lists 'LCPSuitabilityTable' and 'Default'. The 'Label' section shows 'Criteria Suitability'. The 'Configure fields' section has 'Customize' selected. Under 'Select fields for initial display', '6 Selected' is chosen. The 'Field' section lists 'Criteria', 'HighlySuitable', 'Constrained', 'HighlyConstrained', 'Unsuitable', and 'ObjectId'. On the right, the 'Content' tab is selected in the 'Table' configuration window, which contains a 'New sheet' button. A separate 'Header options' panel is open, showing settings for 'Font' (B, A, 14 px), 'Background color' (with a color swatch), and 'Tools' (Search, Select records, Show record count, Refresh) with toggle switches.

4. Under the **Action tab**, there are options on how the user can interact with the table. For this project, toggle off the **Enable data action** option.



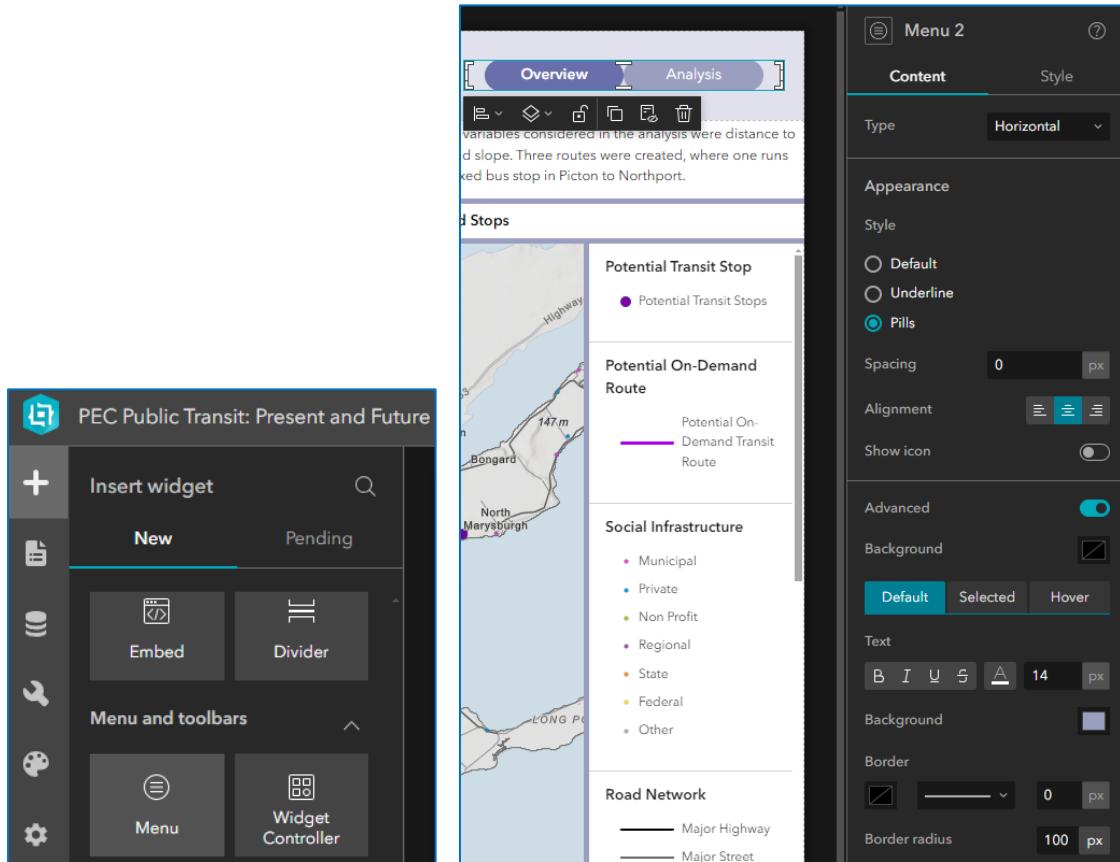
4.6 Add a page

To add a brand-new page, click the **Page** icon, click the **+ icon** to add a page, and then select the page template. Alternatively, click the **three dots** next to the current page and click **Duplicate**. Duplicating the page will keep the layout the same.



4.7 Add menu buttons

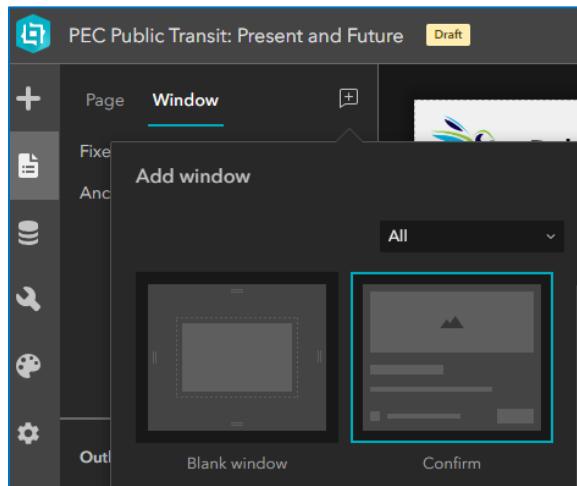
Click the **Insert** button, scroll to **Menu and toolbars**, and click and drag a **Menu** widget to the interface. Configure the menu widget in the **Content** and **Style** tabs of the editing sidebar. This menu allows users to toggle between pages.



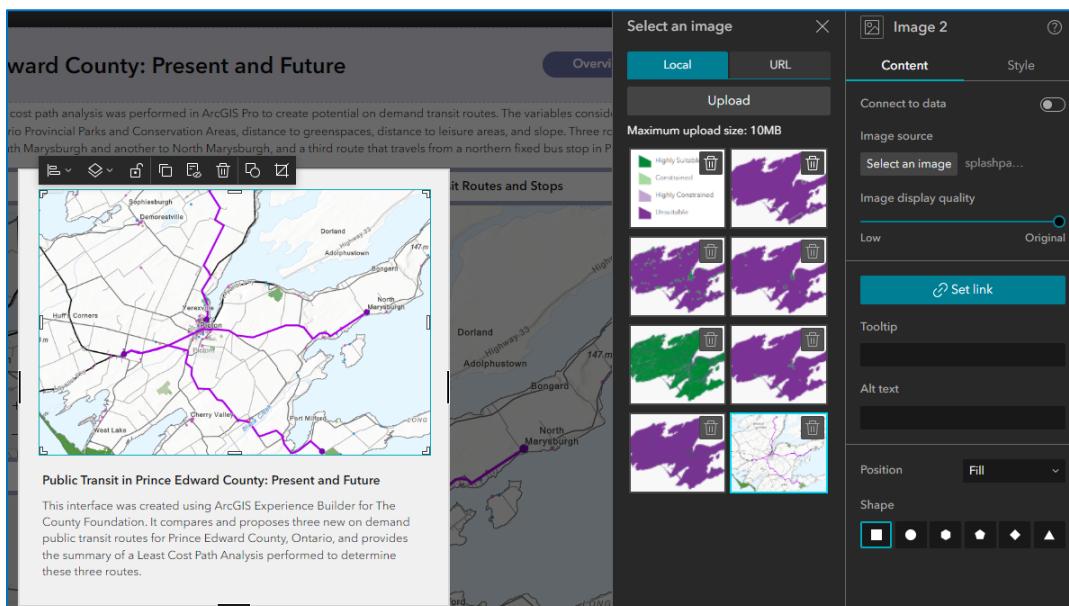
4.8 Create a splash page

A **splash page** is a window that appears when the application is opened, and it was created for this experience to give a brief description and disclaimer. Follow the steps in this subsection to recreate it.

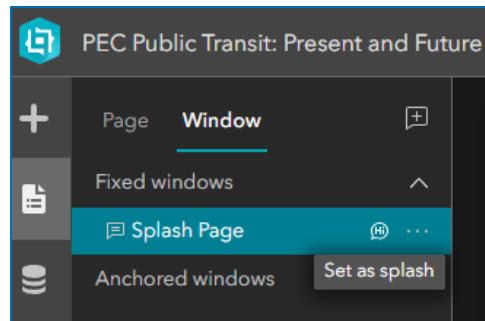
1. In the left toolbar, click the **Page** icon, click **Window**, click the **+** icon to add a window, and select **Confirm** as the window type.



2. Click on the image and text to edit these elements and use the right sidebar to configure the user interaction of the splash page. For this splash page, the user needs to click outside of the box to continue to the Experience.

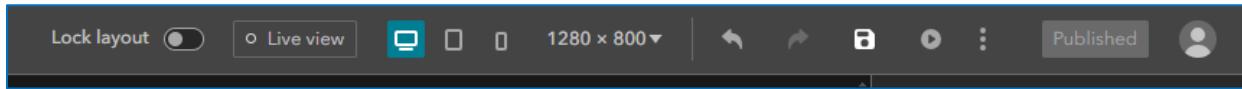


3. When the splash page is configured, set it as splash in the lefthand toolbar.

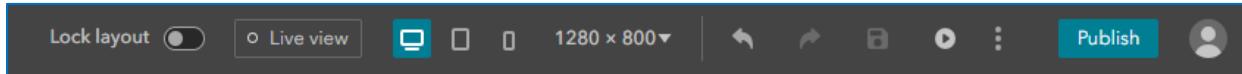


4.9 Saving and publishing the Experience

1. Click the **Save icon** in the top navigation bar to save changes to your Experience.



2. After saving it, click **Publish** to publish to ArcGIS Online.

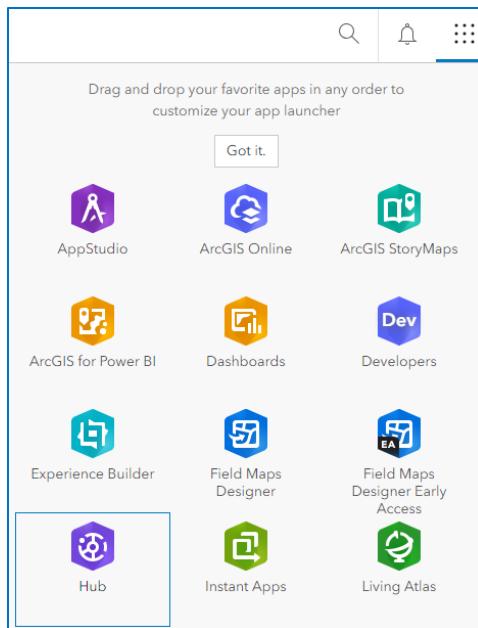


5 Customize an ArcGIS Hub

Like ArcGIS Experience Builder, ArcGIS Hub provides an opportunity for users to create meaningful, interactive web applications with minimal coding. Coding can be used to further the customization of the interface. For this project, an ArcGIS Hub was configured to store, share, and display data from ArcGIS Online. To learn more about building an ArcGIS Hub, visit Esri's [Build an ArcGIS Hub](#) page.

5.1 Create a new ArcGIS Hub

1. Navigate to the **ArcGIS Online homepage** and sign in to your account. Then click the **waffle** in the top righthand corner and click **Hub**.



2. In the **Hub Overview**, under **Sites**, click **New** to create a new hub.

The screenshot shows the 'Hub Overview' page for an 'ArcGIS Hub Basic' account. At the top, there's a search bar and a 'Sites Settings' link. Below the search bar, a message box says 'Download enhancements are here!' with a 'Learn more' link. The main area has two cards: 'Sites' (with 1 item, 0 new in last 30 days) and 'All Content' (with 10 items, 5 new in last 30 days). A large blue button labeled 'New' is positioned over the 'Sites' card.

3. Name the Hub site. The name must be at least 4 characters long and unique. Then click **Create Site**, which will select the default hub layout. Layouts can also be chosen from a collection of templates.

5.2 Add data

1. Under the **Groups** tab on ArcGIS Online, there will be two groups for the ArcGIS Hub, one called the **Core Team** and another called **Content**. Click **View details** on the **Content** group.

The screenshot shows the 'Groups' page on ArcGIS Online. It lists two groups: 'testing2 Content' (last updated May 15, 2024, viewable by public) and 'testing2 Core Team' (last updated May 15, 2024, viewable by organization, shared update). Both groups have a member named 'Helen Plesko'.

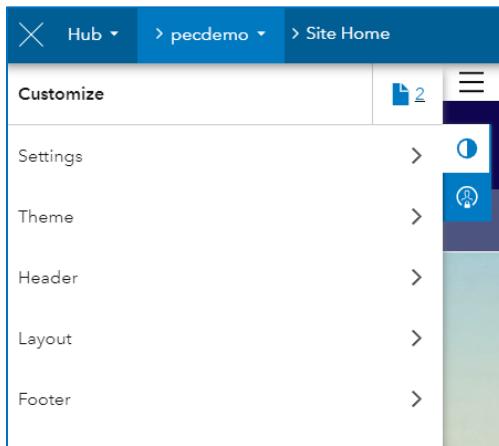
2. The **Content** group is where data that is going to be displayed in the Hub is going to be stored. For more information, read the default description for this group. Click **Add items to group**.

The screenshot shows the 'testing2 Content' group overview page. It includes tabs for 'Overview', 'Content', 'Members', and 'Settings'. The 'Overview' tab is active, showing a description: 'Applications, maps, data, etc. shared with this group generates the testing2 content catalog.' It also shows the group is owned by 'hplesko'. On the right, there are buttons for 'Invite members', 'Edit', 'Add items to group', and 'Create Web App'.

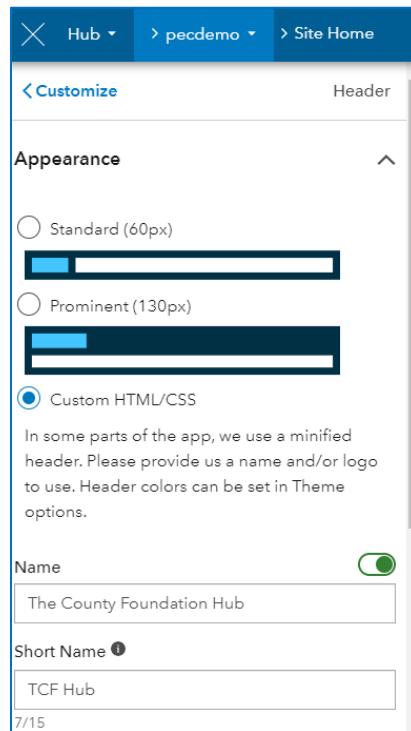
3. Select from your content, group, organization, or Living Atlas the items to be added to the Hub. Then click **Add items**. The selected items will then be added to the **Content** tab of the group. Be sure to include **tags** on the items page so that they can be linked to cards on the Hub, such as category cards.

5.3 Customize the header

1. In the **Customize** sidebar, click **Header**.



2. The appearance can be set as **Standard**, **Prominent**, and **Custom HTML/CSS**. Since this site is going to be customized for The County Foundation, **Custom HTML/CSS** is selected here. Add a name and short name for the Hub.

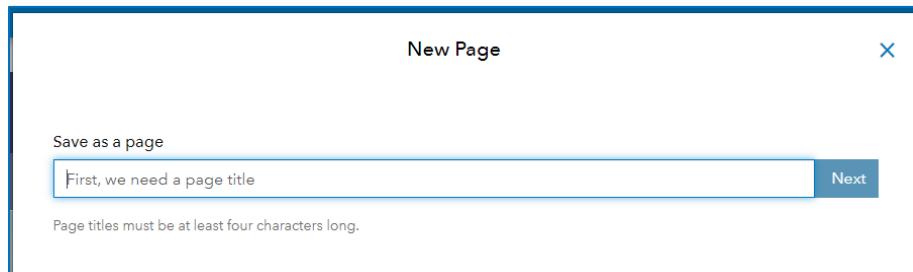


5.4 Add pages

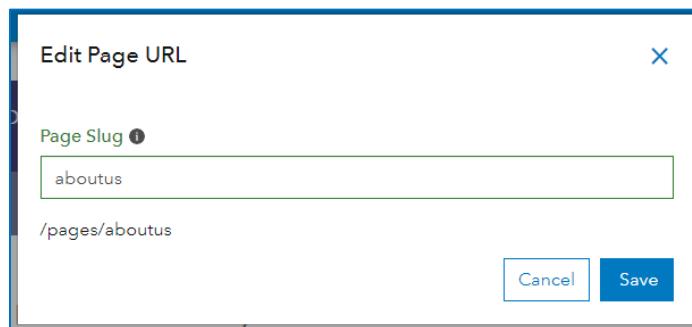
1. To add a new page, on the **Customize** sidebar, click the top-right corner **page icon** and then click **New Page**.



2. Add a page title then click **Next**.



3. The new page interface will appear. Add content, text, and more to the site page and use the URL in Page Info in the HTML of the site's elements to link to the page.

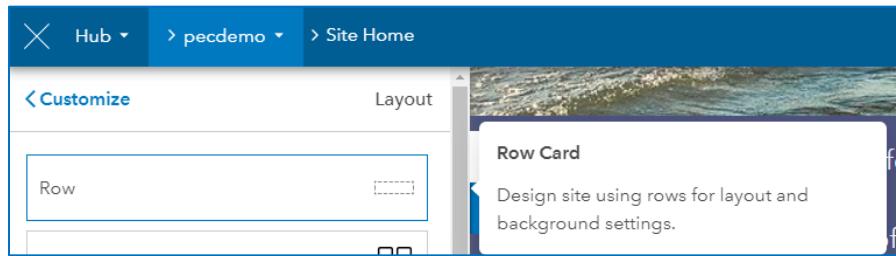


5.5 Configure the layout

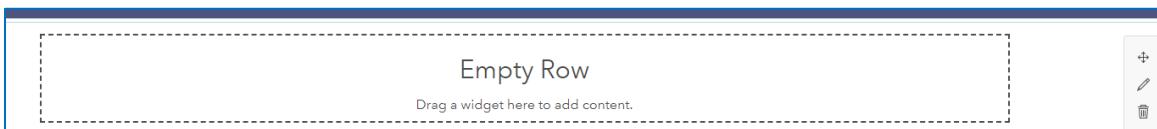
To configure the layout of the Hub, in the Customize sidebar, click Layout. There are many cards and widgets that can be added and customized on the site by simply clicking and dragging them to the page. Further customization can be done to them through HTML and CSS.

5.5.1 Row card

1. **Row cards** help with organizing the different sections of the site. When widgets are added to a row, they can easily be manipulated. Click and drag the row card to the interface.



2. Hover over the empty row and click the **pencil icon** on the righthand side to edit it.

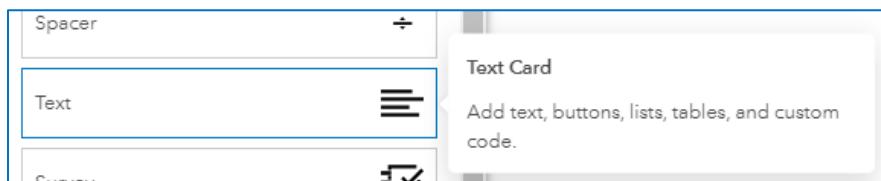


3. The **Appearance** window will appear, where further customization can be done to this row, before other cards and widgets are added to it. For instance, the background color was changed for this row.

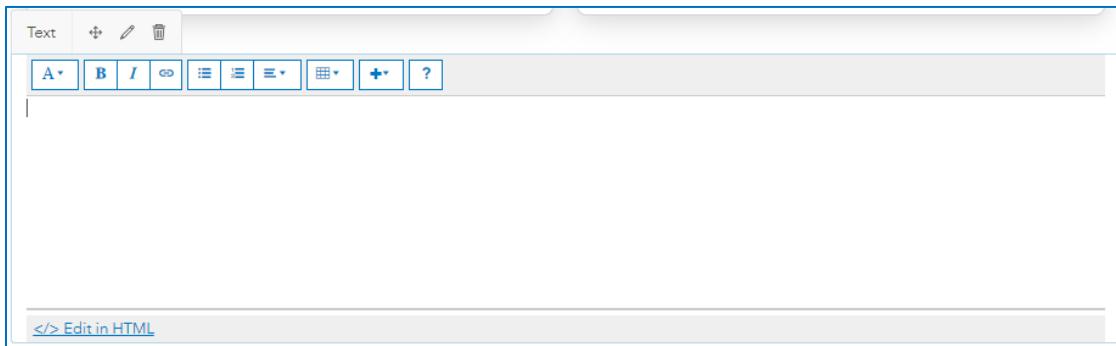


5.5.2 Text card

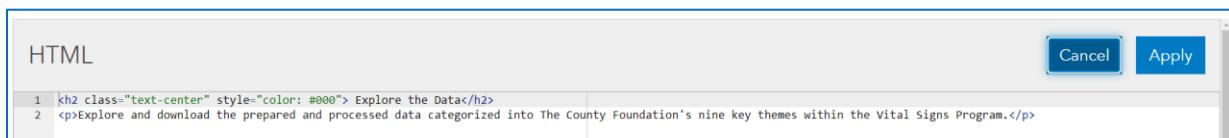
1. Click and drag a new **Row card** to the interface, and then place the **Text card** within it.



2. Use the font editing options available to edit the font.



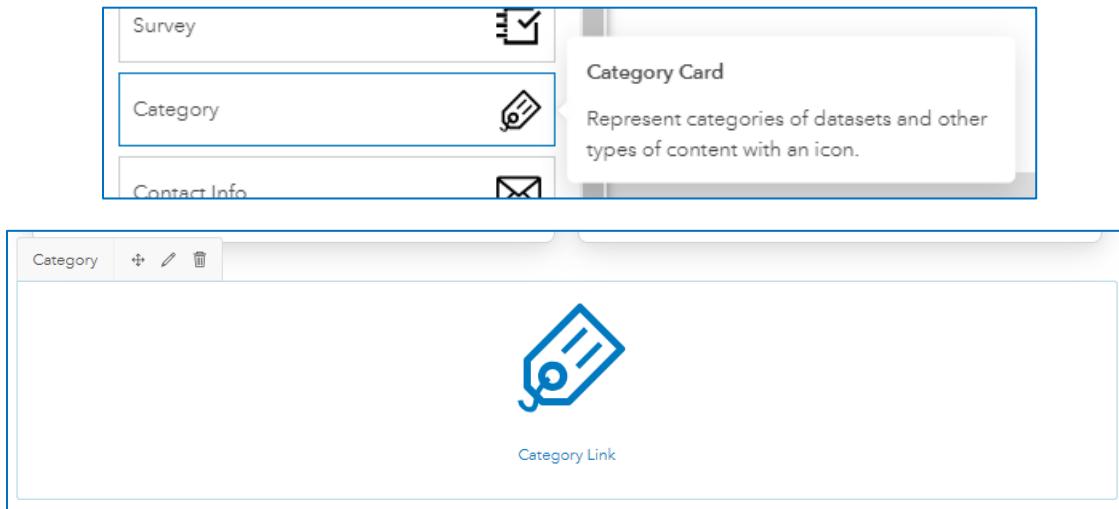
3. Alternatively, edit the text using HTML. Click **Edit in HTML**. Edit the text by using inline CSS. Then click **Apply**.



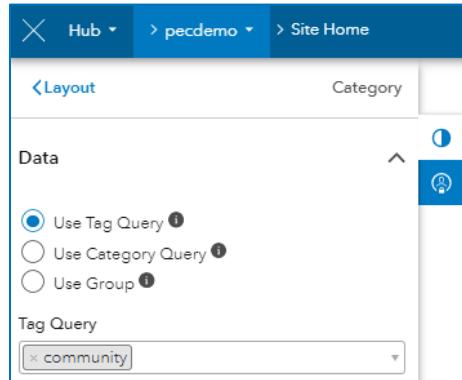
5.5.3 Category card

Category cards allow users to view data based on a certain theme. The County Foundation Vital Signs program sorts their findings into nine themes, so those nine themes will be added as categories to the ArcGIS Hub.

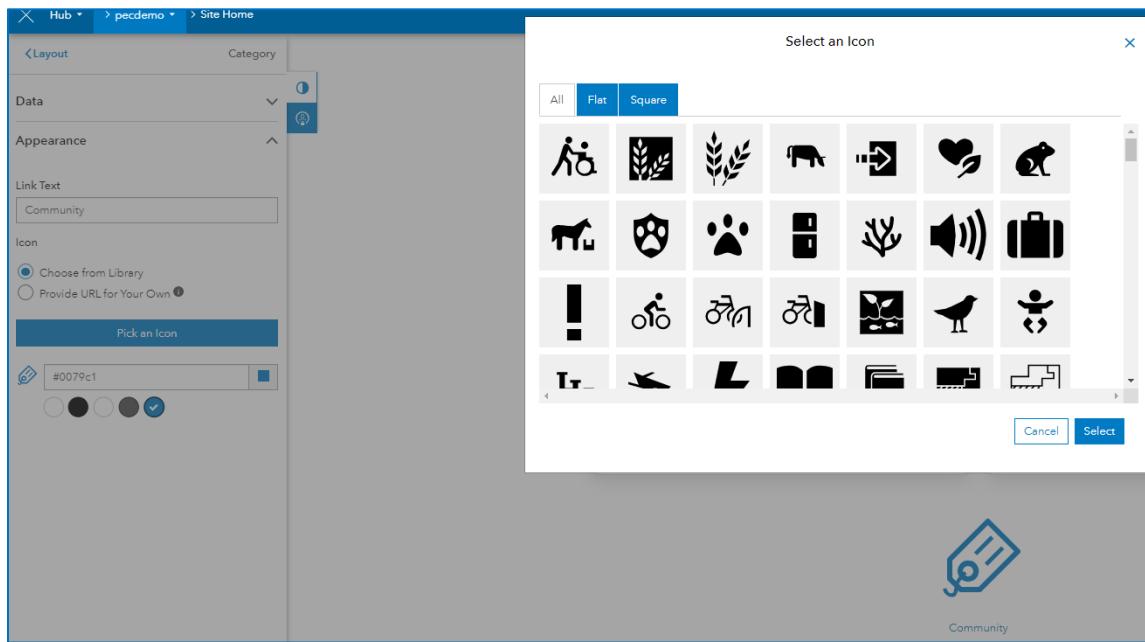
1. Click and drag a new **Row card** to the interface, and then place the **Category card** within it.



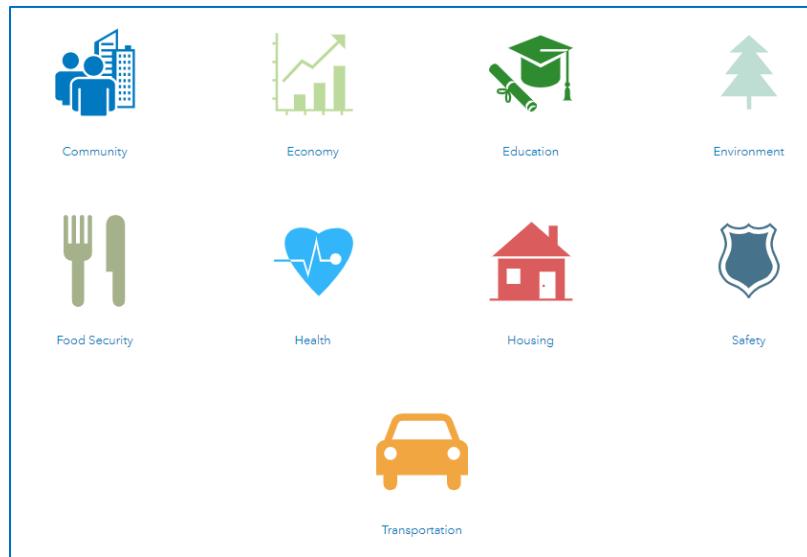
2. Click this card to open the lefthand editing sidebar. This category is going to hold community data with the tag community, so select **Use Tag Query** and then add **community** as the tag query.



3. Under **Appearance**, change the **Link Text to Community** and choose an **icon** from the collection. Alternatively, the image can be from a personal URL. The icon color can also be changed here.



4. Add eight more categories by following the same steps.



5.6 Display web applications

On The County Foundation's ArcGIS Hub, it is pertinent that the web maps and dashboards created are displayed and easily accessible for those using the interface.

5.6.1 Using a Text card

1. Click and drag a new **Row card** to the interface, and then place a **Text card** within it, then click **Edit in HTML**. The following code adds a card with an image, description, and buttons to visit the item page in ArcGIS Online and view it. Copy and paste it in the box. Replace TITLE and DESCRIPTION with the title and description of the web application. Then replace the # with the links to the details page and the application. Click Apply.

```
<div class="col-xs-12 col-sm-6 col-md-3">
<div class="calcite-web">
  <div class="card-base">
    <div class="card-image-wrap">
      
    </div>
    <div class="card-content">
      <h4>TITLE</h4><p>DESCRIPTION<br></p>
      <div aria-label="actions" class="btn-group btn-group-justified" role="group">
        <a class="btn btn-default" href="#">Details</a><a class="btn btn-primary"
href="#">View</a>
      </div>
    </div>
  </div>
</div>
</div>
```

2. This sets the default card for a web map.

The screenshot shows a web-based interface titled "Web Maps". At the top, there is a toolbar with various icons for navigation and search. Below the title, a descriptive text reads: "These web maps were created to show comparisons between census data. We recommend exploring the maps below to get a better understanding of the community data." There are four cards displayed in a grid:

- 2016 Households**: Household distribution across PEC dissemination areas in 2016. Includes a thumbnail image of a map with a circular overlay, a "Details" button, and a "View" button.
- 2021 Households**: Household distribution across PEC dissemination areas in 2021. Includes a thumbnail image of a mobile device displaying a map, a "Details" button, and a "View" button.
- 2021 Income**: Average household income across PEC dissemination areas in 2021. Includes a thumbnail image of a bar chart, a "Details" button, and a "View" button.
- 2021 Education**: Household education attainment across PEC dissemination areas in 2021. Includes a thumbnail image of a dashboard with various data visualizations, a "Details" button, and a "View" button.

3. To customize this further, add the following styling code:

```
<style>
  .card-content {
    background-color: #e4e0eb;
  }

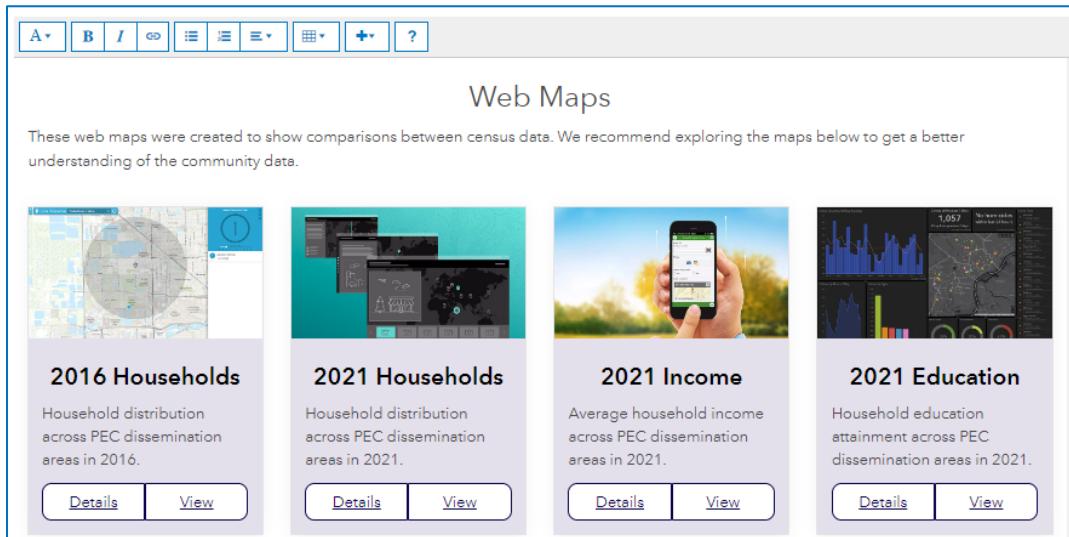
  h4 {
    font-weight: bold;
    text-align: center;
    color: black;
  }

  a.btn.btn-primary {
    border-radius: 10px;
    background-color: #fff;
    color: #0e044f;
    text-decoration-line: none;
    border-style: solid;
    border-color: #0e044f;
  }

  a.btn.btn-default {
    border-radius: 10px;
    background-color: #fff;
    color: #0e044f;
    text-decoration-line: none;
    border-style: solid;
    border-color: #0e044f;
  }

</style>
```

4. Now the cards for each web map are customized with color inspiration from The County Foundation website.

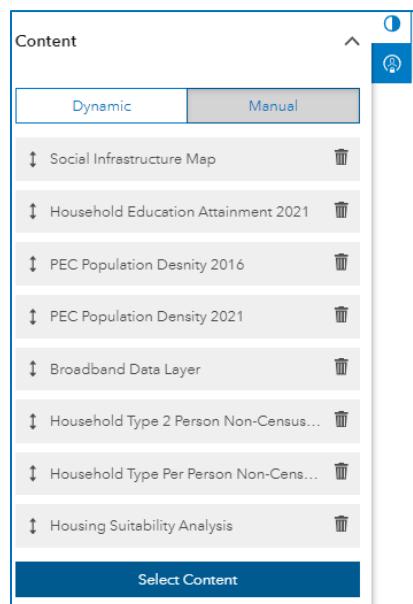


5.6.2 Using a Gallery card

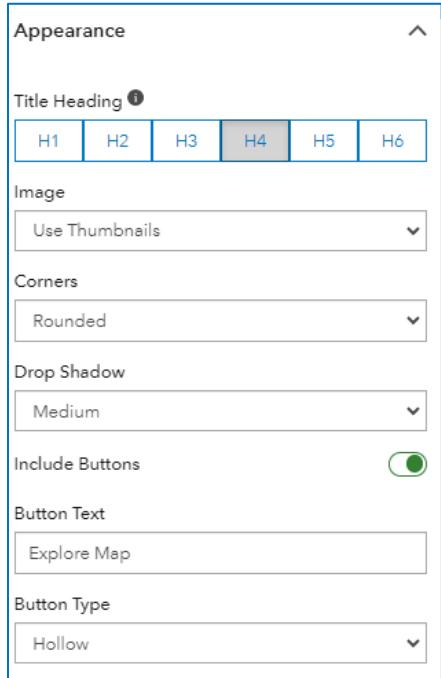
1. Click and drag a new **Row card** to the interface, and then place a **Gallery card** within it.



2. Add content by selecting **Manual** and navigating through your content on ArcGIS Online.



3. The appearance of the gallery can be edited under **Appearance** dropdown menu. By using the **Thumbnail** as the image, all images will be automatically updated with the thumbnail directly from the item's page in ArcGIS Online.



4. The web application products will appear as so.

Web Maps

These web maps were created to show comparisons between census data. We recommend exploring the maps below to get a better understanding of the community data.

Social Infrastructure Map

Explore Map

Household Education Attainment 2021

Explore Map

Average Household Income 2021

Explore Map

PEC Population Density 2016

Explore Map

6 Conclusion

Evidently, there are many ways to use ArcGIS Online's interface to store, manipulate, create, and display data. The opportunities go beyond web maps, Dashboards, Experience Builders, and Hubs. It is encouraged to further explore this platform and its available web applications and tools to find one that best suits the purpose of the data.