

# How to Build a Report with the Knowledge Explorer

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# KNOWLEDGE EXCHANGE

## How to Build a Report with the Knowledge Explorer

Create custom reports with publicly available data from the Census Bureau, National Agricultural Statistics Service (NASS), national and local community foundations, agency databases, and a partnership with the Ohio Food Policy Council.

45 Steps [View most recent version on Tango.us](#) 

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Created by

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Creation Date

May 5, 2023

Last Updated

May 5, 2023

## STEP 1

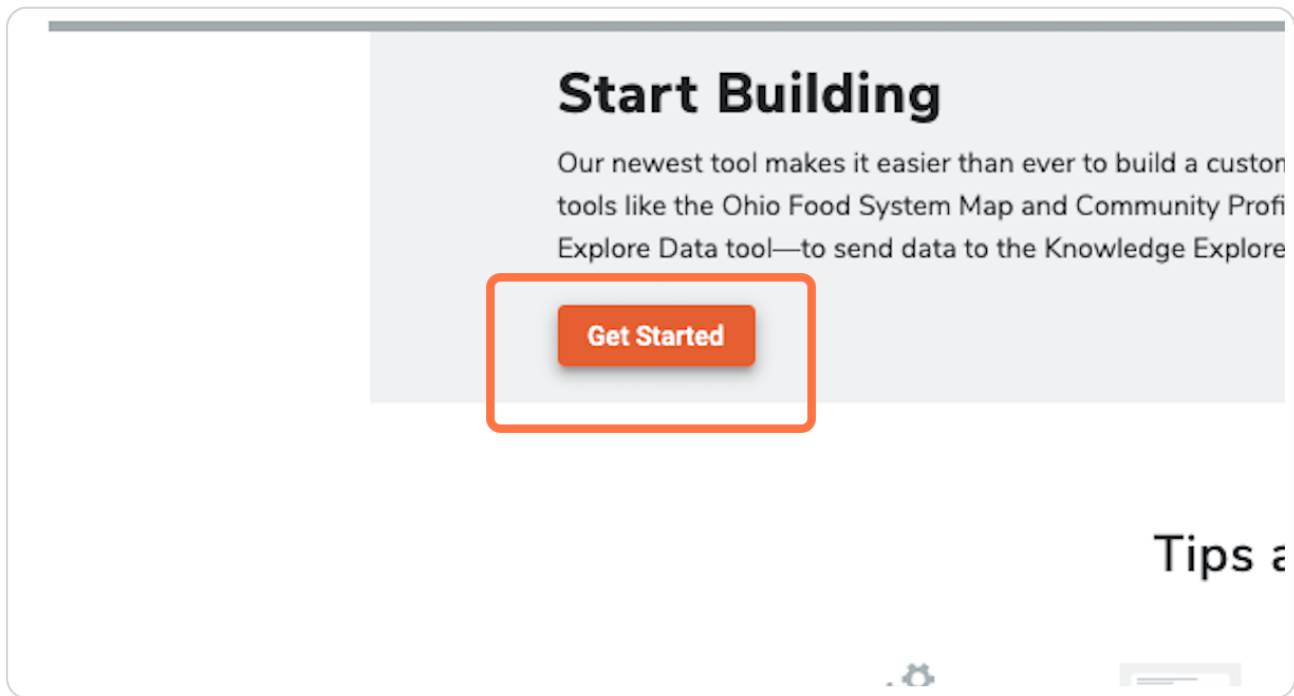
### Go to the Knowledge Explorer landing page

<https://kx.osu.edu/landing-page/knowledge-explorer>

## STEP 2

### **Under Start Building, click on "Get Started"**

When you open the Knowledge Explorer, you'll see a dashboard where you'll build your report.

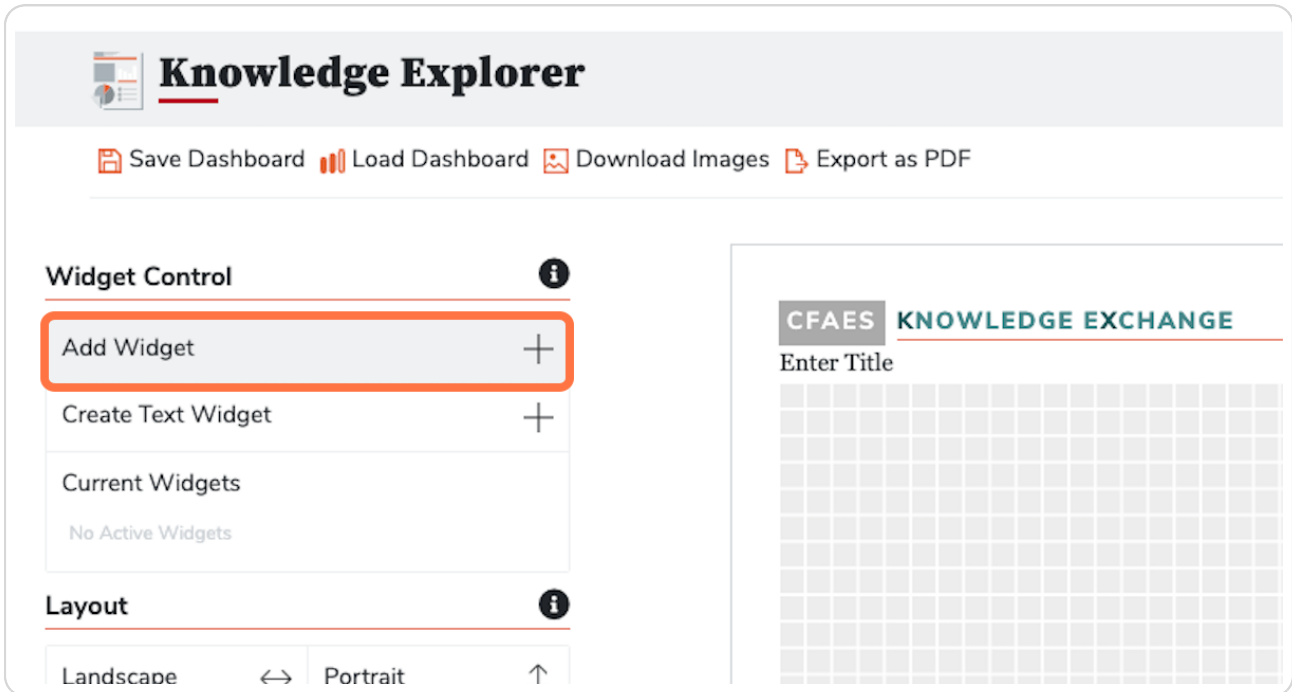


### STEP 3

## Click on "Add Widget"

Build your report using "widgets." Widgets represent every data set currently found in any KX data tool, like the Community Profiles and the Ohio Food System Map. You'll find widgets in the Widget Control menu on the left side of the report builder, along with a custom text widget and a list of current widgets in your report.

Note: To pull in data from eFields reports, start with the eFields tool and send widgets to your cart. When you "checkout," that will send the widgets to the Knowledge Explorer. If you don't see a cart on your page, clear your cache. Click [here](#) to learn how.

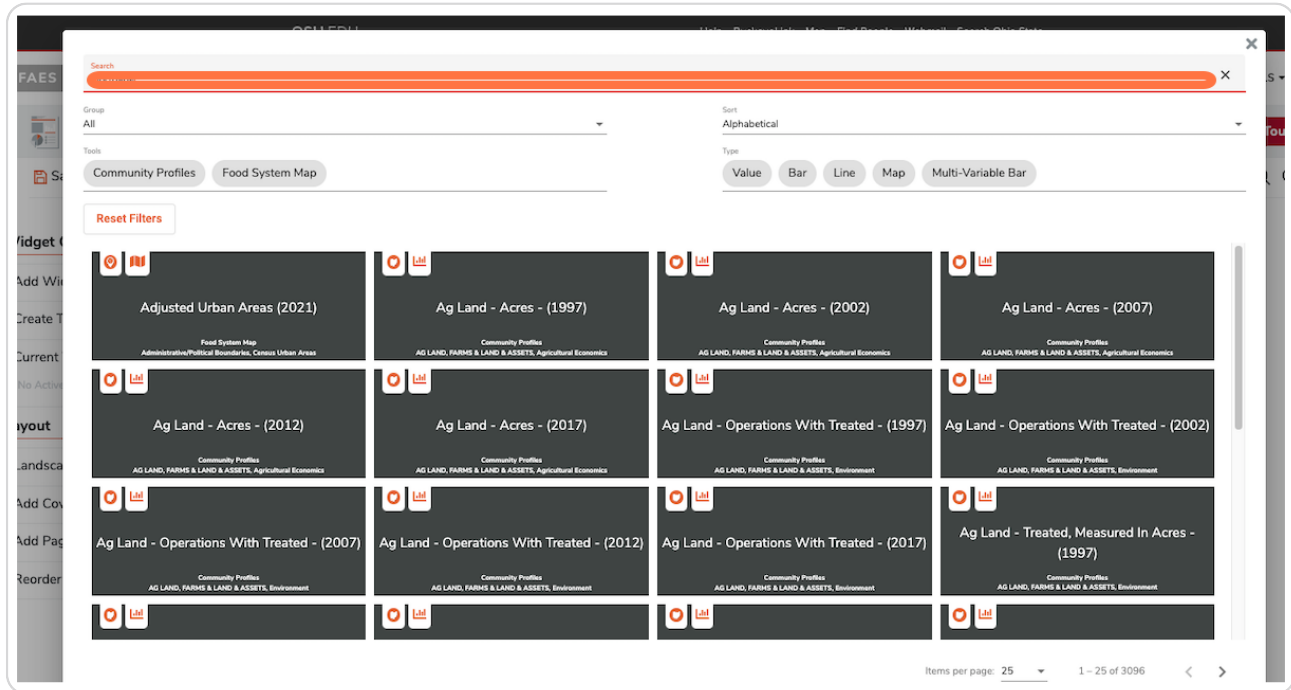


The screenshot displays the Knowledge Explorer interface. At the top, there is a header with the Knowledge Explorer logo and navigation options: Save Dashboard, Load Dashboard, Download Images, and Export as PDF. Below the header, the interface is divided into two main sections. On the left, the 'Widget Control' panel is visible, featuring a list of options: 'Add Widget' (highlighted with an orange border), 'Create Text Widget', and 'Current Widgets' (showing 'No Active Widgets'). Below this is the 'Layout' section, which includes 'Landscape' and 'Portrait' options. On the right, a grid-based workspace is shown with the title 'CFAES KNOWLEDGE EXCHANGE' and a prompt to 'Enter Title'.

## STEP 4

### Search for data

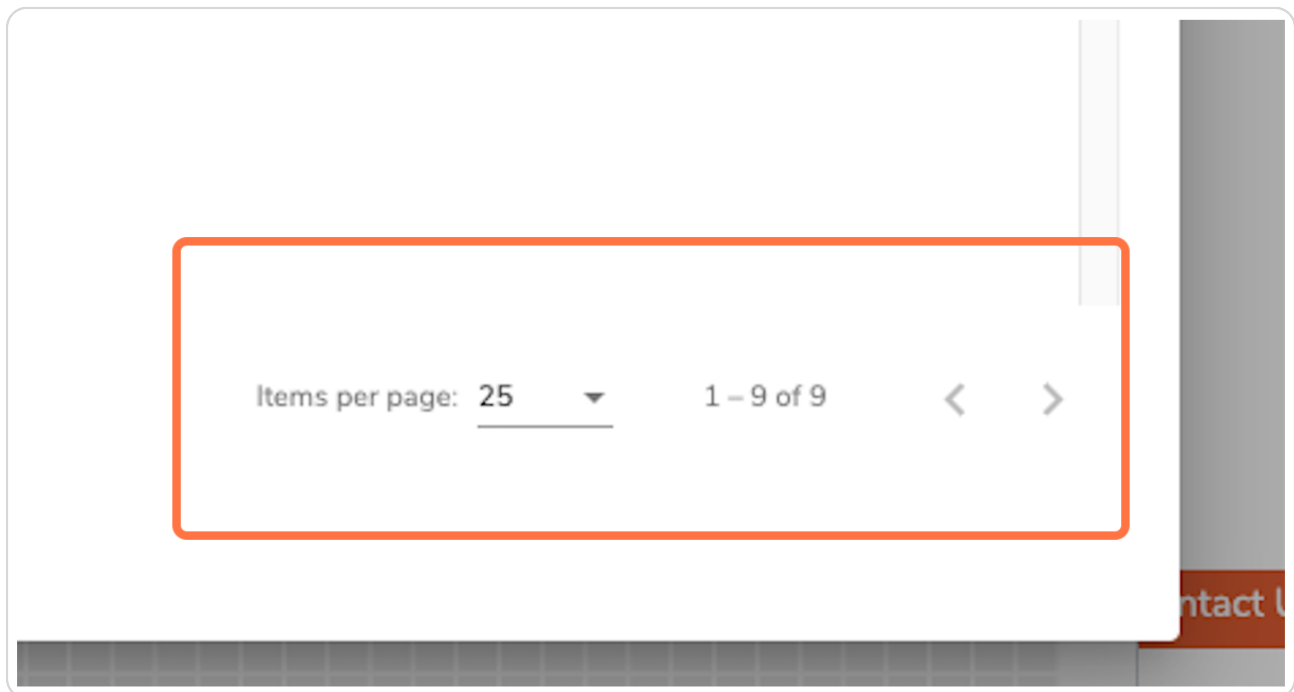
You can find widgets multiple ways - by searching a topic, by topic group, by tool type, alphabetically, by date, or by chart type. We'll start with the search bar. Type "mortgage" to find widgets with mortgage data.



## STEP 5

### Use arrows to search for more data sets

Use the arrows at the bottom of the search box to click through widgets with mortgage data. Or change the number of items shown on the page with the dropdown box.



## STEP 6

### Click on "Homeowners Mortgage Status with a Mortgage By Age (2021)"

Add the data by clicking on the tile. Notice icons and text on each set that indicate from which tool and data source the widget originates.

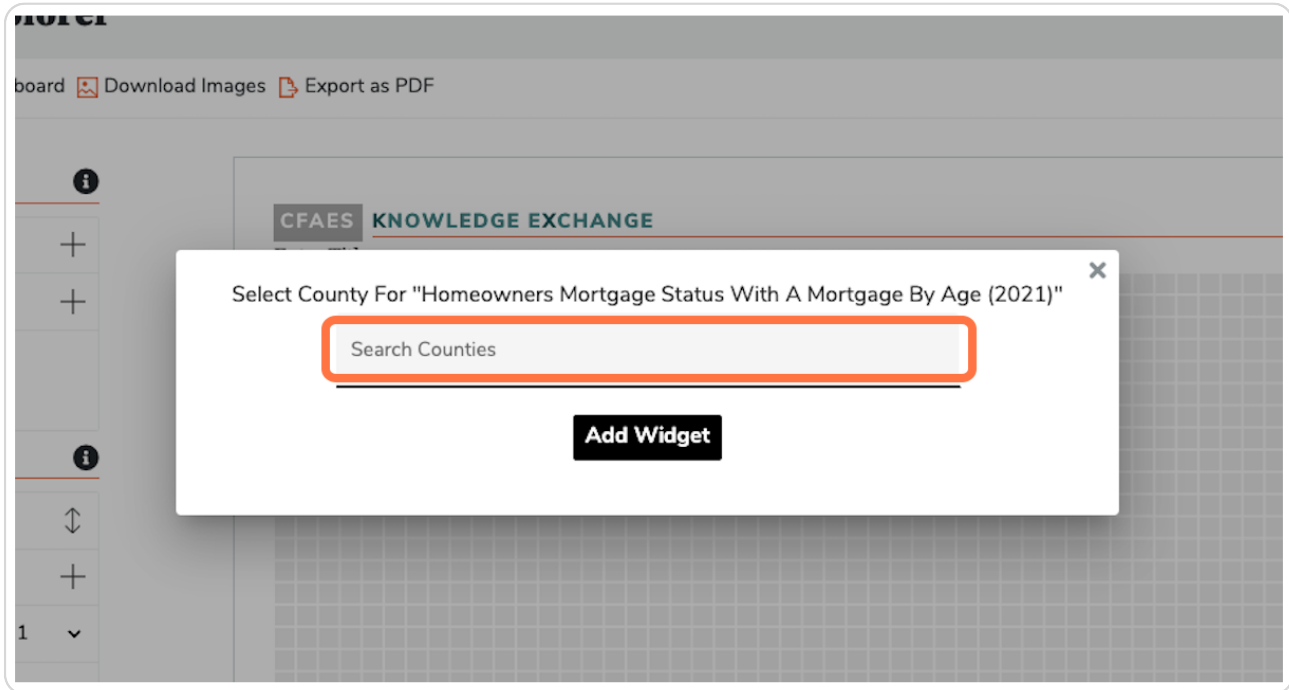
The screenshot shows a dashboard interface with a grid of data tiles. At the top, there are navigation tabs: "Community Profiles" and "Food System Map". On the right, there are filters for "Alphabetical" and "Type" (Value, Bar, Line). The grid contains six tiles, each with a title, a small icon, and a data source attribution. The tile "Homeowners Mortgage Status With A Mortgage By Age (2021)" is highlighted with an orange border. It features a red circle icon and a red bar chart icon. The data source for this tile is "Community Profiles Home Mortgage Status 2021, Housing".

Tile Title	Icon	Data Source
Homeowners Mortgage Status With A Mortgage By Age (2020)	Red circle icon	Community Profiles Home Mortgage Status, Housing
<b>Homeowners Mortgage Status With A Mortgage By Age (2021)</b>	Red circle icon, Red bar chart icon	Community Profiles Home Mortgage Status 2021, Housing
Mortgage Status By Median Value	Red circle icon, Red hash icon	Community Profiles Home Mortgage Status, Housing
Percentage Of Homes With A Mortgage (2020)	Red circle icon, Red hash icon	Community Profiles Home Mortgage Status, Housing
Percentage Of Homes With A Mortgage (2021)	Red circle icon, Red hash icon	Community Profiles Home Mortgage Status 2021, Housing
Total Mortgages By Year (2018-2021)	Red circle icon, Red line graph icon	Community Profiles Home Mortgage Status 2018, Housing

## STEP 7

### Select specific county

The Community Profiles data sets contain county specific data. If you see this pop-up menu after clicking a data widget, you can either type in the Ohio county you want or search with the dropdown menu for your county.

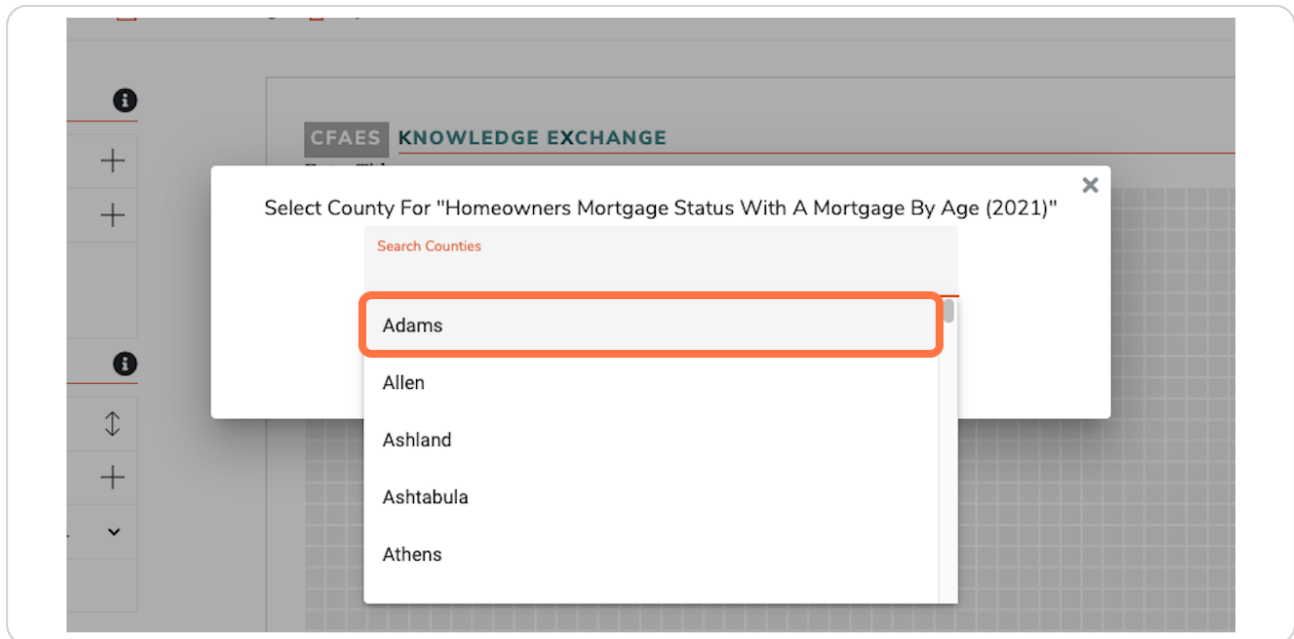




## STEP 8

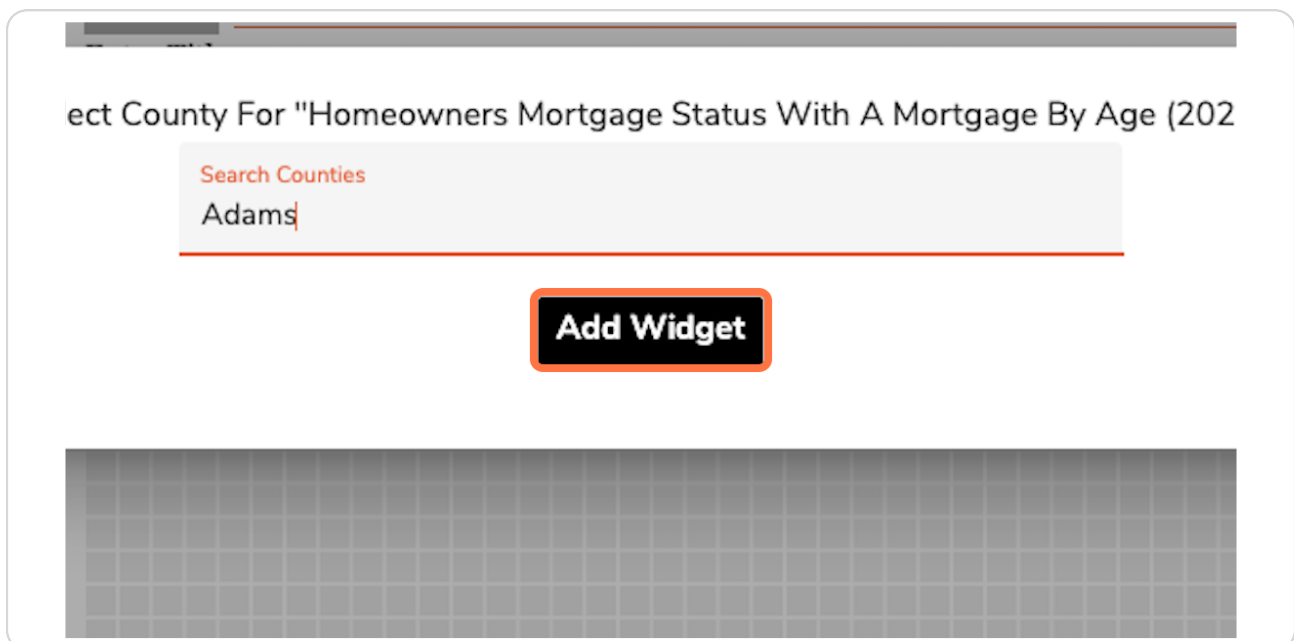
### Click on county name to choose

You've found your county in the dropdown menu. Click on Adams to select.



## STEP 9

### Click on "Add Widget" button to add to your report



## STEP 10

### Let's add more data!

Continue to add data to your report by clicking the Add Widget button.

# Knowledge Explorer

Save Dashboard Load Dashboard Download Images Export as PDF

### Widget Control

- Add Widget
- Create Text Widget

#### Current Widgets

- Homeowners Mortgage Status With A Mortgage By Age (2021)

### Layout

#### CFAES KNOWLEDGE EXCHANGE

Enter Title

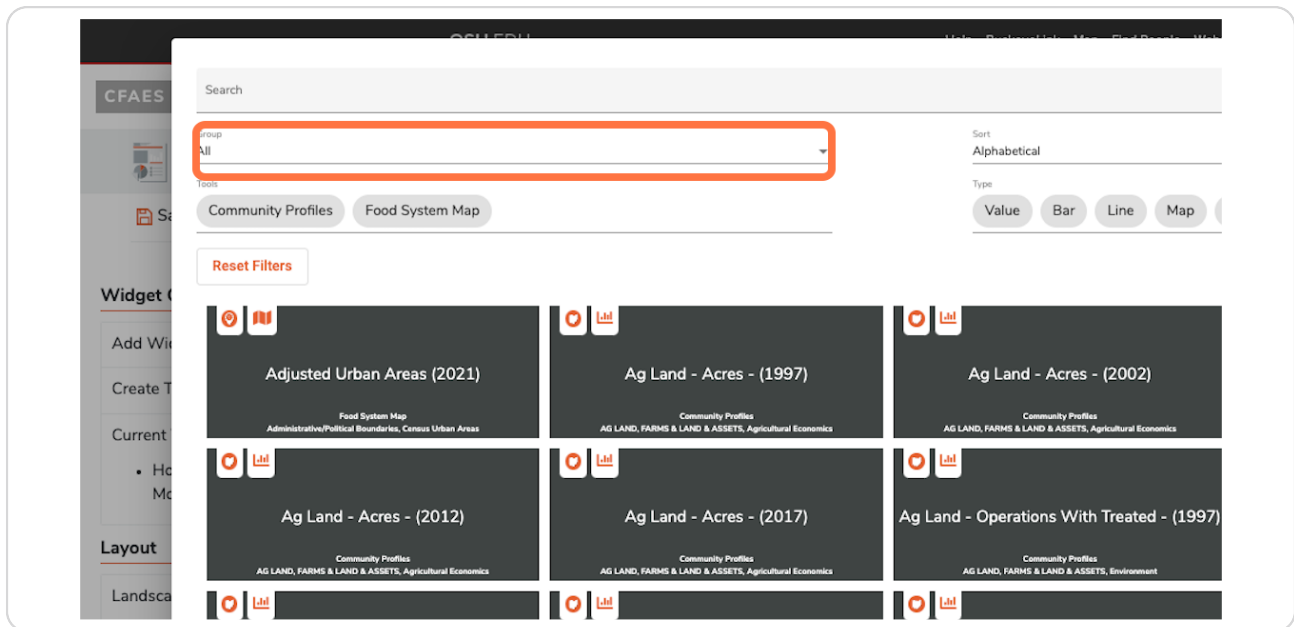
##### Homeowners Mortgage Status With A Mortgage By Ag

Age Group	Percentage
15 To 34 Years Of Age	~85%
35 To 44 Years Of Age	~100%
45 To 54 Years Of Age	~100%
55 To 59 Years Of Age	~65%
60 To 64 Years Of Age	~55%
65 To 74 Years Of Age	~95%
75 Years Of Age	~5%

## STEP 11

### Click on "Group" filter to find specific data categories

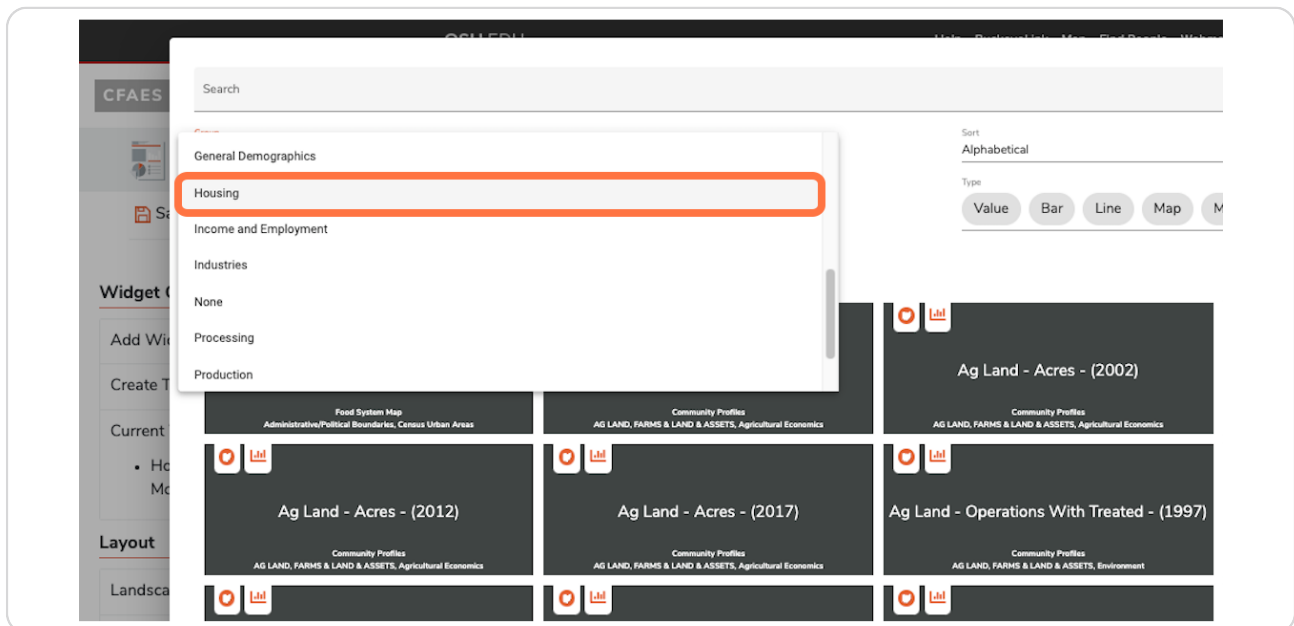
You'll find multiple topics for data listed in this dropdown menu that correlate with the Ohio Food System Map and Community Profiles topics.



The screenshot shows the CFAES dashboard interface. At the top, there is a search bar and a 'Group' filter dropdown menu. The 'Group' filter is currently set to 'All' and is highlighted with an orange border. Below the search bar, there are two tabs: 'Community Profiles' and 'Food System Map'. To the right of these tabs, there are options for 'Sort' (Alphabetical) and 'Type' (Value, Bar, Line, Map). Below the filter and sort options, there is a 'Reset Filters' button. The main content area displays a grid of data cards. The cards are arranged in three rows and three columns. The first row contains 'Adjusted Urban Areas (2021)', 'Ag Land - Acres - (1997)', and 'Ag Land - Acres - (2002)'. The second row contains 'Ag Land - Acres - (2012)', 'Ag Land - Acres - (2017)', and 'Ag Land - Operations With Treated - (1997)'. The third row contains three cards that are partially obscured. Each card has a title, a subtitle, and a small icon in the top left corner.

## STEP 12

### Click on "Housing" to select

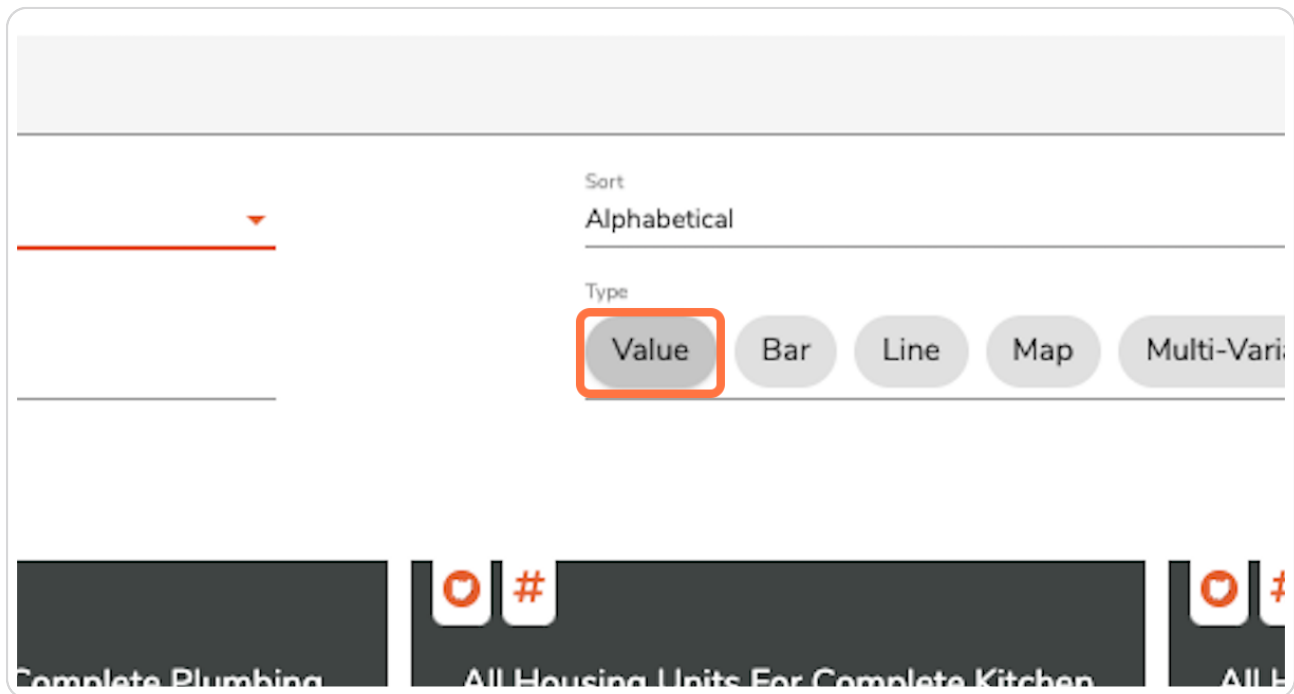


The screenshot shows the CFAES dashboard interface, similar to the previous one. The 'Group' filter dropdown menu is open, and the 'Housing' option is highlighted with an orange border. The dropdown menu lists several categories: 'General Demographics', 'Housing', 'Income and Employment', 'Industries', 'None', 'Processing', and 'Production'. The rest of the dashboard interface, including the search bar, tabs, sort options, and data cards, remains the same as in the previous screenshot.

## STEP 13

### Selecting chart type

Only want a value data viz? Select "Value" under chart type to further narrow the list of data choices.



## STEP 14

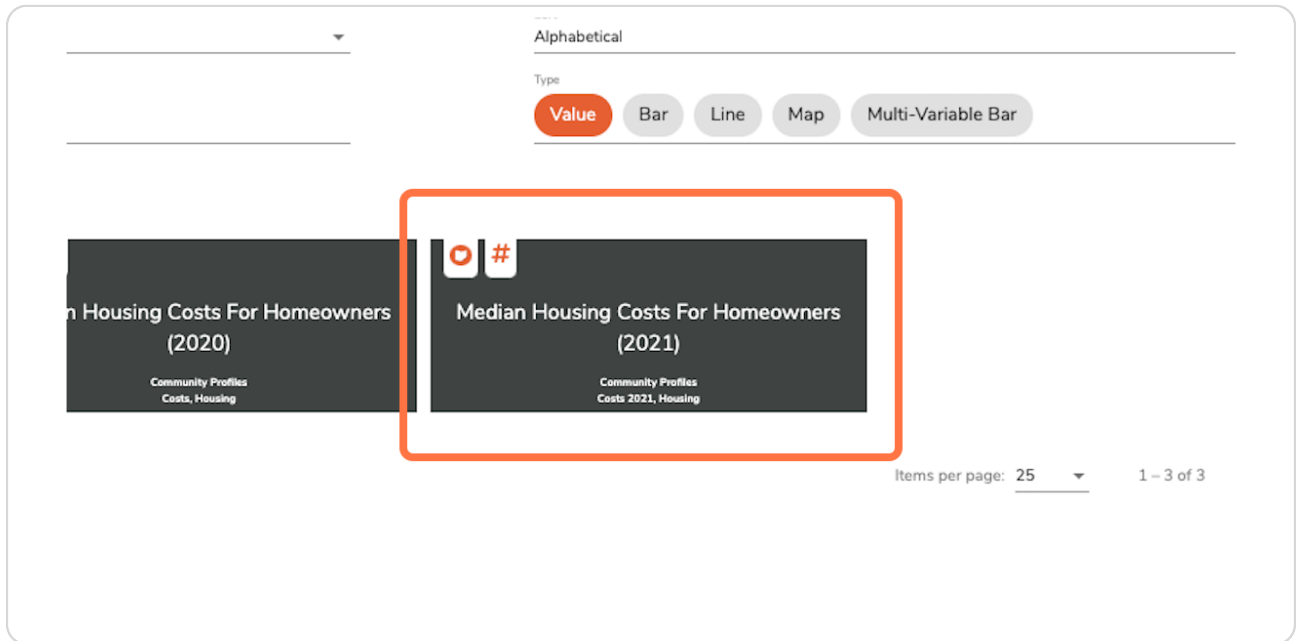
### Type keywords in Search bar to narrow your search

Type "median housing costs for homeowners" to find the exact data you need to fill out your report.

The screenshot shows a data visualization tool interface. At the top, a search bar contains the text "median housing costs for homeowners". Below the search bar, there are filters for "Group" (set to "Housing") and "Sort" (set to "Alphabetical"). There are also tabs for "Tools" (Community Profiles, Food System Map) and "Type" (Value, Bar, Line, Map, Multi-Variable Bar). A "Reset Filters" button is visible. The main area displays a grid of 16 data cards, each with a title, a small icon, and a subtitle. The cards are arranged in a 4x4 grid. The titles of the cards are: "All Housing Units Complete Plumbing Facilities (2020)", "All Housing Units Complete Plumbing Facilities (2021)", "All Housing Units For Complete Kitchen Facilities (2020)", "All Housing Units For Complete Kitchen Facilities (2021)", "All Housing Units Lacking Complete Kitchen Facilities (2020)", "All Housing Units Lacking Complete Kitchen Facilities (2021)", "All Housing Units Lacking Plumbing Facilities (2020)", "All Housing Units Lacking Plumbing Facilities (2021)", "Average Household Size For Owner-occupied Housing (2020)", "Average Household Size For Owner-occupied Housing (2021)", "Average Household Size For Renter-occupied Housing (2020)", "Average Household Size For Renter-occupied Housing (2021)", and four more cards with similar titles. At the bottom right, there is a pagination control showing "Items per page: 25" and "1 - 25 of 54".

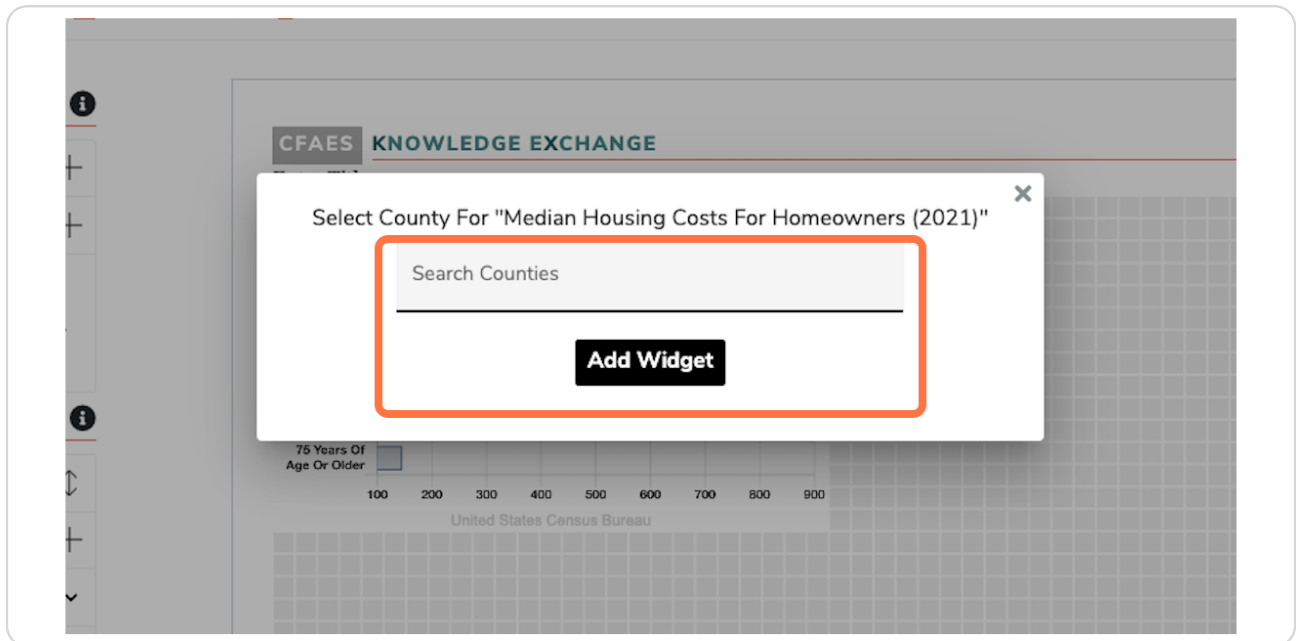
STEP 15

Click on 2021 data



STEP 16

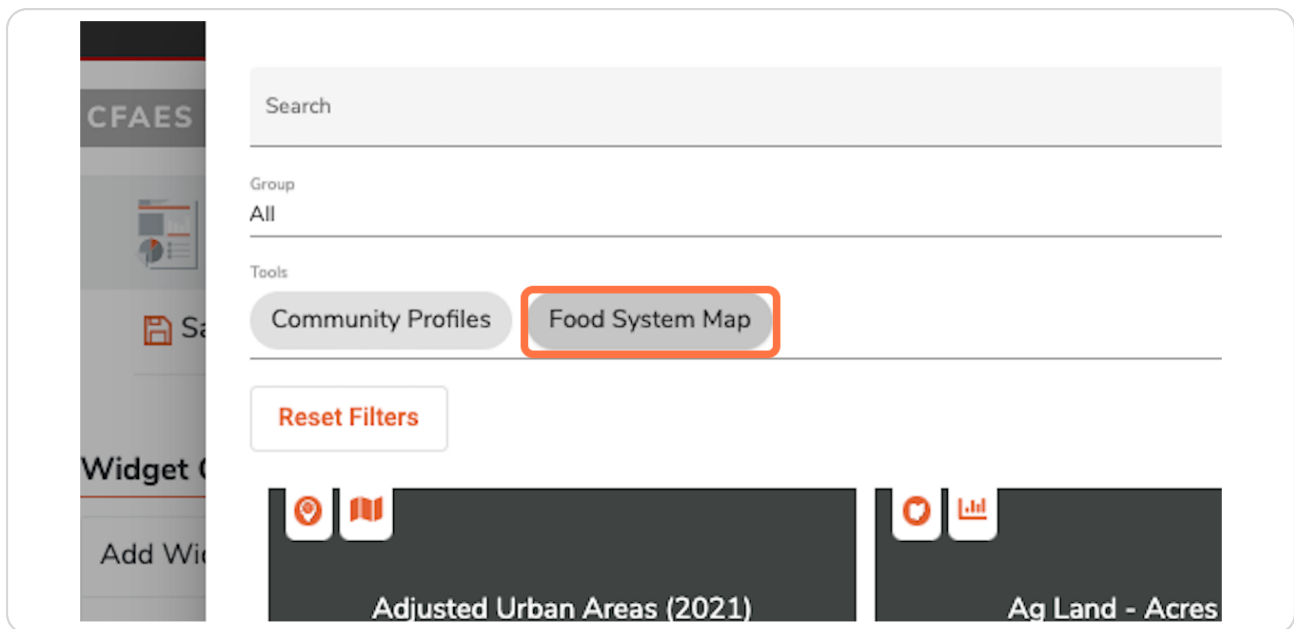
Select county as described above and click Add Widget



## STEP 17

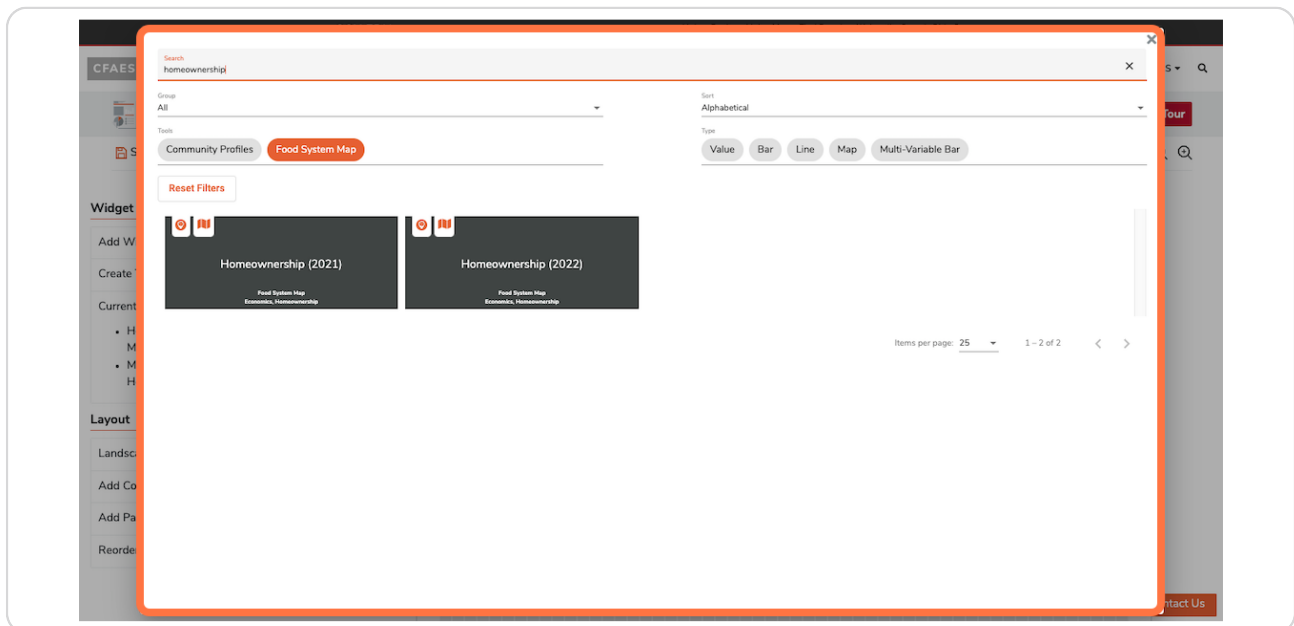
### Add a tool-specific widget

Back to our main screen, click Add Widget again, but this time in the search pop-up menu, click "Food System Map" under Tools category.



## STEP 18

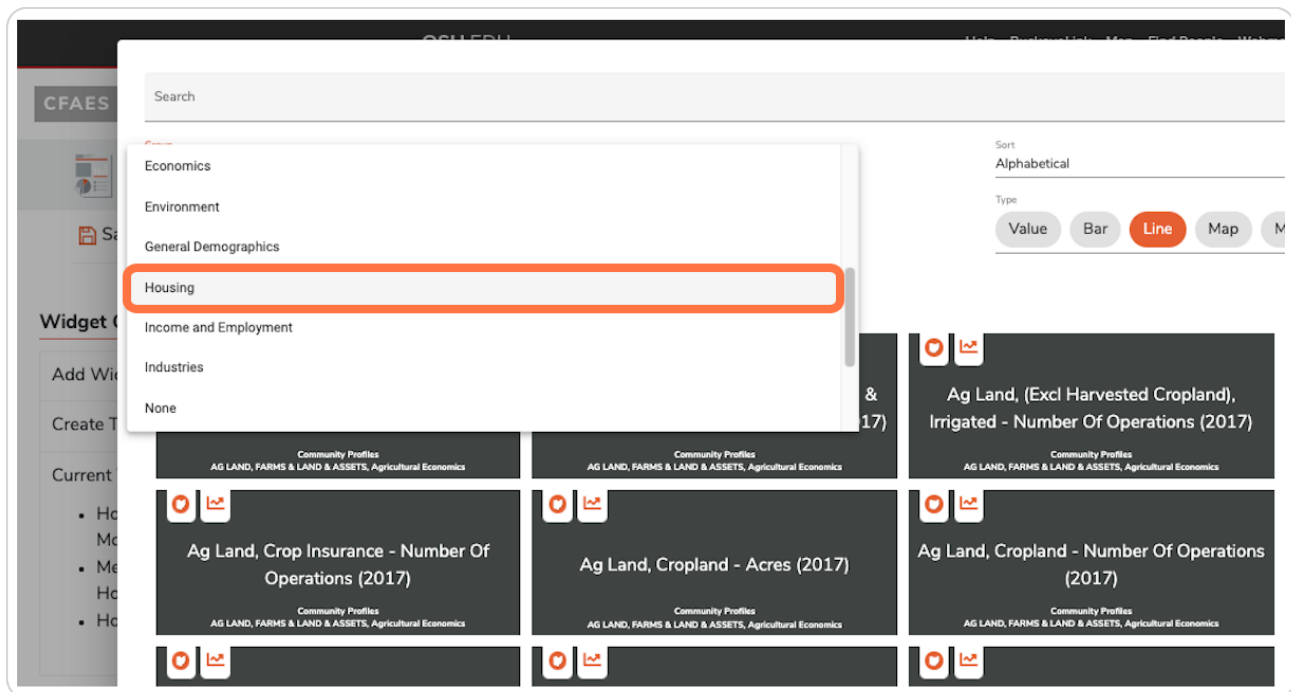
### Search for "homeownership" and select 2021 data to add to your report



## STEP 19

### Add more housing data

Back on the main dashboard, click Add Widget. Then select a Line chart and Housing in the Group dropdown menu.

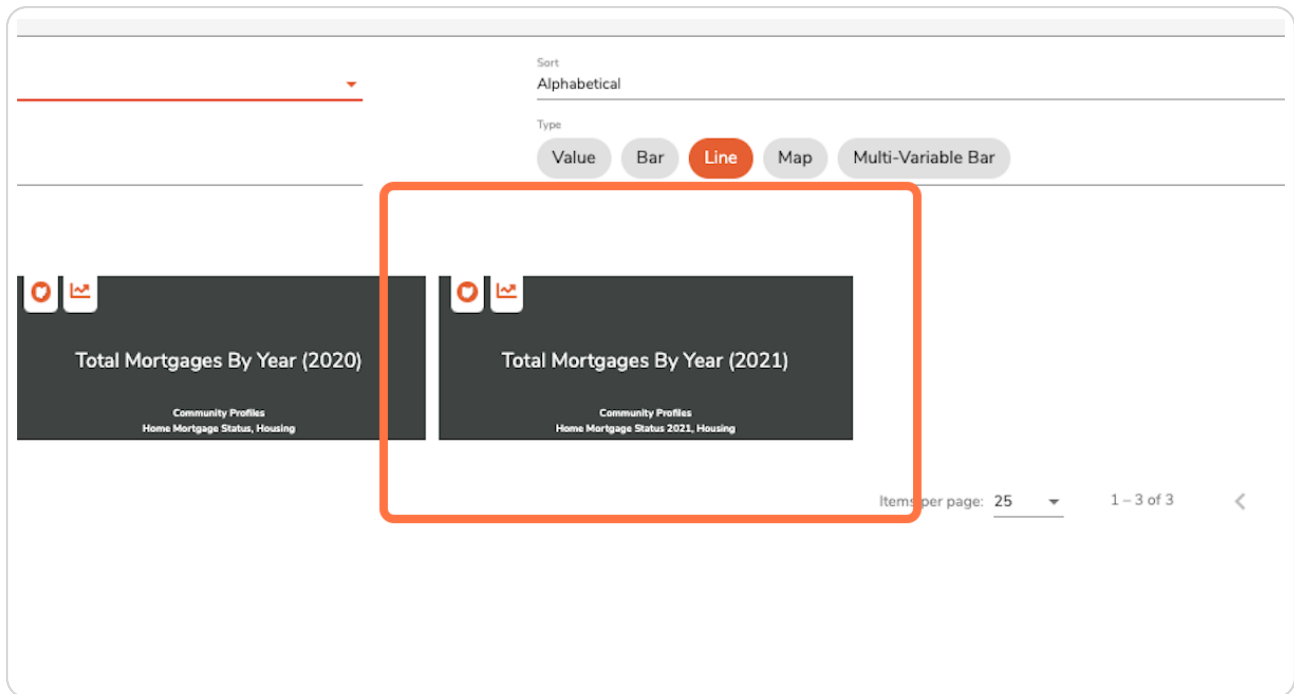




## STEP 20

### Click on "Total Mortgage by Year (2021)"

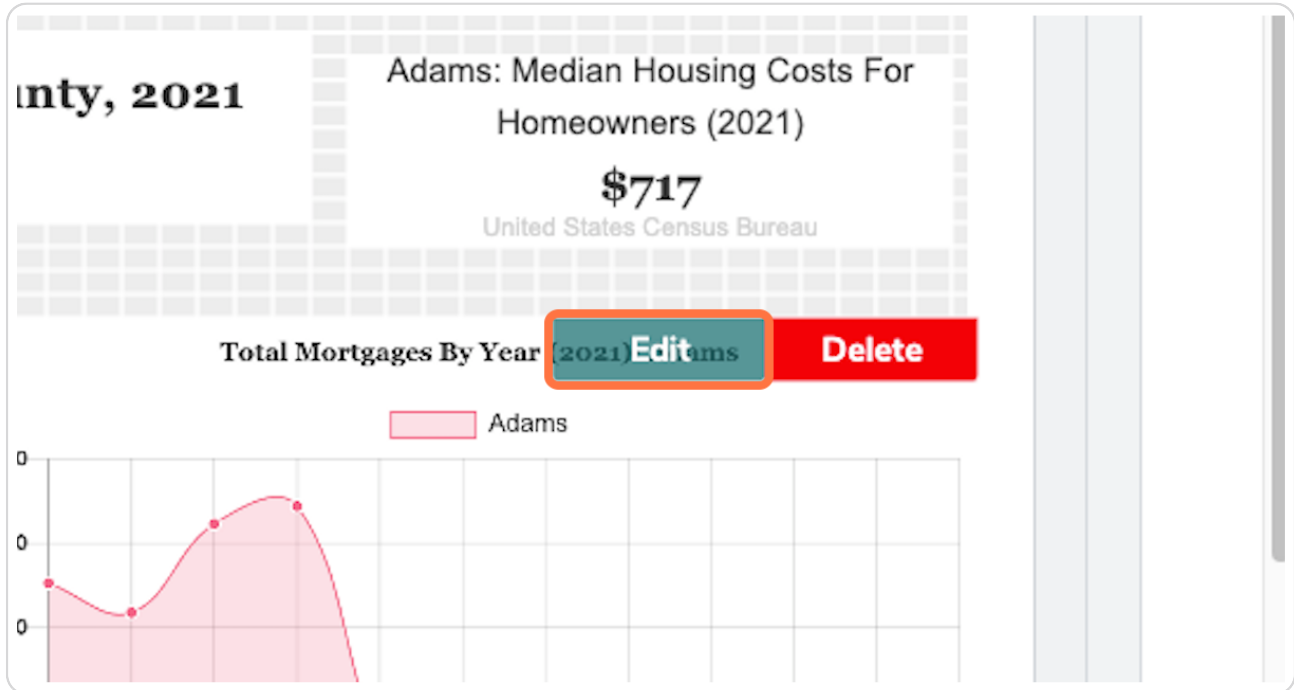
After selecting 2021 data, select Adams county using the Search County dropdown menu.



## STEP 21

### Edit or delete widgets

Each data viz includes an Edit and Delete button. Depending on the data, you can edit which county is shown, add point data to a map, or edit alternative text that will appear in the accessible PDF when you export your report.



## STEP 22

### Select "Add County"

Let's compare Adams County data with another county. Click Add County and selecting another county in the dropdown menu, or type a county name. Let's choose Athens.

Enter Alternative Text  
Line chart showing Total Mortgages By Year (2021). Data source information: United States Census Bureau

Adams Edit Delete

**Add County**

Show Widget on Page

Page  
2

**Edit Widget**

## STEP 23

### Click on "Athens"

United States Census Bureau

Adams Edit Delete

Edit County

Confirm

Gallia

Huron

**Athens**

Adams

Medina

60 To 64 Years Of Age 4100

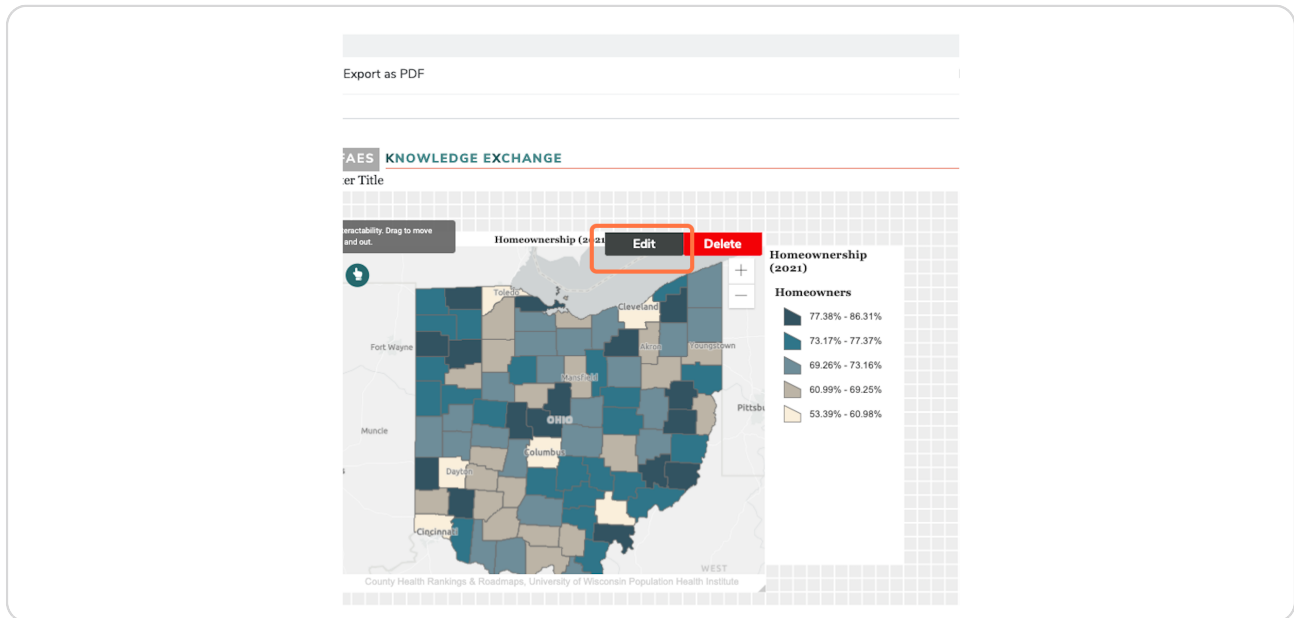
65 To 74 Years Of Age 4000

75 Years Of Age Or Older 3900

## STEP 24

### Edit map layers

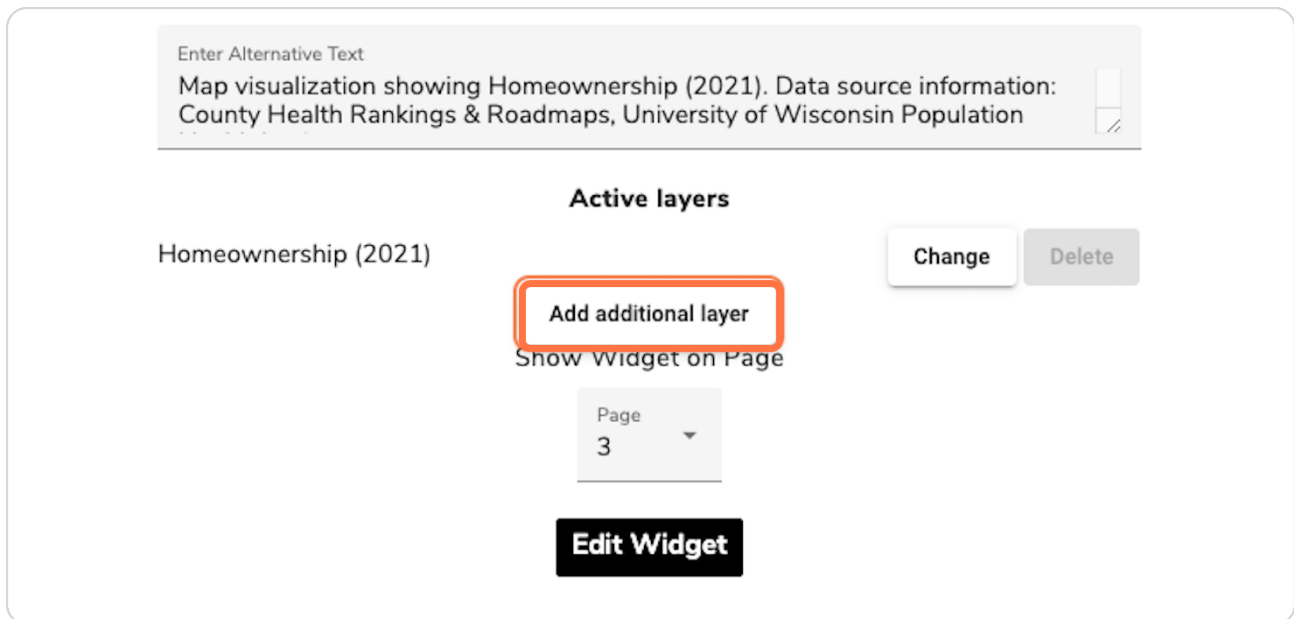
Add a point layer or change the choropleth layer in the Edit window.



## STEP 25

### Add new map layers

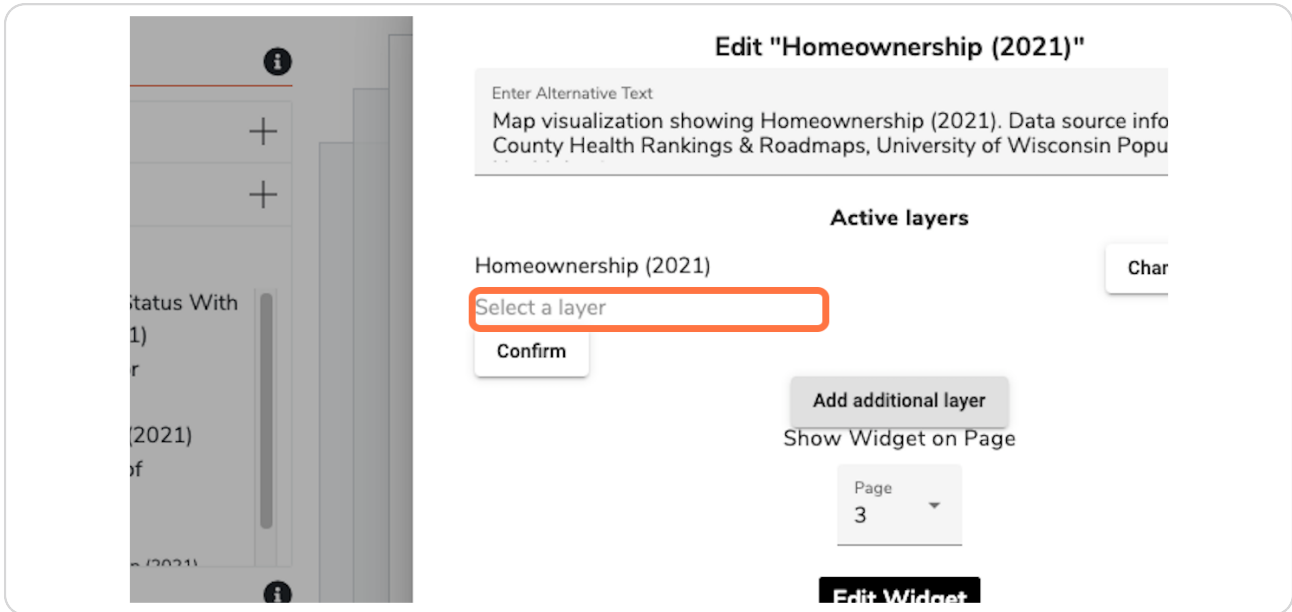
Click on Add additional layer to change or delete layers in your Active layers list.



## STEP 26

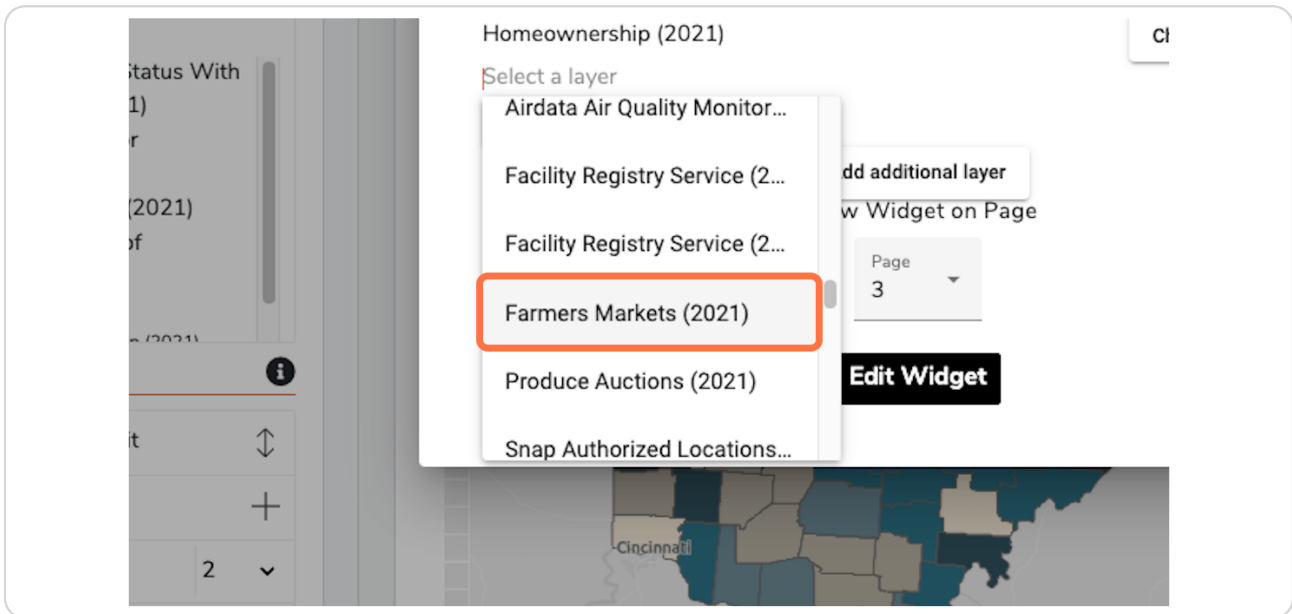
### Click on "Select a layer"

When you click in the Select a layer field, a dropdown menu of layers will appear. Select the layer you want. Only one choropleth is allowed, so you may see a pop-up menu if you choose another choropleth layer from the list.



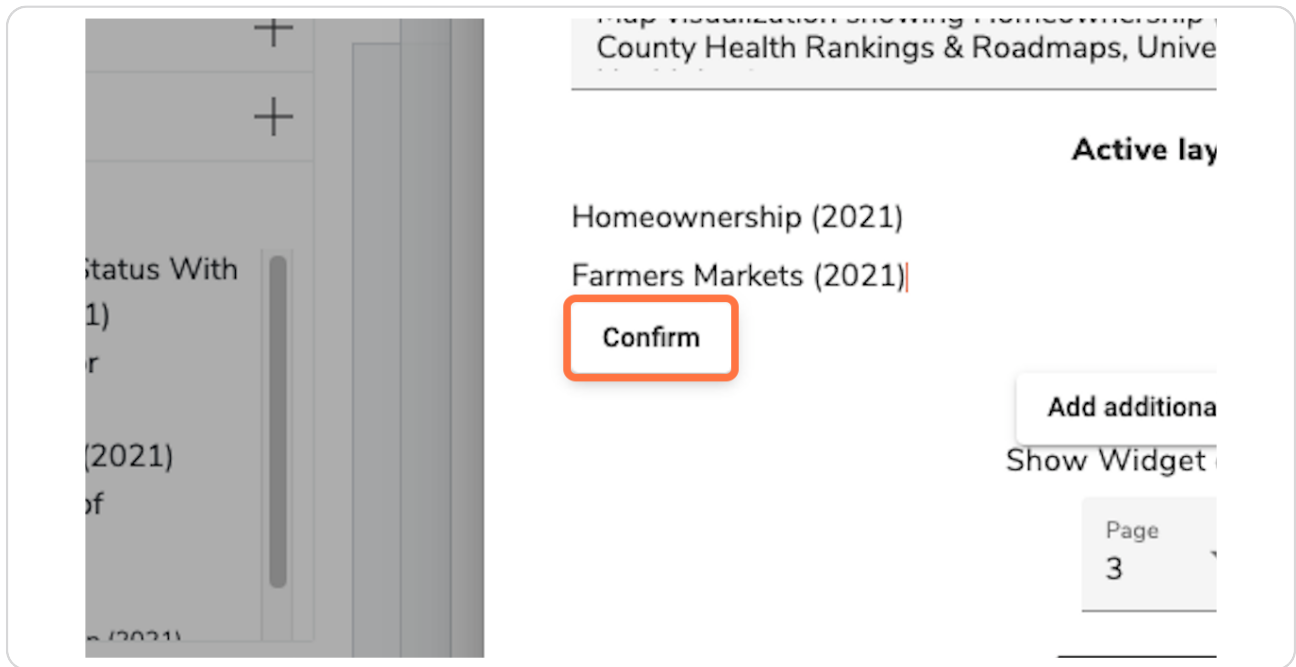
## STEP 27

### Click on "Farmers Markets (2021)"



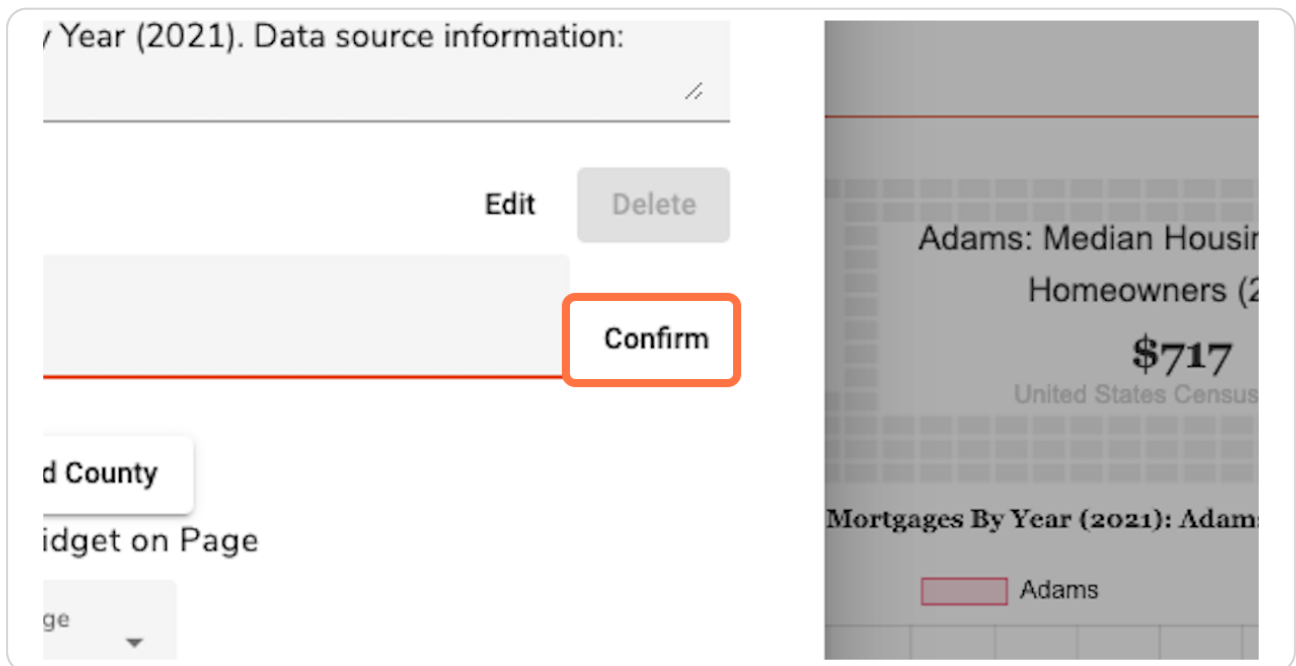
STEP 28

Click "Confirm" to add the new layer



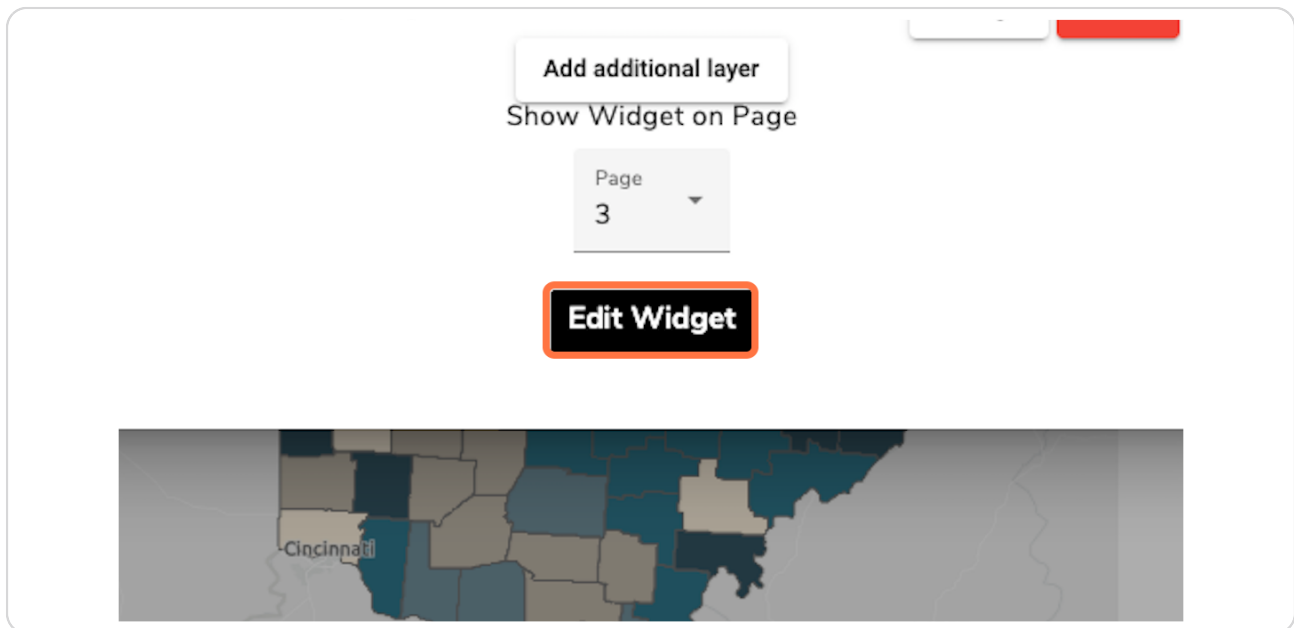
STEP 29

Click on "Confirm" to add the new data set to the widget



## STEP 30

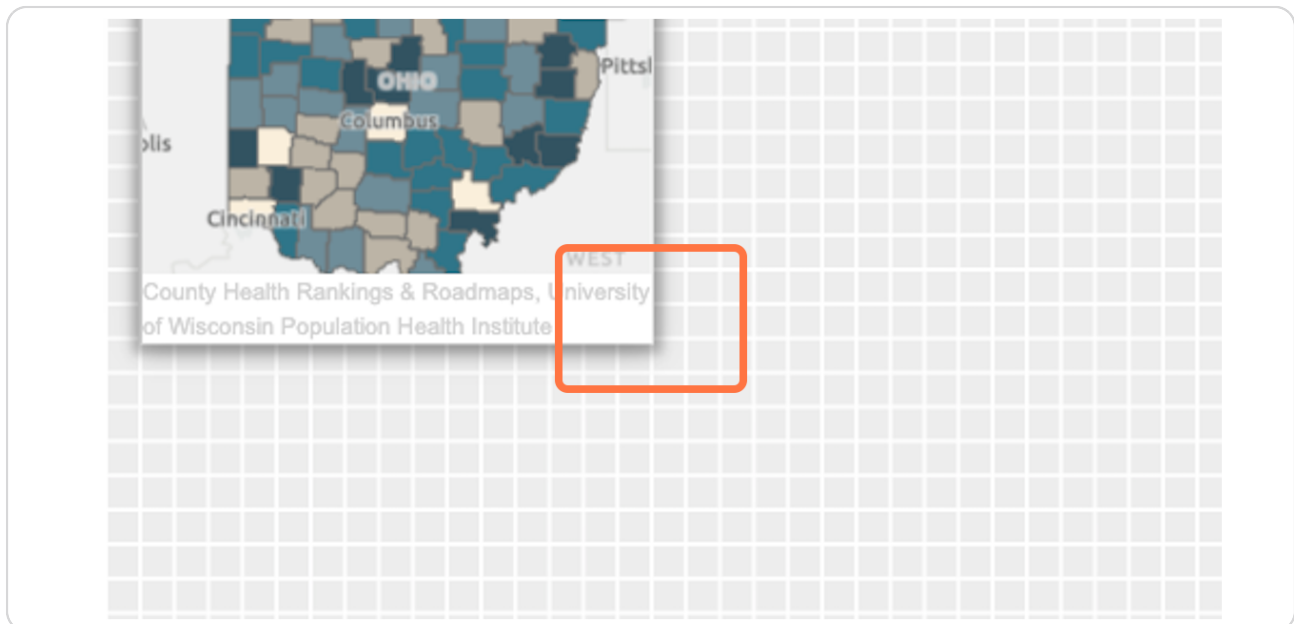
### Click on Edit Widget to update the widget



## STEP 31

### Resize and move widgets to design your report

Click any corner of the data widget to resize on the report grid. Place your cursor anywhere on the widget to click and drag the widget around the page.



## STEP 32

### Need more space? Add pages

Now that all of our data sets are added, we need more space to properly size our widgets. Add pages in the Layout menu individually, or add up to 3 pages at a time using the number dropdown menu.

Current Pages

- Homeowners Mortgage Status With A Mortgage By Age (2021)
- Median Housing Costs For Homeowners (2021)
- Homeownership (2021)
  - Legend - Homeownership (2021)
- Total Mortgages By Year (2021)

#### Layout

Landscape ↔ Portrait

Add Cover Page +

**Add Page** 1 ▾

Reorder Pages

United States Census Bureau

Age Group	Percentage
18 To 24 Years Of Age	~10%
25 To 34 Years Of Age	~10%
35 To 44 Years Of Age	~10%
45 To 54 Years Of Age	~10%
55 To 59 Years Of Age	~40%
60 To 64 Years Of Age	~35%
65 To 74 Years Of Age	~65%
75 Years Of Age Or Older	~10%

#### Homeownership (2021)

Total Mortgages

Homeowners

Homeownership Range	Percentage
77.38% - 86.31%	~10%
73.17% - 77.37%	~10%
69.26% - 73.16%	~10%
60.99% - 69.25%	~10%
53.39% - 60.98%	~10%

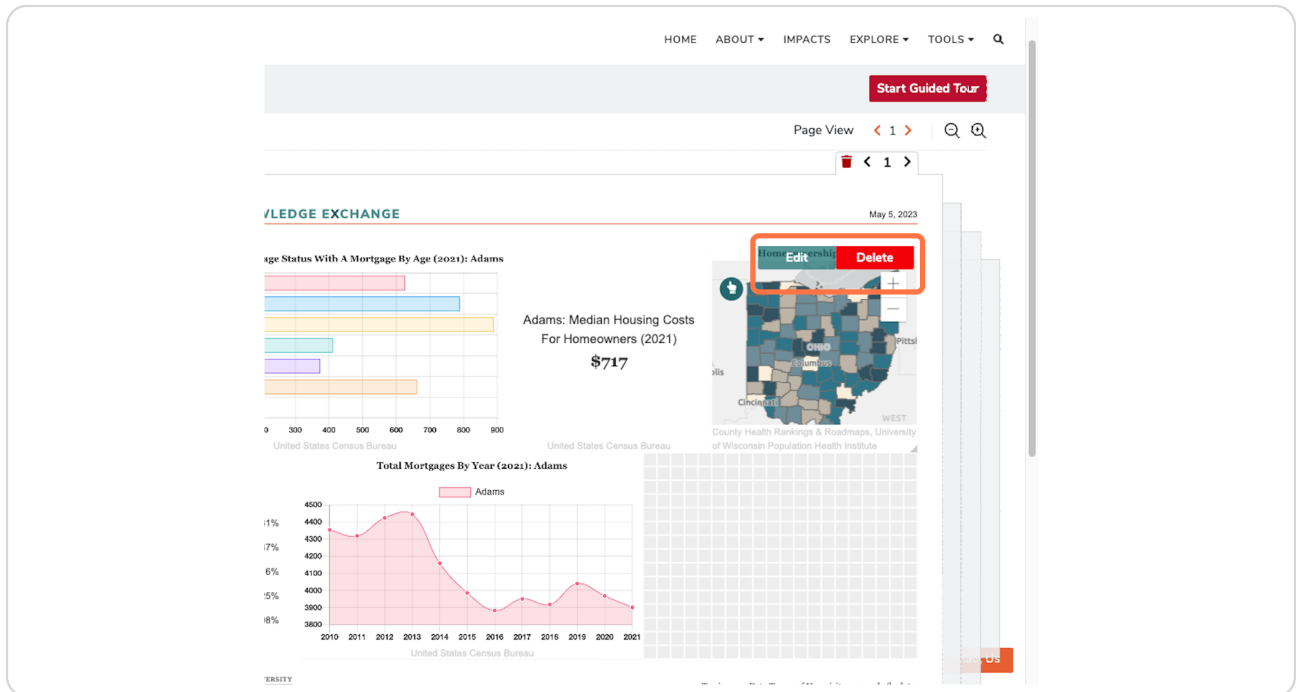
Year	Total Mortgages
2010	~4350
2011	~4300
2012	~4450
2013	~4400



## STEP 33

### Move widgets to another page

Select Edit on each widget to get a new pop-up menu where you can select your new page location.



## STEP 34

### Select page number and submit changes

Select page 2 to move your data widget to new page and click Edit Widget to submit changes.

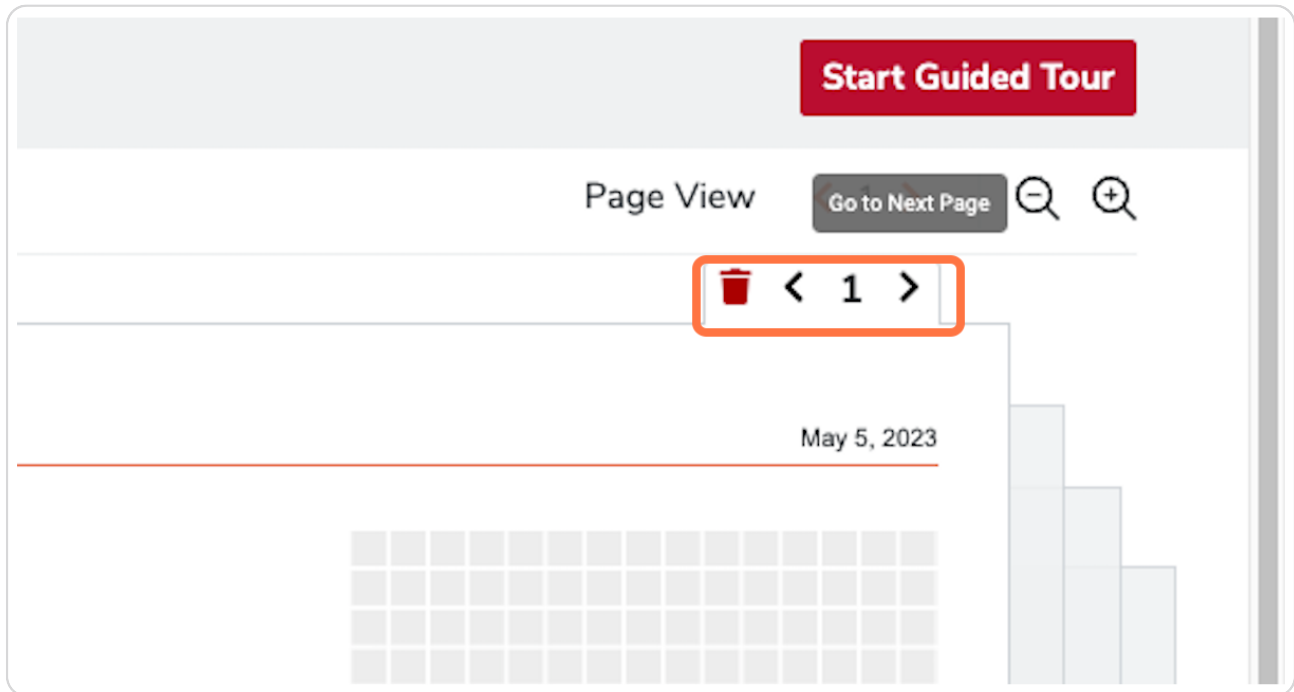
The screenshot shows a configuration interface for a dashboard widget. At the top, there are two buttons: "Add additional layer" and "Show Widget on Page". Below these is a dropdown menu labeled "Page" with the number "2" selected. A prominent "Edit Widget" button is highlighted with an orange border. Below the configuration panel is a preview of the widget, titled "Homeowners". The preview shows a line chart with a red line and a shaded area, and a table of data on the left.

Category	Value 1	Value 2
Homeowners	77.38%	86.31%
	73.17%	77.37%
	69.98%	73.16%

## STEP 35

### Move between pages and delete

Click on the arrow buttons in the top right corner of each report page to move between pages of your report. Click the trashcan to delete a page. You will see a warning message to confirm deletion.



## STEP 36

### Add a title to each page

Click the Enter Title field to add a page title to your report. You can have different titles for each page.

The screenshot displays the CFAES Knowledge Exchange interface. On the left, the 'Widget Control' panel shows options to 'Add Widget' and 'Create Text Widget', and a list of 'Current Widgets' including 'Homeowners Mortgage Status With A Mortgage By Age (2021)', 'Median Housing Costs For Homeowners (2021)', 'Total Mortgages By Year (2021)', and 'Homeownership (2021)'. The 'Layout' panel shows 'Landscape' selected over 'Portrait', 'Add Cover Page', 'Add Page' (set to 2), and 'Reorder Pages'.

The main report area is titled 'Adams: Median Housing Costs For Homeowners (2021)' with a value of '\$717'. Below this, two charts are displayed:

- Homeowners Mortgage Status With A Mortgage By Age (2021): Adams**: A horizontal bar chart showing mortgage status by age group. The x-axis ranges from 0 to 900. The y-axis categories are: 15 To 34 Years Of Age (pink bar, ~600), 35 To 44 Years Of Age (blue bar, ~800), 45 To 54 Years Of Age (yellow bar, ~900), 55 To 59 Years Of Age (teal bar, ~400), 60 To 64 Years Of Age (purple bar, ~350), 65 To 74 Years Of Age (orange bar, ~650), and 75 Years Of Age Or Older (grey bar, ~100).
- Total Mortgages By Year (2021): Adams**: A line chart showing total mortgages from 2010 to 2021. The y-axis ranges from 3000 to 4500. The x-axis shows years from 2010 to 2021. The line is pink and shows a peak around 2013 (approx. 4400) and a low around 2016 (approx. 3000).

Both charts are attributed to the United States Census Bureau. The report footer includes 'THE OHIO STATE UNIVERSITY' logo and a link to 'To view our Data Terms of Use, visit [go.osu.edu/kedata](http://go.osu.edu/kedata)'.

## STEP 37

### Add custom text

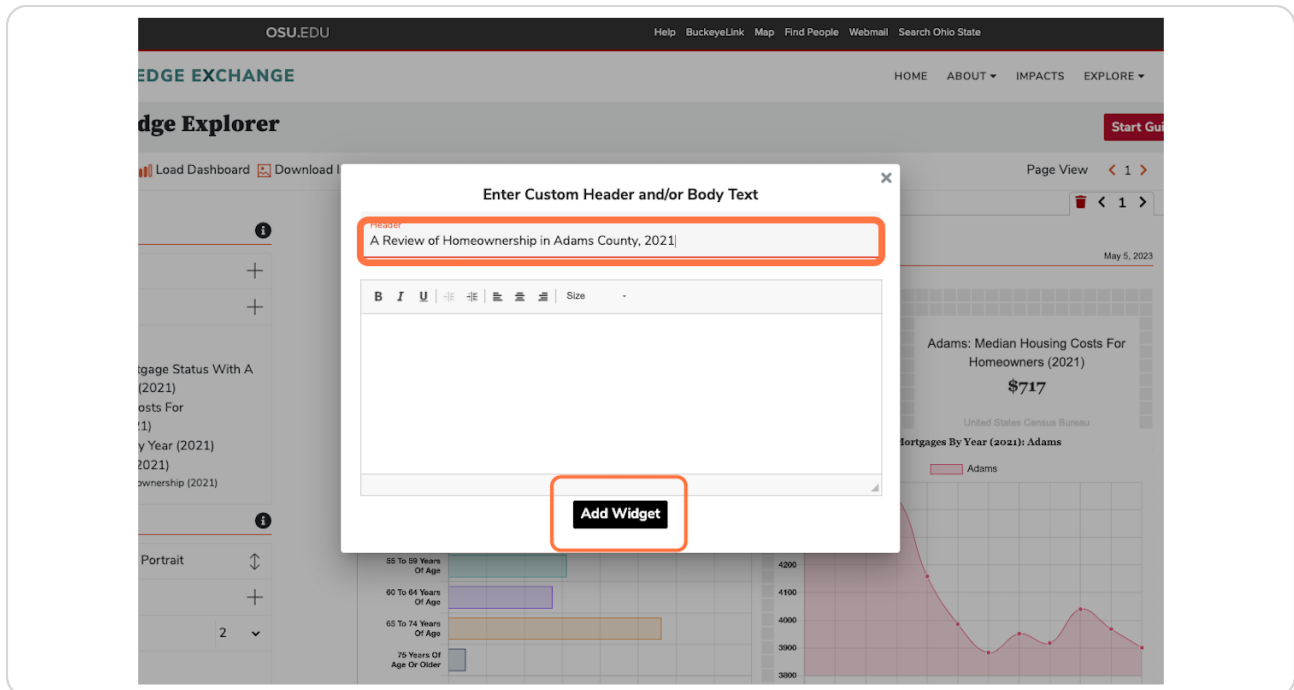
Use the Create Text Widget to add custom text to your report. Text widgets include a header and body copy. Bold, italics, or underlined text options are available, as well as text center, left, and right spacing.

The screenshot shows a dashboard editor interface. At the top, there are navigation buttons: 'Save Dashboard', 'Load Dashboard', 'Download Images', and 'Export as PDF'. Below this is the 'Widget Control' panel, which includes an 'Add Widget' section with a plus sign and a 'Create Text Widget' option highlighted with an orange border. Underneath, there is a 'Current Widgets' list with four items: 'Homeowners Mortgage Status With A Mortgage By Age (2021)', 'Median Housing Costs For Homeowners (2021)', 'Total Mortgages By Year (2021)', and 'Homeownership (2021)'. A legend for 'Homeownership (2021)' is partially visible. To the right, a report preview is shown with the header 'CFAES KNOWLEDGE EXCHANGE' and the title 'Homeownership for Adams County, Ohio, in 20'. Below the title is a grid of empty cells, and at the bottom, there is a chart titled 'Homeowners Mortgage Status With A Mortgage By' with a legend for '15 To 34 Years Of Age'.

## STEP 38

### Type in Header

Add your header, "A Review of Homeownership in Adams County, 2021," and click Add Widget.



## STEP 39

### Almost finished!

You've added all the widgets you want, custom text, and moved the last data widget into place. Now what?

The screenshot shows a dashboard titled "Knowledge Explorer" with a navigation menu (HOME, ABOUT, IMPACTS, EXPLORE, TOOLS) and a search bar. The main content area displays "Homeownership for Adams County, Ohio, in 2021" with a date of May 5, 2023. A sub-header reads "A Review of Homeownership in Adams County, 2021" and "Analyzing homeownership data for Adams County, Ohio." A key metric is shown: "Adams: Median Housing Costs For Homeowners (2021) \$717". Two charts are present: "Homeowners Mortgage Status With A Mortgage By Age (2021): Adams" (a horizontal bar chart) and "Total Mortgages By Year (2021): Adams" (a line chart). A "Widget Control" panel on the left lists current widgets and layout options. A "Start Guided Tour" button is in the top right.

## STEP 40

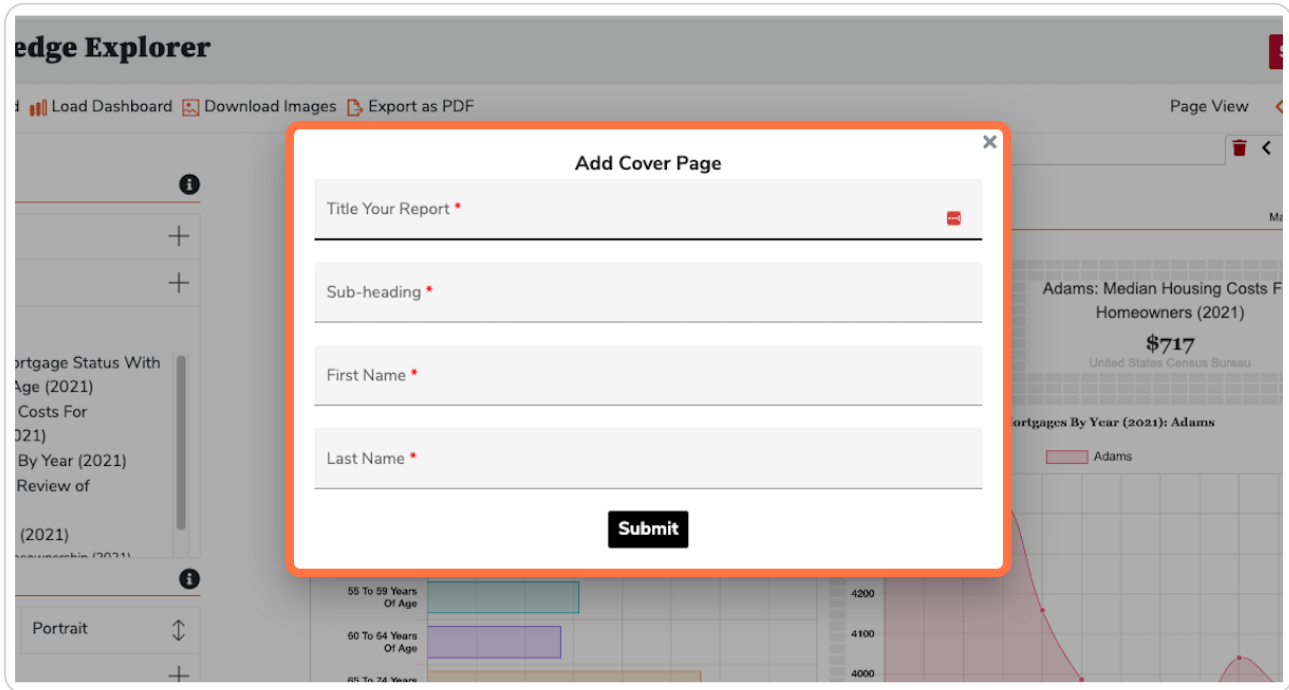
### Add Cover Page

This screenshot focuses on the "Layout" control panel. The "Add Cover Page" button is highlighted with a red rectangle. The "Add Page" dropdown is set to 2. The main content area shows a list of widgets: "A Mortgage By Age (2021)", "Median Housing Costs For Homeowners (2021)", "Total Mortgages By Year (2021)", "Text Widget - A Review of Homeowne...", and "Homeownership (2021)". A horizontal bar chart titled "Homeowners Mortgage Status With A Mortgage By Age (2021)" is visible on the right, showing mortgage counts for various age groups. The 15 to 34 age group has the highest count, followed by 35 to 44, 45 to 54, 55 to 59, 60 to 64, 65 to 74, and 75 years or older.

## STEP 41

### Add your details

Add details for the first page of the report. Type report title, department, or unit name, and your first and last name. The sub-heading is a good place to add program area or county office information. Click "Submit" to finish your cover page.



The screenshot shows the 'Add Cover Page' dialog box in the Edge Explorer application. The dialog box is centered and has a white background with a black border. It contains four text input fields, each with a red asterisk indicating a required field. The fields are labeled 'Title Your Report', 'Sub-heading', 'First Name', and 'Last Name'. Below the fields is a black 'Submit' button. The background of the application is dimmed, showing a dashboard with various charts and data. The top of the dashboard has the text 'edge Explorer' and navigation options like 'Load Dashboard', 'Download Images', and 'Export as PDF'. The right side of the dashboard shows a chart titled 'Adams: Median Housing Costs For Homeowners (2021)' with a value of '\$717' and a legend for 'Adams'.



## STEP 42

### Save and load dashboard

Want to work on this report some more later? Save Dashboard saves your current report. A .kxe file will download that should be saved to a folder or specific location. Ready to modify this report? Resume your work using the Load Dashboard button and locating the .kxe file to open.

The screenshot shows the OSU.EDU Knowledge Explorer dashboard. At the top, there is a black header with "OSU.EDU" in white. Below that is a grey header with "CFAES KNOWLEDGE EXCHANGE" in teal. The main content area has a grey background with the "Knowledge Explorer" title and a small icon. Below the title, there is a toolbar with four buttons: "Save Dashboard" (highlighted with an orange box), "Load Dashboard", "Download Images", and "Export as PDF". To the left of the main content is a "Widget Control" panel with an information icon. It contains three items: "Add Widget" with a plus sign, "Create Text Widget" with a plus sign, and "Current Widgets". To the right of the widget control is a preview of a widget, which is a grid with the "CFAES KNOWLEDGE EXCHANGE" header, the text "Enter Title", and a grid of 10 columns and 5 rows.

## STEP 43

### Save widget images for another use

If you want to use the data widgets in another report, use the "Download Images" button to save all the data widgets as .PNG files to your computer download folder. A downloading progress bar shows where you are in the process.

The screenshot shows the OSU Knowledge Explorer interface. At the top, there's a navigation bar with 'OSU.EDU' and various utility links. Below that, the 'CFAES KNOWLEDGE EXCHANGE' header is visible. The main content area displays a report titled 'A Review of Homeownership in Adams County, 2021'. The report includes a sub-header 'Homeownership for Adams County, Ohio, in 2021' and a key metric: 'Adams: Median Housing Costs For Homeowners (2021) \$717'. Two charts are featured: a horizontal bar chart titled 'Homeowners Mortgage Status With A Mortgage By Age (2021): Adams' and a line chart titled 'Total Mortgages By Year (2021): Adams'. The bar chart shows mortgage status across age groups: 15-34, 35-44, 45-54, 55-59, 60-64, and 65-74. The line chart shows the total number of mortgages from 2010 to 2021. On the left side, there's a 'Widget Control' panel with options to 'Add Widget', 'Create Text Widget', and a list of 'Current Widgets'. Below that is a 'Layout' panel with options for 'Landscape' and 'Portrait' views, 'Edit Cover Page', 'Add Page', and 'Reorder Pages'. The 'Download Images' button is highlighted in the top navigation bar.

## STEP 44

# Export your finished PDF

All finished? Download an accessible PDF of your report with the Export as PDF button.

The screenshot shows the 'Knowledge Explorer' interface. At the top, there's a navigation bar with 'CFAES KNOWLEDGE EXCHANGE' and links for HOME, ABOUT, IMPACTS, EXPLORE, and TOOLS. Below this, the 'Knowledge Explorer' title is displayed along with a 'Start Guided Tour' button. A toolbar contains options: Save Dashboard, Load Dashboard, Download Images, and 'Export as PDF' (highlighted with a red circle). There are also page navigation controls showing 'Page View < 2 >' and a search icon.

The main content area displays a report titled 'Homeownership for Adams County, Ohio, in 2021'. The report includes a sub-header 'A Review of Homeownership in Adams County, 2021' and a key metric: 'Adams: Median Housing Costs For Homeowners (2021) \$717'. Below this, there are two charts:

- Homeowners Mortgage Status With A Mortgage By Age (2021): Adams** - A horizontal bar chart showing mortgage status by age group.
- Total Mortgages By Year (2021): Adams** - A line chart showing the total number of mortgages from 2010 to 2021.

On the left side, there is a 'Widget Control' panel with options to 'Add Widget' and 'Create Text Widget'. Below it, 'Current Widgets' lists several report components. A 'Layout' panel at the bottom left allows switching between 'Landscape' and 'Portrait' views, editing the cover page, adding pages (currently set to 2), and reordering pages. A 'Downloading 0%' status is visible at the bottom left of the interface.

## STEP 45

### The end

Way to go! You just created your first report. Questions or comments? Use the Contact Us button in the lower right corner of the screen. Thanks for using the Knowledge Explorer.

The screenshot displays the Knowledge Explorer interface. At the top, there is a navigation bar with 'OSU.EDU' and various utility links like 'Help', 'BuckeyeLink', 'Map', 'Find People', 'Webmail', and 'Search Ohio State'. Below this is a header for 'CFAES KNOWLEDGE EXCHANGE' with a 'Start Guided Tour' button. The main content area shows a report titled 'Homeownership 2021' by 'Ohio State University Extension, Office of Adams County', dated 'May 5, 2023'. A text block below the date states: 'This document was created by Extension Educator using the Knowledge Explorer tool created by Knowledge Exchange.' On the left side, there is a 'Widget Control' panel with options to 'Add Widget' and 'Create Text Widget', and a list of 'Current Widgets' including 'Homeowners Mortgage Status With A Mortgage By Age (2021)', 'Median Housing Costs For Homeowners (2021)', 'Total Mortgages By Year (2021)', 'Text Widget - A Review of Homeowne...', and 'Homeownership (2021)'. Below the widget control is a 'Layout' panel with options for 'Landscape' and 'Portrait' orientation, 'Edit Cover Page', 'Add Page' (set to 2), and 'Reorder Pages'.