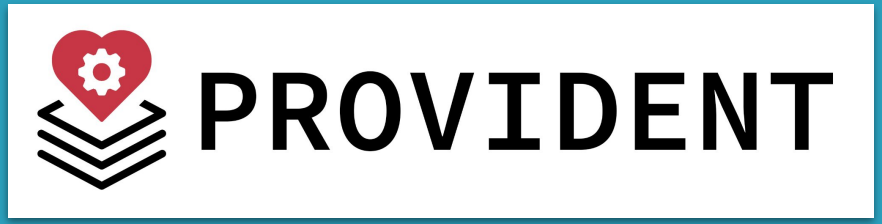

PPHC at Brown University
people place & health collective

BROWN School of Public Health

PROVIDENT: An overdose forecasting tool for overdose

Max Krieger
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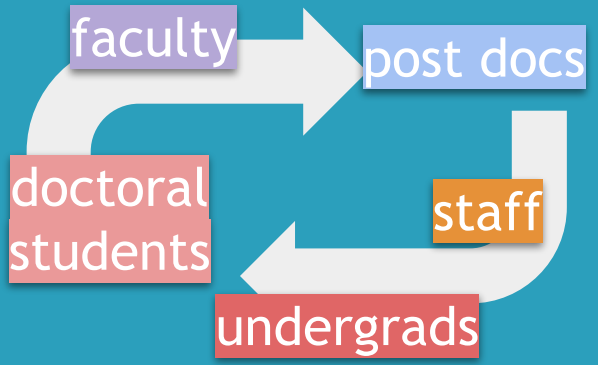
Project Manager
Drug Overdose Surveillance Program
Center for Health Data and Analysis

The People, Place, and Health Collective (PPHC) is made up of:

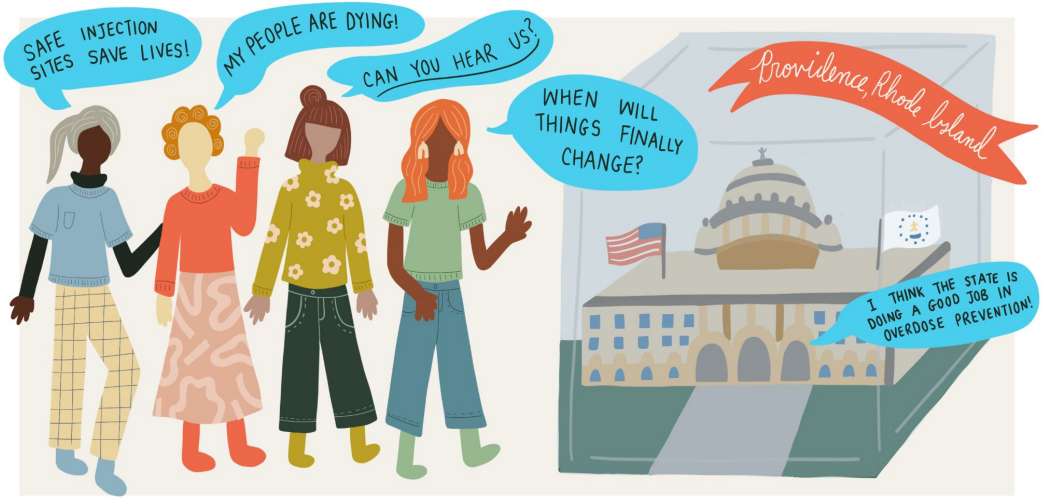


We work collaboratively and are interconnected.

Illustrations by Esther Moon

Research is better with all of us.

Rhode Island has been a model in the fight against overdose thanks to your efforts.
But at the same time, overdoses have still gone up.



Illustrations by Esther Moon

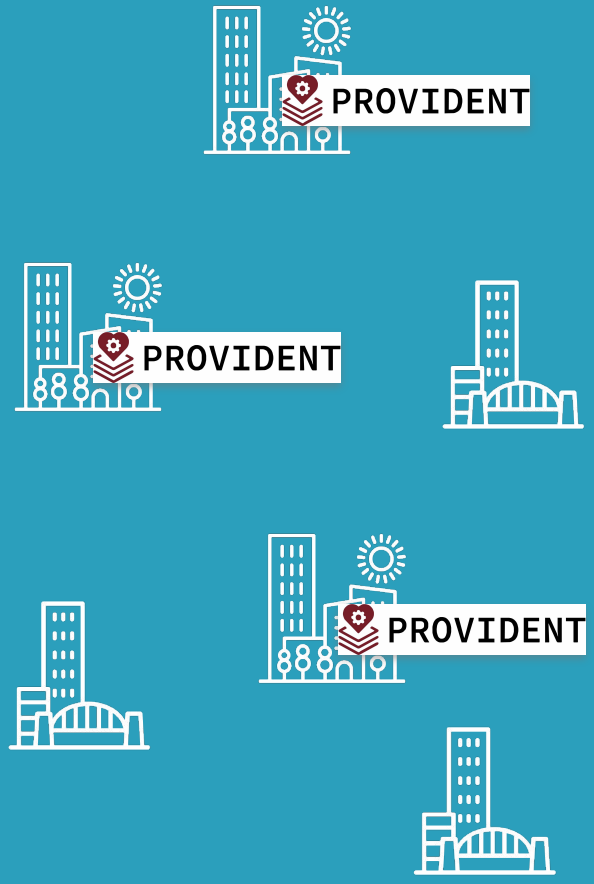
Research is better with all of us.

So we are trying out a new tool.

But in order to figure out whether it will work, we need to research it. This new research project can hopefully put us one step ahead.

Because this is research, we will use PROVIDENT predictions in some towns, and not others.

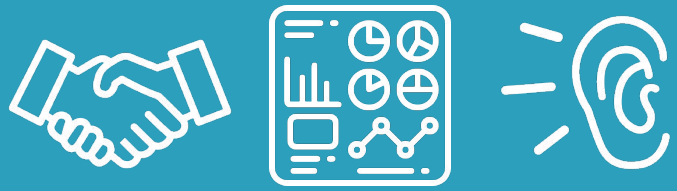
We all will be receiving some extra tools, resources, and opportunities to collaborate.



What does the PROVIDENT research project mean for me?

re·search

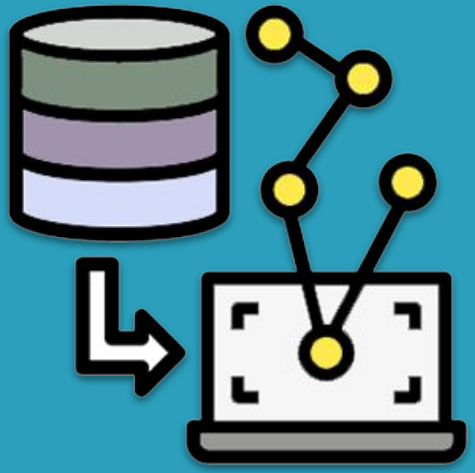
/ˈrēˌsərCH,rəˈsərCH/



As community research partners **we are asking for your help.**

This means collecting more information about what you are already doing, and gathering more data on your planning process. **We also want to hear how you use data and the web tool to inform your decisions.**

PROVIDENT is like a weather forecast, but for overdose!

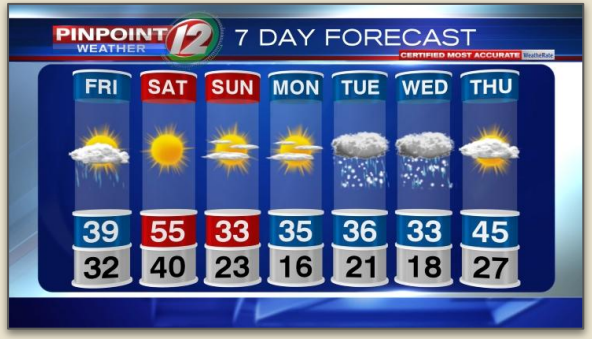


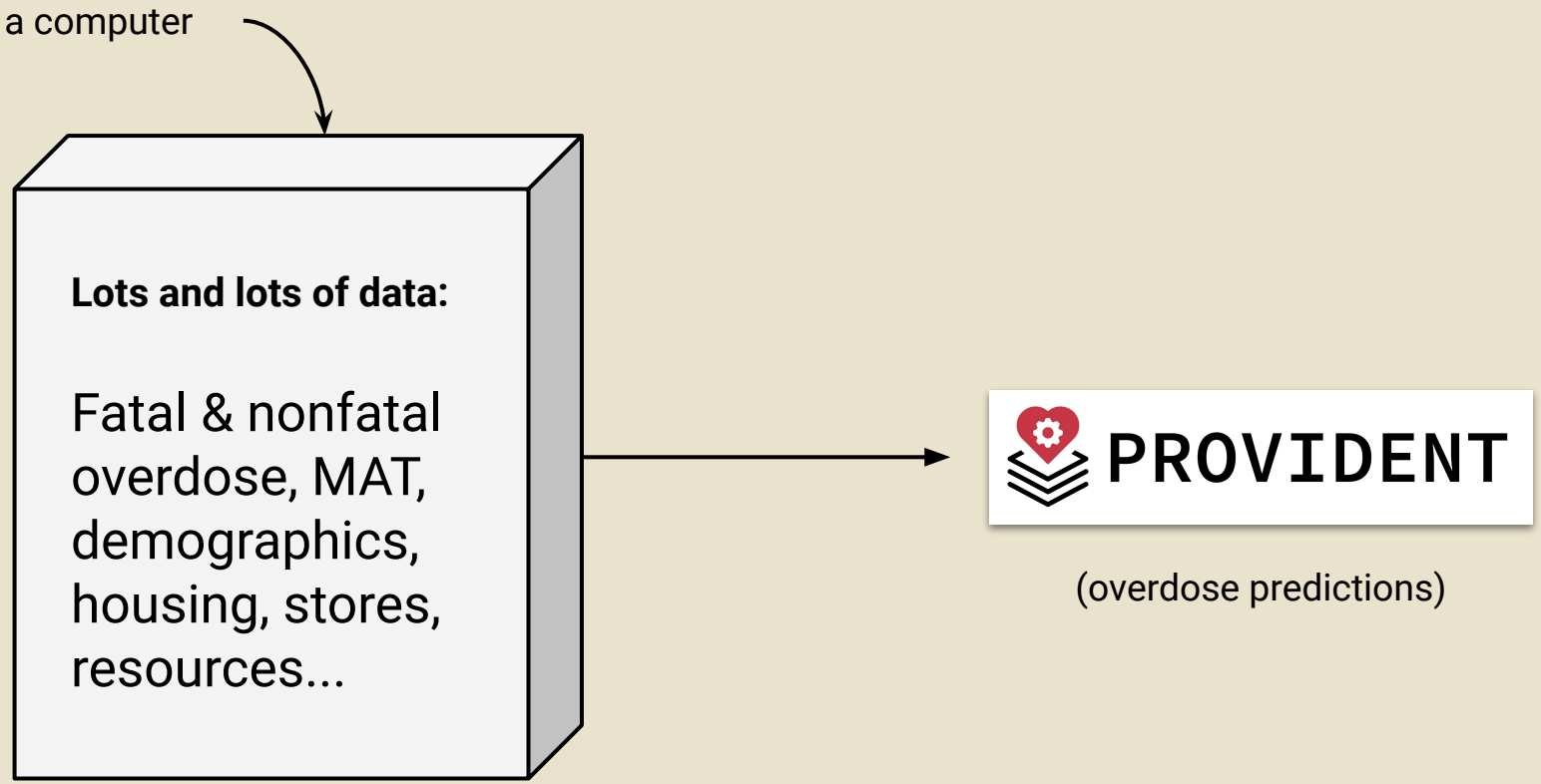
The tool uses sophisticated models to give us these predictions at the **neighborhood level.**

a computer

Lots and lots of data:

Temperature, humidity, pressure, wind, clouds, historic information, regional variation

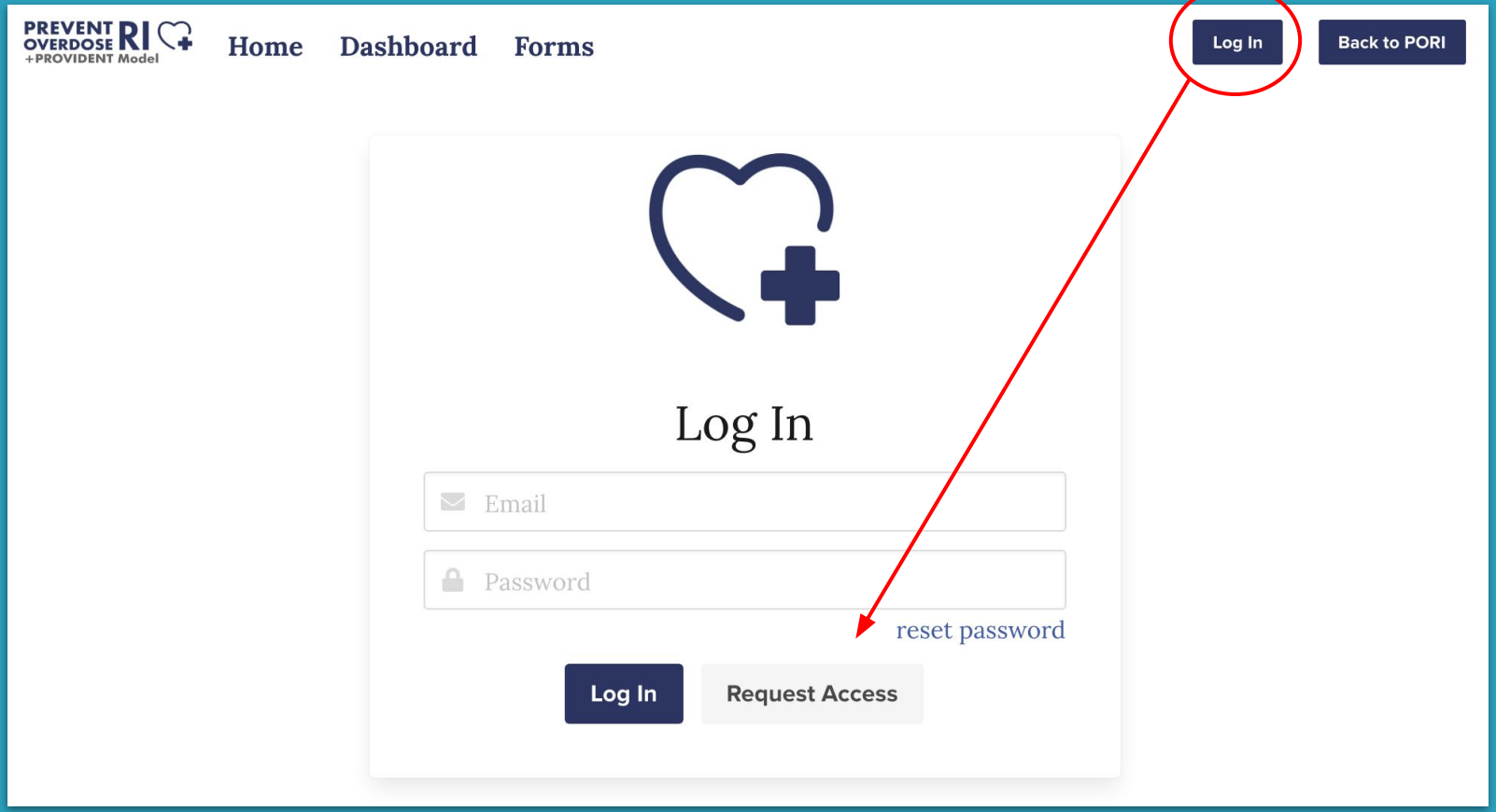



a computer
Lots and lots of data:
Fatal & nonfatal overdose, MAT, demographics, housing, stores, resources...
PROVIDENT
(overdose predictions)

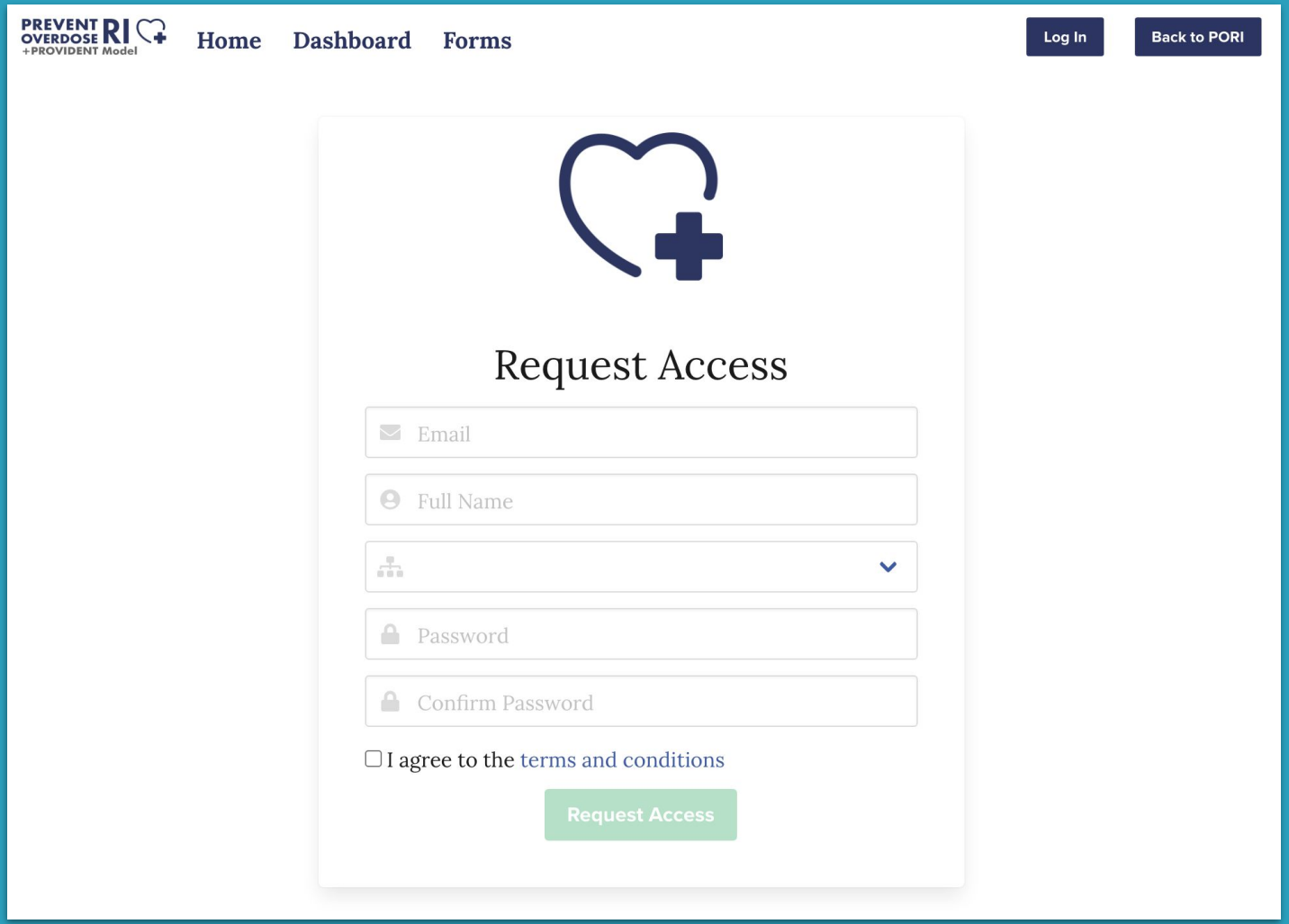
Ready to get started???
To visit our web tool, go to:

provident.preventoverdoseri.org

PROVIDENT data academy

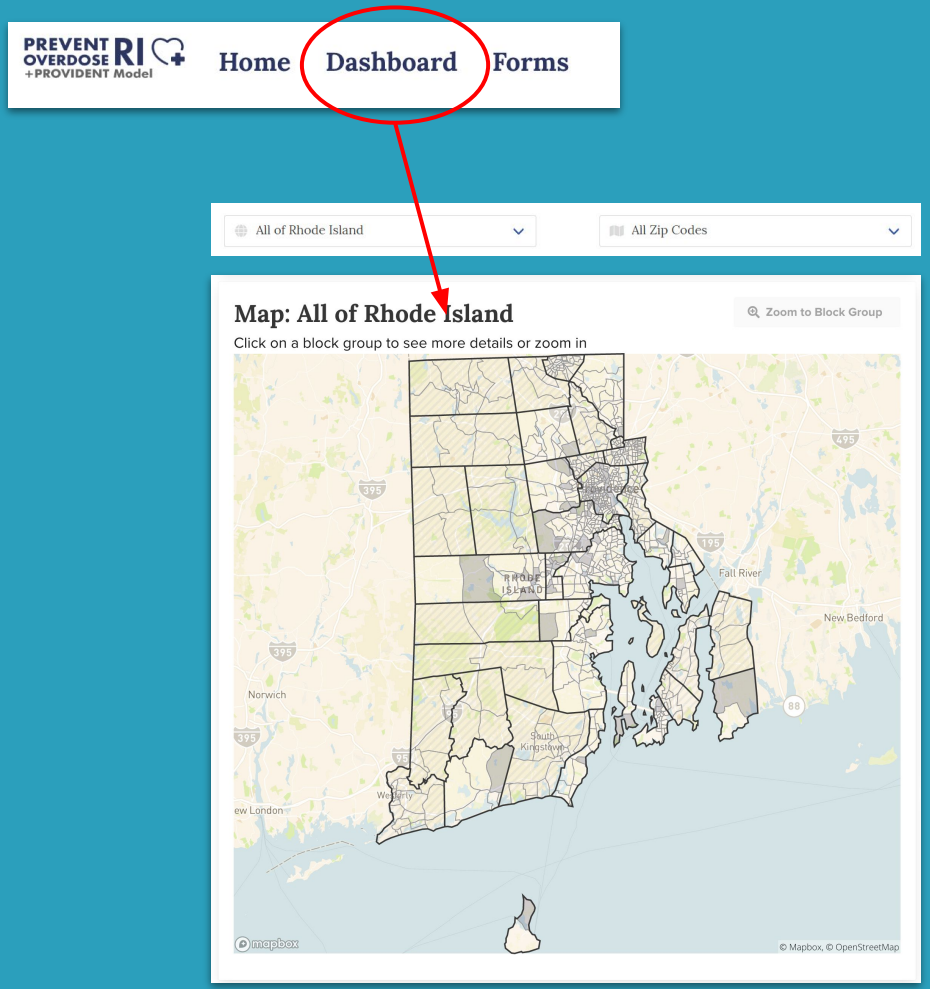


Click the **Log In** button up top and click **Request Access**



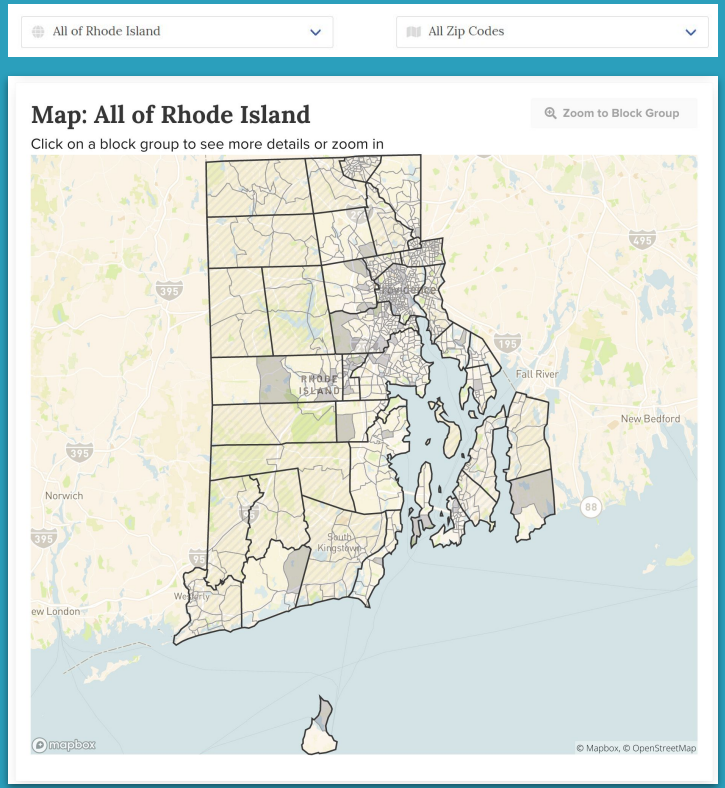
Put in your information here and your account will be sent for approval. Once approved, you can log in!

PROVIDENT data academy



Click **Dashboard** up top to go to the PROVIDENT map. This gives us a view of all of the neighborhoods and towns in Rhode Island

PROVIDENT data academy

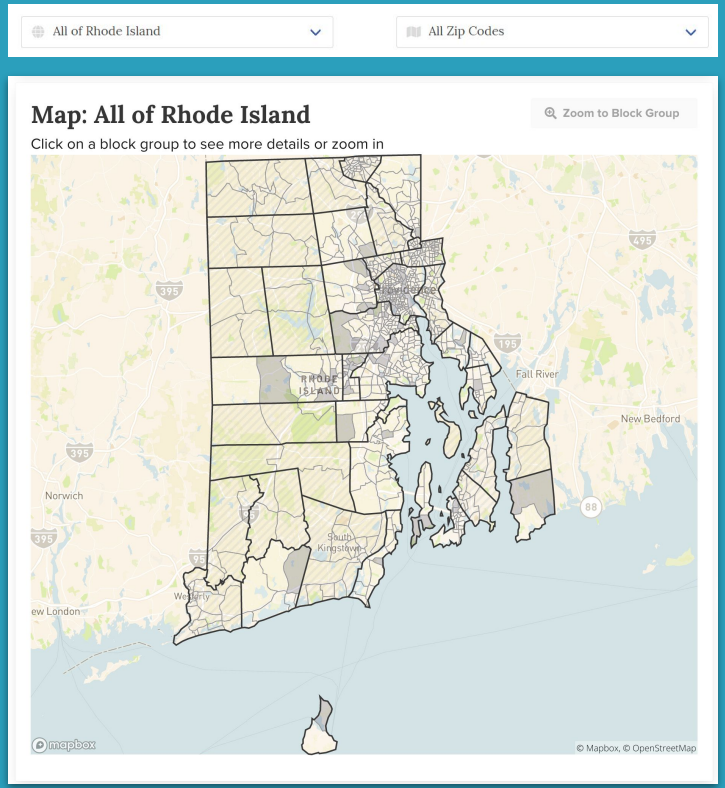


The areas you can highlight and select are called **neighborhoods**. These are smaller parts of each town or city.

PROVIDENT data academy

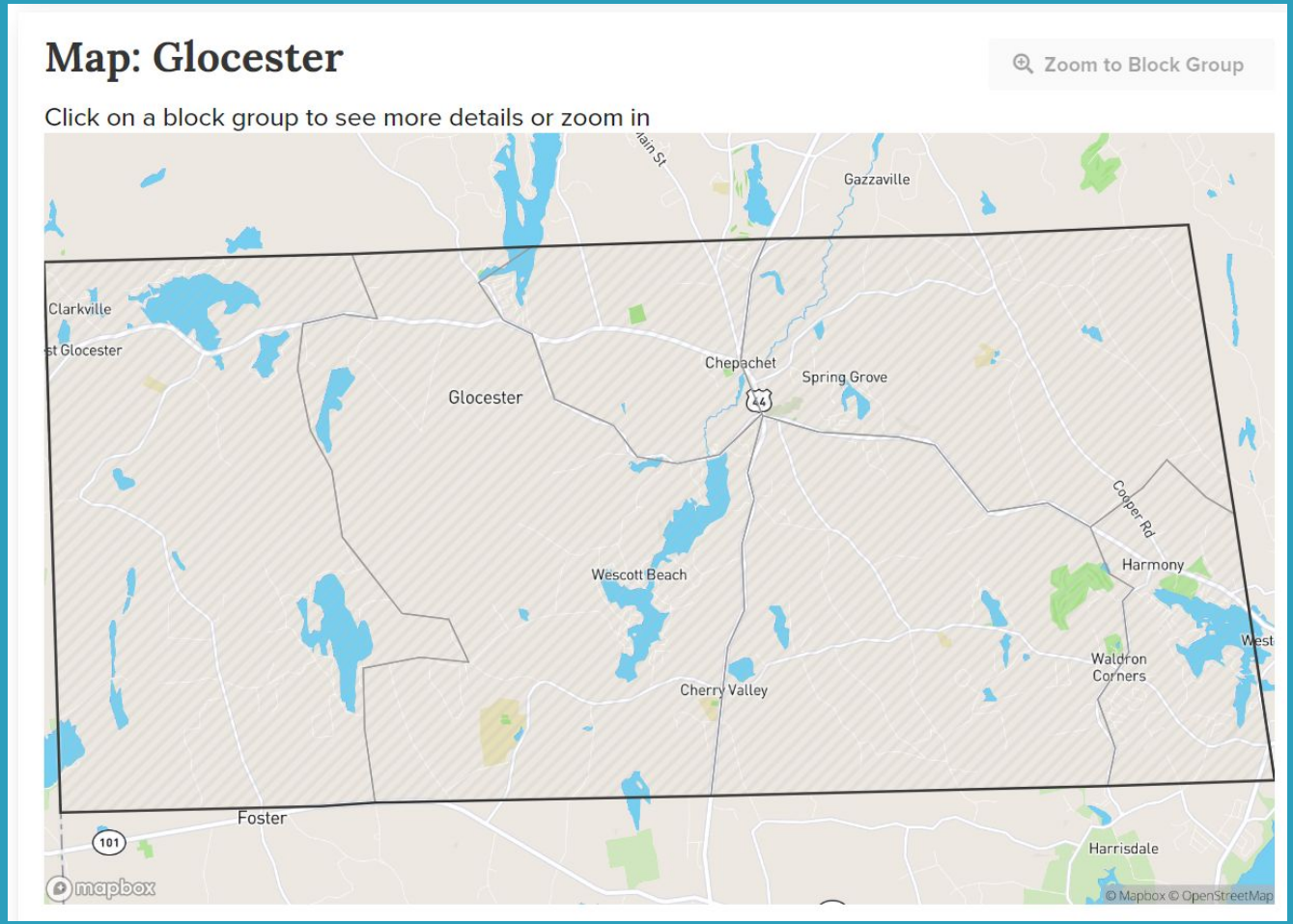
PREVENT OVERDOSE RI +PROVIDENT Model

Home Dashboard Forms



You will also see different types of shading on the map that mean different things

PROVIDENT data academy



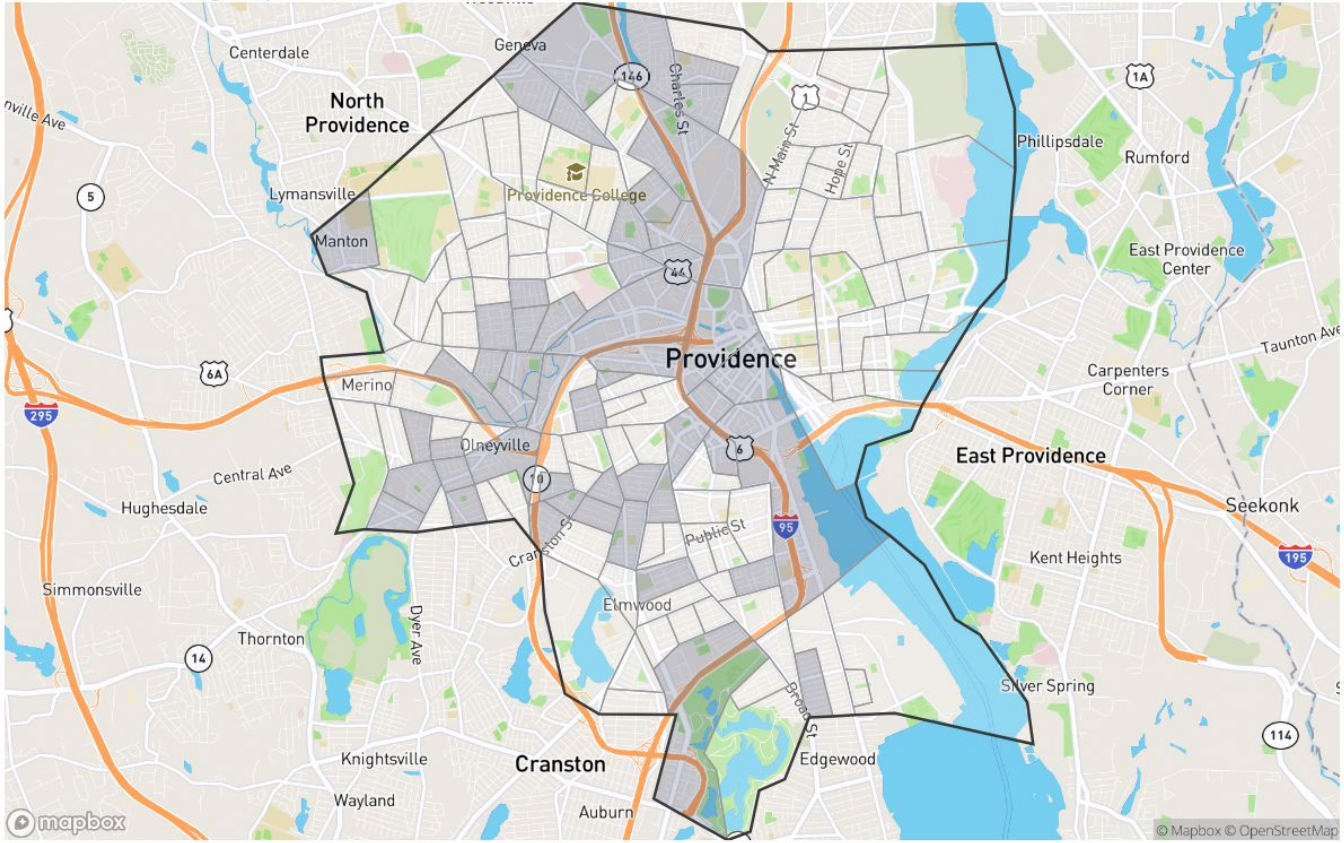
A town with light lines through it means that the town doesn't receive any predictions. But you can still click on the neighborhoods to learn more about them!

PROVIDENT data academy

Map: Providence

Zoom to Block Group

Click on a block group to see more details or zoom in



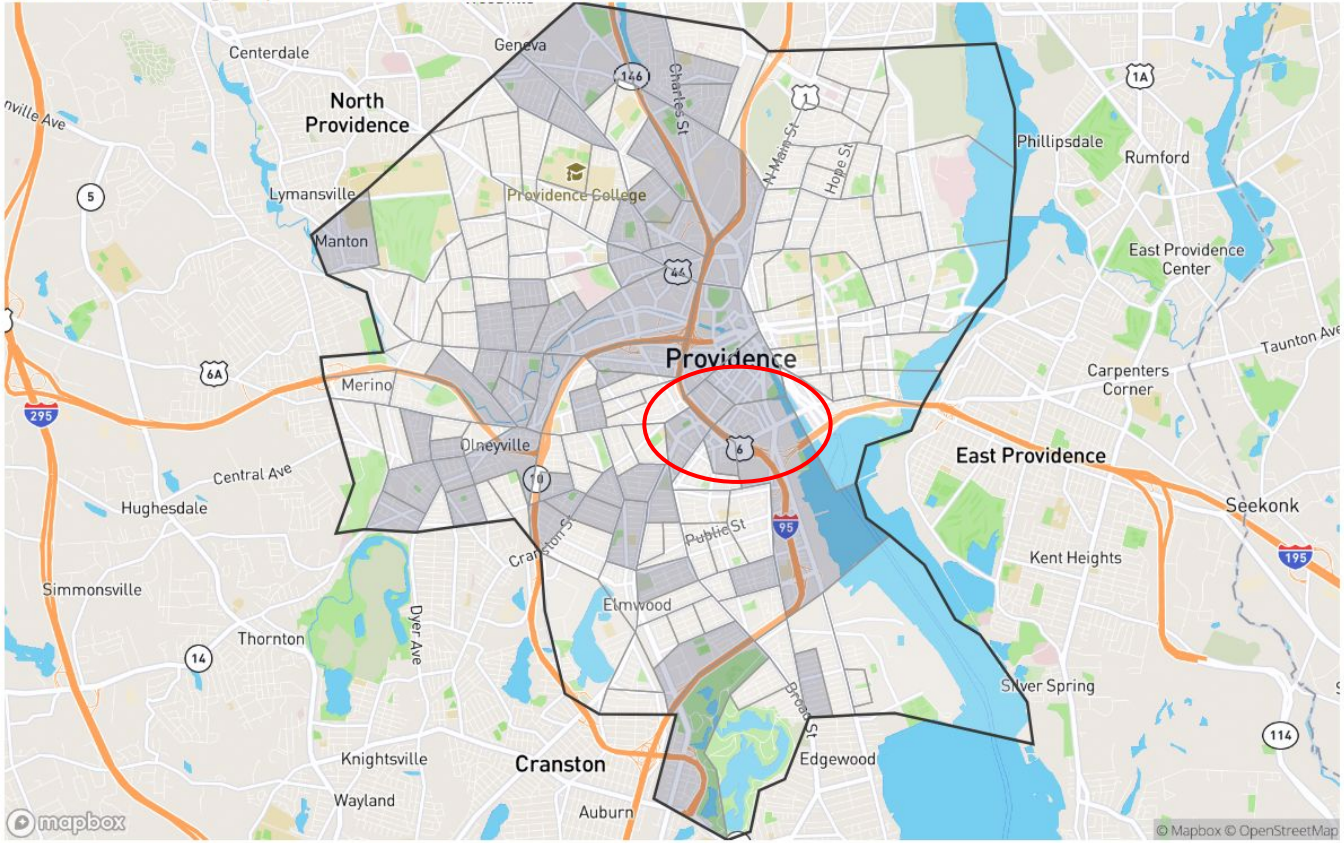
A town with highlighted neighborhoods means that it has predictions!

PROVIDENT data academy

Map: Providence

Zoom to Block Group

Click on a block group to see more details or zoom in

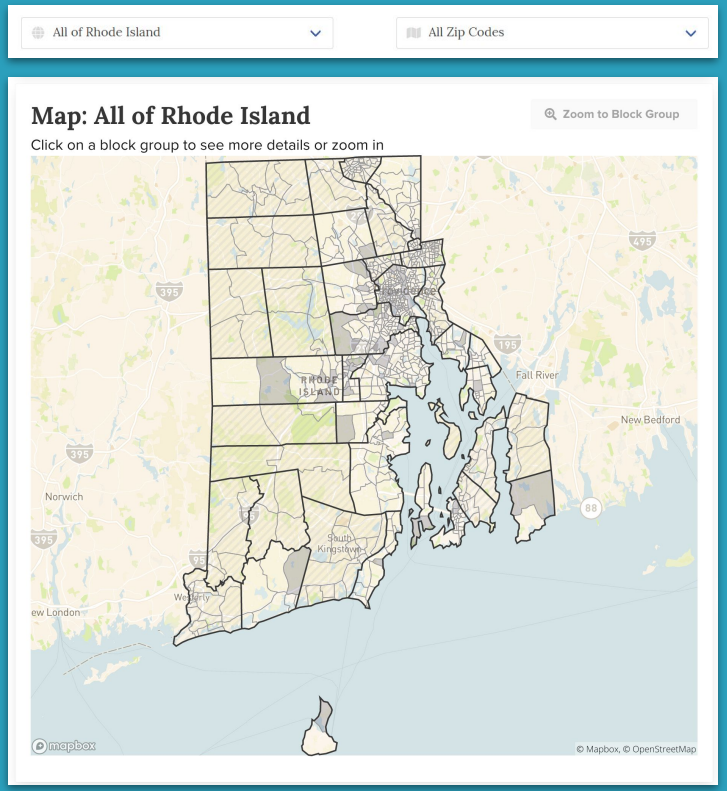


For example, these darker shaded areas around downtown have been prioritized by our tool. **This means we think there is a higher chance there will be an overdose there.**

PROVIDENT data academy

PREVENT OVERDOSE RI +PROVIDENT Model

Home Dashboard Forms



Stats: 2021-2

Municipality Providence | Block Group 0003004

Prioritized by PROVIDENT model

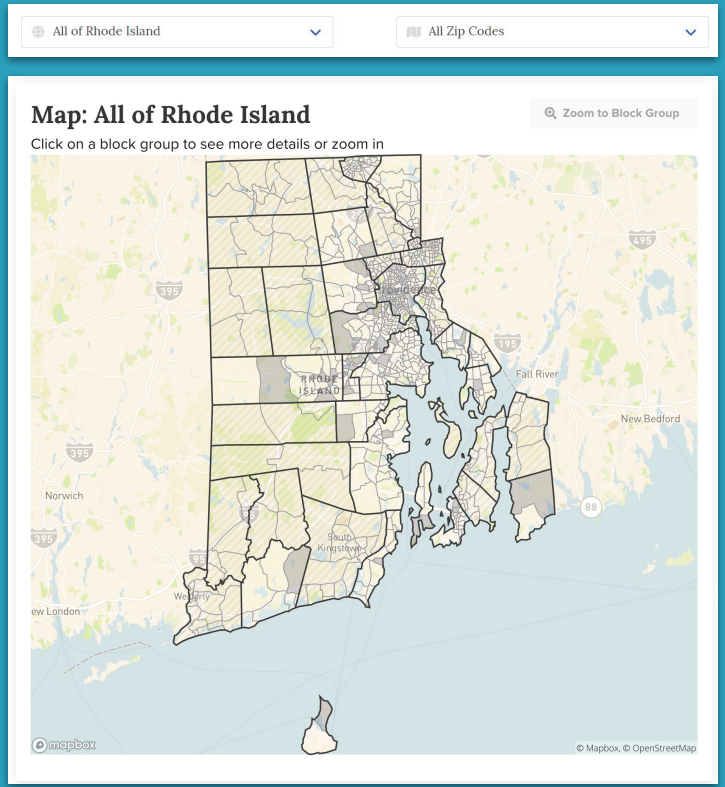
	BG	Town	RI
Community Composition			
American Indian / Alaska Native	12%	0%	0%
Asian	0%	3%	<1%
Black / African American	15%	10%	2%
Hispanic / Latino	67%	43%	6%
Native Hawaiian / Pacific Islander	0%	0%	0%
White	5%	28%	84%
Social Vulnerability Indicators			
▾ Economic Resources	◆		
Poverty Status	13%	21%	8%
Unemployment Rate	11%	6%	4%
Rent Burden	37%	44%	41%
No Vehicle Available	10%	11%	4%
▸ Housing Environments	◆		

Resources Available:
A neighborhood's resilience to overdose depends on its resources. We compared each neighborhood to the median, or middle, amount of resources available to Rhode Islanders.

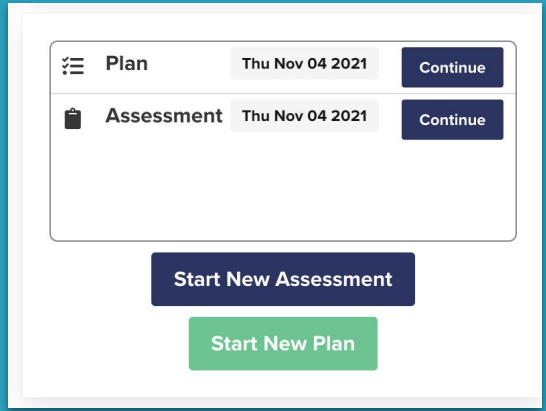
◆ More ◆ Similar ◆ Less ◇ No data

This side panel gives us a lot of information about each neighborhood and the town that its in

PROVIDENT data academy



The last panel shows us tools that we can use when we click on a neighborhood (we will talk about this later)



PROVIDENT data academy

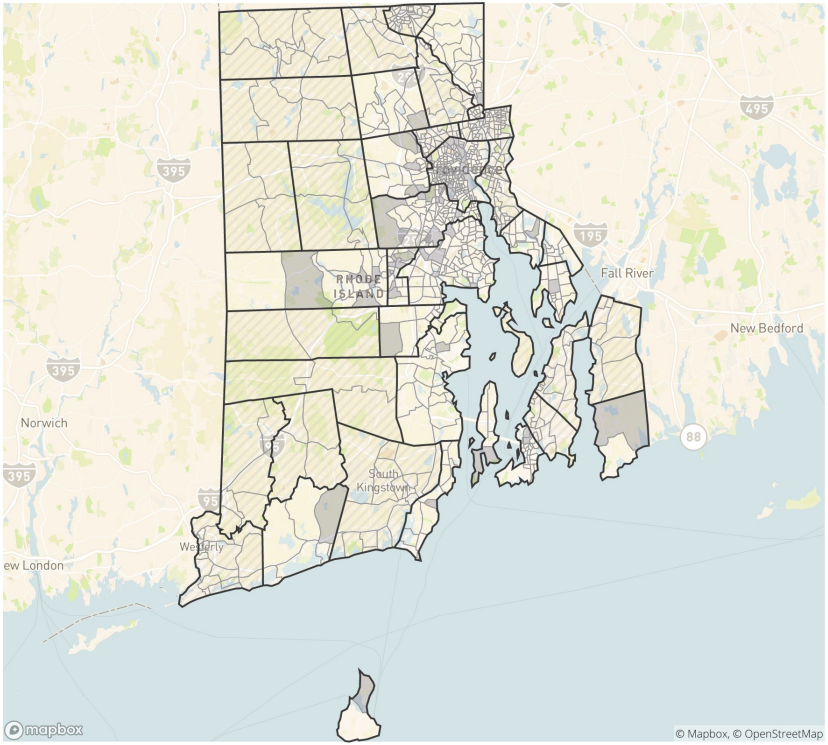
All of Rhode Island

All Zip Codes

Map: All of Rhode Island

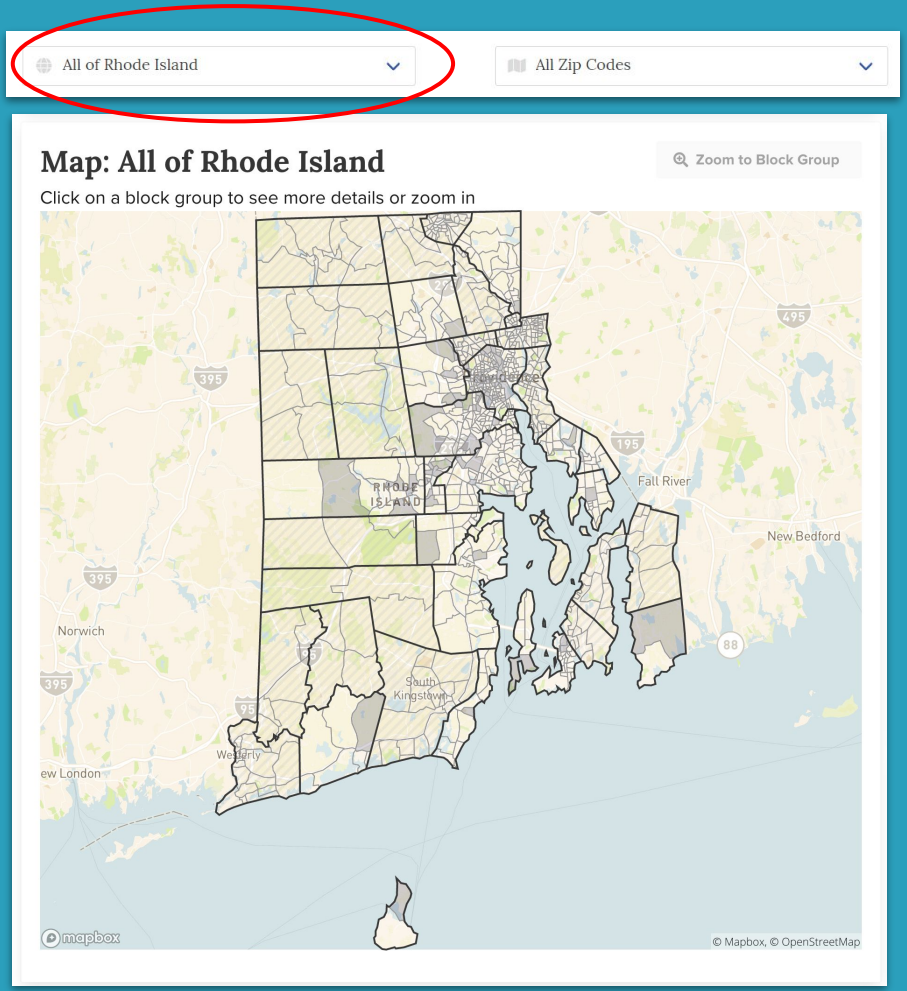
Zoom to Block Group

Click on a block group to see more details or zoom in



The map

PROVIDENT data academy

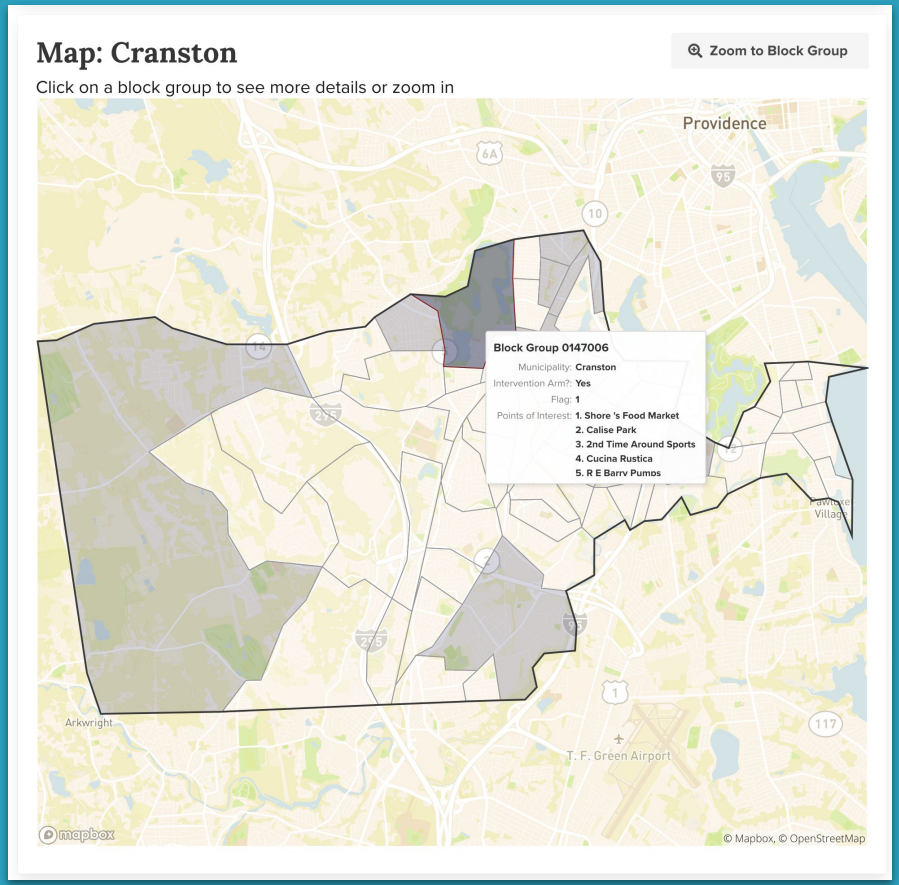


The map

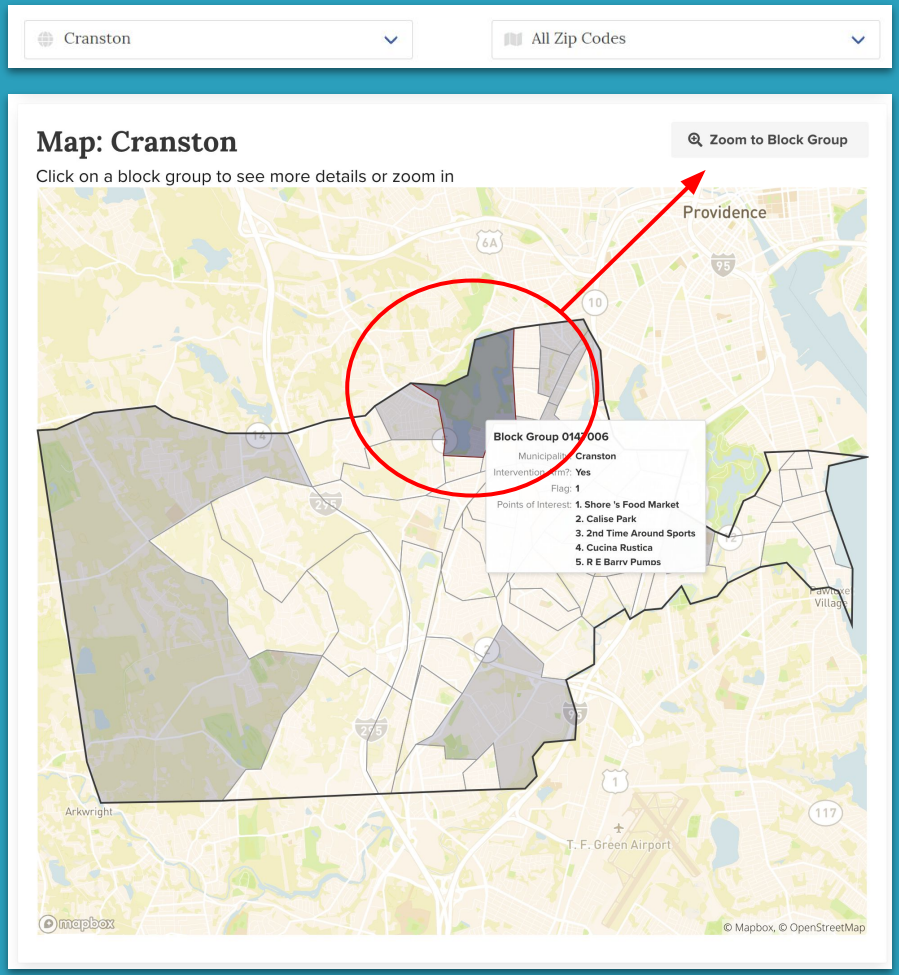
- ❑ Click the dropdown to change towns
- ❑ Select **Cranston**

PROVIDENT data academy

The map



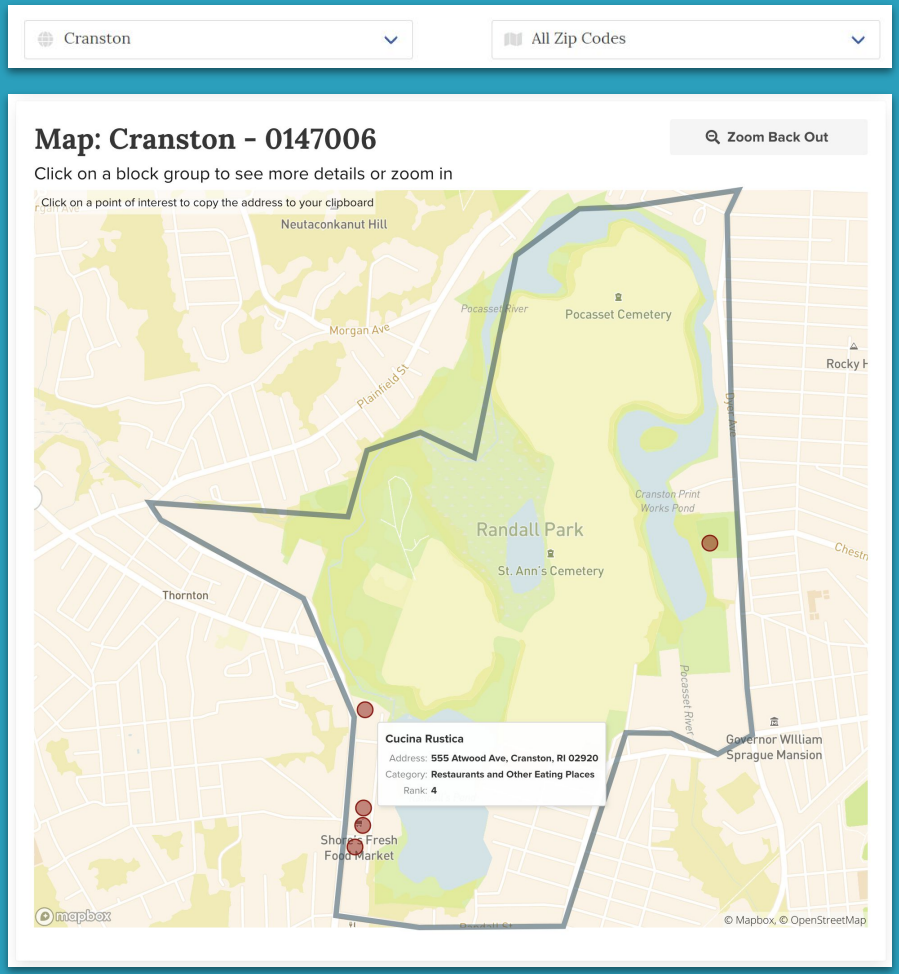
PROVIDENT data academy



The map

- Click on a neighborhood on the map to select it
- Click on “Zoom to Block Group” to look closer

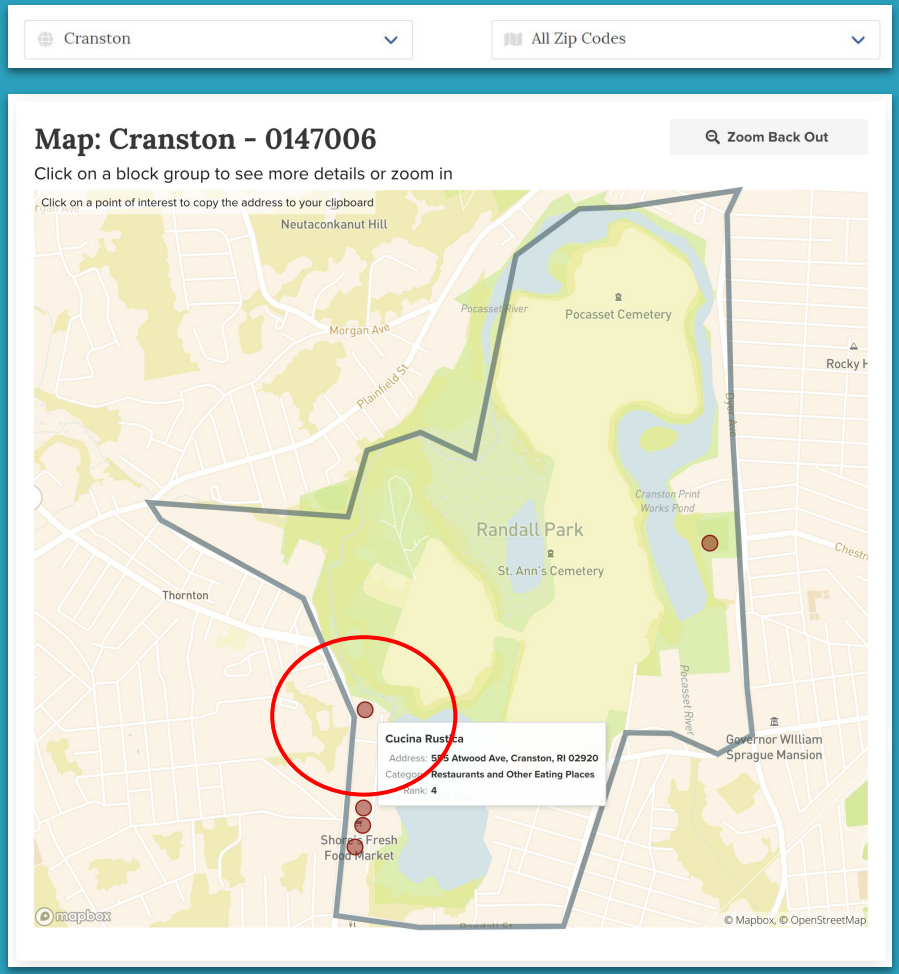
PROVIDENT data academy



The map

Now you are looking at one neighborhood within Cranston.

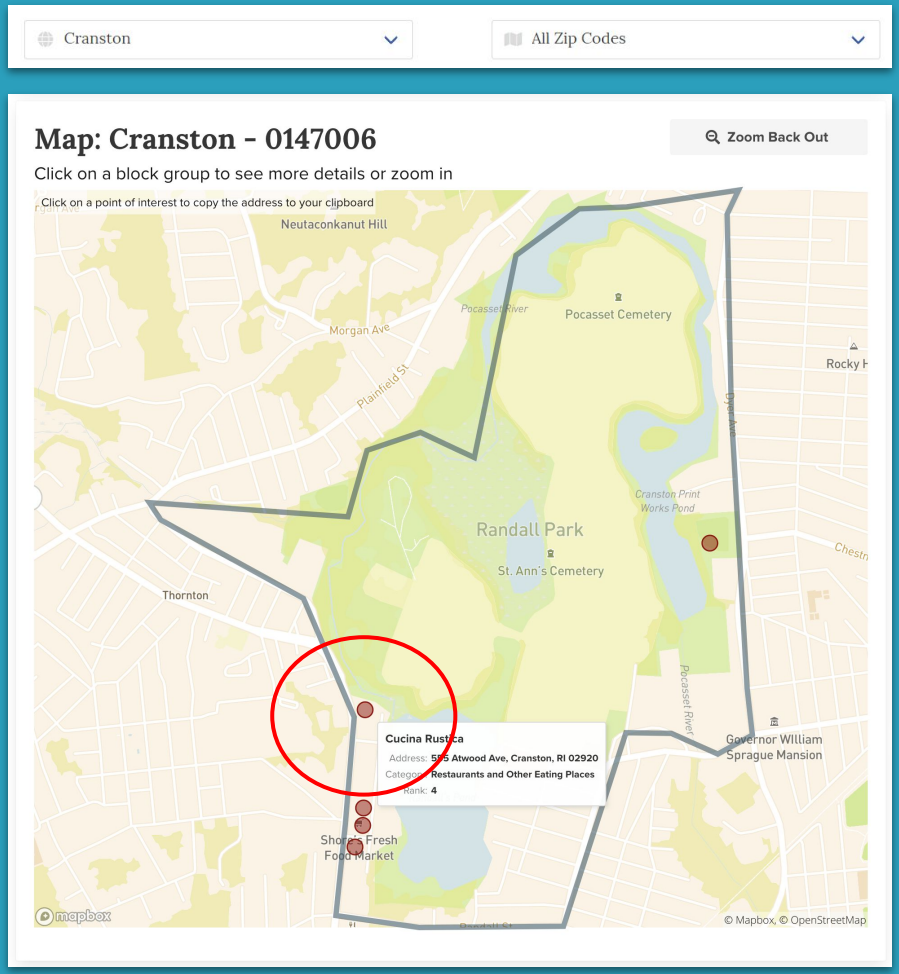
PROVIDENT data academy



The map

These red dots show places that are most visited. This is based on cell phone data. **These are helpful if you don't know about a neighborhood and want to know where people spend time**

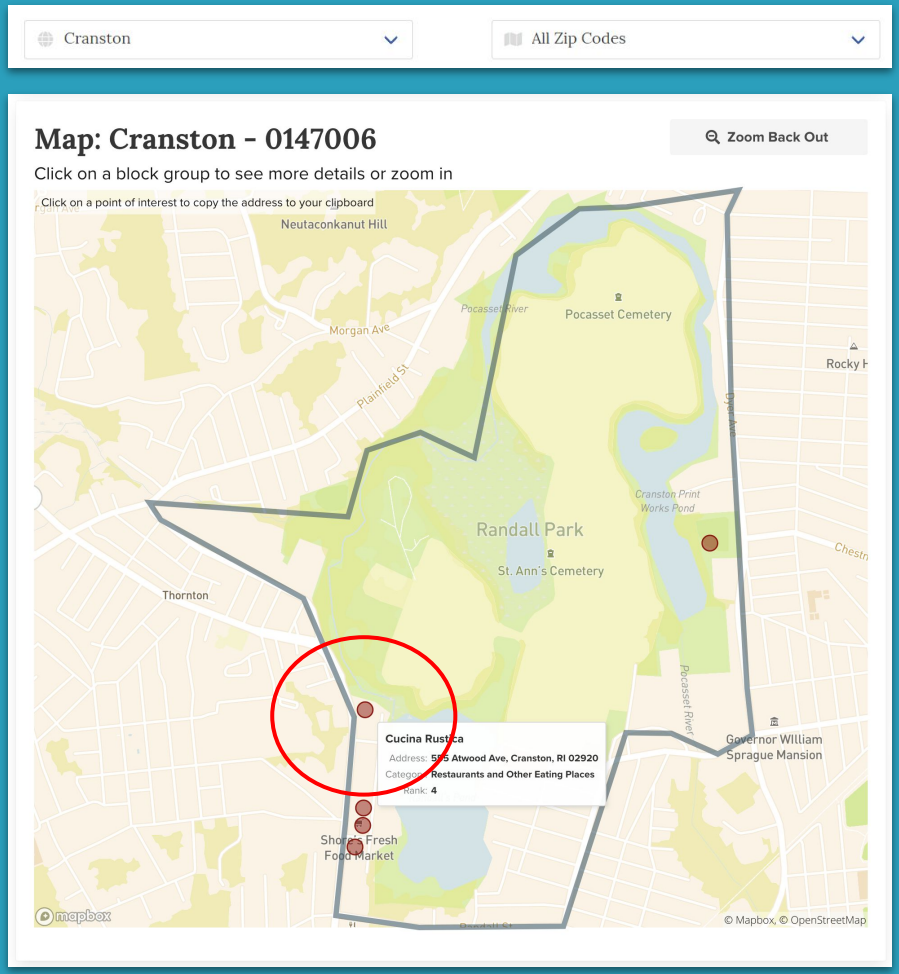
PROVIDENT data academy



The map

The names of the locations are the closest location for the data. **So just treat these points as general areas where there are more people.**

PROVIDENT data academy

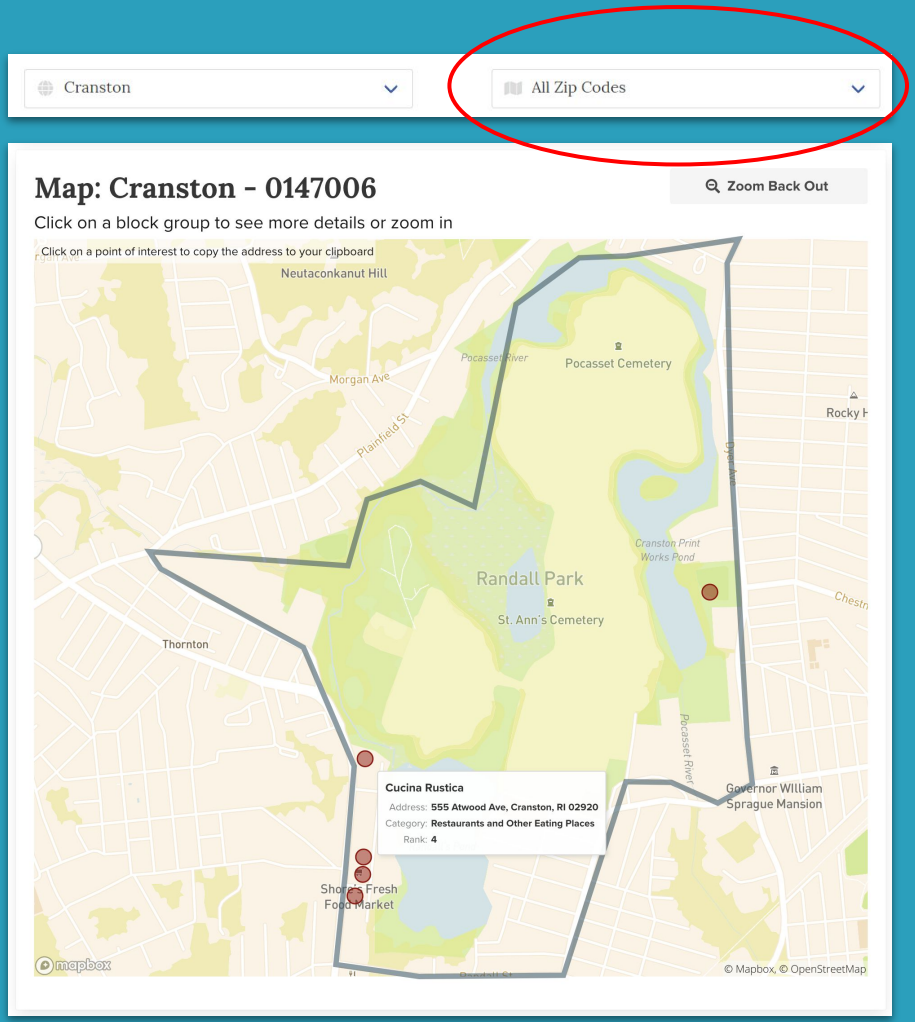


The map

- Hover/tap on a point of interest to learn more about it

(on a desktop, clicking the point will copy the address to your clipboard)

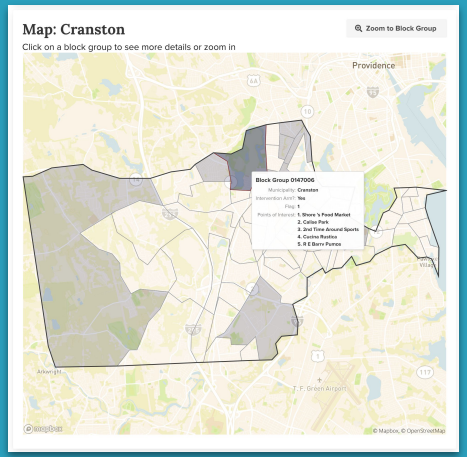
PROVIDENT data academy



The map

You can also zoom to a specific zip code area when looking at a town or the whole state

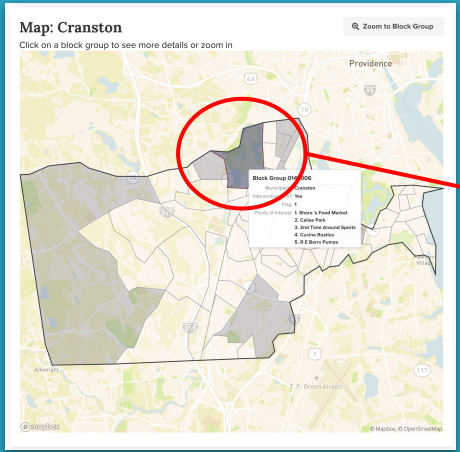
PROVIDENT data academy



The stats

- Click or hover on a neighborhood to learn more about it

PROVIDENT data academy



Stats: 2021-2

Municipality Providence | **Block Group** 0003004

Prioritized by PROVIDENT model

	BG	Town	RI
Community Composition			
American Indian / Alaska Native	12%	0%	0%
Asian	0%	3%	<1%
Black / African American	15%	10%	2%
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White	5%	28%	84%
Social Vulnerability Indicators			
▾ **Economic Resources** ◆			
Poverty Status	13%	21%	8%
Unemployment Rate	11%	6%	4%
Rent Burden	37%	44%	41%
No Vehicle Available	10%	11%	4%
▸ **Housing Environments** ◆			

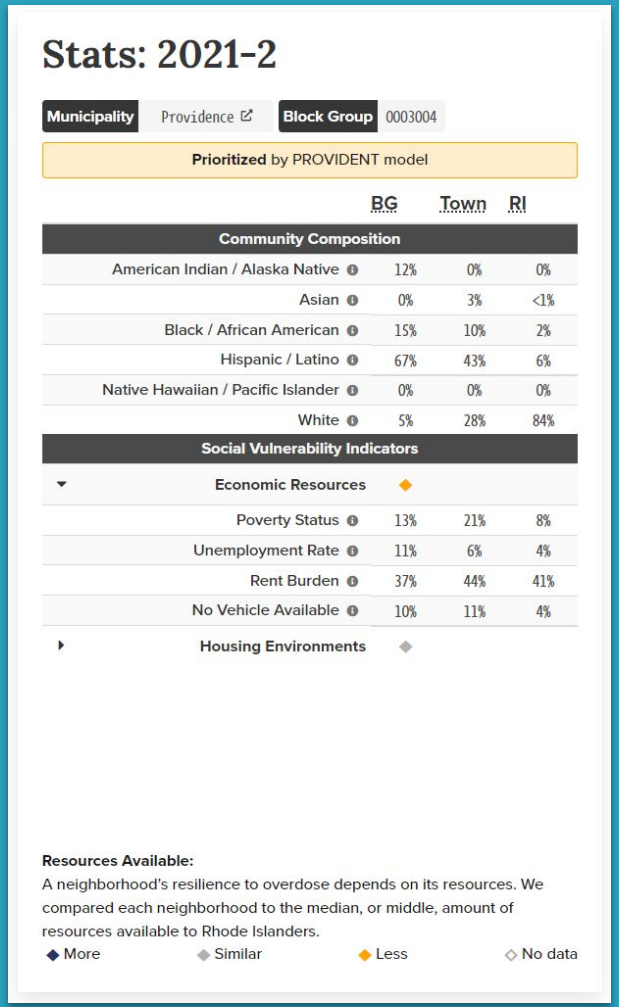
Resources Available:
A neighborhood's resilience to overdose depends on its resources. We compared each neighborhood to the median, or middle, amount of resources available to Rhode Islanders.

◆ More ◆ Similar ◆ Less ◇ No data

The stats

- Click or hover on a neighborhood to learn more about it

PROVIDENT data academy



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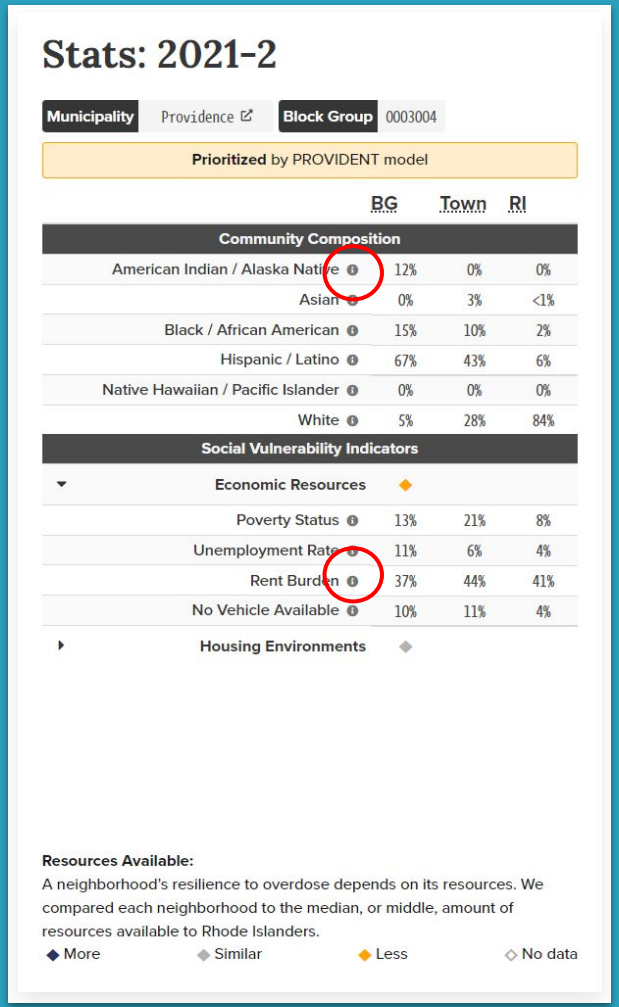
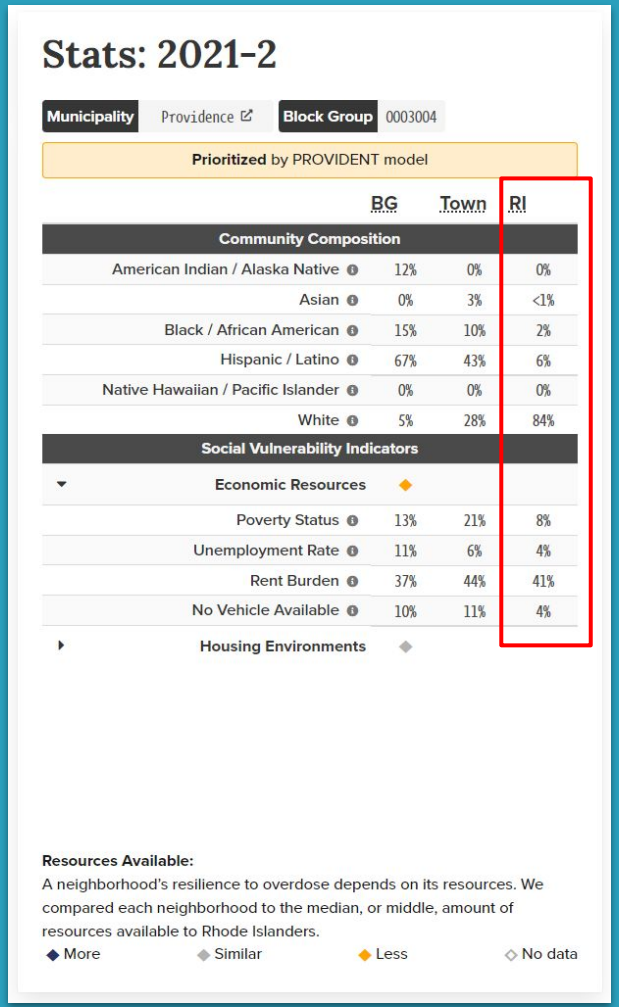
The stats panel tells you more information about the neighborhood you are looking at. We think that these things are important to understand what might make the neighborhood at risk for future overdose

PROVIDENT data academy



You can hover over the little gray info buttons to learn more about each individual factor.

PROVIDENT data academy



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Resources Available:
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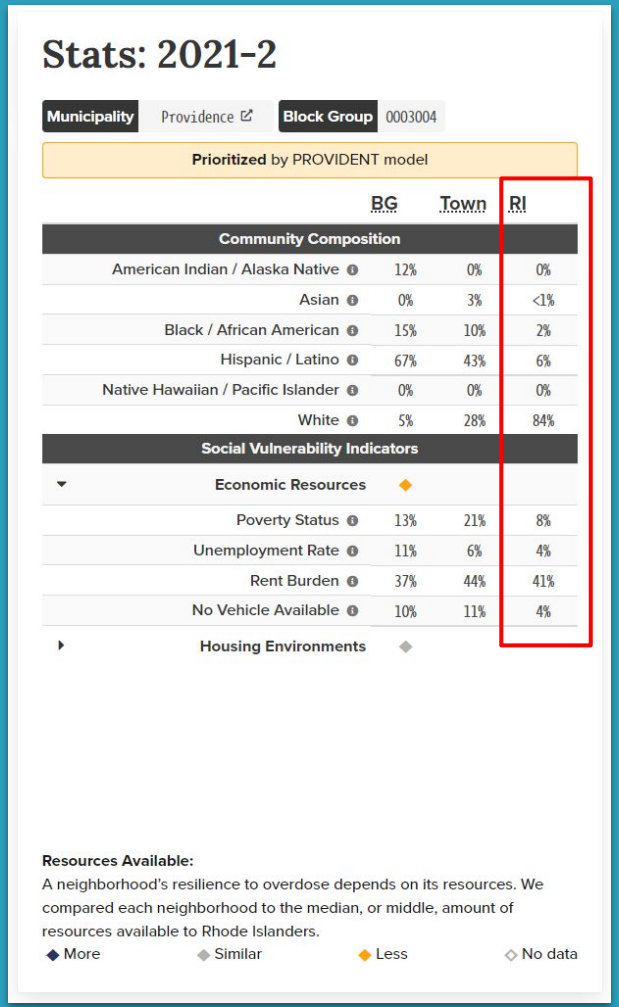
◆ More ◆ Similar ◆ Less ◇ No data

These are the values for all of Rhode Island

PROVIDENT data academy



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Resources Available:
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◆ More ◆ Similar ◆ Less ◇ No data

These values show us what a typical neighborhood in Rhode Island looks like

PROVIDENT data academy

Stats: 2021-2

Municipality Providence **Block Group** 0003004

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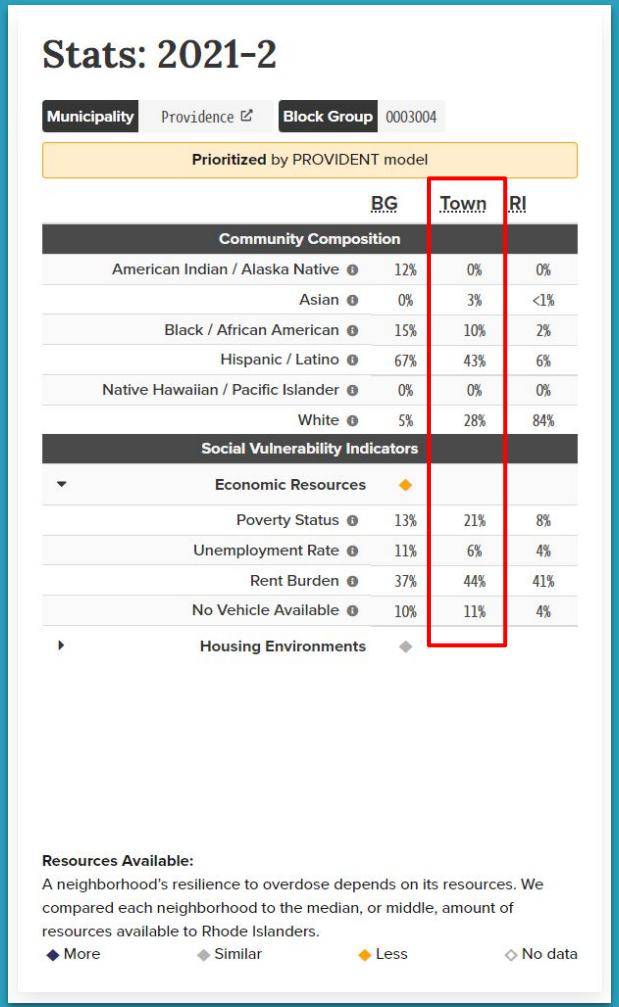
◆ More ◆ Similar ◆ Less ◇ No data

These values show us what a typical neighborhood in Rhode Island looks like

For example, a typical neighborhood in Rhode Island has 4% unemployment

PROVIDENT data academy



Stats: 2021-2

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Hispanic / Latino	67%	43%	6%
Native Hawaiian / Pacific Islander	0%	0%	0%
White	5%	28%	84%
Social Vulnerability Indicators			
Economic Resources	◆		
Poverty Status	13%	21%	8%
Unemployment Rate	11%	6%	4%
Rent Burden	37%	44%	41%
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Housing Environments	◆		

Resources Available:

A neighborhood's resilience to overdose depends on its resources. We compared each neighborhood to the median, or middle, amount of resources available to Rhode Islanders.

◆ More ◆ Similar ◆ Less ◇ No data

These are the values of the town that you selected.

PROVIDENT data academy

Stats: 2021-2

Municipality Providence **Block Group** 0003004

Prioritized by PROVIDENT model

	BG	Town	RI
Community Composition			
American Indian / Alaska Native	12%	0%	0%
Asian	0%	3%	<1%
Black / African American	15%	10%	2%
Hispanic / Latino	67%	43%	6%
Native Hawaiian / Pacific Islander	0%	0%	0%
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Social Vulnerability Indicators			
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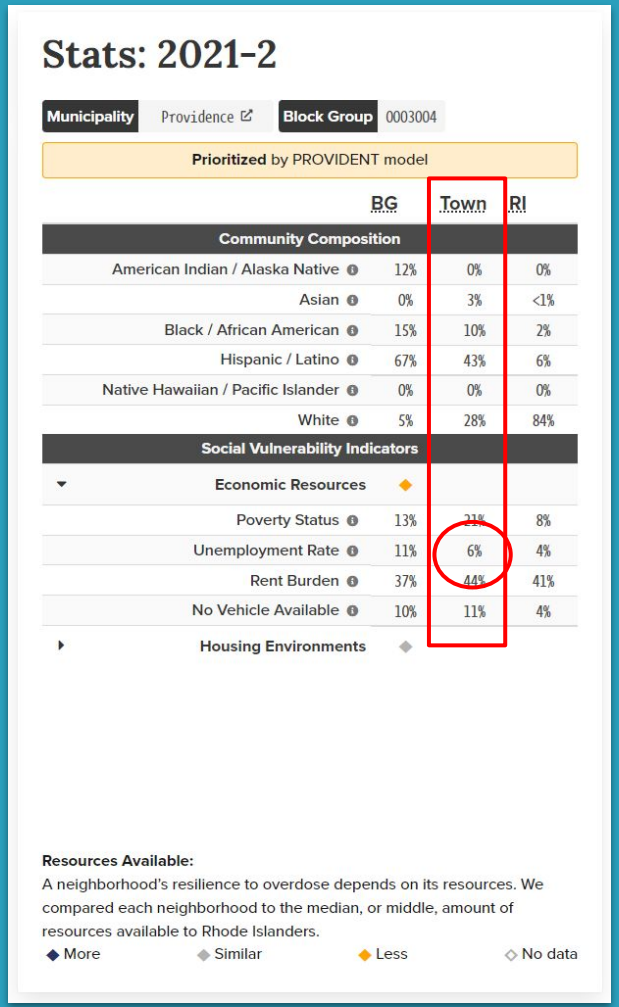
They show us what a typical neighborhood in the town looks like.

PROVIDENT data academy



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These are the values of the town that you selected.

They show us what a typical neighborhood in the town looks like.

In **Cranston**, the unemployment rate is a bit higher than the state average

PROVIDENT data academy

Stats: 2021-2

Municipality Providence **Block Group** 0003004

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PROVIDENT data academy

Stats: 2021-2

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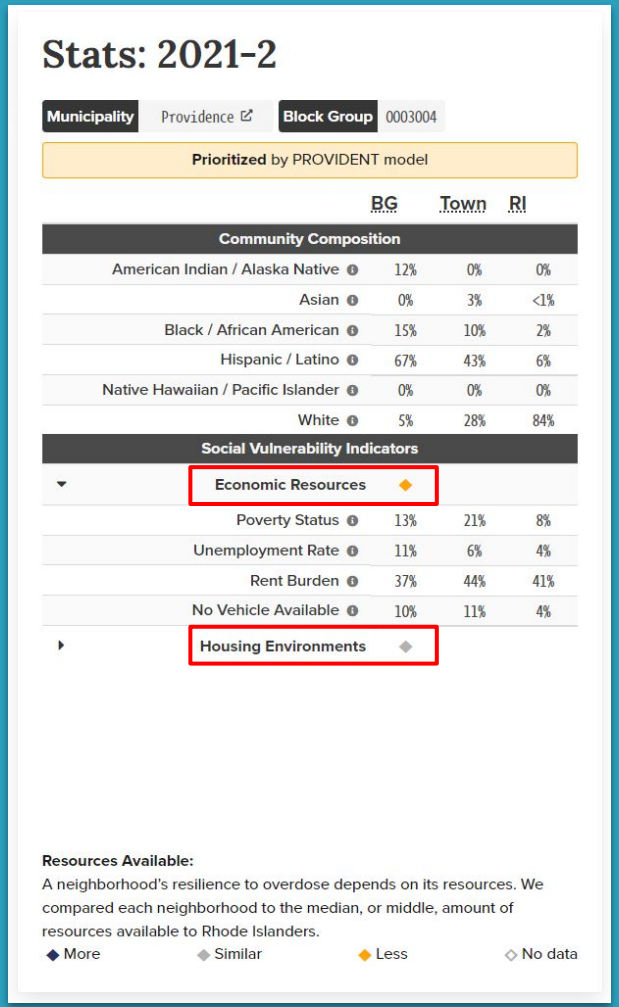
We can see here that this neighborhood has an unemployment rate of 11%, higher than the Cranston average of 6%, and even higher the state average of 4%

PROVIDENT data academy



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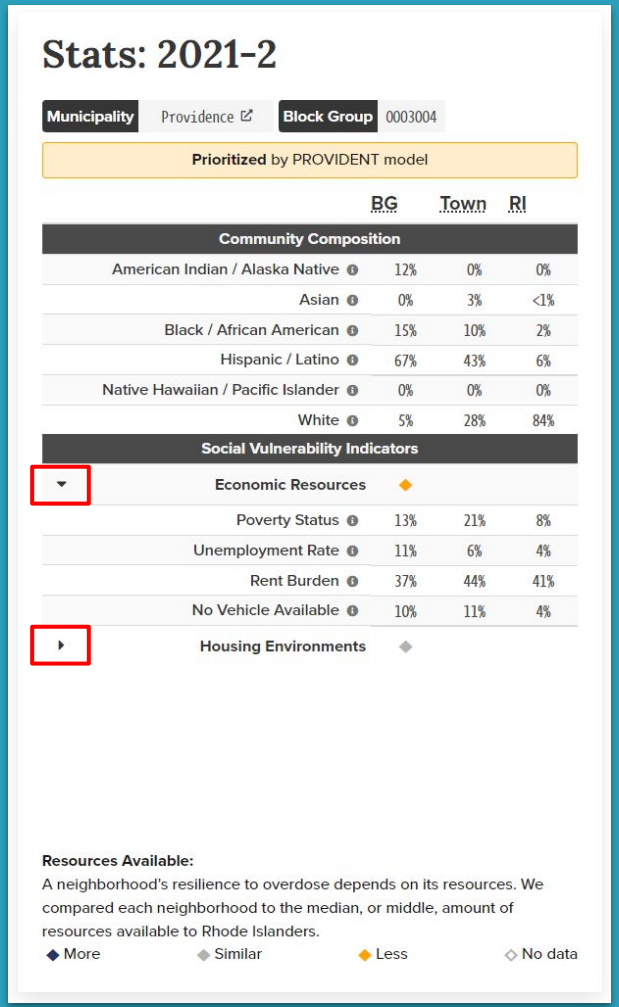
The colors can give you a general idea of the amount of resources available to the neighborhood compared to typical neighborhoods in the state.

This neighborhood has **less** economic resources available than a typical neighborhood in Rhode Island, but similar housing resources.

PROVIDENT data academy



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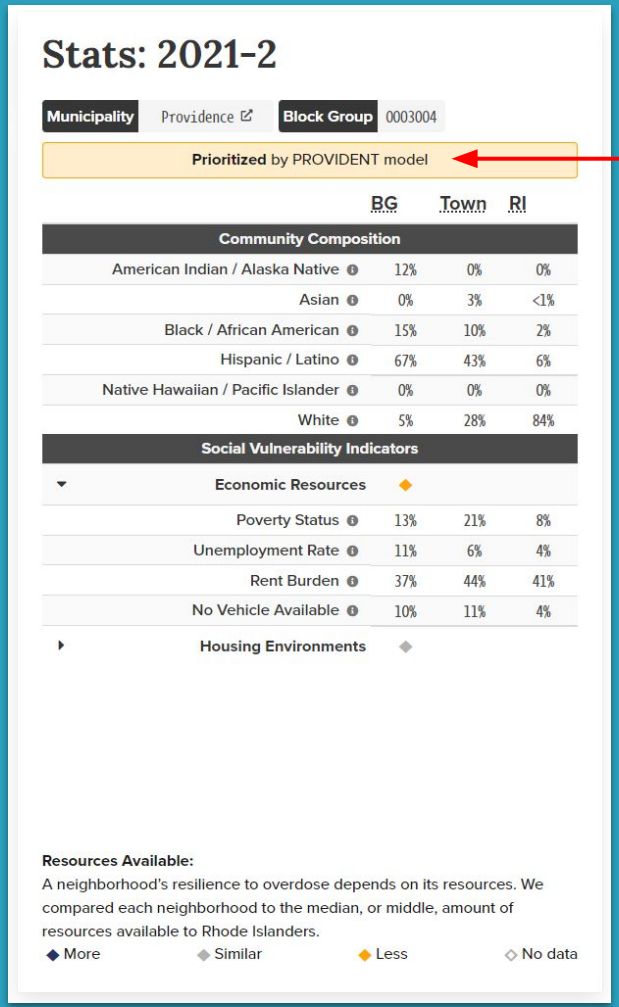
You can also click these arrows to open or close each section

PROVIDENT data academy



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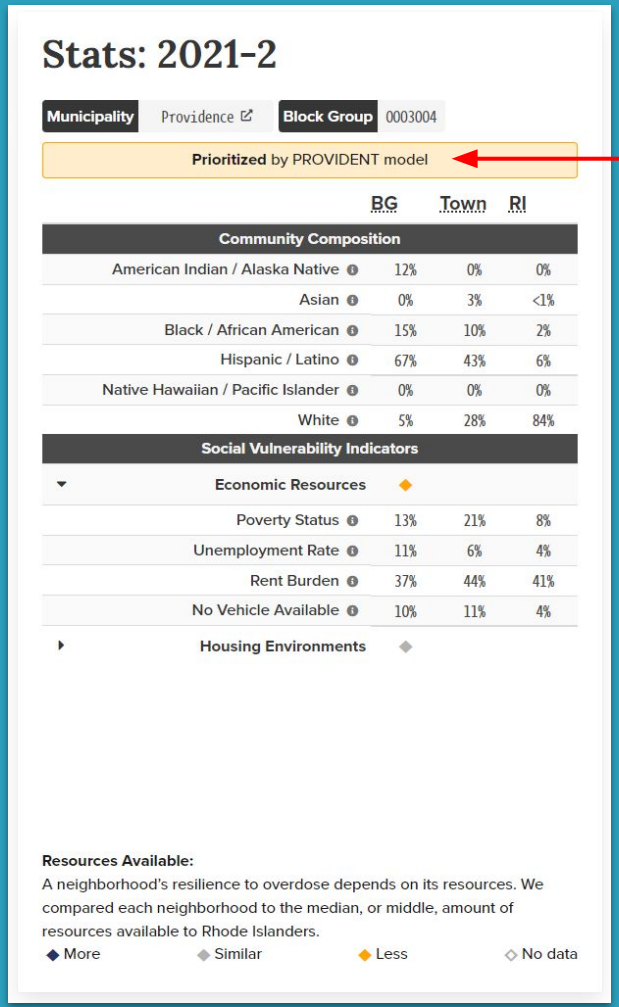
This spot lets us know if the neighborhood is **prioritized** by the PROVIDENT model

PROVIDENT data academy



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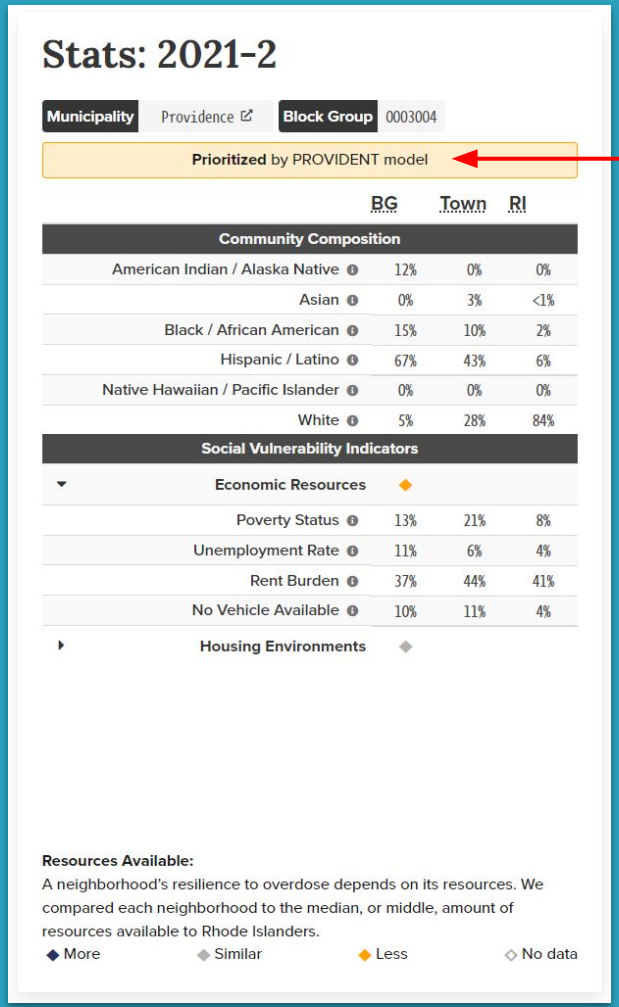
Remember, **only some towns can get these predictions**

PROVIDENT data academy



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This spot lets us know if the neighborhood is **prioritized** by the PROVIDENT model

Remember, **only some towns can get these predictions**

And within those towns, there will be at least one prioritized neighborhood

PROVIDENT data academy

Stats: 2021-2

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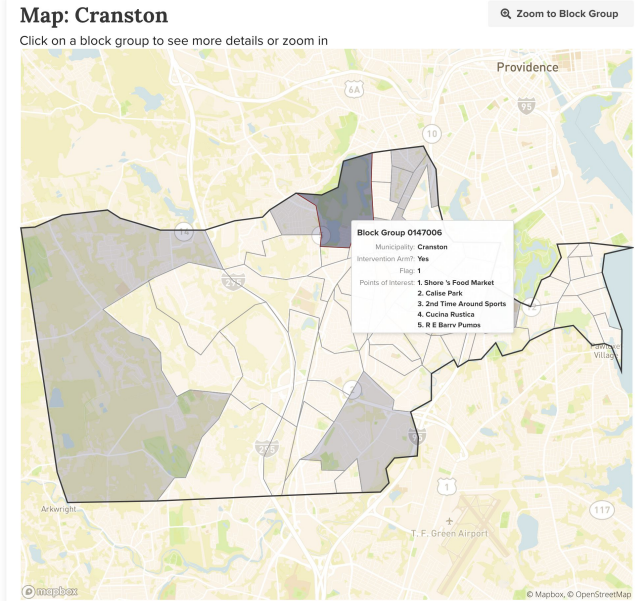
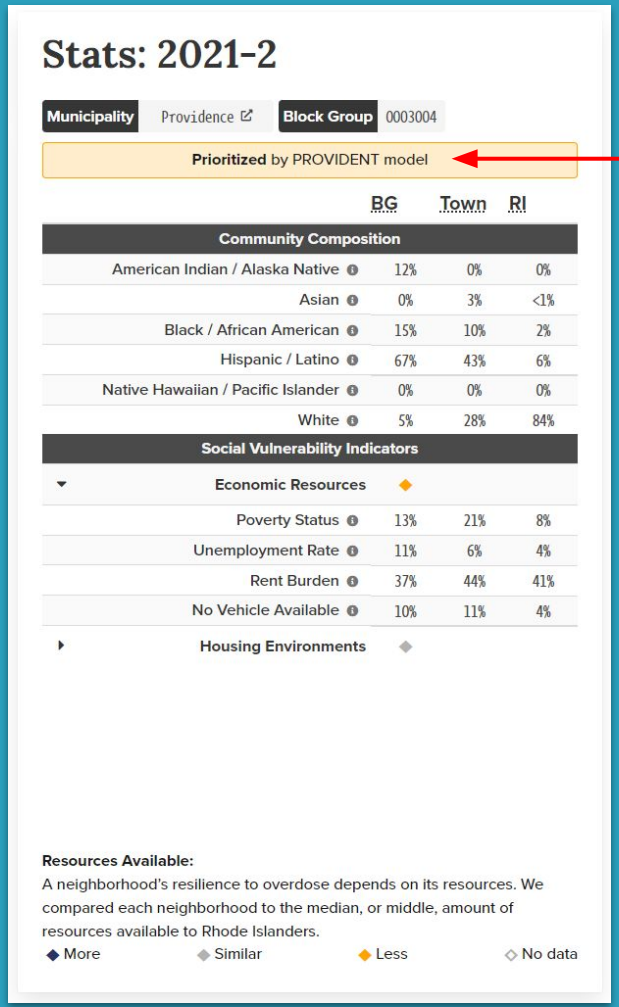
◆ More ◆ Similar ◆ Less ◇ No data

On the map, these neighborhoods will be **highlighted**



PROVIDENT data academy



We update the predictions every 6 months, so be sure to check back in!

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Questions or thoughts so far?

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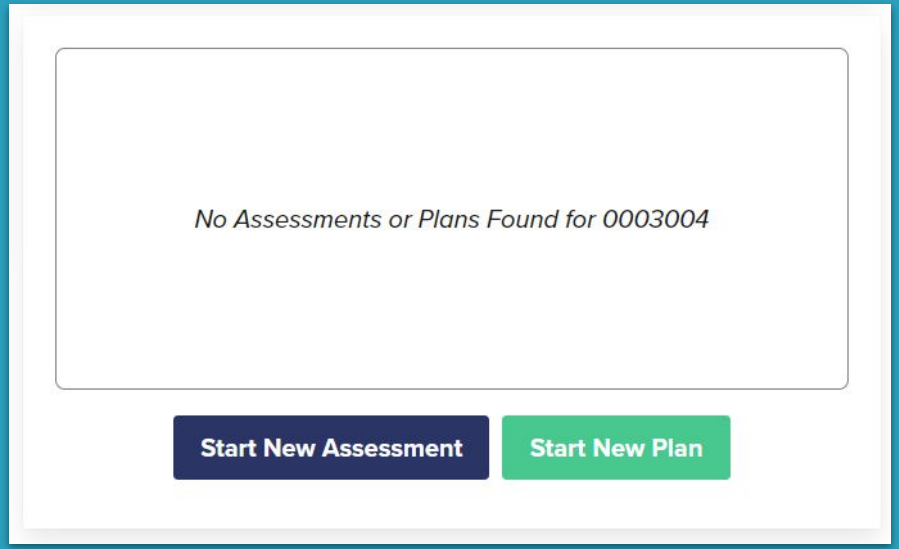
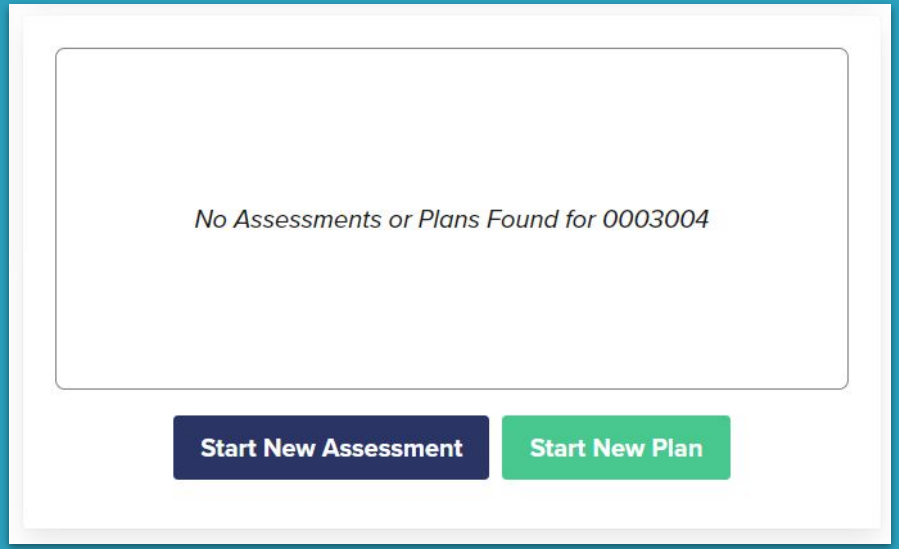
The forms



PROVIDENT data academy

When you select a neighborhood, you will see this box in the lower right corner:



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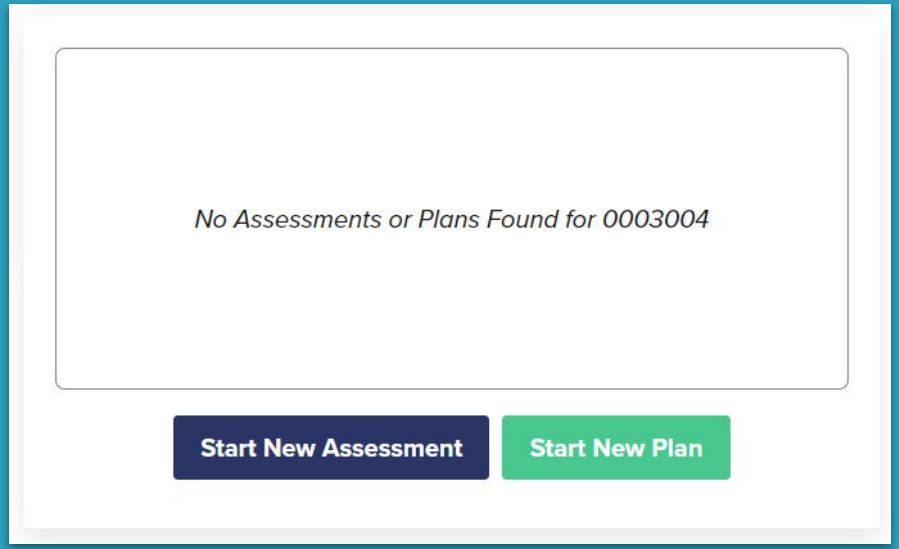
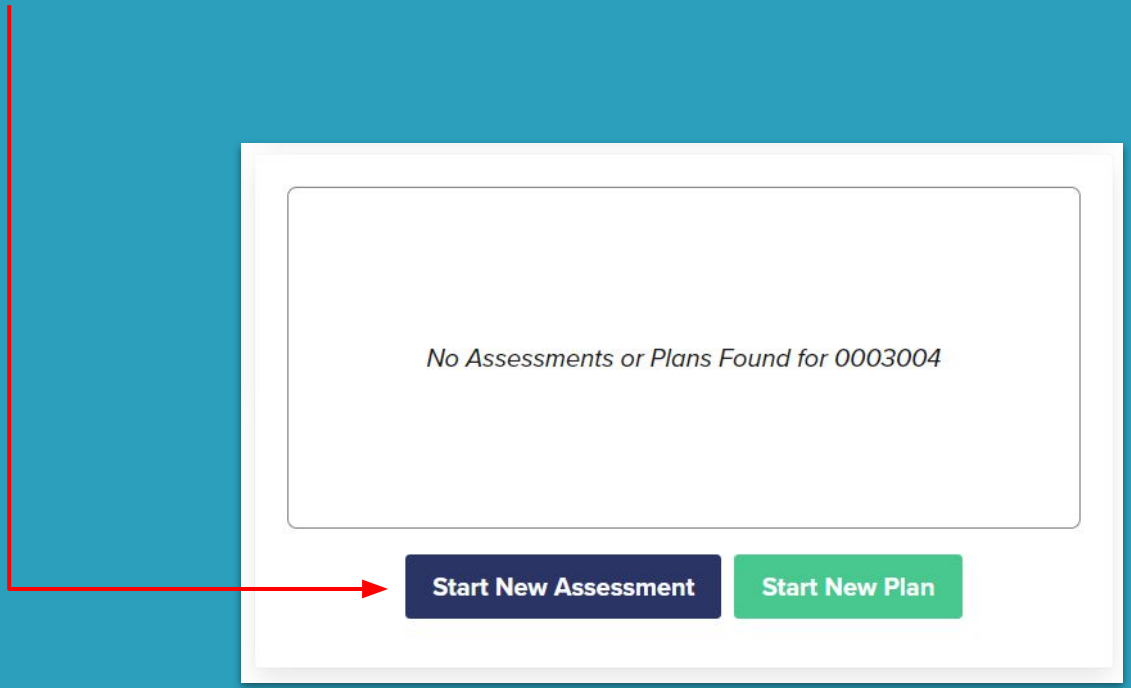
This is what we use to create neighborhood assessments and plans

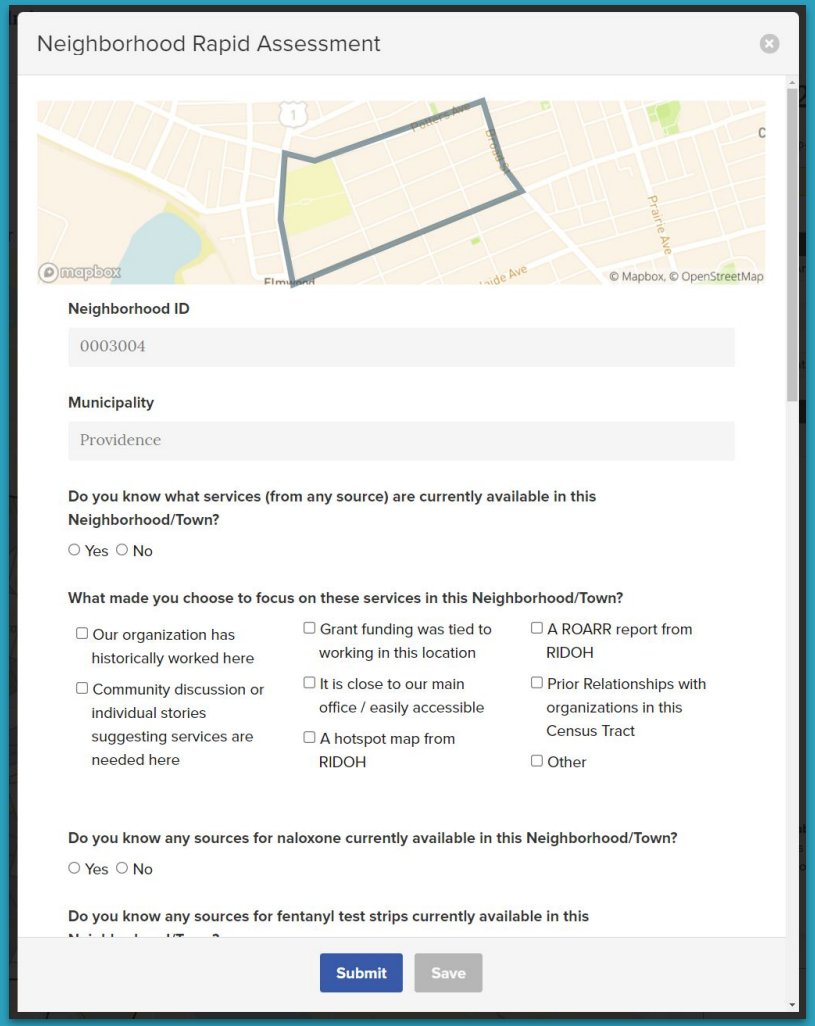


PROVIDENT data academy

Let's create an **assessment**...

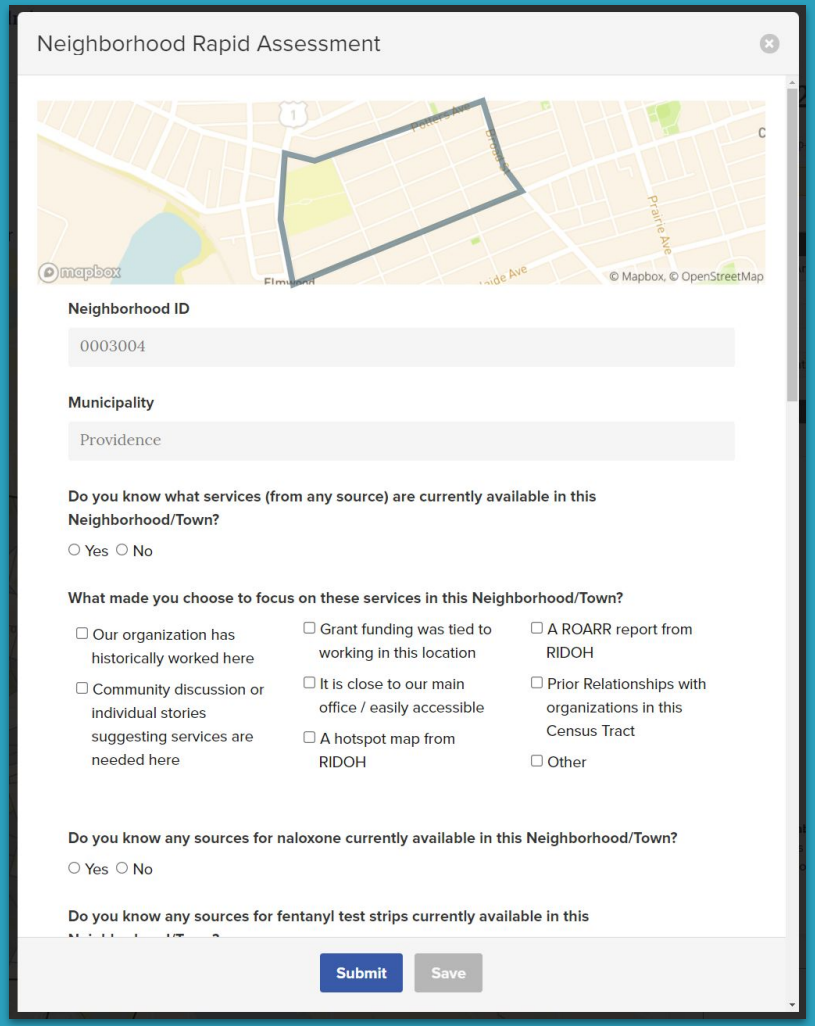


PROVIDENT data academy



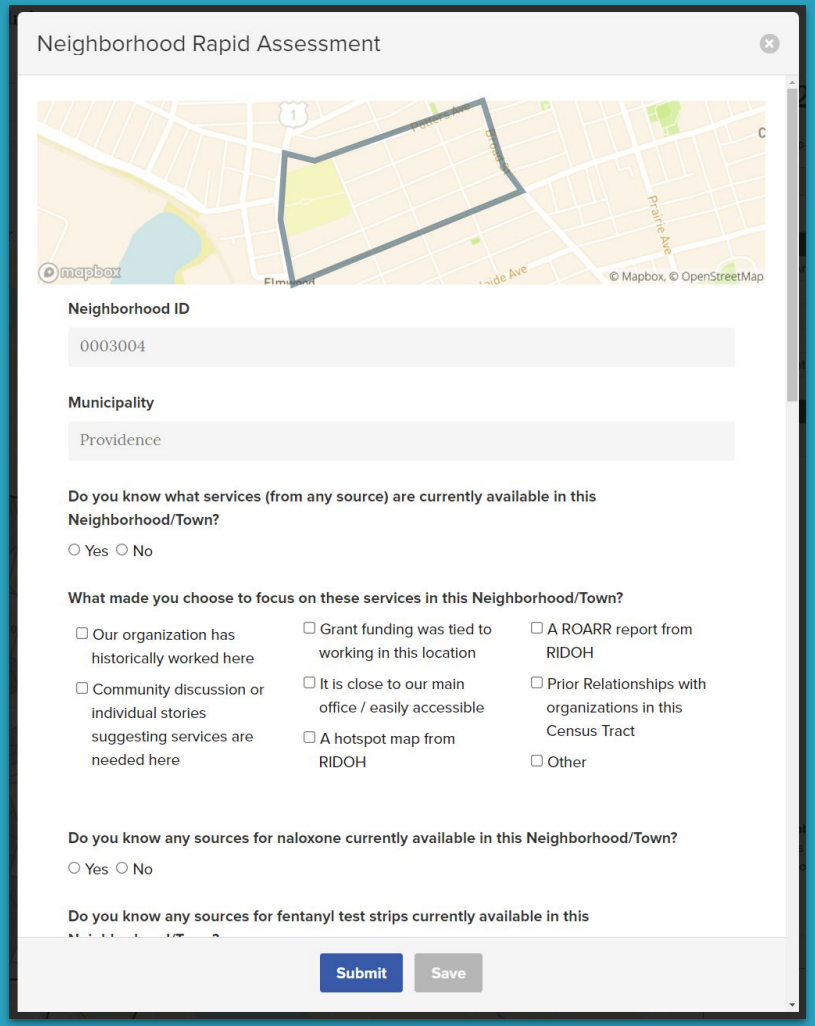
The assessment let's you put down what you know about a neighborhood.

PROVIDENT data academy



Some neighborhoods you might know a lot about, and others not so much. This form helps capture that information.

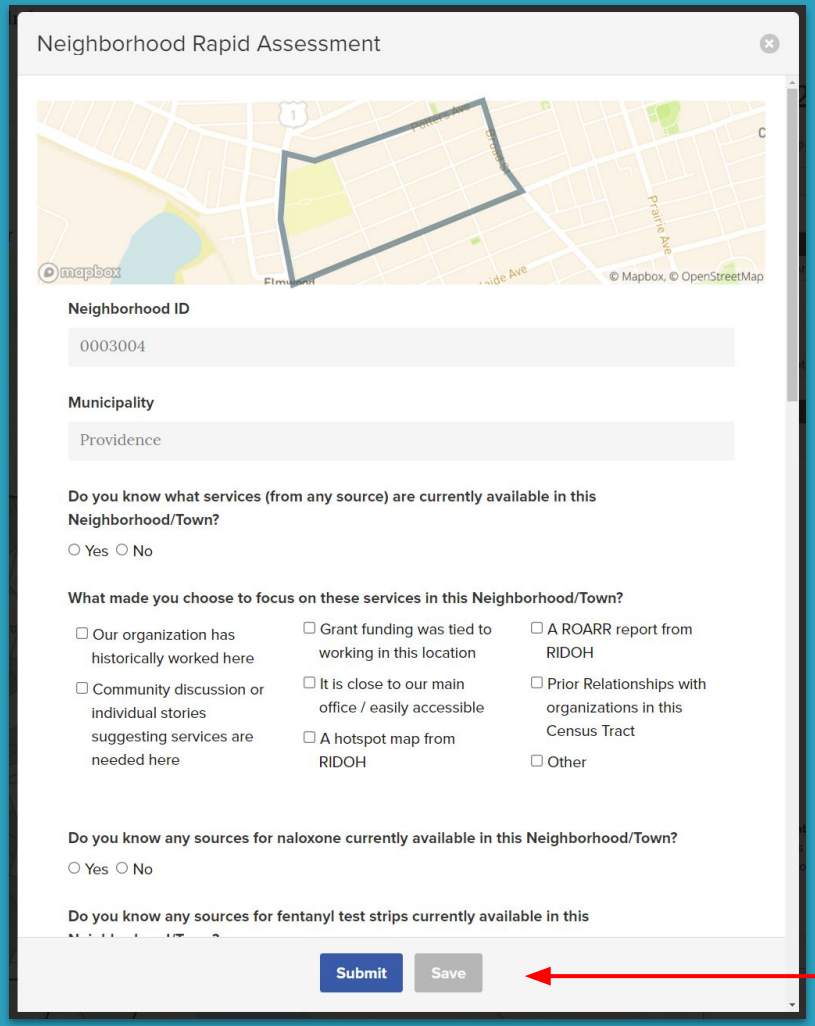
PROVIDENT data academy



You can create assessments for neighborhoods that have predictions or ones that don't!

There aren't any rules here, and no wrong or right answers!

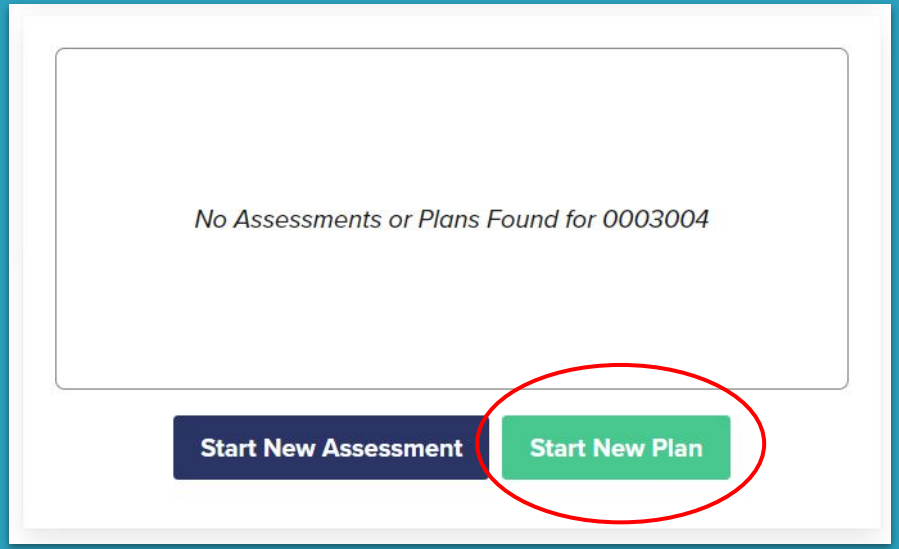
PROVIDENT data academy



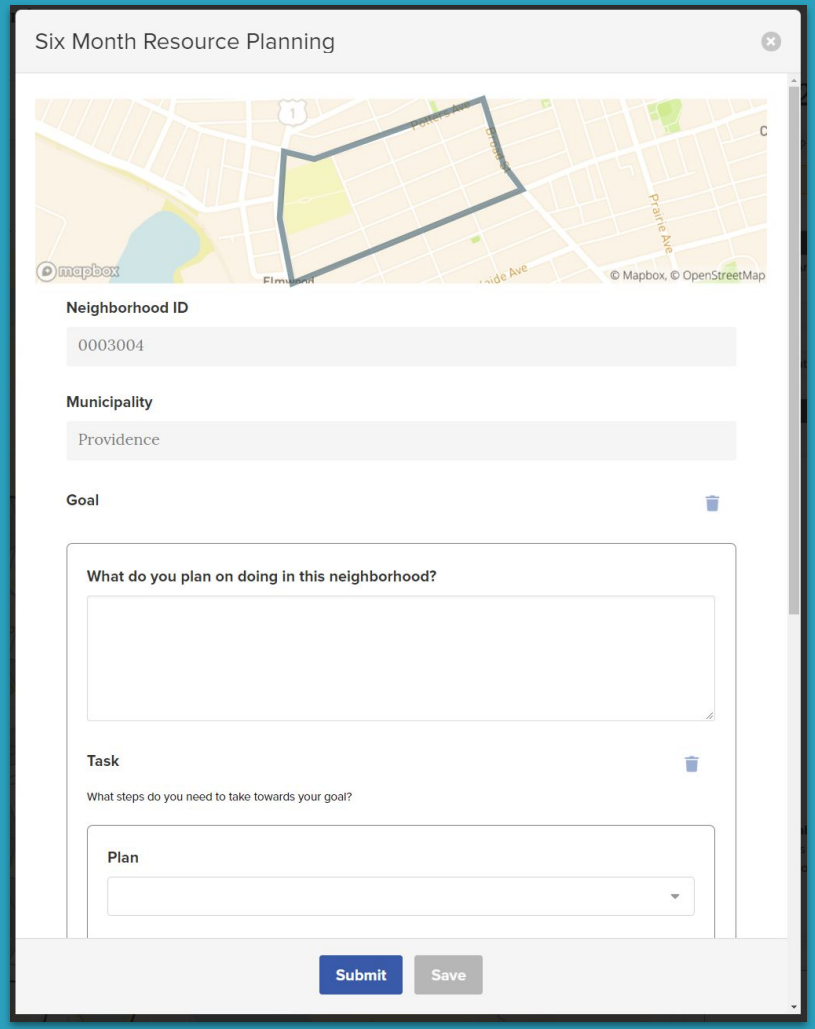
When you're done, hit **Submit**. You can also save your work and come back to it later if you click **Save**.

PROVIDENT data academy

Now let's start a new **plan**...

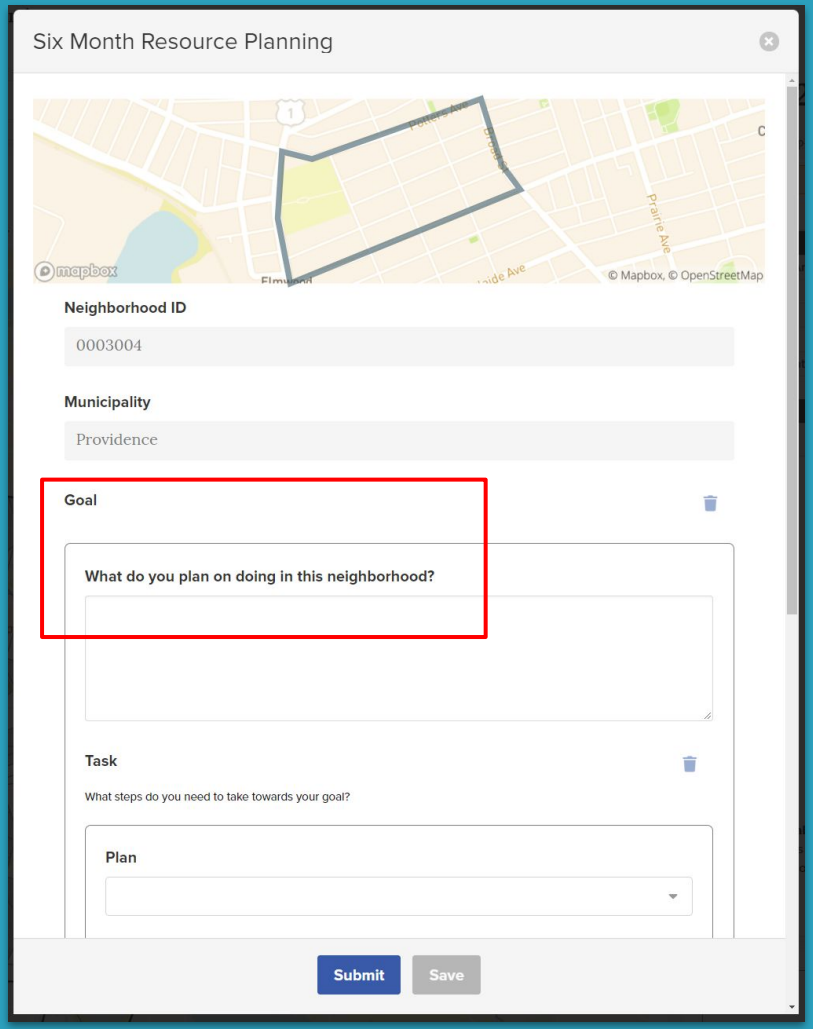


PROVIDENT data academy



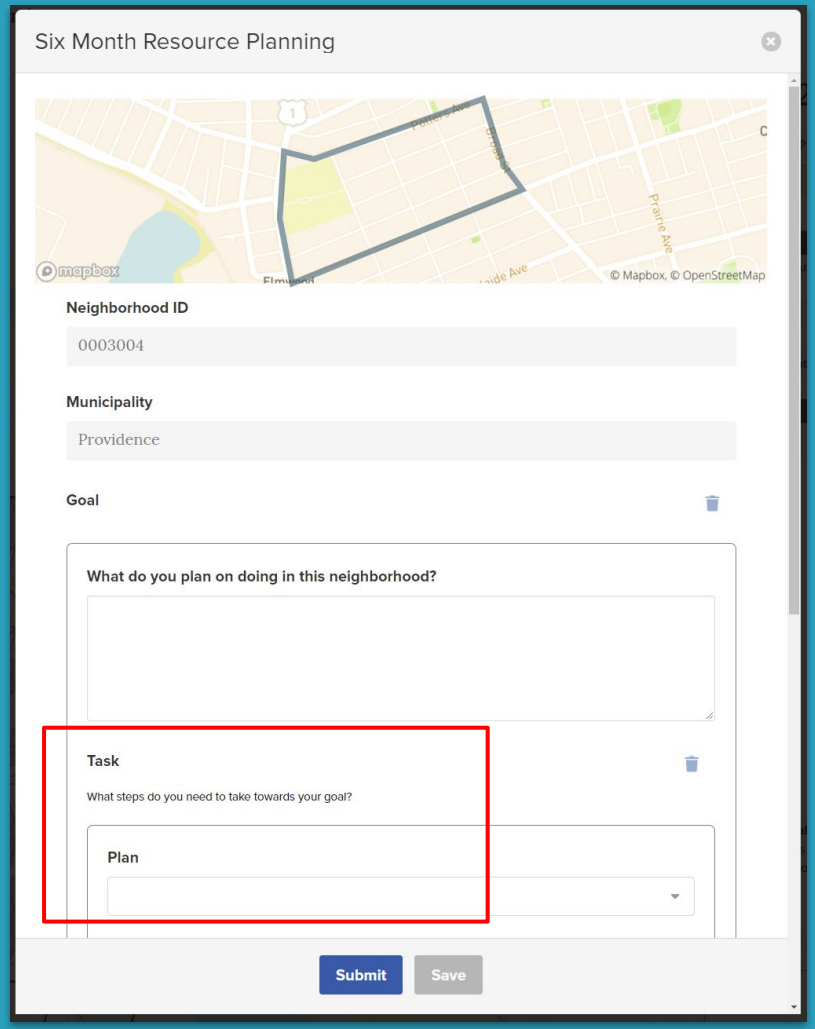
Plans are similar to assessments. They let you track what you plan on doing in this neighborhood.

PROVIDENT data academy



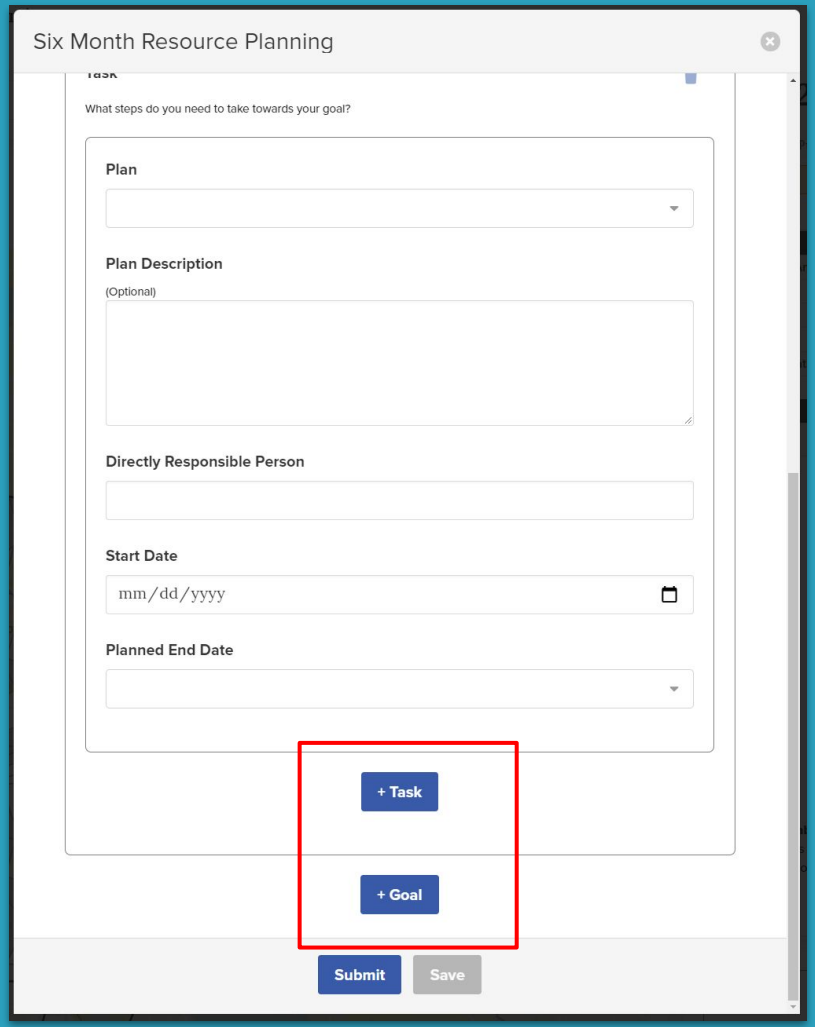
In the **Goal** section, you can write down your plans...

PROVIDENT data academy



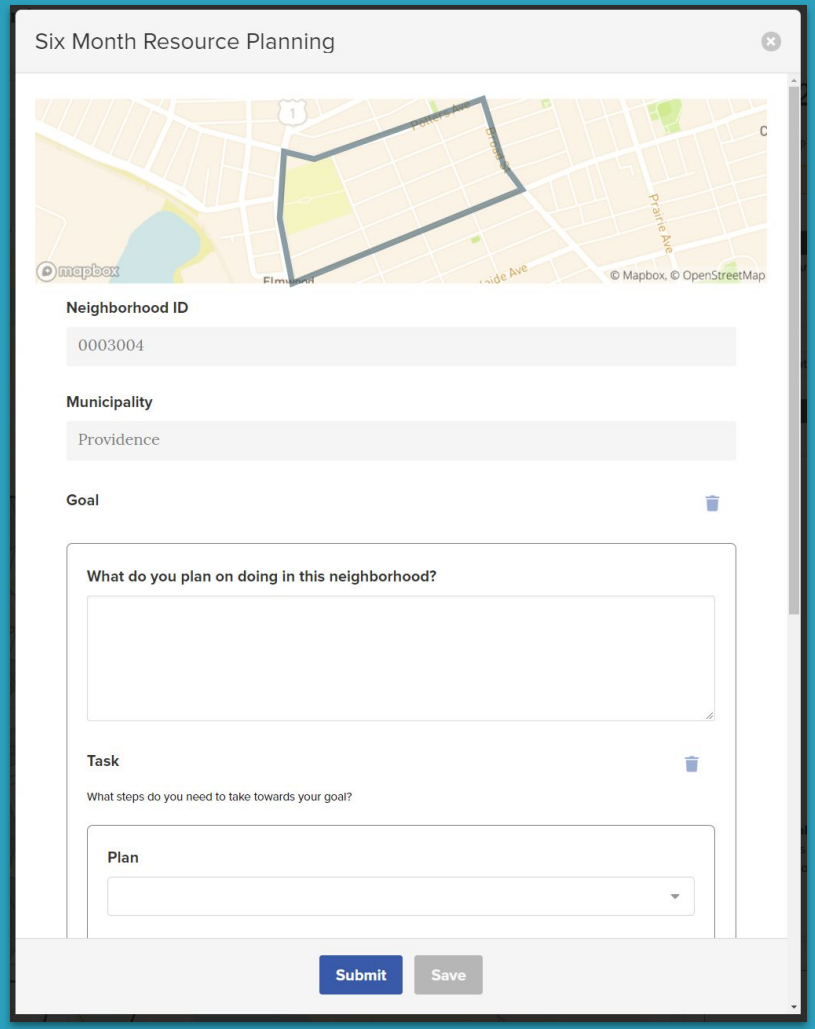
And in the **Task** area, you can record the steps you need to take towards your goal.

PROVIDENT data academy



You can also have multiple **Tasks** and **Goals** in this planning form.

PROVIDENT data academy



A goal doesn't have to be something big. For example, a goal could be:

- Check out a new area
- Try to form new relationships
- Hand out resources
- Scope out a new location for an event or outreach

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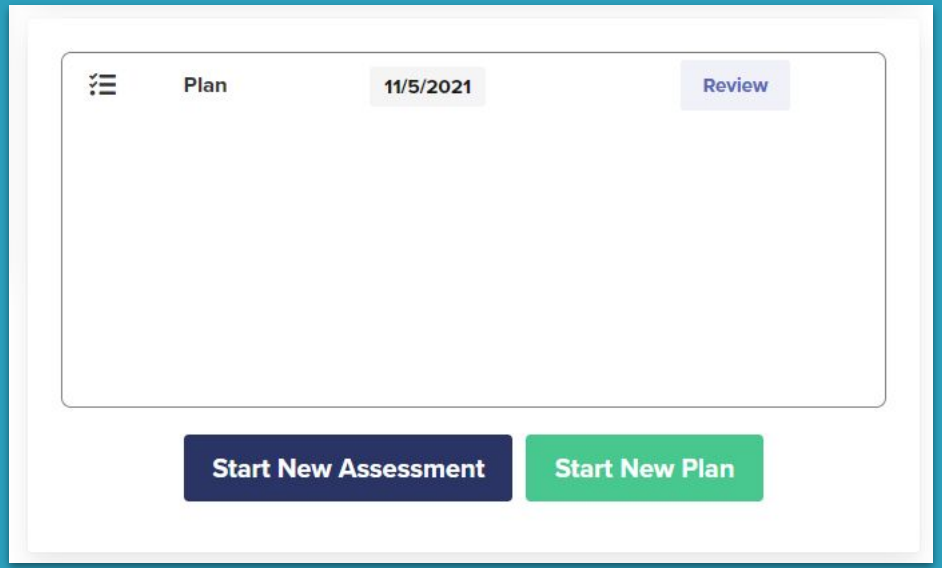
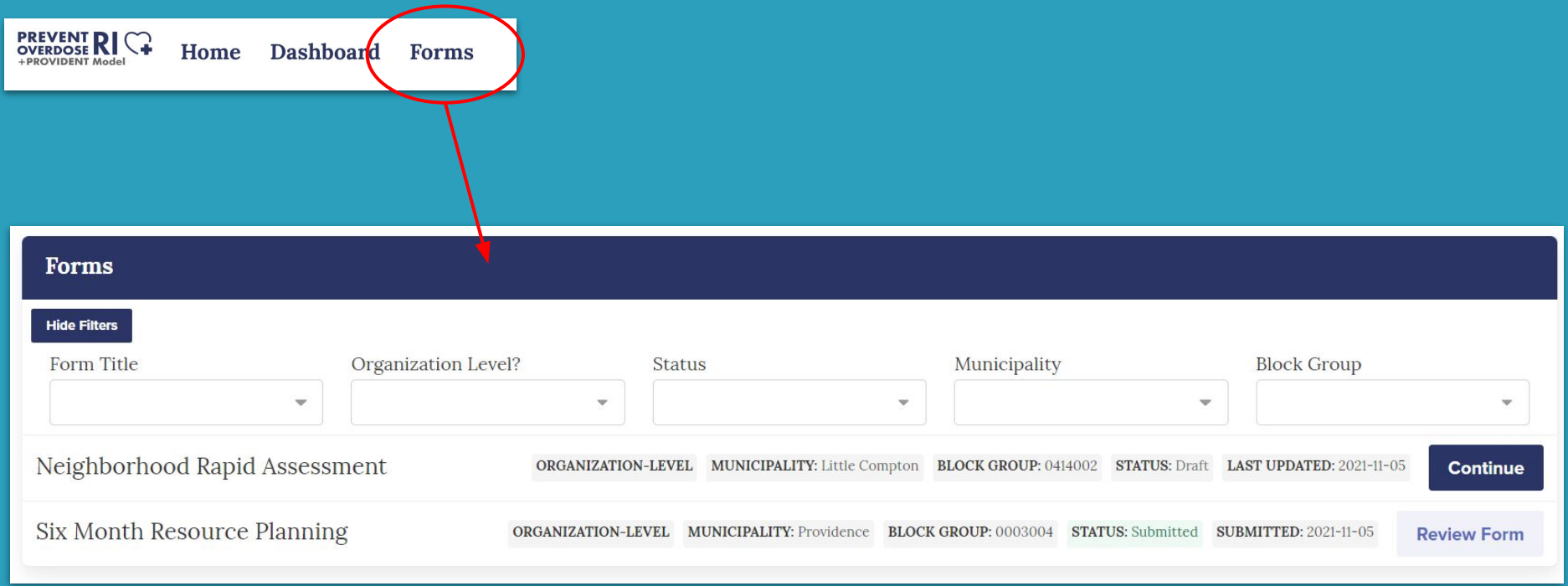
As you create assessments and plans, they will show up in this box:

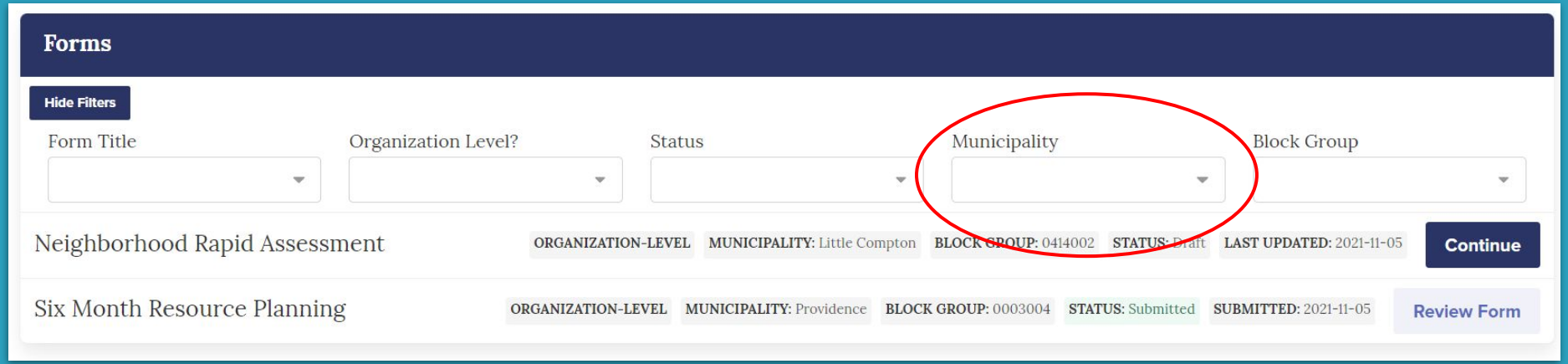


PROVIDENT data academy



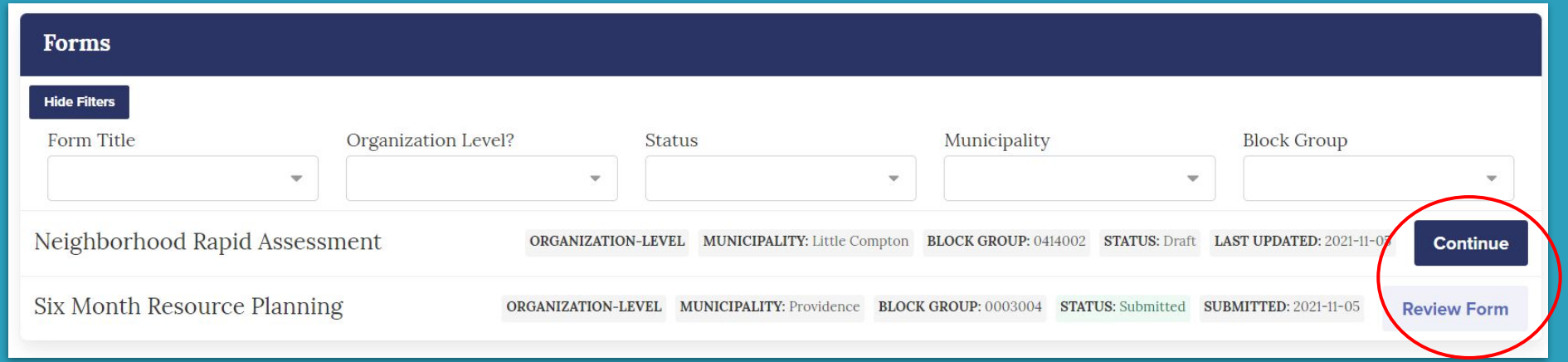
The **Forms** tab at the top of the page lets you see all of the forms that you have completed.

PROVIDENT data academy



You can use this to filter by forms you have completed for certain **towns**.

PROVIDENT data academy



Here, you can **Start** new forms, **Continue** drafts that you started, and **Review** forms you have completed

PROVIDENT data academy

We need your help seeing if this tool will be a success.

We are asking you to log in at least once a month to create an assessment or goal.

PROVIDENT data academy

We need your help seeing if this tool will be a success.

We are asking you to log in at least once a month to create an assessment or goal.

We also want your input, your thoughts, and your ideas about how to improve this tool!

PROVIDENT data academy

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