

Mapping Social & Environmental Injustices in Houston



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Rice University | Summer 2020

How can humanists bridge “apolitical” data to track and highlight social, racial, and environmental injustices in urban spaces?

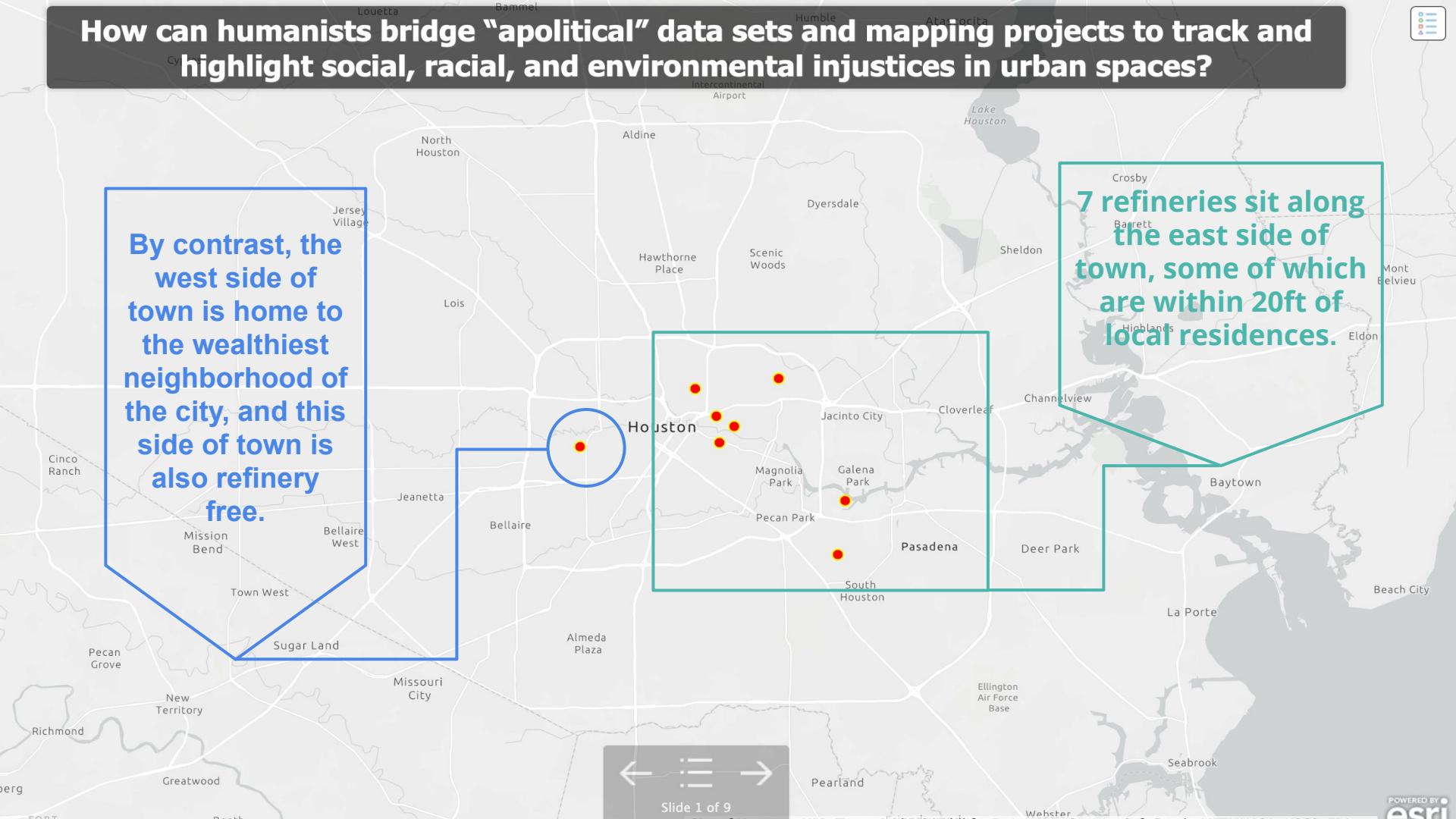
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Houston has seen its fair amount of disasters—both environmental and natural—in the time since I moved to the city in June 2014. I wanted to track the location of oil refineries and other facilities that release highly toxic fumes into the environment alongside population demographics.

How can humanists bridge “apolitical” data sets and mapping projects to track and highlight social, racial, and environmental injustices in urban spaces?

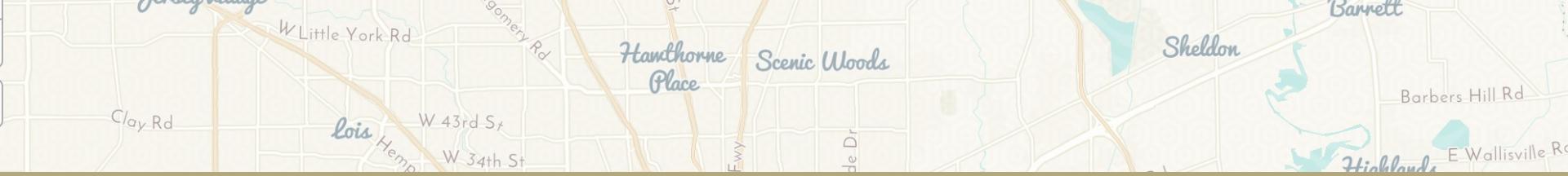


By contrast, the west side of town is home to the wealthiest neighborhood of the city, and this side of town is also refinery free.



**As humanists, none of us are surprised by
the problematic ways in which this urban
space is stratified.**

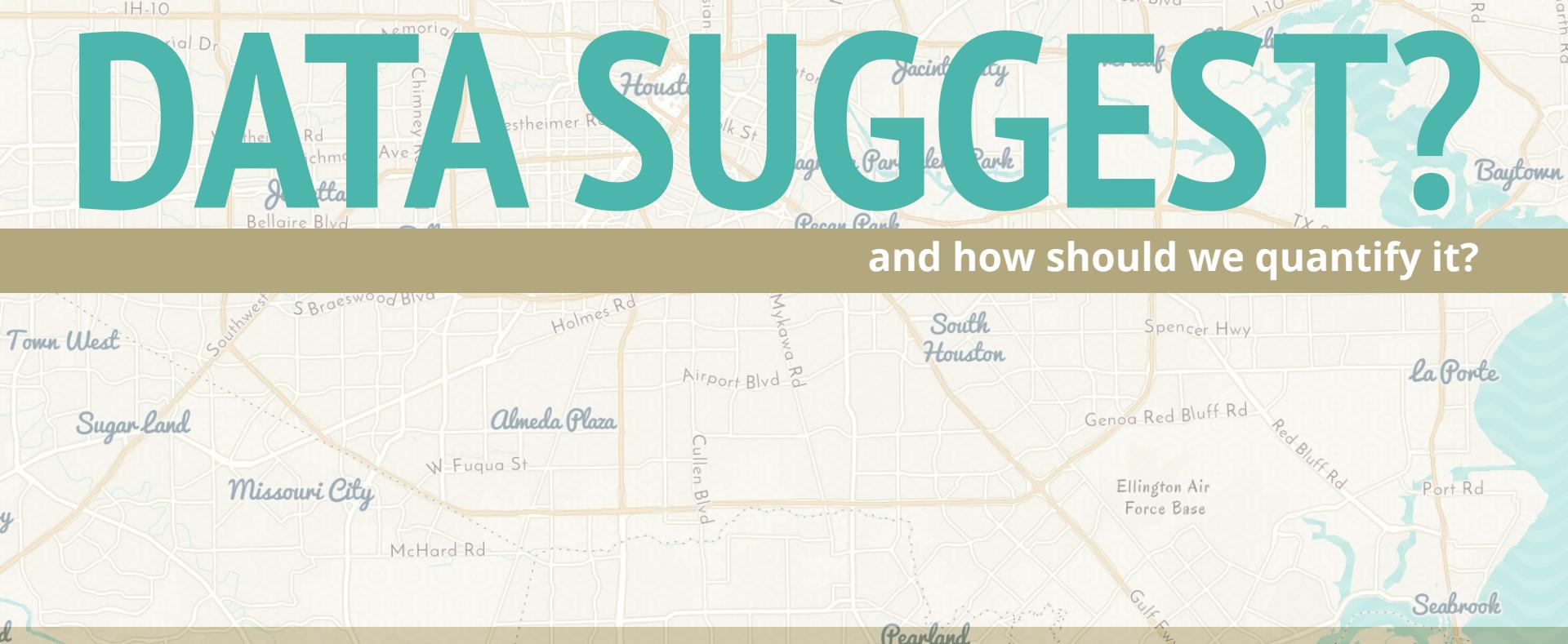
**Our entire careers are spent explaining the
invisible barriers that hinder the lives
of underprivileged populations.**



but what do the

DATA SUGGEST?

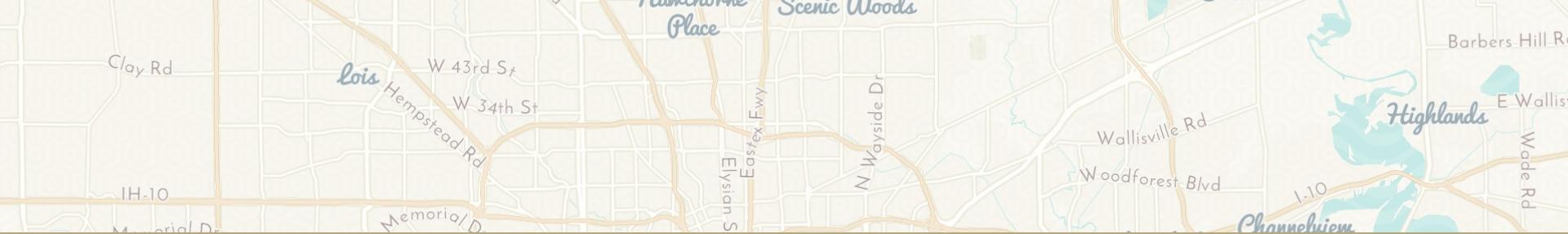
and how should we quantify it?



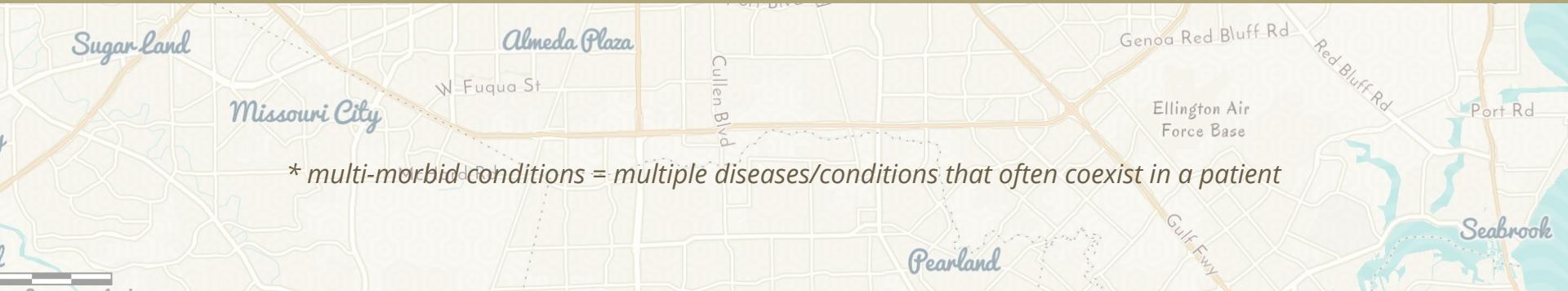
In each scenario ...

- Income
- non English-speaking homes
(Hispanic populations)
- CDC “vulnerability” index
- Socioeconomics
- Households with disabilities
- Minority status (Black, Latinx)
- Asthma
- COPD

**... affect communities where
refineries are most prevalent.**

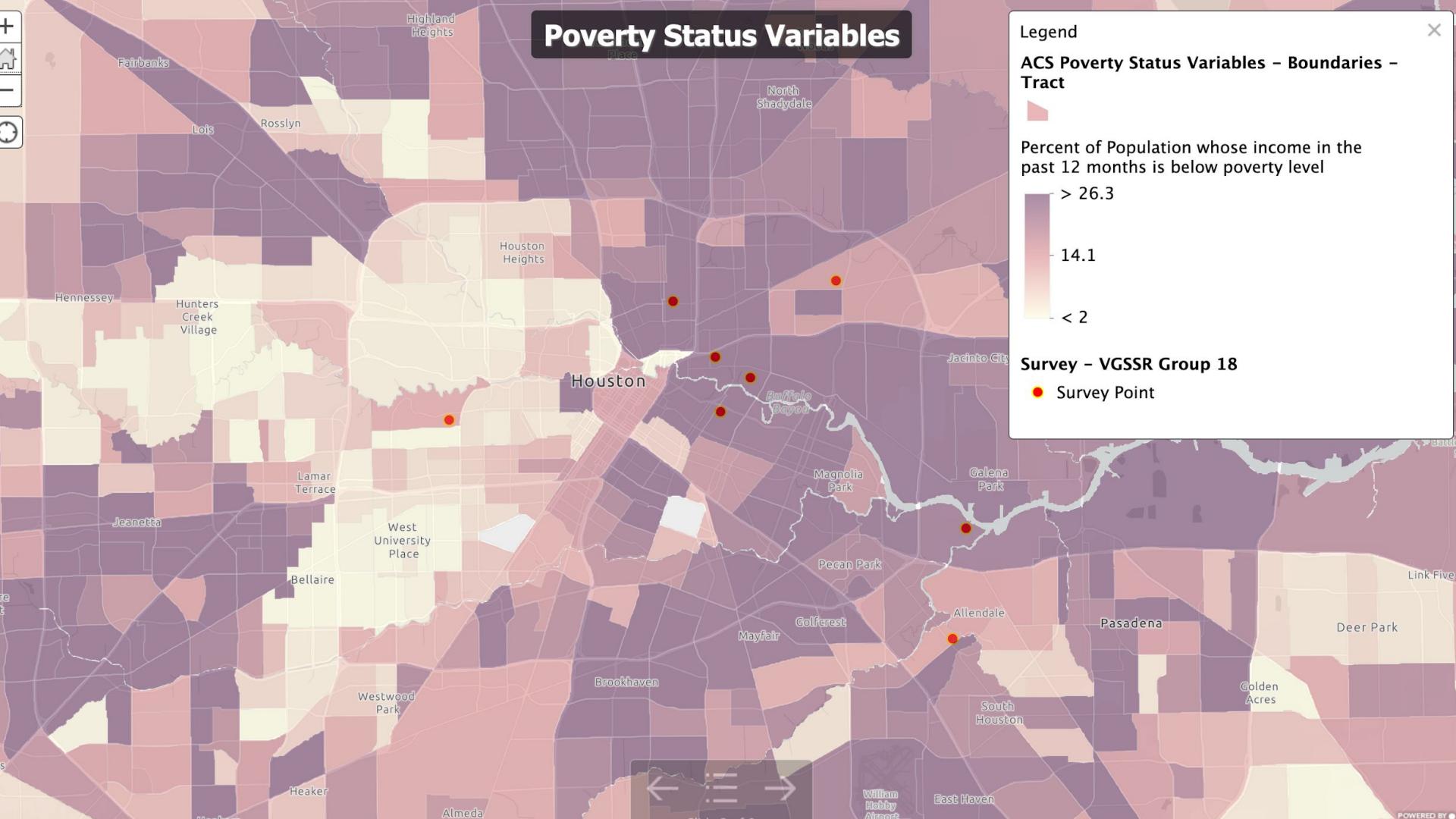


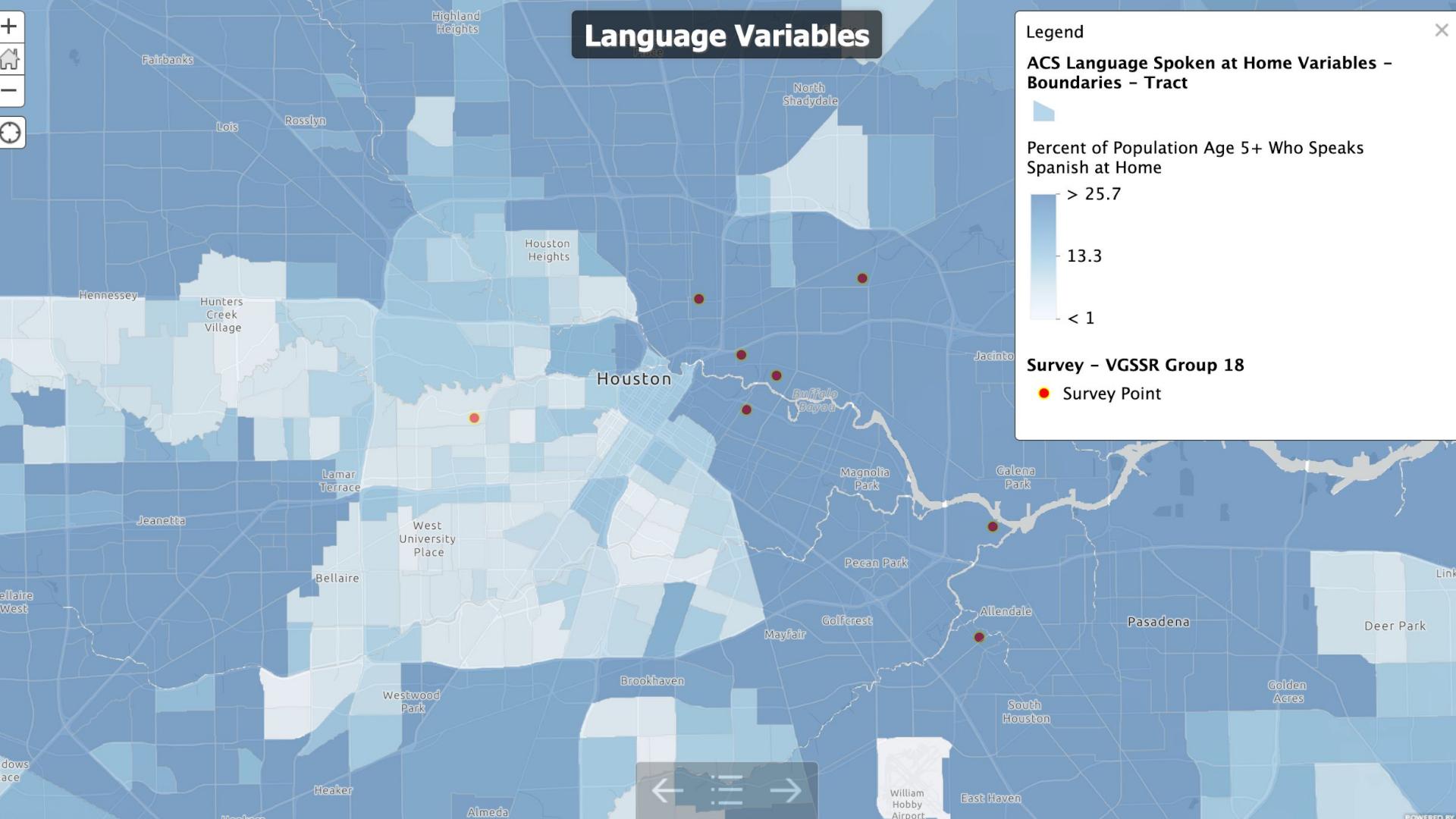
These communities also experience the highest rates of poverty and associated multi-morbid conditions*



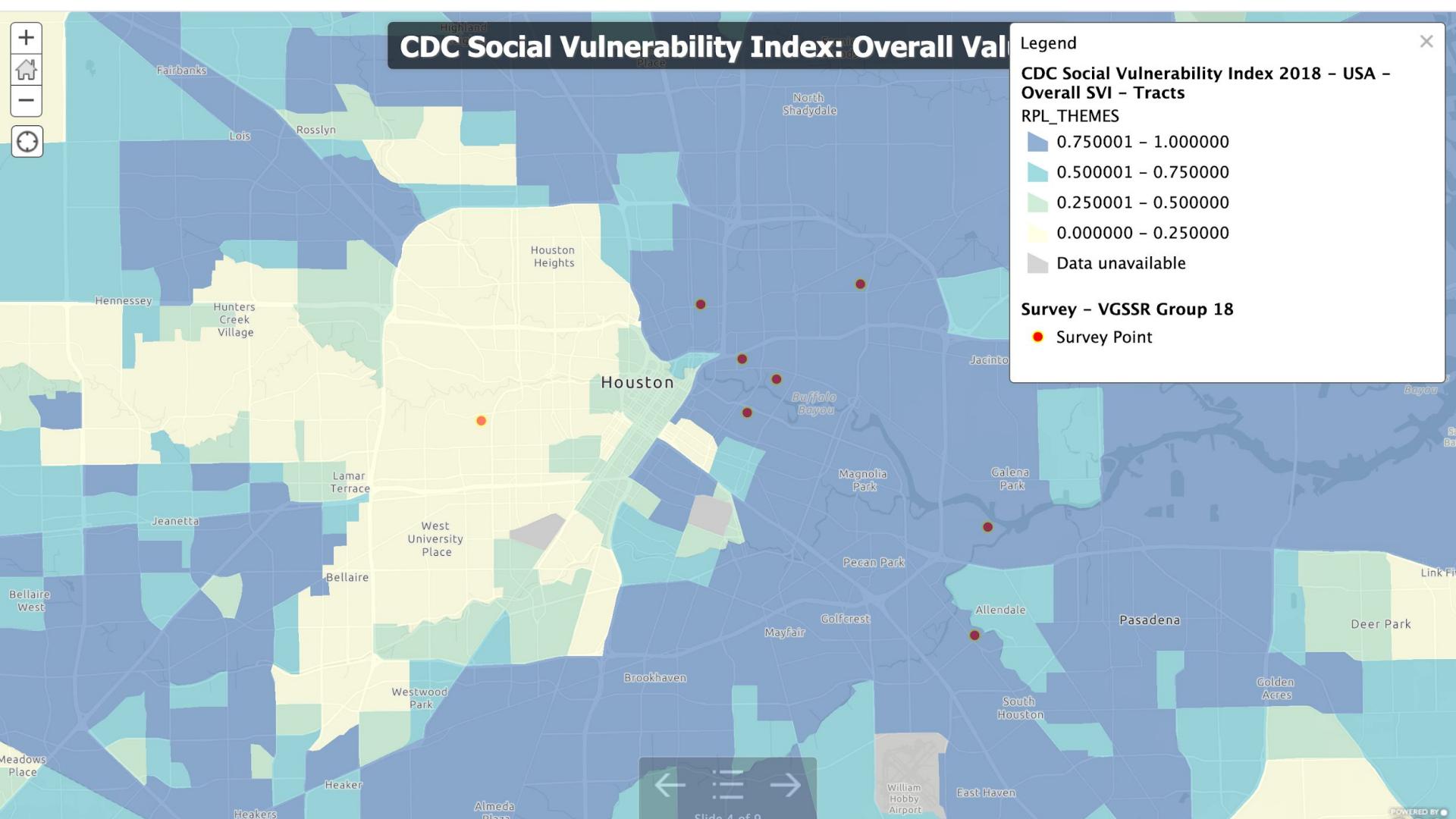
* multi-morbid conditions = multiple diseases/conditions that often coexist in a patient

Poverty Status Variables





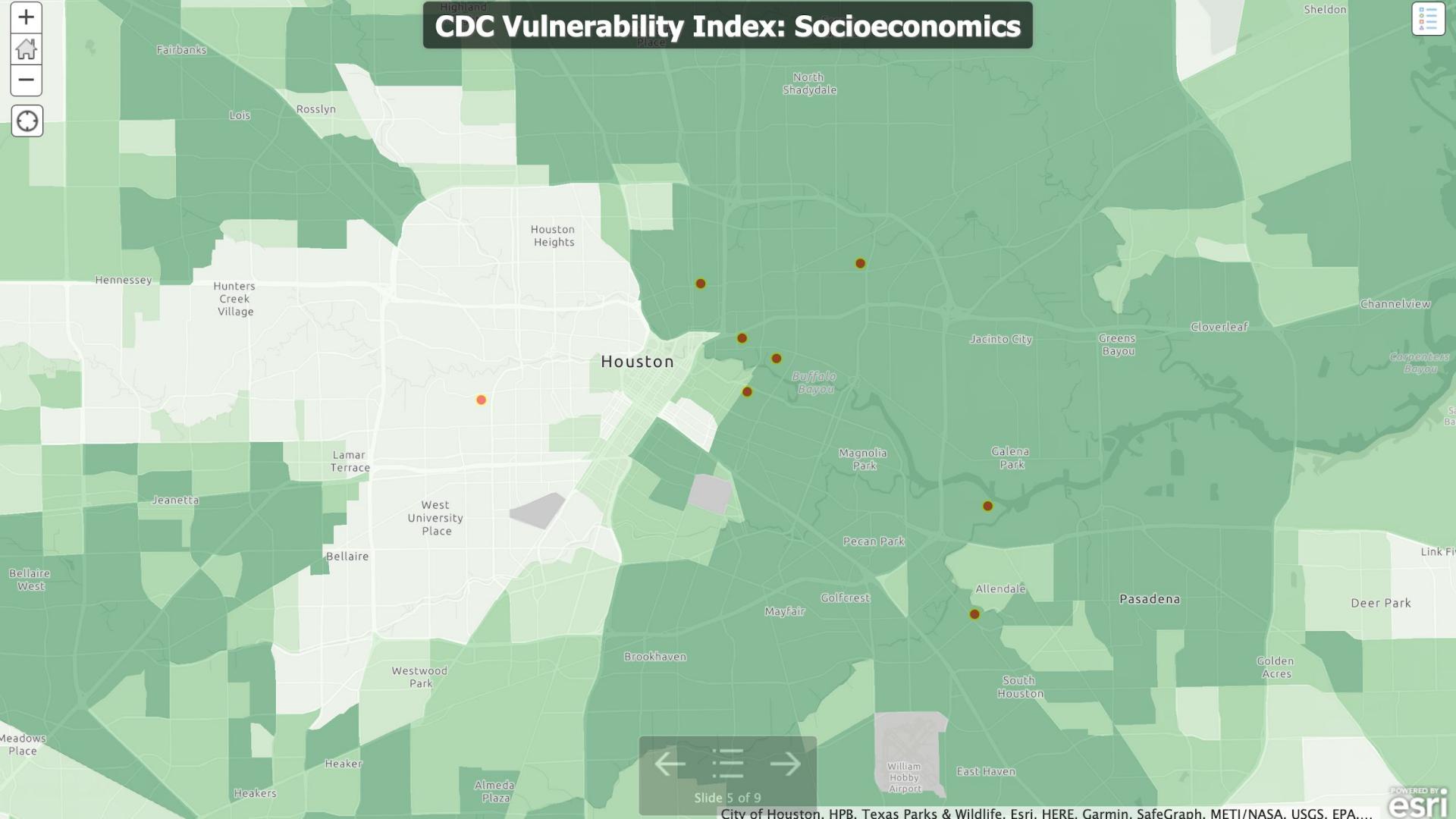
CDC Social Vulnerability Index: Overall Value



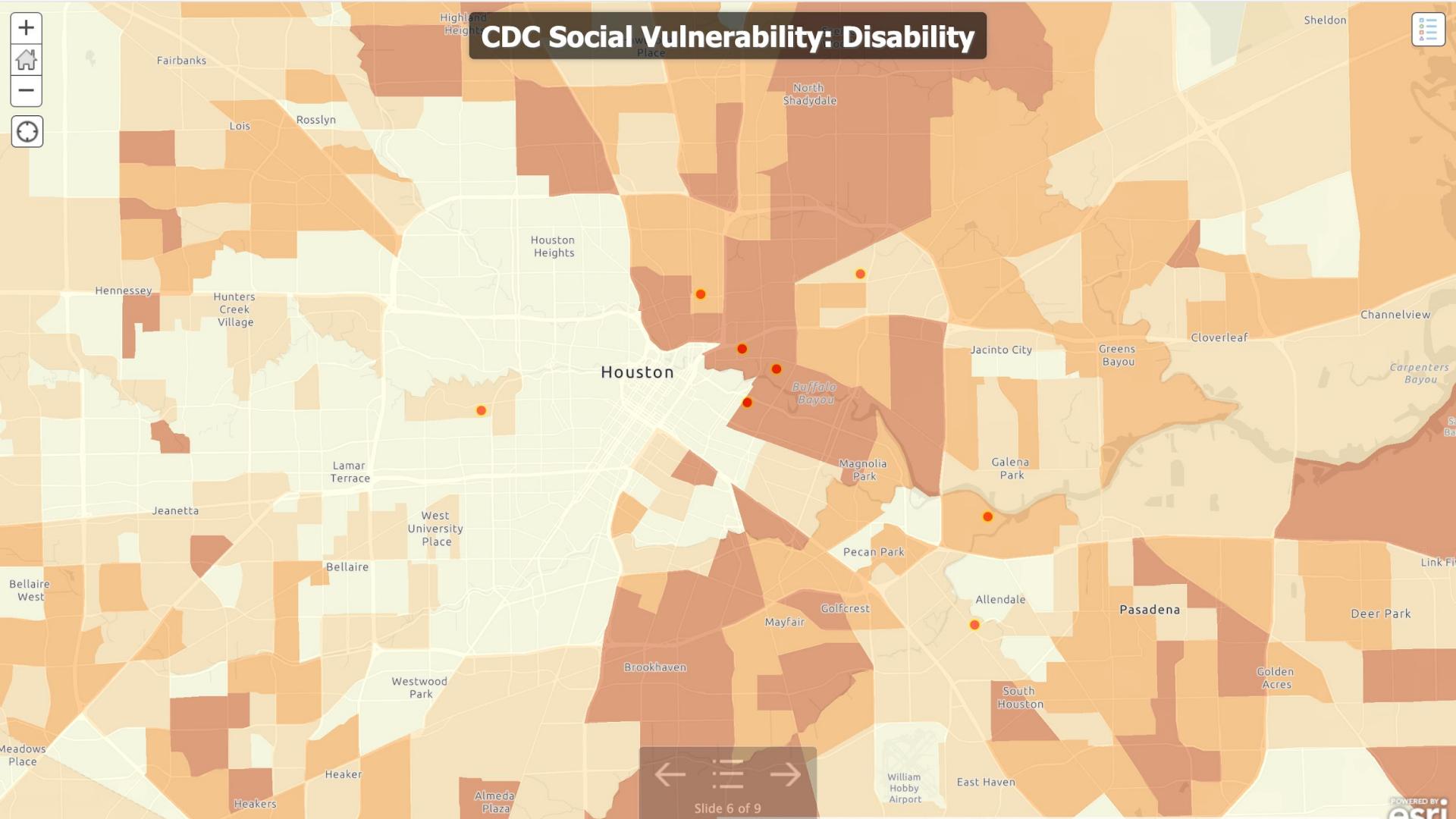


CDC Vulnerability Index: Socioeconomics

Sheldon

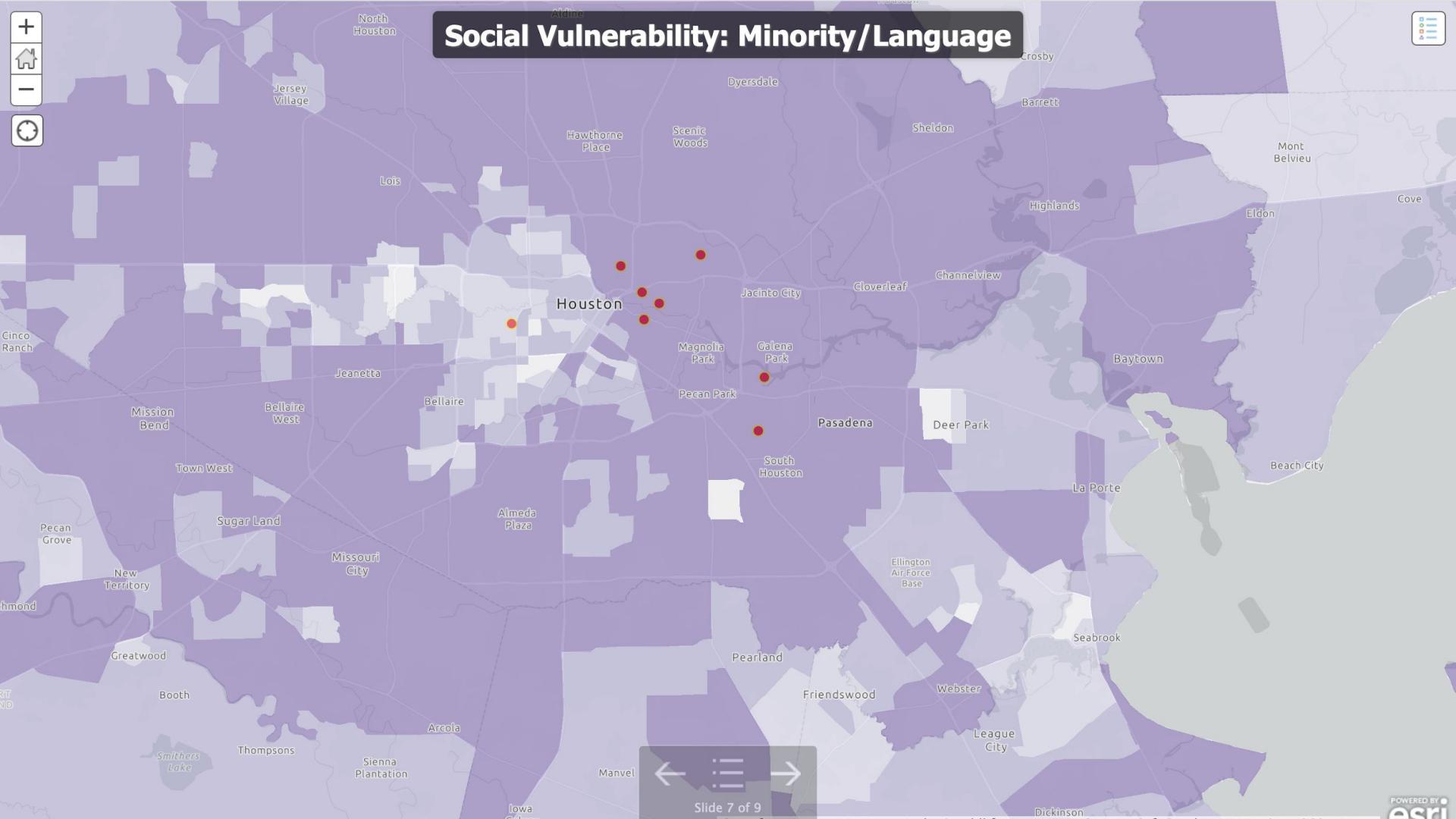


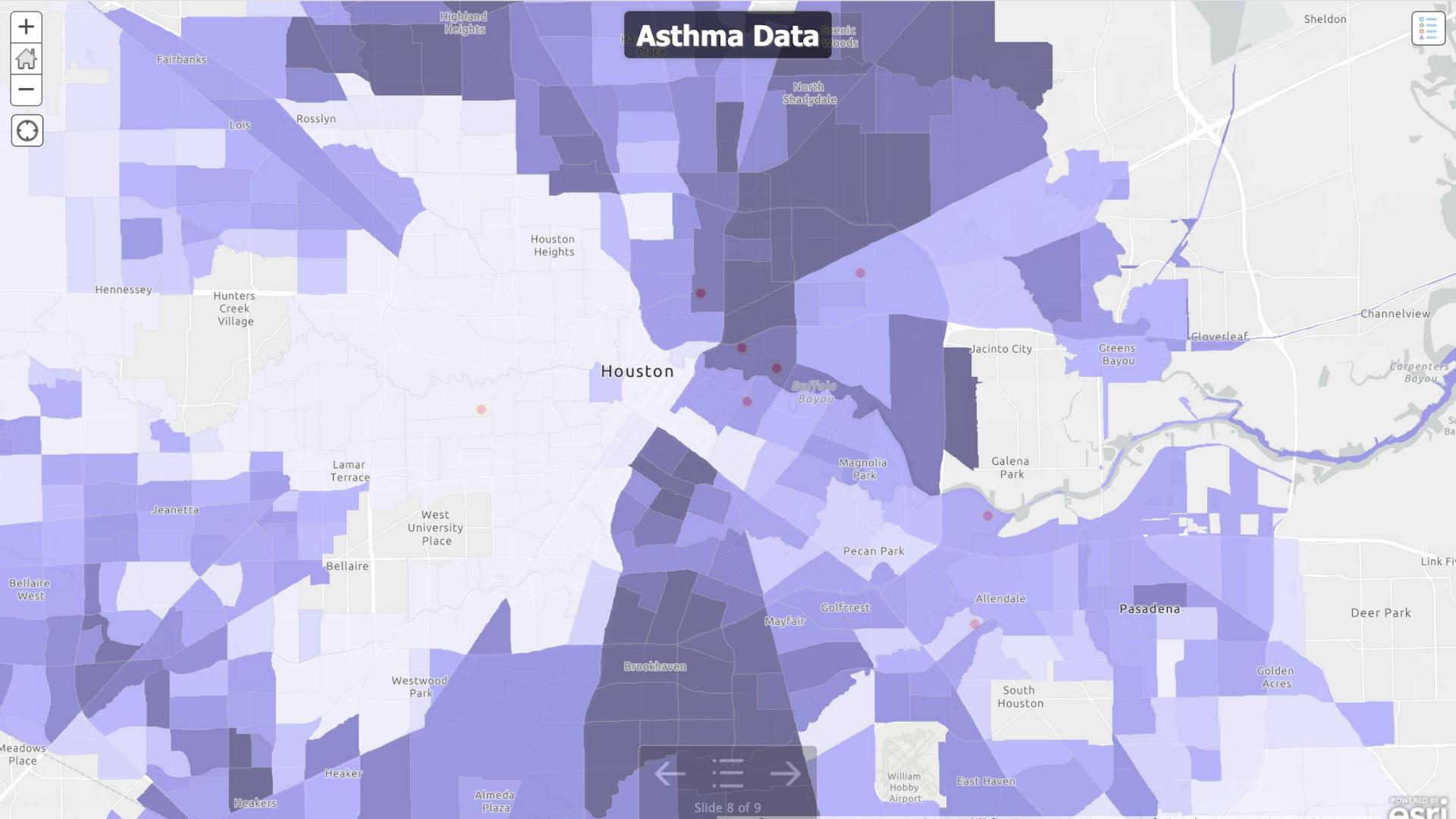
CDC Social Vulnerability: Disability

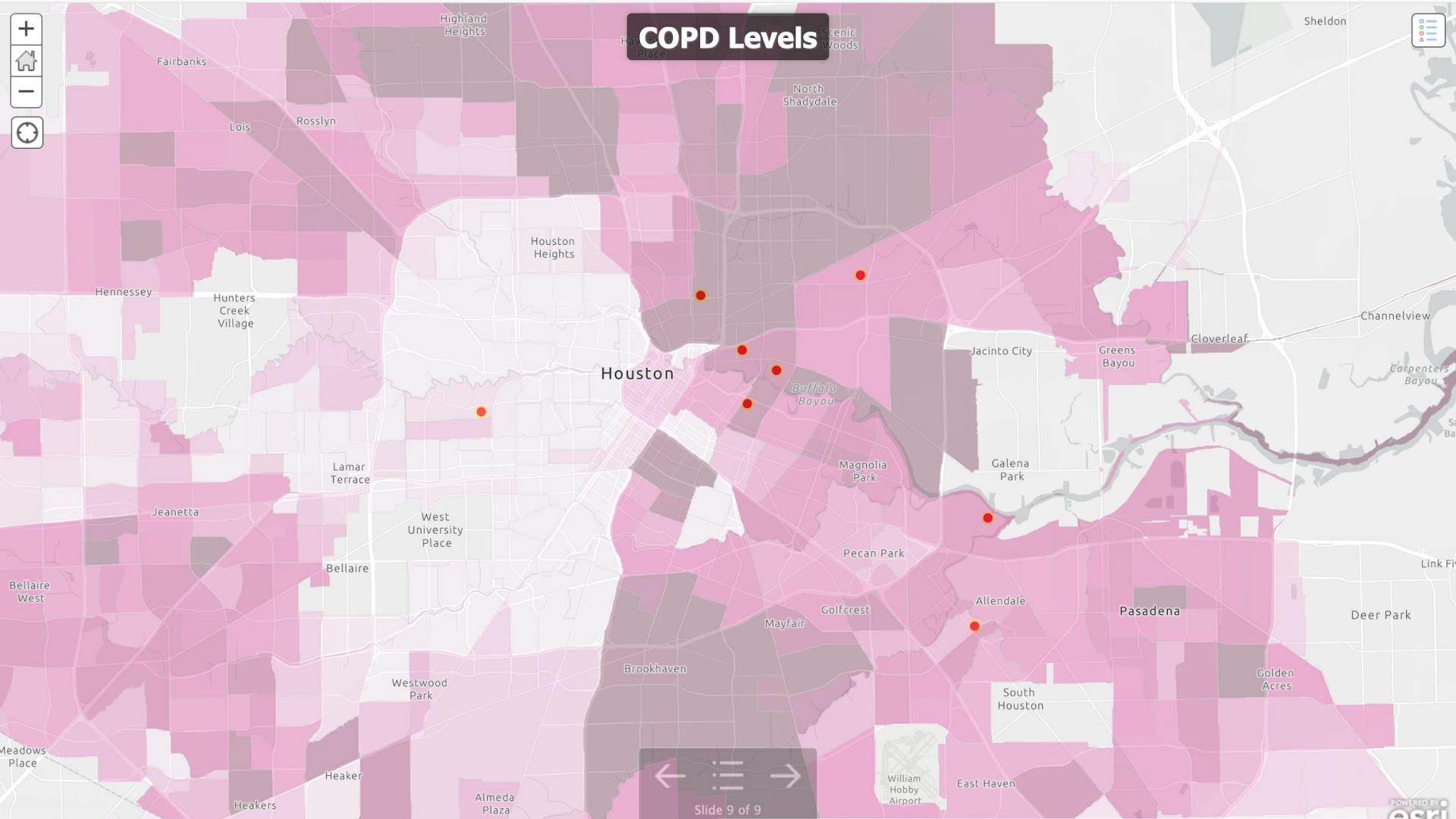




Social Vulnerability: Minority/Language







COPD Levels

© Hawker
Breeze

DATA TELL US WHAT WE ALREADY KNOW TO BE TRUE

But they can also render
visible inequities correlating
to other societal ills.

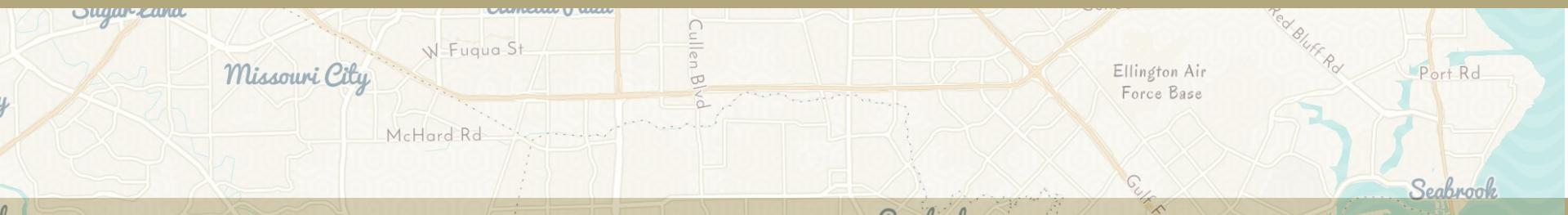
HARD DATA GET ATTENTION

Our economic system is built upon the principle that numbers do the talking.

it only makes sense that we call

ATTENTION

to these injustices, using the best tools available,
to make sure people in power to listen.



and to

MAKE CHANGE

wherever we can.

