

Mapping Social & Environmental Injustices in Houston



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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.

7 refineries sit along the east side of town, some of which are within 20ft of local residences.

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.

A background map of the Houston, Texas area, showing various neighborhoods and roads. The map is divided into three horizontal sections by two brown bars. The top section shows areas like Handthorne Place, Scenic Woods, and Sheldon. The middle section, where the text is located, shows downtown Houston with labels like 'Houston' and 'Jacinto City'. The bottom section shows areas like Sugar Land, Missouri City, Alameda Plaza, South Houston, and La Porte. The text 'but what do the' is in white on the top brown bar, 'DATA SUGGEST?' is in large teal letters in the middle, and 'and how should we quantify it?' is in white on the bottom brown bar.

but what do the

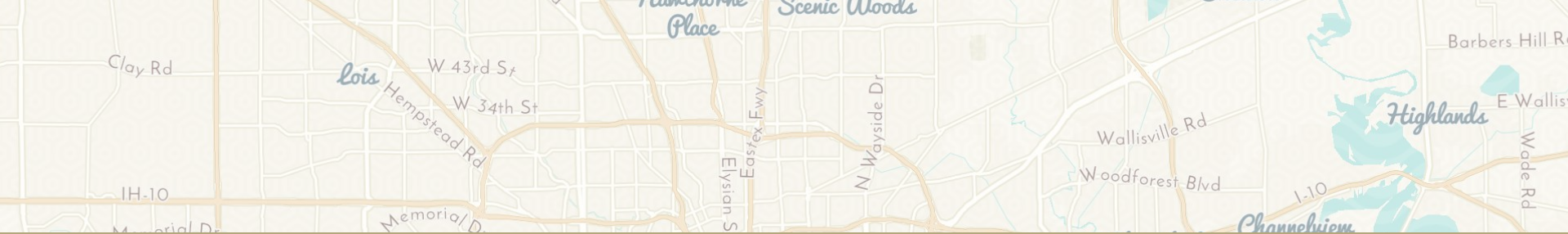
DATA SUGGEST?

and how should we quantify it?

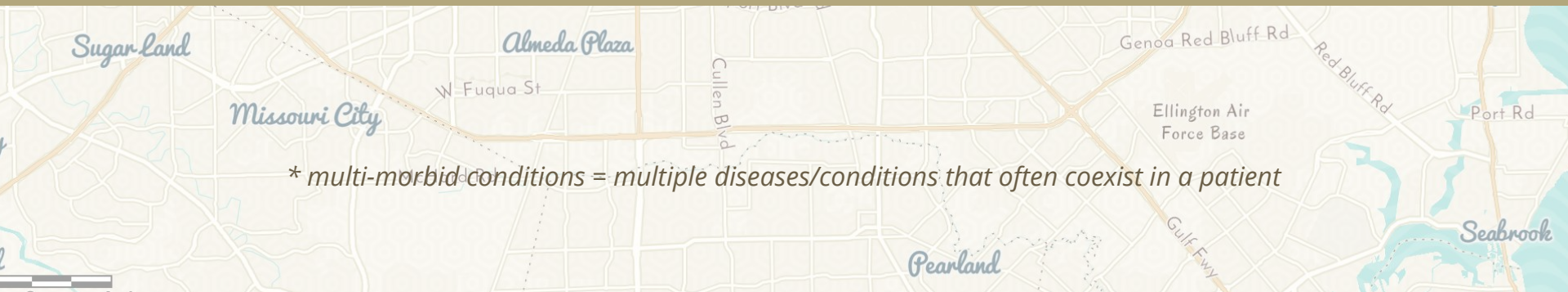
In each scenario ...

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

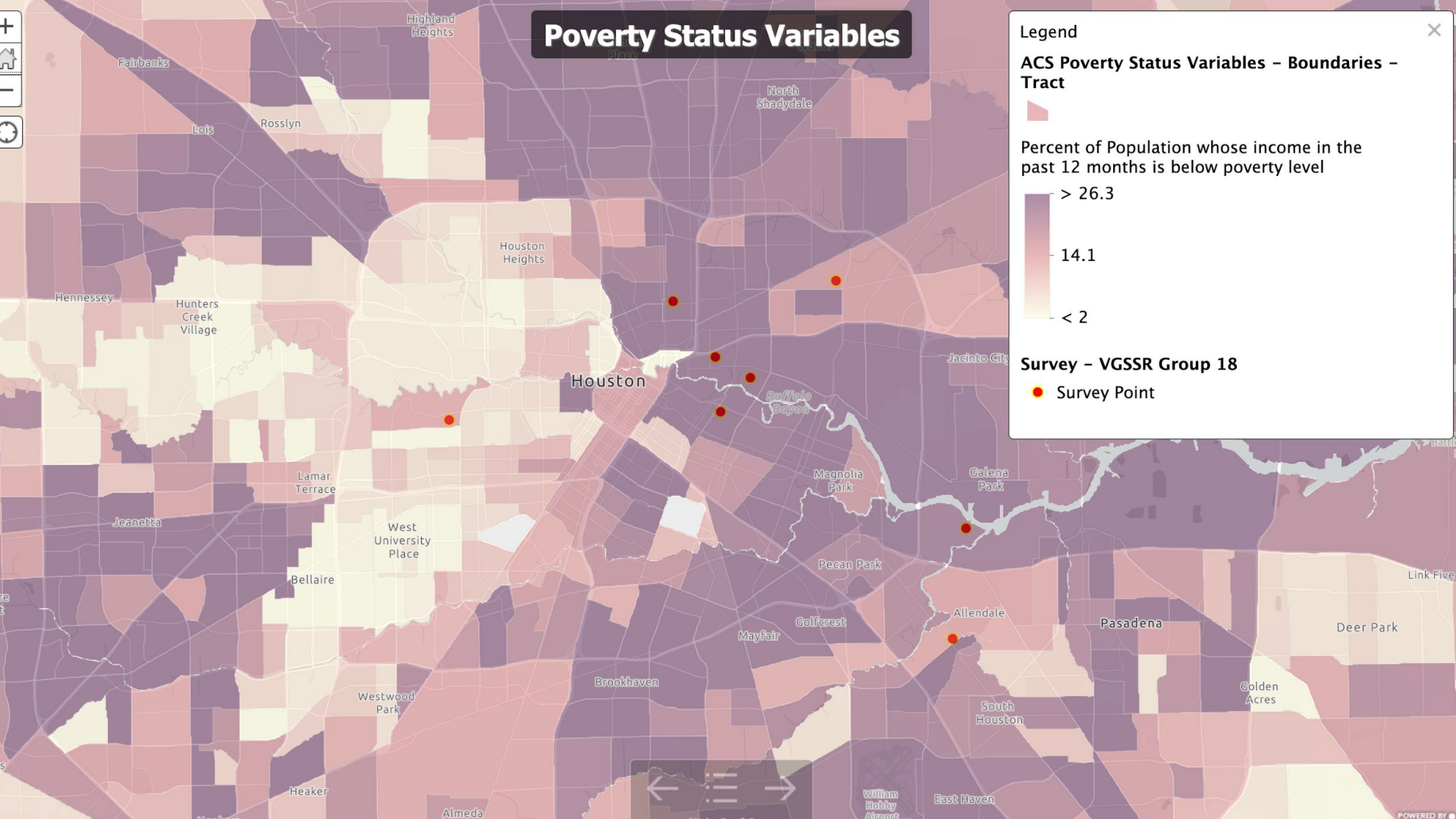
... affect communities where refineries are most prevalent.

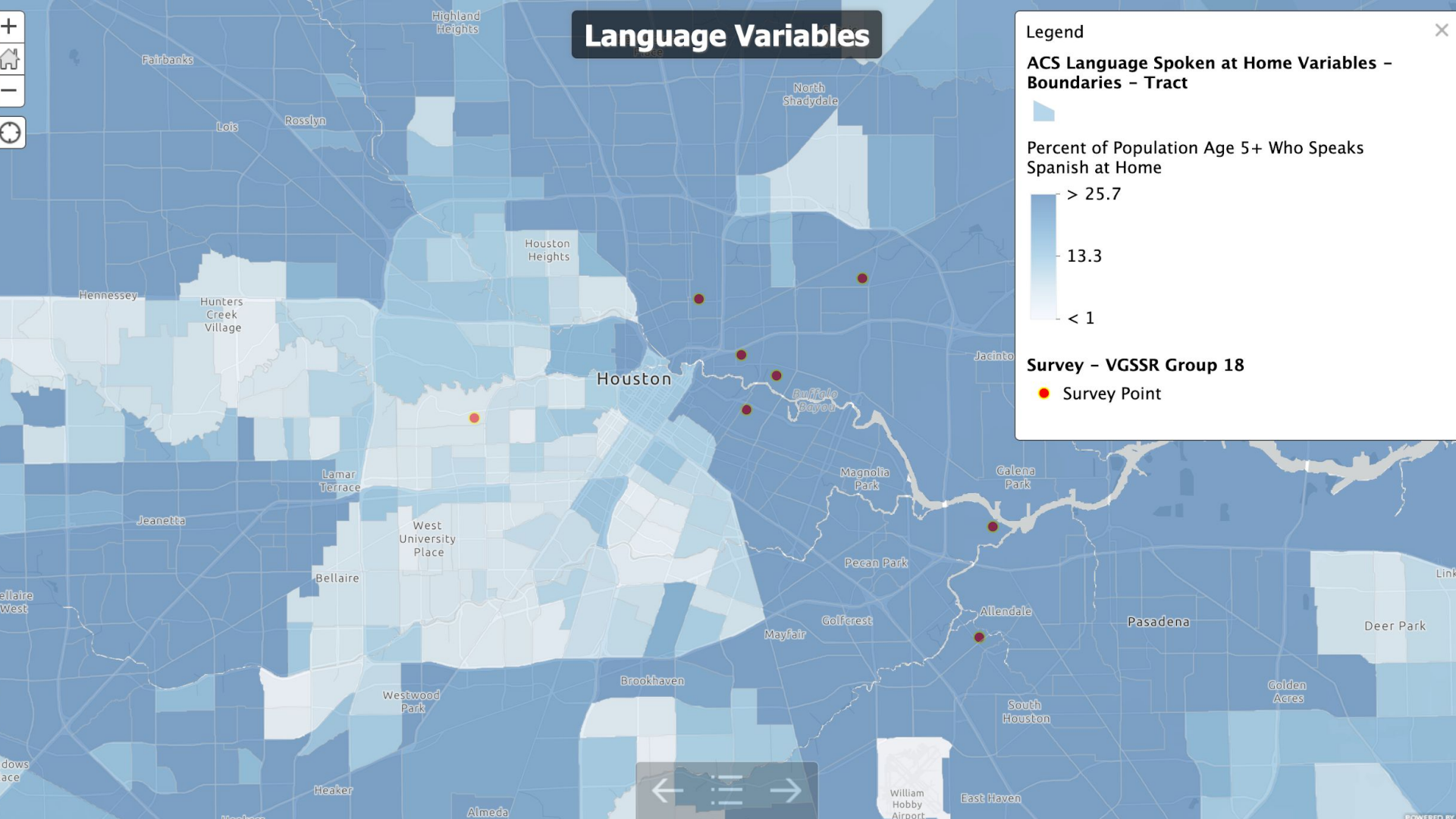


These communities also experience the highest rates of poverty and associated multi-morbid conditions*



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





CDC Social Vulnerability Index: Overall Value

Legend

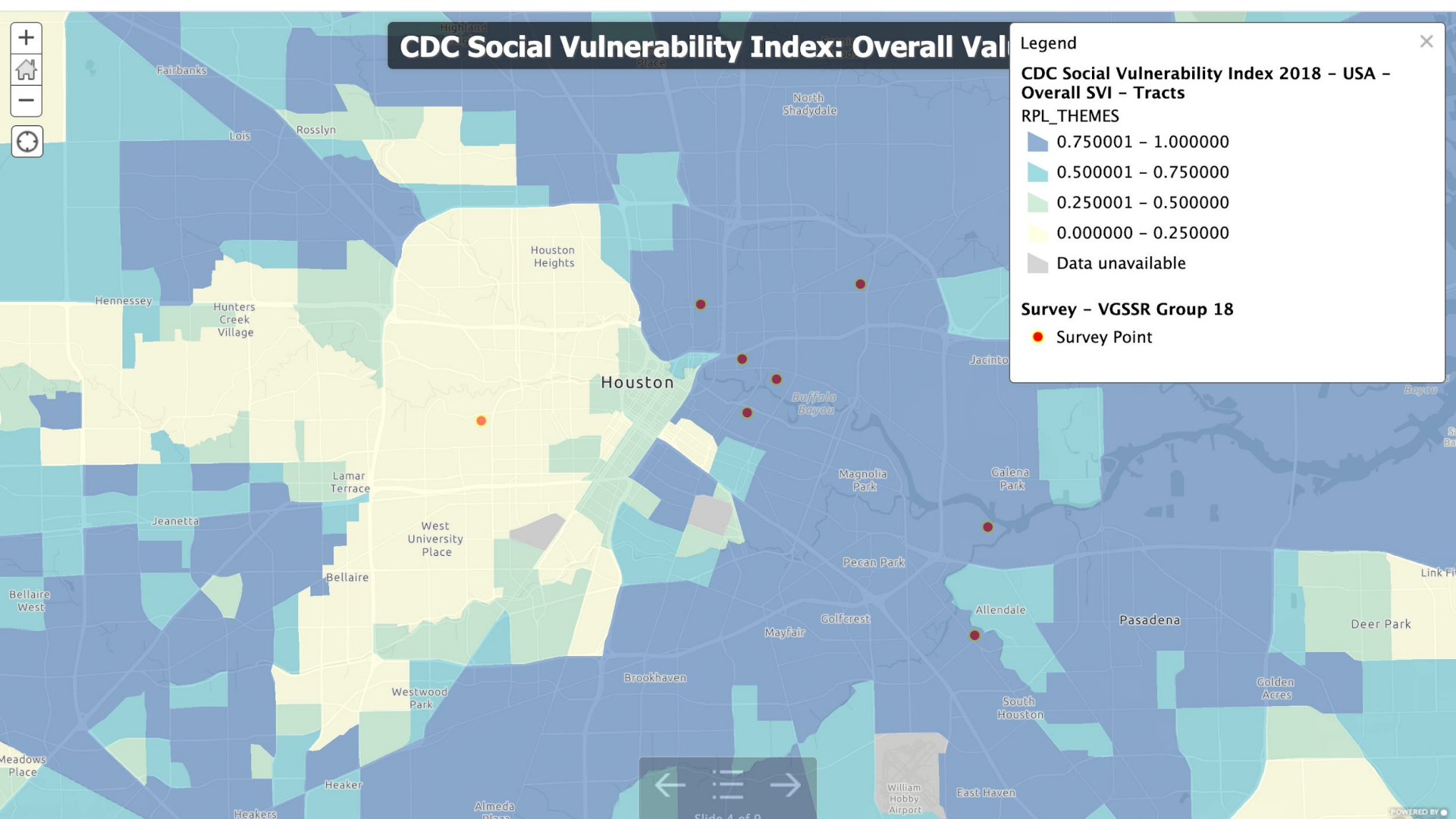
CDC Social Vulnerability Index 2018 - USA - Overall SVI - Tracts

RPL_THEMES

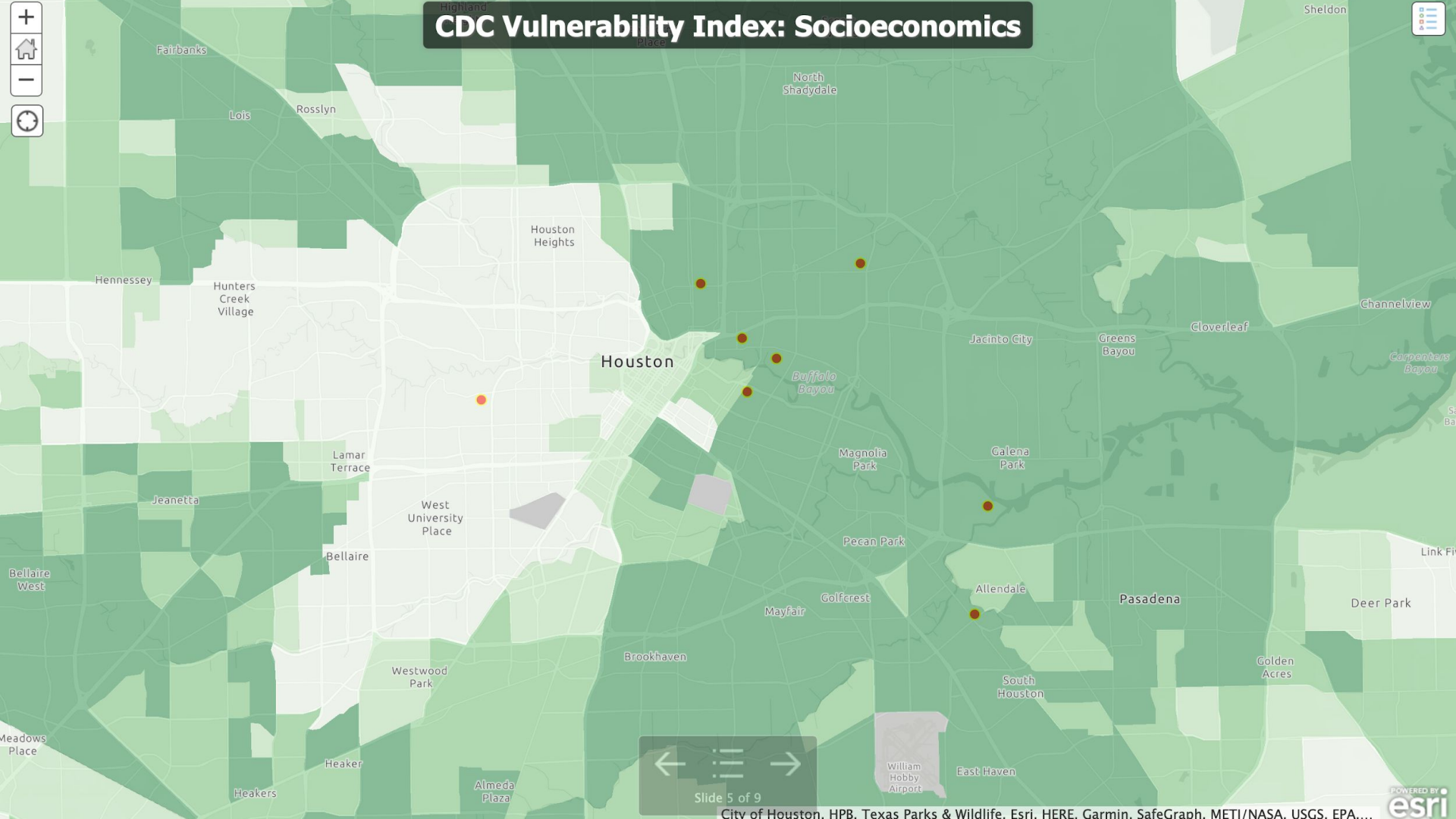
- 0.750001 - 1.000000
- 0.500001 - 0.750000
- 0.250001 - 0.500000
- 0.000000 - 0.250000
- Data unavailable

Survey - VGSSR Group 18

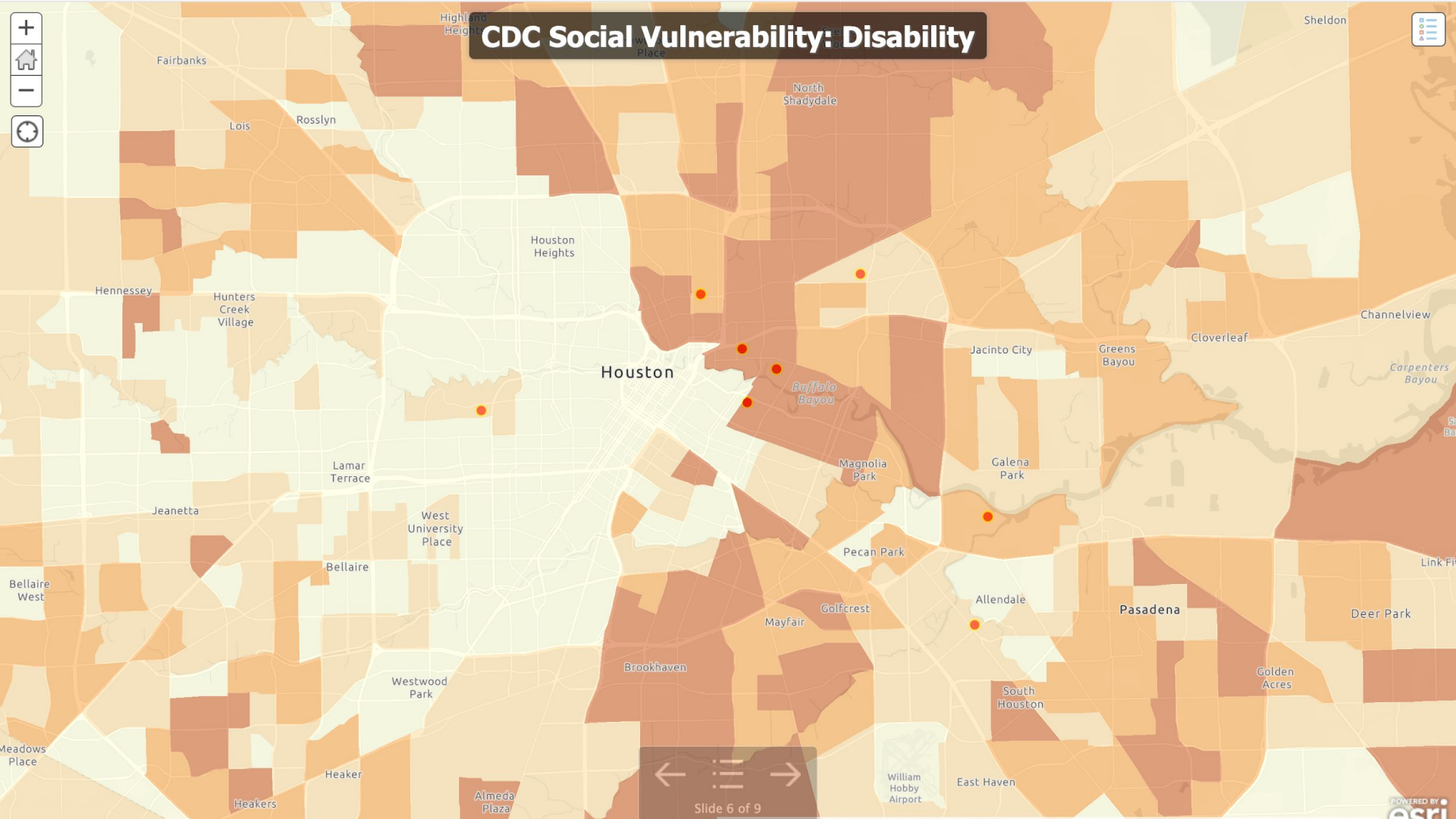
- Survey Point



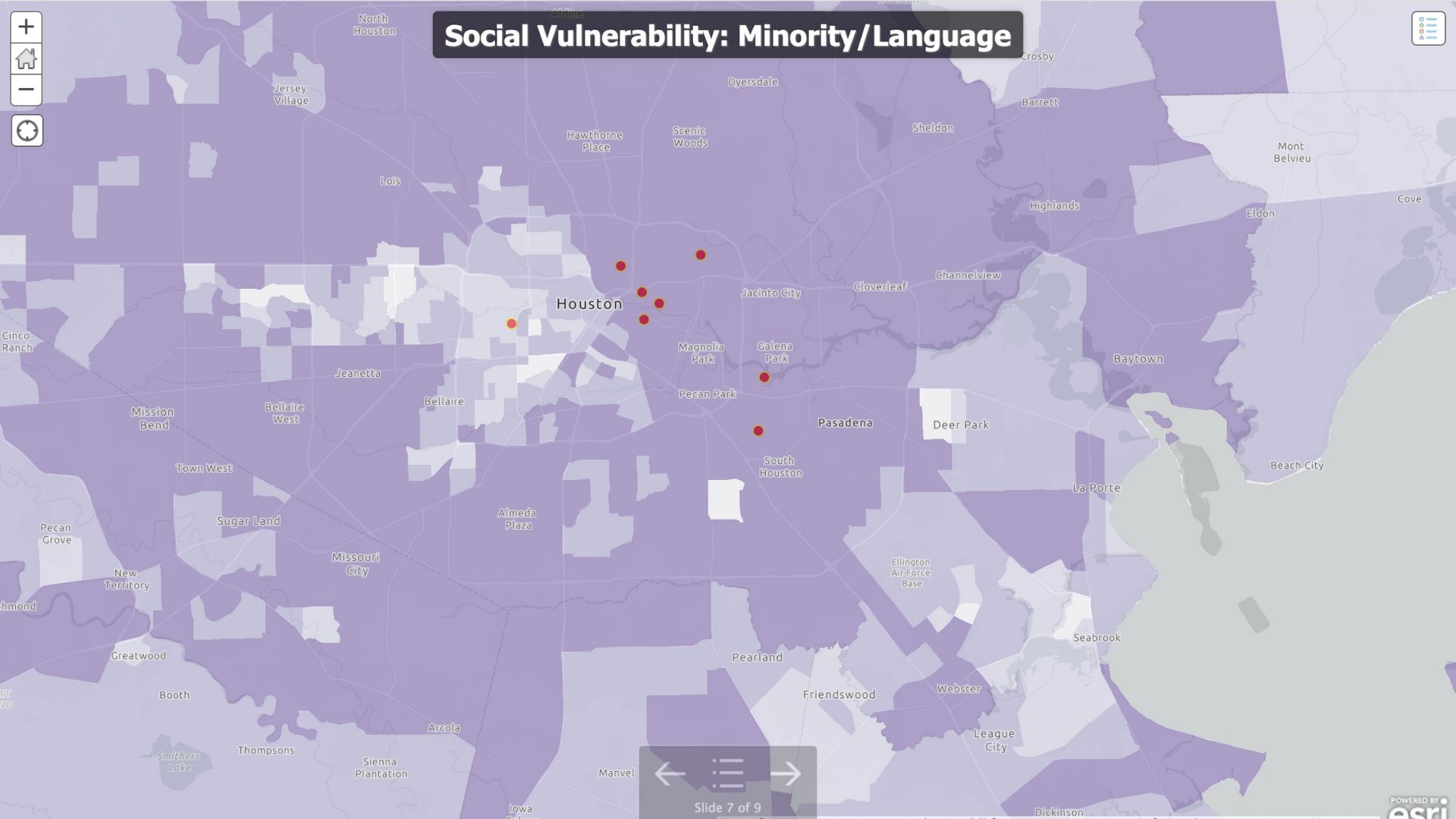
CDC Vulnerability Index: Socioeconomics

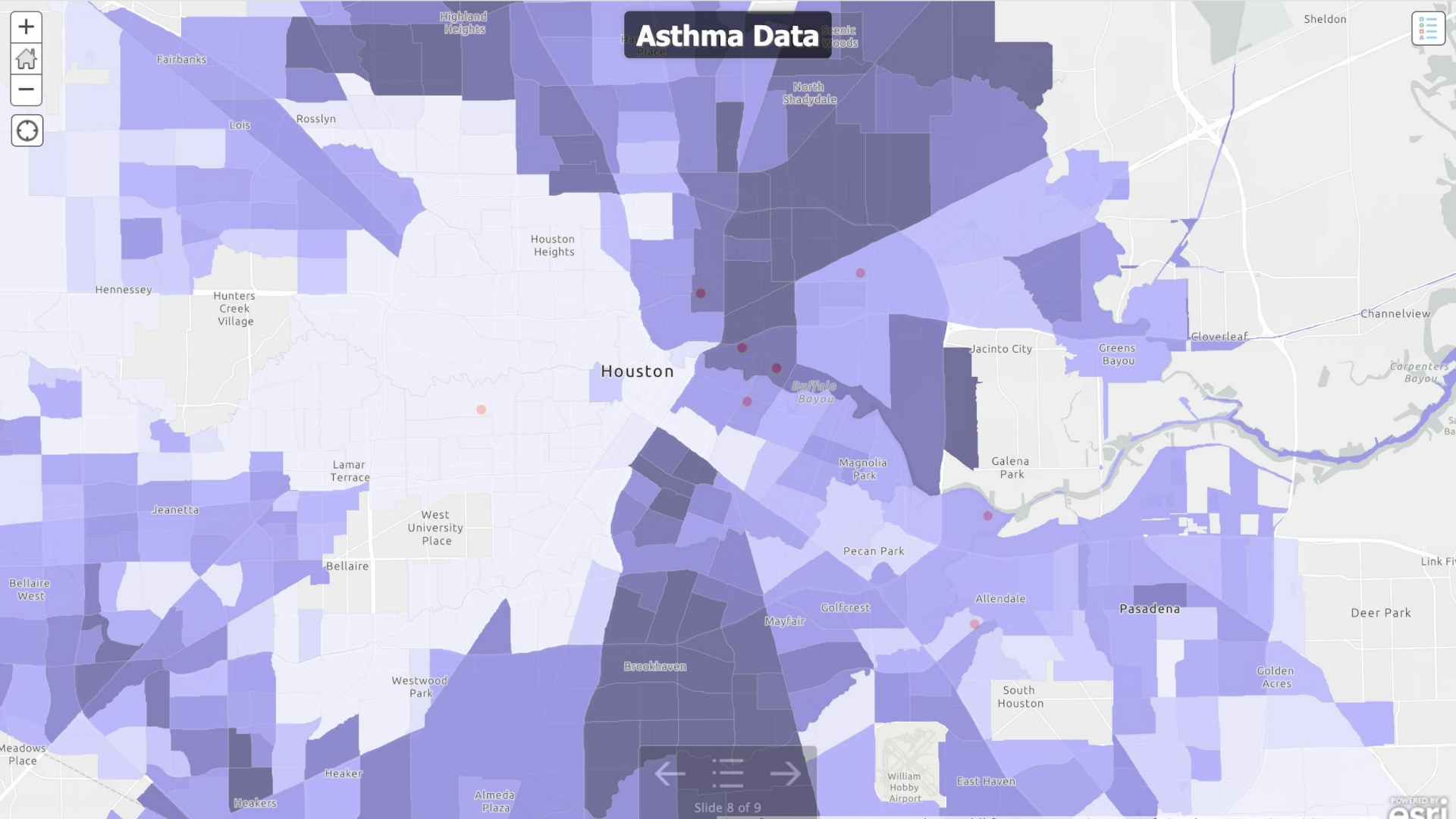


CDC Social Vulnerability: Disability

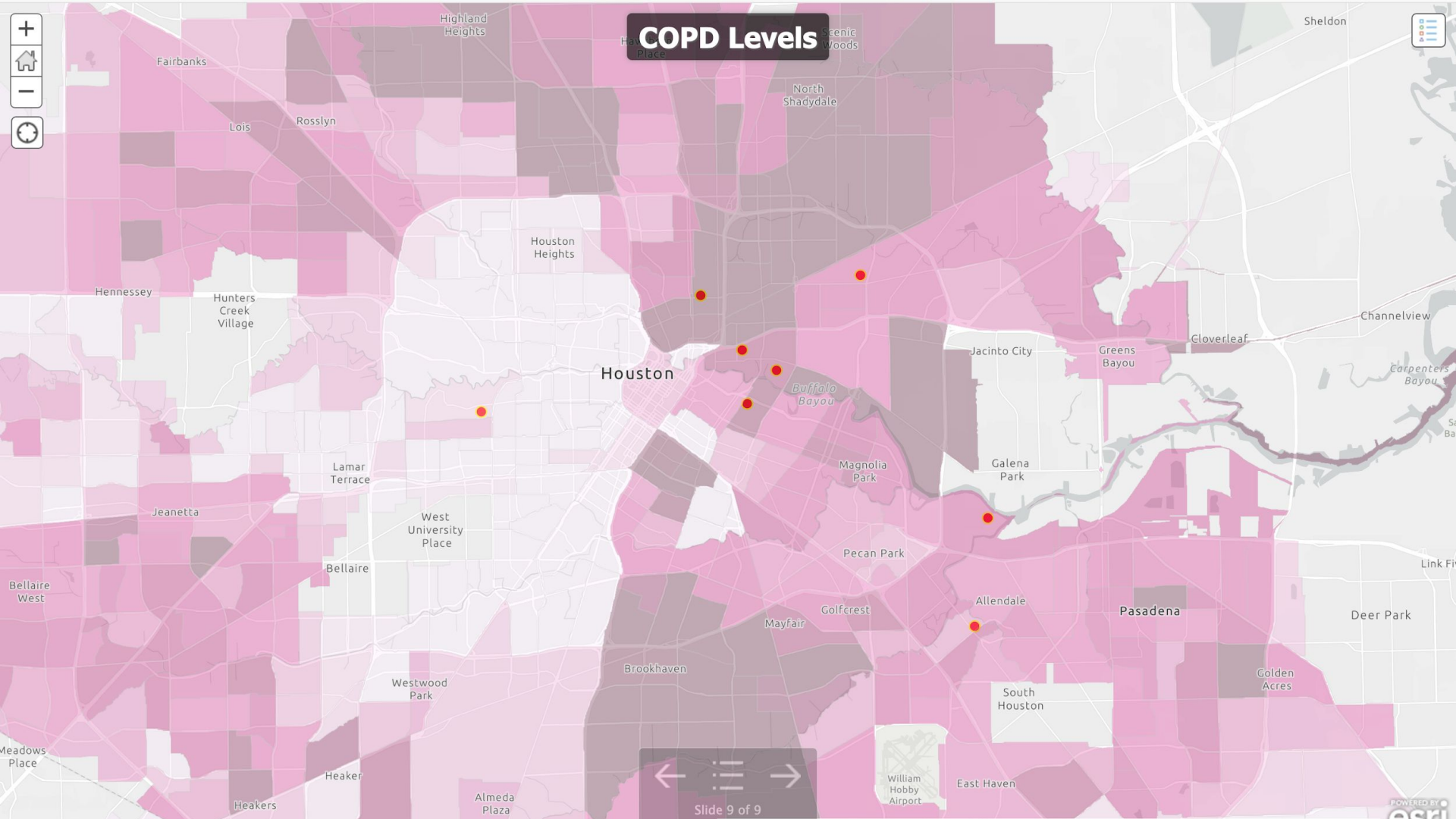


Social Vulnerability: Minority/Language





Asthma Data



COPD Levels

**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

A map of the Houston, Texas area, showing various cities and highways. The word "ATTENTION" is overlaid in large, bold, teal letters. The map includes labels for Jersey Village, Barrett, Woodforest Blvd, Wallisville, Garth Rd, Memorial Dr, IH-10, Chimney Rock Rd, Bellaire, Bellair West, Missouri City, W Fuqua St, Cullen Blvd, McHard Rd, Ellington Air Force Base, Red Bluff Rd, Port Rd, Seabrook, and Baytown. The word "ATTENTION" is centered over the map, with "ATTEN" over the left side and "TION" over the right side. The letters are a vibrant teal color and are in a bold, sans-serif font. The background is a light-colored map with various street names and city names in a smaller, blue font. The map shows a mix of urban areas and green spaces, with some water bodies visible on the right side. The overall tone is informative and direct, emphasizing the importance of the message being conveyed.

ATTENTION

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

A map of the Houston area, Texas, showing various neighborhoods and roads. The map is divided into three horizontal sections by two solid brown bars. The top section shows areas like Jersey Village, W Little York Rd, W Montgomery Rd, Handthorne, Scenic Woods, Dyersdale, Sheldon, and Barnett. The middle section, which is the largest, features the word 'MAKE CHANGE' in large, bold, teal capital letters. The bottom section shows areas like Town West, Sugar Land, Missouri City, Alameda Plaza, W Fuqua St, Airport Blvd, Cullen Blvd, South Houston, Spencer Hwy, Genoa Red Bluff Rd, Red Bluff Rd, Ellington Air Force Base, Port Rd, and La Porte. The map uses a light beige background with blue lines for roads and green areas for parks or water. The brown bars are a solid, medium-brown color.

and to

MAKE CHANGE

wherever we can.