

Census Open Innovation Challenge May 2017

Census policy priority:

Every decade, in years ending in “0,” the U.S. Census Bureau conducts its Decennial Census, apportioning representation in the U.S. House of Representatives, as well as federal funds for critical infrastructure and services such as housing, highways, schools, hospitals, and scores of programs that are vital to the health and welfare of the U.S. population and economy.

It is critical that all those living in the U.S. participate in the 2020 Census. It is therefore vital that people know the impact that the 2020 Census has on their lives, families, communities, and societies.

Yet certain groups have been undercounted at disproportionately high rates, including racial and ethnic minorities, non-native English speakers, low-income people, undocumented immigrants, mobile millennials, children, and those experiencing homelessness. We are bringing together teams of partners from across industries and sectors to ideate new technology platforms and solutions that will drive participation in hard-to-count communities.

What is the problem?

In 2020, our goal is to conduct a complete and accurate census, but there are massive challenges ahead. Historically, certain groups have been undercounted at disproportionately high rates.

These “Hard-to-Count” populations include:

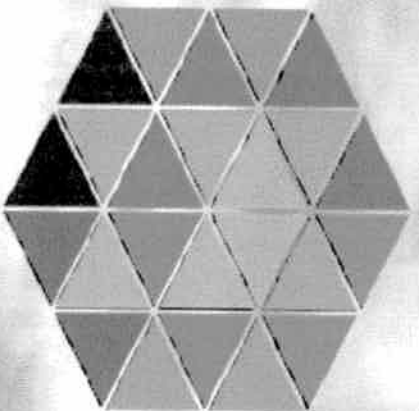
- Racial and ethnic minorities
- Non-native English speakers
- Low-income people
- Young, mobile people
- People experiencing homelessness

User Scenarios:

- Doesn't speak English
- Doesn't know what Census is/does
- Doesn't want to participate or share information
- Doesn't know how to participate

Why is this problem important? When people participate in the Census, they further drive its value by ensuring a complete count. Having an accurate count then ensures the fair distribution of federal spending and apportionment of congressional seats. When segments of the population are undercounted, it results in fewer resources allocated, imprecise policy recommendations, and less congressional representation for those communities. The 2020 Census will also be the first to have an online response option, presenting new challenges with those who aren't digitally connected, but also opening up new opportunities for creative solutions to the undercount challenge.

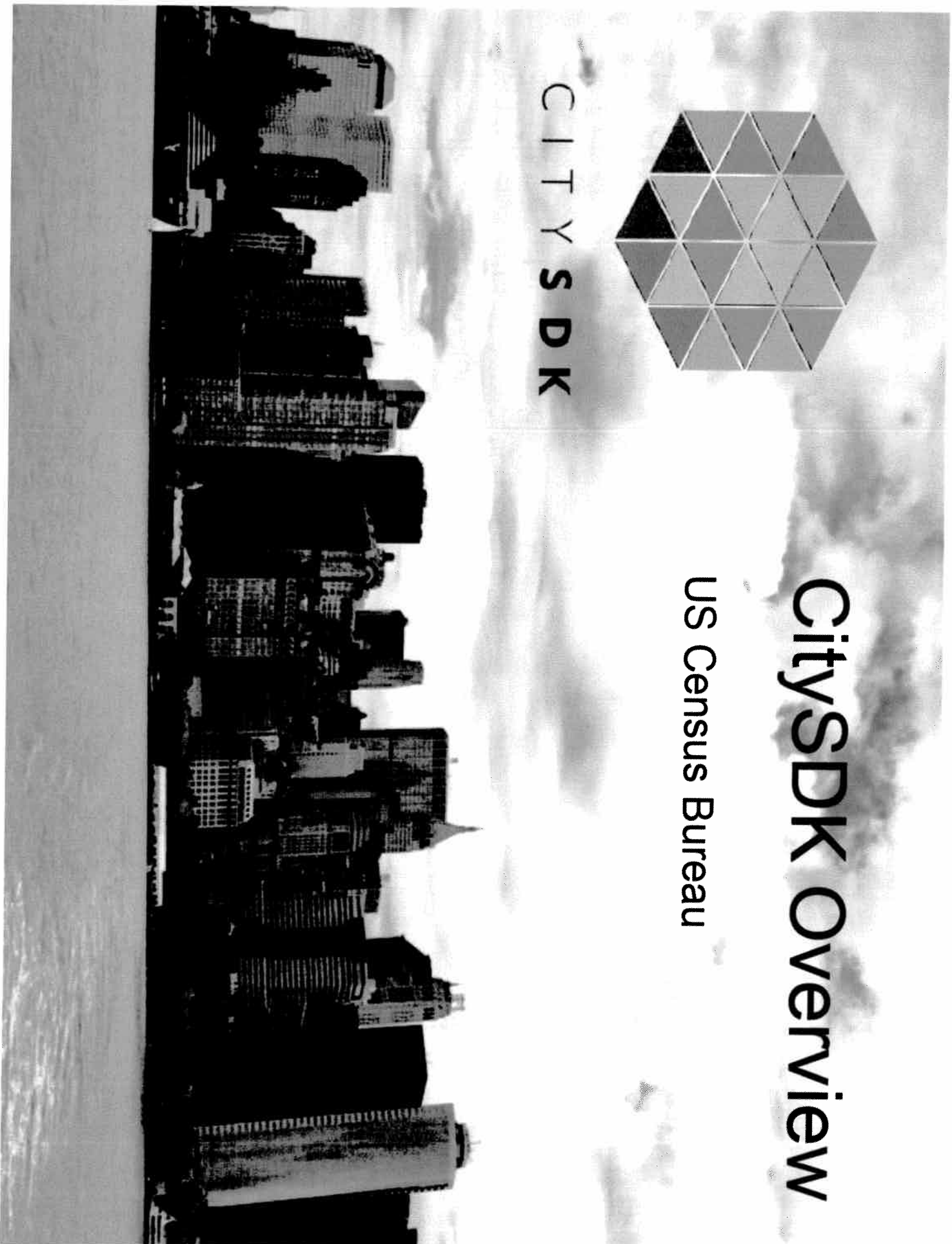
Challenge: How might we enable the Hard to Count to see and experience the value of the Census data and increase their participation?

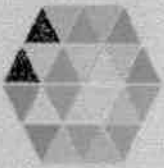


CITY SDK

CitySDK Overview

US Census Bureau





CITY SDK

What is the CitySDK

The CitySDK is a collaboration between the Census Bureau, Department of Commerce, HUD, USDA, and other agencies in the federal government.

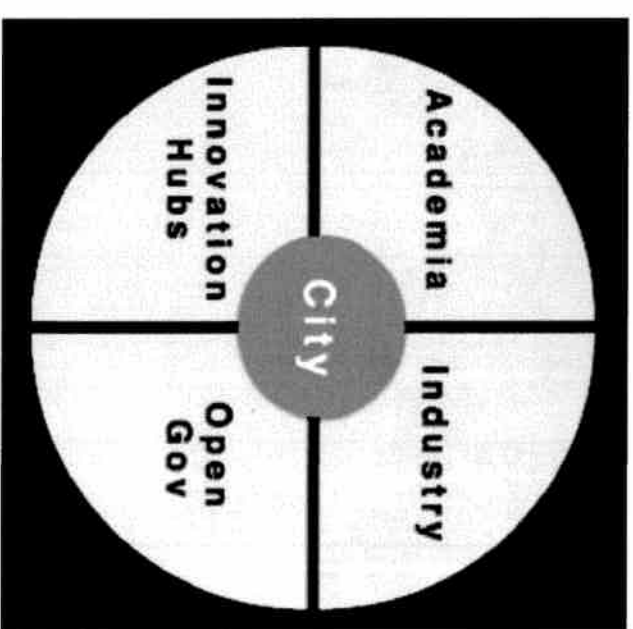
The goal is to support civic innovation, through the efforts like Code for America, and streamline the development of applications that use open data at the federal, state and local levels.



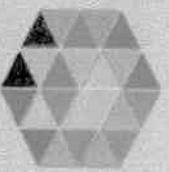
- AWARDED TO -

CitySDK

US Census Bureau



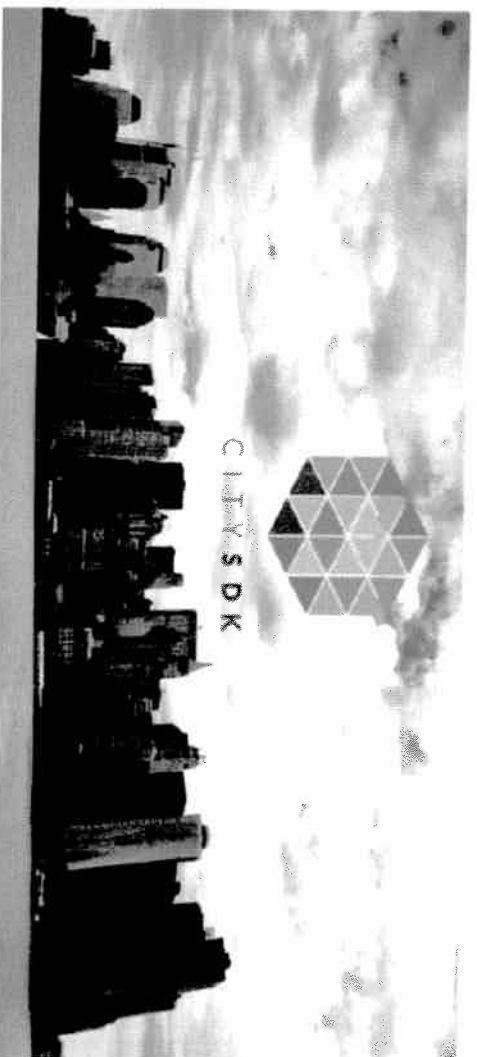
City SDK won 2016 API World Award for best innovations in harnessing data in ways that have a meaningful impact on our nation and our lives.



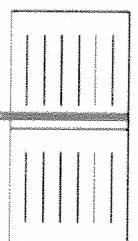
CITYSDK

Open-Source Project

<http://uscensusbureau.github.io/citysdk/>



Toolbox for civic innovators to connect local and national public data



Guides

Check out the "Getting Started" guides, learn how to submit requests, and see what's available with the CitySDK.

[Click](#)

Code Examples

Jump straight to code examples and begin integrating into your data and mapping capabilities with your own applications.

[View](#)

Category

Browse integrations from Corona, FxIO, US2A, iOrange, and other US, American, Spanish, Esri, and more.

[Category](#)

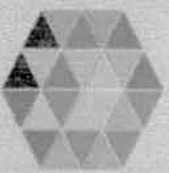
News

Learn about upcoming features, new case studies from civic innovators and find the latest CitySDK updates.

[News](#)

CITYSDK

[Guides](#) [Example Code](#) [Gallery](#) [News](#) [Contact Us](#)



CITY SDK

Partner integrations and example projects

Show All

Browse by Dataset

Browse by Technology

FEMA



Access the Disaster Declarations dataset from the Federal Emergency Management Agency to see what emergencies have occurred in your area.

CitySDK FEMA Module
City of Disaster Declaration Summaries

Civic Spark



The CivicSpark App is for civic tech leaders and entrepreneurs to more easily find free or low-cost stations in their local communities to host.

Dataset: Connection and Incorporation
App: Civic Spark (iOS/Android)

Austin Parks Equity



This is a civic app that aims to help visualize how Austin's park resources are distributed throughout the City of Austin.

Dataset: Parks Austin Parks Equity
App: Austin Parks Equity (iOS/Android)

Hyperlocal



Hyperlocal: Mega Food Truck operators without a locker parking spot find customers by locating trailers from those who are hungry.

App: Who's Hungry? (iOS/Android)

Purshable



Purshable is a mobile app that will help reduce waste, increase grocer's profit, and offer the shopper high quality food at a fraction of the cost.

Partners: various

Accessible Places Finder



This app aims to help people with disabilities to easily find a place to live or travel in the state of Minnesota that matches the specific accessibility needs.

App: Accessible Places Finder (iOS/Android)

US Census Bureau



The Census Bureau's mission is to serve as the leading source of quality data about the nation's people and economy.

Dataset: Census and Incorporation
App: Census (iOS/Android)

Leaflet



Leaflet is an Open-Source JavaScript library for web and mobile browser-based interactive maps. It uses the GeoJSON format.

Dataset: Leaflet NYC Boroughs
App: Leaflet NYC Boroughs

Housing and Urban Development



Access data on FHA Loans, HUD Insured Properties, Fair Market Rents and dozens of other datasets related to national housing and property status.

CitySDK HUD Module
Dataset: Insuring Loans in Progress

US Department of Agriculture



Discover fresh food near you with the National Farmer's Market Directory module.

CitySDK Farmer's Market Module
Dataset: Farmer's Markets in California

US Department of Energy



Access the extensive database of the U.S. Energy Information Agency, broken into categories and use their data series in your visualizations.

CitySDK Energy Information Agency Module
Dataset: Energy Information Agency browser

ESRI



Government, industry, academic, and non-governmental organizations (NGOs) use ESRI to connect with analytic knowledge they

Dataset: ArcGIS Module
Dataset: City Showing DC Service Environment

Socrata



The Socrata platform is commonly used by municipal, state, and federal agencies can to distribute their data.

CitySDK Socrata Module
Dataset: Chicago Payroll Query
Dataset: Chicago Census and Demographics

Google Maps



There are several CitySDK examples that utilize Google Maps to create interactive web apps.

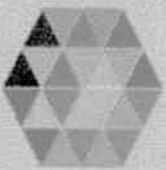
Dataset: Farmer's Markets in California
Dataset: Insuring Loans in Progress

Bing Maps



CitySDK apps can be built with Microsoft Bing's mapping technology.

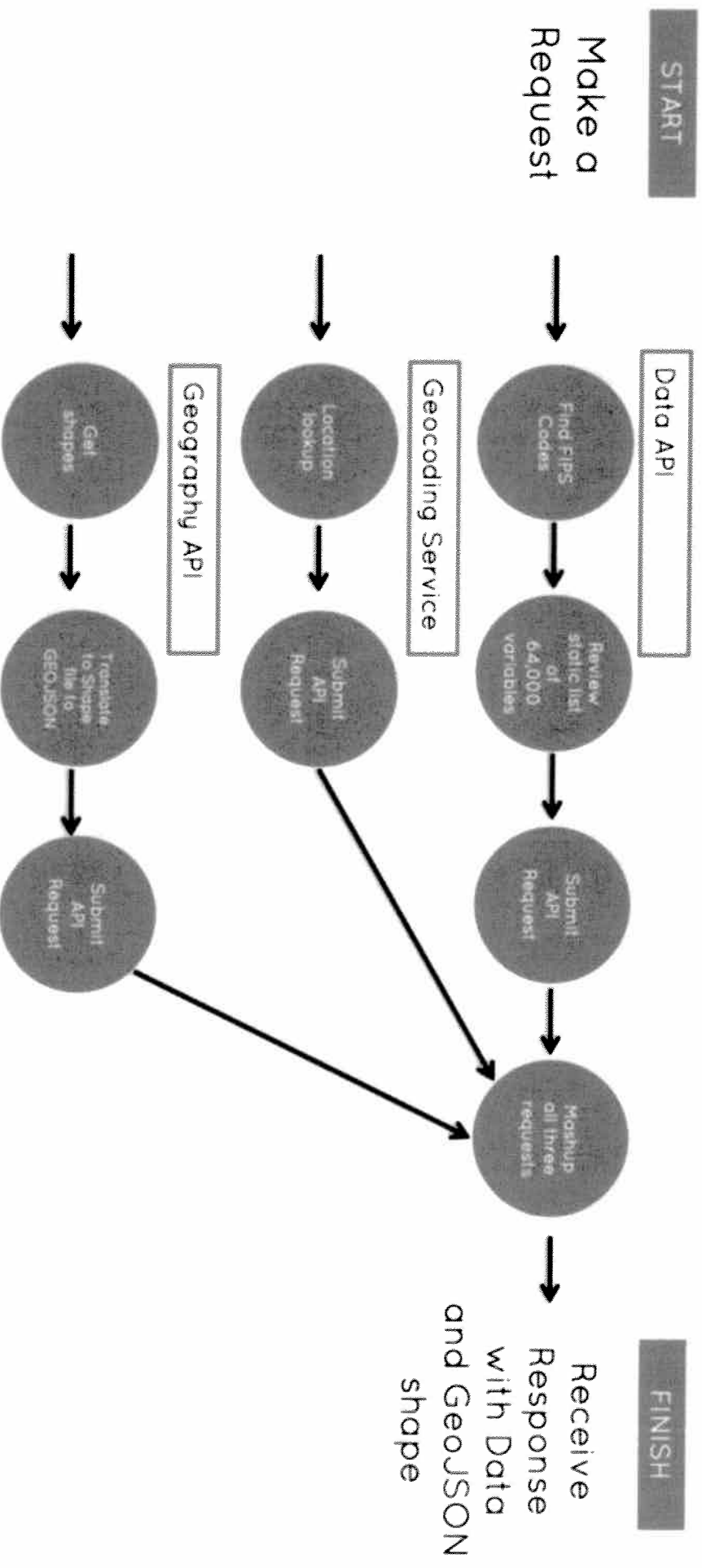
Dataset: Using Bing Maps with the CitySDK

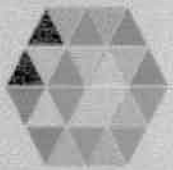


CITY SDK

How the SDK works

Combines multiple datasets using a single call



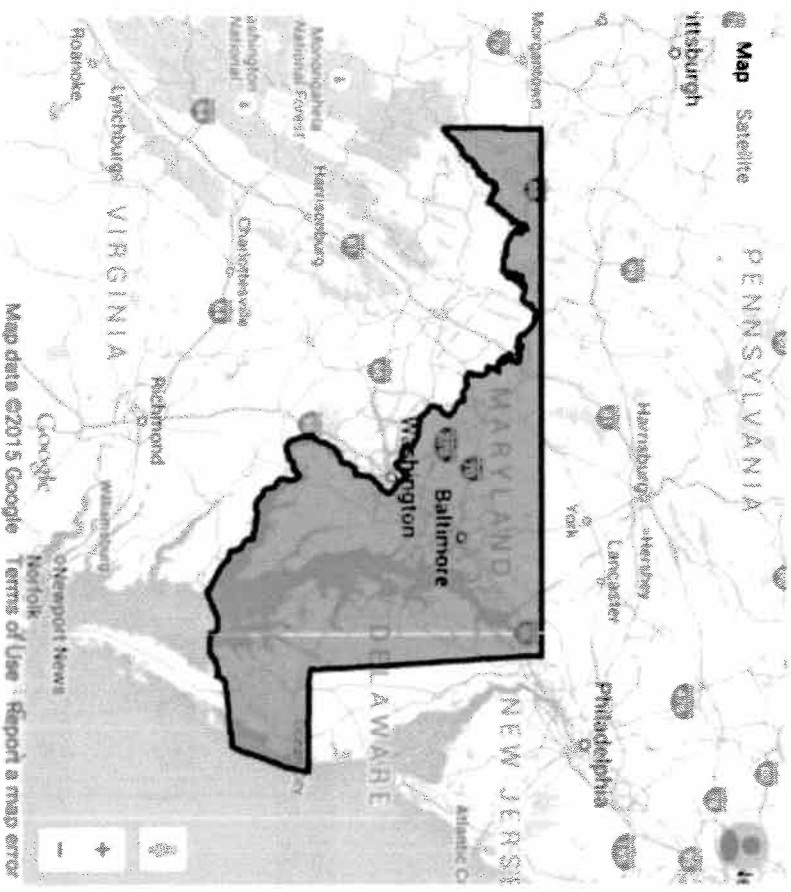


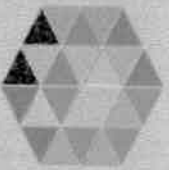
CITY SDK

Acquiring Census Data

Example of simple request for State of Maryland geography

```
var request = {  
  'state': 'MD',  
  'level': 'state'  
};  
  
var callback = function(response) {  
  map.data.addGeoJson(response);  
};  
  
census.GEORequest(request, callback);
```

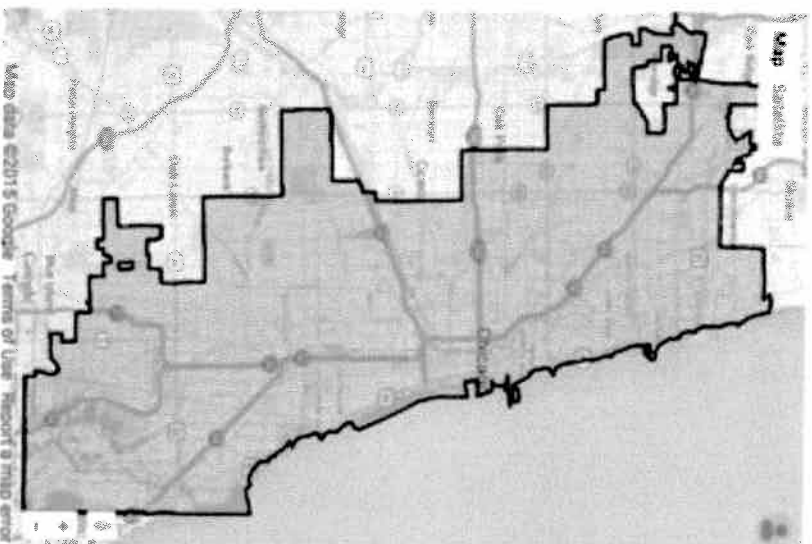




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Combining Federal and Local Data

Uses Census ACS data with Crime data from the City of Chicago



Crime Controls

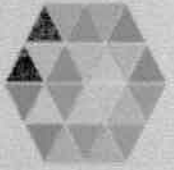
Start date: 01/01/2015
 End date: 06/12/2015
 Crime type: All
 Arrest type: Enter

Demographic and Data Controls

Show boundaries: Chicago

include American Community Survey (2013, 5-year) variables

Median Household income	Income Per Capita	Population
Median Age	Population in poverty	Population Unemployed
Median Criminal Court	Median Gross Rent	Median House Construction Year
Population, High School Diploma	Population, Associate's degree	Population, Bachelor's degree
Population, Master's degree	Population, Professional degree	Population, Doctoral degree
Population, No Education	Population, GED	
Build Character for	Name	
Character mode	Color	Opacity



CITY SDK

Case Study: Purshable

PURSHABLE

BROWSE LIST FAVORITE

AVAILABLE ITEMS

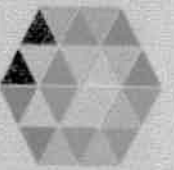
- Apples, 1lb
- Oranges, 1lb
- Grapes, 1lb
- Pineapple, 1lb
- Grapes
- Apples

Elizabeth's Apple Atelier
Apples, 1lb (\$2) Ends 2015-06-12

Closest Farmer's Market
0.3 miles Tower Farmers Market
233 S Wacker Dr, Chicago, Illinois, 60606

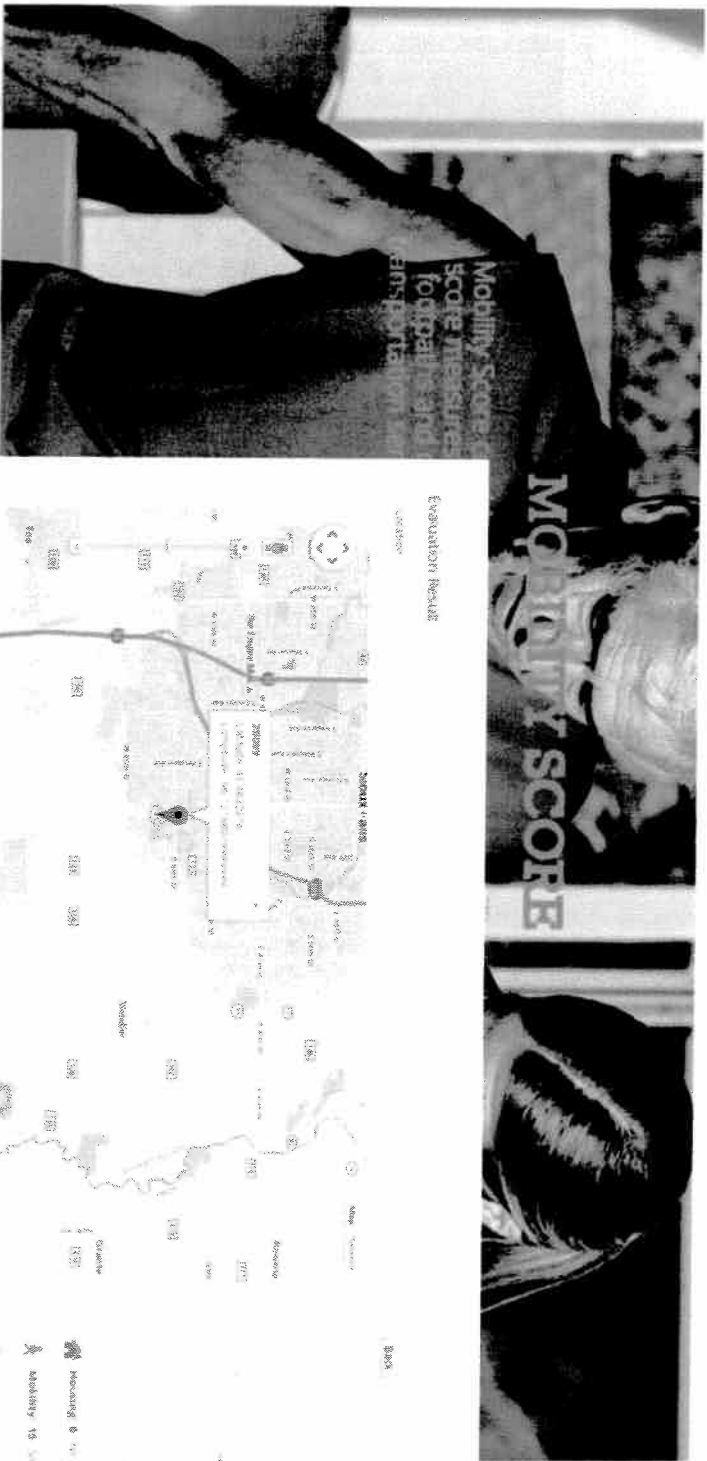
ABOUT BROWSE LIST





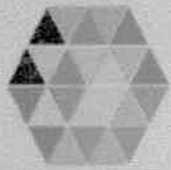
CITY SDK

Case Study: Housing Accessibility



Type



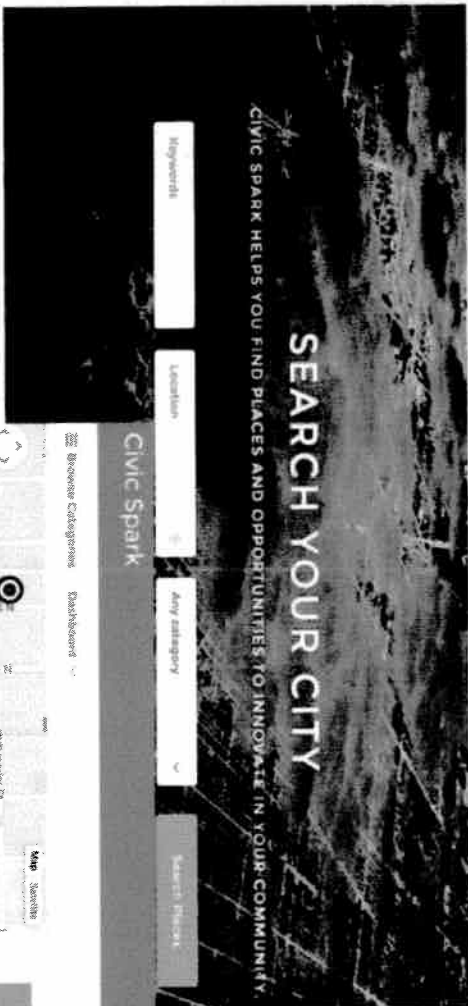


CITY SDK

Case Study: "Airbnb for Tech Spaces"

Civic Spark

Browser Categories Dashboard



Civic Spark

Browser Categories Dashboard

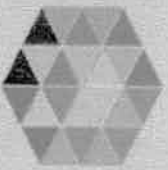


Showing all places located in Chicago, IL, USA within a 50 mi radius

Results Found

2 Results Found





CITY SDK

Where to go for more information

Census Developer Portal:

<http://www.census.gov/developers/>

CitySDK Project Page:

<http://uscensusbureau.github.io/citysdk/>

Submit a Github issue:

<https://github.com/uscensusbureau/citysdk/issues>

