



*Image/Map Credit: Stamen Design*

# OPTIMIZING OPEN DATA

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*@abhinemani | CAPP 30130 | University of Chicago*



# CIVIC TECH: KEYS TO SUCCESS

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## *Empathy*

- ▶ Build with, not for
- ▶ Talk to users
- ▶ Understand behavior
- ▶ Learn what's out there

## *Lean*

- ▶ It's more than just a technical process
- ▶ Expect failure
- ▶ Only build what's necessary
- ▶ Test, test, test

## *Data*

- ▶ Data "lives" everywhere
- ▶ Be ready to scrape
- ▶ Open data is your friend
- ▶ ETLs are your best friend

## *Users*

- ▶ ~~If you build it they will come~~
- ▶ Listen and learn
- ▶ Define metrics
- ▶ Find partners

## *Sustainability*

- ▶ Consider your options: startup, open source, non-profit, academic, etc
- ▶ Tech -> Policy
- ▶ Expect to train everyone
- ▶ Document everything

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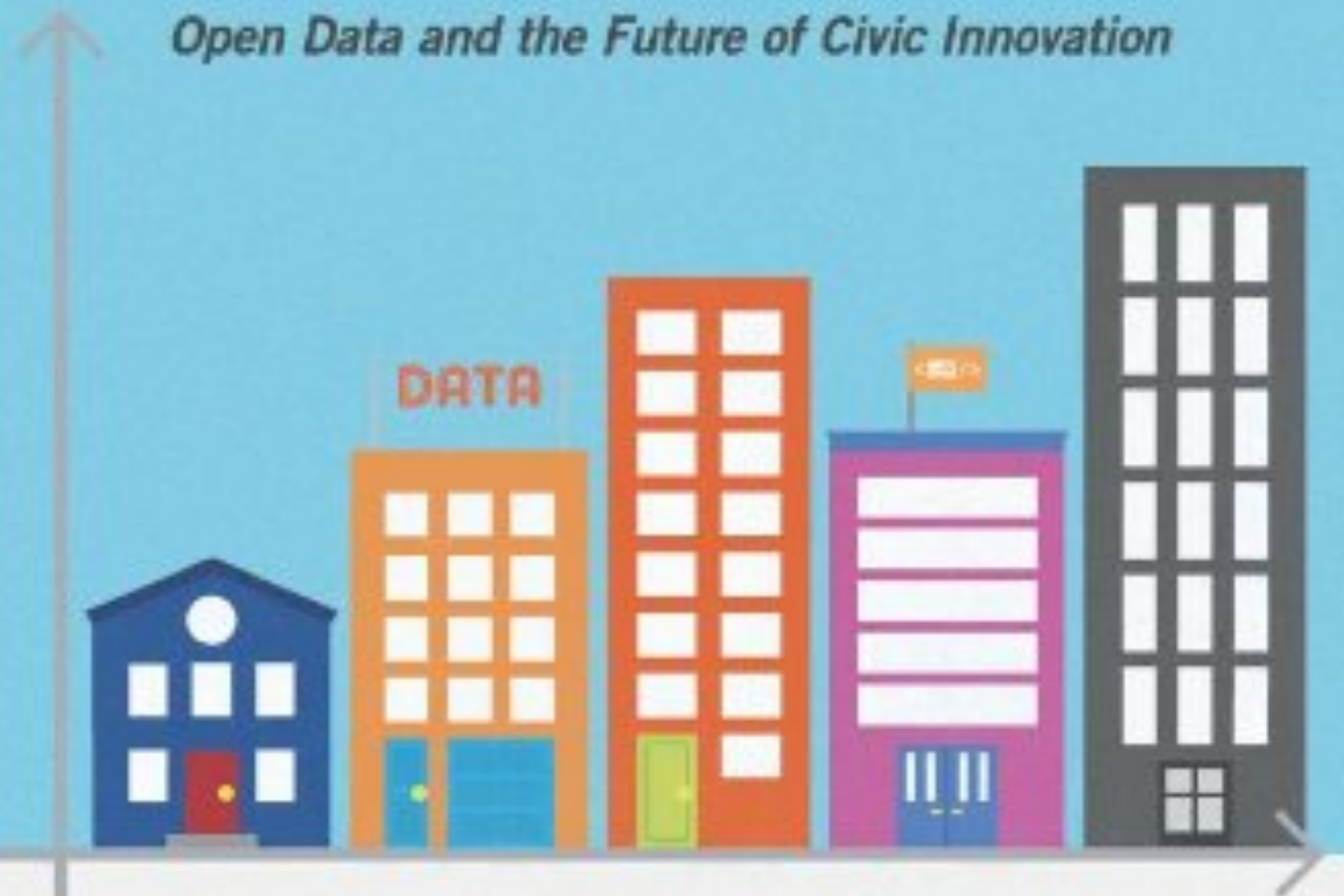
## *Sustainability*

- ▶ Consider your options: startup, open source, non-profit, academic, etc
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Edited by Brett Goldstein with Lauren Dyson

# Beyond Transparency

*Open Data and the Future of Civic Innovation*



*"A must-read for anyone who is passionate about what open data can do to transform city living."*  
—Boris Johnson, Mayor of London

## AGENDA

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- Models of CDO
- Community as capacity
  - Open your doors
  - Create an community identity
  - Good people need good support
  - Make it count
- Making all apps more civic

**“WHAT IS DATA?”**

# 3 MODELS OF CDO



**DATA MANAGER / TRAINER**

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# DATA SCIENTIST

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# DATA EVANGELIST

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Back to Basics: Performance Metrics

Mayor's Executive Directive on Open Data

Featured App: City of LA Event Finder

Search Data...

A Safe City

Public Safety Data

A Livable And Sustainable City

Livability Data

A Prosperous City

Economic Data

A Well Run City

Government Efficiency Data

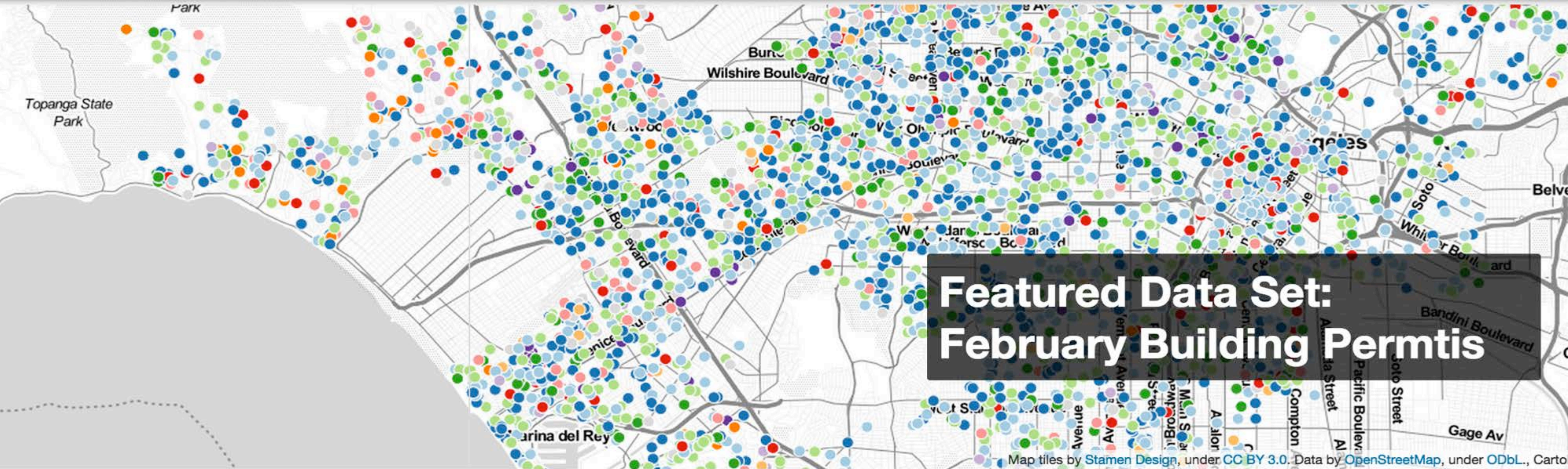
Developers

Developer Resources

Welcome to DataLA, the open data portal for the City of Los Angeles. Here you will find data to conduct research, develop web, online, and mobile applications, and generally learn more about Los Angeles. This site allows you to subscribe to changes in datasets, request new datasets, and participate in discussions with other users. We look forward to seeing what you do with DataLA.

**IF YOU BUILD IT  
THEY WILL COME.**

~~IF YOU BUILD IT~~  
~~THEY WILL COME.~~



# LOS ANGELES OPEN DATA

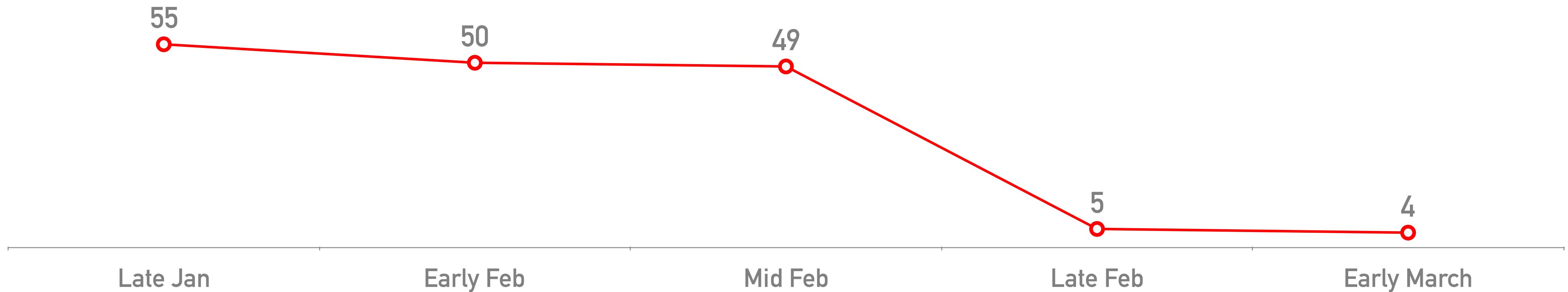
Information, Insights, and Analysis from the City of Los Angeles

# STICKING AROUND

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- *Changing the design of the homepage reduced bounce rate by an order of magnitude.*
- *Traffic also increased 1000%.*

50% -> 5%



**COMMUNITY AS CAPACITY**



Chicago OpenGov Hack Night

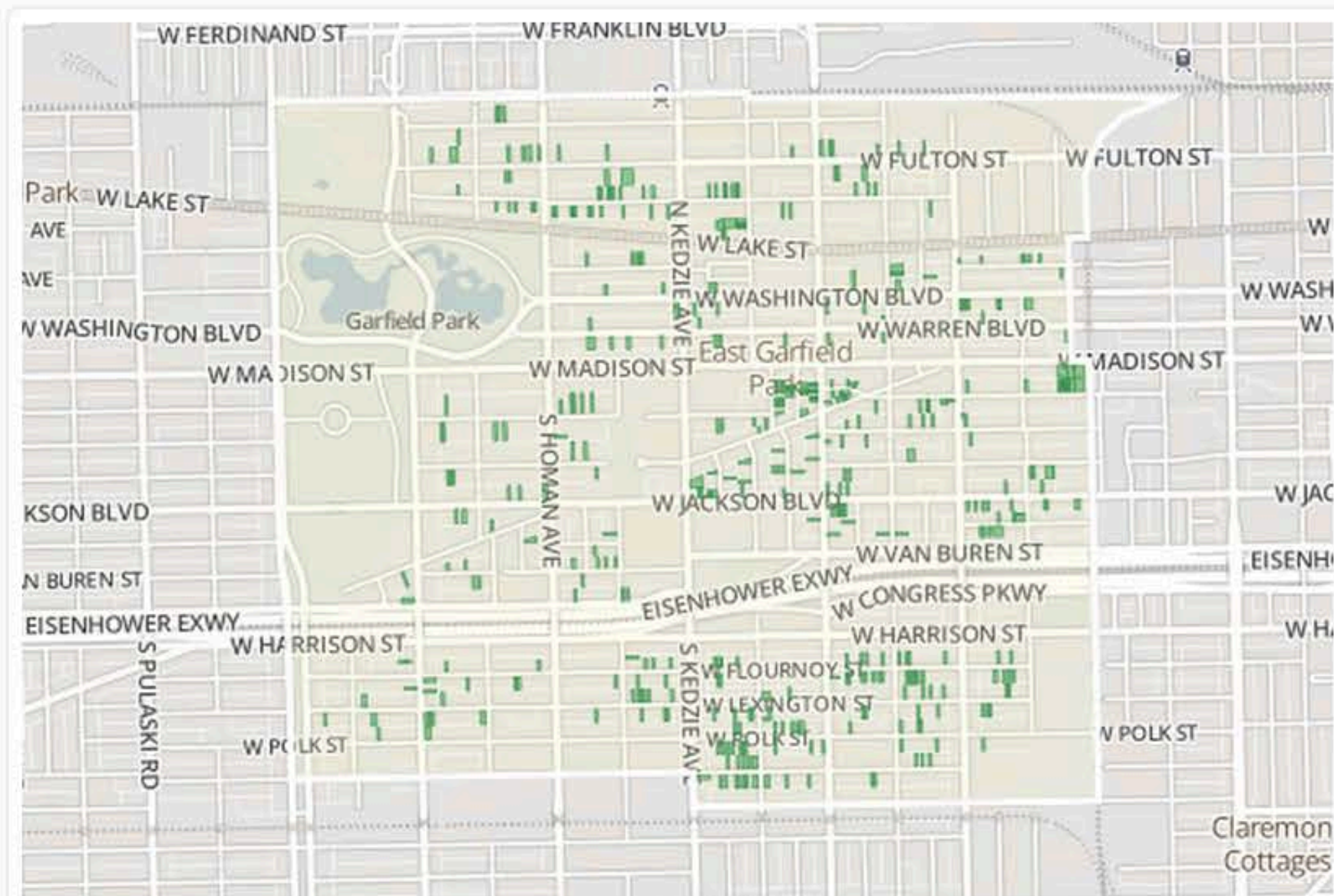




The City of Chicago is selling vacant residential lots for **\$1**. Here's how you get one.

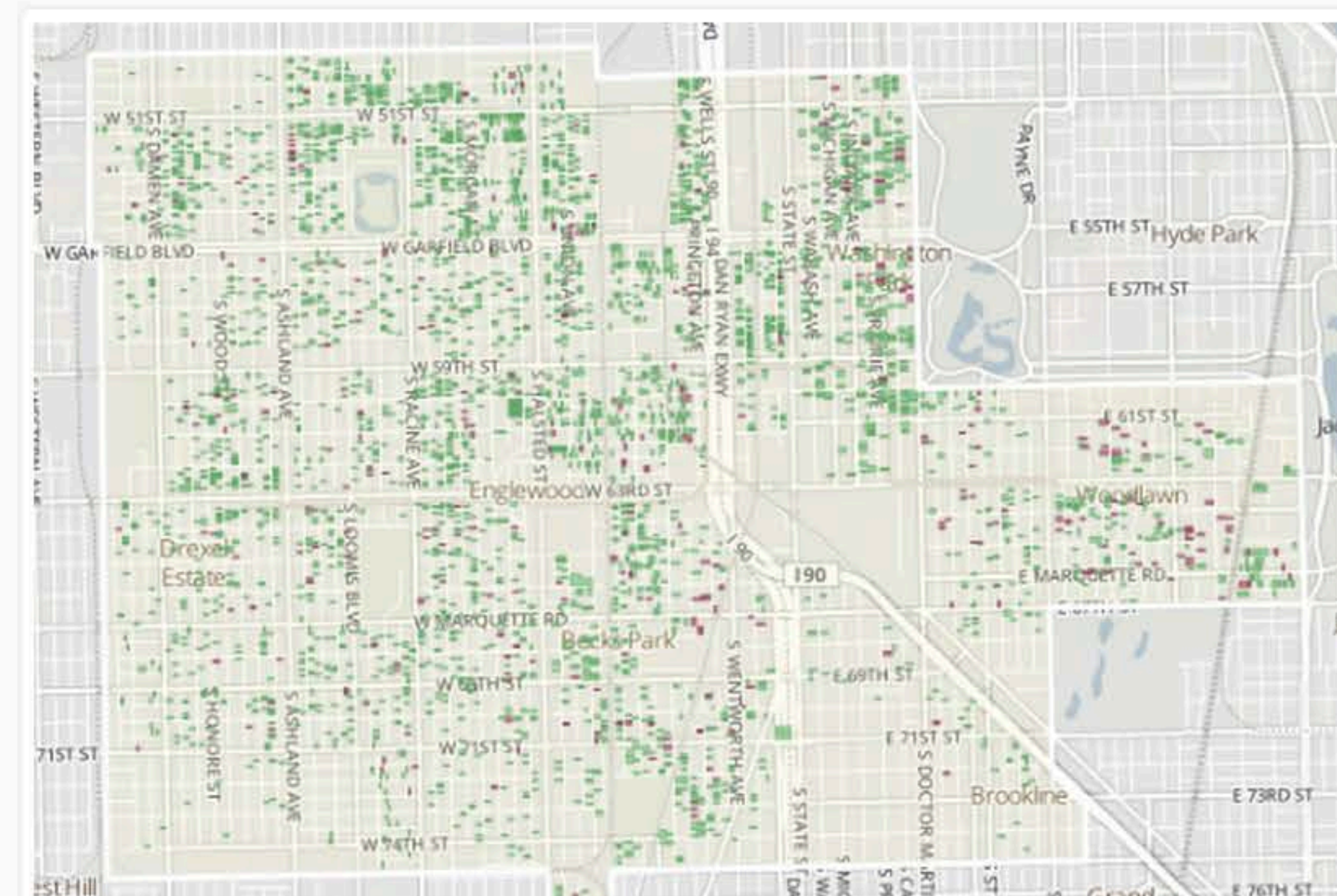
## East Garfield Park Closed

The second Large Lot Program ended in East Garfield Park on **August 4th at 11:59 p.m.** Applicants will be contacted via a letter regarding the status of their application sometime after the 1st week of October.



## Greater Englewood Area Closed

The first Large Lot pilot program ended on **April 21st, 2014** and **414 applications** for lots were received. [Check the status](#) of each lot application. Closings are anticipated for late fall, pending City Council approval.



# 1. OPEN YOUR DOORS (ACTUALLY)

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# 1. OPEN YOUR DOORS (ACTUALLY)

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## 2. CREATE A SENSE OF COMMUNITY

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### 3. BACK GOOD PEOPLE WITH REAL SUPPORT

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# 4. MAKE IT COUNT.

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Create a procurement vehicle



Shine a spotlight



Get creative

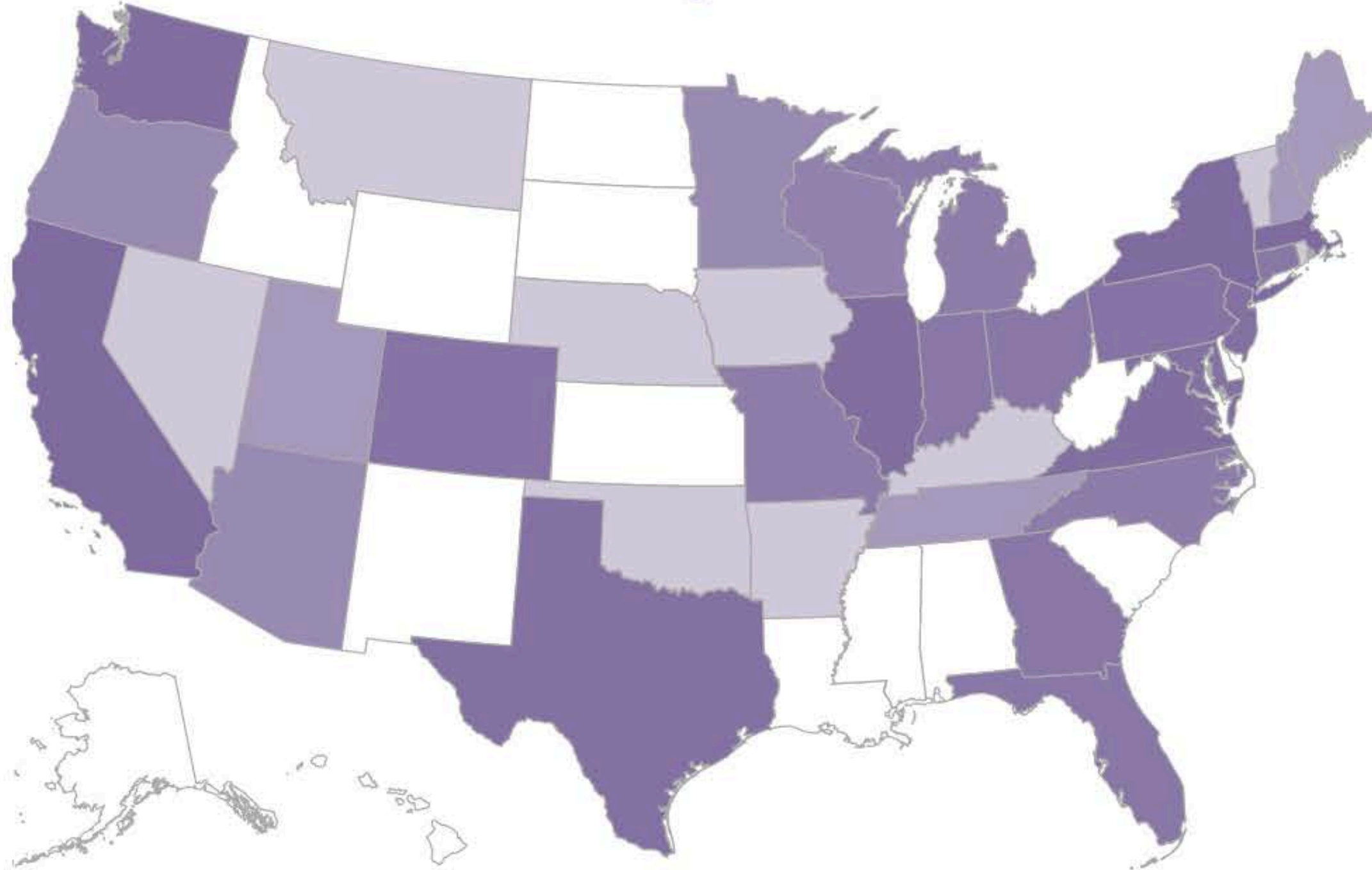
# Open Data 500 Companies

[Download the Datasets](#)

[All Companies](#) [JSON](#) | [CSV](#)

[Agencies and Datasets](#) [JSON](#) | [CSV](#)

## Filter By State



## Category

[Clear Filter](#)

[Business & Legal Services](#)

[Data/Technology](#)

[Education](#)

[Energy](#)

[Environment & Weather](#)

[Finance & Investment](#)

[Food & Agriculture](#)

[Geospatial/Mapping](#)

[Governance](#)

[Healthcare](#)

[Housing/Real Estate](#)

[Insurance](#)

[Lifestyle & Consumer](#)

[Media](#)

[Research & Consulting](#)

[Scientific Research](#)

[Transportation](#)

## Federal Agency

[Clear Filter](#)

[Dept of Commerce](#)

[HHS](#)

[Dept of Energy](#)

[SEC](#)

[Dept of Labor](#)

[Dept of Education](#)

[EPA](#)

[Dept of the Treasury](#)

[Dept of Agriculture](#)

[Dept of the Interior](#)

[Dept of Transportation](#)

[Dept of Homeland Security](#)

[Dept of Justice](#)

[Federal Reserve Board](#)

[Dept of Defense](#)

[NASA](#)





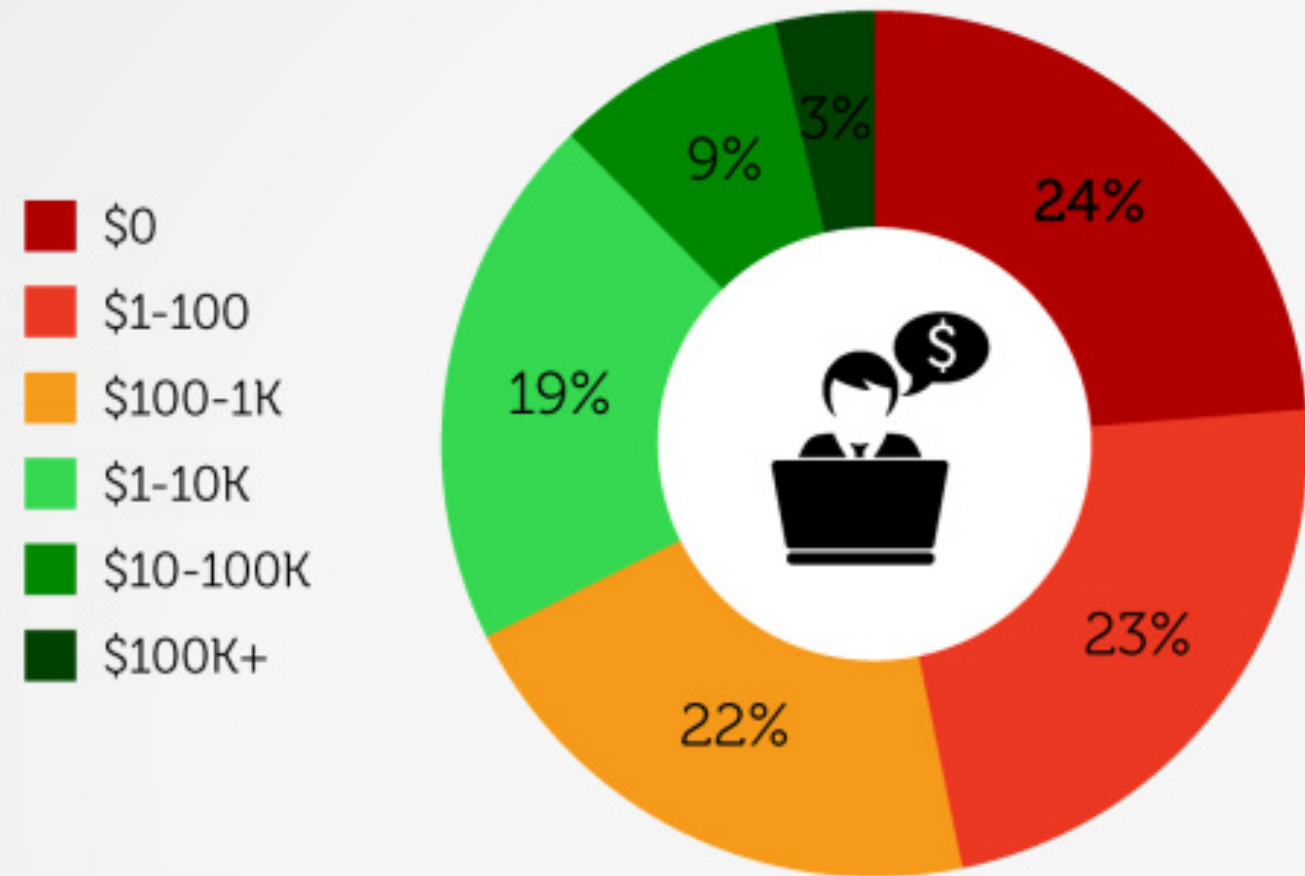
# THE APP ECONOMY IS A WINNER TAKES ALL GAME

How many app businesses are sustainable?



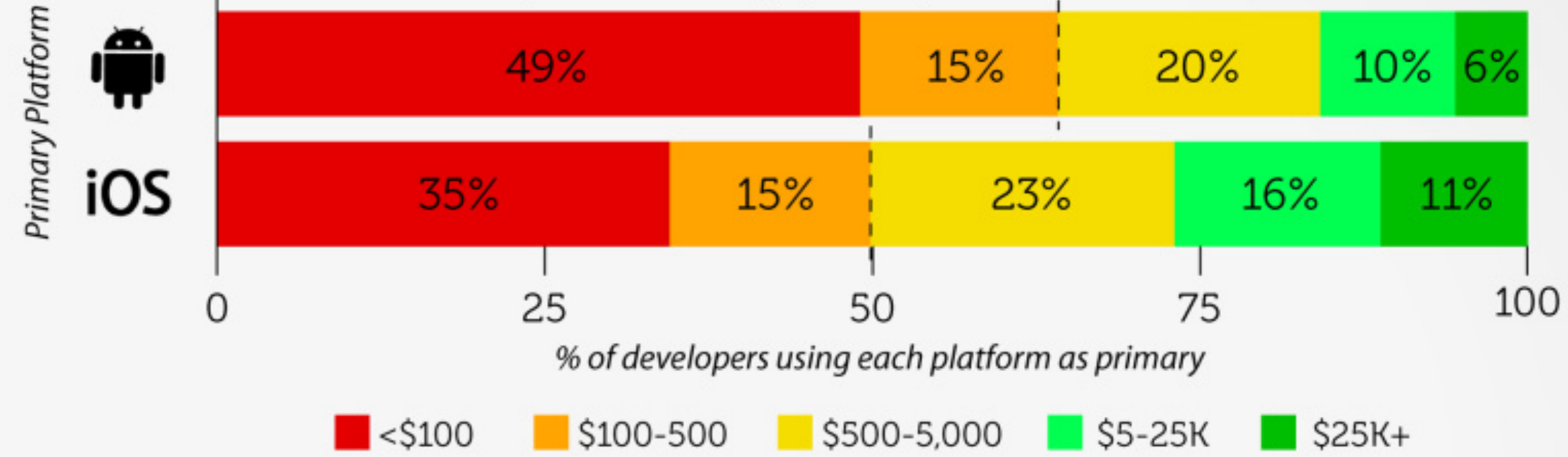
## Monthly App Revenues

% of all developers interested in revenues



## Revenue Distributions - Android vs. iOS First

Developers below app poverty line ▶



**1.6%** of developers have an app earning >\$500k per month. Together they earn multiples of the other **98.4%** combined.

## How App Revenues are Split

Here's how revenues are split amongst those earning < \$500k per month. Box area is proportional to the fraction of total revenues earned by each group.



**“APP ECONOMY IS A WINNER  
TAKES ALL GAME”**

of Madison, or 2 miles north. The actual number of blocks between any two locations will vary.

Suburban street numbers vary; some use Chicago's system, others have their own. Local numbers are not shown.

WHERE can I find locations?

On the city/suburban map, street numbers are shown every mile in purple. Only streets that buses run on are shown. On the downtown map, street numbers are shown along the sides every 2 blocks, and all streets are shown.

Both maps have their own alphabetical Points of Interest tables. Use the coordinates on the map sides (A-3, etc.) to locate these.

WHEN and HOW OFTEN does service run?

Trains: All routes operate 24 hours except Skokie Swift, Ravenswood, and Evanston Express. Trains generally run every 5 to 15 minutes all day and evening. See Rapid Transit section below.

WHICH is the best route?

There may be different routes to reach your destination, depending on the time, day, and what's important to you: Speed? Use trains, express buses, and diagonal streets. Simplicity? Make the fewest transfers, even if it takes longer. Least amount of walking? Check the street numbers to measure distance.

Then, locate your destination and trace BACK to your starting point, using your choices above, in the most direct way possible. Finally, check that the service is running when you want to go.

TRAVEL INFORMATION CENTER — (CTA, Pace, Metra)

We're open everyday from 5 AM to 1 AM  
From Chicago (312) 836-7000  
From Suburbs (800) 1-800-972-7000 (toll-free)  
TTY (hearing impaired) (312) 836-4949

City/Suburban Map Legend

Legend for CTA Rapid Transit, CTA/PACE Bus, and Metra Commuter Rail. Includes symbols for routes, stops, and boarding directions.

NEED FOR STANDARDS

Chicagoans call our rapid transit trains the 'L' (short for elevated), because originally all the routes were on elevated tracks. Today our trains also run in subways and in the middle of expressways, but our nickname has stayed! This section will show you how easy it is to use our fast, frequent, convenient train lines.

Train Names

CTA operates six rapid transit train routes. They are named for the areas they serve or the street or expressway they run along. The routes are:

- O'Hare-Congress-Douglas
- Howard-Englewood-Jackson Park
- Lake-Dan Ryan
- Ravenswood
- Evanston
- Skokie Swift

Each route is shown in a different color on the map to make it easy to follow, but the routes are NOT known as the "Red Line" or "Blue Line".

Train Signs

Train signs do NOT show the train's destination, and they do NOT show the train's direction. Train signs ONLY show the route name (such as Lake-Dan Ryan), and the stopping pattern (such as A, B, All Stops, or Express).

To determine that you are going in the correct directions, look for the signs at the station that are overhead or on the platform columns.

A and B "Skip Stop" Service

On the map you'll see most stations marked with an A or B symbol. CTA runs "skip-stop" A and B trains on most routes during weekday rush hours.

A and B trains alternate, following one another. A trains stop only at A and AB stations; B trains stop only at B and AB stations. To ride from an A station to a B station, change trains at an AB station (without additional charge). All downtown stations are AB except for State/Harrison (B only).

At all other times, trains make all stops along the route (except for part-time stations).

Service Hours

Table with columns: Route, Monday-Friday, Saturday, Sunday/Holiday. Lists routes like O'Hare-Congress-Douglas and Howard-Englewood-Jackson Park.

Service Frequency

- Weekday rush hours: Every 5 to 10 minutes on all routes
- Midday, evening, weekends: Every 7 to 15 minutes, except:
- Congress and Douglas branches: every 30 minutes in late evening
- Ravenswood: every 20 minutes on Sunday early morning and late evening
- Overnight (1:30am-4:30am): Every 30 minutes, except:
- Howard-Englewood-Jackson Park: every 15 minutes between Howard and 58th
- Congress & Douglas branches: every 60 minutes
- Evanston Shuttle: every 30 to 45 minutes

Transfer Points

North Side: FREE connections at Howard between Skokie, Evanston, and Howard-Englewood-Jackson Park routes. FREE connections at Fullerton and Belmont between Ravenswood, Evanston Express, and Howard-Englewood-Jackson Park routes.

Downtown Loop Elevated: FREE connections at Clark/Lake or Adams/Wabash between Lake-Dan Ryan, Ravenswood, and Evanston Express routes. If you need to change platforms, use the overhead walkway bridge.

Downtown Subways: FREE connections at Washington and Jackson between O'Hare-Congress-Douglas route (Dearborn Street subway) and Howard-Englewood-Jackson Park route (State Street subway). Walk downstairs from platform and use lower level walkway to other subway.

Between Downtown Subways and Downtown Loop Elevated: There is no free transfer point. Purchase a transfer at the start of your trip. Change routes downtown by walking between whatever stations are closest on the downtown map.

Part-Time Stations

Closed on days & times when trains are still operating over the route.

Table with columns: Route & Station, Open: Monday-Friday, Saturday, Sunday/Holiday. Lists stations like North/Clybourn and Harrison/State.



Downtown Points of Interest and City/Suburban Points of Interest lists. Includes locations like Adler Planetarium, American Police Museum, and various museums and landmarks.

CHAPTER 10

# Pioneering Open Data Standards: The GTFS Story

In 2005, I was working at TriMet, the public transit agency in Portland, Oregon, as an IT manager for Geographic Information Services. Earlier that year, while traveling, I found it very frustrating to try and find transit directions in the unfamiliar cities I was visiting. This was especially true when transportation agencies that provided differing services or areas were not consolidated. It was much easier at that time to get driving directions from popular online mapping services, and I realized this was probably encouraging car usage over public transit.

In my role at TriMet, I worked with transit data every day, so I knew such data was available and the potential was there. We offered our own online transit trip planning tool, as many agencies do. The trouble was, the average citizen often didn't know where to go to find this information, especially if he or she was unfamiliar with the local transit system. The general public was used to going to certain online destinations for driving directions—Google Maps, MapQuest, and Yahoo were all widely used at the time—but the data they needed to plan a trip using public transit wasn't available where they were looking.

← CHAPTER 9      PART 3 →



**Bibiana McHugh**

*IT Manager  
Trimet*

*IT Manager of Geographic  
Information Systems for Portland's  
Trimet public transit agency. Open  
data evangelist.*

 @trimet

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## SKIP TO

- Bringing Data to the Citizens
- Scaling Up
- Why Standards Matter for Cities
- Lessons Learned for Scalable Standards
- Standards for Better Public Service
- About the Author
- References



The biggest advantage of being part of the GTFS standard for agencies is that their information appears in a global set of search products that are easy to use and visited by millions and millions of people every day.

*Bibiana McHugh*



**“KILLER APP STRATEGY”**

**GTTFS**

10+ years.  
Major corporations.

# of other popular  
data standards: \_\_\_\_\_

# How Yelp Might Clean Up the Restaurant Industry

Ever wonder about the risk of vermin infection at your favorite eatery? The review site is teaming up with public-health officials to make health ratings count.

EMILY BADGER | JUN 19 2013, 10:05 PM ET

107

Like

98

Tweet

0

+1

11

Share

More



Jason Ford



Find tacos, cheap dinner, Max's

Near San Francisco

Home About Me Write a Review Find Friends Messages Talk Ev

## AQ Restaurant & Bar

★★★★☆ 350 reviews Rating Details

Categories: American (New), Bars [Edit]

1085 Mission St  
(between 7th St & 6th St)  
San Francisco, CA 94103  
Neighborhood: SoMa

(415) 341-9000  
<http://aq-sf.com/>

### Menu

Health Score: 78 out of 100

Hours:  
Tue-Sat 5:30 pm - 11 pm  
Sun 11 am - 2 pm  
Sun 5:30 pm - 10 pm

Delivery: No  
Accepts Credit Cards: Yes  
Parking: Street  
Attire: Casual  
Good for Groups: Yes  
Good for Kids: No  
Takes Reservations: Yes

Price Range  
Take-out:  
Waiter Service  
Outdoor Seating  
Wi-Fi: No  
Good For:  
Music: Background  
Best Nights: Thu, Fri, Sat  
Happy Hour: No  
Alcohol: Full Bar



AQ Restaurant & Bar > Health Inspections

## AQ Restaurant & Bar

June 20, 2012 — Routine Inspection

### Violations

- Moderate risk food holding temperature [ date violation corrected: ]
- Foods not protected from contamination [ date violation corrected: 6/20/2012 ]
- Unclean hands or improper use of gloves [ date violation corrected: 6/20/2012 ]
- Unclean or unsanitary food contact surfaces [ date violation corrected: 6/20/2012 ]

Health Score

78

out of 100

### About Yelp Health Scores

We collect public inspection data directly from your city's health department. Due to the city health department's inspection schedule as well as the time it takes to pass that information on to us, it is possible that we may not display the most recent inspection data. Please report any unreasonable delay and data inaccuracies to your city's health department.

# LIVES DATA STANDARD

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## Local Inspector Value-Entry Specification (LIVES)

These examples show sample data for each file in the [LIVES data specification](#). You can also download complete examples from the [LIVES Feeds page](#).

### Businesses

The businesses.csv file contains information about businesses. **This file is required.**

business_id	name	address	city	state	postal_code (optional)	latitude (optional)	longitude (optional)	phone_number (optional)
3597	WOK THIS WAY	4200 BERRY DRIVE	YELPTOWN	CA	94122	33.984208	-117.713943	4153765021
3610	THAI TANIC	330 LESLIE WAY	YELPTOWN	CA	94124	34.058345	-117.180213	4154299439
3624	TEQUILA MOCKINGBIRD	505 FINCH AVE	YELPTOWN	CA	94123	34.09198	-117.352738	4159499783
3626	PITA PAN	29 KING ST	YELPTOWN	CA	94105	34.135472	-116.055729	4157947060

### Inspections with Scores

The inspections.csv file contains information about inspectors' visits to businesses. **This file is required.**

business_id	date	score	type (optional)
3597	20150113		followup
3597	20140114	65	routine
3597	20140121	80	followup
3610	20140122	92	routine
3624	20131108	98	routine

# STRENGTH IN NUMBERS

---





San Francisco, CA

0 SAVED



Sign In



**SALE!** Cable, Internet & Phone with INSTANT REBATES! Now as low as \$29<sup>95</sup> per service / per month [LEARN MORE](#) **astound**

[See similar homes](#)

## 280 Casitas Ave

San Francisco, CA 94127 (Sherwood Forest)

4 bed, 4 full, 1 partial bath 3,300 sqft

Single-Family Home

For Sale / Resale

**\$2,299,000**

\$11,649 / mo [Mortgage Center](#)

**astound**.ENABLED

### Ask about this property



**Pete Brannigan**  
(415) 483-7021

PRO 0




Hi, I found your listing on Trulia and would like to set up a time to see this property. Please send me more information about 280 Casitas Ave in San Francisco. Thank you.

Contact Agent

By sending, you agree to Trulia's [Terms of Use & Privacy Policy](#).

★ Follow Like Hide

Get My Credit Score Get Prequalified

Photos (1 of 36)

Street View

Map

Broker: Brown & Co. Real Estate



### House Facts Data Standard for 280 Casitas Ave i

Violation Date	Closed Date	Category	Type	
10/28/2003	-	Animals and Pests	Cockroaches	<a href="#">Dispute Claim</a>
10/28/2003	-	Animals and Pests	Mice	<a href="#">Dispute Claim</a>
10/28/2003	11/26/2003	Bed Bugs	Mice	<a href="#">Dispute Claim</a>

Save \$1000 When You Close With Capital One

### Listing Details

35 [Follow](#) [Like](#) [Hide](#)





# NETWORKS, NOT JUST DATA

@ABHINEMANI

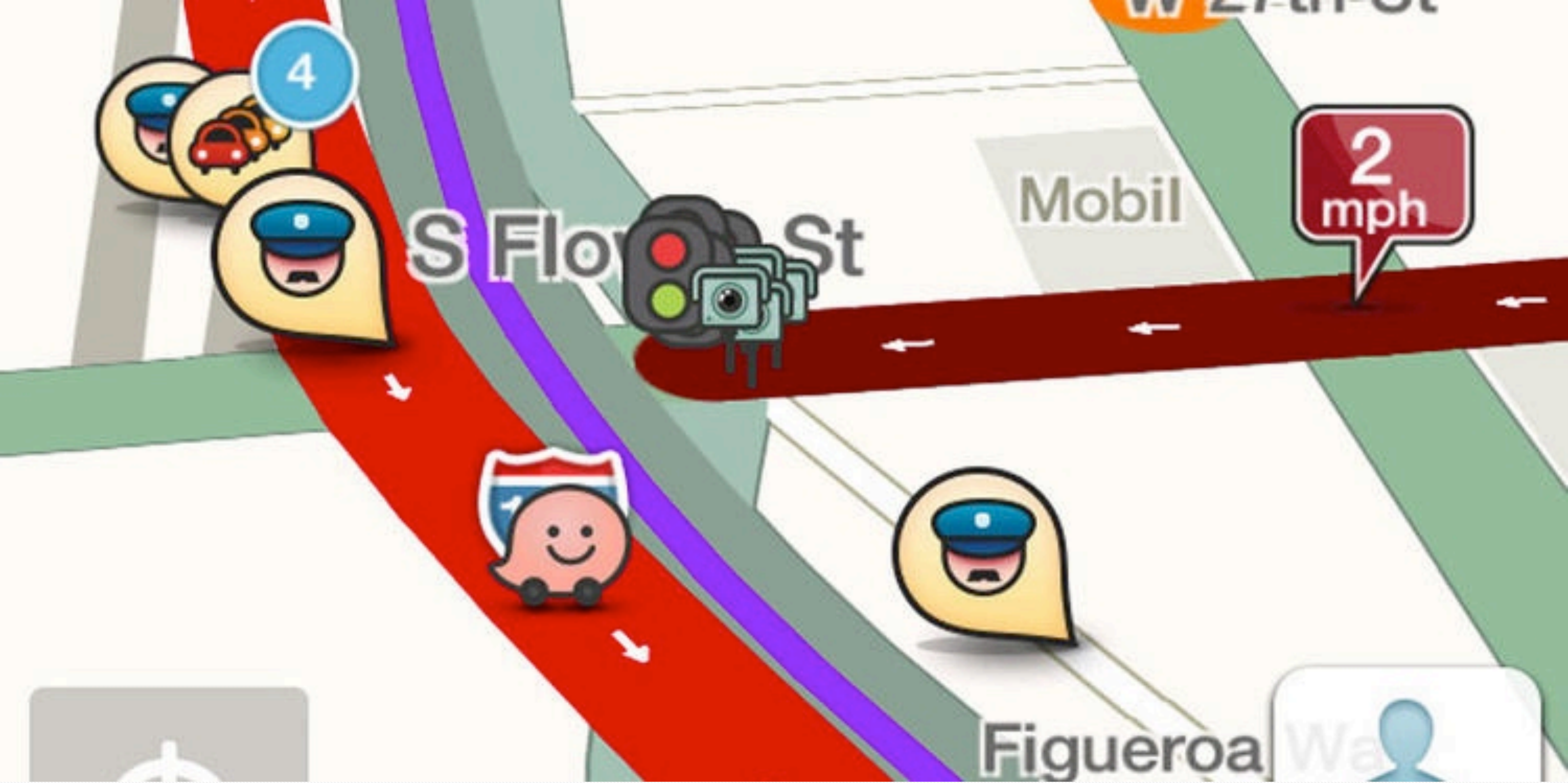


Meet Pearl



What can brown do for you?

# CITIZENS AS SENSORS



Waze



**RI** WAZE AND POLICE

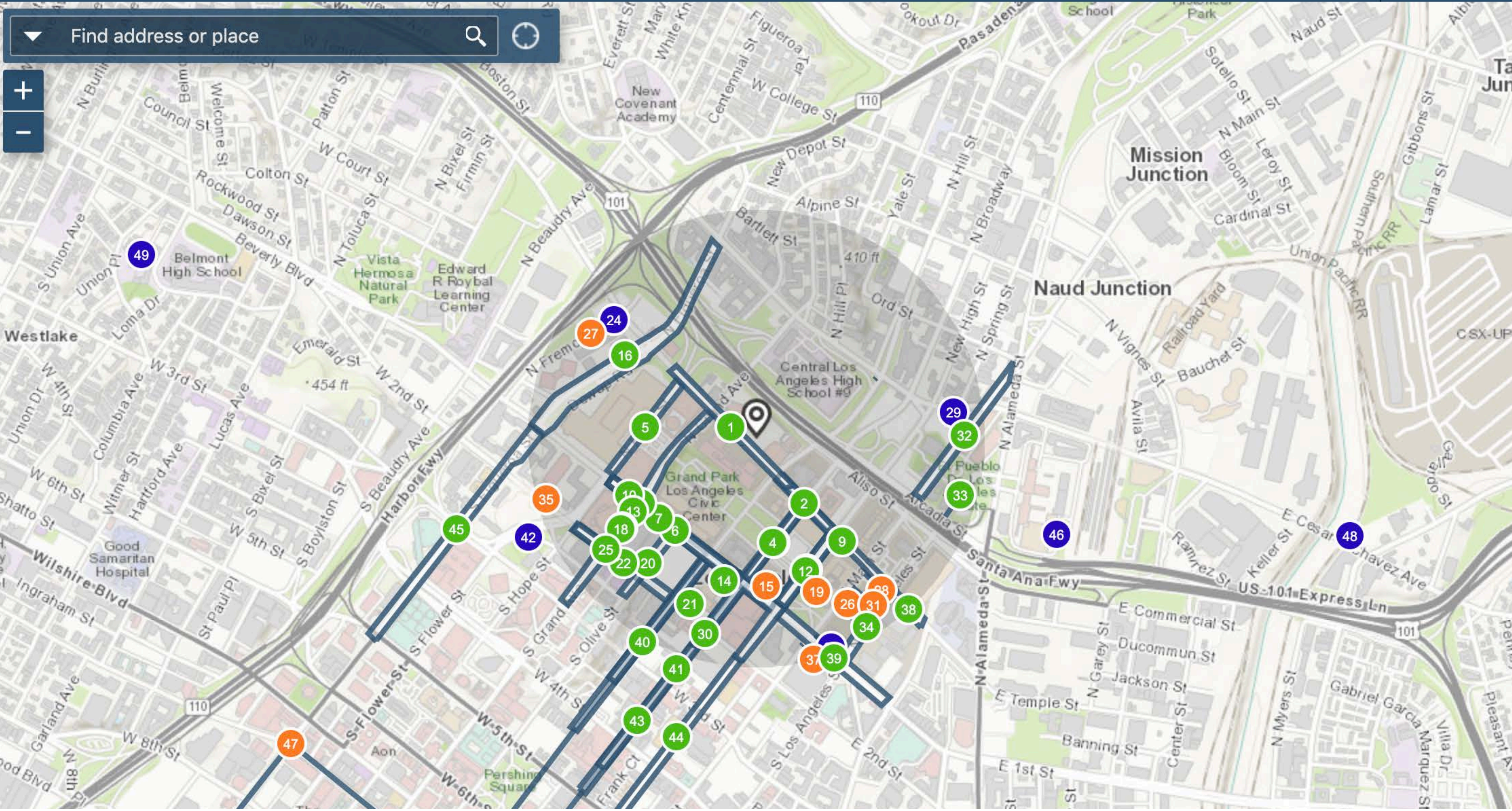
**BELING**

06:29

#SYRIAN OPPOSITION FIGURES AND ASSAD OFFICIALS MEET IN MOSCOW FOR TALKS

Waze & LAPD Partnership

Find address or place



63 Projects

Search Radius (0.5 mi)



Earliest Date: Apr 21, 2019

Latest Date: Oct 21, 2019

1	Special Events	0.06 MILES	Starts In: 5 day
2	Special Events	0.17 MILES	Starts In: 3 week
3	Special Events	0.23 MILES	Starts In: 5 day
4	Special Events	0.23 MILES	Starts In: 3 week
5	Special Events	0.24 MILES	Starts In: 2 day

*Internal Efficiency: LA GeoHub, hosts open data, and powers apps like StreetWize that helps agencies coordinate (and communicate) street closures*

@abhinemani



Road Closures

Let's make all apps more civic.

@ABHINEMANI

# LECTURE 9 ASSIGNMENT (ASSIGNED 4/29)

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- Readings

- *Web Scraping with Python* by Ryan Mitchell

- Part 1, Chapters 1, 2, 4, 5

- Project Work

- Post your JKAN link on the Discussion thread on Canvas