



*Image/Map Credit: Stamen Design*

# SUSTAINABILITY

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# 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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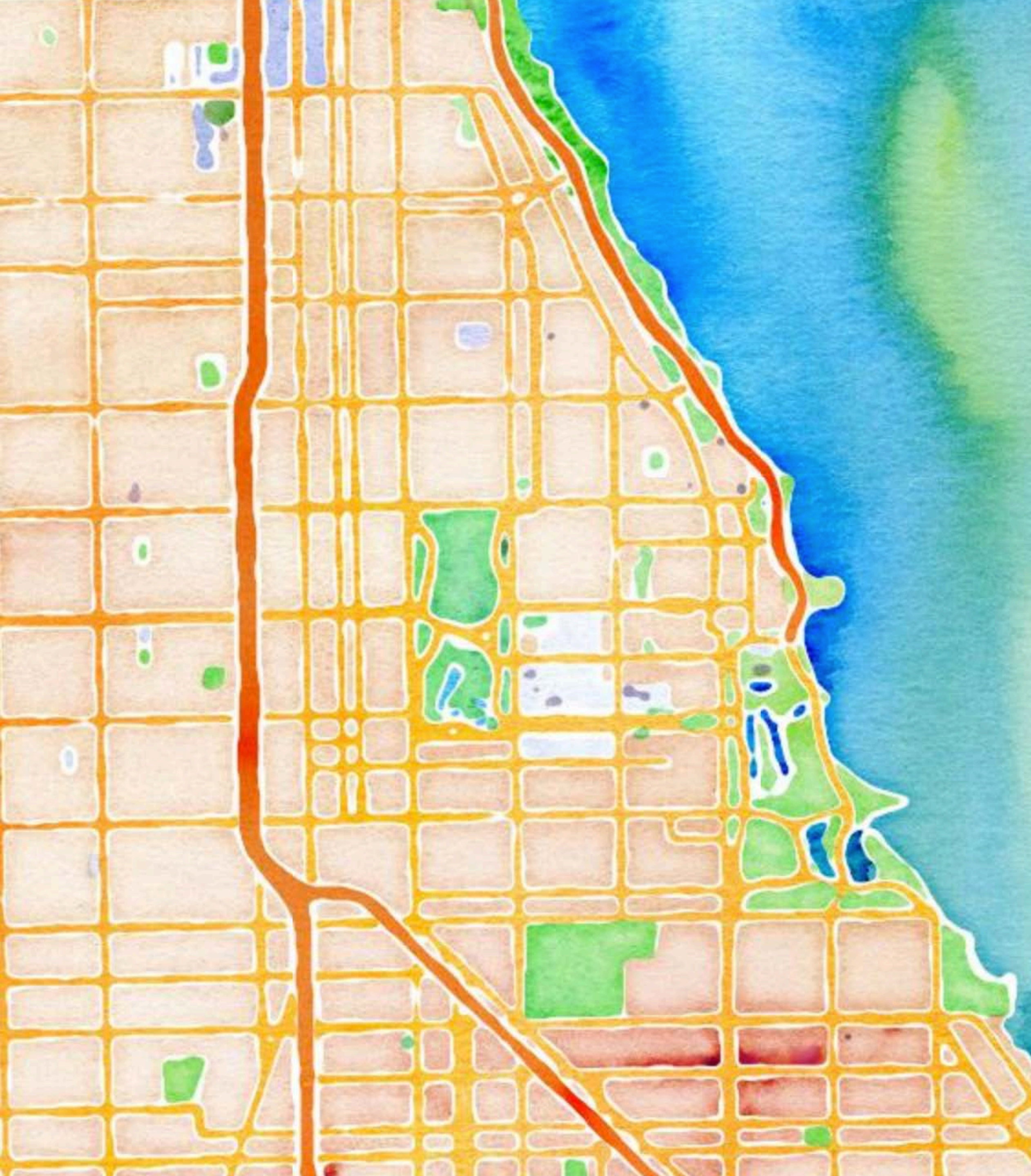
## *Sustainability*

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# AGENDA

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- Case Study: Adopt-a-Hydrant
- Decision Tree
- Product v Services
- Open v Closed
- Customers
- Funding and “Exits”







Claim responsibility for shoveling out a fire hydrant after it snows.

Email address

I haven't signed up yet

I've already signed up

Name (visible to others)

Organization (visible to others)

Home phone number

Mobile phone number

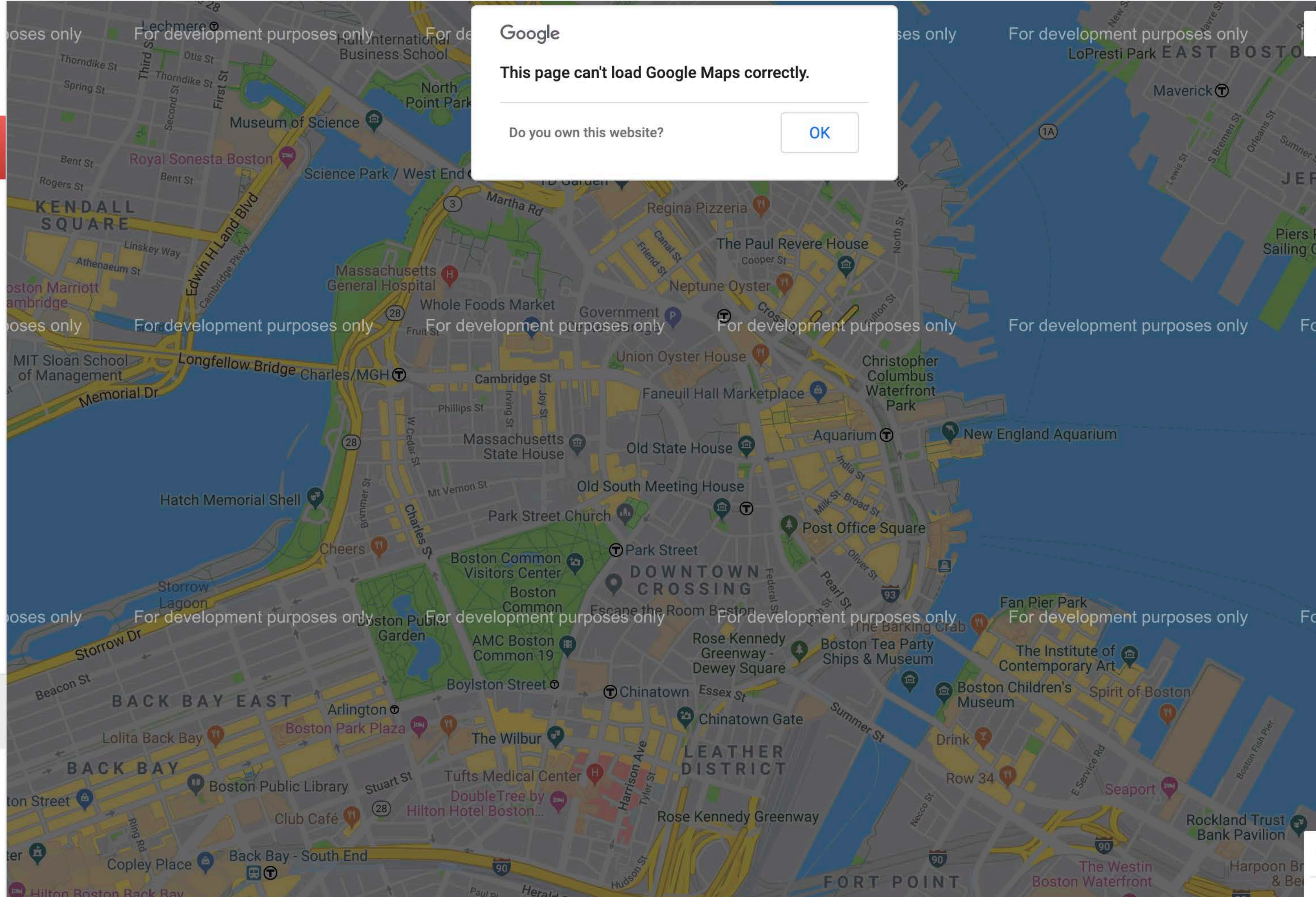
Choose a password

Sign up

By signing up, you agree to the [Terms of Service](#).



Built in



Google

This page can't load Google Maps correctly.

Do you own this website?

OK

**YEAR 1: 7 CITIES**  
**YEAR 2: 35 CITIES**  
**YEAR 3: 65 CITIES**  
**ACTIVE USERS: ~10**

**NOW IN YEAR 8...**



3090 drains adopted in SF  
Last updated June 2, 2019

What does it mean to adopt a drain?



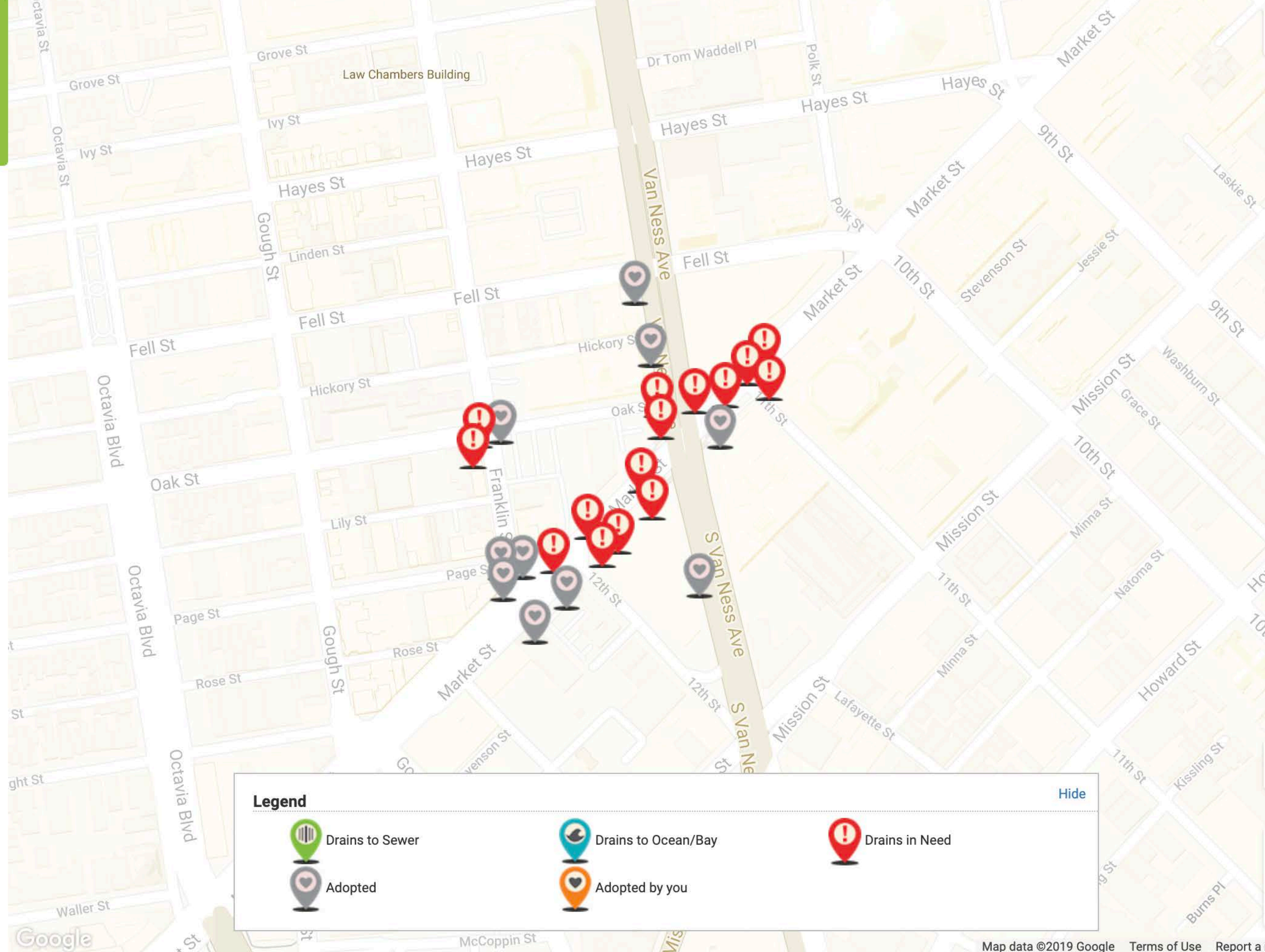
Address, Neighborhood

Find drains

Register / Sign in

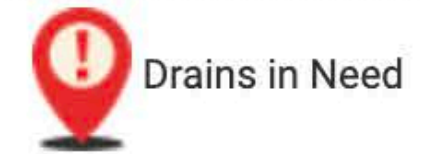


DataSF



Legend

Hide



# WHAT CHANGED? A SUSTAINABILITY PLAN



# SUSTAINABILITY DECISIONS . . .

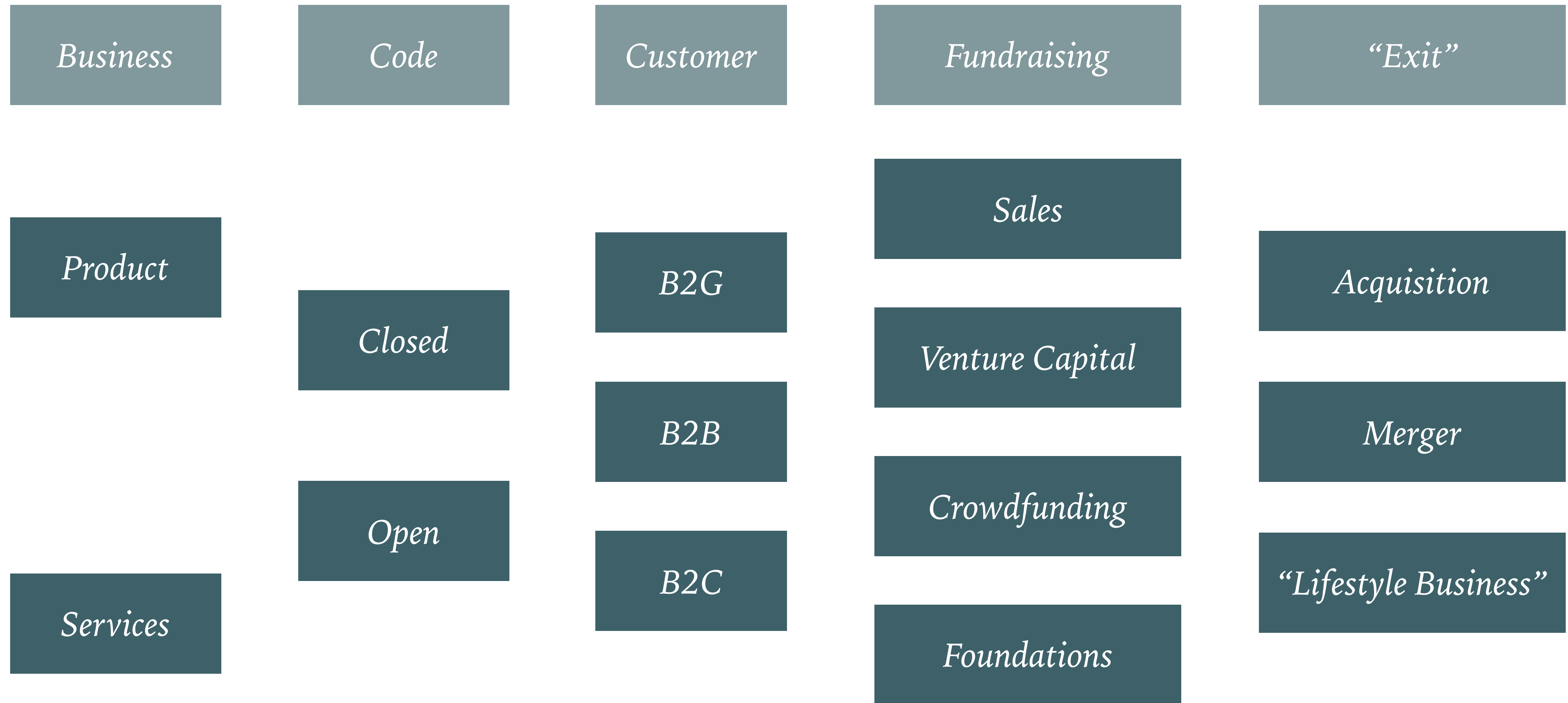
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*What are your options ?*



# SUSTAINABILITY DECISION TREE

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# PRODUCT V SERVICES



*The challenge is that a product business and a services business are fundamentally opposed. The former aims to deliver as fast and as much as possible; the latter, not: they take as much time to make the client happy.*

*-fmr co-founder of BSD*



# OPEN V CLOSED SOURCE

*Challenges and opportunities*



**OPEN**

# MYSOCIETY

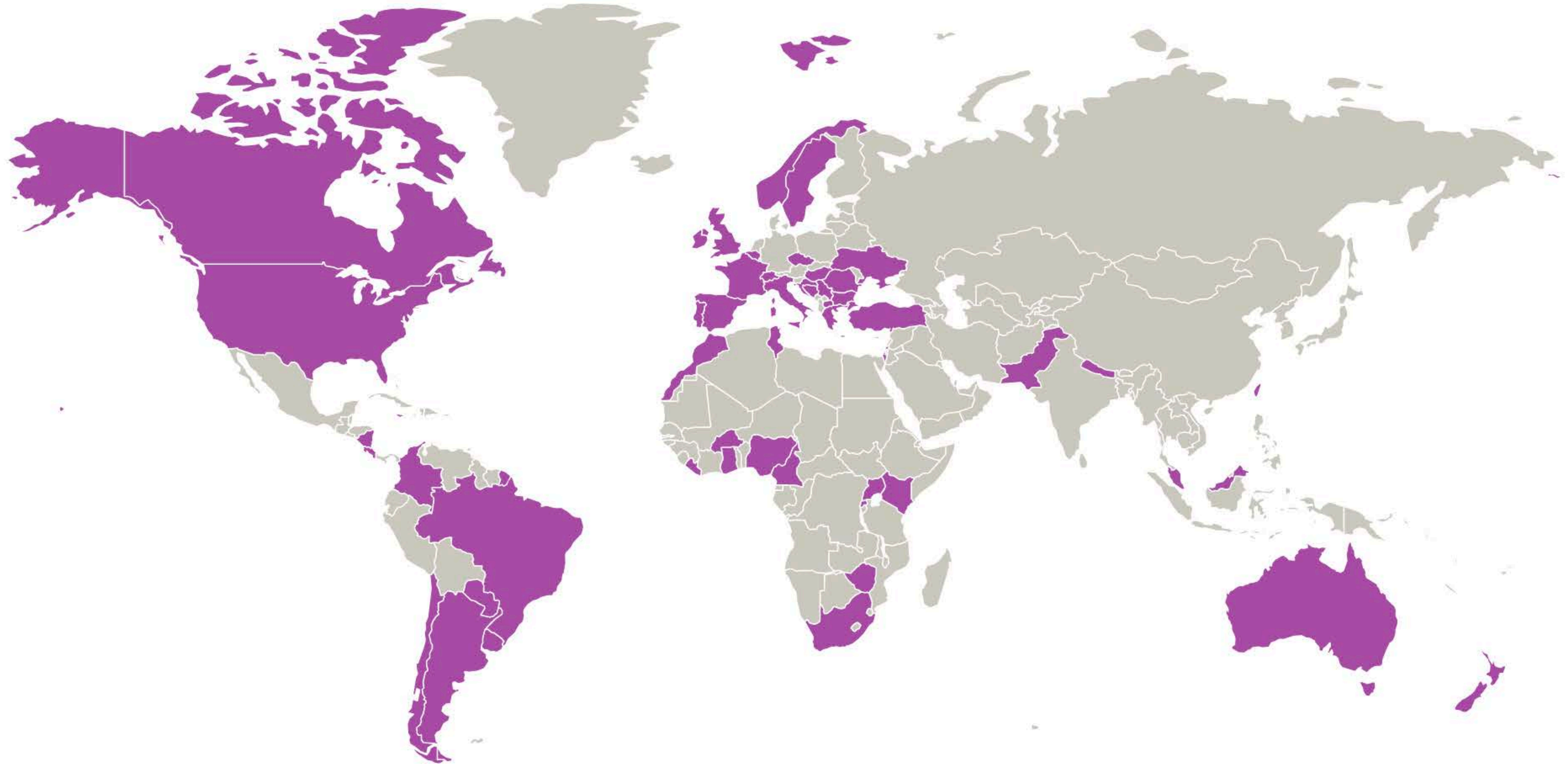
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*All open source, all the time*



# Here's where it's being used right now:

Projects all over the world are running their websites on mySociety's tools



# Report, view, or discuss local problems

(like graffiti, fly tipping, broken paving slabs, or street lighting)

Enter a nearby UK postcode, or street name and area:

e.g. 'B2 4QA' or 'Tib St, Manchester'


 ... or locate me automatically

 [mysociety](#) / [fixmystreet](#)


 Watch ▾ 38

 Star 383

 Fork 192

 Code

 Issues 170

 Pull requests 8

 Projects 0

 Wiki

 Security

 Insights

This is mySociety's popular map-based reporting platform: easy to install in new countries and regions <http://fixmystreet.org/>

[international](#)

[civic-tech](#)

[map](#)

[reporting](#)

[councils](#)

[mysociety](#)

[civictech](#)

[fixmystreet](#)

4

We send it to the council on your behalf

Broken traffic light

17:50 today



# Introducing FixMyStreet Pro. Made with councils, for councils.

Bath & North East  
Somerset Council



## Plans & pricing

Let us help you find the right FixMyStreet Pro plan for your local authority

### Driveway £0

If you set up your own Open311 endpoint, we'll connect you to our FixMyStreet.com service for free – ideal if you already have your own street reporting service in place

### Crescent £7,500

The basic FixMyStreet Pro service, branded to look like your website, with useful tools to help you manage, moderate and respond to reports – ideal for a Parish or small District council



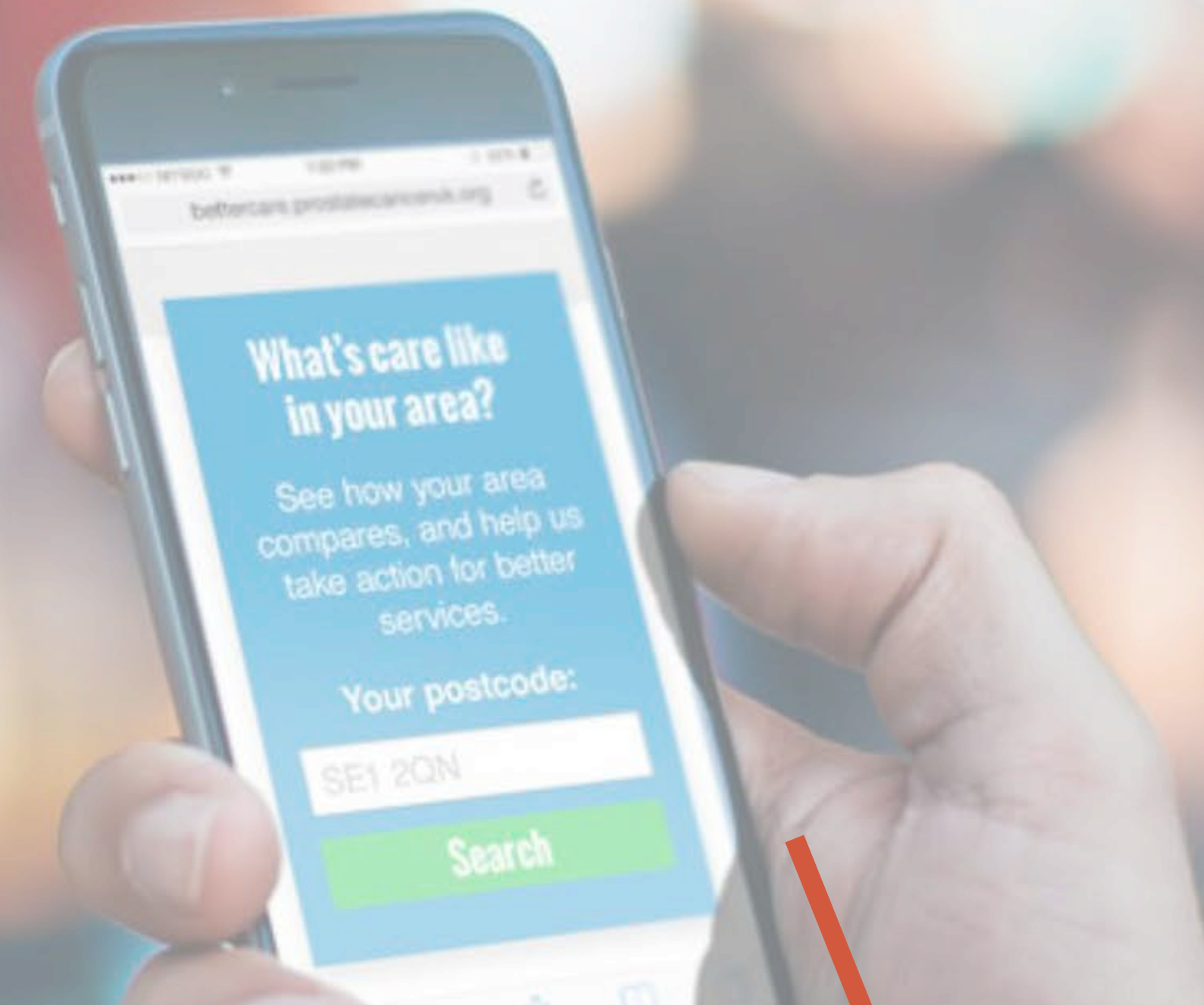
of Westminster



# The easy way to match points to boundaries

If your app or website needs to connect UK locations with areas like constituencies or counties, MapIt can save you a lot of time.

MapIt is mature, trusted and widely deployed — and it is



mysociety / mapit

Watch

34

Star

223

Fork

76

Code

Issues 38

Pull requests 9

Projects 0

Wiki

Security

Insights

A web service to map postcodes to administrative boundaries and more

Try it out – enter a postcode

Look up

# Pricing

MapIt is an API. Your product or service can call the MapIt API to discover which boundaries a geographical point lies within. This look-up of a single point is what we term an “API call”. And our pricing tiers are based on the number of calls you can make per month.

## SANDBOX

**Free**

*Limited key-less access, perfect for trying out the MapIt API before you buy.*

- Max 50 calls per day
- Free – no signup required

[Read the docs](#)

## VILLAGE

**£20/mth**

*A great place to start if you're integrating MapIt into a low traffic site.*

- Max 10,000 calls per month
- **Free** for charitable users

[Sign up](#)

## TOWN

**£100/mth**

*Our most popular plan. Great for busier sites, or bulk boundary lookups.*

- Max 100,000 calls per month
- **50% off** for charitable users

[Sign up](#)

## METROPOLIS

**£300/mth**

*Super popular with heavy users like councils and government departments.*

- Unlimited calls
- **Free** use of our [data mapper](#)
- **50% off** for charitable users

[Sign up](#)

# WIZARDING

Write In Public

Sign in

Make sites that empower citizens to send emails to representatives and politicians.

No coding required.

Create your own site

[WriteInPublic](#) allows you to run a website that does exactly that.

Information about your politicians — their names and email addresses — are automatically pulled in from EveryPolitician, so when it comes to set-up, you don't have to worry about a thing.

All you need to do is select your country, click a button, then tweak a few settings. It's almost like magic.

## As used in...



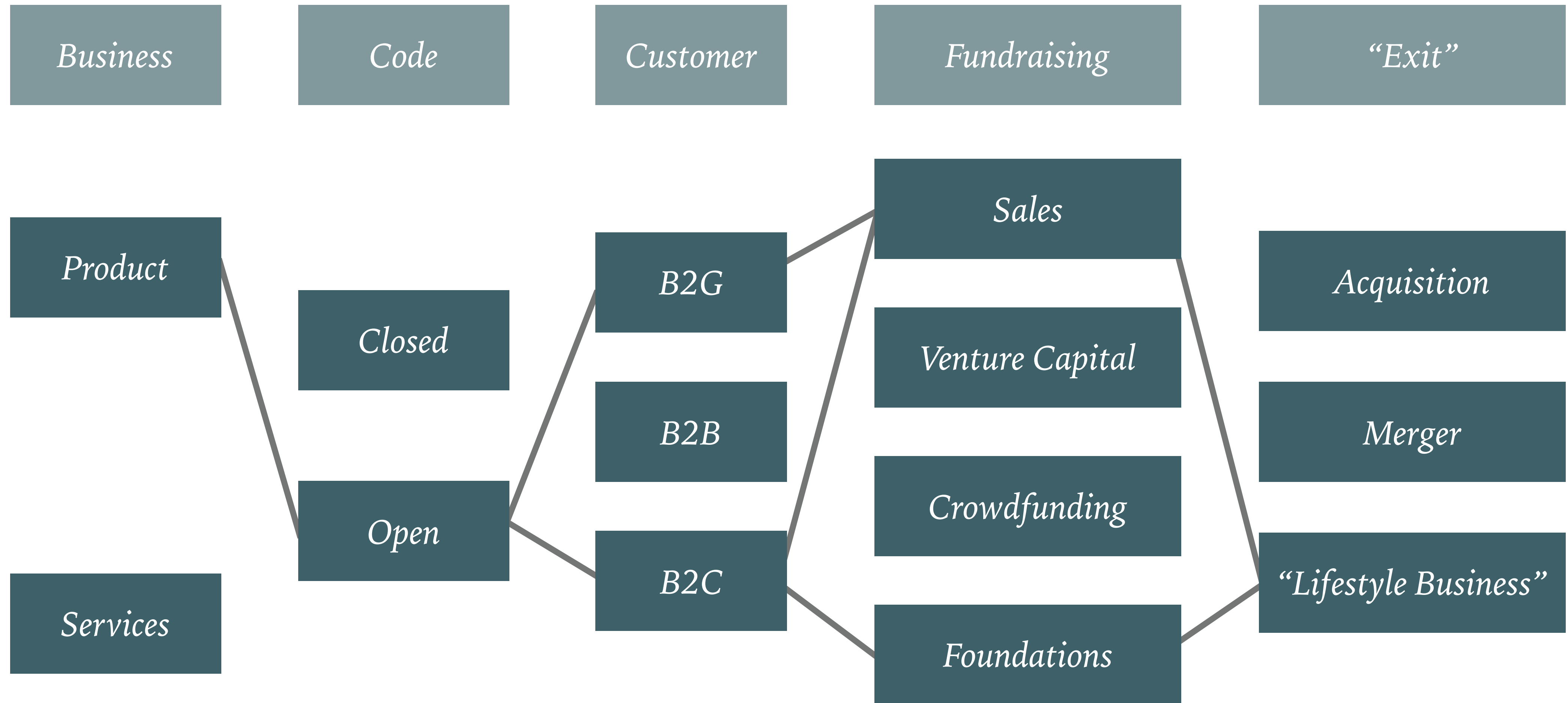
**Hungary** The country was facing prohibitive changes to its Freedom of Information law. The people behind [Ki Mit Tud](#) (the Hungarian Freedom of Information website) set up a WriteInPublic instance to enable their supporters to question the proposed changes in a public arena.



**Iran** Partnering with [asl19.org](#), we set up [Majlis Nameh](#) to allow Iranian citizens to ask questions of their MPs, online, in public, and anonymously. [Read more about the project here.](#)

# MYSOCIETY EXAMPLE FLOW

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# BIG (CIVIC) COMPANIES USE OPEN SOURCE TOO

**mapbox** Products Solutions Documentation Company Pricing Blog

About Us Team Careers Events Press Legal **Open Source** Green

## OPEN SOURCE

Mapbox proudly embraces our open-source roots. We work in the open and release as much code as possible. Right now we have more than 660 public repositories on GitHub, most licensed under BSD. We do this because we believe that it's the right thing for people, technology, and business.

 [Contribute on GitHub](#)



Mac

iPad

iPhone

Watch

TV

Music

Support



# App Store Preview

This app is only available on the App Store for iOS devices.



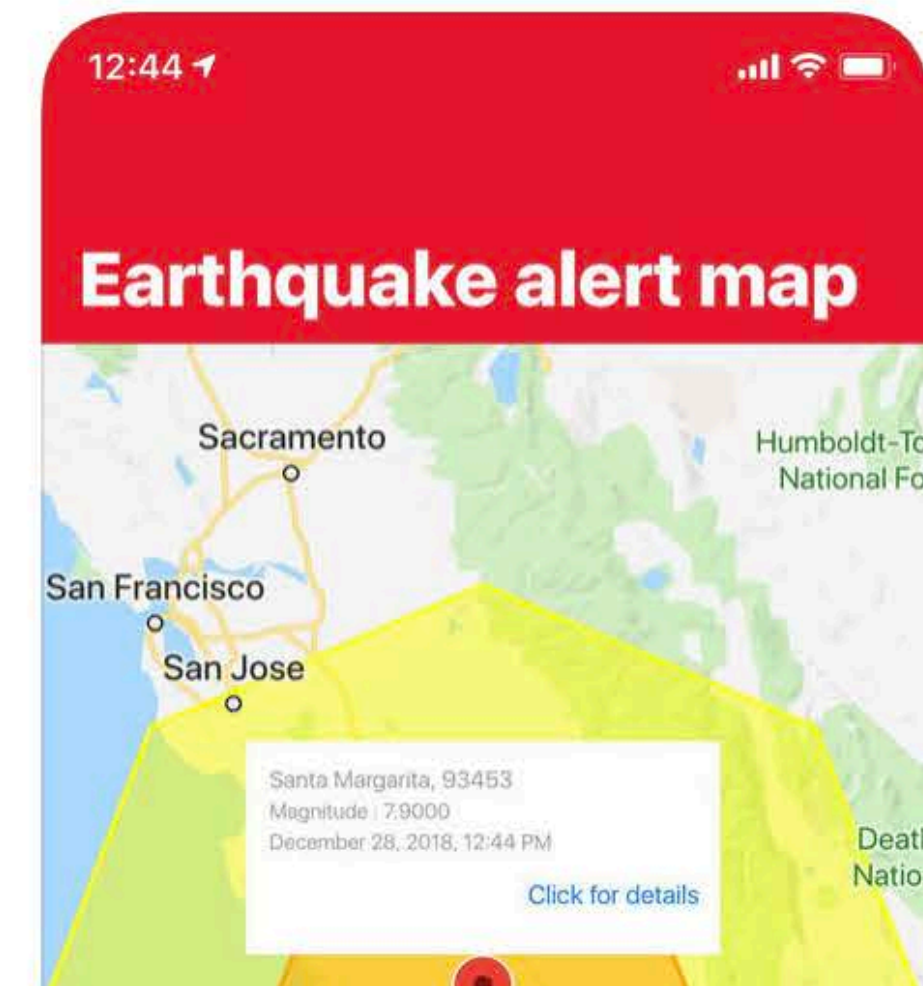
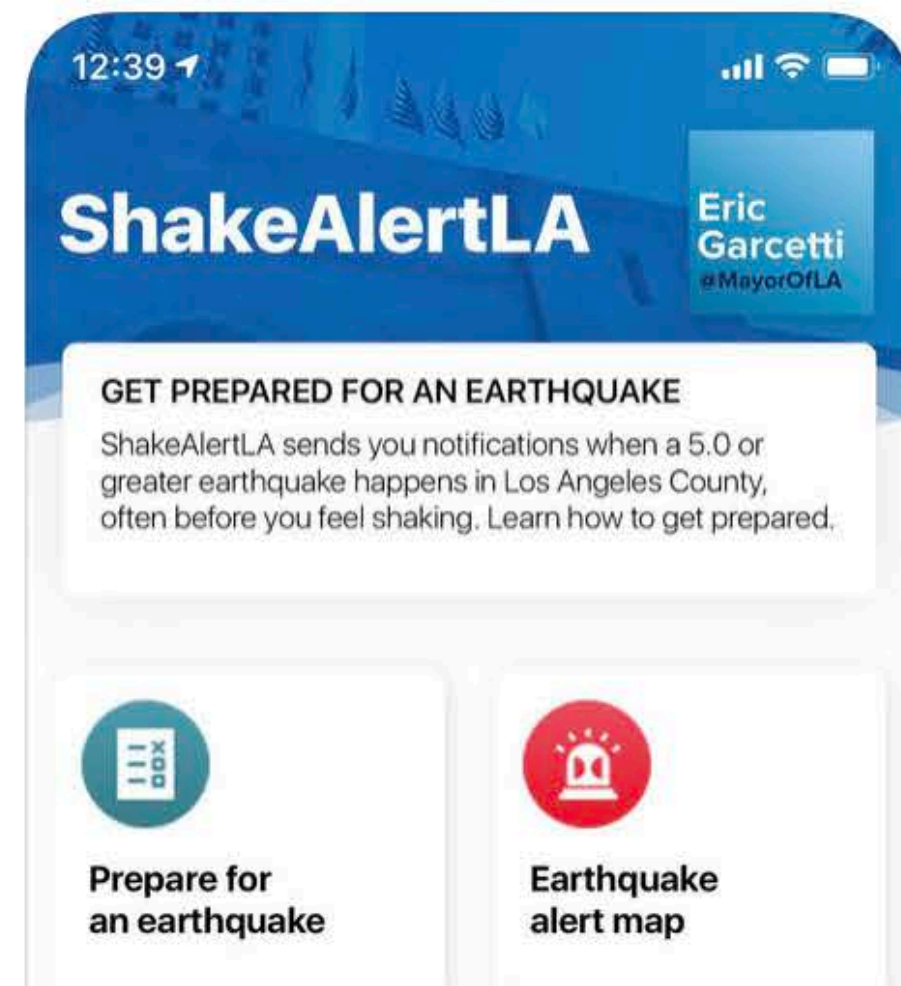
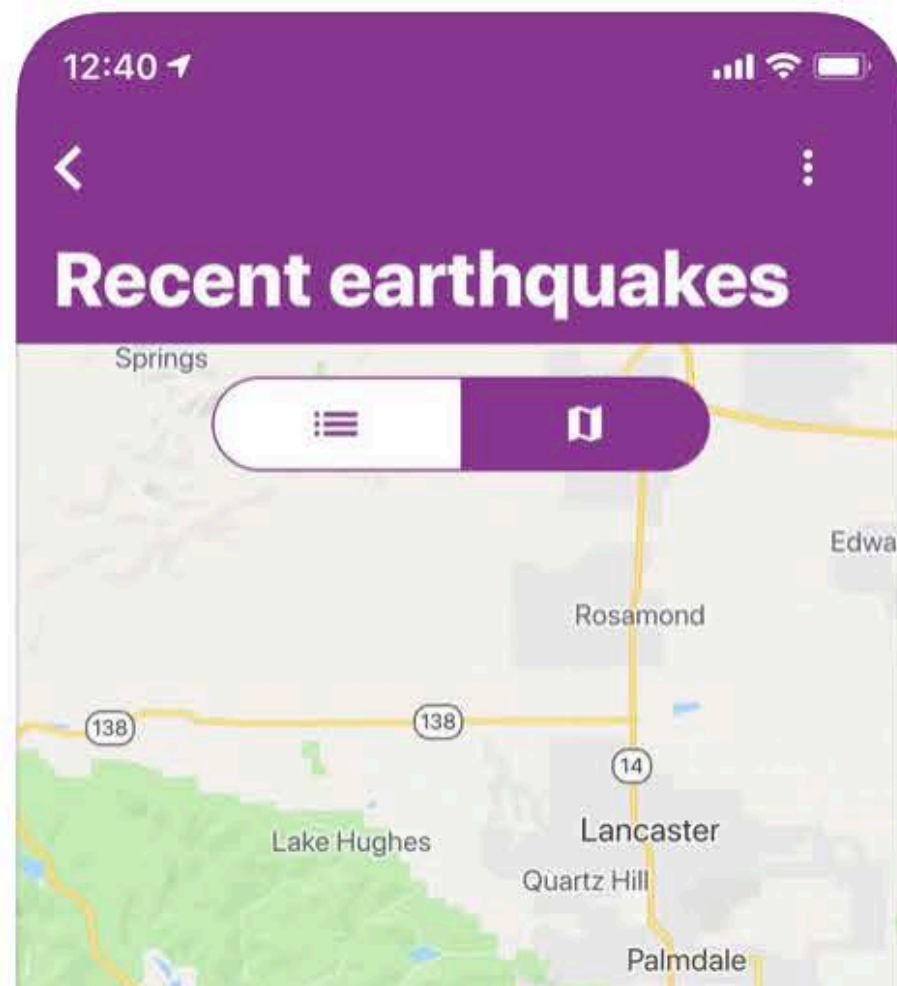
## ShakeAlertLA 4+

Earthquake Early Warning  
City of Los Angeles

★★★★★ 2.5, 543 Ratings

Free

## iPhone Screenshots



# CROWDSOURCED FEEDBACK

reddit Home Popular Search r/LosAngeles

Posted by u/OwnDistribution 4 months ago

## [OC] The City of Los Angeles paid \$300,000 for ShakeAlertLA - an untested, unreliable, and vulnerable earthquake alert app

Discussion

Hey all,

Last week, the City of LA unveiled [ShakeAlertLA](#), a new app that gives you an alert if an earthquake is happening in Los Angeles County. The code for the app (Android, iOS, and the server) was posted [on GitHub](#) around the same time.

While the code was on GitHub, I found many security flaws, terrible engineering practices, and just general shitty building. So, I decided to roll it up all in one post here:

<https://iamprettydamn.cool/2019/la-earthquake-app>

Disclaimer - This is a link to my blog, but I make no money off it whatsoever. I do use google analytics to see how many people view the post, but if you want to opt out of that, use [this link](#). If you don't want to click through at all, I'll put the entire post as a comment below

A quick TL;DR:

- **[Security]** - Potential password and login info to the database that contains the location of all users of the ShakeAlertLA application (10,000's of users)
- **[Security]** - Potential SQL injection vulnerability that allows a bad actor to delete the entire ShakeAlertLA database.
- **[Security]** - Plaintext password and login information to the USGS service that isn't publicly available
- **[Privacy]** - High accuracy of a user's location that is stored in a LA City database
- **[Software Engineering]** - No tests in the Android app and barely any tests in the server codebase, making the entire app unreliable and prone to bugs

Branch: master ShakeAlertLA-message-gateway / Code / LABackend / shakealert\_client.properties

samsidd Latest Code

1 contributor

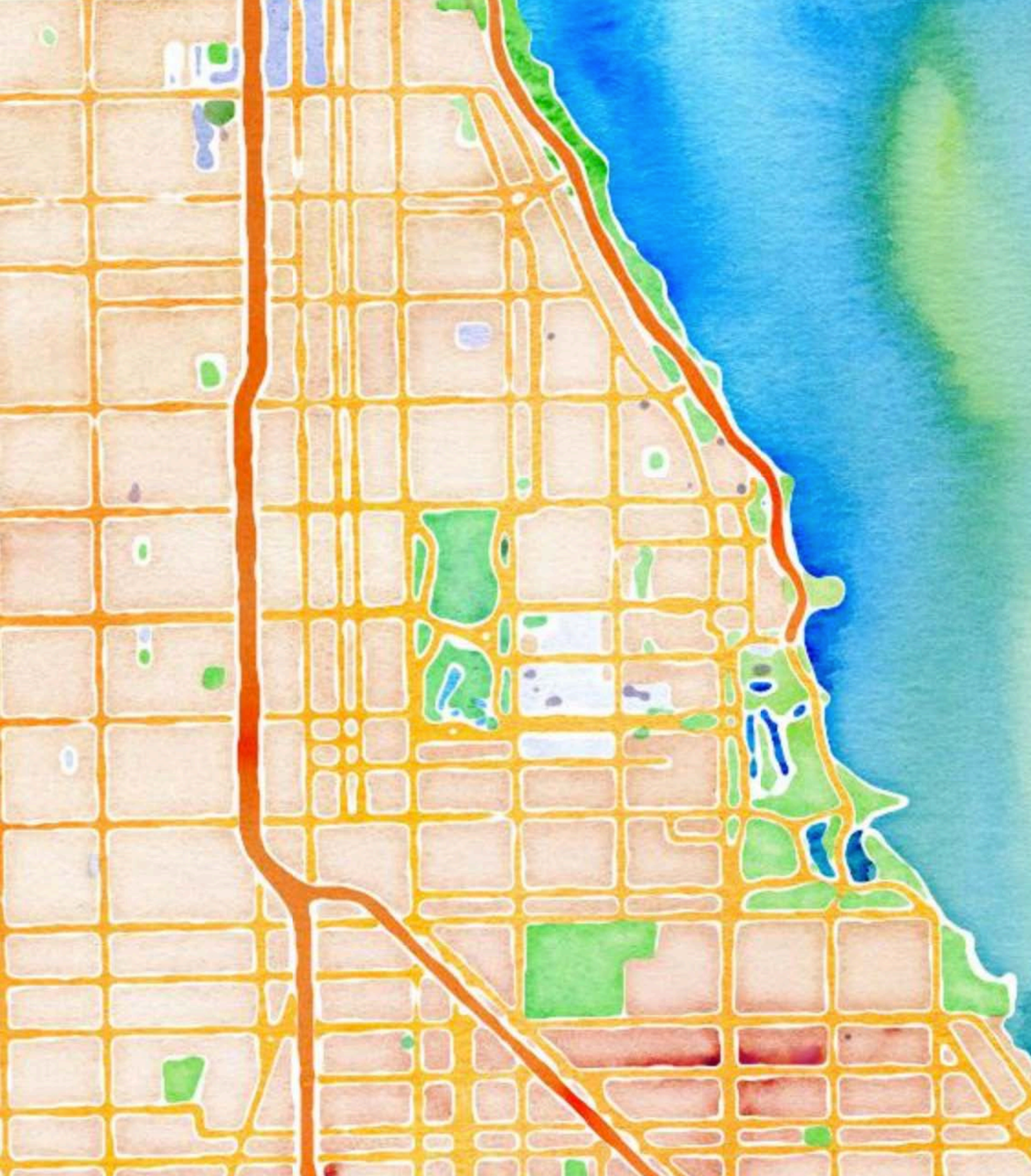
10 lines (9 sloc) 228 Bytes Raw

```
1 #ShakeAlert Client Properties
2 username=[REDACTED]colworx.com
3 password=[REDACTED]
4 latitude=34.0201613
5 longitude=-118.6919214
6 health_topic=eew.sys.ha.data
7 event_topic=eew.test_lacity.gm-contour.data
8 host=[REDACTED]
9 port=[REDACTED]
```

# CHALLENGES AND BENEFITS OF OPEN

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- Opportunities
  - Community support
  - Collaborations
  - Possible foundation/donations
- Challenges
  - Difficult to get VC
  - Code needs to be OSS-optimized
  - Requires community management



**CLOSED**

**SmartProcure**

*Procurement Intelligence*

**mySidewalk**

*Performance Measurement*

**amigacloud**

*Geospatial Data Collection*

**seamless docs**

*Forms*

**MARK43**

*Law Enforcement*

**binti**

*Adoptions & Foster Care*

**MISSIONMARK**

*Government Contracting*

**GovInvest**

*Pensions & OPEB*

**CoInspect**

*Food Safety*



**smarking**

*Parking Data Science*

**Neighborly**

*Bond Finance*

**Glimpse**

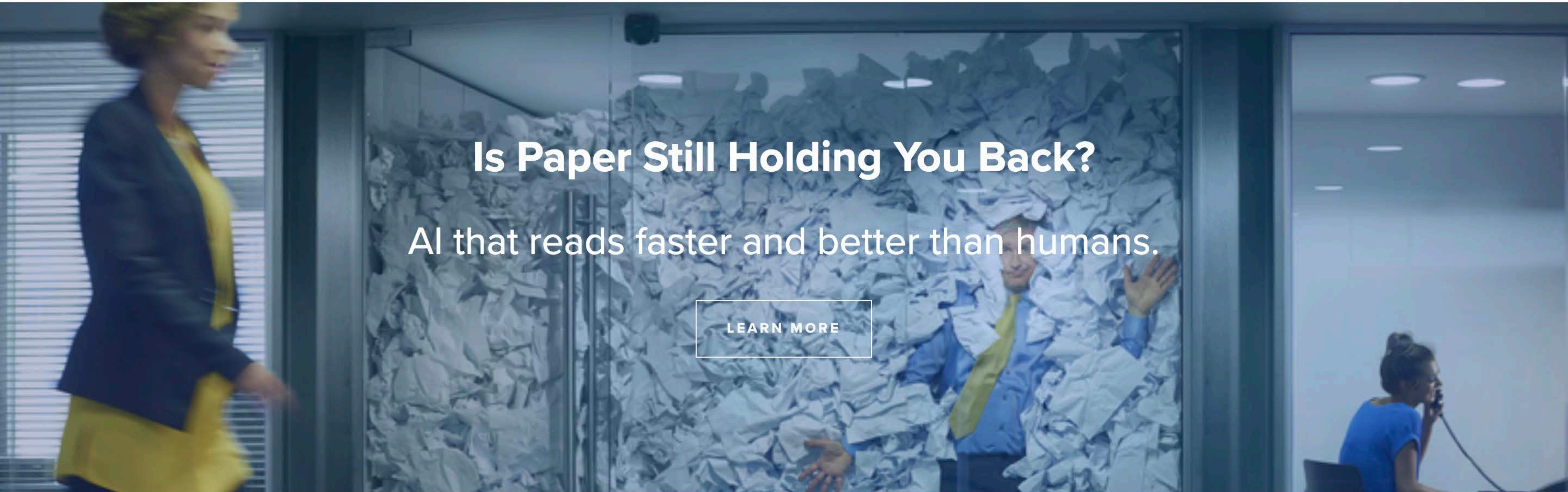
*Education ROI*

**Camino**

*Land Management*

**sema**

*Legacy Code Maintenance*



# Is Paper Still Holding You Back?

AI that reads faster and better than humans.

LEARN MORE

*Video*

**HOW VIDADO IMPROVES RPA**

**READ MORE**

*Press Releases*

**VIDADO ELEVATES ELAINE ZHOU TO CHIEF TECHNOLOGY OFFICER**

**READ MORE**

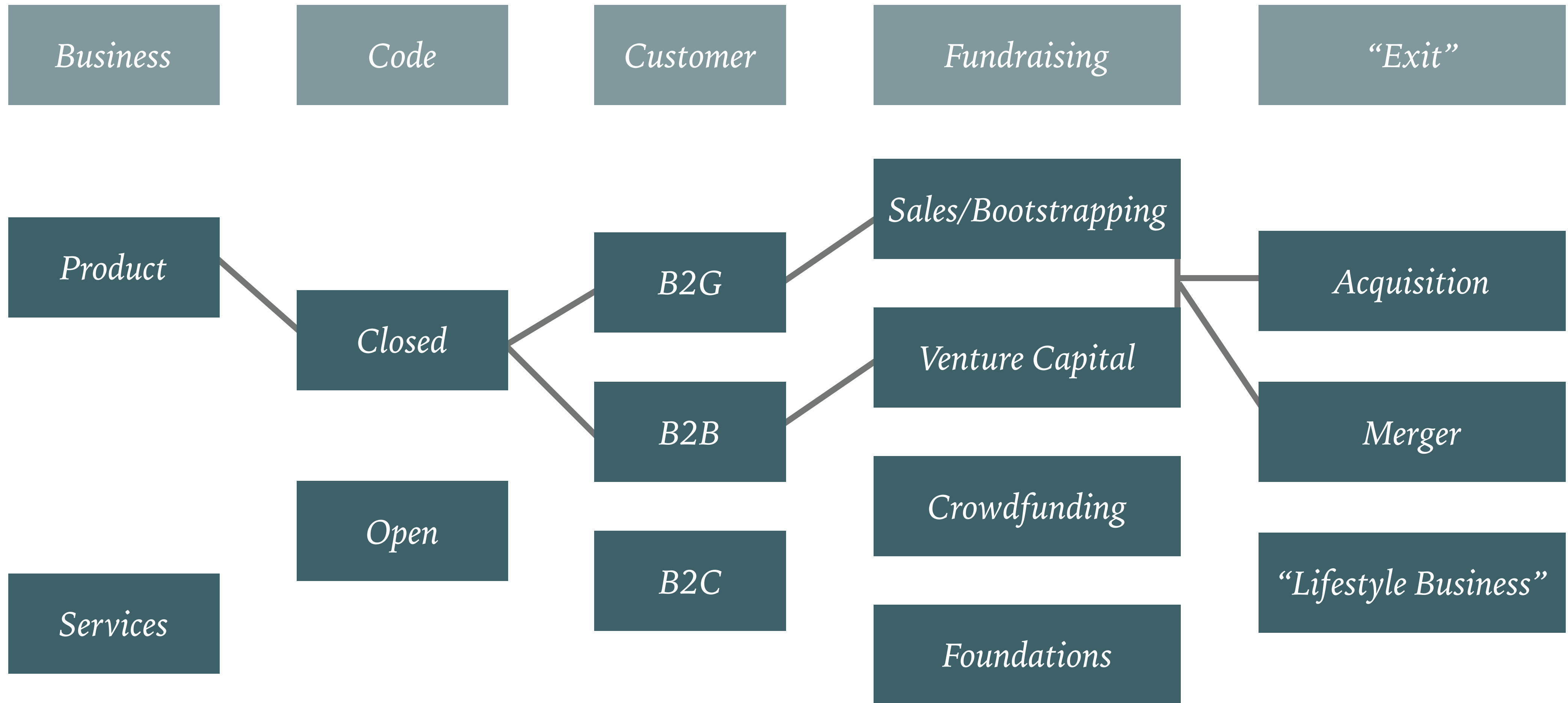
*White Papers*

**WHITE PAPER: DISPELLING THE TOP MYTHS AROUND RPA**

**READ MORE**

# VIDADO (WAS CAPTRICITY) EXAMPLE FLOW

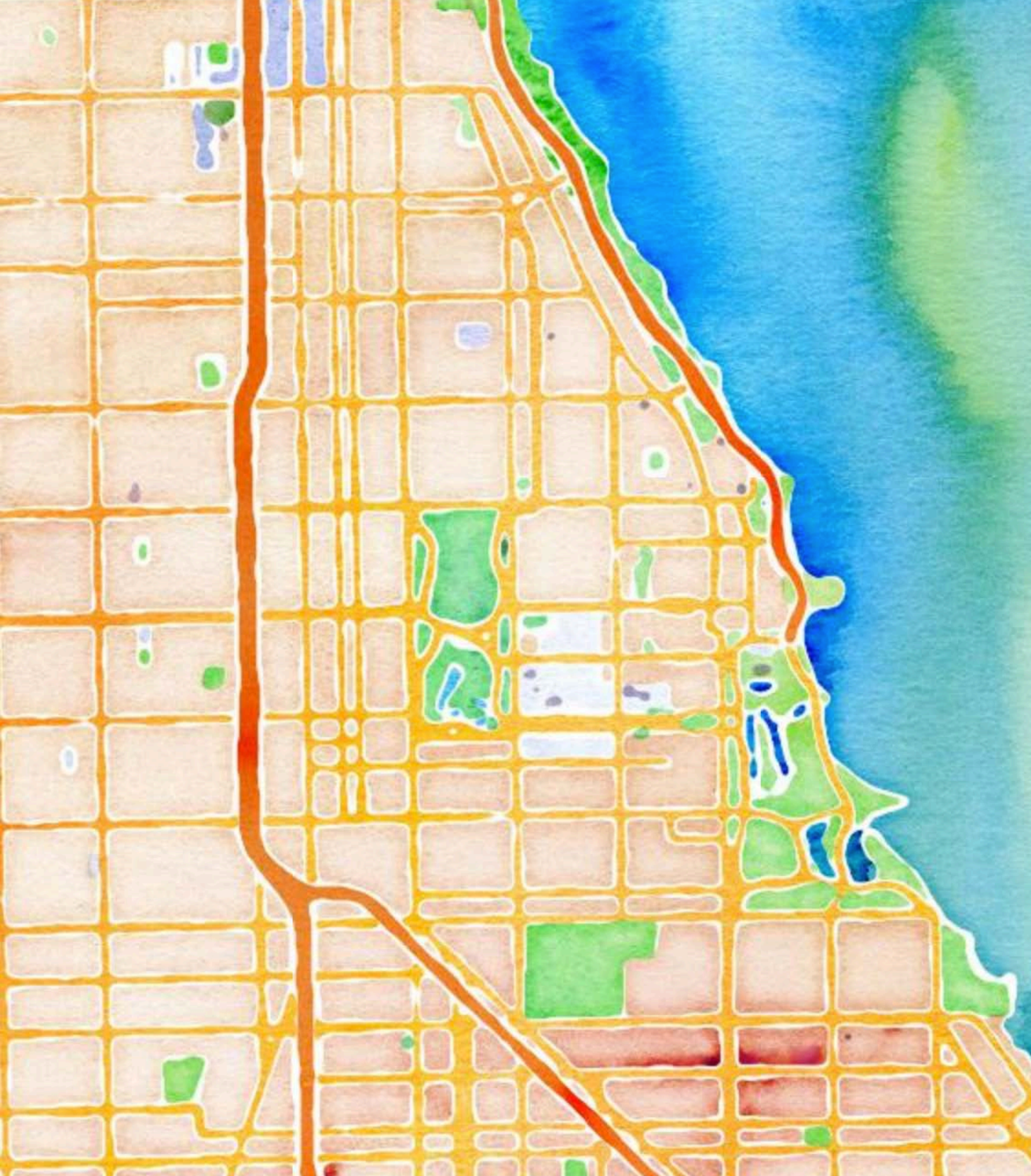
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## CHALLENGES AND OPPORTUNITIES OF CLOSED

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- Access to venture capital
- Exit opportunities
  - Acquisitions
  - Mergers
  - IPO
- Access to consumer-tech level talent
- Bias towards SaaS





# CUSTOMERS: B-2-G/B/C

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*Who could you “sell” to?*



# B2G (BUSINESS TO GOVERNMENT)

CitySourced Announces Merger with Rock Solid Technologies [READ MORE](#)



[311 & CRM PLATFORM](#) [TESTIMONIALS](#) [RESOURCES](#) [FEATURES](#) [INSIGHTS](#) [CONTACT US](#)

[GET A DEMO](#)

## One Citizen App to Rule Them All

Make your citizen's life easy! CitySourced is the only citizen engagement platform that offers cities and counties a one-stop, native mobile app solution for your citizens.



# B2B (BUSINESS TO BUSINESS)

---

HOME

ABOUT US

SmartProcure

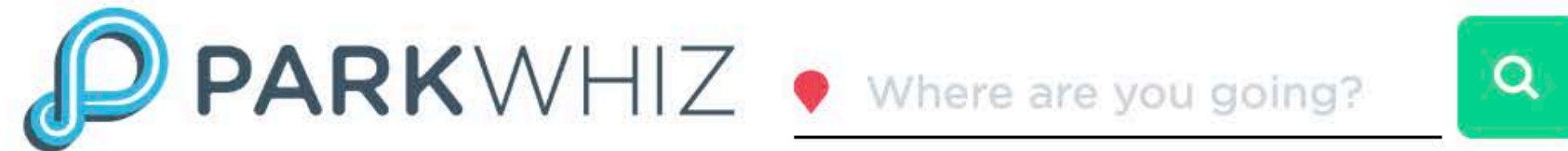
BECOME A MEMBER

## Created by government professionals for government professionals

The **leading** trusted information **database** of government  
purchase orders in the nation.

LEARN MORE

# B2C (BUSINESS TO CONSUMER)



OUR APPS

HELP

SIGN IN

SIGN UP

## YOUR PARKING IS MOBILE, YOUR LIFE IS EASY.

From the all-in-one home screen to our virtual passes, we make booking parking a breeze.

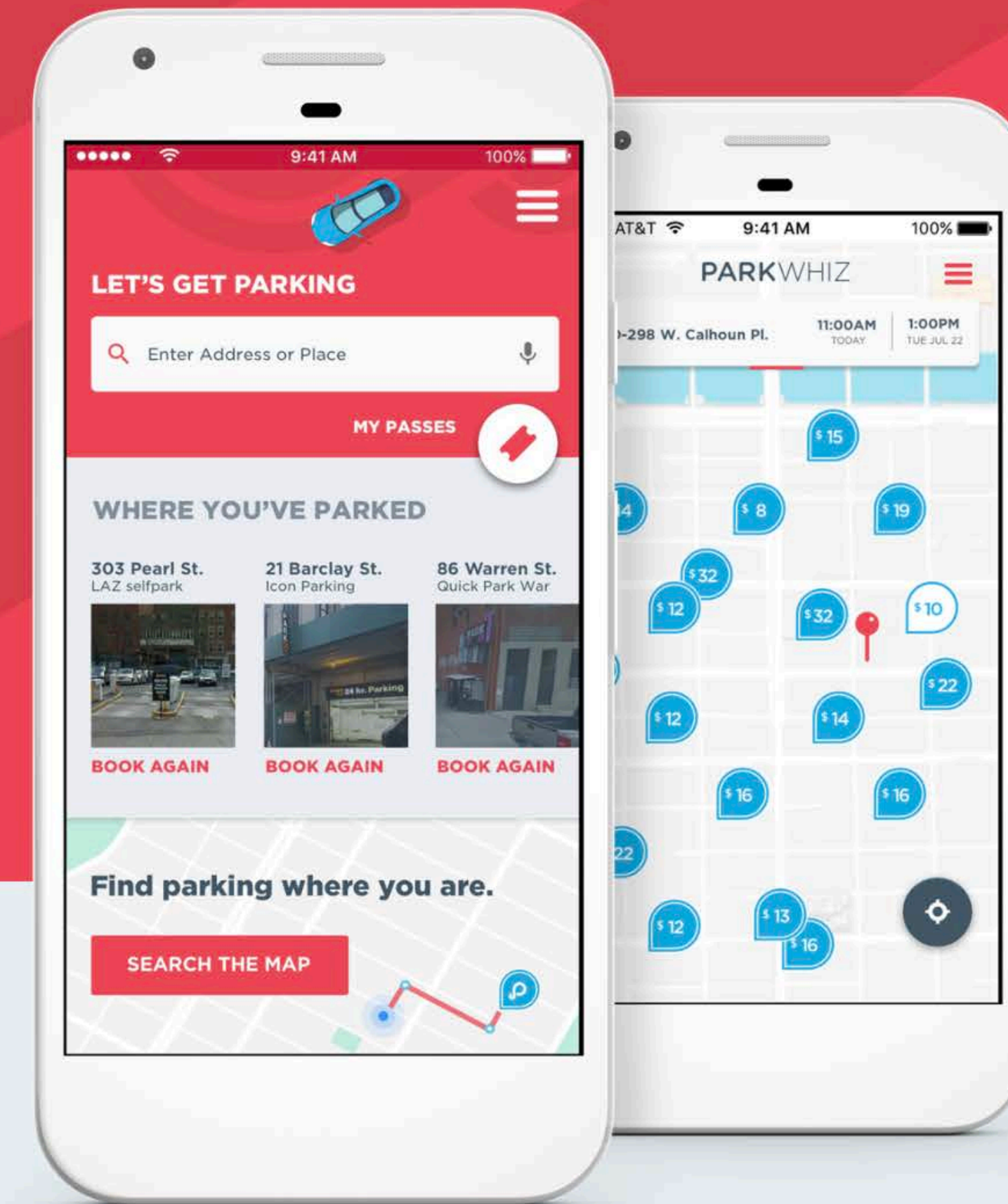


Get parking in your pocket.



Enter phone number

SEND LINK





# FUNDRAISING

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# SALES/BOOTSTRAPPING

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- Overview
  - Typical for most GovTech startups
  - Usually starts with a pilot project
- Benefits
  - No dilution
  - Total control
- Drawbacks
  - Requires starter capital
  - Government tend to bias towards known commodities

# VENTURE CAPITAL

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- Overview
  - Investors provide capital (money) in rounds (angel, seed, A, B, C...)
  - Angel investors are individuals
  - VC firms are collections of individuals and institutions (eg pension funds); known as limited partners: “LPs”
- Benefits
  - Large influx of capital
  - Expert advice/mentorship from LPs
  - Investment = (usually) positive signal to other VCs, press, governments, and talent
- Drawbacks
  - Dilution
  - Many VCs are skeptical of GovTech/CivicTech
  - Investment tends to train focus on revenue and exits

# CROWDFUNDING

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- Overview
  - Small dollar contributions from individuals
  - Platforms such as Kickstarter, etc
- Benefits
  - Ties product/services/company to the community — generates buy-in
  - No cost (typically) aside from small transaction fee
- Drawbacks
  - No guarantee
  - Requires marketing/outreach for the funding, in addition to your services/product

# FOUNDATIONS

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- Overview
  - Funded (legally required) expenditures of their endowments
  - Corporations sometimes have “.org” arms or foundations (eg [google.org](http://google.org))
  - Popular GovTech foundations: Omidyar Network, Luminate, Rockefeller, Ford, MacArthur, and Knight
- Benefits
  - Little-to-no dilution
  - Focus on impact, not revenue
  - Often host conferences/events to showcase grantees
- Drawbacks
  - Often move slowly
  - Determining non-financial metrics can be difficult
  - Bias towards non-profits/B-corps, not for-profits



**“EXITS”**

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# ACQUISITION

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Purchase of your company by a larger one for cash or equity in the larger company

- Benefits
  - Potentially large pay-out
  - Roles for the senior team in the bigger company
  - Can pay back your investors
- Drawbacks
  - “Golden handcuffs”
  - Questions of ethical alignment;
  - Potential relocation;
  - Brand loss



# MERGER

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Combination of companies into one larger institution, typically funded by private equity

- Benefits
  - Potential efficiencies in operations (eg sales, marketing, etc)
  - Greater reach
  - Opportunity to upsell clients
- Drawbacks
  - Loss of control
  - Limited-to-no significant pay-out;
  - Additional stakeholders to manage



# “LIFESTYLE” BUSINESS

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Business that continues without an exit to generate revenue/dividends

- Benefits
  - No loss of control
  - All dividends (could) go to founders
  - Ability to pace growth yourself
- Drawbacks
  - Limited-to-no startup capital
    - Requires bootstrapping
  - Potentially limited opportunities to scale



# IPO

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Business that decides to sell its stock publicly on an exchange

- Benefits
  - Potentially huge injection of capital
    - Ideal for scale
  - Potentially large pay-out for any
  - Can help eliminate debt
- Drawbacks
  - Requires existing significant revenue
  - Brings in additional oversight
  - Significant legal/regulatory issues



“

I prefer to be wrong rather than ambiguous.

*-Ron Bouganim*