



Image/Map Credit: Stamen Design

DIGITAL SERVICES, WHERE AND HOW

@abhinemani | CAPP 30130 | University of Chicago



CIVIC TECH: KEYS TO SUCCESS

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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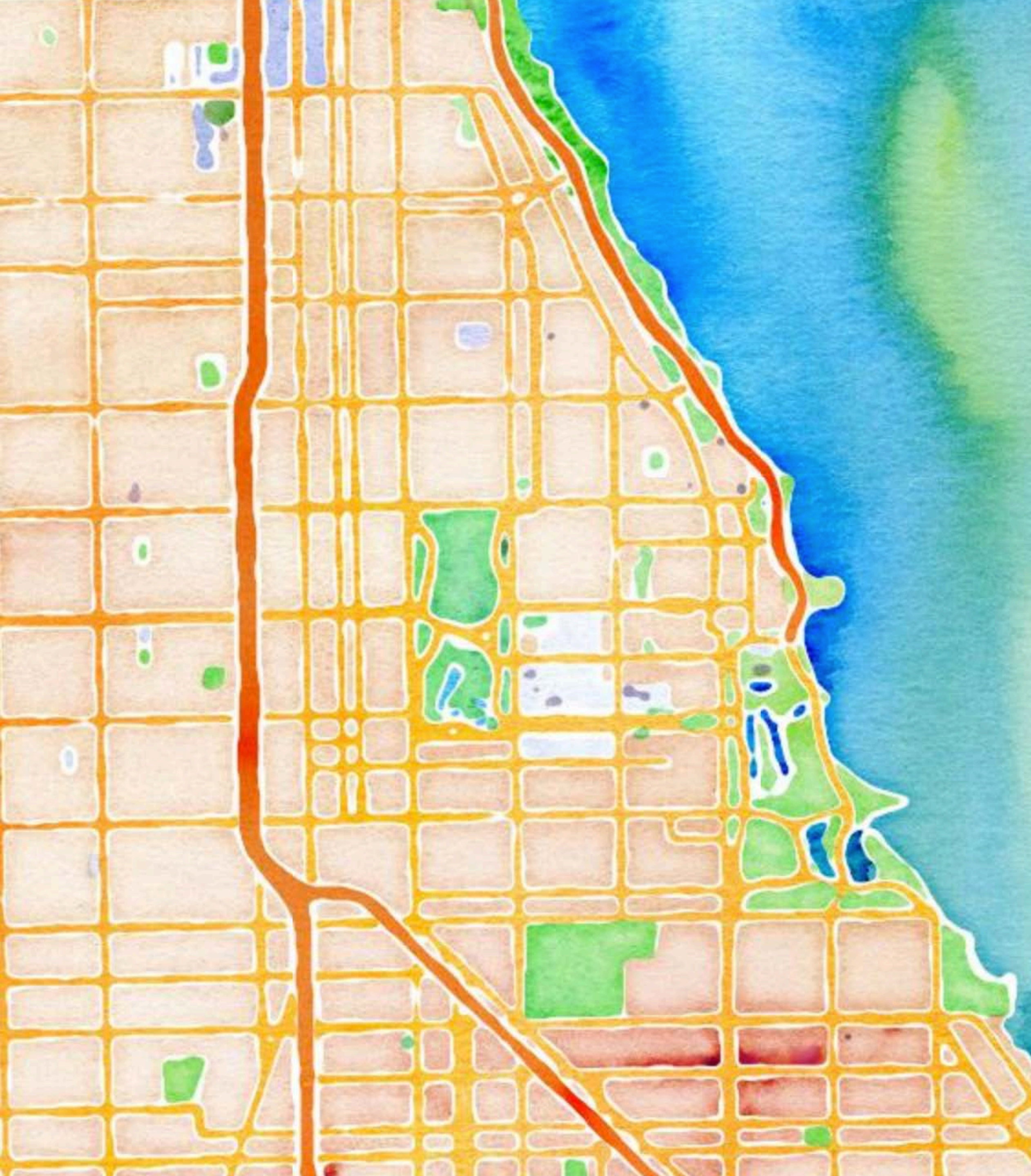
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AGENDA

- Where
 - Kenya
 - India
 - Jamaica
- How (in the US)
 - Federal Government Approach
 - State Government Approach
 - Local Government Approach





KENYA





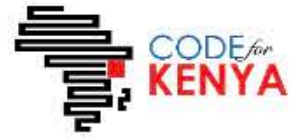
**ANTICORRUPTION
SUGGESTION
BOX**



**CORRUPTION
MOIC**

**SUGGESTION
BOX**

CODE FOR KENYA: “GIVING CITIZENS ACTIONABLE INFORMATION”



[Who We Are](#)

[What We Do](#)

[Community](#) ▾

[Opportunities](#)



ACTIONABLE INFORMATION

What Problems Keep People Awake At Night?

Code for Kenya uses **data** to give citizens **hyper-local** and **hyper-personal** information to make **better informed decisions** about bread & butter issues.

Code for Kenya also builds technology tools to **amplify citizen voices**.



AGENCY

We empower citizens.

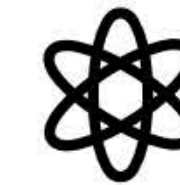
Strong democracies rely on engaged citizens who have actionable information and easy-to-use channels for making their will known. We support civic watchdogs, government and social enterprises to meaningfully engage with citizens.



ACTION

Our society is asymmetric.

The balance of power rests with government and corporate institutions, at the expense of citizens, where citizens are treated as passive recipients of consultation or services. We build actionable data and action-orientated tools that give 'agency' to citizens.



ECOSYSTEMS

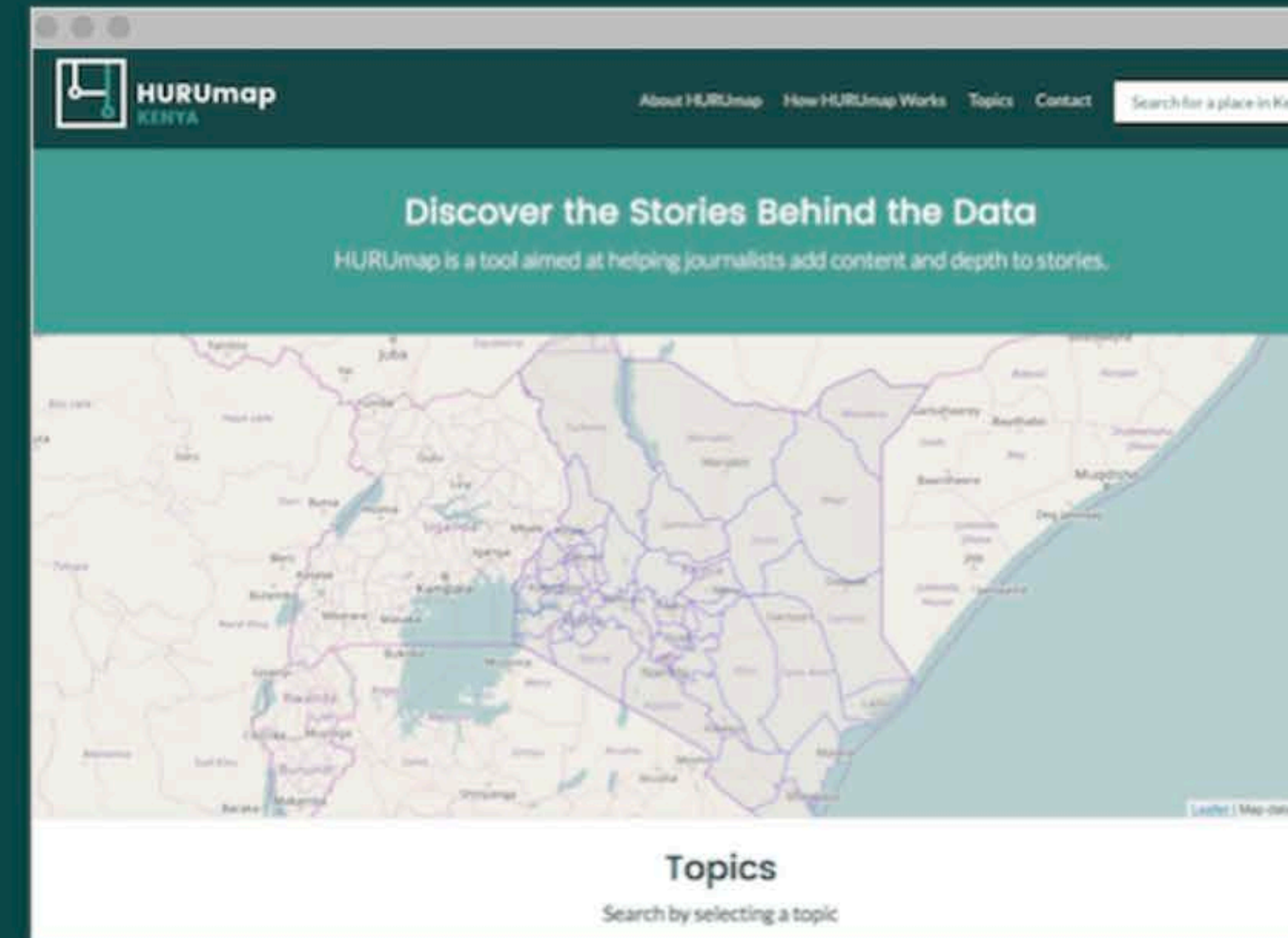
By the people, for the people.

We build ecosystems, because creating digital democracies is too big a task for any one organisation. We invest into existing communities and partners, and reuse existing tools and standards, because all of our work is better if we are all connected.

HURUmap

What's the data behind the story? HURUmap gives infomediaries like journalists and civic activists an easy 'plug & play' toolkit for finding and embedding interactive data visualisations into their storytelling. HURUmap's underlying data is quality-checked, from reputable official sources including the government Census, PEPFAR and Uwezo.

[Learn more](#)

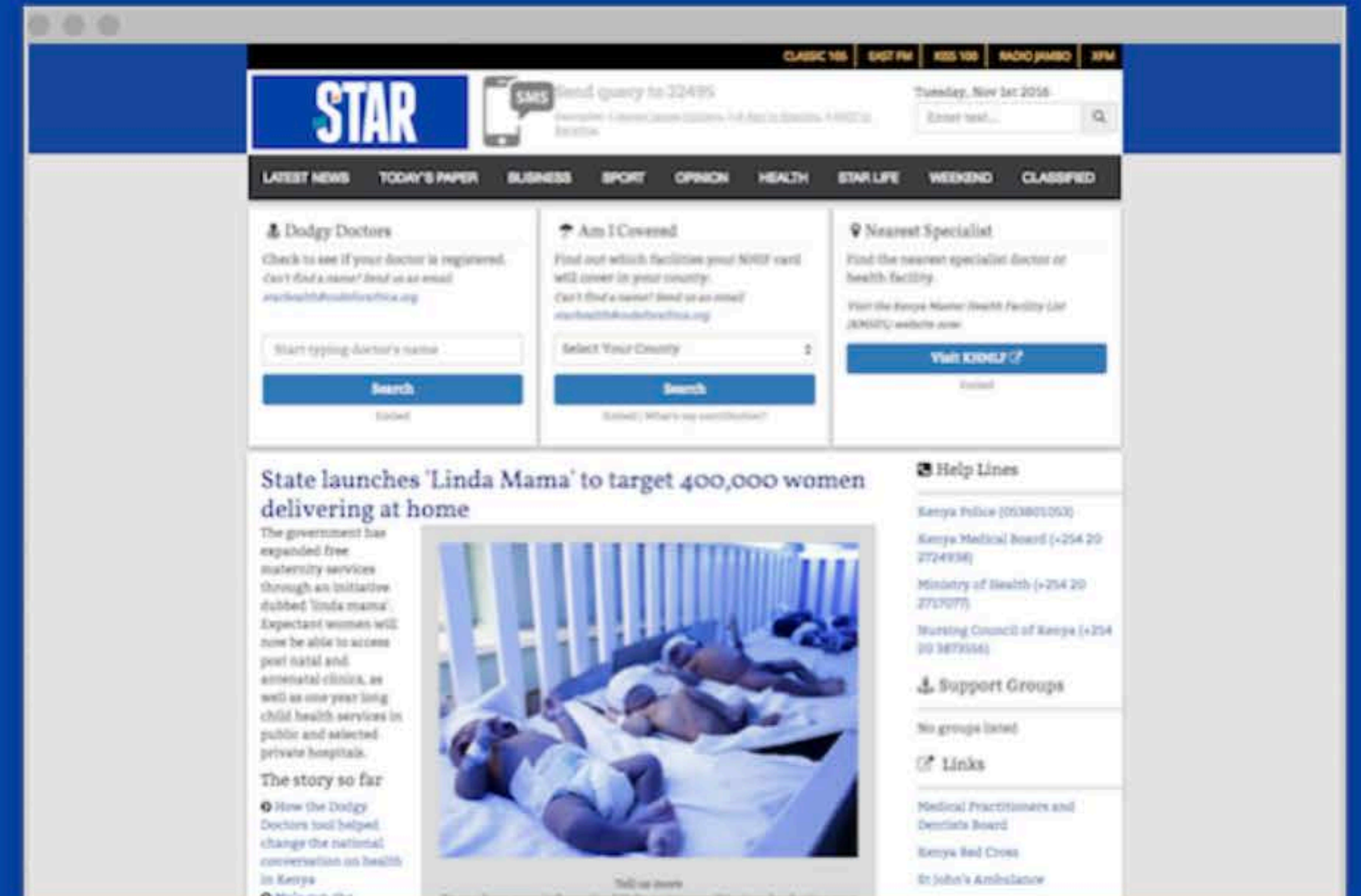


HuruMap: Empowering journalists to tell better stories, provide greater transparency on government through data and visualizations.

HealthTools

Is your doctor a quack? Are you being overcharged for medicines? Where is your nearest medical specialist? HealthTools give citizens localised answers to everyday health challenges via SMS and the web to help the *mwananchi* get the best medical care. Data is from reputable official sources, with additional crowd verification.

Learn more



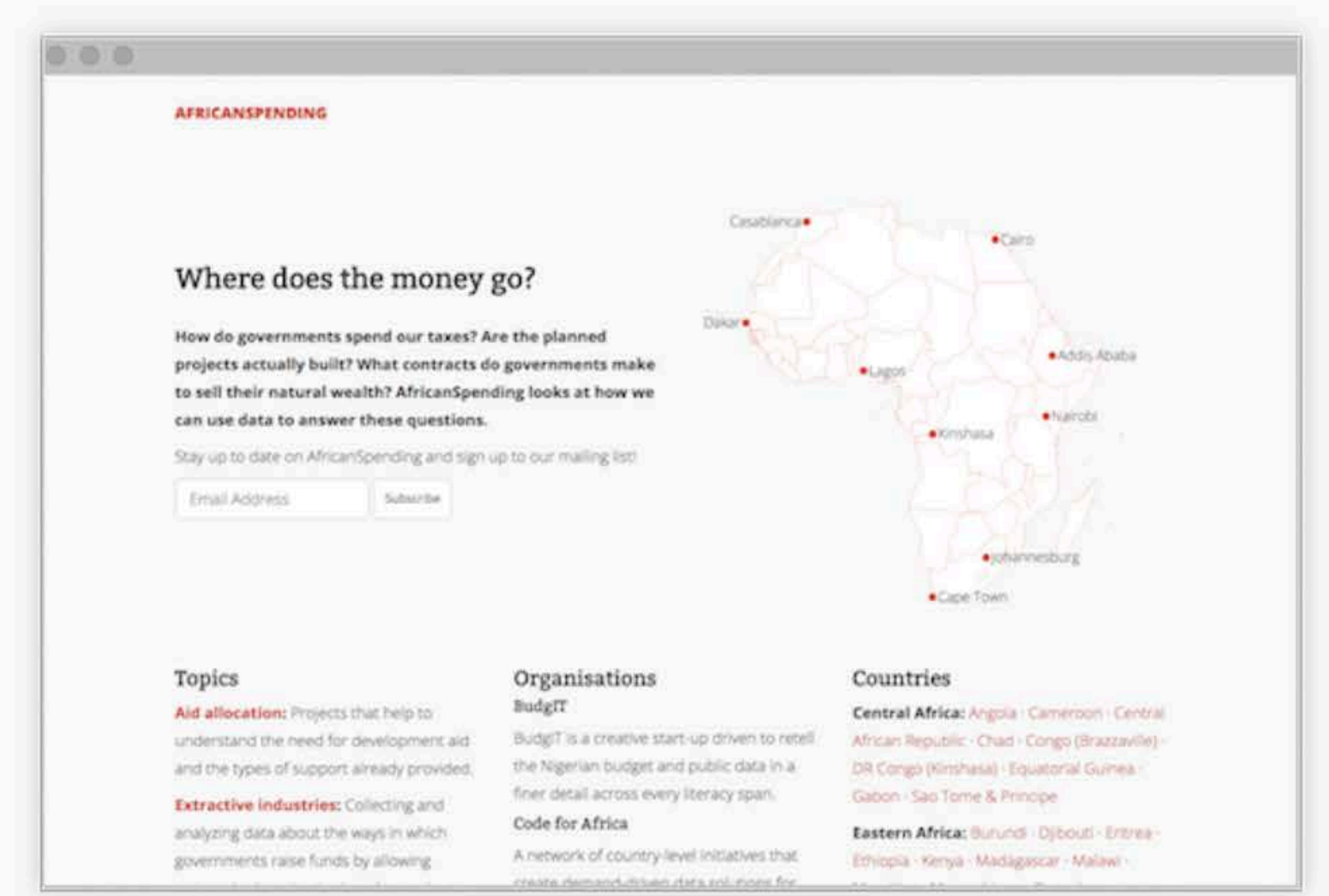
HealthTools: HealthTools answers everyday health challenges via SMS. Data is from reputable official sources, with additional crowd verification.

africanSPENDING

Taxpayers struggle to understand how government spends their hard-earned money. *Mwananchi* also struggle to help government understand what citizens' real priorities or needs are.

africanSPENDING offers a suite of interactive tools that support civic engagement around public finance data, strengthening participatory governance.

[Learn more](#)



africanSPENDING: A suite of interactive tools that support civic engagement around public finance data, enabling participatory governance.



INDIA





HAVE A QUERY?
Ask our experts

Bribe Trends

ASSAM

TOTAL REPORTS

2105

TOTAL AMOUNT

101.53 Cr

BRIBES PAID

483

BRIBES FIGHTERS

27

HONEST OFFICERS



7.26 CR
POPULATION

3.76 CR
MALE

3.5 CR
FEMALE

4.38 CR
LITERACY

2.58 CR
MALE

I Paid a Bribe: An anonymous crowdsourcing platform for reporting corruption.



JAMAICA





Praedial Larceny is the theft of agricultural produce or livestock from a farm or estate. It continues to be one of the greatest deterrents to investments in agriculture and is believed to cost the sector between \$5 billion and \$6 billion, annually.



CHIP: CHIP enables law enforcement to quickly verify whether suspected agriculture was properly acquired through a simple text.



LIVE STREAM

Sitting of the House of Representatives – Sectoral Debate @ 2:00pm

JIS News

HOME » JIS NEWS » AGRICULTURE

LIVE STREAM

Sitting of the House of Representatives – Sectoral Debate @ 2:00pm



ADVERTISEMENTS

Technology coming to help fight Praedial Larceny

AGRICULTURE

MARCH 14, 2014

WRITTEN BY: CHRIS PATTERSON



“

Providing information on how the application will work, Co-Founder, Slashroots and Engineering Residence, Code for the Caribbean, Varun Baker said the SMS application will provide agricultural information to law enforcers’ “at their fingertips”.

My Apps

Search by Name...

+ ADD A NEW APP

MY FIRST TEST APP

Brief Description : My First Test App

API Key : 4a345e3e193928852566613d5e75ea1
0a5a5f243b2145a93e2a2b494d99c856

CROPLOCATER

Brief Description : Brief description of the app

API Key : a5b715cdaf9a9a28ed34c20b31ffb06a4
1ad960c864bd054c3fad90be7fac74fa3

HarvestAPI: Brings together transaction data for developers to build more agricultural apps just like the CHIP application.

CONTEXT IS KEY.

**HOW GOVERNMENTS ARE
STRUCTURED AND PERCEIVED
MATTERS.**



US: 18F & USDS





**PRESIDENTIAL
INNOVATION FELLOWS**





Barack Obama

Clay Johnson
VP

Clay Johnson
VP

Clay Johnson
VP

Clay Johnson
VP

Clay Johnson
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Clay Johnson
VP

Quality solutions for efficient government

RFP-EZ delivers savings for taxpayers and new opportunities for small businesses



Government

High-technology Projects



Small Business

Innovative Deliverables



Collaboration

Efficient & Quality Solutions

For Small Business

Create a simple online profile and begin bidding on projects. If you're selected to work on one, we'll walk you through the government registration process.

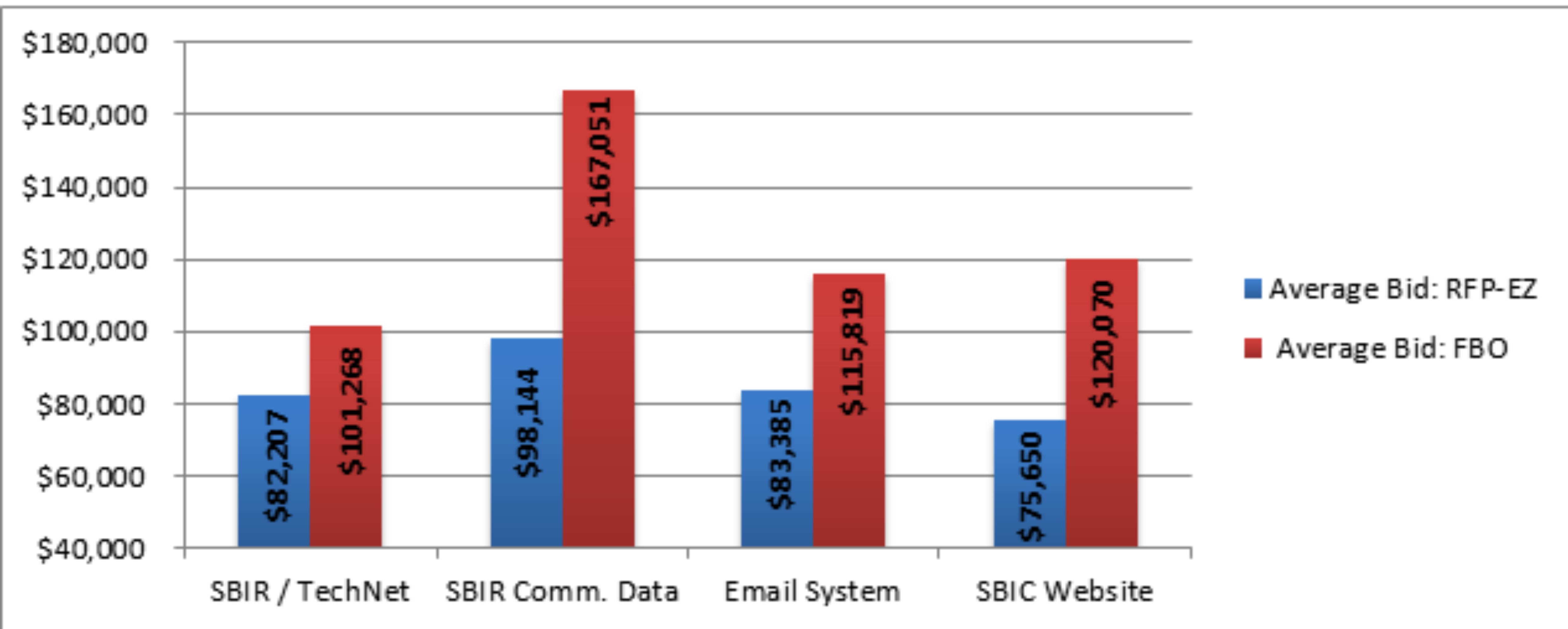
[Browse the Projects →](#)

For Government

Make great statements of work. Browse innovative tech businesses and see their online portfolios. Receive and review bids on your projects.

[Learn More →](#)

Average of All Bids Received for RFP-EZ vs FedBizOps (FBO)



1

88

F

18F —> TTS

- ▶ 18F eventually was folded into the “Technology Transformation Service” inside the GSA (General Services Administration)
 - ▶ **18F:** A digital consulting office that partners with agencies to help them build or buy digital services.
 - ▶ **IT Modernization Centers of Excellence (CoE):** A centralized team of technical experts that accelerate agency-wide IT modernization.
 - ▶ **Presidential Innovation Fellowship (PIF):** A program that pairs top technologists with civil-servants to spend 12 months tackling some of our nation’s biggest challenges.
 - ▶ **Office of Products and Programs (OPP):** A diverse portfolio of mature products and services that help agencies improve delivery of information and services to the public.



THE U.S. DIGITAL SERVICE



Think about it practically: bureaucratically, physically, and technically, USDS is part of and must respond to the ever-changing political desires of the White House (in contrast, 18F reports to, and is supported primarily by career civil servants).

-Ben Balter

1. TRANSPARENCY AS AN LIABILITY VERSUS TRANSPARENCY AS AN ASSET

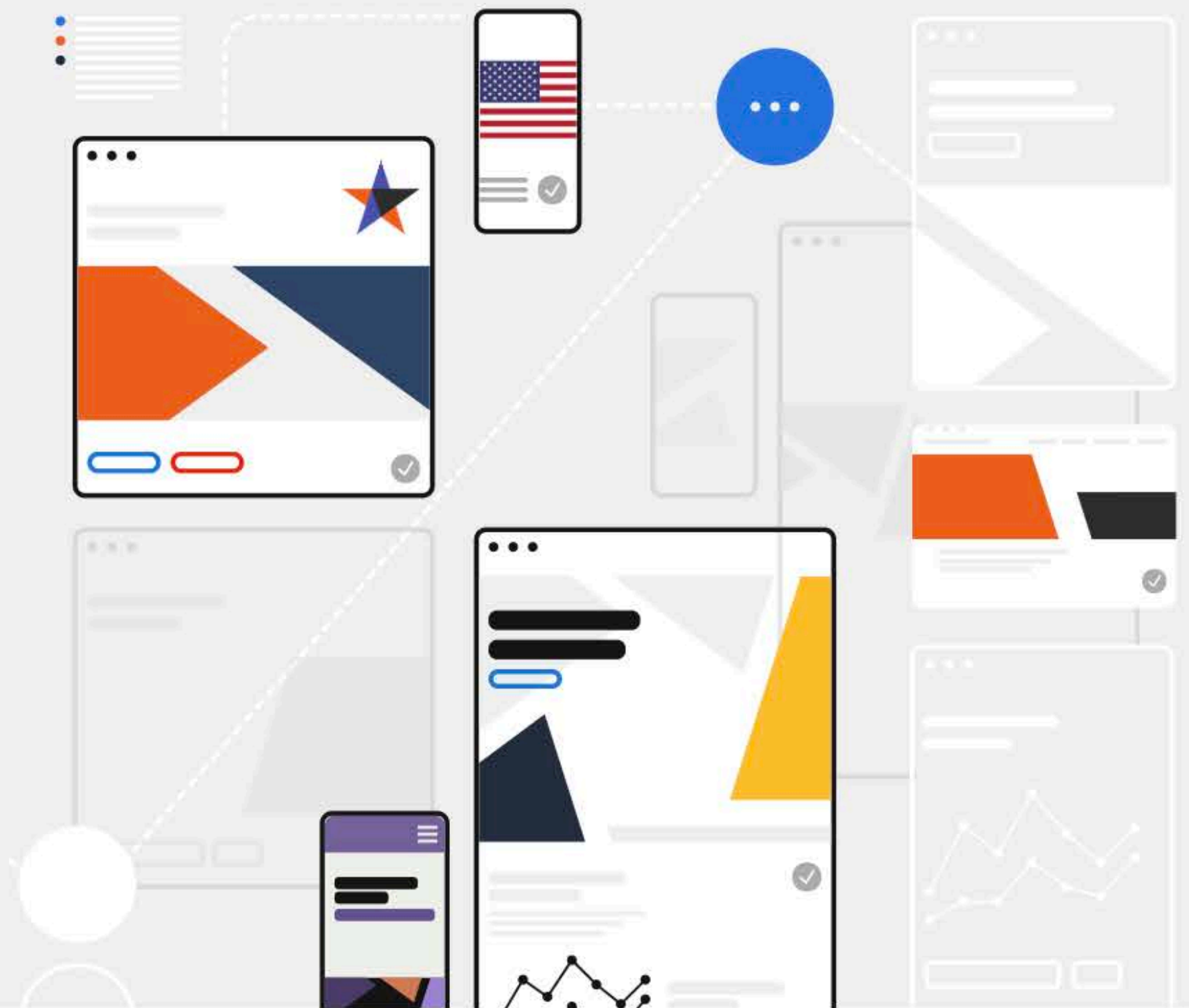
PROJECTS —> DIVIDENDS

18f also creates and maintains reusable tools/platforms for agencies (and 18f itself) to use in the future, providing a more modern IT stack:

- **login.gov** offers users simple, secure access to online government services. Integrate login.gov with your existing services, and users will be able to sign in with a single set of credentials for all participating government programs.
- **cloud.gov** helps government teams build, run, and authorize cloud-ready or legacy government systems quickly and inexpensively. The cloud.gov platform has a FedRAMP Joint Authorization Board (JAB) authorization, which means you can focus on developing mission-critical applications and leave server infrastructure management to us.
- **Federalist** helps federal agencies and offices quickly launch compliant websites. Use Federalist's templates and cloud.gov-backed hosting to launch a website in minutes.

A design system for the federal government.

We make it easier to build accessible, mobile-friendly government websites for the American public.

[Learn about USWDS 2](#)[Migrate to v2.0.1](#)

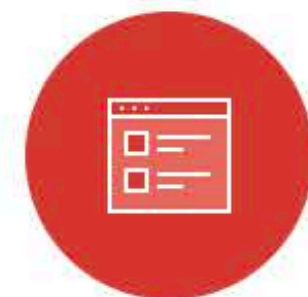
Components



Design tokens



Utilities



Page templates

2. SHOW VERSUS TELL



We engaged with 18F, and it was a game-changer for us. They came in and helped the IT team and business owners get involved in the agile development process. It changed our whole methodology.

-Alec Palmer, FEC

USDS DIGITAL SERVICE PLAYBOOK

Digital Service Plays

1. Understand what people need
2. Address the whole experience, from start to finish
3. Make it simple and intuitive
4. Build the service using agile and iterative practices
5. Structure budgets and contracts to support delivery
6. Assign one leader and hold that person accountable
7. Bring in experienced teams
8. Choose a modern technology stack
9. Deploy in a flexible hosting environment
10. Automate testing and deployments
11. Manage security and privacy through reusable processes
12. Use data to drive decisions
13. Default to open

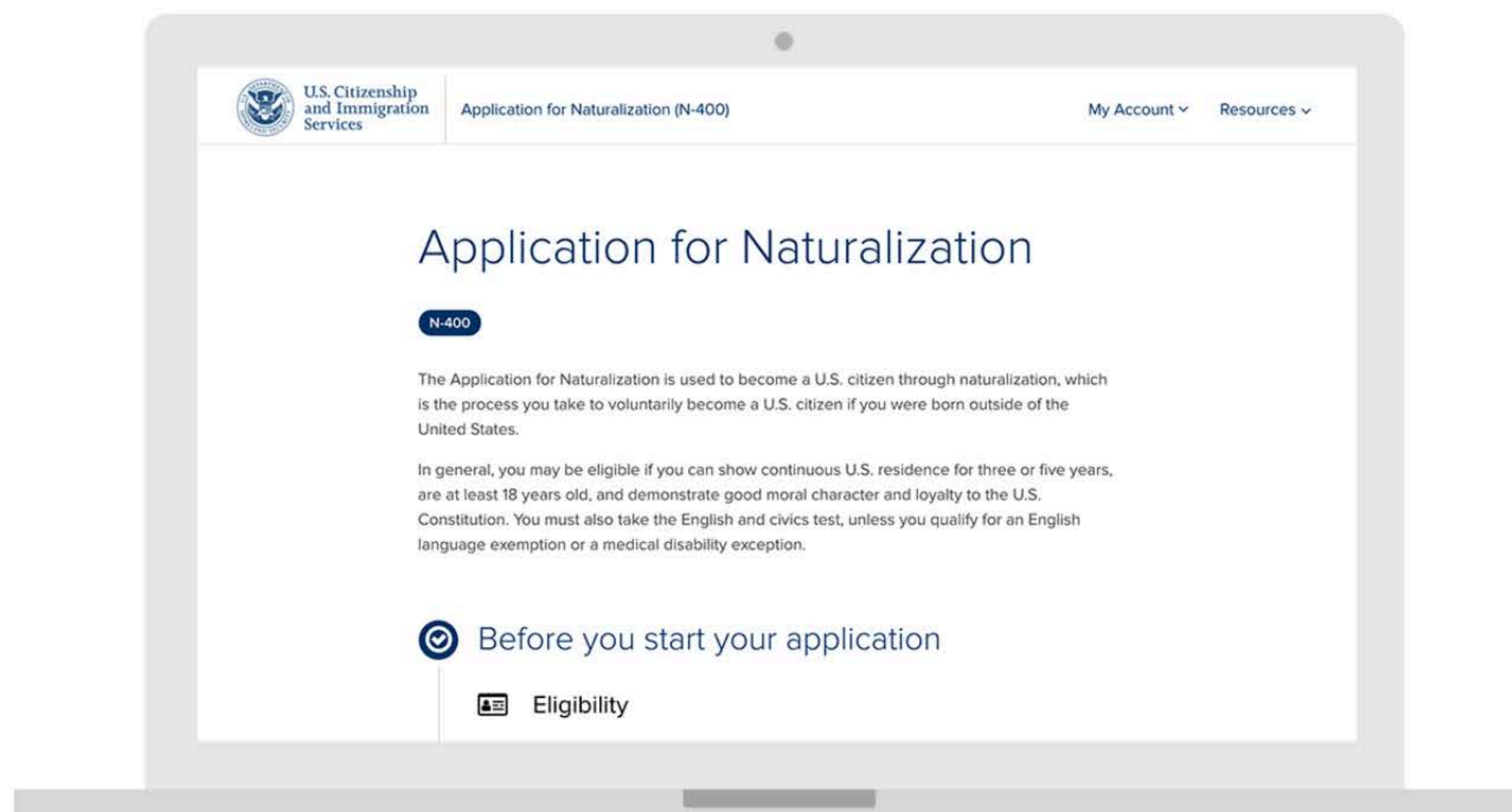
3. MANAGEMENT VERSUS HACKER

USDS & DHS: CITIZENSHIP



The Challenge

U.S. Citizenship and Immigration Services processes millions of immigration requests a year using a paper-based process that results in long waiting periods for applicants who have little visibility into the status of their application or petition. To become a naturalized citizen, an individual had to complete a physical 20-page form, called the N-400. Often, USCIS shipped this form across the country to multiple immigration officers, adjudicators, and clerks to review immigration records, perform interviews, and process background checks.



The Impact

975k

Yearly naturalization applicants

50%

Immigration workload now completed digitally

100%

of new N-400 applications electronically processed since October 2017

[View live project](#)

USDS EMBEDS TEAMS

Going where the work is

USDS embeds teams within federal agencies and their in-house digital technology divisions. Team engagements typically last between six months and two years. Agencies we've partnered with include:



Department of Veterans Affairs



Health & Human Services



Department of Homeland Security



Department of Defense



Small Business Administration



Department of State



Department of Education



Department of Agriculture



Department of Justice



Internal Revenue Service

GSA

*Non-political,
services-oriented
administration*

V

OMB

*Largest office within
the Executive Office
of the President*



STATES



UTAH.GOV. BUILT BY NIC (\$EGOV)

My Location: Salt Lake City (Out of State)

Support  Settings 




Government


Services


Employment


Business


Education


Residents


Visiting


About


Connect

I want to:

renew my bus |



OVERALL



WINNER 2018



✂ Online Services

Smarter eGovernment

The Economics of Online Services in Utah

Financial Savings

\$46M

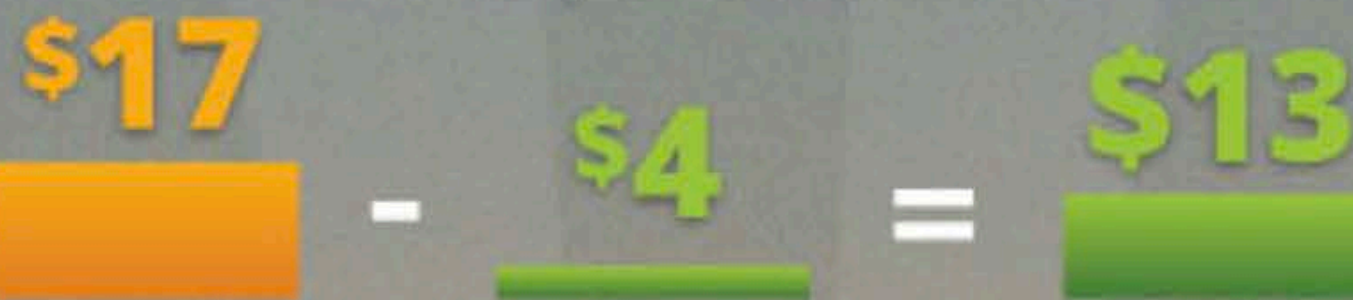
The cost savings from moving only 9 of Utah's services online was approximately \$46 million over 5 years.

\$15M

The state avoided over \$15 million in costs, over 5 years, by using a self-funded model.

Average Service Costs

The average cost per transaction to provide a service online is \$3.91 compared to \$17.11 to provide the service offline - a difference of \$13.20 per transaction



1400+ Online Services

Beginning in 1999 with just one service, Utah.gov now offers 1,400 online services



\$EGOV

MARKET CAP: \$1.136B



Services

News

Government

Local

Q Search

Location

Translate

THE OFFICIAL WEBSITE OF NEW YORK STATE

Second Span of New Kosciuszko Bridge to Open in September

MAY 6, 2019

The span will open a full four years ahead of schedule and on budget. Once complete, the bridge will include 5 Queens-bound lanes, 4 Brooklyn-bound lanes and a bikeway/walkway.

LEARN MORE

Stay Updated

First Name

Email

Zip Code

SIGN UP



Apply for a Professional License

Search the professional licenses offered in New York State and apply.

AVERAGE TIME OF TRANSACTION

 **5 - 10**

MINUTES

APPLY

★ SAVE | SHARE   

SECTIONS

Overview

Eligibility

How To

Apply

Overview

The Department of State offers licenses for over 32 professional occupations from real estate brokers to appearance enhancement professionals.

Which professions require licensing?

The following are **just some** of the professional licenses offered through the Department of State:

- Cosmetologist
- Barber

[Learn more](#) about the complete list of occupations available for licensing through the Department of State.



Services

News

Government

Local

eAccessNY

Occupational Licensing Management System



Create Account

Enter your details and press "Preview" to continue.

You **SHOULD** create an account if you are scheduling your first salesperson exam through eAccessNY.

You **SHOULD NOT** create an account if:

You are currently licensed or have previously created an account.

**Indicates a required field.*

Press "Cancel" to cancel this registration and return to the main menu.

* Email:

Street Number:

* Street Name:

Additional Line 1:

Additional Line 2:

City:

* County:

* State:

* Country:

Zip Code:

Phone Number: Ext:

* Secret Question (for lost password):

Select a predefined question:

Write my own question:

* Secret Answer:

* Please type the word from the picture below:
(case sensitive)



We have detected you are using an incompatible browser: Chrome

The NYS License Center is compatible with the following browsers:



Internet Explorer (8, 9, 10, and 11)



Firefox

If you use your current browser to access the NYS License Center, you may be unable to complete your license transaction.

We are working to make improvements in the future and apologize for any inconvenience.

[CLICK HERE
to proceed and access
the NYS License Center
with my current browser.](#)

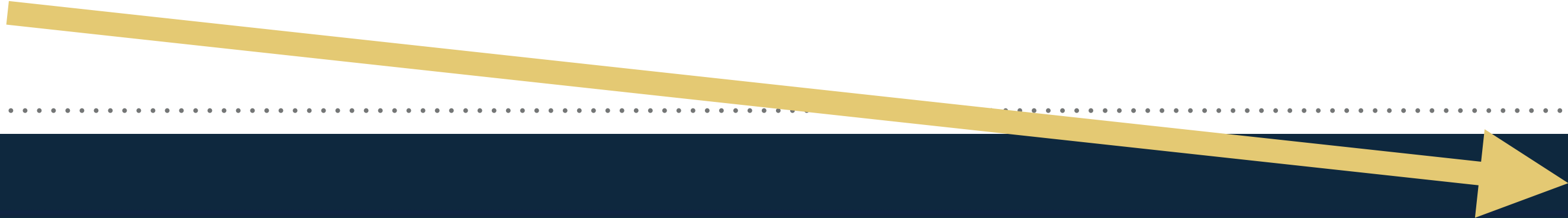
[CLICK HERE
to exit this page and
return to the
NYS Business Express home page](#)



CITIES



LA CITY SERVICES



LOS ANGELES MyLA 311 Select Language Search City Services by entering keywords (ex. Permits) Sign In / Register

CREATE SERVICE REQUEST VIEW ALL CITY SERVICES

ASK CHIP

Use Quick Ticket

[View All Service Requests >](#)

Bulky Items →	Graffiti Removal →
Containers →	Service Not Complete →
Illegal Dumping Pickup →	Metal/Household Appliances →
Homeless Encampment →	Electronic Waste →
Pothole - Small Asphalt Repair →	Dead Animal Removal →

Popular Services

- [Building and Safety Inspection Scheduling](#)
- [Estimated Inspection Time of Arrival Lookup or Inquiry](#)
- [Animal Services Centers](#)
- [Parking Enforcement](#)
- [Property Violation Reports](#)
- [877 ASK-LAPD - Non-emergency Police Service](#)
- [Abandoned Vehicles](#)

LA CITY SERVICES

The screenshot shows the Los Angeles Public Library website. At the top left is the 'LOS ANGELES' logo. On the right, there are links for '311 City Services' and 'LA City Directory'. Below this is an orange banner with 'LOS ANGELES PUBLIC LIBRARY' and a logo, along with links for 'GET A LIBRARY CARD' and 'MY LIBRARY ACCOUNT'. A dark blue navigation bar contains 'Collections & Resources', 'Locations & Hours', 'Events', 'Get Involved', 'About LAPL', and 'Library Store'. A teal search bar features a 'Search the LAPL Catalog:' section with a 'Search Term:' input field, a 'Search Type:' dropdown set to 'Keyword', and a 'FIND' button. To the right of the search bar are links for 'Other Collections & Resources: Tessa: Photo & Digital Collections', 'Research & Homework', and 'eMedia'. A left sidebar lists various services like 'Español', 'Get Your Diploma', 'Kids & Parents', 'Teens', 'Teachers', 'Job Seekers', 'Adult Literacy', 'New Americans', 'Veterans Resources', 'Health Matters', 'Money Matter\$', 'Online Learning', 'Homeless Resources', and 'ADA Services'. At the bottom of the sidebar is a 'How Do I?' link with a right arrow. The main content area features a large image of a smiling woman with speech bubbles containing 'Hello', 'Ciao', '안녕하세요', '¡Hola!', 'Bonjour', 'Guten Tag', and '你好'. To the right of this image is a 'Latest Blog Posts' section with two entries: 'Start Your Small Business at the Library!' and 'Jewish American Heritage Month: Comic Book Creators', each with a small thumbnail image.

LOS ANGELES

311 City Services LA City Directory

LOS ANGELES PUBLIC LIBRARY

GET A LIBRARY CARD | MY LIBRARY ACCOUNT

Collections & Resources | Locations & Hours | Events | Get Involved | About LAPL | Library Store

Español

Get Your Diploma

Kids & Parents

Teens

Teachers

Job Seekers

Adult Literacy

New Americans

Veterans Resources

Health Matters

Money Matter\$

Online Learning

Homeless Resources

ADA Services

How Do I? >

Search the LAPL Catalog:

Search Term:

Search Type:

Keyword

FIND

Go to the Catalog for more options

Other Collections & Resources:

- Tessa: Photo & Digital Collections
- Research & Homework
- eMedia

Latest Blog Posts

Start Your Small Business at the Library!

Business & Economics Department

Have you been toying with the idea of starting your own business? Have you been unsure where to...

Continued

Jewish American Heritage Month: Comic Book Creators



City of
Philadelphia

What can we help you find?

I'm looking for...

e.g. Property Information, Department of Revenue, Water Billing



SUBMIT A
REQUEST



PAY A BILL



PROPERTY
SEARCH



JOBS

BUSINESS

Includes starting a business and taxes

HEALTH

Includes health centers and food protection

LICENSES AND PERMITS

Includes permit applications, tenant/landlord rights, and violation reporting and appeals

PROPERTY

Includes assessments, taxes, and violations

PUBLIC SAFETY

Includes visiting inmates and criminal justice

RECREATION

Includes parks, facilities, programs, and events

STREETS AND UTILITIES

Includes water, sanitation, parking

TAXES AND PAYMENTS

Includes assessments, taxes, and violations



Service Requests

BOS:311

Boston city services on the go.
Download the BOS:311 app

Top Requested

Select a Payment

Select a Service Request

Search Job Postings

City Departments >

Select a Department

Most Requested Pages

Property Tax Information

Apply for a Job

Parking Ticket

Things to Do

Maps

Welcome!

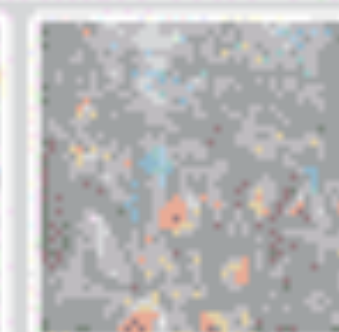
Tuesday, July 19, 2016



Boston's Small Business Plan

Our first ever small business plan is a five year strategic document with three aims: to make the small business economy thrive, to enhance neighborhood vibrancy, and to foster economic and social inclusion and equity.

[Boston's Small Business Plan >](#)



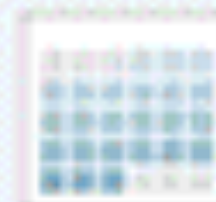
Search: Go!

Translate >



Calendar >

See a listing of City Events and Public Meetings.
[View Calendar >](#)



Mayor's Office >

[Mayor's Biography](#)

City Council >

[Councillors](#)

[Meetings](#)

News & Press Releases >

USER INFORMATION

CONTACT TYPE:

OpenCounter 

FIRST NAME:

MI:

LAST NAME:

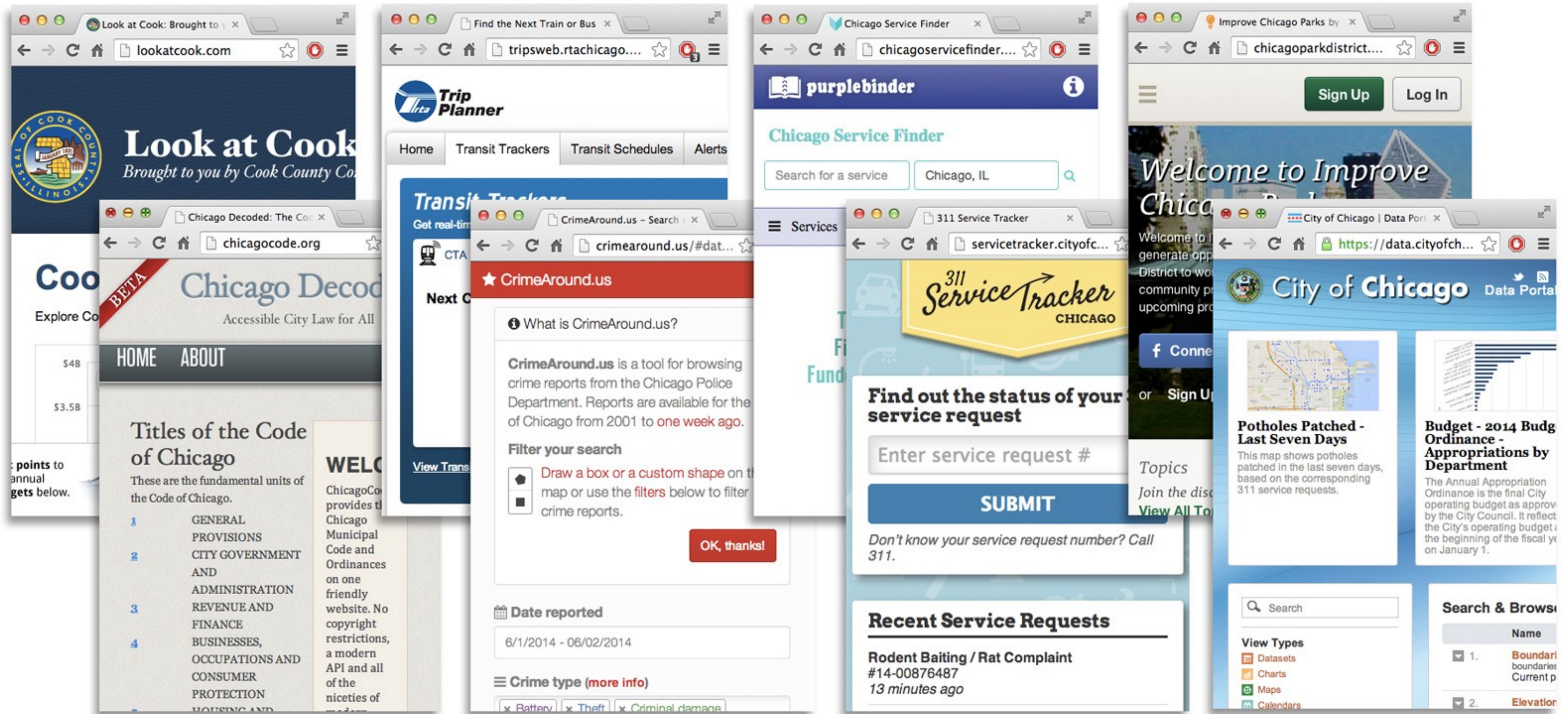
COMPANY NAME:

POSITION:

ADDRESS:

ADDRESS CONTINUED

A LOOK AT COOK: ALL THE APPS



LOTS OF SMALL PIECES, ALREADY BUILT

- **Bullets:** CrimeAround.Us, Crime in Chicago, Oakland Crimespotting
- **Bills:** OpenGov's AmericaDecoded, MySociety's SayIt, Councilmatic
- **Budget:** OpenGov.com, OpenSpending, Look at Cook
- **Buses:** OpenTripPlanner, OneBusAway
- **211:** Aunt Bertha, Purple Binder, Ohana, Connect Chicago
- **311:** SeeClickFix, PublicStuff, Connected Bits, Service Tracker, Open311Mobile
- **411:** CityAnswers, MindMixer, OSQA
- **Data:** Socrata, NuData, CKAN, OpenDataCatalog, Junar

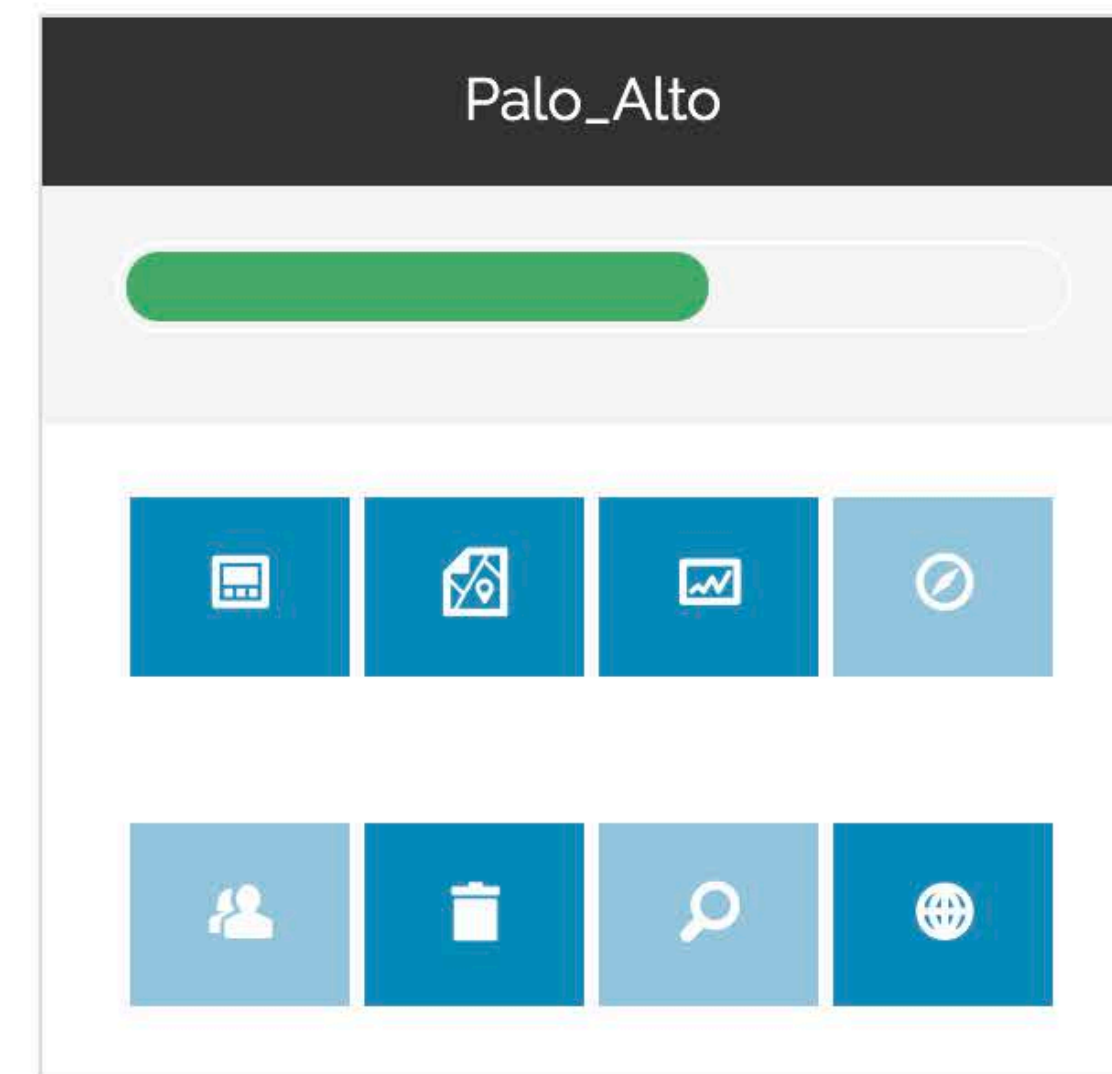
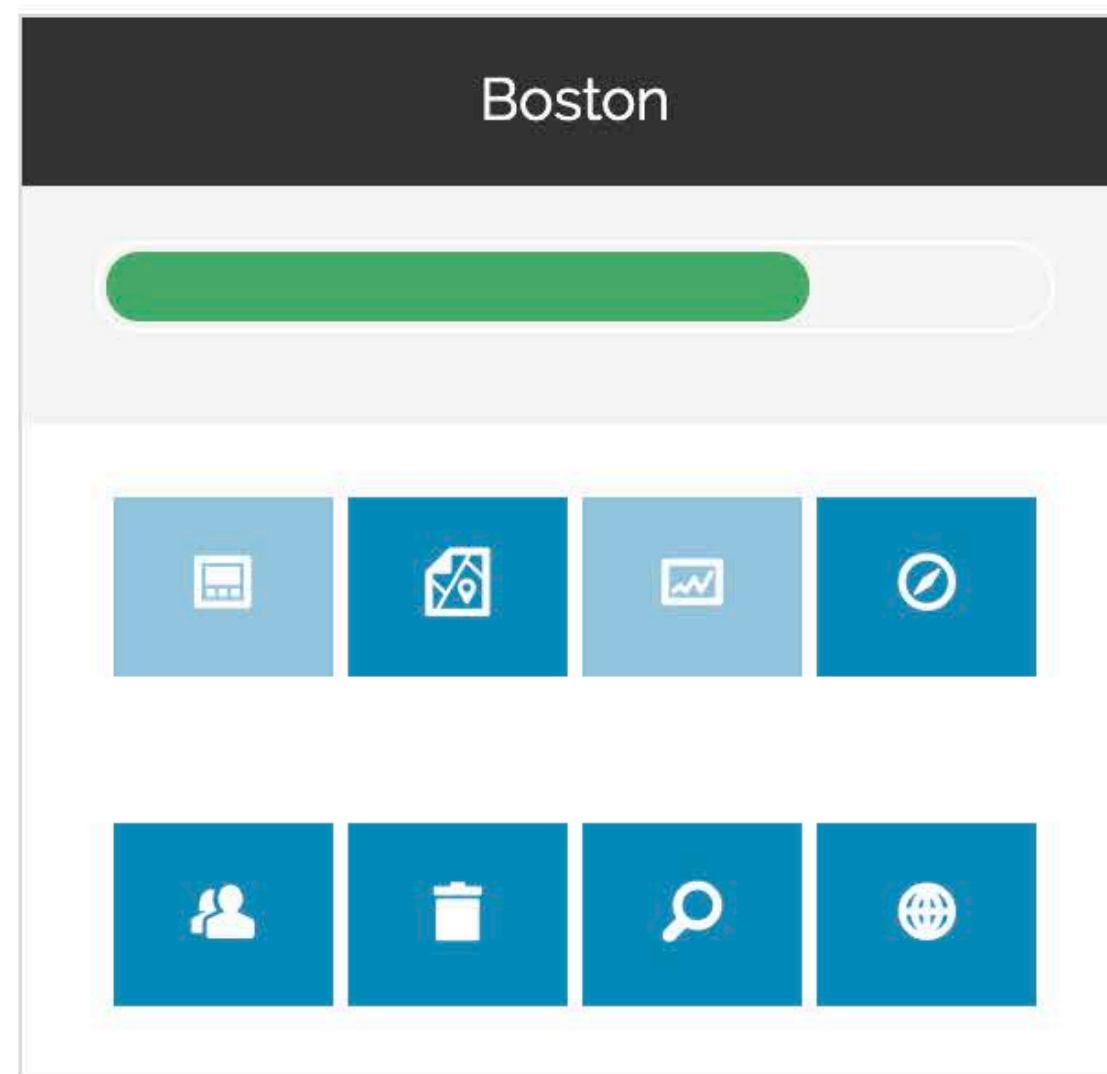
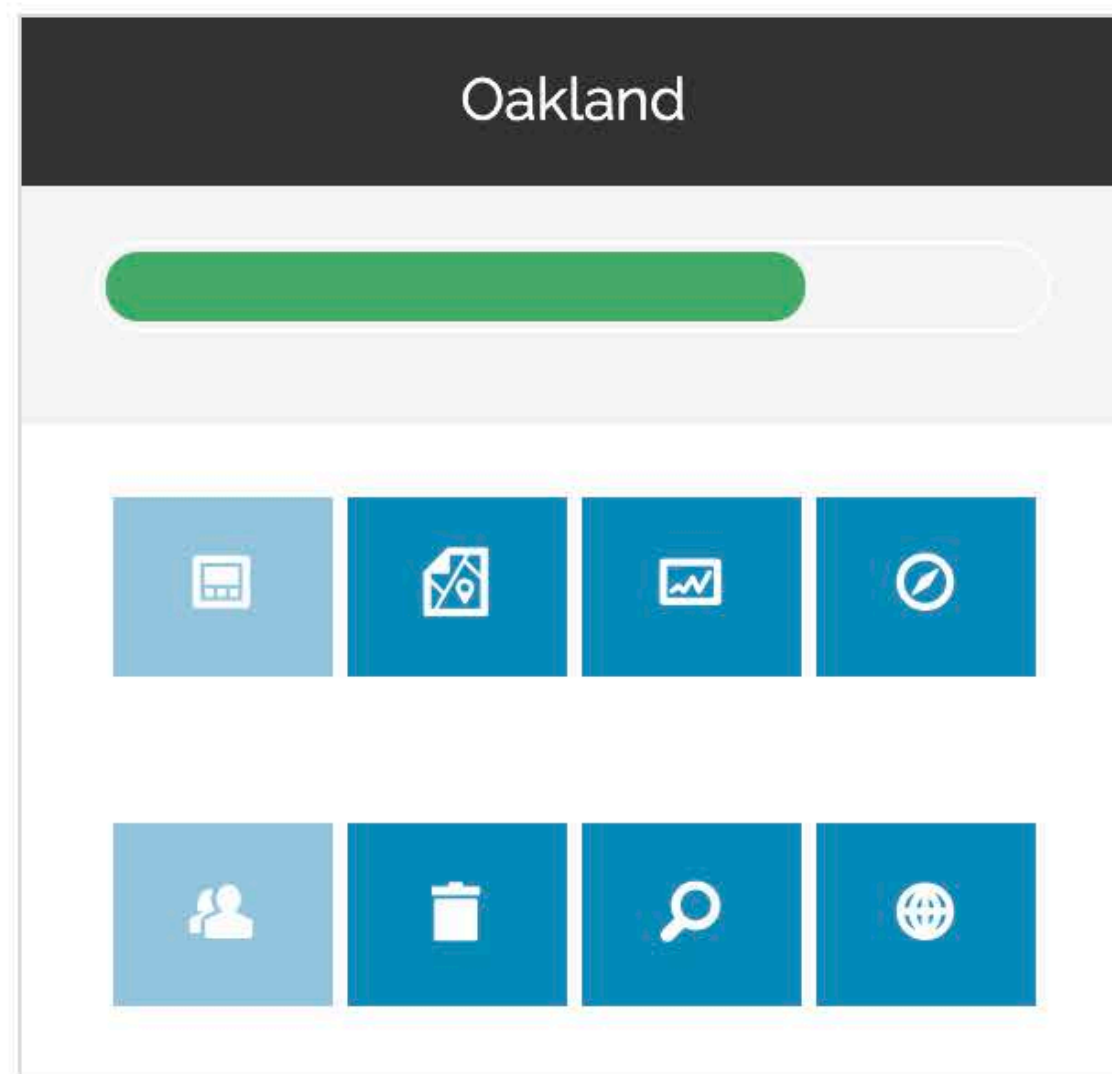
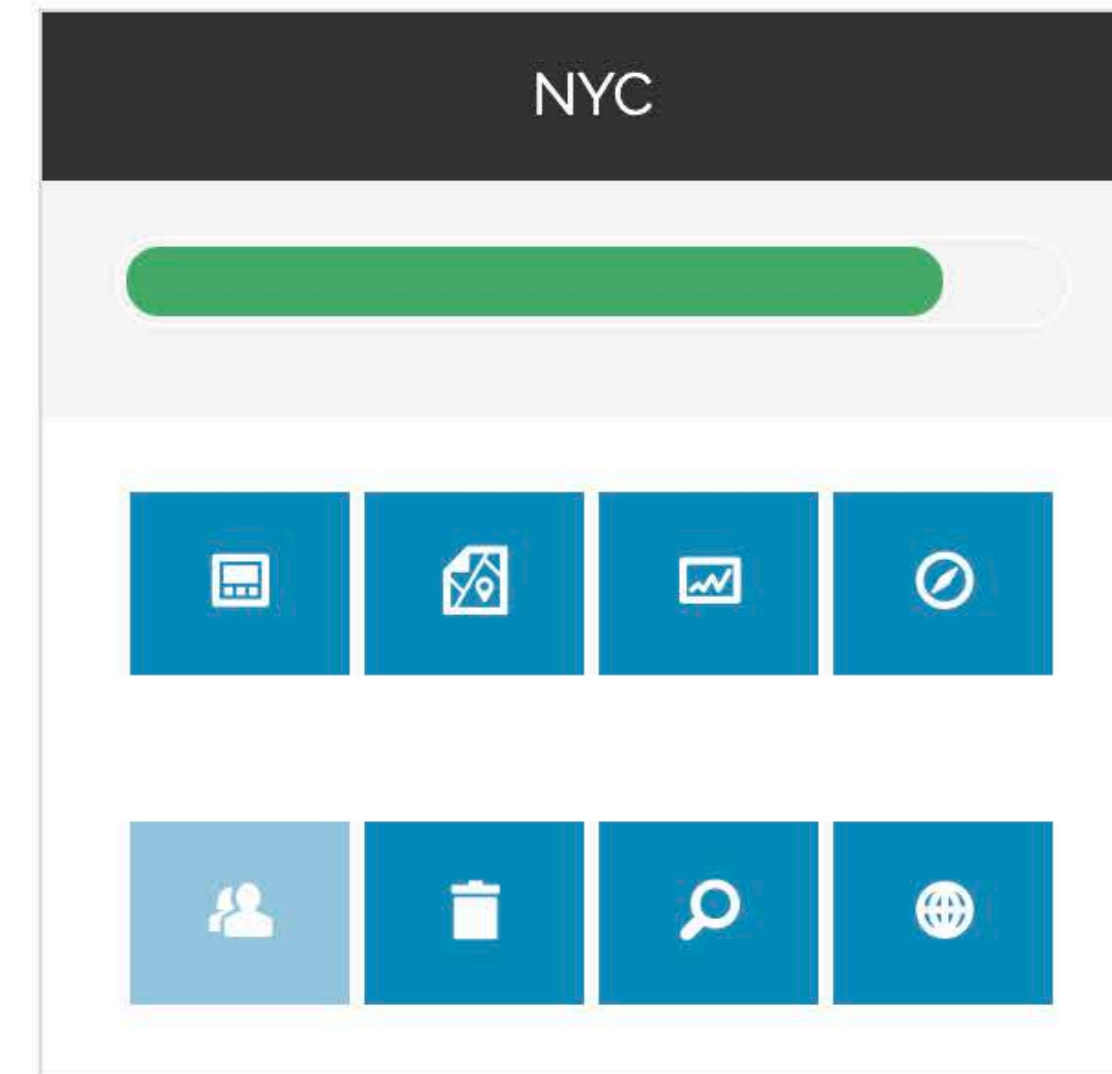
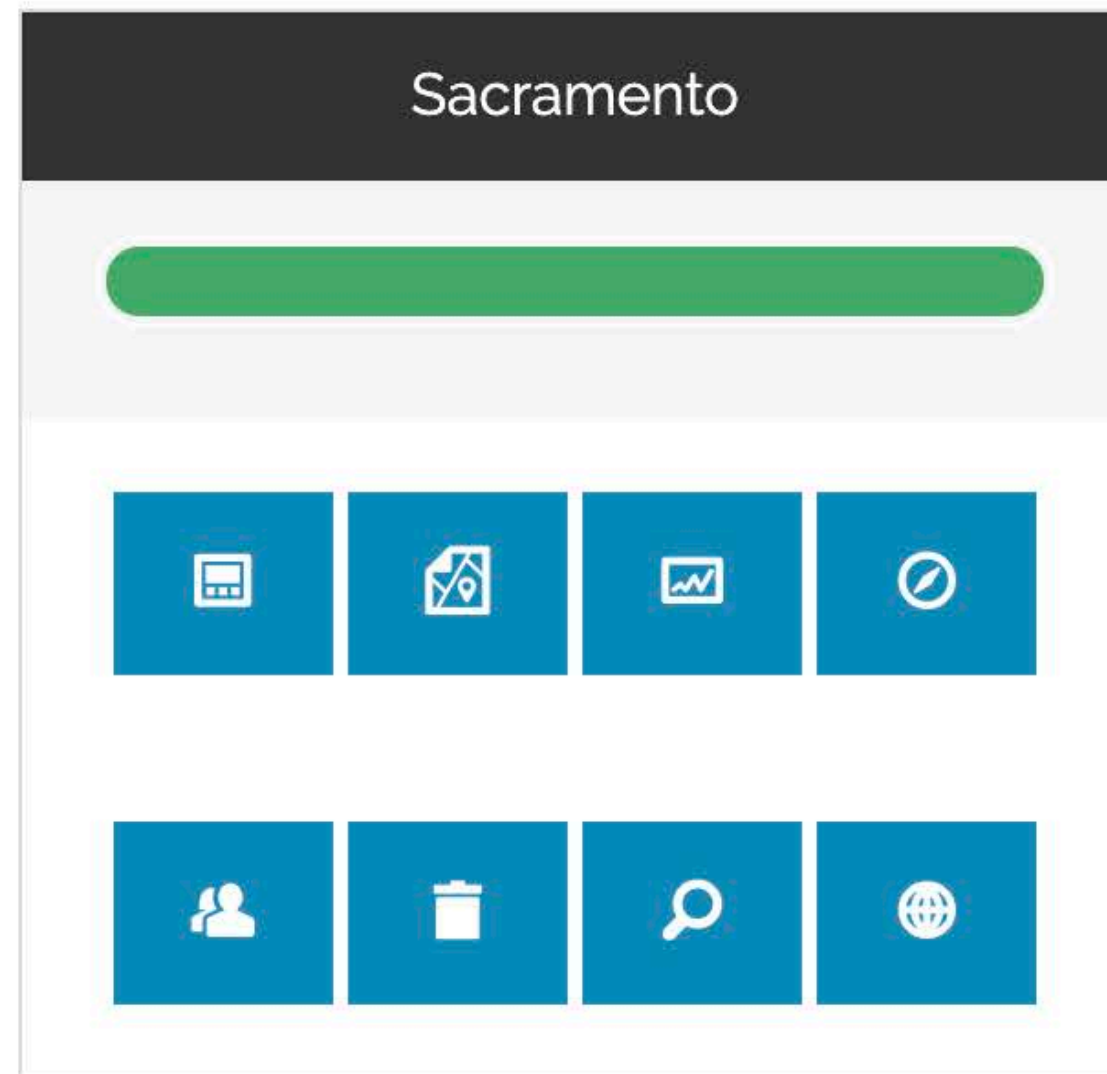
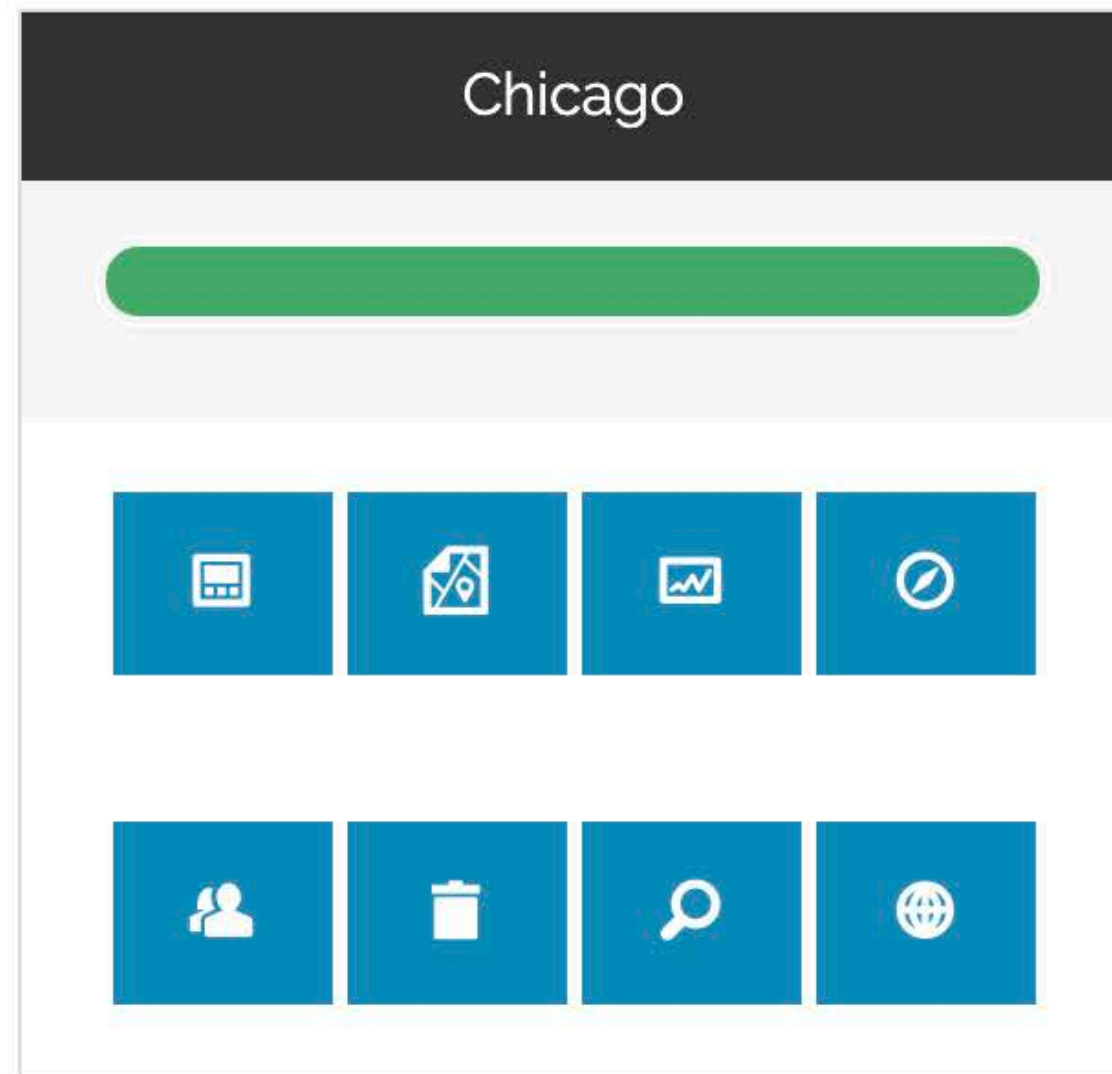


Small (City) Pieces, Loosely Joined

Experiments in stitching together civic technology for local governments



But there is, I believe, something more pulling us on to the Web... The Web is ours... the Web is thoroughly ours in the same way that language is ours. It is of us. It is drenched in that which makes us human: consciousness, sociality, meaning, intention, interest. But now we're [making things] it in a world that we're building for ourselves out of the truly human "stuff" of language and passion.



**HOW DO WE BUILT, CONNECT, AND
SUSTAIN THE ECOSYSTEM?**

LECTURE 12 ASSIGNMENT (ASSIGNED 5/6)

- Writing Work

- Memo for the New Mayor (due 5/13, 9pm)

- Project Work

- Create interactive map (due 5/10, 9pm):

- <https://docs.mapbox.com/help/tutorials/tilequery-healthy-food-finder/>