

THE CHANGING TECH OF GOVERNMENT

By Jacqueline Kazil

PyCaribbean, February 18, 2018

OR

HOW THE GOVERNMENT MADE ME A BETTER PROGRAMMER

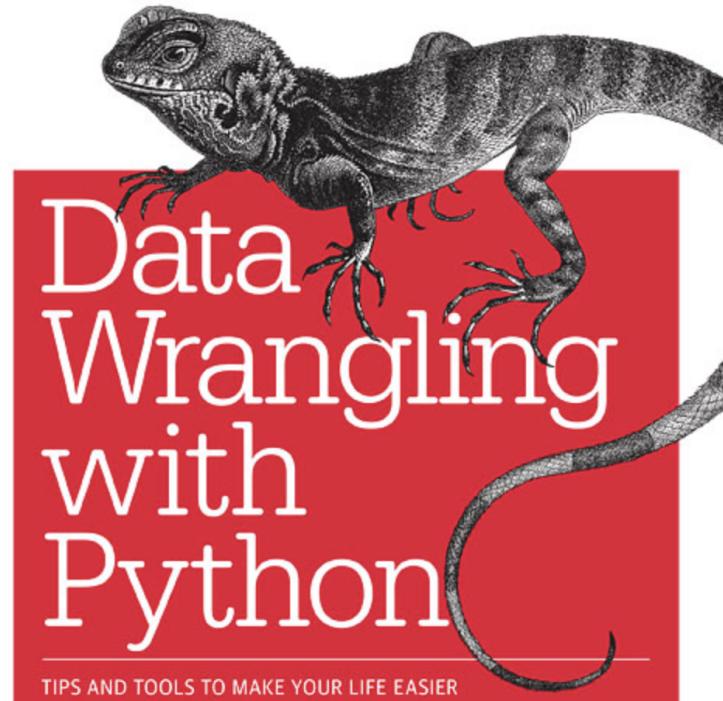
By Jackie Kazil

Tech in government has changed a lot...
.. and so have I.

First, a little about myself...

- Worked in government from 2011 to 2015
- Presidential Innovation Fellow 2013 to 2014
- Python Software Foundation Board member
- PyLadies leader - internationally and in DC
- Board member of Byte Back
- PSF Fellow
- ... and other random things

O'REILLY®



Jacqueline Kazil & Katharine Jarmul

EL SENTINEL



EL SENTINEL FEB. 16, 2018

Trump viajará a Florida tras masacre

El presidente Donald Trump anunció el viernes su viaje a Florida, donde una pequeña población está de luto tras la masacre de 17 personas en una escuela secundaria. "Viajaré a Florida hoy a reunirme con algunas de las personas más valientes del mundo, pero personas cuyas vidas han sido totalmente..."



EL SENTINEL FEB. 16, 2018

Parkland dice "ya es suficiente violencia"

Mientras se programaban los servicios fúnebres para las víctimas de la matanza en la escuela secundaria Marjory Stoneman Douglas en Parkland, un grupo hastiado de la violencia en las calles con armas de alto poder planea una protesta singular con un poderoso mensaje "enough is enough" (ya es suficiente)....



EL SENTINEL FEB. 17, 2018

Más esbelto, Albert Pujols quiere tener más acción en 1B

Albert Pujols está más esbelto, y listo para desempolvar su guante de primera base. El toletero dominicano de 38 años quiere revertir la espiral negativa de su carrera, en parte contribuyendo con su defensa ahora que se ha recuperado de lesiones. Los Angelinos confían que Pujols pueda compartir...



Things have changed a lot!





loc.gov

The team worked on lots of important things...



LIBRARY OF CONGRESS

Websites Down Feb. 16-19; Reading Rooms and Library Shop Closed Feb. 17 and 19

Due to a planned power outage, most of the Library's public websites (loc.gov and others) will be unavailable from **7 p.m. ET, Friday, Feb. 16 through Monday, Feb. 19**. The Copyright online registration system will be unavailable beginning **5 p.m., Thursday, Feb. 15** throughout the weekend.

[**Congress.gov**](#) will be available during the February 16-19 (Friday-Monday) planned maintenance. System data will be current, but Saved Searches and new Alert subscriptions will not be available.

On **Saturday, Feb. 17 and Monday, Feb. 19**, all reading rooms and research areas, Library Shop, Madison and Adams buildings will be closed to the public.

The Thomas Jefferson Building's Great Hall and exhibitions will be open to the public from 8:30 a.m. to 4:30 p.m. on Feb. 17 and 19. The Thomas Jefferson Building is located at 10 First St. S.E., Washington, DC 20540. The Young Readers Center in the Jefferson building will be open on Saturday, Feb. 17 only from 9 a.m. to 4:30 p.m. No food service will be available throughout the day, however the vending lounge in the Jefferson building cellar will be open.

The Architect of the Capitol will be conducting essential maintenance on the Capitol Hill campus from Friday, Feb. 16 through Monday, Feb. 19, resulting in a power outage that will require these closings.

Explore the Library of Congress on social media.





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Lesson: If you are not on the cloud, you need to move, otherwise someone will take screenshots of your downed website and share it at a conference.

Lesson: A team only functions as well as the environment in which it is run.

**WHY WOULDN'T SOMEONE MOVE
TO THE CLOUD?**

Managing data centers is hard. If that is not your business, pay someone else to do it for you.

If fact, deploying code is one of the hardest things to do in government.

It can take six months to more than a year.

LESSON: CHESTERTON'S FENCE



Automated deployments to the cloud == less risk.

Many small deployments are less risky than one single,
large deployment.

$$A - B < A - C$$

We can learn a lot about the way tech worked (or didn't work) through its devs and deployment processes.

REGULATION

Less regulation <-----> More regulation

FEMA Contract Called for 30 Million Meals for Puerto Ricans. 50,000 Were Delivered.

[Leer en español](#)

By PATRICIA MAZZEI and AGUSTIN ARMENDARIZ FEB. 6, 2018



[Get Coverage](#)[Keep or Update Your Plan](#)[See Topics ▾](#)[Get Answers](#)

Search

SEARCH

2018 Open Enrollment is over. Still need health insurance?

You can enroll in or change plans if you have certain life changes, or qualify for Medicaid or CHIP

[SEE IF I CAN ENROLL](#)[SEE IF I CAN CHANGE](#)

Looking for coverage for a small business? [Learn more](#)



NEED TO SUBMIT DOCUMENTS?

[SEE HOW](#)

healthcare.gov

MEANWHILE...



Search

Submit a Complaint

Consumer Tools

Practitioner Resources

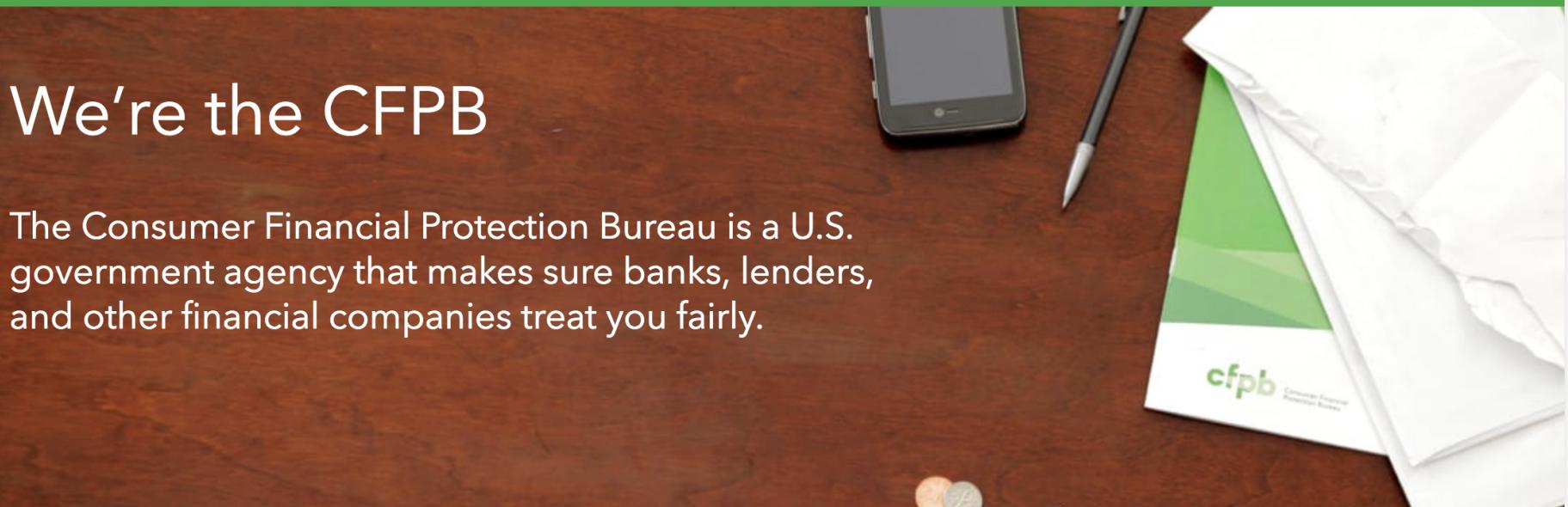
Data & Research

Policy & Compliance

About Us

We're the CFPB

The Consumer Financial Protection Bureau is a U.S. government agency that makes sure banks, lenders, and other financial companies treat you fairly.



cfpb.gov

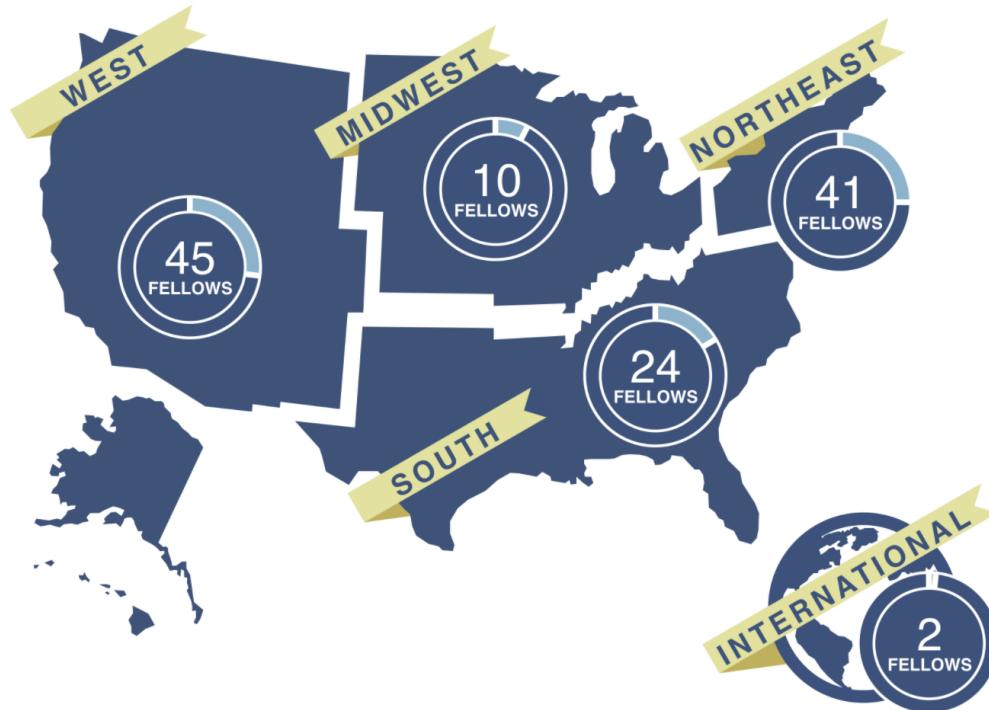
President Obama wanted to bring "Silicon Valley" entrepreneurs and engineers into government.

So, he appointed Todd Park as the second CTO of the U.S. in March 2012.

TODD CREATED THE PRESIDENTIAL INNOVATION FELLOWS (PIF)

- Inspired by Code for America
- Short "tours of duty" to work on projects with the potential to save lives, money, create jobs, and make government more efficient
- There were 18 fellows in the first round, now...

Recruiting industry leaders to serve as change agents



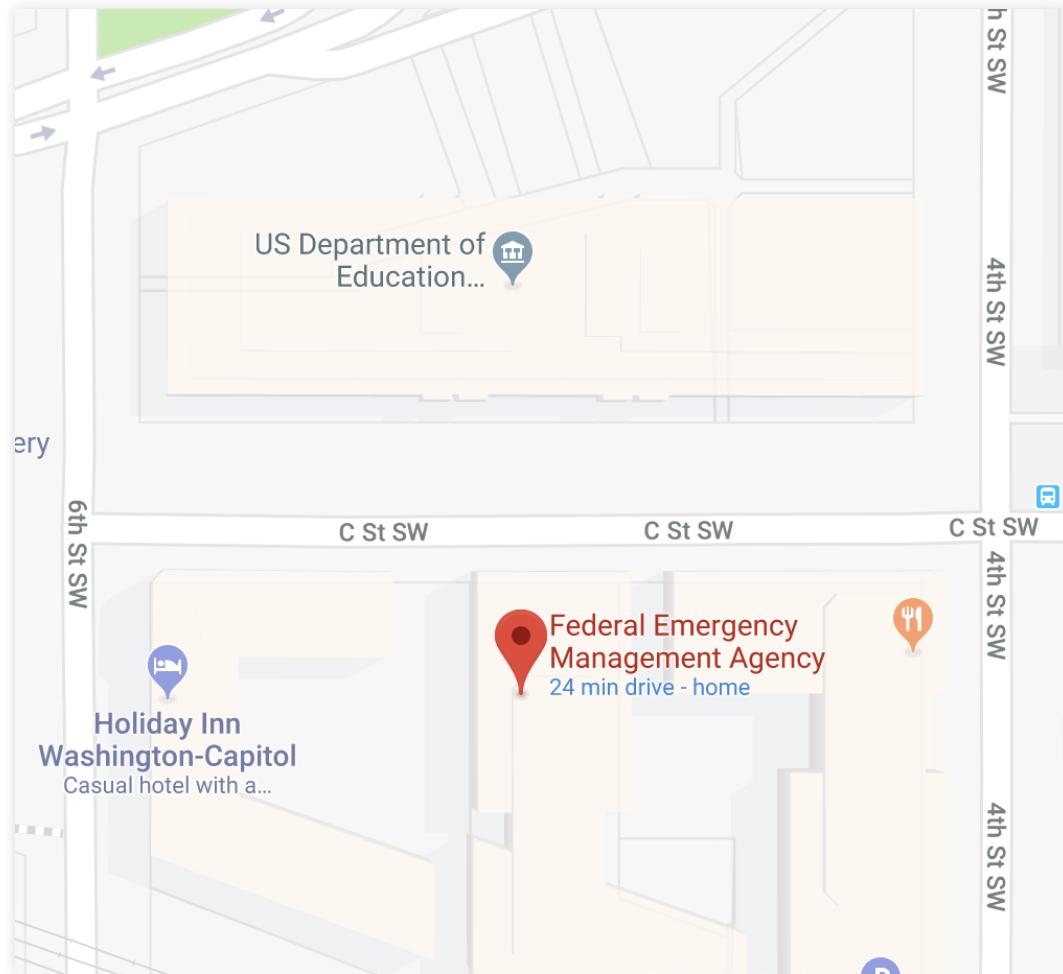
122
Fellows

28
Agencies

presidentialinnovationfellows.gov

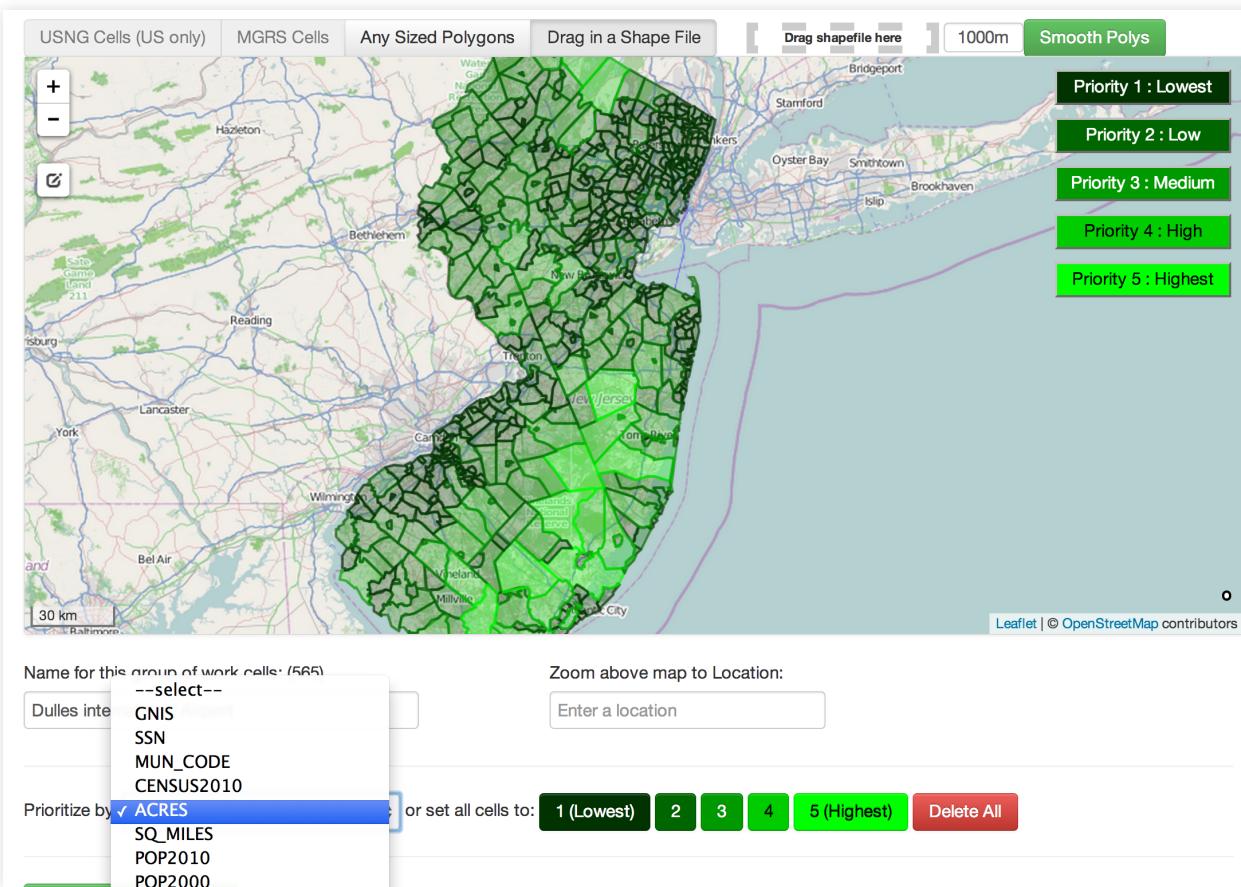
Lesson: Create a fellowship and give the fellows lots of freedom and air cover to attract top talent.

Application due during PyCon 2013



Lesson: Do not *not* pursue an opportunity. Apply for anything that interests you.

Don't let imposter syndrome get in the way of your goals.



github.com/ngageoint/geoq

Lesson: Rewrite versus build upon -- carefully consider your path and make sure you are not being biased.

MEANWHILE...



18F

18f.gov

And they used Python, Javascript, and Ruby

What were the goals of 18F?

Delivery is the strategy.

Lesson: Always be shipping.

As I mentioned earlier, software deployment is hard in government... so is hiring.

To make 18F work and to make it successful, we were
"Hacking Bureaucracy".

LESSON: "HACKHING THE BUREAUCRACY" ACCORDING TO HILLARY HARTLEY

- Find innovators inside of the government who have solved similar problems.
- Engage the stakeholders early and often.
- Set up an MVP to get started quickly & iterate.
- Make sure you are working with real users.
- Always stay aligned with the rules of the bureaucracy.
- Formalize the process/solution for reuse.

Lesson: It's okay to hack your way around the rules,
but you must stay aligned with them. - Hillary Hartley



CORE TENANTS OF OPERATION AT 18F

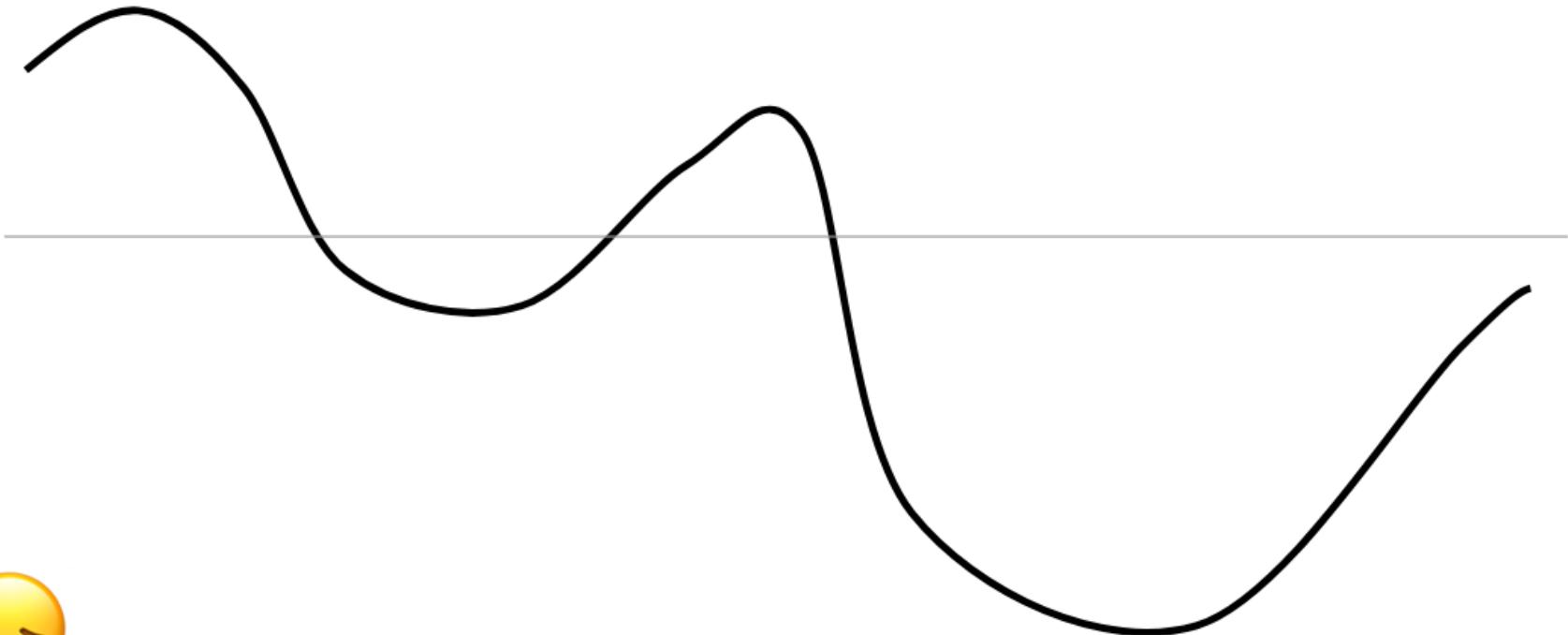
The needs of the user should drive all decisions.

Lesson: Everything is an API to everything else. - Jon
Bodner



methods.18f.gov

JOURNEY MAP



AFFINITY MAP

Models need
to be tested

Getting
Started is
hard

Tutorial has
bugs

Unclear on
how to build
plug-ins

What is
core vs
private?

Sample
models need
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How do I
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While we are on the topic of giving back...

SOME MORE PROJECTS THAT ~~STATE & LOCAL GOVERNMENTS~~ ANYONE CAN USE

1. Analytics hub
2. Quick mini-sites for content
3. Market research for procurement
4. Help small businesses find opportunities

bit.ly/7projectsBy18F

Open By Default



Open Source Initiative

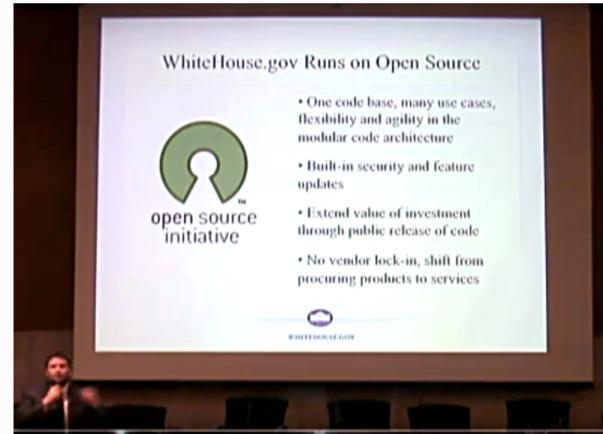
[ABOUT ▾](#)[LICENSES ▾](#)[MEMBERSHIP ▾](#)[COMMUNITY ▾](#)[RESOURCES ▾](#)[NEWS & EVENTS ▾](#)

Open Source for Government

Many local, regional, and national governments are engaged with open source software and communities. Below are only a few resources that may help departments and agencies understand the value of open source software and development communities within the public sector, as well as how public institutions can engage with, and implement similar initiatives to realize the greatest returns for their citizens and governments.

Table of Contents:

- Press and media coverage related to open source software in government
- Reports on the adoption of open source software in government
- References of open source software in public policy and law



opensource.org/personas/government

GitHub and Government

[Who's using GitHub](#)

[Peer Group](#)

[Accessibility](#)

[Contact](#)

Who's using GitHub?

Government agencies at the national, state, and local level use GitHub to share and collaborate. If you don't see your organization on this list, follow the instructions below to add it!

government.github.com/community

Lesson: Not all projects will work for all countries.
People are different.

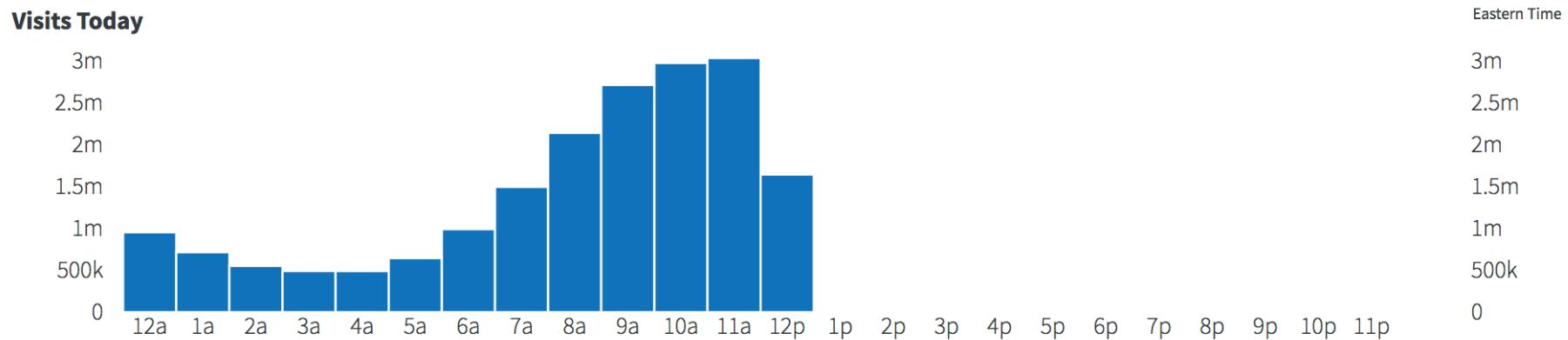
Example: Estonia versus United States

Be Data Driven.

310,328

people on government websites now

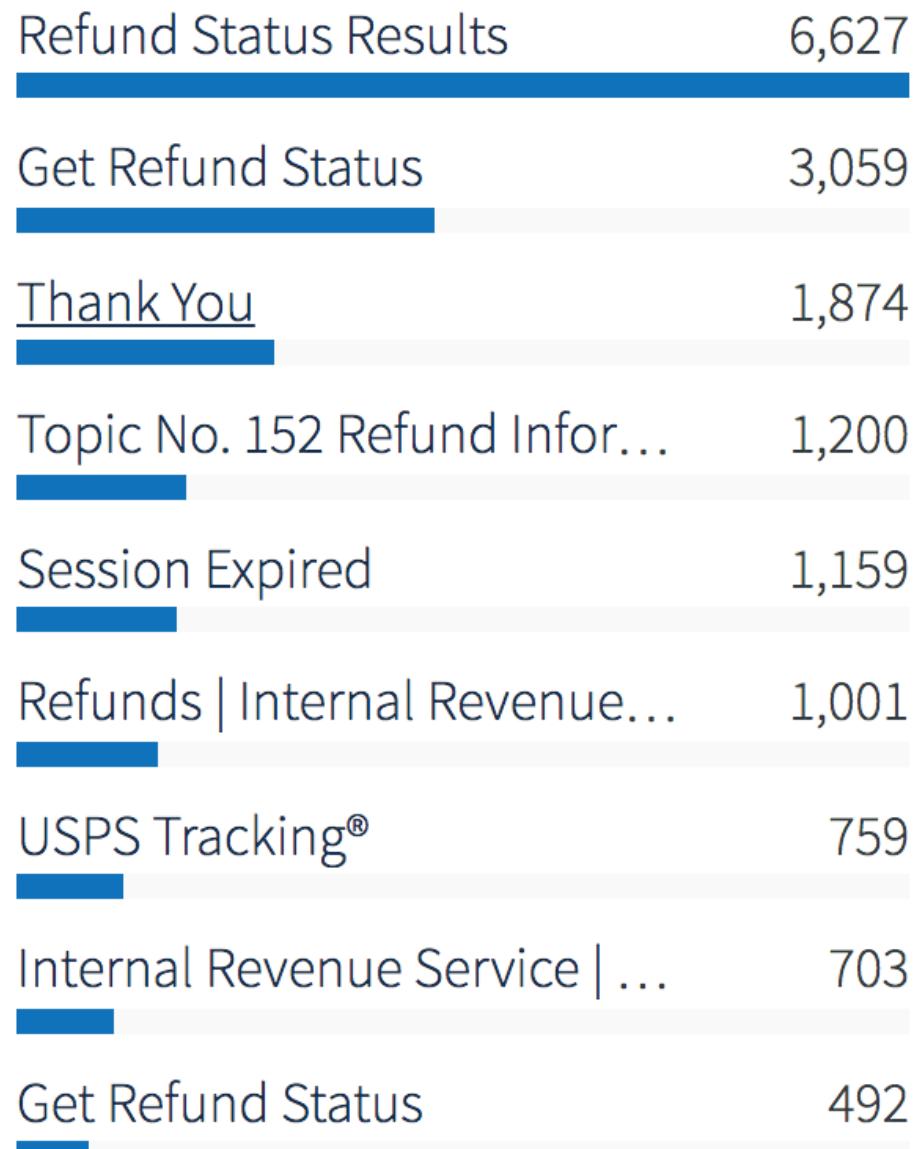
Visits Today



Visits in the Past 90 Days

There were **2.69 billion** visits over the past 90 days.

analytics.usa.gov



National Weather Service

468

Latest Earthquakes

460

Case Status Online - Case ...

360

Lesson: Don't assume you know what people want.
Use data.

Be Agile.

Lesson: Explicitly write this into your contract and be prepared to cancel the contract when other parties want to practice waterfall or agile-fall.



THE U.S. DIGITAL SERVICE

usds.gov

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

playbook.cio.gov

And where are they now?

18F



**Meet the Presidential Innovation Fellows
(And Learn Why President Obama Just Made This
Program Permanent)**

cfpb

Lastly...





Questions?

jackiekazil@gmail.com