



21st Century Cities

Technology & Innovation

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*“Healthcare.gov taught us... in the 21st Century,
good governance and **good policy**
are inextricably linked to the **digital.**”*

- Tom Steinberg





What's Working Where

- 
- An aerial photograph of a dense urban skyline, likely New York City, with numerous skyscrapers and buildings. The image is overlaid with a semi-transparent blue filter. On the left side, there is a list of three items in white text.
- **Digital Services**
 - **Data Analytics**
 - **Civic Entrepreneurship**



DIGITAL SERVICES

Modern Customer Service

Ranging from enrolling in city programs to paying for parking tickets, digital services improve satisfaction, reduce costs, and make life easier for staff and citizens.

Boston: Helping Parents Choose Schools for their Kids

"By moving the eligibility criteria into the application's source code, DiscoverBPS allows parents to focus on what's important to them: the options for their child's education — and no longer spend hours figuring out where their child is even eligible."

– Huffington Post

The collage illustrates the transition from a complex, multi-page printed guide to a streamlined, user-friendly online application. The left image shows a printed 'Inside...' guide from 2009, which is a complex, multi-page document with various sections and a map of Boston. The center image shows a screenshot of the 'Discover' website, which features a map of Boston and a list of schools ranked by fit score. The right image shows a screenshot of the 'DiscoverBPS' application, which features a map of Boston and a list of schools ranked by fit score.

Discover

Jump to any step by clicking on it

STEP 1 search STEP 2 learn STEP 3 compare & rank STEP 4 get ready!

Home-based

Next Step 4 - Get Ready!

Your Rank	1	2	3	4	5	More Schools:
Name	UP Academy Boston	Eliot K-8 Innovation School	Condon K-8	Orchard Gardens K-8 School	Timilty Middle School	+ Dearborn 6-12 + STEM Academy + McCormack Middle School
Fit Score						

After an uproar from parents about how confusing and opaque the school selection process and documentation were (left), Boston built a fully online search, comparison, and application tool: **DiscoverBPS**. Local news reported that parents had thought about leaving the city, but after this change, they applauded the government – and stayed.

Santa Monica: Boosting EconDev by turning Paper into Online Forms

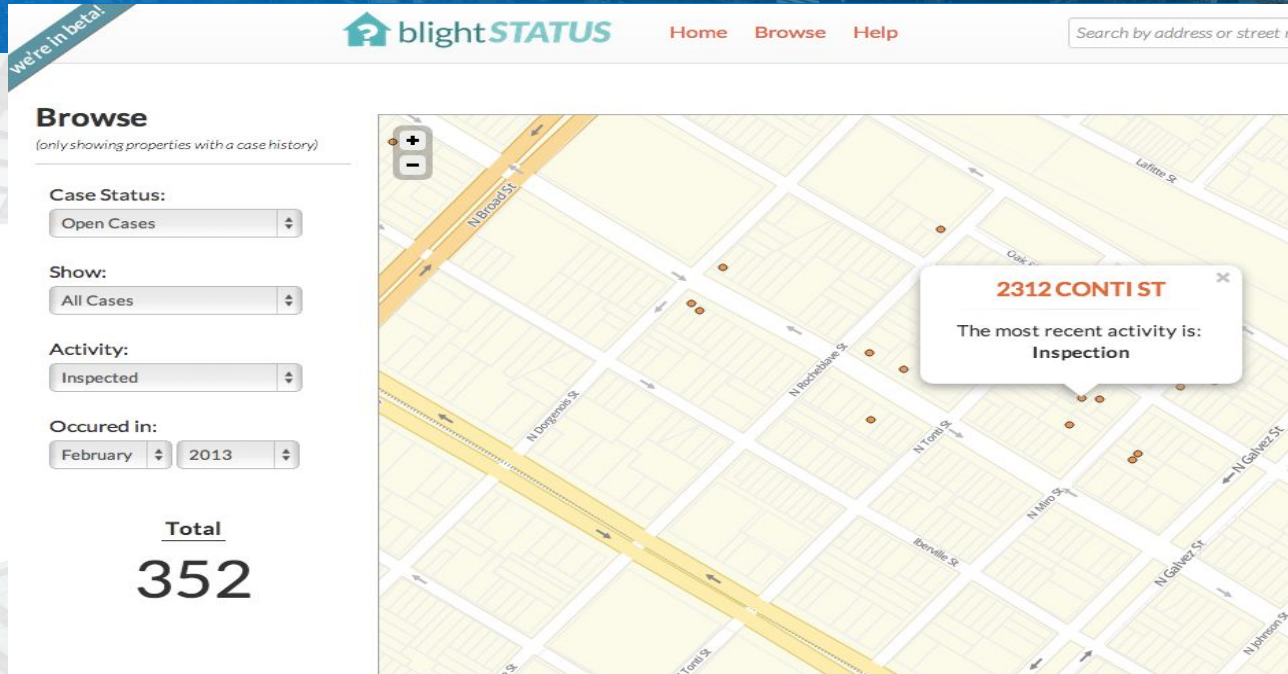
“... The city has implemented a new system, one that is inherently digital and fundamentally transparent. More than just taking the paper form and putting it on the Web, city staff took the opportunity to re-envision the entire workflow... As soon as the process went from paper to digital the median processing time dropped from one month to 14 days.” – Government Technology



The City of Santa Monica worked with a GovTech platform, CityGrows, to take its business permitting system online. Before, starting a new business required in-person meetings, paper forms, and numerous man hours. **Now it's all streamlined, online, and simple.**

New Orleans: Tackling Blight with Data & Technology

*“The app proposes a **new kind of more productive communication** between the two groups that moves past angry and frustrated citizens on one end, and a paralyzed city on the other.” – Fast Company*



Like most American cities, New Orleans struggles with vacant (blighted) properties. The Mayor wanted an easy to use way to track progress of revitalizing those properties. The city projected it would cost 3 years and \$3M. Thanks to a more open, agile approach, civic hackers came in and built BlightStatus for free in 6 weeks.

Chicago: Opening up access to available / vacant property

‘The deadline to apply for a \$1 city-owned property in one of 34 neighborhoods throughout Chicago’s South and West sides is only a few days away, but there are hundreds of lots that haven’t been claimed yet. [That’s where the LargeLots.org app stepped in.]’

– Curbed Chicago

\$1 LARGE LOTS

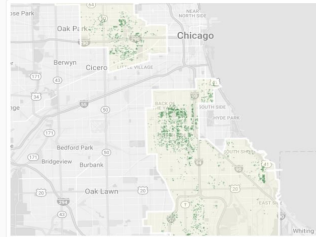
[Home](#) [Apply](#) [FAQ](#) [Lot Uses](#) [About](#)

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

Large Lots 6: Fall 2016 Expansion Ended on January 31st, 2017 at midnight

The sixth Large Lot Program ended on **January 31st, 2017 at midnight**. The city received 2,841 applications.

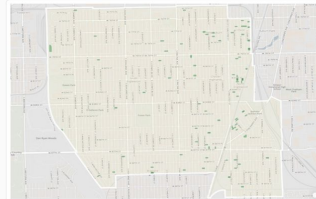
Check back soon for updates!



Large Lots 5: Auburn Gresham Ended on May 15th, 2016

The fifth Large Lot Program ended in Auburn Gresham on **May 15th at 11:59 p.m.**

Check back soon for updates!



The city of Chicago set up a program to **sell city-owned vacant lots for \$1**. But buried within the city website, very few applied for this unprecedented opportunity. The local civic hacking group built a tool to easily find and request those lots, leading to a **1000X increase in participation**.



DATA ANALYTICS

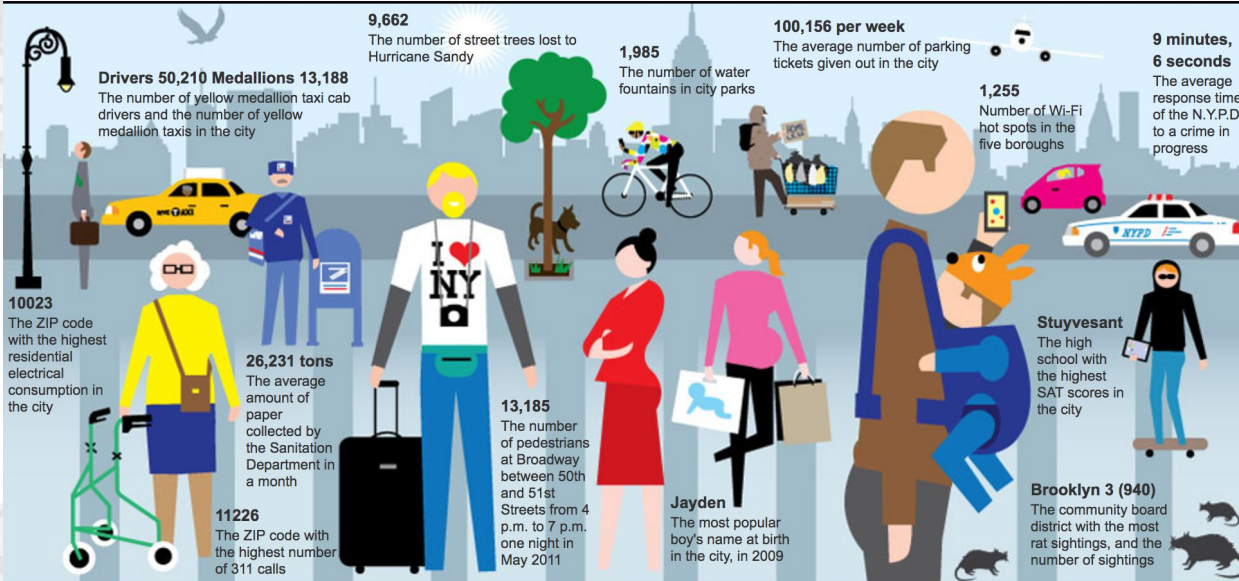
Going Beyond Transparency

Data (or information) is typically seen as a transparency or accountability tool – which it can be, but cities are showing that you can put data to work with modern data analytics and science practices to optimize operations and improve efficiencies.

“Bloomberg’s Geek Squad”

“...the in-house geek squad has leveraged the power of [data] to double the city’s hit rate in finding stores selling bootleg cigarettes; sped the removal of trees destroyed by Hurricane Sandy; and helped steer overburdened housing inspectors — working with more than 20,000 options — directly to lawbreaking buildings where catastrophic fires were likeliest to occur.”

The New York Times



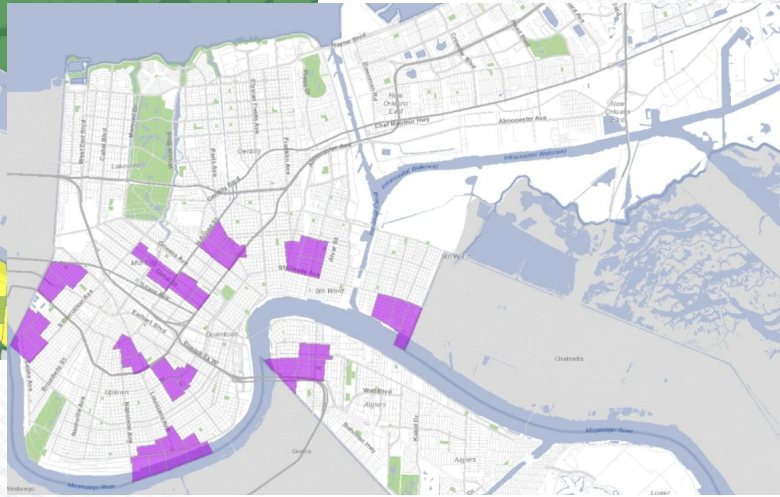
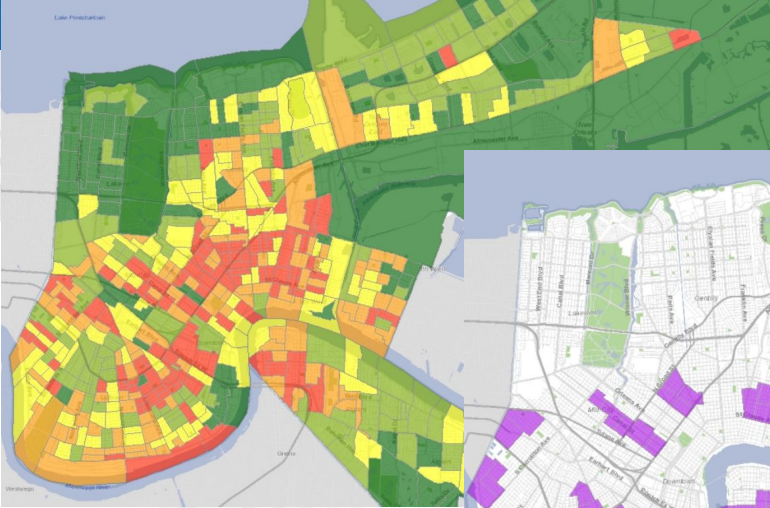
Mayor Mike Bloomberg of New York City built the “**Mayor’s Office of Data and Analytics**” (MODA) designed to improve city services through analysis, performance management, and delivery transformation.

The Mayor’s Geek Squad

New Orleans: Using Existing Models to Reduce Fires

“But New Orleans [data and analytics program] shows that the field can certainly be helpful for some public sphere challenges — and not just for cities that want to put iPads in classrooms or pioneer the perfect luxury bus.”

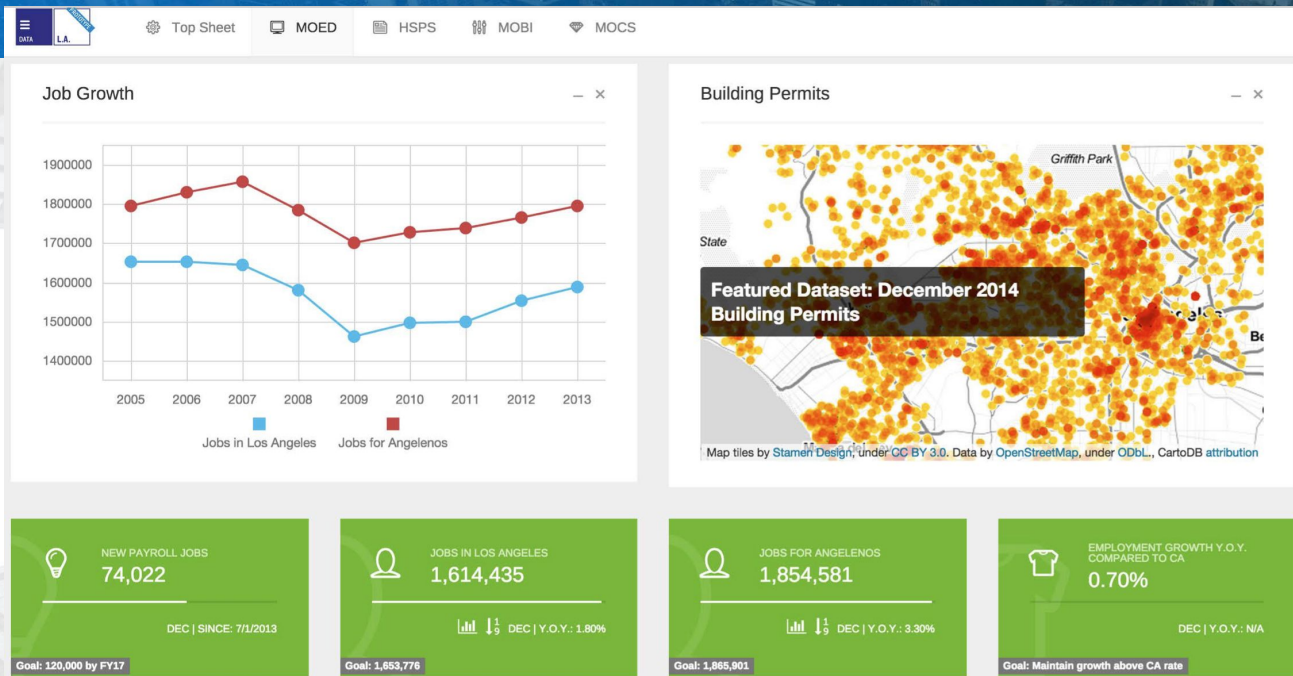
– Government Technology Magazine



New Orleans, a city much smaller than NYC, borrowed NYC's model and technology to reproduce their results on fire reduction – **at a fraction of the cost**, proving analytics are not solely for city's at NYC's scale.

Los Angeles' Mayor's Dashboard

"I want citizens to see what I see to manage... We are sharing city data with the public to increase transparency, accountability and customer service and to empower companies, individuals and non-profit organizations with the ability to harness a vast array of useful information to improve life in our city." - Mayor Eric Garcetti

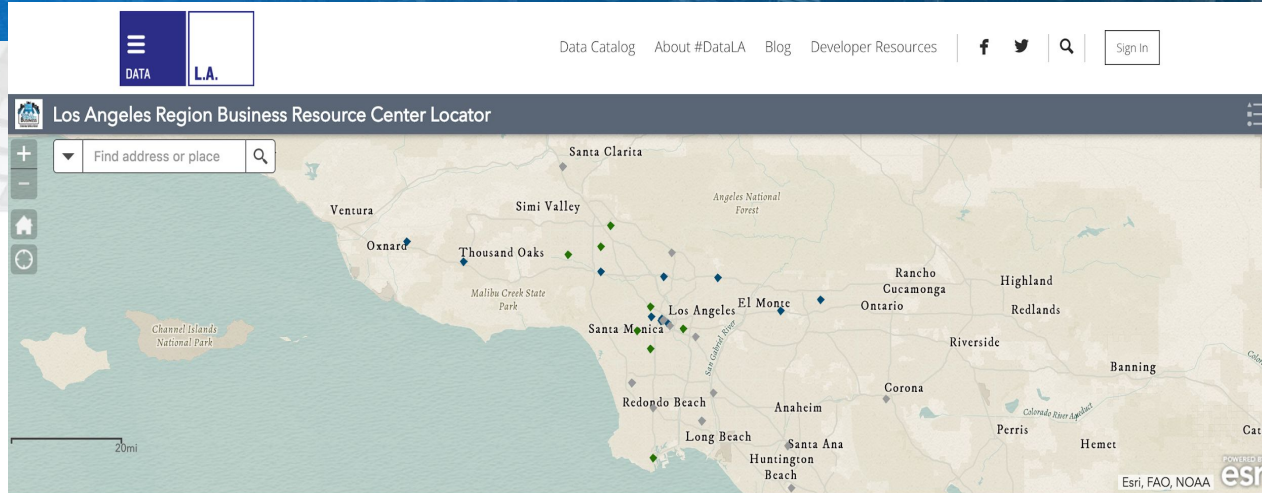


Mayor Eric Garcetti upon taking office chose to **turn around LA's system of a "weak mayor"** and set up performance metrics to manage each department. His data team developed this dashboard, **which he checks multiple times daily**, to facilitate real-time leadership.

Open Data Portals: Common First Step to Digital Gov

Examples include: data.lacity.org, data.nola.gov, data.cityofboston.gov

A host of for-profit and nonprofit providers offer data portals as a service (small annual fee): Socrata, Accella, Granicus, OKFN



LOS ANGELES OPEN DATA

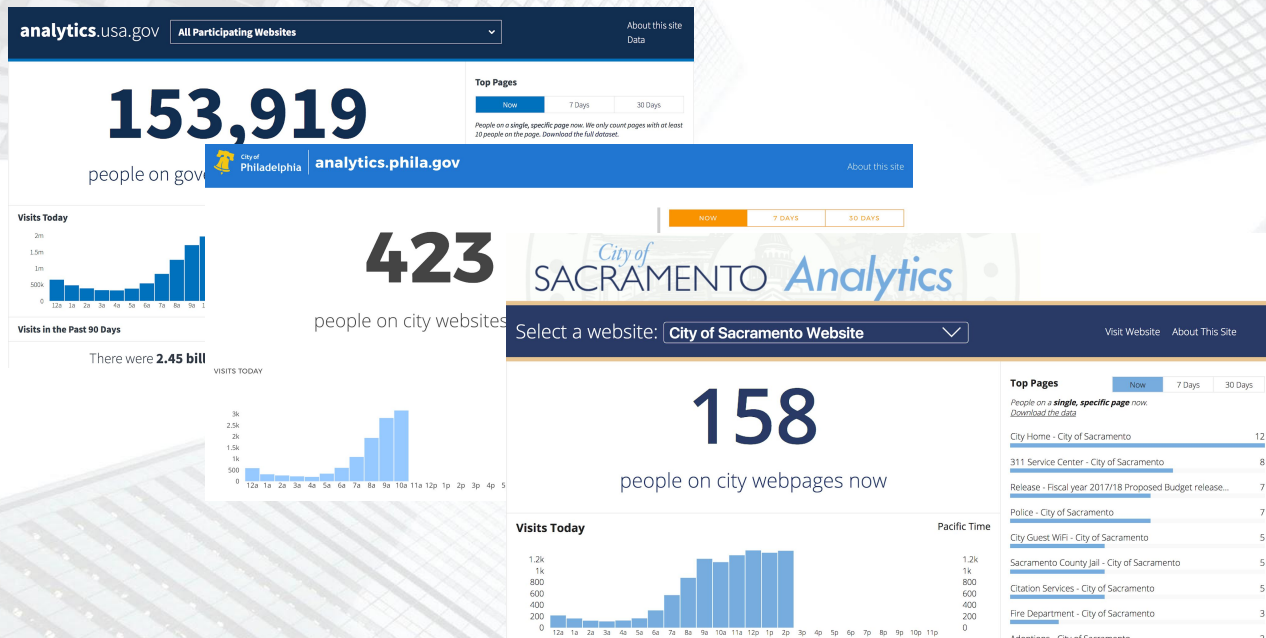
Information, Insights, and Analysis from the City of Los Angeles

Open Data "portals" are centralized hubs for digital information provided by the city. Instead of linking to PDFs, these solutions provide searchable, downloadable files – effectively excel sheets – that enable civic entrepreneurship through "open data". It has been shown, as well, that such portals increase staff efficiency by improving interdepartmental cooperation.

From Federal to Local: Analytics Dashboard from 18F to Philadelphia

"IT shops in Tennessee, Philadelphia and Boulder, Colo. are taking advantage of the open source analytics.usa.gov dashboard, leveraging its tools for analytics to make data-driven decisions..."

'The benefits of this project have more than warranted spending the time implementing it.' [said one city staffer]" - GCN



18F, the federal government's innovation arm, built a dashboard to track engagement with government websites. They did so in an open fashion – **making their tool easily reusable**. Many cities spanning from Philadelphia to Sacramento have **redeployed it for free**.



CIVIC ENTREPRENEURSHIP

Unlocking local potential

Every city, no matter the size, has an untapped potential in local entrepreneurs, which can not only help improve city technology but also build out the region's startup scene and economic base.

ChiHackNight

“These hackers, as they call themselves, praise the city's recent release of information... This group hopes they can turn hard to understand data into easy to comprehend information and that will translate into action.” – ABC Chicago



ChiHackNight is a free, weekly event in Chicago to build, share and learn about tools to create, support, and serve the public good. They have thousands of researchers, web developers and curious citizens who have built dozens of impactful apps, started a handful of companies, and work hand-in-hand with city leadership.

OpenDataSTL

“There’s a new tool available to navigate the St. Louis County Court system that its developers hope will reduce incarceration rates... it’s a simple to use mobile-friendly site that teaches you how to navigate the system.” – CBS St. Louis



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Find municipal court information...

Use the options below to find your ticket information



I have my ticket number.



I have my driver's license number.



I kind of remember where I got my ticket.

OpenDataSTL, modeled off of the ChiHackNight and other national volunteer civic “hacking” groups, meets regularly in the city to work on technology to address **St. Louis-specific issues**, ranging from public safety to transportation. **YourSTLCourts** (right) is a flagship app that has already gained national recognition.

Sacramento's Innovation and Growth Fund & RAILS Program

“Philadelphia, Portland, Ore., – and now Sacramento – don’t expect to turn themselves into the next Silicon Valley. But the idea is **to leverage taxpayer dollars to spark innovation specific to local industries**, creating a high-tech hub uniquely tied to the region.” – *Sacramento Bee*



RAILS
RAPID ACCELERATION
INNOVATION & LEADERSHIP
IN SACRAMENTO

Sacramento is for entrepreneurship.

The City committed up to **\$1M** in grants for groups that drive acceleration, innovation & leadership for startups in 2016.

Innovation and Growth Fund:

Leveraged unused city funds to diversify and grow the economy. Supported by a unanimous council vote (left) with the city’s investment finding matching private dollars.

Rapid Acceleration, Innovation, and Leadership Program(right): \$1M annual grant program to startup enablers; the 15 winners (out of 150 applicants) have helped hundreds of local startups.



NEXT STEPS

Getting Started

WHAT'S NEEDED

- **Starting at the Top**

- **Endorsement from Mayor**, signaling internally and externally city's commitment to tech leadership
- **Appointment of lead**: Chief Technology, Innovation, or Data Officer (CTO, CIO, or CDO)
- **Departmental support / engagement** for project / focus area identification

- **Building a Team**

- **Hiring technical talent** into city hall, both in IT department,
- **Partnerships with local and national organizations** to leverage best practices and reusable tools (e.g. 18F, Open Data / GovTech Meetups, Code for America)

- **Clearing a Path for Success**

- **Allocating budget** – which is usually quickly recouped through efficiencies) – to empower innovators to get the tools and staff they need
- **Addressing policy barriers** to innovation including procurement and hiring to enable quick wins



NEXT STEPS

Models for Tech Leadership

City Tech Leaders



Chief Information Officer (CIO)

Ideal candidate:

- Has run large tech orgs
- Private sector experience
- Understanding of city tech needs
- Strong manager
- Can work well internally

Keeping the IT organization on track

- Manages the Information Technology department /agency and supports IT in all departments
- Ensures best-in-class tech for city government ranging, from phones to servers
- Drives forward modernization strategies such as the cloud, software as a service, and information security

Outcomes

- Cost savings
- Internal efficiencies in IT and across the city
- Better collaboration between departments

Chief Technology Officer (CTO)

Ideal candidate:

- Understands the pace and future of technology
- Can evangelize the city's vision for technology
- Knows and works with open source / volunteer groups for new tools
- Has private / public sector experience in an innovation role

Driving the city forward through tech

- Implements innovative tech to support city's strategic goals and priorities
- Engages community technology leaders and groups to create additional capacity for city innovation
- Serves as a spokesperson for innovation programs to more interest and support from the tech industry

Outcomes

- Free / volunteer resources from the community
- Cheaper, better apps from the city for residents
- Increased interest in the city as a hub for startups

Chief Data Officer (CDO)

Ideal candidate:

- Savvy and comfortable with data analytics
- Experience either in a business intelligence or performance management unit
- Understanding of the role open data can play in engaging communities and building new tools

Making the city smarter with its data

- Leads the performance management program for every department for the city leadership to be able to support data-driven decision-making and hold people accountable
- Uses modern data analytics and science to find creative ways to boost efficiency and improve outcomes
- Makes the city's data openly accessible for entrepreneurs, NGOs, and others to build useful applications upon it

Outcomes

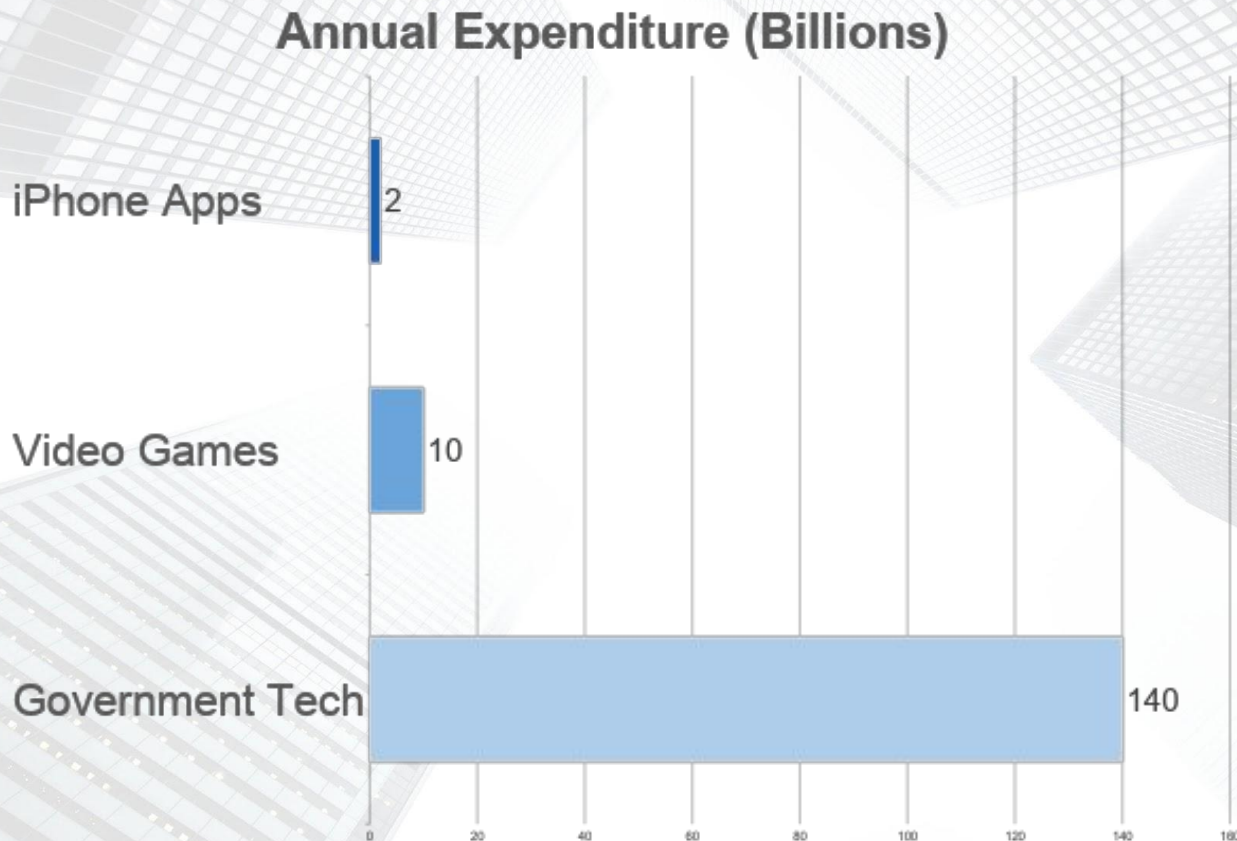
- Improved efficiency in the departments
- Optimized service delivery based on data science
- Greater citizen engagement through data



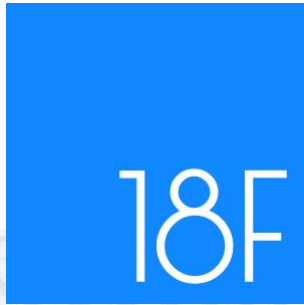
APPENDIX

GovTech: Outsized Market

Governments spend an order of magnitude more on technology than some of the largest consumer technology sectors: mobile apps and video games



National Organizations



CODE *for*
AMERICA

opengov
FOUNDATION

ON
OMIDYAR NETWORK
A WORLD OF POSITIVE RETURNS

 **SUNLIGHT**
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