Driving Innovation with Open Data

Chris Musialek in place for Jeanne Holm
Data.gov
February 9, 2012

Creating a Data Ecosystem

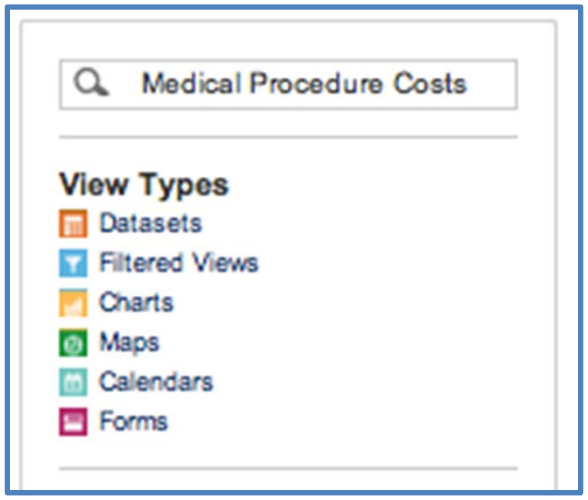
1. **Gather data**
   - from many places and give it freely to developers, scientists, and citizens
2. **Connect the community**
   - in finding solutions to allow collaboration through social media, events, platforms
3. **Provide an infrastructure**
   - built on standards
4. **Encourage technology developers**
   - to create apps, maps, and visualizations of data that empower people's choices
5. **Gather more data**
   - and connect more people

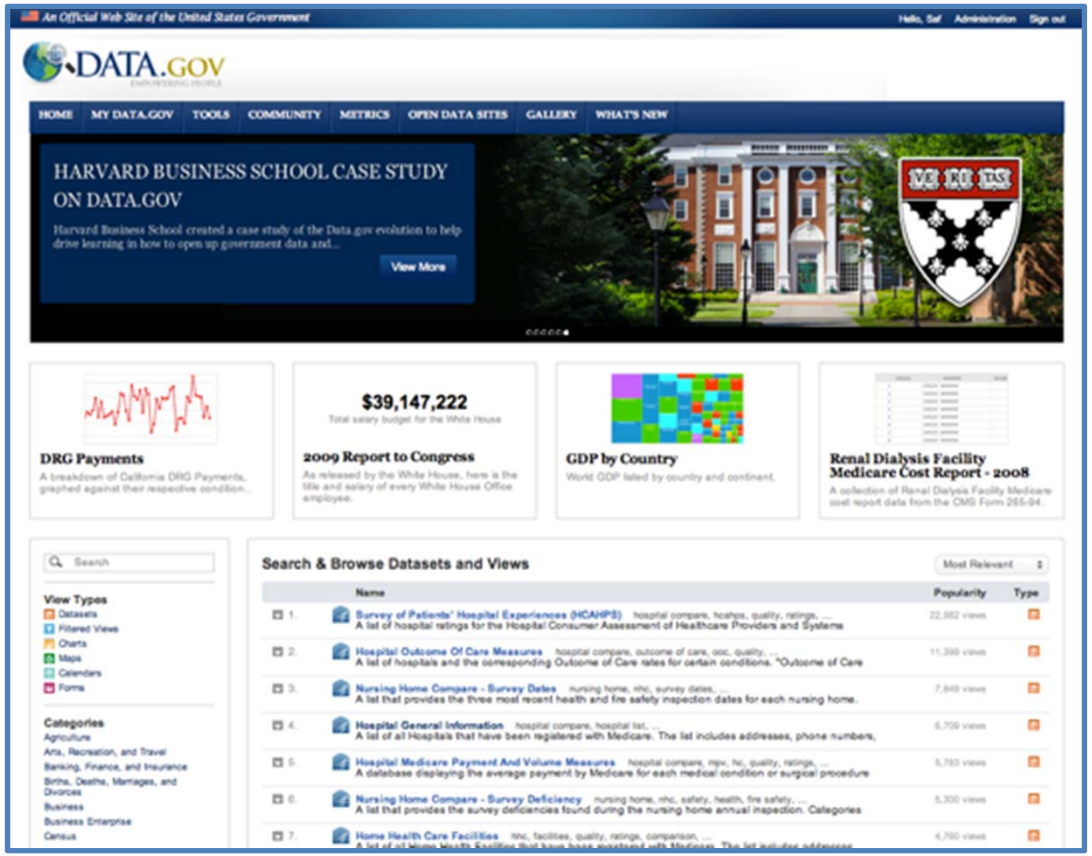
"A Strategy for American Innovation" published September 2009

Data.gov

- Provides instant access to over 400,000 datasets in easy to use formats
- Contributions from UN, World Bank, and 185 agencies
- Encourage development of innovative applications
- Drive innovation and knowledge use across the globe

Easy to Find Data





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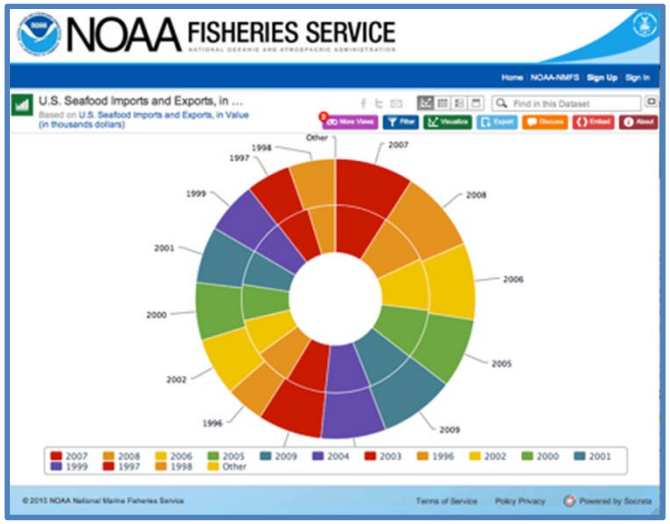
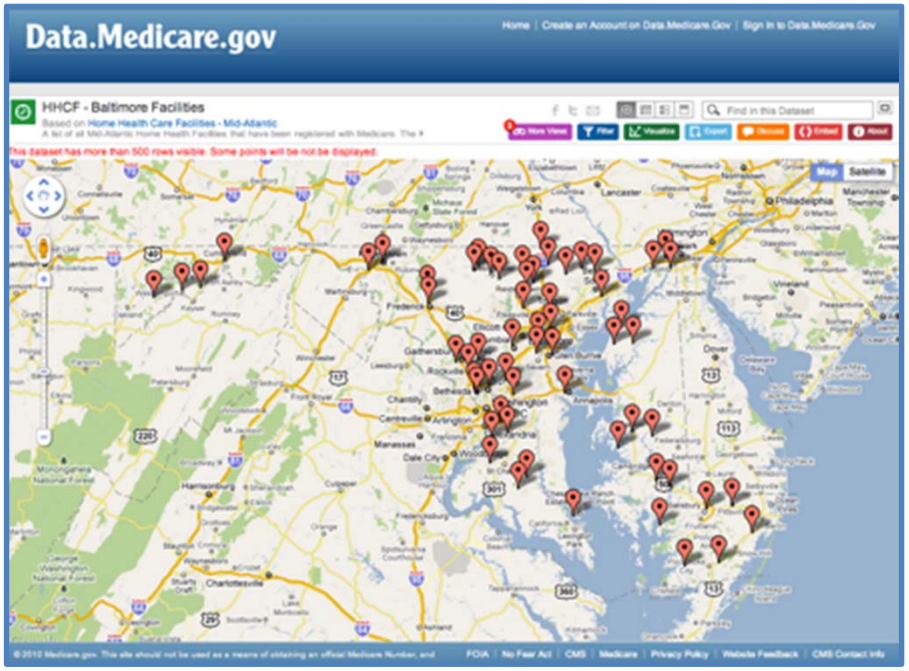
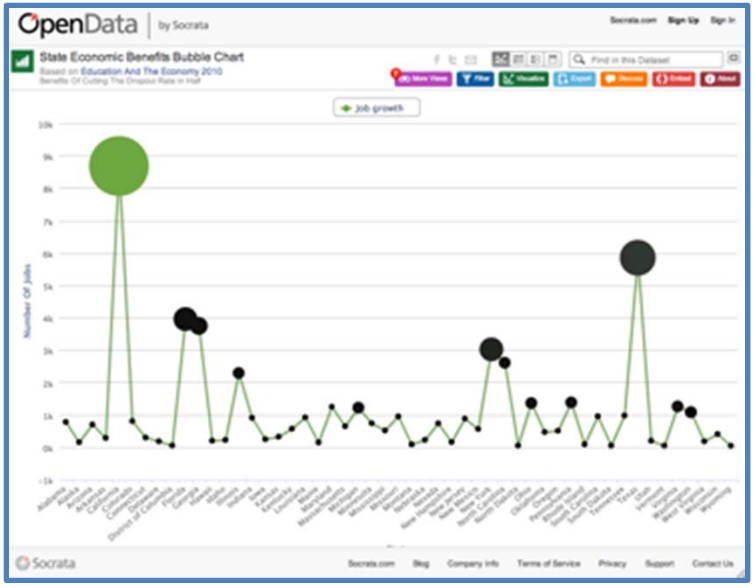
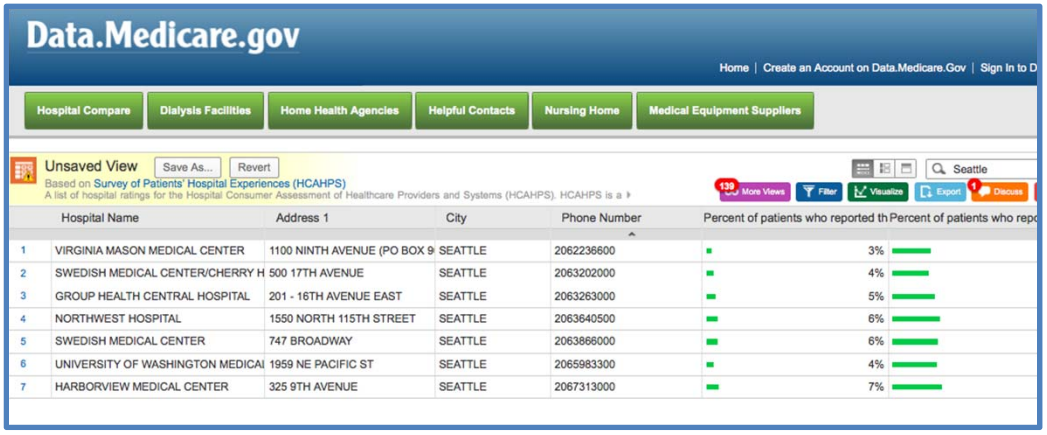
The Power of Visualizations



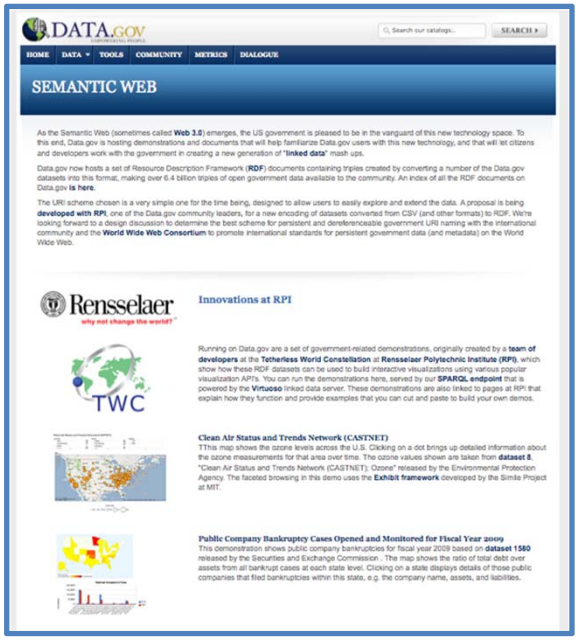


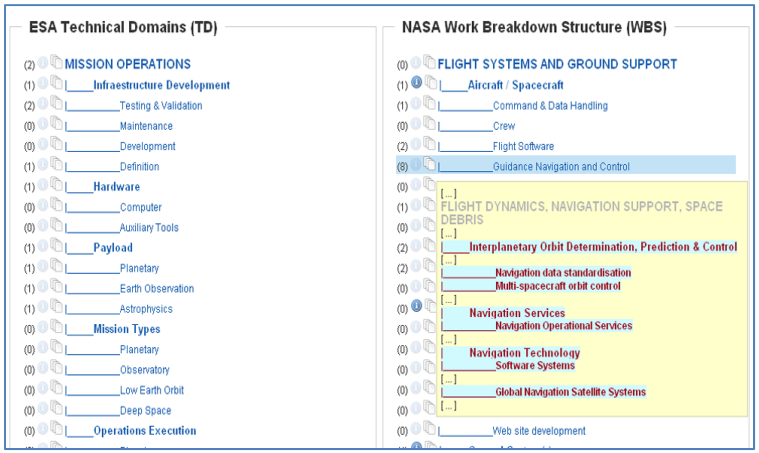




	Hospital Name	Address 1	City	Phone Number	Percent of patients who reported th	Percent of patients who rep
1	VIRGINIA MASON MEDICAL CENTER	1100 NINTH AVENUE (PO BOX 9	SEATTLE	2062236600	3%	
2	SWEDISH MEDICAL CENTER/CHERRY H	500 17TH AVENUE	SEATTLE	2063202000	4%	
3	GROUP HEALTH CENTRAL HOSPITAL	201 - 16TH AVENUE EAST	SEATTLE	2063263000	5%	
4	NORTHWEST HOSPITAL	1550 NORTH 115TH STREET	SEATTLE	2063640500	6%	
5	SWEDISH MEDICAL CENTER	747 BROADWAY	SEATTLE	2063866000	6%	
6	UNIVERSITY OF WASHINGTON MEDICAL	1959 NE PACIFIC ST	SEATTLE	2065983300	4%	
7	HARBORVIEW MEDICAL CENTER	325 9TH AVENUE	SEATTLE	2067313000	7%	

Powered Through Advanced Technologies





- Provides developers the tools and raw data formats to develop new capabilities
- Partnership with W3C (eGov Interest Group) and with RPI for research in semantic web
- Connected to other open data efforts across the world
- Data hosted in the cloud
- Open source platform
- Builds on ontologies developed in specific areas

Open Communities

Community	
Restore the Gulf	✓
Open Data	✓
Semantic Web	✓
Health	✓
Law	✓
Energy	✓
Education	
Ocean	
Research and Development	
Public Safety	
Human rights	
+ many more…	

Health.Data.gov

Champion: Todd Park
Chief Technology Officer
US Dept. of Health and Human Services

Apps

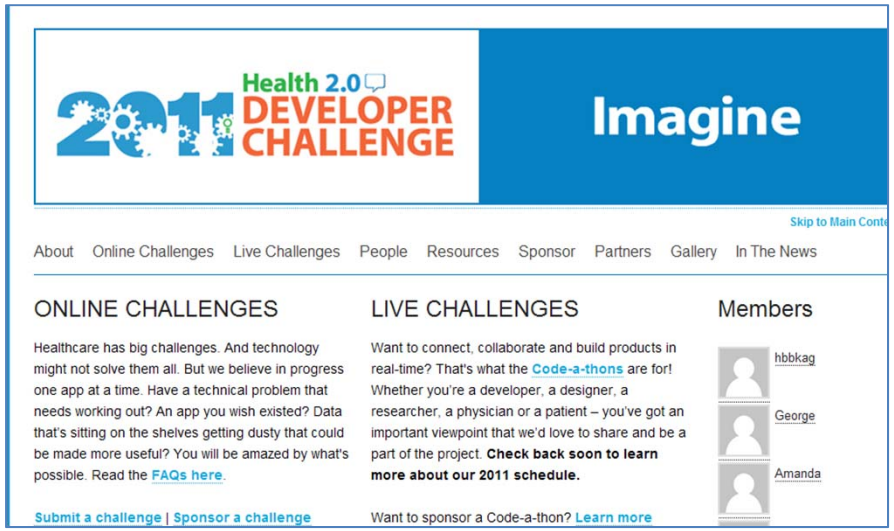
Forums

Blogs

Challenges

Publicizing Data to Innovators

- Challenges and code-a-thons (health2challenge.org)
- Many innovator “meetups” and conferences
- Annual health data-paloozas
- Over 139 applications
- 50 new businesses
- Thousands of lives improved each day



Creating Apps That Improve Lives: Asthmapolis

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Think Big, Start Small, Innovate

Data.gov Quick Facts	May 2009	October 2011
Total datasets available	47	>400,000
Hits to Data.gov	0	>200 million
Apps and mash-ups by citizens and government	0	372 + 1113
RDF triples for semantic applications	0	6.7 billion
Dataset downloads	0	>2.0 million
Nations establishing open data sites	0	28
States offering open data sites	0	31
Cities in North America with open data sites	0	13
Open data contacts in Federal agencies	24	396
Agencies and subagencies participating	7	185
Communities	0	7
Community challenges	0	23

Energy Drives Innovation

- Energy.Data.gov connects innovators, industry, academia, and government at federal, state, and local levels

Challenges Spark Ideas

- Energy.Data.gov connects works with challenges across the nation to integrate federal data and bring government personnel to code-a-thons

CHALLENGES

Want to get involved in helping to solve an energy problem that you see in your home, community, or country? Join in on one of our challenges. Challenges range from brainstorming ideas to creating applications to proposing research. Not ready to jump in? Then come and see how others have responded and look at the winners of previous challenges.

Open Challenges

Code for Livability
The Partnership for Sustainable Communities is hosting a code-a-thon to brings together citizens, developers, and government personnel to work on solutions that bring sustainability to the forefront of peoples' everyday lives. Join us on January 21-22, 2011 to make a difference!

2011 ENERGY STAR National Building Competition: Battle of the Buildings
It's an energy savings battle as 245 buildings compete to see who can be the most efficient.

Resources:
- CBECS
- CEUS
- EnergyIQ
- Portfolio Manager
- NREL Renewable Energy Certificate and Green Power Markets

America's Home Energy Education Challenge
Participate in three great ways:
- Have your class or school join in the Home Energy Award by saving energy and win prizes for your school!
- Feeling artistic? Design a conservation plan and poster.
- Shall we play a game? Compete in the Energy Fitness Award with online games, quizzes and activities to earn prizes for you and your school.

Resources:
- EnergySmart
- EnergySavers.gov

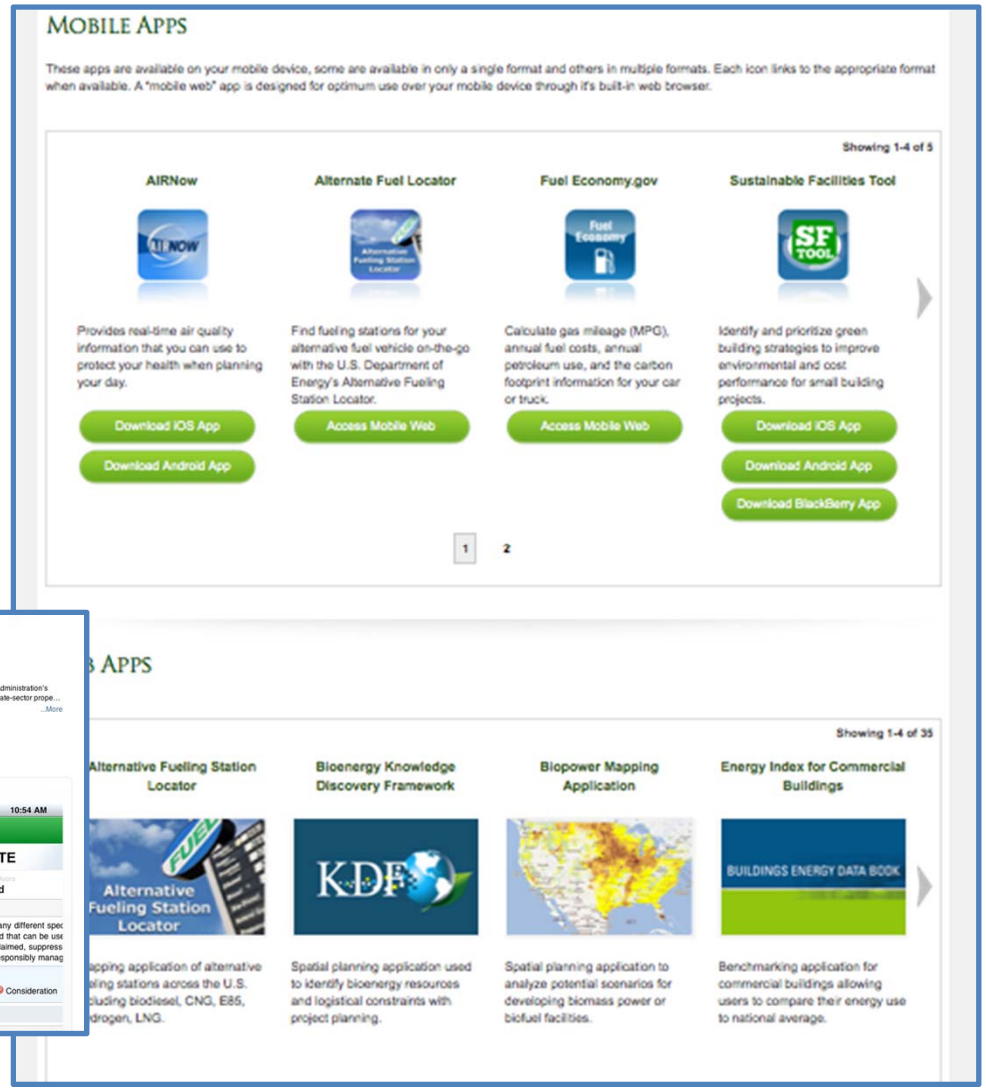
Apps for the Environment
EPA challenges you to find new ways to combine and deliver environmental data in a new app. In the Apps for the Environment challenge, you have free reign to make an app that uses EPA data, addresses one of Administrator Lisa Jackson's Seven Priorities, and is useful to communities or individuals. EPA encourages you to use other environmental, energy, and health data too. The winners will be honored at a recognition event in Washington, D.C. this fall and the winning apps will be publicized on EPA's website. EPA is counting on you to come up with exciting and useful new apps!

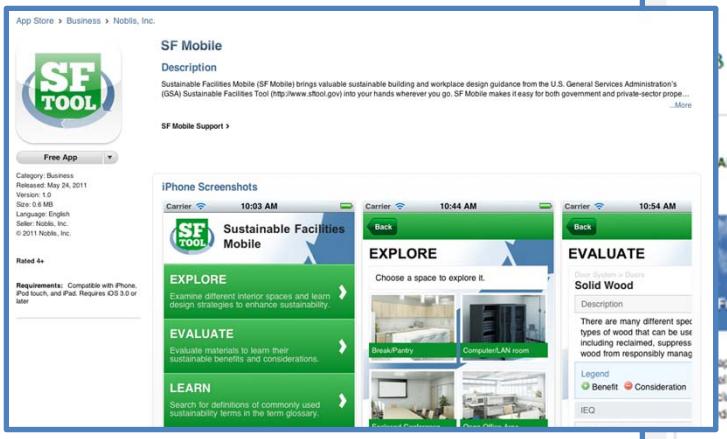
Build your own challenge for energy efficiency
You can use this platform and process to employ ENERGY STAR tools and resources in your energy improvement efforts.

Rooftop Solar Challenge
Be part of a national effort to make clean solar electricity cost-competitive for your community.

Data Drives Decisions

- Apps transform data in understandable ways to help people make decisions





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The Path Ahead

- Bring data up and out of government to the public ★
- Make data accessible and linked ★★★★★
- Provide simple ways to visualize the data
- Create communities to understand and apply data
- Connect and collaborate with small businesses, industry, and academia to drive innovation
- Develop open source open government data platform with India for global use and further community development
- Share with others to understand global issues

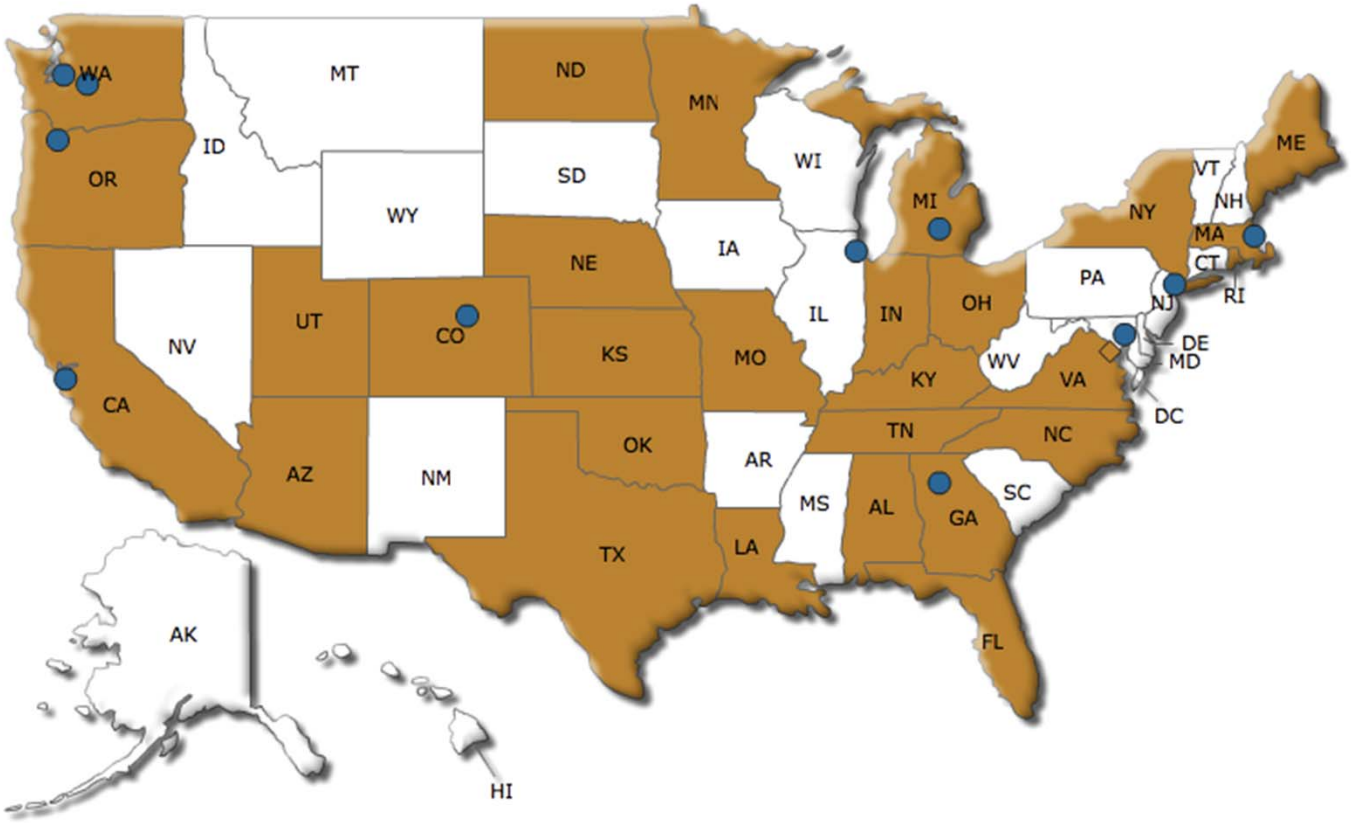
Be the change you want to see in the world

– Ghandi

US Open Government Action Plan

- On 20 September 2011, President Obama announced at the UN General Assembly…
- Contribute Data.gov as a platform
  - India and the U.S. creating open source platform
  - Will allow any country to create open data site
- Foster communities on Data.gov
  - Health, energy, and law plus new communities in education, research and development, and public safety
- Launch International Space Apps Competition
  - NASA and other space agencies will gather scientists and citizens
  - Use data for global challenges: weather impacts on global economy and depletion of ocean resources
  - A collaboration website will be created to facilitate citizen participation

Open Data at Cities, Counties, and States



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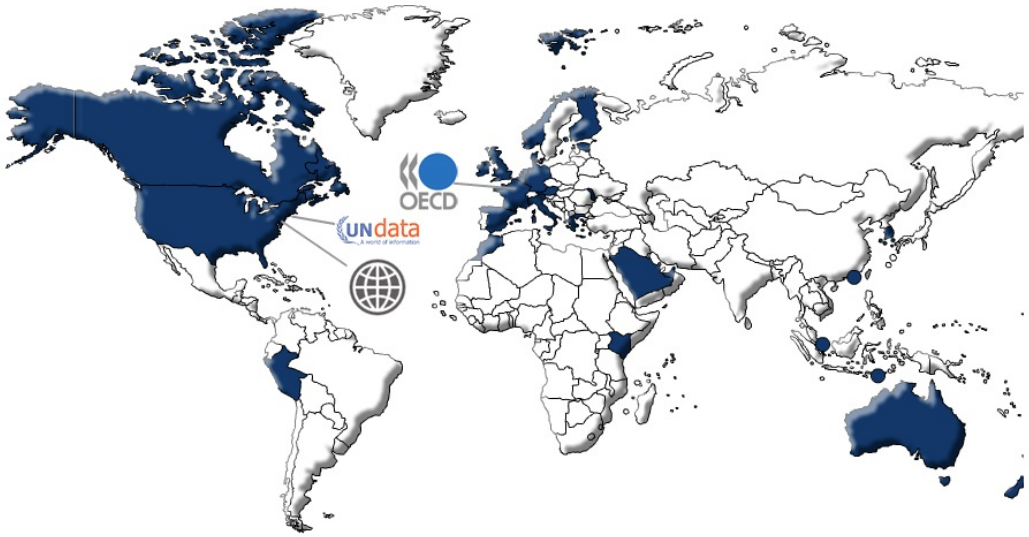
A Global Movement Has Begun to Provide Transparency and Democratization of Data

U.S. States	U.S. Cities	Agencies and Subagencies	International
31	13	172	28



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Let's work together to set the data free!

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