

## International Open Government Data Conference

## What is the Value Proposition of Open Government Data? How Do We Measure Success?

Alex Howard, Government 2.0 Correspondent, O'Reilly Media

<u>Sharon Dawes, Ph.D.</u>, Senior Fellow, Center for Technology in Government, University at Albany



<u>James Rolfes, Ph.D.</u>, Chief, Division of Enterprise Architecture and IT Strategic Planning and Chief Enterprise Architect, U.S. DOI (Moderator)







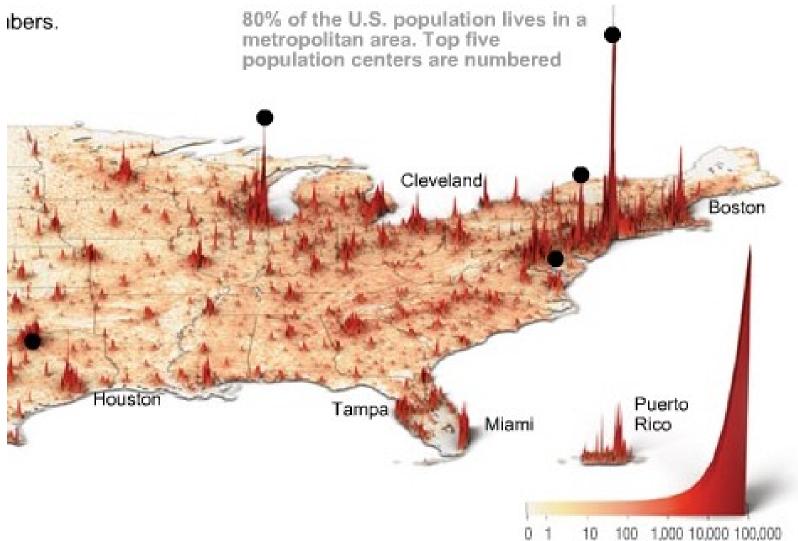


What's the value proposition for open data?

By Alexander Howard

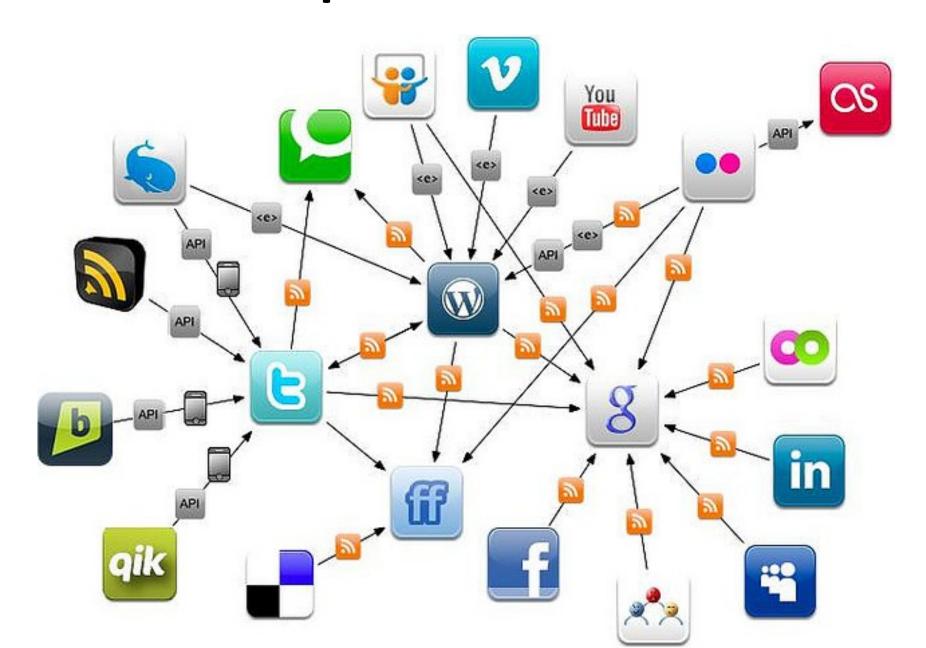
[@digiphile]

### "Data is the next Intel Inside -Tim O'Reilly



Population density per square mile (2.6 sq km)

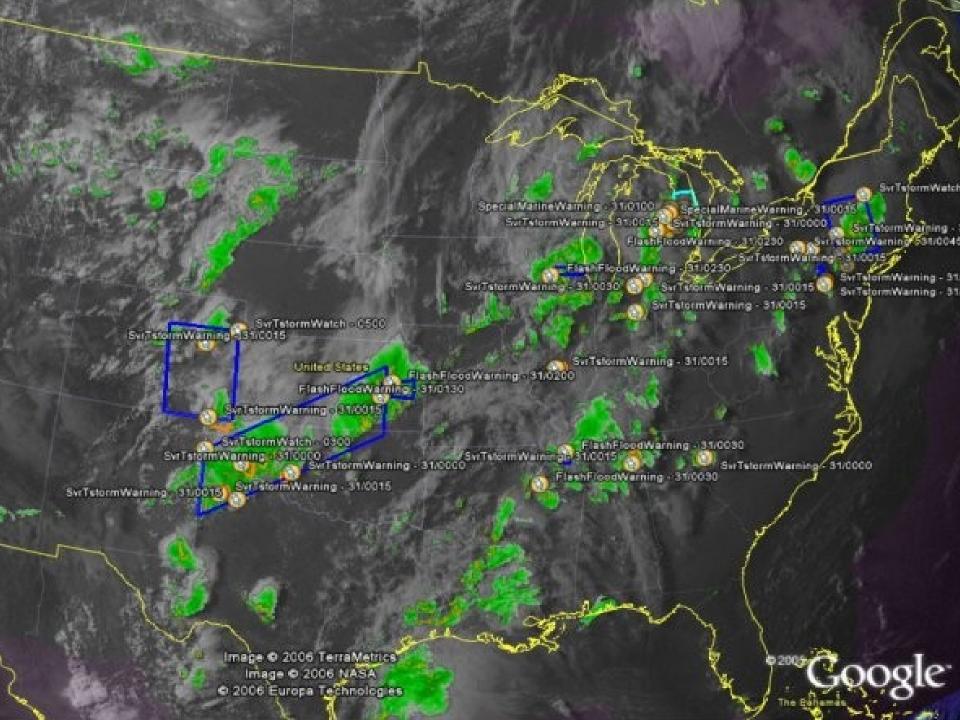
## Data powers Web 2.0



## Big data is a secret sauce

 The reason Google offered free 411 service was to get phoneme data for speech recognition algorithms

 Amazon, LinkedIn and Facebook use pattern recognition and relationship analysis to drive growth and connections



## Gov 2.0: the power of platforms

NOAA and GPS data

 NHIN Direct: an open system for interchange of patient records between physicians (and ultimately patients)



 FCC.gov/developer – beginning to reboot one of the worst agencies website

## How do you measure success?

#opendata success will ultimately be
measured not by # of sets "open" but in
outcome & quality of use by people &
communities #iogdc

about 19 hours ago via Twitter for iPhone Retweeted by 2 people



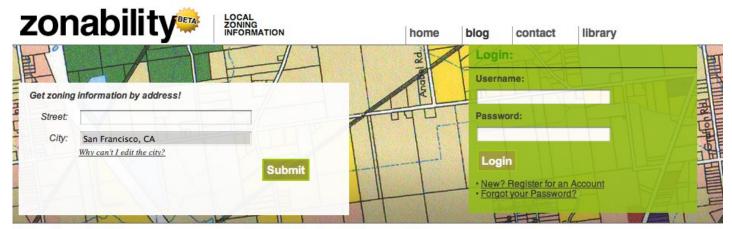


## Cost reduction: FOIA and FOI requests



### **Job Creation**

Zoning affects everyone.



#### Latest from the blog:

#### 3 Things for Agents/Brokers

Zoning is behind the look and feel of every neighborhood. Going through a neighborhood with large homes on large lots changes to a block of apartment buildings and then a park – that is zoning at work. Smart Money featured an article "10 Things Your Real Estate Broker Won't Tell You". Number 6 was Zoning. [...]

#### Zonability is a winner of the "Apps for Californians" contest!





Contestants were required to combine open government data sets and APIs (application programming interfaces) to create mash-ups with the aim of enhancing government services and adding transparency. Judges looked at: usefulness, innovation, government efficiency and accessibility.

Our submittal was an iPhone web app designed for San Francisco, showcasing interactive zoning maps, geo-location and featuring an "email-a-planner" tool. The interactive map combines the Google API with San Francisco's zoning GIS layer and its zoning ordinance. Property details information came from Zillow's API.

#### **Common Zoning Topics**

#### Parking Requirements

Driveway Length Alley Impacts

<u>Loading for Small Businesses</u> <u>Off-street Parking for Homes and Small Businesses</u>

Smart Growth Rules

#### more...

#### Work Related

Small Businesses Home-based Businesses

Business Licenses

#### more...

#### Remodeling

Remodeler's FAQ Work without permit Historical Districts Neighborhood Notification

Fences Exterior Changes Health and Safety

more...

Find all topics in our Reference Library of Common Zoning Issues.

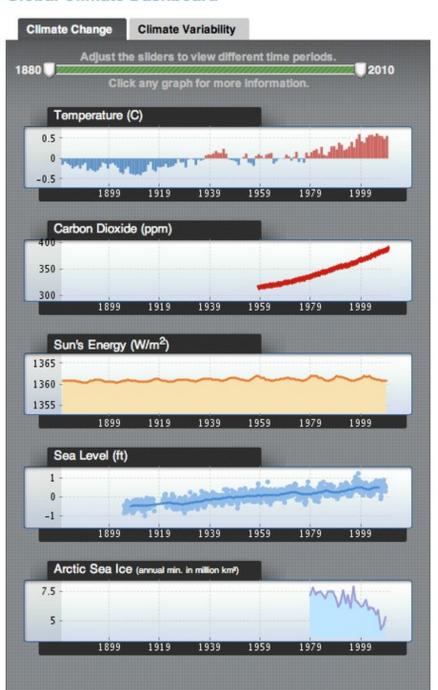
Learn some common zoning terminology in our glossary.

### Internal Efficiencies



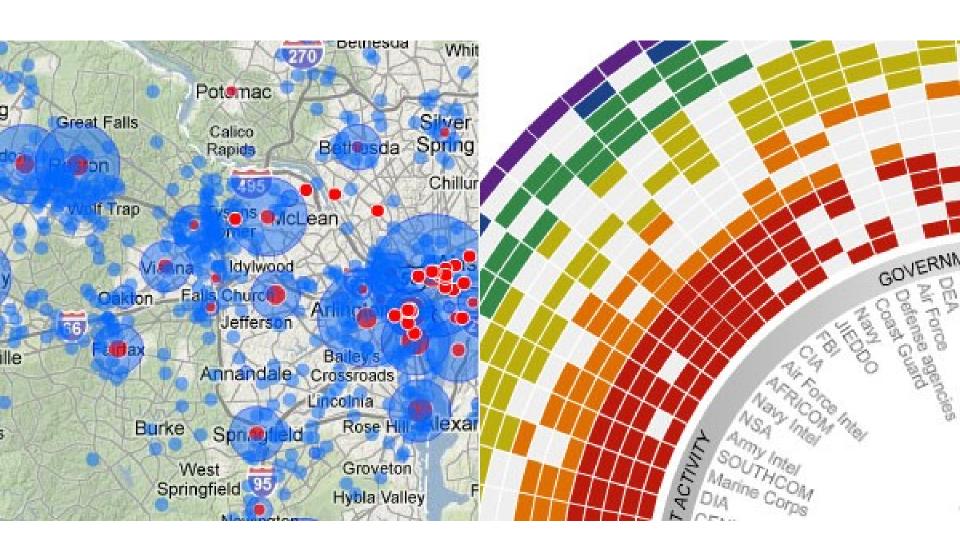
"Employees whose jobs required them to search agency databases estimate they lose an hour of work every day due to inefficiencies in the systems" -OhMyGov

#### **Global Climate Dashboard**



# Better data-driven decisions

## Provisioning Database Journalism



### The future is mobile.

In 2010, 82% of Americans have a cellphone.

60% of American adults go online wirelessly.

Source: Pew

<u>Internet</u>



## Smarter commuting through data



Image Credit: <u>Real Time Rome from Senseable.MIT.edu</u>

#### Real Time Apps



#### Track My Transit - Boston

MBTA public transit application for webOS.

Made By: The CodingBees

Platform: Web OS (Palm)

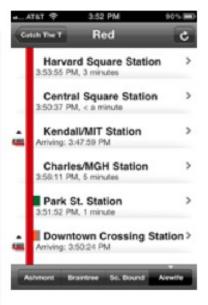


#### OpenMBTA for iPad

OpenMBTA for iPad is a free, open-source iPhone app for MBTA users in the Boston metro region. It delivers realtime bus and subway arrival information.

Made By : Daniel Choi, Eric Richmond

Platform: iOS (iPad)



#### Catch The T

CTT displays real time position data for the Orange, Red & Blue lines in an intuitive and easy to understand way. Don't wait for the train, know when it's going to be there.

Made By: Jared Egan

Platform: iOS (iPhone)



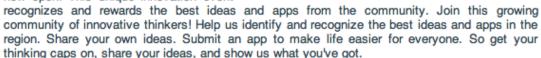
#### DATASETS IDEAS APPS CONTRIBUTE ABOUT

SEARCH

#### Welcome to CivicApps!

#### Making public data easy to find and easy to use.

The first annual CivicApps Challenge is now open! This unique innovation event



BE HEARD. Tell us the ideas you would like to see realized. Comment and vote for ways to make public information more accessible and useful.

GET INVOLVED. Show us how to use, combine and represent the information government holds in more useful and interesting ways. Your ideas provide data and input for developers to better understand the local communities' needs and create apps that matter.

TURN IDEAS INTO REALITY. Apps are what make it happen. Your participation is what turns the vision for public data into reality. Submit ideas that unlock the potential of local data and you could win cool stuff.

#### FEATURED IDEA

#### **Portland Poetry Boxes**

Portland Poetry Boxes app will provide a regional mobile map of Poetry Box locations, and enable users to share and find Poetry Boxes. and plan their walks...

more

#### FEATURED APP

#### PDX Food Cart Finder

CartsPDX is a free iPhone application that lets users find food carts near their current location. If they wish to edit the details of a food cart (location...

more

#### TOP IDEAS from people just like you

most popular ideas right now

Accessible Trip...

Augmented Portla...

Portland API (PA...

Ш Urban Forest map

ADD YOUR OWN IDEA

#### TOP APPS

made with change in mind

most popular apps right now

Pdxtrian

myTrimet.com

pdx.py

#pdxhash

ADD YOUR OWN APP

#### MOST RECENT ACTIVITY

■ IDEA

Pilot data.oregon.gov

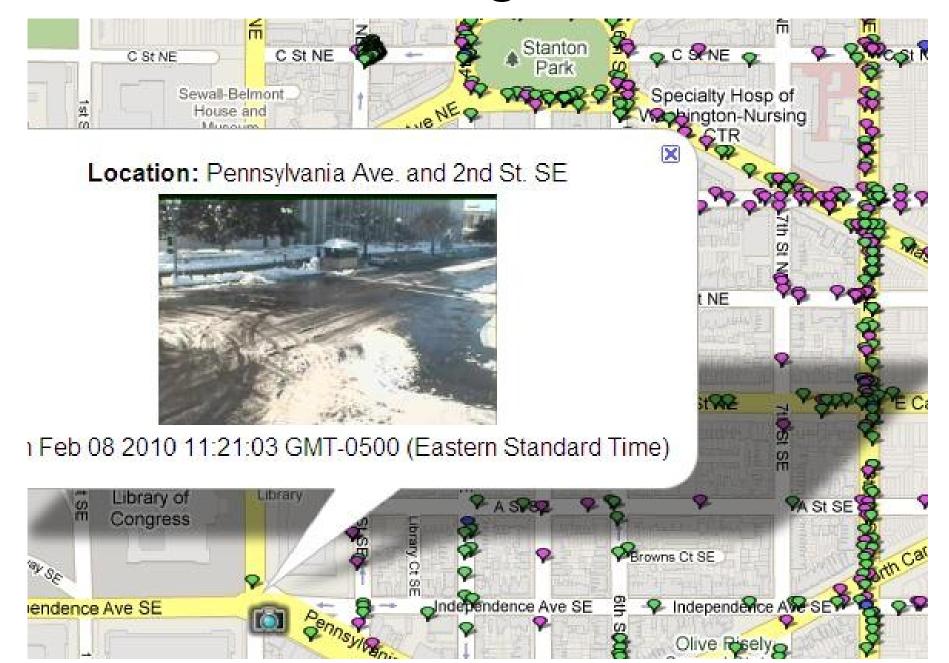
**DATASET** 

Crime Incidents

DATASET

TriMet - Stop Location

## Snowmageddon





## Now servicing Washington DC



Are You Safe lets you know how safe you are at all times based on your current location within the city.

All it takes is a quick tap to see a threat meter of your safety level along with hyperlocal crime data broken down by type.

#### Features:

- · Simple visual representation of your safety level on the Threat Meter
- · Up to date crime data from police and local city/governments
- · Dynamically updated recent crime data for your surrounding area
- Walk /drive /bike /bus /canoe around and see your status update as you go

#### Uses:

- · Visiting and unfamiliar with the city?
- · Debating whether to walk or take a cab?
- · Headed to an area you haven't been to before?
- Not sure if you should park your car on the street?

#### All Cities:

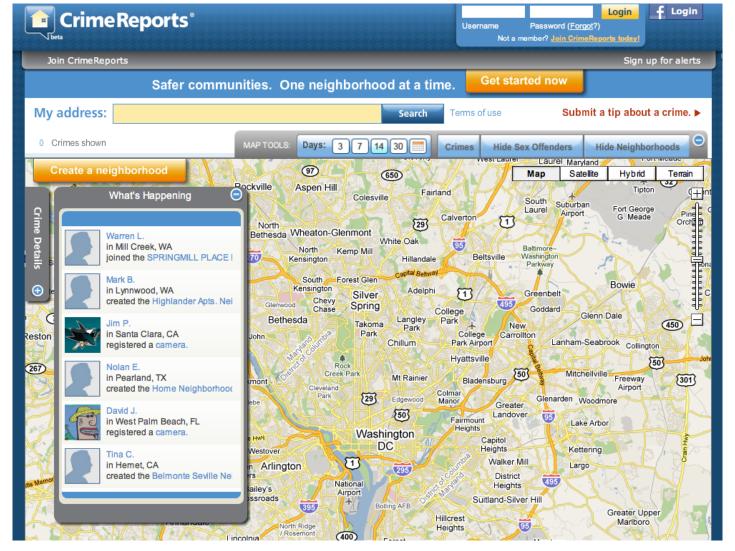
Atlanta , Washington D.C. , Sacramento , Indianapolis , Milwaukee ,
 Chicago , San Francisco , Dallas , Hampton Roads (VA Beach, Norfolk,
 Chesapeake, Newport News, Suffolk, Portsmouth), Cincinnati

#### Support:

- · For new features and updates, follow us on twitter
- · Drop us a line for help, or media inquiries

Disclaimer: AreYouSafe uses actual crime statistics to derive safety ratings. This data is sourced from police departments and local/city governments. AreYouSafe makes no claims as to the accuracy or validity of this data. The application is for novelty purposes only. Decisions should not be made based on the information yielded by the AreYouSafe application. Decisions to move from/to a location are solely the responsibility of the user of the application. AreYouSafe may not be held liable for such decisions or the results of such actions.

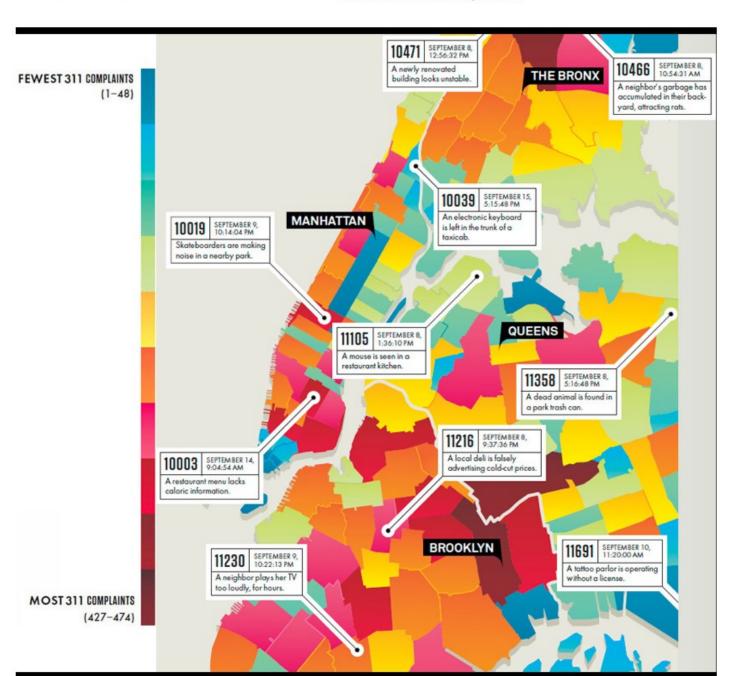




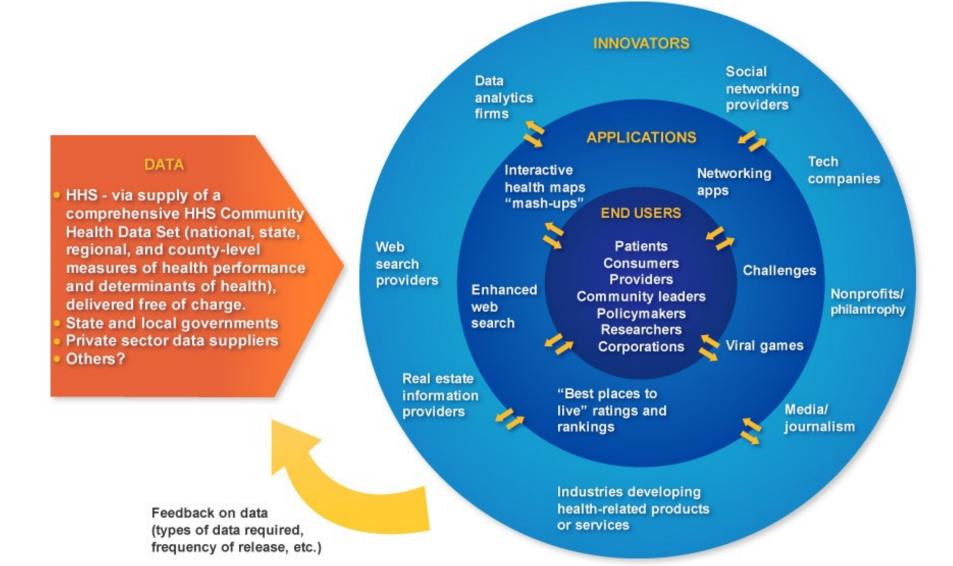
The CrimeReports.com citizen tips network has led to more than 122,000 arrests and more than 45,000 fugitives caught.

#### What's Your Problem?

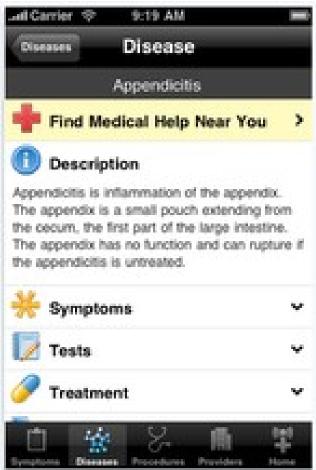
Some New Yorkers are kvetchier than others. A breakdown by zip code for one week in September.



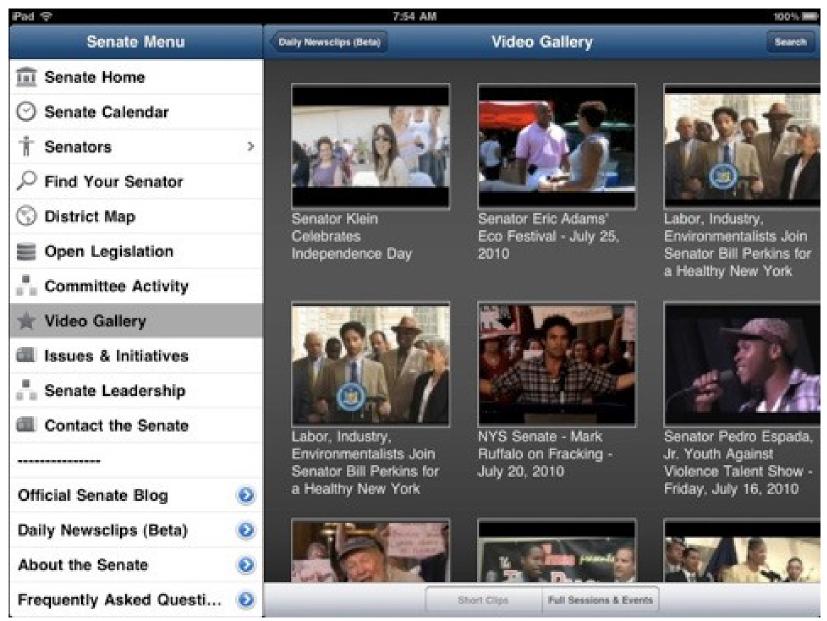
## HHS Community Health Data





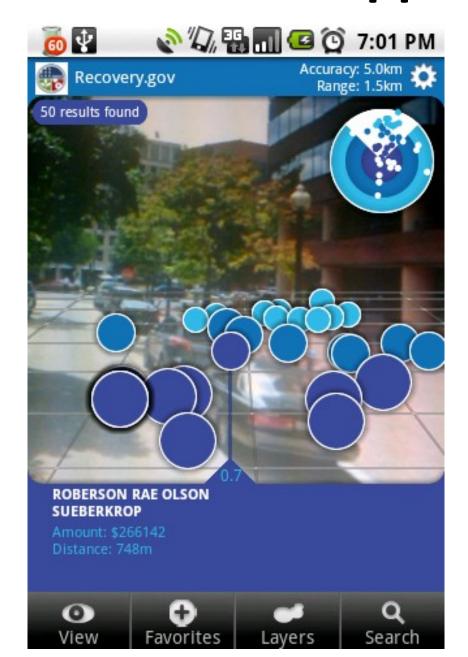


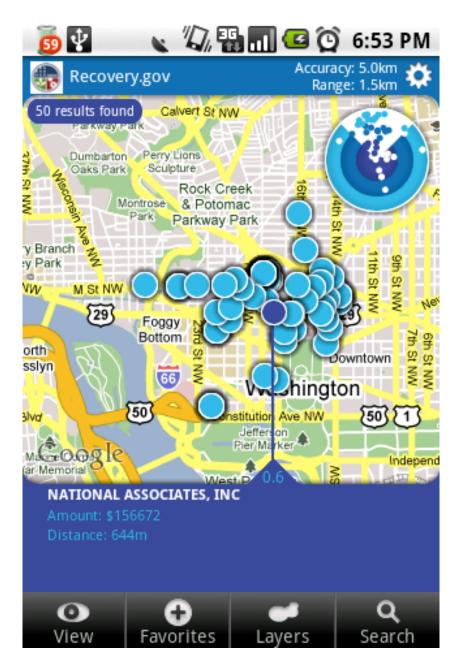
## Digital tools for open government



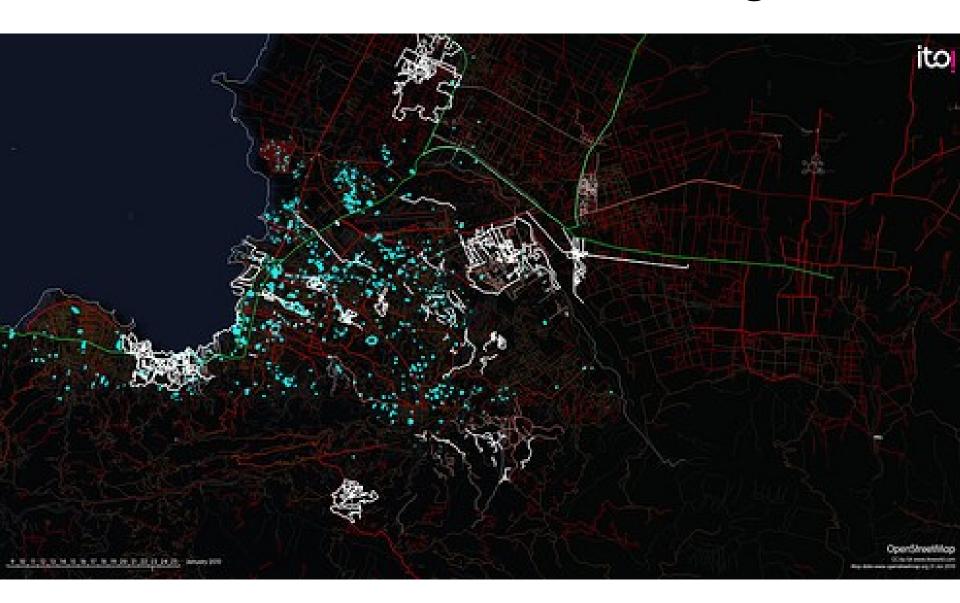
NY Senate on iTunes

## Better apps to audit data





## Platforms for citizens to self-organize



### More information

 What is the value of open government data? (Govloop)

What is data science? (O'Reilly Radar)

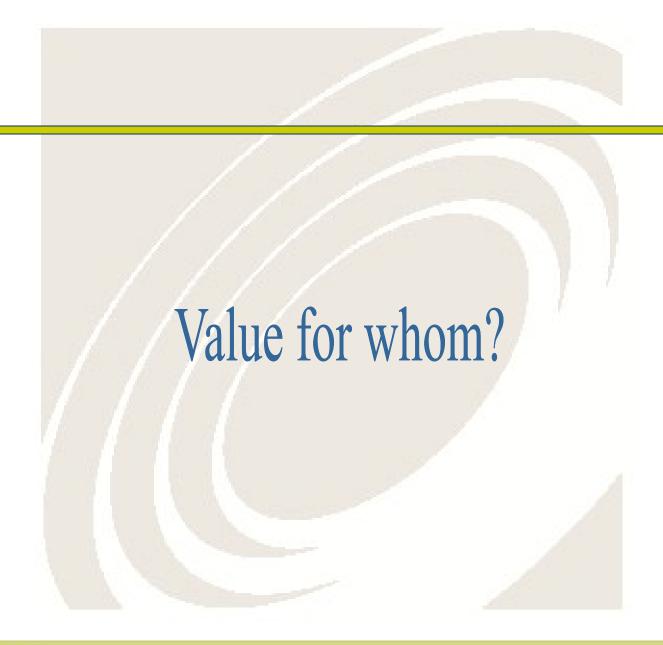
Me: alex@oreilly.com

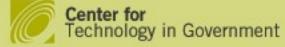


## **Assessing Public Value of Open Government Data Initiatives**

Sharon Dawes
International Open Gov Data Conference
November 2010

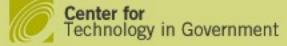






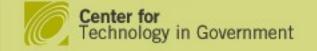






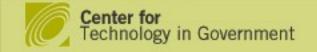


## What will it take to offer that value?



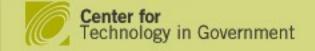


## What do beneficiaries need to be/have/do to experience that value?





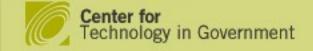
## How can the value be assessed or (maybe) measured?





## Value for whom?

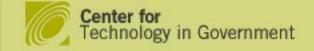
- Stakeholders
- Definition: anyone who affects, is affected by, or cares.
- Types:
  - External to the agency
    - Individuals, groups, organizations
      - Inside government
      - Outside government
  - Internal to the agency
    - Individuals, groups, organizational units





## What kind of value?

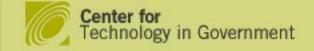
- Public value (generic)
  - Financial: revenue, assets, costs, savings
  - Social: relationships, mobility, status, identity
  - Strategic: resources or opportunity for innovation
  - · Political: influence on agendas, policies, decisions
  - Ideological: alignment with beliefs, values, commitments
  - Stewardship: effects on trust, integrity, legitimacy
- Mission value (agency-specific)





## What will it take to offer that value?

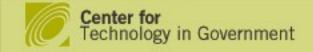
- Human resources (numbers, skills & capabilities)
- Infrastructure (technical, physical, legal)
- Information content (in all forms)
- Tools (existing and new)
- "Fit" (with mission and organizational culture)





# What do beneficiaries need to be/have/do to experience that value?

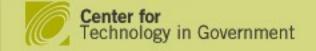
- What are the characteristics of the intended beneficiaries?
  - How well can you describe them?
  - How many are there?
  - Where are they?
  - What can they do, not do?
  - What do they care about, not care about?
  - What do they want, not want?





# How can the value be assessed or (maybe) measured?

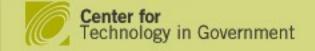
- Think in terms of a portfolio of efforts
- Associate each effort with specific stakeholder(s)
- Express intended value from the stakeholders' POV
  - How will you recognize it? Describe it? (Measure it?)
- Assess portfolio balance
  - Across stakeholder groups served
  - Across types of value offered
  - Across level of effort, cost, and risk
- Re-balance, reassess, repeat



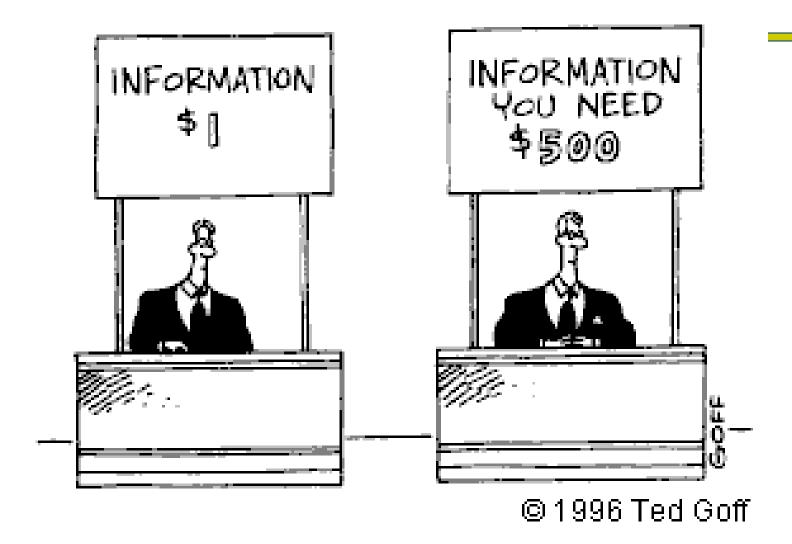


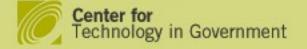
# Public value assessment . . .

- Takes a stakeholder view
- Makes use of the agency's mission and expertise
- Is much more than numbers and anecdotes
- Should identify what does and does not work
- Can answer "how," "why" and "so what" questions
- Should generate cycles of learning and adaptation
- Requires its own resources



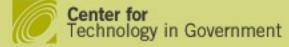














## **OPEN GOVERNMENT DATA**

# Towards Adding Value and Measuring Success

## Efficiency and Transparency X Privacy and Security

Jonas Rabinovitch

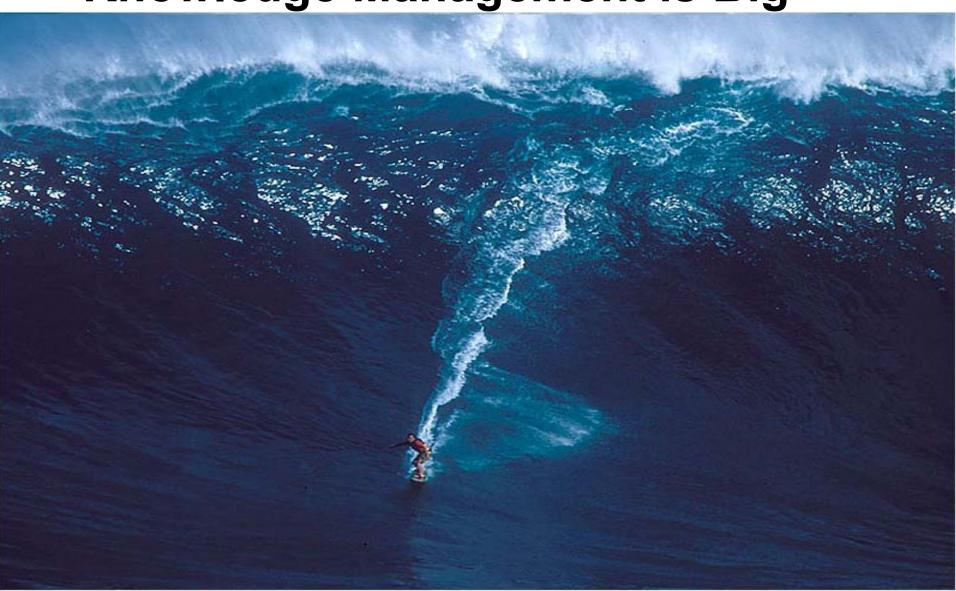
Senior Adviser
UN Public Administration Programme







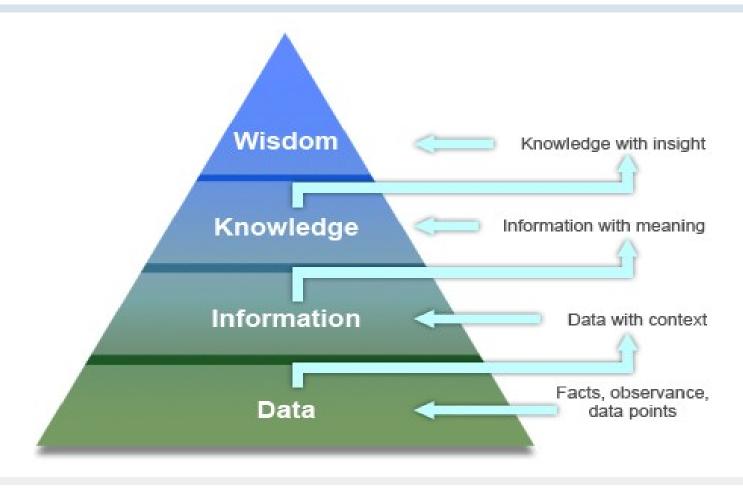
# **Knowledge Management is Big**





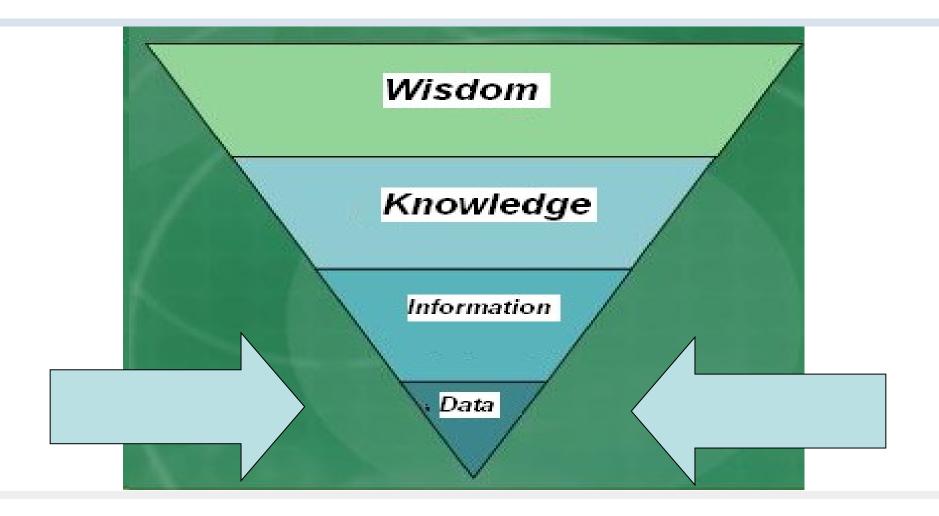


## What is Knowledge?





## **Focus on Data**







## **Contents**

- 1. How the UN measures e-Government
- 2. How Benchmarking Can Induce Change
- 3. e-Gov. Strategies from e-Government to e-Governance. E-infra, E-literacy, E-Service, E-Information, E-Consultation, E-Decision-Making.
- 4. United Nations Public Administration Country Studies: Towards a Global Network of CIOs and other tools





## Rationale

- 1. Demonstrate how the movement from e-Government to e-Governance calls for data openness
- 2. Illustrate the methodologies, indicators and tools used by the UN to rank, document lessons and develop capacities for e-Government strategic development
- 3. Examples of UN's products and trends responding to country demand





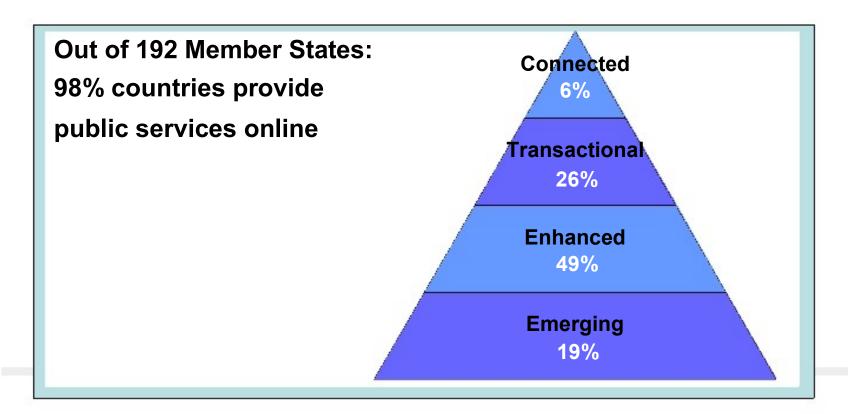


## United Nations E-Government Surveys 2001-2010





#### **United Nations e-government Survey 2010**







## **United Nations E-Government Survey 2010**

**Top 20** 

Rank	Country	E-Government Development Index
1	Republic of Korea	0.8785
2	United States	0.8510
3	Canada	0.8448
4	UK and Northern Ireland	0.8147
5	Netherlands	0.8097
6	Norway	0.8020
7	Denmark	0.7872
8	Australia	0.7863
9	Spain	0.7516
10	France	0.7510
11	Singapore	0.7476
12	Sweden	0.7474
13	Bahrain	0.7363
14	New Zealand	0.7311
15	Germany	0.7309
16	Belgium	0.7225
17	Japan	0.7152
18	Switzerland	0.7136
19	Finland	0.6967
20	Estonia	0.6965

Rank	Country	E-Governance (E-Participation) Index
1	Republic of Korea	1.0000
2	Australia	0.9143
3	Spain	0.8286
4	New Zealand	0.7714
5	UK and Northern Ireland	0.7714
6	Japan	0.7571
7	United States	0.7571
8	Canada	0.7286
9	Estonia	0.6857
10	Singapore	0.6857
11	Bahrain	0.6714
12	Malaysia	0.6571
13	Denmark	0.6429
14	Germany	0.6143
15	France	0.6000
16	Netherlands	0.6000
17	Belgium	0.5857
18	Kazakhstan	0.5571
19	Lithuania	0.5286
20	Slovenia	0.5143



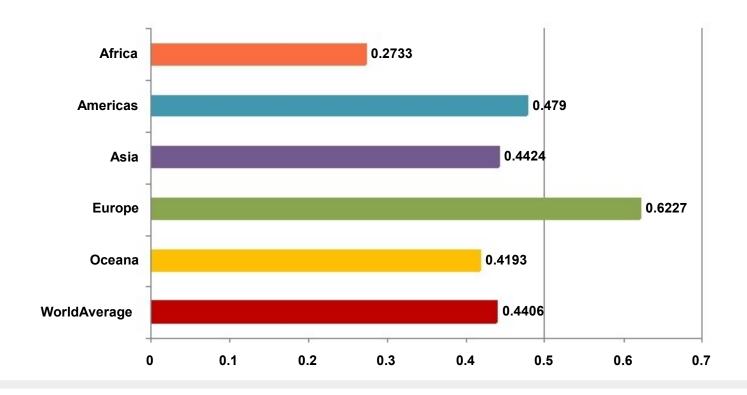


# Indicators UN e-Gov. Survey

- 1. Social Capital UNESCO index
- 2. Infrastructure ITU index: broadband, internet, cell phones, PCs and phone lines
- 3. Web presence (objective questionnaire on 100 + features of official gov. websites)



## **E-Government Development by Region**

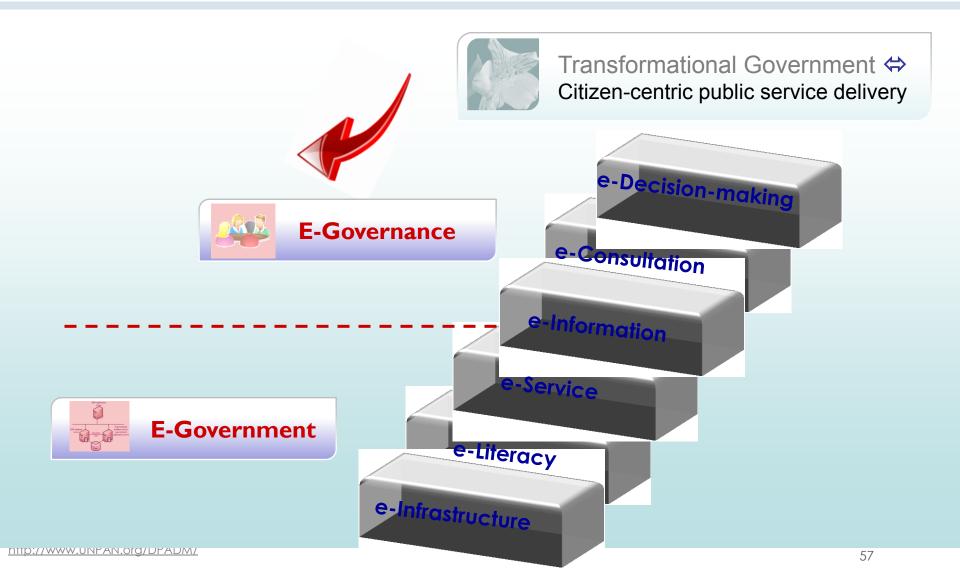


Source: UN E-Government Survey 2010 <a href="http://www.unpan.org/dpadm/">http://www.unpan.org/dpadm/</a>





## **United Nations E-Government Survey**







## e-Strategies



http://www.UNPAN.org/DPADM/





**Supply-side** 



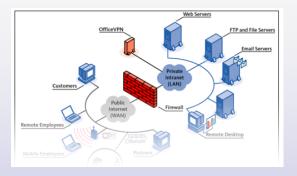




## Supply-side Strategies

e-Infrastructure & e-Information

#### e-Infrastructure



- 1. Internet usage/access
- 2. Diffusion of personal computers
- 3. Main telephone lines
- 4. Mobile phone usage/access
- 5. Fixed broadband subscribers

#### e-Information



- 1. E-participation policies or information
- 2. Information re. inclusiveness in e-gov
- 3. Citizen charters/service agreements
- 4. Info on employment opportunities





## Supply-side Strategies

Top 40 countries in e-Infrastructure: global rankings

Rank	Country	Index value
1	Switzerland	0.7687
2	Netherlands	0.7666
3	Sweden	0.7522
4	United Kingdom	0.7164
5	Luxembourg	0.7138
6	Denmark	0.6988
7	Monaco	0.6961
8	Germany	0.6955
9	Norway	0.6830
10	Canada	0.6799
11	United States	0.6449
12	Iceland	0.6395
13	Republic of Korea	0.6390
14	Singapore	0.6386
15	Estonia	0.6273
16	Finland	0.6240
17	Australia	0.6011
18	France	0.5954
19	Bahrain	0.5855
20	Ireland	0.5739

Rank	Country	Index value
21	Austria	59.37
22	Belgium	66.53
23	New Zealand	69.76
24	Barbados	73.86
25	United Arab Emirates	65.15
26	Liechtenstein	65.08
27	San Marino	51.37
28	Japan	69.16
29	Antigua and Barbuda	75.03
30	Spain	56.70
31	Slovenia	49.24
32	Italy	48.85
33	Malta	49.14
34	Andorra	70.04
35	Lithuania	53.50
36	Hungary	54.93
37	Israel	28.85
38	Cyprus	38.04
39	Saint Kitts and Nevis	29.75
40	Czech Republic	48.61

Source: UN E-Government Survey 2010 http://www.unpan.org/dpadm/







## Supply-side Strategies

Top 40 countries in e-Infrastructure: global rankings

Internet users per 100 inhabitants		<b>ALALALALA</b>
Developed Countries	58	**************************************
Developing Countries (other than LDCs)	23	
Small Island Developing States	25	
Least Developed Countries	4	4

Source: ITU, UN E-Government Survey 2010





#### **Demand-driven**







## **Demand-driven Strategies**

e-Literacy & e-Consultation

#### e-Literacy



- 1. Adult literacy rates
- 2. Human capital development

#### e-Consultation



- 1. Public consultation blogs
- 2. Online surveys and polls
- 3. Chat rooms and instant messaging
- 4. Web logs, list servers and newsgroups
  - 5. Feedback forms

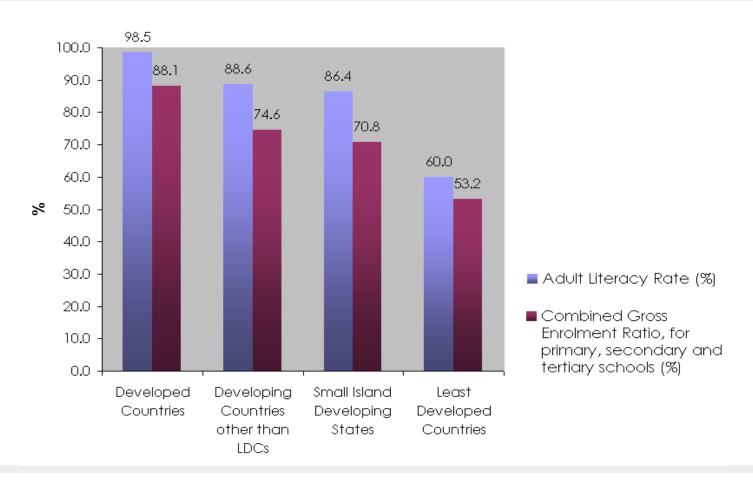






## **Demand-driven Strategies**

e-Literacy & e-Consultation



Source: UN E-Government Survey 2010







## **Demand-driven Strategies**

#### e-Literacy & e-Consultation

#### Interactive tools used by governments

Payment type	Number of countries	Percent
Online polls	30	16
Online surveys or feedback forms	55	29
Chat rooms or instant messaging	11	6
Web logs	20	10
List services or newsgroups	16	8
Other interactive tools	33	17

Source: UN E-Government Survey 2010 <a href="http://www.unpan.org/dpadm/">http://www.unpan.org/dpadm/</a>





**Integrated-Interaction** 





### Integrated-Interaction e-Strategies

#### e-Service & e-Decision-making

## e -Service Connected Transactional Enhanced Emerging 1. Four stages of development 2. Use of multimedia technology to interact with citizens 3. Citizens are consulted regularly on improving public policy and public service delivery matters

#### e -Decision-making



- 1. Online discussion forums
- 2. Archives of past discussions
- 3. Online petitions
- 4. Officials' responsiveness to queries/comments and their incorporation of such feedback
- 5. Official's invitation for suggestions and comments

22





## **Integrated-Interaction Strategies**

e-Service & e-Decision-making

#### Top 20 countries in e-service development: global rankings

Rank	Country	Online service index value
1	Republic of Korea	1.0000
2	United States	0.9365
3	Canada	0.8825
4	United Kingdom	0.7746
5	Australia	0.7651
6	Spain	0.7651
7	Norway	0.7365
8	Bahrain	0.7302
9	Colombia	0.7111
10	Singapore	0.6857

Rank	Country	Online service index value
11	France	0.6825
12	Netherlands	0.6794
13	Denmark	0.6730
14	Japan	0.6730
15	New Zealand	0.6381
16	Malaysia	0.6317
17	Belgium	0.6254
18	Chile	0.6095
19	Israel	0.5841
20	Mongolia	0.5556

Source: UN E-Government Survey 2010 <a href="http://www.unpan.org/dpadm/">http://www.unpan.org/dpadm/</a>

23

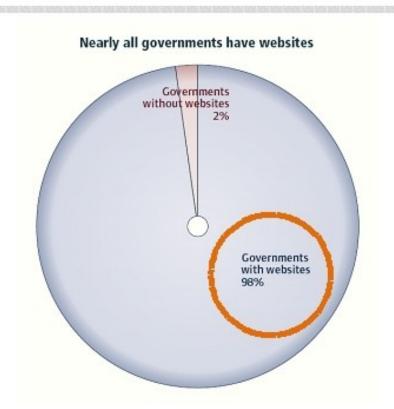


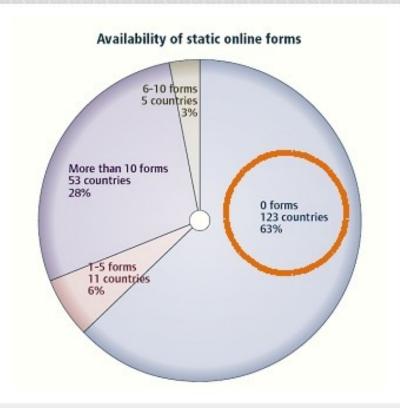




## **Integrated-Interaction Strategies**

e-Service & e-Decision-making









## **Integrated-Interaction Strategies**

e-Service & e-Decision-making

#### Online submissions

Feature	Number of countries	Percent
Online forms	53	28
Online transactions	60	32
Application for government benefits	32	17
Acknowledgement of receipt	19	10

#### Online payment

Payment type	Number of countries	Percent
Taxes	34	18
Registrations	36	19
Permits, certificates, identification cards	33	17
Fines	22	11
Utilities	18	9

#### Site maps and linkages from national portals

Feature	Number of countries	Percent
Site map is available	102	53
Links between national home pages and ministries/departments	143	74
Links between national home page and public sector services	129	67

Source: UN E-Government Survey 2010 <a href="http://www.unpan.org/dpadm/">http://www.unpan.org/dpadm/</a>





## **Areas of Focus UN E-Gov Survey 2012**

- ✓ Emphasis on quantity/quality of Services provided (NOT number of ministry websites) – INTEGRATION
- ✓ Observation of Open Data Trends TRANSPARENCY
- ✓ More attention on Service Usage USER TAKE-UP
- ✓ More weight to E-Infrastructure in E-Readiness DIGITAL DIVIDE
- ✓ Higher marks for e-services or e-inclusion of Vulnerable Groups
   EQUITABLE DEVELOPMENT
- ✓ Higher marks for connected Mobile Internet Services M-GOVERNMENT
- ✓ New area of assessment on Environmental Issues -E-/M-INFORMATION ON ENVIRONMENT

http://www.UNPAN.org/DPADM/





## Data: Access, Privacy and Security

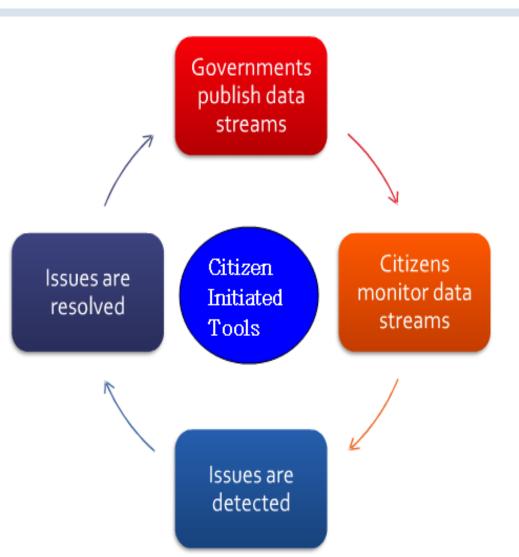


http://www.UNPAN.org/DPADM/





## How is it useful?

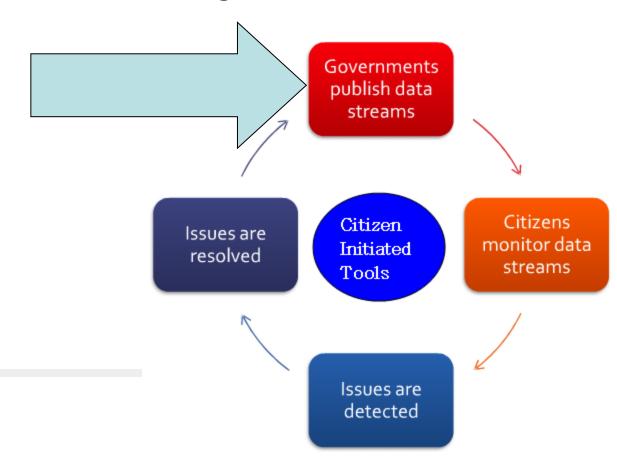


- Governments publish data streams
- Citizens create tools for analysis and oversight
- Citizens collaboratively monitor their government
- Citizens detect issues and give feedback
- Issues are resolved



## **LEADERSHIP**

- Someone needs to PUSH for open data
- How? Directives, acts, laws, regulations



🔐 UNHQ Portal...



🎁 start

*(C)* (C)

Open Gover...



M 🔗 📿 🔼 🕲 🥦 🐉 11:03 AM

## An example of PUSH: USA - Open Government Initiative



Microsoft Po...

Document1 -...

👹 untitled - Paint







HOME

CATALOGUE

OTHER CATALOGUES



#### Welcome

data.australia.gov.au is the home of Australian government public information datasets. We encourage you to make government information even more useful by mashing-up the data to create something new and exciting! Make sure you pay attention to the licence attached to the datasets you are interested in using. Each licence should make clear what you can and can't do with the data. If you're unsure, please contact the contributing agency.

Start browsing the collection.



#### Browse Data by Category

- > Business (3)
- → Communication (1)
- > Community (25)
- > <u>Culture</u> (5)
- Education (8)
- > Emergencies (9)

- > Finance (1)
- > Information & Communications Technologies (2)
- > Law (9)
- > Measurement (8)
- > Planning (3)

#### Recently-Added Datasets

- National Public Toilet Map
- Australia Council Funded Arts Organisations 2009
- National Parks and Asset Locations (South Australia)
- ➤ NSW Rural Fire Service Current Incidents
- ▶NSW Rural Fire Service Major Updates
- > Frog Atlas SA





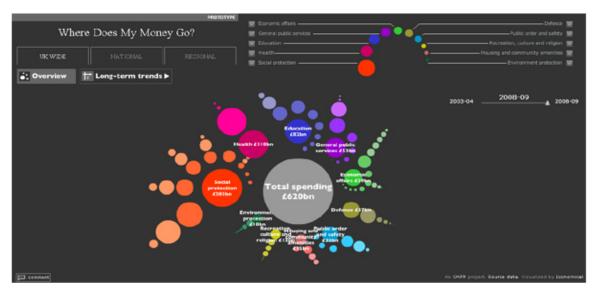
# Where Does My Money Go?

Analysing and visualising UK public spending

Our aim is to promote transparency and citizen engagement through the analysis and visualisation of information about UK public spending.

Where Does My Money Go? was a winner of the UK Government's **Show Us a Better Way** competition in November 2008. **Find out more** ».

#### Go to prototype »





#### Support Our Work

UK £	5.00
Donate	
Home	
About	
Prototype Comme	ents
Get Involved	
□ <u>Ideas</u>	
□ <u>Data</u>	
• Overview	
□ <u>Visualisations</u>	
People	
News	
Developers	





# **Risks: Privacy and Security**

Open Data promotes increased civil discourse, public welfare and a more efficient use of public resources.

but...

It raises privacy and security concerns that may legally prevent certain data sets from being shared with the public







## Challenges facing Govs. while opening data

- Protecting personally identifiable information
- Suitably control access to the data
- Keep data safe from corruption







# How Do Govs. Respond?

- Data Protection Act
- Privacy and Security Laws
- Advocacy
  - Data Privacy Day
- Raising Awareness
  - News <a href="http://www.privacy.ohio.gov/">http://www.privacy.ohio.gov/</a>
  - Resources: http://www.privacy.ohio.gov/resources









## Research and Timeframe

- **Legal and Regulatory Framework 2009** 
  - Legislation on Open Government Data including but not limited to Freedom of Information Acts
  - Legislation on Privacy and Security including but not limited to Data Protection Acts
- Other resources 2010
  - Government sites with Open Data
  - Citizen initiated sites that utilize Gov't Data
  - Policy, Strategies & Technologies for Opening Gov't Data
  - Policy, Strategies & Technologies for implementing Privacy and Security in Government

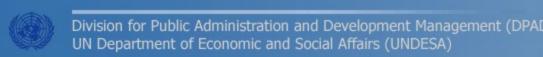
http://www.UNPAN.org/DPADM/ 82





# **Next Steps**

- Raise awareness of UN Member States on the importance of "open government data, privacy and security"
- Guide them in developing legal frameworks (laws, regulations, acts etc)
- Assist in developing open data strategies
- Advise on the technologies for opening the data
- Share best practices from leading countries





Thank you www.unpan.org rabinovitch@un.org