Open Data as a Key Enabler of Smart Government

Session 3: Leveraging Emerging Technologies

Oleg Petrov
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Global ICT Practice @ The World Bank
Part 1: The Context

Smart Government Framework and Examples
1980-2000: Old Model
  • Informatization (Gov 1.0)

2000-2013: Current Model
  • E-Government/e-Transformation/Open Government (Gov 2.0)

2014+: Emerging Model
  • Smart Government (Gov 3.0)
Old Model (1980-2000): **Informatization**
High Costs – Limited Results

Gov 1.0: Computerizing the “Brick and Mortar” (industrial age) government

- Duplicative, wasteful IT investments
- Technology/supply/vendor-driven
- Ignoring or reinforcing organizational silos
- Limited back-end integration and sharing of data, infrastructure and services
- Focus on interoperability rather than sharing
- Limited process re-engineering that does not leverage the full power of ICT
- Limited change management
- Limited participation of the citizens and private sector
- Government-centric
Gov 2.0: Second-generation model of ICT-enabled government transformation into a more citizen-centric and integrated government.

Focus on sharing and integration and more recently (2008-2011) on transformation (“e-Transformation”) and most recently (2012-2013) on openness (“Open Government”).

Key trends:

- Whole-of-government perspective
- Sharing infrastructure and services
- e-Inclusion-for-all
- Multi-channel delivery of services, especially via mobile phones
- Change management and e-leadership
- Process re-engineering/admin reform
e-Government in 2014

WHAT'S NEXT?
Next generation model of ICT-enabled public sector transformation into a **Smart** Government (Gov 3.0)

**Simple Definition: What is Smart?**

- **Doing more** (more focus on effectiveness, results) with **less** (more focus on efficiency, cost savings) and:
  - More openly (more focus on transparency and accountability)
  - More sustainably (more focus on social, political, environmental and financial sustainability)
  - More securely (increased focus on cybersecurity)
  - Faster (real-time, more agile service delivery and software development) and
  - More inclusive, targeted and personalized delivery
S.M.A.R.T Government: Key Aspects

- **Social**: Not only highly personalized and citizen-friendly service delivery, but also allowing citizens and civil society to co-create with Government, especially via social media and crowdsourcing tools.

- **Mobile**: Using the latest mobile technologies to deliver information and services, and get contributions from citizens, wherever and whenever they want – by Apps, SMS, Social Media, and Web-on-the-move – using mobile networks and cloud computing at the back-end.

- **Analytics**: Using big data Analytics, sensors, and context Aware services to drive policy action and to individualize communications and transactions.

- **Radical-openness**: “Open by Default” and “Open by Design” transforms Accountability and Transparency and engages citizens in co-creation, as well as enable businesses to use data for innovative new services.

- **Trust**: Effective Cybersecurity so that services are resilient, available and protection of privacy.
ICT Enablers as a Platform

1. Shared ICT Services and Infrastructure
   – e.g. e-Procurement, HR, Office suite tools;
   – Cloud, Mobile, Broadband, Cybersecurity, eID, Open/Big Data, Social Media, Sensors, Analytics

2. Innovation Infrastructure
   – e.g. innovation hubs, funding mechanisms, PPP...

3. ICT Capacity and Skills
   – e.g. capacity building and IT skills.

4. Policy, Standards, Institutional, Legal & Regulatory Framework
   – e.g. institutions & policies.
Smart Government: So What?

Can Smart Government Enablers Really Help Achieve MDG Goals, e.g. Eradicate Poverty?

“Our strategy calls for us to become a Solutions Bank with results for the poor as our central benchmark.”

Jim Yong Kim
World Bank Group President
Example of Smart Poverty Killer: the Aadhar Project (India)

Nandan Nilekani speaks at World Bank on the country’s digital identification program (Aadhar)—what WB President Kim called a ‘poverty killer’ innovation
Part 2: Open Data as a Key Enabler of Smart Government
Part 2: Open Data as a Smart Enabler

What is Open Data?
Why Open Data?
Lessons Learned so far?
How can World Bank help?
What is Open Government Data?
Open data is data that can be freely used, reused and redistributed by anyone for any purpose.
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Machine-readable (Re-usable)
Open Licence
Usable by anyone ...
Open =

... for any purpose allowed by law
Public Data

Types of Data

- Geodata
- Culture
- Science
- Financial
- Statistics
- Weather
- Environment
- Transport
Big Data ≠ Open Data ≠ Open Government

1. Non-public data for marketing, business analysis, national security
2. Citizen engagement programs not based on data (eg petition websites)
3. Large datasets from scientific research, social media, or other non-govt. sources
4. Public data from state, local, federal govt. (eg budget data)
5. Business reporting (eg ESG data); other business data (eg consumer complaints)
6. Large public government datasets (eg weather, GPS, Census, SEC, health care)
The Open Data Index is an initiative of the Open Knowledge Foundation based on contributions from open data advocates and experts around the world. The Index results were compiled from the data collected from the Open Data Census. You can see a list of our global community of contributors here.

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## Open Data Barometer 2013

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India @ Open Data Barometer 2013

How India scores in terms of data availability and openness

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| Public transport timetable |    |
| International trade |    |
| Health |    |
| Education |    |
| Crime statistics |    |
| Environment statistics |    |
| Election results |    |

The Open Data Barometer scores are based on the availability of 1078 different datasets across 14 categories (including online availability, machine-readability, license, sustainability, timeliness of updates and discoverability).

The larger the size of the circle, the higher the score.

http://www.thehindu.com/opinion/blogs/blog-datadelve/article5314288.ece
Why Open Government Data?
Open Data as Fuel for Innovation and Economic Growth
Economic Value of Open Data

McKinsey study: $3 trillion annually worldwide
Open Gov Data in EU would increase business activity by up to €40 Bn/year, with total benefits up to €140 Bn/year (0.7% of GDP)
Australian study found ROI of ~500% from open data
Deloitte/POPSIS found open data was reused 10x-100x more than charged-for data

All economic analysis and case studies point the same way
Evidence of Impact of Open Data

- Releasing Global Positioning System data from 1994 now has $122bn/yr benefits to US economy alone with 5.8m jobs in GPS-intensive industries
- UK National Mapping Agency data supports £100bn/yr of GDP activity
- Open Weather Data in US has created 400 companies employing 4000 people
- Releasing addressing data as Open Data in Denmark gave $21m/yr benefits and 2200% ROI
- Publishing the UK’s 240 cardiac surgeons’ individual clinical outcomes reduced deaths by 1000 a year
- 1000s of apps delivering public transport information in the United States – 68 in New York alone
- UK released data on location of 300,000 bus-stops; OpenStreetMap corrected 18,000 of them, improving official data accuracy.
DELIVER CASH SAVINGS
WITHOUT COMPROMISING
FRONT-LINE SERVICES

Spend & Contract Visibility
Profile your spend to find savings, identify opportunities to aggregate...

Transparency
Improve the accessibility, relevance and value of the spend data...

Performance
Evidence your progress, create context through comparison...

Sustainability
Measure and manage CO₂ in the supply chain...

Data Transformation
Our highly experienced team rapidly transform your spend, supplier and contract data into actionable business intelligence regardless of the completeness, accuracy or fitness for purpose of the source.
London: Open Data as a Transport Investment

- ~500 Applications (mobile, web, others)
- ~5000 people involved in “app industry”
- As a transport project alone, evaluated by usual economic criteria:
  Return On Investment = 58:1
- TFL have stopped making their own apps
Open Data Improves Efficiency

- Used experts in
  - Health
  - Data Analytics
- Analysed 35m data records
- 8 weeks
- £200m+/yr savings
- Repeatable
- Could scale to £1.5bn
NHS records 20,000 pregnant men in the UK

Highlights a need for more sophisticated data capturing systems

By Anh Nguyen | Computerworld UK | Published 12:42, 17 April 12

A study of NHS data has discovered that there were 20,000 men using midwifery services between 2009 and 2010.
Assisting Foreign Inward Investment
Driving Business Growth

From Weather Insurance to Green Revolution

Protect & Increase your Profits

Full-Stack Risk Management

MP Federal Crop Insurance  CH Crop-Hail  TWI Total Weather Insurance

Ag Production Management

CLIMATE.COM

Climate Corporation offices in San Francisco
Driving Business Growth

Data for Energy Savings

Better information, motivation, and control for all.

Welcome to Opower

Our purpose is to save energy right now.

Ogi Kavazovic, VP Marketing & Strategy
Healthcare: The Next Big Frontier?
Driving Business Growth

Take Charge of Your Health

With the new symptom checker, learn possible causes of multiple related symptoms, locate care, and book an appointment.

Start Here
Help for K-12 Households

Bill Jackson, CEO
Uganda: Open Data and Community Health Monitoring

- 33% reduction in under-5 mortality
- 20% extra utilisation of out-patient services
- Significant improvements in:
  - Immunization
  - Waiting times
  - Absenteeism
Open Government Data: Lessons Learned
Leadership is key
[Open Data is] going to help launch more businesses. . . . It’s going to help more entrepreneurs come up with products and services that we haven’t even imagined yet.
Neelie Kroes: Data is the new gold!

Wednesday, December 14, 2011 // Blog

On December, 12 2011 Neelie Kroes (Vice-President of the European Commission) gave a speech about the Open Data Strategy of the EU. I’m not going to repeat the whole speech, you can read a transcript here but I must say that I heard a lot of encouraging statements in it!
“Greater transparency will enable the public to hold politicians and public bodies to account”

“Public information does not belong to Government, it belongs to the public.”
Data Publishing – Star Quality

★ Put your data on the Web with an Open Licence (any format)

★★ Make it available as structured data (e.g. Excel, CSV, instead of PDF)

★★★ Use open, standard formats (e.g. XML, RDF)

★★★★ Use URLs to identify things (so people and machines can point at your data)

★★★★★ Link your data to other people’s data
Ensure Privacy of Personal Data
Focus on data on things that people care about
Using citizens to help improve data
Open Data Ecosystem
UK Open Data Institute

Develop capability of UK businesses to exploit value of Open Data

Engage developers/small businesses to build Open Data supply chains and commercial outlets

Help public sector use its own data more effectively

Ensure academic research in Open Data technologies
It’s not (just) an IT project!

CIOs can give leadership, but
CIOs/IT Directors often do not “own” the data
Key issues are business, policy and politics: don’t let policy makers brand it as “just IT”

Keep the IT simple
  use Open Source (CKAN, Drupal, etc)
  use existing contracts/infrastructure with niche firms
  host data on existing websites or on public Cloud

Use revealed legacy data quality issues as spur for improvement
  not as an excuse for doing nothing
# Frequent concerns and excuses

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<th>Solution</th>
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<td>We can not publish data because…</td>
<td>Ways to address this…</td>
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<td>Our data is not reliable, the quality of our data is low, there is no consensus</td>
<td>Publish what you use!</td>
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<td>Privacy of people needs to be preserved</td>
<td>Use open data to improve data quality</td>
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<td>National security, sensitive data</td>
<td>Use data anonymization techniques</td>
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<td>We sell our data, how will we replace those resources?</td>
<td>Establish a system to determine what data is threatening to national security</td>
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Very valid concern. Budget authorities need to understand that data is a public good and replace your budget.
OPEN GOVERNMENT DATA
How the World Bank Can Help?
How we help with Open Government Data

- ASSESSMENTS AND ACTION PLANS
- KNOWLEDGE SHARING, ADVICE AND TRAINING
- STIMULATING INNOVATION USING OPEN DATA
- DEVELOPING CIVIL SOCIETY CAPABILITIES
Conduct an action-oriented assessment of the readiness of a country, sector, region or city - to evaluate, design and implement an Open Data initiative or a particular aspect.

Readiness Assessments and Action Plans piloted in:

- Ulyanovsk, Russian Federation
- Antigua and Barbuda
- Tanzania
- Rwanda
- Peru
- Mexico
- Burkina Faso
KNOWLEDGE SHARING, ADVICE AND TRAINING

- International Open Government Data Conferences
- Regional Conferences
- Country Workshops
- Technical assistance and reimbursable advisory services on open data
Bringing international experts and local talent together to make quick progress in using data in new, valuable ways.

- Open Innovation Weeks and TechCamps
- Water, Transport and Sanitation Hackathons
- Apps contests
- Mobile Innovation Camps
Organizing data journalism boot camps, making budget data easy to understand, producing foreign aid maps, and other initiatives to promote the effective, responsible use of open data.
The Toolkit is designed to help our government clients get “up to speed” in planning and implementing an open government data program while avoiding common pitfalls.

POD: PARTNERSHIP FOR OPEN DATA

An initiative designed to help policy makers and citizens in developing countries understand and build on the benefits of open data.

Objectives:

- Supporting developing countries to plan, execute and run open data initiatives
- Increase re-use of open data in developing countries
- Grow the base of evidence on the impact of open data for development

Fill in the form to help us supply you with relevant further details:
https://docs.google.com/forms/d/10jGnTIIHD5NQcCAU_fkObPpnBb3cOG2ZWf8tIjE0ZUc/viewform?edit_requested=true
Thank you!

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