Open Government Data in the UK

Andrew Stott

UK Transparency Board
formerly Director, data.gov.uk
& UK Deputy GCIO

BCS APSG
12 Jan 2012

@dirdigeng
andrew.stott@dirdigeng.com
Presentation Contents

- A World of Open Data
- Why is the UK Government doing this
  - Emerging Business Models
- How data.gov.uk was developed
- Lessons Learned
- Wider Implications
- Discussion
A World of Open Data
Tim Berners-Lee on the next Web
Australia

App: Suburban Trends
A mashup of different types of crime and census data that allows you to compare and contrast suburbs by a range of economic, education, safety and socio-economic indicators (Community App).
World Bank

Data

Pupil-teacher ratio, primary

Search all Indicators

Go

Featured Indicators

Education

Children out of school, primary, female

Children out of school, primary, male

Expenditure per student, primary (% of GDP per capita)

Expenditure per student, secondary (% of GDP per capita)

Expenditure per student, tertiary (% of GDP per capita)

Gross intake rate in grade 1, female (% of relevant age group)
London, United Kingdom

A first step towards freeing London’s data

Welcome to the London Datastore

The London Datastore has been created by the Greater London Authority (GLA) as an innovation towards freeing London’s data. We want citizens to be able access the data that the GLA and other public sector organisations hold, and to use that data however they see fit – free of charge. The GLA is committed to influencing and cajoling other public sector organisations into releasing their data here too.

Latest blog entry

Where’s the loo? Making data on public toilets more widely available
21ST APRIL 2011

The London Assembly is trying to help improve the quality of data published about public toilets in London, and we would appreciate your help.
City of Vancouver, Canada

Open Data Catalogue Beta v2

Residents Business Visitors Jobs with the City Services Departments City Projects Pay & Purchase Online

Open data home
Get the data Data catalogue City web feeds
About the data Data formats Data updates Terms of use
Feedback

Collaborative Cities
The Cities of Vancouver, Edmonton, Ottawa and Toronto have recently joined forces to collaborate on an “Open Data Framework”. The project aims to enhance current open data initiatives in the areas of data standards and terms of use agreements. Please contact us for further information.

Updates

City of Vancouver - Most Innovative Organization in B.C.
April 12, 2011
City of Vancouver has won the 2011 BC Business Innovator first place award for its open data program. More information

Business Licence data improved
March 10, 2011
The City has just improved the Business Licence data on the Open Data website to include latitude and longitude attributes. In addition, XML Document Type Definition (DTD) information is also made available and embedded inside the XML file.

Please feel free to provide us with feedback on this or any other aspect of the Open Data website on our feedback page. As always, your use of the data available from this site is governed by the City’s Terms of Use and by downloading the data, you are agreeing to be bound by these Terms of Use

Give us your feedback
Which data items would you still like to see added to the City’s Open Data site? Fill out the survey.
See the feedback form

Open Data updates
Receive updates on developments related to this site:
Subscribe to the RSS feed
Subscribe to the mailing list
Open Data update history

Connect with the Community
Community developers have created a wiki and discussion group to share application ideas and discuss datasets.
Vancouver Open Data Wiki
Discussion Group

Please note: These community sites are not affiliated with the City of Vancouver.

Background
City Council Motion: Open Data, Open Standards and Open Source (PDF) 22 KB
City of Rennes, France

LES DONNÉES

L’entrepôt de données de Rennes Métropole vous donne la possibilité d’accéder à différents jeux de données, sous différents formats et en provenance de différents services de la Ville de Rennes et de Rennes Métropole et leurs partenaires.

Pour trouver les données qui vous intéressent ou simplement pour visiter notre entrepôt n’hésitez pas à consulter notre catalogue.

> Le moteur de recherche est simple, laissez-vous guider...

VOS APPLICATIONS

Vous êtes développeur et vous avez imaginé l’appli qui tue ?
Pour que tout le monde le sache n’hésitez pas à publier les caractéristiques de votre service dans cette rubrique du site.
Allez dans l’espace développeur et suivez les instructions : une image, un descriptif, un lien et hop ! en deux temps, trois mouvements vous voici dans notre “data store”...

> Vous cherchez l’appli qu’il vous faut pour vous faciliter la vie ? c’est ici...

VOS IDÉES

Qui dit ouverture des données publiques dit aussi travail en commun, rencontres, réseaux communautaires.
Dans cette partie “Forum” de notre site nous vous proposons d’échanger, de questionner, de débattre de vos idées. Concrites, politiques, crées, efficaces, utiles, les idées d’aujourd’hui seront les services de demain...
Pas de débats techniques qui trouvent leur place dans l’espace développeur mais bien une place publique de l’imagination !

> Pour inventer ensemble les services de demain...
City of San Francisco, USA

SAN FRANCISCO INNOVATIONS SHOWCASE

The DataSF App Showcase celebrates the innovators and innovations who are championing the Mayor’s vision of a more collaborative and open government. The public can browse examples of new ways in which Bay Area constituents are using City data to improve San Francisco. If you have an application using City data not in our showcase, we would like to hear from you.

Crime

Crimespotting – San Francisco
Crimespotting is an interactive map of crimes in San Francisco and a tool for understanding crime in cities.

Transportation

Routesy San Francisco – Routesy will help you find your way around the Bay Area’s top transit systems — San Francisco Muni and BART — in real time. Simply choose the line you want to ride, and Routesy will show you the closest stop or station, along with real-time prediction data to make sure you make it on time.

Etcetera

EveryBlock – EveryBlock publishes a news feed for every city block in San Francisco. Enter your street address, neighborhood or ZIP code, and the site shows you recent nearby mainstream/blog news coverage, police calls, building permits, restaurant inspections and much more — updated throughout the day, every day.

CleanScores – CleanScores is bringing you the health inspection scores of restaurants around San Francisco.
Kenya – first in Africa
A World of Open Data

Now over 200 governmental Open Data sites
Why is the UK Government doing this?
UK Policy Drivers

The Power of Information: An independent review by Ed Mayo and Tom Steinberg

Welcome

Welcome to the report of the Power of Information Taskforce. We are publishing this report in beta before we hand it in formally to the Government. We wanted to give the the community that has contributed to the Taskforce’s work the chance to make suggestions while the report is in draft. The report will be here for comment for two weeks. We shall make small improvements as we go along. Then we shall consider the views raised, adapt the report if we think it helps make the case to the Government and hand it in to the Cabinet Office. So please go ahead and comment.

You can see Richard Allan discussing the Power of Information work on Youtube.

The Plan for Growth

New economic and social value

June 07  Feb 09  Mar 11
Evidence for EU PSI review

- EU27 direct gains from completely open access to PSI could be ~ €40 Bn
- Aggregate economic impacts could be even larger: ~€140 Bn
- Direct market associated with PSI use less important than spillovers and new uses.
- Future innovations due to easier access add further economic and social benefits
- Costs and revenue foregone? ~ € 1 bn

Source: Graham Vickery, Information Economics at EU Digital Agenda Assembly
Emerging Business Models
Cleansing and organising data

Business Intelligence from item-level purchasing data
Information services to the public

Live train map for the London Underground, by Matthew Somerville

Weather, transport and public facilities among most downloaded Smartphone Apps
Govt open data policy "set to boost UK life sciences growth"

The UK government's Autumn Statement includes "world-leading commitments" to boost growth in the nation's life sciences sector by transforming access to public-sector health and care data.

From next September, services provided by the NHS Information Centre for Health and Social Care will link datasets from primary and secondary care, which will enable professionals in the NHS, pharmaceutical industry, academia and elsewhere to access unprecedented and unequalled levels of information about the journeys of patients through the care system and the outcomes of different treatments, it says.
Operational efficiency/optimisation

Real time info on road delays and roadworks allows logistics efficiency
Financial Products

- Weather Risk Management (US: $4bn annual contracts value)
- Flood insurance on detailed topography and river records
Customer attraction and retention

Local house prices attract potential customers

estate agents/realtors

Financial services

builders and other local services
Data Broking

Customer-focused reliable high-volume serving of data and APIs

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications</td>
<td>Ruterow.net: A service for companies specializing in institutional sales of products through lease, consignment or even detailed... EzUpData: Rather than emailing files to your contacts and dragging up their inbox, EzUpData makes it easy to upload files to a website...</td>
</tr>
<tr>
<td>Data</td>
<td>Gender Info 2007 - United Nations Statistics Division: Gender Info 2007 is a global database of gender statistics and indicators on a wide range of policy areas, including population... Millennium Development Goals Database - United Nations St...: The Millennium Development Goals Database presents official data for more than 60 indicators to measure progress towards the MDGs...</td>
</tr>
</tbody>
</table>
More Innovation

Welcome to the OS OpenSpace API

The OS OpenSpace API is free to access and lets developers create amazing web applications and online projects with Ordnance Survey maps.

But OS OpenSpace API is not just for developers.

Although the API uses JavaScript to make web pages more interactive, anyone can create an application by following our sample code and tutorials.

Get Ordnance Survey maps on your website to enhance the service and customer experience.

Example of OS OpenSpace API displaying Ordnance Survey data

News and information

**Web-Map Builder – the login got lazy** NEW

Enter the GeoVation Challenge.

Visit the **OS OpenData website**.

*OS OPENSPACE is a registered trade mark of Ordnance Survey.*
Social value and cohesion
UK Policy drivers

New economic and social value

Improve public services

Open Public Services White Paper

Mar 09

Jul 11
Improving Public Services

Street-level crime and ASB in February 2011
Grouped by crime type. To protect privacy, individual addresses are not pinpointed on the map. Crimes are mapped to an anonymous point on or near the road where they occurred.
View crime data for previous months: Dec 2010, Jan 2011

All crime and ASB 43

To show crimes of a specific type click on the links below. To view details of individual crimes click the markers on the map.

- Burglary 7
- Anti-social behaviour 14
- Robbery 0
- Vehicle crime 4
- Violent crime 3
- Other crime 15
Improving Public Services

Royal Cornwall Hospital (Treliske)
Treliske, Truro, Cornwall, TR1 3LJ
01872 250000

What people say about this hospital

Overall rating
I would recommend to a friend
The environment where I was treated was:
[ ] very clean
[ ] clean
[ ] all of the time
The hospital staff worked well together:
[ ] all of the time
I was treated with dignity and respect by the hospital staff:
[ ] all of the time
I was involved with decisions about my care:
[ ] all of the time
I was involved with decisions about my care...
[ ] most of the time
What I liked
I enjoyed where the anaesthetist asked me what do I want to dream of while I was sleeping and I s...
Improving Public Services

We believe that patients’ feedback - **good or bad** - is essential to improving UK health services.

Tell us what was good and what could be improved, say thanks or call for change - we’ll pass your stories to the people in the health services who can make a difference.

**Featured stories**

"It would seem that being *prejudged* by the ambulance crew led to *hostility* from A&E staff."

*About: Royal Infirmary of Edinburgh at Little France / Accident & Emergency and Scottish Ambulance Service*

**Who's listening to your stories?**

- 34,833 stories told
- 1,523 staff listening
- 216 stories have led to changes

**Search**

Search for a place, service, condition...

eg Leeds General Infirmary, heart surgery, depression
UK Policy drivers

Transparent & Accountable Government

Improve public services

New economic and social value
Transparent and Accountable Government

**Daily Mail**

Global backlash after Israeli ship raid leaves 19 dead

**EXPRESS.co.uk**

Tuesday 26th April 2011

**PUBLIC MONEY ON MASSAGES**

CIVIL SERVANTS WASTE PUBLIC MONEY ON MASSAGES

Friday August 13, 2010

By Martyn Brown

OUSTROUS civil service spending under Labour was laid bare yesterday. New figures revealed public cash was lavished on massages, jazz workshops and even a trip to the seaside.

£1,673 was spent on massage

The shocking figures, including almost £20,000 spent at football clubs and racecourses, will dismay hard-pressed taxpayers.
Transparent and Accountable Government
Transparent and Accountable Government

![Openly Local: Making Local Government More Transparent](image)

**Oxford City Council**

<table>
<thead>
<tr>
<th>Website</th>
<th><a href="http://www.oxford.gov.uk/">http://www.oxford.gov.uk/</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Authority Type</td>
<td>District</td>
</tr>
<tr>
<td>County Council</td>
<td>Oxfordshire County Council</td>
</tr>
<tr>
<td>Address</td>
<td>Town Hall, Blue Boar Street, Oxford OX1 4EY</td>
</tr>
<tr>
<td>Telephone</td>
<td>01865 249 811</td>
</tr>
<tr>
<td>Chief Executive</td>
<td>Peter Sloman</td>
</tr>
<tr>
<td>Population</td>
<td>153,900 (Source: ONS Crown Copyright©)</td>
</tr>
<tr>
<td>Police Force</td>
<td>Thames Valley Police</td>
</tr>
</tbody>
</table>

**Other Info**

- **External links**
  - WhatDoTheyKnow.com FoI requests (feed)
  - Office for National Statistics page
  - eGovernment Register page
  - ONS SNAC ID: 381UC

- **Statistics**
  - Happiness Survey 2008: % who are satisfied with their local area as a place to live: more data - 86.5
  - Local Government Pension Funds 2006-07: more data
  - Market Value - at end of year £000: 1048951

**Current Councillors**

- Mohammed Niaz Abbasi (Labour)
- Mohammed Ali Afzal Khan (Liberal Democrat)
- Alan Edmund Armitage (Liberal Democrat)
- Antonia Bance (Labour)
- Laurence Peter Baxter (Labour)
- Elise Benjamin (Green)
- Stephen Thomas Brown (Liberal Democrat)
- Clark L Brundin (Liberal Democrat)
- James Robert Martin Campbell (Liberal Democrat)

**Council Committees**

- Audit and Governance Committee (next meeting: Jan 26 2010, 5.00PM)
- Central South and West Area Committee (next meeting: Jan 12 2010, 5.30PM)
- City Executive Board (next meeting: Dec 15 2009, 5.00PM)
- Communities & Partnership Scrutiny Committee
- Next meeting: Feb 25 2010

**Wards**

- Barton And Sandhills
- Blackbird Lays
- Carfax
- Churchill
- Cowley
- Cowley Marsh
- Headington
- Headington Hill And Northway
- Hinksey Park
- Holywell
- Iffley

35
The emergence of data journalism

COINS data release: The 10 things we found out

Last week the government released the massive Coins database. Find out what we know now

• Coins explorer
How data.gov.uk was developed
data.gov.uk organising principles

- Small central team (4 people)
- Short stages, each with clear goals
- Respond quickly to feedback from users
- Draw in resources from Government’s experts
- Each dataset always controlled by its owner
- data.gov.uk holds metadata not data!
- It is not an IT project! Keep the IT simple
data.gov.uk: the timeline

Project Announced
10 June 2009

1st Build
data.gov.uk: the timeline

1st Build

Developer Invite 30 Sep 2009

1st Build Dev Preview

Calling open data developers: we need your help http://bit.ly/QfiLQ
#opendata #gov20

1:33 PM Sep 30th from web

DirDigEng
Director Dig Engmnt
data.gov.uk: the timeline

UK Launches Open Data Site; Puts Data.gov to Shame

By Marshall Kirkpatrick / January 20, 2010 11:57 AM / 23 Comments

A new website dedicated to making non-personal data held by the U.K. government available for software developers has launched today with the help of Sir Tim Berners-Lee, the inventor of the World Wide Web. Data.gov.uk is being slammed with traffic but six months after the U.S. government opened its Data.gov site the U.K. site already has more than three times as much data than the U.S. site offers today.

At launch, Data.gov.uk has nearly 3,000 data sets available for developers to build mashups with. The U.S. site, Data.gov, has less than 1,000 data sets today.

1st Build Dev Preview Beta

Public Launch 21 Jan 2010
data.gov.uk: the timeline

1st Build

Dev Preview

Beta

Map Data

37 GB of map data made free
1 Apr 2010
data.gov.uk: the timeline

The Coalition: our programme for government

Policy 1st Build Dev Preview Beta Map Data Transparency

Transparency Commitments 29 May 2010
Government spending data published

19 November 2010

The Government has today published detailed spending data allowing the public to see for the first time how money is spent and hold politicians to account.

As part of the ongoing drive to make Government more accountable, efficient and transparent than ever before, all departments will publish details of spending over £25,000 for the last six months.

- View the data on the online transparency database

On data.gov.uk a portal has also been set up to give the public and developers easy access to data from all levels of Government.

Implementation
19 Nov 2010

Policy 1st Build Dev Preview Beta Map Data Transparency
The first two years of data.gov.uk

- Over 7500 datasets
- 37 GB of geo data
- Public Data Principles
- Open Government Licence
- Transparency of salaries, spending, contracts and tenders
Lessons learned
Important to have top-level political support

“Greater transparency across Government will enable the public to hold politicians and public bodies to account”

“Public information does not belong to Government, it belongs to the public on whose behalf government is conducted.”
Important to have strong “demand-side”

Guardian.co.uk

Give us back our crown jewels

Our taxes fund the collection of public data - yet we pay again to access it. Make the data freely available to stimulate innovation, argue Charles Arthur and Michael Cross

Open Knowledge Foundation

Our Vision

We seek a world in which open knowledge is ubiquitous and routine. We promote open knowledge because of its potential to deliver far-reaching societal benefits.
Also important to have passionate team!
Refine policy principles based on experience

Clear, common, licensing approach

You are encouraged to use and re-use the Information that is available under this licence, the Open Government Licence, freely and flexibly, with only a few conditions.

Using information under this licence

Use of copyright and database right material expressly made available under this licence (the “Information”) indicates your acceptance of the terms and conditions below.

The Licensor grants you a worldwide, royalty-free, perpetual, non-exclusive licence to use the Information subject to the conditions below.

You are free to:

- copy, publish, distribute and transmit the Information;
- adapt the Information;
- exploit the Information commercially for example, by combining it with other Information, or by including it in your own product or application.

You must, where you do any of the above:

- acknowledge the source of the Information by including any attribution statement specified by the Information Provider(s) and, where possible, provide a link to this licence;
Incremental delivery

Datasets on data.gov.uk

Sep 09  Mar 10  Sep 10  Mar 11  Sep 11
It’s not just about new data

Scope for “Open Data” also includes data previously “published” but …

- in non-reusable format
- with restricted licence
- only aimed at specialist groups
- only for payment
- only in response to requests
- difficult to find

data.gov.uk contains a lot of data which nobody knew was already published
Handling the concerns of data owners

“People hug their database, they don't want to let it go. You have no idea the number of excuses people come up with to hang onto their data and not give it to you, even though you've paid for it as a taxpayer.”

– Tim Berners-Lee

http://www.ted.com/talks/tim_berners_lee_on_the_next_web.html
A sample of “data hugging” excuses

- It’s held separately by $n$ different organisations, and we can’t join it up
- It will make people angry and scared without helping them
- It is technically impossible
- We do not own the data
- The data is just too large to be published and used
- Our website cannot hold files this large
- We know the data is wrong
- We know the data is wrong, and people will tell us where it is wrong
- We know the data is wrong, and we will waste valuable resources inputting the corrections people send us
- People will draw superficial conclusions from the data without understanding the wider picture
- People will construct league tables from it
- It will generate more Freedom of Information requests
- It will cost too much to put it into a standard format
- Our IT suppliers will charge us a fortune to do an ad hoc extract
Dealing with “data hugging”

- It’s held separately by *n* different organisations, and we can’t join it up
- It will make people angry and scared without helping them
- It is technically impossible
- We do not own the data
- The data is just too large to be published and used
- Our website cannot hold files this large
- We know the data is wrong
- We know the data is wrong, and people will tell us where it is wrong
- We know the data is wrong, and we will waste valuable resources inputting the corrections people send us
- People will draw superficial conclusions from the data without understanding the wider picture
- People will construct league tables from it
- It will generate more Freedom of Information requests
- It might be combined with other data to identify individuals/sensitive information
- It will cost too much to put it into a standard format
- Our IT suppliers will charge us a fortune to do an ad hoc extract

Data owners need to be helped through

- **Releasing data is a new idea**
- **Look for ways to manage perceived risks**
- **Look for examples and precedents**
- **For first phase, be prepared to compromise on data content – but not on licence terms**
- **“Hackdays” can show potential benefits**
- **Ensure data owners get credit for what they do**
- **release**
Manage expectations, prepare for mistakes

“We’re making a small start next week. But eventually, it’s going to make a big difference.”

“The information we’re publishing next week won’t be perfect, it won’t always be in the most convenient format, and I’m sure there’ll be some mistakes. But I want to get on with it.”

*UK Prime Minister 29 May 2010*
Don’t be afraid of mistakes - learn from them
Continuously engage with developers

Calling open data developers: we need your help http://bit.ly/QfiLQ
#opendata #gov20

1:55 PM Sep 30th from web

DirDigEng
Director DigEngmt

Photos: @memespring, @MadLabUK, @paul_clarke
.. and highlight applications, not data
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
... and the biggest lesson of all

Overcome obstacles practically by doing, not debating
Wider Implications
Next steps for UK

Policy/organisation

- Right to Data - “FOI 2.0”?
- Codify policy – Open Data White Paper
- Public Data Group for paid-for data

Delivery

- Improve data quality
- Industrialise release processes
- Data standards and support (“linked data”)

64
Government is a data user too
The importance of location
Government: key provider of reference data
Data Publishing – Star Quality

★ Put your data on the Web (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

Benefits of linked data within Government also
Open Data Institute: its mission

- 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
Data Quality

- Release of data will reveal issues of data quality
- Celebrate greater checking of data!
- Remind business of Garbage In, Garbage Out
- Ensure legal waiver
- Use as stimulus to
  - Measure
  - Prioritise
  - Improve
Using crowd-sourcing to improve data
Citizen sourced data

“#uksnow
TN13 2RY
4/10”
Other routes to public services

FixMyStreet

This problem has been fixed.

Pothole reappearing in High Street

Reported in the Potholes category by Andrew Stott at 15:19, Saturday 15 January 2011
Sent to Kent County Council 1 minute later

A pothole has reappeared in the High Street, in a section of road used by traffic in both directions (due to parked cars on the other carriageway). A pothole in this location was reported and fixed last spring; the repair does not seem to have been effective. The pothole is adjacent to a utility access cover.

Offensive? Unsuitable? Tell us

View on Google Maps
“Open” approach to personal data?

Could mydata be the answer to personal information problems?

21 April 2011 | By Ruth Martiner

A government initiative to make available to the public all the customer data held by companies sounds good in theory.

This week, the NHS contacted me by email to offer me help quitting smoking, even though I’ve never started. And not so long ago, a clothing catalogue dropped through my door offering me more great skirts for my wardrobe, although I have never bought anything from that particular yummy-mummy clothing brand.

So who is the linen-wearing, smoking consumer being targeted by these companies? It certainly isn’t me. While both companies claim to hold data on my behaviour, they don’t know the right things. And neither marketing communication benefited me, nor them, in any way.
Discussion
End