



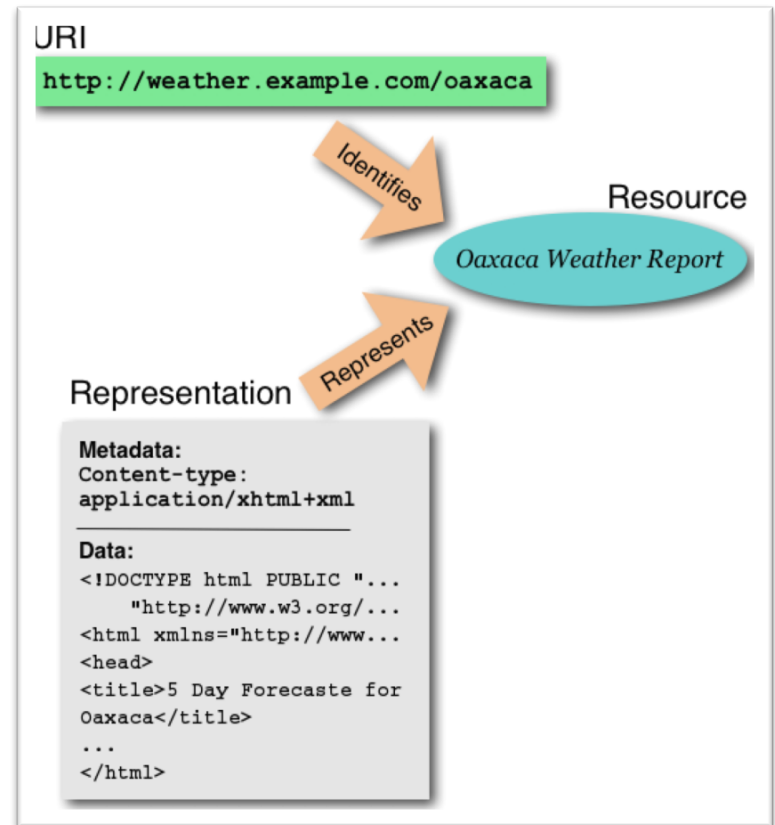
# Open Data, Government and the Open Web

Photo by Flickr user 'nex230' <http://www.flickr.com/photos/listing/3924144506/>

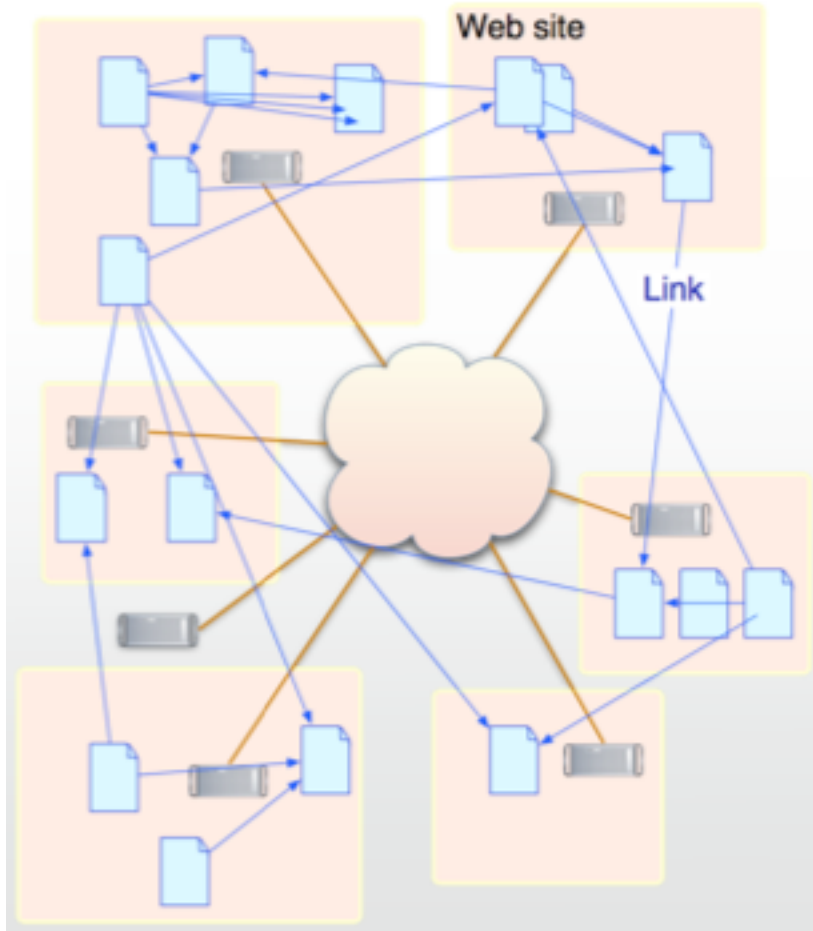
## COMP6218

# RECAP: Web Architecture

- Resources are identified by URIs
- Resources have different representations in different formats (e.g. HTML, text, PDF)
- Resources can be obtained by asking the Internet for them (using HTTP)
- Key components of the Web Architecture:
  - Identification
  - Interaction
  - Formats

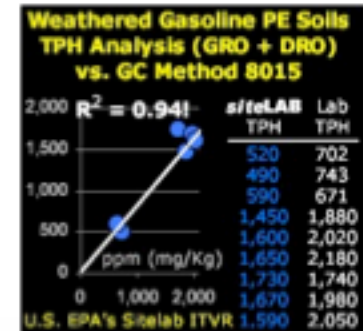
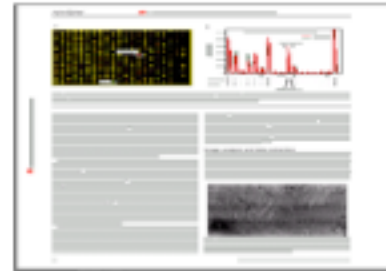


# Web Principles: Web of Documents and Data

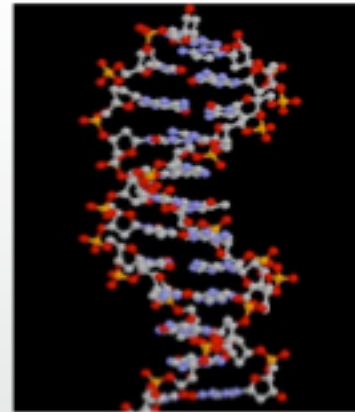


# URIs identify *any* resource

- Publications
- Multimedia
- Web data set (XHTML)
- Databases
- Scientific structures
- Workflows
- People



Web data set (XHTML)



# Web Principles

- All entities of interest, such as information resources, real-world objects, and vocabulary terms should be identified by URI references
- URI references should be *dereferenceable*, meaning that an application can look up a URI over the HTTP protocol and retrieve data about the identified resource (a representation).
- Data should be provided using a standard format (HTML, XML, RDF etc)
- Data should be interlinked with other data

# 5 Stars of Linked Data

★ On the web with an open licence

★★ Machine-readable structured data  
*e.g. Excel instead of image scan of a table*

★★★ Non-proprietary format  
*e.g. CSV instead of excel*

★★★★ Use URLs to identify entities  
*e.g. RDF*

★★★★★ Link to other data to provide context

# Openness Agendas



- Open Access to Research Outputs
  - Supported Research Funders all over the world
- Open Research Data
  - Demanded by UK government, private funders & UK Research Councils
- Open Educational Resources
  - From closed VLEs to sharing resources and MOOCs
- Open Government Data
  - Supported by G8

# Open Research Publications

Library Catalogue | Electronic Library | Journals | Archives | Reading Lists | Other Libraries | Library Home

**LSE Library**

Home | About | Browse by Year | Browse by Departments | Browse by Research centres and groups | Search

Login | Create Login

**Welcome to LSE Research Online**

Welcome to LSE Research Online. A collection of research produced by LSE academics: articles, working papers, book chapters, conference papers and more.

Atom RSS 1.0 RSS 2.0

Institutional repository for the London School of Economics  
<http://eprints.lse.ac.uk/>

About

To deposit your research in LSE Research Online:

- you can email it to [lseres@lse.ac.uk](mailto:lseres@lse.ac.uk)
- you can deposit items directly

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Home | About | Browse by Year | Browse by Departments | Browse by Research centres and groups | Search

Login | Create Login

**Supporting people with AIDS and their carers in rural South Africa: Possibilities and challenges**

Campbell, Catherine and Nair, Yugi and Maimane, Spongile and Sibiya, Zweni  
 carers in rural South Africa: Possibilities and challenges. *Health & place*

 PDF - Requires a PDF viewer such as [GSview](#), [Xpdf](#) or [Adobe Reader](#). 215Kb

Official URL: <http://www.sciencedirect.com/science/article/pii/S0926641008000444>

**Abstract**

Under-served rural areas—home to over half of people in sub-Saharan Africa—are a case study of the existence and quality of support networks available to people in an African rural area. Drawing on 45 interviews and 13 focus groups, we identify key support agencies in civil society, the public and the private sectors. The most effective are faith-based organisations, traditional healers and local leaders. This support is supplemented by volunteer health workers and two lone missionaries. This support is supplemented by faith-based organisations, traditional healers and local leaders, a private sector agencies. We discuss ways in which existing and latent networks can be strengthened.

**Item Type:** Article

**Additional Information:** © 2008 Elsevier Ltd

**Rights:** <http://www.lse.ac.uk/library/rights/LSERO.htm>

**Uncontrolled Keywords:** HIV/AIDS; Rural areas; Carers; Home-based care; Primary care; Support networks; Facilitation

**Library of Congress subject classification:** [R Medicine > RA Public aspects of medicine > RA0421 Public health, Hygiene, Preventive Medicine](#)  
[H Social Sciences > HV Social pathology, Social and public welfare](#)

**Preview**

LSE Research Online

[Cathy Campbell, Yugi Nair, Spongile Maimane and Zweni Sibiya](#)

Supporting people with AIDS and their carers in rural South Africa: Possibilities and challenges.

Article (Accepted version) (Refereed)

Original version: [Supporting people with AIDS and their carers in rural South Africa: Possibilities and challenges](#). *Health & place*, 14 (2), pp. 207-216. doi:10.1016/j.healthplace.2008.04.004

# PDF (Accepted version)

This document is the author's final accepted version of the journal article. It is not the published version. It may differ from the published version in terms of content, style and layout. It is not to be distributed or used for any other purpose without the permission of the publisher.

<http://eprints.lse.ac.uk>

One of 145 UK Institutional Research repositories





# Open Educational Resources

- JISC EdSpace Project
- IEEE LOM metadata
- Web 2, informally tagged
- Sufficient for discoverability and usefulness

The screenshot shows the EdShare website interface. At the top, there is a navigation bar with 'EdShare' and 'University of Southampton' logos, and a search bar. Below the navigation bar, there are links for 'Home', 'Browse', 'About', and 'Help'. A secondary navigation bar contains 'Profile', 'Share manager', 'Bookmarks', 'Saved searches', and 'Logout'. The main content area displays a poster titled 'What are the actual effects of Enterprise 2.0?' with sections for 'Origins of social software', 'Enterprise 2.0 Typology', 'Research methods', and 'Theoretic framework'. Below the poster, there is a list of related items with download links. The right sidebar contains a 'Description' section, an 'Advice for reuse' section, a 'Share details' section with 'Added By: Dr Leslie Carr', 'Added On: 16 Feb 2010 13:37', 'Creators: Leslie Carr, Catherine Pope', 'Tags: Web science', 'Viewing permissions: World', 'Link: http://www.edshare.soton.ac.uk/4790/', and 'Downloads:'. At the bottom of the sidebar is a 'Toolbox' with options like 'Edit item', 'Bookmark this item', 'Download as zip', and 'Use as template'.



JISC Jorum (full LOM) & JorumOpen (lightweight OA approach, DSpace)

# Open Scientific Data

**eCrystals**  
 Home | About | Browse by Year | Browse by People | Login | Create Account  
 University of Southampton

(6-Thien-2-ylpyrid-3-yl)methanol

Sample Originator: Donated Sample<sup>a</sup>  
 Data Collection: Susanne L. Huth<sup>b</sup> and Michael B. Hursthouse<sup>b</sup>  
 Structure Determination: Susanne L. Huth<sup>b</sup>  
 Sample kindly provided by Maybridge<sup>a</sup>  
 University of Southampton<sup>b</sup>

C<sub>10</sub>H<sub>9</sub>NOS  
 InChI=1/C10H9NOS/c12-7-8-3-4-9(11-6-8)10-2-1-5-13-10/h1-6,12H,7H2

Identification Number: 10.3737/ecrystals.chem.soton.ac.uk/373  
 Date Created: 09 July 2007  
 Deposited On: 31 Jan 2008 13:08  
 Deposited By: Ms L.S. Huth

Available Files

File Name	Size
<a href="#">2007may0014.cif</a>	11k
<a href="#">2007may0014.cml</a>	3k
<a href="#">2007may0014.fcf</a>	99k

Validation

<a href="#">2007may0014_checkcif.htm</a>	8k
--	----

Refinement

<a href="#">2007may0014.res</a>	4k
<a href="#">2007may0014_xl.lst</a>	30k

Depositor Comments  
 More information about this compound can be found at:  
<http://www.maybridge.com/>

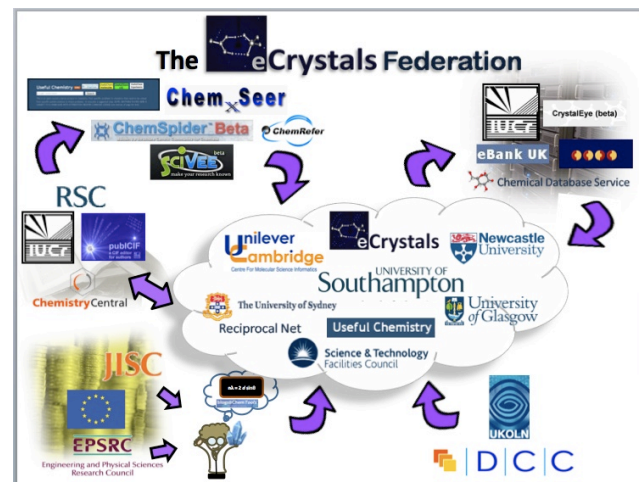
Data collection parameters

Chemical formula	C10 H9 N O S
Crystallisation Solvent	
Crystal morphology	Needle
Crystal system	Orthorhombic

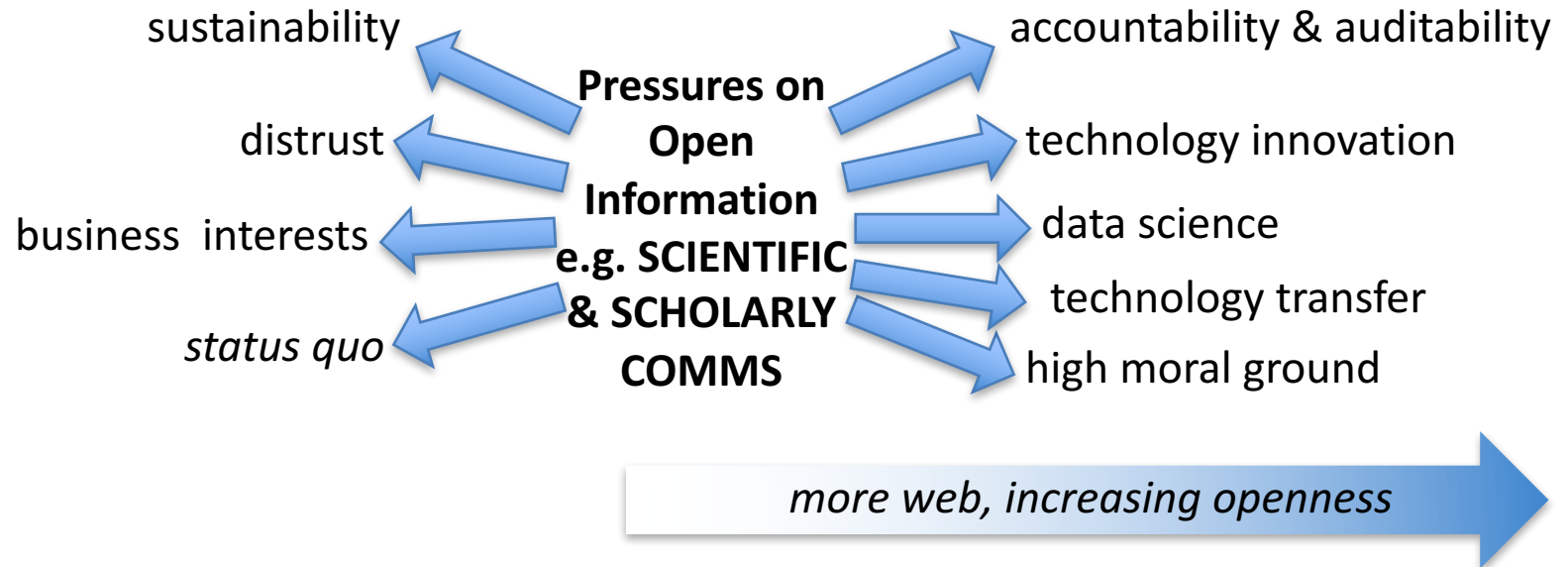
A repository of chemical data JISC EBank project (2003)

Scientific, not bibliographic, metadata.

Run by the UK Crystallographic Service and latterly an international consortium.



# Future Directions



- Open Access, Open Data, Open Educational Resources
  - Web Technologies, Digital Economy
- vs the established economic model for ensuring continuity of information production
  - trading of privately held information through subscription products such as journals or magazines

Comment & Analysis  
 UEA appeared to support a culture of "resisting disclosure of information to climate change sceptics".  
 The committee chairman, Phil Willis, described this as "reprehensible".  
 Climate science must be transparent and irreproachable, the committee said.

# Climategate

- Climate Research Unit at UEA refused to provide research data upon which its publications had been based

Michael M  
 Rita  
 ces  
 OW

## Climate science must be more open, say MPs

By Roger Harrabin  
 Environment analyst, BBC News

**MPs investigating the climate change row at the UK's University of East Anglia (UEA) have demanded greater transparency from climate scientists.**

The Commons Science and Technology Committee criticised UEA authorities for failing to respond to requests for data from climate change sceptics.



31 March 2010

Roger Harrabin  
 Environment analyst,  
 BBC News

**"It is not standard practice in climate science to publish the raw data and the computer code in academic papers," its report said.**

**"We consider that climate scientists should take steps to make available all the data that support their work, including raw data... and full methodological workings, including the computer codes."**

**"When the prices to pay are so large, the knowledge on which these kinds of decisions are taken had better be right," the report stated.**

# G8 Open Data Charter (June 2013)

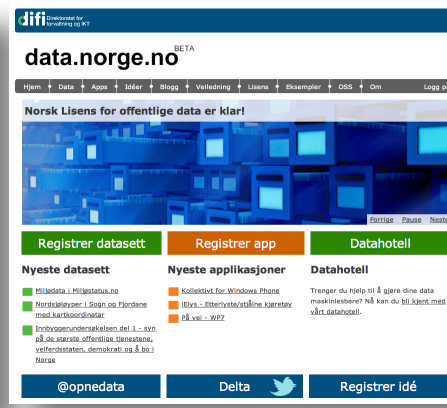
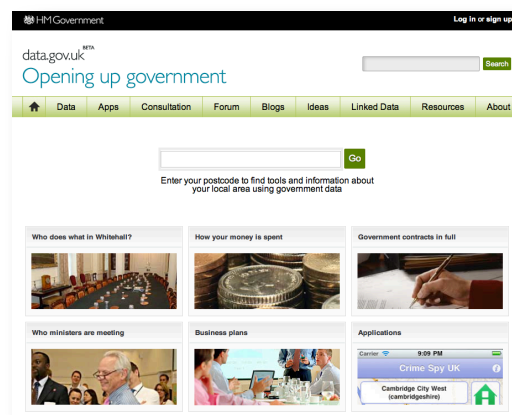
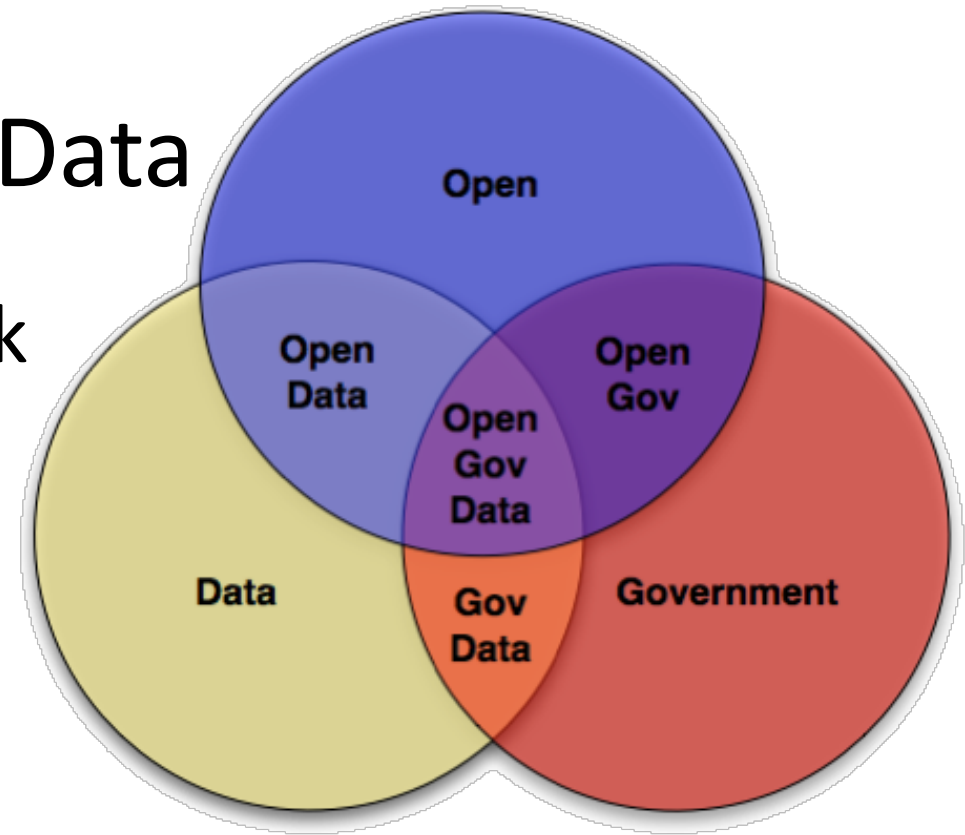
- The world is witnessing the growth of a global movement facilitated by technology and social media and fuelled by information – one that contains enormous potential to create more accountable, efficient, responsive, and effective governments and businesses, and to spur economic growth.

*Open data sit at the heart of this global movement.*

<https://www.gov.uk/government/publications/open-data-charter/g8-open-data-charter-and-technical-annex>

# Open Government Data

- Same principles work on the government
  - Transparency
  - Openness
  - Innovation
  - Enabling new value & new businesses



# data.gov.uk (8,300 data sets)

data.gov.uk<sup>BETA</sup>  
Opening up government

Search

Data Apps Consultation Forum Blogs Ideas Linked Data Resources About

## FCO Travel Advice

Posted by Foreign and Commonwealth Office on 17/02/2011 | 2 comments | ★★★★★

Foreign & Commonwealth Office (FCO) travel advice for you to re-use in your own applications, widgets and content. Designed by Directgov Innovate for developers or content aggregators to build feeds of travel advice, get embassy contact information and FCO travel news through a RESTful, content-negotiated interface. Any development platform with an HTTP stack or any widget generator that takes an ATOM feed will be able to use the content.

- Overview
- Resources (download)

Download FCO Travel Advice

Details

Contact information

Comments (2) [Add new comment](#)

**How ?**  
Tue, 08/03/2011 - 12:24 — Anonymous  
How would I integrate this into my travel insurance site?  
Thanks in advance  
[reply](#)

**Take a look at what how I**  
Tue, 15/03/2011 - 20:47 — michaelg  
Take a look at what how I have used the data here  
<http://www.ebusinessconsultant.co.uk/foreign-travel-advice/>

Share this

### Related apps

**Travel Tools Dashboa...**  
by Andy Wrigley | ★★★★★  
A Travel Dashboard providing a huge range of tools for independent and business...

**Travel Information b...**  
by Andrew Wrigley | ★★★★★  
A widget for travel websites, providing the latest Travel Advice by Country from drop down...

Bespoke apps produced by independent developers for government data

data.gov.uk<sup>BETA</sup>  
Opening up government

Home Data Apps Consultation Forum Blogs Ideas

## A planning app map that can be applied to any council area

Posted by Michael MacLeod on 29/02/2012 | 2 comments | ★★★★★

I worked with a developer last year at a ScaperWiki hacks & hackers day in Glasgow to create a planning app map. I'm a hack, by the way, not a hacker. I wish I could code. However, it worked very well considering we only had a day. The two-person team of myself and Robert McWilliam were overall winners in the #hhglas contest, much to our surprise. All we wanted to do was build something useful in which your average punter could bash in their postcode and see a map containing the active plans in their area. Amazingly, most council sites don't have this option.

Then, within a few weeks a local environmental charity used our map and the data to create an RSS feed which in turn triggered a Twitter account, tweeting the details of every new application as it went in. People seemed to love it. And I found it very useful as a journalist.

Unfortunately the council (Edinburgh) moved over to a new site, so our scraper no longer works.

I'm very keen to resurrect all of this but I'm not sure where to start. There's a good version of the idea in Australia: <http://www.planningalerts.org.au/> and we have a pretty useful, if slightly anonymous, version here in the UK: <http://www.planningfinder.co.uk/>

But neither of those are ideal. I'd like users to be able to choose from: - postcode search Or a drop down menu with: - constituency name - colour status, ie green for approved, yellow for pending and red for declined.

Even better would be the option to allow people to comment on the plans they discover, which could then be forwarded to the council. This has been done on the Australian version of Planning Alerts. It's a fantastic example of what can be done and makes civic engagement much easier. Details here: [PlanningAlerts closes the loop](#). What I'm seeking is some guidance, someone to point me in the right direction. I see ScaperWiki can now build custom apps at a cost dependent on the amount of work involved. Personally I think public data should be much more accessible, at no cost to those who want to make it so.

I hope someone can help.

Michael

Tagged: [data](#) [local councils](#) [planning](#)

Comments (2) [Add new comment](#)

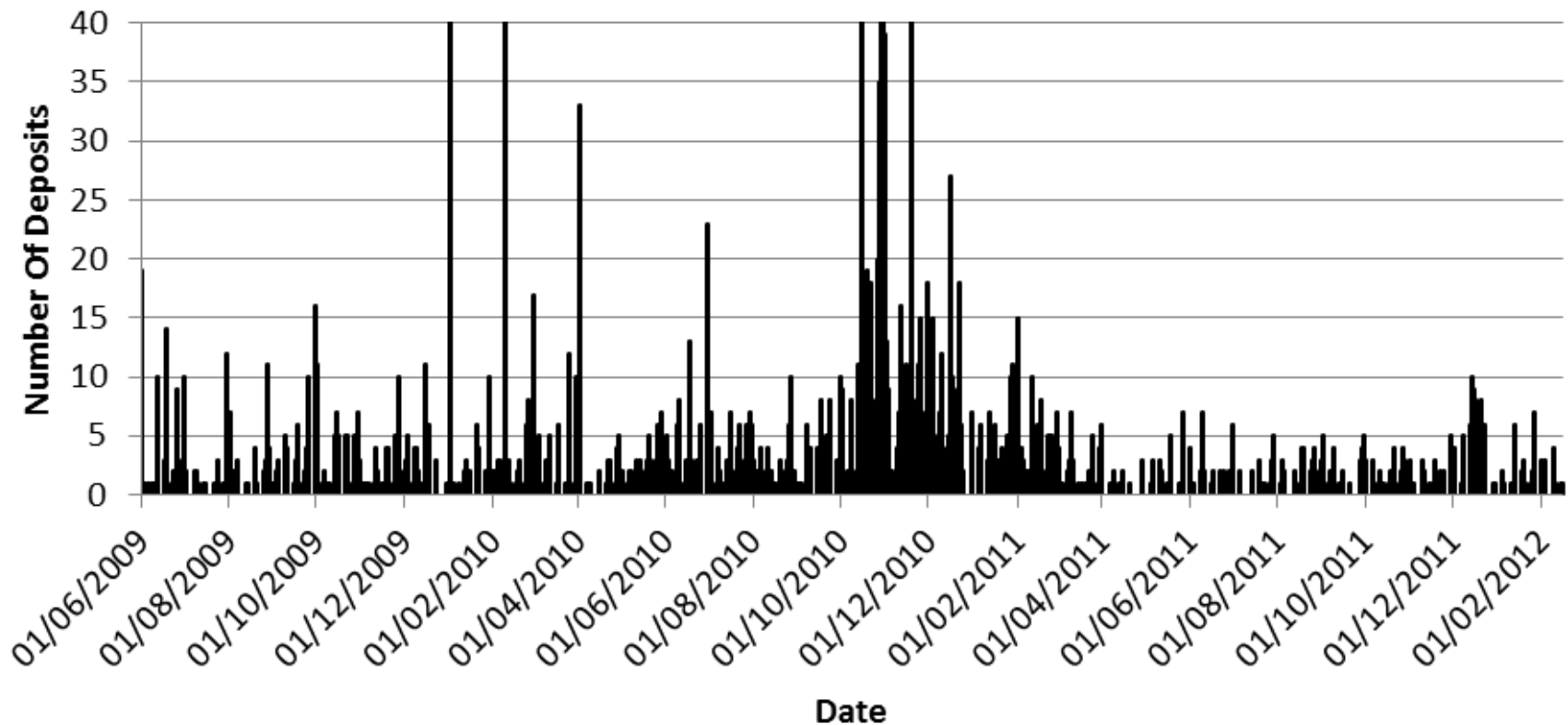
**Planning map**  
Tue, 17/04/2012 - 13:43 — Andrew Speakman (not verified)  
Michael  
I've developed a prototype service on Scaperwiki which does what you want.  
Here's an example which shows planning applications based around an Edinburgh post code. It returns results both from Edinburgh and Midlothian councils.

Shared ideas: Michael built a 'planning proposals' web app. Some turned it into an RSS feed. Someone else turned that into a Twitter feed. Someone else used scraperwiki...

# Data.gov.uk - What's Available

- Over 8,300 datasets now
- Frequent deposit activity of medium sized dataset deposits
- Signs of a healthy data catalogue

## Dataset Deposits made in Data.gov.uk

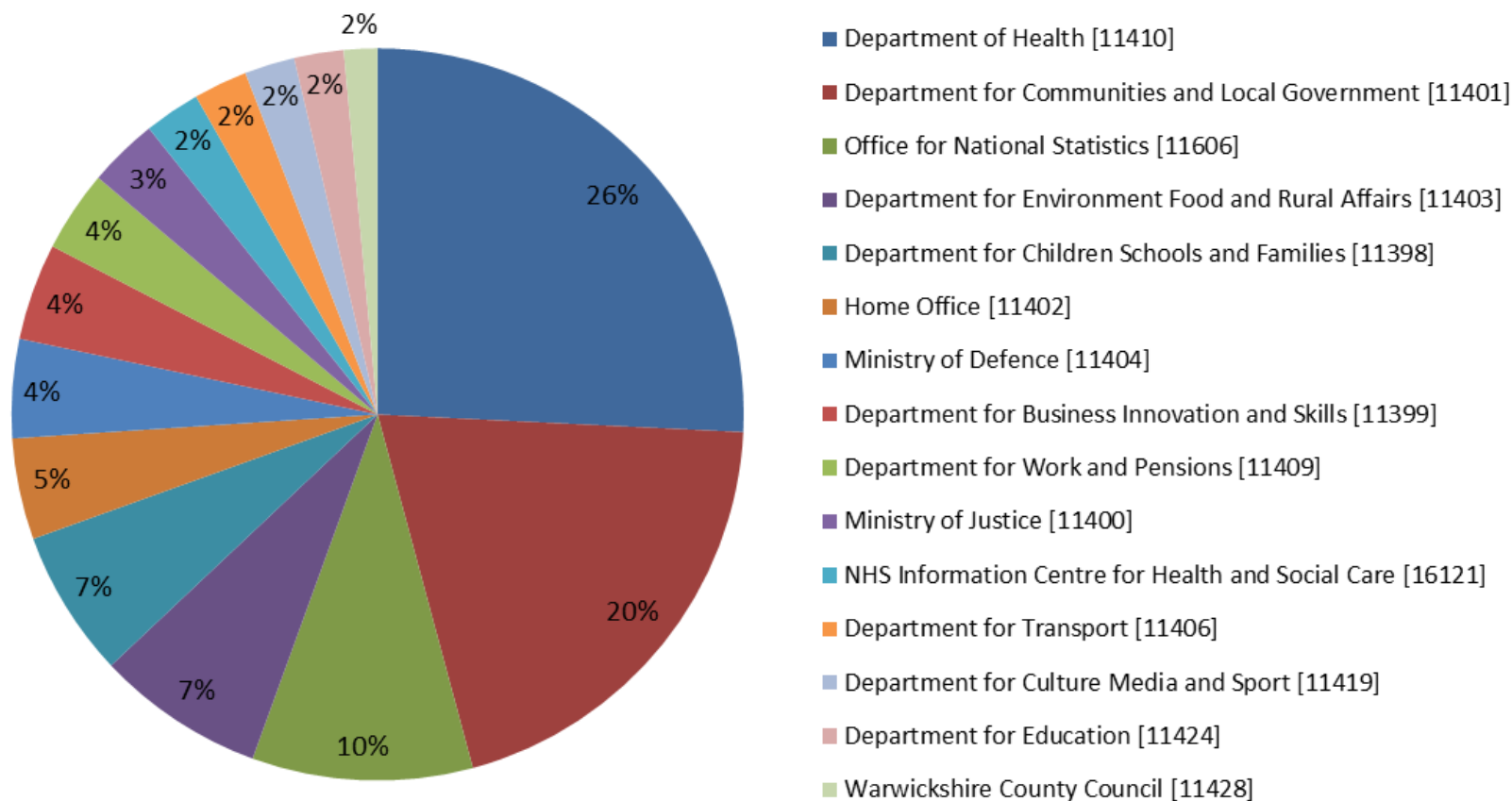




# Data.gov.uk - Who's Publishing It

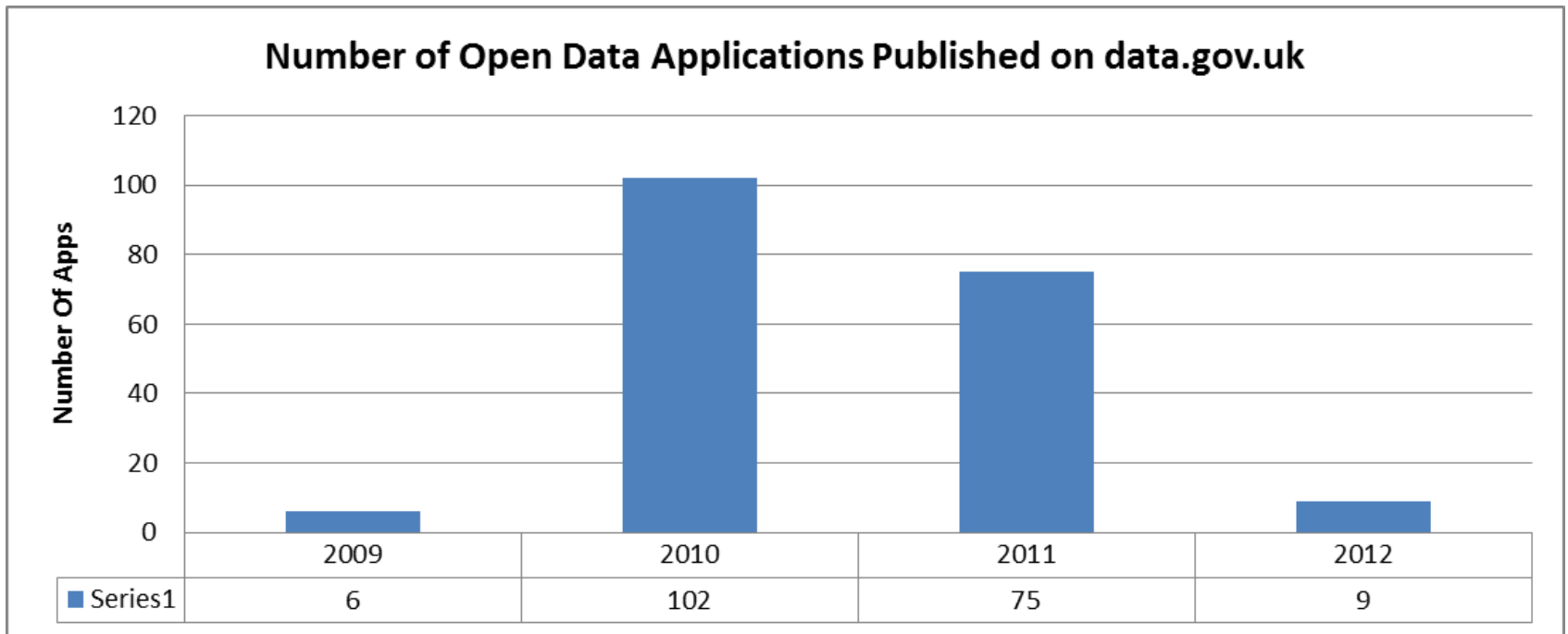
- 406 departments supplying data
- These include national Government departments, local government, and local council

## Departments Depositing >1% of Total Datasets in data.gov.uk



# Data.gov.uk - Who's Using It

- 197 Applications available on Data.gov.uk
- Ranging over multiple topics of interest
  - Transparency Apps
  - Transport Apps
  - Public Health Apps



# Institutional Open Data

## Open Data Service

Open Data Homepage

5★ Data

Frequently Asked Questions

Apps

Data Catalogue

Places

Phonebook

Academic Programmes

Organisation

Jargon

Points of Service

Products & Services

Bus Routes

SPARQL Endpoint

Feedback

Suggestions

Report a Problem

Register an App

University of Southampton > Open Data > Datasets

 Share

## Datasets

Here is a list of datasets we currently have available. At this subject to alteration because we are learning as we go. If you going to rely on the data, please [let us know](#).

- [Apps using our data](#)
- [Buildings and Places](#)
- [Catering](#)
- [Common Learning Spaces Extra Information](#)
- [EPrints Repository](#)
- [EdShare](#)
- [EdShare Video](#)
- [Electronics and Computer Science EPrints Repository](#)
- [Events Diary](#)
- [International Links](#)
- [International Links DBpedia Data](#)
- [JACS Codes](#)
- [Links to DisabledGo Access Information](#)
- [Local Amenities](#)
- [Open Data Catalog](#)
- [Open Days July 2011](#)
- [Organisation](#)
- [Payments 2010-11 to 2011-01](#)
- [Photographs of University of Southampton Things](#)

```
@base <http://id.southampton.ac.uk> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .

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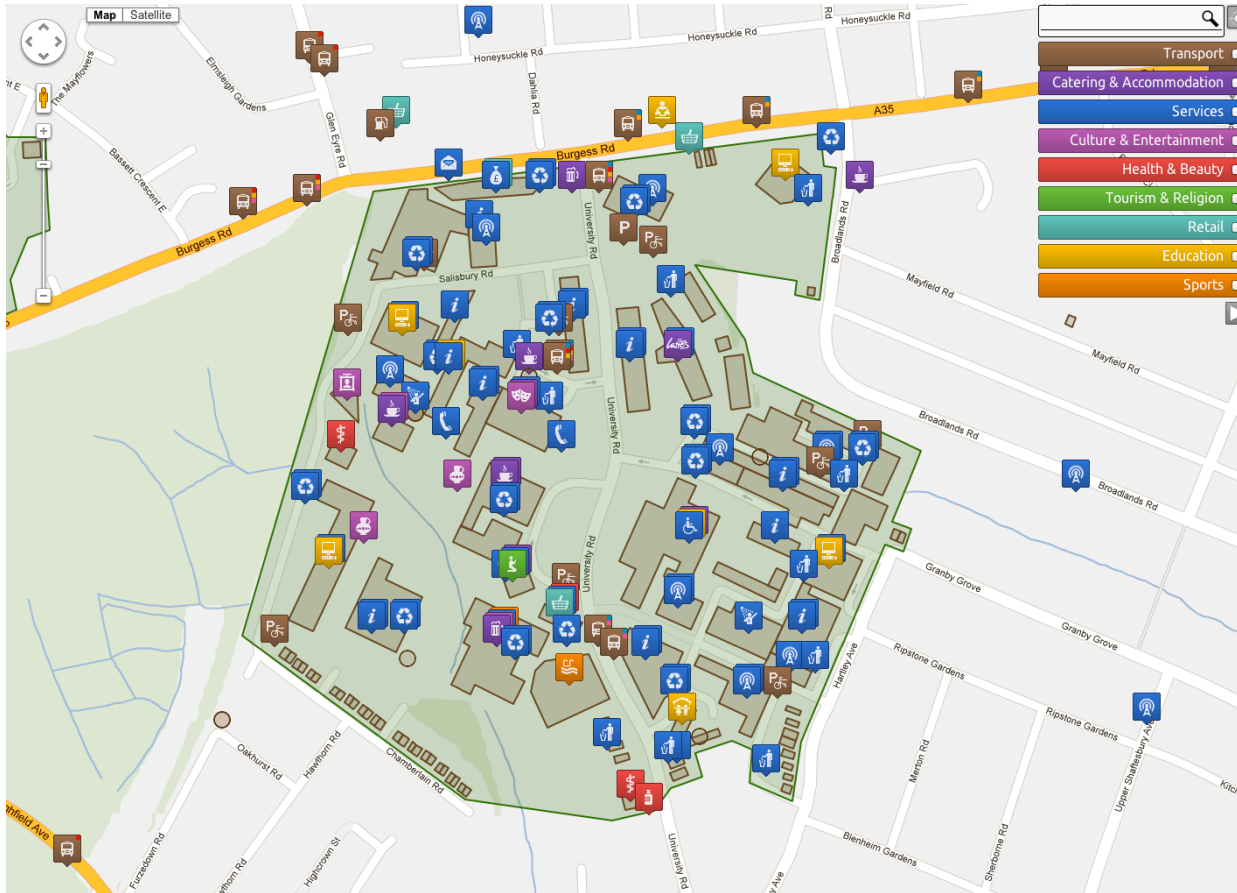
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[data.southampton.ac.uk](http://data.southampton.ac.uk)

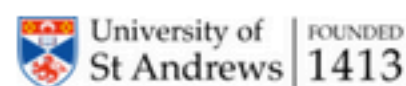
# Institutional Apps



Application created by 4 students using the following datasets:

- Buildings and Places
- Catering
- Local Amenities
- Southampton bus-routes
- Southampton Bus-stops
- Teaching Room Features
- Ordnance Survey Data

# equipment.data .ac.uk



# Why Do It?

- Motivations
  - Making useful services, easier
- Benefits
  - Building location, entrances, bus timetables
    - Mash up to find out quickest route between lectures
    - First bus after end of lecture to favourite bar
  - Menu availability
  - Expensive equipment sharing

# Evaluating Results

- Impact
  - Is the company actually having any impact with its use of open data? Is the impact likely to be long term, sustainable and difficult to replace?
  - How can this be assessed?
    - ROI is used by projects such as ODINE
    - SROI (social return on investment)
    - Most impact projects (eg the GovLab) focus on narrative reports.
- Integrality
  - Is open data at the core of the product or service?
  - Or is it a 'nice to have'?
  - Level of integration into the company strategy and who is responsible
- Innovation
  - On a number of dimensions - technological, social, financial.
  - How is the open data used and how is this new or different?
  - What kind of problem/customer need does this solve? If the problem is a more socially-based one, how does open data make this more sustainable?
    - This is a challenging area as there is limited understanding of how innovation actually occurs through open data activities, and in July 2016 NESTA published a report that stated there was surprisingly little innovation taking place using open data in the UK (Rubenstein, Cowl and Cath 2016).

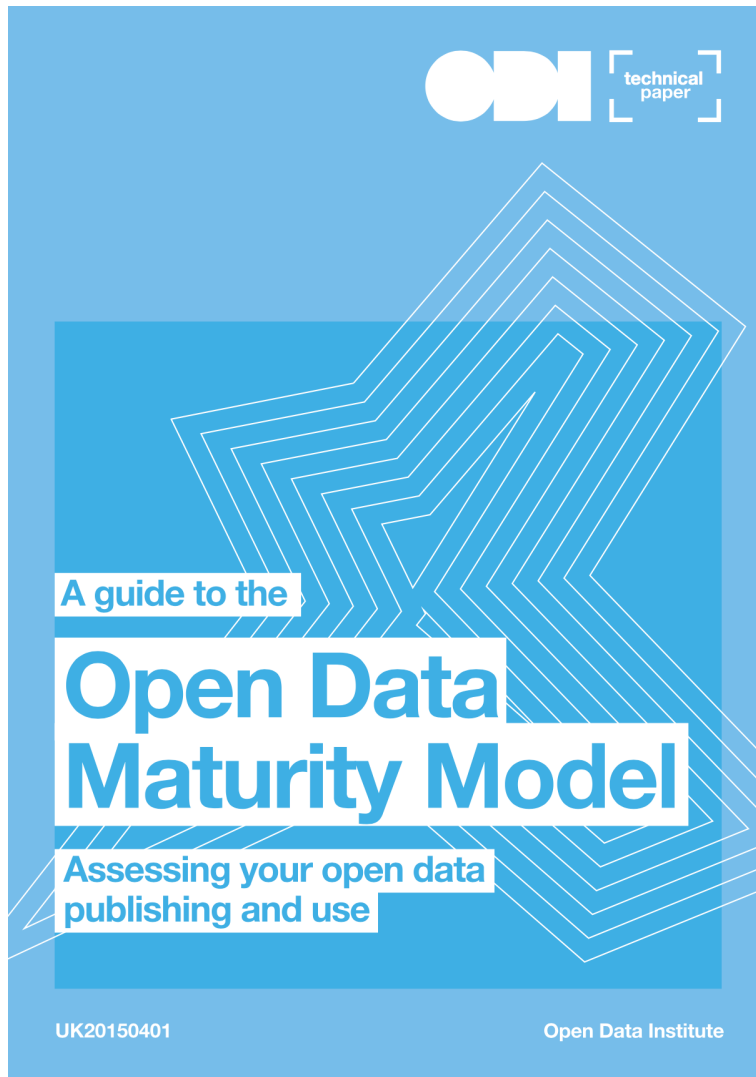
# Example: London Data Strategy

- The city data economy will be based on simplicity and alignment for data stakeholders.
  - The city data economy needs to be made less fragmented and complex for data creators (London's public services, utilities, private sector, citizens).
  - This will be achieved through promoting technical advances in data sharing, harmonisation, interoperability and open standards, as well as tackling head on issues on pressing policy issues such as data privacy and security.
- A clear 'City Data Market' sharing culture will be promoted within both the public and private sector. This will transform current data management practices and develop a philosophy that emphasises the exploitation of city data across the whole range of city policy settings and activities.
- Data infrastructure will be co-ordinated and joined-up to facilitate deep knowledge discovery, and the creation of new valuable integrated services. The exploitation of rich, interoperable and engaging cross-domain city data is key to this.
- Non-technological elements and technical domains will have equal status. Business models, value networks, feedback loops, a data marketplace, data toolsets, clear licensing arrangements, and more efficient data governance, are all vital building blocks of a functioning city data economy.

<https://data.london.gov.uk/dataset/data-for-london-a-city-data-strategy/resource/e0f80405-09da-4aba-bfc7-56535b7e2982#>



# Example: Open Data Maturity Model



- Data management processes
  - identifies the key business processes that underpin data management and publication including quality control, publication work flows, and adoption of technical standards.
- Knowledge & skills
  - highlights the steps required to create a culture of open data within an organisation by identifying the knowledge sharing, training and learning required to embed an understanding of the benefits of open data.
- Customer support & engagement
  - addresses the need for an organisation to engage with both their data sources and their data reusers to provide sufficient support and feedback to make open data successful.
- Investment & financial performance
  - covers the need for organisations to have insight into the value of their datasets and the appropriate budgetary and financial oversight required to support their publication. In terms of data consumption, organisations will need to understand the costs and value associated with their reuse of third-party datasets.
- Strategic oversight
  - highlights the need for an organisation to have a clear strategy around data sharing and reuse, and an identified leadership with responsibility and capacity to deliver that strategy.

# How Does Open Data Work?

- Make catalogue of all the things **you** know
- Give each thing a permanent web name (URL)

Publish information about that thing on the Web with an open license (PDF)



Use a machine readable format (XLS)



Use a standard data format (CSV)



Use an web linked data format (RDF)



Link *other* data entities!



- See <http://5stardata.info/>