

The Obelisk (2012), Fabio Lattanzi Antinori
ODI Commission "Data as Culture"



welcome

Open Data in Practice

catalyse the evolution of open data culture

to create economic, environmental, and social value



Slides by David Tarrant

Schedule

Monday: Discovering Open Data

Tuesday: Publishing and Managing Open Data

Wednesday: Consuming and Understanding Data

Thursday: Business of Open Data

Friday: Open Data in Practise Hackathon



Question 1

What is Open Data?





*A piece of data or content is open if **anyone** is
free to use, reuse, and redistribute it –
subject only, at most, to the requirement to
attribute and/or share-alike.*



Slides by David Tarrant

Theodi.org

Open data is information that is **available** for
anyone to **use**, for **any purpose**, at no cost.



Slides by David Tarrant

opendefinition.org

Unrestricting License
Non-Discriminatory
Integrity
Attribution
Reuse
Redistribution
Access



Slides by David Tarrant



 <http://opendefinition.org/okd>

Question 2

What are the positives and
negatives of open data for ...

- Businesses
- Government
- Society
- You



Question 3

What key examples are there of
the benefits of open data to...

- Businesses
- Government
- Society
- You





Slides by David Tarrant



Bus Stops

300,000

bus stops' data made available

18,000 corrected by Open
Street Map community

Assuming each stop takes 4 minutes to correct. This equates to ~3 years worth of effort.

* Based upon 8 hours a day and 232 working days in a year.



Slides by David Tarrant

Open Data and Transport

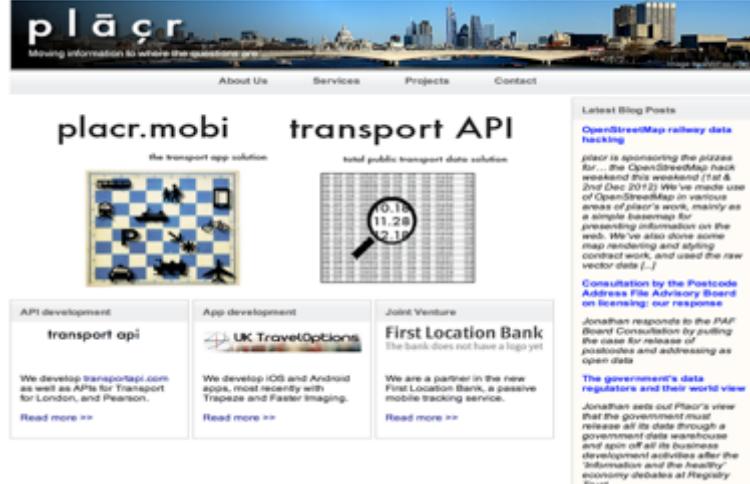
current time between trains: 2.1 mins.
normal:3.1 mins

Southbound - Platform 2

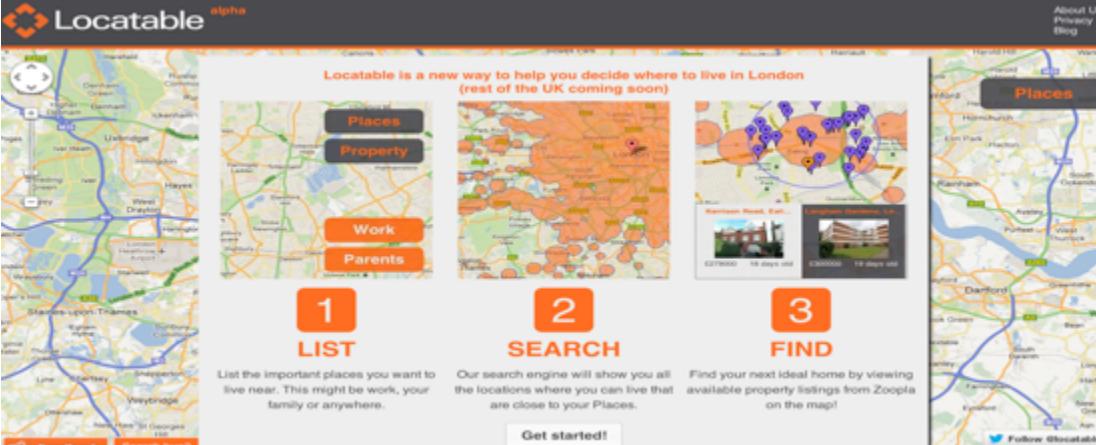
Bakerloo

Normal performance

current time between trains: 2.2 mins.
normal:2.2 mins



The screenshot shows the placr.mobi transport API website. At the top, there's a banner with a city skyline and the text "Moving information to where the passengers are". Below the banner are links for "About Us", "Services", "Projects", and "Contact". On the left, there's a sidebar titled "Latest Blog Posts" with a link to "OpenStreetMap railway data". The main content area features two large images: one showing a map with various transport icons and another showing a grid with a search icon and numbers like 10.16, 11.28, and 2.1. Below these are three boxes: "API development transport api", "App development UK TravelOptions", and "Joint Venture First Location Bank". Each box contains a brief description and a "Read more" link.



The screenshot shows the Locatable alpha website. The header features the "Locatable" logo and "alpha" text. Below the header is a map of London with several locations marked. To the right of the map are three numbered steps: 1. LIST, 2. SEARCH, and 3. FIND. Step 1 has a "Places" button. Step 2 has "Property", "Work", and "Parents" buttons. Step 3 shows two property listings: "Harrison Road, E8" and "Loughborough Grove, N1". Below the steps, there's a "Get started!" button. The footer includes a "Feedback" button, a "Search bug?" button, and social media links for Twitter and Facebook. It also features a "Follow @LocatableUK" button and a "Follow @LocatableUK" link.



Slides by David Tarrant

Open Data and Governance

WELCOME TO CONTRACTS FINDER
CONTRACTS FINDER CAN DO MORE THAN EVER.

- We have improved the search facility to include pipeline notices and subcontracting opportunities from larger suppliers.
- With the changes we have made, now might be a good time to think about how you use the service. Do your saved searches need refreshing? Are you subscribed to the right email alerts?
- Please explore the site to ensure that you are getting the best from it.

FIND LIVE OPPORTUNITIES
Enter keywords here
within miles of United Kingdom
Advanced search - search by CPV or by Buyer

SEE WHAT IS BEING BOUGHT BY GOVERNMENT
Enter keywords here
Documentation for all procurements valued at over £10,000 is stored on Contracts Finder for public viewing as part of government's transparency commitment.
Advanced search... search by CPV, by buyer or by awarded supplier
Search >

SEE WHAT'S IN THE PIPELINE
Contracts Finder now has details of the DATA FEED AVAILABLE
You can download summary information

spotlightonspend

Powered by Spikes Cavell

Home About Tools & Utilities

Winchester City Council

Buying Entity Spend Carbon

Spend by Category (Annual) Spend by Category (Monthly)

Overview Construction Construction Buildings

| Name | Spend | Percent |
|---------------------------------------|----------|---------|
| Correct Contract Services Ltd | £443,297 | 47.47% |
| Bartram Building Maintenance Services | £292,277 | 31.30% |
| S & J Building Services | £63,211 | 6.76% |
| Star Mechanical & Electrical Services | £42,268 | 4.52% |
| Nationwide Maintenance | £34,420 | 3.68% |
| Corrigenda Ltd | £26,605 | 2.84% |
| Avenue Building Services Ltd | £21,278 | 2.27% |
| Hudson, Dick and Associates | £10,386 | 1.11% |

Data Comparison

Select a year and buying entity of the same type

Select a year

Latest Year

Select an entity

Go

Total Spend

Winchester City Council

£933,742

opencorporates The Open Database Of The Corporate World

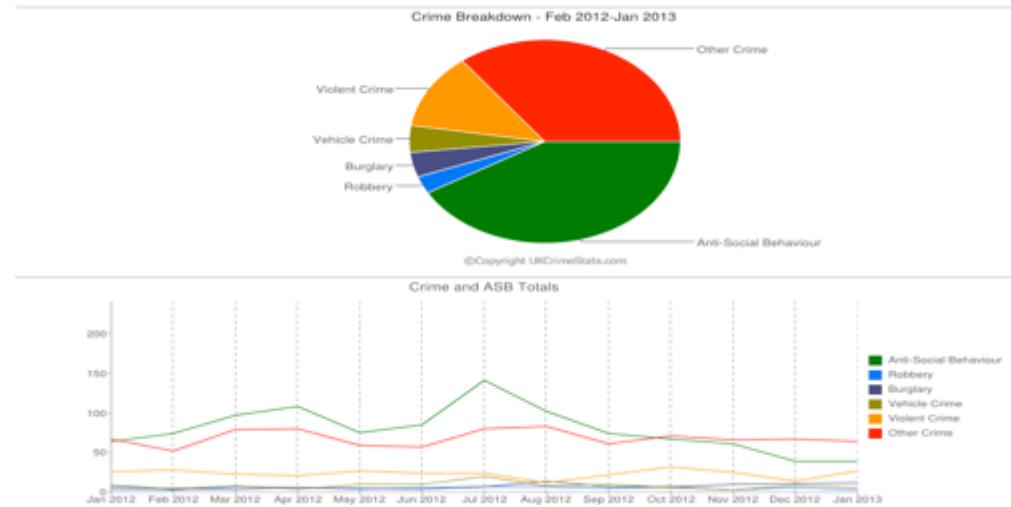
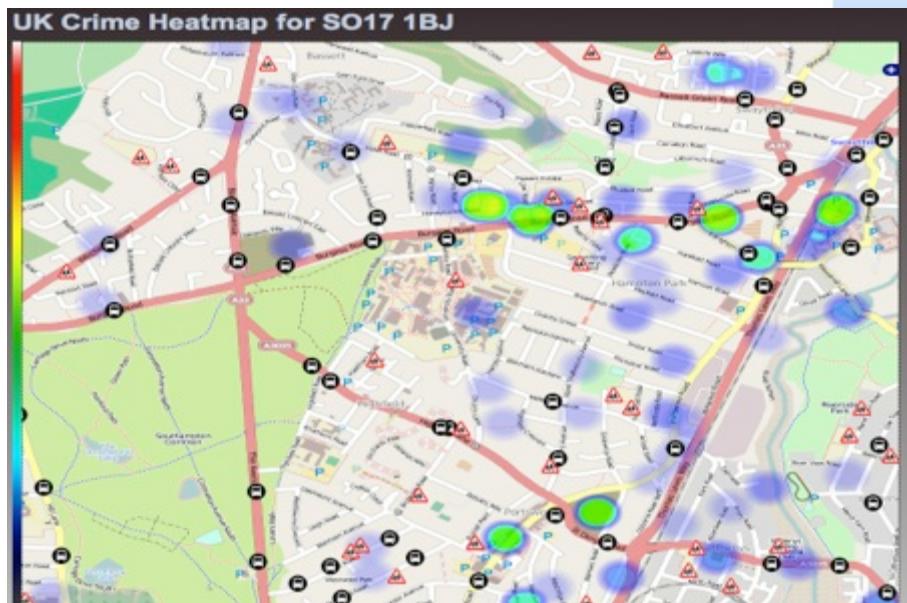
We have information on **49,335,199** companies

Filter by jurisdiction

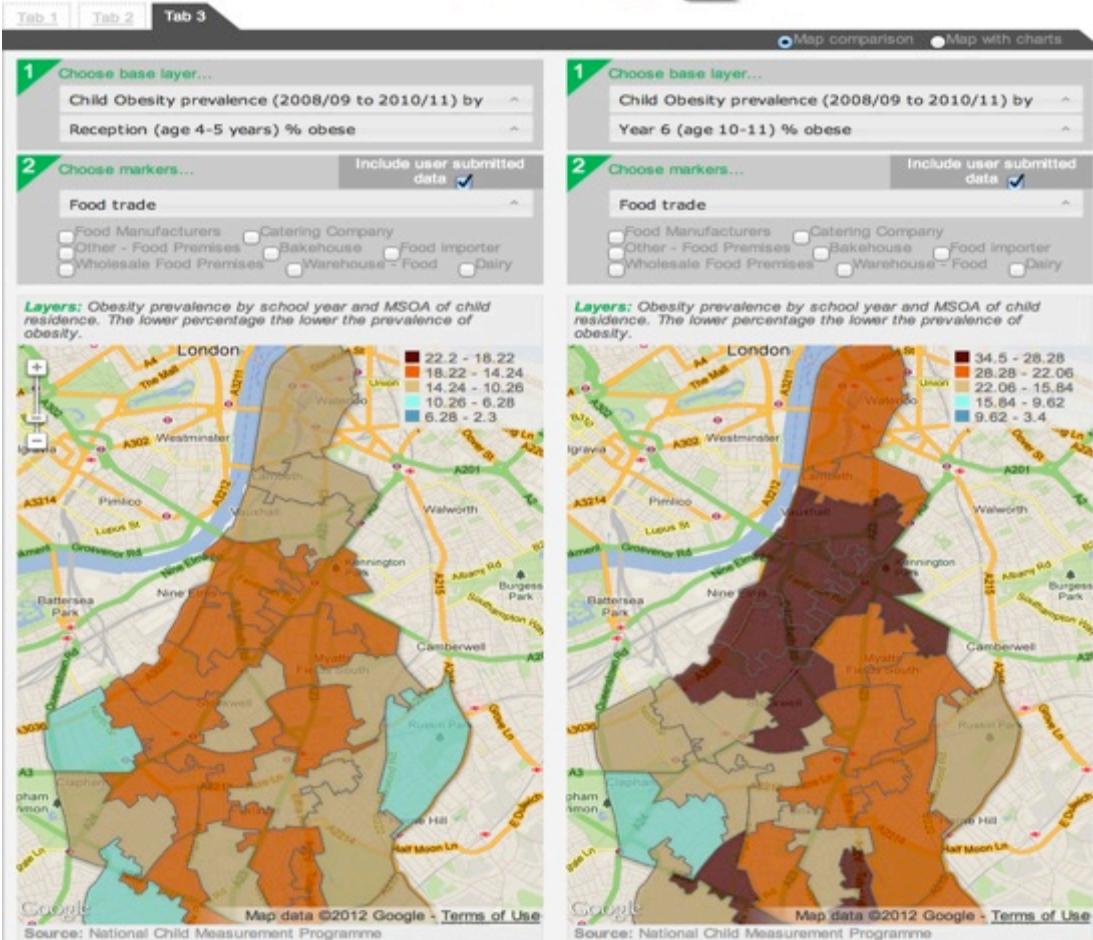
| | |
|-----------|---------------------------|
| 105,913 | Alaska (US) |
| 39,417 | Albania |
| 74,670 | Arizona (US) |
| 44,065 | Aruba |
| 30,629 | Barbados |
| 44,953 | Bermuda |
| 8,617,333 | California (US) |
| 627,111 | Canada |
| 656,481 | Connecticut (US) |
| 176,182 | Croatia |
| 920,749 | District of Columbia (US) |
| 377,144 | Finland |
| 5,640,076 | Florida (US) |
| 1,679,958 | Georgia (US) |
| 104,858 | Gibraltar |

Just released: OpenCorporates API
Reuse our data for free, or add a widget to your website. Read more

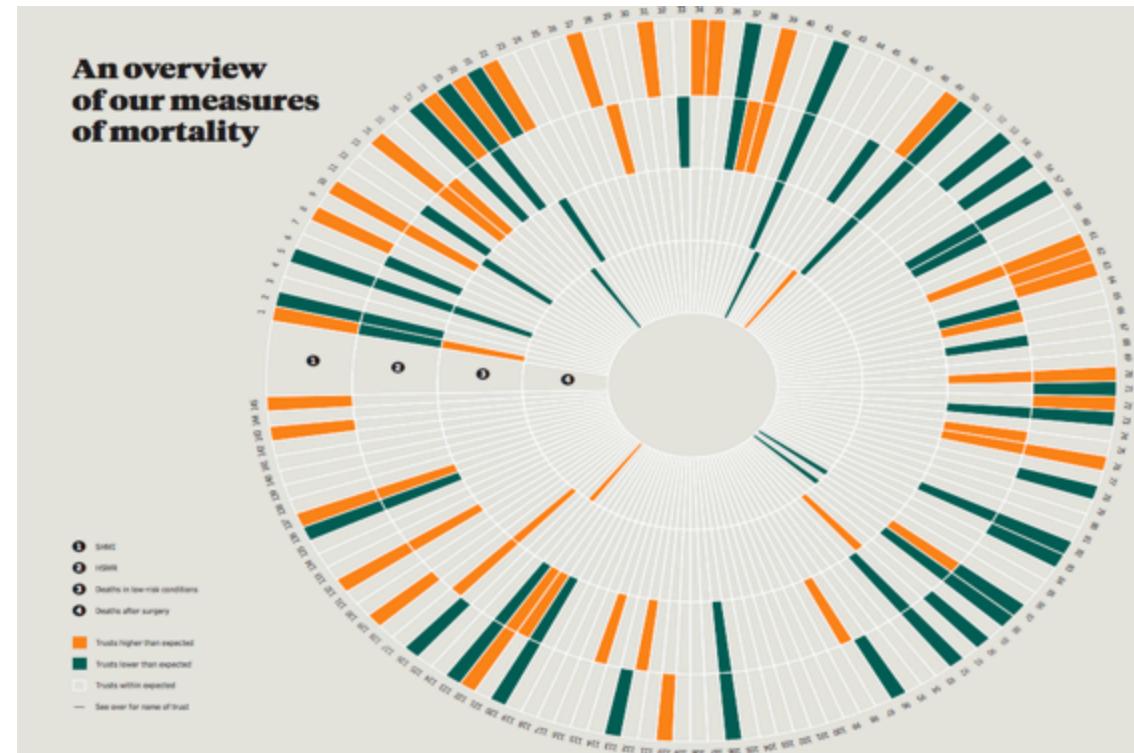
Use Google Refine to match companies in your data
Watch screencast, or read all about it



LAMBETH IN NUMBERS BETA

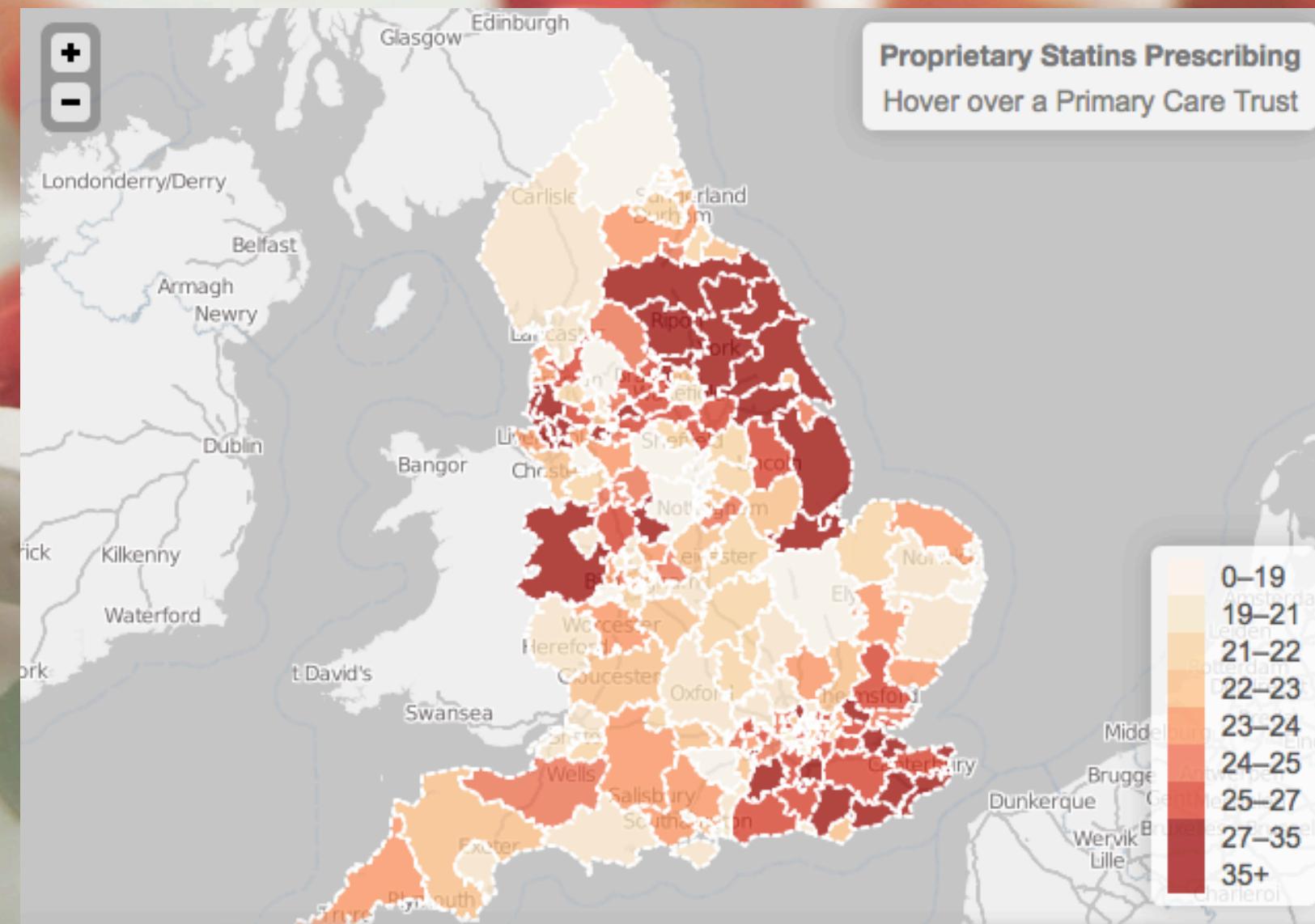


Map comparisons
Add my data
Forums
Account Settings





<http://PrescribingAnalytics.com>



Proprietary Statins Prescribing
Hover over a Primary Care Trust

Health

£300m
potential saving

Identified in 6
weeks

The Power of Open



View A Timeline Of Events »

- [Feb 9, 2008] Naivasha youth is organizing a peace...
- [Feb 3, 2008] Using sport as antidote to violence...
- [Feb 1, 2008] Reaching out to the Mungiki...
- [Jan 31, 2008] Roadblocks removed after peace effo...
- [Jan 27, 2008] Police quelling an uprising by you...
- [Jan 27, 2008] Killings in Naivasha...
- [Jan 27, 2008] Naivasha - house burned down with 2...
- [Jan 27, 2008] Violence in Naivasha...

Map Satellite Hybrid

Filter By Category

- ALL CATEGORIES
- RIOTS
- DEATHS
- PROPERTY LOSS
- GOVERNMENT FORCES
- CIVILIANS
- LOOTING
- RAPE
- PEACE EFFORTS
- INTERNAL DISPLACED PEOPLE

GO

Submit An Incident!

Submit Via SMS

Send your SMS to 6007 on
your phone
(Safaricom/Celtel)

Subscribe To Ushahidi News

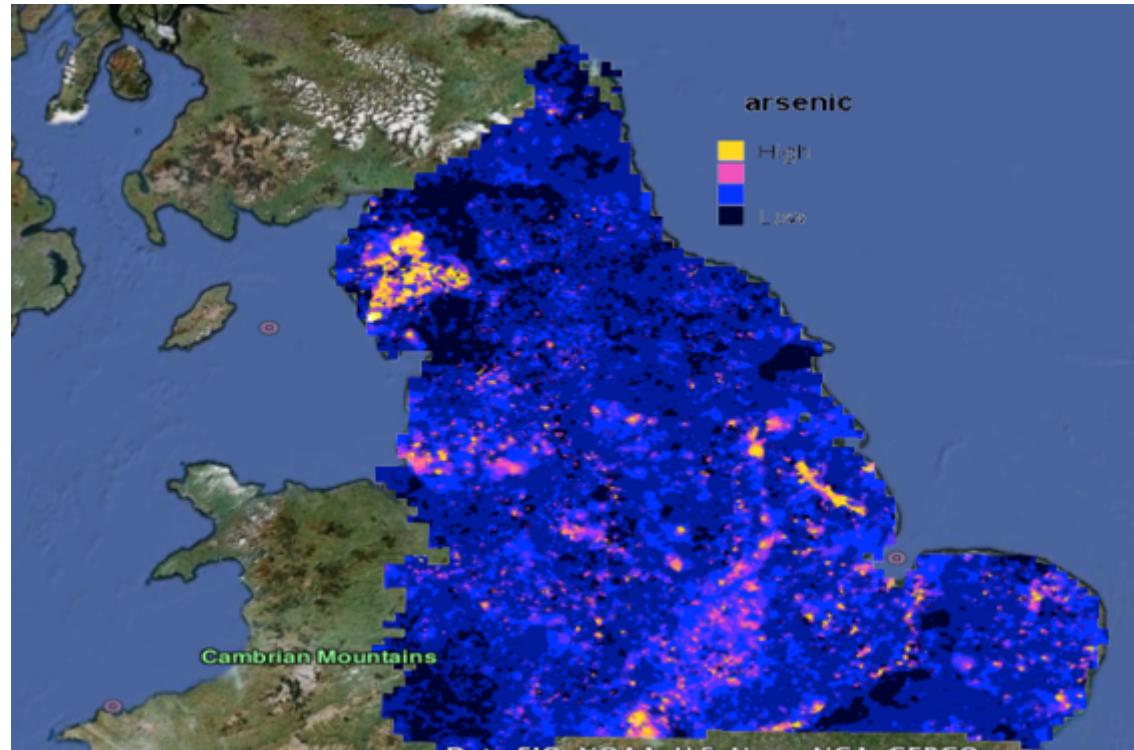
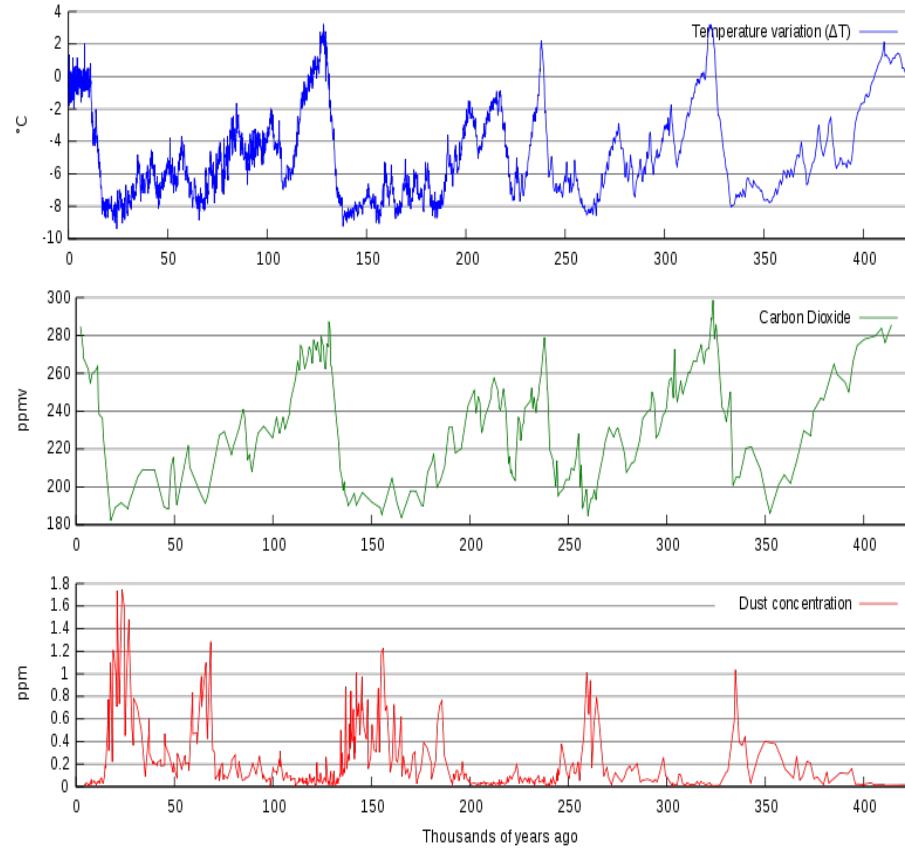
TAGS: ALL, Riots, Deaths, Property Damage, Government Forces, Civilians, Looting, Rape, Peace

| Incident | Location | Date | Description | Images |
|--|----------|-------------|--|--------|
| Anxiety increases in IDP Mathare Camps as supplies | Mathare | Apr 7, 2008 | Food and other essential supplies are fast dwindling in the camps for Internally Displaced | |



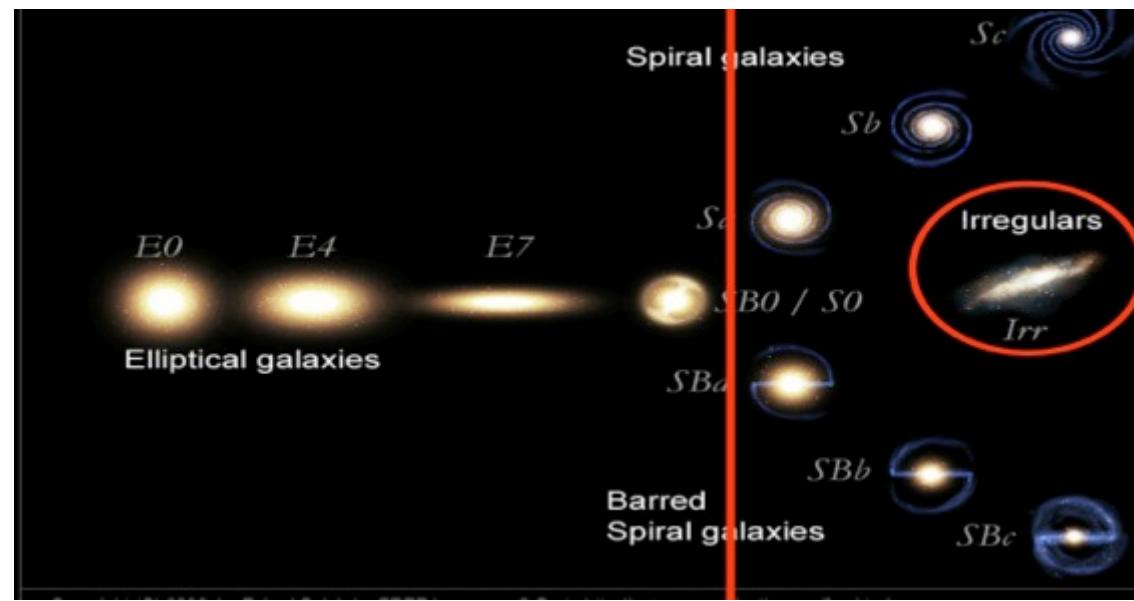
Slides by David Tarrant

Open Data and Science

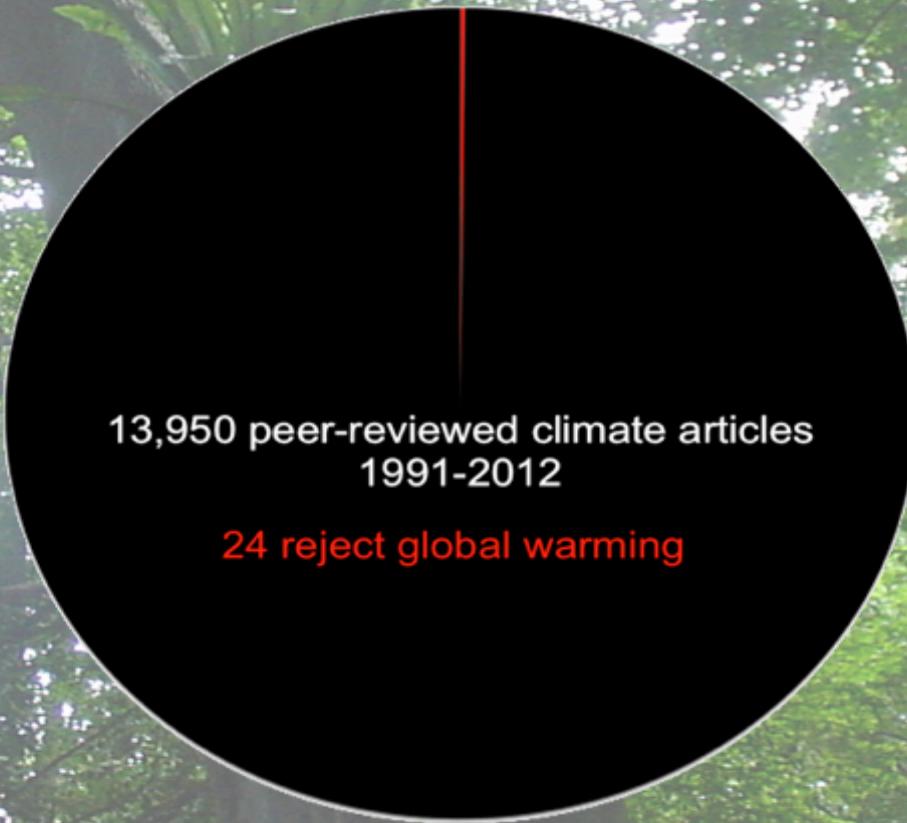


Slides by David Tarrant

Citizen Science



The Environment



<http://www.desmogblog.com/2012/11/15/why-climate-deniers-have-no-credibility-science-one-pie-chart>



Slides by David Tarrant

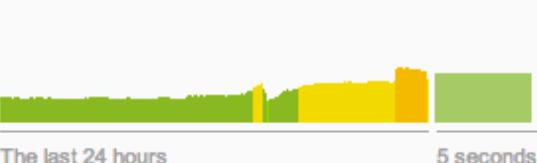
Carbon Culture



Department
for Environment
Food & Rural Affairs

Energy use at Nobel House

153 Kg CO₂ per hour



How we use energy

From midnight on 19 Mar to 16:15 on 25 Mar, Defra has used:

28,402kWh

Energy use

28,402kWh in Electricity

0kWh in Gas

Average 169kWh per hour

£2,447

Energy cost

£2,447 from Electricity

£0 from Gas

Average £14 per hour

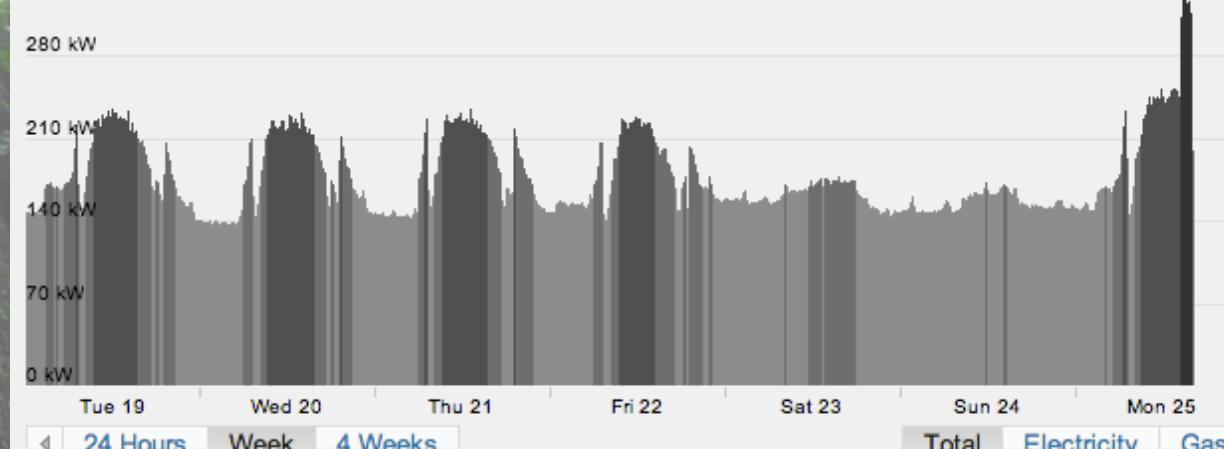
14,900kg

Carbon impact

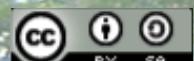
14,900kg for Electricity

0kg for Gas

Average 88kg per hour



<http://www.carbonculture.net/orgs/defra/>



Slides by David Tarrant

Trust

NEWS POLITICS

Home | World | UK | England | N. Ireland | Scotland | Wales | Business | Politics | Health | Education | Sci/Ec

31 March 2011 Last updated at 12:56

Share    

Former MP Jim Devine jailed for 16 months over expenses

Ex-Labour MP Jim Devine has been jailed for 16 months for fraudulently claiming £8,385 in expenses.

Devine was last month found guilty of using false invoices for cleaning and printing work.

The ex-MP for Livingston, 57, is the third current or former MP to be jailed for fiddling their expenses, but was the first to stand trial.

The judge, Mr Justice Saunders, said he "set about defrauding the public purse in a calculated and deliberate way".



Devine was the first MP to stand trial over his expenses

Related Stories



<http://www.telegraph.co.uk/news/newstopics/mps-expenses/>

Growth

140bn euro per year benefit in EU

Cutting transaction costs

More Jobs

More Consumers



Slides by David Tarrant



<http://epsiplatform.eu/content/review-psr-re-use-studies-published>

Procurement

Common vocabularies make common connections

Data enrichment through data sharing

Aircraft and spacecraft

ID: 34700000

ID with checksum: 34700000-4

URI: <http://purl.org/cpv/2008/code-34700000>

Scheme: CPV 2008

Data



Aircraft and spacecraft - RDF Turtle

CPV2008

UNIVERSITY OF
Southampton



Data Journalism Data Visualisers

Data summary

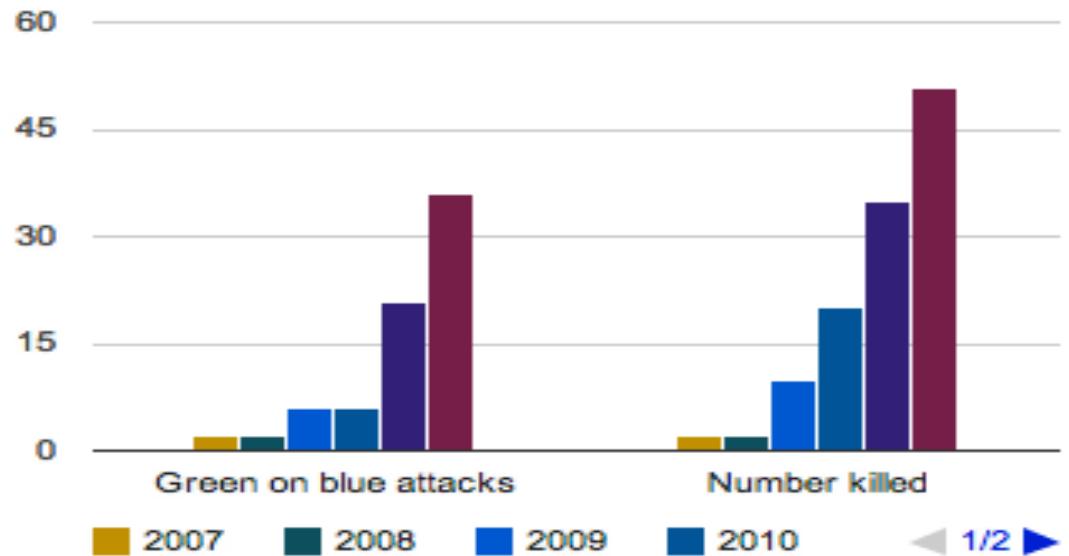
Total green on blue attacks by year

Click heading to sort table. [Download this data](#)

| Year | Green on blue attacks | Number kil |
|------|-----------------------|------------|
| 2007 | 2 | 2 |
| 2008 | 2 | 2 |
| 2009 | 6 | 10 |
| 2010 | 6 | 20 |
| 2011 | 21 | 35 |
| 2012 | 36 | 51 |

Source: Isaf

Green on blue attacks and deaths in Afghanistan



Open Data Managers

Jobs

Building: EEE Building

Site: Highfield Campus

Date of Construction: 2006

Architect: John McAslan & Partners

Occupants:

- Electronics & Computer Science
- Agents, Interactions & Complexity
- Web & Internet Science

Features: Building 32 is non-residential

Disability Information

- [View Disability Report for this Building](#)

Email

Bulk email lists may only be emailed by members of the university and in addition are moderated.

- building-32@all.soton.ac.uk

Points of Sale & Service

Bottle Vending Machine (Coke)

Offers: Caffeine, Soft Drinks.

Physical and Applied Science Faculty Deanery

Snack Vending Machine (Snakky Max)

Offers: Snacks.

Social and Human Sciences Faculty Deanery

<http://id.southampton.ac.uk/building/32> ← This is the URI

Upcoming Events

Tuesday 25th September

14:00 - [The use of Vibration in Microfluidics for Particle Handling and Sorting](#)

Teaching Locations

Generally these are lecture theatres, but this also includes any location used in the syllabus database. The feature codes are a little esoteric due to them having only been intended for internal office use.

32 / 1015 (Lecture Theatre)

Capacity: 426

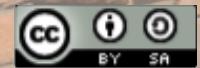
- RSC-BENCH PC
- RSC-DATA/VIDEO PROJECTION
- RSC-DISABLED ACCESS - AUDIENCE (A) Ground Floor Room Fully Accessible
- RSC-DISABLED ACCESS - AUDIENCE (B) Upper Floor Room Egress Standard LIF & Evac Management Plan
- RSC-DISABLED ACCESS - INSTRUCTOR (B) Upper Floor Room Egress Standard LIF & Evac Management Plan
- RSC-DVD
- RSC-INDUCTION LOOP (HEARING)
- RSC-LAPTOP/NETWORK CONNECTION
- RSC-MICROPHONE (VOICE ENHANCEMENT)
- RSC-NETS MOVEABLE (REQUIRES UNIVERSITY LOGIN)
- RSC-SEATS FIXED TIERED
- RSC-VIDEO CONFERENCING
- RSC-VISUALISER (VIDEO CHP)
- RSC-WIRELESS NETWORK



32 / 3077 (Seminar Room)

Capacity: 40

- RSC-BENCH PC
- RSC-DATA/VIDEO PROJECTION
- RSC-DISABLED ACCESS - AUDIENCE (B) Upper Floor Room Egress Standard LIF & Evac Management Plan
- RSC-DISABLED ACCESS - INSTRUCTOR (B) Upper Floor Room Egress Standard LIF & Evac Management Plan
- RSC-DVD
- RSC-INDUCTION LOOP (HEARING)
- RSC-LAPTOP/NETWORK CONNECTION
- RSC-SEATS MOVEABLE
- RSC-WHITEBOARD
- RSC-WIRELESS NETWORK



Slides by David Tarrant

Countries

“Open Data is at the heart of my agenda for Government”

Prime Minister Cameron, UK



“Open Data Strategy can enhance transparency and trust of government, and lead to economic revitalization”

Former Prime Minister Noda, Japan



“Openness will strengthen our democracy and promote efficiency and effectiveness in Government”

President Obama, USA





EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

THE DIRECTOR

May 9, 2013

M-13-13

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND

FROM: Sylvia M. Burwell
Director

Steven VanRoekel
Federal Chief Information Officer

Todd Park
U.S. Chief Technology Officer

Dominic J. Mancini
Acting Administrator, Office of Information and Regulatory Affairs

SUBJECT: Open Data Policy—Managing Information as an Asset

“Making Open and Machine
Readable the
New Default for
Government Information”
**EXECUTIVE ORDER,
BARACK OBAMA**



<http://www.whitehouse.gov/the-press-office/2013/05/09/obama-administration-releases-historic-open-data-rules-enhance-governmen>



The image is a horizontal collage of ten different screenshots from various open government data websites. From left to right, the sites include:

- data.gov.uk**: A landing page with a large image of wind turbines and text about renewable energy.
- Australian Government Open Data**: The homepage of data.australia.gov.au featuring a green banner with 'Over 4,800 datasets to view'.
- Kenya openData**: The homepage of Kenya's open data portal with a 'Open Government Partnership' section.
- Data.gov**: The homepage of the US open data portal.
- ten su ch Katalo**: A screenshot showing a search interface with categories like 'Data', 'Apps', and 'Blogs'.
- DATA.GOV**: The homepage of the US open data portal.
- Government datasets online**: A screenshot of the New Zealand government's open data portal.
- al portal de datos Gobierno de Chile**: The homepage of Chile's open data portal.
- Umwelt und Verkehr**: A screenshot of the German open data portal.
- date.gov.md**: The homepage of Moldova's open data portal.
- data.gouv.fr**: The homepage of France's open data portal.

The collage illustrates the variety of data available across different countries and sectors, from energy and environment to health and education.



United States



Argentina



Australia



Austria



Bahrain



Belgium



Brazil



Canada



Chile



China



Denmark



Estonia



Finland



France



Germany



Greece



Hong Kong



India



Ireland



Italy



Kenya



Mexico



Moldova



Morocco



Netherlands



New Zealand



Norway



Peru



Portugal



Republic of Korea



Russia



Saudi Arabia



Singapore



Slovak Republic



Spain



Sweden



Timor-Leste



Tunisia

United Arab
Emirates

United Kingdom



Uruguay

Dozens of countries, 100's of regions and cities moving to open data

data.gov - data.gov.uk - datameti.go.jp - data.gouv.fr - data.gov.pl



OECD



United Nations



World Bank

“a new era in which people can use open data to generate insights, ideas, and services to create a better world for all.”

G8 Open Data Charter



Slides by David Tarrant

Question 4

Having covered all of this...

What types of data are there?

What is the Potential?



Slides by David Tarrant

Social Data

London's Daytime Population 2010

9,300,000

Daytime population

7,900,000

Resident population

Top 5 Boroughs - Daytime Population

1. Westminster 980,000 (253,000 residents)
2. Camden 460,000 (235,000 residents)
3. City of London 390,000 (11,700 residents)
4. Tower Hamlets 380,000 (238,000 residents)
5. Southwark 360,000 (237,000 residents)

Top 5 Boroughs - Daytime Population Density

1. City of London (350,000 sq. mi.)
2. Westminster (120,000 sq. mi.)
3. Kensington and Chelsea (59,000 sq. mi.)
4. Camden (55,000 sq. mi.)
5. Islington (52,000 sq. mi.)

Bottom 5 Boroughs - Daytime Population Density

29. Enfield (8,800 sq. mi.)
30. Richmond upon Thames (8,200 sq. mi.)
31. Hillingdon (7,800 sq. mi.)
32. Havering (4,900 sq. mi.)
33. Bromley (4,800 sq. mi.)



This 3D map illustrates
the population density of
Boroughs by day.

Other Daytime Data...

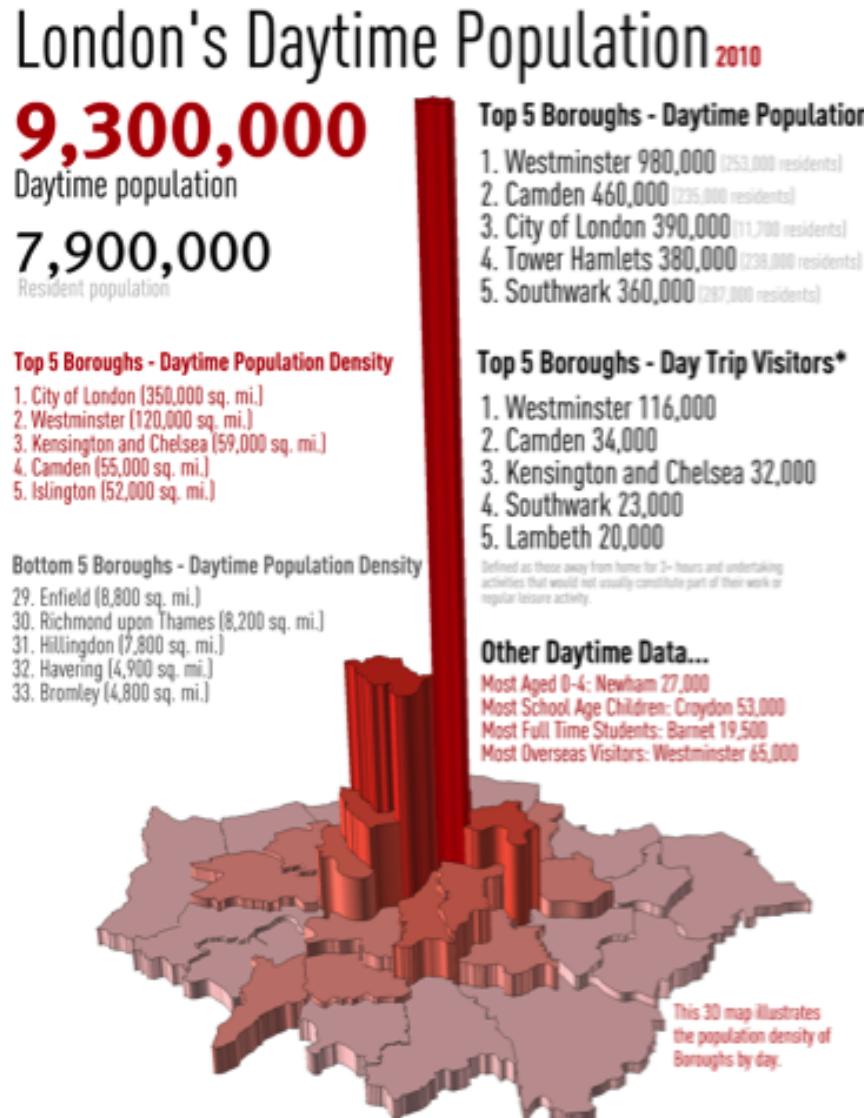
- Most Aged 0-4: Newham 27,000
Most School Age Children: Croydon 53,000
Most Full Time Students: Barnet 19,500
Most Overseas Visitors: Westminster 65,000

Population
Education
Health
Law
Crime
Housing
Transportation and travel
Media & publications
User-generated content
Personal data-shadows



Slides by David Tarrant

Social Value



‘the Internet is Changing the Way We Think’ [Al Gore]

Data as culture

→ Ubiquitous data changes human behaviour

Innovation

- transformation from products to services
- scale existing services (e.g. MOOC)
- radically improve data-driven decision-making
- entirely new interactions

Environment Data



Maps / geographic

Terrain / land-use

Weather / climate

Water / hydrographic

Farming / species

Pollution / ecosystems

Materials / resource scarcity

Environmental Value



**'I got it wrong on climate change
– it's far, far worse'** [Nicholas Stern]

Stimulate investment and growth

→ new energy supply, grids and efficiency markets

Improve governance and accountability

→ Transparency increases accountability + competition

Address resource scarcity at scale

→ effective resource management

→ systemic changes in supply-chain management

Environment

Public Products and services Research

Met Office

Weather Climate Learning News Invent

Amber Warning of severe weather has been issued

 Regions affected: Orkney & Shetland, Grampian, Central, Tayside & Fife, Strathclyde, North West England, East Midlands, SW Scotland, Lothian Borders, Yorkshire & Humber, Highlands & Eilean Siar, South West England, London & South East England, East of England, Northern Ireland

Change location Enter place name or postcode

Five day forecast

City of London

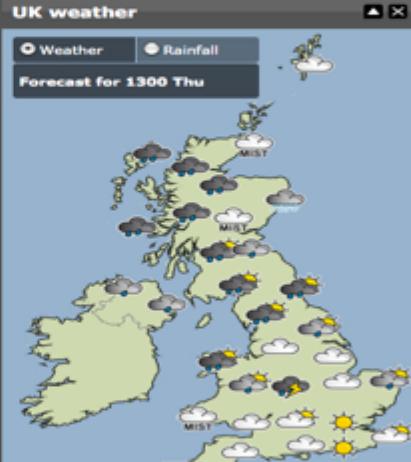
| Day | Weather | Temperature (°C) | Wind (mph) |
|-----|---------|--------------------|--------------|
| | | Max. | Min. |
| Thu | | 29 | 15 |
| Fri | | 20 | 16 |
| Sat | | 21 | 19 |
| Sun | | 19 | 13 |
| Mon | | 18 | 14 |

Updated: 1000 on Thu 28 Jun 2012

Get five day forecast for City of London >

UK weather

Weather Rainfall Forecast for 1300 Thu



FOG Updated: 1000 on Thu 28 Jun 2012

Get detailed forecast map for UK >

Regional forecast

London & South East England

English **Bathing Water Data Explorer** home help

Enter bathing water name, county, district or postcode

Throughout the summer, The Environment Agency of England and Wales collects detailed scientific data on the cleanliness of our bathing waters (mostly beaches). Weekly and annual compliance ratings are given:

meets the higher standard
 meets the minimum standard
 fails to meet the minimum standard

Use this web site to search for a bathing water by name, county or postcode, or by browsing around the map. You can then see the detailed data the agency has collected about that site.



Powered by **LINKEDDATA** Environmental Agency Under the Open Government Licence
OS Ordnance Survey © Crown copyright and database rights 2012
Ordnance Survey and Neptagon Mallet
Key: most recent weekly classification:
 higher standard, minimum standard, fail, closed

creating a better place

Noticed a problem? Please tell us
Designed and developed by Epimorphics Ltd.



Slides by David Tarrant

Economic Data



- Corporate ownership
- Tax
- Open Procurement
- Market information (e.g. commodities)
- Asset registers (e.g. stranded assets)
- Supply-chain transactions
- Personal spending

Economic Value

“Transparency Drives Prosperity”
[Open Government Partnership]

Stimulate investment

→ Transparent rules-based commercial environments attract investment and make companies (both domestic and international) more competitive

Improve governance and accountability

→ Fiscal transparency increases accountability and is self-enforcing

Reduce corruption

→ wide participation and systemic changes affect everyone - “race to the top”



Slides by David Tarrant

Potential Changes

Behaviour Change

Operational Change

Global Change



Slides by David Tarrant

A 3D-style word cloud diagram where words are stacked vertically, creating a sense of depth. The words are arranged in three columns. The left column contains 'Planning' (yellow), 'Evaluation' (brown), and 'Activities' (green). The middle column contains 'Marketing' (yellow), 'Community' (brown), and 'Efficiency' (yellow). The right column contains 'Advocacy' (brown), 'Integration' (yellow), and 'Trust' (green). Other visible words include 'Collaboration', 'Transparency', 'Campaigning', and 'Policy'.

Savings Advocacy
Collaboration
Transparency
Marketing
Activities
Evaluation
Community
Efficiency
Integration
Trust
Campaigning
Policy



Recap

What is data?

What is Open Data?

What are the benefits?

What changes are we seeing?

Who is driving the open data movement?



Slides by David Tarrant