



# Open Data and Sustainability

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November, 2013 · **ulrich atz** · @statshero





Sir Tim Berners-Lee, inventor of the web, tweeting from middle of the 2012 Olympics

CERN DD/OC  
Information Management: A Proposal

Vague but exciting ...  
Tim Berners-Lee, CERN/DD

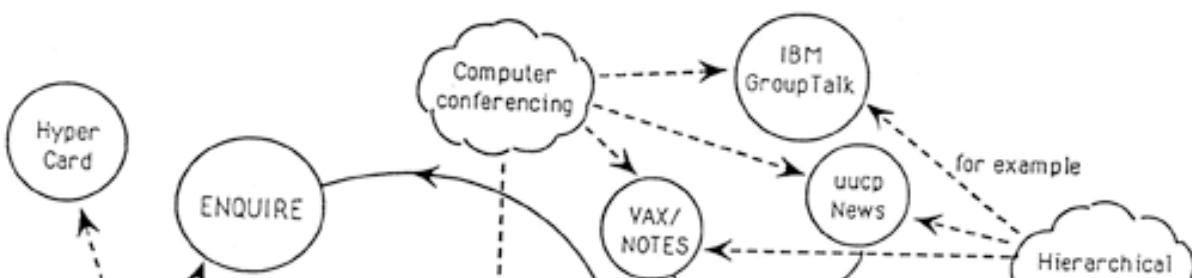
March 1989

## Information Management: A Proposal

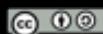
### Abstract

This proposal concerns the management of general information about accelerators and experiments at CERN. It discusses the problems of loss of information about complex evolving systems and derives a solution based on a distributed hypertext system.

Keywords: Hypertext, Computer conferencing, Document retrieval, Information management, Project control



[http://  
info.cern.ch/  
Proposal.html](http://info.cern.ch/Proposal.html)



Open data can help us address  
the greatest challenges of our time  
and generate value for everyone.

*Open Data Institute 2012*



“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 2013*



kenhodge13  
(40132991@N07)  
on flickr.com

# “Data is the New Oil”

*But data is not oil!*

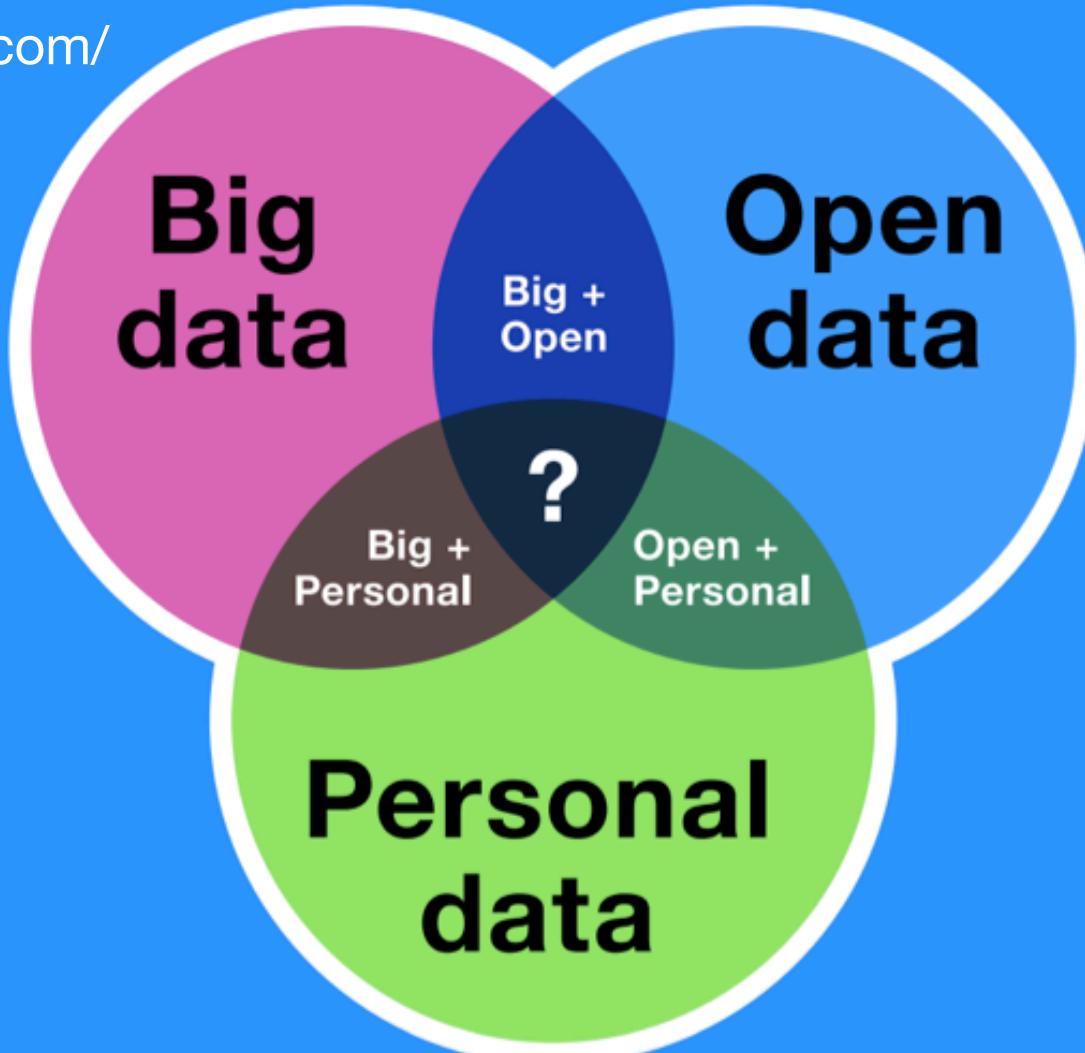


# More like a goldmine...



<http://www.flickr.com/photos/48806909@N00/497511638/>

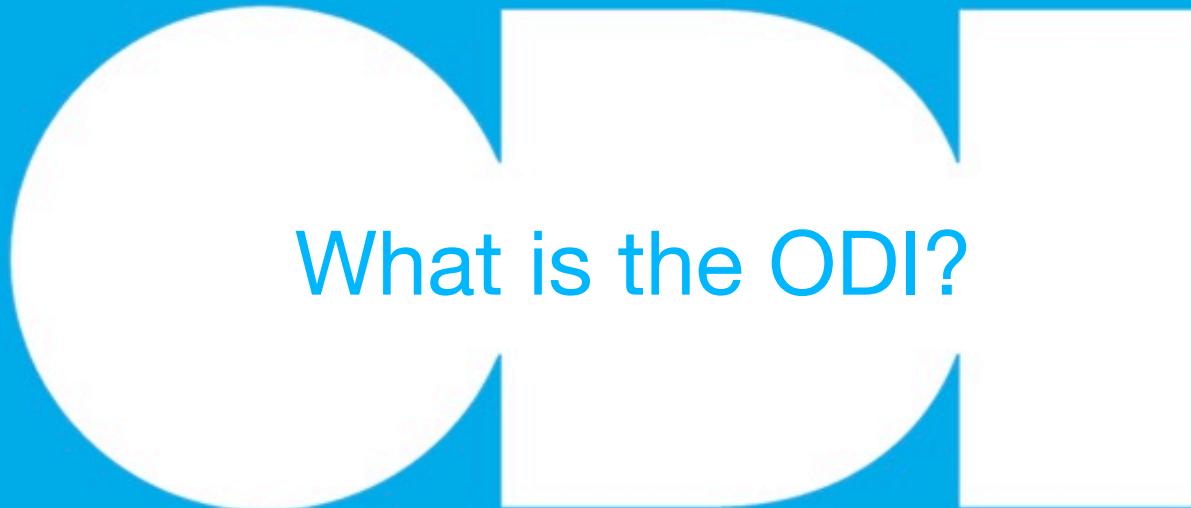
[https://github.com/  
theodi/data-  
definitions](https://github.com/theodi/data-definitions)



# Overview for the reminder

1. What is the ODI?
2. Open data and sustainability
3. What you can do for sustainability!



The ODI logo consists of the letters "ODI" in a bold, black, sans-serif font. The letter "O" is a solid circle, the letter "D" is a vertical rectangle with a diagonal cut, and the letter "I" is a horizontal rectangle.

What is the ODI?



**Sir Tim Berners-Lee**



**Sir Nigel Shadbolt**



**Gavin Starks** CEO  
18+ years startup experience  
20+ years science, web, media, and data



**Jeni Tennison** CTO  
World-leader in open data and linked data  
W3C, legislation.gov.uk and data.gov.uk



**Stuart Coleman** VP Market Dev.  
15+ years in commercial tech space  
Formerly HP, CA, and AMEE



# We are convening a community



# 10 Startups

MASTODON C



BIG DATA DONE BETTER

opencorporates

Locatable

CARBON  
CULTURE.  
Join in, team up, make a difference

HB  
Honest Buildings

transport API  
powering change and innovation in transport

Demand  
LOGIC

PROVENANCE

Spend Network

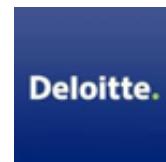
OPENBANK PROJECT

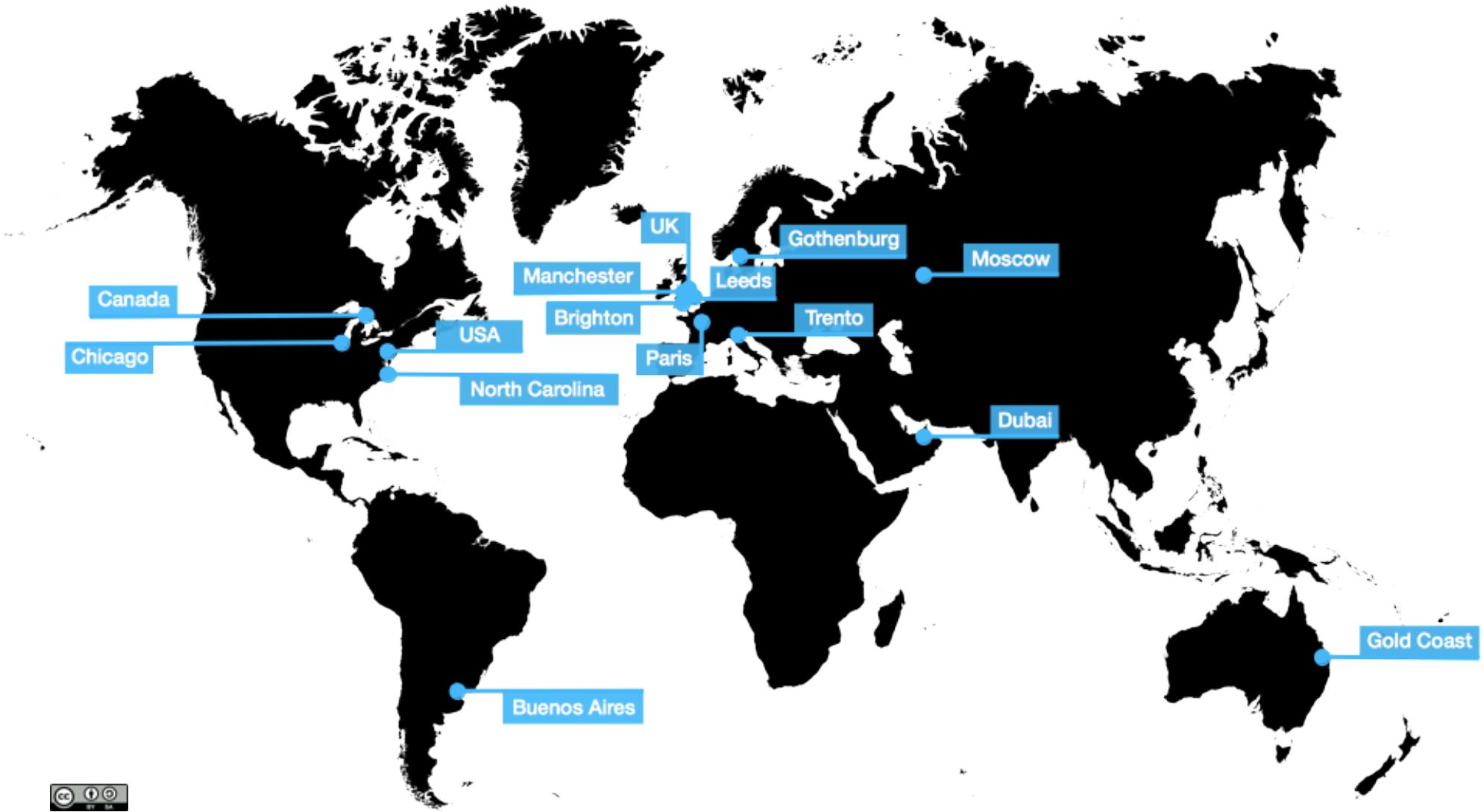


# 50 Members



Quanta Computer





# ODI Nodes

ODI Nodes connect the organisations  
that support open data projects and  
people



**Businesses + Universities + NGOs**



=



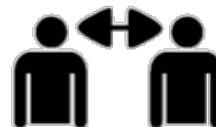
# Supporting local, national and international impact



**Country Node**  
Country-lead, close to  
government,  
independent



**City or Region Node**  
Deliver projects, training,  
research, and development

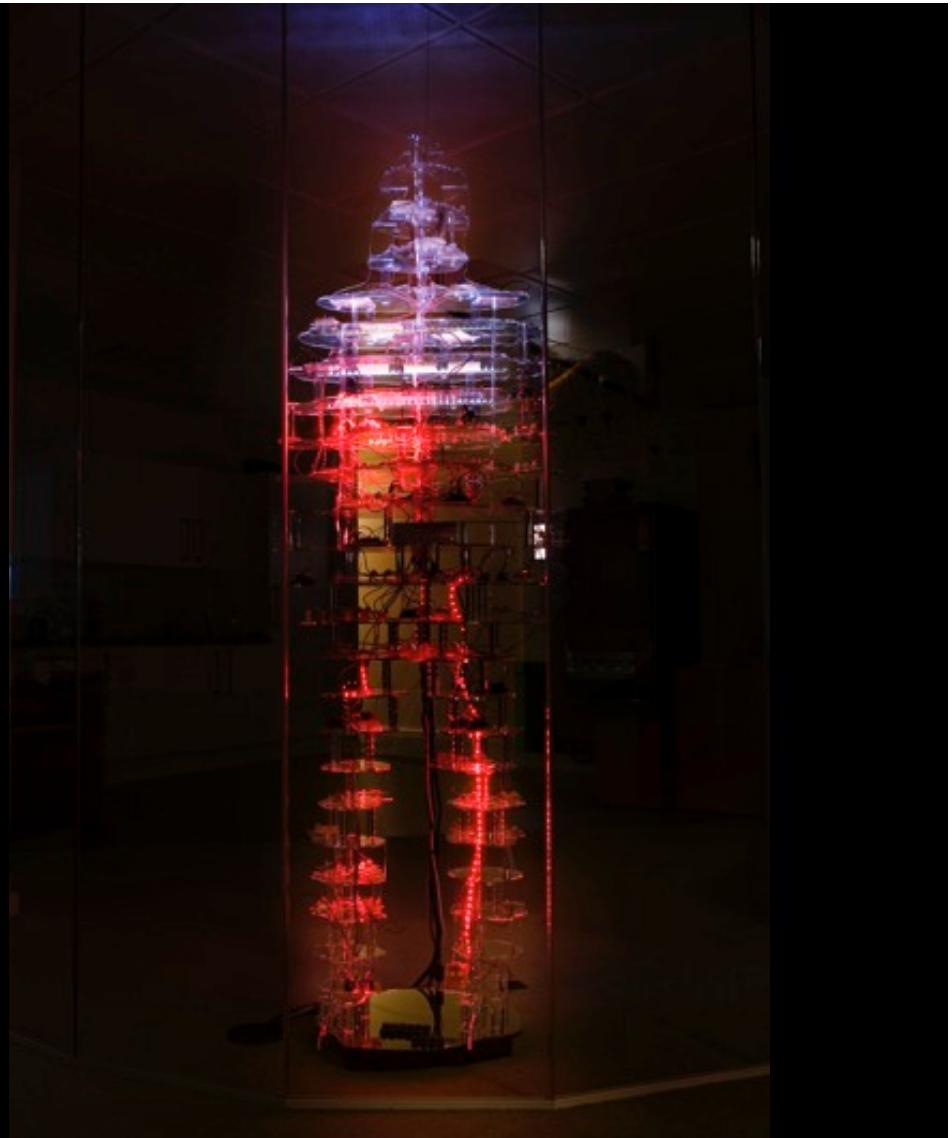


**Communications Node**  
Amplify use-cases to,  
and from, around the  
world



# data as culture

Stanza: Body 01000010011011110110010001111001



Groß and Clerc: Metrography



# A collaboration with the World Bank



**THE WORLD BANK**  
Working for a World Free of Poverty

[ABOUT](#)[DATA](#)[RESEARCH](#)[LEARNING](#)[NEWS](#)[PROJECTS & OPERATIONS](#)[PUB](#)

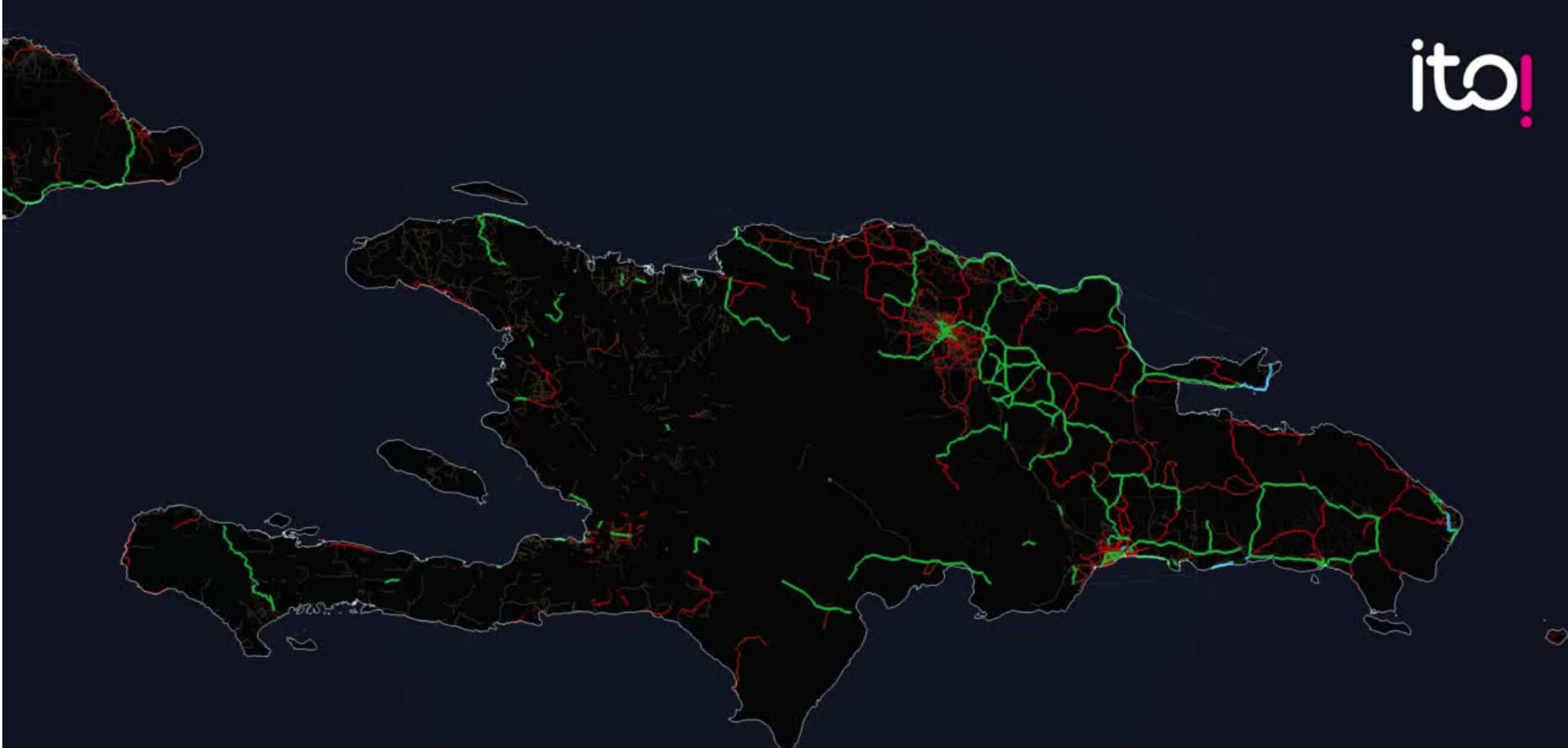
## News

This page in: [English](#)

PRESS RELEASE

### New Partnership Seeks to Bring Benefits of Open Data to Developing Countries





ito!

9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 January 2010

<http://vimeo.com/9182869>

OpenStreetMap

CC-by-SA [www.itoworld.com](http://www.itoworld.com)  
Map data [www.openstreetmap.org](http://www.openstreetmap.org) 31 Jan 2010

QuickTime Player File Edit View Window Help

Open Mapping in Tandale

explore.ramanitanzania.org

Open Mapping in Tandale

- + III

Residents of Tandale, an informal settlement *Mwananyamala* in Dar es Salaam, Tanzania, used OpenStreetMap to identify key local features, and are now sharing geo-located reports on Ushahidi and a blog in order to influence local development and share a community voice.

Points of Interest

- Wells, towers and drinking water
- Local Ushahidi reports

Residential

Retail

Commercial

Landfill

Recreation ground

Tandale

MOROGORO RD

MOROGORO RD

GroundTruth Initiative

WORLD BANK

Twaweza

University of Dar es Salaam

Ushahidi

# SUSTAINABILITY



“Sustainability” mentioned in forest management in 1761

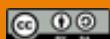


Phil P Harris, [http://commons.wikimedia.org/wiki/File:Amazon\\_Manaus\\_forest.jpg](http://commons.wikimedia.org/wiki/File:Amazon_Manaus_forest.jpg)

# Economic

“Without money, there is no sustainability.”

*Beyond Transparency 2013*

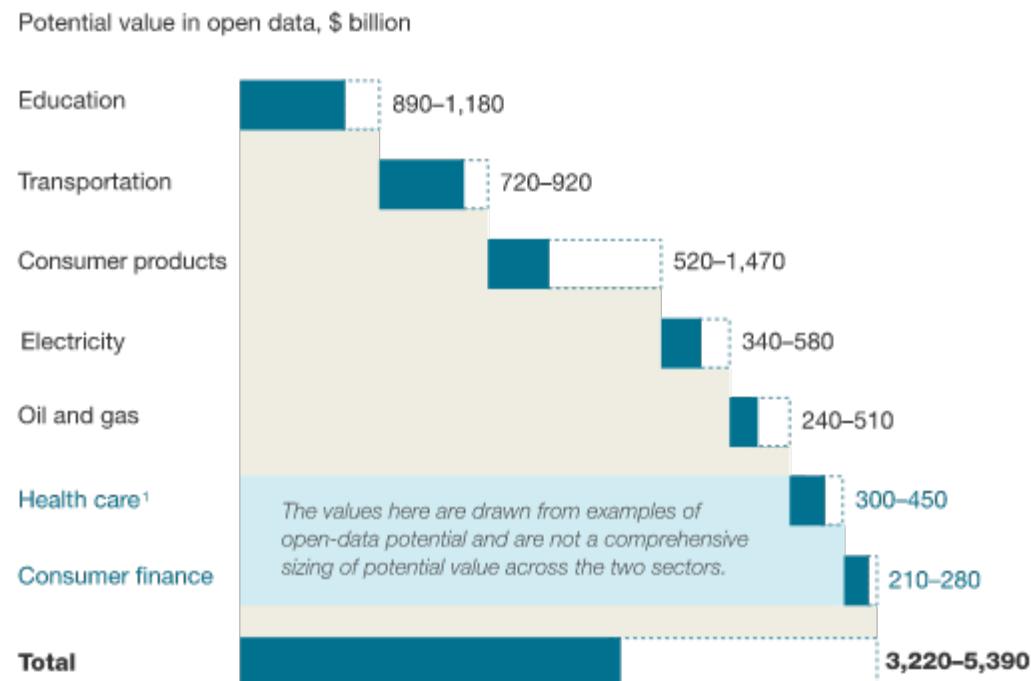




# Open data can help unlock \$3-5 trillion in economic value annually across seven sectors.

## Open data: Unlocking innovation and performance with liquid information

McKinsey Global Institute



<sup>1</sup>Includes US values only.

Source: McKinsey Global Institute analysis



# The Climate Corporation: sold for \$1.1bn in October 2013

**CLIMATE | BASIC**

**Better Data. Better Decisions.**

The most advanced way to get insight into your fields.

Weather   Tracker   Alerts   Scouting & Notes

**LEARN MORE »**

**HOMESTEAD**

POTENTIAL YIELD (ESTIMATE)  
155

145 BASIC  
120

HARVEST DATE  
Sept 21

GROWTH STAGE  
R6

EXCERPT LAST 72H  
0.65"

# Social

“What happens to cities that do not become smart? They will die.”

*Kevin Ashton (*Internet of Things*)*





Analysing the impact of fire station closures  
using open data



David Tarrant, UKODI, @davetaz

# *Combining public and private open data*



## London

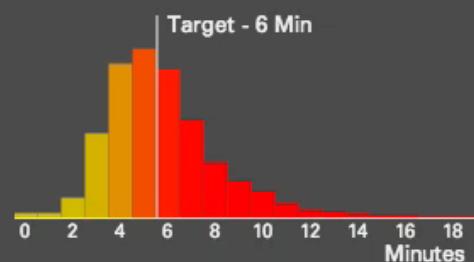
Average attendance time:

**5m34s**

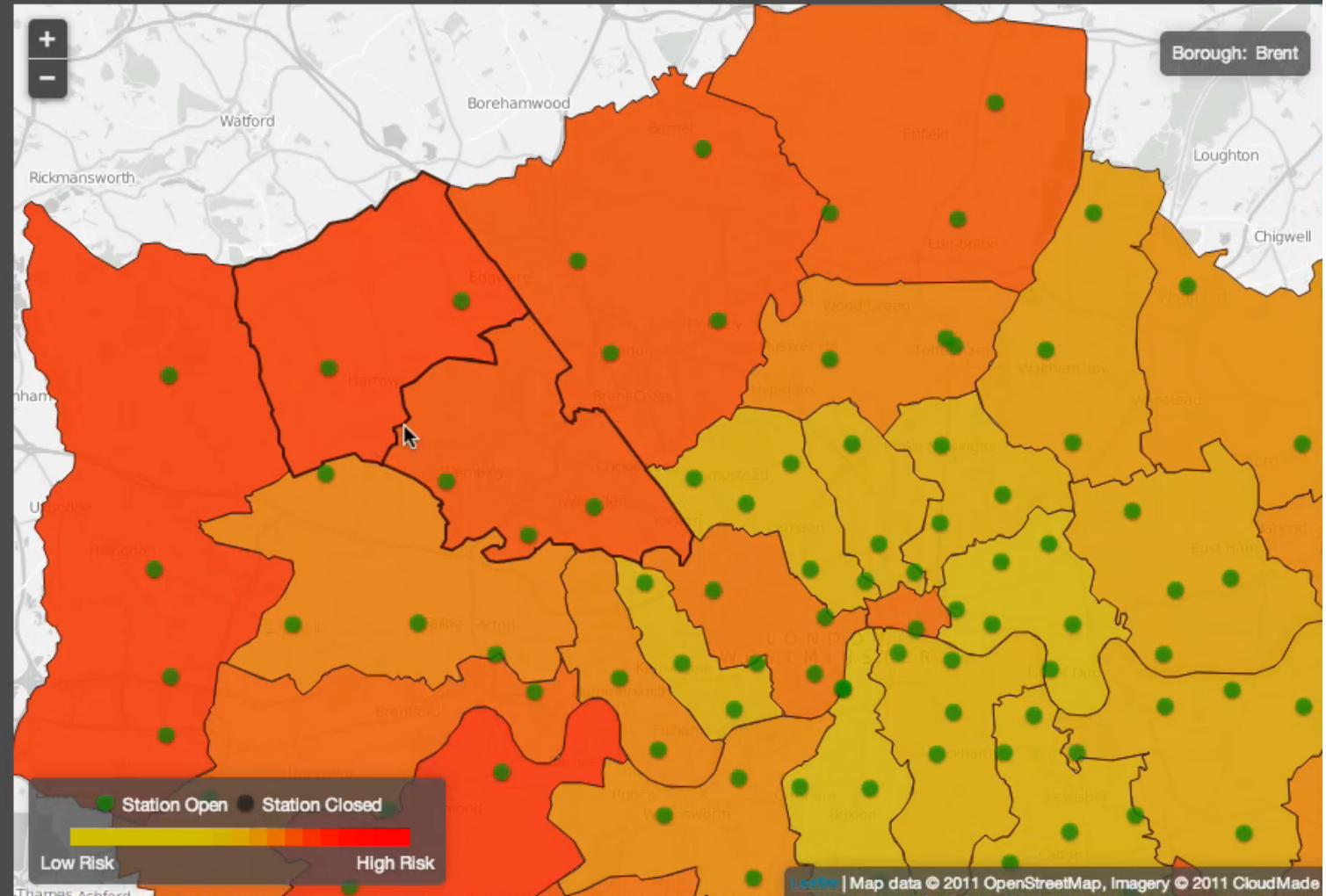
## Harrow

Average attendance time:

**6m22s**



Close proposed stations  Weight by footfall  Enable analysis mode



# Initiatives in developing countries

Some ICT stats from 2013:

- Mobile-cellular penetration at 89% in developing countries.
- In the developing world, 31% of the population is online.
- In developing countries, the number of mobile broadband subscriptions reached 1.16bn (472m in 2011).



Source: <http://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2013.pdf>

# Environmental

“I got it wrong on climate change  
– it's far, far worse.”

*Nicholas Stern*



# Measuring carbon

Demand Logic and King's College energy savings of £390,000 per year; carbon savings of 2500 t/y



San Francisco: carbon footprint of benchmarked facilities decreased 5.1% since 2011, cost savings of \$450,000

# Nike Materials Sustainability Index



<http://nikemksiapi.nikebetterworld.com>

# WeatherSafe: climate warning for coffee farmers in Rwanda



<http://www.flickr.com/photos/nestle/4932164676/>

# Open data and climate change: What can you do?



Ellie Harrison: Vending Machine



# 1

Demand data



All open data are good,  
but some are better.



<http://certificates.theODI.org>



## Where can you create certificates?

Different countries have different laws, so their certificates are slightly different too. Choose your country to create the right certificate.

Senegal

Create a certificate

SN alpha

This certificate hasn't been properly [localised](#) yet, and we need your help! Please contact [certificate@theodi.org](mailto:certificate@theodi.org)

### Legend

[Certificate in alpha stage](#) [Certificate in beta stage](#) [Certificate in final stage](#)

# The first robust quality badge for open data.



## Expert

An exceptional example of information infrastructure.



## Standard

Regularly published open data with robust support that people can rely on.



## Pilot

Data users receive extra support from, and can provide feedback to, the publisher.



## Raw

A great start at the basics of publishing open data.

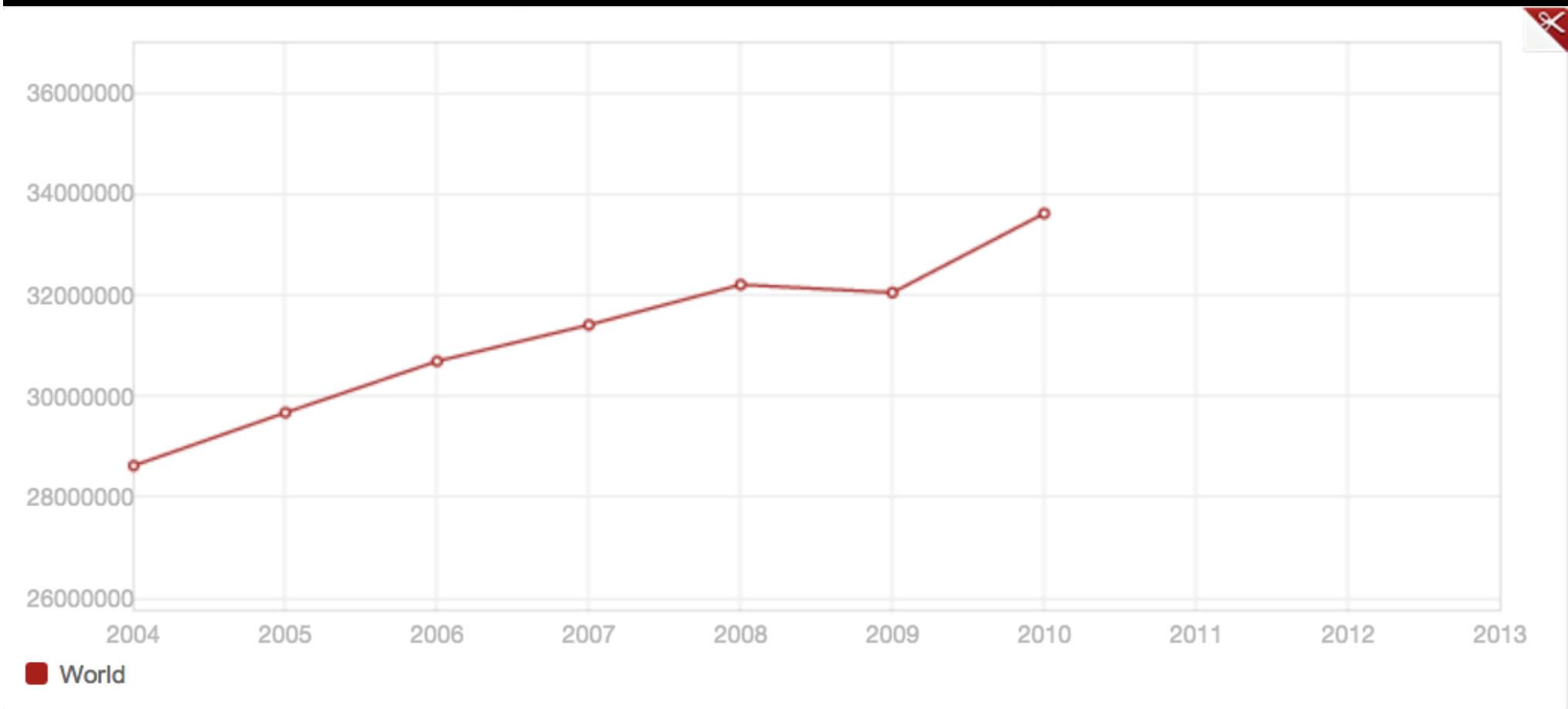


# 2

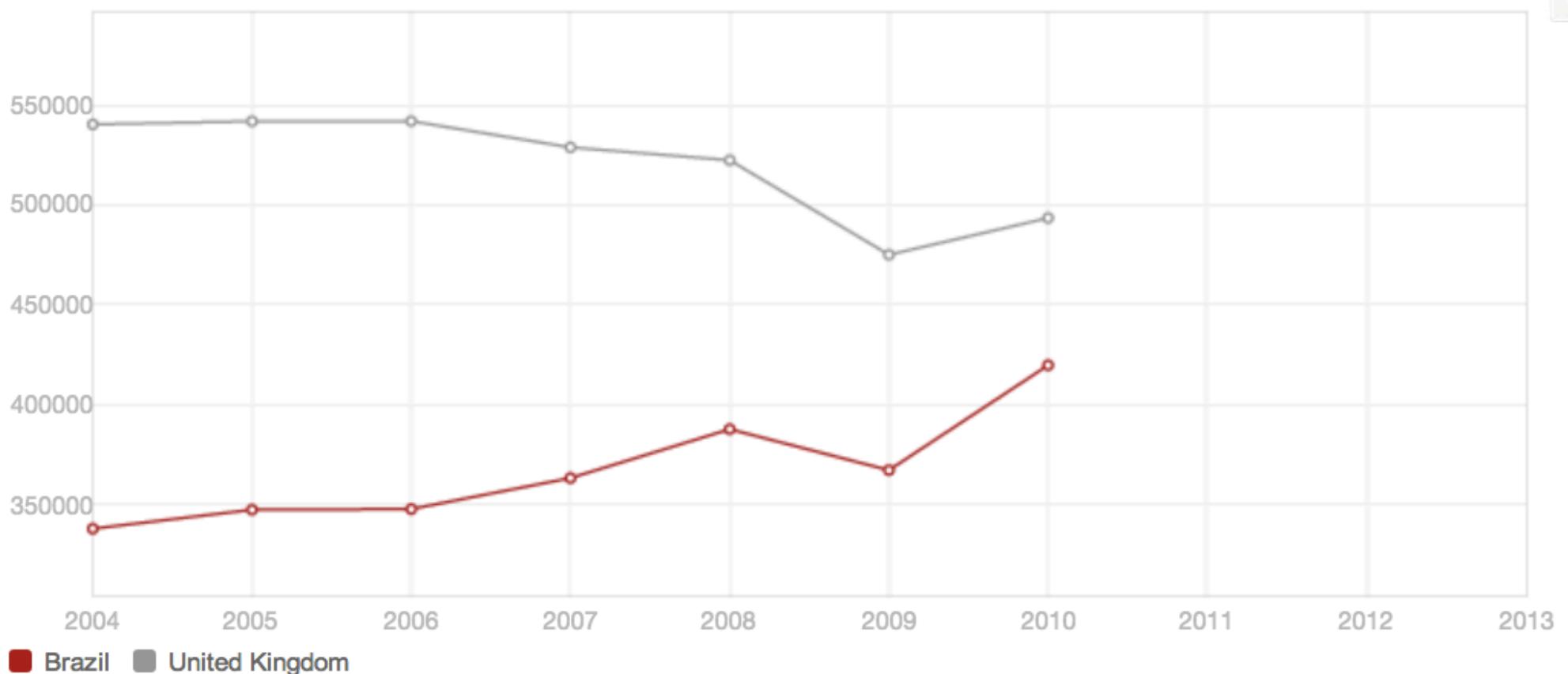
## Test timeliness



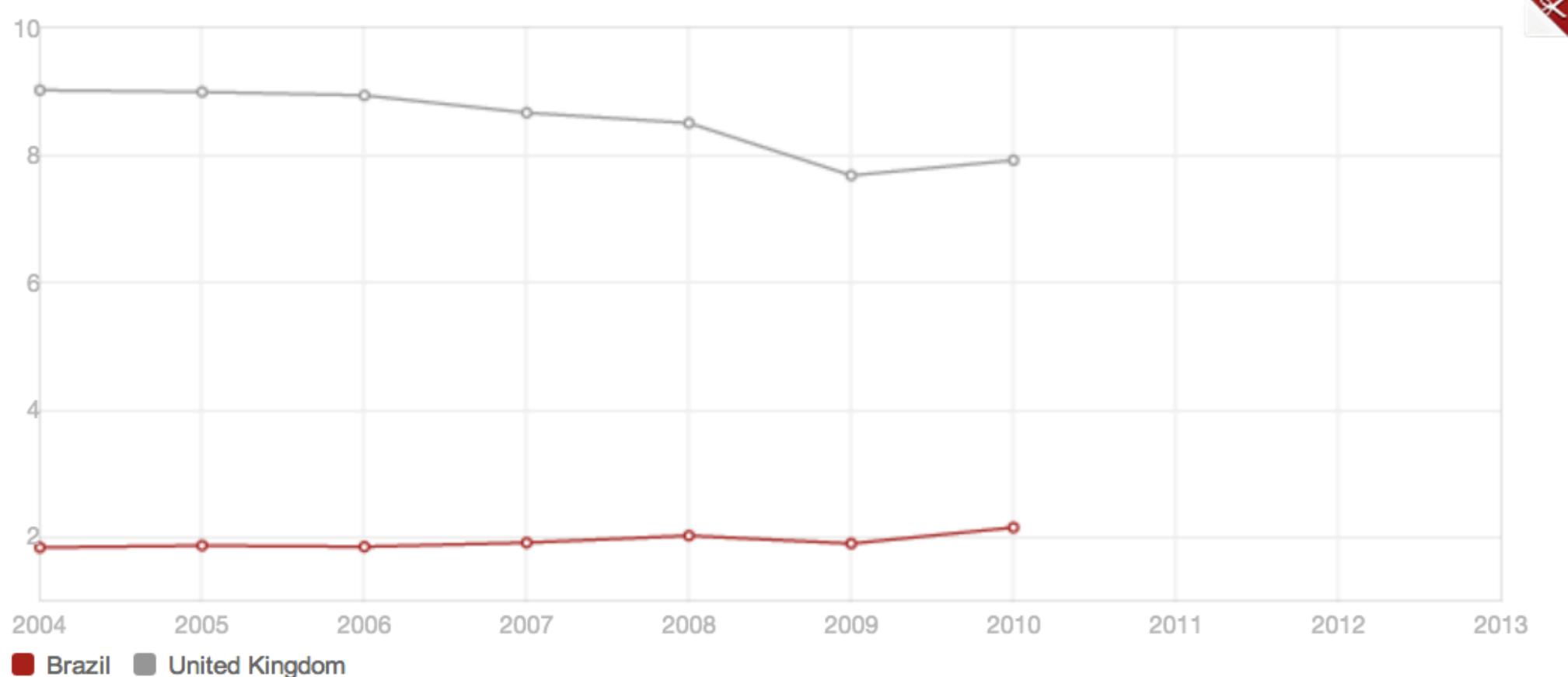
# CO<sub>2</sub> emissions (kt) – World Bank



# CO<sub>2</sub> emissions (kt) – World Bank



# CO<sub>2</sub> emissions (t per capita) – World Bank



# 3

Explain, engage



## Our energy use



London City Hall

This graph allows everyone to access a range of data from our offices at London City Hall. It's generated in real-time from data taken every 5 seconds from the on-site meters.

For the week commencing midnight on 25 Apr, London City Hall has used:

**58,642 kWh**

Energy use

58,642kWh in Electricity

0kWh in Gas

Average 349kWh per hour

**£7,037**

Energy cost

£7,037 from Electricity

£0 from Gas

Average £41 per hour

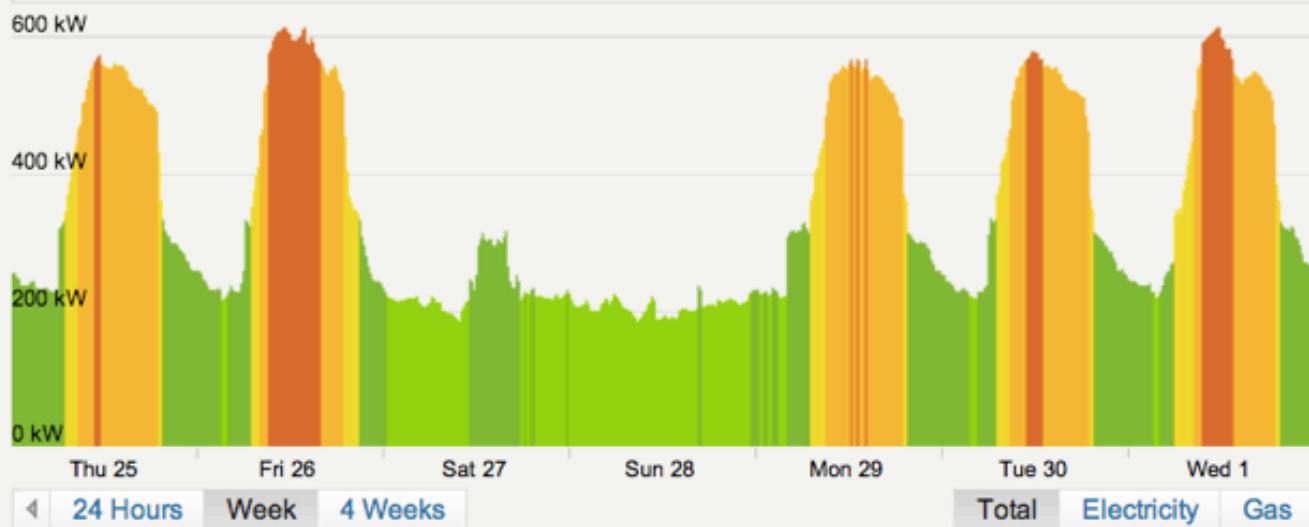
**30,765kg**

Carbon impact

30,765kg for Electricity

0kg for Gas

Average 183kg per hour



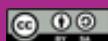


[Mdbeckwith](#),  
wikimedia

# Data actions against climate change



1. Demand data (openness)
2. Test timeliness (quality)
3. Explain, engage (value)

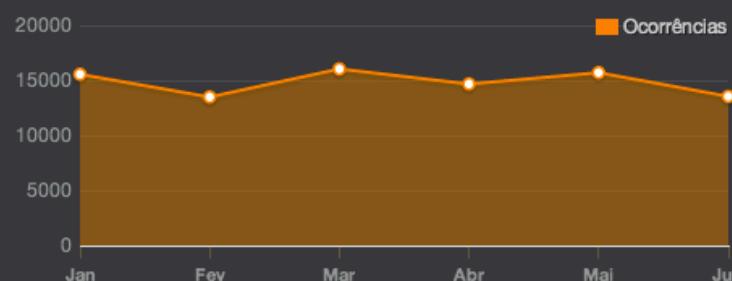


**Períodos**

- ▶ Semestral
- ▶ Trimestral
- ▶ Mensal
- ▶ Diário

**Acidentes****Condutores****Veículos****Rodovias****Filtrar por Período****Bem-vindo(a) ao aplicativo DPRF.info**Estatísticas de ocorrências em rodovias federais a partir de 2007. [Mais..](#)**Informações****Alterar período****1º Semestre de 2013 Janeiro a Junho**

O gráfico abaixo representa o comparativo mensal de ocorrências neste período.

**Tipos de acidente**

Conheça os principais tipos de acidentes nas rodovias federais.

**Tipos mais comuns****Lista completa****Tipo****Ocorrências****Total de ocorrências****88.979** ▼ -4.1%

Semestre anterior: 92.827 ocorrências

**Trecho mais perigoso****BR-101/SC** ▼**-6.1%****KM 200-210 718****ocorrências**

Semestre anterior: 765 ocorrências

**Veja outros trechos ►****Pessoas feridas 46.584****Pessoas mortas 3.165****Total de pessoas envolvidas****189.507** ▼ -3.8%

Semestre anterior: 196.972 pessoas

**Sexo dos condutores**

O sexo de aproximadamente 6.677 condutores não foi registrado no sistema.

**Idade dos condutores****0-17 anos****167**

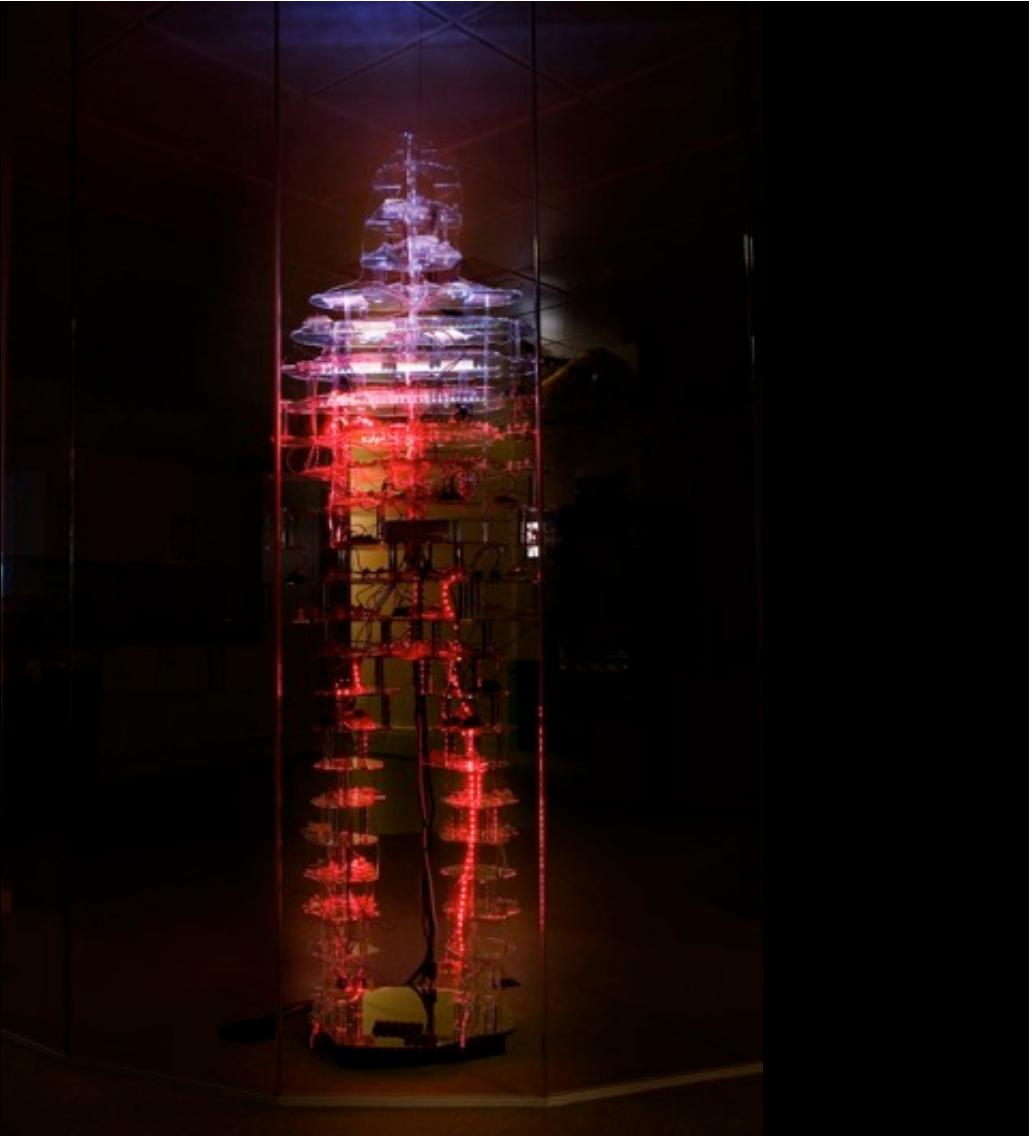


Together!

# Thank you!

Email: [ulrich@theodi.org](mailto:ulrich@theodi.org)

Twitter: [@statshero](https://twitter.com/statshero)



 **FAQ**

Terms apply only to Node-related work,  
not all of the work of the host organisation



Fees apply for the ODI Trademark  
License. Exclusions can be agreed.



Nodes have to commit time.  
How much is up to you.



Nodes must support a community.  
They are different from ODI Members.



ODI UK is the “root Node”. When there are  
5 country Nodes, we'll create a board.



<http://theodi.github.io/open-data-barometer-viz/>

