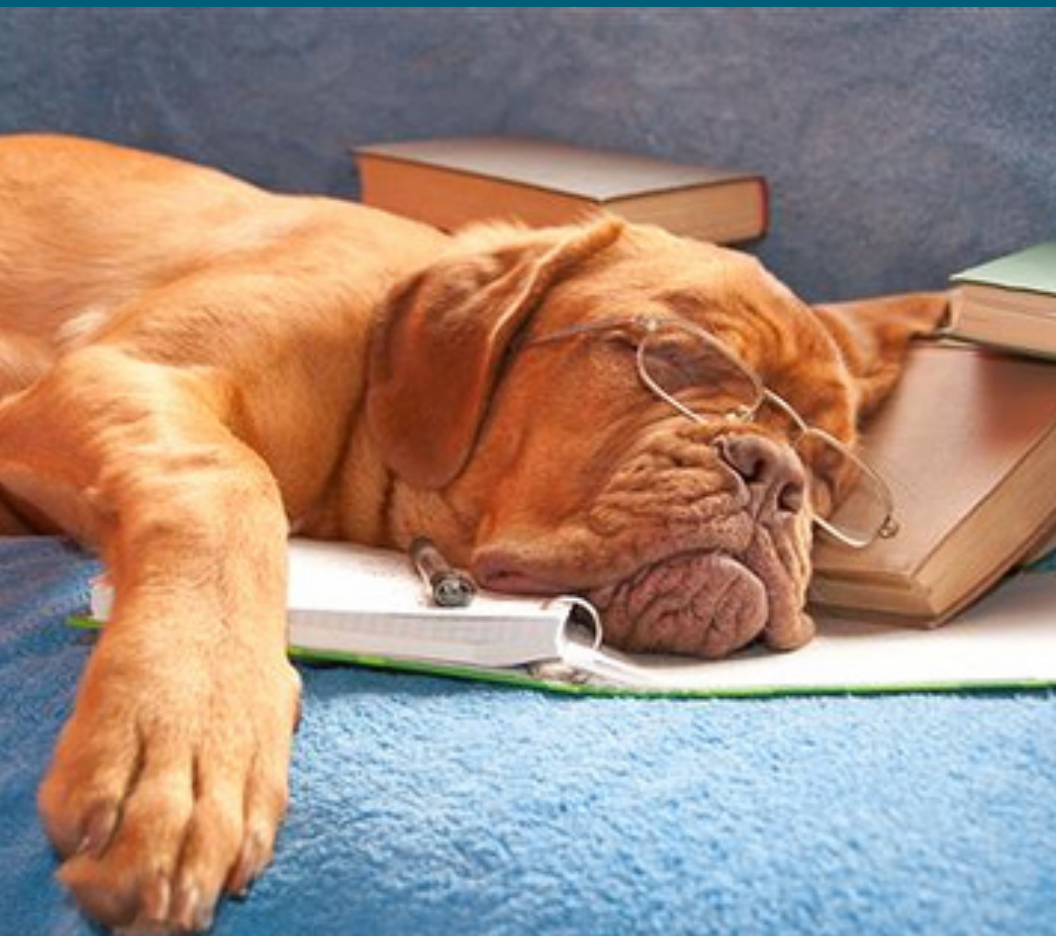


Presented by:

**Irina Bolychevsky**





Presented by:

**Paulo  
Rupino  
da Cunha**



# Open Data 101

## WHAT IS OPEN DATA?

OPEN

DATA



“

***Open** means **anyone** can **freely access, use, modify, and share** for **any purpose** (subject, at most, to requirements that preserve provenance and openness).*

”

---

“

***Open data** and content can be **freely used, modified, and shared** by **anyone** for **any purpose***

”

<http://opendefinition.org>



## WHAT IS OPEN DATA?



## Multimodal trip planning & analysis

OpenTripPlanner provides a range of passenger information and transportation network analysis features using our infrastructure for finding itineraries combining transit, pedestrian, bike, and car segments.

 Blog

 Code

 Docs

 Support

OpenTripPlanner

 **OTP Analyst**



## WHAT IS OPEN DATA?

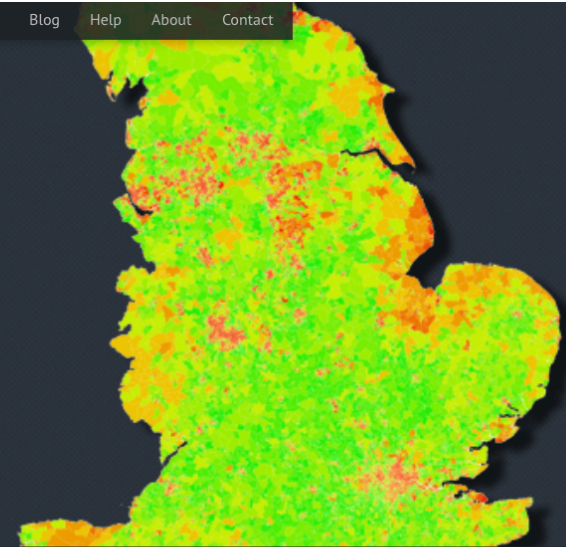


[illustristree](#) [Explore England](#) [Blog](#) [Help](#) [About](#) [Contact](#)

### Standard of living

Based on official deprivation statistics such as: income, employment, health, crime, housing, and environment.

[Explore England](#)



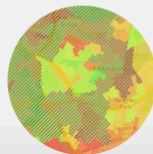
## England's best places to live

Find the best locations to buy or rent your home. It's free and fun to use!



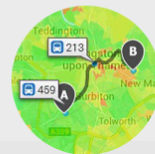
### On the Fly!

If using a mouse, you can get quick area information while hovering over any location on the map.



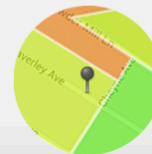
### Find by Price

You can search for areas by average prices and rents, and only show the ones that fit your budget.



### Estimate Travel

Integrated Google Directions to help estimate the travel time and distance between any two points.



### Search or Click

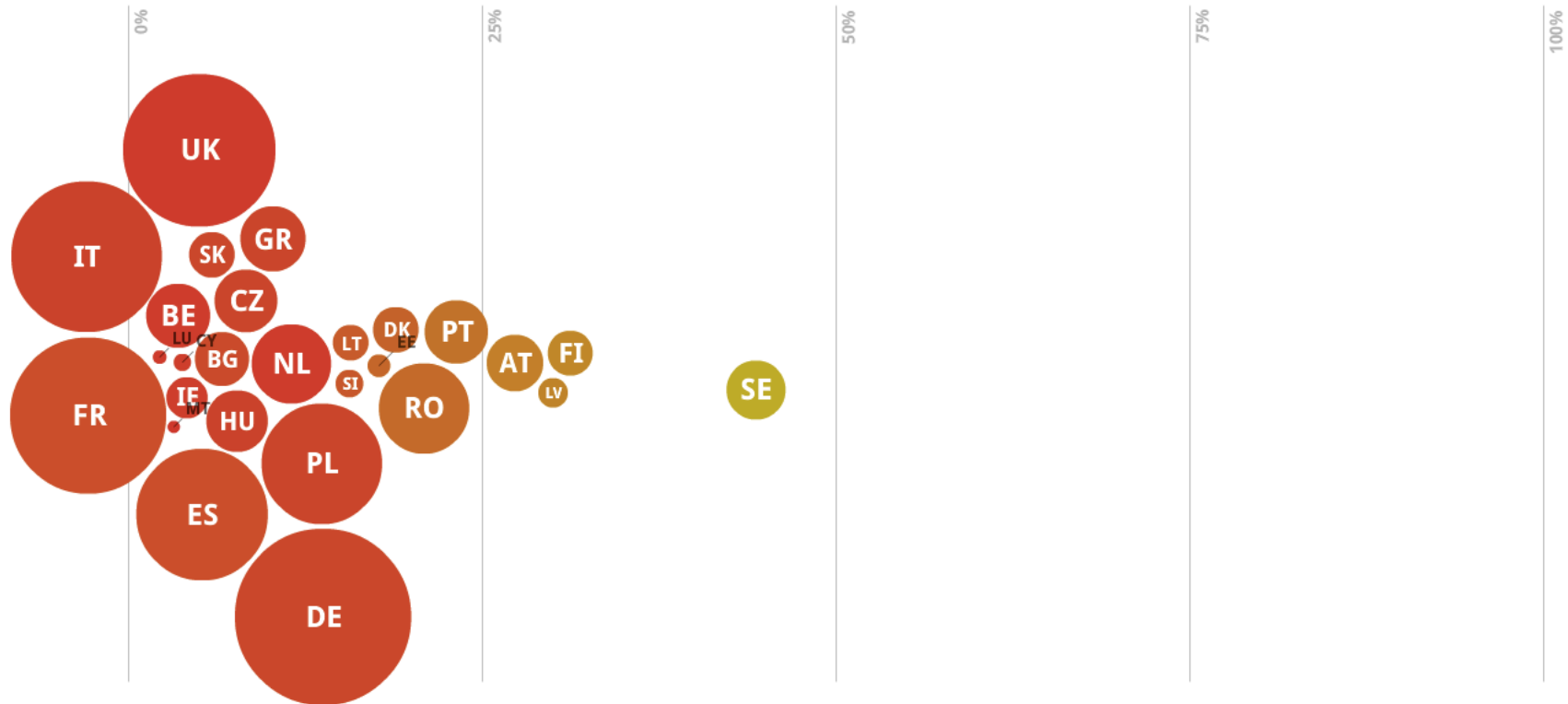
Standard of living, crime, prices, schools, and much more, with just one search or click on the map.

[Explore England](#)

## Share of Renewable Energy in Gross Final Energy Consumption

Percent of total gross consumption

< 2008 >



CO2 Emissions Per Capita



Renewable Energy Share



Renewables Targets 2020



Primary Energy Production



Energy Dependency



Net Imports




Renewable Electricity Share



Source: eurostat



# WHAT IS OPEN DATA?


 **OpenStreetMap**

[Edit](#) [History](#) [Export](#)

[GPS Traces](#) [User Diaries](#) [Copyright](#) [Help](#) [About](#)

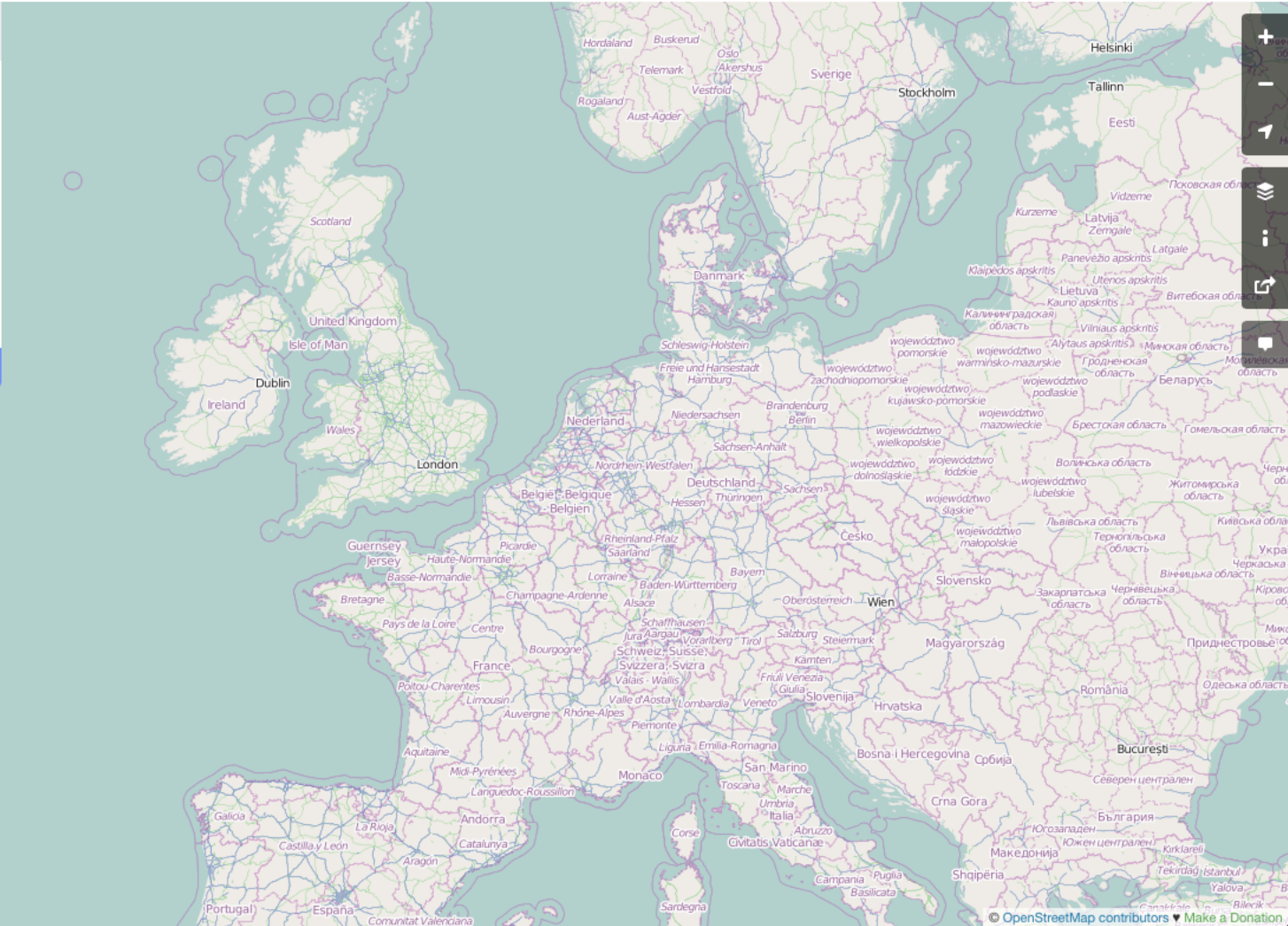
[Log In](#) [Sign Up](#)

Where am I? [Go](#)

**State of the Map 2014** ×  
8th Annual Conference  
November 7th-9th 2014  
Buenos Aires, Argentina

**Welcome to OpenStreetMap!** ×  
OpenStreetMap is a map of the world, created by people like you and free to use under an open license.


[Learn More](#) [Start Mapping](#)



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# WHAT IS OPEN DATA?

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 **publicdata.eu**  
Europe's Public Data **BETA**

[Datasets](#) [Groups](#) [About](#) [Apps & Ideas](#) [Data Portals](#)

## Search Europe's Public Data

Finance and Budgeting (436)

Social Questions (226) Environment (214)


Transportation (191)

Agriculture, Fisheries, Forestry (175)

Education and Communication (174)

Population (140) Economy and Industry (113)

Health (79)



[View larger map >](#)

## Open Data Showcase

### Featured Applications



Who makes business with the state?  
Search for persons and companies in business with the state

**Dataquest**  
powered by publicdata.eu

Enter name and business field (optional)  
to search for companies and persons

View complete search results

ENTER NAME

CHOOSE A COMPANY

CHECK COMMISSIONS

What is worth for you searching Open Data companies in the world? We're strong!

**opencorporates** The Open Database Of The Corporate World


We have information on **55,844,012** companies

Enter name and business field (optional)  
to search for companies and persons

Filter by jurisdiction

4,987	Australia (100)
1,000	Austria (10)
4,000	Belgium (10)
1,000	Canada (10)
1,000	France (10)
1,000	Germany (10)
1,000	Italy (10)
1,000	Spain (10)
1,000	Sweden (10)
1,000	Switzerland (10)
1,000	United Kingdom (10)
1,000	United States (10)

View complete search results



**What is this?**  
This map shows all the public data points that are available in the public data portals of the European Union. The map is color-coded by country and shows the density of data points in each country.

**How does it work?**  
The map is powered by the publicdata.eu API. You can search for data points by country, region, or city. The map also shows the location of the public data portals for each country.

**Who did this?**  
The map was created by the publicdata.eu team. We are a group of volunteers who are passionate about open data and public transparency.

## WHY OPEN DATA?

IMPROVED  
PRODUCTS  
AND SERVICES



CIVIC  
ENGAGEMENT  
AND  
PARTICIPATION



BUSINESS  
OPPORTUNITIES



ACCOUNTABILITY



TRANSPARENCY

SELF-EMPOWERMENT



...





# WHERE DOES MY MONEY GO?

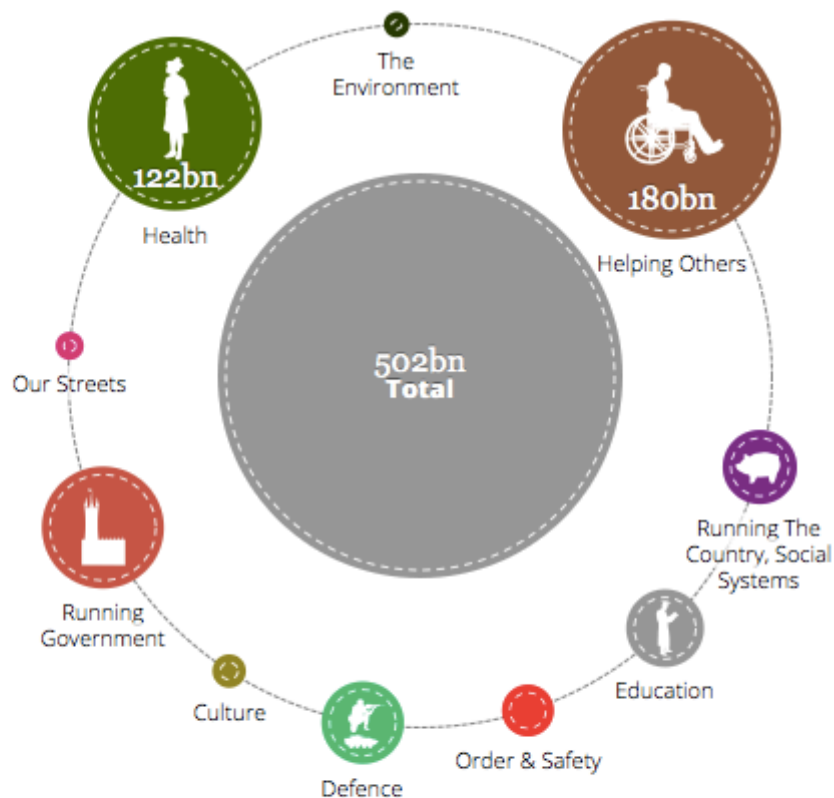
*Showing you where your taxes get spent*

[The Daily Bread](#)

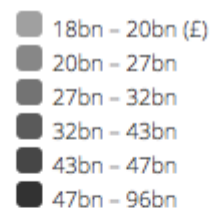
**Country & Regional Analysis**

[Departmental Spending](#)

[About](#)



*Expenditure on Total*



# WHAT IS OPEN DATA?

OFFENERHAUSHALT

BUND

LÄNDER

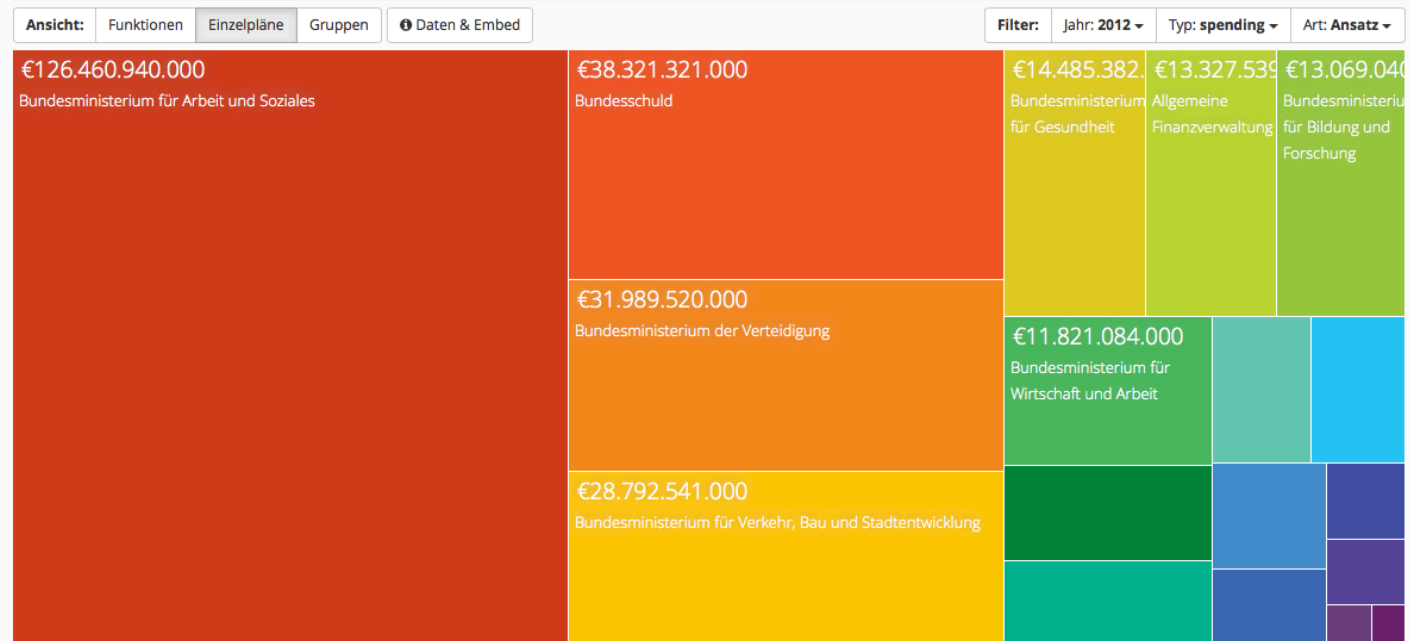
KOMMUNEN

EUROPA

ÜBER UNS



## BUNDESHAUSHALT



Titel	Betrag	Anteil
Bundesministerium für Arbeit und Soziales	€126.460.940.000	39,90%
Bundesschuld	€38.321.321.000	12,09%
Bundesministerium der Verteidigung	€31.989.520.000	10,09%
Bundesministerium für Verkehr, Bau und Stadtentwicklung	€28.792.541.000	9,08%
Bundesministerium für Gesundheit	€14.485.382.000	4,57%
Allgemeine Finanzverwaltung	€13.327.539.000	4,20%





## Weather is the key to a safer and more sustainable world. Openness is the way...

We promote open data, open science, open technology and open knowledge for pushing meteorology forward in the society and give rise to innovation.

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[Talking weather at UKCon 2013](#)



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## Data Journalism Handbook 1.0 BETA

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122

### What Is Data Journalism?

## Investigate your MP's expenses

Join us in digging through the documents of MPs' expenses to identify individual claims, or documents that you think merit further investigation. You can work through your own MP's expenses, or just hit the button below to start reviewing. (Update, Fri pm: we now have a virtually complete set of expenses documents so you should be able to find your MP's) Already created an account? [Log in here](#).

We have **458,832** pages of documents. **32,755** of you have reviewed **225,443** of them. Only **233,389** to go...

[Start reviewing](#)

Please read our [privacy policy](#) to find out how we use your data. You must also read our [terms of service](#). By reviewing pages, you are agreeing that you have read the terms of service, and that you agree to them.

Figure 3. *Investigate your MP's Expenses* (The Guardian)

What is data journalism? I could answer, simply, that it is journalism done with data. But

## News Front Page

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Page last updated at 21:32 GMT, Wednesday, 29 July 2009 22:32 UK

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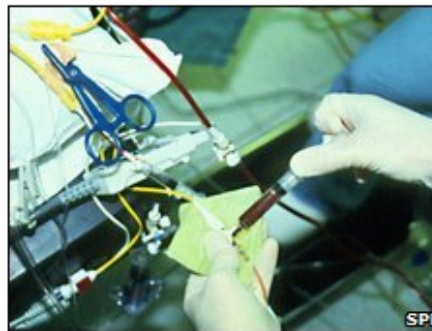
## Heart surgery 'more successful'

**Outcomes for adult cardiac patients in the UK have improved significantly since publication of information on death rates, research suggests.**

The study also found more elderly and high-risk patients were now being treated, despite fears surgeons would not want to take them on.

It is based on analysis of more than 400,000 operations by the Society for Cardiothoracic Surgery.

Experts said all surgical specialties should now publish data on death rates.



Heart surgery can be extremely complicated

### SEE ALSO

- ▶ [Death data 'cuts risky surgery'](#)  
14 Jan 05 | [Health](#)

### RELATED INTERNET LINKS

- ▶ [Royal College of Surgeons of England](#)
- ▶ [Society for Cardiothoracic Surgery of GB and Ireland](#)

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### TOP HEALTH STORIES

- ▶ [Stem cell method put to the test](#)
- ▶ [Hospitals 'eyeing private market'](#)
- ▶ [Low vitamin D 'Parkinson's link'](#)

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## PUBLIC SECTOR INFORMATION



Image: <http://addurl.xyz/Government/>

The White House

Office of the Press Secretary

 E-Mail

 Tweet

 Share



For Immediate Release

May 09, 2013

## **Executive Order -- Making Open and Machine Readable the New Default for Government Information**

EXECUTIVE ORDER

-----

### MAKING OPEN AND MACHINE READABLE THE NEW DEFAULT FOR GOVERNMENT INFORMATION

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. General Principles. Openness in government strengthens our democracy, promotes the delivery of efficient and effective services to the public, and contributes to economic growth. As one vital benefit of open government, making information resources easy to find, accessible, and usable can fuel entrepreneurship, innovation, and scientific discovery that improves Americans' lives and contributes significantly to job creation.

Decades ago, the U.S. Government made both weather data and the Global Positioning System freely available. Since that time, American entrepreneurs and innovators have utilized these resources to create navigation systems, weather newscasts and warning systems, location-based applications, precision farming tools, and much more, improving Americans' lives in countless ways and leading to economic growth and job creation. In recent years, thousands of Government data resources across fields such as health and medicine, education, energy, public safety, global development, and finance have been posted in machine-readable form for free public use on Data.gov. Entrepreneurs and innovators have continued to develop a vast range of useful new products and businesses using these public information resources, creating good jobs in the process.



## I

*(Legislative acts)*

## DIRECTIVES

**DIRECTIVE 2013/37/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**  
**of 26 June 2013**  
**amending Directive 2003/98/EC on the re-use of public sector information**  
**(Text with EEA relevance)**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 114 thereof,

Having regard to the proposal from the European Commission,

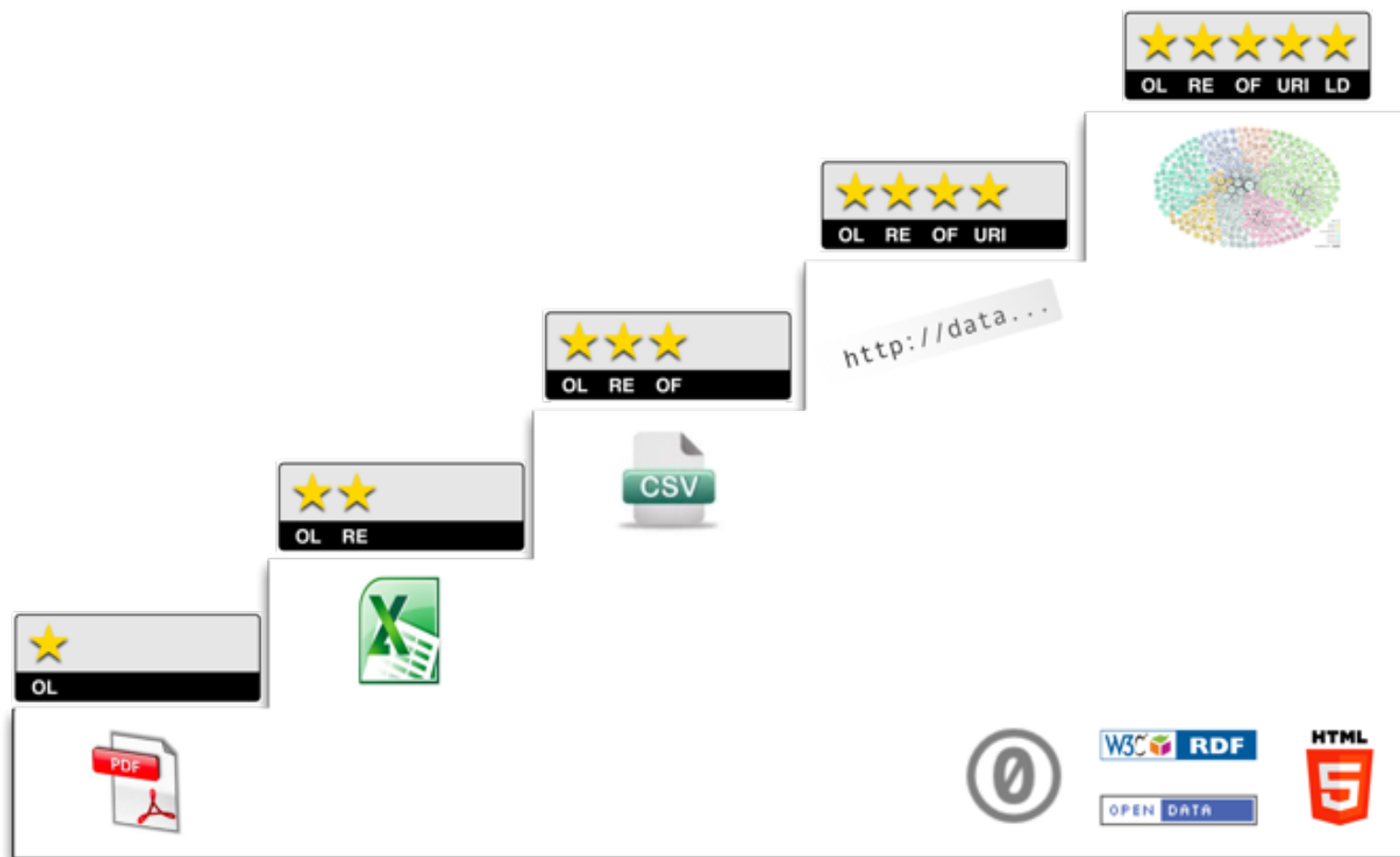
After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee <sup>(1)</sup>

technical or financial constraints, and which promote the circulation of information not only for economic operators but also for the public, can play an important role in kick-starting the development of new services based on novel ways to combine and make use of such information, stimulate economic growth and promote social engagement. However, this requires a level playing field at Union level in terms of whether or not the re-use of documents is authorised, which cannot be achieved by leaving it subject to the different rules and practices of the Member States or the public sector bodies concerned.

(4) Allowing re-use of documents held by a public sector

# HOW TO OPEN DATA?



<http://5stardata.info>

- ★ make your stuff available on the Web (whatever format) under an open license<sup>1</sup>
- ★★ make it available as structured data (e.g., Excel instead of image scan of a table)<sup>2</sup>
- ★★★ use non-proprietary formats (e.g., CSV instead of Excel)<sup>3</sup>
- ★★★★ use URIs to denote things, so that people can point at your stuff<sup>4</sup>
- ★★★★★ link your data to other data to provide context<sup>5</sup>

<http://5stardata.info>





### **Keep it simple.**

Start out small, simple and fast. There is no requirement that every dataset must be made open right now. Starting out by opening up just one dataset, or even one part of a large dataset, is fine – of course, the more datasets you can open up the better.



### **Engage early and engage often.**

Engage with actual and potential users and re-users of the data as early and as often as you can, be they citizens, businesses or developers. This will ensure that the next iteration of your service is as relevant as it can be.



### **Address common fears and misunderstandings.**

This is especially important if you are working with or within large institutions such as government. When opening up data you will encounter plenty of questions and fears. It is important to (a) identify the most important ones and (b) address them at as early a stage as possible.

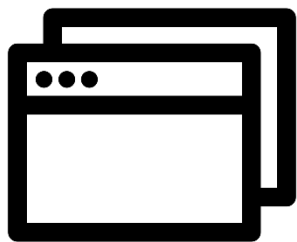


- ➔ Choose your dataset(s)
- ➔ Apply an open license
- ➔ Make the data available (in bulk and in a useful format; consider API)
- ➔ Make it discoverable





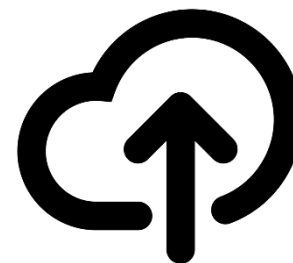
## WHERE TO PUBLISH YOUR OPEN DATA?



**YOUR WEBSITE**



**THIRD-PARTY SERVICE**



**CONSIDER  
A SPECIALIZED TOOL**



**ckan**

The open source data portal software

Services ▾

Case studies ▾

Feature Tour

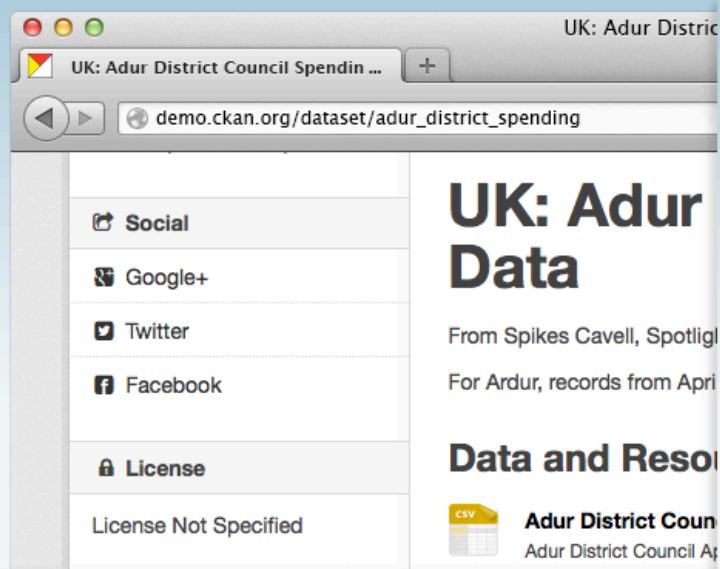
Developers ▾

FAQ

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Blog

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## CKAN, the world's leading open-source data portal platform

CKAN is a powerful data management system that makes data **accessible** – by providing tools to streamline **publishing**, sharing, **finding** and **using** data. CKAN is aimed at data publishers (national and regional governments, companies and organizations) wanting to make their data open and available.

[✓ Take Tour](#)[🛒 Get CKAN](#)[▶ Live Demo](#)

### Feature Overview



Complete catalog system with easy to use web interface and a powerful API



Strong integration with third-party CMS's like Drupal and WordPress



Data visualization and analytics



Workflow support lets departments or groups manage their own data publishing



Fine-grained access control



Integrated data storage and full data API



Federated structure: easily set up new instances with common search

[Read More](#)

### Support and Hosted Solutions

CKAN is open source and can be downloaded and used for free. Users can also get hosting and support from a range of suppliers.

A full-time professional development team at the Open Knowledge Foundation maintains CKAN and can provide full support and hosting with SLAs.

[Read More](#)



## Publish & find datasets

**Publish** datasets via import or through a web interface. **Search** by keyword or filter by tags. See **dataset information** at a glance. Full change **history** lets you easily undo changes or view old versions.



## Store & manage data

**Store** the raw data and metadata. **Visualise** structured data with interactive tables, graphs and maps. Get statistics and usage metrics for your datasets. Search **geospatial** data on a map by area.



## Engage with users & others

**Federate** networks with other CKAN nodes. **Theme** with CSS or integrate with a CMS. Build a **community** with extensions that allow users to comment on and follow datasets.



## Customise & extend

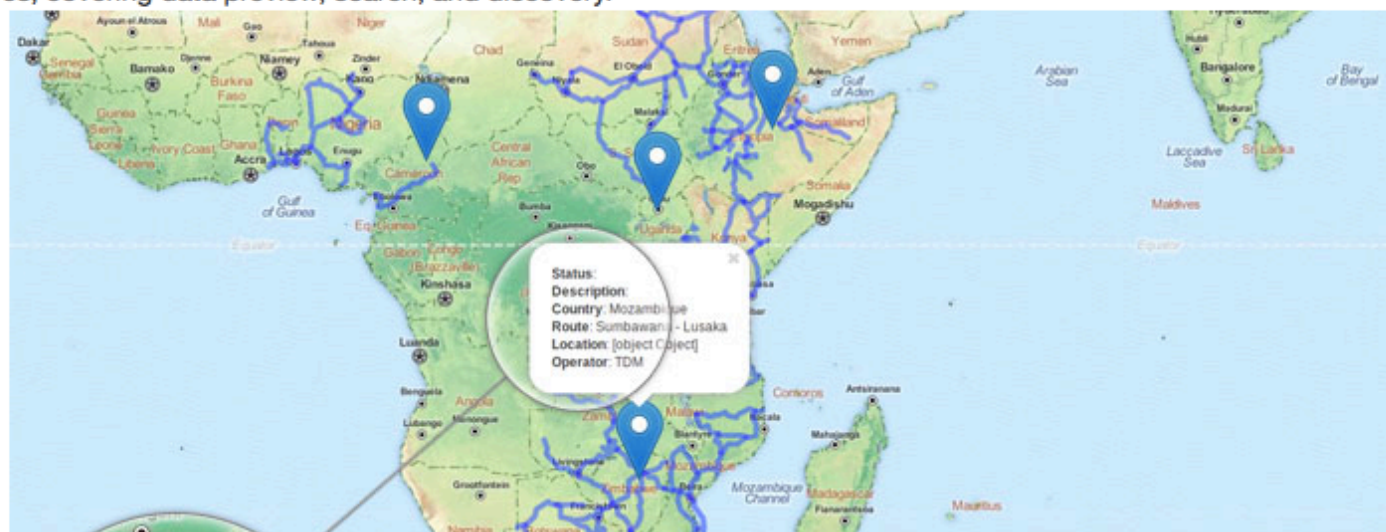
Use the **API**'s rich programming interface, and benefit from over 60 **extensions** including link checking, comments, and analytics. CKAN's **Open Source** licence allows you to download and run it for free.

# Geospatial

CKAN has advanced geospatial features, covering data preview, search, and discovery.

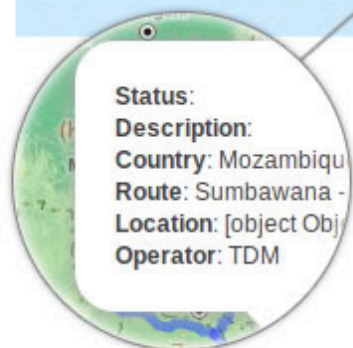
## Preview

Where structured data with location information is loaded into CKAN's DataStore, CKAN can plot the data on an interactive map. The screenshot shows a map view of a sample dataset, with markers showing individual data points and full details shown for records as they are selected.



## Search

CKAN can understand a location associated with a dataset, and use this to offer geospatial search capabilities via the web interface and API. A user searching for datasets can filter the results by geographical location, specifying a bounding box to limit the area they are interested in. CKAN understands different co-ordinate geometries and parses location information accordingly.



## Discovery

To ensure your datasets can be easily integrated with other systems, CKAN includes tools to import geo-coded metadata in a number of formats and make it queriable ('discoverable') according to the INSPIRE standard. It can import major metadata schemas such as ISO19139, GEMINI 2.1 and FGDC can handle records hosted in a variety of ways, including the geospatial CSW standard, WAFs, ArcGIS portals, Geoportal Servers and Z39.50 databases. CKAN can also serve geospatial packages via its own CSW interface. The architecture is extensible, making it easy to support other standards and distribution services. For more detailed documentation on CKAN's geospatial functionality, see the [Geospatial Capabilities documentation](#).

**Thank you!**

Paulo Rupino da Cunha  
*rupino@ipn.pt*



CONTACTS  
Instituto Pedro Nunes  
Rua Pedro Nunes  
3030-199 Coimbra, Portugal  
T +351 239 700 962  
F +351 239 700 965  
[www.ipn.pt](http://www.ipn.pt)