Foundations for Open Data
Data management and publication
Not all the literature that researchers want to find, retrieve, and read should be called knowledge. We want access to serious proposals for knowledge even if they turn out to be false or incomplete. We want access to serious hypotheses even if we're still testing them and debating their merits. We want access to the data and analysis offered in support of the claims we're evaluating. We want access to all the arguments, evidence, and discussion. We want access to everything that could help us decide what to call knowledge, not just to the results that we agree to call knowledge.

If access depended on the outcome of debate and inquiry, then access could not contribute to debate and inquiry.

_Peter Suber, Open Access_
Welcome :) 


<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>08h45</td>
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<tr>
<td>10h15 - 10h30</td>
<td>Coffee and Catch-up</td>
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<td>12h30 - 13h30</td>
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Day 1: Introduction to open data

Day 2: Data classification and preparation

Day 3: Harmonising disparate datasets

Day 4: Cross-organisation collaboration

Day 5: Dashboards and data release policy
Day 1: Introduction to open data
A data story
Data challenges opinion, 
And that is *always* political.
Case study: Informed journalism

ONS, FT
Journalism in an age of “fake news” ...
Retail industry

Sales by retailers in Great Britain directly to end consumers, including spending on goods (in store and online) (Retail Sales Index) and spending on services (Index of Services). The industry as a whole is used as an indicator of how the wider economy is performing and the strength of consumer spending.
Making a request

If you'd like to request data, please contact us using the relevant email address. Please be as clear as possible about what it is you would like, including any time frames:

- Annual Survey of Hours and Earnings – earnings@ons.gsi.gov.uk
- Annual Business Survey – abo@ons.gsi.gov.uk
- R&D surveys – rand@ons.gsi.gov.uk
- Internet access – esociety@ons.gsi.gov.uk
- ICT activity – ecommerce@ons.gsi.gov.uk
- Census – census.customer.services@ons.gsi.gov.uk
- Social surveys – socialsurvey@ons.gsi.gov.uk
- Trade – trade@ons.gov.uk
- Inter Departmental Business Register (IDBR) – idbr@ons.gsi.gov.uk
- Migration & Population Statistics - pop.info@ons.gov.uk

For anything not covered in this list, contact info@ons.gsi.gov.uk.

Please note, we may charge for some services, in line with our charging policy. Charges can be made depending on the amount of time taken to develop the analyses and undertake quality and disclosure control processes. For more information on the services available, take a look at our publication scheme.
Left behind: can anyone save the towns the economy forgot?

Soaring antidepressant usage, falling life expectancy: Blackpool embodies much of what is going wrong on the fringes of Britain.

Sarah O'Connor in Blackpool NOVEMBER 16, 2017

Listen to this article
Powered by Curio.to

The elephants that lumbered up and down Blackpool’s beach have long gone.
Knowledge requires management
Data are *not* oil.
Do we *know* what we know?
Do we *share* what we know?
Do we *use* what we know?
Losing our past, losing our future
The best defence against the loss of knowledge is to share it as widely as possible. Open knowledge survives. Private knowledge does not.
Open by default
“Open Data” are made available to the public free of charge, without registration or restrictive licenses, for any purpose whatsoever (including commercial purposes), in electronic, machine-readable formats that ensure data are easy to find, download and use.

- Data must be legally open
- Data must be technically open
Open by default assumes that – even though the data has already served the purpose for which it was collected – it may still have value to others.
Governments publishing open data
## Datos

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**HISTORIAS DE DATOS**

¿Has usado datos abiertos para crear herramientas?
### Indicadores Clave/ Tasa de ocupación en la industria manufacturera

#### Datos y Recursos

- **Serie estadística sobre la magnitud de la tasa de ocupación en la industria manufacturera**

#### Metadatos

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WELCOME TO EDO STATE OPENDATA PORTAL

This is the official data repository for Edo State Government. It provides an easy way to find, access and reuse public datasets from the State Government, international organizations and non-state actors.

RECENTLY UPDATED DATASETS

- List of Fire Fighting Rescue Operators and Numbers of Available Vehicles
  This data set is a list of Fire Fitting Rescue Operators in Edo State and the number of vehicles...

- List of Various Motor Parks
  This is a data set of various Motor Parks in Edo State. It gives details as to their addresses...

- List of the Traffic Control and Management Offices
  The Edo State Traffic Control and Management Agency office is made available in this data set....

- Edo State Secondary School Mapping for 3 LGAs
  Dataset contains statistical data of secondary schools located in Oredo, Egor and Ikpoba-Okha...
Projects Carried Out in ESIEC From 2009 -2014

This data-set provides a list of contracts carried out in the Edo State Independent Electoral Commission from 2009 to 2014. Stated in the data is the project title, contractor, and the contract amount involved.

List of Fire Fighting Rescue Operators and Numbers of Available Vehicles

This data set is a list of Fire Fitting Rescue Operators in Edo State and the number of vehicles each operator has available. It’s also states the location of the operators

List of the Traffic Control and Management Offices.

The Edo State Traffic Control and Management Agency office is made available in this data set.
HEALTH STATISTICS

Identify health facilities, compare regional data, and visualize improvements in the health sector.

Education
Datasets from different institutions under the education sector.

Health
Datasets from different institutions under the health sector.

National Statistics
Datasets from Tanzania National Bureau of Statistics (NBS).

Water
Datasets from different institutions under the water sector.

Most recent datasets

- **National Form Six Examinations Schools Ranking**
  This Dataset shows schools ranking according in the order of performance in National Form Six Examination from 2015 to date. Read More...

- **Teachers Examinations Results**
  This data-set provides the statistics for consolidated results for the final examinations for all Teachers Colleges in Tanzania. Read More...
Consolidated Primary School Data with Grade and Gender
This dataset comprise number of pupils enrolled in primary schools for the year 2017 and examination data for the Primary School Leaving Examination Data 2016.

Consolidated Primary School Data with Age and Gender
This dataset comprise consolidated Primary school data with age and gender within Tanzania mainland.

Consolidated Secondary School Data with Grade and Gender
This dataset describes consolidated Secondary school data with grade and gender within Tanzania mainland.

Consolidated Secondary School Data with Age and Gender
This dataset describes consolidated Secondary school data with age and gender within Tanzania mainland.

Primary School Enrolment by Sex and Age
This dataset represents school-based enrolment dis-aggregated by Sex and Age.
Live Flood Warning map

The live flood warning map shows the locations where Flood Alerts, Flood Warnings or Severe Flood Warnings are in force. The Environment Agency issues flood warnings when we expect flooding to occur. The map is updated with information from our flood warning systems every 15 minutes.
How is open data used?
House sales data from the UK Land Registry
Annual sales of £76m and profit of £25m
86% of its sales are subscriptions from 19,000 estate agents
Residential property search comes with all sorts of stuff to help you make a decision about how good a deal you’re getting:

- Comparative pricing
- Historical valuations
- Regional comparisons
- Price trends
Residents can find out:

- What their neighbours are like
- Commute times
- School ratings
- Crime levels

Open data has been a tremendous boon for residential property search.
Acquired for $930 million by Monsanto in October 2013
Uses 60 years of detailed crop yield data, weather observations from one million locations in the United States and 14 terabytes of soil quality data
Helps farmers improve their profits by making better informed operating and financing decisions.
Knowledge | Interoperability | Discovery
Open data is the public dissemination of all or part of the information from a knowledge management system.

Requirements include:

• Preparation and presentation of that data for reuse is critical;
• Adherence to metadata (structure and descriptive), as well as ontologies to describe aboutness;
• Machine-readability to promote interoperability;
• Persistent URIs;
Case study: Sharing knowledge

Wikipedia and Our World In Data
“There are decades where nothing happens; and there are weeks where decades happen.”
Sharing knowledge in an imperfect world.
## Monthly Overview

### Reading
- **Total Page Views**: 661M
  - February: -12.91% month over month
  - Year Total (2017): 9B
  - Year Average (2017): -6.55% year over year

- **Unique Devices**: 83M
  - February: (no data last month)
  - Year Average (2017): 63M
  - Year Total (2017): +27.83% year over year

- **Page Views By Country**
  - France: 100M→1B
  - Canada: 10M→100M
  - Belgium: 10M→100M
  - United States: 10M→100M

### Contributing
- **New Registered Users**: 15K
  - February: -17.26% month over month
  - Year Average (2017): 12K
  - Year Total (2017): +14.59% year over year

- **Edits**: 861K
  - February: -14.06% month over month
  - Year Average (2017): 11M
  - Year Total (2017): +7.49% year over year

- **Editors**: 60K
  - February: -10.08% month over month
  - Year Average (2017): 720K
  - Year Total (2017): -2.76% year over year

### Content
- **Edited Pages**: 313K
  - February: -15.64% month over month
  - Year Average (2017): 4M
  - Year Total (2017): +9.06% year over year

- **Net Bytes Difference**: 176MB
  - February: -19.07% month over month
  - Year Average (2017): 180MB
  - Year Total (2017): -0.97% year over year

- **Absolute Bytes Diff**: 355MB
  - February: -17.09% month over month
  - Year Average (2017): 357MB
  - Year Total (2017): +3.44% year over year
Our world is changing

Explore the ongoing history of human civilization at the broadest level, through research and data visualization.

A web publication by Max Roser.
Knowledge | Interoperability | Discovery
Interoperability promotes mashups

Ensuring data can be combined with other data promotes collaboration and breaks down silos.

This requires:
- interoperable technology which promotes data discovery,
- operational capacity to use that data, and
- the processes in place to demand data sharing.
Data release comes with ethical responsibilities.

When data about individuals is de-anonymised, the consequences can be not only embarrassing, but life-threatening.
Case study: Business transparency

France, USASpending, UN ISIC
OpenCorporates, SpendNetwork
Business transparency isn’t only about offshore tax havens.
Partagez, améliorez et réutilisez les données publiques

MEILLEURES RÉUTILISATIONS

DATA- STORY #3 : MESURER LA PRÉCARITÉ DES TERRITOIRES POUR MIEUX COMPENSER LES ÉTABLISSEMENTS DE SANTÉ

L'actualité en données.
Base Sirene des entreprises et de leurs établissements (SIREN, SIRET)

La base Sirene contenant des données à caractère personnel, l’Insee attire votre attention sur les obligations légales qui en découlent:

- Le traitement de ces données relève des obligations de déclaration de la Loi 78-17 du 6 janvier 1978 modifiée, dite Loi CNIL :
  https://www.cnil.fr/fr/loi-78-17-du-6-juin-1978-modifiee
- Selon votre usage du jeu de données, il est de votre responsabilité de tenir compte du statut de diffusion le plus récent de chaque personne physique.
  En effet, l’article A123-96 du code de commerce dispose que :
  "Toute personne physique peut déterminer soit directement lors de ses formalités de création ou de modification, soit par lettre adressée au directeur général de l’institut national de la statistique et des études économiques, que les informations du répertoire la concernant ne puissent être utilisées par des tiers autres que les organismes habilités au titre de l’article R. 123-224 ou les administrations, à des fins de prospection, notamment commerciale."

Fichiers : Trois types de fichiers packagés (format ZIP) sont mis à disposition (1 fichier stock et 2 fichiers de mises à jour mensuelles ou quotidiennes, France entière). Chaque fichier compacté (Format ZIP) contient un fichier de données en format CSV.

Le fichier stock et le fichier des mises à jour mensuelles sont déposés le premier jour de chaque mois avec les données (dessin de fichier L2) au dernier jour du mois précédent. Le fichier des mises à jour mensuelles étant au même dessin que le fichier stock, vous pouvez faire le choix chaque mois, d’annuler et remplacer le fichier stock par le nouveau fichier stock ou de l’actualiser avec le fichier des mises à jour mensuelles. Tous les mouvements relatifs à un établissement au cours du mois sont agrégés, rendant l’information facilement utilisable.

Le fichier des mises à jour quotidiennes est déposé dans la nuit suivant la journée de gestion qu’il concerne (dessin de fichier XL2).

NB : Les tenors sont déposés un peu plus tardivement début janvier et début juillet en raison d’opérations de mise en concordance semestrielle de la base de diffusion.

Le site de l’Insee www.sirene.fr fournit des informations sur le contenu de ces bases, ainsi que la documentation associée et une Foire Aux Questions pour vous aider, comprenant plus de 50 questions-réponses.

Pour toute demande de création, de modification ou de changement concernant votre situation administrative, nous vous invitons à contacter le Centre de formalités des entreprises dont vous dépendez : https://www.service-public.fr/professionnels-entreprises/vosdroits/F24023

Resources

ZIP
Sirene : mise à jour quotidienne du 13 mars 2018
Last modified on Wednesday, March 14, 2018

ZIP
Sirene : mise à jour quotidienne du 12 mars 2018
Last modified on Tuesday, March 13, 2018
ISIC Rev.4

ISIC Rev.4 has been officially released on 11 August 2008.

As of this date, all previous draft versions become obsolete.

The structure on the UN Classifications website has been updated accordingly.

The following ISIC Rev.4-related information is currently available in the Classifications registry:

**Browse:**

Browsing the classification on the website provides immediate access to related information for each code, such as links to other classifications, case law decisions, etc.

- ISIC Rev.4 structure *(incl. explanatory notes)*
- Correspondence tables between ISIC Rev.4 and ISIC Rev.3.1
- Correspondence tables between ISIC Rev.3.1 and ISIC Rev.4
- Correspondence tables between ISIC Rev.4 and CPC Rev.2
- Correspondence tables between ISIC Rev.4 and NACE Rev.2
- Correspondence tables between ISIC Rev.4 and NAICS-USA 2002
- Correspondence tables between ISIC Rev.4 and NAICS-USA 2012
- Correspondence tables between ISIC Rev.4 and ISIC Rev.3.1
- Correspondence tables between ISIC Rev.3.1 and ISIC Rev.4
- Correspondence tables between ISIC Rev.4 and CPC Rev.2
- Correspondence tables between ISIC Rev.4 and NACE Rev.2
- Correspondence tables between ISIC Rev.4 and NAICS-USA 2002
- Correspondence tables between ISIC Rev.4 and NAICS-USA 2012
- Correspondence tables between ISIC Rev.4 and ISIC Rev.3.1

**Download:**

- ISIC Rev.4 publication (PDF) - English
- ISIC Rev.4 publication (PDF) - French
- ISIC Rev.4 publication (PDF) - Spanish
- ISIC Rev.4 publication (PDF) - Russian
- ISIC Rev.4 publication (PDF) - Arabic
- ISIC Rev.4 publication (PDF) - Chinese
- ISIC Rev.4 publication (PDF) - Japanese

- ISIC Rev.4 structure and explanatory notes - English (MS Access) *
- ISIC Rev.4 structure and explanatory notes - Chinese (MS Access) *
- ISIC Rev.4 structure - English (codes and titles only)
- ISIC Rev.4 structure - French (codes and titles only)
- ISIC Rev.4 structure - Spanish (codes and titles only)

Other related files:
- Correspondence tables between ISIC Rev.4 and ISIC Rev.3.1
- Correspondence tables between ISIC Rev.3.1 and ISIC Rev.4
- Correspondence tables between ISIC Rev.4 and CPC Rev.2
- Correspondence tables between ISIC Rev.4 and NACE Rev.2
- Correspondence tables between ISIC Rev.4 and NAICS-USA 2002
- Correspondence tables between ISIC Rev.4 and NAICS-USA 2012
- Correspondence tables between ISIC Rev.4 and ISIC Rev.3.1

* includes corrections to the printed version
** not an official UN language

(Page last updated: 23 April 2014)
You are viewing FY 2018 spending by Budget Function

Choose a budget function below to start your exploration.

See the breakdown by: Budget Function

Social Security 22.1%

Medicare 19.9%

Net Interest 13.3%

Income Security 9.5%

Health 13.2%

GeneralGov... 5.0%

Veterans... 4.4%

Community... 2.9%

Education... 2.7%

Admin... 1.3%

Int... 0.7%

All dollar amounts shown here represent agency reported obligated amounts.

FY 2018 OBLIGATED AMOUNT
$1.2 Trillion
Data as of December 31, 2017
Use the Keyword Search to get a broad picture of award data on a given theme. To learn more about the fields the keyword search matches to, read our FAQ entry on the topic. For a more targeted search, try our Advanced Search tool, whose extensive filters let you find more precise data sets.

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Warning!
Naked transparency coming.
WHYTHAWK LIMITED

Company Number 06583455
Status Active
Incorporation Date 2 May 2008 (almost 10 years ago)
Company Type Private Limited Company
Jurisdiction United Kingdom
Registered Address 8c High Street
Southampton
SO14 2DH
Hampshire
United Kingdom

Industry Codes 73.20: Market research and public opinion polling (UK SIC Classification 2007)
73.20: Market research and public opinion polling (European Community NACE Rev 2)
7320: Market research and public opinion polling (UN ISIC Rev 4)

Latest Accounts Date 2017-05-01
Annual Return Last Made Up 2016-05-02
Directors / Officers GAVIN CHAIT, director, 2 May 2008-
Inactive Directors / Officers INCORPORATE SECRETARIAT LIMITED, secretary, 2 May 2008–2 May 2008

Sometimes open data really is about roads, refuse and rates ...
Knowledge | Interoperability | Discovery
Discovering new things from old data

Not all data are released immediately, and some data are forgotten.

Discovery and release requires:

- Formal mechanisms for query and release,
- Legal support for publication challenges, and
- Ombudsman and ethical support to both publishers and requestors.

Repurposing old data increases engagement and investment.
Case study: Promoting discovery

WhatDoTheyKnow, Pikhaya
In the wrong place, even the best business will fail ...
Get answers from the government and public sector

Make a request for information to a UK public authority: by law, they have to respond

Browse 461,675 requests to 23,180 authorities

How it works

You have the right to request information from any publicly-funded body, and get answers. WhatDoTheyKnow helps you make a Freedom of Information request. It also publishes all requests online.

1. Use this site to make your request for information – we’ll show you how.
2. We’ll drop you an email as soon as your request gets a response.
3. We publish it all online. Great! Now you have your answer, and everybody else can access it too.
This person's Freedom of Information requests (approximately 1145)

Complete Non-Residential / Business Property Rates Data (Section 31)
Response by Doncaster Borough Council to Gavin Chait on 13 March 2018.
Awaiting classification.

Complete Non-Residential / Business Property Rates Data (Data Quality, Q1 2018)
Response by Eastleigh Borough Council to Gavin Chait on 9 March 2018.
Awaiting classification.

Complete Non-Residential / Business Property Rates Data (Q1 2018)
Response by St Edmundsbury Borough Council to Gavin Chait on 9 March 2018.
Awaiting classification.

Complete Non-Residential / Business Property Rates Data (Data Quality, Q1 2018)
Response by Bristol City Council to Gavin Chait on 8 March 2018.
Awaiting classification.

You sent us a Freedom of Information request on 12/02/2018. Your request number is CRN00155371. Our reply to your request is attached. This response...
City Centre, Bath, BA1

Filter:
Retail > 80 sqm < 140sqm

Average rates for BA1:
£1,850 pcm

Average rent for BA1:
£2,500 pcm

Choose metrics
- Greater than 80 sqm
- Less than 140 sqm
- Heatmap: Rates
Data has a lifecycle
Open data is data that can be freely used, reused and redistributed by anyone - subject only, at most, to the requirement to attribute and sharealike.

And how do we find the data we want?
## SUMMARY DESCRIPTIVE METADATA TABLE

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>RECOMMENDED</th>
<th>OPTIONAL</th>
</tr>
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<tr>
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<tr>
<td>Description</td>
<td>Terms of use</td>
<td>Update frequency</td>
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<tr>
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</tr>
<tr>
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<td>Related resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regulations</td>
</tr>
</tbody>
</table>
Day 2: Data classification and presentation
## SUMMARY DESCRIPTIVE METADATA TABLE

<table>
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<td>Related resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regulations</td>
</tr>
</tbody>
</table>
Data hierarchy

★  Available on the web (in any format) but with an open licence;
★★ Available as machine-readable structured data in a proprietary format (e.g. Excel instead of image scan of a table);
★★★ Available as machine-readable structured data but in a non-proprietary format (e.g. CSV instead of Excel);
★★★★ All the above plus standards from W3C (RDF and SPARQL) to identify data uniquely so that others can access and reference this live data;
★★★★★ All the above plus cross-link data to other data to provide context;
Machine-readable data
Exercise - restructuring data

### Analyze with Excel Pivot Tables

<table>
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<th>Customer Name</th>
<th>Additional Field 1</th>
<th>Additional Field 2</th>
<th>sEmail</th>
<th>sCity</th>
<th>sPhone1</th>
<th>Total</th>
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<td></td>
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<tr>
<td>Empire Automobile Repairs</td>
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</tbody>
</table>

### FieldList Toggle

- **Field List Toggle**
- **Buttons**: New, Modify, Erase, Restore
- **Field Heedness**: Show, Hide

### PivotTable Field List

- **Choose fields to add to report:**
  - Customer Name
  - Additional Field 1
  - Additional Field 2
  - sEmail
  - sCity
  - sPhone1
  - Total
- **Drag fields between areas:**
  - **Row Labels**:
    - Customer Name
    - Additional Field 1
    - Additional Field 2
    - sEmail
    - sCity
  - **Values**:
    - Total

---

Update

[Image of Excel Pivot Table interface with highlighted fields and options]
Analyse with Google Tables
Exercise - analysis using pivot tables

Correlation is not causation
Day 3: Harmonising disparate data
## Project - prepare our data


### SUMMARY DESCRIPTIVE METADATA TABLE

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<td>Validity</td>
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<tr>
<td></td>
<td></td>
<td>Related resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regulations</td>
</tr>
</tbody>
</table>
CSV looks easy, but it can be hard to make a CSV file that other people can read easily.

CSVLint helps you to check that your CSV file is readable. And you can use it to check whether it contains the columns and types of values that it should.

Just enter the location of the file you want to check, or upload it. If you have a schema which describes the contents of the CSV file, you can also give its URL or upload it. Read more...
Day 4: Cross-organisation collaboration
Case study: Engaging the public

Flood Network, FixMyStreet
Citizens have more local knowledge than their government ever will.
Flood Network gives you live data, showing where water levels are high. Buy our sensors or use your own. Even data from an API, we don’t. We share this with flood modelers and forecasters to improve our warning system.
FixMyStreet

Report, view, or discuss local problems

(like graffiti, fly tipping, broken paving slabs, or street lighting)

Enter a nearby UK postcode, or street name and area:

e.g. ‘B2 4QA’ or ‘Tib St, Manchester’

or locate me automatically

How to report a problem

1. Enter a nearby UK postcode, or street name and area
2. Locate the problem on a map of the area
3. Enter details of the problem
4. We send it to the council on your behalf

Recently reported problems

- Rubbish dumped
  15:59 today

- Dangerous pothole
  15:56 today

- Flytipping Hotspot
  15:51 today

- Huge pothole on Thurland Road, SE16
  15:40 today

- Pothole causing serious vibrations - traffic lights on Kent House Road/Lennard Road
  15:48 today, last updated 15:53 today

FixMyStreet Pro

The one-stop street reporting service for councils.

Incorporate FixMyStreet with your council's own

Huge pothole on Thurland Road, SE16

Reported via iOS in the Potholes category by Dave Rinaldi at 15:49 today
Sent to Southwark Borough Council 1 minute later

Huge pothole on Thurland Road, SE16, by the Co-Op. Very dangerous for cyclists as it extends to the centre of the road, and there are often cars parked at the side of the road, so cyclists are forced into the other lane (impossible to avoid the pothole on the inside, as this is where the parked cars are). Would be dangerous to cycle over the pothole, you'd be likely to come off your bike. Also it's just before a T-junction and the view into the side road is often obscured by the parked cars, so risk of collision with cars turning into Thurland from Spa Rd is high. Please fix ASAP before someone is seriously injured! Thank you.

Provide an update

Please note that updates are not sent to the council. Your information will only be used in accordance with our privacy policy.

Photos

Drag and drop photos here or click to upload

Update

Please write your update here
Exercise - merge tables

Some guidance:

<table>
<thead>
<tr>
<th>Salesperson</th>
<th>Company</th>
<th>Product</th>
<th>Price</th>
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<tr>
<td>Kirti Whitt</td>
<td>MARS Industries</td>
<td></td>
<td></td>
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<tr>
<td>July Hubert</td>
<td>The Lanford Lunch Box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeri Clement</td>
<td>Minuteman Cafe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lali Barden</td>
<td>Springfield Beans</td>
<td></td>
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</tr>
<tr>
<td>Kirti Whitt</td>
<td>Smith and Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeri Clement</td>
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<tr>
<td>Stefanie Schultz</td>
<td>Cyberdyne Systems</td>
<td></td>
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<tr>
<td>July Hubert</td>
<td>Osato Chemicals</td>
<td></td>
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</tr>
<tr>
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<td>Klimpy's</td>
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<td></td>
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<tr>
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<td>Corellian</td>
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<tr>
<td>T</td>
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<td></td>
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</tr>
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</table>

**Merge using a common column**
The Town Hall Problem
and a requirement for unique identifiers
Day 5: Dashboard and data release policy
Case study: Sharing experience

FiveThirtyEight, Github
Sharing skills and techniques.
The Pennsylvania 18th Result Tells Us What Everything Has Been Telling Us For A While
By Nathaniel Rakis

March Madness
The Tournament’s Most Likely First-Round Upsets
By Will Finn

Even After 22 Trillion Digits, We’re Still No Closer To The End Of Pi
By Oliver Roeder

Emergency Politics Podcast: Tillerson’s Out. What Now?
By Daveandclock

March Madness Predictions
Updated 13 hours ago

Men’s tournament

TXSU 58%
NC Central 42%
Syracuse 59%
Arizona St. 41%
Rhode Island 58%
Oklahoma 42%
Tennessee 91%
Wright State 9%

How Popular Is Donald Trump?
Updated 2 hours ago

Disapprove 54.0%
Approve 40.4%

NBA Predictions
Updated 12 hours ago

Upcoming games

Bucks over Magic 66%
Celtics over Wizards 75%
Fifty years of California reds
Average price in recent auctions of a 750 ml bottle of red wine vs. vintage, by California wine-growing region

Hoverboard Christmas
Number of injuries sustained daily on skateboards, scooters and powered skateboards and scooters (including hoverboards) for every day with at least one injury

How things changed when Simon left 'Idol'
Average contestant performance rating on WhatNotToSing.com vs. contestant’s finishing place, before and after Simon Cowell left the show

The sweet spot
Scoring value (LWTS) of batted balls based on launch angle and speed off the bat, 2015 MLB

The most dominant swimmer this century
Standard deviations of the fastest 200 men and women’s times at each distance since 2000 from the average of the best times of the top 50 swimmers

The most popular national parks
National parks ranked by number of visitors in a given year
## Our Data
We’re sharing the data and code behind some of our articles and graphics. We hope you’ll use it to check our work and to create stories and visualizations of your own.

● UPDATING

<table>
<thead>
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<th>DATA SET</th>
<th>RELATED CONTENT</th>
<th>Date</th>
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<td>30 minutes ago</td>
</tr>
<tr>
<td>congress-generic-ballot</td>
<td>Are Democrats Or Republicans Winning The Race For Congress?</td>
<td>2 hours ago</td>
</tr>
<tr>
<td>trump-approval-ratings</td>
<td>How Popular Is Donald Trump?</td>
<td>2 hours ago</td>
</tr>
<tr>
<td>nba-carmelo</td>
<td>2017-18 NBA Predictions</td>
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<td></td>
<td>Trump’s Reluctant Voters Are Getting More Reluctant</td>
<td>Aug. 23, 2017</td>
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Open journalism

See how publications and data-driven journalists use open source to power their newsroom and ensure information is reported fairly and accurately.

- **fivethirtyeight / data**
  Data and code behind the articles and graphics at FiveThirtyEight
  ⭐ 3467  ⌨ 3419  📤 Jupyter Notebook

- **NYTimes / objective-c-style-guide**
  The Objective-C Style Guide used by The New York Times
  ⭐ 4557  ⌨ 1113

- **newsapps / beeswithmachineguns**
  A utility for arming (creating) many bees (micro EC2 instances) to attack (load test) targets (web applications).
  ⭐ 4549  ⌨ 485  🌐 Python

- **voxmedia / meme**
  Meme generator
  ⭐
Unavailable for legal reasons

Licenses for reuse and redistribution...
Dashboards and story-driven data

“Excellence in statistical graphics consists of complex ideas communicated with clarity, precision, and efficiency. Graphics reveal data.”
Edward Tufte
Case study: Without the effort

Gregor Aisch, Datawrapper
Not all pain is gain.
And, sometimes, easy is effective.
Live Election Forecast

Live forecast for the 2016 Presidential, Senate and House election.

I wrote about why we used the jittery gauges in my blog.

visit

Published Nov 8, 2016 on nytimes.com
with Nate Cohn, Amanda Cox, Josh Katz, Adam Pearce and Kevin Quealy.
How Bolt Came From Behind Again to Win Gold

By JOE MALIA and JESSICA MALIA  AUG 16, 2016

Usain Bolt of Jamaica became the first carrier to win the 100 meters at three Olympics. Bolt was slow out of the blocks, as is often the case. His reaction time of 0.155 is slower than all but one of his seven competitors.

Small down to see the race.

For other runners to create as much force, they would have to stay on the ground longer, but that would slow them down.

Bolt’s top-end speed is between 99 and 100 meters, and there was little (Gader) could do at the point most trainers drop to in their stride. But both in the lead on the 300m, they were still close.
Hurricane Irma Is One of the Strongest Storms In History

A quick breaking news response piece showing how Hurricane Irma compared to the strongest hurricanes in history. Featuring nice hurricane geo paths morphing into line charts sweetness by Adam Pearce.

Published Sep 9, 2017 on nytimes.com
with Karen Yourish & Adam Pearce
Enrich your stories with charts, in seconds.

CREATE A CHART
CREATE A MAP

Datawrapper makes it easy to create beautiful charts.
See for yourself how different newsrooms use our charts:
It all starts with your data...

Select your data (including header row/column) in Excel or OpenOffice and paste it in the text field on the right. You can also upload a CSV file from your computer.

If you just want to try Datawrapper, here's a list of some example datasets you can use:

The World's Energy Consumption

|------|------|------|------|------|------|------|------|------|------|

Datawrapper is developed by Datawrapper GmbH.
Make sure the data looks right

Please make sure that Datawrapper interprets your data correctly. In the table, number columns should be shown in blue, dates in green and text in black.

- First row as label
- Output locale
  - Defines decimal and thousand separators as well as translation of month and weekday names.

```
<table>
<thead>
<tr>
<th>Year</th>
<th>Coal consumption</th>
<th>Oil consumption</th>
<th>Natural gas consumption</th>
<th>Nuclear consumption</th>
<th>Hydrocar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>1,394.80</td>
<td>1,529.5</td>
<td>588</td>
<td>8.80</td>
<td>7.80</td>
</tr>
<tr>
<td>1966</td>
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<td>1,645.10</td>
<td>648.2</td>
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<td>14.20</td>
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<td>1,763.30</td>
<td>746.30</td>
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<td>11.70</td>
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<td>2,078.4</td>
<td>819.80</td>
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<td>17.5</td>
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<td>2,562.70</td>
<td>952.48</td>
<td>24.90</td>
<td>34.1</td>
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<tr>
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<td>1,479.5</td>
<td>2,256.6</td>
<td>1,081.1</td>
<td>45.80</td>
<td>59.6</td>
</tr>
<tr>
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<td>1,479.4</td>
<td>2,379.1</td>
<td>952.48</td>
<td>24.90</td>
<td>34.1</td>
</tr>
<tr>
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<td>2,562.70</td>
<td>1,081.1</td>
<td>45.80</td>
<td>59.6</td>
</tr>
<tr>
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<td>2,783.20</td>
<td>1,081.1</td>
<td>45.80</td>
<td>59.6</td>
</tr>
<tr>
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<td>2,723.5</td>
<td>1,081.1</td>
<td>45.80</td>
<td>59.6</td>
</tr>
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<td>2,592.20</td>
<td>1,081.1</td>
<td>45.80</td>
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<tr>
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<td>3,096.8</td>
<td>1,286.7</td>
<td>148.1</td>
<td>144.70</td>
</tr>
</tbody>
</table>
```
Embed your chart in your story.

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“The purpose of visualization is insight, not pictures”
Ben Shneiderman
Case study: African data journalism

StoryLab Academy, Mwananchi, Punch, BudgiT
A good story to tell
Shifting Sands

Lagos communities count the cost of dredging

Fine sand is fast disappearing along Lagos shorelines due to unchecked mining and dredging activities. *Bukola Adebayo*
Namna idadi ya wanaosusa ving'amuzi ilivyooongezeka kwa kasi

Viyo vya watoto njiti pasua kichwa Afrika Mashariki

Yanayofahamika kuhusu ukuaji wa elimu ya msingi Tanzania

Zaidi ya nusu ya wenye VVU Tanzania virusi vyavyafubazwa

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Namna idadi ya wanaosusa ving'amuzi ilivyooongezeka kwa kasi

3 months ago

Viyo vya watoto njiti pasua kichwa Afrika Mashariki

2 months ago

Yanayofahamika kuhusu ukuaji wa elimu ya msingi Tanzania

4 months ago
wanaojiunga kidato cha kwanza kupaa hadi theluthi mbili ya waliohitimu (asilimia 67.5) kutokea nusu ya wanafunzi (asilimia 49.5) mwaka 2005, shukran kwa uanzishwaji wa shule za sekondari za kata.

Kwa bahati mbaya kiwango cha wanaojiunga na kidato cha kwanza ilipomoka hadi wanafunzi watano kwa kila 10 (asilimia 52) mwaka 2015 kutokea takriban saba kwa kila 10 mwaka 2006.

Matumaini mapya yameanza kurudi mwaka 2015 baada tena ya idadi hiyo kupanda hadi wanafunzi saba kwa kila 10 wanaohitimu elimu ya msingi.

**Idadi ya wahitimu wa elimu ya msingi wanaofanikiwa kujinga na sekondari katika asilimia**

![Graph showing the trend of secondary education completion rates from 2003 to 2015.](image)

Chanzo: Ripoti ya takwimu za msingi za elimu Tanzania (Best) 2016

Hata pamoja na idadi ya wanaojiunga sekondari ikionekana kupaa kwa kasi kumukena na hoja juu ya uwezo wa wanafunzi wa sekondari.
FG’s 2018 Proposed Budget
Budget of Consolidation

- Budget Size: N8.61tn
- Oil Revenue: N2.44tn
- Non-Oil Revenue: N4.17tn
- N6.61tn Total Revenue
- N8.61tn Total Expenditure
- Statutory Transfers: N456bn
- Sinking Fund (Bonds): N220bn
- Debt Servicing: N2.01tn
- Recurrent Expenditure (Non-Debt): N3.49tn
- Capital Expenditure: N2.43tn
State of States Data

ABIA STATE

- Population: 3,727,347
- Land Area - Sqkm: 4,900
- FAAC 2016 (Bn) - NGN: 30,720,790,645
- IGR 2016 (Bn) - NGN: 12,694,839,539.4
- External Debt 2016 ($) : 41,290,438.92
- Domestic Debt 2016 - NGN: 53,525,312,006.51
- Budget Size 2017(Bn) - NGN: 102.6
- VAT 2016: 7,968,972,627.12
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  by academy

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- Multimedia Storytelling
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Doing Journalism with Data: First Steps, Skills and Tools

by Paul Bradshaw, Alberto Cairo, Steve Doig, Simon Rogers, Nicolas Kayser-Biril

Comprising of video lectures, tutorials, assignments, readings and discussion forums, this course is open to anyone in the world with an Internet connection who wants to tell stories with data.

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How will you tell them?