

Open Data: Delivering the benefits

Ben Johnson

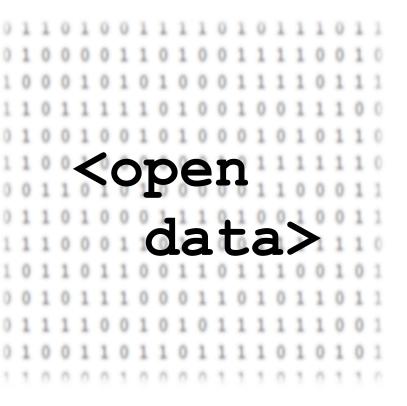
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RDMF workshop 27 April 2016



Shape of this presentation

- The changing role of outputs in research
- Benefits of open data
- Support for open data and evidence of progress
- How we are getting there

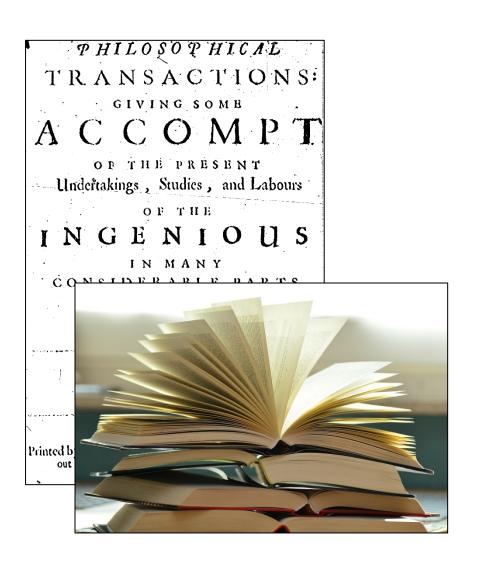


The role of outputs in research



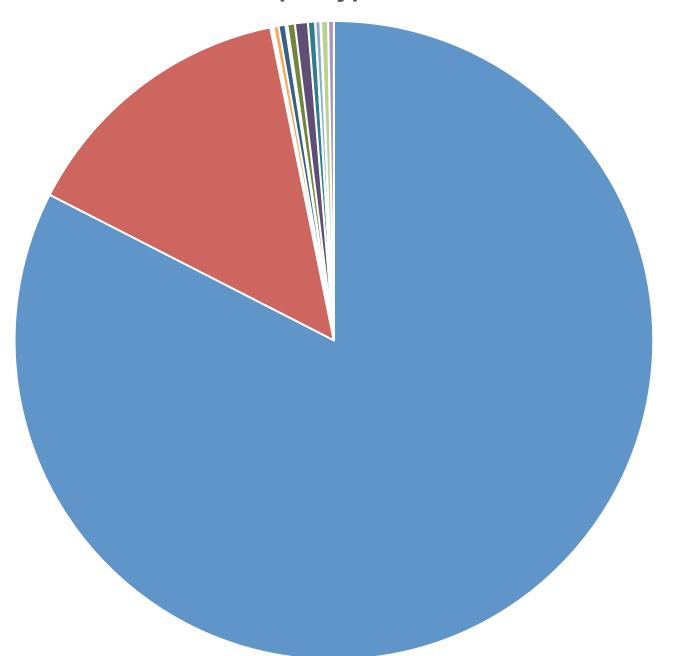
- Communicate results
- Increase standing

The classic way – books and articles



- Results
- Arguments
- Discussion

Output types submitted to REF2014



- Journal article or conference contribution
- Book or book chapter
- Patent/published patent application
- Software
- Website content
- Performance
- Composition
- Design
- Artefact
- Exhibition
- Research report for external body
- Devices and products
- Digital or visual media
- Research datasets and databases
- Working paper
- Other form of assessable output

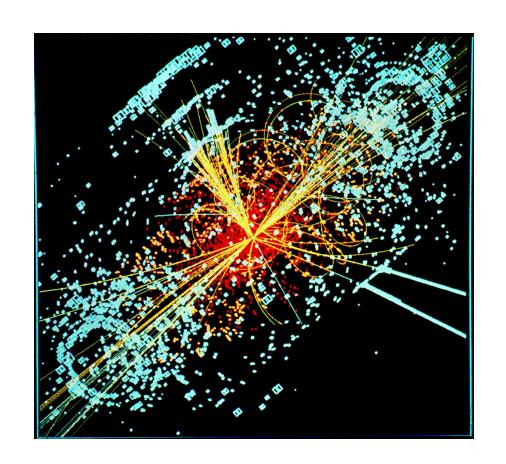
The classic way – books and articles

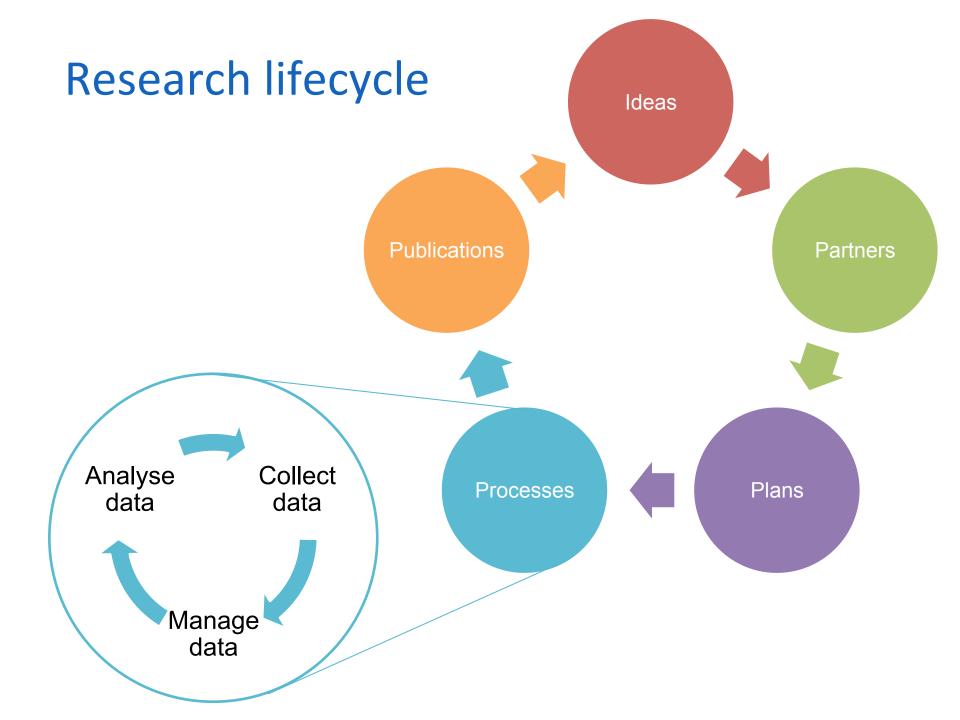


- Selectively descriptive (I only publish what matters)
- Carefully contextualised (I only publish what fits)
- A form of advertising (I only publish what makes me look good)

"I"? Or "we"?

- Research is getting ever faster and bigger
- "Team science"
- Researchers are part of a bigger global 'club'
- We need better ways to communicate at all parts of the lifecycle



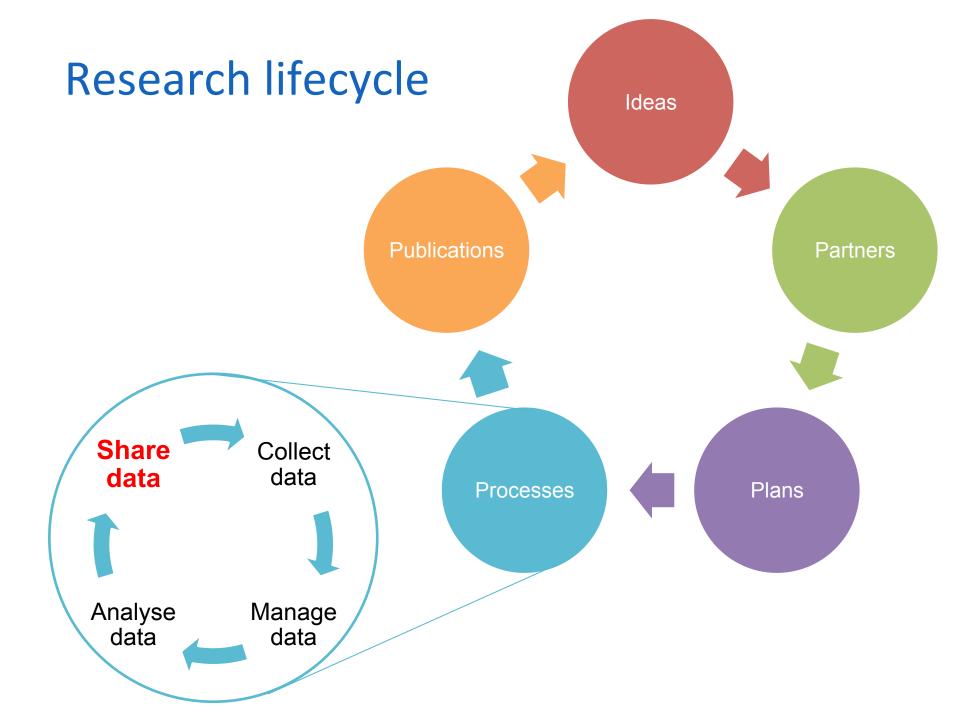


Where ideas, partners and publications are online and global...

Shouldn't data be an online, globally useful good?

For researchers? For business? For everyone?





Benefits of open research data

For researchers

- Ensuring that data are properly managed in the first place
- Avoiding duplication (e.g. two teams unknowingly collecting same data)
- Enabling collaboration and new uses for existing data
- Increasing reproducibility
- Making data 'prestigious'

80% of datasets are lost within two decades [1]

Willingness to share research data is related to the strength of the evidence and the quality of reporting of statistical results [2]

Benefits of open research data

For the public

Open data will result in £10 return for every £1 invested [3]

Patterns of database citation in patents indicate long-term industry value of biological data resources [4]

- Innovation through openness
- Impact on business
- Impact on our economy and society
- Public trust in research
- Public inquiry / 'citizen science'

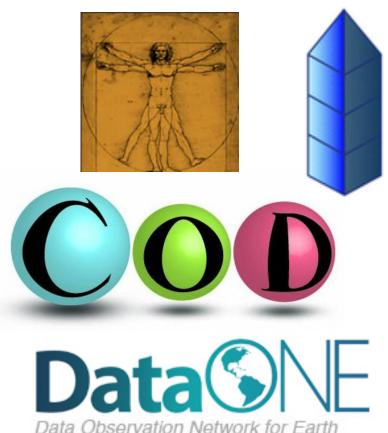
Examples of support and progress

- Strong advocacy for open data
- G8 commitment to open data (2013)
- Dutch presidency of the EU – focus on open science



Examples of initiatives

- Human Genome Project
- www.crystallography.net
- Blue Obelisk
- Environmental science
- http://opendata.cern.ch/
- ESRC business and local government data sets

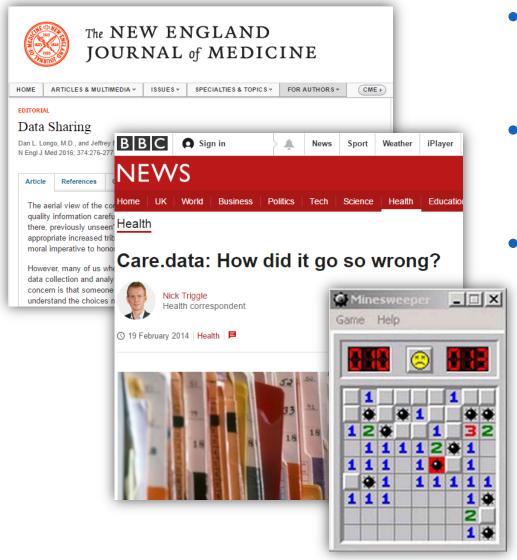






ESRC Business and Local Government Data Research Centre

Challenges along the way

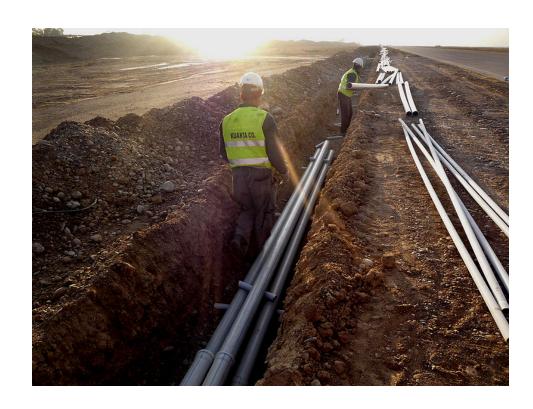


- Concerns over "data parasites"
- Concerns over patient data (care.data)
 - Other barriers (e.g. cost)

Work to be done

Infrastructure – we need:

- Tools for managing, curating and sharing data
- Standards
- Metrics for tracking scholarly/societal impact of data



Work to be done

Policies and processes

Funders

- RCUK
- o REF?
- Wellcome Trust

Publishers

- Policies (e.g. PLOS)
- Journals (e.g.Scientific Data)



Collective efforts

- UK Open Research Data Forum
 - "Concordat to support open research data"

http://www.rcuk.ac.uk/documents/documents/concordatopenresearchdata-pdf/

Concordat On Open Research Data

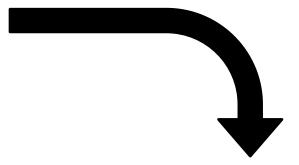
Version 10

July 17th 2015

This document contains the substantive text of the Concordat On Open Research Data that has been developed by a UK multi-stakeholder group. This concordat will help to ensure that the research data gathered and generated by members of the UK research community is made openly available for use by others wherever possible in a manner consistent with relevant legal, ethical and regulatory frameworks and norms.

In this concordat, the following definition has been adopted:

Research Data are quantitative information or qualitative statements collected by researchers in the course of their work by experimentation, observation, interview or other methods. Data may be row or primary (e.g., direct from measurement or collection) or derived from primary data for subsequent analysis or interpretation (e.g. cleaned up or as an extract from a larger data set). The purpose of open research data is to provide the information necessary to support or wildidar a research project's observations, findings or outputs. Data may include, for example, statistics, collections of digital images, sound recordings, transcripts of interviews, survey data and fieldwork observations with appropriate annotations.



- Institutional practice
- Disciplinary arrangements
- Skills and training









Thank you for listening

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References



[1] Vines, T.H. et al. (2014). The Availability of Research Data Declines Rapidly with Article Age. Current Biology 24(1). http://dx.doi.org/10.1016/j.cub.2013.11.014

[2] Wicherts, J.M. et al. (2011). Willingness to Share Research Data Is Related to the Strength of the Evidence and the Quality of Reporting of Statistical Results. Plos ONE. http://dx.doi.org/10.1371/journal.pone.0026828

[3] Tennison, J. (2015). The Economic Impact of Open Data: What Do We Already Know? Huffington post blog. Blog post. Accessed 26 April 2016.

http://www.huffingtonpost.co.uk/jeni-tennison/economic-impact-of-open-data_b_8434234.html

[4] Bousfield D, McEntyre J, Velankar S et al. Patterns of database citation in articles and patents indicate long-term scientific and industry value of biological data resources [version 1; referees: 3 approved]. F1000Research 2016, 5(ELIXIR):160 doi: 10.12688/f1000research. 7911.1 http://f1000research.com/articles/5-160/

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