Research Data Mechanics and Impact

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Open Forum

RESEARCH IMPACT: STRENGTHENING THE EXCELLENCE FRAMEWORK

14/09/2017

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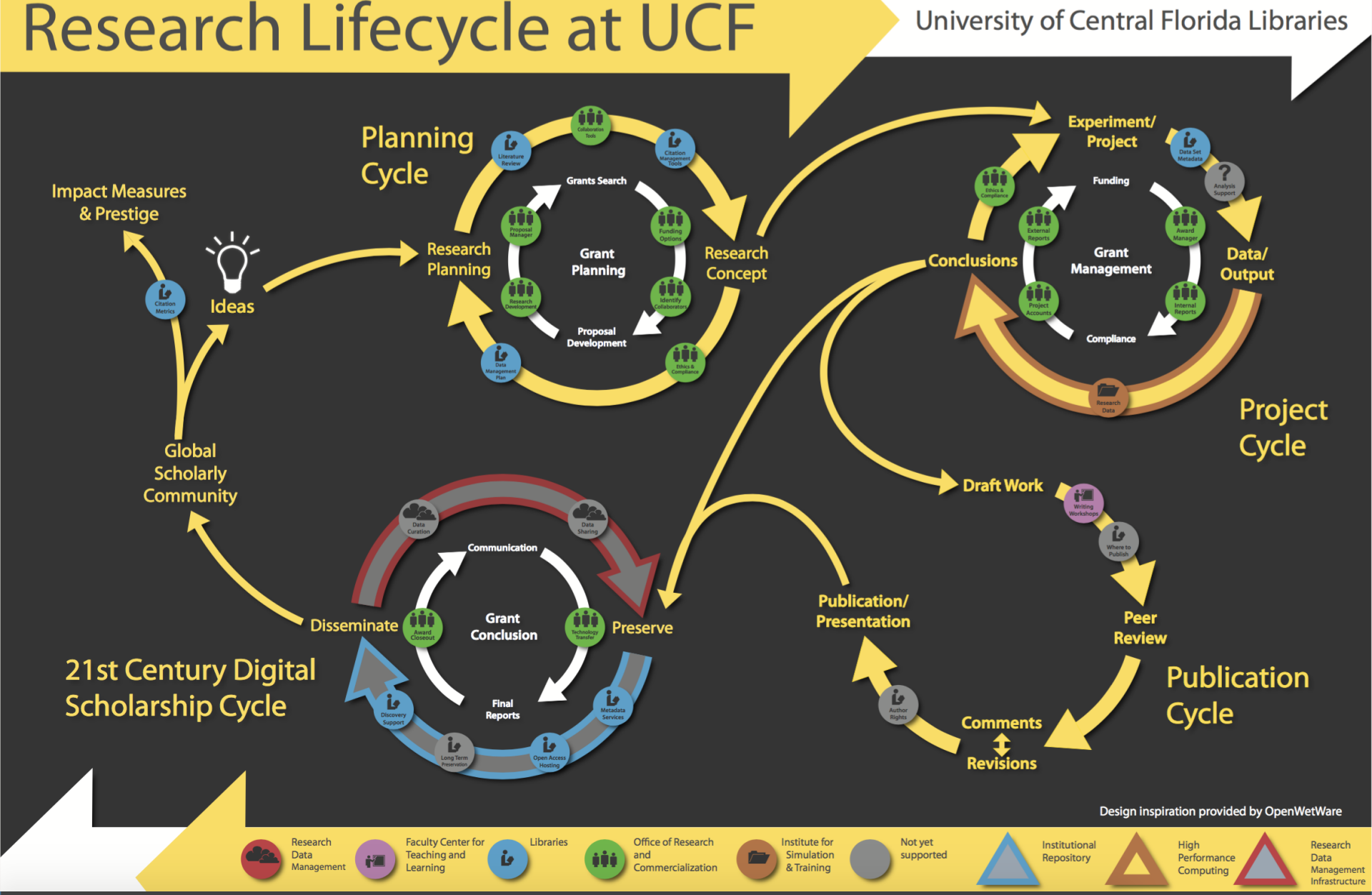
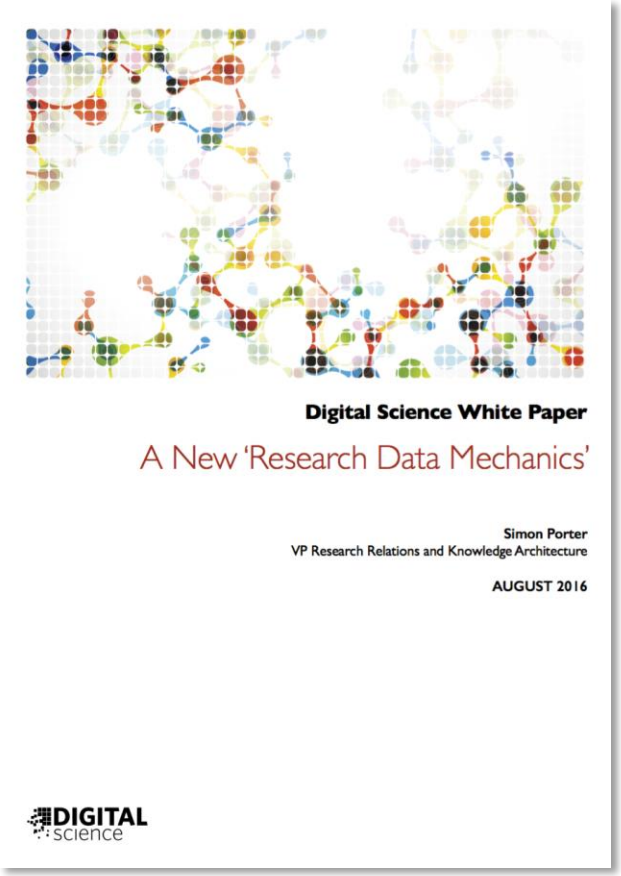


University of Central Florida Libraries Research Lifecycle Committee. (2012). *The research lifecycle at UCF* [Online Graphic]. Retrieved (13/09/2017) from library.ucf.edu/ScholarlyCommunication/ResearchLifecycleUCF.php

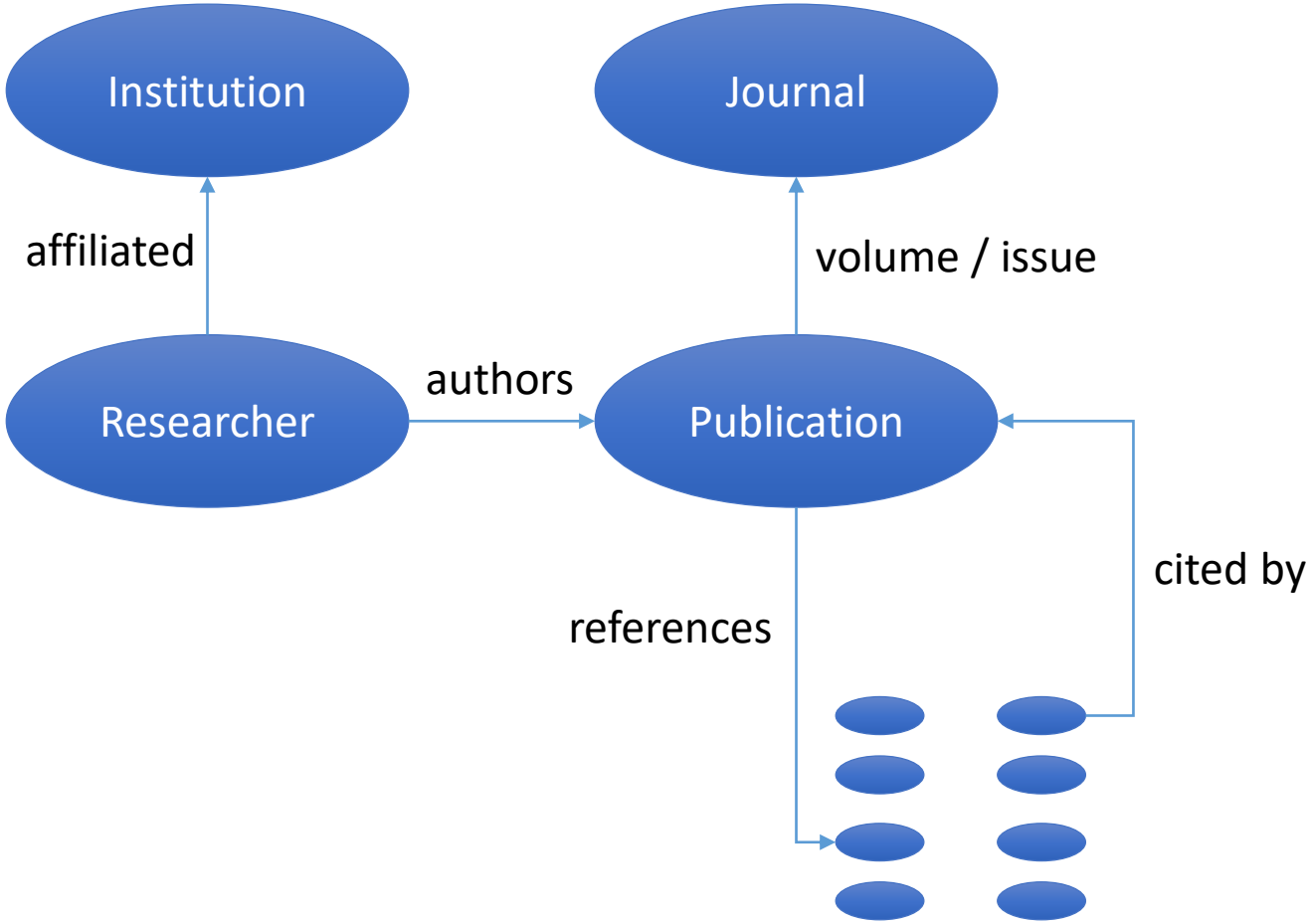
Research Data Mechanics

"Research metadata forms the information network that connects researchers, research institutions, funders, publishers, and research service providers together. How well information flows across this community has direct implications on how well research activity can be supported, and fundamentally how efficiently we can move research forward."



10.6084/m9.figshare.3514859.v1

Assessing the research



REF2014 Impact Case Studies

REF2014 impact case studies
Research Excellence Framework

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Leading the open data revolution

Submitting Institution
University of Southampton

Unit of Assessment
Computer Science and Informatics

Summary Impact Type
Political

Research Subject Area(s)
Mathematical Sciences: Statistics
Information and Computing Sciences: Information Systems

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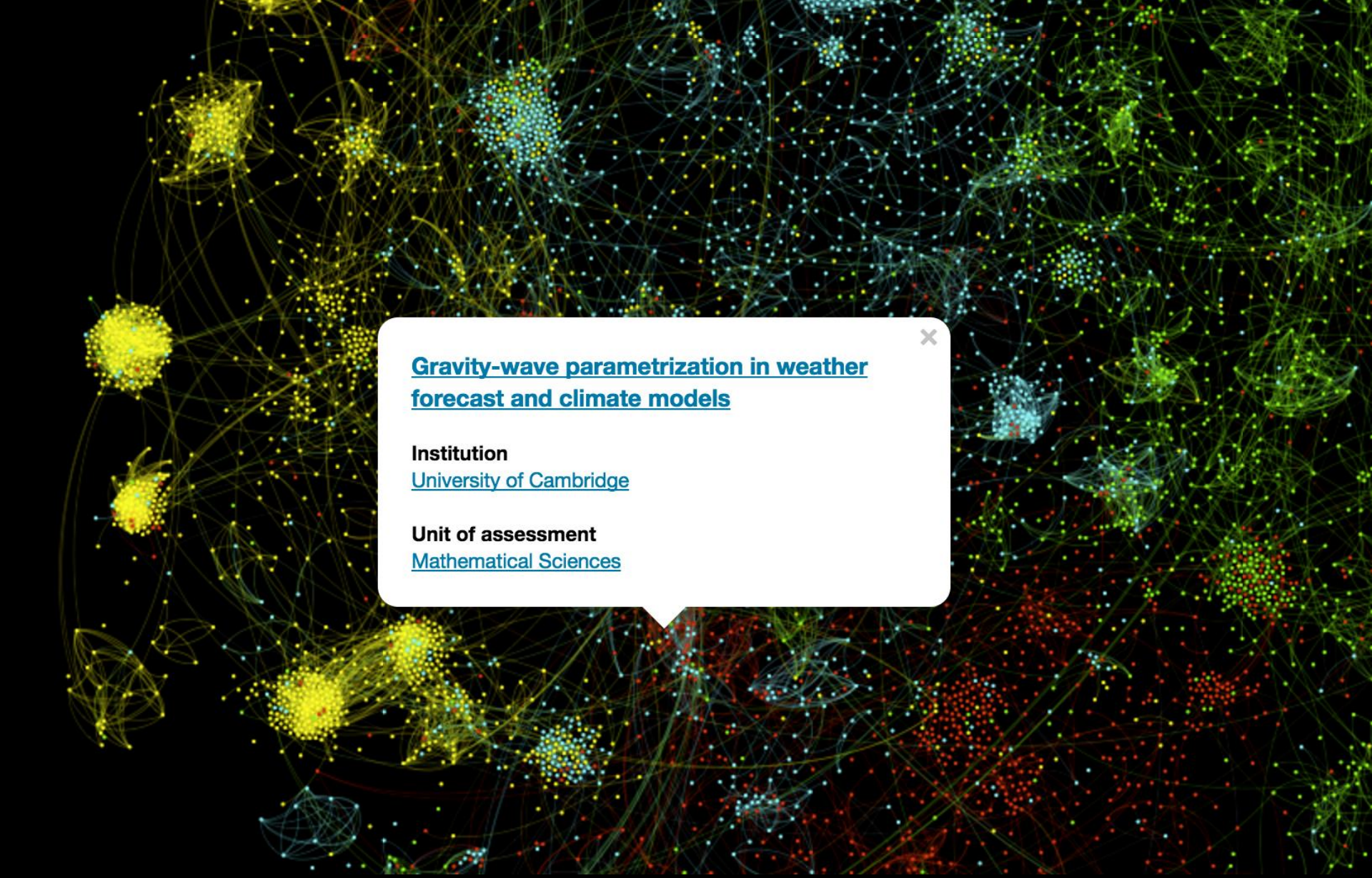
Summary of the impact

Open Data has lowered barriers to data access, increased government transparency and delivered significant economic, social and environmental benefits. Southampton research and leadership has led to the UK Public Data Principles, which were enshrined in the UK Government Open Data White Paper, and has led to *data.gov.uk*, which provides access to 10,000 government datasets. The open datasets are proving means for strong citizen engagement and are delivering economic benefit through the £10 million Open Data Institute. These in turn have placed the UK at the forefront of the global data revolution: the UK experience has informed open data initiatives in the USA, EU and G8.

Underpinning research

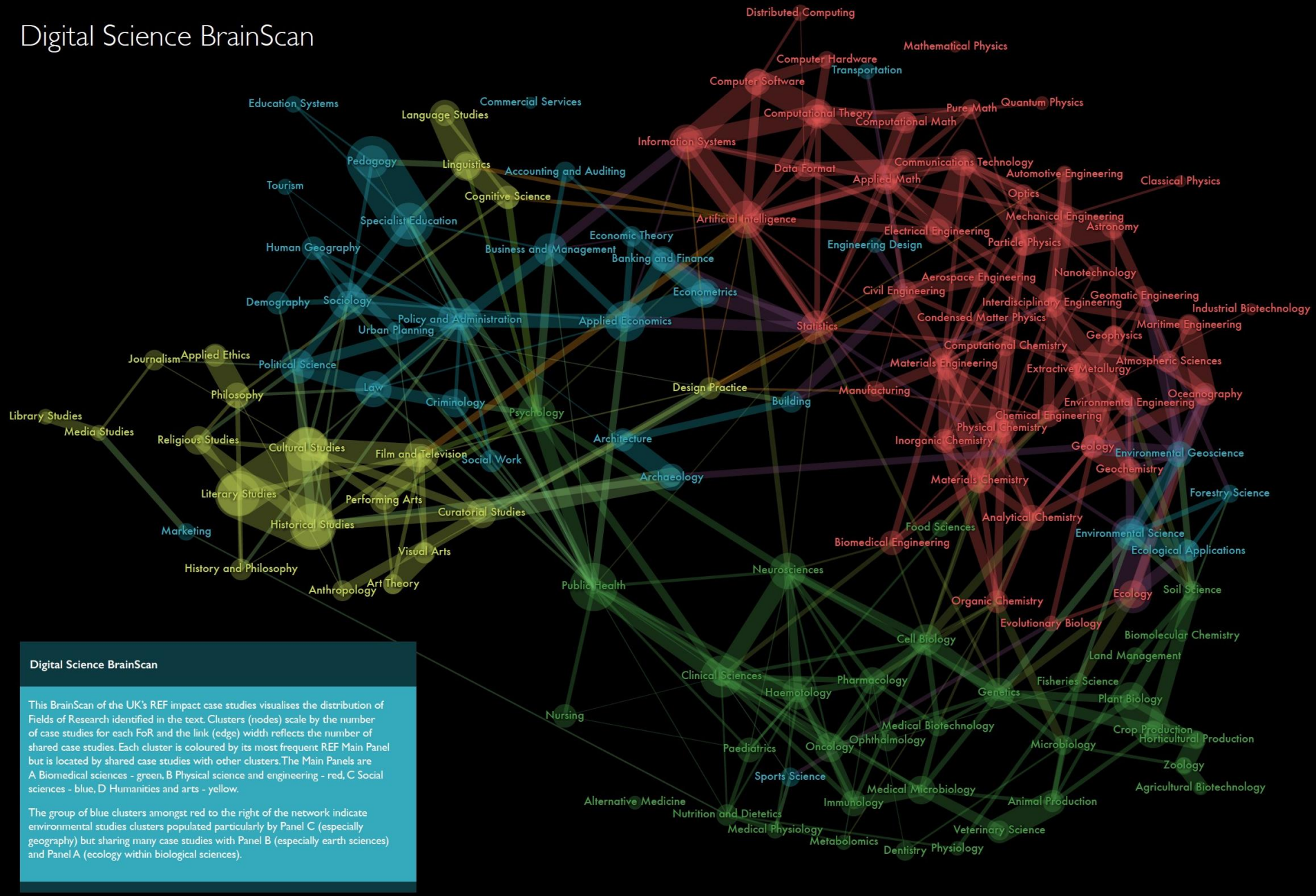
Data is generated by many crucial social processes, yet the potential of vast swathes of information remains untapped. Successive UK governments have recognised that greater openness about spending can cut waste and increase value for the taxpayer, particularly in times of austerity. Research at the University of Southampton has driven the development of the open data movement, showing how transparency of data can revolutionise the delivery of public services, how business is conducted and how communities work together.

From 2000, Nigel Shadbolt, Professor of Artificial Intelligence (2000-present) directed the EPSRC's six-year, £7.5m Advanced Knowledge Technologies (AKT project) which sought to



https://www.digital-science.com/visualizations/ref-case-study-similarity-network/

Digital Science BrainScan



Digital Science BrainScan

This BrainScan of the UK's REF impact case studies visualises the distribution of Fields of Research identified in the text. Clusters (nodes) scale by the number of case studies for each FoR and the link (edge) width reflects the number of shared case studies. Each cluster is coloured by its most frequent REF Main Panel but is located by shared case studies with other clusters. The Main Panels are A Biomedical sciences - green, B Physical science and engineering - red, C Social sciences - blue, D Humanities and arts - yellow.

The group of blue clusters amongst red to the right of the network indicate environmental studies clusters populated particularly by Panel C (especially geography) but sharing many case studies with Panel B (especially earth sciences) and Panel A (ecology within biological sciences).

Loach, T., Adams, J., Szomszor, M. (2016): Digital Research Report: The Diversity of UK Research and Knowledge - Analyses from the REF impact case studies. **10.6084/m9.figshare.1476881.v5**

References to the research

(best three references starred)

1. Shadbolt, N., Gibbins, N., Glaser, H., Harris, S. and schraefel, m. c. (2004) CS AKTive Space or how we stopped worrying and learned to love the Semantic Web. *IEEE Intelligent Systems,* 19 (3), pp. 41-47.

WEB OF SCIENCE™ | Scopus

2. * Shadbolt, N., Berners-Lee, T. and Hall, W. (2006) The Semantic Web Revisited. *IEEE Intelligent Systems* 21(3), pp. 96-101.

WEB OF SCIENCE™ | Scopus | Am score 20

3. Alani, H., Dupplaw, D., Sheridan, J., O'Hara, K., Darlington, J., Shadbolt, N. and Tullo, C. (2007) Unlocking the Potential of Public Sector Information with Semantic Web Technology. In, *The 6th International Semantic Web Conference (ISWC), Busan, Korea,*

Scopus | Am score 4

4. * Alani, H., Hall, W., O'Hara, K., Shadbolt, N., Chandler, P. and Szomszor, M. (2008) Building a pragmatic Semantic Web. *IEEE Intelligent Systems*, 23, (3), 61-68.

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Grants supporting underpinning research

1. PI Shadbolt EPSRC Funded Advanced Knowledge Technologies (AKT) IRC £7.5m (2000-07 GR/N15764/01) AKT — rated outstanding scoring 35 out 36 at final review

2. PI Shadbolt EPSRC Funding large Grant EnAKTinG the unbounded Web of Data £1.94m (2009-2012 EP/G008493/1)

3. PI Shadbolt EPSRC/DTI Market Blended Insight £0.8m (2006-2010 DT/E007104/1)

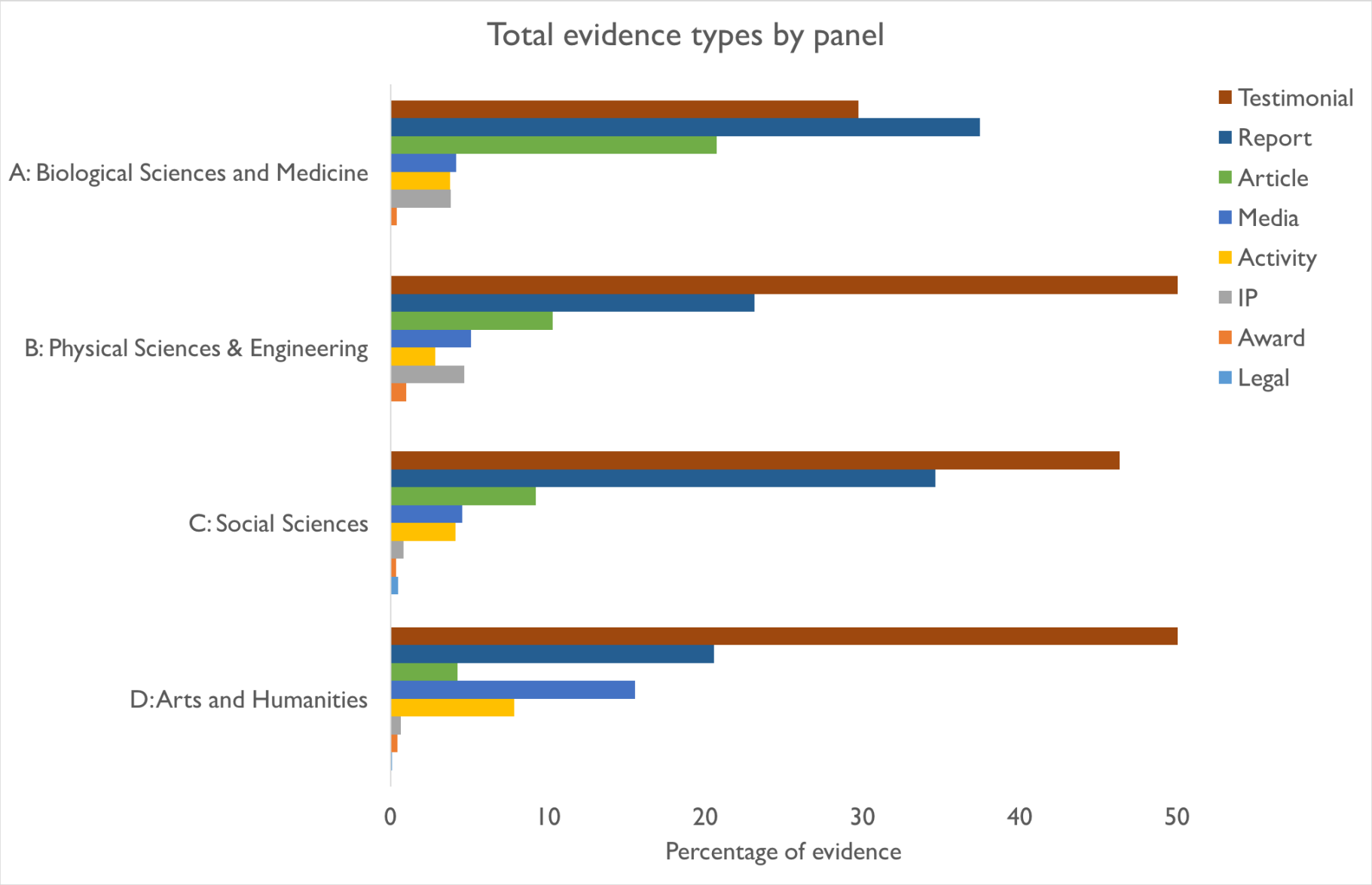
4. PI Shadbolt EPSRC Programme Grant for SOCIAM — the theory and practice of Social Machines £6.15m (2012-2017 EP/J017728/1)

Submissions compared to references in case studies (underpinning research)

	Science		Engineering		Social sciences		Humanities and arts	
REF2014	Outputs	%	Outputs	%	Outputs	%	Outputs	%
Books and chapters	228	0.3	197	0.8	8,307	15.9	18,168	46.3
Conference proceedings	81	0.1	2,056	7.9	233	0.4	380	1.0
Journal articles	73,039	99.1	23,521	90.9	42,545	81.5	15,749	40.2
Other	331	0.4	108	0.4	1,105	2.1	4,914	12.5
REF case studies								
Books and chapters	274	2.1	282	6.3	1,819	16.9	3,409	40.0
Conference proceedings	150	1.2	686	15.4	195	1.8	334	3.9
Journal articles	11,752	91.7	3,263	73.4	7,102	65.9	3,251	38.1
Other	631	4.9	213	4.8	1,649	15.3	1,523	17.9

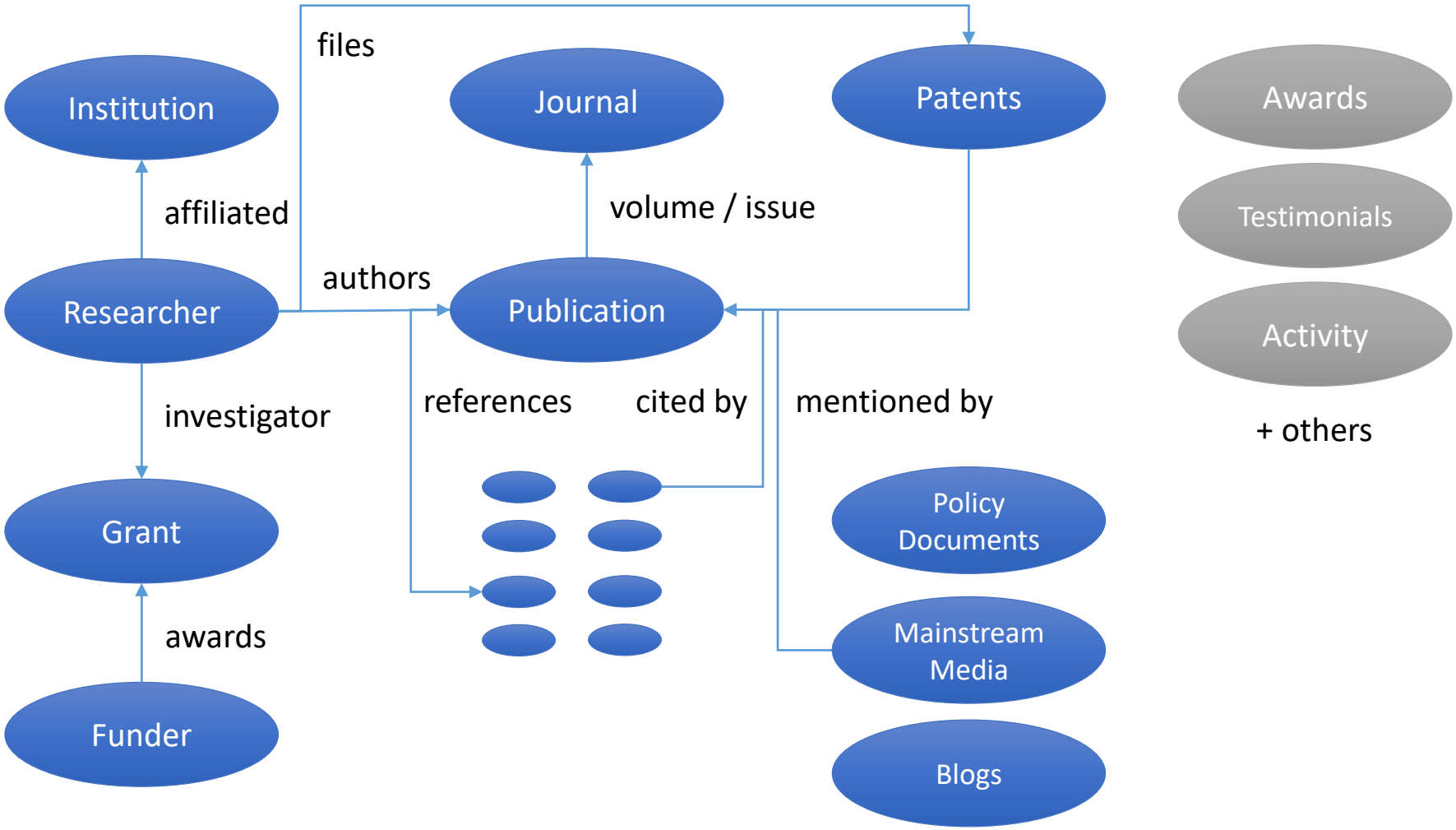
Sources to corroborate the impact

1. Article from No 10 Website on Berners_Lee & Shadbolt' briefing to Cabinet
   http://users.ecs.soton.ac.uk/nrs/2009/09/pm-welcomes-berners-lee-to-downing-street/ and Ordnance Survey Open Data Release
   http://data.ordnancesurvey.co.uk
2. Launch of data.gov.uk
   http://www.guardian.co.uk/technology/datablog/2010/jan/21/government-free-data-website-launch?intcmp=239
3. Article from Cabinet Office on Appointment of Shadbolt and Berner's-Lee to the Coalition Government's Transparency Board
   http://webarchive.nationalarchives.gov.uk/+/http://www.cabinetoffice.gov.uk/newsroom/news_releases/2010/100531-open.aspx
4. Published Letter to Francis Maude, MCO at start of Coalition Governments Transparency Board
   http://data.gov.uk/sites/default/files/Transparency%20Board%20-%20letter%20from%20Nigel%20Shadbolt%20to%20MCO%2014.06.10.pdp__0.pdf and the resultant UK public data principles
   http://data.gov.uk/blog/public-data-statement-of-principles
5. Prime Minister's speeches covering open data policy:
   https://www.gov.uk/government/speeches/pm-speech-at-open-government-partnership-2013
   https://www.gov.uk/government/news/g8-summit-prime-ministers-remarks
   https://www.gov.uk/government/speeches/business-in-the-community-speech--2
6. Shadbolt's report on Open Data Portals to the EU
   http://ec.europa.eu/information_society/policy/psi/open_data_portal/index_en.htm
7. O'Hara's report to the Cabinet Office on Open Data and Privacy
   https://update.cabinetoffice.gov.uk/news/government-publishes-independent-transparency-and-privacy-review
8. Deloitte report on economic impact following the Shakespeare Review
   https://www.gov.uk/government/publications/public-sector-information-market-assessment



Loach, T., Adams, J., Szomszor, M (2016): Digital Research Report: The Societal and Economic Impacts of Academic Research - International perspectives on good practice and managing evidence [10.6084/m9.figshare.3117928.v2](https://doi.org/10.6084/m9.figshare.3117928.v2)

Assessing the impact



Final Message

- The presentation today has described how much data can be collected and connected about research activities and their impact
- Much of this data can be used to create indicators that measure relative performance
- These indicators alone will not be able to properly assess the quality or impact of the research
- Context is important and expert led assessment is vital

Thanks for your attention

https://www.digital-science.com/resources/digital-research-reports/

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