

Solving global challenges starts with open data – new report launched today

February 4 2019

Better incentives for researchers and fewer barriers between technological systems are key to kickstarting a revolution in open data, according to *Realising Potential*, a report released today by the Open Research Data Task Force (ORDTF) – a group of senior professors and UK higher education and research organisations and Chaired by Professor Pam Thomas, Pro-Vice-Chancellor for Research at the University of Warwick.

Open Research Data (ORD) or data which is FAIR (findable, accessible, interoperable and re-useable) dramatically increases the capacity of science to infer patterns and identify solutions in the complex systems that are at the heart of global issues such as climate change or antibiotic resistance. This transparency in the process and outcomes also increases the public's trust in [scientific research](#), enhances its impact and delivers greater efficiencies.

Realising The Potential, the final report of the Open Research Data Task Force, examines the opportunities presented through ORD and responds to a technological evolution in research, where machine-learning and Artificial intelligence are becoming more commonplace in mining [open data](#).

The report also calls for:

- Active Leadership to coordinate ORD efforts across all organisations and institutions

- Clear Expectations from [policy makers](#), publishers and funders
- User friendly services to make it easier to publish, manage and locate research data
- Sustainable funding which supports the process of creating and reusing open research outcomes

Chaired by Professor Pam Thomas (PVC Research, University of Warwick), the Task Force includes representatives from The Royal Society, HEFCE (RE/UKRI), The Wellcome Trust, Universities UK, and BEI, with Jisc acting as secretariat. The cross-section of the research sector involved ensures a set of recommendations that can be implemented across the board.

Professor Thomas said of the task force and its work:

"I thank all those worked on the Task Force or who contributed to its work. We were tasked with setting out a roadmap for the development of a national open research data infrastructure. It is clear to the Taskforce that the crucial destinations on that map must be: the identification of an active Leadership to coordinate ORD efforts across all organisations and institutions; the establishment of user friendly services to make it easier to publish, manage and locate research data; and the provision of sustainable funding which supports the process of creating and reusing open research outcomes."

Carole Goble (Professor of Computer Science, University of Manchester) added:

"As the Head of the UK Node of ELIXIR, the European Research Infrastructure for Life Science data, I recognise the crucial importance of a national open research data infrastructure for driving new biological insights in academia and industry. The recommendations of this Taskforce lay down the roadmap to enable UK research data to be

"FAIR" by proposing steps for overcoming the technical and organisational obstacles that jeopardise FAIR data sharing."

Andrew Prescott (Professor of Digital Humanities, University of Glasgow) further commented:

"I have recently served as Theme Leader Fellow for the Arts and Humanities Research Council strategic theme of 'Digital Transformations'. One of my chief conclusions from this work is that a national open research data infrastructure is just as important for the arts, humanities and social sciences as it is for science and technology. Data documenting the UK's cultural, historical and creative heritage is potentially an enormous resource for our creative and other industries, and the ORD report identifies examples of best practice and the key requirements to capitalise on the UK's great data resources."

Recommendations of the Open Research Data Task Force

Better incentives, fewer barriers:

- All stakeholders act to strengthen the incentives for researchers to create and use open research data
- Funders and research organisations establish training programmes for researchers in data management, analysis and stewardship
- Research organisations strengthen the provision of specialist support services within research organisations, and increase capacity in data stewardship, research software and data science.

Active leadership:

UK Research and Innovation takes a co-ordinating role in overseeing the development of ORD policies, infrastructure and services, including:

- Shared understandings of roles and responsibilities
- Distribution of resources—Engagement with international and non-academic stakeholders
- Development of guidelines and protocols on ORD
- Establishing the evidence base and monitoring trends and progress towards ORD

Clear expectations:

- Funders, research organisations and publishers establish clear expectations on preservation of data and software, including the repositories to be used
- UKRI leads an effort to promote greater harmonisation of funder ORD policies, based on the FAIR principles and with a view to [research data](#) being 'as open as possible, as closed as necessary'
- Publishers and learned societies take steps to require data access statements, support open citation of data and facilitate data deposit and linking to other outputs

User-friendly services:

- Research organisations and funders take steps to ensure that all researchers have access to user-friendly services, both generic and domain-specific
- Research organisations and funders develop, with support from Jisc, a set of principles for negotiation with commercial providers of ORD infrastructure to maximise interoperability, retain data ownership and reduce the risk of 'lock-in'
- UKRI ensures the development of sustainable ORD infrastructure features prominently in its long-term research and

innovation infrastructure roadmap, with relevant needs to be identified in close consultation with learned societies and subject communities

- Research organisations and funders take active steps to sustain and strengthen UK participation in international ORD services and initiatives

Sustainable funding:

- UKRI and other stakeholders work together to review the costs, business and funding models of current data services
- All funders require existing, funded data services to develop appropriate plans for ORD
- UKRI, funders and [research organisations](#) review levels of funding for ORD to ensure these remain appropriate to an increasingly data-rich research landscape
- UKRI and other funders consider the provision of funds to fill priority gaps, support data publishing, and make existing data readily usable in support of national research and innovation priorities

Provided by University of Warwick

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