

Productivity Commission
Inquiry into Data Availability and Use

Submission by the Council of Australian University Librarians (CAUL)

This response was prepared on behalf of CAUL by the CAUL Research Advisory Committee.

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The Council of Australian University Librarians (CAUL)¹ is pleased to have the opportunity to provide comment on the questions raised in *Productivity Commission Inquiry into Data Availability and Use*.

CAUL, as the peak leadership organisation for university libraries in Australia, seeks to enhance the value and capacity of Australian university libraries and to influence scholarship, learning, and information policies and practices relevant to Australian higher education. Our members are the University Librarians or equivalent of institutions which have representation on Universities Australia.

Australia's university libraries make a significant contribution towards research innovation through the provision of expert advice and tailored services to researchers. This is critical to the success of Australia's higher education system, one of the chief components of an innovation system. A number of major changes in research and innovation practice have increased the value that CAUL can bring, including:

- changes in research practices, with data being increasingly seen as the foundation of research practice and a valuable output of research;
- the emergence of alternative approaches to discovery, dissemination and access to research information;
- an international policy environment that increasingly advocates for the outputs of publicly funded research being openly accessible;
- the broader application and importance of contemporary information management skills to research support and innovation.

University libraries are leaders of change within their institutions, especially with regard to effective research data management and use, as well as the preservation, discoverability and access to research outputs.

Over the past few years, the role of university libraries has expanded to provide sophisticated services for research and innovation in higher education through:

- provision of repositories to store, promote and preserve the digital assets and outputs of universities;
- management, and increasingly creation, of research resources such as datasets and digital collections;
- publication, especially electronic publication, of material based on research;
- support for innovation in scholarly expression and communication;
- services for measuring and increasing research impact;
- provision of advice on data management policy and planning, metadata, standards and persistent identifiers;
- transformation of services and physical facilities to support the development of students' lifelong learning skills; and,
- collaboration with Research Offices to deliver the HERDC and ERA reporting and audit process.

Research data

Australia's ability to remain competitive and to contribute fully to the global digital economy is contingent upon its ability to harness the value of its research to advance knowledge, solve complex real world problems and stimulate innovation. The CAUL community is acutely aware of both the opportunities and barriers to increasing research opportunities and impact through access to public, private and research data; and to increasing research discoverability, use and impact. The digital age has brought amazing opportunities for research practice and research collaboration, together with

¹ Further details about CAUL and its activities can be found at <http://www.caul.edu.au/>

the growing recognition of the importance of research data and tools as valuable research outputs in their own right². Through the work of the Australian National Data Service, in partnership with the CAUL community, Australia has positioned itself as an international leader in research data policy, standards, services and infrastructure but more must be done.

We welcome the inclusion of research data in the Australian Public Data Policy Statement and the focus of this recent inquiry on the role of data in driving productivity, research and innovation. However if we are to optimise the value of research, all its outputs (such as data, software, methods, tools and publications) must be findable, accessible, interoperable and reproducible (FAIR) in a way that easily facilitates use, re-use and application. Discoverability and access to all research outputs not only creates the opportunity for validation of research through reproducibility but also provides the foundation for new areas of research, discovery and innovation. If we are to realise the aspirations of better access to data in all its forms, it will be essential that we develop a national ecosystem which links research data, tools and publications.

Specifically **we recommend** that we adopt a national approach that:

1. by default, makes all publicly funded research outputs findable, accessible, interoperable and reusable (FAIR), and more specifically
 - a. makes all research publications immediately free to read at the point of publication;
 - b. supports the *Australian Government Public Data Policy Statement* to ensure non-sensitive publicly funded research data is made open for use and re-use where possible;
 - c. applies appropriate AusGOAL licences and international metadata standards to research outputs to ensure accessibility, interoperability and reusability;
 - d. does not assign copyright to publishers of outputs;
 - e. encourages and supports researchers to make research outputs available in accord with this policy;
2. values and practically supports the development of a diversity of dissemination models, recognising discipline differences, whilst maintaining a commitment to the principles of this policy; and;
3. ensures that the application of the above is in accordance with the *Australian Code for the Responsible Conduct of Research* and other codes of practice which lay out requirements to disseminate research responsibly, ethically and for the benefit of the Australian and international community.

Public and private data to support research

CAUL strongly supports the national agenda to make public data more open, across all levels of government. Making more government data accessible (not necessarily open access but sharable and interoperable using open standards) provides an amazing opportunity to not only create an exceptionally rich research resource, but a data platform from which to drive more effective and efficient policy and government services. Across many research domains from health through to policy, environment and planning, adopting appropriate federated data standards can enrich research whilst promoting increased productivity and improved policy decisions. Such standards also allow federation of private sector data for mutual benefit. A great example of such an approach is the work that has been done in the UK to develop an [Open Banking Standard](#) to improve people's banking experience and in turn drive efficiency and stimulate innovation.

The Issues paper seeks to identify high value data sets and the characteristics of such data sets. From a research perspective many of today's complex problems require the linking of data from multiple agencies across all levels of government, and potentially NGOs and private sector data. A problem-based approach may prove more effective to determine priorities. For example determining priorities by supporting access to data, across all levels of government, to inform Australia's national

² See for example <https://innoscholcomm.silk.co/>

research priorities and the complex problems faced by the nation at a national or local level, such as environmental degradation, social, economic or educational disadvantage, may provide a more effective mechanism through which to prioritise access.

Bringing it together

Data is currency in a digitally connected world, and opening up access to data is seen as the mechanism by which to stimulate research, innovation, economic prosperity and growth. Research funding agencies internationally are increasingly mandating the release of research data and publications in an effort to accelerate research, research impact and innovation. Whilst in the public sector, open data initiatives are seen as an opportunity to increase citizen engagement and satisfaction, reduce bureaucratic inefficiencies and constrain costs.

Opening up data creates both challenges and opportunities. From the “supplier” side there are the issues of understanding the policy, information management, technical, social, and legal challenges of making data more accessible, and from the “demand” perspective, understanding what data is accessible and how it might be mined, manipulated and applied for broader benefit.

A unique opportunity now exists to join up the initiatives taking place around open public data and research data, and develop a national approach to improving the capability of researchers, government and industry to contribute to and benefit from data, both open and shared, using open data standards. Public and research data are critical ingredients to innovation at the national level, and underlying this success is the infrastructure required to support the data.

To fully leverage the value that data can provide, Australian government and research institutions need to actively invest in infrastructure and the skills shortage around data management at a national level. Agencies such as the Australian National Data Service (ANDS) and organisations such as the Open Data Institute Queensland (ODIQ) sit poised to provide policy advice and data management training, whilst associations such as CAUL have data management expertise available across the country.

CAUL believes that greater national benefit could be derived through strengthened collaboration in data policy development, services, infrastructure and skills development across the research and government data domains.