Embedding research data management: case studies from the University of Sydney

Katrina McAlpine¹, Justin Chang², Jennifer McLean³, Christopher Albone⁴

¹The University of Sydney, Sydney, Australia, katrina.mcalpine@sydney.edu.au
²The University of Sydney, Sydney, Australia, justin.chang@sydney.edu.au
³The University of Sydney, Sydney, Australia, jennifer.mclean@sydney.edu.au
⁴The University of Sydney, Sydney, Australia, chris.albone@sydney.edu.au

INTRODUCTION
The impact of funder and publisher requirements, as well as changing approaches to research, has seen an increase in the need for services and infrastructure to support the creation, management, and reuse of research data. While the University of Sydney has been actively involved in this space since 2010 through participation in Australian National Data Service (ANDS) and University funded infrastructure projects, the University is now taking a proactive approach to research data management (RDM) in order to increase uptake and compliance. This presentation will examine a number of case studies at the University of Sydney to see how RDM is being embedded at a faculty and institutional level.

INSTITUTIONAL SUPPORT
The University of Sydney has shown commitment to RDM through a suite of research data management and Open Access policies, the appointment of a senior academic to the role of Research Data Steward, and the formation and endorsement of a formal Research Data Management Strategy Group (RDMSG). While a commitment to RDM is well established at the University, the creation of strong cross-institutional partnerships has been necessary in order to embed RDM infrastructure. The professional units that are involved with RDM at the University include the Library, ICT and the Research Portfolio.

The Library’s Research Data Team, with support from a network of Academic Liaison Librarians, provides specialist support for data management planning and storage, curation and preservation, data description and publishing, as well as data reuse.

ICT recently expanded its support for research, employing specialist support staff, and dedicated service delivery and digital strategy managers who maintain and continually improve the infrastructure that underpin the delivery of research services to the University.

The Research Portfolio supports researchers in the RDM space through its focus on grant applications and compliance with funding requirements, research impact and reporting, as well as research ethics and integrity.

CASE STUDIES OF SERVICE DEVELOPMENT
Partnerships between units within the institutional support network have created opportunities for RDM practices and infrastructure to be embedded within the University, which has then increased the ability for researchers to seamlessly comply with internal and external RDM policy and practice good research data management.

The University’s Sydney Microscopy and Microanalysis Core Research Facility (SMM) is a key partner in promoting and implementing good data management practices at the University. Enhancement of University research data storage services and upgrades to SMM systems have enabled a seamless transfer of data to the University’s Research Data Store. The implementation of this compulsory use of the Research Data Store by the SMM have enabled the SMM to align service delivery with the Research Data Management Policy, whilst driving uptake of University research services.
The University Research Data Store (RDS) is a general purpose petascale storage facility provided to the University research community. Initially, the primary focus of services improvements to the RDS focused on increasing storage capacity. However, as the needs of the University continue to grow and change the University has adjusted its focus to deliver a more mature storage environment that simplifies the use of the full range of research services offered by the University. The Research Computing Optimised Storage facility allows researchers to access and use centrally managed storage while being able to easily analyse large datasets using the University’s high-performance computing (HPC) facility ‘Artemis’. The optimisation of this established service to create a more agile system highlights the proactive approach the University is now taking, ensuring that we are responsive to change and continuously strive to meet the evolving needs of researchers.

The University provides institutional access to both the Professional and Classroom editions of the LabArchives eNotebook platform. This institutional eNotebook solution is a secure platform that is suitable for use across disciplines and across institutional boundaries. eNotebooks support the long term preservation of research data, collaboration and academic integrity. Recently, the University has implemented a stronger support model for eNotebooks to encourage uptake and to support an institutional rollout, while continuously looking for ways to enhance the platform, including integration with existing infrastructure.

These case studies are examples of improvements focused on driving uptake and compliance as services and infrastructure become more aligned with the practices of researchers while also supporting the development of a University culture that values research data management in all stages of the research lifecycle.

ABOUT THE AUTHOR(S)

Katrina McAlpine is University of Sydney’s Research Data Manager. She leads the Research Data team, overseeing the Library’s research data management support services, liaising with internal and external stakeholders, contributing to the development of policy, and providing strategic advice and specialist expertise on research data management to the wider University community.

Justin Chang is an ICT Service Delivery Manager at the University of Sydney. His role oversees the delivery and continual improvement of research technology services, both directly to the University and in partnership with the Library, Research Portfolio and Core Research Facilities.

Jennifer McLean is the Research Data Officer at the University of Sydney. Her role focuses on providing outreach and training about research data management practices across the University.

Christopher Albone is the University of Sydney’s ICT Enterprise Architect supporting Research and the Library. His role is to provide architecture support to translate research and library strategy into tangible capabilities and services.