

The Realities of Research Data Management

Selected University
RDM Service Profiles

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The Realities of Research Data Management: Selected University RDM Service Profiles

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INTRODUCTION

In 2016, OCLC Research began an investigation of emerging service models for research data management in four universities operating in different national contexts. We were interested to explore the local context in which decisions are made regarding the scope, scale and sourcing of institutional RDM service capacity. In a preliminary phase of the project, the research team compiled descriptive profiles of RDM services in a random selection of about a dozen colleges and universities in the United States.

From these descriptions, we distilled a generic framework of three primary clusters of RDM activity: education in the principles of data management, expert consultation tailored to the needs of specific researchers, and curatorial support for managing and preserving research data sets. This framework is described in [A Tour of the Research Data Management \(RDM\) Service Space](#), the first in a series of reports under the banner of *The Realities of Research Data Management*.¹

Subsequent reports in this series provide an in-depth account of the scope of RDM service provision, the primary incentives to develop institutional RDM capacity, and the different choices individual institutions have made in building or buying RDM service components. These case studies, focused on four globally recognized research universities in Australia, the US, the UK and the Netherlands, are based on close study of RDM services that were offered during the last part of the 2016 calendar year. Initially, we intended to use the brief institutional profiles compiled here as internal background documents, preparatory material for our reports. Over time, we discovered that they had more durable value as time capsules of RDM service that could be referred to over the course of the project and usefully compared to other examples of university RDM profiles “in the wild.”

The service profiles presented here were reviewed and confirmed by staff at Edinburgh University, Monash University, University of Illinois at Urbana-Champaign and Wageningen University & Research. The profiles are descriptive inventories, with brief observations about the scope, organization and staffing of RDM services in these universities, prefaced with some remarks about the national context in which university RDM offer is embedded. The compilation of profiles is published by OCLC Research as supplementary, supporting material for *The Realities of Research Data Management* report series. We encourage other interested parties to make use of them as a body of historical evidence, templates for describing RDM services in other settings or for whatever other purpose they prove useful.

1. Bryant, Rebecca, Brian Lavoie and Constance Malpas. 2017. *A Tour of the Research Data Management (RDM) Service Space*. The Realities of Research Data Management, Part 1. Dublin, Ohio: OCLC Research. doi:10.25333/C3PG8J.

University of Edinburgh

NATIONAL CONTEXT

The University of Edinburgh adopted a [Research Data Management Policy](#) in 2011. Among other things, the policy recommends that all research includes a data management plan. The university pledges to provide support/training/consultation, as well as storage, backup and registration services. The policy requires that data retained externally be registered with the university. The university RDM policy is described as “aspirational,” acknowledging that full implementation may take years.

In addition to the University RDM policy, Research Councils UK (RCUK) has released a set of [data management principles](#) that stipulate that publicly funded research data should be made openly available. The UK has national-scale resources to aid in RDM, such as the [Digital Curation Centre](#) (DCC) and the [UK Data Service/Archive](#) for social science and humanities data. JISC has launched a new project (to be completed in 2018) to develop a [shared research data service](#), in partnership with 13 university/college partners (Edinburgh is participating as a supplier).

Edinburgh is [in the process of joining EUDAT](#), a collaborative pan-European data infrastructure providing research data services, training and consultancy.

Edinburgh, like all UK universities, is subject to the reporting requirements of the [Research Excellence Framework](#) (REF), a national initiative to evaluate the quality of research in UK higher education. Additionally, Edinburgh is subject to the [UK Open Access Policy](#), which requires that journal articles and conference proceedings be deposited in repositories, discoverable and freely accessible in order to be eligible for consideration in the REF exercise. Currently, research data is not covered by this policy. The university also seeks to adhere to the principles of the [UK Open Data Concordat](#).

KEY INFORMATION

The University of Edinburgh’s Research Data Service (RDS) is housed within the Research Support sub-unit of the Information Services unit. Information Services includes the library, information technology, study spaces and learning technology services.

- The [home page for RDM services](#)
- A description of the Research Data Service is available in an [online booklet](#)
- RDS Leadership/staff: Robin Rice, Dominic Tate and Tony Weir

HISTORY AND MILESTONES

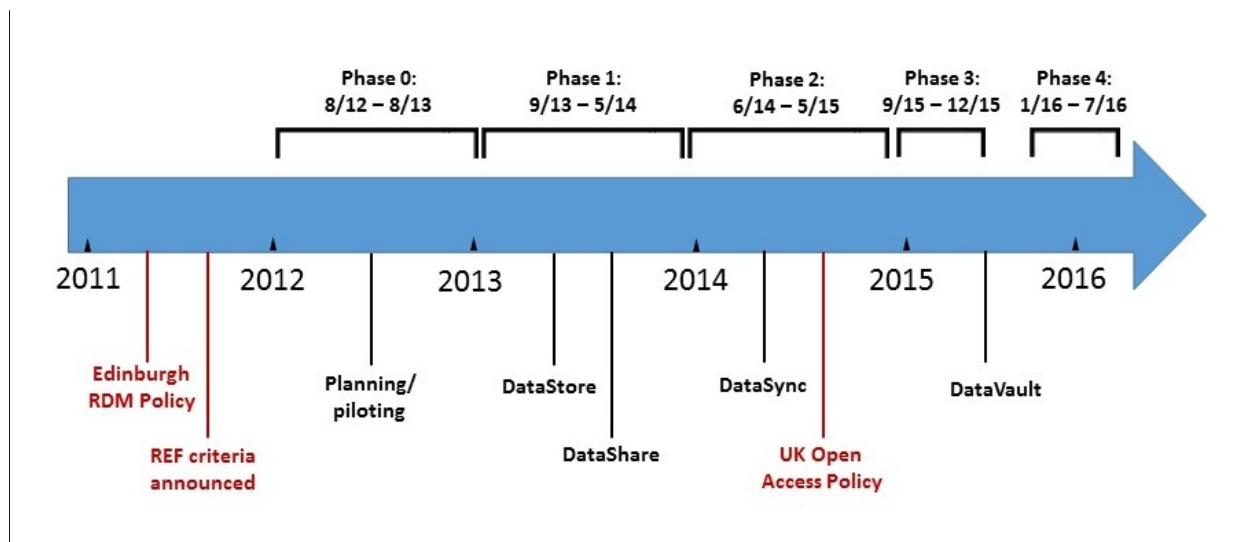


FIGURE 1. RESEARCH DATA MANAGEMENT AT UNIVERSITY OF EDINBURGH

EDUCATION SERVICES (USER ORIENTATION TO RDM)

1. General information on the importance of RDM; also links to external sources (many to DCC), for example on the [benefits of writing a DMP](#).
2. [Extensive resources on writing data management plans](#), including a link to the [DMPOnline](#), a web-based tool to assist with developing a DMP. The tool was developed by DCC.
3. [MANTRA](#), an online self-paced tutorial, provides a basic/general introduction to RDM. MANTRA was originally developed in collaboration with the Institute for Academic Development at Edinburgh (and was JISC-funded), and is maintained by Data Library Staff.
4. The web site describes various available [RDM courses](#) including “Creating a data management plan for your grant application,” “Managing your research data: why is it important and what should you do,” “Working with personal & sensitive research data,” “Good practice in research data management” and “Handling data using SPSS.”
5. Edinburgh partnered with the University of North Carolina at Chapel Hill to create a [Coursera course](#) on Research Data Management and Sharing.
6. Customized training sessions for specific disciplines, schools, institutes or research groups are also available.
7. Data/Software Carpentry workshops.
8. There is a link for [help and support](#) for RDM-related questions.

EXPERTISE SERVICES (RDM DECISION SUPPORT FOR USERS AND ADMINISTRATION)

1. Requests for customized assistance are channeled through a specialized helpline: data-support@ed.ac.uk.
2. The DCC is a national center of expertise in digital curation, including service provision (like DMPOnline) and research. Edinburgh was a partner in the consortium that launched DCC, and DCC is currently headquartered at Edinburgh. DCC offers, among other things:
 - a. access to curation tools and resources
 - b. training and networking events
 - c. promotion of best practice
 - d. fee-based consultancy services

CURATORIAL CAPACITY (INFRASTRUCTURE)

1. [DataStore](#) is the central file store for active research data (0.5 terabyte allocation per researcher, half of this can be used as a shared project space). Additional space can be purchased and non-research campus units can also purchase space.
2. [DataSync](#) is their tool for synchronizing/sharing research data with collaborators and uses “Dropbox-like” file hosting (at Edinburgh). 20GBs of dedicated DataSync storage space are allocated per user, which can also be linked up with data in DataStore. Data can be shared with anyone with an e-mail address.
3. Bespoke data hosting, with custom computational/visualization mechanisms integrated, is available via Edinburgh Compute and Data Facility.
4. Edinburgh is using the Pure research information management system as a Data Asset Register with the core purpose to describe data sets created at Edinburgh. Descriptions of data sets are linked to and automatically displayed as part of a researcher’s online Pure profile (in Edinburgh Research Explorer) alongside other research outputs.
5. [DataShare](#) is the online repository of data sets produced at Edinburgh. Data sets are assigned a persistent identifier, suggested citation and retained indefinitely. This enables online discovery and reuse. Data sets are deposited directly into DataShare by the researcher, but are quality-assured by data library staff. This repository has the “Data Seal of Approval.”
6. [DataVault](#) (under development) is a private archival storage service for the long-term retention of “golden copy research data.” It is intended for data that is no longer active, but must be retained and cannot be published, and is accessible only by data set creator or their representative. The primary benefit is to enable compliance with funder data retention policies.
7. Subversion is a version control tool for managing code. A Subversion repository may be accessed by external collaborators for group/collaborative work. Sign-in is required. The default quota is 50MB and space that exceeds 10GB is subject to fees.

8. [ERA](#), the university institutional repository, is not part of the research data curatorial infrastructure. ERA (a DSpace instance) is a repository of original research produced by or affiliated with researchers based at Edinburgh that is not controlled by commercial publishers. Holdings include theses/dissertations, project reports, briefing papers and out-of-print materials. ERA is the responsibility of the library.

STATISTICS

From February to April 2016:

- Pure dataset functionality is now included in standard Pure and Research Data Management (RDM) training. There are now 210 dataset records in Pure.
- A total of 363 staff and postgraduates attended RDM courses and workshops during this quarter.
- There were 30 new DMPonline users and 55 new plans created during this quarter.
- There are now 210 dataset metadata records in Pure.
- A total of 56 datasets were deposited in DataShare during this quarter.
- The total number of DataStore users rose from 12,948 in the previous quarter to 13,239 in this quarter, an increase of 291 new users.

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University of Illinois at Urbana-Champaign Research Data Service

NATIONAL CONTEXT

In the United States, the National Institutes of Health (NIH) began requesting data sharing plans from principal investigators submitting proposals in excess of \$500,000 in October 2003. The National Science Foundation (NSF) followed in Spring 2010 when it announced that it, too, would begin requiring research data management plans (DMPs) in future grant proposals. As a result, there has been an emphasis in the US on developing and sharing data management plans as a part of extramural funding and review processes. The [DMPTool](#), a free service to help researchers and institutions create high-quality data management plans, was developed through collaborative community effort and first released in October 2011.

In February 2013, the White House Office of Science and Technology Policy (OSTP) released a [public access memo](#) directing federal agencies supporting research to develop a plan to support increasing public access to publicly supported research. Specifically, the OSTP memo called for the public availability of federally funded research outputs after a 12-month post-publication embargo period. Both peer-reviewed publications and datasets were specifically included in the memo.

While NSF and NIH are the two largest research funders in the US, there are numerous other federal agencies providing research support. With each federal agency responding on its own timeline with its own public access plan, a complex landscape of differing requirements and systems has emerged. University libraries, research offices and individual researchers work to monitor this complex and changing landscape. SPARC (the Scholarly Publishing and Academic Resources Coalition) and Johns Hopkins University Libraries have developed a [community resource](#) to aggregate this information.

KEY INFORMATION

The [University of Illinois Research Data Service](#) (RDS), is housed in the Illinois University Library in partnership with several other campus units, including the Office of the Vice Chancellor for Research, Provost, School of Information Sciences, Technology Services and the National Center for Supercomputing Applications (NCSA).

- The [homepage for RDM services](#)
- RDS leadership: Heidi Imker, PhD, Director, imker@illinois.edu

HISTORY AND MILESTONES

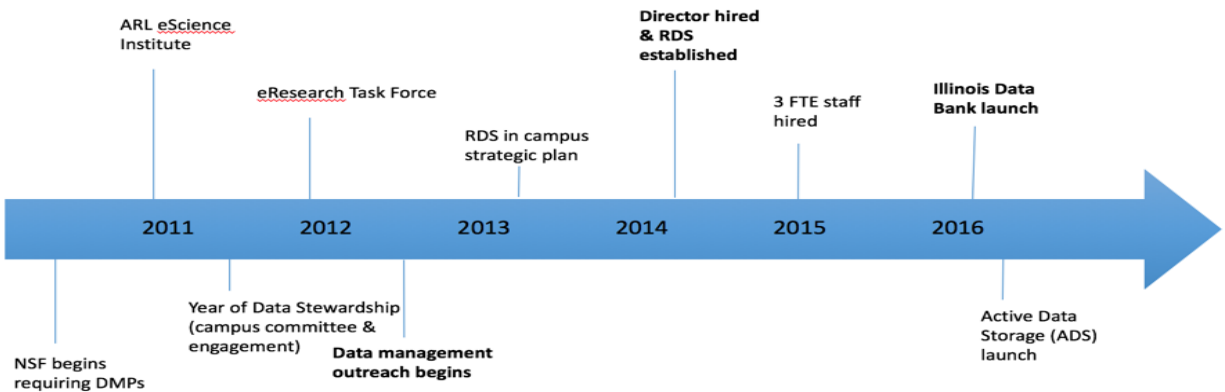


FIGURE 2. RESEARCH DATA MANAGEMENT AT UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

EDUCATION SERVICES (USER ORIENTATION TO RDM)

1. RDS offers online data management guidance, particularly related to [data management plan requirements](#), data organization, active data management and curation.
2. Illinois provides a customized version of the [DMPTool](#) to support the creation of ready-to-use data management plans for specific research projects.
3. RDS [offers workshops](#) in the library and to campus units on data management and data publishing topics. In AY2016, RDS offered more than 40 workshops attended by more than 500 researchers.
4. Recognizing that data management is usually a hurried afterthought for researchers, RDS seeks to be creative in its outreach efforts, experimenting with interjecting data management training in areas that seem tangential, such as data and software carpentry workshops, and by holding [data help desk drop-in hours](#).
5. RDS provides comprehensive and detailed [guidance for researchers preparing to deposit data in the Illinois Data Bank](#), with information about best practices for metadata description, dataset documentation, curatorial processes, embargo options, and education about DOIs, copyright and licensing.
6. RDS provides guidance and resources to campus users on active data management. In addition to educating users about local resources like U of I Box that can help support typical data storage needs, RDS also partners with NCSA and Technology Services to provide [Active Data Storage \(ADS\)](#) in order to address hosting large datasets, operational data storage and mid-term data archiving, from a few terabytes to over a petabyte of storage.

7. Illinois directs users to re3data.org to identify relevant discipline-specific repositories and also educates on local repository options.
8. The Illinois RDS works in concert with the University Library's [Scholarly Commons](#), which offers expert copyright, data, digital humanities, digitization, scholarly communications and usability consultation services. In particular, the Scholarly Commons offers services to [help researchers identify, purchase, format and use research data sets](#).

EXPERTISE SERVICES (RDM DECISION SUPPORT FOR USERS AND ADMINISTRATION)

1. The Illinois Research Data Service is staffed by four permanent FTE: one director, one research programmer and two data curators. In addition, it has had additional support from a Council on Library and Information Resources (CLIR) postdoctoral fellow and an iSchool practicum student. The new office is also guided by a library-appointed [research data committee](#) composed of subject specialists, research data librarians and functional specialists. Users are invited to contact RDS at researchdata@library.illinois.edu.
2. RDS provides individual consultation with Illinois researchers as they create data management plans (DMPs) and manage data. In AY2016, RDS staff provided 28 DMP consultations, including guidance on NIH Funding Opportunity Announcements (FOAs) requiring complex DMP preparation.
3. RDS closely monitors [evolving data policies](#) from agencies and publishers to provide expert guidance to the Illinois research community.
4. RDS seeks to strengthen campus data management expertise by engaging the [RDS interest group](#), providing librarians and graduate assistants with opportunities to learn about, discuss and develop skills related to research data management.

CURATORIAL CAPACITY (INFRASTRUCTURE)

1. RDS launched the [Illinois Data Bank](#) in August 2016, offering Illinois faculty, graduate students and research staff the local infrastructure to deposit data associated with Illinois research. The data bank is a file-based repository that is optimized for research data, and seeks to centralize, preserve and provide persistent and reliable access to voluntarily deposited research data objects created by Urbana campus affiliates. The data bank is locally developed and hosted; the [metadata schema for the Illinois Data Bank](#) is based on the DataCite Metadata Schema for the Publication and Citation of Research Data version 3.1.
2. Users may deposit files of any format, up to 15 GB via self-deposit, and RDS is in active development of additional mechanisms for upload of larger files. The maximum total size of deposited datasets cannot exceed 2 TB per researcher in a given 12-month period without pre-approval.
3. Illinois Data Bank datasets are professionally managed and curated. Staff provide curation by reviewing datasets for potential issues, adding relevant keywords to improve discoverability, advising on additional documentation, and linking deposited datasets to publications, software programs or datasets archived elsewhere.
4. Illinois has developed [policies about the Illinois Data Bank](#), including a detailed [Preservation Policy](#). The current objectives are to provide preservation of and access to published research data for a

minimum of five years after the publication date. Illinois reserves the right to assess the long-term viability of datasets through [curatorial review](#) and anticipates that the majority of preservation reviews will result in dataset retention.

5. Datasets deposited in the Illinois Data Bank utilize the back-end storage and management services within [Medusa](#), Illinois's digital preservation repository.
6. The [IDEALS institutional repository](#) will continue to serve as the Illinois library's repository for reporting of research and scholarship as it is optimized for publications, reports, presentations, posters, etc. Prior to launch of the Illinois Data Bank, IDEALS served as the gap repository for smaller datasets; there are no plans for legacy migration.

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Monash University

NATIONAL CONTEXT

In July 2012 the National Health and Medical Research Council (NHMRC) announced its [policy on the dissemination of research findings](#), which requires publications resulting from NHMRC-supported research to be deposited in an open-access institutional repository and/or made available in another open-access format within 12 months of initial publication. In January 2013, the Australian Research Council (ARC) implemented a similar [Open Access Policy](#). Neither of these policies specifically mentions the public dissemination of datasets. The ARC does have a separate statement on [Research Data Management](#), which states that researchers “have a responsibility to consider the management and future potential of their research data.”

In 2007, the Australian government released the [Australian Code for the Responsible Conduct of Research](#), which states that it “considers data management planning an important part of the responsible conduct of research and strongly encourages the depositing of data arising from a Project in an appropriately publicly accessible subject and/or institutional repository.” Since 2014, ARC requests that principal investigators outline plans for the management of data in project proposals, but ARC does not mandate open data. NHMRC issued a similar statement in 2015, encouraging but not mandating the sharing and reuse of research data sets.

The [Australian National Data Service](#) (ANDS) was formally established in 2008 as a partnership led by Monash University in collaboration with the Australian National University (ANU) and the [Commonwealth Scientific and Industrial Research Organization](#) (CSIRO). It is funded by the Australian Government through the [National Collaborative Research Infrastructure Strategy](#) (NCRIS) in order to collaboratively support the management, preservation and dissemination of Australian research data. ANDS provides resources to educate researchers and librarians on the development of data management plans.

KEY INFORMATION

The Monash University Library provides education, advice and repository infrastructure for data management, deposit and dissemination. It works collaboratively with partners on campus and across Australia, including the [Monash eResearch Centre](#), [Monash eSolutions](#) (IT support) and the [Monash Research Office](#).

- The [homepage for RDM services](#)
- RDS Leadership: David Groenewegen, Director, Research, Monash University Library, david.groenewegen@monash.edu

HISTORY AND MILESTONES

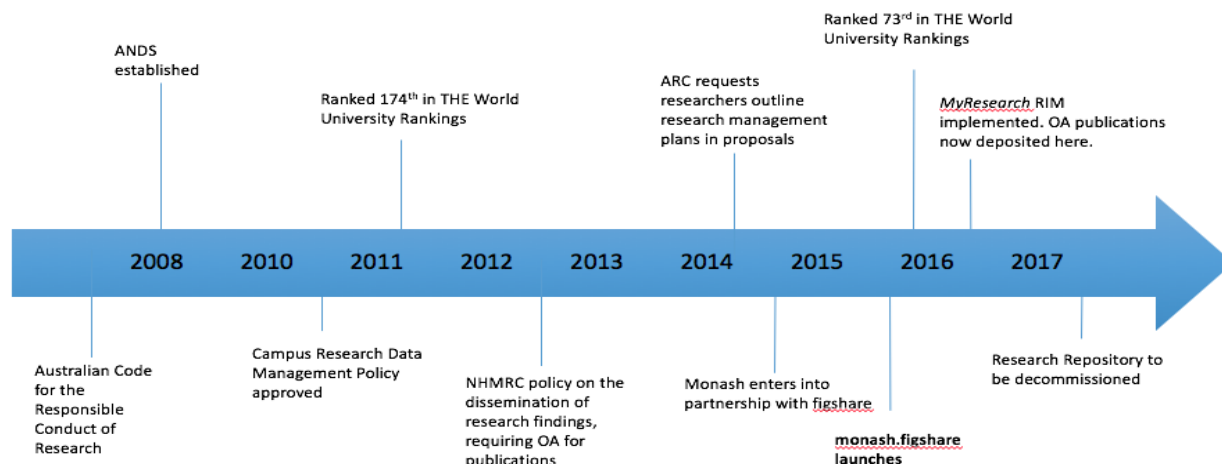


FIGURE 3. RESEARCH DATA MANAGEMENT AT MONASH UNIVERSITY

EDUCATION SERVICES (USER ORIENTATION TO RDM)

1. Monash University implemented a [research data management policy](#) in 2010 in order to ensure the responsible storage, retention and accessibility of locally produced research data, and it applies to all Monash staff, adjuncts, visitors and students. This policy supports and reinforces the 2007 [Australian Code for the Responsible Conduct of Research](#).
2. The library offers [online data management guidance](#), encouraging all researchers to undertake data planning at the start of each research project. The library provides two research data planning checklists to guide graduate students and faculty/researchers through a comprehensive planning process. However, a concrete data management plan (DMP) is not explicitly addressed in the research data management policy, and there is no internal requirement for Monash researchers to create a DMP as the benefit of doing so remains unclear.
3. In addition, the library offers concise yet thorough [online guidance](#) to researchers about ownership, rights and reuse; ethics, consent, confidentiality and cultural sensitivity; password management; storage, backup and security; data organization, sharing, retention and dissemination.
4. The library offers resources to help users understand the complex landscape of incentives and growing requirements for [data sharing](#). In addition, it provides information about the repository options both on and off campus. It also provides a link to the Directory of Open Access Repositories and provides an overview of relevant discipline-specific repositories.
5. In the library, discipline-specific librarians and the University Copyright Adviser offer workshops on topics related to responsible data management.

6. Monash offers an excellent [overview document](#) to educate and direct users to appropriate options for active data management, depending upon their needs. Monash provides [guidance for researchers preparing to deposit in monash.figshare](#). This includes education about DOIs, licensing and embargo options. Monash also provides advice to researchers on best practices for [metadata description](#), [dataset documentation and curation](#), although not in conjunction with the figshare deposit resources.

EXPERTISE SERVICES (RDM DECISION FACILITIES AND ADVICE FOR USERS AND ADMINISTRATION)

1. The library [offers expert advice](#) to researchers about research data management and encourages researchers to contact them at researchdata@monash.edu.
2. In addition to Research Director David Groenewegen, the central Research Infrastructure team of 4.1 FTE provide guidance and facilities for RDM and repositories. These services are also distributed, with [discipline-specific librarians](#) providing guidance on policies and guidelines, repository identification, and offering workshops and training sessions with advice and support from the Research Infrastructure team. Because there are not yet local or national requirements to submit data management plans and because institutionally it perceives DMPs to be of dubious value, Monash does not offer specific advice for DMP creation. The University Copyright Adviser (who is based [in the library](#)) provides individual advice as well as workshops for faculty and students.
3. The [Monash eResearch Centre](#) provides technical resources and infrastructure to enable the research enterprise, including hardware and software, as well as expert guidance. They specialize in provision of infrastructure and assistance to high-end large data producers.
4. In addition, the [University's Office of General Counsel](#) can consult with researchers about legal and contractual considerations of research data management and intellectual property, and additional resources exist on campus to advise researchers on [research ethics and privacy](#).

CURATORIAL CAPACITY (INFRASTRUCTURE)

1. In addition to local campus resources to enable active data management like Monash Google Drive, the institution also offers [myTardis](#), [LabArchive](#) and [ownCloud](#). MyTardis offers a highly automated web application for managing large datasets at the point of creation from large instruments; it also allows collaboration sharing and manipulation. Edd captures data from instruments but without collaboration functionality. OwnCloud is a cloud-based file sharing service similar to DropBox. Monash.figshare also offers locally hosted storage and collaboration functionality.
2. Monash libraries launched [monash.figshare](#) in 2015. Monash.figshare is a local implementation of the [figshare for institutions](#) product. Unlike traditional figshare, which utilizes secure storage with Amazon Web Services, monash.figshare is locally hosted. In other words, users interact with the figshare user interface and upload process in order to deposit and store data at Monash, which is also backed up via VicNode, the Victorian node of the Australian government's [Research Data Service](#). Monash.figshare was developed in collaboration with figshare and supports three domains of research management: private, shared and public. Users may upload and privately maintain their research datasets until they are ready to share. Monash.figshare also provides collaborative project spaces for researchers. When the dataset is finalized, users may submit their data for DOI minting and widespread dissemination.

3. Users may deposit files of any format. Monash.figshare provides essentially unlimited private free space for active data storage as well as file upload capacity limited by the technical constraints of http.
4. The library is currently investigating how best to provide long-term archival functionality for datasets deposited in monash.figshare.
5. Data retention policies vary, depending on the ethical requirements, funder requirements and time the data was created.
6. The Monash [Research Repository](#) has served as the campus institutional repository for several years but will be decommissioned in 2017. Beginning August 2016, researchers should deposit open access copies of their publications using the [MyResearch portal](#) (which is the locally rebranded version of the Elsevier Pure research information management system). Researchers are directed to deposit other types of research outputs (gray literature, working papers, media, as well as datasets), to monash.figshare. Legacy content will be migrated.
7. A project is currently underway to automate the upload of selected monash.figshare metadata to the ANDS registry, Research Data Australia.

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Wageningen University & Research

NATIONAL AND CONSORTIUM CONTEXT

A national-scale effort to coordinate Dutch RDM policy and infrastructure planning was launched in 2015 at the request of the Association of Universities in the Netherlands (VSNU), with SURF—a national cooperative focused on information and computing technology in the Dutch higher education sector—acting as the [National Coordination Centre for Research Data Management](#) (LCRDM). The current [roadmap](#) for this effort runs through 2017 with deliverables in four key areas: infrastructure, legal considerations, financial issues, researcher support services and researcher engagement/outreach activities.

VSNU has also articulated national scientific data retention guidelines as part of the Netherlands [Code of Conduct for Scientific Practice](#) (2014): research data sets are to be preserved for a minimum of ten years to promote reuse and ensure that scientific work can be validated through replication. National data storage (for active research) and archiving (long-term preservation) services are provided by Data Archiving and Networked Services (DANS), a shared services unit of the [Royal Netherlands Academy of Arts and Sciences](#) (KNAW) and the [Netherlands Organisation for Scientific Research](#) (NWO). [DANS-EASY](#) provides a web-based interface for uploading research datasets to the preservation repository and issues DOIs and persistent URLs for data contributed to the archive.

In addition to the national-scale archiving infrastructure provided through DANS, the 4TU consortium provides a shared research data archive for member institutions, including Wageningen University & Research. Research data in the 4TU archive ([4TU.Datacentrum](#)) and in the DANS-EASY archive are made discoverable in the [National Academic Research and Collaborations Information System](#) (NARCIS) discovery platform, which is managed by DANS. As of 28 September 2016, a total of 157,983 research datasets were discoverable through NARCIS, including about 4,000 datasets sourced from the 4TU.Datacentrum. NARCIS also provides discovery services for data sourced from several other Dutch research organizations.

Further group-scale coordination of RDM activities in Dutch universities is provided by the UKB library consortium, which represents 13 Dutch university libraries and the National Library (KB). Jacqueliijn Ringersma recently served as the chair of this UKB Research Data Management working group; Ringersma also serves as the chair of the Engagement/Awareness working group in the national coordination point managed by SURF.

KEY INFORMATION

Wageningen has an [institutional research data management policy](#); an excerpt: “Wageningen Graduate Schools (WGS) requires that PhD candidates create a Data Management Plan for their research. Chair groups are also required to have a Data Management Plan for their group. Once PhD candidates have created their DMP, it becomes an appendix to their research proposal and may be reviewed by Wageningen Graduate Schools. Each graduate school has slightly different requirements on how to submit the DMP with other documents.”

While the Wageningen Library provided data archiving services (through DANS) as early as 2013, the Data Management Support group was created in 2014, in response to revised guidance on national

research practice standards and a Horizon 2020 EU funding mandate requiring data management plans to be included with grant applications. The Wageningen Data Management Service Hub was launched in May 2015.

Wageningen's RDM services are positioned above the library, as part of the university's core research infrastructure. The Data Management Support group is composed of experts from the university Library, IT Services, Document Management & Logistics and Corporate Governance & Legal Services.

- The [homepage for RDS services](#)
- Leadership: Jacqueline Ringersma, Head of Digital Production Centre, jacqueline.ringersma@wur.nl

HISTORY AND MILESTONES

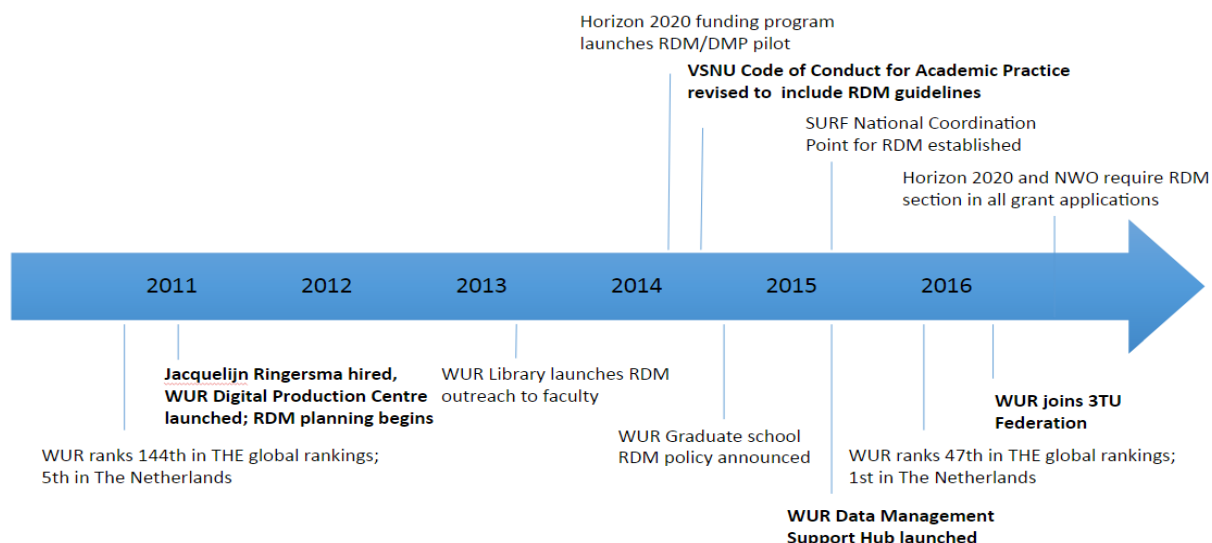


FIGURE 4. RESEARCH DATA MANAGEMENT AT WAGENINGEN UNIVERSITY & RESEARCH

EDUCATION SERVICES (USER ORIENTATION TO RDM)

A general orientation to RDM (derived in part from [Research Data Oxford](#) and the [UK Data Service](#) websites) is consolidated in a single page of information for Wageningen researchers who are [new to research data management](#).

Researcher-facing pointers to online tools (DMPT, Mantra, DataQ, Re3data, etc.)

- A locally created [template for Data Management Plan](#)
- Guidance on [file naming protocols](#)

- Guidance on [preferred file formats](#) for data deposited in DANS-EASY and 4TU.Datacentrum
- Guidance on [storage for active data management](#) (for current research, pre-publication)
- Guidance on [selecting \(and complying with\) an appropriate data license](#)
- Guidance on [research data requirements imposed by journals](#) in which Wageningen researchers publish most frequently; researchers are encouraged to contact the Data Management Support group to add to the list
- Guidance [on publication and disclosure of research data sets](#) including a decision flowchart
- [“Tips and Tricks”](#) (developed by a faculty department at Wageningen) for best use of OneNote as a Electronic Library Notebook are shared by the library

The Data Management Support hub includes a news section where external educational offerings (such as the EdX [MOOC on data visualization](#)) are featured. Relevant courses by Wageningen faculty are also highlighted (e.g., an [introductory course on data management](#) for master’s students).

Training (workshops, class sessions)

Three times a year, the Wageningen library offers a one-day data management course for doctoral and postdoctoral researchers that includes an overview of RDM principles and an introduction to data management plans. As part of the course, students develop a sample data management plan using a [document template](#) developed by the university library and participate in a peer review of the plans.

Policies and awareness raising about institutional/disciplinary policies/compliance

A summary of the Wageningen graduate school policy requirement for DMP is included on the [DMP guidance page](#).

A list of specific [funder requirements](#) related to research data management is provided and Wageningen researchers are encouraged to alert the library to gaps in the agencies profiled.

EXPERTISE SERVICES (RDM DECISION FACILITIES AND ADVICE FOR USERS AND ADMINISTRATION)

Wageningen’s RDM service offering has a strong expertise orientation, as reflected in its positioning as one of the university’s distinctive service and expertise capacities.

Dedicated RDM staffing

General questions about Wageningen RDM services are directed to a generic Data Management Support email alias (datamanagement.support@wur.nl). In addition to Ringersma, the library staff includes a dedicated information specialist for data management (Hugo Besemer) and a designated data librarian (Annemarie Patist).

Train-the-trainer offerings, institutional capacity-building

None found

Decision support services for researchers/departments (data discovery, data deposit options, Metadata prep, DMP development, mediated deposit).

Upon request, the Data Management Support Hub staff will:

- Review DMP for Wageningen research groups
- Provide support for metadata creation necessary for deposit of data in DANS-EASY or 4TU.Datacentrum; provide guidance (but not metadata creation or other dataset preparation) on deposit requirements for disciplinary repositories
- Obtain a DOI (via CrossRef) for Wageningen datasets that do not receive an identifier through deposit in other repositories
- Deposit researcher datasets in DANS EASY or 4TU.Centre for Research Data
- Create links from publications registered in Pure to related source code in Git@WUR
- Create links from publications registered in Pure to related datasets archived in DANS, 4TU

CURATORIAL CAPACITY (INFRASTRUCTURE)

Wageningen researchers are encouraged to use disciplinary data repositories where appropriate but are also given the option of archiving research data sets in the national DANS data repository or the 4TU consortial data repository.

The Data Support Hub manages a shared Git repository (Git@WUR) for source code and statistical models developed by Wageningen faculty and researchers.

Institutional Repository

The Wageningen [institutional repository](#) includes metadata records for research datasets deposited by Wageningen researchers (or library staff); these records include a persistent URL for the archived datasets in DANS-EASY or 4TU.Datacentrum. As of 28 September 2016, a total of 263 metadata records for research data were available.

Research Data Repository

Research datasets produced by Wageningen researchers are not managed locally but are instead archived in disciplinary repositories, the national DANS archive, or the consortial 4TU.Datacentrum archive. The library provides individualized support to researchers for deposit of data and publication of relevant metadata in the appropriate repository. Services include:

- Deposit of the dataset in DANS-EASY or the 4TU.Datacentrum.
- Guidance on self-deposit in other disciplinary data repositories

- Registration of archived datasets (with DOI) in the local instance of Pure (a commercially licensed research information management system), which ensures that datasets are included in the university's externally facing experts/faculty profiling and publications system.

At the moment there is no charge to individual Wageningen researchers for archiving "small" datasets in DANS or 4TU.

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