



The 6 Pillars of Engaging Researchers in Research Data Management (RDM)

LIBER Research Data Management (RDM) Working Group



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About this Report

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About LIBER

LIBER (Ligue des Bibliothèques Européennes de Recherche – Association of European Research Libraries) is the main network for research libraries in Europe. Founded in 1971, LIBER has grown steadily to include more than 400 national, university and other libraries from over 40 countries.

Together we work to represent the interests of European research libraries, their universities and their researchers by advocating on issues such as Copyright and Open Access, by collaborating on European-funded projects, and by meeting and learning at events such as our Annual Conference.

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Introduction

This document is written by the LIBER Research Data Management (RDM) working group's engaging researchers' task group. The RDM Working Group operates as part of LIBER's Strategic Direction on Research Infrastructure, which in turn is one of the pillars of the LIBER 2018-2022 Strategy.

The main goal of this document is to give libraries practical guidelines on how to involve researchers in the topic of RDM. The document is directly linked to the publication, 'Engaging Researchers with Data Management: The Cookbook' (Claire et. al, 2019), which focuses on 24 case studies when it comes to engaging researchers in RDM. The six main pillars outlined as part of this document were drawn up based on the above-mentioned publication. These pillars can be referred to and used as a whole, or each separately.

Pillar 1: Employ an Institutional Policy

Why is it important to have an institutional Research Data Management (RDM) policy?

Having an institution-wide RDM policy allows the institution and its researchers to cooperate in the same open science landscape. A policy outlines clear steps for researchers to follow and for institutions to establish a clear support system. However, a policy itself is not a stand-alone solution for establishing a data management culture. Researchers' input and commitment, as well as rewards and incentives, are also very much necessary for cultural change when it comes to data management.

What is a Research Data Management (RDM) policy?

An institutional research data management policy is an organisational directive which recommends or requires researchers of a university to provide data management plans and establishes requirements for managing data i.e. the storing, documenting, and enabling (re)use of data.

6 Tips to engage researchers when developing an RDM institutional policy

1. Cooperate with the university administration, IT department, and researchers to establish RDM services that can be offered by the library;
2. Offer your expertise in metadata, data repository requirements, as well as general knowledge in the field of open science (gained from various international library projects and library networks);
3. Involve researchers in the creation of the institutional RDM policy;
4. Ensure there is recognition for RDM practices in the policy, for example, RDM involvement could serve as a requirement for promotion or hiring;
5. Use every opportunity to discuss RDM with researchers to get them to understand the concept and the importance of good RDM practices (using practical, discipline-specific examples) as well as to increase overall awareness of the policy;
6. Provide relevant training on RDM, FAIR principles, best practices and tools, services and resources, to enable researchers to adhere to the RDM policy.



Resources and case studies

- Clare, C., Cruz, M., Papadopoulou, E., Savage, J., Teperek, M., Wang, Y., Witkowska, I., and Yeomans, J. (2019). Engaging Researchers with Data Management: The Cookbook, p. 16-29. DOI: 10.11647/OBP.0185, <https://www.openbookpublishers.com/product/1080>
- Cruz, M., Dintzner, N., Dunning, A., van der Kuil, A., Plomp, E., Teperek, M., ... Versteeg, A. (2019). Policy Needs to Go Hand in Hand with Practice: The Learning and Listening Approach to Data Management. *Data Science Journal*, 18(1), 45. DOI: <http://doi.org/10.5334/dsj-2019-045>
- Schoots, F., Sesink, L., Verhaar, P., and Frederiks, F. (2017) "Implementing Research Data Management Policy in Leiden" *University International Journal of Digital Curation*, Vol. 12, Iss. 2, 256–265. <http://www.ijdc.net/article/download/575/502/>
- The University of York Research Committee (2017), Research Data Management Policy with Guidance, reviewed version 15. July 2017 <https://www.york.ac.uk/about/departments/support-and-admin/information-services/information-policy/index/research-data-management-policy/rdm-policy-guidance/>
- University of Cambridge (2019), Research Data Management Policy Framework <https://www.data.cam.ac.uk/university-policy>
- University of Helsinki (2020), Research Data Management and Policy <https://www.helsinki.fi/en/research/services-for-researchers/research-data-management>

Pillar 2: Personally Engage with the Research Community

Why is it important to engage with researchers on a personal level?

To inform researchers about RDM, you need to get to know your end-users and learn about their RDM challenges so you can improve existing services or create new services for them.

What does engagement with the research community actually mean?

Creating an active bond with researchers (tours of faculties, informal get-togethers) and reaching out to the research community.

How to connect with and engage researchers?

- Make sure you get to know the organisational structure of your institution - people, culture, common ways of interaction etc. Be prepared that different parts of the organisation can have different organisational cultures.
- Actively involve subject/liaison librarians since they are connected to their research community and are familiar with its respective culture.
- Continuously grow the network of researchers and RDM related staff within the research community.
- Constantly search for model examples and promote them. Connect these stories to a service.
- As far as possible, use the language of your end-users.
- Give the spotlight to RDM advocates and data professionals.
- Give the research community an active role, e.g involve individuals directly in the creation of new services, test your ideas with the community, give priority and support to community-driven activities, nudge the community to take the lead.
- Listen to critics and find new and possibly creative ways to collect feedback, e.g. surveys, feedback meetings, polls, games.



Resources and case studies

- 101 innovations in Scholarly Communication <https://101innovations.wordpress.com/>
- Clare, C., Cruz, M., Papadopoulou, E., Savage, J., Teperek, M., Wang, Y., Witkowska, I., and Yeomans, J. (2019). Engaging Researchers with Data Management: The Cookbook, DOI: 10.11647/OBP.0185
- Data Champions Project
 - University of Cambridge <https://doi.org/10.2218/ijdc.v12i2.562>
 - Technical University of Delft <https://www.tudelft.nl/en/library/current-topics/research-data-management/r/support/data-champions/>
 - EPFL (École polytechnique fédérale de Lausanne) <https://www.epfl.ch/research/open-science/champions/>
- Lancaster University Data Conversations <https://www.lancaster.ac.uk/library/research-data-management/data-conversations/>

Pillar 3: Engage Early-Career Researchers

Why is it important to engage early-career researchers?

Organising and managing research data properly is important for on-going research, preservation, and findability; it also helps save time in the research process. Developing good data management practices at the beginning of one's research career helps establish good habits for the rest of one's career. Adequate RDM skills can also help researchers when it comes to applying for grant applications because most funders require data management plans.

What does RDM mean for early-career researchers?

A Data Management Plan (DMP) can be a useful tool for getting started with research data management. This is because it can be used for planning data generation and collection, storage and preservation, as well as data (re)use. Feedback by experts and regular updates to the research community help establish good practices early in one's research projects.

How to engage early-career researchers?

- Reach out to PhD students (through workshops, mailing lists, social media etc.) and tell them about the importance of good RDM practices;
- Map early-career researchers' needs and questions they may have about RDM;
- Offer courses specifically aimed at PhD students, their supervisors, and early-career researchers;
- Connect senior researchers (who employ good RDM practices) with early-career researchers to demonstrate their best practices.



Resources and case studies

- Clare, C., Cruz, M., Papadopoulou, E., Savage, J., Teperek, M., Wang, Y., Witkowska, I., and Yeomans, J. (2019). Engaging Researchers with Data Management: The Cookbook, p. 60-66. DOI: 10.11647/OBP.0185
- Smits, D. A. B., & Teperek, M. (2020). Research Data Management for Master's Students: From Awareness to Action. *Data Science Journal*, 19, 30. <https://doi.org/10.5334/dsj-2020-030>
- UiT The Arctic University of Norway (2018), High North Academy courses for PhD students <http://doi.org/10.5334/dsj-2019-045>
- University of Edinburgh (2020), Data Management Plan Training for Early Career Researchers <https://mantra.edina.ac.uk/datamanagementplans/>
- University of Southampton (2020), RDM for PhD Students <https://library.soton.ac.uk/researchdata/phd>
- University of Tartu Library (2019), Course for PhD students Research Data Management and Publishing <https://sisu.ut.ee/andmehaldus/home-o?lang=en>

Pillar 4: Facilitate Researcher-to-Researcher Communication via Data Stewards

Why is it important to inform researchers about RDM?

Research institutions must ensure that researchers and other staff members know how to handle and share data during and after the research process. This often requires that knowledge and experiences from different departments must be available to the researcher. Often researchers would like to contact other researchers and staff members from within their scientific research area. The institution should therefore facilitate this.

What is the role of Data Stewards?

To share knowledge about RDM services on offer, the library can use its interpersonal contacts as well as online information. To do this, a research institution could, for example, train and promote local Data Stewards to establish contacts within the different scientific communities at your institution. Data Stewards are subject-specific experts with various degrees of expertise in the different aspects of research data management supporting faculties, research groups, and individual researchers with research data management all across the RD lifecycle. The Data Stewards must know local requirements when it comes to RDM and the services which can be offered.

Tips for facilitating communication with researchers

- Train locally-based Data Stewards who are connected to different services such as the library, IT, legal, contract/project manager etc.
- Ensure that local Data Stewards are connected to each other so that they are supported in their work and that they can serve as a crucial link between different faculties/departments/groups.
- Use different communication channels to convey RDM messaging, ranging from attending local meetings, giving presentations, to a well developed online presence.



Resources and case studies

- Clare, C., Cruz, M., Papadopoulou, E., Savage, J., Teperek, M., Wang, Y., Witkowska, I., and Yeomans, J. (2019). Engaging Researchers with Data Management: The Cookbook, p. 18-22 and 68-90. DOI: 10.11647/OBP.0185
- Verheul, Ingeborg, Imming, Melanie, Ringerma, Jacqueline, Mordant, Annemie, Ploeg, Jan-Lucas van der, & Pronk, Martine. (2019, May 6). Data Stewardship on the map: A study of tasks and roles in Dutch research institutes. Zenodo. <http://doi.org/10.5281/zenodo.2669150>

Pillar 5: Offer RDM Services and Training

Why offer RDM services and training

Research institutions and archives need to ensure that research data are stored, shared, and made available according to FAIR data principles to ensure scientific transparency, (re)use of data and further scientific development. The institutions, therefore, need to ensure that staff members know how to analyse, store, and share data.

What can a research institution do to ensure services and training?

Institutions need to offer access to specific services like Data Management Planning software, online services to store and share data during and after the research process, and tools to analyse the data. Institutions need to offer training for staff and students to ensure that the services are used. This training can be done by the local Data Stewards and/or in collaboration with relevant networks and initiatives.

How to make training possible?

- Appoint Data Stewards who can assist and train researchers;
- Point your staff and researchers to existing training resources, that are freely available;
- Ensure that Data Stewards are easily accessible to end-users;
- Ensure Data Stewards know the scientific field researchers are working in.

Resources and case studies

- Clare, C., Cruz, M., Papadopoulou, E., Savage, J., Teperek, M., Wang, Y., Witkowska, I., and Yeomans, J. (2019). Engaging Researchers with Data Management: The Cookbook , p.110-119. DOI: 10.11647/OBP.0185
- Example of relevant service: DMP Online
- Wildgaard, L., Vlachos, E., Nondal, L., Larsen, A. V., and Svendsen, M. (Edt.) (2020). National Coordination of Data Steward Education in Denmark: Final report to the National Forum for Research Data Management, 10.5282/zenodo.3609516



Pillar 6: Communicate Everything You Do

Why is it important to communicate?

It is necessary to ensure that researchers and students know about your services. They should understand these services and their added value. By communicating relevant and up-to-date information, you create trust and build upon the positive image of the library.

What to communicate?

RDM communication is a process by which RDM-related information is exchanged between various stakeholders using various tools¹. Describe your services, introduce your experts, be transparent about existing limitations, and highlight the means of direct communication channels.

How to maximise the impact of your communication?

- Make sure you get to know the communication landscape of your institution - relevant roles, preferred tools, and used language;
- Get access to relevant newsletters and mailing lists. Connect to the social media channels of your end-users and relevant networks;
- Stay up-to-date by connecting to relevant initiatives;
- Make sure that the information you communicate is unambiguous;
- Have a visible presence on the website of your institution. Make sure that your part of the website is easily reachable, searchable, and up-to-date;
- The users often only engage with RDM when they directly need the service. Prepare your communication for this situation;
- Plan your actions (time, resources, tools, stakeholders, audience) in advance;
- Adjust the language and information level to your audience.
- Start small, grow continuously. Always take into account updates and future changes.
- Get inspired by others. There is no need to reinvent the wheel or do everything by yourself.

Resources and case studies

- Clare, C., Cruz, M., Papadopoulou, E., Savage, J., Teperek, M., Wang, Y., Witkowska, I., and Yeomans, J. (2019). Engaging Researchers with Data Management: The Cookbook, DOI: 10.11647/OBP.0185
- MIT Knowledge base. <http://kb.mit.edu/confluence/display/home/The+Knowledge+Base>
- Open Working from 4TU.ResearchData & TU Delft Research Data Services. <https://openworking.wordpress.com/>

1. Merriam Webster Dictionary, online, retrieved 02.06.2020, source: <https://www.merriam-webster.com/dictionary/communication>



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