

DCU Research Data Management Guide

Dr Ecaterina McDonagh
Research Support Office
Dublin City University



Ollscoil Chathair
Bhaile Átha Cliath
Dublin City University

Rationale for developing the resource...

**Research Data
Management:
guidance and
resources**

... and a brief introduction

Dublin City University



Ollscoil Chathair
Bhaile Átha Cliath
Dublin City University

DCU Research Data Management WG

- Convened 2019
- Representatives from Research Support, ISS, Library.
- Initially tasked with surveying DCU Staff on their perceptions of RDM practices
- ✓ How researchers manage research data in DCU?
- ✓ **What supports for research data management are needed in DCU?**

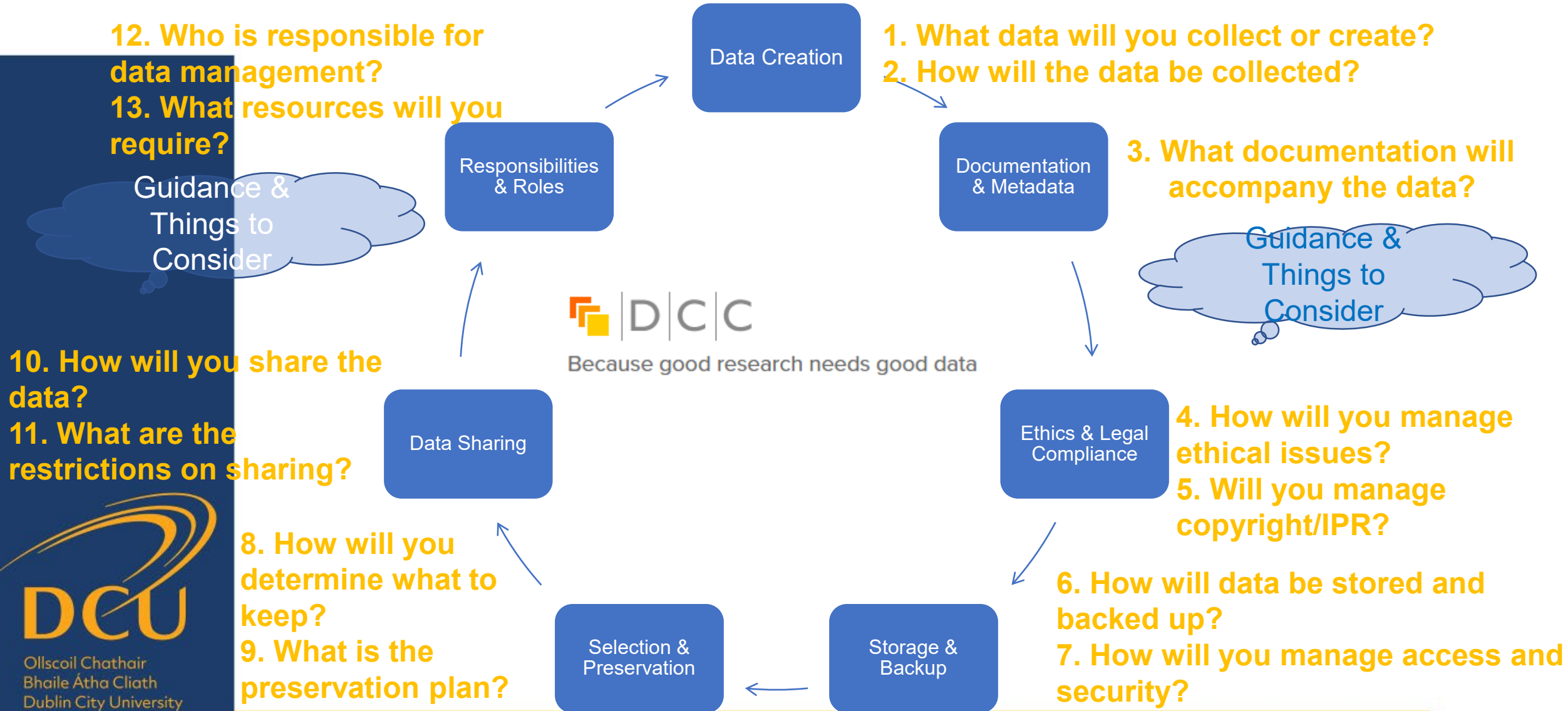


DCU Staff Survey: Support for RDM in DCU

- 22% of Respondents Considered RDM Supports at DCU as Adequate
- 48% Wanted RDM Support when Writing a Research Proposal
- 69% of Staff Wanted Training in Writing Data Management Plans



Digital Curation Centre (DCC) Guidance



Resources

Research Data Management: guidance and resources



DCU Library

DCU Library / LibGuides / Writing Data Management Plans / Introduction

Writing Data Management Plans: Introduction

Introduction | Data Creation | Data Description | Ethics, Compliance, GDPR | Data Storage | Preserving, Sharing & Archiving | Re

Introduction to Data Management Plans

Creating data can be expensive, in terms of the monetary, human, and time resources required. Recreating can be even more expensive and in some circumstances impossible. Your data is precious, not only to you as the researcher, but potentially to others involved in its creation. Data management planning (and the associated plan document) can help to give you insight into the nature of your data set, that is the size, format, sensitivity of the data, as well as allowing you the opportunity to give cognisance to how you will store, secure, and perhaps share the data. Crucially it will also highlight any additional resources (money, expertise, equipment) you might need and a cogent reason for seeking additional funding.

Planning for your research data and its management should start at the earliest possible stage and should continue throughout the research lifecycle. Whilst a data management plan should be one of the first deliverables of your project it should not be considered finished until the research project itself is finished. The plan should give you pause for thought throughout the project and may need to be updated to take account for slower (or quicker) progress on data creation, higher (or lower) volumes of data, new formats, or any other unforeseen changes to the nature of the data. It should not be considered a "rule book" that must be adhered to rigidly. If, for example, your data set ends up twice as big as originally envisaged, then the plan can be updated to reflect that, as long as all of the other considerations (e.g. storing, backup, preservation of a bigger dataset) are taken care of.

Creating a data management plan can seem daunting, starting at a blank page at the very start of a research project but fortunately the following tabs in this section of the libguide along with the excellent 'DMPonline' tool from the Digital Curation Centre in the UK can help to demystify the process and break it down into much more manageable chunks. Additionally, DCU Research Support, DCU Library, and ISS have created a [comprehensive guide to all supports available to DCU Researchers](#). Click on "[Step 1: Data Creation](#)" below to start this tutorial.



Please contact me directly if you'd like a demo of DMPonline, or if you'd like a review of your recently compiled data management plan.

- Directly downloadable for DCU Research Support webpage
- Accessible via RDM Library Guide "Wrapper" at Library
- Launch event (online) – February 2022

Introduction	2
Data Collection	2
<i>What data will you collect or create?</i>	2
<i>How will the data be collected or created?</i>	4
Documentation and Metadata	5
<i>What documentation and metadata will accompany the data?</i>	5
Ethics and Legal Compliance	6
<i>How will you manage any ethical issues?</i>	6
<i>How will you manage copyright and Intellectual Property Rights issues?</i>	9
Storage, Backup and Security	10
<i>How will the data be stored and backed up during the research?</i>	10
<i>How will you manage access and security?</i>	12
Selection & Preservation	14
<i>Which data are of long-term value and should be retained, shared, and/or preserved?</i>	14
<i>What is the long-term preservation plan for the dataset?</i>	15
Data Sharing	15
<i>Why and how will you share the data?</i>	15
<i>Are any restrictions on data sharing required?</i>	17
Responsibilities and Resources	18
<i>Who will be responsible for data management?</i>	18
<i>What resources will you require to deliver your plan?</i>	19
ANNEX 1	21
Examples of Data Management Plans	21

Why to share research data?

Benefits to you, research community and public:

- Increased research impact
- Ensuring research integrity of your research findings
- Long term preservation of research data
- Research and innovation
- Funder requirements
- Publisher requirements



Questions to consider:

- ✓ *How will potential users find out about your data?*
- ✓ *With whom will you share your data and under what conditions?*
- ✓ *What are the contractual obligations on data sharing?*
- ✓ *What permissions will be needed to reuse the data?*
- ✓ *How will you share the data e.g. via a repository, handle requests directly or any other mechanism?*
- ✓ *When will you make the data available?*



Restrictions on data sharing

Reasons not to share data include:

- Commercial value of data
- Need for confidentiality of data (security issues; personal data)
- The project's aim might not be achieved
- No new data is generated
- ✓ Provide details & justification of potential restrictions to share data in your DMP (proposal/post-award stage)
- ✓ European Commission: “*Research data should be as open as possible, as closed as necessary*” (H2020 and Horizon Europe)



Useful resources & further guidance

- [“*Data sharing and how it can benefit your research career*” \(by Gabriel Popkin, NATURE, 13 May 2019\)](#)
- [UK Data Service “Managing and sharing data: best practice for researchers”](#)
- [Registry of research data repositories \(re3data.org\)](#)
- [Zenodo \(multidisciplinary repository\)](#)
- [HRB Policy on Management and Sharing of Research Data](#)
- [EU Open Science Policy](#)
- [Open Research Europe’s research data guidelines](#)



Introduction	2
Data Collection	2
<i>What data will you collect or create?</i>	2
<i>How will the data be collected or created?</i>	4
Documentation and Metadata	5
<i>What documentation and metadata will accompany the data?</i>	5
Ethics and Legal Compliance	6
<i>How will you manage any ethical issues?</i>	6
<i>How will you manage copyright and Intellectual Property Rights issues?</i>	9
Storage, Backup and Security	10
<i>How will the data be stored and backed up during the research?</i>	10
<i>How will you manage access and security?</i>	12
Selection & Preservation	14
<i>Which data are of long-term value and should be retained, shared, and/or preserved?</i>	14
<i>What is the long-term preservation plan for the dataset?</i>	15
Data Sharing	15
<i>Why and how will you share the data?</i>	15
<i>Are any restrictions on data sharing required?</i>	17
Responsibilities and Resources	18
<i>Who will be responsible for data management?</i>	18
<i>What resources will you require to deliver your plan?</i>	19
ANNEX 1	21
Examples of Data Management Plans	21

Ethical and legal compliance as part of DMP

- *How will you manage any ethical issues?*
 - If personal data are processed, how will compliance with legislation on personal data and on security be ensured?
 - Have you gained consent for data preservation and sharing?
 - How will you protect the identity of participants if required? e.g. via anonymisation
 - Consider whether ethical issues (e.g. sensitive data) can affect how data are stored and transferred, who can see or use them, and how long they are kept. Demonstrate awareness of these aspects and respective planning
 - Follow the national and international codes of conducts and institutional ethical guidelines, and check if ethical review (for example by an ethics committee) is required for data collection in the research project



Ethical and legal compliance: DCU supports

- DCU Research Ethics Committee (website: procedures and guidance)
- DCU Data Protection Unit (website: procedures and guidance)
 - DCU GDPR Advocates
- List of relevant DCU policies and procedures:
 - Code of Good Research Practice
 - DCU Data Privacy Policy
 - DCU FoI Office
 - DCU Data Classification Policy
 - DCU ISS Guide to Encrypting Laptops, Mobile Phones and other devices
 - Etc..



Copyright and IPR issues

- Who owns the data?
- How will the data be licensed for reuse?
- Are there any restrictions on the reuse of third-party data?
- Will data sharing be postponed / restricted e.g. to publish or seek patents?
- **DCU Supports:**
 - DCU INVENT (“Introduction to IP guide” and other supports)
 - DCU IP Policy
- **External supports & guidance:**
 - Ireland’s National IP Protocol 2019
 - Knowledge Transfer Ireland “Practical Guide to Managing IP”



Additional resources

- DMP Guide: 5 examples of DMPs in Annex
- DCU Research Support website (regularly updated):
 - dedicated webpage on research data management
 - link to the DMP Guide
 - Irish and international funders' RDM requirements
 - DCU Library LibGuide "Managing Research Data"
 - Research Data Management: IT considerations (guidance)
 - Individual meetings with researchers re: their DMPs (if they come early!)



Thank you!

ecaterina.mcdonagh@dcu.ie

research@dcu.ie



Ollscoil Chathair
Bhaile Átha Cliath
Dublin City University