



# DIY Research Data Management Training Kit for Librarians

## Data Management Planning

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# Running Order

- I. What is Research Data Management (RDM)?
- II. Why does RDM Matter?
- III. What do the funders expect?
- IV. What does Edinburgh University expect?
- V. Creating Data Management Plans
- VI. Questions?



# I: What is Research Data Management?

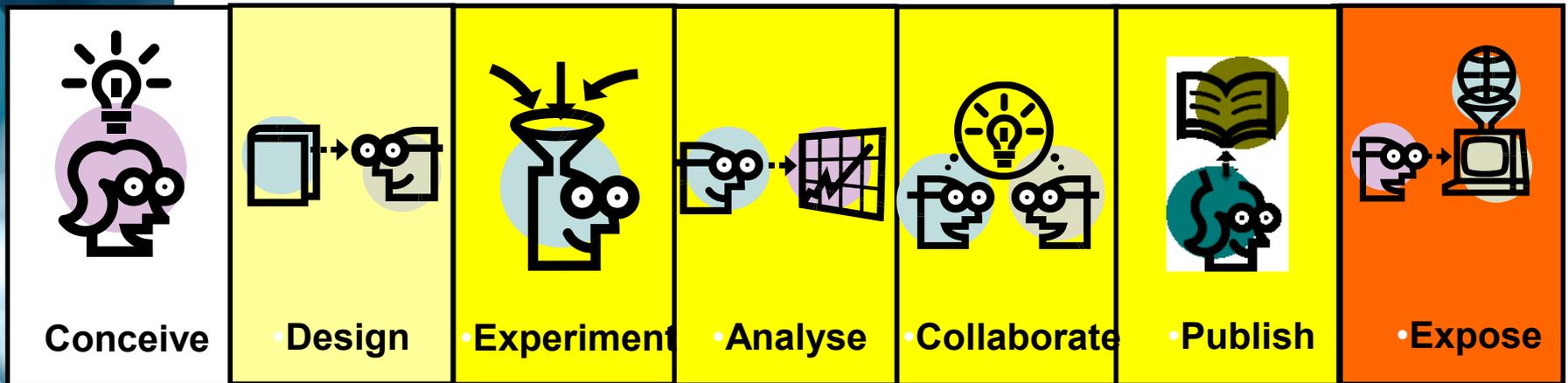
- An umbrella term to describe all aspects of planning, organising, documenting, storing and sharing data.
- It also takes into account issues such as data protection and confidentiality.
- It provides a framework that supports researchers and their data throughout the course of their research and beyond.

# I: What is Research Data Management?

Data  
Management  
Planning

Research Data Management  
Platform

National Repository or  
Institutional Repository or  
Electronic Journal or  
Community Portal



Slide borrowed with permission from Anthony Beitz, Monash University. Presented at OR 2012, Edinburgh

## II: Why Does RDM Matter?

Good RDM provides a number of benefits for both researchers and their institution, it ensures:

- researchers meet funder / university / industry requirements
- data are accurate, complete, authentic and reliable – as per good research practice
- research integrity and replication
- data security & minimise the risk of loss
- increased efficiency - saving time & resources
- data is available for their own future use

## III: What do the funders want?

### RCUK Common Principles on Data Policy

Key messages:

1. Data are a **public good**
2. Adherence to community **standards and best practice**
3. **Metadata** for discoverability and access
4. Recognise constraints on **what data** to release
5. Permit **embargo periods** delaying data release
6. Acknowledgement of / compliance with **T&Cs**
7. Data management and sharing activities should be explicitly **funded**



<http://www.rcuk.ac.uk/research/Pages/DataPolicy.aspx>



## III: What do the funders want?

- AHRC, BBSRC, ESRC, MRC, NERC, and STFC all require some form of data management or sharing plan as part of a funding application.
- The requirements are diverse, but they all have the RCUK Common Principles as their foundation.
- Cancer Research UK and the Wellcome Trust are not part of RCUK but both require data sharing plans.

<http://www.dcc.ac.uk/resources/data-management-plans/funders-requirements>

# III: What do the funders want?

Research Funders	Policy Coverage		Policy Stipulations					Support Provided			
	Published outputs	Data	Time limits	Data plan	Access/sharing	Long-term curation	Monitoring	Guidance	Repository	Data centre	Costs
AHRC	●	●	●	●	●	◐	○	●	○	◐	○
BBSRC	●	●	●	●	●	●	●	●	●	◐	●
CRUK	●	●	●	●	●	●	●	◐	●	○	○
EPSRC	●	●	●	◐	●	●	●	◐	○	○	●
ESRC	●	●	●	●	●	●	●	●	●	●	◐
MRC	●	●	●	●	●	●	○	◐	●	○	◐
NERC	●	●	●	●	●	●	●	●	●	●	◐
STFC	●	●	●	●	●	●	●	◐	●	◐	○
Wellcome Trust	●	●	●	●	●	●	●	●	●	◐	●

## III: What do the funders want?

- EPSRC does not require researchers to submit data management or sharing plans in grant applications.
- However, they do require research organisations to publish appropriately structured metadata online describing the research data they hold, normally within 12 months of the data being generated.
- It is expected that data will be made available in a timely and responsible manner.
- The EPSRC expects data to be maintained securely for 10+ years
- The deadline for institutions to meet this requirement is May 2015

## IV: What Does Edinburgh Want?

- Edinburgh University's Research Data Management Policy was approved in May 2011 and forms the foundation of all subsequent RDM work within the university.
  - Responsibility for research data management through a sound research data management plan during any research project or programme lies primarily with Principal Investigators (PIs).
  - All new research proposals... must include research data management plans or protocols that explicitly address data capture, management, integrity, confidentiality, retention, sharing and publication.
  - The University will provide training, support, advice and where appropriate guidelines and templates for the research data management and research data management plans.
  - Research data management plans must ensure that research data are available for access and re-use where appropriate and under appropriate safeguards.

## V: Creating Data Management Plans?

- Funders expect data plans to outline how data will be created, managed, shared and preserved, justifying any restrictions that need to be applied.
- A good Data Management Plan will normally cover the following six themes;
  - Data Types, Formats, Standards and Capture Methods
  - Ethics and Intellectual Property
  - Access, Data Sharing and Reuse
  - Short-Term Storage and Data Management
  - Deposit and Long-Term Preservation
  - Resourcing
- But will vary according to the exact questions and requirements of the funder being applied to.

# V: Creating Data Management Plans?

- Data Types, Formats, Standards and Capture Methods
  - What data outputs will your research generate?
    - outline volume, type, content, quality and format of the final dataset
  - Outline the metadata, documentation or other supporting material that should accompany the data for it to be interpreted correctly
  - What standards and methodologies will be utilised for data collection and management?
  - State the relationship to other data available in public repositories e.g.
    - existing data sources that will be used by the research project
    - gaps between available data and that required for the research
    - the added value that new data would provide in relation to existing data
- Researchers should be prepared to explain and justify the choices they are making
- They need to understand the need to create Metadata and documentation to support their research data



# V: Creating Data Management Plans?

- Ethics and Intellectual Property
  - Demonstrate that you have sought advice on and addressed all copyright and rights management issues that apply to the resource
  - Make explicit mention of consent, confidentiality, anonymisation and other ethical considerations, where appropriate
  - Are any restrictions on data sharing required – for example to safeguard research participants or to gain appropriate intellectual property protection?
- Researchers should be able to present a strong case for any restrictions on sharing
- Ensure that they have all necessary ethical approval in place
- Clarify issues surrounding data ownership

# V: Creating Data Management Plans?

- Access, Data Sharing and Reuse
  - What are the further intended and/or foreseeable research uses for the completed dataset(s)?
  - How you will make the resource accessible to the potential audience(s) identified.
    - Where will you make the data available?
    - How will other researchers be able to access the data?
    - Will a data sharing agreement be required?
    - What is the timescale for public release of the data?
  - State any expected difficulties in data sharing, along with causes and possible measures to overcome these difficulties.
  - How will data sharing provide opportunities for coordination or collaboration?
- Anticipate and plan for data reuse
- Reassure funders by being very clear about where, when and how data will be made available
- Use existing infrastructure, e.g. institutional, national or international repositories

# V: Creating Data Management Plans?

- Short-Term Storage and Data Management
  - Describe the planned quality assurance and back-up procedures [security/storage]
  - Specify the responsibilities for data management and curation within research teams at all participating institutions
- Define data management support
- Consider the practicalities
- Apply appropriate levels of data management

# V: Creating Data Management Plans?

- Deposit and Long-Term Preservation
  - Identify which of the data sets produced are considered to be of long-term value
  - Outline the plans for preparing and documenting data for preservation and sharing
  - Explain your archiving/preservation plan to ensure the long-term value of key datasets
- Select data of long-term value
- Safeguard the data behind the publications
- Assure that data will remain accessible

# V: Creating Data Management Plans?

- Resourcing
  - What resources will you require to deliver your plan?
  - Outline additional hardware, software and technical expertise, support and training that is likely to be required and how it will be acquired
- Outline and justify costs
- Be realistic about the human time and effort required
- Show that funds will be used efficiently and effectively



## VI: Contact details and resources

All of our DMP-related resources available online at:

[www.dcc.ac.uk/dmponline/](http://www.dcc.ac.uk/dmponline/)

THANK YOU

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