Overview

Help you think about practical issues to do with creating, working with and securing data

Show how ‘data management’ benefits you

During a research project and after

Foundation of Open Research and Reproducible Research
Policy on Management of Research Data and Records

There is a formal policy:

“The University of Oxford seeks to promote the highest standards in the management of research data and records as fundamental to both high quality research and academic integrity.”

See Research Data Oxford (RDO)

http://researchdata.ox.ac.uk/
Policy on Management of Research Data and Records

No one would disagree with that but in practice what does it mean?

‘Management’ - Protecting ourselves as projects develop or things go wrong;
Laptop lost or stolen
Hard drive crash
Funding terminated
Team members disperse
Memory fails
Management Policy

Research data and records should be:

a. Accurate, complete and reliable;
b. Identifiable, retrievable, and available when needed;
c. Secure and kept in an appropriate manner
Impact on You

Responsibility is yours as data creators to be aware of policy

Combine with wider research skills development

*Respond to funder/publisher expectations*

Make use of the *support framework* at Oxford

Right from the start
“Overall, doing research robustly and fairly does not necessarily require more money, it simply requires that you think before you start.”

Ben Goldacre, Bad Science (2008)
Some Principles of Data Management

How can RDM help with these concerns?

Data Management Planning and the research lifecycle

All stages of research
  ◦ Before – During - After

Data and Metadata

Usable for you now (secure storage)

In the future
  ◦ Accessible to you
  ◦ Preserved for you
Working with Data?

Typical examples?
  Born digital
  Or digitised
  Used and unused
Digital Media

Digital – a key factor in rdm

Strengths of digital
  ◦ Perfect copies
  ◦ Easy to share
  ◦ Convenient

But there are weaknesses *to be managed*
Digital Media

Weaknesses of digital
- *Too* easy to share
- Medium dependent
- Corrupted - Immediate loss
- Inflexible – difficult to repurpose
- Too *many* copies
- Hardware and software dependent
- Long term use issues - Digital obsolescence and fragility
- Ethical and licensing issues

Curate it
- Collaborate on data management
Management takes Shape

Day to day protocols on collection and use

Disaster planning
  ◦ Multiple storage and backups
  ◦ Data security

Appropriate workflow?

Documentation – Metadata
  ◦ Natural offshoot of literature search/ research diary?

Formalisation of procedures ensures **preservation**

Preservation as basis of sharing **with others**
Getting Support for RDM

Important distinctions in managing your data *and* how others view it

Dynamic or static?

See where and *when* support fits in

During or after the project?
- One Drive for business (during but *not* after)
- HFS (during but *not* after)
- ORA-Data
- [RDO](#) on other options
- External archival services
Welcome to the Research Data Oxford website

About RDM
Overview of research data management and funder policies.

Working with data
Data management day-to-day and at the project planning stage.

Sharing data
Sharing, licensing, depositing, and citing your data.

Tools, services, and training
Resources to help with various aspects of data management.

Research data glossary
Terms used in the management of digital research data.

Oxford research data blog
Latest news and views on Oxford research data support.

ORA-Data
Find out more about ORA-Data, the archival catalogue and repository for research data produced by Oxford academics.

Useful links
- Ask a question - Contact Us
- University RDM policy - download or view
- Find out what funders expect - see the funder policies page
- Latest news - Read the Oxford Research Data blog

Recent blog posts
- Using DMP Online with Oxford SSO credentials – instructions now available 29 January 2016
- Seal of approval for ORA-Data 11

http://researchdata.ox.ac.uk/
Support Frameworks

You are not left to figure this all out yourself!

At Oxford:
- The Library and its Subject Consultants
- Departmental level support
- Research Skills training
- Research Data Oxford webpage
- Research Data Oxford email
- ORA / ORA-Data
Support Frameworks 2

Ethical and legal issues
- Creating data – live participants
- Curec
- Collecting data – Licensing

Research Ethics
- Access Restrictions
- Participation/Confidentiality agreements
- Ethics Committees and Informed Consent
Support Frameworks 3

Outside Oxford:
- Digital Curation Centre
- UK Data Archive/Service
- Edinburgh – MANTRA Course
- Publications (Rice & Southall 2016, Angus Whyte 2014)
- websites
Open and Reproducible Research

Key trend in academic research around:

- Preservation of materials
  - Data
  - Software
  - Methodology
- Documentation of research
- Transparency in methodology
- Potential for provenance, verification etc
- Augmentation

All research can be managed and planned
Not all research is Open or Reproducible
RDM Planning

Data Management Plans and Planning

Growing popular with funders and publishers

What is it?
- About applying rdm principles
- Formalising previously informal stages
See chapter 7 (Rice & Southall 2016)
‘Research Data Oxford’ pages
DMP – an outline

Describes the research data being created or collected

Key responsibilities

How the data will be organised

Disaster recovery

Documentation during the collection and analysis phase

Tools

Plan v. Planning - a considered approach
Other Elements

Policy on data storage and security
What facilities and equipment will be required
How stakeholder requirements being addressed
How / If the data will be preserved
How / If the data will be shared
ORA-Data Pre-deposit checklist

DMPOnline tool
In Conclusion

Beneficial to you

Make more efficient use of data

Protect against common problems of ‘fragile’ digital data

Increase citations/ impact of research

Respond to funder, publisher expectations:
  ◦ Good Data management
  ◦ Open research
  ◦ Reproducible Research