Innovating with Researchers at Oxford: Improving Research Data Management

James A J Wilson, Project Manager

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Aims & Approach

• Maximize the value of the research data produced in Oxford
• Ensure that data can be re-used
  – Preserved
  – Accessible
  – Comprehensible
• Both a ‘bottom-up’ and a ‘top-down’ approach to implementing infrastructure
• Pilot projects to understand existing practices and develop tools and workflows that can be generalised
• Intra-institutional collaboration
Eidcsr

Embedding Institutional Data Curation Services in Research

• Working with three research groups:
  – Computational Biology Group
  – Cardiac Mechano-Electric Feedback Group
  – Department of Cardiovascular Medicine

• Understand their requirements
• Preserve their data
• Enable future access to data
• Produce a University Data Management Policy
Sudamih
Supporting Data Management Infrastructure for the Humanities

• Better understanding of research data management practices and needs in the humanities
• Development of training to improve information/data management skills
• Development of a ‘Database as a Service’ (DaaS) system
• Cost models for data curation services
Research Data: the Institutional Perspective

The Research Data lifecycle

- Project Planning
- Project Set-up
- Data Creation
- Local Storage & Retrieval
  - Documentation
  - Institutional storage
  - Rediscovery mechanism
  - Retrieval mechanism

The Real Research Data lifecycle

- Project Planning
- Project Set-up
- Data Creation
- Documentation?
  - Local Storage & Retrieval on hard drives, USB sticks, DVDs, floppy disks, etc.
  - Keep the DVDs in a drawer
  - Find a journal article which you suspect must depend on some underlying data and obtain the email of the author(s)
  - Ask the suspected data creator if you can look at it. Researcher drops by with the DVD

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Eidcsr Interventions

The Research Data life‘cycle’

EIDCSR interventions
Sudamih Interventions

The Research Data life‘cycle’

Local Storage & Retrieval

Documentation

Institutional storage

Rediscovery mechanism

Retrieval mechanism

Project Planning → Project Set-up → Data Creation → Local Storage & Retrieval → Institutional storage → Rediscovery mechanism → Retrieval mechanism

Training

Database as a Service (DaaS)

Oxford University Computing Services

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Outputs

- Draft University Data Management Policy
- Core Research Data Metadata Schema
- Metadata editing and archiving client
- 3D large image visualisation software
- University Research Data Management Portal
- Suite of information management training/learning materials
- Two data management courses
- Pilot ‘DaaS’ online service
Benefits

To researchers

• Better personal organisation improves research efficiency
• Better linking of data can improve quality of research – exposing new connections or prompting new ideas
• Easier to discover and re-use existing data sources, thus maximising value of data
• Documentation improves comprehensibility of data, enabling reuse
• Use of more appropriate software tools and methods
• Adoption of ‘best practice’
• Reduced risk of data loss

To the University

• Improved uptake of central services, bringing economies of scale
• Increased sharing of skills and knowledge across institution
• Easier to collect and manage data assets
• Better compliance with research council funding requirements
• Potential funding benefits from greater impact and citation of research data
• Improved data security
• Potential to help respond to FOI requests
Thanks!

• Questions?