# Project Information

<table>
<thead>
<tr>
<th>Project Identifier</th>
<th>To be completed by JISC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Title</td>
<td>Open Exeter</td>
</tr>
<tr>
<td>Project Hashtag</td>
<td>OpenResearchExe</td>
</tr>
<tr>
<td>Start Date</td>
<td>01/10/11</td>
</tr>
<tr>
<td>End Date</td>
<td>30/06/13</td>
</tr>
<tr>
<td>Lead Institution</td>
<td>University of Exeter</td>
</tr>
<tr>
<td>Project Director</td>
<td>Dr Jessica Gardner</td>
</tr>
<tr>
<td>Project Manager</td>
<td>Jill Evans</td>
</tr>
<tr>
<td>Contact email</td>
<td><a href="mailto:jill.evans@exeter.ac.uk">jill.evans@exeter.ac.uk</a></td>
</tr>
<tr>
<td>Partner Institutions</td>
<td>N/A</td>
</tr>
<tr>
<td>Project Web URL</td>
<td><a href="http://as.exeter.ac.uk/library/resources/openaccess/openexeter/">http://as.exeter.ac.uk/library/resources/openaccess/openexeter/</a></td>
</tr>
<tr>
<td>Programme Name</td>
<td>Managing Research Data 2011-13</td>
</tr>
<tr>
<td>Programme Manager</td>
<td>Dr Simon Hodson</td>
</tr>
</tbody>
</table>

## Project Director

- Dr Jessica Gardner

## Project Manager

- Jill Evans

## Contact email

- jill.evans@exeter.ac.uk

## Partner Institutions

- N/A

## Project Web URL

- [http://as.exeter.ac.uk/library/resources/openaccess/openexeter/](http://as.exeter.ac.uk/library/resources/openaccess/openexeter/)

## Programme Name

- Managing Research Data 2011-13

## Programme Manager

- Dr Simon Hodson

---

## Document Information

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Jill Evans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Role(s)</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Date</td>
<td>09/07/13</td>
</tr>
<tr>
<td>URL</td>
<td><a href="http://hdl.handle.net/10871/14845">http://hdl.handle.net/10871/14845</a></td>
</tr>
<tr>
<td>Access</td>
<td>This report is for general dissemination</td>
</tr>
</tbody>
</table>

## Document History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1.0</td>
<td>26/05/13</td>
<td>Outline</td>
</tr>
<tr>
<td>V2.0</td>
<td>18/06/13</td>
<td>Structure and section headings; began to write content</td>
</tr>
<tr>
<td>V3.0</td>
<td>24/06/13</td>
<td>Further content added</td>
</tr>
<tr>
<td>V4.0</td>
<td>30/06/13</td>
<td>Change in structure and content</td>
</tr>
<tr>
<td>V4.01</td>
<td>01/07/13</td>
<td>Development of content</td>
</tr>
<tr>
<td>V4.02</td>
<td>02/07/13</td>
<td>First draft for circulation</td>
</tr>
<tr>
<td>V4.03</td>
<td>09/07/13</td>
<td>Final version</td>
</tr>
</tbody>
</table>
# Table of Contents

## 1 ACKNOWLEDGEMENTS

## 2 PROJECT SUMMARY

## 3 PROJECT REPORT

### 3.1 PROJECT OUTPUTS AND OUTCOMES

### 3.2 OVERVIEW OF PROJECT ACTIVITY

#### 3.2.1 Project Objectives

#### 3.2.2 Work Package 1: Project Management

#### 3.2.3 Work Package 2: Follow the Data

#### 3.2.4 Work Package 3: Data Asset Framework (DAF)

#### 3.2.5 Work Package 4: Technical Development

#### 3.2.6 Work Package 5: Training and Guidance

#### 3.2.7 Work Package 6: Policy and Governance

#### 3.2.8 Work Package 7: Advocacy

#### 3.2.9 Work Package 8: Sustainability

#### 3.2.10 Work Package 9: Evaluation

#### 3.2.11 Work Package 10: Dissemination

### 3.3 LESSONS LEARNED

### 3.4 IMMEDIATE IMPACT

#### 3.4.1 Benefits to the wider community

### 3.5 FUTURE IMPACT

## 4 CONCLUSIONS

## 5 RECOMMENDATIONS

## 6 IMPLICATIONS FOR THE FUTURE

## 7 REFERENCES

## 8 APPENDICES

### 8.1 APPENDIX I

### 8.2 APPENDIX II

### 8.3 APPENDIX III

### 8.4 APPENDIX IV

### 8.5 APPENDIX V

### 8.6 APPENDIX VI

### 8.7 APPENDIX VII: EXTERNAL PROJECT EVALUATION
1 Acknowledgements

The Open Exeter project (originally known as Open Up) was funded by the JISC under the Managing Research Data Programme 2011-13.

The project team would like to acknowledge the following individuals, groups and projects.

The Open Exeter Steering Group for support throughout the project:

**Professor Nick Talbot,** Deputy Vice-Chancellor, Research and Knowledge Transfer
Chair and project sponsor

**Professor Susan Banducci,** Associate Dean of Education, College of Social Sciences and International Studies. University of Exeter

**Joy Davidson,** Associate Director of the Digital Curation Centre

**Dr Simon Hodson,** JISC Programme Manager: Managing Research Data Programme

**Professor Tim Harries,** Associate Professor in Astronomy, School of Physics and Astronomy. University of Exeter

**Professor Andrew Thorpe,** Associate Dean of Research and Knowledge Transfer, College of Humanities. University of Exeter

**Dr Stephen Trowell,** Research Systems Project Manager. Research and Knowledge Transfer. University of Exeter

**Lynne Tucker,** Chief Information Officer. Exeter IT

**David Underwood,** Deputy Director Technology and Information Services. Met Office

**Dr Michael Wykes,** Policy, Impact, and Performance Manager. Research and Knowledge Transfer. University of Exeter

**Grant Young,** Digitisation and Digital Preservation Manager. Cambridge University Library

The Open Exeter team of PhD students: Stuart Atkinson, Annie Blanchette, Philip Bremner, Ruth Farrar, Rebecca Hunter, Duncan Wright and Lee Wylie.

Mrunal Chavda, Dr Jacqueline Christmas, Tom Haworth, Dave Hudson and Shaun Mudd, all of whom contributed to case studies.

James Beeson and Meg Hunt, Open Exeter project administrators.

Stephen Gray, Simon Price and Debra Hiom of the data.bris project who were generous with time and support.

Chris Cooper, Caroline Dominey, Professor Richard Everson, Dr Elena Isayev, Dr Sabina Leonelli, Dr Richard Pulsford and Dr Darren Soanes all of whom presented to audiences on behalf of the project.


Steve Parkinson of Exeter IT.

Pete Hodges of Research and Knowledge Transfer who assisted with the organisation of events.

The Digital Curation Centre and the UK Data Archive for assistance with training and development of materials.
2 Project Summary

Open Exeter built on the work of Exeter’s pilot Data Archive. Taking the remit and ambition of the original pilot several steps further, the project additionally focussed on the development of a supporting framework of training and guidance so as to establish an institutional culture of effective research data management (RDM) from the creation of data to its final archiving.

In order to understand what problems and concerns were common amongst the researcher community the project team carried out two related investigations: 1) an adaptation of the Data Asset Framework allowed us to obtain a broad overview of data being created, stored and managed and associated issues, 2) a more in-depth, long-term investigation, ‘Follow the Data’, which involved working with a team of PhD researchers in different subject areas, helped to gain an understanding of the issues faced by postgraduate students at various stages of their research.

Findings from these two exercises guided approaches to the development of advocacy activities and materials, training, guidance and creation of specific services, such as the DMP query service.

Policy development examined RDM alongside wider Open Access (OA) issues and resulted in a combined policy for ease of understanding and accessibility. A Policy Task and Finish Group comprising a variety of stakeholders from Colleges, IT, RKT and Library, oversaw the development and ratification of the researcher policy, which was finally approved by Senate Council with a mandate for Green deposit of research papers in March 2013.

The project’s work with PhD students and research groups revealed concerns around potential loss and lack of visibility of postgraduate data, thus it was agreed to develop a separate policy applying to PGRs. This policy requires PGRs, in conjunction with supervisors, to ensure their data is correctly managed and prepared for final upload to Exeter’s repository alongside theses, where possible. The policy stipulates that students should meet with supervisors annually for a data ‘health check’ and suggests final approval for data upload should be granted by the supervisor.

Technical development focussed on two main areas: 1) improving and refining the pilot system has resulted in a unique and innovative data upload tool using Globus for file transfer, 2) Exeter’s research publications repository has been merged with the data repository and rebranded as ORE (Open Research Exeter) to make deposit of related publication/primary data easier.
## 3 Project Report

### 3.1 Project Outputs and Outcomes

<table>
<thead>
<tr>
<th>Output / Outcome Type</th>
<th>Brief Description and URLs (where applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Asset Framework</strong></td>
<td>See Open Exeter blog: <a href="http://blogs.exeter.ac.uk/openexeterrdm/blog/category/online-survey/">http://blogs.exeter.ac.uk/openexeterrdm/blog/category/online-survey/</a></td>
</tr>
<tr>
<td>DAF survey questionnaire</td>
<td>Questionnaire developed by members of the Open Exeter project team based on the Data Asset Framework (DAF). <a href="http://hdl.handle.net/10871/9688">http://hdl.handle.net/10871/9688</a></td>
</tr>
<tr>
<td>Report: Summary Findings of the Open Exeter Data Asset Framework (DAF) Survey</td>
<td>This report provides the initial findings of the research data management survey and interviews conducted by the Open Exeter project. <a href="http://hdl.handle.net/10036/3689">http://hdl.handle.net/10036/3689</a></td>
</tr>
<tr>
<td>Case study: Targeted Advocacy to Encourage Engagement with the Data Asset Framework Survey</td>
<td>A case study for the DCC documenting advocacy and promotional work around the release of Exeter's online Data Asset Framework Survey. The survey attracted a high number of respondents (284) which the team believes was due to the intensive programme of advocacy undertaken. <a href="http://hdl.handle.net/10036/3754">http://hdl.handle.net/10036/3754</a></td>
</tr>
<tr>
<td>Report: Data holdings at Exeter</td>
<td>Not available on open access</td>
</tr>
<tr>
<td>Report: Data loss</td>
<td>Not available on open access</td>
</tr>
<tr>
<td><strong>Follow the Data</strong></td>
<td>See Open Exeter blog: <a href="http://blogs.exeter.ac.uk/openexeterrdm/blog/category/follow-the-data/">http://blogs.exeter.ac.uk/openexeterrdm/blog/category/follow-the-data/</a></td>
</tr>
<tr>
<td>Audit template</td>
<td>The template used for the weekly audit of PGR research data is available here: <a href="http://hdl.handle.net/10871/10361">http://hdl.handle.net/10871/10361</a></td>
</tr>
<tr>
<td><strong>Audit report</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Policy and Governance</strong></td>
<td>See Open Exeter blog: <a href="http://blogs.exeter.ac.uk/openexeterrdm/blog/category/advocacy-and-governance/">http://blogs.exeter.ac.uk/openexeterrdm/blog/category/advocacy-and-governance/</a></td>
</tr>
<tr>
<td>Policy document: Open Access Research and Research Data Management Policy</td>
<td>Final version of the University's Open Access Research and Research Data Management Policy for researchers including information on the Green mandate approved by Senate on 21/03/13. <a href="http://hdl.handle.net/10036/4280">http://hdl.handle.net/10036/4280</a></td>
</tr>
<tr>
<td>Policy document: Open Access Research and Research Data Management Policy for PGR Students</td>
<td>The University of Exeter's policy on Open Access and Research Data Management for PGR students. <a href="http://hdl.handle.net/10036/4279">http://hdl.handle.net/10036/4279</a></td>
</tr>
<tr>
<td>Guide: RDM checklist for supervisors and students</td>
<td>Annual Research Data Management Checklist for PGR Supervisors and Students to guide good practice and aid preparation for archiving: <a href="http://hdl.handle.net/10036/4214">http://hdl.handle.net/10036/4214</a></td>
</tr>
<tr>
<td>Working paper: Roadmap for</td>
<td>This document describes how the University of Exeter will work to conform to EPSRC expectations concerning the</td>
</tr>
<tr>
<td>EPSRC’s Research Data Management Expectations</td>
<td>management and provision of access to EPSRC-funded research data between May 2012 and May 2015. It is a live document which will be updated and adapted regularly. <a href="http://hdl.handle.net/10036/4377">http://hdl.handle.net/10036/4377</a></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Open Access and Research Data Management Policy Task and Finish Group’s recommendation report</td>
<td><a href="http://hdl.handle.net/10871/11682">http://hdl.handle.net/10871/11682</a></td>
</tr>
</tbody>
</table>

### Technical development

<table>
<thead>
<tr>
<th></th>
<th>See Open Exeter blog: <a href="http://blogs.exeter.ac.uk/openexeterrdm/blog/category/technical-development/">http://blogs.exeter.ac.uk/openexeterrdm/blog/category/technical-development/</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>ORE repository</td>
<td>Created through the merging of three existing repositories: ERIC (publications), Digital Collections Online (images and multimedia) and Exeter Data Archive (pilot data repository): <a href="https://ore.exeter.ac.uk/repository/">https://ore.exeter.ac.uk/repository/</a></td>
</tr>
<tr>
<td>Data upload tool</td>
<td>Embedded in ORE: <a href="https://ore.exeter.ac.uk/repository/">https://ore.exeter.ac.uk/repository/</a></td>
</tr>
<tr>
<td>Use case scenarios</td>
<td>Document that discussed and tested different approaches to data upload: <a href="http://hdl.handle.net/10036/3847">http://hdl.handle.net/10036/3847</a></td>
</tr>
<tr>
<td>Metadata schema</td>
<td>Embedded in ORE: <a href="https://ore.exeter.ac.uk/repository/">https://ore.exeter.ac.uk/repository/</a></td>
</tr>
</tbody>
</table>

### Training and Guidance

<table>
<thead>
<tr>
<th></th>
<th>See Open Exeter blog: <a href="http://blogs.exeter.ac.uk/openexeterrdm/blog/category/training/">http://blogs.exeter.ac.uk/openexeterrdm/blog/category/training/</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Web site: Research data management</td>
<td><a href="http://as.exeter.ac.uk/library/resources/rdm/">http://as.exeter.ac.uk/library/resources/rdm/</a></td>
</tr>
<tr>
<td>Web site: Open Access</td>
<td><a href="http://as.exeter.ac.uk/library/resources/openaccess/">http://as.exeter.ac.uk/library/resources/openaccess/</a></td>
</tr>
<tr>
<td>(i) Training sessions, workshops and talks</td>
<td>See Open Exeter blog: <a href="http://blogs.exeter.ac.uk/openexeterrdm/blog/category/training/">http://blogs.exeter.ac.uk/openexeterrdm/blog/category/training/</a></td>
</tr>
<tr>
<td>Face to face training: Researcher Development Programme</td>
<td>Seven related RDM training sessions aimed at postgraduate students and early career researchers: <a href="http://as.exeter.ac.uk/rdp/postgraduateresearchers/">http://as.exeter.ac.uk/rdp/postgraduateresearchers/</a>. Slides available here: <a href="https://ore.exeter.ac.uk/repository/handle/10036/3737">https://ore.exeter.ac.uk/repository/handle/10036/3737</a></td>
</tr>
<tr>
<td>Face to face training: Postgraduate Certificate in Academic Practice (PCAP)</td>
<td>Annual training session on RDM and OA for all staff who teach (particularly new and junior lecturers) <a href="http://www.exeter.ac.uk/staff/development/teach/pcap/">http://www.exeter.ac.uk/staff/development/teach/pcap/</a>. Slides available here: <a href="http://hdl.handle.net/10871/10382">http://hdl.handle.net/10871/10382</a></td>
</tr>
<tr>
<td>Face to face training: Doctoral supervisors</td>
<td>An introduction to research data management for doctoral supervisors: <a href="http://hdl.handle.net/10036/4363">http://hdl.handle.net/10036/4363</a></td>
</tr>
<tr>
<td>Face to face training: RDM for Social Sciences</td>
<td>Methodology and Research Skills in Sociology course for PGR students <a href="http://hdl.handle.net/10036/4044">http://hdl.handle.net/10036/4044</a></td>
</tr>
<tr>
<td>Face to face training: RDM for Social Sciences PGR Students</td>
<td><a href="http://hdl.handle.net/10036/4299">http://hdl.handle.net/10036/4299</a></td>
</tr>
<tr>
<td>Face to face training: Exeter and <a href="http://hdl.handle.net/10871/10202">http://hdl.handle.net/10871/10202</a></td>
<td></td>
</tr>
<tr>
<td>Workshop: RDM for Professional Service staff</td>
<td>Materials available here: <a href="http://hdl.handle.net/10871/10585">http://hdl.handle.net/10871/10585</a> and here: <a href="http://www.dcc.ac.uk/training/dc-101">http://www.dcc.ac.uk/training/dc-101</a></td>
</tr>
<tr>
<td>Workshop: RDM for PhD students</td>
<td>Materials available here: <a href="http://hdl.handle.net/10871/10582">http://hdl.handle.net/10871/10582</a> and here: <a href="http://www.dcc.ac.uk/training/dc-101">http://www.dcc.ac.uk/training/dc-101</a></td>
</tr>
<tr>
<td>Holistic Librarian/23 Things</td>
<td><a href="http://blogs.exeter.ac.uk/openexeterrdm/blog/category/holistic-librarian/">http://blogs.exeter.ac.uk/openexeterrdm/blog/category/holistic-librarian/</a></td>
</tr>
<tr>
<td>Data Management Plan (DMP) service and online guidance</td>
<td><a href="http://as.exeter.ac.uk/library/resources/rdm/create/datamanagementplans/">http://as.exeter.ac.uk/library/resources/rdm/create/datamanagementplans/</a></td>
</tr>
</tbody>
</table>

(ii) Materials

| Online guidance: RDM FAQs | Research Data Management FAQs: http://hdl.handle.net/10036/4216 |
| Online guide: User Guide for the Deposit of Data to ORE | http://hdl.handle.net/10871/9309 |
| Online guide: Checklist for depositing data to ORE | http://hdl.handle.net/10871/9255 |
| Online guide: Selecting data: what to keep, what to delete? | http://hdl.handle.net/10036/4427 |
| Online guide: Research Data Management Survival Guide for New PhD Students | http://hdl.handle.net/10036/3738 |
| Online guide: Uploading your publication to the Open Research Exeter repository (ORE) using Symplectic | http://hdl.handle.net/10036/4048 |
| Online guide: Brief guide to using cloud storage | Brief guidance on the use of cloud storage solutions such as Dropbox. http://hdl.handle.net/10871/9704 |

(iii) Case Studies

| Case study: Issues Involved in Working with Human Subjects to Capture and Document Emotional Responses | This case study looks at the data challenges around capturing and documenting emotional responses. The PhD thesis described in the case study seeks to develop a new analytical model based on the theory of Rasa aesthetics. http://hdl.handle.net/10036/3697 |
| Case study: PhD Research and | A personal account of dealing with copyright issues related to putting a PhD thesis containing third-party copyrighted |

Document title: Open Exeter Project Final Report
Last updated: 02/07/13
Copyright: A Personal Experience
material in Exeter’s institutional repository on Open Access.
http://hdl.handle.net/10036/3690

Case study: The Cricket-Tracking Project
A case study looking at the archiving of big data in video format to the repository.
http://hdl.handle.net/10036/3556

Case study: Electronic versus paper record keeping in scientific research
In this case study the nature of record keeping for two different kinds of research in Physics, experiment and theory, is used to assess the potential value of keeping electronic instead of paper records.
http://hdl.handle.net/10036/4393

Case study: Issues in archiving Digital Humanities data
Not yet available

Case study: Archiving data in Astrophysics
A set of guidelines developed by an Astrophysics PhD student in collaboration with Open Exeter. The guidelines set out approaches for use of an Astrophysics HPC for storing and transferring data:
http://blogs.exeter.ac.uk/openexeterrdm/blog/2012/05/31/zen-archiving-an-open-exeter-case-study-in-astrophysics/

Advocacy, Engagement & Dissemination

Open Exeter Advocacy and Communication Plan
http://hdl.handle.net/10871/11742

Plan: Communication of new University PGR policy.
Outline of Communications Plan for PGR Open Access Research and Research Data Management Policy:
http://hdl.handle.net/10036/4217

Plan: Communication of new University policy to researchers and support staff
http://hdl.handle.net/10871/11742

Presentation
A presentation on Open Exeter for Research and Knowledge Transfer staff: http://hdl.handle.net/10871/10442

Project blog
http://blogs.exeter.ac.uk/openexeterrdm/

Project Twitter account
@OpenResearchExe

Project Facebook page
http://www.facebook.com/openresearchexeter

Project Storify narrative
http://storify.com/OpenExeter/open-exeter-research-data-management

Presentation: Discover Academic Research Training and Support Conference (DARTS 3) 2012
http://hdl.handle.net/10036/3647

Presentation: 7th International Conference on Open Repositories (OR2012)
http://hdl.handle.net/10036/4020
http://or2012.ed.ac.uk/2012/07/10/p1a-research-data-management-and-infrastructure-liveblog/

JISCMRD Programme meeting October 2012
Working together for a sustainable service
http://blogs.exeter.ac.uk/openexeterrdm/files/2012/10/poster.pdf

Open Access Week
http://blogs.exeter.ac.uk/openexeterrdm/blog/category/open-access/

Workshop, Poster and Demo: 8th International Digital Curation
Joint workshop with the University of Bath: Designing Data Management Training Resources: Tools for the provision of interactive research data management workshops
| Conference (IDCC 2013) | http://hdl.handle.net/10036/4233  
|  | http://www.dcc.ac.uk/events/idcc13/workshops  
|  | Poster/demonstration: Submitting big data to a DSpace repository  
|  | http://hdl.handle.net/10036/4075  
|  | Poster: Encouraging junior researchers to value and share data management skills:  
|  | http://hdl.handle.net/10036/4076  
|  | http://www.dcc.ac.uk/events/idcc13/posters-and-demonstrations  
| Presentation: JISC MRD programme workshop, March 2013 | Benefits and challenges of working with PGRs  
|  | http://hdl.handle.net/10871/8185  
| Presentations: Research Focus Week | Raising Your Research Profile Through Open Access: http://hdl.handle.net/10871/9306  
|  | How to Write a Data Management Plan: http://hdl.handle.net/10871/9362  
|  | http://www.exeter.ac.uk/research/events/researchfocusweek/tuesday14may/  
| Presentations: Open Repositories 2013 Conference (OR2013) | 1) Facilitating reuse of PhD research data: http://or2013.net/sessions/facilitating-re-use-phd-research-data  
|  | 2) Developing the repository community (joint Bath/Leeds/Exeter/Warwick): http://or2013.net/sessions/developing-repository-manager-community  
|  | 3) Moving big data into DSpace: http://or2013.net/sessions/moving-big-data-dspace  
| Promotional materials | A range of materials is available in ORE under a CC-BY licence: https://ore.exeter.ac.uk/repository/handle/10036/3558  
| Evaluation | Evaluation report  
|  | Evaluation of the project carried out and reported on by Debra Hiom of the Institute for Learning and Research Technology, University of Bristol, see Appendices
3.2 Overview of Project Activity

An alternative project narrative can be seen at the Open Exeter project Storify web site: [http://storify.com/OpenExeter/open-exeter-research-data-management](http://storify.com/OpenExeter/open-exeter-research-data-management)

Open Exeter built on the work of Exeter’s 2010 science-driven pilot Data Archive, extending the planned repository across the University to all disciplines. Taking the remit and ambition of the original pilot several steps further, the project additionally focused on the development of a supporting framework of training and guidance in order to establish an institutional culture of effective research data management (RDM) from the creation of data to its final archiving.

3.2.1 Project Objectives

The overarching aim of the Open Exeter project was to create an environment in which the Exeter research community would be equipped with the understanding, skills and tools necessary in order to ‘act open’ with research data. Institutional good practice in RDM will facilitate collaborations and increase the global impact of Exeter’s research.

Understanding the landscape

- To establish a clear and comprehensive understanding of current RDM practice by conducting a University-wide data asset audit using the DAF.
- To gain an understanding of how current postgraduate students and early career researchers use and handle data by monitoring their day-to-day interactions with data over an extended period.

Driving cultural change

- To work continuously to develop and maintain the key relationships and support required to gain acceptance for the wide scale organisational and cultural changes needed to ensure RDM good practice is embedded in the scholarly lifecycle.
- To work within existing committee structures to ensure new RDM and Open Access policy and guidance is ratified, taken up and established at an institutional level.
- By the collaborative nature of this project to strengthen further existing cross-departmental bonds.

Provide support for change

- Using knowledge and experience gained from investigations, to plan, implement and deliver the full range of support required by researchers so that they can consistently and easily manage their data according to established standards of good practice.
- To ensure take up of project outputs through an ongoing programme of advocacy, awareness raising and dissemination.
- To enhance and improve the current Exeter Data Archive (EDA) DSpace repository in response to feedback received during testing and known performance issues.
- To ensure Open Exeter technical development takes account of interoperability issues, for example, consistency with other Exeter DSpace repositories and the Symplectic to ERIC (NB. now ORE) Repository Tools feature.

Ensure sustainability of outputs

- To produce a business case for long-term sustainability of Open Exeter outputs including costing models, roles and responsibilities, maintenance and development.
- To develop a series of KPIs to monitor use and adoption rates.
3.2.2 Work Package 1: Project Management

A robust governance structure was put in place at the start of the project including a Project Management Group (PMG), made up of the extended project team, to cover operational issues and a wider Steering Group with some external members to govern the overall direction of the project.\(^1\) Staff were deployed to the project through a combination of secondment and recruitment. Despite the team being split across three different Professional Services\(^2\) within the University a strong team culture of co-operation and mutual support developed.

In addition to monthly PMG meetings and quarterly Steering Group meetings the team submitted monthly progress updates to the JISC Programme Manager and co-ordinated the project communication internally and externally. An online project tracking tool, JIRA, was set up to facilitate sharing of information and tasks across the team.\(^3\)

The project methodology emphasised good communication and collaboration. In fact, one of the most successful aspects of the project has been the cross-team/service model of collaboration. At the project outset it was acknowledged that relevant skills and knowledge existed in various departments across the University but that these were not joined-up or communicating successfully. There was duplication of effort and some inconsistencies in the way advice and information was disseminated. The project has provided a focus for bringing key stakeholders together to share experience and knowledge and to work on disseminating an agreed, consistent message.

The team employed a number of innovative approaches to work which could usefully act as guides for similar projects in other institutions. For example, establishing formal working relationships with postgraduate research (PGR) students to help deepen understanding about how this group of researchers use and handle data. This piece of work (see Follow the Data, below) included a long-term audit to track their use of data and any associated issues arising from that use. Outcomes of this work included the creation of a PGR-specific data management policy which mandates the deposit of selected PGR research data from 1 October 2013. Exeter was the first UK University specifically to incorporate PGR data formally into policy, an innovation that other institutions are now examining.

3.2.3 Work Package 2: Follow the Data

In order to provide an effective and efficient RDM service based on genuine requirements, the team first needed to understand what kind of data existed throughout the University, how it was typically used and handled, and what problems and concerns were common amongst the researcher community at Exeter. To obtain that level of understanding the project team carried out two related investigations: 1) an adaptation of the Data Asset Framework (DAF) - including an online survey and follow-up face-to-face interviews - allowed us to obtain a broad overview of data being created, stored and managed across the University and associated issues (see below), and 2) a more in-depth, long-term investigation, ‘Follow the Data’, which involved working with a team of PhD researchers in different subject areas, helped to gain an understanding of the issues faced by postgraduate students at various stages of their research, and how they go about resolving or working around these issues.\(^4\)

This Follow the Data Work Package used an innovative approach of working closely with students in order to understand the issues they faced when managing their research data on a day-to-day basis as well as to identify training needs and helping with the creation of training materials. This work resulted in new insights that directly fed into a change in policy for storing and archiving PGR data.

The original intention was to work with four post graduate researchers but the recruitment exercise resulted in over 70 applications for the roles. From these the project team undertook 20 interviews

---

\(^1\) See Acknowledgements section for Steering Group membership

\(^2\) Library, Exeter IT and Research and Knowledge Transfer

\(^3\) [http://www.atlassian.com/software/jira](http://www.atlassian.com/software/jira)

\(^4\) A series of blogs written by the PGRs reflecting on and documenting experiences of working with the project: [http://blogs.exeter.ac.uk/openexeterrdm/blog/category/follow-the-data/](http://blogs.exeter.ac.uk/openexeterrdm/blog/category/follow-the-data/)
and chose six researchers to work with across the 12 month period. The PGRs represented a good spread of disciplines across the University:

- Engineering
- Business
- Law
- Film Studies
- Archaeology
- Sport and Health Sciences

An initial workshop with the PGRs uncovered a number of common issues that have been reported by other projects looking at research data management issues namely: terminology and definitions of research data (these tend to vary according to discipline), naming and versioning of files, managing sources and creating bibliographic data, and so on. Another common issue that arose (but less anticipated in relation to PGRs) was around archiving of research data once the PGR had completed their research and left the institution. The discussions on the lack of clarity and infrastructure to support this type of data fed directly into a separate PGR Data Management Policy (see Policy & Governance, below).

The results and reflections from the seven month audit have been reported on. In addition the PGRs provided their own reflections on what they had learnt through end of project posts on the Open Exeter blog.

Evidence points to some very positive outcomes from this strand of work, including:

- Increase in PGRs awareness, knowledge of and confidence in RDM issues. (See section 3.4.1)
- Indications of changes in RDM practice over the lifetime of the audit.
- Anecdotal evidence of PGRs sharing knowledge with peers.
- Advice to the Open Exeter project team on issues to highlight in training materials and guidance sessions.
- Advice to the Open Exeter project team on the type of training sessions to provide. For example, short sessions on the Researcher Development Programme.
- Opportunities for the PGRs to increase their presentational and organisational skills through their involvement in information fairs and other college events.
- RDM skills building (and including these on CVs).
- Collaboration to help produce the Research Data Survival Guide.
- Creation of data management case studies. For example, Issues Involved in Working with Human Subjects to Capture and Document Emotional Responses; Evaluation of Electronic Lab Books.
- Reviews of research tools and gadgets on the project blog.

The team held a final workshop for the PGRs which generated a great deal of valuable feedback. Some formal feedback from PGRs has been uploaded to the project blog:
http://blogs.exeter.ac.uk/openexeterrdm/blog/category/pgr-students/.

### 3.2.4 Work Package 3: Data Asset Framework (DAF)

Following a period of initial research, the Data Asset Framework methodology was selected as the most appropriate tool with which to survey University researchers. The team approach built on
findings and lessons learnt by previous DAF implementations at, for example, Edinburgh and Northampton.\textsuperscript{11}

Data collection consisted of two main strands: an online survey, which ran from 14\textsuperscript{th} February until 30\textsuperscript{th} March 2012, and interviews with researchers, administrators and IT support staff. Interviews were conducted throughout the length of the project, allowing the team to focus on deeper investigation of specific survey findings. In addition, it was felt by the project team that ongoing face to face contact with researchers would aid awareness and engagement within the research community.

The online survey consisted of 34 questions.\textsuperscript{12} Previous DAF methodologies were consulted during its construction but questions asked were tailored for Exeter’s needs and the aims and objectives of the Open Exeter project: understanding RDM practice rather than counting data assets. The draft survey was piloted with the Open Exeter team of PGRs. By using the PGRs as a pilot group the survey was able to be tested on a group of researchers of a similar nature to the target audience. The pilot process proved particularly valuable in identifying which questions needed to be re-worded to clarify understanding and ensure the right responses would be obtained.

DAF implementations elsewhere have resulted in limited involvement from the researcher community. In order to encourage survey response, it was decided that a programme of advocacy should be conducted before the survey launch. In the weeks prior to the launch members of the project team met with senior members of the six academic Colleges including College level Associate Deans of Research (ADRs) and Assistant College Managers for Research (ACMRs) as well as departmental level Directors of Research (DoRs). These meetings allowed the team to clarify the aims and objectives of the project and to outline to the College representatives the long-term benefits of engagement with project strategy. These face to face meetings allowed the team to build a good rapport with senior College staff and to gain ongoing support for project work.

In addition, the meetings provided valuable insight into the research data issues facing the various Colleges and departments. These insights in turn helped to develop the survey content.

As a consequence of these pre-survey meetings communications that were sent to researchers informing them of the survey, although drafted by members of Open Exeter, were actually distributed through internal College and department mechanisms. In this way the survey appeared to be promoted by a member of the researcher’s own academic community rather than an unknown central services staff member. The project team feel that this high-level College involvement greatly helped to raise the survey response rate.

As encouragement to complete the survey a Kindle was offered as a prize for a randomly chosen respondent. Anecdotal evidence suggests that this acted as an additional incentive.\textsuperscript{13}

Follow up interviews continued for several months. Interviews were semi-structured based on a schedule designed either for PGR students, academic staff, IT support staff or administrative staff. The interviews were generally of one hour duration and, where possible, conducted by two members of the project team. Hand written notes were taken by interviewers and interviews were recorded on an MP3 player with the interviewee’s consent. Notes were written up after the interview and checked for accuracy by other team members. It was decided early on not to transcribe interviews fully due to the amount of work involved. Both the audio recordings and the interview notes were added to an NVivo 9 database to aid analysis of the results. Other data collected as part of the Open Exeter project (such as recruitment interviews with PGRs) were added to this database.

Participant privacy was respected at all stages of investigation: survey respondents could opt to remain anonymous; quotations from interviews have been used only with participants’ permission;

\textsuperscript{10} http://www.dcc.ac.uk/resources/repository-audit-and-assessment/data-asset-framework
\textsuperscript{11} http://www.data-audit.eu/users.html and http://nectar.northampton.ac.uk/2736/
\textsuperscript{12} http://hdl.handle.net/10871/9688
\textsuperscript{13} http://blogs.exeter.ac.uk/openexeterdm/blog/2012/05/24/congratulations-elif-our-kindle-winner/
consent was always obtained for recording or filming; a data protection statement was included at the start of the survey.

As a result of high level engagement with the research community, through ADRs and DoRs, Exeter’s DAF survey attracted a high response rate (relative to other HEIs).\(^1\) This gave confidence on the headline conclusions of the report which included:

- Research data management practice, understanding and awareness varied widely across the institution, though (crudely speaking) understanding is higher in STEM/M and Social Sciences than in the Humanities.
- Few researchers had experience of completing a Data Management Plan.
- Researchers were using a wide variety of storage solutions, with varying degrees of information security measures, and the requirement of many researchers exceeded the standard 20GB network backup space allocation.
- There could only ever be partial cost recovery from grants (via directs or indirects) for future staffing and infrastructure for research data management.
- Researchers will require research data management support post-award, underlining the need for thorough, guided data management planning throughout the full lifecycle.
- As funders place greater emphasis on research impact, good data management that facilitates open sharing and reuse will become increasingly important.
- Researchers should be encouraged to cite data in the same way that they currently cite published research; there is evidence that published research that provides access to underlying data is cited more frequently.\(^1\)\(^5\)
- There was strong evidence of demand for advocacy, engagement and skills training to raise awareness and competency in research data management (this is important to researchers and professional services).
- RDM at Exeter should be inclusive of analogue (e.g., paper records such as log books) as well as digital data.
- Significant complexity of data, from formats – including obsolete software and hardware and associated licensing issues – to the size of datasets, to the types and specialist knowledge required to describe and manage the data.

The findings suggested that a lot of data is being held, but not in all cases actively managed. Active management should involve forward planning around ethical, legal issues, as well as planned choices about how and when to share data, and about retention (how to preserve and for how long?). Responsible disposal of research data is a critical part of active management, and essential given storage constraints (on analogue or digital data).

The DAF findings informed next project steps. Given that the results highlighted good and bad practice, the project used the findings to create training and advocacy materials addressing specific problem topics and in some cases tailored to disciplinary requirements. Although the DAF survey was not an audit of research data holdings, it helped the project team to understand the complexity of the data (analogue and digital) and through the follow-up interviews a number of data sets were identified for archiving.

### 3.2.5 Work Package 4: Technical Development

**Data Upload Tool**

Technical development has been complex and lengthy as the technology solutions for research data, especially ‘big data’, are still emerging. The team made a early decision to try to find a solution that would allow the transfer and storage of very large files (i.e., TBs) as the most demand for data archiving has come from data-intensive research groups such as Biosciences, Medicine and Astrophysics. In addition, video files are increasingly becoming standard research outputs

\(^{1}\) [http://hdl.handle.net/10036/3754](http://hdl.handle.net/10036/3754)

accompanying PhD theses, and a solution to upload of these over a network with a limit on data
upload of 1GB or less was clearly required.

**Use Case Scenarios**

A number of possible use case scenarios were developed in the first months of the project and, from
these, two prototypes for ingesting large data into DSpace were developed and trialled. The following
findings emerged:

- A prototype based on the sworduploader.py script encountered issues caused by limitations
  in file upload in the XMLUI DSpace interface. At this stage advice was sought from the
  community, most notably Richard Jones of Cottage Labs who went on to provide valuable
  support through consultancy work for the project.
- An Easydeposit SWORD based submission tool also experienced issues with large data
  submission.
- The second prototype based on ‘submission by reference’ into DSpace (where files are made
  directly available to DSpace for ingesting into the archive rather than being uploaded as part
  of the submission process) progressed rapidly. This tool used the SWORD service document
  in addition to the DSpace batch import command line script.
- Subsequently GlobusConnect was explored as a possible file transfer client for uploading
  large data to the ATMOS storage facility before submission. This negated the DSpace
  XMLUI file upload limit.
- The ‘out of the box’ DSpace submission tool which installs with DSpace remained operational
  but suffered from poor performance when large files or large numbers of files were submitted.

Following further testing and discussion, the team opted to work with Globus Online, a world leader in
the grid research community, for transferring very large datasets between cooperative sites across the
globe. Globus supports high-performance, reliable, secure and interruption recoverable transfers in
an easy to use and open service and was seen to be a solution to the ongoing issue of big data
upload over University networks.

The first fully functional release of the Submission Tool linked into the DSpace test environment,
including first time user registration and endpoint creation, will be rolled out during summer 2013. This
tool uses Globus for file transfer and has been demonstrated at various stages to senior
management, the Research and Knowledge Transfer Management Group, The Open Exeter Steering
Group, the Project Management Group, at a JISC MRD Programme meeting, the International Data
Curation Conference 2013 in Amsterdam, at Globus World 2013 in April at Argonne National Labs,
Chicago and at OR2013 in Prince Edward Island, Canada.

The Submission Tool:

- Supports reliable, secure, asynchronous upload of data to the research data repository
  irrespective of location and size.
- Is implemented as a java web application running under apache/tomcat on a Linux vim test
  environment.
- Uses Globus APIs for authentication, endpoint creation, endpoint listing, file selection, transfer
  initiation and transfer monitoring - Globus have fully supported Exeter to modify parts of their
  APIs to achieve our goal and have also created a specific alternative login and Exeter
  branded portal of their web site (https://go.exeter.ac.uk).
- Uses SWORDv2 to “submit by reference” to DSpace using a 2 stage process to initially create
  an “in progress” metadata only submission which is then completed
  upon file transfer completion (this work was initially supported by Richard Jones of Cottage
  Labs).

16 http://hdl.handle.net/10036/3847
17 http://blogs.exeter.ac.uk/openexeterrdm/blog/2013/01/25/dspace-submission-using-globus-and-sword2-
update/
• Uses the Exeter Single Sign On service for end user authentication via a dedicated Exeter hosted OAuth for MyProxy delegated credential service closely integrated with Globus to be trusted.

Development of submission tool
Further integration to use the Exeter SSO service with DSpace has also led to development of a general purpose external authentication plugin submitted to the community for inclusion in a future DSpace release.¹⁸

Senior management has recognised that Globus could become more widely used for general purpose file transfer/sharing and backup across the University in line with a strategic IT vision around cloud based services and huge increases in demand for video and other research data.

**User Testing**

A generally positive architecture review was conducted by Open Exeter Steering Group member Dave Underwood and his team from the Met Office which led to some changes being made.

Testing with Library staff was carried out during May 2013 resulting in changes to the help text provided both before and during the upload process. Our group of PhD students assisted with early testing and development of inline guidance.

Guidelines for data deposit are in development as we test the data upload tool and we continue to identify big data requiring long-term storage. We are updating the terms and conditions, licensing information and copyright statements relating to deposit with Legal Services.

For ‘real life’ data upload, in the first instance we will work with a number of data-intensive research groups, including Marine Renewable Energy, Astrophysics, the Biomedical Informatics Hub and the Biosciences Gene Sequencer.

**Data Archiving**

During the project we were able to deposit a number of smaller datasets via the default DSpace web interface but upload of ‘big data’ remained difficult. We worked closely with the Marine Renewable

¹⁸ [http://blogs.exeter.ac.uk/openexeterrdm/blog/2012/12/03/dspace-authentication-with-single-sign-on/](http://blogs.exeter.ac.uk/openexeterrdm/blog/2012/12/03/dspace-authentication-with-single-sign-on/)
Energy Research Group,¹⁹ based in Cornwall, to prepare and archive data to a high standard.²⁰ We are using these submissions as exemplars to demonstrate to other researchers the benefit of developing high-quality metadata.

Work on the AHRC-funded Future Memory in Place project has been completed by Classics PGR student Shaun Mudd.²¹ Shaun has written a case study that provides guidance on the preparation and archiving of Humanities research outputs; this is being edited and will be available shortly. Future Memory in Place is a high-profile project that has been put forward to REF 2013 as an impact case study.²² The team felt it was important to work with a non Science project in order to encourage Humanities and Social Sciences researchers to deposit their data.

In 2012, a known 553 applications for funding were successful. A majority of those projects will generate summative data that will typically require long-term storage and linking to the publications to which they relate. Using the estimate above, to archive 553 datasets in ORE, or to provide support for appraising and selecting datasets for archiving in specialist repositories, amounts to 1659 hours.²³ This equates to a full time post (1650 hours per annum/£30,434 @ Grade E). Clearly, this high level of support for a single activity is unsustainable and a long-term aspiration must be to equip researchers, or those who support researchers, such as Computing Development Officers (CDOs), with the necessary skills to act independently, requiring a minimum of central support.

**ORE Metadata Schema**

In defining a metadata schema²⁴ for the Open Exeter project various factors and limitations had to be considered:

- The repository infrastructure would use DSpace, which as default provides a qualified Dublin Core schema.
- The University at the time ran three DSpace repositories: ERIC, Digital Collections Online, and OER, all of which incorporate established metadata procedures based around DSpace Dublin Core.
- The need for interoperability with internal and external systems and protocols and repository community conventions.
- The need to be compliant with emerging data citation standards, such as DataCite.
- The need to keep the dataset description process as simple and straightforward as possible in order to encourage deposit.

As the technical development got underway and a decision was taken to merge the pilot data repository with existing repositories, an additional factor had to be considered:

- Any schema would need to be usable for any type of deposit: papers and underlying research data.

Defining responsibility for, ownership of, IPR and copyright of data was felt to be particularly important in the case of research data where the above are not always clear, in cases, for example, where data emerges from the work of a collaborative research group. There are a number of scenarios in which clarity is not only an ethical but also a legal imperative. For example, new data is frequently based on or incorporates data from elsewhere; collaborative and inter-disciplinary styles of research can lead to confusion regarding responsibilities and rights; bleeding edge research by its nature may be commercially (or otherwise) sensitive and require protection; increasing public awareness of access rights to publicly-funded research information; the ability to demonstrate adherence to UK legislation and Exeter regulations governing research conduct.

¹⁹ [http://emps.exeter.ac.uk/renewable-energy/research/](http://emps.exeter.ac.uk/renewable-energy/research/)
²⁰ [http://hdl.handle.net/10871/682](http://hdl.handle.net/10871/682)
²¹ [https://ore.exeter.ac.uk/repository/handle/10472/5386](https://ore.exeter.ac.uk/repository/handle/10472/5386)
²² [http://projects.beyondtext.ac.uk/deplacingfuturememory-f0/index.php](http://projects.beyondtext.ac.uk/deplacingfuturememory-f0/index.php)
²³ Figures based on estimates calculated by the data.bris project at the University of Bristol.
²⁴ [http://hdl.handle.net/10871/11468](http://hdl.handle.net/10871/11468)
**Repository Merger**

DCO, ERIC and EDA have been merged and rebranded as Open Research Exeter (ORE), Exeter’s repository for research papers, data and theses. The soft launch of ORE took place on March 22nd 2013. The merger will allow deposit of published papers alongside the data underpinning the research, as well as ease of discovery and access by potential users.

The team will work with the Biomedical Informatics Hub over summer/autumn 2013 to test the deposit of associated data and papers using the Globus upload tool.

### 3.2.6 Work Package 5: Training and Guidance

The project team has taken a number of different approaches to the training and support of researchers, to ensure maximum impact and reach. This included working with existing providers, for example the project hosted two RDM training sessions from the Digital Curation Centre (DCC) to help the development of Exeter specific materials. The team also worked with the UK Data Archive (UKDA) to repurpose their guidance on research data management for social scientists. UKDA also ran a webinar on “planning to share” research data as part of Open Access week at Exeter. Where possible the team has tried to embed training in existing, known and trusted, training programmes.

**Groundwork**

According to DAF findings, Only 31 respondents (11%) had received any data management training. Of these 31, eight had received their training from outside the University of Exeter (and one of the respondents was a PGR student working on the Open Exeter project). Very few had ever completed a DMP:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever completed a Data Management Plan? (DAF)</td>
<td></td>
</tr>
<tr>
<td>Yes: 8.1%</td>
<td>23</td>
</tr>
<tr>
<td>No: 91.9%</td>
<td>261</td>
</tr>
</tbody>
</table>

DAF results showed that the greatest number of researchers wanted training in how to write a DMP, followed by Organising Research Material and Institutional Repositories and Open Access, with training in Bibliographic Software a distant last. Major funders now use evidence of planned data management as a criteria by which to assess funding proposals, therefore the high importance given to DMP training was not surprising. Acceleration of awareness raising and training for DMPs and
RDM in general was a key recommendation arising from the survey which the team has acted on through the establishment of the DMP service (see below).

<table>
<thead>
<tr>
<th>Training Area</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>How to Develop a Data Management Plan</td>
<td>144</td>
</tr>
<tr>
<td>Organising Research Material</td>
<td>123</td>
</tr>
<tr>
<td>File and Document Management</td>
<td>112</td>
</tr>
<tr>
<td>Legal and Ethical Issues</td>
<td>115</td>
</tr>
<tr>
<td>Bibliographic Software</td>
<td>83</td>
</tr>
<tr>
<td>Institutional Repositories and Open Access</td>
<td>121</td>
</tr>
</tbody>
</table>

Priorities for training (DAF)

**Awareness of Funder Policy:**

Thinking of your current or most recent research grant, are you aware if your funder requires you to make your research data available via Open Access?

- I am aware of such requirements: 11.3% 32
- I am not aware of such requirements: 67.6% 192
- N/A: 21.1% 60

Thinking of your current or most recent research grant, are you aware of any other requirements from the funder regarding Research Data Management, e.g. data management plans?

- Yes: 9.5% 27
- No: 70.1% 199
- N/A: 20.4% 58

Is any of your research data of a sensitive or confidential nature?

- Yes: 53.9% 153
- No: 46.1% 131

Are you under any legal obligations to keep it secure?

- Yes: 64.1% 98
- No: 20.9% 34
- Don’t know: 15.0% 23
Implementation

The project team has sought to maximise the impact of training activities by integrating these with ongoing programmes and activities and repurposing existing materials where appropriate.

Online Guidance

- **RDM website:** The first version of the one-stop-shop website has been released and the site will continue to be updated. Certain sections of the website will be mirrored on the University's Research Toolkit.
- **A video wall of training videos is also available.**
- **Open Access web site:** Contains details of funder policy, Creative Commons licences, etc.
- **Research Data Management Survival Guide for New PhD Students.**
- **A range of materials and presentations can be found on ORE.**

Training Activities

- **Researcher Development Programme (RDP):** the team developed and delivered seven RDM modules for the RDP. This programme is open to all PhD students and Early Career Researchers (ECRs):
  - An Introduction to Research Materials Management
  - File and Format Frenzy: How to Organise Your Files
  - Protect Your Data: How to Store and Back up your Data Securely
  - Sharing Data: How, When, What?
  - What to Keep/Delete: How To Appraise Your Data
  - Open Access and Repositories
  - How to Write a Data Management Plan
- **Postgraduate Certificate in Academic Practice (PCAP).**
- **Doctoral Supervisors Course:** RDM training has been included and delivered as part of the Doctoral Supervision Course for new doctoral supervisors.
- **Discuss, Debate, Disseminate.**
- **PGR inductions:** the team delivered a number of introductory OA and RDM sessions to new PGR intake as part of standard induction sessions.
- **Training for Social Scientists:** We have adapted UKDA training materials to provide training for PGRs from the College of Social Sciences and International Studies (CSSIS). This course was further adapted for generic use with PGRs from any discipline who require longer, more in-depth training sessions.

The team identified that there is a need for targeted RDM training for Library staff, Computing Development Officers (CDOs), Ethics Officers and Library Liaison Officers (LLOs).

- **Holistic Librarian/23 Things:** The project created an adaptation of the 23 Things online learning format which we called the Holistic Librarian. The aim was to ensure the Library team is equipped to deal with queries independently rather than relying on the Open Exeter team. We initially worked with the Subject Librarian team at Exeter to develop, test and refine the content and format. A set of typical queries relating to RDM was developed and each

---

28 [http://as.exeter.ac.uk/library/resources/rdm/](http://as.exeter.ac.uk/library/resources/rdm/)
29 [http://as.exeter.ac.uk/library/resources/openaccess/videowall/](http://as.exeter.ac.uk/library/resources/openaccess/videowall/)
30 [http://as.exeter.ac.uk/library/resources/openaccess/](http://as.exeter.ac.uk/library/resources/openaccess/)
31 [http://hdl.handle.net/10036/3738](http://hdl.handle.net/10036/3738)
32 [https://ore.exeter.ac.uk/repository/handle/10036/3360](https://ore.exeter.ac.uk/repository/handle/10036/3360)
33 [http://as.exeter.ac.uk/rdp/programmes/](http://as.exeter.ac.uk/rdp/programmes/)
34 [http://www.exeter.ac.uk/staff/development/teach/pcap/](http://www.exeter.ac.uk/staff/development/teach/pcap/)
35 [http://www.exeter.ac.uk/staff/development/courses/coursedetail/?code=20002](http://www.exeter.ac.uk/staff/development/courses/coursedetail/?code=20002)
36 [http://hdl.handle.net/10871/10441](http://hdl.handle.net/10871/10441)
37 [http://hdl.handle.net/10036/4239](http://hdl.handle.net/10036/4239)
38 [http://plcmcl2-things.blogspot.co.uk/](http://plcmcl2-things.blogspot.co.uk/)
Subject Librarian was allocated three or more of these to research and formulate a response. Responses were written up on the Open Exeter blog.  

- Training for research support staff: The team held a DCC workshop for support staff from across University departments and Colleges. This has since been adapted for Exeter needs and delivered to a number of support staff groups.
- Training for Library Liaison Officers.

Information about Open Exeter training for librarians and our approach towards training is included in two DCC case studies.

Open Access Week

Also see Section 3.3, Lessons Learnt.

“I was very pleased to be able to attend a number of the Open Access Week events last week. You will know that the library has run a number of themed events over the years but I can recall none which have attracted such high profile speakers and also filled an entire week. I am aware that this will not have been achieved without a great deal of hard work from you and your colleagues both in preparation and especially during the week itself. Many congratulations on organising this so efficiently - it not only pushed the Open Access agenda within the university but also considerably raised our own profile at an international level. I realise that there is much more to do on this with our academic colleagues but it was an excellent promotion and a powerful continuation of the work you have all been doing on Open Access.”

“Event of this kind and significance for the University ought to’v had compulsory 3 line whip attendance.”

“I must say it was thoroughly enjoyable and am a bit shocked about how much I actually learned today.”

“I am hoping to use this idea in getting our UG dissertation students to talk about their work.”

DMP Service

DAF survey findings (see section 3.2.4) indicated that training in DMPs was required across Colleges and subject areas. In response to this the team runs sessions on writing DMPs as well as offering one-to-one support for researchers writing data management plans for funding proposals.

The Open Exeter DMP service has seen a steady increase in queries as awareness of its existence has grown. The team has assisted in the development of 42 data management plans over the last year. A large number of these requests for help have come via RKT or College support staff as a result of strengthened relationships with the team. Increasingly, researchers have contacted the team directly following talks or training sessions, or from colleagues the data curation team have previously helped.

Analysis of DMP assistance by funder:

<table>
<thead>
<tr>
<th>Funder</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESRC</td>
<td>18</td>
</tr>
<tr>
<td>AHRC</td>
<td>6</td>
</tr>
<tr>
<td>NERC</td>
<td>5</td>
</tr>
</tbody>
</table>

39 [http://blogs.exeter.ac.uk/openexeterrdm/blog/category/holistic-librarian/](http://blogs.exeter.ac.uk/openexeterrdm/blog/category/holistic-librarian/)
40 [http://hdl.handle.net/10871/10202](http://hdl.handle.net/10871/10202)
41 [http://www.dcc.ac.uk/resources/developing-rdm-services/rdm-training-librarians](http://www.dcc.ac.uk/resources/developing-rdm-services/rdm-training-librarians) and [http://www.dcc.ac.uk/resources/developing-rdm-services/increasing-participation-training](http://www.dcc.ac.uk/resources/developing-rdm-services/increasing-participation-training)
Two of these 42 DMPs had been returned to researchers by peer reviewers for further development. Both of these have since been funded (over £200k from the AHRC). The fact that these bids were returned on the basis of weak DMPs demonstrates that Councils are now looking for evidence of good practice in RDM.

The team, in conjunction with Exeter IT, spent a number of hours working on a DMP for a complex, collaborative, data-intensive funding bid to the MRC. This bid for £800k in total was successful, bringing in over £400k to Exeter.

In addition five other grant applications that we advised on have since been successful:

<table>
<thead>
<tr>
<th>Institute</th>
<th>Fund</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEMPS</td>
<td>BBSRC</td>
<td>£483k</td>
</tr>
<tr>
<td>CEMPS</td>
<td>BBSRC</td>
<td>£119k</td>
</tr>
<tr>
<td>UEMS</td>
<td>ERC</td>
<td>£1.6m</td>
</tr>
<tr>
<td>Business School</td>
<td>ESRC</td>
<td>£1m</td>
</tr>
<tr>
<td>SSIS</td>
<td>AHRC</td>
<td>£197k</td>
</tr>
</tbody>
</table>

In total the income brought in to the University from the above bids is c. £4m.

These 42 bids represent a tiny percentage of total funding applications made by Exeter researchers. A majority of such applications will require a DMP of some sort. Smaller funders and charities (Leverhulme, for example) do not yet require explicit DMPs, and there will be researchers who do not require help; still, over the next couple of years, as awareness of standards for DMPs becomes embedded in the researcher mindset, there is an obvious need for support and guidance to ensure potential income is not lost.

In times of financial crisis, a DMP service may be regarded as something the University can do without. However, in reference to the examples cited above, a number of the applications were successful undoubtedly due to the intervention of the team. In terms of cost to the University, if guidance on a single DMP were to take an average of two hours work, and one per day were completed, one advisor could work on 220 DMPs per year - approximately £7.6k per annum (around one quarter of the time of an E Grade). In 2012 (Jan-Dec) there was around 1300 applications for funding according to Exeter’s research tracking system iPac. 220 equates to approximately 17.5% of those bids.

Without a DMP service providing the kind of expert insight into data management that funders increasingly expect, the University will be poorly equipped to compete with Russell Group peers, such as Edinburgh and Bristol both of which are making heavy investment in research data management solutions.

EPSRC, as demonstrated in policy and the Roadmap to compliance, has clear expectations of the institutions it funds. Good practice in research data management is at the core of EPSRC requirements; EPSRC, more than any other of the Councils, lays out specific institutional obligations, one of which is a commitment to ensuring long-term accessibility of data. Universities that do not show a willingness to comply with EPSRC policy undoubtedly risk loss of research income and reputation.

The University is not yet at the point where researchers and support staff have the skills and knowledge required to manage research data expertly and consistently, there is still a requirement for training, guidance and advice from the team. Our aim is that over the next year at least, if possible

---

42 Figures calculated by Bristol’s data.bris project and corroborated by Open Exeter.
43 Edinburgh is investing £2m in research data management over the next two years; Bristol has invested £250k in four new posts specifically to support RDM.
given reduced staffing, we work with researchers and support staff to embed good practice and policy in the research lifecycle so that in time staff will be in a better position to ‘self-help’ or to provide help to those they support, leading to less central support resourcing (see appendix…Training and Guidance).

3.2.7 Work Package 6: Policy and Governance

The policy aims of Open Exeter were very much in alignment with the University's commitment to scholarly openness and long-term access to research outputs, including data. The timing of the project was key in allowing the team to focus on Open Access issues during a period when the landscape was constantly and dramatically changing. In response to shifts in funder policy, the project was instrumental in leading the development of institutional policy on Open Access and research data management. The policy will play a crucial role in clarifying researcher and institutional obligations and responsibilities, and will promote compliance with funder policy. The cross institutional collaboration and consultation processes developed by Open Exeter were crucial in the creation and approval of the policies.

Policy Development

Policy development examined RDM alongside wider Open Access issues and resulted in a combined policy for ease of understanding and accessibility. A Policy Task and Finish Group comprising a variety of stakeholders from Colleges, IT Security, Research and Knowledge Transfer, Library and Ethics committees, oversaw the development and ratification of the researcher policy, which was approved by the Research and Knowledge Transfer Management Group in May 2013.

As discussion around policy development evolved, it became obvious that similar guidance for postgraduate students would be required. This corroborated findings from the project’s work with PhD students and research groups, which revealed concerns around potential loss and lack of visibility of postgraduate data, and it was agreed to develop a separate policy applying to PGRs. The PGR policy was approved by the Board of Faculty of Graduate Research in October 2012.

The EPSRC’s policy framework on research data influenced institutional policy development, as institutions receiving EPSRC funding will need to meet their research data requirements by 1 May 2015. The University developed a roadmap for compliance with these expectations and this was taken into consideration by the Task and Finish Group.

The Group followed other UK universities' lead (for example, the University of Edinburgh and the University of Leeds) and developed a high level set of policy principles, as well as policy guidance which can be updated quickly when the need arises. A wide variety of external and internal groups and individuals were consulted on the policies before final approval (see Appendix IV).

Key points of the policies include:

- The University is responsible for the provision of training, support and advice on research data management and a backed-up storage service for completed digital research data.
- All digital research data that has been selected for retention should be offered and assessed for deposit and preservation in an appropriate University, national or international data service or domain repository, unless specified otherwise in the data management plan. Valid reasons for non-deposit include commercial and confidentiality issues.
- All research data that has been selected for retention should be registered with the University’s data repository, even if the data is retained in a national or international data service or domain repository or if the data is not suitable for publishing on Open Access.

44 http://hdl.handle.net/10036/4280
45 http://hdl.handle.net/10036/4279
46 http://www.epsrc.ac.uk/about/standards/researchdata/Pages/policyframework.aspx
47 http://as.exeter.ac.uk/library/resources/rdm/whymanagemydata/epsrcroadmap/
48 http://hdl.handle.net/10036/4216
The researcher policy also clarifies that:

- Responsibility for RDM during research projects lies jointly with Principal Investigators (PIs) and researcher(s).
- All research proposals must include research data management plans.

The PGR policy states that:

- Responsibility for RDM lies with the PGR student, and if relevant, jointly with the Principal Investigator (PI) of the research project.
- PGR students and their supervisors should hold an annual review of the research data that the student is collecting or creating and any issues that he or she is facing with regards to research data management.

A draft Annual Research Data Management Checklist for PGR Supervisors and Students\(^ \text{49} \) is available as a tool for the annual review, and a second checklist has been developed for the registration and/or deposit of data into ORE.\(^ \text{50} \) This check will take place at the point when the student submits their thesis. The exact process of checking compliance and depositing/registering data is being developed in conjunction with the PGR Administration Office and will also depend on the finer details of technical solution for data deposit.

**Policy Implementation**

The policies are due to be rolled out in autumn 2013, but the way in which the policies are implemented and monitored should be in line with the speed of cultural change around RDM issues amongst the research community. In addition, they will need to be implemented bearing in mind the level of support available for researchers. The policies will be implemented softly initially; by focusing on research which is regulated by the policies of external funders to begin with and by encouraging compliance with the policies by all researchers and PGRs. This approach will be reassessed regularly.

**Local Level Guidelines**

As agreed, data management standards vary by discipline area and the specifics of the research. Open Exeter has helped to develop research group level guidelines with the Marine Renewable Energy Group. A case study with Dr Ian Ashton of Renewable Energy about the development of this policy is available.\(^ \text{51} \) In addition, the team has helped develop RDM guidelines for the Centre for Cognitive Control and Associative Learning\(^ \text{52} \), the Mood Disorders Centre\(^ \text{53} \) and Clinical Education Development and Research (CEDAR)\(^ \text{54} \).

**Ongoing Governance**

The Policy Task and Finish Group recommended that OA and RDM are put forward as a regular 6-month standing agenda item in the Research and Knowledge Transfer Management Group (RKTMG) meeting. In addition the Open Exeter Project Management Group will become a permanent body, with a slightly different membership and remit, to oversee OA and RDM issues within the University.

It is also important to note that the policies should not be looked at as stand-alone documents, but in conjunction with other University policies such as the Code of Good Practice in the Conduct of Research, the Data Protection Policy, the Information Security Policy, the Ethics Policy, and the Intellectual Property Policy. These policies will need to be updated as work around research data management evolves.

\(^{49}\) http://hdl.handle.net/10036/4214
\(^{50}\) http://hdl.handle.net/10871/9255
\(^{51}\) http://hdl.handle.net/10871/12107
\(^{52}\) http://www.ccal-exeter.org/
\(^{53}\) http://www.exeter.ac.uk/mooddisorders/
\(^{54}\) http://cedar.exeter.ac.uk/
3.2.8 Work Package 7: Advocacy

An advocacy and communication plan was developed at the start of the project and followed throughout the project lifespan. Advocacy work has been wide-ranging. A crucial start to the work was to ensure the project had a high level champion (in the form of the Deputy Vice Chancellor for Research Knowledge and Transfer) and representation from key stakeholders across the University and beyond in the project Steering Group.

The project team organised meetings early on with a number of key academic and non-academic contacts in each of the colleges, including: Associate Deans for Research and Knowledge Transfer (responsible for all research related activity within their College), Assistant College Managers for Research (responsible for the administration of research within their College) and Departmental Directors of Research (departmental academics with teaching and research commitments who also have responsibility for their department’s research). In addition the team worked with Library Liaison Officers, academics who act as a point of contact between the Library and relevant department. There were also regular meetings between the RKT team and project staff, and between project staff and Subject Librarians. The project team regularly presented documents at the Research and Knowledge Transfer Management Board and gave presentations at Library All Staff meetings.

Throughout the project the team ran a campaign of advocacy in order to engage academics with RDM, funder policy, and the notion of active data curation. We believe that the reason our DAF survey attracted such a high number of responses was due to the intensive programme of advocacy that surrounded its release (see a case study on this topic).

We held many awareness-raising events at research group, departmental and institutional level, for example, a wide range of events for International Open Access Week.

Advocacy has been integrated into training activities; for example, the Holistic Librarian project was key to engaging with the Subject Librarian team, our two talks at Research Speed Updating raised the profile of research data management amongst academics and research support staff and our stalls at PGR conferences allowed us to interact with a larger number of PGRs than at longer training events.

---

55 http://hdl.handle.net/10871/11742
56 http://hdl.handle.net/10036/3754
57 http://as.exeter.ac.uk/library/resources/openaccess/
Open Exeter established relationships with other short-term projects which helped the project to reach a wider audience. For example, the team presented at a Bridging the Gaps workshop and participated in the Cascade project’s Digital Humanities event.

The team tried to build strong working relationships with academics and Professional Services staff following initial engagement with the project. For example, we invited all those who had completed the DAF survey, who had been interviewed, or from whom we had received other input to a ‘Thank You’ event on 4th July 2012. This provided the opportunity to highlight DAF findings and to foster the interest and goodwill of those interested in the project’s work. Over 50 people representing various parts of the University attended: researchers; PGRs; Research and Knowledge Transfer; College administrators and managers; Exeter IT; Subject Librarians, and Computing Development Officers. This highlighted the significant work that Open Exeter has done in reaching out to and including all sections of the institution. A similarly broad group of stakeholders were invited to the ORE launch in March 2013, which also included an event in the Forum to raise the profile of ORE amongst those who may not have been reached by other engagement activities.

The engagement aspect of the project has been one of its most successful outputs. However, as the technical element of the project has taken longer than anticipated, the team has not yet been able to launch a campaign about data deposit into ORE. The way that such a campaign is approached will depend on staffing levels, as we cannot afford to raise expectations of researchers without providing them with the support that they need to upload their data. Another element of advocacy that will need to be strengthened in the future is a clearer positioning and visibility of research data management services within the Library’s marketing strategy.

3.2.9 Work Package 8: Sustainability

The overarching aim of the project was to oversee the establishment of an institution-wide, integrated, embedded research data management service bringing in expertise from various services: IT, RKT, Learning & Development, Education Enhancement, etc. To this end, sustainability was of key importance and the team was aware of the need to ensure that the resources developed during the lifetime of the JISC project could be sustained when funding ended.

In spite of the good work carried out by the Open Exeter team in raising the important role of effective RDM in assuring compliance with funder policy and minimising institutional risk, it has been very difficult to gain commitment to continuing financial support from the University.

In September 2012 a joint proposal for extended funding to enhance research support (including Open Access and Research Data Management) was put forward to the Vice-Chancellor’s Executive Group (VCEG) for consideration. The proposal was supported by the Library, Exeter IT and Research and Knowledge Transfer. Included in this proposal was a request for funding for a Data Curation Officer and Research Librarian, in effect continuing existing Open Exeter posts. It was suggested that the Research Librarian post should straddle both Library and RKT, investigating and establishing Open Access (papers and data, with an initial emphasis on EPSRC) compliance mechanisms and gathering business intelligence and statistics. A Technical Developer, based in Exeter IT, would provide support for the repository and DSpace in addition to working directly with researchers to find live data storage solutions through brokerage of cloud storage systems, for example.
This proposal was accepted into the University annual planning round for further discussion and review by the Planning Review Group (PRG). The PRG met several times from September 2012 in order to prioritise financial requests for further debate and to identify those requests that could be rejected.

In April 2013 the team was made aware that the funding requests had not been successful. However, the importance of the team’s work, particularly around compliance and associated risk, was recognised by Academic Services Senior Management Team – funding for two years to extend the Data Curation Officer post has been made available. The Project Administrator will continue for one year as Open Access Administrator, working three days a week. This post was funded from the remains of the Exeter pilot data repository budget. There is no obvious source of funding for the Research Librarian/Advocacy and Governance Officer post which leaves the team depleted at a time when, due to the success of the project, workloads have significantly increased.

The Project Manager submitted a paper to the University’s Research and Knowledge Transfer Management Group. The paper set out the difficult circumstances in which the team finds itself and indicated the risks associated with failing to resource OA and RDM activities adequately. Although the Group was sympathetic, no further funding was made available.

The work carried out by the Open Exeter project over the previous eighteen months has placed the University at the cutting edge of open data management, further investment would have allowed us to build on that solid foundation to ensure excellence in RDM is associated with Exeter.

The team now has some difficult decisions to make regarding continuing the services that have been developed through the JISC project; it will no longer be possible to provide the same level of responsive service. For example, due to the success of the Researcher Development Programme
sessions delivered by the team, we have been asked to deliver 24, rather than seven, sessions during the coming academic year. This would include sessions at all Exeter campuses, Cornwall included.

The team alone (2.6 individuals) serves the entire researcher, postgraduate, and support staff communities for all Open Access and Research Data Management queries. The Project Manager is working with senior Library managers to identify and prioritise what can be offered.

We will continue to look for opportunities, both internal and external, for funding to maintain and expand the team.

3.2.10 Work Package 9: Evaluation

A formal evaluation of the project was carried out by Debra Hiom of the Institute for Learning and Research Technology, University of Bristol. (See Appendices.)

3.2.11 Work Package 10: Dissemination

The dissemination and promotional activities carried out during the project lifespan are numerous and varied (see section 3.1 for some outputs, and Appendix VI for a list of events attended by the project team). The dissemination element of the project was closely connected with the advocacy work package.

The team has worked hard to disseminate the project both internally and externally through a variety of methods and outlets. As a JISC-funded project we felt an obligation to share our findings and outputs with the wider HE community. This we have achieved by regular use of social media as well as the more traditional route of talks at conferences and seminars ensuring a high profile for the project and the University's lead on OA and RDM.

Social Media

Twitter: The project Twitter account, Open Research Exeter has over 410 followers. Initially the Twitter account was used to connect with other JISC-funded RDM projects and other external players in the RDM world. The team then changed strategy and began to use the account to actively engage with Exeter researchers, PGRs and research groups as well.

Blog: The project blog has been used throughout the project to update the RDM community on project outputs, news and training events.

Facebook: The project page, Open Research Exeter, has 60 likes and has been used to upload photos, and raise the profile of events run by the project. Although the team would have liked to spend more time on increasing the number of engaged Facebook users, it was felt that this time was more usefully spent concentrating on our Twitter engagement strategy.

University Media

The team has used University media to disseminate information about research data management and events. For example, RDM news has appeared in FYI, the Academic Services newsletter and News in Brief, a newsletter which has two versions, one for researchers and the other for students. Open Access week was advertised on the University’s research webpage. In addition, the Subject Librarians have blogged about RDM on their subject-specific blogs and the team has used College-wide newsletters to disseminate information.

Website

During the lifetime of the project, the Open Exeter website was used to disseminate project findings; this website will stay live post-project, but will not be updated.
The team also developed the Exeter RDM website which is part of the Library’s set of webpages and provides guidance for researchers, PGRs and research support staff on RDM. Some sections of the site are mirrored in the University’s Research Toolkit and will therefore reach a larger audience.

Materials

The team has produced various types of dissemination material, which are available online in the Open Exeter collection in ORE.

3.3 Lessons Learnt

In general, everything took a lot longer to achieve than we had anticipated. At the formal end of the project in March 2013, there remained a huge amount of work to do in the area of embedding. With hindsight, original timescales were over-ambitious and unrealistic given the very small team leading the project and the scale of work planned. It was hard to develop services and materials from scratch and then to embed these successfully in the institutional framework within an 18-month period. Three years would have been more realistic. Having attended a number of JISC MRD Programme events, it seems that many projects have found themselves in a similar position and it is a great shame that MRD3, allowing MRD2 projects more time to embed and share expertise, seems unlikely.

During 2012 the Open Access policies of major funders changed dramatically and suddenly necessitating a quick response from the University. The aspiration to merge both OA and RDM in a single policy document increased the complexity of the document and prolonged the ratification of the researcher RDM and OA Policy. For example, the Government’s acceptance of the Finch Report recommendations and the corresponding announcement from RCUK required further consultation and adaptation of the policy document.

Technical development was very much more complex than was originally predicted. A great deal of time was spent in researching and testing possible solutions to the ‘big data’ problem. Although a robust, innovative solution is now in place the delay in its availability did disrupt plans for testing and upload of real-life data. The team was unable to publicise the repository openly as a place to deposit research data. A full scale deposit campaign has yet to be launched. We have not been able to start work on the proposed Dark Archive (see below).

Sustainability issues should have been formally addressed much sooner in the project at a high level. It was unfortunate that our request for funding for posts was submitted alongside a vast number of other funding requests as part of the University’s annual planning review. It was also unfortunate that our requests were submitted at a difficult time economically for all UK HEIs.

Sensitive data was a much greater issue than we had foreseen. According to the Open Exeter DAF results nearly 54% of respondents classified some or all of their data as ‘sensitive’. It became obvious through interviews that the team should look seriously at the services it could offer for the archiving of sensitive or confidential data. A high percentage of researchers work with data that, due to its nature, cannot be put on Open Access yet must be stored and preserved. In the long-term, given the opportunity, we would like to consider different levels of openness, e.g.: a ‘dark’ archive that offers metadata only; access to data that has been heavily redacted by the researcher; access to redacted data where the researcher acts as a ‘gatekeeper’ and will share more complete data versions to credible users; completely open with no restrictions. At Exeter it seems there is a fairly even spread of approaches to being open.

It was difficult to engage researchers through generic RDM sessions. Academics are far more likely to attend a session that is tailored to their specific needs or research workflows so that they are able to identify a benefit. In addition, people prefer to attend established events that are known to be well

58 Government to open up publicly funded research https://www.gov.uk/government/news/government-to-open-up-publicly-funded-research
59 RCUK announces new Open Access Policy http://www.rcuk.ac.uk/media/news/2012news/Pages/120716.aspx
organised and deliver on content rather than one-off sessions (see the table below outlining lessons learnt from Open Access Week).

PGRs and ECRs were easier to reach and engage with than established researchers. However, using the DMP service as a hook has allowed us to connect with a number of senior academics. The team has started to email newly-funded project Principal Investigators (PIs) with details of funder obligations, policy and the help available to them to manage data. In time, we should see this have a positive effect on RDM behaviours.

PhD supervisors have little knowledge of RDM and in most cases provide little support or guidance to PGRs on this aspect of their thesis development. PGRs tend to learn more from their peers with 3rd or 2nd year students passing on what they have learnt to new students informally. There are opportunities here to build on the work undertaken by the project by formalising these communication channels but with no funding available to the team this is currently not possible.

Loss of PhD data on the departure of the student emerged as a significant issue across Colleges but most particularly in STEM/M subject areas where PGR work is frequently embedded in the broader work of a research group. As noted elsewhere in this report, this finding led to the development of a separate institutional policy governing the archiving and preservation of postgraduate data and the processes through which it is developed and monitored.

Many researchers are more interested in finding a solution for the storage of their live data and were disappointed to discover that Open Exeter was focussing on archivable, completed data. Secure storage of live data remains a problem for a large number of researchers and postgraduates and undoubtedly leads to some questionable practices.

While running the DAF survey very early on in the project provided the team with vital insight into RDM practice across the University, there are several questions that, with hindsight and greater knowledge, we would have phrased differently, omitted, or included. Additional questions would include asking which operating system the researcher uses e.g. Windows, Mac, Linux or a combination. We would also have liked to have asked how many researchers collect data on mobile devices. In retrospect some of the language we used in the survey could have been clearer. For example, it became clear during the subsequent interviews that researchers understood the phrase “archived data” to mean many different things.

As expected, there was greater awareness and a more positive attitude towards discussion of RDM issues in STEM/M subject areas than in HASS. As the team needed to engage all groups equally, it was sometimes difficult to get the wording, tone and level correct. For example, one training session resulted in the following feedback:

“It is hard to know where the audience knowledge level is, but some of this was too difficult for me to understand what it meant to me when sitting in front of my computer.”

And, in contrast

“Was too basic - not clear what intended level was from course description.”

There is clearly a need for different levels of training in some areas (beginners, intermediate, advanced) but with limited staff resources it is difficult to cater for all these needs. Online training materials would be useful here, given the time to develop them.
### Open Access Week Events: Lessons Learnt and Tips for Others: [http://as.exeter.ac.uk/library/resources/openaccess/](http://as.exeter.ac.uk/library/resources/openaccess/)

<table>
<thead>
<tr>
<th>Issue</th>
<th>Discussion</th>
<th>Lesson Learned</th>
<th>What we would do differently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Events planning</td>
<td>Early planning. Confidence. Able to demonstrate commitment to OA and RDM at Exeter. Building on pre-existing knowledge of speakers.</td>
<td>This did help to promote the work of Open Exeter outside the University and to underline that Exeter is a leading player in OA and RDM.</td>
<td>We were able to run such an extensive week of activities only because we had additional staff resources and budget through the JISC-funded Open Exeter project. Future events will of necessity be scaled back.</td>
</tr>
<tr>
<td>Events promotion</td>
<td>A number of comments were received about Open Access and Open Exeter, in relation to lack of understanding and awareness.</td>
<td>Simple, one sentence definitions on posters and postcards might have helped to generate more informed interest. Having a finalised programme sufficiently ahead of time to allow for some marketing momentum to be generated is essential.</td>
<td>With the speakers spread across campus it may have been more effective to produce a timetable with a map alongside in the form of a pamphlet rather than a postcard. This would also have allowed for more detail about the speakers and their presentations, possibly including short abstracts by way of explanation. The Open Access, and consequently Open Access Week, pages on the University of Exeter website are buried deep within the Information Architecture. They are also governed by strict style guide rules and limited to the approved templates. An independent website for the events, run through Wordpress or similar, would have allowed for greater freedom and visibility in advertising the week.</td>
</tr>
<tr>
<td>Academic turnout for most events was not as high as we had hoped.</td>
<td>We wanted to run this special week of events to coincide with International OA Week while we had the budget. We realised there would be a conflict with teaching timetables but decided to go ahead anyway, trying to schedule our key events at times when we felt researchers would be less busy (e.g., Wednesday afternoons are</td>
<td>We feel the timing of the Week was not helpful – just a few weeks in to the busiest of the academic semesters. In spite of the advocacy that has taken place during the last year around OA and RDM, we still feel that most academics are unaware of how they will be affected. Messages must be repeated often</td>
<td>Run a few activities during OA Week itself followed by other sessions throughout the academic year at times when the audience is likely to be higher (Reading Week, Opportunities Week, either side of the summer break). Run some discipline-specific events, making sessions more relevant to particular subject areas would probably have helped raise numbers. Tried to reach audiences that feel they are sometimes overlooked or who find they cannot participate in</td>
</tr>
<tr>
<td>%</td>
<td>kept free for sports activities).</td>
<td>in a variety of formats and made relevant to the work researchers do.</td>
<td>events due to physical geography.</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------</td>
<td>-------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>High level of attendance from support staff (College administrators, IT, RKT).</td>
<td>This was a very positive result: the more support staff are engaged with and understand the issues surrounding OA and RDM, the more they will be able to contribute to the sustainability of the services we develop.</td>
<td>We believe this is a result of the advocacy work carried out by Open Exeter and of the collaborative nature of the project which draws in and values expertise from across Professional Services.</td>
<td>Most sessions were aimed at researchers/PGRs. It would have been a good idea to include some training and discussion specifically for support staff.</td>
</tr>
<tr>
<td>Humanities and Social Sciences researchers were well represented among academic participants.</td>
<td>Usually seen as being relevant to STEM/M not HASS</td>
<td>Result of previous engagement with HASS researchers through Open Exeter advocacy in collaboration with Subject Librarians (predominantly from departments we had given presentations to).</td>
<td>It is possible to engage HASS researchers with OA and RDM but a lot of ground work is needed.</td>
</tr>
<tr>
<td>Engaging new audiences.</td>
<td>Of the researchers and students who did attend, most were from research groups we had not previously had contact with.</td>
<td>Advocate and promote widely, do not rely solely on tried and tested methods or existing champions.</td>
<td>Our advocacy and promotion worked well in this case.</td>
</tr>
<tr>
<td>Popularity of the Research Speed Updating session.</td>
<td>Work through established channels that are known and trusted with established formats.</td>
<td>Would make it more obvious in future that events are run collaboratively with research services (in Exeter’s case, RKT). Would consider making sessions shorter. Would involve more researchers and PGRs as presenters or facilitators.</td>
<td></td>
</tr>
<tr>
<td>Timetabling</td>
<td>Due to conflict with the teaching timetable the availability of suitable rooms was greatly reduced. As a result, events were spread across campus and often in locations lacking in AV capability or equipment and WiFi.</td>
<td>It is impossible to overrule the academic timetable, and OA Week is a set event, however if a similar event were planned again, it would be wise to hold it during the optimum time for academic and student attendance.</td>
<td>Leave time between sessions to get from one venue to another and to set up.</td>
</tr>
<tr>
<td>Situation of Open Access stall</td>
<td>The OA stall was confined to the upper level of the new Forum Building (of which the Library is a part), where there is little passing</td>
<td>It seems likely that a more visible stand in the better populated areas of the Forum would have attracted more researchers and may have</td>
<td>There is work to be done in raising the profile of OA and RDM issues in certain quarters of the University.</td>
</tr>
</tbody>
</table>
traffic. Indeed, it was quite difficult for us to book any space in the Forum although a number of external companies were able to obtain central space on the busy ground floor at the same time. We felt that OA Week was not considered as high status in some areas of University administration. resulted in a greater turnout for some events.

| Use of social media | Use Facebook to promote Tweet during events Blog each day | Use of social media (especially Twitter) did draw attention to the project and OA Week events but from other JISC MRD projects rather than researchers. | Social media is incredibly useful but only if you have the right connections/followers, etc. We are now actively trying to increase our Exeter researcher followers on Twitter so that we are targeting the right groups. |

Summary of findings and feedback from Open Access Week in October 2012
3.4 Immediate Impact

Anecdotal evidence and feedback gathered both formally and informally suggests that RDM issues are now much more widely acknowledged and understood at Exeter due to the work of the project.

The project itself has gained a high profile and high-level support and as a result the team has been asked to present to a number of senior management groups. The Project Manager has been asked to sit long-term as a member of the Strategic Projects’ Task Force Group and the Information Security Steering Group. The project has allowed the building and consolidation of new relationships across the University which have resulted in vital insight and input. Open Exeter was one of five projects selected for the Outstanding Project of the Year Professional Services Awards.60

The team has worked to encourage:

- Understanding of good practice in RDM.
- Greater understanding of funding bodies’ policies.
- Better compliance with funder policy.
- Better understanding and use of metadata and documentation.
- Improved quality of DMPs.

DAF survey results act as a benchmark against which to compare future findings. The team had intended to re-run a short version of the DAF in order to gain some clear evidence of change in attitude and behaviour but due to staff shortages at a critical time this has not been possible. It remains an ambition, however, for later in 2013.

Take-up of training on offer has increased steadily. See Appendices for a breakdown of training activities and an estimate of numbers of people reached. Feedback from attendees and course organisers has been positive. For example, in the 2012/13 academic year the team ran seven sessions on the Researcher Development Programme; we have been asked by organisers to run 24 similar sessions during the 2013/14 year.

In general, it has been easier to reach postgraduate students and Early Career Researchers. These groups have shown themselves to be keen to learn and more receptive to acquiring new skills. Our work with PGRs has shown that they receive little support with RDM issues and often struggle to find practical systems or solutions to problems:

“Several of my PhD students have been to your talk on data management and storage this week and have told me how useful they found it. They have also told me that they would have found it useful to have known all of this at an earlier stage in their studies.”61

The feedback below consists of extracts from end-of-project reports written by the Open Exeter Follow the Data PGR team. Full reports can be seen in the Appendices.

1) Philip Bremner, PhD student in The School of Law

“I have found working on the JISC-funded Open Exeter project an invaluable experience. It has greatly enhanced my understanding of the need for and methods of rigorous research data management. It has encouraged me to consider issues such as: what constitutes research data? What is the value of making research data openly available? Who is responsible for research data management issues and long-term archiving? Speaking personally, participation in the project has contributed to my personal development as a researcher. In the future I will feel more confident about discussing research data management procedures in the form of a research data management

60 http://blogs.exeter.ac.uk/openexeterrdm/blog/2013/05/02/open-exeter-outstanding-project-of-the-year-finalist/
61 Feedback from Senior Lecturer.
plan, which is required by the research councils when applying for research funding.

“…I feel that the Open Exeter project has been instrumental in raising awareness of research data management issues amongst researchers at the University and the project's Advocacy and Governance Officer deserves special thanks in that regard. What is more, the project has produced some excellent training materials, which are already being delivered as part of the researcher development programme”.

2) Annie Blanchette, PhD student, The Business School

“Collaborating on the Open Exeter project served first and foremost as a great opportunity to reflect on and develop my research data management process according to some of the best practices and solutions out there.

“Through discussions with the project leaders and other fellow students involved in Open Exeter, I have learned a lot about data management processes and tools…The creation of the survival guide for new students was also a great opportunity to reflect on and share, as well as learn about best practices from others”.

3) Duncan Wright, PhD student, Department of Archaeology (now qualified)

“Firstly, I’d like to say that I have really enjoyed the time that I have spent working on the Open Exeter Project. It has been a pleasure working with all of the project team, staff and PhD researchers alike, and I feel that it has been a productive experience… I have particularly appreciated the time spent in workshops, and it is probably in this format which I gained the most. …The times when specialists were invited into the workshops seemed to work especially well, and the level at which the information was pitched was far better than that of the PGR development workshops.

“…I’ve actually mentioned data management in a few of the research fellowships that I’ve been applying for, and it is experience which I hope to use to my benefit from in the future”.

4) Ruth Farrar, PhD student, Film Studies

“…I absorbed so much new information I would not have previously considered let alone have known the specific questions to ask. I enjoyed learning about data management topics ranging from the Freedom of Information Act to the advantages of academic depositories like ERIC.

“…When I was able to confidently explain data management issues to students who came to the stand, it made me realise how much I had learned throughout the Open Exeter Project. Attending the workshops also highlighted the impact social media networks can have on disseminating research data to the public”.

The RDM Survival Guide developed in collaboration with the above group of PGRs is now handed out at induction sessions for new postgraduate students and remains one of the most downloaded ORE documents. We know from conversations with staff from other HEIs that they have adapted and used this with their own students.

It has been more difficult to reach established researchers and there are undoubtedly a variety of reasons for this lack of interest, such as lack of time. However, we have found that providing assistance with DMPs (something they have to do) has been a hook with which to encourage engagement with RDM. Senior researchers have limited time available to allocate to skills
development and are more likely to be interested in training or guidance that can be shown to have a beneficial impact on some aspect of their work or simply to make life easier. For this reason, our DMP service remains a priority for the team; given the fact that we have to reduce our training and other activities DMP advice is a slow but certain way through which to embed good practice.

“...thank you once again for all your help and support in writing the technical appendix for my AHRC fellowship. I heard last week that I got it! Thank you so much for all your help and time. The technical appendix was a large part of the project... so I am really very grateful for your support.”

“That's absolutely wonderful and will sound so reliable and professional when I add the further details!”

The project has been very successful in engaging research support staff across Colleges and departments. Our aim in working with support staff was to embed skills in existing services where possible through training and guidance. In this way we hoped that when project funding ended, services and training could continue to be offered sustainably via support staff who would be equipped with the knowledge and skills required to act independently.

Although this aim has been achieved to a certain extent work remains to be carried out to ensure full understanding of RDM. The team continues to meet with groups of support staff and has started to send out a regular RDM and OA newsletter to support staff who then cascade to researchers via established channels.

For reasons discussed previously, there has been very limited ability to work with real life data during the lifetime of the project. However, a great deal of groundwork has been carried out in the areas of metadata development, testing and refinement of user interfaces, and production of associated documentation, including licences, agreements and legal statements, developed in conjunction with the University’s Legal Services.

It was clear from DAF results that there was no single, consistent approach to archiving data once completed. More in-depth investigation revealed a lack of understanding of what is meant by ‘archiving’ and why it is important (see tables below).
With these findings in mind, advocacy and training has included increasing understanding of the purposes of data archiving, how and when to do it.

### 3.4.1 Benefits to the wider community

Open Exeter was one of the first MRD2 projects to run a DAF survey. The survey attracted what at that time was a very high response rate (nearly 290 respondents). The team was subsequently asked by DCC to write a case study outlining approaches to promoting the survey. We feel that the success of other projects’ DAFs has, at least in part, been due to the sharing of our approach and results. Within two weeks of our DAF findings being made available in ORE, the document had been downloaded several hundred times.

Some of Open Exeter’s approaches to training have been innovative, for example, Discuss, Debate, Disseminate, Research Speed Updating and the Holistic Librarian. Examples of training methodologies have been included in two DCC cases studies.

ORE (formerly ERIC) statistics show that materials developed by Open Exeter remain amongst the items most frequently downloaded (see image below). All project materials have been made freely available through ORE under a CC-BY licence.

---

62 [http://www.dcc.ac.uk/resources/developing-rdm-services/rdm-training-librarians](http://www.dcc.ac.uk/resources/developing-rdm-services/rdm-training-librarians) and [http://www.dcc.ac.uk/resources/developing-rdm-services/increasing-participation-training](http://www.dcc.ac.uk/resources/developing-rdm-services/increasing-participation-training)
The Globus data upload tool clearly has great potential for reuse amongst HEIs and wider. Apart from its innovative approach to data transfer, technical work has resulted in a new approach to DSpace user authentication which will be incorporated in future DSpace software upgrades. The development has attracted international attention wherever it has been demonstrated:

Globus + SWORD = move large data sets into DSpace. Looks useful
http://ow.ly/1RbMmd  @OpenExeterRDM  #idcc13

@OpenExeterRDM thanks, very cool, will look! Might solve a realworld problem we have with our Fluor (Sakai-fedora integration) tool.

3.5 Future Impact

- Exeter postgraduate/PhD students will be required to submit relevant data to ORE alongside their thesis, where possible.
- Exeter postgraduate/PhD students will be required to meet with supervisors for an annual data health check, and supervisors will be expected to ‘sign off’ data for upload to ORE, where applicable.
- Exeter researchers will be encouraged to submit data that underpins published papers or is otherwise of value to ORE, where possible, as outlined in the University policy.
- Where researchers submit data to external repositories they will be expected to provide a metadata-only record with link in ORE.
• The method of submitting data to ORE will change – from summer 2013 a new upload tool based around Globus software, will be rolled out. Anyone submitting data will be required to use this facility.
• Increased use of ORE for data storage will lead to increased infrastructure costs.
• All researchers, regardless of funder, are encouraged to develop a DMP to assist the project team with good RDM and ensure data is suitable for upload to ORE.
• Researchers and research students will continue to require help in managing their data. As data uploads start to increase so will the demand for support - the impact of trying to provide this support on the reduced project team could be severe.

4 Conclusions

Overall, the Open Exeter project has been successful and highly influential in raising awareness of RDM and OA in all corners of the University.

Cultural change is a slow process that takes place over a long period of time. In that time, continuing support for advocacy and training activities is needed so that momentum is not lost.

Cross-departmental collaboration and co-operation are essential to drive change forward through a number of different channels.

The project could not have achieved what it has without the support of the JISC MRD Programme. The Programme has fostered a culture of support and sharing amongst the MRD projects that has allowed projects to achieve goals collaboratively or by building on the work of others.

Without the continuing support of JISC MRD, and in the absence of full, long-term financial support from the University, it is hard to see how the project can build on its successes or even continue to deliver the same level of service.

5 Recommendations

For the University of Exeter

The University should invest financially in adequate staffing for the delivery of an integrated RDM/OA service enhancing Research Support, as envisioned in Section 3.2.9. This service would include support for RDM, for Open Access and a dedicated Technical Developer to develop and maintain DSpace, and to integrate ORE more deeply with the University’s CRIS, Symplectic. This latter would assist with compliance monitoring and reporting to funding bodies.

A Dark Archive for sensitive data should be developed to allow the secure storage of sensitive data that is not suitable for Open Access (see Section 3.2.6).

The University should look at alternative, cheaper solutions for the long-term storage of infrequently-accessed data.

Secure storage of live data remains an issue for a majority of STEM/M researchers and some researchers and PGR working in Digital Humanities. In the absence of increased and better storage of live data on institutional networks, the University should look at secure, trusted, value for money cloud solutions.

The team should work more closely with researchers submitting grant applications to EPSRC; data suggests that bids to EPSRC attract a high rejection rate. In addition, the University must meet its obligations for compliance with EPSRC policy by 2014.

The team recommends continuation of the Policy and Governance Task and Finish Group in a slightly different format and with a different membership. This group would have oversight of policy, ethical
and legal issues and would be responsible for the review, maintenance and updating of policy and associated legal documents and procedures.

The Open Exeter Project Management Group should continue with the remit of ensuring the work of the project is sustained in whatever form is possible and that issues arising are raised at a high level.

**For JISC**

- Continuation of MRD Programme.
- Facilitation of collaborative (perhaps regional) initiatives, such as those under discussion through GW4.
- Support for development and implementation for international standards: Creative Commons licences; data citation protocols, metadata and metadata harvesting (CERIF, OpenAire, etc.).
- Provide a platform for dissemination and sharing of expertise.
- Brokers for storage systems for archivable and live data, e.g., trusted cloud solutions.

**6 Implications for the future**

The Globus tool for data upload has the potential to be more widely used by any HEI seeking to transfer large amounts of data across networks.

Although it appears that Globus will resolve the issue of big data transfer, we have not had the resources or time to look at the impact of accessing big data on potential users. The team would be very keen to investigate this issue further and may look for funding opportunities with one or more of the research groups we are working with.

**7 References**

References have been included in the body of the report with URLs where applicable.
8 Appendices

Appendix I: End-of-project reports from the Open Exeter PGR team.
Appendix II: Outline of training and advocacy activities.
Appendix III: Open Exeter DAF survey online questionnaire.
Appendix V: Open Access and Data Curation Team: Staffing during the Open Exeter Project.
Appendix VI: Dissemination events.
Appendix VII: External project evaluation.

8.1 Appendix I

End-of-project reports from the Open Exeter PGR team.

Philip Bremner, PhD student in The School of Law

I have found working on the JISC-funded Open Exeter project an invaluable experience. It has greatly enhanced my understanding of the need for and methods of rigorous research data management. It has encouraged me to consider issues such as: what constitutes research data? What is the value of making research data openly available? Who is responsible for research data management issues and long-term archiving? Speaking personally, participation in the project has contributed to my personal development as a researcher. In the future I will feel more confident about discussing research data management procedures in the form of a research data management plan, which is required by the research councils when applying for research funding.

In addition to this I felt that the project team valued my contribution to the project, along with that of the other PGRs. As PGRs, we participated in a number of useful workshops, reports of which can be seen on the project blog: http://blogs.exeter.ac.uk/openexeterrdm/, along with many other interesting articles about the progress of the project. Various topics were discussed at these workshops such as data protection, reference management, the creation of an institutional repository etc. We also ran an event where PGRs took the lead in facilitating discussion of research management issues more generally amongst postgraduate researchers in the University. A number of other events have been organised under the auspices of the project, such as the very successful University-wide Open Access Week, which ran as part of International Open Access Week. Within my own College, the project team participated in the PGR induction programme where we tried to raise awareness of research data management issues amongst new PhD students.

The Open Exeter project has produced a number of very useful outputs, which we PGRs have been involved with in one way or another. Principally, of course, is the creation of a robust institutional repository to make research data available on open access. We were fortunate enough to be able to test drive the repository (and thereby gain a sneak preview of it). I have to admit, it seemed able to handle all the different shapes and sizes of research data that we could think of throwing at it. Another significant output is the data management policies for researchers at the University, which we had input on. As a result of these policies, PhD students (and other researchers) will be required to submit their research data for long-term archiving in the institutional repository thereby making the data available for other researchers to use. This is in line with the requirements of many of the research councils, which now make data archiving compulsory.

Looking back at the report I wrote following the initial project workshop, I wrote: 'research data management is not something I had given much thought to...’ I can safely say that I have now given the matter some considerable thought and feel that it is one that is relevant to most researchers in the University. I feel that the Open Exeter project has been instrumental in raising awareness of research data management issues amongst researchers at the University and the project's Advocacy and Governance Officer deserves special thanks in that regard. What is more, the project has produced
some excellent training materials, which are already being delivered as part of the researcher development programme.

Looking to the future, I feel that there is still work to be done in relation to promoting open access to research data in terms of advocacy, training and data curation. My concern is that the excellent work achieved by the project will not continue beyond the conclusion of the project if sufficient funding is not in place. In my view, it is essential to ensure that there are dedicated personnel within the University whose main concern is dealing within research data management issues. The data repository, although a fantastic achievement, cannot be considered as a static system. It requires proper curation by specially trained staff that are willing and able to deal with any concerns or queries that are raised in relation to its operation.

I am very grateful for the opportunity to participate in this project and would like to thank the project team for their enthusiasm and support.

Annie Blanchette, PhD student, The Business School

Collaborating on the Open Exeter project served first and foremost as a great opportunity to reflect on and develop my research data management process according to some of the best practices and solutions out there.

As a foreign student, I had never heard of the Data Protection Act until the Open Exeter project leaders invited Caroline Dominey to present the DPA and Freedom of Access policy in a workshop. This awoke me to some of these requirements and prompted me to ensure my data process was adequate. Given the sensitive nature of my data - dealing with real life subjects that can be recognised - I met with Ms Dominey in order to review my intended process. This has been very helpful too for the approval of my ethical research protocol. I have also learned about Open Access policies, some of the benefits of sharing, as well as measures to control diffusion in order to suit the sensitive nature of my data.

Through discussions with the project leaders and other fellow students involved in Open Exeter, I have learned a lot about data management processes and tools. For instance, I have found tools for encryption and synching, storing data with a good level of security online and managing efficiently research references. I have learned about sites to build a Data Management Plan (such as DMP online). Undertaking such a process proved very helpful in my ongoing data management, and facilitated my approval by the ethical committee as it allowed me to document potential ethical issues at every step of the process and measures envisioned to minimise the latter. The creation of the survival guide for new students was also a great opportunity to reflect on and share, as well as learn about best practices from others. Learning about good practices in terms of folder structures, versioning and naming conventions was very helpful too, although I wish we had covered this before so that I could have implemented this system earlier. While my submission delay does not allow me to adjust all my files at the moment, the system seems very promising and easy to implement, so I am hopeful it will work well for my future projects. The project was also an opportunity to learn to work with the iPad as a research tool, while benefiting from other’s exploration of this tool.

What worked:
Although I am still struggling to do the actual writing up of my thesis with the iPad, it has been playing a crucial role at every step of my data collection (managing field appointments, recording interviews and field notes, conducting photo reviews with participants and accessing/sharing my data for the purpose of interpretation).

Monitoring my data management throughout the project was also a great help because it pushed me to reflect on the nature of the data, as well as proper ways of handling it. Although reporting on a weekly basis was at time difficult given the diverse nature of my data, it also helped me create a much more detailed account for my thesis, which increased its credibility.

What didn’t work as well:
I was able to put together a process of synching and encryption, however, I am still struggling a bit with overwriting issues (especially with dropbox). I believe this will get resolved once I implement an appropriate versioning system.

Other suggestions:
I think offering the opportunity to students to take part in research data management groups (with data monitoring activities, group discussions and workshops) would be potentially of great benefits to some interested postgrad researchers. Perhaps I would have liked having a little bit more group interactions because I found it was great to interact with a team of people committed to data management reflection. This and the one to one meetings often helped me fix some issues that would have otherwise blocked me for much longer. Thank you for giving me the opportunity to participate!

Duncan Wright, PhD student, Department of Archaeology (now qualified)
Firstly, I'd like to say that I have really enjoyed the time that I have spent working on the Open Exeter Project. It has been a pleasure working with all of the project team, staff and PhD researchers alike, and I feel that it has been a productive experience. I feel the project has been well managed throughout, with exemplary correspondence and engagement with researchers: at no point was it unclear what was required from us, and the aims and objectives of each task were consistently communicated effectively. I have particularly appreciated the time spent in workshops, and it is probably in this format which I gained the most. Conversely, I found tasks/activities online more difficult to undertake, although this is probably as much a reflection on the manner in which I operate than anything else. The times when specialists were invited into the workshops seemed to work especially well, and the level at which the information was pitched was far better than that of the PGR development workshops.

Particular aspects of the project I found especially informative for my own research, and I would have certainly have benefitted further still if I’d encountered some of the information nearer the beginning of my studies. The workshop/discussion on academic referencing software, such as Mendeley and Endnote, was really informative and should be considered for the future-I’m aware that there is an Endnote workshop, but researchers should be made aware of the wider range of resources available where possible. Creating a data management plan also provided a useful insight: I’ve actually mentioned data management in a few of the research fellowships that I’ve been applying for, and it is experience which I hope to use to my benefit from in the future. It has been good too to learn about Open Access, and its implications for research even if some of those are potentially difficult/challenging-it seems a shame that more academics in particular are not engaging with Open Access, or at least involved in discussing its implementation.

I think that the lack of interest from academics was reflected during the Open Access week though sadly. It was also disappointing that the University didn’t deem it important enough to warrant a more suitable location for the stall-this is in no way a criticism of the team, as I am aware that a better position was sought after, but it did negatively impact the visibility of the stall and what we had to offer. Open Access week was a well-publicised, efficiently organised and very informative event, and all of the sessions that I went to were interesting, pitched at a good level and useful. It was just a shame that it wasn’t enjoyed by more people!

That’s probably the sum of most of my thoughts. As I said before, my main thoughts about Open Exeter is that it has been a very positive experience, and a real pleasure to work with you all.

Ruth Farrar, PhD student, Film Studies

The Open Exeter project began with a structured method of involvement: weekly data management audit forms and face-to-face meetings with Dr. Gareth Cole every two to three weeks. Initially, I found this approach beneficial for three main reasons. First, as I work remotely from campus, it was nice to have a regular check in with the Open Exeter team as it encouraged open lines of communication and getting to know the team better. Second, the data management audits enabled me to regularly reflect on my own data management practices which in turn helped me understand the project’s wider issues of data management. Third, I found the face-to-face meetings with Dr. Cole useful at the start of the project as it provided a friendly space to discuss data management issues, gain advice and ask any questions about the project.
Though as the months progressed, I felt I was repeating some of the same information on my audit form which in turn meant there was little new material to add in the meetings. Perhaps, the audit form phase could have stopped sooner in the process as it may have been more productive to get us to move on to another structured project. However, I understand the audit forms needed to be carried out over a significant period of time.

Throughout the project, I liked how we were invited to numerous events by the Open Exeter team as this promoted a sense of inclusion and better awareness of data issues throughout the entire university. For instance, being given a table at the Digital Scholarship Showcase on 28th May, 2012 proved a useful platform to share my research and data management issues.

The Open Exeter project also gave me an opportunity to hone my communication, organisational and pedagogic skills. During a PhD researchers workshop on 22nd June, 2012, I helped lead a 'Speed Data Dating' session which was equally fun and informative.

I also practiced speaking and listening skills in meetings with fellow PhD Open Exeter researchers. I found these meet ups invaluable. The number of group meetings were also evenly spaced throughout the project. I started the Open Exeter project in the first year of my doctoral studies. I benefitted greatly from listening to data management advice from researchers in their second and third years. I understand our newly created survival guide helps fill in this need for advice. However, I still found the face-to-face meet ups the most helpful part of the Open Exeter project. I wonder if first year students would benefit from talking to fellow students from second and third year in their department about data management issues. I am sure there are many students who would volunteer for a buddy/mentoring system to add another credential to their CVs. First year PhD researchers may also take a deeper interest in important data management issues if it was communicated by another fellow student as they may be eager to learn how to avoid common data management pitfalls.

From my perspective, the meetings with Jill, Gareth, Hannah and the PhD researchers helped me consider how the way I manage data now will have an impact on my research in my final year. I absorbed so much new information I would not have previously considered let alone have known the specific questions to ask. I enjoyed learning about data management topics ranging from the Freedom of Information Act to the advantages of academic depositories like ERIC.

Helping assist at the Information Stand and workshops during Open Access Week in October, 2012, marked another highlight of my involvement with the project. When I was able to confidently explain data management issues to students who came to the stand, it made me realise how much I had learned throughout the Open Exeter Project. Attending the workshops also highlighted the impact social media networks can have on disseminating research data to the public.

The provision of an iPad on the Open Exeter project also introduced me to effective methods for disseminating data online and between apps. My iPad rapidly became an essential tool for managing data particularly when working remotely. The iPad proved invaluable as it afforded me a new-found workflow freedom to edit, store, back up my field recordings and share data with users in the UK while simultaneously carrying out research on site on a project in America.

Overall, the Open Exeter project generously provided me with practical tools, useful advice and an excellent introduction to issues surrounding open access research and data management. Jill, Gareth and Hannah were a real pleasure to work with as their friendliness, enthusiasm and sincere kindness remained consistent throughout my time on the project. Ultimately, my involvement in the project has positively shaped the ways I consider saving, storing and sharing my doctoral research data.
## 8.2 Appendix II: Training and Guidance

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Development Time (Hrs)</th>
<th>Delivery Time (Hrs)</th>
<th>No. of People Reached (approx)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researcher Development Programme</td>
<td>Series of 7 workshops for PGRs</td>
<td>56</td>
<td>7</td>
<td>70</td>
</tr>
<tr>
<td>Research Data Management in the Social Sciences</td>
<td>Workshop for PGRs X 2 (one specifically for Sociology and Philosophy PGRs)</td>
<td>24</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Discuss, Debate, Disseminate</td>
<td>Workshop for PGRs</td>
<td>24</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>PGR Induction Sessions</td>
<td>CLES, HUMS (X 3), Business School, CEMPS</td>
<td>6</td>
<td>3</td>
<td>110</td>
</tr>
<tr>
<td>OA Talks</td>
<td>English Department, Modern Languages, IAIS, HUMS Management Group, HUMS DoRs, CLES DoRs, Business School Management Board, CEMPS DoRs</td>
<td>28</td>
<td>7</td>
<td>140</td>
</tr>
<tr>
<td>RDM and OA workshops and presentations</td>
<td>ECEHH, IHSR, CRF, Psychology, Biosciences, SSIS Research Support Staff, CEMPS Research Support Staff, PGR Admin Network Meeting</td>
<td>27</td>
<td>9</td>
<td>65</td>
</tr>
<tr>
<td>An introduction to research data management (RDM)</td>
<td>In conjunction with DCC. 1 session for research support staff, 1 session for PGRs</td>
<td>6</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Writing a data management plan (DMP)</td>
<td>Tremough/Research Focus Week</td>
<td>16</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>Introduction to OA &amp; RDM for doctoral supervisors</td>
<td></td>
<td>2</td>
<td>0.5</td>
<td>20</td>
</tr>
<tr>
<td>Holistic Librarian/23 Things</td>
<td></td>
<td>48</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>PCAP OA and RDM presentation</td>
<td></td>
<td>2</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Open Access Week Sessions</td>
<td>Open Access</td>
<td>13</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td>Open Access Week Sessions</td>
<td>Research data management</td>
<td>16</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Open Access Week Sessions</td>
<td>Combined sessions</td>
<td>15</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Research Speed Updating</td>
<td>Research data management</td>
<td>2.5</td>
<td>0.5</td>
<td>30</td>
</tr>
<tr>
<td>Research Speed Updating</td>
<td>Open Access</td>
<td></td>
<td></td>
<td>45</td>
</tr>
</tbody>
</table>
### LRS Staff Meeting
<table>
<thead>
<tr>
<th>Event</th>
<th>People Reached</th>
<th>Hours</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Practice Talk</td>
<td>2</td>
<td>0.5</td>
<td>10</td>
</tr>
<tr>
<td>Research Focus Week</td>
<td>12</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Training for Subject Librarians</td>
<td>7.5</td>
<td>7.5</td>
<td>12</td>
</tr>
<tr>
<td>Tremough/Exeter</td>
<td>3</td>
<td>0.5</td>
<td>14</td>
</tr>
<tr>
<td>Update at RKT meeting</td>
<td>1</td>
<td>0.5</td>
<td>25</td>
</tr>
<tr>
<td>All RKT staff</td>
<td>10</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Update at Bridging the Gaps session</td>
<td>1</td>
<td>0.5</td>
<td>25</td>
</tr>
<tr>
<td>Bridging the Gaps staff</td>
<td>10</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>321</td>
<td>98</td>
<td>776</td>
</tr>
</tbody>
</table>

### Total Hours

<table>
<thead>
<tr>
<th>Total Hours</th>
<th>419</th>
</tr>
</thead>
</table>

### People reached/Hours

<table>
<thead>
<tr>
<th>People reached/Hours</th>
<th>1.9</th>
</tr>
</thead>
</table>

**Key**

- Open Access
- Research Data Management
- Combined Training

Table 6: Overview of training carried out 2012/13
8.3 Appendix III

Open Exeter DAF survey online questionnaire
(see http://hdl.handle.net/10871/9688 for full questionnaire)
Personal Details

If you wish to be entered into the prize draw and a chance of winning a Kindle please answer questions one and two. Information entered here will not be used for any other purpose.

Personal details

1. Name (Optional)

2. Email address (Optional)

3. Department/School

4. College
   - The Business School
   - College of Engineering, Mathematics and Physical Sciences
   - College of Humanities
   - College of Life and Environmental Studies
   - College of Social Sciences and International Studies
   - Peninsular College of Medicine and Dentistry

5. Which of the following best describes your position at the University.
   - Post-Graduate Research Student
   - Post-Doctoral Researcher
   - Lecturer
   - Senior Lecturer
   - Associate Professor/Reader
   - Professor
   - Other (please specify):

Continue >

Survey testing only

https://www.survey.bris.ac.uk/?manifestid=104585&cop=preview 16/02/2012
8.4 Appendix IV

Policy Development – Consultation Process

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 2012-Apr 2013</td>
<td>Interviews between Library and researchers.</td>
</tr>
<tr>
<td>Feb 2012-Apr 2013</td>
<td>Online survey to gather data around open access awareness and training needs (<a href="http://hdl.handle.net/10036/3689">http://hdl.handle.net/10036/3689</a>).</td>
</tr>
<tr>
<td>Mar 2012-Mar 2013</td>
<td>Ongoing meetings between Library and College support staff</td>
</tr>
<tr>
<td>March 2012</td>
<td>Formation of Open Access Policy Task and Finish Group Membership:</td>
</tr>
<tr>
<td></td>
<td>• Cris Burgess - Ethics Officer, Psychology, CLES</td>
</tr>
<tr>
<td></td>
<td>• Caroline Dominey - University Records Manager, Governance and Compliance, Exeter IT</td>
</tr>
<tr>
<td></td>
<td>• Jill Evans - Open Access and Data Curation Manager and Open Exeter Project Manager, Academic Engagement</td>
</tr>
<tr>
<td></td>
<td>• Hannah Haig - IP and Contracts Officer, Legal Services and RKT</td>
</tr>
<tr>
<td></td>
<td>• Simon Honeyball - Senior Lecturer, Law, SSIS and Academic Staff Association Member</td>
</tr>
<tr>
<td></td>
<td>• Jamie Horsley – Assistant College Manager for Research, CLES</td>
</tr>
<tr>
<td></td>
<td>• Hannah Lloyd-Jones - Advocacy and Governance Officer, Open Exeter, Academic Engagement</td>
</tr>
<tr>
<td></td>
<td>• Mairi Maclean – Director of Research, Management, The Business School</td>
</tr>
<tr>
<td></td>
<td>• Noel Morgan - Director of Research, Institute of Biomedical &amp; Clinical Sciences, PCMD</td>
</tr>
<tr>
<td></td>
<td>• Anthony Musson – Director of Research, Law, SSIS</td>
</tr>
<tr>
<td></td>
<td>• Christopher Smith – Director of Research, Engineering, CEMPS</td>
</tr>
<tr>
<td></td>
<td>• Lee Snook - Head of Academic Engagement</td>
</tr>
<tr>
<td></td>
<td>• Tom Tregenza - Director of Research, Biosciences, CLES</td>
</tr>
<tr>
<td></td>
<td>• Catherine Turner – Director of Research, Drama, Humanities</td>
</tr>
<tr>
<td></td>
<td>• Nela Vlaisavljevic-Kapelan - Research &amp; Knowledge Transfer Manager, HASS Lead, RKT</td>
</tr>
<tr>
<td></td>
<td>• Michael Wykes - Policy, Impact, and Performance Manager, RKT (Chair)</td>
</tr>
<tr>
<td>Apr-Jun 2012</td>
<td>Policy development in consultation with group and other Russell Group universities</td>
</tr>
<tr>
<td>Apr-Mar 2013</td>
<td>Library-led talks and discussions with departments and research groups</td>
</tr>
<tr>
<td>26th June 2012</td>
<td>Draft Open Access policy approved by Open Exeter Steering Group</td>
</tr>
<tr>
<td>6 Jul-7 Sept 2012</td>
<td>Open consultation</td>
</tr>
</tbody>
</table>

The following groups were emailed with follow up meetings in some cases:

- Associate Deans for Research and Knowledge Transfer
- Directors of Research
- Assistant College Managers for Research
- Associate Deans for Education
- Directors of Postgraduate Research
- Assistant College Managers
- Deans of the Graduate Research Faculty/Taught Programmes Board
• Graduate Research Faculty Board
• Academic Staff Association via Dr Simon Honeyball
• Guild Vice President Academic Affairs
• Unions: UCU, UNITE, and UNISON
• Open Exeter Project Steering Group
• RKT Research Managers
• Researchers via academic members of the Policy Task and Finish Group

Documents were made openly available on the Open Exeter web site to allow comments from the wider open access community.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 August 2012</td>
<td>Drop-in session to discuss policy</td>
</tr>
<tr>
<td>Sept 2012</td>
<td>Review of feedback and updating of policy</td>
</tr>
<tr>
<td>Sept 2012-Mar 2013</td>
<td>Open Access Implementation Group: Meetings between Library/RKT:</td>
</tr>
<tr>
<td></td>
<td>Jess Gardner</td>
</tr>
<tr>
<td></td>
<td>Michael Wykes</td>
</tr>
<tr>
<td></td>
<td>Nela Vlaisavljevic-Kapelan</td>
</tr>
<tr>
<td></td>
<td>Jill Evans</td>
</tr>
<tr>
<td></td>
<td>Kate Newell</td>
</tr>
<tr>
<td></td>
<td>Beverley Hughes</td>
</tr>
<tr>
<td></td>
<td>Lee Snook</td>
</tr>
<tr>
<td></td>
<td>Caroline Gale</td>
</tr>
<tr>
<td>Sept 2012-Mar 2013</td>
<td>Ongoing discussions with other Russell Group universities</td>
</tr>
<tr>
<td>24 Sept 2012</td>
<td>Open Access policy approved by RKT Management Group</td>
</tr>
<tr>
<td>26 Sept 2012</td>
<td>PGR Open Access policy reviewed by Quality Strategy Group</td>
</tr>
<tr>
<td>25 Oct 2012</td>
<td>PGR Open Access policy approved by Graduate Faculty Board</td>
</tr>
<tr>
<td>Oct-Dec 2012</td>
<td>Consultation meetings between Library and ADRs</td>
</tr>
<tr>
<td>Oct-Dec 2012</td>
<td>Open Access Week: awareness raising and debate</td>
</tr>
<tr>
<td>Nov 2012-Feb 2013</td>
<td>Open Access Task and Finish Group: Meetings between Library/RKT/College support staff and researchers:</td>
</tr>
<tr>
<td></td>
<td>Jess Gardner</td>
</tr>
<tr>
<td></td>
<td>Michael Wykes</td>
</tr>
<tr>
<td></td>
<td>Jill Evans</td>
</tr>
<tr>
<td></td>
<td>Lee Snook</td>
</tr>
<tr>
<td></td>
<td>Caroline Gale</td>
</tr>
<tr>
<td></td>
<td>Caroline Huxtable</td>
</tr>
<tr>
<td></td>
<td>Kate Newell</td>
</tr>
<tr>
<td></td>
<td>Adrian Bailey</td>
</tr>
<tr>
<td></td>
<td>Katy Griffiths</td>
</tr>
<tr>
<td></td>
<td>Nick Church</td>
</tr>
<tr>
<td>Feb 2013</td>
<td>Open Access implementation plan and proposal for green mandate approved by RKT Management Group</td>
</tr>
<tr>
<td>Feb-Mar 2013</td>
<td>Meetings with academic members of Senate (ASA)</td>
</tr>
<tr>
<td>Feb-Mar 2013</td>
<td>Meetings between Library and DoRs</td>
</tr>
<tr>
<td>Feb-Mar 2013</td>
<td>Meetings between Library and College management groups</td>
</tr>
<tr>
<td>Mar 21</td>
<td>Request for green mandate from Senate</td>
</tr>
</tbody>
</table>
8.5 Appendix V

Open Access and Data Curation Team: Staffing during the Open Exeter Project

<table>
<thead>
<tr>
<th>Post</th>
<th>Outline of duties</th>
<th>Funder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Access &amp; Data Curation Manager</td>
<td>Management of Open Exeter</td>
<td>University, ongoing</td>
</tr>
<tr>
<td></td>
<td>Management of repository</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Open Access &amp; RDM strategy development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Liaison with Exeter IT (e.g., Symplectic)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Liaison with researchers, PGRs and support staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metadata</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compliance monitoring</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Budget management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Production of reports and papers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Promotion and advocacy planning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Development of training programme</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Involvement in delivery of training</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bibliometrics and intelligence gathering</td>
<td></td>
</tr>
<tr>
<td></td>
<td>External liaison/community relationships</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dissemination</td>
<td></td>
</tr>
<tr>
<td>Advocacy &amp; Governance Officer</td>
<td>Lead on liaison with RK1</td>
<td>JISC until 31 March 2013</td>
</tr>
<tr>
<td></td>
<td>OA and RDM policy development</td>
<td>Library until July 2013</td>
</tr>
<tr>
<td></td>
<td>Advising on DMPs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assisting with queries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Policy review and updating</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Advise on ethics and legal issues</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Advise on licensing for papers and data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lead on advocacy planning and delivery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communications and marketing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lead on use of social media and general dissemination</td>
<td></td>
</tr>
</tbody>
</table>
| Cultivation of good relationships with internal and external stakeholders
| Development and delivery of training |
|---|---|

### Data Curation Officer
- Dealing with research data queries
- Support for repository
- Development of content for RDM web site
- Updating and maintenance of above
- Development and delivery of training
- Development of online training materials
- Advising on DMPs
- Advising researchers on selection of data for upload
- Assisting researchers with upload of data to ORE

<table>
<thead>
<tr>
<th>Administrator</th>
</tr>
</thead>
</table>
- General administration
- Organisation of training activities
- Communications
- Assists Data Curation Officer
- Records and analyses repository statistics.
- Events development and co-ordination (e.g., Open Access Week)
- Answering and logging Open Access queries
- Checking and filing forms
- Entering information in JISC APC (OAK)
- Internal liaison: AS Purchasing & Research Accounting
- External liaison: funders, publishers, service providers
- Updating and maintaining information systems
- Monitoring expenditure
- Mailing list maintenance
- Web site content development and maintenance
- Ensure paid OA papers are deposited in ORE
- Co-ordinating feedback

**Table 8: Open Access and Data Curation staff @ 18 June 2013.**
### 8.6 Appendix VI

External Events attended by the Open Exeter team

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Papers/Posters/Demos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Preservation Training Programme</td>
<td>2-3rd October 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>JISC Collections Conference</td>
<td>20th November 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>DataCite Workshop: Managing and Citing Sensitive Data</td>
<td>29th October 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>JISC MRD Programme meeting</td>
<td>1-2nd December 2011</td>
<td></td>
</tr>
<tr>
<td>JISC MRD Programme meeting</td>
<td>24-25th October 2012</td>
<td>Presentation: RDM Training and Guidance at the University of Exeter[^63] Poster: Open Exeter: Working Together for a Sustainable Service[^64]</td>
</tr>
<tr>
<td>JISC MRD programme meeting</td>
<td>25-26th March 2013</td>
<td>Paper: The Benefits and Challenges of Working with PGRs[^65] Poster: Open Exeter: Key Outputs and Sustainability Plans[^66]</td>
</tr>
<tr>
<td>DataCite Workshop: An Introduction to Data Citation and DataCite</td>
<td>25th May 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>DataCite Workshop: Describe, disseminate, discover: metadata for effective citation</td>
<td>6th July 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>DataCite Workshop: What to Cite: Versioning and Granularity of Research Data for Effective Citation</td>
<td>3rd December 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>DataCite Workshop: Making citation work: practical issues for institutions</td>
<td>8th March 2013</td>
<td>Paper: Engaging with Researchers at the University of Exeter[^67]</td>
</tr>
<tr>
<td>DARTS 3</td>
<td>29th June 2012</td>
<td>Creating and Maintaining a Sustainable Research Data Management Service: Where Do Librarians Fit?[^68]</td>
</tr>
<tr>
<td>IDCC 2011</td>
<td>5-7th December 2011</td>
<td>N/A</td>
</tr>
</tbody>
</table>

[^63]: http://hdl.handle.net/10871/11783  
[^64]: http://hdl.handle.net/10871/11784  
[^65]: http://hdl.handle.net/10871/8185  
[^66]: http://hdl.handle.net/10871/8184  
[^67]: http://hdl.handle.net/10871/11782  
[^68]: http://hdl.handle.net/10036/3647
<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDCC 2013</td>
<td>14-17th January 2013</td>
<td>Workshop: Designing Data Management Training Resources&lt;sup&gt;69&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poster: Encouraging junior researchers to value and share data management skills&lt;sup&gt;70&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Demo: Managing Research Data: Submitting BIG data to a DSpace repository&lt;sup&gt;71&lt;/sup&gt;</td>
</tr>
<tr>
<td>JISC MRD Hack Day, Manchester</td>
<td>3-4th May 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>Open Repositories 2012</td>
<td>10th July 2012</td>
<td>Paper: Postgraduate Research Data: a New Type of Challenge for Repositories?&lt;sup&gt;72&lt;/sup&gt;</td>
</tr>
<tr>
<td>RSP Scholarly Communications: New developments in Open Access</td>
<td>1st June 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>Preservation and research data for History researchers at the University of London.</td>
<td>14th March 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>Launch workshop for DataFlow and VIDaaS</td>
<td>2nd March 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>JISC/DCC workshop on institutional research data policies</td>
<td>12-13th March 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>JISC MRD regional meetings</td>
<td>Various</td>
<td>N/A</td>
</tr>
<tr>
<td>Open Repositories 2013</td>
<td>8-12th July 2013</td>
<td>Facilitating re-use of PhD research data <a href="http://hdl.handle.net/10871/11841">http://hdl.handle.net/10871/11841</a></td>
</tr>
<tr>
<td>DCC Roadshow in Cambridge</td>
<td>11th November 2011</td>
<td>N/A</td>
</tr>
<tr>
<td>DCC Roadshow in Loughborough</td>
<td>7-8th February 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>Mendeley Advisors meeting day</td>
<td>21st September 2012</td>
<td>N/A</td>
</tr>
<tr>
<td>RDMF 9: Shaping the Infrastructure</td>
<td>14-15th November 2012</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<sup>69</sup> [http://hdl.handle.net/10036/4233](http://hdl.handle.net/10036/4233)
<sup>70</sup> [http://hdl.handle.net/10036/4076](http://hdl.handle.net/10036/4076)
<sup>71</sup> [http://hdl.handle.net/10036/4075](http://hdl.handle.net/10036/4075)
<sup>72</sup> [http://hdl.handle.net/10036/3671](http://hdl.handle.net/10036/3671)
8.7 Appendix VII

Open Exeter Project
External Final Evaluation Report

<table>
<thead>
<tr>
<th>Author</th>
<th>Debra Hiom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>21 January 1512 June 2013</td>
</tr>
<tr>
<td>Version</td>
<td>1.0</td>
</tr>
<tr>
<td>Notes</td>
<td>Final Version</td>
</tr>
<tr>
<td>IPR</td>
<td>Copyright © 2015 University of Bristol.</td>
</tr>
</tbody>
</table>
Executive Summary

Open Exeter was an 18-month JISC funded project to aid further development of a research data management infrastructure within the University of Exeter. This external summative evaluation reviews the project against its original aims and objectives and identifies areas of good practice and transferable learning.

Overall the project has met and in some cases exceeded its original project objectives. Where unforeseen difficulties with the plan have arisen the team have worked hard to look for alternative solutions and/or adapted the project timescales to incorporate the changes to the plan.

1.1 Core achievements

Good communication and collaboration emerged clearly as a positive output in the self-reflection of the project team members. This was also evidenced in many of the project outputs and outcomes e.g. the strong advocacy and promotion work which resulted in such a good return rate to the Data Asset Framework (DAF) survey and the cross institutional collaboration and consultation processes involved in creating the two policies on Research Data Management (RDM) and Open Access (OA).

The Open Exeter project team employed a number of innovative approaches to their work which could usefully act as guides for similar projects in other institutions. For example they established formal working relationships with post-graduate research (PGR) students to help deepen understanding about how this group of researchers use and handle data. This included a seven-month weekly audit to track their use of data and any associated issues arising from that use. Outcomes of this work included the creation of a PGR specific data management policy which mandates the deposit of selected PGR research data from 1 October 2013. Such a policy appears to be unique to Exeter and it will be interesting to see if/how other institutions tackle this area in future.

The project team have maximised the impact of their training activities by integrating these with on-going programmes and activities and repurposing existing materials where appropriate. Their adaption of the 23 Things online list of activities73 into the Holistic Librarian as a “train-the-trainer” was a useful way to simultaneously engage and up-skill the University’s professional library staff in research data management issues.

The technical team have implemented an innovative solution to submitting large datasets to the online repository using Globus Online which has already attracted a lot of interest from other academic institutions.

The dissemination and promotional activities carried out during the project lifespan are impressive and the team have worked hard to disseminate the project both internally and externally through a variety of methods and outlets. They have made good use of social media channels and have over 320 individuals following the project through Twitter.

1.2 Lessons learnt

Open Access is a much broader and faster moving issue than research data management. The aspiration to have both in a single policy document increased the complexity of the document

73 23 Things http://plcmcl2-things.blogspot.co.uk/
and has prolonged the ratification of the main RDM and OA Policy for the University. For example the Government’s acceptance of the Finch Report recommendations\(^7\) and the corresponding announcement from RCUK\(^7\) required further consultation and adaptation of the policy document. The institutional mandate on repository deposit was approved by Senate on 21st March 2013; this supports the principles of Open Access and mandates the creation of Data Management Plans for all research proposals. There will be a need to provide on-going leadership and co-ordination of these issues.

The technical development work turned out to be more complex than originally anticipated and although a good solution is now in place the delay in getting this established did have a negative impact on publicising the repository as a place to deposit research data. A full scale deposit campaign has yet to be launched although the contracts for the Advocacy and Governance Officer and Data Curation Officer have been extended until July 2013 which will allow for this work to get underway.

Some preliminary work on sustainability issues has been carried out by the project team and a request for post-project funding is currently being considered by the University which will be essential to ensure that the good work achieved during the project phase is not lost. However sustainability issues are a major challenge for all of the projects in the JISC Managing Research Data Programme and more work is required across UK HE on how these costs might be covered and possibly shared with other institutions.

---

\(^7\) Government to open up publicly funded research https://www.gov.uk/government/news/government-to-open-up-publicly-funded-research

\(^7\) RCUK announces new Open Access Policy http://www.rcuk.ac.uk/media/news/2012news/Pages/120716.aspx
Introduction

Open Exeter was an 18 month project funded by JISC under Strand A of the Managing Research Data 2011-13 Programme. The objectives of this strand of the JISC programme were:

1) to encourage and facilitate the development of pilot research data management infrastructures, including supporting policies and procedures, in universities that are at a very early stage of development in this area and do not have an existing pilot in place;

2) to encourage and enable universities which have already started developing a research data management infrastructure to extend existing pilots and develop a robust structure of supporting policies and guidance.

Exeter was situated in category two of the programme as they already had an existing pilot biosciences data collection (Exeter Data Archive) based on a DSpace repository. One of the objectives of the Open Exeter project was to extend this repository to provide a multi-disciplinary service.

The purpose of this external evaluation was to:

- Review the project against its original objectives in relation to how the actual work was carried out
- Look at the effectiveness of project activity with regard to dissemination and networking
- Identify areas of good practice and transferable learning

This summative evaluation used a number of documentary sources as well as drawing on some interviews and self-reflection from a number of the project team members (see Appendix 1 for a full list of sources used).

1.3 Project Context

Exeter is a research intensive university and a member of the Russell Group. The University has 18,000 students (1,418 of which are classed as postgraduate researchers (PGRs) and 1,799 staff (1,088 of which are classed as research active). There are six academic colleges within the University: Humanities, Social Sciences and International Studies, Life and Environmental Sciences, the Business School, Engineering, Mathematics & Physical Sciences and the Exeter Medical School. In addition there are nine professional services: Academic Services, Communication and Marketing, Campus Services, Development and Alumni Relations, Finance, Human Resources, International, Research and Knowledge Transfer and Strategic Planning and Change. The project sought to work across all of the academic colleges and many of the professional services.

2 Original Aims and Objectives

This section has been split in accordance with the work-packages as set out in the project plan, for a complete list of the original aims and objectives with brief comments please see Appendix 2.
2.1 Project Management

Objective
To ensure the smooth running of the project, that outputs are delivered within stated deadlines and the project achieves its objectives.

Main Work Undertaken
A robust structure was set in place at the start of the project including a Project Management Group (made up of the extended project team) to cover operational issues and a wider Steering Group with some external members to govern the overall direction of the project. Staff were deployed to the project through a mix of secondment and recruitment over the first 6 months and despite the team being split across three different professional services within the University they have demonstrated themselves as a strong group who worked well together. In addition to the monthly PMG meetings and quarterly Steering Group meetings the project manager has submitted monthly progress updates to the JISC Programme Manager and co-ordinated the project communication internally and externally. An online project management tool (JIRA) was set up to facilitate sharing of information and tasks across the team.

Outputs and Outcomes
The project has generally followed the planned programme of tasks and activities and is on course to deliver the most of the objectives set out in the project plan as well as additional outputs not initially predicted. Where unforeseen difficulties with the plan have arisen the team have worked hard to look for alternative solutions and/or adapted the project timescales to incorporate the changes. Good communication and collaborative relationships within and outside of the project were viewed as a positive outcome by the project team. The project team also felt they had personally gained useful skills and knowledge during the life of the project.

2.2 Follow the Data

Objective
To gain an understanding of how current postgraduate students and early career researchers use and handle data by monitoring their day to day interactions with data over an extended period.

Main Work Undertaken
This strand of work entitled Follow the Data: the Human Factor involved the project team working closely with a number of post graduate researchers in order to understand the issues they faced with managing their research data on a day-to-day basis as well as identify training needs and helping with the creation of training materials. The original intention within the plan was to work with four post graduate researchers (PGRs) but the recruitment exercise resulted in over 70 applications for the roles. From this the project team undertook 20 interviews and chose six researchers to work with across the 12 month period. The PGRs represented a good spread of disciplines within the University:

- Engineering
- Business
- Law
- Film Studies

---

76 Library, Exeter IT and Research and Knowledge Transfer
Archaeology

Sport and Health Sciences

The Project’s Data Curation Officer was responsible for organising workshops and regular meetings (group and one-to-ones) with the PGRs, as well as for coordinating the research data management audit that the students completed on a weekly basis.

An initial workshop with the PGRs uncovered a number of issues that have been reported amongst other projects looking at research data management issues namely: terminology and definitions of research data (these tend to vary according to discipline), naming and versioning of files, managing sources and creating bibliographic data, etc. One of the other common issues that arose (but less anticipated in relation to PGRs) was around archiving of research data once the PGR had completed their research and left the institution. The discussions on the lack of clarity and infrastructure to support this type of data fed directly into a separate PGR Data Management Policy (see Section 3.6 for more information on this).

The results and reflections from the seven month audit have been well captured by the project team. In addition the PGRs provided their own reflections on what they had learnt through end of project posts on the Open Exeter blog.

Outputs and Outcomes

This workpackage used an innovative approach to working closely with students, resulting in new insights that directly fed into a change in policy for storing and archiving PGR data. The evidence points to some very positive outcomes from this strand of work, including:

- Increase in PGRs awareness, knowledge and confidence of data management issues
- Indications of changes of individual PGR practice over the lifetime of the audit (7 month period)
- Anecdotal evidence of PGRs sharing knowledge with peers
- Advice to the Open Exeter project team on issues to highlight in training materials and guidance sessions
- Opportunities for the PGRs to increase their presentational and organisational skills through their involvement in information fairs and other college events
- Collaboration to help produce the Research Data Survival Guide
- Creation of data management case studies e.g. Issues Involved in Working with Human Subjects to Capture and Document Emotional Responses; electronic lab books
- Reviews of research tools and gadgets on the project blog

One of the unexpected outcomes from this strand of work is the value and benefits the PGRs gained from meeting peers from other disciplines to share research data management issues.

---

77 Report on the PGR Audit (draft)
78 http://blogs.exeter.ac.uk/openexeterrdm/
79 Research Data Survival Guide http://hdl.handle.net/10036/3738
80 https://ore.exeter.ac.uk/repository/handle/10036/3555
81 http://blogs.exeter.ac.uk/openexeterrdm/blog/2013/01/21/follow-the-data-end-of-project-feedback-from-annie-blanchette/
2.3 Data Asset Framework Implementation

Objective
To establish a clear and comprehensive understanding of current research data management practice by conducting a University-wide data asset audit using the DAF (Data Asset Framework).

Main Work Undertaken
The Data Asset Framework is a set of methods created for Higher Education Institutions to:

- Find out what data assets are being created and held within institutions;
- Explore how those data are stored, managed, shared and reused;
- Identify any risks e.g. misuse, data loss or irretrievability;
- Learn about researchers' attitudes towards data creation and sharing;
- Suggest ways to improve on-going data management.

As with many institutions, the Open Exeter team chose not to focus on auditing specific data assets but rather to use the survey to get an overall idea about the type and amount of data that is being created and stored within the University. The survey was piloted with the PGR recruits and subsequently promoted to researchers at all levels, attracting 284 replies, which equates to just over a 10% response rate amongst research active staff and students. This compares very favourably to response rates from similar previous surveys carried out at other institutions. The promotional and advocacy work included meeting with senior members of professional services staff and the 6 academic Colleges to get their buy-in to the survey and the wider project. These contacts also acted as a conduit for the actual emails promoting the survey, this ensured that the email was being sent by someone known to the researcher and as such more likely to be read. The team used other contacts to help with promotion e.g. subject librarians, PGR students and those interviewed as part of the Open Exeter project. Various promotional techniques were employed such as postcards, posters, information on library and departmental plasma screens, announcements through newsletters, project blog, twitter etc.

Outputs and Outcomes
As noted above the survey received a good response rate (across all of the six academic colleges) due in no small part to the significant amount of promotional and advocacy work of the team prior to, and during the survey run. A case study published by the project team on the advocacy work usefully documents the activities they undertook to ensure that participation rates were as high as possible. The survey showed a diverse environment and that data is stored in many different places. This led directly to the need for the technical solution to fit in with these workflows. It also captured a useful snapshot of current research data management practices and highlighted a number of issues that fed directly into the development of training materials and workshops. In particular it highlighted that a number of researchers have experienced data loss during the course of their research which can be usefully used to emphasise the importance of research data management within the institution. The number of accesses to the survey’s

---

82 http://www.dcc.ac.uk/resources/repository-audit-and-assessment/data-asset-framework
84 Based on 1,088 research active staff http://www.exeter.ac.uk/about/facts/staffnumbers/ and 1,418 postgraduate researchers http://www.exeter.ac.uk/about/facts/plannedstudentnumbers/
85 Targeted Advocacy to Encourage Engagement with the Data Asset Framework Survey: a Case Study http://hdl.handle.net/10036/3754
summary of findings document on Exeter’s repository demonstrates the wider interest that the work has generated in the RDM community\textsuperscript{86}.

2.4 Technical Development

Objectives
To enhance and improve the current EDA DSpace repository in response to feedback received during testing and known performance issues.

To ensure that Open Exeter technical development takes account of interoperability issues, for example, consistency with other University of Exeter (UoE) DSpace repositories and the Symplectic to ERIC Repository Tools Feature.

Main Work Undertaken
Exeter had four existing implementations of DSpace: ERIC (full text publications and theses); Digital Collections Online (images and multimedia); Open Exeter Repository of Open Educational Resources (owned by Education Enhancement) and EDA (research data). ERIC, DCO and EDA have been merged to become the Open Research Exeter repository. As part of this work the DSpace software installations were updated to the latest version (1.8.2), the technical team also took this opportunity to move from Postgres to an Oracle database backend as this is more widely supported within the University.

The University has a one petabyte (raw size) ATMOS\textsuperscript{87} storage facility and this is being used as the asset store for research data deposited to the DSpace ORE repository software.

Work on the technical development quickly highlighted some issues with uploading large data files through the DSpace repository interface as HTTP has problems transferring files over 2GB in size. It was clear from the DAF survey results that researchers have fairly sizable research holdings so the technical team worked hard on developing a solution to this restriction.

They have developed a submission tool, replacing the standard DSpace one, that makes use of the JISC funded SWORD protocol and the Globus Online\textsuperscript{88} facility to asynchronously transfer data files using the grid ftp protocol. The submission tool enables researchers to make a deposit by entering metadata and then selecting multiple files and directories for uploading. The tool then automatically uploads the data asynchronously using a simple Globus Online Grid ftp client. A key point is that the researcher no longer has to keep his browser open to complete the transfer which for very large data transfers could be days. The Globus Online client handles the data transfer in the background, surviving even a laptop shutdown or restart. The researcher is informed by email when the submission is completed as an entry into the ORE repository. Another key feature of the submission tool is that any directory selected for deposit is automatically zipped (at the destination) and presented as one item in the repository.

There is an on-going requirement for better support for live data, which was outside the scope of the Open Exeter Project.

\textsuperscript{86} The report received 444 views in the 2 weeks following its release on 8\textsuperscript{th} August 2012
\textsuperscript{87} EMC ATMOS http://uk.emc.com/storage/atmos/atmos.htm
\textsuperscript{88} Globus Online http://www.globusonline.org/
Outputs and Outcomes
This workpackage did not run strictly to the original work plan and timescales partly due to the complex nature of the problem of securely uploading large datasets and partly because of constraints imposed by needing to integrate with existing platforms. For example, the use of the University’s research publications management system (Symplectic) for holding data was investigated but deemed not to be feasible. This has meant that the team have not yet been able to fully instigate a campaign to encourage researchers to deposit their research data. However despite these difficulties the technical team managed to put a number of innovative solutions in place within the lifetime of the project. Highlights from this work included:

- A SWORD-based deposit tool for submitting multiple files to repository
- Use of Globus Online for transferring large datasets to ATMOS storage facility (a paper given at IDCC13 on this attracted a lot of interest from the wider academic community)
- SSO integration with DSpace
- Establishment of better working relationships and understanding between IT and the Library
- Creation of case studies to investigate issues of transferring data
- Launch of the merged Open Research Exeter repository for papers, theses and research data which links together papers and their underlying data

2.5 Training/Guidance

Objectives
To plan, implement and deliver a full range of training and support required by researchers so that they can consistently and easily manage their data according to the standards of good practice.

Main Work Undertaken
The project team have taken a number of different approaches to the training and support of researchers, to ensure that they were achieving maximum impact. This included working with existing providers, for example the project hosted two research data management training sessions from the Digital Curation Centre (DCC) to help the development of Exeter specific materials. The team also worked with the UK Data Archive (UKDA) to repurpose their guidance on research data management for social scientists. UKDA also ran a webinar on “planning to share”89 research data as part of Open Access week at Exeter.

Feedback from the DAF survey indicated that training in data management plans (DMPs) and Open Access/repositories were the two main areas of interest for researchers. In response to this the team runs sessions on writing data management plans as well as offering one-to-one support for researchers writing data management plans for their funding proposals (see section 3.7 for more details on this work). They responded to the latter request through a series of talks

89 http://hdl.handle.net/10036/3929
during Open Access Week, as well as producing supporting documentation, FAQs and short videos of local academics talking about the benefits of Open Access.\(^{90}\)

The team also adapted the 23 Things online programme\(^{91}\) into *The Holistic Librarian* which was a novel approach to simultaneously engage and train professional library staff in research data management issues. The question topics and were distributed amongst the subject librarians who were tasked with sharing the findings and knowledge they gained through short posts on the Open Exeter blog. Getting the staff to research short discrete topics and share the outcomes is a really effective way of building capacity and increasing confidence in their ability to support researcher’s data management queries. This is currently in the process of being repackaged for reuse amongst other institutions.

There are a number of existing library and RKT support documents where details of RDM and the associated support mechanisms have been added. A one-stop-shop website has been developed to provide access to all of the RDM specific training and support materials for Exeter researchers. This site will also be able to be accessed from within the RKT’s Research Toolkit.

**Outputs and Outcomes**

The work undertaken in this work package was multi-faceted, encompassing a number of different audiences, mediums and methods to help accomplish the overall objective. Particular highlights included:

- Regular on-going training slots on the University’s Researcher Development Programme, Doctoral Supervision Workshop (ensuring both supervisors and supervisees benefit from the training) and the Postgraduate Certificate in Academic Practice (PCAP)
- Research data management training for researchers and peer reviewers planned as well as more general training for research support staff. Implementation will be dependent on human resources available
- Inclusion of materials in PGR handbooks and slots in PGR induction sessions
- Up-skilling of librarians to help support researchers through the *Holistic Librarian (23 Things)* initiative
- Research data management survival guide written in collaboration with the *Follow the Data* PGRs
- Adapted UK Data Archive data management course for social sciences
- Supported over 30 individual researchers in the creation and submission of Data Management Plans (ongoing)

### 2.6 Policy Development

**Objectives**

To work within existing committee structures to ensure the new RDM and OA policy and guidance is ratified, taken up and established at an institutional level.

**Main Work Undertaken**

An Open Access and Research Data Management Task and Finish Group\(^{92}\) was set up in March 2012 to develop and ratify an institutional policy on Open Access and Research Data Management. The group had academic representation from each of the six Colleges in the form

---

90 Open Access at Exeter [http://as.exeter.ac.uk/library/resources/openaccess/](http://as.exeter.ac.uk/library/resources/openaccess/)
91 [23 Things](http://plcmcl2-things.blogspot.co.uk/)
92 [http://as.exeter.ac.uk/library/resources/openaccess/openexeter/exeterembeds/policydevelopment/](http://as.exeter.ac.uk/library/resources/openaccess/openexeter/exeterembeds/policydevelopment/)
of Directors of Research as well as appropriate professional services staff from across the University.

Following feedback from the DAF survey and interviews with PGRs the group decided that a specific policy aimed at PGR students was also needed to ensure research papers and data were not lost once students had left the University. The PGR policy and supporting guidance was approved by the Board of the Faculty of Graduate Research in January 2013 and compliance for all PGR students is expected from 1st October 2013.93

Work on the main OA and RDM policy for University of Exeter researchers was slightly delayed due to changes in the wider Open Access landscape, for example the Government’s acceptance of the Finch Report recommendations94 and the corresponding announcement from RCUK95. The institutional mandate on repository deposit was approved by Senate on 21st March 2013. The policy supports the principles of Open Access and mandates the creation of Data Management Plans for all research proposals.96 There is also supporting guidance to back up the policy.

Outputs and Outcomes
The policy work has been completed and was only held up by developments in the wider OA landscape which extended the time and work needed to consult with appropriate parties within the University.

- Open Access Research and Research Data Management Policy for PGR Students ratified and partially implemented (full compliance due from 1st Oct 2013)
- University wide Open Access Research and Research Data Management Policy ratified.
- Creation of EPSRC Roadmap97 for the management and provision of access to EPSRC-funded research data.
- Consultation process incorporating feedback from wide group of interested parties including Students Guild, Information Security representative, Records Management, Colleges/Departments as well as individual researchers and PGRs.
- Worked with University Records Manager and member of IT Governance and Compliance to ensure integration and consistency of related policy
- Exeter appears to be the first UK Higher Education Institution that has successfully developed and approved an RDM policy aimed solely at PGRs.
- Worked with the Marine Renewable Energy Group98 to develop a research group level policy for managing data (Centre for Cognitive Control and Associative Learning, the

93 Open Access Research and Research Data Management Policy for PGR Students http://hdl.handle.net/10036/4279
94 Government to open up publicly funded research https://www.gov.uk/government/news/government-to-open-up-publicly-funded-research
95 RCUK announces new Open Access Policy http://www.rcuk.ac.uk/media/news/2012news/Pages/120716.aspx
96 Open Access Research and Research Data Management Policy: http://hdl.handle.net/10036/4280
97 http://hdl.handle.net/10036/4377
Mood Disorders centre and Clinical Education Development and Research (CEDAR) are also developing group-level RDM guidelines.

2.7 Advocacy

Objectives
To ensure take up and embedding of project outputs through an on-going programme of advocacy, awareness raising and dissemination.

Main Work Undertaken
The advocacy work was very broad and covered the whole project lifespan. A crucial start of the work was to ensure the project had a high level champion (in the form of the Deputy Vice Chancellor for Research Knowledge and Transfer) and representation from key stakeholders across the University and beyond in the project Steering Group.

The project team organised meetings early on with a number of key academic and non-academic contacts in each of the colleges, including: Associate Deans for Research and Knowledge Transfer (responsible for all research related activity within their College), Assistant College Managers for Research (responsible for the administration of research within their College) and Departmental Directors of Research (departmental academics with teaching and research commitments who also have responsibility for their department’s research). In addition the team worked with Library Liaison Officers, these are generally academics and act as a point of contact between the Library and relevant department. There were also regular meetings between the Research and Knowledge Transfer team and project staff, and between project staff and Subject Librarians.

Advocacy work on depositing data has been delayed slightly as the technical solutions for depositing large data files took longer than anticipated. However the contracts for the Advocacy and Governance Officer and Data Curation Officer have been extended for a further 4 months through internal library funding which will allow this work to get underway. The team have also identified a number of high-profile academics who are keen to deposit their data into the repository.

Outputs and Outcomes
The project team worked through established and recognised College channels to ensure that the impact of their advocacy work was maximised. In particular:

- Preliminary advocacy and promotional work with departments can reasonably be attributed to high response to DAF survey
- Open Access Week activities used to help raise the profile of the project (although there was some disappointment in the team at the attendance levels)
- Brought together expertise from across the University through formal and informal channels
2.8 Sustainability

Objectives
To produce a business case for long-term sustainability of Open Exeter outputs including costing models, roles and responsibilities, maintenance and development.

Main Work Undertaken
In relation to post project sustainability, some initial work has been carried out on a cost recovery model and a request for post-project funding has been submitted to the University to fund two posts to create a Research Enhancement team, two posts within IT and budget to cover the Globus software licence and handle registration costs (a decision is expected by the end of April 2013).

Outputs and Outcomes
Sustainability issues are a major challenge for all of the projects in the MRD strand, especially in the formulation of cost estimations for on-going service delivery and how these costs might be recovered within the institution, for example by top slicing from indirect grant funding costs and/or charging on a project by project basis.

- Work on key benefits for individual researchers and the wider institution and draft metrics
- Continuation funding requested to maintain support activities (awaiting decision)
- The ratified OA and RDM policy effectively commits the University to provide on-going training, support and technical infrastructure for digital research data and Open Access papers

2.9 Evaluation

Objectives
To measure the success of the project and ensure that the outputs/outcomes are of a consistently high quality.

Main Work Undertaken
As part of the JISC MRD Programme work projects were asked to identify key benefits that the projects were likely to produce as a result of their work. The project team identified the following benefits:

- Greater understanding of funding bodies' policies
- Better compliance with funder policy
- Improved quality of DMPs
- Improved RDM skills in researchers and PGRs
- Support staff have the ability to deal with RDM queries

99 http://www.dcc.ac.uk/blog/sweet-smell-sustainability-jisc-mrd-projects-make-business-case
• Greater visibility and reuse of Exeter research data
• Application of institutional RDM & OA policy to research groups
• Better understanding and use of metadata and documentation

There are a number of draft metrics attached to each of the above benefits to allow the project team to monitor progress during and after the life of the project, however many of these will need time to embed before they can be monitored effectively.

Feedback from all the training events was collected, analysed and brief evaluative comments for each event were created to identify what was successful and what was less successful to help inform the planning of subsequent events.

**Outputs and Outcomes**
Formative evaluation was carried out by the project team during the life of the project.

2.10 Dissemination

**Objectives**
To ensure project outputs are made known to as wide an audience as possible.

**Main Work Undertaken**
A great deal of dissemination work has taken place during the life of the Open Exeter Project. This has ranged from presentations and meetings with key internal stakeholders, to conference papers and workshops at national and international conferences. As part of the dissemination and promotion work the team introduced the concept of “speed data dating” to allow researchers to meet and share common problems and issues, and this was demonstrated at the International Digital Curation Conference in Amsterdam.100

The project team have attended and contributed to the JISC MRD programme events and wider related meetings such as the BL DataCite and DCC workshops.

**Outputs and Outcomes**
The team have excelled in their dissemination of the project both internally and externally through a mix of publications, conference papers, seminars and workshops as well as through judicious use of social media tools. Some highlights include:

- Organised and participated in over 30 internal and external events promoting research data management and/or Open Access e.g. DARTS3 Conference (June 2012); departmental staff meetings
- Increased the profile of the project and data management through Open Access Week at Exeter (October 2012) and events such as Discuss, Debate, Disseminate in June 2012
- Have made good use of social media channels to engage local and wider groups, with over 320 followers on Twitter
- Paper presented at OR2012 and a second accepted for presentation at OR2013.

• The DAF Summary of Findings report generated a lot of interest both within Exeter and from the wider RDM community (report was the most frequently downloaded item in the institutional repository for Aug/Sept 2012)

• Concept of speed data dating has been picked up by other projects/countries.

3 Conclusions

The Open Exeter Project has successfully achieved the majority of its original aims and objectives and these have been exceeded in some areas. The project’s particular strengths lay in the advocacy and dissemination work that has been carried out. Internally this has encompassed all of the six academic colleges and the relevant Professional Services with significant collaboration across the Library, IT and Research and Knowledge Transfer. Externally the project has engaged widely with the other UK HE institutions involved in the JISC Managing Research Data Programme as well as in national and international fora.

Whilst Research Data Management and Open Access are closely connected issues, their inclusion into a single document did result in a delay in getting the policy ratified by Senate. However the project is now in a good position to move forward with an integrated repository and technical solution in place for ingesting large datasets. The sustainability of the project outputs is waiting on a formal decision for post-project funding. This will be essential to ensure that there is on-going co-ordination of data management and Open Access issues. Given the relative newness of research data management services within institutions the whole area of sustainability requires greater investment in time as well as resources but this is true across all UK HEIs and is an area that JISC could usefully continue to support.
## 4 Appendices

**Appendix 1 – Sources of Information for Evaluation**

### Primary Data

<table>
<thead>
<tr>
<th>Data</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting with core project team (February 2013)</td>
<td>Notes</td>
</tr>
<tr>
<td>Self-reflection questionnaire to whole project team (February/March 2013)</td>
<td>Online survey</td>
</tr>
<tr>
<td>Correspondence with Project Manager</td>
<td>Emails</td>
</tr>
</tbody>
</table>

### Secondary Data

<table>
<thead>
<tr>
<th>Data</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project plan and workpackages</td>
<td><a href="http://hdl.handle.net/10036/3366">http://hdl.handle.net/10036/3366</a></td>
</tr>
<tr>
<td>Monthly Progress reports to JISC</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Minutes from Project Management Group meetings</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Minutes from Steering Group meetings</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Open Exeter Project blog</td>
<td><a href="http://blogs.exeter.ac.uk/openexeterrdm/">http://blogs.exeter.ac.uk/openexeterrdm/</a></td>
</tr>
<tr>
<td>Register of DMP support with University of Exeter</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Summary Findings of the Data Asset Framework Survey</td>
<td><a href="http://hdl.handle.net/10036/3689">http://hdl.handle.net/10036/3689</a></td>
</tr>
<tr>
<td>Targeted Advocacy to Encourage Engagement with the Data Asset Framework Survey: a Case Study</td>
<td><a href="http://hdl.handle.net/10036/3754">http://hdl.handle.net/10036/3754</a></td>
</tr>
<tr>
<td>Posters used to raise awareness of the DAF findings</td>
<td><a href="http://hdl.handle.net/10036/3843">http://hdl.handle.net/10036/3843</a></td>
</tr>
<tr>
<td>My Journey into Research....Beginnings: Issues Involved in Working with Human Subjects to Capture and Document Emotional</td>
<td><a href="http://hdl.handle.net/10036/3697">http://hdl.handle.net/10036/3697</a></td>
</tr>
<tr>
<td>Responses</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Report on the PGR Audit (Draft)</td>
<td>Data Curation Officer</td>
</tr>
<tr>
<td>DSpace Submission Tool Development Update</td>
<td></td>
</tr>
<tr>
<td>Open Exeter Projects and Benefits</td>
<td><a href="http://hdl.handle.net/10036/4052">http://hdl.handle.net/10036/4052</a></td>
</tr>
<tr>
<td>Training Activities Table</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Collated dissemination feedback</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Open Exeter OA week report (draft)</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Google Analytics data for Open Exeter Facebook referrals</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Open Access Research and Research Data Management Policy for PGR Students</td>
<td><a href="http://hdl.handle.net/10036/4279">http://hdl.handle.net/10036/4279</a></td>
</tr>
<tr>
<td>Outline of Communications Plan for PGR Open Access Research and Research Data Management Policy</td>
<td><a href="http://hdl.handle.net/10036/4217">http://hdl.handle.net/10036/4217</a></td>
</tr>
<tr>
<td>Terms of Reference Open Access and Research Data Management Policy Task and Finish Group</td>
<td><a href="http://as.exeter.ac.uk/library/resources/openaccess/openexeter/exeterembeds/policydevelopment">http://as.exeter.ac.uk/library/resources/openaccess/openexeter/exeterembeds/policydevelopment</a></td>
</tr>
<tr>
<td>Open Access Research and Research Data Management Policy (Draft)</td>
<td><a href="http://hdl.handle.net/10036/4280">http://hdl.handle.net/10036/4280</a></td>
</tr>
<tr>
<td>Guidance for the Open Access Research and Research Data Management Policy</td>
<td><a href="http://hdl.handle.net/10036/4216">http://hdl.handle.net/10036/4216</a></td>
</tr>
<tr>
<td>The University of Exeter’s Roadmap for EPSRC’s Research Data Management Expectations</td>
<td><a href="http://hdl.handle.net/10036/4377">http://hdl.handle.net/10036/4377</a></td>
</tr>
<tr>
<td>Open Exeter Training materials</td>
<td><a href="https://eric.exeter.ac.uk/repository/handle/10036/3737">https://eric.exeter.ac.uk/repository/handle/10036/3737</a></td>
</tr>
<tr>
<td>Open Exeter Promotional materials</td>
<td><a href="https://eric.exeter.ac.uk/repository/handle/10036/3558">https://eric.exeter.ac.uk/repository/handle/10036/3558</a></td>
</tr>
<tr>
<td>Open Exeter Conference papers and presentations</td>
<td><a href="https://eric.exeter.ac.uk/repository/handle/10036/3646">https://eric.exeter.ac.uk/repository/handle/10036/3646</a></td>
</tr>
</tbody>
</table>
Appendix 2 - Questions for Staff Self Reflection

A self-reflection questionnaire was sent to nine members of the project team and seven responses were completed, these provided a useful overall picture of the project as well as specific insights into particular areas.

Questions

What worked well?

What didn’t work so well?

What could have been done differently/what lessons have been learnt?

Have there been any unexpected outcomes from the project?

What do you think have been the main impacts of the project on:

- Individual researchers
- Professional support staff
- The University
- The wider community

What did you personally gain from being involved in the project? (E.g. new skills, insights, contacts, etc.)

What do you think are the implications for the longer term sustainability of the project outputs?

What further work would be useful in the future?

Are there any other reflections or comments you would like to make?

Name:

Email address:

Role in project:
## Appendix 3 - Original Project Objectives

<table>
<thead>
<tr>
<th>No</th>
<th>Project Objective</th>
<th>Brief Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>To establish a clear and comprehensive understanding of current research data management (RDM) practice by conducting a University-wide data asset audit using the Data Asset Framework (DAF).</td>
<td>This has largely been achieved although issues will continue to emerge as knowledge of RDM begins to embed within the institution.</td>
</tr>
<tr>
<td>2</td>
<td>To gain an understanding of how current postgraduate students and early career researchers use and handle data by monitoring their day-to-day interactions with data over an extended period.</td>
<td>Again this has been achieved but will need to be monitored.</td>
</tr>
<tr>
<td>3</td>
<td>Using knowledge and experience gained from the above two investigations to plan, implement and deliver the full range of support required by researchers so that they can consistently and easily manage their data according to established standards of good practice.</td>
<td>A full training and support plan in place for researchers.</td>
</tr>
<tr>
<td>4</td>
<td>To work continuously to develop and maintain the key relationships and support required to gain acceptance for the wide scale organisational and cultural changes needed to ensure RDM good practice is embedded in the scholarly lifecycle.</td>
<td>Some good collaborative relationships set in place and high-level advocacy work undertaken within the academic colleges.</td>
</tr>
<tr>
<td>5</td>
<td>To ensure take up of project outputs through an ongoing programme of advocacy, awareness raising and dissemination.</td>
<td>On-going training programme in place.</td>
</tr>
<tr>
<td>6</td>
<td>To develop a series of KPIs to monitor use and adoption rates.</td>
<td>KPIs have been developed but will take some time for useful data to be collected and analysed.</td>
</tr>
<tr>
<td>7</td>
<td>To work within existing committee structures to ensure new RDM and OA policy and guidance is ratified, taken up and established at an institutional level.</td>
<td>Policy and guidance in process of being ratified (March 2013)</td>
</tr>
<tr>
<td>8</td>
<td>To enhance and improve the current EDA DSpace repository in response to feedback received during testing and known performance issues.</td>
<td>EDA has been rebranded as Open Research Exeter (ORE)</td>
</tr>
<tr>
<td>9</td>
<td>To ensure Open Exeter technical development takes account of interoperability issues, for example, consistency with other University of Exeter (UoE) DSpace repositories and the Symplectic to ERIC Repository Tools feature.</td>
<td>Issues investigated although not always able to achieve full interoperability</td>
</tr>
<tr>
<td>10</td>
<td>To produce a business case for long-term sustainability of Open Exeter outputs including costing models, roles and responsibilities, maintenance and development.</td>
<td>Request for further funding has been submitted, this is a large area that requires on-going work and development.</td>
</tr>
<tr>
<td>11</td>
<td>By the collaborative nature of this project to strengthen further existing cross-departmental bonds.</td>
<td>Evidence supports that cross-departmental bonds have been strengthened through advocacy and policy work</td>
</tr>
<tr>
<td>12</td>
<td>To disseminate and share findings and outcomes with the JISC and wider HE community.</td>
<td>Dissemination work has been very successful</td>
</tr>
</tbody>
</table>