



The
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White Rose
university consortium



An Open Educational Resource of
materials for taught and CPD learning
about Research Data Management
tailored for Information Professionals

Version March 2013

Funded by

JISC

The URL...

<http://www.sheffield.ac.uk/is/research/projects/rdmrose>



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ABOUT RDMROSE

RDMRose is a JISC funded project to produce taught and continuing professional development (CPD) learning materials in Research Data Management (RDM) tailored for Information professionals.

GIVE US FEEDBACK

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What some librarians drew when asked “if RDM were an animal what would it be”?

- A rather malicious looking spider in a web
- A girlish octopus
- A dragon: (“a mystery animal I cannot defeat”)
- A dung beetle
- Ants that cling together to form a living raft to save themselves in a flood
- A creature just coming into being

What librarians need...

- Confidence raising... demystification of a complex social world
- Increased knowledge and competencies
- A change of identity – ability to take risks, operate in undefined contexts
- Prompts to get started with RDM, rather than waiting till policy or infrastructure is clear

In a nutshell

- There is recognition of the growing scale and fragility of digital research data; funders and publishers mandate RDM; and a promise of increased impact through open data
- Researchers are currently ill positioned to undertake long term stewardship of data (Pryor 2012)
- Libraries have a part to play in supporting RDM, but librarians need to acquire new skills
- RDMRose has been creating Open Educational Resources on RDM tailored for information professionals

Objectives of the project: RDMRose

- Create and evaluate learning materials about RDM tailored for liaison librarians
- Produce an Open Educational Resource (OER) for self supported Continuing Professional Development and full time Library & Information Management students

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RDM in UK HEI libraries survey results

- 83 UK HEIs responded to our survey (with Stephen Pinfield)
- Low level of service development; high priority for next 3 years

Survey results: challenges

- *“The skill set of the library workforce, the costs of RDM and the difficult economic climate.”*
- *“Capacity and workload in a context of shrinking resources”*

Do library staff have right skills to play a significant role in RDM?

- *“A few library staff have some of the right skills”*
- *“Librarians have core skills regarding the organisation of information but these need extending to fully encompass the requirements of data management.”*
- *“They may not be aware that the skills they have are transferable however”*

Where will the skills come from?

- By recruitment
 - What sort of knowledge, competencies and attitudes are needed?
 - Is an LIS background a requirement?
- Through JISC projects
- On the job or self-training or CPD

Why librarians?

- Open access leadership role
- Liaison, negotiation skills and contacts with academics
- Knowledge of information management, collection development, metadata skills and practices
- Understanding of research data management as a form of information literacy (IL)
- Established LIS networks for sharing best practice across the profession
- Librarians are good at explaining things in accessible ways

Challenges

- Librarians are already over-taxed with roles
- They often do not have personal experience of research
- Translating library skills to research data issues
- Will researchers look to libraries for this support? Being taken seriously
- Complexity and scale of issues
- Resources, infrastructure, management structures have yet to be created in most institutions

Areas where libraries can contribute

- Policy
- Teaching appropriate literacies to PIs and early career researchers, PGR, taught students
- Advisory services on RDM; web sites
 - Awareness of data for reuse; data citation practices; copyright and licensing of data
- Signposting
- Auditing/ asset review of data sets researchers have
- Data curation capacity, e.g. appraisal and collection management policy, metadata creation/advice
- In collaboration with other professional services such as computer services, research office and archives/records management staff
- In collaboration with researchers and research administrators

A taster: “Are you RDM ready?”

- What exactly is research data? And what does “managing” it mean?
- Why has RDM become a big issue now?
- What do the funders’ mandates actually say?
- How does RDM relate to the open access agenda?
- Has your institution got a policy? What does it say and who owns it? How does it differ from other institutions’ policies?

“Are you RDM ready?”

- How do researchers see RDM?
- How does the computing service OR research office see RDM?
- Are there teaching resources on RDM relevant to the topic I support that I can reuse?
- Are there any national data repositories relevant to subjects you support?
- How do you cite a data source in APA?

“Are you RDM ready?”

- What is a data management plan and what do you need to know to write it?
- What is the case for a data audit?
- What policies and procedures would need to be in place to manage a local repository as a collection?
- What useful resources are there on the DCC web site?

“Are you RDM ready?”

- What does RDM mean to my job?
- Does RDM imply embedded roles for LIS staff?

Library roles in RDM (See sources section for sources)

Role	Alignment with existing roles	Competencies required
<i>Policy and advocacy</i>		
Lead on institutional data policy	Advocacy role e.g. in the area of open access	Strategic understanding and influencing skills
<i>Support and training</i>		
Bring data into undergraduate research-based learning, promoting data information literacy	Information literacy training	Understanding of RDM best practices as they apply to relevant disciplines; pedagogic skills
Teach data literacy to postgraduate students		
Develop researcher data awareness		
Provide an advice service to researchers (and research administrators), e.g.: Advice on writing Data Management Plans, RDM within a project, licensing data, on data citation and on measurement of impact of data sharing.	Reference and enquiry roles; producing print and web based guides; copyright advice.	Reference interview, knowledge of RDM principles

Provide advice as above through a web portal	Library web site	Knowledge of institutional and extra-institutional resources
Signpost who in the institution should be consulted in relation to a particular question	Role of library as point of enquiry and the reference interview	Knowledge of institution
Promote data reuse by making known what is available internally and externally; explaining data citation	Marketing of library resources	Knowledge of researchers' needs, knowledge of available material
<i>Data asset assessment and repository management</i>		
Audit to identify data sets for archiving, create a catalogue of materials or to identify RDM needs	Metadata skills	
Develop and manage access to data collections	Collection development, digital library management and metadata management	Audit interviews, knowledge of RDM principles, metadata, licensing
Develop local data curation capacity	Open access role. Preservation role.	Knowledge of RDM principles, relevant technologies and processes, metadata

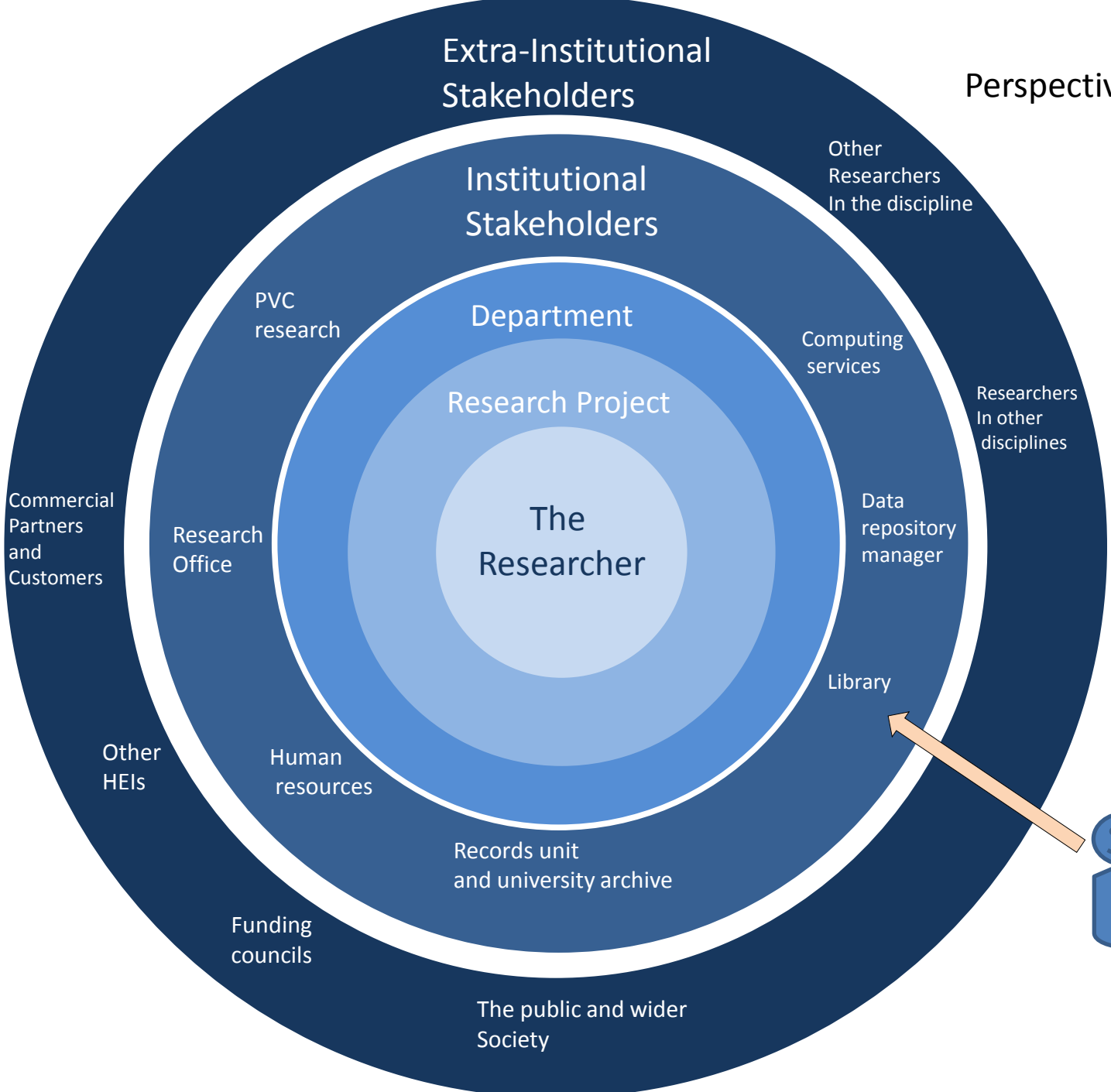
Design approach to learning materials

- Learning needs analysis: Use of literature, existing curricula, focus groups
- Participatory design process

Learning approach

- Structured around different potential roles in RDM
- Open ended context demands exploration of issues, with individual professional reflecting on how issues relate to their own role and how the library organisation might change
- More than about lists of competencies/knowledge, also about identity
- Need to understand perspective of researchers
- Need to understand perspective of other professional services: especially research office, computing service, archives and records managers
- Not for specialist curators or data analysts

Perspectives on RDM



Individual professional perspective

The learning materials

- Desire for practical hands on experience needs to be balanced by a grasp of strategic issues
- Problem Based Learning (PBL)
- Inquiry Based Learning (IBL)
- Eight sessions equivalent to about 4 hours of study each
- Slides
- Readings
- Learning activity ideas
- Audio files of interviews with researchers
- A fictional case study

A sample of the activities

- An introduction to the theory of disciplinarity
- A discussion of DCC curation lifecycle and alternative models
- Interviewing a researcher about their work
- Designing a guidance web site
- Reading Data Management Plans; reading the local RDM policy
- Writing potential collection policies for an institutional repository
- If RDM were a movie – what genre would it be?
- Analysing recordings of interviews with five researchers
- Discussing research and professional staff stakeholders perspectives through a complex fictional case study

Learning outcomes

- Explain the diverse nature of research across academic disciplines and specialities and discuss different conceptions of research data
- Analyse the context in which research data management has become an issue
- Discuss the role of a range of support services, including libraries, in RDM
- Reflect for themselves as individuals and for information professionals in general on the role and priority of supporting research data management
- Explain and apply the key concepts of research data management and data curation to real world case studies and professional practice
- Understand how to keep knowledge acquired on the module up-to-date

Material can be studied systematically or followed by theme

Session 1 – Introductions, RDM, and the role of LIS

- RDMRose module introduction
- RDM basics
- The LIS role in RDM
- Reflection and reflective writing

Session 2 – The nature of research and the need for RDM

- The social organisation of research
- Research, information practices and data
- The RDM agenda, including Funders' mandates and university policies
- The research data interview and audit, and investigating a researcher 1
- Reflection on research

Session 3 – The DCC curation lifecycle model

- Exploring the lifecycle
- Data Management Plans
- Advocacy of Data Management Plans
- Reflection

Session 4 – Key institutions and projects in RDM

- Mapping the DCC website
- Designing Library web pages with RDM support for researchers
- Investigating a researcher 2
- Reflection on the learning process

Session 5 – What is data?

- Researchers and their data: investigating a researcher 3
- Looking at data
- Open data
- Reflecting on research and research data

Session 6 – Managing data

- Practical data management
- Institutional data repository policies
- Subject repositories
- Metadata and data citation
- Reflection on Library organisation

Session 7 – Case studies: Research Projects

- Case studies of researchers and research projects
- Reflection on RDM and your role as an LIS professional

Session 8 – Case study: Institutional Context, and Conclusions

- Institutional case study
- Reflection on the Library role in RDM
- Evaluation of the RDMRose module

How can you use the learning materials?

- Gain a systematic grounding in RDM, through self-directed CPD
- Undertake targeted learning about an RDM topic that is key for your role
- Reuse material or ideas for teaching your library colleagues and others – **join an on-going informal RDMRose user group by coming to a workshop in May**
- Come to Sheffield to take RDM as a module

THE PROJECT

Where RDMRose fits into the LIS RDM learning ecology

Type of training / learning	Content	Sources
Self directed CPD	General understanding for professional awareness and career development	RDMRose materials and publications
On the job training	Focus on learning local procedures	
Light weight training activities	Focus on developing understanding of local issues	23 things approach used by open Exeter; self-directed used of RDMRose
Internal training programme by the library	Specialist topics such as copyright or licensing issues	Reuse of RDMRose materials
1 day off-site training	Focus on learning specific methodologies and solutions	RDMRose via UKeIG?
Training of other professional services staff	Understanding the researcher perspective and policy issues	RDMRose adapted
Elective module within generalist LIS masters	Focus on strategic and policy issues; understanding of researcher and stakeholder perspectives; appreciation of theory.	RDMRose in MA librarianship and MSc Digital Library Management
Masters level qualification in data curation	Specialist understanding with mastery of theory, IT and other technical aspects	Reuse of RDMRose as core module
Masters level qualifications in data analysis	Specialist understanding of data analysis procedures	Reuse of RDMRose as core module

About the partnership

- White Rose libraries:
 - Leeds, Sheffield and York,
 - iSchool, University of Sheffield
- Thank you to the library staff who participated in the delivery of the materials f2f at Sheffield, then and Leeds and York
- Advisory Board
 - Neil Beagrie – expert on digital preservation
 - D. Scott Brandt (D2C2) - Associate Dean for Research, Purdue University
 - Sheila Corral – University of Pittsburgh, formerly Sheffield
 - Martin Lewis – Director of Library Service, University of Sheffield
 - Liz Lyon - Director of UKOLN and Associate Director , DCC
 - Andrew Thompson (DMSPpsych) University of Sheffield
 - Madeleine de Smaelen (3TU.Datacentrum)

Project Management Team

- **Led by the Information School, University of Sheffield**
 - **Dr Eddy Verbaan and Dr Jen Smith**, Research Associates/Curriculum Developer; **Andrew Cox, Barbara Sen**, Lecturers, Information School, University of Sheffield.
 - **Brian Clifford**, Deputy University Librarian (Head of Learning and Research Support), University of Leeds and Project Director, RoaDMaP
 - **Denise Harrison**, Head of the Learning and Research Services Team, Library, University of Sheffield.
 - **Liz Waller**, Deputy Director Information and Head of Information Services, University of York.

Project

- Starting July 2012– ending Summer 2013
- Focus groups (White Rose libraries) will scope the knowledge base, skills gaps, and training requirements
- Development of a core of material built round existing work
- Case study material
- Delivery and evaluation with Sheffield librarians (Autumn Semester 2012-13)
- Iteration with Leeds and York and FT Sheffield masters students (Spring semester 2012-13)
- Dissemination via website, blog and publications and event for LIS educators

Deliverables

- A module within Sheffield's taught masters courses (but also available for stand alone study)
 - MSc Digital Library Management
 - MA Librarianship
 - Also MSc Information Management, Information Systems
- Curriculum material (lesson plans, case study, assignments etc) for other Information Departments as OER in Jorum
- A self study CPD version, with support forum

Strengths of the Project

- Addresses a real need
- Brings together practitioners, researchers, experts, teaching staff, managers, students
 - Sharing expertise, and promoting communication and understanding
- Draws on expertise across organisations exploiting the strengths within the consortium and beyond
- Participative curriculum development tailored for librarians
- Provides outputs to support best practice, teaching, and research
- Supported mutual learning, and engagement with reflective techniques
- Continuous evaluation built into the project design
- The resources will be made openly accessible

Evaluation and quality control

- Participating learners' qualitative and quantitative formative and summative evaluation:
 - Is the material suitable in terms of content, level and approach?
- Tutors' reflections: success of learning, also impact on personal practice
- Interviews with project stakeholders: wider expectations and impacts
- Response of wider LIS community
- Advisers to check quality against pedagogic principles

Timeline

- Current status: Designed and delivered half day sessions @ Sheffield
- Version 1 of CPD material launch January 2013
- Second iteration with Leeds and York, completed March 2013
- Version 2 to be launched in April 2013
- Workshop for LIS educators in May 2013

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Sources and further reading

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