

Research data management for libraries: getting started

Many libraries are keen to take on new roles in providing support for effective research data management (RDM), but lack the necessary skills and resources to do so. This article explores the approach used by the University of Sussex to engage with academic departments about their RDM practices and requirements in order to develop relevant library support services. It describes a project undertaken with three Academic Schools to inform a list of recommendations for senior management, to include areas which should be taken forward by the Library, IT and Research Office in order to create a sustainable RDM service. The article is unflinchingly honest in sharing the differing reactions to the project and the lessons learnt along the way.

The research data management (RDM) agenda

RDM is an issue which is concerning many higher education institutions. Research data generated by publicly funded research is increasingly being seen as a public good, which should be available for verification and reuse. Research Councils UK (RCUK), which represents seven of the UK's major research funders, has recently developed a set of Common Principles on Data Policy¹ which require researchers to manage and retain their data for reuse where appropriate. Furthermore, a new culture of open research is developing and a growing number of researchers are becoming convinced of the value of open data and the potential for its reuse.

In the UK, the response to the challenge of RDM and the need to develop new support services has been varied, with most progress being made in institutions taking advantage of expertise and funding from bodies such as the Digital Curation Centre (DCC) and Jisc. One of the reasons for slow progress is that RDM does not fit neatly into any one particular existing campus service, instead needing input and support from multiple stakeholders including, for example, the research office, the library and IT services.

Most research funders are now asking researchers to plan for the management of their research data at the bidding stage. The EPSRC (Engineering and Physical Sciences Research Council) has gone a step further, taking an institutional approach by requiring all recipients to develop a clear policy and process-aligned roadmap by May 2012, and to achieve full compliance by May 2015.² This move has encouraged many institutions to take a more coordinated approach. The RDM Rose project, a Jisc-funded project to develop librarians' skills in the area of RDM, has found evidence of an RDM culture shift across institutions, with 70% of librarians responding that that culture change was evident during 2012.³ However, in recent months, RDM as an issue has been overtaken by the open access agenda and debate over the Finch report and RCUK policy on open access. Consequently, many institutions, including Sussex, have diverted attention away from RDM to focus on more immediate needs to administer article processing charges.



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Research data management at Sussex

Although the University's existing Code of Practice for Research⁴ includes some guidance on how researchers should manage their data, there is no formal policy in place. Against this background, and prompted by the 2012 EPSRC letter of expectation, the University Research Committee set up a Working Group to recommend a formal policy on research data, and to review the existing infrastructure in light of new and future requirements. Membership of the Working Group comprised three schools, IT Services (who provide the technical infrastructure to support research), the Library (which has experience of developing the information handling skills of researchers and dealing with publishers) and the Research Office (who support researchers with their bidding process). To date, the group has yet to make real progress. On the other hand, the Library has recognized the importance of RDM and its own potential to develop new roles, and in 2012 developed a strategic goal demonstrating its intentions in this area. Furthermore, the Library's staffing structure, based on function rather than subject, put it in a strong position of already having a team dedicated to supporting the needs of researchers who could more readily accommodate RDM.

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Jisc Managing Research Data programme

In 2012, we prepared a bid in response to a Jisc call for funding proposals as part of their Managing Research Data programme which aims to improve the capability of institutions to manage their research data. The programme has funded a range of institutional projects which have generated a significant body of software, supporting systems, guidance and policies which can be used by other universities. Our bid focused on setting up training and support for RDM in liaison with our School of Education and Social Work (ESW) and newly established Economic and Social Research Council (ESRC) Doctoral Training Centre. Although it was disappointing to learn that the bid had not been successful, the process gave the Library a greater insight into the nature of research data at Sussex, and gave us the opportunity to see the number of tools and resources that had already been created by other Jisc projects and which could be repurposed for use at Sussex. Importantly, it also helped clarify that the Library's role with RDM should be identifying researcher requirements and practices and developing guidance and training accordingly. As part of the bid process, valuable work had also been carried out in raising awareness of RDM with stakeholders across the University, including the Academic School, the Doctoral Training Centre, the Research Office and IT Services.

Next steps: identifying RDM practice and requirements at Sussex

The Library began to consider what we could achieve within our existing resource or with some limited additional local project funding. What had become clear to us was that researchers in different disciplines created different types of data and faced different issues when managing and sharing it. On this basis a smaller project proposal was devised to identify researchers' RDM practices and requirements in three Academic Schools (one from each of the subject clusters at Sussex) and provide a report with recommendations for the University's Director of Research and Enterprise, and to inform the creation of subject-specific training and web guidance for researchers.

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These three three-month projects, managed by the Library, would employ postgraduate researchers as project workers on a part-time clerical basis. We already had a lot of experience of employing students, knew many of the researchers and key contacts within the Schools, and suspected that many researchers would be more likely to make time to be interviewed by a PhD student than a member of Library staff. The projects would reuse

258 and repurpose as much existing material as possible. It was important to evaluate progress, in order to make recommendations about how the projects could be scaled up to cover the whole University. An important step was convincing University Senior Management of our proposals. The projected project costs were £3,500 each, and the Library's Senior Management Team agreed to fund two from its strategic planning fund, with the other to be funded by Higher Education Innovation Funding (HEIF) via the Research Office, as the University's Director of Research felt that in Life Sciences the project would enable knowledge exchange with external partners.

Auditing our researchers

A major part of each project was to audit the researchers from each of the three Schools and compare and contrast their data requirements, highlighting areas of good practice that could be applied elsewhere. The audit, based largely on the DCC's Data Asset Framework⁵, focused on the following areas:

- funding and experience of putting together a research data management plan as part of the bidding process
- what kind of data is being collected/created, how is it being stored, what issues have been faced?
- issues around the data sharing, both during the active stage of a research project, and also once the project is completed
- what the University should be doing to help researchers manage their data effectively.

Our experiences of carrying out the projects were very different in each of the different Schools.

School of Life Sciences

The University's School of Life Sciences consists of five different subject departments, including the MRC-funded Genome Centre. The nature of the data collected means that there is a need to have effective methods of managing and storing it, so it was likely that there was good practice that could be recommended to other Schools. However, of the three Schools selected, it was the one where Library staff currently had the weakest level of engagement with researchers, and where the value of the Library was perhaps viewed with most cynicism. In initial conversations with Subject Chairs and other key contacts within the School, there was a general feeling that RDM just wasn't important: researchers in the life sciences publish research of any value alongside their articles, and RDM was viewed as an administrative process, not part of 'real science'. One researcher commented that research bids were judged purely on the science and not the data management plan. One major disciplinary difference which we had failed to take into account was that nearly all postgraduate researchers were full time and lab-based, and sciences were so hierarchical that employing a student as a project worker was perhaps not appropriate, so on the advice of the Life Science School Administrator we employed a post-doctoral researcher instead. She found that the most appropriate method of carrying out interviews was to catch people between experiments for an informal interview.

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This was our first project, and we were very aware within the Library that we didn't yet have the expertise to deliver training in RDM. We approached the DCC, who delivered a half-day's training for researchers within the Life Sciences as well as some training for Library staff, IT staff and Research Office staff. They also participated in a lunchtime meeting with members of the University's senior management to discuss the best way to take RDM forward as an institution.

School of Education and Social Work (ESW)

We selected this School for a number of reasons: the Library had a very good existing relationship with its academic staff and much of the groundwork in engaging with key

259 stakeholders had already been carried out when putting together the Jisc bid. The Library already delivered training as part of the School's international professional doctorate summer school, and this presented a captive audience on which we could try out our training. We expected the nature of the data collected within the School to present conflicts between data sharing and ethics, and were keen to explore these further. In addition, we were also aware of examples of poor data management.

Working with ESW was a complete contrast with our experience of the School of Life Sciences. The researchers immediately understood the value of managing their data effectively and were happy to engage with us. The School's Director of Doctoral Studies was concerned that we should not overload one postgraduate researcher with the project, and in order for it to be a developmental opportunity for their researchers, we offered a smaller number of hours to a group of three students so that they could work on the project together. The project raised issues of whether or not we were ourselves creating research data as part of our audit: the students were keen to record their interviews, and concerned when asked to dispose of the recordings afterwards. It also raised issues of informed consent: the Library had designed the interview as a survey, but we quickly had to design a consent form to reassure researchers about how we would be sharing the information they gave us.

Our good relationship with ESW allowed the Library to explore other methods to raise awareness of RDM within the School: we participated in the School's fortnightly postgraduate Twitter chat #eswphd on the subject of 'why share your research data?', which was followed the next day by a Library seminar for researchers on the same theme, chaired by the Head of School, with expert speakers on ethics from within Education and from the UK Data Archive. These activities prompted the School to set up its own Working Group on Research Data Management, which has now implemented several changes to local working practices.

School of Media, Film and Music

This School was also one with which the Library already had a good level of engagement, and where we were aware that there were a number of researchers interested in opening up access to their research. The School creates a wide variety of data, and has its own media labs for this purpose. The Director of Research was keen that we use the same project team approach as we had done within ESW, and so again we appointed three students to carry out the interviews. She also advised us that as many researchers had strong feelings about the inadequate level of centralized IT infrastructure and support for their research, our project workers should send a copy of each interview report with the interviewee to ensure that they were happy that it was correct. One of the issues our project workers faced within Media, Film and Music was trying to keep the focus of the interviews on research data and away from general IT issues.

Developing training

Working on these projects has increased confidence within Library staff and enabled us to begin to take the lead on University-wide initiatives. Although we envisaged the creation of subject-specific web support as being integral to each of these projects, this was too ambitious an undertaking and we decided to begin by creating a set of generic web pages⁶, in consultation with the University's Research Office and IT Service, to which we could then link to discipline-specific information. We also designed and delivered what is now a regular training session 'Managing your Research Data Effectively' as part of the University's wider researcher development programme, and developed a successful optional module in the subject as part of our ESRC Doctoral Training Centre's MSc in Social Research Methods.

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The future

We are currently compiling the list of recommendations for senior management from the three project reports, to include areas which should be taken forward by the Library, IT and Research Office in order to create a sustainable RDM service. Our key recommendation is for a clear policy on RDM to be put in place to guide future developments. We will also be wary of letting training and support run too far ahead of infrastructure.

“There have been benefits to our low-cost DIY approach ...”

There have been benefits to our low-cost DIY approach to starting with RDM. Many of the existing Jisc MRD-funded projects are now grappling with creating a sustainable service post project-funding that meets the raised expectations of their researchers. At Sussex, we have not had the opportunity to raise expectations and so have not fallen into the trap of creating something unsustainable. We have also been under less pressure than if we were running an externally funded project, and have perhaps felt more able to make mistakes.

The last year has also taught us some important lessons. Libraries have worked hard for many years to establish good working relationships with researchers, and it is important to capitalize on these when starting to look at RDM services. We also used existing mechanisms to try out our training. A cross-University approach has been essential and we have established stronger links with other units around campus. There was no need to reinvent the wheel: there is a huge amount of material out there that can be reused, and even within our institution, it was sometimes just a matter of bringing existing guidance together and promoting the Library as a central point for support.

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