



**West Midlands Share:
Promoting shared use of digital teaching content
across the West Midlands Region**

**WM-Share Final Report
(Draft)**

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The WM-Share Team

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***A JISC Distributed E-Learning Regional Pilot
led by the University of Worcester***



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The WM-SHARE project team are: Andrew Rothery, Director of E-Learning and Online Information, (Project Director Jan 2005-Jan 2006), Viv Bell (Research Officer April 2005-March 2006, Project Leader March 2006-July 2006), Amber Thomas, (Project Leader April 2005-March 2006), Sue Moron-Garcia (Research Officer March 2005 – Jan 2006), Louise Robertson, (Project Officer March 2005 – June 2006)

Most importantly, the project relied heavily on involvement of its partners and we very lucky to have an enthusiastic Executive Group, many of whom have directly shaped the project and provided a wealth of experience to us. The executive group consisted of the following members:

Mark Childs, Saima Akhtar, Jenny Brown, Graham Mason, Megan Griffiths, Eleanor Lisney, Rob Talbot, Dave Cockayne, Peter Kilcoyne Karen Roberts, Will Ellis, Amber Thomas, Andrew Rothery, Judith Keene, Louise Robertson, Sue Moron-Garcia, Viv Bell, Kelly Smith and Pat Lovell.

Executive Summary

The WM-Share project investigated the issues involved in sharing digital teaching content across the West Midlands region, and focused on the use of repositories as a mechanism for sharing teaching content. This Final Project Report describes our approach, the activities we undertook and the extent to which we met our objectives.

The project captured the experiences amongst project partners between Spring 2005 and Spring 2006. We worked with a range of institutional and project partners at different stages of use of repository services.

What we did

- We identified staff attitudes, behaviours and requirements in relation to sharing digital teaching content
- We explored the drivers and barriers around repository provision amongst our project partners
- We examined the perspectives of repository providers, incorporating issues around service rationale, development, take-up and support
- We scoped the options for supporting the sharing of teaching content across the region, and made recommendations

What we found

There is less use of repositories for sharing teaching content than it first appeared. However, we found less resistance to sharing teaching materials amongst staff than might be expected. In fact, over 75% of the staff we surveyed are already sharing content within their departments. Within institutions, the presence of well-supported strategies to support e-learning activity is usually correlated with a willingness of staff to engage in repository use. Institutions without such strategies are less able to benefit from repository practices.

This report summarises the key findings and recommendations of the project. Our primary output is the project website¹ which hosts all of the reports, profiles, presentations and summaries produced by the project. The website expands on five key areas:

- 1) the project itself - including a detailed account of how it progressed.
- 2) advice and recommendations - giving guidance to institutions.
- 3) outputs - including reports, case studies and other relevant findings.
- 4) publications - including conference papers and articles.
- 5) Shibboleth information and implementation reports.

The conclusions of the project will be carried out during an extension period from April-July 2006. This will finalise the outcomes by influencing work-practices within the partner institutions and consolidating the repository development at the University of Worcester and its partners.

Background

The collaborative creation, use and reuse of digital content, has long been seen as a highly beneficial opportunity provided by the widespread use of information and communication technologies (ICT) in support of learning, teaching and assessment. Regional priorities include a need for institutions to collaborate effectively, and mechanisms are needed to enable this.

During the life of the project, there was a significant growth in awareness of repositories, at the time the project began a number of repositories were being developed, including the national repository JORUM, the West Midlands Regional Repository E-Source, and local institutional repositories such as Rob Talbot's repository at City College Coventry.

Experience in some quarters suggests that key barriers to the use of digital repositories are quantity and relevance of material, access management, intellectual property rights, time to create and describe shareable resources and expertise in the creation and manipulation of resources. Rumours that teaching staff may be reluctant to share materials and make use of repositories were investigated by the project.

We were keen to identify cases where repositories can support collaboration between institutions, between FE and HE and within regional groupings. Within the project partners, we had representation from an emerging regional repository service, a project repository funded by the JISC Exchange for Learning (X4L) programme², a homegrown repository software in wide use in FE, along with a number of other projects. We aimed to gather evidence from staff who are piloting repositories about the barriers they experience, and the models of working with and organising repositories they would prefer.

Project Partners

West Midlands Share project involved a range of partners across the West Midlands. Details of the Executive Group membership are available on the website³.

The partners were chosen because they have an interest in repositories, or because they are already working with the University of Worcester. We wanted our group to be representative of the range of institutions in the region. The larger institutions tended to be represented from within a project rather than someone with a whole institution representative. The representatives had different roles and levels of authority within their institutions, and they were encouraged to give their own views as well as those of their institutions where necessary. As with many regions, there are overlapping projects and relationships between institutions.

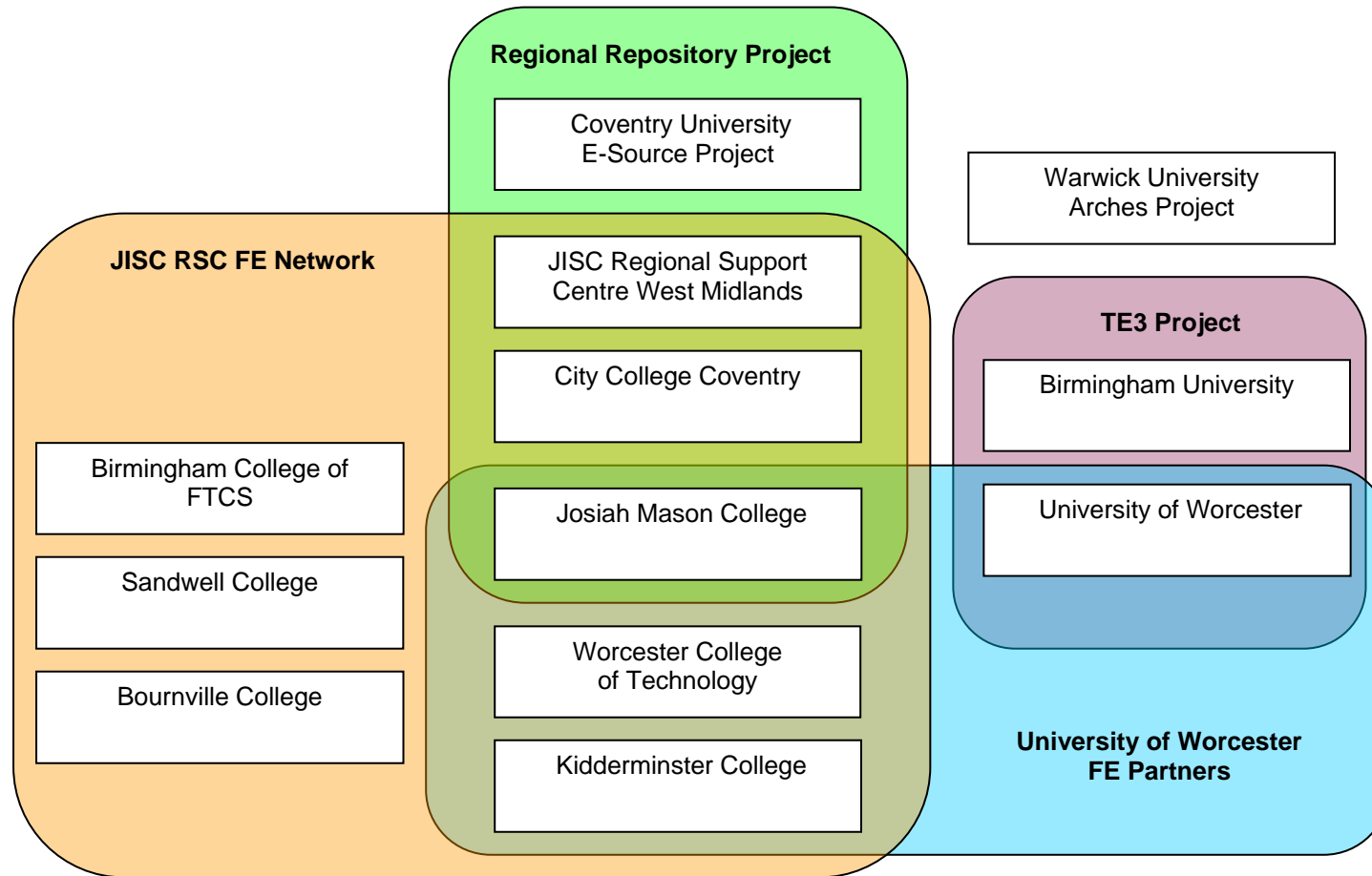
Existing Relationships

- There is already a fairly mature network of FE e-learning practitioners in the region, focussed around the JISC Regional Support Centre (RSC). The University of Worcester is also engaged with the RSC.
- There is a European Social Fund (ESF) regional repository project, now called E-Source, at Coventry University, originally in the New Technology Institute (NTI) for Coventry and Warwickshire, but now based directly in the University's School of Lifelong Learning. This project involved a number of institutions from across the region.
- The University of Worcester has partnerships with many FE colleges in the Worcestershire and Herefordshire area. It has run a previous project investigating shared VLE use with FE partners, funded under JISC's MLEs for Lifelong Learning

Programme. The University also manages a HEFCE Shared E-Learning grant which equips its Foundation Degree delivery partners with ICT equipment and support.

- The Technology Enhanced Enterprise Education (TE3) Project based at Birmingham University includes University of Worcester and Warwick University amongst its partners.
- Lastly, the project has two associate partners. Worcestershire LEA has a watching brief on the repositories area. Wolverhampton University has a parallel e-portfolios project funded within the same programme as WM-Share. Wolverhampton has also worked closely with the Kidderminster College Shibboleth team on previous and ongoing implementations.

WM-Share Project Partners Relationships



Aims and Objectives

The project sought to enable educational institutions within the region to make more effective use of their existing digital assets by promoting shared, open and accessible use of digital content across the region. In particular the project aimed to:

- Carry out a needs analysis of potential repository users in the Region
- Investigate alternative models of repository development and use, leading to a proposed strategy for the Region
- Investigate issues that need to be addressed in the collaborative use of digital repositories, making specific recommendations for further work to help overcome any barriers.
- Link existing collaborative projects and repositories into the authentication and authorisation framework.
- Initiate sustainable and scalable collaborative projects that utilise the authentication and authorisation framework.
- Provide and pilot a framework for managing cross-institutional authentication and authorisation of access rights to shared resources.

The Shibboleth Early Adopters project ran in parallel to WM-Share rather than as an integral part of it. As is detailed in the separate Shibboleth Implementation report⁴ most of the repositories within our sample were not able to go through to full shibboleth implementation. Although it is clear that authentication and authorisation are very important issues for repositories of teaching content, these objectives were dealt with separately from the rest of the objectives. This report reflects that.

Methodology

We intended from the outset to:

- Focus on the sample of experiences of project partners, but qualify that evidence as a limited sample
- Address research themes as they emerged rather than against a pre-set agenda
- Take an action-research approach where necessary, activity influencing services within the partners rather than purely observing them
- Run a structured survey amongst staff at project partner institutions to gather wider structured data
- Build on reflective practice within the team and project partners, and encourage a continuing dialogue within the executive group

The focus of this research is on identifying user needs in relation to the sharing of digital content. The vehicle for sharing to be explored is a digital content repository. Our research questions were:

What do users require in order to facilitate the sharing of digital content?

How are digital content repositories used?

What affects the adoption of digital content repositories?

How can these activities be best supported by institutions within the West Midlands?

Initial issues

It was decided to conduct a “baseline” study to explore the current use of digital content and to try and identify ways in which institutions supported the sharing of information and resources facilitated by Web-based technology. We used the following questions to guide the initial data collection and to indicate issues for investigation.

What do we mean by digital content in the context of this project?

This project is about the shared use of digital content. There appears to be no mutual understanding of what digital content is, for some it means complete IMS learning packages for others something

such as an image, a video clip, a URL or a PowerPoint presentation. Different understandings need to be identified and described. We need to decide whether the investigation of digital content sharing relates only to that content which could be defined as a Learning Object (and if so what level of learning object) or whether the type of content should it be as wide as possible in order to investigate what is actually happening. For example, there may be a desire to store administrative documents also.

Is it possible to identify ways in which people share already?

In order to understand what affects people's willingness to share content it is necessary to investigate the ways in which this already happens and the issues that prevent it happening. So we need to find some way of identifying collaborative partnerships and networks that already exist, for example team working and collaboration within and across institutions. The idea being that if there is already a culture and ethos of sharing a technology tool to support this will be welcomed.

What technology tools support sharing currently?

As this project is about the shared use of digital content it is necessary to investigate the technology tools currently used to facilitate the storage and sharing of information and resources, for example institutional Intranets, portals, Virtual Learning Environments (VLEs), repositories and online databases. It was decided to use digital content repositories as the focus of this research, therefore we had to identify those available and used within the region and to work towards a shared understanding of the term "repository" (which will be culled from the literature and the investigation of regional examples). Moreover it was important to clarify what might encourage people to use yet another technology tool as a way of identifying the benefits of this particular tool and moving towards the idea of promotion.

Implementation

Executive Group Meetings

The executive group consisted of the project team and representatives of each of the partners. It was chaired by the Project Director. It was not a Steering Group, it was more of a high level working group. A jiscmail list was set up to aid communication within the Executive Group. The Group met on a monthly basis except for July and August: 21st April, 19th May, 16th June, 15th September, 20th October, 15th December, 19th January 2006 and 16th March 2006. In November the group did not meet as members attended the project workshop instead. In February the group did not meet because the project team were into the drafting and writing-up stage. Membership and Notes are available on the website⁵.

Baseline study

A simple summary form was designed by the project team to collect and confirm contact details and drivers for institutional involvement with the project. We wanted to understand what the situation is in partner institutions regarding the use and sharing of digital content. The researchers conducted interviews with all of the institutions represented in the project. This was sent to interviewees along with a copy of the notes from their interview and they were asked to check and amend the notes and complete the form. The information from the baseline study forms part of the Case Studies and is available on the website⁶.

Initial/Pilot Survey

This was administered to the key project contacts. The aim was to explore what was understood by the term "digital content", to identify the way in which individuals currently store and access this content, and to investigate the way in which information and resources were shared in the partner institutions. It is also important to understand what repositories are available and used already and to collect details of potential users or promises of access to the same. It drew on a survey conducted by Kelly Smith (Birmingham University) and Mike Clements (Staffordshire University) for 'Shock of the Old 5 Oxford' April 2005. The pilot survey form is available from the website⁷.

Survey of Attitudes

Following on from the initial survey, the questionnaire was refined and extended. We ran it as a paper-based survey to capture the attitudes of staff within project partner institutions. We evaluated the pros and cons of both widening the sample and using an online survey but decided that within our project aims and remit we should maintain the sampling approach within project partners. The Survey Form and the data analysis are available from the website⁸.

The Exec group was an important part of the project and as a working group brought knowledge and expertise which helped to shape the project. Regular meetings and an intensive whole day workshop were ideal vehicles for much discussion around the key themes. The project outputs reflect the dissemination of much of this knowledge and expertise.

Involvement in Partner Projects

There were a number of repository-related projects taking place within the partner organisations. The project team were actively involved in some of those projects in order to explore the issues.

- West Midlands Regional Repository. The project manager was on the steering group and provided them with input on strategy, workflow⁹, metadata schemas¹⁰ and subject classification schemes¹¹, and provided text for the welcome pages.
- University of Worcester Repository. To produce guidance on permissions¹², ground rules and training. The project team commissioned a piece of work to customise the repository, addressing usability, functionality and security requirements as well as a revised subject classification and other local customisations.
- University of Worcester Shared E-Learning Project. A series of training events were organised by the project team, and training sessions were observed.
- City College Coventry Software Development Project. The project had an input into the development of this software.
- T.E.3. at the University of Birmingham.¹³
- Foundation Degree in Early Years at University of Worcester. Repository training sessions were organised for tutors on the Early Years programme, this project is ongoing and aims to further embed repository use within the partner institutions.

November Workshop

At the beginning of the project we had pencilled in an event for November 2005, so in the summer we began to identify what we needed at that point. We decided that we wanted to give project partners a greater chance to explore the issues with us. We encouraged them to bring along a colleague, preferably a teaching colleague. There were 21 delegates in all. We invited two external speakers to give us a fresh perspective. The emphasis was on small group targeted discussion and a realistic approach to what is desirable and achievable within our own institutions and region. The outputs were fed back to the December Executive Group meeting, enabling us to refine and reflect on the discussions. The summary of the November Workshop is available from the website¹⁴.

Outputs and Results

We are using the website¹⁵ as the focus of our outputs and results.

Our key outputs and results are collated in sections which include:

- Case studies on institutional experiences. Repository provider perspectives and projects in search of a solution
- Survey results and analysis
- Themes/synthesis
- Regional services scoping and recommendations

There is a separate report on the Shibboleth Early Adopters project.

We refer the readers of this Report to the website for access to the project outputs.

Outputs

Objectives

Objective: Carry out a needs analysis of potential repository users in the Region

- results of detailed interviews with project partners about their institutional drivers
- report and analysis of survey of attitudes towards sharing
- report of pilot studies of how people use the repositories that are available to them
- piloted the JORUM User Service to project partners to extend their understanding of the role of national services
- project workshop in November 2005 which explore the requirements of potential repository users (outputs from the day and dissemination available on the project website)
- scoping paper on regional repository services

Objective: Investigate alternative models of repository development and use, leading to a proposed strategy for the Region

- supported new repository implementations in order to understand the development issues: West Midlands repository, UW early years project, UW shared e-learning project, Kidderminster's Rob Talbot repository
- worked with the TE3 project to inform and explore their repository requirements
- documented the history of existing repositories in order to understand the development issues: Coventry College repository, Arches image repository
- actively influenced new repository providers in order to promote good practice: West Midlands repository (strategy, workflow, training support) UW (permissions, ground rules, training support, customisation)
- ran a workshop for partners in November 2005 to focus on the options available, from federated architectures to regional pots
- produced a scoping paper on regional repository services

Objective: Investigate issues that need to be addressed in the collaborative use of digital repositories, making specific recommendations for further work to help overcome any barriers

- identified different forms of collaboration within teams, departments, institutions and beyond
- surveyed the attitudes of teaching staff towards sharing, to provide repository providers with a more sophisticated understanding of attitudes
- identified and analysed barriers to collaborative use
- liaised with repositories projects

Objectives: Shibboleth

There is a separate report available on the Shibboleth-related objectives¹⁶.

- Link existing collaborative projects and repositories into the authentication and authorisation framework.
- Initiate sustainable and scalable collaborative projects that utilise the authentication and authorisation framework.
- Provide and pilot a framework for managing cross-institutional authentication and authorisation of access rights to shared resources.

Please see Shibboleth Implementation Report and Shibboleth and Repositories Report¹⁷.

Outcomes

Reflections on achievements and impact

Early on in the project, within the first 2 or 3 months, it became clear that there was not as much use of repositories taking place as we had expected. We therefore included in the scope of our

investigation discussion about why repository use is being “talked up” and “hyped”. We also included the perspectives of institutions without repositories and of individuals who aren’t using repositories. We feel that this has given us a rounded view of the potential repositories can play in the region. However it also means that we have not had as wide a sample of repository users as we had hoped for, though based on activity in the region our findings are far from untypical and may apply to repository use generally.

The executive group had two main types of members; HE project representatives and FE institutional representatives. This has meant we have a clearer picture of the FE institutional situation than we do of the HE institutional situation. The University of Worcester is typical of a small HE institution but is very different in scale and ethos from a large pre-1992 university, for example. Our findings may be most resonant for smaller HE institutions and for FE institutions. We feel there is a value in this perspective, to balance the experiences of many of the institutions who run JISC development projects. It should be noted however that our sample may differ significantly from that of other projects in the repositories field.

In terms of impact at the regional level, the project has had a number of impacts on changing attitudes towards repository use, examples of this are:

- University of Worcester repository implementation, University of Birmingham TE3 repository under-going further development, University of Warwick and City College Coventry have reported further awareness of repository use.
- The setting up of the repository at Worcester has provided a basis to build a consultancy network between projects of similar themes locally.
- Members of the exec group reported institutional interest in repositories, and some are at present making decisions about how to proceed with implementation.

The Executive Group has been the focus of our capacity building, and we feel we have successfully built on the knowledge of this group of representatives. The Regional Support Centre representative has been involved in various elements of our work, which provides some continuity beyond the project. The conceptual and strategic work we have shared through the website and with the Executive Group is valuable, and we hope that the extension period for the project will enable us to embed this learning further.

In relation to the Early Adopters project, we hoped for the following impacts:

- Continued implementation of Shibboleth in the test bed institutions
- Rolling out shibboleth testing to other institutions in the region

In practice, there were far less implementation than we had anticipated. It is due to the efforts of the Kidderminster College technical team that we were able to gain insight into the potential and emerging role of Shibboleth. A separate report is available for the Early Adopters project.

Conclusions

Staff attitudes towards sharing content (see results on project website¹⁸)

The sample group were 148 participants with a range of teaching experience across the subject areas. 75% of participants were from FE colleges, reflecting the proportion of FE in our project partners. The majority of staff have created their own digital teaching resources, the most common being documents and presentations. Over 50% have used resources provided by others, including websites. Over 30% of respondents store some materials on a VLE or shared network drive. 19% of respondents said they don't share the resources they have created. However, approximately half of all participants reported that they placed materials on an institutional VLE and/or shared network drive, so they may be available to others without active effort to “share”. The survey examined attitudes towards clearing copyright, uploading materials, adding metadata and other tasks associated with repository use. Indications were that sharing would be most successful amongst writing teams and communities of trust. The full analysis is available on the website.

Institutional Readiness for repositories¹⁹

Institutions that are already sharing content tend to have a greater recognition of the internal drivers to sharing. Prior negative experience of technology implementations can impact negatively on repository adoption. We have identified six key questions for institutions to ask themselves in order to assess their readiness to support content sharing through a repository.

Issues of repository provision²⁰

Technical and legal issues are complex at the outset but are mostly resolvable. Repositories can support diverse purposes, which may be a complexity in future interoperability. The skills of target users need to be taken into account. It is crucial for what repository providers to understand their users requirements in relation to the repository purposes.

Synthesis and Themes²¹

Despite the growing awareness of repositories, we found less provision and use than expected. Where there are repositories, the content varies in type and complexity, but there is very little use of content packaged learning objects. Users want clean safe content and searching has to be worthwhile. There is less resistance to sharing than might be expected, in fact sharing is mostly taking place informally and within teams. IPR and metadata have to be tackled in each case, but are ultimately resolvable. Access consideration are important and will vary according to the purpose of the repository. Internal advocacy and promotion needs to address the valid concerns of staff about the appropriateness of a repository solution.

Recommendations: Repository strategies for the region²²

Institutions in the West Midlands should consider the extent to which they support the content management requirements of teaching staff. A number of activities are recommended. Collaboration and support at a regional level could aid institutions in improving their services. A number of activities should be undertaken within the region, including from auditing existing activity to brokering the sharing of practice to providing training opportunities. There are barriers to providing a regional repository in the West Midlands at this point in time, and the drivers are not quite clear, given the value of institutions managing their own content. However, the situation is likely to change over time as practices and technologies mature.

Implications

The implications of the WM-Share project in relation to future JISC work are:

- There is less resistance to sharing teaching content than might be expected, so closer attention needs to be paid to what academics are really saying
- The issues in teaching content sharing may be very different from those in the research papers open archives area, and the two should not be conflated, either from an institutional services point of view or from a cultural/human perspective. Definition of content is difficult, should repositories specialise in one thing or should there be overlap
- Gain a better understanding of the actual practices of content sourcing, management and sharing, and map that against services available within institutions to assess if needs are being adequately met, using the key indicators we have identified
- Explore file management capability of network drives and VLEs to better understand the content management needs of teams and departments within institutions
- Avoid hyping repositories: this leads to high expectations that are unlikely to be met at the present time
- Provide help on evaluating and testing the various functionalities required in a repository service so that institutions can assess their own provision and that of available software
- Make use of the Executive Groups to discuss and refine the conceptual and strategic issues: the right mix of people can greatly inform the project
- Indications were that sharing would be most successful amongst course teams and communities of trust
- “Regional” repositories may be more difficult as “typography” of repositories hard to define

References

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 - ⁴ <http://www2.worc.ac.uk/wm-share/> - Project Website – Shibboleth report
 - ⁵ <http://www2.worc.ac.uk/wm-share/> - Project Website – Executive group
 - ⁶ <http://www2.worc.ac.uk/wm-share/> - Project Website – Initial Pilot/Survey form
 - ⁷ <http://www2.worc.ac.uk/wm-share/> - Project Website – Survey of attitudes form
 - ⁸ <http://www2.worc.ac.uk/wm-share/> - Project Website – Survey of attitudes form
 - ⁹ <http://www2.worc.ac.uk/wm-share/> - Project Website – Draft guidance on workflow
 - ¹⁰ <http://www2.worc.ac.uk/wm-share/> - Project Website – Draft guidance on metadata schemas
 - ¹¹ <http://www2.worc.ac.uk/wm-share/> - Project Website – Draft guidance on classification schemes
 - ¹² <http://www2.worc.ac.uk/wm-share/> - Project Website - Draft guidance on permissions
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