Version: 2.0

Contact: Ruth Kirkham Date: 03/07/2007

JISC VRE PROGRAMME

A VRE for the Study of Documents and Manuscripts PROJECT PLAN

Project

Project Acronym	VRE-SDM	Project ID			
Project Title	A Virtual Research Environment for the Study of Documents and Manuscripts				
Start Date	01/04/2007	End Date	31/03/2009		
Lead Institution	University of Oxford				
Project Director	Prof. Alan K Bowman				
Project Manager & contact details	Ruth Kirkham Email: ruth.kirkham@humanities.ox.ac.uk Address: Oxford eResearch Centre, 7 Keble Road, Oxford, OX1 3QG				
Partner Institutions					
Project Web URL	http://bvreh.humanities.ox.ac.uk/				
Programme Name (and number)	Virtual Research Environments Programme (eResearch)				
Programme Manager	Frederique van Till				

Document

Document Title	Project Plan				
Reporting Period	n/a	n/a			
Author(s) & project role	Ruth Kirkham, Project Manager				
Date	30/05/2007	Filename			
URL					
Access	☑ Project and JISC in	ternal	☐ General dissemination		

Document History

Version	Date	Comments
2	03/07/2007	

Version: 2.0

Contact: Ruth Kirkham Date: 03/07/2007



Overview of Project

1. Background

The VRE for the Study of Documents and Manuscripts addresses the user needs of documentary, textual and manuscript scholars. Focusing in the first instance on the requirements of ancient documentary specialists working in the fields of epigraphy and papyrology, the pilot will incorporate existing Open Source tools to enable annotation and sophisticated document viewing and will make use of existing VRE tools to facilitate communication and collaboration between scholars. The VRE will also provide efficient, integrated access to a disparate range of existing textual databases and related resources. Although the pilot will focus on ancient documents, it will be constructed so as to be usable by textual specialists working in other languages, periods and cultures. The context will be extended by treating documents not as disembodied texts but as artefacts which can and should be related to their original physical context, to the extent that this is possible. This will be of great benefit to the archaeological community and will enable them to feed the results of advances in interpretation of texts and to improve understanding of their sites and artefactual assemblages.

The work naturally follows from the outcomes of BVREH (Building a VRE for the Humanities), a series of e-Science User Requirements workshops undertaken for the AHRC (PI Prof. AK. Bowman) and the EPSRC Virtual Workspace (VWSAD) demonstrator project. In these we have established a broadbased understanding of user-driven needs, we have shown how tools and resources for studying texts and document might be implemented in a service-based environment and have tested some annotation and mark-up tools. We will now proceed to construct an integrated environment in which the data (documents), tools and scholarly instrumenta will be available to the scholar as a complete and coherent resource. The research resources on which the VRE pilot project will be based will be ancient documents on various media (stone, wooden tablets, papyri, lead etc.), but we emphasize that it will include two very important features of broader significance. First, that the tools and the structure of the environment will be entirely suitable for the study of a wide variety of types of documents and manuscripts (in two and in three dimensions) and will thus provide an exemplar for humanities researchers working on texts in all disciplines, languages, cultures and periods. The second is that we will extend the context by treating documents not as disembodied texts but as artefacts with an original archaeological or physical context which can, in a significant number of cases (in antiquity and later periods) be recovered or reconstructed.

The significance of this approach is that the construction of a VRE appropriate for texts as artefacts opens up the possibility for the archaeologist and the textual scholar to work both separately and together within a unified environment generated by the complimentarity of their VRE implementations. This aspect of our proposal has been developed in close collaboration with the Silchester Roman Town VRE (PI Professor M.G.Fulford, Reading University). This VRE has developed a sophisticated system for registering, tracking and analysing data recorded in the field to allow efficient recovery of information on any given artefact or assemblage in its original environment. Future development of the Silchester VRE will focus on on-site information flow, development of a 3-dimensional imaging capability and creation of an environment in which sub-sets of archaeological small finds specialists can work in teams (in this perspective, documentary specialists may be regarded as one such sub-set). This collaboration will be further supported by currently developing links between the University of Reading and the Oxford e-Research Centre (Directors, Dr. Anne Trefethen and Prof. Paul Jeffreys).

Version: 2.0

Contact: Ruth Kirkham Date: 03/07/2007

2. Aims and Objectives

The aim of the VRE-SDM project is to construct an integrated environment in which the data (documents), tools and scholarly instrumenta will be available to the scholar as a complete and coherent resource. In the first instance the project will validate the pilot VRE against the requirements of researchers drawn from the Papyrological and Epigraphical communities and then will extend the system to further humanities disciplines.

Objectives:

- View, manipulate and enhance digitized images of documents and manuscripts within a portal framework
- Search across multiple, distributed data sets, images and texts including (in the first instance)
 the Lexicon of Greek Personal Names (LPGN), the Duke Databank of Documentary Papyri,
 Perseus, Heidelberger Gesamtverzeichnis, the Gazeteer of Papyri in British Collections, the
 Vindolanda Tablets and Database of Greek Inscriptions
- Select, store and organise items from the above, in a 'personal workspace'
- Add annotations to these items to store personal thoughts and responses
- Support collaboration by allowing multiple researchers in separate locations to share a common view of the workspace, in conjunction with real time communication via Chat, VoIP and desktop integration with AccessGrid
- Allow a collaborator to comment, point/highlight, discuss and annotate the items in the shared workspace
- Gain comprehensive user requirements and expand the use of the VRE for documentary and manuscript scholars in other fields of humanities research

3. Overall Approach

The VRE-SDM project is intended as a pilot VRE designed to concentrate on the user needs of documentary, textual and manuscript scholars, who make up the target user community. Within this broader user group, the pilot project will focus in the first instance on the requirements of ancient documentary specialists working in the fields of epigraphy and papyrology. The local user community within Oxford is of significant size: up to 20 scholars working directly on original papyrus and epigraphical documents within the Classics Faculty; together with a wider circle of historians, numismatists and literary scholars who use inscriptions and papyri as primary sources for their research. The immediate user community is linked to a broader national and international community of documentary scholars through collaborative work on major projects (Inscriptiones Graecae; Oxyrhynchus Papyri; Romano-British Writing Tablets) and participation in electronic initiatives (Advanced Papyrological Information System (APIS); EpiDoc Collaborative; the EAGLE project of the Association Internationale d'Épigraphie Grecque et Latine; International Gazetteer of Papyrus Collections).

The project extends this collaborative activity to the recovery of documentary artefacts through archaeological excavation. Documentary specialists are rarely present during the excavation process. The potential for documentary specialists to work closely with archaeologists through real-time recording and communication of finds and contexts promises significant improvements in the working practices of both. Currently, IT-based research tools have been deployed in two main contexts in field archaeology: first, to aid in understanding the configuration, topography, and stratigraphy of complex sites and second, to record and catalogue significant numbers of 'small finds' and extensive assemblages of ceramic and zooarchaeological remains in their physical context, from which they are then removed by the nature of the excavation process. In the context of the present proposal 'small finds' naturally include documents (inscriptions, tablets, papyri, graffiti etc): the same object may be viewed in one context as a small find, in another as a documentary text, and the tools used to identify and define these separate aspects can be combined to provide a fuller picture for both the documentary historian and the archaeologist. The two VRE projects aim to explore this area of overlapping perspectives to demonstrate the way in which separate and self-standing VRE implementations may complement and build interfaces to one another.

Version: 2.0

Contact: Ruth Kirkham Date: 03/07/2007

3.1 Methodology

Gathering user requirements will be a significant, continuous process throughout the duration of the project and will constantly inform development on an iterative basis. Ongoing, deployment of VRE components will be subject to full user testing. The responses will be evaluated and fed back immediately into the development cycle, which will be both responsive and iterative. The team will draw upon knowledge gained during the user requirements activities undertaken by the BVREH project. Initially this will involve interviewing users and where possible and appropriate shadowing them in their working environment. Following each new deployment of tools, use of the VRE will be evaluated to determine how the users' research is affected by the tools and to guide the next cycle of development. This process will include holding focus groups of representative users, held in conjunction with user training sessions.

The initial interface to the VRE will be based on a portal environment, and the intention is to make use of the JSR168/JSR286 standards in writing portlets. Existing document viewing tools will be reengineered to work in the portal environment. All of the components developed by the project will be made available as Open Source Software to further the potential for reuse within other Virtual Research Environments, and the project will work with members of OSSWatch to ensure that suitable licences are used for software outputs. The project will also work with the Virtual Environments for Research in Archaeology (VERA) project to realise the intention of linking documentary scholars to the archaeological context of documents. The two projects will investigate ways in which links can be created between the two environments and data exchanged between the two systems.

3.2 Scope and Boundaries

The VRE for the Study of Documents and Manuscripts is designed to be a pilot system aimed at demonstrating the feasibility, scalability and sustainability of such a system both for work on ancient documents and for the wider documentary and manuscript community within the humanities. The VRE will also demonstrate the wider implications of the system, linking into the VERA archaeological VRE, providing an exemplar for humanities researchers working on texts in all disciplines, languages, cultures and periods.

3.3. Critical Success Factors

The critical success factors of the VRE-SDM project will be:

- Ease of use of the Virtual Research Environment for the target user group
- Quality of reproduction of documents within the VRE and richness of the research tools within
- The degree to which collaboration between documentary scholars is made more possible
- The extent to which the VRE can adapt and be useful for more intensive documentary problems such as palimpsests, different languages etc
- Scalability the extent to which the VRE can be adaptable to other humanities disciplines with their own specific issues and needs

4. Project Outputs

The tangible deliverables of the VRE-SDM project will be:

- Four iterations of a pilot VRE for use and testing by documentary specialists
- Report on the effect of introducing VRE tools to the humanities community
- Report evaluating usability and extensibility of VRE tools
- Report/Analysis of usage and uptake of pilot iterations
- Design documentation
- Training materials and workshops for end users
- OSS code for tool versions

Version: 2.0

Contact: Ruth Kirkham Date: 03/07/2007

- Technical documentation of components developed
- Project website and mailing list
- Workshop to discuss the project and its results
- Reports to PI's and JISC
- Final project report

5. Project Outcomes

The VRE-SDM project has the potential to transform current research practice in the study of documentary and textual sources. The scholar interpreting an ancient documentary text currently has a broad range of relevant electronic tools available; but the interaction is largely in one direction and the experience is fragmented by the dispersal of the electronic resources. The potential of ICT to mediate collaborative activities has also yet to be fully exploited. Decipherment and transcription are activities that naturally benefit from shared visualisation and multiple perspectives. Developments in e-Science have opened new possibilities to make collaborative work on decipherment and analysis available on demand to researchers.

This project also extends this collaborative activity to the recovery of documentary artefacts through archaeological excavation. Documentary specialists are rarely present during the excavation process. The potential for documentary specialists to work closely with archaeologists through real-time recording and communication of finds and contexts promises significant improvements in the working practices of both.

As such, the outcomes of the VRE-SDM project will:

- Transform current research practice in the study of documentary and textual sources
- Mediate collaborative activities in ways not yet exploited
- Allow new possibilities for collaborative work including decipherment and analysis available on demand
- Allow documentary specialists to work with archaeologists through real-time recording and communication of finds

6. Stakeholder Analysis

Stakeholder	Interest / stake	Importance
Oxford University Humanities Division	The project aims to build on the experience and needs of a user community in the Humanities Division intensively engaged in research involving or potentially benefiting from ICT components.	High
Oxford eResearch Centre (OeRC) and Oxford University Computing Services (OUCS)	The project is based in the OeRC and is expected to benefit from and contribute to the drive for interdisciplinary eResearch across the university and further a field. The project has close links to a number of projects based at the OeRC and OUCS.	Medium
Humanities User Communities	It is important that the project outcomes and experience	High

	reflect current activities and initiatives in the wider humanities research community.	
JISC	The JISC is the project's funding body; the project is expected to benefit from and contribute to the ongoing development of the VRE programme.	High

7. Risk Analysis

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Failure to recruit staff	3	3	9	Risk affects the recruitment of an additional technical officer. However, appropriate expertise also exists in OUCS and the Oxford e-Research Centre. The project will carefully manage the recruitment process.
Key staff resign during project	1	4	4	Depending on the stage of the project, second staff from other projects within OeRC. In worst case scenario, new recruitment.
Lack of engagement with and of the user community	2	3	6	Preceding and continuing user needs analysis indicates a positive reception for the proposed pilot.
Failure to identify appropriate technologies for deployment within the pilot project	2	3	6	A rigorous user needs analysis and systems analysis and design cycle will mitigate this possibility.

8. Standards

Name of standard or specification	Version	Notes
XML	1.1	XML is a document format standard which forms the basis for many of the other standards mentioned (xhtml, WSRP, XMPP, RDF,)
HTML/XHTML	4.01 / 1.0	Specification of format for webpages
ECMAScript / DOM	3	"Javascript" language and DOM to add interactivity to webpages. Due to non-standard nature of implementations proprietry workarounds are necessary.
JSR 168/JSR 286 portlets	-	Standard for integration of portlets with a portal framework
WSRP	1.0, 2.0?	Standard for remote embedding of portlet by portal framework
XMPP	RFC 3920, RFC 3921	The "Jabber" communications protocol for real time chat, and message passing

Version: 2.0

Contact: Ruth Kirkham Date: 03/07/2007

		between instances of software client.
RDF	1.0	A key base model and format for metadata
OWL	1.0	Ontology specification language built on RDF to describe structure of metadata models
Z39.50/SRW		A key search and retrieval standard

9. Technical Development

The project will follow an iterative development process, aiming to deliver working versions to the user community regularly. This allows technical development to mesh with the user engagement and evaluation elements of the project, and ensures that requirements are kept in line with actual user needs by frequent feedback from end users.

The pilot will adapt Open Source tools to enable annotation¹ and sophisticated document viewing (GSIV)². It will also make use of existing VRE tools to facilitate communication and collaboration between scholars. The current intention is to embed the above within the uPortal³ framework. This offers interoperability with other VRE/VLE systems and provides the ability to reuse JSR-168 portlets from other projects whilst making our components easier for others to make use of. At the time of writing the Sakai framework doesn't fully support these portlet standards so we will initially look to make use of the uPortal framework providing the added benefit of interoperability with developments on the VERA project based in Reading.

Full advantage will be taken of the Subversion⁴ version control system, and the Trac⁵ bug/feature tracking tools to manage all software components developed for the project. This will allow progress and provenance of code to be tracked throughout the project. These will be made available under an Open Source Software license to allow re-use and further development by other interested parties. The project will also consult closely with OSS Watch through the duration of the project.

10. Intellectual Property Rights

Any IPR resulting from this project will remain the property of the organisation(s) generating it. Under the University of Oxford's policy on intellectual property (which covers all University employees and students), the University claims ownership of a range of intellectual property rights with commercial potential. The University does not assert any claim to the ownership of copyright in artistic works, books, articles or lectures, apart from those specifically commissioned by the University. Results arising from projects funded by the JISC at Oxford would therefore usually be owned in the first instance by the University as the employing institution. The University seeks to maximise the commercial potential of its intellectual property through its wholly-owned technology transfer company, ISIS Innovation Ltd. In accordance with the desires of the JISC Virtual Research Environments Programme it is proposed to release any software applications developed by this project under an Open Source Software license to maximise the benefit for the wider community.

_

¹ The current thinking is that the project will work with Annotea http://www.w3.org/2001/Annotea/, though other options are being reviewed, including tools created as part of the Cheshire3 Multivalent project -

 $[\]underline{\text{http://www.jisc.ac.uk/whatwedo/programmes/programme_cminfrastructure/proj_cheshire_shiboleth.as} \ \underline{\text{px}}$

² Giant Scalable Image Viewer - http://www.mojavelinux.com/projects/gsiv/

³ uPortal - http://www.uportal.org/

⁴ Subversion - <u>http://subversion.tigris.org/</u>

⁵ Trac - http://trac.edgewall.org/

Version: 2.0

Contact: Ruth Kirkham Date: 03/07/2007

Project Resources

11. Project Partners

The project has no direct project partners and as such will not be entering into a formal consortia agreement. However the project will work closely with the VERA VRE project http://vera.rdg.ac.uk/ to ensure complimentarity between the two pilot implementations.

12. Project Management

The organisation of the VRE-SDM Project will be as follows:

Project Director: Professor Alan Bowman
 Contact: Brasenose College, Oxford, OX1 4AJ. Email: alan.bowman@classics.ox.ac.uk. Tel. 01865
 277874

Principal Investigators:

Professor Alan Bowman. Contact: Brasenose College, Oxford, OX1 4AJ. Email: alan.bowman@classics.ox.ac.uk. Tel. 01865 277874

Dr Charles Crowther. Contact: Ioannou Centre for Classical and Byzantine Studies, 66 St Giles' Oxford OX1 3LU. Email: charles.crowther@classics.ox.ac.uk. Tel. 01865 288180

Dr Michael Fraser. Contact: Oxford University Computing Services, 13 Banbury Road, Oxford OX2 6NN. Email: mike.fraser@oucs.ox.ac.uk. Tel. 01865 283343

- Co-Investigator: Dr Marina Jirotka. Contact: Oxford eResearch Centre, 7 Keble Road, Oxford OX1 3QG. Email: marina.jirotka@oerc.ox.ac.uk. Tel. 01865 610613
- Project Manager: Ruth Kirkham

Contact: Oxford eResearch Centre, 7 Keble Road, Oxford OX1 3QG. Email: ruth.kirkham@humanities.ox.ac.uk. Tel. 01865 610617

• Technical Manager: John Pybus

Contact: Oxford eResearch Centre, 7 Keble Road, Oxford OX1 3QG. Email: john.pybus@humanities.ox.ac.uk. Tel. 01865 610619

• Technical Developer: To be appointed.

Two of the Principal Investigators are active members of the target user community (Bowman: papyrology; Crowther: epigraphy) and a corresponding input of time is required and budgeted for them (2 hours per week each). The third PI (Fraser) is responsible for co-coordinating the development of the project within the Oxford and wider VRE community (1 hour per week). The Co-Investigator, Dr. Jirotka has a vital consultancy role in supervising user needs analysis (1 hour per week).

The project involves intensive user needs analysis and an iterative series of development cycles. 100% FTE Project Manager, Ms Ruth Kirkham, the BVREH Project Manager, will be principally responsible for user needs analysis, documentation and project management. Development activity is covered by two posts: the role of Technical Manager will be taken by Mr John Pybus, previously Technical Officer for the BVREH project. Mr Pybus works as 20% FTE IT Research Officer in Phonetics and is accordingly budgeted at 80% FTE. An additional 50% FTE technical developer will be recruited to work specifically on system design and building and integration of tools.

The Technical Manager will have responsibility for the 0.5 FTE Technical Officer, and will report on behalf of both to the Project Manager. The Project Manager will report, in turn, to the principal

Version: 2.0

Contact: Ruth Kirkham Date: 03/07/2007

investigators and the project as a whole will be guided by them and the pre-existing BVREH Steering Committee.

A steering committee, consisting of representatives of Oxford Humanities faculties, stakeholder representatives in the wider national and international humanities research community and contacts in the eScience community has been established and will meet formally at least three times during the course of the project.

Formal meetings of the principal members of the project team will take place at regular intervals and will be minuted. Training needs will be met locally; a block of the project budget has been allocated for staff development.

13. Programme Support

The project anticipates a high degree of overlap and interoperability between the four projects funded under the VRE2 phase. As such programme meetings, project management sessions and opportunities for the development teams to meet and exchange code, knowledge and ideas would be extremely beneficial, as would the continued involvement of the JISC to inform the team about other projects, programmes, conferences and workshops as appropriate.

The project would also benefit from financial support in marketing the project, due to time and budgetary constraints on the project team.

14. Budget

See Appendix A

Detailed Project Planning

15. Workpackages

See Appendix B

16. Evaluation Plan

It is expected that the evaluation of the project as whole will be undertaken in conjunction with the JISC VRE Programme. Internal evaluation will be carried out through the project management board in consultation with an evaluation panel of one internal (Oxford) and one external evaluator.

Continuing internal evaluation procedures will include consultation with representative members of the user community through the steering committee.

Timing	Factor to Evaluate	Questions to Address	Method(s)	Measure of Success
	Four iterations of	Does the system meet	Review of	Successful and
	VRE Pilot system	the user requirements	system by	sustained user
		this far? What new requirements have come to light? How effectively do the deployments meet the needs of user group?	user group, ongoing user requirements gathering. Ongoing exposure to user group, the VRE community	interaction, take up of the VRE pilot by users outside of the original user group

31/01/09	Interim report on effect of VRE tools on community	Are the correct methodologies being used?	and the wider humanities community Review of results by management board	Evidence of use of tools within the community
31/03/09	Final Report on effect of VRE tools on community	Does the report present a clear picture of the effect of VRE tools on the community	Review of results by management board, steering committee and user community	Coherence of results and identification of issues to be addressed.
31/03/09	Analysis of usage and uptake of each pilot iteration (carried out after each of the four deployments)	Does the iteration meet the requirements of the user group? Are people using the system?	Exposure to user community, user documentation and training, ongoing development of pilot	Evidence of ongoing uptake of the pilot iterations amongst user group
31/10/08	First draft of report evaluating usability and extensibility of VRE tools	How clear a picture of usability and extensibility has emerged?	Review of draft by steering committee and evaluators	Coherence of findings and identification of issues to be addressed
28/02/09	Final Report evaluating usability and extensibility of VRE tools	Does the report succeed in evaluating the usability and extensibility of VRE tools?	Critical review of final draft by steering committee, evaluators and publication to user community	Coherence of findings and identification of issues to be addressed; circulation in the wider community
31/03/09	Final report (JISC)		,	Coherence of findings and identification of issues to be addressed
31/03/09	Dissemination	What level of impact has the project had?	Feedback logs and citation of reports. Long term take up of the pilot VRE	Circulation, citation and response to project reports and the pilot VRE

17. Quality Plan

Output	Report on effect of VRE tools on community						
Timing	Quality criteria						
	Fitness for purpose	Evaluation against project objectives	Result of evaluation and verification by project	Project management board and			

Adherence to specifications	Evaluation against agreed project plan	management board and evaluation panel Result of evaluation and verification by project management board and evaluation panel	Project management board and evaluation panel	
Accessibility legislation	Accessibility applies to user interfaces relating to the dissemination of project reports. Webbased publication will follow good practice documented by the W3C Web Accessibility Initiative	Successful validation against published standards	Project management board and evaluation panel	

Output	Analysis of usage and uptake of each pilot iteration				
Timing	Quality criteria	QA method(s)	Evidence of compliance	Quality responsibilities	Quality tools (if applicable)
	Fitness for purpose	Evaluation against project objectives		Project management board and evaluation panel	
	Adherence to specifications	Evaluation against agreed project plan	Result of evaluation and verification by project management board and evaluation panel	Project management board and evaluation panel	
	Accessibility legislation	Accessibility applies to user interfaces relating to the dissemination of project reports. Web- based publication will follow good practice documented by the W3C Web Accessibility Initiative	Successful validation against published standards	Project management board and evaluation panel	

Output	Final Report evaluating usability and extensibility of VRE tools				
Timing	Quality criteria	QA method(s)	Evidence of compliance	Quality responsibilities	Quality tools (if applicable)
	Fitness for purpose	Evaluation against project objectives		Project management board and evaluation panel	
	Adherence to specifications	Evaluation against agreed project plan	Result of evaluation and verification by project management board and evaluation panel	Project management board and evaluation panel	
	Accessibility legislation	Accessibility applies to user interfaces relating to the dissemination of project reports. Web- based publication will follow good practice documented by the W3C Web Accessibility Initiative	Successful validation against published standards	Project management board and evaluation panel	

Output	VRE Pilot versions				
Timing	Quality criteria	QA method(s)	Evidence of compliance	Quality responsibilities	Quality tools (if applicable)
	Fitness for purpose	Evaluation against project objectives		Project management board and evaluation panel	
	Adherence to relevant standards	The VRE Pilot versions will comply with published open standards	Audit trail via version control system and internal project logs	Project management board and evaluation panel	
	Adherence to specifications	Evaluation against agreed project plan and project reports analysing usage, feasibility and extensibility	Result of evaluation activities and verification by project management board and evaluation panel	Project management board and evaluation panel	
	Use of best practice methods and techniques for	Adherence to best practice methods for planning,	Audit trail via version control system and internal project logs	Project management board and evaluation panel	

development	designing,		
	coding and		
	testing		

18. Dissemination Plan

Timing	Dissemination Activity	Audience	Purpose	Key Message
01/06/07	Update of previous (BVREH) project web site	All	Raise initial awareness of new VRE project	About the project
Ongoing	Project Mailing List	Humanities community	Raise awareness of new VRE project amongst a community already established by the BVREH project	About the project
As arranged	Programme Meetings	JISC VRE programme projects	Raise awareness about the project and identify commonalities with other projects	About the project, how can VRE2 projects work together?
As arranged	Project Steering Committee Meetings	Stakeholders	Updating and soliciting feedback/advice	Are we on the right track?
Ongoing	Conference attendance/presentations/po sters both at technical events and more specialised gatherings of potential users/interested parties	Various	Raise awareness amongst potential users, those who might benefit from and who might provide benefit to the project	About the project and how we might expand its usefulness into other research areas
Ongoing	Ongoing publication of reports, conference papers and general publications	All	Publication of project deliverables	Project findings

19. Exit and Sustainability Plans

Project Outputs	Action for Take-up & Embedding	Action for Exit	
Reports	Publication of initial series of reports both to targeted audiences and to general user community through project web site. Publication, as appropriate, of project findings in peer-reviewed journals.	Reports will be delivered to JISC for dissemination via jisc.ac.uk. The project web site will continue to exist for at least three years beyond the end of the project.	
Pilot VRE	The pilot developed during the project will be made available, as appropriate, for integration into local and national or interinstitutional VRE's.	The pilot will be maintained locally beyond the end of the project so long as it continues to meet needs of the user community.	

Knowledge The project's deliverables include a number of reports. The project team will participate in appropriate meetings and events. Internal and wider dissemination of knowledge will be mediated through the steering committee. Project results will be published, if appropriate, in peer-reviewed journals.		The Humanities Division is in the process of considering commitment of resources to the long-term development of VRE technologies; staff retention will be an important element of maintaining continuity of project knowledge.	
OSS code The open source code developed as by the project will be made available through the BVREH website for integration into local and national or inter-institutional VRE's.		The code will be available on the BVREH website which will exist for at least three years beyond the end of the project.	

Project Outputs	Why Sustainable	Scenarios for Taking Forward	Issues to Address
Pilot VRE	Standards compliant VRE pilot with potential to be integrated in whole or part into other VRE's at Oxford and beyond. The project will already provide links with the VERA VRE and show the potential for expansion into other humanities disciplines.	Integration into a local /institutional/national framework	Commitment of local resources
OSS code	Code is written to be reused by other projects as they wish	The open source code developed as by the project will be made available through the BVREH website for integration into local and national or inter-institutional VRE's.	