

**e-Infrastructure Proposal Cover Sheet**

<b>Cover Sheet for Proposals</b> (All sections must be completed)	<i>JISC Capital Programme</i>
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<b>Name of Capital Programme:</b> e-Infrastructure			
<b>Programme Strand:</b> (Please tick ONE BOX ONLY, as appropriate)			
<b>e-Research Community Engagement &amp; Support</b>			
<input type="checkbox"/>	Call I – Barriers to Take-Up of e-Infrastructure Services	<input type="checkbox"/>	Call II – Support for Research: Tools & Standards
<input type="checkbox"/>		<input type="checkbox"/>	Call III – Use Cases and Service Usage Models
<b>e-Infrastructure Security</b>		<b>Knowledge Organisation and Semantic Services</b>	
	<b>Call IV – Federated Tools and Services</b>  <input type="checkbox"/> a) Integration of Grid and Shibboleth <input type="checkbox"/> b) Developing and Applying n-tier Web Service Architectures <input type="checkbox"/> c) Applying existing virtual home for identity solutions		<b>Call V – Virtual Organisation Management Tools and Services</b>  <input checked="" type="checkbox"/> a) Tools for the establishment of VOs <input type="checkbox"/> b) Services and UIs for management of VOs <input type="checkbox"/> c) Federation membership models for VOs <input type="checkbox"/> d) Delegated authorisation
			<b>Call VI – Semantically Coordinating Resources and Services Across Registries</b>  <input type="checkbox"/> a) Area A – integration of Resources and Services from Existing JISC Services <input type="checkbox"/> b) Area B – Metadata for Services, Data, and Published Literature
<b>Name of Lead Institution:</b> Cardiff University			
<b>Name of Proposed Project:</b> Cuckoo Project (Cardiff University collaboration with KC-ROLO Organisational Objects)			
<b>Name(s) of Project Partner(s):</b> Cardiff University Kidderminster College KC-ROLO			
<b>Full Contact Details for Primary Contact:</b> <b>Name:</b> Joan Wright <b>Position:</b> Project Director <b>Email:</b> wright@cardiff.ac.uk <b>Address:</b> Information Services, Cardiff University, 39-41 Park Place, Cardiff, CF10 3BB. <b>Tel:</b> 029 2087 4496 <b>Fax:</b> 029 2087 4285			
<b>Length of Project:</b> 24 Months			
<b>Project Start Date:</b> 1 <sup>st</sup> March 2007		<b>Project End Date:</b> 1 <sup>st</sup> March 2009	
<b>Total Funding Requested from JISC:</b> £99,922			

<b>Funding Broken Down over Financial Years (Aug - July):</b>		
<b>Mar 06 – July 07</b>	<b>Aug07 – July 08</b>	<b>Aug 08– Feb09</b>
<b>£22,304.53</b>	<b>£49,710.76</b>	<b>£28,106.45</b>
<b>Total Institutional Contributions: £46,200</b>		
<b>Percentage Contributions over the Life of the Project:</b>	<b>JISC 51%</b>	<b>PARTNERS 49%</b>
<b>Outline Project Description</b>		
<p>Core middleware services such as identity management, directory, and authentication provide a foundation for secure, manageable applications throughout an institution/federation.</p> <p>However, with most institutional community collaborations, user confidentiality is a concern which presents a real problem to Virtual Organisations (VO’s). Members could belong to more than one real organisation; such as Foundation Degree students within the HE-FE environment, who would move in and out of the federated structure. Wishing to share resources across these HE-FE institutional boundaries often raises problematic security difficulties as VO membership may be more (or indeed less formal) in a HE-FE environment. With the JISC launching its UK Federated Access Management for HE and FE in July 2008, VO’s could play a significant part in allowing access to what could be called a non-traditional institutional access route. With this in mind, the CUCKOO project proposes to research, develop and report on what the future holds for VO’s in this type of environment. The project will have two distinct phases:</p> <p>Phase one of the project will consolidate and review existing national and international tools for the establishment and developments of Virtual Organisations (VO’s), such as myVocs, Grouper and Signet. This will be achieved by researching, demonstrating, and producing papers/reports on how these tools and developments work in the real world of HE – FE. This will involve working with the community who would <i>really</i> benefit from the UK Federated Access Management structure – students and institutional staff.</p> <p>The second phase will deal with the arrival of SAML 2.0 and the potential new capabilities of Shibboleth within Virtual Organisations; not forgetting that the UK Federated Access Management will stay with Shibboleth 1.3 for some time. With the Shibboleth mantra of “open source, open standards, and open architectures”, we will explore how these new VO tools and developments aid or hinder these cross-collaborative HE-FE environments. Will they provide the most compatible, secure, and flexible access regarding shared collaborative resources, sharing via portal entrances (SSO) and Federated Access? Previous research from phase one of the projects will be vital in accessing and reporting back to the HE-FE lead bodies, having compared VO tools within Shibboleth 1.3 and Shibboleth 2.0 plus the various requirements and scenarios to provide solutions for institutions.</p>		
<b>I have looked at the example FOI form at Appendix A and included an FOI form in the attached bid (Tick Box)</b>	<b>YES</b> ✓	<b>NO</b>
<b>I have read the Circular and associated Terms and Conditions of Grant at Appendix B (Tick Box)</b>	<b>YES</b> ✓	<b>NO</b>

There is no information in the bid that we would want withholding under freedom of Information.

# THE CUCKOO PROJECT

*(Cuculus canorus)*

## Introduction

### Background

Cardiff University and Kidderminster College have been very active over the past three years in Shibboleth development and research.

**Cardiff University (CU)** is a major user of Identity Management (IDM) systems: the second phase of a two phase IDM project has just reached completion. Phase one produced a system designed to be flexible and extensible, is connected to major business systems, and proved of great value to CU. Phase two introduced new features, and reworking some existing components given experience gained from the phase one. This already extensive understanding of IDM within CU allows us to be able to comprehensively identify and understand core issues surrounding IDM; and how IDM issues brought about by forming Virtual Organisations can be effectively solved.

The success of the JISC funded Shibboleth early-adopter “ASMIMA” project has given CU extensive experience with Federated Access Management (FAM). “The Identity Project”, a JISC funded project in collaboration with the London School of Economics, is currently investigating IDM across the UK academic world, looking at intra, and inter, institutional requirements of IDM. As Virtual Organisations are an aspect of inter-institutional management of identity and access; this proposed project gels quite neatly with the existing work being done and can offer an additional viewpoint.

Personnel of CU that were a core part of the team in making the ASMIMA project a success, and that are currently engaged in assuring “The Identity Project” is equally a success, are also key personnel within this proposal, thus bringing to this proposal the extensive experience acquired of managing JISC funded projects; both administratively and technically.

Cardiff University is also just embarking upon a strong relationship with IBM. CU is in the process of implementing the Modern Working Environment programme, involving implementing WebSphere Portal, Lotus Notes, Quickplace, Sametime, and many other technologies. CU can provide access to these cutting edge technologies to the project, thus giving an additional aspect of tools to research.

**Kidderminster College (KC-ROLO)** have also managed a very successful JISC projects (JISC Core Middleware funded project 2004-2006) which the project is still called upon to give fully functional demonstrations to the HE and FE communities regards to Shibboleth and Access Management. With JISC not funding Athens from July 2008, institutions are looking at the strategic move to the UK Federated Access Management.

KC-ROLO astonished the JISC Core Middleware Programme Team by having a Shibboleth demonstrator up and running so quickly. Renowned as “doers” in the HE-FE Shibboleth environments, helping College in the installation of IDM systems a report on their findings “Shibboleth in FE” can be seen on the MATU website.

The project team have also been involved in a number of other JISC projects namely:

- JISC WMSHare Project 2005 -2006  
This project is looked into producing a framework for promoting the use of shared digital resources in FE and HE institutions across the West Midlands, by making them available online using Digital Repository software.
- JISC ePistle Project 2005 -2006  
The ePistle project investigated the potential of ePortfolio use for student retention and progression in the catchment area of the University of Wolverhampton. It created the opportunity for groups of students from two local schools and three Further Education colleges to use an ePortfolio system. Kidderminster College were heavily involved in the installation and supporting Shibboleth in these institutions.
- JISC MLE Project 2003 – 2004  
This project addresses the e-learning needs of higher education students in the area of Foundation Degrees. The demands of providing a challenging yet supportive learning environment for Foundation Degree students, this project identified tested and evaluated ways to improve the use of a Managed Learning Environment to provide effective delivery of Foundation Degrees.
- HEFCE funded Shared E-Learning Project 2004 – ongoing  
This projects aim is to provide resources across a group of partner colleges to help work together to develop online learning and the use of learning technology for the HE students.



**Aims and Objectives**

The aim of the project is to research implement/demonstrate Shibboleth Virtual Organisations (VO's) and on-line collaboration tools. Building on and incorporating work already done, such as attribute release policies mapping (ShARPE) and MyVOCS. The project will research into how SAML 2.0 will affect these tools and solutions.

VO tools and concepts in place by other projects will be relevant, as time re-inventing the wheel is not favoured. A project such as ShARPE's whose aim was to manage the creation and maintenance of user's attributes by Attribute Release Policy (ARP) mechanism bolted on to Shibboleth. This will be a starting point as user privacy is vital in the Identity Provider (IdP) and gaining resources on the Service Provider (SP).

Within the HE-FE environment the mapping of attributes from different schemas can be problematic and complex will SAML 2.0 overcome these issues. These are some of the research and reports to the HE-FE communities.

Tools are essential to a Virtual Organisation, which if wrongly selected can quickly slow down its creation. Collaborations are hampered when there is no single tool or site that can satisfy all requirements and the quality of collaboration suffers. Highlighting the difficult problems of tool selection, identity management and access control in both Shibboleth 1.3 and Shibboleth 2.0

Within Virtual Organisation creating, managing, and supporting groups can be challenging. Open source toolkit such as **Grouper** is designed to function as the core element of a common infrastructure for managing group information across integrated applications and repositories. The project will research and report on these authorisation and service provisioning decisions, issues such as allowing portals to personalise content and provide role information to applications.

Managing permissions and access control in a HE-FE environment can be a headache; **Signet** provides a framework for transforming process and polices into rules that govern access to systems. What are the issues in managing rules, will organisations be sure that users only have access to those services they are should have access to.

The project will produce some development by looking at simplifying the VO process (See figure 2) giving a scalable platform for what I would call non traditional organisations who might be interested in purchasing/sharing content. Widening the access to other organisations such as SWITCH would also benefit.

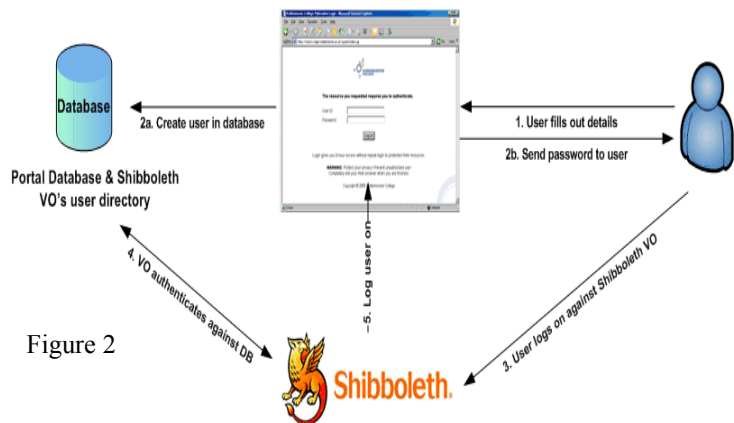


Figure 2

**VO Service Provider with Middleware-Enabled Applications**

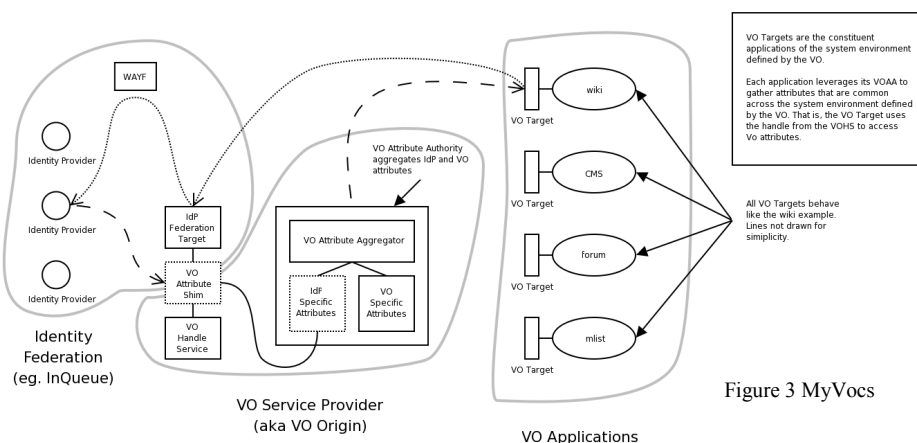


Figure 3 MyVocs

The MyVOCS project addressed some of the concerns that institutions have with confidentiality of users.

Concerns such as VO components, how integrated should VOs be with the Institutions and requirements in shared collective interests.

## Project Methodology

With regards to hardware infrastructure, Infrastructure purchased with JISC 01/04 Core Middleware funding is in place at Kidderminster College. This infrastructure is still relatively new and therefore the KC-ROLO Development team require no additional hardware. There is over three years worth of Shibboleth skills throughout the project team which has been recognised by JISC and MATU in providing them with live IDM presentations over the past two years.

Regarding VO tools and development, groups of institution staff and students through various selected HE-FE communities will be invited to try out these tools and gain access to resources via CU's portal or ShARPE's "Attribute Release Policy" interface to resources such as open source repository, Moodle VLE, Wikis and Forums, The findings from this research will be fed into reports and papers produced by the project for the academic communities. We feel this will benefit both HE and FE sectors that ultimately will use UK Federated Access. This will take place over the first nine months of the project, thereafter Shibboleth SAML 2.0 research with the same tools will commence.

## Project Management

There will be two partners in this project: **Cardiff University and Kidderminster College (KC-ROLO)**

Kidderminster College, who will do most of the project work, we have a Project Development team in place consisting of a Project Manager, Senior Project Programmer, Junior Project programmer and project administrator (Administrator will be provided as a consortia contribution to the project). This successful project team has been in place since the start of the core middleware project call 01/04. Although we have finished that phase of the project, we have been busy researching and carrying out shibboleth installations and demonstration on behalf of JISC and interested clients, finance from the Shibboleth and VLE installation work and a contribution from the college has enable us to stay active and ready to progress in the area of VO's and SAML 2.0.

Cardiff University will provide the Project Director and their expertise at managing both technical and financial aspects of JISC funded projects.

## Core Project Management Team

Ms Joan Wright	Project Director
Mr Graham Mason	Project Manager
Mr Ed Beddows	Senior Project Developer
Mr Anthony Williams	Junior Project Developer
Provided By KC	Project Administrator

## Outline Project Timetable

### Phase 1: consolidate and review existing national and international developments

Phase one of the projects will start in March 2007 and be completed by November 2007 with a review of the tools and projects that have implemented VO's. Selection of participating organisations will be briefed and installation of the various tools. User will use these access routes to gain access to resources such as Moodle VLE, repositories, Wiki's and Forums. Data will be collated and paper/reports drafted. Invite other organisations such as SWITCH, UK Federated Access Management to access these resources.

### Phase 2: Research the potentials of Shibboleth SAM 2.0 and its capabilities within VO's

Phase 2 of the project (November 07 – February 09) will focus on dealing with the SAML 2.0 and the potential new capabilities of Shibboleth 2 within Virtual Organisation. The project will spend sometime researching and implementing Shibboleth 2 within the consortium institutions and upgrading/documenting the Shibboleth infrastructure. Once this as been completed we will review the same tools with the same organisations and review how this time they access the same resources. This will compare and contrast VO tools and giving valuable data, reports and papers to HE-FE communities. This will be passed onto the JISC and the UK Federated Access Management.

**Timetable of activities (start-month) & deliverables (due month)**

Timeline		2007										2008										2009			
WP		M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
1	Project Start-up																								
2	Survey of existing VO's and selection linking with DyVose																								
3	VO Tools Selection																								
4	Grouper VO Tool																								
5	Signet VO Tool																								
6	Implementation of VO tools working with SWITCH and Demonstrators																								
7	Evaluate & report From tools																								
8	SAML 2.0 install & report																								
9	Implementation of selected VO tools																								
10	Dissemination																								
11	final report																								

**Project Deliverables**

**WP1: Project Start-up**

This Work package sees the start of the project administration, issues such as, Project Plan, website creation and the selection of Steering/Executive group.

**Deliverables**

- Web page on JISC and/or project site
- Project Plan

**WP2: Survey of current Virtual Organisational practice within the UK and other areas**

This Work Package will seek to build a picture of current VO Tool practice across the UK academic sector and our neighbours in Europe. It will include a full survey of current institutional practice with VO tools and the pedagogy behind the user interaction. Review of VO projects findings of research into available literature and online information, from projects worldwide in academic, government and commercial sectors that are dealing with similar technologies and management issues.

At CU we already have a lot of experience of integrating many data authorities (different corporate systems) into an IDM solution; and in accomplishing sympathetic change management within the organisation to enable these changes to be implemented effectively. These areas are important as IDM systems rely on accurate and timely data coming from the data authorities. This already extensive expertise in these areas enables us to quickly identify and document these core issues, and move to investigate more advanced issues.

The data gathered from research will be accomplished through use of our expertise in the area of IDM to create a questionnaire (or similar) designed to survey current institutional thought and practice around VO tools. We will issue this to as wide a range and as large a number of institutions as realistically feasible. The data gathered will give us a large breadth of information about current IDM VO practice across the whole academic sector.

Given the information gathered in the above task, we will next identify a subset of institutions that are representative and would be willing to access resources via VO tools. We will investigate these further through direct interaction with members of each institution. The data gathered here will give us an increased depth of understanding about current VO practice across a range of institutions and in Europe (SWITCH).

**Deliverables**

- Update section of the project website relating to this work package;
- Report on current state of VO tools in UK academic institutions and Europe (SWITCH)

**WP3: Virtual Organisational Tools and their selection**

This Work Package will be managed and supported by the ICT Dev Team (KC-ROLO). Tools in VO can play a role in the functionality of an institution's access to resources. We will select a suite of tools that are currently being or have been tested and approved by the Internet2 community. The project will be taking into consideration the work that other projects within the UK and Worldwide have been using some, whether it is PERMIS or just a simple e-mail tool such as Sympa. This will take place over several Work packages as each tool will need to be assessed.

**Deliverables**

- Wiki; opened to wider community
- Detail research on the JISC project and Selection
- Project paper and report on findings
- Link with SWITCH and other projects

**WP4: Virtual Organisational Tools “Grouper VO Tool”**

First of the selected tools is “Grouper”. Grouper being Group Management Toolkit, the ICT Dev team will enable both automated and manual mechanisms for assigning users to groups. Entry via Grouper can be complex as issues such as a user's institution and their association, status, or relevant roles within the HE-FE community. Reporting back to the HE-FE communities on issues such as what support is needed, ease of use and the expense.

**Deliverables**

- Wiki; opened to wider community
- Update Website
- Detail Grouper tool research
- Project paper and report on findings
- Link with SWITCH and other projects

**WP5: Virtual Organisational Tools “Signet VO Tool”**

Second of the selected tools is “Signet”. Signet is a privilege management system, which centralises user's privileges across a wide range of applications. ICT Dev team have created a module that links Shibboleth with an Institution MIS/CIS system, using Signet to link in via Active Directory and the Signet interface. CU Portal entrance to applications would test the feasibility of such an activity to gain access to applications. As with Grouper this WP reporting back to the HE-FE communities on issues such as what support, is needed ease of use and the expense.

**Deliverables**

- Wiki; opened to wider community
- Update Website
- Detail Signet tool research
- Project paper and report on findings
- Link with SWITCH and other projects

**WP6: Virtual Organisational Tools “Signet and Grouper”**

Having gained data from WP 3 & WP4, this WP would see the combination of both tools. This is how it was intended by Internet2 developers. Research would advise communities within the academic environment if this is the best possible approach. Tools developed by SHARPE and their Attribute Release Policy (ARP) interface mechanism will be used to evaluate and contrast the real World situation. DyVose project with PERMIS achieves this in some ways but linking in to Moodle VLE and a Repository that has been Shibbed will be tested for a demonstrator i.e. working model. Reviewing the concerns that the MyVOCS project addressed, issues relating to institutional confidentiality of users and VO components

**Deliverables**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>● Wiki; opened to wider community</li> <li>● Update Website</li> <li>● Signet and Grouper combination and the components</li> <li>● VLE and Repository ARP's</li> </ul> | <ul style="list-style-type: none"> <li>● Portal entrance to applications</li> <li>● Project paper and report on findings</li> <li>● Link with SWITCH and other projects</li> </ul> |
|--|--|

**WP7: Virtual Organisational Tools Evaluation and reports/papers**

This WP sees all first phase project work come together in a research package that will move us forward into the next phase of the project. Vital data will be useful to compare and contrast the VO tools. In phase 1 we will be using Shibboleth 1.3f which will be the preferred Shibboleth version for the Federated Access Management. Feedback from our European colleagues at SWITCH will look in the future for VO's and SAML 2.0.

**Deliverables**

- Wiki; opened to wider community
- Update Website
- Project paper and report on findings
- Link with SWITCH and other projects
- 

**WP8: SAML 2.0 install and test**

This Work package moves the project into phase 2. Starting with the installation of Shibboleth 2 and reviewing the MAMS project and their advancement in SAML 2. This WP will be carried out by ICT Dev team although CU is looking to upgrade to SAML 2.0. Documentation and demonstrators will see the new functionality of SAML 2.0

**Deliverables**

- Wiki; opened to wider community
- SAML 2.0 and documentation
- Project paper and report on findings. Feedback to the UK FAM
- Link with SWITCH, MAMS and other projects with SAML 2.0

**WP9: SAML 2.0 and Virtual Organisational Tools “Signet and Grouper”**

This Work package will implement the same VO tools (Signet & Grouper) that were used with Shibboleth 1.3f and see the difference in Shibboleth 2

**Deliverables**

- Wiki; opened to wider community
- Update Website
- Signet and Grouper combination and the components with SAML 2
- VLE and Repository ARP's
- Portal entrance to applications
- Project paper and report on findings
- Link with SWITCH, MAMS and other projects with SAML 2.0

**WP10: Dissemination and demonstrators**

This WP sees the project give practical examples to the HE-FE communities. These would be carried out on behalf of JISC where previous live demonstration by the KC-ROLO project and Cardiff University has been very valuable.

**Deliverables**

- Wiki; opened to wider community
- SAML 2.0 Demonstrator with VO tools. On the road conferences.
- Project paper and report on findings. Feedback to the UK FAM
- Link with SWITCH, MAMS and other projects with SAML 2.0

**WP11: Final Project Report**

This WP see the end of the project however sustainability built-in by both institutions will see this work carry on. Final Paper to the HE-FE communities will give much gained knowledge to JISC and the UK FAM.

**Deliverables**

- Wiki; opened to wider community
- Website final update and archive
- Final report
- Project paper and report on findings. Feedback to the UK FAM
- Feedback to SWITCH, MAMS and other projects with SAML 2.0

**Project Governance and Evaluation**

An Operational Working Group comprising representatives from all project organisations and we will try and get a representative from SWITCH involved in the CUCKOO Project, with invited representatives of academic staff and end-users, will meet monthly (at least in the first 12-month phase of the project) to review progress against the plan and timetable, and authorise changes to the plan where necessary. Records of these meetings will be circulated internally on the website to all interested parties via the WIKI. We can also be made available to specific JISC programme management staff.

An institutional Project Steering Committee to be chaired by Senior Manager will provide high-level oversight of the project, and will meet once each academic term. A JISC representative will be invited to join the Steering Committee, and invitations will also be made to end-user representatives and to interested parties from at least two other HE-FE institutions, to assist in monitoring the portability of models and tools developed by the CUCKOO project.

In addition to these formal structures, it is anticipated that staff involved in the project will maintain close contact with, and seek advice from appropriate JISC staff, and liaise with other relevant JISC projects to ensure that the project is continuing to adopt or develop technical models and standards that will be applicable to the whole of the HE-FE community.

**Dissemination**

Apart from publication of the formal deliverables, the CUCKOO project team will actively seek opportunities to disseminate information and experience from the project, in presentations and publications aimed at appropriate target audiences. All of the key personnel to be involved are experienced speakers and writers, and are active in cross-organisational dialogue with their professional peers.

Previous national projects in which the project team members have played a lead role have impressive track records of dissemination: The KC-ROLO Project and the Cardiff ASIMA Project been invited to demonstrate live use of Shibboleth and pass-on their extensive experience at JISC, MATU and ALT conferences.

**Outcomes and benefits**

The major outcome of the project will be the principal deliverable described in WP2, WP6 WP7, WP8, and WP9, the website which describes in detail the research carried out throughout all work packages, and the results obtained from that research. This should provide a clear basis for future work by JISC and others in the sphere of Identity Management and VO tools.

We see that most of deliverables will be designed for potential re-use by other members of the community (and will be clearly marked out as such):

- The technology briefings will help those who wish to find clear and impartial information about the benefits and drawbacks of technical solutions for VO tools.
- The reports and papers will provide information of use to similar institutions across the HE-FE communities and the UK FAM.

Outcomes of the project will see involvement of key staff at each of the project partners with increase the growth of the Shibboleth community of UK HE-FE staff who will be aware of the strategic and technical issues of next-generation identity and access management and VO tools.

**Risks**

Forecasting some of the major risk that could hinder the project has been taken in to consideration.

Table 1 Main risks to the successful completion of the project

<b>Risk</b>	<b>Prob (1-5)</b>	<b>Severity (1-5)</b>	<b>P x S</b>	<b>Action to Prevent/Manage Risk</b>
Technical Failure with VO tools	2	2	4	Whilst Grouper and Signet are still in production and with any open source product is not documented. It could hold-up the timeline of the project and add to a delay.
Late or no release of SAML 2.0	2	2	4	SAML 2.0 launch date has been put back to February 2007, although this is not a problem for the project as the SAML 2.0 Work package is not due to start until September 07. The launch of SAML 2.0 has been put back before so there could be a possibility of another delay, therefore putting back the start date of the SAML Work package. One of the main aims of the project are to compare and contrast VO tools in 1.3 and 2.0.
Staffing and personnel loss	2	2	4	The project team has now been together for over three years and has strength in depth with full institutional support.
Loss of Project Director and Project Manager	2	2	4	Project Director and Project Managers both hold a senior position within their respective institutions; this is unlikely to arise as an issue.
Consortium brake-up	1	4	5	We feel is highly unlikely as both institutions are committed to the development of Shibboleth within the Federated Access Management model.

**Institutional Benefits**

This project will allow for situated research and development at both institutions to lead to a better quality of Shibboleth Services. The experience and tools which are to be developed are expected to have exceptionally wide application for both HE-FE environments. KC-ROLO provides institutional installations of Shibboleth and annual technical support this service enable institutions to access the UK Federation Access to resources. Cardiff University are developing IBM Portal for all resources and applications tools developed will also be of interest to professional and accrediting bodies.

**Key Personnel****Project Director Ms Joan Wright:**

Joan Wright is Principal Consultant for Strategy, Projects and Liaison; manager of Cardiff University's Identity Management System, was Project Manager for the JISC funded ASMIMA project and is Project Manager for the current JISC Funded "The Identity Project".

**Project Manager Graham Mason BSc. (Hons) CertEd**

Graham Mason having a career in Computer Engineering and teaching in the Independent Sector, moved to Kidderminster College in 2002 as Head of ICT. Graham not only runs a busy ICT Department at the college, but also leads open source research and development projects. At present is Project Manager of the **JISC KC-ROLO Project** (Kidderminster College –repository of Learning Objects), a **JISC Core Middleware funded project 2004-2006**.

## Budget

### JISC Cost by Academic Year (All Prices Inc VAT)

ITEM	Year 2006/07 Mar - Apr (1)	Year 2007/08 Apr- Mar(12)	Year 2008/09 Apr- Mar (11)	Total Over the Life of the Project (24)
<b>Project staff costs. JISC Contribution Required</b>				
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<b>Total Staff Costs</b>	<b>£4,034.23</b>	<b>£48,410.76</b>	<b>£44,376.74</b>	<b>£96,822</b>
<b>Non-Staff Costs</b>				
Travel & Subsistence (meetings, research, best practice, etc)	Nil	£1,100	£1,100	£2,200
Dissemination costs (design, print, distribution)	Nil	£400	£500	£900
<b>Total Non-Staff Costs</b>	<b>£ Nil</b>	<b>£1,500</b>	<b>£1,600</b>	<b>£3,100</b>
<b>Grand Total</b>	<b>£4,034.23</b>	<b>£49,910.76</b>	<b>£45,976.74</b>	<b>£99,922</b>
<b>Contribution by Project Consortia</b>				
Project Administrator (0.2 Fraction)	£400	£4,800	£4,400	£9,600
Secretarial support	£106.25	£1,274	£1,168.75	£2,549
HR and Financial Administration	£62.50	£750	£687.50	£1,500
Website Implementation / updates	£400	£250	£250	£900
<b>Staff Costs Total</b>	<b>£968.75</b>	<b>£7,074.00</b>	<b>£6,506.25</b>	<b>£14,549</b>
<b>Non-Staff Costs</b>				
Overheads for Project /Accommodation Offices/ P.C. Equipment/heating/Lighting	£600	£7,200	£6,600	£14,400
Accommodation Meeting/training Rooms	£600	£2,400	£2,200	£5,200
Evaluation Activities i.e. input by testers	£400	£4,800	£4,400	£9,600
Hardware Servers and Network support	£600	£2,400	£2,000	£5,000
Postal/Telephone costs	£250	£450	£300	£1,000
<b>Total Non-Staff Costs</b>	<b>£2,450</b>	<b>£17,250</b>	<b>£15,500</b>	<b>£35,200</b>
<b>Grand Total</b>	<b>£3,418.75</b>	<b>£24,324.00</b>	<b>£22,006</b>	<b>£49,749</b>