

An evaluation of the JORUM Set Up and Launch Project

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To

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1. Introduction

This evaluation report has been commissioned by Moira Massey EDINA Learning and Teaching Co-ordinator and JORUM Manager at EDINA at the University of Edinburgh on behalf of the Jorum Set Up and Launch Project. The evaluation fulfils a commitment for evaluation set out in the Workplan delivered to JISC (Joint Information Systems Committee).

JORUM (<http://www.jorum.ac.uk/>) will be a free online repository service for teaching and support staff in UK Further and Higher Education Institutions, helping to build a community for sharing, reuse and repurposing of learning and teaching materials. The JORUM Set Up and Launch project was funded to develop and launch the JORUM service to the higher education and further education community in the UK. JORUM has been developed to be a component of the JISC Information Environment (IE) and interoperable with other services within it.

The evaluation was conducted by Pete Dalton and Sukhvinder Chima of evidence base research and evaluation at the University of Central England during August and September 2005. This report provides an evaluation of the JORUM project as it reaches the end of its duration.

The table below sets out the evaluation plan as detailed in the original JORUM Set Up and Launch Project Plan V 3.

Factor to Evaluate	Questions to Address	Method(s)	Measure of Success
Assess progress of the project	<p>Are the objectives of the project clear?</p> <p>Is the project producing the promised deliverables?</p> <p>Are the milestones being met?</p> <p>Has the project engaged its stakeholders?</p> <p>Has the project been managed effectively?</p>	<p>Review of project literature</p> <p>Discussions with project staff</p> <p>Discussions with project stakeholders</p>	<p>Project literature clear</p> <p>Deliverables being met</p> <p>Milestones being met</p> <p>Stakeholders report being engaged with the project</p> <p>Stakeholders report effective project management</p>
Discover if end user needs are being met	<p>How is the project involving end users?</p> <p>Are there effective mechanisms for the gathering of requirements from end users?</p> <p>Are there effective mechanisms for translating requirements into workable solutions?</p>	<p>Discussions with early adopters, project staff, and vendor of repository system</p>	<p>Early adopters report satisfaction with requirements gathering process</p> <p>Early adopters report satisfaction with system functionality and interface usability</p>
To discover whether the JORUM service is likely to be taken up by institutions	<p>How is the Set-up project approaching institutions and are its methods effective?</p> <p>Are institutions indicating interest in subscribing to the JORUM service?</p>	<p>Review of project documents and discussion with project staff; outcomes of surveys and contacts made with institutions</p>	<p>Institutions indicating that they are interested in subscribing to the JORUM service</p>
To discover whether projects and institutions are interested in depositing in JORUM	<p>How is the Set-up project team approaching this task and are its methods effective?</p> <p>Are institutions and projects indicating interest in depositing in JORUM?</p>	<p>Review of project documents and discussion with project staff; outcomes of surveys and contacts made with institutions and projects</p>	<p>Institutions and projects indicating interest in depositing in JORUM</p> <p>Numbers of project teams and/or institutions actually depositing in JORUM</p>

The evaluation has sought to work as closely as possible to this plan and to explore additional themes where these have arisen.

2. Methodology

The evaluation methodology was intended to collect data which reflected the views of a range of stakeholders in the JORUM Set Up and Launch project including those representing both the higher education and further education sectors. Initially the JORUM Team provided a list of possible stakeholders to contact. This was supplemented with suggestions from other participants in the evaluation and the evaluation team themselves. The methods employed consisted of:

- detailed document analysis
- a visit to the JORUM team
- face to face interviews with JORUM team members
- telephone interviews with a range of stakeholders (using an open ended set of themes relevant to each particular stakeholder).

Each of these activities is described in greater detail below.

2.1. Document analysis

Project documentation from a variety of sources was analysed. This included:

- JISC tender documents
- Project proposal
- Project plan
- Work packages
- Bi-monthly reports
- Minutes of Steering Group meeting
- Technical documents
- JORUM website materials
- JORUM user guide
- Jorum Set Up and Launch Project completion report

The main aims of document analysis were to:

- Develop a better understanding of the JORUM project and the activities that took place in order to achieve the project aims and objectives
- Understand the project team and their roles
- Follow the progression of the project
- Understand where, why and how problems developed and how they were overcome

2.2. Interviews with the JORUM team

A visit made to the JORUM team in August provided an opportunity to meet the team, interview them as a team and individually and observe a demonstration of the JORUM repository.

The main aims of the interviews and visit were to:

- Identify which of the projects' aims and objectives have been achieved and which had not
- Identify challenges to achieving the projects aims and objectives and how they were overcome

- Allow the JORUM team to elaborate on the range of stakeholders in the project
- Observe the team and reflect on their co-operation and ability to work together
- Investigate individual roles and support received from managers

2.3 Telephone interviews

Telephone interviews were conducted with a range of stakeholders recommended by the JORUM team and supplemented by suggestions from interviewees themselves. In total 22 interviews were conducted excluding the interviews conducted during the visit to the JORUM team. Interviews were conducted with a broad range of respondents including:

- JISC Development Projects & Programme X4L Phase 1 & 2 Project Managers (8)
- X4L/ JORUM Programme Manager (1)
- Steering Group members (2)
- Early Adopters (1)
- HEA (Higher Education Academy) (3)
- Regional Support Centres (2)
- RDN (Resource Discovery Network) (1)
- X4L Steering Group (1)
- INTRALLECT - Software Vendor (1)
- JISC Data Centre Manager (1)
- JISC Communications Manager (1)

Other external stakeholders who did not participate in this evaluation included TECHDIS, JISC Legal, Netskills, Becta, Ferl, AHDS, UKOLN and NILTA.

These interviews provided valuable wider perspectives on the Jorum Set Up and Launch Project.

It should be noted that although the JORUM developments had been underway prior to the period of the Set Up and Launch project and that a parallel Jorum Research and Development Project was underway in parallel, the focus of this evaluation was on the Set Up and Launch Project which ran from 1st August 2004 – 31st July 2005.

This report assume that the work on JORUM launch and development will be continued as part of the JORUM Service in Development proposal which has been developed by the current JORUM team and the EDINA and MIMAS data centre directors.

2.4 Limitations of the evaluation

A number of constraints on the evaluation should be noted:

- The evaluation was commissioned at fairly short notice and with a relatively short timescale in which to produce the report. In addition the bulk of the data collection was conducted over the summer period. As a result, although the evaluation team endeavoured to speak to all of the potential interviewees identified, in practice, three-quarters of those identified for interview provided evaluation data.

- It had been hoped to supplement the data collected with reflection on, and possible contact with, respondents to the survey of potential users that the JORUM Set Up and Launch project had intended to undertake. However, as the JORUM service was not launched and the project survey had not been distributed by the time of the evaluation, this was not possible. The main 'end-user' feedback therefore comes from interviews with X4L programme project representatives. It should also be noted that some X4L projects and early adopters were not ready to use the system and were therefore unable to comment on functionality and potential of the system in as much detail as might have been hoped. This was due to factors such as the timescales of particular X4L projects not meeting those of the JORUM Set Up and Launch project.

2.5 Report structure

The data is presented in the following four sections in a format which corresponds as closely as possible to the format of the JORUM Set Up and Launch evaluation plan.

3. Project progress

The following section provides an evaluation of the progress of the project over its twelve-month duration.

3.1. Aims and Objectives of the JORUM Set Up and Launch Project

The Jorum Set Up and Launch project had the following aim:

To undertake the work necessary to establish and launch the national JORUM service to all Further and Higher Education Institutions in the UK that wish to take the service from August 2005.

In order to meet this aim the project had the following objectives:

- 1) *Produce a working, appropriately customised repository system capable of receiving deposits by staff in subscribing F/HEIs of learning and teaching materials, and allowing their download for sharing, re-use and re-purposing across the F/HE sector;*
- 2) *Establish appropriate workflow and service models and procedures, in discussion with community and institutional representatives;*
- 3) *Work with intermediary organisations, such as the HE Academy and Regional Support Centres, and early adopters to obtain deposit of suitable materials and production of an appropriate promotional strategy for the JORUM service;*
- 4) *Put in place appropriate procedures for assisting staff with deposits and downloading of materials.*

The evaluation team consider that the aims and objectives of the JORUM Set Up and Launch Project were clear, although it is worth noting that there was a degree of complexity underlying the achievement of some of the specific objectives.

At the end of the project the overall aim to launch the service had not been achieved, however, considerable progress had been made to meet the objectives set out above. An examination of the key aspects of the projects progress against these aims and objectives is set out below.

3.2 Objective 1

Produce a working, appropriately customised repository system capable of receiving deposits by staff in subscribing F/HEIs of learning and teaching materials, and allowing their download for sharing, re-use and re-purposing across the F/HE sector

3.2.1. System and software

Developing the JORUM software system was the key feature that arose from the evaluation in relation to this objective.

Although the procurement process had been commenced before the Jorum Set Up and Launch phase, it provides some useful context for this evaluation.

Procurement was undertaken in line with strict EU procurement rules. The process was complex and took considerable time and provided quite a learning curve for the JORUM team. One respondent commented:

.....the team had learned a lot through going through this process.

As a result of the procurement exercise Intrallect was awarded the contract their tender was, across the range of evaluation criteria used to assess the tenders, the:

... best available at the time within the funding available from JISC.

The issue of the development of the repository system for JORUM and its delivery was considered to be the most challenging aspect of the project and for most was considered to have had the most impact on not achieving the aim of launching the service in August 2005.

Although only limited data pertaining to this aspect was collected from a narrow group of stakeholders, some interviewees wondered whether a more robust contractual arrangement should have been established with Intrallect at the outset, for example:

In hindsight the project plan seems weak in that it did not have anything in there about how to deal with delays to getting the software.

However, the JORUM team pointed out that delays with getting the software were included in the project plan as a key risk and the JISC was informed by the Project Directors at the Steering Group that this was a key risk that could affect dates of launch of service.

In addition, the contract contained the legal phrase, “Time shall be of the essence of the Contract”, indicating that it was open to the universities and JISC to cancel the contract and seek damages, on the basis of the inclusion of this clause, as soon as Intrallect failed to deliver an acceptable system.¹ Intrallect is a small company and it may have been difficult for them to move from being a company acting as project consultants to acting in a more formal relationship as commercial suppliers. In addition, a small company may have a limited ability to devote additional staffing resources to a project to speed up the development process at key points, as the vendor recognised:

We’ve got fixed resources, so it is time that has moved a bit.

The fact that Intrallect is linked to the University of Edinburgh and that some of the JORUM team has had dealings with them previously in other capacities (not as client and vendor) may have led to the nature of the client /vendor relationship being less clear.

Although there was a slight delay by Intrallect in delivering version 2.3. of the system one of the key challenges lay in the extent to which the system was tested to meet the expectations of the data centres. The data centres expected the vendor to do load testing and performance testing prior to delivering the system but the vendor was not always clear about the performance requirements of the systems stating that:

.....this highlighted the fact that none of us had really specified any performance criteria²

¹ In relation to the cancellation of the contract, the JORUM team wanted it to be made clear that The Project Directors and JISC discussed cancellation of the contract, but decided not to do this, because of impact on service delivery dates. Options included a further procurement exercise, or development of software at the data centres, but were rejected on the grounds that there would be long delays in delivery of JORUM to the community, and it seemed a better option to give every assistance to Intrallect from the data centres to understand what were the performance issues with their software and give them time to develop version 2.4. The Project Directors and managers have withheld the 10% due on delivery of the “service-ready system” until delivery of an acceptable system.

² The JORUM team believe that load testing and performance testing prior to delivery would be normal practice when buying in a system to form the basis of a service. A system must meet “fit for purpose” requirements under contract law. The acceptance tests concentrated on functionality because a vendor would be expected to have undertaken performance tests and not supply a system that was not fit for purpose. They further commented that Intrallect committed themselves in the contract to supporting our delivery platform. They failed to run tests on the platform prior to delivery of the software to the data centre. It was open to them to hire a test suite at Sun that would have directly replicated our server, but this was not done.

The problem was exacerbated by the fact the Intrallect is a small vendor with limited resources available to devote to testing. This resulted in problems with the performance and scalability of version 2.3 of the system and as a result changes to the roll out plan for the JORUM service. For example this led to the JORUM team using a previous version of the system in order to allow a platform for X4L projects to deposit in. The JORUM team had to do more testing than they had expected as one team member commented:

.....this aspect of performance testing and scalability testing is something that you would expect the supplier to do.

The vendor acknowledged that:

.....this system is considerably more complex than the previous one and we were slow to recognise this because they [the problems that arose] were more serious on the machine that JORUM was using to deliver the service than they were on any of our test systems.

Another factor to consider was the requirements gathering process. The vendor and the JORUM team had differing opinions regarding whether DRM requirements had in fact changed or whether two separate versions were funded under different contracts. The vendor, perhaps, did not always realise the importance of the JORUM team following JISC direction on this matter. The second DRM version was required to fit with the development of a single contract licence, as required by HEFCE on behalf of the F/HE funding councils in the UK, for the JORUM service.

It is important to reflect on the overall approach to the development of the system that has been taken. The vendor has aimed to take an approach that is more flexible than traditional software development which is based on a fixed set of user needs developed at an early stage and limits flexibility to change direction. The vendor considers that in order to give maximum flexibility they have been using:

.....a shorter iterative cycle, but with much less detailed specification of how it will do all these things.

In a system as complex as JORUM we have found that it has been a tremendous advantage at times as we have come up with ideas and they [JORUM] have come up with ideas that we would have never thought of at the beginning.

However the vendor felt that as a result:

It probably took longer for us (I mean both Intrallect and the JORUM team) to absolutely confirm precisely what functionality we need.....and it has taken us longer to get there than we expected to.

The project team feel that this process has also been to Intrallect's advantage, because they have been able to say what they feel they can and cannot deliver, and the JORUM team have altered in some cases what they really wanted accordingly.

It is likely that this way of working is valuable to deal with the development of a complex system like JORUM, but stands the risk of greater misunderstanding between vendor and client.

In relation to the system development and the use of a third party vendor there were mixed feelings from a range of stakeholders about whether the timescale for delivery was a realistic one in practice. It was generally considered that the work could have been achieved in the timescale outlined at the outset if everything went perfectly according to plan, but that in reality it is likely that there is more of a need for both projects and their funders to allow for some contingency for timescales to change especially when developing something that needs to be responsive to change and gradual iteration and relies on a third party vendor.

The majority of stakeholders interviewed indicated that some slippage in this area was unsurprising and that the issues encountered could be adequately resolved:

The project is preparing to run a major learning object exchange nationally for UK HE and FE and is taking this software out to an audience greater than it was faced with before so there are bound to be, and indeed there are, issues around scalability and usability.

.....the project has met a small delay over technical issues, this is not a huge issue, this thing can be sorted out, I have come across this sort of thing with vendors, and maybe it was to be expected to an extent.

.....they will get over the problems with software one way or another

The deadlines seemed very tight with little margin for error, it would have been a miracle to meet some of these deadlines.

It is clear that this process has generated a great deal of learning and improved understanding from all parties involved that can be brought to future collaborative working. The issue of clarity of communication between and expectations of stakeholders is one emerges from an analysis of the development of the JORUM system and is something that should be strengthened in future interactions.

Currently work is underway by the JORUM team to make clearer the vendor and client relationship and this should be applauded as a way of improving the situation in the future, including the provision of a test harness to enable the vendor and the JORUM team to run performance tests.

3.3. Objective 2

Establish appropriate workflow and service models and procedures, in discussion with community and institutional representatives.

The two key aspects under this objective to emerge from the evaluation related to licensing and metadata.

3.3.1. Licensing

The development of a practical licensing model was an essential component of the Jorum Set Up and Launch Project. It has proved to be an extremely complex task that the project has had to deal with, however, without the development of a licensing model it would not have been possible to begin to realise the outcomes of the project. A great deal of work went into exploring the possible licensing models and developing a license model for JORUM. This involved considerable efforts of a number of stakeholders including the JISC Programme Manager, the JISC Legal Adviser, and the JORUM Team, with additional support from the JISC Development Group and Content Services Group. Clearly this was an area of great importance and priority for JISC.

Initially the JORUM team had hoped to create a licensing system which allowed a great deal of flexibility including for example:

- providing a range of licences which could be tailored to a number of individual circumstances
- individuals to deposit in JORUM where they own the rights in their content
- allowing repurposing of content and redeposit back into JORUM

Early on in the project the decision that the licensee should be HEFCE (Higher Education Funding Council for England) on behalf of the FE and HE funding councils of the UK, rather than an individual HEI resulted in a reduction in the level of risk that could be assumed as HEFCE is unable to take out insurance cover in the same way in which an HEI may do so. In addition, exploration of the topic discovered that it was appropriate that licence agreements were actually signed on behalf of institutions rather than individuals and that generally intellectual property rights resided with institutions rather than with individuals. The limitations that this imposed was clearly a disappointment to the JORUM team who had wanted to develop a more ambitious licensing model. One interviewee commented:

Some of the team may be disappointed that individuals are not able to contribute only institutions, but it is the best they could do.

Whilst another pointed out how the JORUM team had to develop something within the gradually emerging constraints:

The project has dealt with the issue of licensing well and has just had to get on with it – there was little other choice.

It is acknowledged that developing the licence has been a complex and difficult undertaking in itself and it would appear that at the initial stages there may have

been some lack of clarity and communication between the parties (JORUM Team, JISC Programme manager and the solicitor advising HEFCE and the JISC) involved in developing the licensing model in particular in relation to the emerging constraints on the licence.

With the constraints on the initial plans and after undergoing a number of iterations, the JORUM Set Up and Launch Project has managed to develop a single licensing agreement that can be used to underpin the launch of a service and the deposit of content into the repository. The licence must be signed on behalf of an institution. It facilitates downloading of content to the local institution and re-use and re-purposing locally. However, it does not allow re-deposit of content in JORUM. Developing the licence has taken a considerable amount of time on behalf of the JORUM team and others involved.

Despite having a less ambitious licence agreement than originally envisaged, the agreement in place provides a basis on which a functional national repository service can be launched. It is acknowledged by a wide range of stakeholders that the work undertaken on licensing during the JORUM Set Up and licensing project has been worthwhile and dealt with efficiently:

The fact that there is any licence at all is a major achievement.

I think this has been managed exceptionally well under the circumstances, they have shown a degree of dedication that goes well beyond what one might expect from a project team in this sort of circumstance.

The promotion of, and justification for, the licence developed has been a key part of the work of the JORUM Team and has been supported by The JISC Programme Manager at an early stage.

At the time of writing 15 licences; 10 in FE and 5 in HE institutions have been signed. This could be considered to be a success of the project as one interviewee echoed:

Contact with and building confidence of early adopters and X4L projects is a key success and the fact that some licences have been signed.

The reaction of some early adopters and X4L projects is provided in Section 4.3.

It is also worth putting the achievement of the JORUM licence into a wider context when it can be considered to have undertaken groundbreaking work and investigation in this area. One interviewee summed up the positive aspects of the licence agreements in this way:

.....it is in that sense a big success, no-one else in the world is doing large scale repositories which are full text and with third party content included. It is unique in the world and it first to address the licensing issue in this way.

Clearly the process and depth of investigation that the JORUM Set Up and Launch project has undertaken to arrive at a licence has generated a considerable amount of expertise and learning that is of use to the UK education sector and beyond. There is anecdotal evidence that the work done by the JORUM team in this area is being made use of elsewhere. For example, an X4L project has reported using the JORUM licence as a model for another licence developed for another purpose within the institution and there has been interest from other countries in the learning outputs of JORUM. One interviewee summed up this point saying:

.....it is an exemplar part of the project, JORUM can share what it has done and people can learn from it and take the model and use it

There is emerging evidence that the work that JORUM has undertaken on licensing has contributed to stimulating debate in the wider HE and FE community.

The JORUM team have worked hard to support the licence that has been developed. This has included the development of an additional schedule called "Schedule 2", which had not been specified in the project plan and highlighted the team's flexibility and dedication to the project.

A good thing to emerge from the project were the schedules the JORUM team invented and worked up themselves, it was over and above what was expected.

The licence agreement has been developed in light of current constraints and contexts, however it is important that future JORUM service development keeps a watching brief on the possibility for further developing JORUM user and contributor licences in the longer term to discover whether further flexibility can be added. A number of stakeholders have expressed some concern that the licences could possibly act as barrier to the take up of JORUM, so if circumstances change in the future the licence should be amended where appropriate. One interviewee made a comment reflective of a range of respondents where the current constraints on the licence and reasons for the licence were acknowledged, but there was hope for a more flexible arrangement in the future:

I understand completely why they are going to allow things to be downloaded but not redeposited as a new object...that sort of repurposing would be ideal and it is a shame that we have not got to that point yet, but it is a complex area.

3.3.2. Metadata workflow

One of the outcomes of the project was for the JORUM Set Up and Launch project to develop a suitable metadata workflow model. Initially progress on this aspect was delayed as it was intended that this would be informed by a study undertaken by the Centre for Digital Library Research at the University of Strathclyde. However, it became apparent after a four month delay that this report was not going to be forthcoming and the JORUM Set Up and Launch team had to revise their plans and develop a suitable model through other means. During the year, the JORUM team had been actively engaged with X4L projects and some early adopters in a process of assessment of a range of metadata requirements for the JORUM system, in addition to gathering feedback from dealings with the wider academic community.

As a result, a relationship was established with the RDN (Resource Discovery Network) which resulted in the RDN recruiting some of its staff to act as metadata creators for objects deposited in JORUM. From the perspectives of stakeholders involved this is a model that is working well. As the JORUM system had not reached the stage of development desired when the RDN cataloguers became involved training had to be carried out on a different versions of the system. Despite this the cataloguers found the training useful and the system very easy to use with one interviewee commenting "we completely underestimated how easy they would find it". There was some initial concern from some cataloguers about adding in the

'educational level' metadata who felt that the creators of the learning objects themselves would be best placed to add this information, however it appears that the cataloguers are becoming more comfortable in taking on this role. The RDN staff working on the JORUM metadata are employed on a freelance basis which is a working model which allows enough flexibility to respond to the changing levels of work required as the JORUM service develops.

The model now in place provides contributors with more support with metadata than was originally anticipated. One interviewee described this as:

.....a unique selling point to encourage people to contribute....the purpose was to maintain the quality of the metadata, the side benefit is that people have to do less of their own metadata.

To date this model has been trialled on some of the X4L project contributions. The contract with the RDN has been extended to cover the whole of the JORUM Service-in Development ie for three years from August 2005. Whilst this model is fit for purpose at the present time and a 'pragmatic solution' it is not a permanent solution as one interviewee summarised:

.....no one thinks this is a sustainable model by any means.

It is likely that the JORUM team will have to further develop the model on an iterative basis as the service develops. For example, it may not be suitable in the long term to offer this level of support for metadata if there is a high volume of contributions. Overall the development of a good working relationship with the RDN has been an unanticipated and beneficial outcome of the project and a link that is likely to be of benefit in the further development of JORUM.

3.4. Objective 3

Work with intermediary organisations, such as the HE Academy and Regional Support Centres, and early adopters to obtain deposit of suitable materials and production of an appropriate promotional strategy for the JORUM service

The intermediary organisations set out in the JORUM project plan were the HEA Centre and Subject Centres and JISC RSCs and early adopters. The intention was to obtain an indication of their interest in depositing resources or virtual objects and in assisting with the dissemination strategy. For the purposes of this evaluation, one representative from a RSC and three representatives of the HEA were interviewed. The comments about the value of JORUM were overwhelming positive:

This is an exciting programme, I know about some other repositories happening and that some colleges are making their own repositories, it's a good time to have a national one and it's a good time to have a launch of it, I just hope that they do some national road shows and stuff, should be fun, should be good.

One HEA representative also reported a positive response to JORUM from those working in subject centres. All also commented on the good relationships they had developed with the JORUM team:

Project team has been wonderful, enthusiastic, have a good relationship with them

I am very positive about them [the JORUM team]. They are happy to meet and come to events and send publicity it is all quite impressive and they always get back with answers to questions.

The relationship between JORUM and the HEA has developed further than had been expected at the outset with the writing of the use of JORUM into the HEFCE e-learning strategy and the requirement for Subject Centres to deposit materials as part of their funding agreement. An interviewee from the HEA expressed the hope that this would prevent resources which had been developed from being lost after the initial funding period had finished.

However, HEA representatives expressed two main concerns. Firstly, the possibility that JORUM may cease to be a free service in the future was mentioned:

it is a service in development now, but in 3 years time if people have to pay to use and take things out this would be a huge barrier

Secondly, the fact that access is currently via Athens was raised as it was considered that this would restrict the way in which the HEA can use JORUM:

HEA was going to use and still may use JORUM as its repository but there is an issue that is sitting behind Athens which is a set back as our stuff needs to be made freely available.

Another complication mentioned is the fact that JORUM licences are institutional and cannot, therefore, be taken out by a HEA subject centre directly:

I thought subject centres might add things on behalf of the community, but with the license being with institutions this cannot happen.

It should however be pointed out that a subject centre could licence materials to an institution that then deposits them in JORUM.

Yet another concern expressed by a HEA interviewee was that subject centres may fear JORUM will direct traffic away from their own sites; it was felt that links between sites possibly through the future development of a portlet interface to JORUM could allay these fears. HEA representatives were also conscious of the need to establish the links between JORUM and other repositories, including ways in which multiple searches could be carried out.

The intention in the project plan was to recruit five or six early adopters representing the different types of project deposits that might be expected in the early JORUM service. Just one early adopter had deposited material in JORUM at the time of the evaluation. It has been reported that one decided not to deposit material in JORUM and a further two will deposit at a later date.

3.4.1 Deposit of suitable materials

To date the deposit of materials has been limited as the launch of the service has been delayed. According to the JORUM Set Up and Launch Completion Report, 10 deposit licences had been signed with FEIs and 5 with HEIs, representing promises to deposit over 660 objects in JORUM. Just four of the pre-launch users¹ interviewed for this evaluation had deposited materials in JORUM, although others intended to do so in the near future. The issue of ensuring a critical mass of resources is deposited in JORUM at an early stage was one which was raised by a number of interviewees questioned for this aspect of the evaluation. This issue relating the growth and development of JORUM and is something that the JORUM Team and the Steering Group have been tackling. As a result it has been decided to take the approach of making it clear to the community that JORUM is being developed through an ongoing process, rather than being launched as a fully fledged service with a comprehensively populated database in all areas from the day it is launched. It is expected that this will encourage contributors to be involved in the ongoing development of JORUM. It is clear that this clarity and management of expectations in this way will be important as the service develops.

3.4.2 Promotional strategy

Promotion is just one aspect of the JORUM Dissemination Strategy, along with engagement, informing and raising awareness. The main forms of promotion identified in the dissemination strategy are conference posters and presentation and the project website. There are two members of staff with primary responsibility in this area, the Community Outreach and Technical Support Co-ordinator and the Promotions Officer. The JORUM team has actively disseminated information about the project at a wide range of conferences, meetings and workshops including RSC events, HE Academy events, X4L meetings and general conferences in the e-learning sector. A number of training events have also been held and articles published in both specialist and general publications. Materials developed include flyers, posters, newsletters and press releases.

¹ For purposes of this report 'pre-launch users' is a term used to refer to the X4L project representatives interviewed and the one early adopter interviewed.

A number of X4L project representatives made positive comments regarding JORUM events they had attended:

.....they do what they are supposed to do, tell people about the system, they make people aware of it and hopefully encourage people will use it

.....very clear, well run , good quality, all the people that have run them have been very helpful

The amount of dissemination and promotion undertaken to date has been carefully targeted because the JORUM team were wary about managing expectations. The importance of promotion immediately following the service launch was stressed by many interviewees:

*Without good dissemination over the next year or so it will fall down
They need to build JORUM, get the system finished then make a big push on advocacy to encourage depositing and use.*

A view common among a number of interviewees was that a dual approach would be needed with promotion and persuasion combined with more formal pressures on institutions to become involved:

They need to persuade those on the ground the benefits of using it as well as getting JISC to put pressure on the big cheeses to sign up to it

It would work on two levels – the bottom up persuasive element which is most important, but the top down is almost a given in terms of the JISC, it has got that kind of dual approach.

According to the project plan, the JORUM team would make use of work looking at incentives and promotional activities offered by other repositories to identify ways of obtaining enthusiasm from project and teaching teams in institutions and intermediaries such as HEA Subject Centres and RSCs. However, the amount of direct contact it was appropriate for JORUM to have with the former group was questioned by a number of interviewees from both the RSC and the HEA who commented that the most sensible approach to promotion and dissemination would be for JORUM to take advantage of their networks and contacts rather than attempting to build its own from scratch:

Their [JORUM's] role should not have been about making sure that end users got to it; that should be the role of the HE academy and people who actually work with end users. They should not promote it to students or staff, but they should promote it the agencies working with staff and students...If they all know what was there and how to use it they could incorporate and send on that promotional stuff into the sector, but there is no way you can replicate the subject centre's contacts with the whole of the sector through JORUM...It is about being clever about who you are promoting to so you are getting the best value out of how you promote.

3.5 Objective 4

Put in place appropriate procedures for assisting staff with deposits and downloading of materials

The JORUM project plan referred to the establishment of a support system for early adopter's pre-launch users along with training and support documentation. A number of training events have been run; a support mailing list was established in January 2005; and in June 2005 the following documents were made available: Contributing Quick Reference Guide, Contributing Step-by-Step Guide, JORUM System Guide for Cataloguers and JORUM Cataloguers' Handbook. A draft User Guide has also been prepared.

The JORUM team were praised for the support they had provided for pre-launch users, including email contact, a support and incentives plan, training days and communication through mailing lists, bulletins etc as well as informal contact. Almost all pre-launch users commented on the excellent way in which they had been supported by the JORUM team and this was felt to be extremely important in meeting the needs of end users:

.....established good working relationship with team and found them very supportive

They are a brilliant team have had good communication, [a member of the team] is great very helpful and practical and keen to assist and help out

We've had to have a lot of support really, as some of the objects are large in size and some also have other elements about them and we didn't know how JORUM would cope, had to liaise with them to see if that could work and look at ways in which the files could be downloaded from JORUM...it would have proved very, very difficult for us to know that the repository was in a form that could take our objects if we didn't have that support

However, as a member of the steering group pointed out, when JORUM becomes a service, it is unlikely that all users can be provided with this level of support, so alternative support mechanisms need to be developed. The JORUM team acknowledge that in the long term support will always be needed for contributors and for the site representatives of the User service, but that this may not be necessary for the end users of the User service.

While comments about personal support were extremely positive, pre-launch users emphasised that a substantial amount of support would be required, particularly for those that have had no or little engagement with JORUM. For instance, one respondent commented at length on clear, detailed documentation to guide users on the JORUM site itself, for example:

.....clear concise instructions for people of what the repository is going to be, who its for, everyone should be able to make use of the repository as long as tutors know that material put into the repository will be shared with other tutors, and that there are clear guidelines...user guides, clear instructions about what the system can do, how you can get material in there and how you can actually get material out I think that has got to be key for members of staff", for repositories there has got to be clear indication for guidelines on how you actually access material, upload stuff and take stuff down

Another pre-launch user said that she had not experienced problems because she had created the materials she was depositing, but had this been someone inexperienced they may have done.

..... created the material in the first place I understood what the IMS materials were in the first place, if someone had not created them they may have struggled putting them up.

The only exception was that one pre-launch user commented that the website made assumptions and was not necessarily easy to use for those who were unfamiliar with it. This related to an earlier version of the website than is currently available. The JORUM team have been keen to respond to feedback from pre-launch users and make improvements as a result.

3.6. Meeting the aim of the Jorum Set Up and Launch project

To undertake the work necessary to establish and launch the national JORUM service to all Further and Higher Education Institutions in the UK that wish to take the service from August 2005.

Although the majority of project outputs were delivered to time, the one notable exception is, of course, the launch of the JORUM Service. The main reasons for this listed in the Project Completion Report were licensing issues and delays in developing software. These concerns are discussed in detail in Sections 3.2.1. and 3.3.1. The failure of a third party research organisation to deliver a report was a further factor mentioned which cost the JORUM team valuable time. Other issues which may have contributed to the delays experienced include:

- The loss and subsequent replacement of project staff; understandably, it is usual for new members of staff to have a settling in period when they are not necessarily up to speed
- The lack of a dedicated steering group to provide support and direction from the start

The scale and scope of the work the JORUM Set Up and Launch project was attempting cannot be under-estimated and was commented on by a significant number of interviewees:

Getting to the stage they are at is an achievement and dealing with the challenges of setting up an innovative service is a success. They have forged ahead and have strong commitment.

In terms of trying to collaborate and find a solution in complex world I think they have done a great job

They have had a difficult job to do and it should not be played down; it has been a challenge and getting even nearly there has been an achievement.

Although the aim of the project to launch the service in August 2005 was not met, the JORUM team has worked well to manage expectations in the community about the project and this has included taking advice from the JISC Communications Officer

about dealing with a refocused launch event. At the time of writing the impact of not launching the service on time seems to be minimal. This is supported by the views of the stakeholders consulted for this evaluation:

Not launching in August would have been a bit of a blow for them and possibly a minor set back

I don't think we have seen a great deal of evidence of any significant problems for the community because of it –I think expectations have been managed reasonably well, most people quite understand the level of complexity so you are finding a positive response from the HEA subject centres for example who are waiting to deposit materials in JORUM and are being understanding about it so I don't think it has had a major impact.

However, the work undertaken in the next round of JORUM development must be mindful to launch the service as soon as possible as part of managing expectations as some stakeholders mentioned:

It is an understandable glitch with developing software, but they need a definite date to tell people, this is an issue that needs to be sorted out. We have the enthusiasm at the moment, but if it drags on it could be lost and we would hate to lose that"

A respondent from an RSC was keen that a new launch date be agreed as soon as possible as the work to promote and support it would have to be included in forward planning cycles and prioritised alongside other activities.

It is not clear what the future milestones are for developing the JORUM service although it is expected that this will be dealt with in negotiations over the next phase plan for the JORUM Service In Development, which will include the development of a business plan. The development of a clear business plan will be an important aspect of the next phase of JORUM development.

3.7. Project management

A key area to reflect upon when assessing the progress of the project is the management of the project and related topics.

The JORUM team were praised by many interviewees for their dedication and commitment:

They have given 100% through some difficult issues and, when facing challenges from the community regarding the development of JORUM, particularly the licensing model, they have conducted themselves in a professional manner at all times

I have been impressed by their dedication and effort

Probably the biggest single success is that the project team itself has cohered well

The project team have been wonderful, enthusiastic, have a good relationship with them.

Communication within the project team appears to have been excellent. Communication with other organisations, such as the HEA, X4L projects and the RDN was highly praised:

I am very positive about them [the JORUM team]. They are happy to meet and come to events and send publicity it is all quite impressive and they always get back with answers to questions.

I would rate communication as being very good, very high, very frank and very constructive.

The only exception to this is in relation to the vendor where some agreements might be tightened up and communicated better and the communication about licensing in the early stages.

Having two data centres involved in the development of JORUM could be argued to bring with it the potential for duplication and inefficiency. However, this also can have a number of benefits, including the ability to draw on a wider variety of skills and experience. The emphasis is on making the best use of individuals' strengths, rather than organising work strictly on the basis of job titles and descriptions; as one team member commented, "everyone's role overlaps". Perhaps for this reason, the exact relationship between the two data centres involved was not always apparent to external observers. There are regular meetings between the JORUM Team members from the two data centres, who are located in close geographical proximity. The project team agreed they worked closely together:

We forget we are two separate teams...until you [the evaluator] mentioned it then we sort of forgot; when people say 'Who do you work for', we never say 'MIMAS', but 'JORUM'. You do forget you're two separate universities.

One interviewee commented that the allocation of roles and the collaboration between the two data centres was like:

Holding hands on something new to the community

One interviewee commented that JORUM might be 'management-heavy' compared to other JISC projects, but speculated that this might be needed as the project was developing a national service and involved two data centres:

The two data centres are running it and they run other services so in a sense their reputation for other services can be impacted by this and the quality of service they provide. It is a high risk thing in this respect that they cannot afford to let fail and it is important nationally.

The fact that a number of complex issues, such as licensing and vendor relationships have needed to be solved may also have had an impact on the apparent levels of management intervention required. As plans for dealing with such eventualities were not set out in the original project plan, decisions about how to deal with the various challenges needed to be made as they emerged.

Both EDINA and MIMAS project managers had been actively engaged on the project. Members of the team commented that both project managers allowed people to explore their own strengths and asking for feedback and involvement.

From a variety of perspectives, the work of both project managers was considered very positively as one interviewee summarised:

.....on the whole it has been well managed and the right things prioritised – I do not see any wastage.

3.7.1 Steering group

The Steering Group for the JORUM project was seen as a useful addition to provide some support in relation to project management, and determining priorities for JORUM and providing external contacts. The Steering Group was not formed at the outset of the project but an advisory group existed in its place. The general consensus again was that there was that at the project would have benefited from a Steering Group from the outset.

Members of the steering group have also helped in practical ways such as commenting on promotional materials which is a role that should continue. . In the future, the steering group may be able to support JORUM through its links within the community:

There is a very good relationship between the project team and the steering group and we have started to use that relationship to make connections for JORUM outside JISC circles and outside UK circles

The relationship between the JORUM team and the Steering Group was considered to be professional and effective:

They [JORUM] have given the Steering Group their full co-operation and support, sometimes over and above what I would expect”

Despite the Steering Group being introduced late into the project it provides a support mechanism for the development of JORUM.

3.7.2 Reporting

The reports from JORUM team to JISC, the Steering Group and other parties have been clear and informative:

The JORUM team have been good at documenting what they do.

They have done a remarkable job of documenting things principally as they are so used to developing services.

Although occasionally the team delivered reports late they had agreed revised delivery dates with those concerned.

Bi-monthly reports are provided in order to ensure the information is timely. Although in some instances progress reports have not been delivered on time, a revised date has been agreed and this has not impacted on any important milestones.

3.7.3 Relationship with JISC

One interviewee commented on the importance of JORUM to JISC's strategy:

It is well supported and has considerable interest in it and it is seen as being in some senses a fairly critical element of JISC strategy.

The JORUM team felt that they had strong senior management backing and this helped in making them feel they were a high profile team whose work was important to JISC and the community. They commented that the Programme Manager was helpful in promoting JORUM to other JISC programmes and providing central support, such as access to the X4L support officer. However, the team felt that JISC could have been more flexible regarding timescales, especially given the complexity and innovativeness of the work.

One area which several interviewees thought could be developed further is the relationship between JORUM and other JISC activities such as the Repositories Programme and the Distributed E-learning Programme.

4. Are end user needs being met?

The potential end users of JORUM were defined by the project team as 'any teaching staff in the FE/HE community'; use is not intended to be restricted to any one academic discipline. At the time of the evaluation (Aug-Sept 2005) contact with end users of JORUM was not as extensive as might have been hoped. As the launch of the service had been delayed, contact with institutions had been limited and the planned survey had not been carried out. The evaluation findings relating to contact with end users come, primarily from the eight interviews with representatives of Phase 1 and Phase 2 X4L projects and a further interview with an early adopter carried out by the evaluation team. Together, these could be considered to form a pre-launch user group.

4.1. Communication with end users

The general feeling from the JORUM team was that, although many people within the sector may be aware of JORUM, at present, most did not really understand what it was in detail. This view was corroborated by a number of other interviewees.

The main ways in which end users have been involved in JORUM so far are:

- Establishing a small community of X4L contributors, essentially to test the service
- A launch/information event
- Conference presentations/demos
- Training events/workshops
- Promotional materials e.g. leaflet
- Articles in specialist and general publications
- Email bulletins

Because the service was not launched, the team was wary of promoting it too widely as this might raise unrealistic expectations at this stage.

Several pre-launch users commented that the JORUM team had been effective in making potential end users aware of the service through events and bulletins. Although much of the communication referred to was one-way information provision from the JORUM team, a number of pre-launch users also commented on the ways in which they had fed back about their experiences as pre-launch users to inform the development of JORUM, for instance, by providing early reviews, testing and feedback sessions.

4.2. Functionality and usability

Some pre-launch users offered positive comments on the functionality and usability of JORUM:

The look and feel of it was quite nice, navigation was straight forward, you knew that you could create a new folder structure to put your package material in, there was some basic metadata, it was quite a clear process to upload materials

Intralibrary is a lot more user friendly [than XTENSIS] and can see tutors using that for searching content

One pre-launch user felt that the fact that it was possible to see whether someone had already used materials was helpful as this may indicate the quality of the resource.

One pre-launch user had been involved in authoring a report on improving the accessibility of JORUM; this had advised on the need to improve accessibility for users with disabilities and visual impairments, and was welcomed by the JORUM team as improvements could be incorporated early to enhance the performance of the final version of JORUM.

One pre-launch user had problems with the large size of the objects they wanted to upload, but pointed out that the system being used was that of an earlier version. This interviewee welcomed the support received from the JORUM team.

JORUM have managed to accommodate us, but that was in an early version

A number of others commented that, at the time when they had used the Intralibrary site, it did not appear to be as technically robust as would be required. There were a number of glitches which needed to be dealt with if people were not to be deterred from using it but it was acknowledged that this would be the case given that the service is not complete and is still in its development phase.

You can't suggest anything as it is only half a product

It is a work in progress

Other pre-launch users were less positive. One felt the Intralibrary site was "difficult to use and not very well designed". Another reported problem was with account details which were changed which made it difficult for the project to use JORUM at key times. The JORUM team has been actively engaged in responding to feedback from pre launch users and other sources in order to improve the system.

4.3 Licensing

A key area in which user needs should be considered is JORUM licensing arrangements. The majority of pre-launch users interviewed reported no problems with the JORUM licence, although some felt it was complex. However, it is worth noting that in one case the lack of difficulties was felt to be due to the fact that issues had been dealt with at an earlier stage of the X4L project:

...the X4L project helped a lot in that we understood what was happening from day one and what was going to happen and how we had to address copyright and how we were responsible for quite a bit of it anyway so it was not much of an issue to sign the licence...

Another X4L project representative commented that, had the licensing guidelines been in place earlier, this would have made it easier to ensure that IPR and copyright conformed from the start of the project. Interestingly, another project had managed to include the JORUM licensing agreement as part of their own copyright contract for third party contributors. This interviewee thought that having clear definitions of 'reuse' and 'repurposing' in the licensing agreement was important. Another issue related to licensing raised by one interviewee was the fact that that more needed to be done to ensure that teaching staff understood copyright law, for example, ensuring they had obtained copyright clearance for any images they used in teaching materials.

However, other pre-launch users had experienced greater difficulties. One interviewee feared that the current arrangements would not be attractive to potential depositors. In one instance, a university's legal department had not been able to make a decision through fear of losing intellectual property rights to materials developed by their staff. Although with the JORUM licence the depositing institution retains full IPR in any materials deposited, in this case within the institution discussion is still underway internally about the implications of signing the licence.

5. Is the JORUM service likely to be taken up by institutions?

Attitudes among pre-launch users were overwhelmingly positive; they were clearly behind the overall aims of the project:

There are a lot of examples of outputs, websites, fixed term projects which lack continuity, software that has just been wasted and lost as it was not stored anywhere; this would be good to avoid

...very enthusiastic about the idea of JORUM as a national educational repository, from an academic point of view, very interested, motivated in using it.

...get much better economies of scale, better return for investment across the education sector, things that are available somewhere can be made available to other people in other institutions

...a fundamental requirement of the 21st century e-learning infrastructure.

...having a single point of contact for nationally funded content means we won't lose a lot of good project work. For tutors an online repository that they can search is really what they need as we don't have anything else like it at the moment

We believe there is a need for a national repository to enable sharing of resources

[JORUM] provides opportunities for teaching staff to have a one stop shop where they can go to look for resources to support their learning and teaching and course delivery

One pre-launch user commented on the value of a national repository as opposed to regional ones:

I think it is a good idea to do such sharing on a national level as what you finding is a number of regional areas have got their own intra-library equivalent and it does not seem to make sense to me as it still means a lot of the same information is going to be in a lot of different points and I thought the whole point was to have some sort of central place to avoid duplication which is frustrating.

Other stakeholders speculated that there would be likely to be interest across the FE and HE community in using JORUM when it was available, however they were not able to provide more concrete evidence at this stage. Many stressed the necessity to deliver a launch date fairly soon and to ensure other repositories did not supersede JORUM. Many also thought that it would take some time to develop a critical mass of material and volume of users and that promotion and dissemination after launch would be important.

5.1. Barriers to take-up

As a non-subject specific repository, JORUM has a number of advantages. However, one pre-launch user working in a medical discipline spoke about the additional levels of control of access which might be necessary for some medical materials which the access requirements for JORUM might not be able to provide. .

In all, four pre-launch users explicitly said they definitely intended to use the service when it was launched; only one would definitely not and this was because it was

unsuitable for medical resources. Five said they would definitely recommend it to colleagues. One commented:

...need to spread the usage of JORUM, it's a really positive move forward to have somewhere to store the outputs of these projects and as a way of sharing

The need to continue to publicise the service was mentioned by a number of pre-launch users. Several commented on the need to build up a critical mass of material to ensure that there was sufficient material available to convince people it was worthwhile:

I think that it will take a year or maybe longer to build up enough content in there that will appeal to external users. Once a critical mass has been reached with good publicity campaign it will be widely used

I am very keen to encourage others to use it because the quality of the resource that will be there and the value of JORUM is dependant on large volume use

Bluntly repositories rise and fall by their content, it is the critical mass argument you need good quality content to get people on board.

One pre-launch user felt that it may be a struggle to convince staff to use JORUM as doing so would require something of a cultural change; this issue is discussed in greater detail below.

6. Are projects and institutions interested in depositing in JORUM?

It was a requirement of the Stage 2 X4L projects to deposit outputs in JORUM and four of the pre-launch users interviewed had deposited materials in JORUM and a further two had tested the Intralibrary site. Reasons for not depositing were that it was currently too early in the project (i.e. they would deposit materials in the future) or they were waiting for key personnel to receive training. In one case, the JORUM service was not considered suitable to meet the needs of someone working in the medical area as the access conditions were not stringent enough. The majority, however, said they would be likely to deposit materials in the future. One pre-launch user had used JORUM rather than developing their own repository which was originally part of the project plan. A number of pre-launch users commented that they would continue to use the facility for other resources after the end of the project.

6.1. Higher education and further education engagement with JORUM

Some stakeholders commented on how the HE and FE communities might engage with JORUM, in some cases suggesting that the FE and HE communities will engage with JORUM differently. For example, FEIs might see it as a place to house their materials they have created rather than to set up a repository for their individual institution. HE staff might see it as a place to deposit those materials they create under grant funding from JISC or HEFCE. In particular, subject centres were coming under increasing encouragement to use JORUM in line with HEFCE's e-learning strategy. However, it was considered that many HEIs who had, or were developing their own institutional repositories would retain these, at least for research outputs, if not for teaching resources.

One interviewee questioned whether HE material might be more individualistic and less easy to reuse than FE resources; its resources might also be likely to be more subject specialist and perhaps not as easy to adapt for different subjects.

6.2. Cultural change

One pre-launch user spoke about the cultural change which would be required in the education sector to ensure that JORUM survives:

If there is a single danger to the future of JORUM it is related to finding ways to create an ethos in the academic university of being prepared to share resources. I think that if we don't successfully address these issues that I've raised we may find that JORUM could sit more or less with the content which has been uploaded from the X4L Phase 1 and Phase 2 projects, and not very much more and that would be tragic.

Several interviewees mentioned the possibility of having an incentive to encourage people to contribute. A pre-launch user suggested that, in order to encourage people to deposit materials in JORUM, one idea would be to only allow people to use material if they put something back in. While some individuals might be enthusiastic, a number of interviewees acknowledged that growth may be slow elsewhere; those who have been engaged to date, as pre-launch users, may be likely to be more enthusiastic than the average academic. One interviewee felt that the way in which the licensing and uploading procedure was structured might act as a barrier in itself:

Persuading a lecturer that it would be a good idea to share, which is quite a big task in itself then persuading them to take their stuff to a named individual

in an institution which may or may not be a person they know and then to give it to them for uploading on the system it is just another loop for them to jump through.

An interviewee suggested that, rather than taking a blanket approach, it might be better to target those areas where people might be more willing to deposit materials, “warm targets”, initially in order to help build a critical mass.

There was some indication that the culture of sharing may be more widespread in the FE sector than is currently the case in HE where some individuals and institutions are more wary of making resources freely available in the public domain. One interviewee from an RSC commented:

FE are more used to sharing resources than HE, but if it was targeted correctly FE would probably contribute more than HE – that would be my initial impression but that might change in time but certainly for the concept of the whole work sharing resources goes on a lot in my experience in FE than HE, that’s why FE are less worried and won’t think where HE think about the pressures and resources.

The JORUM team felt that the availability of staff time to deposit materials was likely to be a factor which determined the level of take up of the service.

6.3. Licensing

As indicated above, the issue of licensing might be seen as a problem by some institutions and individuals who are concerned about the implications of making resources they have developed available to all. One respondent thought that political pressure from JISC could be exerted to encourage institutions to agree to licensing terms and another suggested that JISC-funded projects should be required, rather than simply encouraged, to deposit outputs in JORUM. One interviewee warned that the complexity of licensing agreement might be off putting for some:

That could be a turn off, people could feel that it’s not worth the bother, too many restrictions on who can upload and that could be a barrier to its use

One respondent hoped that the licences would eventually be able to accept an electronic signature to make signing easier.

6.4 Accessibility

For the HEA, the fact that JORUM is accessed via Athens may be a barrier as this means that the resources are not strictly freely available. One interviewee from the HEA suggested that a system whereby those who deposited resources could choose whether they were made available just to those from authenticated institutions or to everyone as a possible way of overcoming this problem.

6.5 Embedding

It was recognised that after the initial set-up stage, a period of promotion and embedding would be required when JORUM became linked more closely with other JISC activities and those of other partners such as the HEA subject groups. One interviewee was concerned that the long term future of JORUM was not guaranteed and it was not certain that it would continue after the initial three years; it was felt that this might deter some people from committing to using the service. The question of

whether JORUM would remain a free service raised similar concerns as this too might make some individuals, institutions and other bodies wary about depositing materials in JORUM.

6.6 Competition and collaboration

The question of how JORUM links to other repositories e.g. subject, regional and international was raised by several interviewees. The issue of cross-searching repositories and multi-harvesting was another concern. The position of JORUM in relation to other repositories is something which a number of interviewees felt had not been addressed as yet, but needed to be clarified by JISC in consultation with other stakeholders.

7. Conclusions

This evaluation has considered four aspects:

- The progress of the JORUM Set-up and Launch project
- Whether user needs were being met
- Whether the JORUM service is likely to be taken up by institutions
- Whether projects and institutions are interested in depositing in JORUM.

In relation to the first of these aspects, the evaluation found that the objectives of the JORUM project have been clear although the work underlying some of these objectives has involved a fair degree of complexity.

Although work has progressed well on all the objectives, the overall aim of the project has not been met. The main reason for this centred around delays in the delivery of systems and software. The JORUM team are managing expectations well in light of the failure to launch in time and at this point it seems there is little impact of missing the stated launch date, however, this is something which obviously needs to be addressed as a priority and not allowed to be delayed indefinitely. Overall, the project seems to have been managed extremely well. It must be remembered that this the work undertaken by the JORUM team is cutting edge and the scale and complexity of this project have been extremely challenging; all work to date needs to be considered within the context of this.

The delayed launch of the JORUM service has made it more difficult than was originally envisaged to provide clear answers to the other three aspects to consider as part of this evaluation. The main findings in these areas are based on a small sample of pre-launch users, supported by general knowledge of the community and feedback through JORUM promotional events and supplemented through opinions of other stakeholders. It is unfortunate that more early adopters have not, as yet, been engaged in the project. The majority of comments from end users were from representatives from X4L projects, some of whom were not able to reflect on the applicability of JORUM in great depth as they were not in a position to begin depositing materials until their own projects had developed slightly further.

As far as it is possible to comment at this stage, based on the limited feedback from pre-launch users, it would appear that the JORUM team is engaging with its pre-launch end users well and taking on board comments to ensure that end user needs are being met; the majority of end users interviewed were happy with the level of support they had received and extremely positive about the future possibilities of JORUM. Some feedback on stakeholders opinions on possible barriers to use of JORUM were provided, for example, institutional attitudes towards licensing; the importance of effective promotion; and ensuring enough good quality materials are in JORUM to encourage its use.

The following section highlights the main achievements of the project and lesson learnt.

7.1 Achievements

Overall the development of JORUM to this point has been a massive achievement given the scale and innovative nature of the project; the complexity of all the elements required to reach this point should not be underestimated. The principle achievements are summarised below.

The project has been well managed; the climate within the JORUM team is one of openness, clarity, professionalism and flexibility. The project has been well documented; communication has generally been good; and any unforeseen developments quickly adapted to. Despite being spread between two data centres, the project team appears to work extremely well together.

One of the key achievements of the JORUM Set-up and Launch Project has been the development of a suitable licence for JORUM in light of the emerging constraints and the external environment. Despite being less ambitious than was originally envisaged, it is still a major achievement to have developed a single licensing agreement which can provide the basis for the launch of a large scale repository which is full-text and includes content, including third party content. Obtaining a number of signed licences from HE and FE institutions has been an achievement.

The collaborative partnerships which have been developed between the JORUM team and other bodies in the sector are significant achievements which can be built on in the future. Securing the backing of the HEA is an important achievement, but this relationship needs to be carefully handled, as there are some areas of doubt over JORUM's applicability in the longer term with regard to open access.

The development of a suitable metadata workflow model to suit the needs of the project at this point is another achievement. This is important not only in its own right but also in that it has led to the development of a good working relationship with the RDN.

A less tangible achievement of the project has been in awareness-raising and stimulating debate about the issues surrounding repositories, for example, copyright and licensing.

7.2 Lessons learnt

The project team and other stakeholders have learnt great a deal during the course of this project. Some of the main learning points are summarised below.

The JORUM team has learned a lot about working with third parties, in particular in relation to the software development, and dealing with a small vendor in a different capacity has meant some learning with regard to negotiating vendor-client relationships.

JORUM has generated significant learning about complex area of repositories which will be beneficial for the whole community.

There has been learning with regard to some aspects of project management, in particular, the value of a steering group for this type of project and perhaps the need to build in more contingency time in a project of this complexity and scale.

8. Recommendations

The recommendations emerging from this evaluation relate to specific issues for the JORUM team in future development of the JORUM Service, and JISC. It is acknowledged that as the JORUM develops further, some of these points may already be being addressed by the JORUM Service-in Development Project and the JORUM Research and Development Project.

8.1 Recommendations for JORUM

Recommendation 1

The JORUM team should aim to launch the contributor and the user JORUM Service as soon as possible. However a robust and well tested system for the service needs to be in place prior to launch and immediate efforts should be devoted to this. It is important that stakeholders' interest and perceptions continue to be well managed and that when a date for launch is announced it is adhered to. Information about a proposed launch date should be clearly communicated to all stakeholders as soon as possible to enable this to build it into their planning cycles.

Recommendation 2

The promotional strategy for JORUM should be developed further and will be a vital part of the next stages of development post launch of the service. Efforts should be made to draw on the expertise and background of the Steering Group members in developing the strategy. The full responsibility for this should not rest with the JORUM team alone; dissemination and promotion should be conducted in the most effective way possible, for example, drawing on the existing networks of the HEA and RSCs and other areas of JISC. Whilst the development of a 'critical mass' of material is an important long term aspiration for JORUM this may take some time to build. JORUM may wish to consider developing a targeted strategy in the first instance and possibly offering incentives to contribute for a limited period.

Recommendation 3

The JORUM team should take steps to ensure that the expectations of both the JORUM team, the vendor and JISC are spelt out clearly at all stages and adequately understood by all parties. Clear understanding is needed between all parties on the criteria for, and responsibility for, testing of each system release. Before further development is undertaken Charles Duncan and the JORUM Managers should meet to review the contract and ensure that the working arrangements are formalised and the client /vendor relationship and expectations are made clear and understood.

Recommendation 4

The JORUM team, in conjunction with JISC, should ensure that relationships with key stakeholders who could be valuable in the promotion and take-up of JORUM, such as the HEA and the RSCs, continue to be carefully managed. The HEA in particular - a key stakeholder in JORUM, has expressed a number of concerns about the proposed JORUM service and whilst currently JORUM is unable to incorporate fully all of the desired requirements of the HEAs a regular dialogue needs to be maintained in order to regularly provide clarity on current constraints and where possible explore new optional features.

Recommendation 5

The JORUM team should continue to develop the relationship with the Steering Group and draw on their expertise and contacts as the JORUM service develops.

Recommendation 6

As a unique developing service, the JORUM team should ensure after the launch that feedback from users is effectively captured. This might include revisiting plans for the user survey that was not undertaken during the JORUM Set Up and Launch project and an assessment of the impact of the first year of launch of JORUM. Similarly the JORUM Team need to constantly review the effectiveness of the metadata service model developed with the RDN and support requirements for users and contributors as demand for the service is known.

Recommendation 7

The sharing of roles between the two data centres offers some flexibility to deal with changing circumstances. The JORUM Team should make clear to relevant stakeholders, for example the Steering Group and JISC, how the roles between the two data centres are allocated over time.

Recommendation 8

The JORUM Team should seek to capture the lesson learned over the Set Up and Launch year and share them for the benefit of the wider community. This might be achieved through a summative research paper or through a more comprehensive approach (see Recommendation 13)

Recommendation 9

Through links with the JORUM Research and Development project, the JORUM Team should keep up to date with developments which may result in gradual revisions to the JORUM service. The JORUM Team, however, must be mindful to keep a clear distinction between the service delivery and the related research and development activities.

8.2. Recommendations for JISC

Recommendation 10

As far as is possible, JISC needs to consider how links might be developed between JORUM and other repositories at a local, subject, regional or international level. Information on this should be clearly communicated to stakeholders including potential users.

Recommendation 11

Dissemination and promotion of JORUM requires a dual approach: bottom up and 'top-down'. JISC should ensure that it continues to be engaged in persuading institutions to buy into the service and consider whether it could be a compulsory requirement of funding for JISC funded projects which produce suitable resources to deposit their material in JORUM. JORUM needs to be firmly placed on the wider JISC agenda to ensure it reaches as many people as possible.

Recommendation 12

JISC should consider providing guidance for JISC funded projects in the procurement of software and contracts with external vendors. This could include standard clauses and best practice guidelines.

Recommendation 13

For many, including JISC, working with a third party vendor in the way the JORUM Set Up and Launch project has done, has been a new experience and one in which has entailed considerable learning. Drawing on the experience to date, building an element of contingency timing in future project plans for the development of the JORUM system where activities are complex and involve third party vendors should be considered.

Recommendation 14

JISC should, as soon as possible, aim to make explicit and clear the longer term aspirations for JORUM. Although it is acknowledged that this is difficult to do, some areas of ambiguity still exist around whether JORUM will be a free or fee-paying service in the long term; the current uncertainty has potential to be off-putting for some potential depositors and stakeholders such as the HEA. These relationships need to be carefully managed (See Recommendation 4)

Recommendation 15

The JORUM Set-up and Launch project has generated a great deal of learning that could be of use outside the core work of the project i.e. to other sectors and internationally. Although this should not detract from the focus on the tasks in hand in launching and supporting the JORUM service, work should be undertaken to capture and present this knowledge in a way that is accessible to the wider community. In this respect JISC may consider providing additional funding to support this element.

Recommendation 16

One of the perceived barriers to sharing learning resources is that the culture of sharing in particular in HE is not well developed. JISC in collaboration with other organisations such as the HEA need to continue to be strong advocates to promote a culture of sharing. JISC should consider funding a study to explore some of the cultural barriers to the sharing of resources and use the result so this work to inform the JORUM promotion strategy over the medium and longer term.

Recommendation 17

JISC should work to implement a system of digital signatures which can be applied to the signing of the JORUM licence to facilitate ease of signing.