

JISC DEVELOPMENT PROGRAMMES

Project Document Cover Sheet

PROJECT PLAN

Project

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|--|---|-------------------|---------------|
| Project Acronym | Streamline | Project ID | |
| Project Title | Integrating Repository Function with Work Practice: Tools to Facilitate Personal E-Administration | | |
| Start Date | 1 March 2007 | End Date | 31 March 2009 |
| Lead Institution | Leeds Metropolitan University | | |
| Project Director | | | |
| Project Manager & contact details | Professor Janet Finlay Innovation North Leeds Metropolitan University Caedmon Hall Headingley Campus Leeds LS6 3QS j.finlay@leedsmet.ac.uk 0113 283 2600 | | |
| Partner Institutions | Kainao Ltd | | |
| Project Web URL | www.leedsmet.ac.uk/inn/streamline (temporary page to end Jun 07 www.leedsmet.ac.uk/inn/streamline_intergrating_repository_function_with_work_practise.htm) Project blog: emerge.elgg.org/streamline/weblog/ | | |
| Programme Name (and number) | <i>Users and Innovation: e-administration</i> | | |
| Programme Manager | Lawrie Phipps | | |

Document

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|-------------------------------------|---|-----------------|--|
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Document History

| Version | Date | Comments |
|---------|--------|-------------------------------|
| 0a | 9.6.07 | Initial draft of project plan |
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Streamline Management Plan

Overview of Project

1. Background

Repositories have the potential to enhance productivity and quality through effective management of assets relating to learning and teaching, research, policy and decision making. However unless their use is integrated into existing work practices there is a danger that they will increase rather than decrease the overall workload of staff and ultimately therefore be under-utilised. The activities of managing assets and resource discovery, though pivotal to the successful deployment of repositories to support research and learning, are viewed by staff as adding to their administrative overload. This project will therefore explore ways of integrating these essential functions into the tools and work practices that research and teaching staff already use in order to provide personal e-administration support for the use of repositories.

This project will develop and evaluate tools to integrate the necessary repository-related functions of creating metadata for resources, resource discovery and sharing into common proprietary work tools, such as Microsoft Office, and their open source equivalents, such as Open Office. The project will focus on the learning and teaching resources, in order to make the scope of the project manageable, but will develop generic tools which are applicable to other asset management areas. We will explore the development of customised tools to support individualised work flows.

The project builds on our prior experience of learning object repositories and tools in the HLSI (Higher Level Skills for Industry) project, funded by Yorkshire Forward, the EU funded projects eDILEMA: E-resources and Distance Learning Management (90683-CP-1-2001-1-CZ-Minerva-M) and REPLIKA (European Repository for Learning Innovation and Knowledge Acquisition) projects and the current HEFCE funded Centre of Excellence in Teaching and Learning Assessment and Learning in Practice Settings (CETL ALPS) repository project, each of which has contributed to our understanding of repository tools and their use. The JISC funded CD-LOR project identifies four barriers to utilisation of learning object repositories¹: socio-cultural, pedagogic, organisational/management and technological. Solutions to these problems are complex but, according to the findings of the CD-LOR project, must take better account of user communities and context and ensure that the repository is seen as part of the normal context of work rather than as an isolated tool. This concurs with our own experience with HLSI, eDILEMA and REPLIKA where reluctance to fully use the repository was due to the perceived (and actual) overheads associated with its use. It is this issue that this project plans to address.

2. Aims and Objectives

Aim: to develop integrated tools to alleviate the additional administration associated with the use of institutional repositories for assessment, learning and teaching, informed by understanding of existing work practices.

Objectives:

1. Review previous work on integrated tools, in particular drawing together the findings of previous projects (Replika, HLSI, CETL ALPS).
2. Evaluate existing tools for integrating repository functions with existing work practice e.g. e-Cat (REPLIKA's integrated tool) with users from different disciplines and HE and FE sectors.
3. Examine existing work practices surrounding activities (such as developing course materials) that might be expected to contribute to or draw on the contents of an institutional ALT repository.
4. Analyse the disciplinary and sector differences in work practice in the use of integrated tools and repositories.

¹ CD-LOR Deliverable 1: Report on Learning Communities and Repositories. Available at: <http://www.academy.gcal.ac.uk/cd-lor/deli.html>

5. Develop scenarios, domain models and service usage models representing these activities.
6. Explore and evaluate a range of mechanisms for metadata creation, such as automatic metadata generation, semantic processing, pattern matching, metadata composition and develop algorithms and processes for their use. Explore the role of professional indexers in metadata creation.
7. Explore a range of search strategies, such as keyword and metadata search, browsing, thematic searching, full text indexing, relationship measures (nearness, distance), and recommendation. Evaluate against recognised information retrieval measures.
8. Explore the use of ePortfolios and social networking tools such as del.icio.us to facilitate personal management and sharing of repository resources.
9. Iteratively develop and evaluate tools for repository e-administration, integrating with both proprietary and open source software, to reduce personal administrative load.
10. Disseminate findings to evaluate tools more widely.

3. Overall Approach

The project will take an iterative and participatory approach to the development of e-administration tools, working with a number of distinct user groups including teachers and researchers in technology, health, sport and music in HE as well as teachers in FE.

Our initial analysis and development cycle will focus on the workflow associated with video/audio learning objects. At Leeds Metropolitan University we have a pan-University pilot project in which 30 staff groupings will be developing video/audio based learning objects/podcasts which will be shared through an institutional repository. This provides an ideal initial test bed to explore cross disciplinary workflows associated with learning objects.

We will focus our investigation on three core areas of repository function for which integrated tools could be developed:

1. Metadata creation in the packaging of resources.
2. Resource discovery
3. Personal management and sharing of resources.

Adopting a service-oriented approach, we will develop domain models for each of these core activities, including use cases and interaction scenarios, based on our work flow analysis. We will use these to develop service usage models and then to prototype and evaluate appropriate tools. Existing KaiNao tools use open standards such as the IMS Content Packaging 1.2 standard and we would continue this commitment to ensure interoperability. Our design process is in keeping with the Users and Innovation programme development model, following an iterative cycle of user engagement, design and decision making, and technical development and evaluation.

Although applicable to repositories more generally, the project will focus on learning object repositories and in the first instance on video/audio based learning objects. It will also focus on the three key areas of metadata creation, resource discovery and personal management and sharing of resources. While it is recognised that there are other issues relating to workload and repositories, these are considered to be key and provide a realistic scope for the project.

Critical success factors for the tools developed reflect the need to reduce both the actual and the perceived workload associated with repository use and to provide tools which make the use of repositories effective. These are:

1. Usability: tools should be flexible and should be intuitive to use. Guided processes should be provided wherever possible.
2. Accuracy: users should be able to find appropriate resources that are in the repository by whatever means and should not have to manually filter the less relevant.
3. Integration: tools should be integrated with existing work practice and should minimise extraneous effort on the part of the user.

4. Project Outputs

Tangible project deliverables include:

- Scenarios of development and use of learning objects
- Scenarios of use of learning object repositories
- Domain model(s) for learning object repository use
- Process models for learning object repository use

- Service Usage Models for services related to metadata creation, resource discovery and resource management
- Software prototypes to support metadata creation, resource discovery and resource management
- Documentation and tutorials to allow use of software by third parties
- Evaluation instrument for remote evaluation of tools and services
- Two workshops for evaluation of tools and dissemination
- Reports for JISC (2 per year + final report)
- Papers as appropriate in conferences and journals
- Website with project information and deliverables
- JISC Emerge community and blog

Through the project we will gain knowledge of the work practices associated with using learning object repositories and about what works and what does not work in terms of tool support. We will share this knowledge as the project progresses through the website and blog, through contributions to the e-Framework, through workshops and publications (including the final report). It will also be shared through our involvement in the Users and Innovation Emerge community. All project team members are part of this community.

5. Project Outcomes

The outcomes of the project are that teaching staff should experience:

- Greater use of learning object repositories
- More effective and efficient use of repositories
- Streamlined processes for creating and uploading packaged materials

This should lead to an institutional change in emphasis from individual course materials to reusable learning objects with metadata and ultimately a more innovative learning environment for students (with access to greater range of materials).

6. Stakeholder Analysis

| Stakeholder | Interest / stake | Importance |
|-----------------------------------|---|------------|
| University senior management | Learning object model is being adopted across the university therefore a successful repository and processes surrounding it are critical. Important for the University that findings are acted upon by this group. | Medium |
| Teaching staff – cross discipline | This group has responsibility for developing learning objects as an additional activity. Only this group can provide information about the learning object which is key to success. | High |
| Students | Students will receive the learning objects but not directly use the repository or tools so they are indirect stakeholders in this context. However because of their centrality to the learning process their importance is medium – ultimately the learning objects must work for | Medium |

| | | |
|---|---|-------------|
| | this group. | |
| Technical staff – supporting repositories | This group support the repository and have concerns about interoperability. They will not use the tools but may support them. | Medium |
| Learning technologists – supporting development of learning objects | This group support teaching staff in creating learning objects so will be end users of the tools. They are likely to have some experience of metadata and repositories. | High |
| Librarians – professional indexing | Have deep understanding of indexing and metadata – their input into the process for metadata collection is therefore beneficial to the project. | Medium |
| Other HE institutions | Similar to teaching and other staff – but the context will be distinct. Therefore open and interoperable tools are critical to this group. Input from this group important to ensure broad application. | Medium-High |
| FE partner colleges | As HE but again a different context. Important to consider reusability in terms of level. | Medium |
| Software developers and vendors – open and commercial | The project is developing prototype tools and exploring novel approaches to working with repositories – some of these may be taken up by software developers and vendors. Open standards are needed to ensure these tools can be adapted and adopted. | Medium-Low |
| e-Framework | Knowledge of user behaviour, domains and services needs to be shared through the e-Framework. This is important to enable sharing at the modelling level. | High |
| Emerge network participants | This community overlaps with HE and FE but can contribute inwards as well as using the outputs of the project. | Medium |

7. Risk Analysis

| Risk | Probability (1-5) | Severity (1-5) | Score (P x S) | Action to Prevent/Manage Risk |
|------------------------|-------------------|----------------|---------------|---|
| Unable to appoint RO | 1 | 5 | 5 | Seek internal approval for post. Draw on internal and external candidates to ensure a good match. |
| Delay in appointing RO | 5 | 2 | 10 | Use existing staff to do initial analysis work |

| | | | | |
|--|---|---|---|--|
| Loss of key staff | 3 | 2 | 6 | Replace staff from pool of other experienced staff within Leeds Met. Include other staff in activities to ensure wide knowledge of project. |
| Withdrawal of partner organisation | 2 | 4 | 8 | Agree collaboration agreement to address this. Maintain contact and discussion within Emerge community in case new partners are needed. |
| Lack of management buy in to project. | 1 | 4 | 4 | Ensure management support bid and keep them informed as to progress towards goals. Work with other internal projects to ensure consistency and coherence. |
| Compatibility of technologies being used | 2 | 3 | 6 | Use open standards wherever possible. |
| Integration of tools with proprietary software in place not possible | 4 | 2 | 8 | Develop web services as far as possible to enable compatibility. |
| Unable to work with intended user groups | 1 | 5 | 5 | Project making use of established and coherent user group in the first instance and of the Emerge community to access the wider community. |
| Team members not contributing as expected | 2 | 4 | 8 | Managed through management process – regular (3 monthly) face to face meetings and much more frequent management blog. Have agreed targets and action plans. |

8. Standards

| Name of standard or specification | Version | Notes |
|-----------------------------------|---------|--|
| IMS Content Packaging | 1.2 | Packaging of e-learning content and courses. |
| IMS Learning Resource Meta-data | 1.3 | Metadata |
| XML 1.1 , XSLT 1.0, CSS 2.1 | Various | Document/web standards |
| REST | | Web services |
| W3C WAI WCAG | 2.0 | Accessibility |
| PDF | | Documentation |

These are the core standards that will underpin the project and are the most stable and mature in each area. Others may be needed as the project progresses and will be selected using the criteria of openness, maturity and compatibility with JISC recommendations.

9. Technical Development

The project tool development will follow the User and Innovation Development Model. This involves an iterative process with three stages:

1. user requirements capture and participatory design of ideas
2. implementation of tools
3. testing, deployment and evaluation of tools in context

Streamline started following an initial cycle of stages 1 and 2 from previous projects. WPs 1-2 cover stage 3 for the outputs from these projects and will feed into a further iteration of the model. WP 3 is

conducting a further iteration of Stage 1 for a specific learning object type. The project will then iterate through the model on an approximately 10 week cycle.

We will use the following methods at each stage:

1. Scenarios, cultural probes, concept mapping, use cases.
2. Paper prototyping, UML 2.0
3. Testing using test plans based on user requirements and standards. Usability evaluation using observational, survey and expert review methods. A survey instrument will be developed for remote evaluation of tools.

10. Intellectual Property Rights

IPR for software and algorithms brought to the project by each partner will remain with that partner. IPR for outputs (including software and algorithms) produced during the project will be owned by Leeds Met, unless produced specifically by Kainao staff (in which case it will belong to Kainao). In either case, all outputs produced will be open source and use open standards to ensure sustainability and will be freely available to other partners, including to further develop after the end of the project. We will also make all tools available to the community and contribute project outcomes to JISC initiatives (such as the e-Framework) where appropriate.

Project Resources

11. Project Partners

There are two project partners: Leeds Metropolitan University and KaiNao Ltd. Main contact for Leeds Met is Professor Janet Finlay; for KaiNao Ltd, Dr Ben Ryan. The consortium agreement is still being finalised by both parties and will be signed by end June.

12. Project Management

The project will use the JISC InfoNet framework for project management. The project manager is Professor Janet Finlay who will allocate 10% of her time to project management with a further 10% of time spent on other aspects of the project. She will be supported administratively by the Research Officer when appointed. The project will be monitored by a management team, consisting of all project team members and a user group representative, which will meet every three months. The Programme Manager will be invited to this meeting where appropriate. The remit of this meeting is to review progress against the management plan and agree actions to ensure progress.

Day to day communication will be facilitated using a management blog (streamlineproject.wordpress.com – note this blog is not publicly viewable to enable free discussions but access can be given to the JISC Programme Manager and others as required). In addition, the project manager will liaise with individual team members re. their individual contributions on at least a fortnightly basis. All Work Package leaders report directly to the Project Manager, as will the Research Officer. All team members will be consulted on substantive decisions and consensus will be sought through discussion. The project manager is empowered to take budgetary and managerial decisions without further consultation where these are in alignment with the agreed management plan. Any changes to the management will be discussed by all parties.

The current project team consists of:

Professor Janet Finlay, Innovation North, Leeds Metropolitan University, j.finlay@leedsmet.ac.uk
Role: Project manager. Involved in all WPs; leading WPs 1, 2, 3, 8 and 9. Expertise in user centred design methodologies.

Research Officer (To be appointed)
Role: Substantive contribution to WPs 3-9

Dr Rodney Brunt, Innovation North, Leeds Metropolitan University r.brunt@leedsmet.ac.uk

Role: Contribution to WPs 1, 4, 5, 8, 9. Expertise in metadata and information retrieval.

Dr Elizabeth Guest, Innovation North, Leeds Metropolitan University e.guest@leedsmet.ac.uk

Role: Contribution to WP 4, 5, 7 and 8. Expertise in artificial intelligence and software development.

Stuart Hirst, Carnegie Faculty of Sport and Education, Leeds Metropolitan University,

s.hirst@leedsmet.ac.uk

Role: Contribution to WP 1, 2, 3, 7, 8, 9. Expertise in technology enabled learning.

Dr Tony Renshaw, Innovation North, Leeds Metropolitan University, t.renshaw@leedsmet.ac.uk

Role: Contributing to WPs 2, 3 and 7. Expertise in evaluation of software and services and in user requirements capture.

Dr Ben Ryan, KaiNao Ltd, b.ryan@kainao.com

Role: Leading WPs 4, 5 and 7; contributing to 1, 3, 6, 8, 9. Expertise in repositories and tool development.

Dr Jill Taylor, Faculty of Health, Leeds Metropolitan University, j.d.taylor@leedsmet.ac.uk

Role: Leading WP6; contributing to WPs 1, 3, 8, and 9. Expertise in e-Portfolios.

Other staff may contribute to the project (from existing University resources) where appropriate to ensure alignment with other institutional initiatives and priorities.

13. Programme Support

Support for e-Framework methodologies would be helpful, in particular examples. Other areas will become apparent as project progresses.

14. Budget

The budget is attached in Appendix A. There are a number of changes to the original budget which are marked in bold. These have been necessitated by a delay in the approval of the research officer post. It is anticipated that the Research Officer will now be appointed to commence September 2007 and will be in post until the end of the project (19 months total). To compensate for this delay in appointment, Renshaw's involvement in the first 6 months has been increased and Finlay's contribution over the same period has been increased to 0.3 (FTE) respectively. An additional laptop has been included to support the Project manager (Finlay). The costs of these changes are covered by the adjustment to the budget from the later recruitment. The delay in recruitment has also led to some costs being incurred in Year 2 (Apr 2007-Mar 2008) rather than Year 1. However these costs are unchanged and are covered by income carried over from Year 1.

Detailed Project Planning

15. Workpackages

The project workpackages are detailed in Appendix B. The project follows the UIDM development model. Initial work on Stage 1 & 2 of the model has already been completed in previous projects and WPs 1 & 2 assimilate this work and evaluate it as input to a second iteration of the model. WP 3 covers the user requirements and work flow analysis part of Stage 1 of this second iteration, with WPs 4, 5 and 6 then providing the prototyping element (Stage 1/2) and WP7 the implementation and evaluation element (Stage 3). These four WPs will then iterate round this development and evaluation cycle refining tools and exploring alternative approaches, with the expectation of releasing a new tool version every 10 weeks. WPs 8 and 9 cover dissemination and project management.

16. Evaluation Plan

The project and its outcomes will be evaluated continually throughout the project time frame. All tools will be evaluated thoroughly with users to assess usability, acceptability, efficiency and integration. This evaluation will be formative and will inform the further development of the tools.

The effectiveness of the project will be measured largely by the extent to which the tools are used and reduce workload – summative evaluation of the tools will concentrate on these factors.

In addition we will continually review and evaluate the UIDM approach as we are using it and take part in wider assessments of UIDM as appropriate. We will evaluate the management of the project, using this to address issues as they occur, and summatively evaluate the project impact.

| Timing | Factor to Evaluate | Questions to Address | Method(s) | Measure of Success |
|--|------------------------|---|---|--|
| Week 7-9 of each 10 week cycle Formative | Tool acceptance | Is tool acceptable to stakeholders? Is tool usable? | Observation with eye tracking. Questionnaire. Post task interviews. | 80% of users find the tool acceptable. 80% of users can use tool as expected without significant errors. Eyetracking data indicates efficient understanding of tool. |
| Week 7-9 of each 10 week cycle Formative | Tool integration | Can tool be used seamlessly with existing software? | Questionnaire. Post task interviews. | 80% of users consider the tool is integrated with existing software. |
| Week 7-9 of each 10 week cycle Formative | Tool effectiveness | Does tool work correctly and within acceptable limits? | Testing | Tool meets benchmark levels without failure |
| Month 24-25 Summative | Stakeholder engagement | Do staff make use of tools in their work activities? | Questionnaire. | 80% of staff introduced to the tools say they will adopt them in their work. |
| Month 24-25 Summative | Stakeholder benefit | Do the tools provided save staff time/effort? | Questionnaire. | 80% of staff using the tools will consider they save time/effort. |
| Month 24-25 Summative | Institutional benefit | Do the tools increase the overall use of institutional repositories and learning objects? | Repository access statistics. Questionnaire. | Use of learning objects and institutional repositories will increase by 100%. |
| Ongoing through development cycles. Formative | UIDM model | Is our use of the UIDM model of development effective? Do users feel engaged with the process? | Review. Focus groups. | Tools produced meet all quality standards. 80% of users feel they are able to contribute to design. |
| Ongoing Formative | Project management | Is project meeting targets? | Review. Monitoring. | Milestones achieved on time. Deliverables produced on time. |
| Month 14 Formative Month 24 Summative | Community engagement | Is the community engaged with the project? | Attendance at Workshops | Representatives from >25 HE/FE institutions attend evaluation workshop and/or final workshop. |
| Month 24-25 Summative | Project awareness | Is the wider community aware of the project? | Questionnaire to wider HE/FE community | >50% of those questioned are aware of Streamline project. |
| Month 24-25 | Project impact | Are the project outputs | Questionnaire | >50% of those |

| | | | | |
|-----------|--|---------------------------------------|--------------------------|---|
| Summative | | useful outside partner organisations? | to wider HE/FE community | questioned consider the outputs useful. |
|-----------|--|---------------------------------------|--------------------------|---|

17. Quality Plan

| Output Timing | Software Tools | | | | |
|-------------------------|-----------------------|-------------------------------|---------------------------------|--------------------------------------|-------|
| Quality criteria | QA method(s) | Evidence of compliance | Quality responsibilities | Quality tools (if applicable) | |
| Each 10 week cycle | Standards compliant | Design review | Meets standard specification | WP Leader | |
| Each 10 week cycle | Usability | Usability evaluation | Meets evaluation criteria | WP Leader | |
| Each 10 week cycle | Accessibility | Accessibility test | Complies with W3C WAI WCAG 2.0 | WP Leader | Bobby |
| Each 10 week cycle | Fitness for purpose | Functionality test | Meets functional specification | WP Leader | UML |

| Output Timing | Project website | | | | |
|-----------------------------|------------------------|-------------------------------|---------------------------------|--------------------------------------|-------|
| Quality criteria | QA method(s) | Evidence of compliance | Quality responsibilities | Quality tools (if applicable) | |
| 30/6/07 then monthly review | Usability | Usability evaluation | Meets evaluation criteria | Project manager | |
| 30/6/07 then monthly review | Accessibility | Accessibility test | Complies with W3C WAI WCAG 2.0 | Project manager | Bobby |

| Output Timing | Evaluation instrument | | | | |
|-------------------------|------------------------------|-------------------------------|---------------------------------|--------------------------------------|--|
| Quality criteria | QA method(s) | Evidence of compliance | Quality responsibilities | Quality tools (if applicable) | |
| Sep 07 | Usability | Expert inspection | Meets evaluation criteria | Usability specialist | |
| Sep 07 | Validity | Statistical testing | Results in acceptable limits | Usability specialist | |

| Output Timing | Domain models/SUMS | | | | |
|-------------------------|---------------------------|-------------------------------|---------------------------------|--------------------------------------|--|
| Quality criteria | QA method(s) | Evidence of compliance | Quality responsibilities | Quality tools (if applicable) | |
| Sep 07 | Fitness for purpose | Peer review | Complies with best practice | Technical developer | |

| Output | Interim/Final reports | | | | |
|---------------|------------------------------|--|--|--|--|
|---------------|------------------------------|--|--|--|--|

| Timing | Quality criteria | QA method(s) | Evidence of compliance | Quality responsibilities | Quality tools (if applicable) |
|--------------------------------|-------------------------|--------------|------------------------|--------------------------|-------------------------------|
| Sep 07, Mar 08, Sep 08, Mar 09 | Validity of conclusions | Peer review | Sign off by JISC | Project Manager | |

18. Dissemination Plan

| Timing | Dissemination Activity | Audience | Purpose | Key Message |
|-------------------------|------------------------------|---------------------------------|------------------------------------|--|
| Regular | Website/Emerge blog | JISC community, HE/FE community | Awareness, Inform, Engage, Promote | Project aims; project findings |
| Quarterly | JISC Emerge/project meetings | Emerge community | Awareness, Inform, Engage, Promote | Project aims; project findings; evaluate outputs |
| 10 weekly (from Sep 07) | Distribute tools | HE/FE community | Engage | Evaluate project outputs |
| Throughout | Attend conferences | Wider community e-learning | Inform, Promote | Project aims; project findings |
| Apr 08 | Evaluation workshop | HE/FE community | Engage | Evaluate project outputs |
| Mar 09 | Final workshop | HE/FE community | Promote | Project findings |
| 6 monthly | Project reports | Wider community e-learning | Inform | Project progress |
| Sep 07 | Contribution to e-Framework | JISC technical community | Inform | Project outputs |

19. Exit and Sustainability Plans

| Project Outputs | Action for Take-up & Embedding | Action for Exit |
|------------------|--|--|
| Reports | Will be made available via the website | Access: The server will be hosted by Leeds Met Preservation: Reports will be archived Maintenance: Institutional maintenance will apply Intellectual property: Project partners with free use |
| Domain maps/SUMs | Will be submitted to the e-Framework | Access: Available via the e-framework website Preservation: Archived via the e-framework website Maintenance: Maintained by e-framework Intellectual property: Project partners with free use |
| Software tools | Will be available via the website. Tools will be freely available to HE/FE institutions. | Access: The server will be hosted by Leeds Met Preservation: Software will be distributed via JISC sites also |

| | | |
|--|--|---|
| | | Maintenance: Documentation and software will be available but may not be maintained after the end of the project. Intellectual property: Project partners with free use. |
|--|--|---|

| Project Outputs | Why Sustainable | Scenarios for Taking Forward | Issues to Address |
|--------------------|--------------------------------------|---|--------------------------------|
| Software tools | Can be used by any HE/FE institution | Code developed by other projects or by commercial company | Funding |
| Domain models/SUMs | Contribution to e-Framework | Managed and developed by e-framework project | Reusability in other contexts. |

Appendixes

Appendix A. Project Budget

Appendix B. Workpackages

Appendix A: Project Budget

| | JISC Contribution Requested | | | Institution Contribution | | | Total |
|--|-----------------------------|-------|--------|--------------------------|-------|-------|-------------|
| | YR1 | YR2 | YR3 | YR1 | YR2 | YR3 | |
| Staff | | | | | | | |
| Staff Costs | 1940 | 36615 | 43327 | 2394 | 28711 | 26317 | 139304 |
| Estate costs | 139 | 2370 | 3555 | 199 | 2378 | 2179 | 10820 |
| Indirect costs | 1731 | 29426 | 44138 | 2457 | 29494 | 27037 | 134283 |
| Travel & Subsistence <i>(include attendance at relevant programme meetings)</i> | 600 | 7900 | 7800 | | | | 16300 |
| Equipment <i>(specify individual items over £10k)</i> <i>Laptops for project manager and Research Officer and portable printer</i> | 0 | 4000 | 0 | | | | 4000 |
| Dissemination activities | 0 | 0 | 2300 | | | | 2300 |
| Evaluation activities | 500 | 1500 | 1500 | | | | 3500 |
| Other <i>(please specify)</i> | | | | | | | |
| <i>Consumables/printing</i> | 80 | 1000 | 1420 | | | | 2500 |
| <i>Recruitment costs</i> | 0 | 1000 | 0 | | | | 1000 |
| | | | | | | | |
| | | | | | | | |
| Total | 4990 | 83811 | 104040 | 5050 | 60583 | 55533 | 313457 |
| Total requested from JISC | 4990 | 83811 | 104040 | | | | 192841 |

Note: Some elements (such as recruitment costs) have moved from year 1 (to end March 07) to year 2 (Apr 07-Mar 08) due to delays in approving the post. However the final costs of these items are unchanged.

Items in **bold** are revised amounts from initial budget. Justification for these changes is given in main management plan.



Appendix B: Workpackages

| WORKPACKAGES | Month | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|-------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | |
| 1: Assimilation of prior work | █ | █ | █ | █ | | | | | | | | | | | | | | | | | | | | | | |
| 2: Evaluation of existing tools | █ | █ | █ | █ | | | | | | | | | | | | | | | | | | | | | | |
| 3: Analysis of work practice | █ | █ | █ | █ | █ | █ | █ | █ | | | | | | | | | | | | | | | | | | |
| 4: Metadata creation | | | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | | |
| 5: Resource discovery | | | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | | |
| 6: Personal resource management | | | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | | |
| 7: Iterative Design and Evaluation | | | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | | |
| 8: Dissemination and feedback | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |
| 9: Project management | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ |

Project start date: 1/3/07

Project completion date: 31/3/09

Duration: 25 months

| Workpackage and activity | Earliest start date | Latest completion date | Outputs (clearly indicate deliverables & reports in bold) | Milestone | Responsibility |
|---|---------------------|------------------------|--|------------|----------------|
| <p>WORKPACKAGE 1: Assimilation of prior work</p> <p><i>Objective: To synthesise and evaluate the findings from previous and current related projects, e.g. HLSI, REPLIKA, ALPs which formed Stages 1 & 2 of UIDM Iteration 1 for Streamline. (Stage 3 of UIDM iteration 1)</i></p> | 1/3/07 | 30/6/07 | <i>Summary of user requirements for tools.</i> | | JF |
| 1. Review REPLIKA | 1/3/07 | 30/4/07 | Short report on REPLIKA | | SH |
| 2. Review ALPS, ELPP | 1/3/07 | 30/4/07 | Short report on ALPS, ELPP | | JT |
| 3. Review HLSI | 1/3/07 | 30/4/07 | Short report on HLSI | | BR |
| 4. Review external projects | 1/3/07 | 30/4/07 | Short report on external projects | | JF |
| 5. Identify common user needs and scenarios | 30/4/07 | 30/6/07 | <i>User scenarios</i> | | JF |
| 6. Recommendations for tool requirements | 30/4/07 | 30/6/07 | <i>Summary of user requirements for tools.</i> | 1.0 | JF |
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| <p>WORKPACKAGE 2: Evaluation of existing tools</p> <p><i>Objective: To evaluate the current version of eCat and the Power Learn Solution suite with users from a wider range of disciplines than was possible on the earlier projects. (Stage 3 of UIDM iteration 1)</i></p> | 1/3/07 | 30/6/07 | Recommendations for usability enhancement of current tools | | JF |

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|---|--------|----------|---|------------|-----------------|
| 1. Design evaluation task and study | 1/3/07 | 31/3/07 | Evaluation task and plan + schedule of users | | TR |
| 2. Run evaluation with users | 1/4/07 | 15/6/07 | Eyetracking data and questionnaire responses | | TR |
| 3. Analyse results | 1/6/07 | 30/6/07 | <i>Report on evaluation study</i> | 2.0 | TR |
| WORKPACKAGE 3: Analysis of work practice <u>Objective:</u> <i>To conduct a detailed work analysis for activities (such as developing course materials) that might be expected to contribute to or draw on the contents of an institutional repository. (Stage 1 of UIDM iteration 2)</i> | 1/3/07 | 30/9/07 | <i>Domain model/SUMS</i> | | JF |
| 1. Identify user groups and work practice | 1/3/07 | 31/3/07 | List of user groups (HE/FE, multidisciplinary) | | JF, SH, JT |
| 2. Scenario building | 1/4/07 | 31/7/07 | Scenarios, use cases | | JF, SH, JT |
| 3. Observing work practice | 1/4/07 | 31/7/07 | Use cases, work flows | | JF, TR |
| 4. Concept mapping of domain | 1/6/07 | 31/7/07 | Concept maps | | JF, SH, JT |
| 5. Develop Domain models/SUMS | 1/8/07 | 30/9/07 | <i>Domain model/SUMS</i> | 3.0 | BR, JF |
| WORKPACKAGE 4: Metadata creation <u>Objective:</u> <i>To support the core tool development cycle by exploring and evaluating a range of mechanisms for metadata creation, including automatic metadata generation, semantic processing, pattern matching, metadata composition and develop algorithms for their use. (Stage 1 and 2 of UIDM iteration 2 and subsequent iterations)</i> NB each of the following activities is repeated for each candidate approach, on an approximate 10 week cycle. | 1/6/07 | 31/12/08 | <i>Recommendations for metadata creation approaches. Service expressions.</i> | | BR |
| 1. Review approach | Week 1 | Week 3 | Report | | BR, RB, EG, JF, |

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|---|---------|----------|---|---|------------------------|
| | | | | | RO |
| 2. Prototype approach | Week 4 | Week 6 | Prototype | | BR, RB, EG, JF, RO |
| 3. Evaluate approach and make recommendations | Week 7 | Week 9 | Report | | BR, RB, EG, JF, TR, RO |
| 4. Develop service expressions | Week 10 | Week 10 | <i>Service expressions</i> | 4.0n (mile stone every 10 weeks) | BR |
| <p>WORKPACKAGE 5: Resource discovery</p> <p><u>Objective:</u> To support the core tool development cycle by exploring and evaluating a range of search strategies for identifying relevant repository assets and look at ways in which these can be integrated into existing tools. Search candidates will include keyword and metadata search, browsing, thematic searching, full text indexing, relationship measures (nearness, distance), and recommendation. (Stage 1 and 2 of UIDM iteration 2 and subsequent iterations)</p> <p>NB each of the following activities is repeated for each candidate approach, on an approximate 10 week cycle.</p> | 1/6/07 | 31/12/08 | <i>Recommendations for search and resource discovery approaches. Service expressions.</i> | | BR |
| 1. Review approach | Week 1 | Week 3 | Report | | BR, RB, JF, RO |
| 2. Prototype approach | Week 4 | Week 6 | Prototype | | BR, EG, JF, RO |
| 3. Evaluate approach and make recommendations | Week 7 | Week 9 | Report | | RB, BR, JF, TR, RO |
| 4. Develop service expressions | Week 10 | Week 10 | <i>Service expressions</i> | 5.0n (mile | BR |

| | | | | | |
|--|---------|----------|---|----------------------------------|--------------------|
| | | | | stone every 10 weeks) | |
| <p>WORKPACKAGE 6: Personal resource management</p> <p><u>Objective:</u> To explore the use of ePortfolios and social networking to facilitate personal management and sharing of repository resources. (Stage 1 and 2 of UIDM iteration 2 and subsequent iterations)</p> <p>NB each of the following activities is repeated for each candidate approach, on an approximate 10 week cycle.</p> | 1/6/07 | 31/12/08 | <i>Recommendations for personal management approaches. Service expressions.</i> | | JT |
| 1. Review approach | Week 1 | Week 3 | Report | | JT, BR, JF, RO |
| 2. Prototype approach | Week 4 | Week 6 | Prototype | | JT, BR, JF, RO |
| 3. Evaluate approach and make recommendations | Week 7 | Week 9 | Report | | JT, BR, JF, TR, RO |
| 4. Develop service expressions | Week 10 | Week 10 | <i>Service expressions</i> | 6.0n (mile stone every 10 weeks) | BR |
| | | | | | |
| <p>WORKPACKAGE 7: Iterative design and evaluation</p> <p><u>Objective:</u> To design, develop and evaluate a set of tools to reduce administrative load on staff using an iterative and participatory approach. (Stage 3 of UIDM</p> | 1/6/07 | 31/1/09 | <i>Repository, tools and evaluation reports</i> | | BR |

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|---|---------|----------|---|--|---------------------|
| <i>iteration 2 and subsequent iterations)</i> | | | | | |
| NB each of activities 3-4 is repeated for tool iteration, on an approximate 10 week cycle. | | | | | |
| 1. Develop and deploy test bed repository with basic functionality (based on existing tools) | 1/6/07 | 30/6/07 | Open source test repository | | BR |
| 2. Evaluate initial repository and tools | 30/6/07 | 31/07/07 | Report | | BR, TR, JF, SH |
| 3. Tool development | 1/8/07 | 31/12/08 | <i>Open source tools</i> | 7.0n (mile stone every 10 weeks) | BR, RO, EG, SH |
| 4. Tool evaluation | 1/9/07 | 31/1/09 | <i>Reports</i> | 7.1n (mile stone every 10 weeks) | BR, TR, JF, RO, SH |
| | | | | | |
| WORKPACKAGE 8: Dissemination | | | | | |
| <u>Objective:</u> <i>To disseminate project findings to the JISC community and more widely</i> | 1/3/07 | 31/3/09 | | | |
| 1. Develop website | 1/3/07 | 30/5/07 | <i>Website:</i> www.leedsmet.ac.uk/inn/streamline | 8.0 | JF |
| 2. Develop blog | 1/3/07 | 30/5/07 | <i>Public blog:</i> emerge.elgg.org/streamline/weblog/ | 8.1 | JF (All contribute) |
| 3. Distribute tools | 30/6/07 | 31/12/08 | <i>Tools (distributed via website)</i> | | BR, JF, RO |

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|---|--------|---------|---|------------------------------|-----------------|
| 4. Develop evaluation instrument | 1/6/07 | 15/7/07 | <i>Evaluation instrument</i> | 8.2 | TR, JF |
| 5. Organise evaluation workshop | 1/3/07 | 30/4/07 | <i>Workshop - April 2008</i> | 8.3 | JF, BR, TR, RO |
| 6. Organise dissemination workshop | 1/2/09 | 31/3/09 | <i>Workshop - March 2009</i> | 8.4 | JF, RO |
| 7. Prepare and present papers | 1/6/07 | 31/3/09 | Publications | | All |
| WORKPACKAGE 9: Project management <i>Objective: To ensure the successful completion of the project and achievement of project objectives.</i> | 1/3/07 | 31/3/09 | Reports | | JF |
| 1. Prepare management plan | 1/3/07 | 31/5/07 | Management plan | 9.1 | JF |
| 2. Arrange quarterly project team meetings | 1/3/07 | 31/3/09 | Minutes and action plans | | JF, RO |
| 3. Maintain communication through management blog at least fortnightly | 1/3/07 | 31/3/09 | Management blog | | All |
| 4. Monitor and report work package progress monthly | 1/4/07 | 31/3/09 | Progress reports (informal through blog) | | All |
| 5. Maintain and manage budget | 1/3/07 | 31/3/09 | Budget spreadsheet | | JF, RO, finance |
| 6. Prepare and submit JISC progress reports | 1/8/07 | 1/9/08 | Progress Reports (6 monthly) Sep 07, Mar 08, Sep 08 | 9.2, 9.3, 9.4 | JF |
| 7. Prepare and submit JISC final report | 1/2/09 | 31/3/09 | Final report Mar 09 | 9.5 | JF |
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Members of Project Team:

JF=Janet Finlay; BR=Ben Ryan; SH=Stuart Hirst; JT=Jill Taylor; TR=Tony Renshaw; EG=Elizabeth Guest; RB=Rodney Brunt; RO=Research Officer

Deliverables in bold are formal deliverables to JISC

Deliverables in bold italic are deliverables for public dissemination which will be made available on the web site and to the wider community as well as to JISC

Deliverables in normal typeface are internal project deliverables