

ACETS Project Plan

Project Acronym	ACETS
Project Title	Assembling, Cataloguing, Exemplifying/Embedding RLOs in practice. Testing with students and Sharing outcomes with the HE and FE communities.
Start Date	1 st September 2002
End Date	31 st August 2005
Lead Institution	The University of Edinburgh
Project Director	Dr David Dewhurst
Project Manager & contact details	Rachel Ellaway, Learning Technology Section, College of Medicine & Veterinary Medicine, The University of Edinburgh, Hugh Robson Link Building, 15 George Square, Edinburgh EH8 9XD rachel.ellaway@ed.ac.uk, 0131 651 1749
Partner Institutions	U of Cambridge, U of Newcastle (LTSN-01), U of Birmingham, Edinburgh s Edinburgh s Telford College, Suffolk College, U of Nottingham (BIOME)

Document History

Version	Date	Comments
1.1	6-11-02	Transferred to JISC template
1.2	14-11-02	Submitted for internal review
1.3	21-11-02	Following Project Board comments

1 Introduction

This collaborative project will develop and evaluate processes to achieve sustainable use of RLOs by practitioners across medicine and related disciplines in the HE and FE sectors. It will build on existing and emerging experience and expertise in both the HE and FE medicine and health science communities to deliver mechanisms for effective repurposing of existing digital resources.

The project recognises that although enhancement of student learning is the major focus, this can be best-achieved through persuading teachers to embrace technology (existing digital resources and delivery mechanisms) and embed it into their practice. Central to this is making this process easier, less time consuming, intellectually satisfying and rewarding through positive student feedback.

Developing much more useful, teacher-centred, descriptors of RLOs and ensuring they are readily available is essential. This will be achieved, in part by further developing existing, JISC-funded databases and dynamic uptake technologies to explore, with practitioners, innovative ways in which RLOs can be (a) described using basic and extended metadata and educational and subject relevant taxonomies and (b) catalogued to make them more useful in a wide variety of applications and scenarios (c) readily accessed and aggregated into learning activities.

Recognising that facilitating identification, selection and access is only part of the task to ensuring that the use of RLOs is embedded into practice and used to enhance student learning, the project will also involve teachers in the development of wrap-arounds to facilitate this process in ways appropriate to their local needs. Making this process easier, less time consuming, intellectually satisfying and rewarding is a major objective of the ACETS project.

The process and effectiveness of using the repurposed RLOs in a variety of student learning activities will be evaluated with student groups and the results of this evaluation will be documented as further reflective guides to practice and use. The derived exemplars, which themselves will become new RLOs, will be catalogued and shared with the wider community where the transferability of the process can be investigated further.

2 Aims and Objectives

1. Create a project infrastructure including a web-based file server, a web-site with online tools to support the project's learning community such as discussion boards and group workspaces.
2. Work with teachers to identify a varied set of existing RLOs appropriate for teaching anatomy and medical-related communication skills. These will cover different interaction levels, media types and levels of aggregation and will comprise a minimum of 100 learning objects which might include: peer reviewed courseware packages; text; images; video, and a minimum of 25 learning objects which might include: animations; audio; simulations; 3D models.
3. Develop a method for cataloguing the RLOs and describing them by developing a controlled vocabulary and metadata schema to enable relevant, teacher-centred descriptors (metadata) to be added.
4. Investigate ways of modifying existing JISC-funded databases (e.g. BIOME) and resource discovery technologies to make these RLOs more accessible both at their semantic and technical levels to teachers in both the HE and FE sectors.
5. Investigate methods of repurposing the identified RLOs to enable them to be embedded into a range of educational practices across the HE and FE sectors i.e. explore how the re-purposed RLOs can support student learning activities in a variety of contexts and for a variety of types of learning outcome

6. Work with teachers to develop exemplars of learning activities based on using repurposed RLOs
7. Work with teachers to produce an extensive and representative series of exemplar wrap arounds to ensure the learning activities meet local learning outcomes and are embedded into educational practice.
8. Evaluate the development processes and the quality and usefulness of the exemplars outlined above, and the internal management processes.
9. Explore how a limited set of RLOs can support teaching and learning in related disciplines such as veterinary medicine, dentistry, nursing, biomedical science and more distantly related topics such as beauty therapy and health studies.
10. Document the outcomes of the project and disseminate these to the wider HE and FE communities.

3 Overall Approach

The project team will work with teachers from both the HE and FE sectors to define a varied set of existing RLOs in the curricula areas of anatomy and communication skills. The project will work with other X4L strand B project teams and external agencies to develop a RLO repository and cataloguing system, an appropriate taxonomy for describing the objects and a system to allow easy access and manipulation (e.g. aggregation) of the RLOs. Teachers will then be commissioned to develop wrap-around educational support materials to facilitate the process of embedding selected RLOs, appropriate to their local needs, into practice. The process of creating and reusing the repurposed RLOs in a variety of learning activities will be evaluated with student groups and the results added to the database as further reflective guides to practice and use.

The process will be fully documented and the derived exemplars, which themselves will become new RLOs, will be catalogued and disseminated into the wider community where the transferability of the process can be investigated further.

4 Project Consortium

Project Director — David Dewhurst	Principal Investigator — responsible for delivering outcomes to the JISC Strategic vision, direction and leadership Financial governance Ensuring key milestones are achieved Chair Project Board (management group) Represent project as member of Advisory Board Advocate for project Ultimate arbiter for disagreement
Project Manager (Technical) — Rachel Ellaway	Hold project plan on behalf of steering group Technical responsibility for CWE Primary contact — BIOME Recruitment of academic teachers

	<p>RLO identification — anatomy</p> <p>Responsible for draft reports</p> <p>External liaison</p> <p>Liaise with FE partners (Edinburgh s Telford)</p> <p>IPR and ' negotiation</p>
Project Manager (Content) — Dawn Leeder	<p>Recruitment of academic teachers</p> <p>RLO identification — Communication skills</p> <p>Primary contact — UCEL</p> <p>External liaison</p> <p>Liaise with FE partners (Suffolk)</p> <p>Dissemination activities</p> <p>Staff development</p> <p>IPR and ' negotiation</p>
LTSN-01 —Suzanne Hardy, Sarah Marshall	<p>Evaluation (see below)</p> <p>Managing Dissemination process</p> <p>Advocacy for project</p> <p>Facilitation and Liaison</p> <p>Advising on specifications (DC, IMS)</p>
External evaluator — Dr Jean McKendree (LTSN-01)	<p>Responsibility for the design of the internal evaluation process</p> <p>Develop the evaluation strategy</p> <p>Produce evaluation methods, tools and guides</p> <p>Oversee data collection and analysis process</p> <p>Provide regular reports</p> <p>Produce summative report for incorporation in to final project report</p>
Technical Advisor — David Davies	<p>Advise on technical implementation and syndication</p> <p>Specifications (ie. DC/IMS)</p> <p>Advocate of project</p> <p>Primary contact for similar collaborative projects (e.g. IVIMEDS, U21)</p>
Project Board (Management role)	<p>Develop project plan</p> <p>Operationalise the plan</p> <p>Support the Project Director and Project Managers in ensuring key outcomes and milestones are achieved.</p> <p>Monitor and review the project plan over the course of the project</p> <p>Advocates for project</p>
Advisory Board	<p>Ensure quality of project management processes and</p>

(Strategic role)	financial governance Advocates for project Reality checks — big picture Advice Representation of constituencies they represent Able to sign off change
BIOME	Provides final constituency-oriented referencing to objects and cataloguing and development expertise. Represent RDN in project RDN liaison Technical advice
FE Colleges	Pilot implementation and evaluation of modified RLOs in defined FE courses Represent and liaise with FE sector Brokerage of ACETS idea and outcomes within FE community Liaise with project managers

5 Project Management

See attached Management Structure diagram (appendix 1)

6 Overall Project Structure

See attached Workpackages diagram (appendix 2)

See attached GANTT Chart (appendix 3)

7 Detailed Project Plan

Workpackage 1: Setting up Project

Partner Responsible: Edinburgh

Other Partners Involved: all

Start Date: Sep 2002

End Date: Dec 2002

Objectives: to create tools and media through which project participants can collaborate and share information and objects. To create an online presence and physical materials to inform constituency of project and its goals and to begin the process of building collaborative partnerships with individuals in the constituencies, other X4L projects and other JISC entities.

Brief Description of Work: Creating website and collaborative work environment, initial publicity, development of project plan, liaison with JISC and partners

Workpackage 2: Metadata Model and Development Platform

Partner Responsible: Edinburgh

Other Partners Involved: all

Start Date: Sep 2002

End Date: Aug 2003

Objectives: to design and implement a metadata model that can accommodate both the original objects, the exemplars of use and new aggregated objects. To design and implement a repository for the objects and metadata and where possible development bay tools to facilitate object manipulation and aggregation.

Brief Description of Work:

- create a metadata model that can encompass the different objects anticipated - including basic objects, aggregated objects and exemplars of object use.
- relate to existing metadata models and interoperability specifications.
- identify specifications for, and develop or adopt, an ACETS development platform to: store base objects and their metadata, store aggregated objects and their metadata and store exemplars and their metadata.

Workpackage 3: Resource Discovery

Partner Responsible: Cambridge/Edinburgh

Other Partners Involved: LTSN-01, Telford, Suffolk, Birmingham

Start Date: Dec 2002

End Date: Dec 2003

Objectives: to identify and recruit those teachers who will be involved in selecting criteria for useful learning objects, selecting existing objects based on these criteria and identifying gaps in the current pool of available objects.

Brief Description of Work:

- identify and provisionally recruit teachers
- work with identified teachers, to identify a varied range of existing information objects in anatomy

work with identified teachers, to identify a varied range of existing information objects in communication skills

Workpackage 4: Object Acquisition

Partner Responsible: Edinburgh/Cambridge

Other Partners Involved: all

Start Date: May 2003

End Date: Dec 2003

Objectives: to actively acquire and clear for use objects, either as referenced in existing repositories, physically entered in the project repository or sought from project members. The acquisition to include rights negotiation, object access, metadata cataloguing and rendering/exposing the objects from the repository to teachers in a meaningful, appropriate and useful way.

Brief Description of Work:

- 1 clear IPR and copyright
- 2 catalogue objects using project metadata descriptors and protocols
- 3 uploading objects if necessary in to the development platform
- 4 making objects readily accessible to project participants

Workpackage 5: Creating Exemplars

Partner Responsible: Cambridge/Edinburgh

Other Partners Involved: LTSN-01, Edinburgh s Telford, Suffolk, Birmingham

Start Date: Aug 2003

End Date: Sep 2004

Objectives: to create and evaluate strategies to embed objects and aggregates of objects within courses.

Brief Description of Work:

- work with teachers to identify appropriate learning activities
- in the form of workshops and one-to-one sessions, train and develop teachers' knowledge and skills in using objects
- commission teachers to produce wrap-around support materials to embed identified information objects into a learning activity
- document the exemplification process

Workpackage 6: Evaluation of the Exemplars

Partner Responsible: LTSN-01, Edinburgh, Cambridge

Other Partners Involved: all sites who are commissioned to develop exemplars

Start Date: Sep 2004

End Date: Mar 2005

Objectives: to evaluate the processes and effectiveness of the exemplars in enhancing student learning

Brief Description of Work: testing the exemplar processes of repurposing learning objects in other institutions

Workpackage 7: Evaluation of the Processes

Partner Responsible: Edinburgh, Cambridge, LTSN-01

Other Partners Involved: all

Start Date: project start

End Date: project end

Objectives: to provide internal project management and QA information during the project lifetime and to report based on both formative and summative data collected during the project.

Brief Description of Work:

- testing of the ACETS products and procedures
- internal QA processes
- formative project evaluation by the ACETS team.

Workpackage 8: Dissemination

Partner Responsible: LTSN-01, Edinburgh

Other Partners Involved: all

Start Date: project start

End Date: project end

Objectives: to engage with project constituencies, to raise issues and seek feedback and on publishing the reports to ensure the widest possible coverage and greatest levels of engagement.

Brief Description of Work: Formative and summative reports, dissemination to project constituencies via workshops, conference publications, a published guide to using RLOs and embedded approaches in other work.

Workpackage 9: Exit Strategy

Partner Responsible: Edinburgh, Cambridge

Other Partners Involved: all

Start Date: year 3

End Date: open

Objectives:

- ensure objects and metadata are available beyond X4L project lifetime
- seek further funding or alternative resourcing

Brief Description of Work: the specifics will be investigated closer to the time and will need to be in the context of the exit strategy of the whole X4L programme.

8 Dissemination

Dissemination will be co-ordinated by LTSN-01 staff associated with the project but will be the responsibility of all staff involved in the project.

Internal communication/dissemination will be via the ACETS collaborative work environment (CWE). The project GANTT chart will be presented online showing actual progress against planned progress.

Project staff will attend appropriate meetings and disseminate information about the Project s activities via presentations. Information leaflets/conference packs etc will be developed to assist this process.

The project will engage with our constituencies through activities such as workshops, JISC X4L projects platform, stakeholders meetings, offering prize for best use (judges as well as user involvement)

Project reports (published on Project web-site), academic and technical publications, and teacher guides will also be part of the dissemination strategy.

9 Project Steering Committees

The Advisory Board comprises:

Professor Stephen Tomlinson, Vice-Chancellor University of Wales College of Medicine, Cardiff (chair)

Damien Walmsley, Professor of Restorative Dentistry School of Dentistry, University of Birmingham;

Professor John Simpson, Head of the Medical Education Unit, University of Aberdeen;

Professor Stephen May, Vice-Principal(Teaching), Royal Veterinary College;

Dr Terry Melia CBE, Chair of the LSDA

Dr David Dewhurst (ACETS Project Director)

ACETS is also part of the North of England/Scotland X4L Cluster Group with a committee comprising senior representatives (usually project managers) from the 6 local X4L projects (Blackburn, Edinburgh, Glasgow, Lauder, Stirling & York).

10 Quality Assurance and Evaluation

Dr Jean McKendree of the LTSN-01 will advise on the design of project evaluation.

There are three types of evaluation appropriate for ACETS. The first is the evaluation of the products, the exemplar learning materials (RLOs plus wrap-arounds). Appropriate evaluation tools will be developed to capture data from various stakeholders about the uptake, use and effectiveness in real teaching situations once a significant number of RLOs are available. The second, and earlier, evaluation is of the processes and procedures for selecting, cataloguing and creating wrap-arounds for RLOs. The third is the internal formative evaluation of the ACETS project itself (management processes, evaluation and dissemination strategies etc).

Testing of the ACETS Products and Processes (Evaluation 1&2)

This aspect of the evaluation is intended to:

- provide timely and informed feedback from key stakeholders for iterative design of the tools, products and methods being created by ACETS;
- identify in a timely fashion potential problems or particularly smooth operations and procedures;
- keep partners and stakeholders informed as to progress of project;
- collect audit trail and data for summative report.

Evaluation of the ACETS Project (Evaluation 3)

The formative evaluation of the ACETS project will be primarily undertaken by the ACETS team. This aspect is intended to:

- monitor the progress and achievement of major milestones,
- capture the strengths and weaknesses of the management models and procedures;
- provide data for the summative report on the success of the project.

Quality assurance procedures for products e.g. usefulness of RLO repository, cataloguing and metadata systems, exemplar wrap-arounds etc and processes will be an essential part of the evaluation process. The Project Board, and Advisory Group will be responsible for QA of project management processes, financial management and ensuring outcomes and milestones are achieved.

11 Risk Assessment

Factor	Outcome
Key Staff — Project Managers	If key staff are lost mid-project, much of the project knowledge is lost with them as well as project momentum and contacts. By using a CWE as a documentation process this can be mitigated to an extent.
Communication failure — loss of project direction	Team approach is lost. Project Director and Project Managers need to ensure regular and effective communication procedures.
Pursuit of personal/institutional agendas	Failure to achieve value for money. Tight project management processes to ensure that project staff deliver specific outcomes to agreed timescales.
Useful RLO selection process	Poor or inappropriate RLOs will not be used. Need to ensure regular and effective liaison with teachers to ensure high quality RLOs are selected and that teachers feel part of the project.
The cataloguing process	Reduces effectiveness of RLO use. Need to engage as many of constituency as possible in development process and engage specialists (e.g. BIOME, medical librarians) where appropriate.

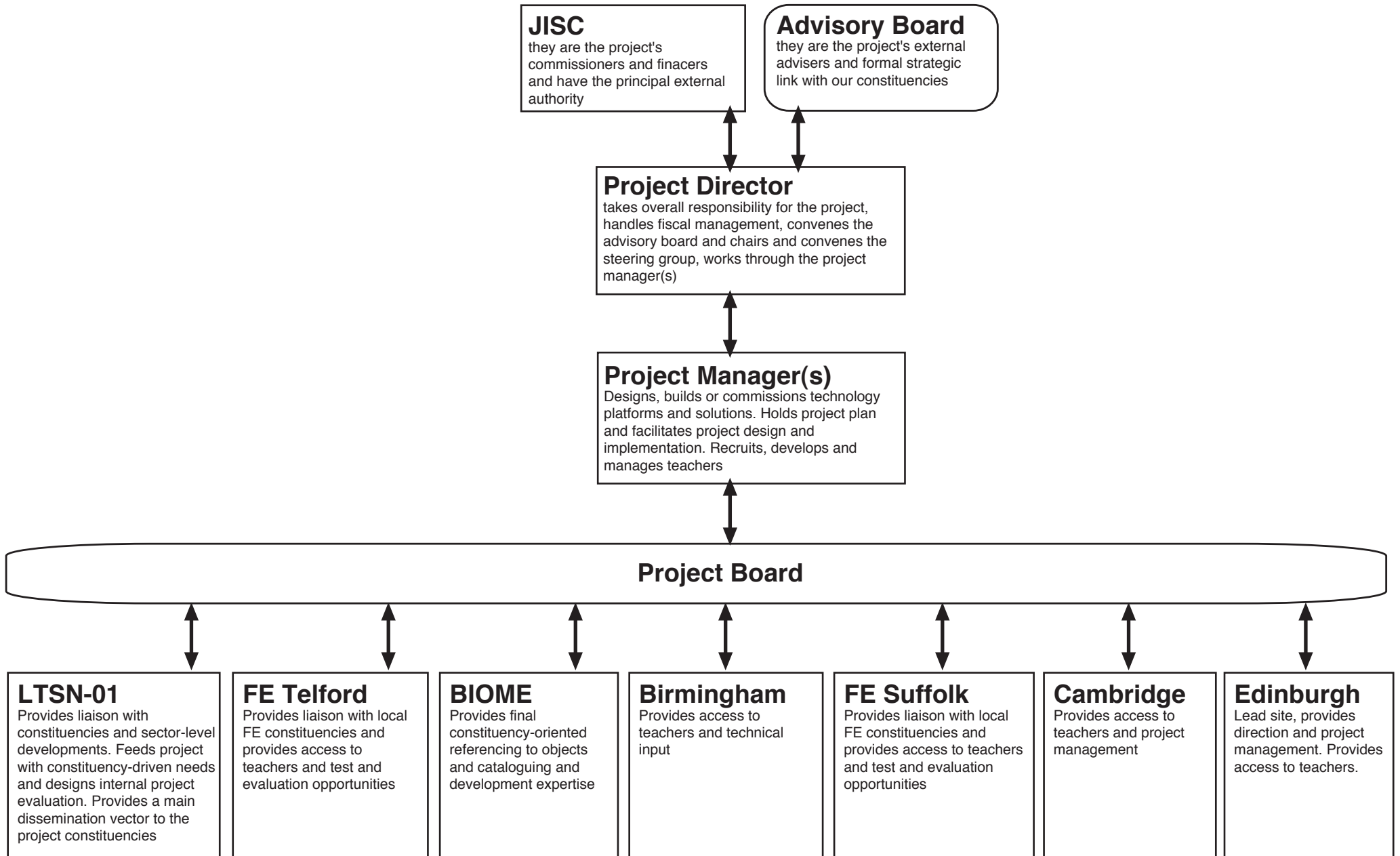
Over-ambitious Project	Regular monitoring of project plan to ensure major outcomes are delivered.
Poor evaluation data	Data analysis not possible — weak evidence/no data/too much data. Develop a robust research and evaluation strategy and engage as many of constituency as possible in evaluation process and engage specialists as required.
Organisational/political change beyond our control	Members or commissioned academics may not able to participate after committing to the project. A large consortium, a well-documented process and a reasonably large testing group should mitigate these effects.
Dissemination ineffective	If the RLOs are not used beyond the lifetime of the project and outside the institutions in which they are developed then the project will not have achieved its broad remit to facilitate change in its communities. Ensuring high-quality RLOs are selected, close-engagement with the teachers who produce the exemplars and an effective evaluation and dissemination strategy should mitigate against this.
Time slip	Could mean that all of the desired outcomes are not achieved. Project Director, Managers, Project Board and Advisory Group must ensure that milestones must be adhered to. The GANTT chart accompanying this plan will be used to monitor progress.
FE/HE Split	There are significant differences in the needs, practices and drivers for the project members. Consensus and democratic accountability is required at all times.

12 Budget

Description	Phase 1		Phase 2		Phase 3	
	Institutional Contribution	Additional Funds	Institutional Contribution	Additional Funds	Institutional Contribution	Additional Funds
Edinburgh - Project Director (Dr D G Dewhurst) 2 sessions per week	10,082.00	0.00	10,434.00	0.00	10,799.00	0.00
Edinburgh - Technical Project Manager (Ms R Ellaway) 2 sessions per week year 1; 1 session per week years 2 & 3	0.00	12,128.00	0.00	3,853.00	0.00	4,068.00
Cambridge - Learning Objects manager (Ms D Leeder) 2 sessions per week year 1; 1 session per week years 2 & 3	0.00	7,939.00	0.00	4,235.00	0.00	4,508.00
LTSN-01 - Liaison (Ms S Hardy; 2 sessions per week)	6,739.00	0.00	7,259.00	0.00	7,820.00	0.00
LTSN-01 - Dissemination & evaluation 1 session per week	4,749.00	0.00	4,915.00	0	5,087.00	0.00
LTSN-01 - Evaluation strategy consultant (Dr J McKendree)	1,000.00	1,000.00	500.00	500.00	500.00	500.00
Research support	0.00	2,000.00	0.00	2,000.00	0.00	6,000.00
Consultancy (including cataloguing)	0.00	18,466.00	0.00	0.00	0.00	0.00
Service Manager BIOME	0.00	0.00	0.00	0.00	0.00	4,000.00
Technical Advisor (Dr DA Davies) 1 session per week	0.00	1,000.00	0.00	4,104.00	0.00	0.00
Additional funding already secured	7000	0	7000	0	7000	0
Consultancy - FE Colleges	0.00	5,000.00	0.00	0.00	0.00	0.00
Hardware including ACETS web server	9,000.00	3,000.00	0.00	0.00	0.00	0.00
Travel & subsistence (includes SG and AB meetings)	1,000.00	8,000.00	1,000.00	8,000.00	1,000.00	10,000.00
Consumables	0.00	700.00	0.00	700.00	0.00	700.00
Repurposing learning objects (creation, piloting, evaluation) FE- Edinburgh s Telford	0.00	0.00	0.00	5,000.00	0.00	0.00
Repurposing learning objects (creation, piloting, evaluation) FE-Suffolk	0.00	0.00	0.00	5,000.00	0.00	0.00
Repurposing learning objects (creation, piloting, evaluation) HE-Institutions	0.00	10,000.00	0.00	25,000.00	0.00	0.00
Dissemination activities	0.00	5,000.00	0.00	5,000.00	0.00	30,000.00
Totals	39,570.00	74,233.00	31,108.00	63,392.00	32,206.00	59,776.00
Institutional waiver of overheads @ 40% of salaries	36,000.00					
Total Institutional Costs	138,884.00					
Total JISC costs	197,401.00					



Appendix 1 ACETS Project Management Structure





Appendix 2 ACETS Workpackages

Workpackage 01	Setting up project Creating website and collaborative work environment, initial publicity, development of project plan, liaison with JISC and partners
Workpackage 02	Metadata Model and Development Platform 1 create a metadata model that can encompass the different objects anticipated - including basic objects, aggregated objects and exemplars of object use. 2 relate to existing metadata models and interoperability specifications. 3 identify specifications for, and develop or adopt, an ACETS development platform to: store base objects and their metadata, store aggregated objects and their metadata and store exemplars and their metadata.
Workpackage 03	Resource Discovery 1 identify and provisionally recruit teachers 2a work with identified teachers, to identify a varied range of existing information objects in anatomy 2b work with identified teachers, to identify a varied range of existing information objects in communication skills
Workpackage 04	Object acquisition 1 clear IPR and copyright 2 catalogue objects using project metadata descriptors and protocols 3 uploading objects if necessary in to the development platform 4 exposing objects to project participants
Workpackage 05	Creating Exemplars 1 work with teachers to identify appropriate learning activities 2 in the form of workshops and one-to-one sessions, train and develop teachers' knowledge and skills in using objects 3 commission teachers to produce wraparound support materials to embed identified information objects into a learning activity 4 document the exemplification process
Workpackage 06	Evaluation of the Exemplars Testing the exemplar processes of repurposing learning objects in other institutions
Workpackage 07	Evaluation of the Processes 1 testing of the ACETS products and procedures 2 internal QA processes 3 formative project evaluation by the ACETS team. 4 summative project evaluation of the ACETS project
Workpackage 08	Dissemination Formative and summative reports, dissemination to project constituencies via workshops, conference publications, a published guide to using RLOs and embedded approaches in other work
Workpackage 09	Exit Strategy 1 ensure objects and metadata are available beyond X4L project lifetime 2 seek further funding or alternative resourcing



Appendix 3 ACETS GANTT Chart

