



## JISC Project Plan Template

*The Project Management Guidelines have detailed instructions for preparing project plans.*

*Expand tables as appropriate.*

*Fill in the information for the header, e.g. project acronym, version, and date.*

*Prepare a cover sheet using the cover sheet template and attach to the project plan.*

### Overview of Project

#### 1. Background

*Summarise the background to the project (and how it builds on previous work) and the need for it (and why it's important).*

The SHELL-FISH project aims to deliver a learning support system by providing learners with a facility to obtain feedback, a development plan and a record of progress related to that feedback. Teachers will have a feedback management system which will allow the accessing and updating of a learner's record of progress and previous feedback.

These user-facing tools support both lifelong learning planning and ePortfolio systems. SHELL-FISH will be a plug-in to the SHELL project, which is the leading inter-operability framework, working to UK LEAP and IMS LIP standardised data transfers. SHELL has already developed, tested and proven the technical infrastructure and the base Learner Record for distributed e-Lifelong Learning. The SHELL Project Director has been consulted and is fully supportive of SHELL-FISH. The SHELL-FISH plug-in will use the inter-operability features of SHELL whilst creating a pedagogically sound example of effective practice in learning, teaching and technology.

This project seeks to develop and test an e-personal learning environment (e-PLE) tool which builds on the existing capacity and features of the JISC-funded SHELL project. ([www.shellproject.net](http://www.shellproject.net)). The proposed e-PLE tool will enable a **Formative & Summative Heuristics (FISH)** methodology to be applied to coursework assignments submitted electronically by learners. This project will benefit learners by providing feedback, a development plan based on the feedback and a record of progress related to issues generated during the feedback process. The project will add value to existing online study guidance resources, improving access by inserting hyperlinks into teachers' feedback comments, and measuring the efficacy of resources by tracking changes in student performance associated with their use. Teachers will benefit from having access to a feedback management system (FMS), the ability to access a record of a learner's progress and of learner's previous feedback.

The FISH plug-in will facilitate learning activities focussing on the *personal web portal for students* element of the SHELL system and therefore the bid falls within the *tools for learning and learning support* element of the 3/04 call. The plug-in will be designed to be used in all sectors of 14-19 learning, including local schools, FE and HE. Figure 1 shows the relationship between FISH and SHELL.

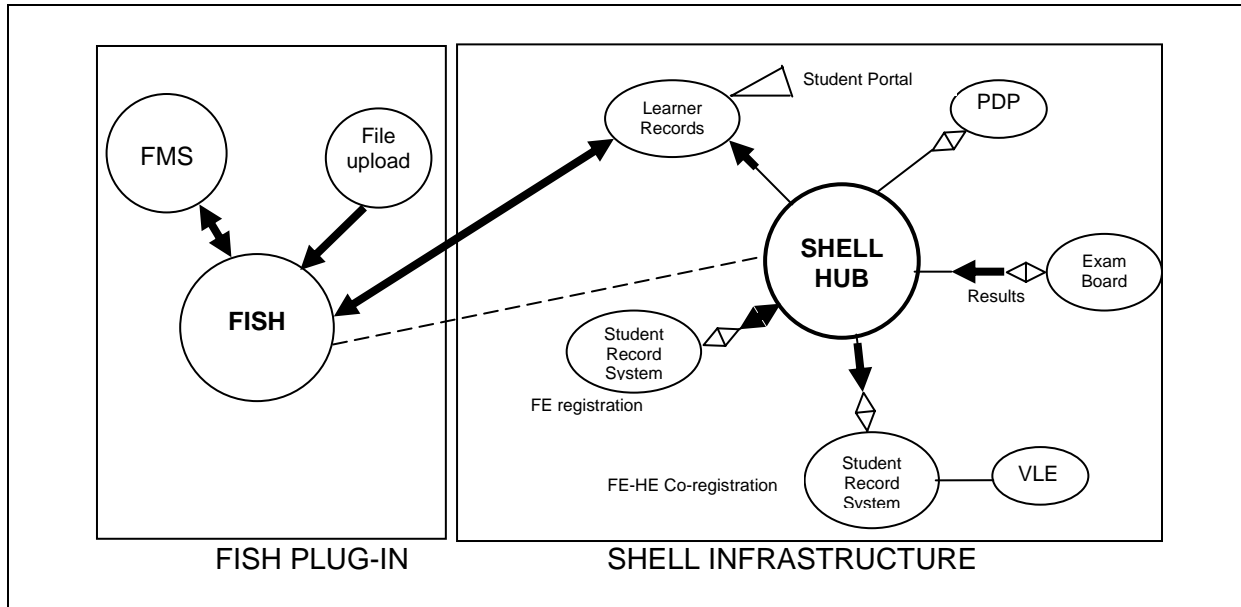


Figure 1. Relationship between FISH and SHELL.

The purposes of assessment and feedback automation include:

- enhancing students' learning through assessment and feedback;
- reducing the time that teachers<sup>1</sup> spend providing assessment and feedback.

SHELL-FISH sets out to move away from the transmission model of feedback, and to exploit the constructivist model described by Nicol and Macfarlane-Dick<sup>2</sup>, providing opportunities to involve students in the development and use of academic assessment criteria, integrating the students' internal performance improvement processes with institutional curriculum-based performance management processes. SHELL-FISH will enable an increasingly automated approach to assessment and feedback.

A number of difficulties typically restrict the learning opportunities presented to students by written feedback. These difficulties include:

- much feedback is hand written and difficult for students to read;
- handwriting comments is a tedious experience for teachers<sup>3</sup>;
- students often experience feedback comments as abrasive;
- responding to numerous similar fundamental mistakes often tests teachers' patience.

Automation via the SHELL-FISH FMS will provide teachers with an extendable shared resource of standard feedback comments that:

- is grouped into themes such as spelling & grammar, discussion & analysis, and assignment-specific comments;
- contain links to existing on-line resources and interactive exercises<sup>4</sup> such as exercises through which students learn punctuation rules;

<sup>1</sup> Teachers in higher, further and secondary education

<sup>2</sup> Nicol, D. J. & Macfarlane-Dick, D. (2004) Rethinking formative assessment in HE: a theoretical model and seven principles of good practice. *Paper Presented At Enhancing Student Learning Through Effective Formative Feedback*, London, 7 June 2004.

<sup>3</sup> Particularly where students persistently submit assignments containing errors that would have been removed had the student proof read their work. By directing students to exercises, for example grammar and punctuation exercises, which must be completed before the student receives their grade, students learn to avoid unnecessary additional work by checking their work before submission.

<sup>4</sup> Teachers can withhold the grade for an assignment until these exercises have been completed by the student. This improves student performance by encouraging students to focus on learning goals

- remain positive and helpful long after the teacher’s sense of humour is exhausted;
- provide a permanent record of the students feedback.

SHELL-FISH will support the learner’s assessment through coursework and examinations:

- by accommodating detailed assessment criteria that can be applied for example by teaching assistants and students in peer assessment;
- by identifying trends in a single students’ performance with respect to assessment criteria applied across a sequence of assessments;
- by measuring the impact of learning development interventions such as online subject specific resources, or seminars that set out to develop students’ critical thinking;
- by measuring the performance of an entire student cohort across the learning outcomes for a programme of study in order to identify opportunities to improve teaching, or to measure the performance of innovative teaching;
- by rapidly completing statistical analysis of student cohort grades.

The elements of SHELL that are exploited by SHELL-FISH are:

- Framework. The SHELL project has already developed and tested the inter-operability framework which already meets the criteria set out in Olivier<sup>5</sup> 2004, p1. (Requirements for ACDF’s).
- Lifelong Learning (LLL) Partnership. The SHELL partnership includes three schools, five Further Education Institutions and the largest Higher Education Institution in Southwest England. This partnership would be an ideal test bed for SHELL-FISH. Client servers and plug-ins have been installed and tested at each site. Plans are currently in place to expand the framework both to another region (Blackpool and Fylde).
- Architecture. SHELL recognises that it is important for providers to retain ownership of their contextualised systems whilst concurrently providing services for “nomadic” individual learners who migrate from place to place over a lifelong learning process, but are dependent on local frameworks whilst registered at a particular institution. SHELL therefore has a platform-neutral architecture, with the ability to take in data feeds from any proprietary e-learning system or student records system via plug-ins. SHELL-FISH with its FMS will be able to plug-in to the SHELL infrastructure. The links between partnership sites is provided via an ioNode infrastructure. SOAP is already used for data packaging, with WSDL translation units attached to plug-ins. By utilising the existing SHELL architecture the feedback records can be linked to the Learner record.
- Data input. Data from Student Record systems, awarding bodies and learners/users will be fed into the SHELL Learner Record database/archive/portfolio, providing a rich LLL source on which learners can draw to create both “outward facing” portfolios and ones for private reflective practice. The feedback profile developed via SHELL-FISH FMS will embed into the Learner Record.
- Data archive. Currently, the conceptual model of the archive is to divide it into at least four broad areas: personal information; formally accredited learning and associated data; skills and competencies and associated data; personal documents. The SHELL-FISH outputs will be stored within the skills and competencies area.

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rather than performance goals (Dweck and Elliot<sup>7</sup>) and acts as an incentive for students to avoid submitting assignments without checking for simple errors.

<sup>5</sup> Olivier, B. (2004), *Application & Tool Component Frameworks*.

[http://www.jisc.ac.uk/uploaded\\_documents/](http://www.jisc.ac.uk/uploaded_documents/)

Application Component Deployment Framework.doc. Accessed 24.06.04.

<sup>6</sup> Teachers can withhold the grade for an assignment until these exercises have been completed by the student. This improves student performance by encouraging students to focus on learning goals rather than performance goals (Dweck and Elliot<sup>7</sup>) and acts as an incentive for students to avoid submitting assignments without checking for simple errors.

<sup>7</sup> Dweck, C. & Elliot, E. (1988) Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology*. 54, 5-12.

- Search, retrieve, edit, prepare. At the next level above the archive, functional tools will enable the learner to drill down into the archive, retrieve documents and data, edit, manipulate and create new files based on the archive. One such tool which has already been developed enables the learner to retrieve and edit their record of formally accredited learning, and present it in different ways for sharing with external audiences. This tool, like those to be developed, has been mapped to IMS LIP and UK LeaP. The SHELL-FISH outputs will follow these mappings.
- Portal access. Portal access to the database is currently being designed and developed, with the direct involvement of user groups. The learner will be able to access their SHELL-FISH feedback comments, record and development plan via the Portal.
- Security User authentication to the SHELL portal will be via HTTPS and VPN. As SHELL-FISH is a plug-in to the SHELL system the security issues have been met.

## 2. Aims and Objectives

*List the broad aim or purpose of the project, and the specific objectives you intend to achieve.*

SHELL-FISH project aims to deliver a learning support system by providing learners with a facility to obtain feedback, a development plan and a record of progress related to that feedback. Teachers will have a feedback management system which will allow the accessing and updating of a learner's record of progress and previous feedback, linking students to existing on-line learning resources and monitoring the impact of resource use on students' academic performance.

SHELL-FISH will be a plug-in to the SHELL project, which is the leading inter-operability framework, working to UK LEAP and IMS LIP standardised data transfers. SHELL has already developed, tested and proven the technical infrastructure and the base Learner Record for distributed e-Lifelong Learning. The SHELL-FISH plug-in will use the inter-operability features of SHELL whilst creating a pedagogically sound example of effective practice in learning, teaching and technology.

In order to achieve the project aims it will be necessary to develop and deliver a Feedback Management System (FMS) with the following objectives

- Have the facility to convert proprietary formatted documents into HTML;
- To develop and populate a database of generic skills feedback;
- To develop a user interface for the teacher to annotate the learner's assignments from the database of generic skills feedback;
- To develop an upload facility to allow teachers to develop and upload subject specific feedback modules;
- To allow the teacher to create their own subject specific feedback modules to be used either by the creator only or put in the public domain for wider use;
- To review and categorise relevant resource information;
- To allow the teacher to link feedback comments with resource information to be accessed via the annotated assignment;
- To create an action plan for the learner, based on the annotations selected by the teacher;
- To inform the learner that their annotated assignment and action plan is available via the SHELL portal;
- To update the learner's feedback record with any issues raised from the annotated assignment
- To update a Module Feedback Record with any issues raised from the annotated assignments from a cohort of learners;

- To track the learner's access to resources suggested by the action plan. This tracking information is held in the learner's feedback record as an indication that the action plan is being adhered to;
- To track changes in the learner's performance against specific assessment criteria in subsequent assessments as an measure of the impact of the feedback and resources
- To utilise the ELT Transformation Manager and ioNode as an agent and hub layer for data transport and data transformation.

### 3. Overall Approach

*Describe the overall approach you will take to achieve the objectives outlined above, including:*

- *Strategy and/or methodology and how the work will be structured*
- *Important issues to be addressed, e.g. interoperability*
- *Scope and boundaries of the work, including any issues that will not be covered.*
- *Critical success factors.*

In order to achieve the objectives the SHELL-FISH project is divided into **5** work packages (WP).

- WP1 Project Management
- WP2 Definition of Feedback Themes and Associated Resources
- WP3 User Focus
- WP4 FMS design
- WP5 FISH to SHELL Data Interface

#### **WP1 Project Management**

This WP will be led by the Project Co-ordinator.

#### **WP2 Definition of Feedback Themes and Associated Resources**

- This WP is responsible for defining the feedback themes, sub-themes and relevant resources. Examples of themes are critical analysis, using other authors' work and written communication conventions : each of these themes will consist of sub-themes. It is the sub-themes that the teacher will be selecting to annotate the assignment.
- It will be necessary to identify a range of existing resources and group them into a set of resource materials to link to each sub-theme as learner tracking of access to this material is a requirement of the project. This material, hosted by SHELL-FISH, may be linked to external resources which will require identification by the project.

#### **WP3 User Focus**

- A Learner User Group will be established.
- A Teacher User Group will be established.
- Input relating to the FMS user interface will be obtained from teachers.
- The FMS user interface will be agreed.
- Input from both learners and teachers on format of annotated script will be obtained.
- Wherever possible, resources will be developed in a range of formats to engage new users by accommodating their preferences. For example comment banks developed for electronic use will be made available as a printed feedback sheet with tick boxes, and as a word processor document for teachers to edit and copy. Each resource will indicate the benefits of simple steps towards full use of the system, and will signpost the user to further resources.
- The format of annotated script will be agreed.
- The format of the action plan will be agreed in terms of assessment criteria, feedback comments and extension exercises, where extension exercises are linked to feedback

comments, these extension exercises become learning development interventions that may be evaluated through the automated assessment process.

- SHELL-FISH will be piloted and evaluated with learners.
- SHELL-FISH will be piloted and evaluated with teachers.

#### **WP4 FMS Design**

- An FMS Interface design based on feedback from the teacher user group will be produced.
- A document translation facility to allow assignments to be imported into FMS will be designed and implemented.
- A methodology to include relevant themes and sub-themes within the FMS interface will be developed.
- A methodology to allow linking of themes and sub-themes to resources highlighted in the Learner Action Plan (internal resources) will be developed.
- A document upload fingerprinting system will be designed and implemented.
- A tracking methodology to monitor usage of internal resources will be developed.
- Linking of internal resources to external resources.
- Hosting of the FISH component of SHELL-FISH, including local resources
- A facility to allow the user to append new subject specific theme and associated resources will be developed.
- The capability to allow users to select and install new themes into their FMS will be developed.
- Host the Annotated Assignments
- Host the Learner Action Plans
- Output notification for the Annotated Assignment and Learner Action Plan to the User Portal will be developed.
- Output updates to Learner's Feedback Record will be developed.
- Output updates to Module Feedback Record will be developed.
- All user facing outputs will comply with the W3C WCAG WAI Level AA.

#### **WP5 FISH to SHELL Data Interface**

- The data specification to allow FMS to update the User Portal (to allow learner access to Annotated Assignment and Learner Action Plan) will be defined.
- The data specification to allow the FMS to update the Learner Feedback Record will be defined.
- The data specification to allow the FMS to update the Module Feedback Record will be defined.
- The FMS development will be carried out in accordance with the SHELL recommended format and include data fields detailed in the CETIS IMS LIP specification. (Within the context of the SHELL project a simple CSV format has been devised and the transforms for this to convert to IMS-LIP have been implemented through a Transform Manager).
- Facilitation of the implementation of the FISH plug-in

## **4. Project Outputs**

*List the tangible deliverables (including reports) your project will create, and the less tangible knowledge and experience you hope to build and share.*

The project outputs will be:

- A Document Translation Facility
- A Feedback Management System
- A review of relevant support material
- A database of feedback material
- The facility to create Learner Action Plan

- The facility to create Annotated Assignments
- The facility to allow the learner to access the Learner Action Plan and Annotated Assignment from their Personal Learning Environment (via SHELL)

## 5. Project Outcomes

*List the outcomes you envisage, including their impact on the teaching, learning, or research communities, and what change they will stimulate or enable.*

The functionality provided by SHELL-FISH will assist the JISC community in the creation of an E-Learning framework. It actively promotes links between schools, colleges and universities and supports learning across different organisations.

SHELL-FISH will illustrate the capabilities of a robust e-Learning tool but this project will not just demonstrate a principle. It is one of SHELL-FISH's underlying themes to become embedded within the institutions involved in the SHELL partnership. SHELL-FISH can be adopted easily by future users of SHELL.

## 6. Stakeholder Analysis

*List key stakeholder groups and individuals that will be interested in your project outcomes, will be affected by them, or whose support/approval is essential, both within your institution and in the community, and assess their importance (low/medium/high).*

Stakeholder	Interest / stake	Importance
Academics (UoP)	Development and Piloting	High
Academics (Partner Colleges)	Development and Piloting	Medium
Learners (UoP)	Development and Piloting	High
Learners (Partner Colleges)	Development and Piloting	Medium
Learning Development (UoP)	Development	High
SHELL Project	Implementation	High

## 7. Risk Analysis

*List factors that could pose a risk to the project's success, assess their likelihood and severity, and how you will prevent them from happening (or manage them if they if they occur). Cover the types of risks listed and any others that apply.*

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Staffing	2	4	8	Staff already in place + using commercial subcontractors
Organisational	2	2	4	
Technical	3	5	15	If there are any interface problems with SHELL the SHELL-FISH project will still operate as a stand alone application
External suppliers	2	2	4	External suppliers are know to the project. The main subcontractor is a UoP spin-out company with experience of working on similar projects
Legal	1	1	1	All code is open source

## 8. Standards

*List any specific standards you will adopt and why they are important.*

- XHTML, CSS will be used to create an interoperable output.
- WAI WCAG Level 2 will be used as a bench mark for all accessibility issues.
- The FMS development will be carried out in accordance with the SHELL recommended format and include data fields detailed in the CETIS IMS LIP specification. (Within the context of the SHELL project a simple CSV format has been devised and the transforms for this to convert to IMS-LIP have been implemented through a Transform Manager).

## 9. Technical Development

*Indicate how the project will follow best practice for technical development, and any specific technologies or development approaches the project will adopt and why.*

Technical Development will be based on best practice and will be using systems developed by SHELL.

## 10. Intellectual Property Rights

*List any intellectual property owned by third parties that will be incorporated into project outputs, when/how you will obtain permission to use them, and any implications for project outputs after the project ends.*

Project outputs will be made available, free at the point of use, to the UK HE, FE and school communities in perpetuity, and they will be disseminated widely by the project in partnership with JISC, and through other e-learning network organisations.

Software components of the deliverables will be released under appropriate open source licences to ensure that they be freely shared with organisations and communities with which JISC has close working arrangements. All software that is developed will be made available free of charge to the education community in perpetuity and all code developed will be made available through open source models. Outputs will be licensed under an Open Source agreement that promotes their reuse.

The project will undertake, subject to available funding, to continue the extension and enhancement of the toolkit according to IMS LIP and Enterprise specifications and other appropriate standards, and continue to make such developments available to the JISC community.

## ***Project Resources***

### 11. Project Partners

*List all project partners (including subcontractors), their roles, and the main contact. Indicate the date a consortium agreement was signed (or will be signed), and send a copy to the programme manager.*

Contracts with subcontractors have yet to be signed.

### 12. Project Management

*Briefly describe the project management framework, including organisation, reporting relationships, decision process, and the role of any local management committee.*

List all members of the project team, their roles, and contact details. Indicate the proportion of time the project manager will spend on project management.

Indicate if the project has training needs and how they will be met.

- The project consists of three sub-areas: (1) Pedagogic Issues; (2) FMS Development; (3) Interfacing and embedding within SHELL. Figure 2 illustrates the management structure.
- Project Academic Directors (PADs) will be assigned to lead each sub-area, the Project Co-ordinator will interface between the PADs.
- A Project Management Group (PMG) consisting of the PADs and project staff (listed in Appendix A) will be responsible for overseeing strategy, operation and monitoring of SHELL-FISH. The PMG will meet at least every two weeks.
- A Project Advisory Group will be established to monitor the project and to provide advice and guidance to the PMG on project: Strategy; Operation; Promoting; Monitoring; Evaluation; Linkage to other interested parties e.g. ILT and LTSN; Reports to HEFCE.
- The Advisory group will meet at least three times during the life of this project.
- An external evaluator will be appointed following consultation with JISC.

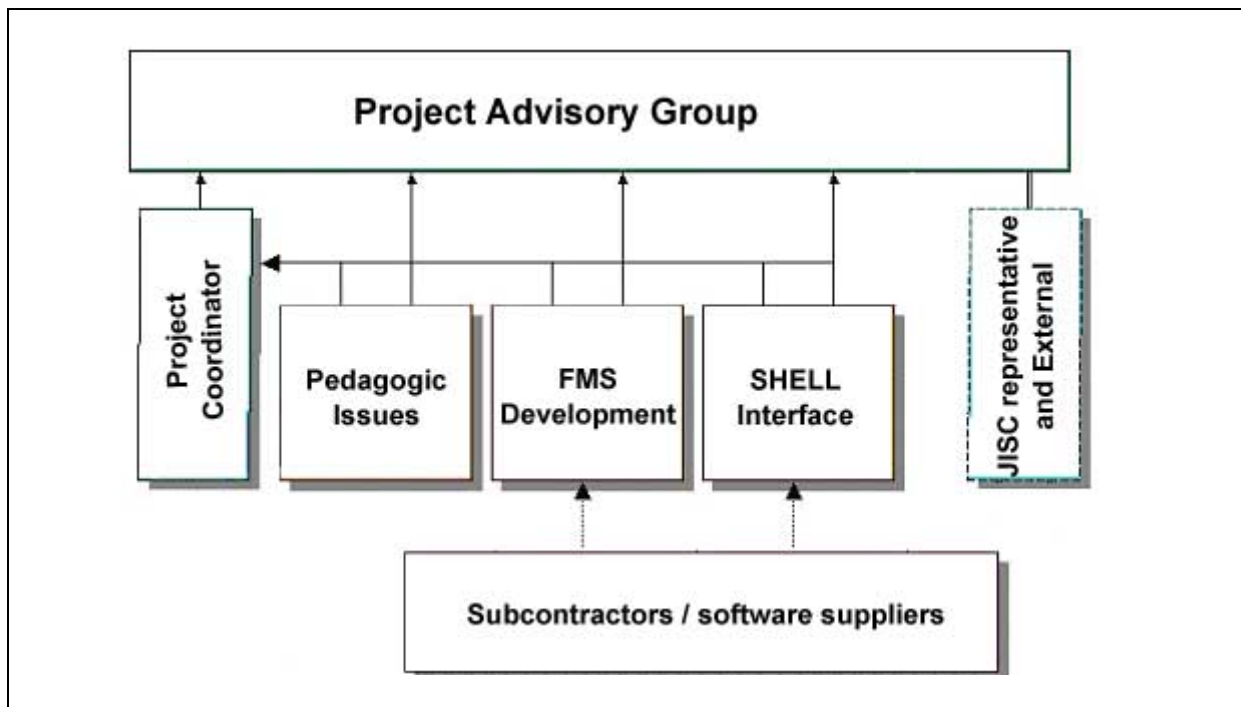


Figure 2. Project Management Structure.

### 13. Programme Support

Indicate if there are specific areas where you would like support from the programme or programme manager.

At this stage no additional support is envisaged.

### 14. Budget

Use the [budget template](#) and attach the project budget as Appendix A. Explain any changes from the budget in the agreed project proposal.

## Detailed Project Planning

### 15. Workpackages

Use the workpackages template to plan the detailed project work and attach as Appendix B. Clearly indicate project deliverables and reports (in **bold**), when they are due, phasing of workpackages, and explain any dependencies. You may also attach a Gantt chart, diagram, or flowchart to illustrate phasing.

Workpackages have still to be confirmed

### 16. Evaluation Plan

Indicate how you will evaluate the quality of the project outputs and the success of the project. List the factors you plan to evaluate, questions the evaluation will answer, methods you will use, and how success will be measured. Expand as appropriate on how you will conduct the evaluation.

Timing	Factor to Evaluate	Questions to Address	Method(s)	Measure of Success

Evaluation is not part of this project proposal

### 17. Quality Assurance Plan

Explain the quality assurance procedures you will put in place to ensure that project outputs comply with JISC technical standards and best practice, and what will constitute evidence of compliance.

Timing	Compliance With	QA Method(s)	Evidence of Compliance
	Fitness for purpose		
	Best practice for processes		
	Adherence to specifications		
	Adherence to standards		
	Accessibility legislation		

### 18. Dissemination Plan

Explain how the project will share outcomes and learning with stakeholders and the community. List important dissemination activities planned throughout the project, indicating purpose, target audience, timing, and key message.

Timing	Dissemination Activity	Audience	Purpose	Key Message

### 19. Exit/Sustainability Plan

Explain what will happen to project outputs at the end of the project (including knowledge and learning). Focus on the work needed to ensure they are taken up by the community and any work needed for project closedown, e.g. preservation, maintenance, documentation.

Project Outputs	Action for Take-up & Embedding	Action for Exit


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*List any project outputs that may have potential to live on after the project ends, why, how they might be taken forward, and any issues involved in making them sustainable in the long term.*

<b>Project Outputs</b>	<b>Why Sustainable</b>	<b>Scenarios for Taking Forward</b>	<b>Issues to Address</b>

## ***Appendixes***

### **Appendix A. Project Budget**

### **Appendix B. Workpackages**

JISC Project Management Framework  
22 December 2003