Project Acronym: Erewhon
Version: 1.0
Contact: Tim Fernando – tim.fernando@oucs.ox.ac.uk
Date: 11th December 2008

JISC Project Plan

Overview of Project

1 Background

1.1 Capabilities of new mobile devices

With the advent of more powerful and developer-accessible mobile computing platforms such as Apple's iPhone, Google's Android and the creation of the Symbian Foundation, pervasive computing is becoming more of a reality.

Today, we can use a mobile phone to quickly find and display the location of the nearest railway station, and then display live information about (e.g.) the next train to London from that point. We can very easily use the same phone to bring up an encyclopaedia entry detailing the history of the user's locality, and buildings thereabouts. The ability to use global positioning systems, cell tower triangulation, on-board accelerometers and various other ambient sensors along with data feeds within a single embedded device allows a whole new range of adaptable, nomadic applications which can harness novel yet useful methods of Human Computer Interaction (HCI).

The example of live train times is an important one; to achieve the same result using more traditional devices, the process would be much more arduous. The user would have to load a web browser (20 seconds), type the appropriate web address from memory (15 seconds), wait for the page to load (20-60 seconds), navigate to the appropriate search box on the page and then type the required station (30 seconds), wait for the next page to load (20-60 seconds) and finally navigate to find the relevant information. In total that process could easily take three or four minutes not to mention requiring a large amount of user concentration due to the series of complex inputs required.

An application using a location sensing system (e.g. cell tower triangulation/GPS) can however significantly reduce the length and complexity of this process. Simply launch the application and within thirty seconds the device would have calculated its rough location, passed this on to retrieve a data feed for the nearest station and then display the information in a form that is instantly readable. An example of such an application is "MyRail Lite" by Kizoom [1].

The sheer simplicity of being able to access such relevant data will attract a great number of new users and will have an especially beneficial effect for the disabled population. However, this simplicity requires us to further develop underlying services to support such applications and in the situation of a higher/further education institute, we have determined that our priorities should lie with Location Based Services (LBS) and accessibility of the Institution's Virtual Learning Environment (VLE).

1.2 Growth in mobile computing and the need for services

The recent boom in mobile computing development has been highlighted by the release of Apple's iPhone and accompanying platform. Since its launch the phone has acquired 17.3% [2] of total Smartphone market share, overtaking other more experienced mobile phone platforms including Microsoft Windows Mobile. The sheer growth and popularity has been (amongst other things) attributed to the simplicity of its interface design as well as its intelligent use of multiple ambient

sensors. This has made the use of complex functions far simpler and has therefore reached a larger and less technically able audience.

More recently, Apple [3] and Google [4] have released application delivery and sales platforms for their respective products both of which have shown phenomenal growth and quite clearly displays the consumer's appetite for pervasive (and entertainment) computing on the move. Surprisingly, despite the relatively high cost of the device it has been shown that the greatest recent growth in iPhone sales has actually been in the low-income bracket [5]. This is not simply because it is viewed as an aspirational commodity but because of the pervasive applications available which can greatly improve the user's day to day productivity and the practical and cost savings incurred by the amalgamation of several portable devices (phone, music player, camera, portable internet device).

Due to Apple's rather sudden growth in this sector, other manufacturers have also been releasing similar products to stay competitive. Examples of which include Samsung's Omnia, the Sony Xperia X1, the HTC/T-Mobile G1 (Google Android), and the HTC Touch Diamond (Windows Mobile). We believe that increased consumer interest and much greater competition between manufacturers will reduce prices, increase functionality and gradually shift users from using traditional "non-smart" phones to higher specified devices.

The growth in this sector has already prompted other leading institutions to develop dedicated mobile services, most notably Stanford [6] and MIT [7]. Both of these services are primarily centred around mapping and delivering course information from their respective VLEs.

1.3 The need for location based services

One of the common characteristics of successful mobile applications is their ability to quickly and effortlessly display relevant data. In many cases, the application uses the device's sensors to infer information; cutting down the time it takes to manually input the information on what would be a small and fiddly interface.

Perhaps one of the most useful sets of sensors are those of location finding, specifically the Global Positioning System/Gallileo, cell-tower triangulation and WiFi hotspot location ids. To make best use of this however, we need to have a comprehensive database of relevant locations. Within a HE/FE institute the locations and relationships between them can be quite complex and there are currently no existing geo-location models available that adequately address this complexity.

1. http://blog.kizoom.com/2008/11/data-integration-and-cloud.html
2. http://news.bbc.co.uk/1/hi/technology/7748372.stm
3. http://www.apple.com/iphone/features/appstore.html
4. http://code.google.com/android/
5. http://www.vnunet.com/vnunet/news/2229499/iphone-popular-poorer-consumers
6. http://stanford.terriblyclever.com/about.html
7. http://mobi.mit.edu/about/

2 Aims and Objectives

Erewhon aims to help create a dramatic increase in the range and types of access to information in the University of Oxford for students, researchers, administrative staff and teachers. It will do this by firstly creating a comprehensive geo-location database capable of handling complex relationships detailing ownership of buildings (including special cases such as co-ownership), relationships between disparate campuses, with a temporal dimension. Erewhon will also improve access to University resources by designing a mobile interface for the Institution's VLE and provide demonstration designs for various other applications and thus provide a framework in which other departments or indeed institutions can quickly create powerful mobile applications.

Innovation will be core to our ethos throughout this project, but we will keep in close contact with our stakeholders to ensure that what we develop will not only be innovative but relevant to those for whom we are catering.

3 Overall Approach

The project will begin with research into the current practice of providing mobile services at other institutions and comparably sized companies. Concurrently, research will start into the implementation of our geo-location database, where we will use standard research practice as well as evaluation by engaging with our stakeholders and other cooperating organisations.
By the sixth month of the project, we will have completed identification of relevant VLE (Sakai) tools for mobilisation and have held two institution-based workshops to help define service requirements and further evaluation of our existing work. We will then start on enhancing our geo-location data to create a more complete set for our test services to work with.

The halfway point in the project will mark the near completion of our geo-location database and will herald the development of our core demonstration and VLE mobile access services. By this point we will have researched the penetration of our project's concepts in other institutions and industry, to ensure that our line of thought is current with the fast evolution in this field.

During the length of the project, we will attempt to make links with industry to ensure that our work is in line with current thinking as well as requesting support for specific mobile and mapping development problems.

3.1 Guidelines for mobile service deployment

At the end of the project, we will deliver a set of guidelines on how other FE/HE institutions can develop and deploy mobile services based on the experiences we have had. We will document our work comprehensively throughout the life of the project not just by traditional means but also via "live" articles on our blog (http://oxforderewhon.wordpress.com) to help receive instant feedback to any problems we may have encountered.

3.2 Geo-location Database

As the geo-location database is essential to all location-based services, good care will be taken with its implementation, especially with the inclusion of a temporal dimension. Initial research has shown that this is a particularly difficult area and although meta-data models such as RDF can comprehensively model a University and its complex relationships, handling a temporal dimension poses more problems.

Development of the geo-location model will include a very large number of test cases as well as input from other organisations (including the JISC Institutional Innovation project *BRII*) and to a certain extent, target end-users. The HE community will also be given a chance to contribute via the blog posts.

Interoperability will be addressed by using industry standard outputs for queries from the database, including KML and XML. There will also be a comprehensive API so that IT professionals across the institution will be able to produce location-based services easily.

3.3 Demonstration applications

Demonstration applications will be created to a near production standard in the latter half of the project, although we will produce versions earlier in the life of the project to help with evaluation at workshops and with our advisory committee. We will engage our target-user community extensively to help determine what applications will be most beneficial, practical and relevant for day to day life in a FE/HE institution.

3.4 Sakai VLE mobile access

We will start developing for the Sakai VLE in the second half the project, allowing the current code base to stabilise and for the initial release of Sakai to go live in Oxford. In the mean time, we will investigate the tools we would like to mobilise by way of a usability study and surveys. The mobilisation of tools may involve different approaches depending on the technology and standards available at the time (we expect this to change in the next six months).

3.5 Evaluation of resources and demonstration services

Evaluation will be an ongoing process throughout the project, but formal evaluation of new resources and services will begin at the end of month five. From this point on, there will be regular written evaluative reports.

3.6 Limitations

3.6.1 Guidelines for mobile service deployment

Although we will endeavour to cover as many of the available platforms and options available on the market, it may be unfeasible to investigate every possible option. This may include one or two of the largest platforms due to the level of specific expertise required. However, we hope that in making industry contacts we can at the very least produce advisory document related to the platform in question.

3.6.2 Geo-Location Database

It should be noted that this project will not cover any three dimensional mapping nor will it illustrate property boundaries. The geo-location database will comprise point data and complex relationships between them.

3.6.3 Sakai

The Sakai aspect of the project may not contribute (or not significantly) to the Sakai code base as the optimal methods of accessing Sakai data may well be through existing interfaces (e.g. SDATA). This will not however, reduce the level of functionality available for mobile access.

3.7 Success factors

3.7.1 Institutional take-up

The primary success factor of the project will be the take up of services. We hope that with adequate advertising and workshops, IT professionals across the University will develop against our APIs. We expect that the Computing Services department will fund the further development of our demonstration services and hence provide a production service to our academics, staff and students.

3.7.2 Cross institutional take-up

Another success factor will be the take up of our geo-location model across other institutions. With this model in place across several institutions, we could leverage support from large mapping companies and attempt to push our collective data through to them. This would allow our data to reach consumer products such as satellite navigation systems and other location based services.

The demonstration applications we create through the project could result in the creation of an open-source community project. This would be advantageous to all and result in a well updated and powerful code base for multiple institutions. It is not, however, a precondition of project success that we release any code to the community.

4 Project Outputs

4.1 Institutional geo-location database

We will produce a geo-location database service at the institutional level for the University of Oxford, comprehensively listing departments, colleges, buildings and the capability of holding information such as room locations. This will be accompanied by a web service to edit and retrieve data, with a REST-based API for application developers.

4.2 Guidelines for deployment of mobile services

Our experience throughout the project will provide experience and knowledge on how best to deploy new mobile services within a FE/HE institute. This will be detailed in a final report.

4.3 Improved mobile access to institutional VLE

Our work on the Sakai VLE will allow students and staff to access aspects of their University resources while on the move.

4.4 Progress reports

There will be three progress reports through the length of the project.

4.5 Evaluative reports

Evaluation will be key to keeping our research work relevant, thus we will have five evaluative reports during the project.

4.6 Knowledge on mobile technologies

Investigation of mobile platforms and development on some of them will provide a wealth of knowledge which will help the department and the University push mobile services in the future.

4.7 Pilot applications

A set of demonstration applications will be developed and evaluated throughout the life of the project, as proof of concept for geolocation services and tailored information delivery on mobile devices.

4.8 Links to industry

We believe our work is quite cutting edge in a field that is highly active in the commercial sector. Developing links with the industry will ensure that we are kept up to date with this rapidly evolving market and hopefully provide future support and knowledge for further endeavours. We also hope that our geo-location database will be in a format that can be output to these companies and thus make our data even more accessible.

5 Project Outcomes

The project outputs listed above will combine to spark a growth in development of mobile services within the JISC community. We hope that the guidelines we produce on using mobile technologies will help implement support for various new devices and any open source code we create will help deployment quickly and effectively.

As our geo-location system will be comprehensive and unique in its capabilities, we hope that this will bring about widespread adoption and lead to institutions being able to handle their geo-location data in an effective manner. The openness and highly standards-based nature of our development will allow for many developers with even less specialised technical skills set (e.g. administration staff) to produce maps and useful information for whatever publications they may be producing.

We hope that the net result of this project will allow students and staff across the University to work more effectively in their day to day lives, being able to access more of the data they require whilst on the move.

6 Stakeholder Analysis

Successful implementation of the work described in this document will benefit a number of stakeholders including both students and staff by allowing them to conduct their business in a more efficient manner – they will be able to perform many of their day-to-day tasks whilst on the move.

Academic visitors to the University will benefit from being able to easily navigate to their destinations and access to the institutional VLE will be opened up to a wider range of devices.

The guidelines and reports that will be produced should provide useful information and experience to the wider JISC community and will greatly help the implementation of similar schemes at other institutions.

Stakeholder	Interest / stake	Importance
Students	Improved access to VLE and new LBS	High
Non Academic Staff	Access to geo-location services	High
Academic Staff	Improved access to VLE and new LBS	High
Academic Visitors	Improved access to VLE and new LBS	Medium
JISC	Funder and project sponsor	High
Mapping providers, e.g. Open Street Map	Map data	Low
Open Source Community	Software for mobile platforms	Low
UK Higher education institutes	Guidance on deployment mobile services	High
Tourists/External users	Access to relevant LBS	Low

7 Risk Analysis

7.1 Areas of Risk

7.1.1 End-user adoption

The principal risk is that the day-to-day lives of University members will not be enhanced by the new services. We will therefore monitor usage of demonstration applications and tools throughout the project, and work with non-expert staff to identify *genuine* uses of technology.

7.1.2 Technical

Current mobile platforms and services are developing extremely rapidly, and there is a risk of substantive changes in technology itself, or technology fashions during the lifetime of the project that will rapidly render results obsolete. The project will mitigate this by working on resources and services that are not dependant on a particular technology. We will also use community tools such as blogs to help create a network from which we can problem solve with the greater community.

7.1.3 Security & legal

As the project will be partly working with data about people, it will have to take extreme care with security and legality; the expert advice of the University's computer security team, Legal Services department and Ethics Committee will be sought as needed.

7.1.4 Staff recruitment and retention

Projects of this type have a high dependency on finding and retaining suitable people very quickly. We already have an expert staff, however, in the key areas of geo-location, mobile devices and the Sakai framework. Hence the main issue will be recruiting staff with more generic skills for the appropriate timeframe. We will attempt to mitigate this by advertising for the last vacant position earlier than under normal procedure.

7.1.5 Risk of free mapping APIs becoming non-free

There is a minimal risk that mapping APIs such as Google's will become available only on a chargeable basis; to mitigate this we will keep up to date with Open Street Map, to ensure that we are able to move our services to this free model.

7.2 Areas of risk - tabular

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Difficulty in obtaining appropriate staff for fixed term contract.	3	4	12	Early advertising of the position for March 2009 start date.
Technical	2	4	8	Attempt to make work non-dependant on particular technology and use community tools to solve problems.
Legal	1	4	4	Be in liaison with the University's expert security, ethics and legal services.
Loss of staff	1	5	5	We will use consultants in the eventuality of a staff member being lost.
Risk of free mapping APIs becoming non-free.	1	2	2	Keep a backup plan of moving to Open Street Map.

8 Standards

Name of standard or specification	Version	Notes
RSS	2.0 or Atom	For simple syndication

RDF		Geo-location database relationship model
SPARQL		Data retrieval from geo-location database
TEI XML	P5	Document Archiving
PDF	ISO 32000-1:2008	Document Archiving
KML	2.2	Geo-location output format
Java	1.5	Sakai Code
Others	TBD	Dependent on project research

9 Technical Development

Due to the fast evolution of the mobile services sector, it is difficult to state any particular technologies or development approaches at this stage. However, for each component we develop, we will use standard product life cycle techniques as well as extensive end-user testing.

10 Intellectual Property Rights

Any software components of the deliverables will be released under appropriate open source licences to ensure that they can also be freely shared with organisations and communities with which the 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 such as LGPL and GPL licences.

The Intellectual Property Rights will be held by the University of Oxford.

Project Resources

11 Project Partners

Erewhon has no formal project partners.

12 Project Management

The team will comprise of senior project directorship by Sue Fenley, Sebastian Rahtz and Adam Marshall. The research team will comprise of Janet McKnight, Arno Mittelbach (until March 2009), TBA (from March 2009-2010) and Tim Fernando. Tim Fernando will also provide project management at 0.2FTE.

Team Listing

Name	Position	Contact	Phone
Sue Fenley	Project Lead	sue.fenley@oucs.ox.ac.uk	01865 283610
Sebastian Rahtz	Project Architect	sebastian.rahtz@oucs.ox.ac.uk	01865 283431
Adam Marshall	Project Architect	adam.marshall@oucs.ox.ac.uk	01865 283357
Tim Fernando	Project Manager & Researcher	tim.fernando@oucs.ox.ac.uk	01865 283348
Janet McKnight	Researcher	janet.mcknight@oucs.ox.ac.uk	01865 273213
Arno Mittelbach	Researcher	arno.mittelbach@oucs.ox.ac.uk	

Steering will be provided by the senior project directorship with weekly/daily (according to the stage of the project) meetings with the research/project management team. A local advisory committee will also be formed and will help steer the project with termly meetings.

The University of Oxford has training programmes for various aspects of our project's needs and if required, will be obtained internally. Other foreseeable training may be in the field of mobile platform-specific application development, which we expect to obtain from the respective platform's creators.

13 Programme Support

We would like support in report writing and keeping to JISC core values and objectives as well as helping to advertise events held in Oxford.

14 Budget

See Appendix A.

Detailed Project Planning

15 Work packages

See Appendix B.

16 Evaluation Plan

It should be noted here that many of our "users" will be developers; what the real end-user sees may be beyond our control. So our interest is largely in delivering effective infrastructure.

Timing	Factor to Evaluate	Questions to Address	Method(s)	Measure of Success
Quarterly	User satisfaction	Are the services or tools we are developing useable and useful to the user?	Questionnaire	Sustained usage over several academic terms.
Quarterly	Appropriateness of pilot tools	Are the tools serving a genuine use?	Stakeholder workshops	Spread of usage beyond early adopters to majority of a group.
Quarterly	Applicability of geodata model	Can the system model all the required circumstances	Consultation with data professionals and other institutions	At least three institutions which develop applications of their own using the model.

17 Quality Plan

Output					
Timing	**Quality criteria**	**QA method(s)**	**Evidence of compliance**	**Quality responsibilities**	**Quality tools**
Termly	Relevance and usefulness	Independent committee	Minutes of meetings	Ensuring relevance of developed applications	
Quarterly after initial six months		Evaluative reports	Delivered reports	Ensures relevance of work and user take up	
As required	Functionality and bug testing	Wherever possible, use unit testing	SVN documentation	Ensuring product functionality	SVN, TBD.

18 Dissemination Plan

Timing	Dissemination Activity	Audience	Purpose	Key Message
Every 3-6 Months	Local workshops	University Staff & Students	Providing knowledge to the community and receiving feedback on work	Mobile access to rich data can enhance productivity.
Yearly	Sakai Conference	International Sakai Developers	Presentation of new code and functionality, networking with developers, ensure no reinvented wheels	We are looking at Sakai access on mobile devices and want to work with others.
June 2009	Institutional Web Managers' Workshop	UK national web professionals	Establish areas of common interest with information providers and distributors	We are modelling our institution, does this apply to other sites.
November 2009	National workshop	Information providers and developers from UK HE/FE	Explain what we have done and discuss areas of common applicability	Mobile access to rich data is applicable across all institutions.

19 Exit and Sustainability Plans

Project Outputs	Action for Take-up & Embedding	Action for Exit
Sakai	Being Implemented (5.3,5.4,5.5)	Dissemination of source code.
RDF (Geo-Location) Database	Rewriting of OxPoints Service	Publish technical document.
OxPoints Service	Already a local service	Further improvements and maintenance.
Guidelines for mobile service deployment	Being created (Reporting WPs)	Dissemination of report.
Improved mobile access to institutional VLE	Integration into Sakai	Maintain locally as part of VLE

Project Outputs	Why Sustainable	Scenarios for Taking Forward	Issues to Address
OxPoints Service	Part of core university information set	Adoption as core service by University	Timely updating of data
Mobile Access to VLE	Part of Sakai, so useful to all sites	Participate in Sakai community and keep contributions up to date	

Appendices

Appendix A. Project Budget

Directly Incurred **Staff**	**Apr 2008 – Mar 2009**	**Apr 2009 – Mar 2010**	**TOTAL £**
Project Manager, Grade 9, 20% FTE, 18 months (73 days).	[redacted]		
Senior Researcher, Grade 8, 100% FTE, 18 months (366 days)			
Researcher, Grade 7, 100% FTE, 18 months (366 days)			
Total Directly Incurred Staff (A)			
Non-Staff	**April 08 – March 09**	**April 09 – March 10**	**TOTAL £**
Travel and expenses	£1,082	£1,857	£2,939
Hardware/software	£2,060	£2,122	£4,182
Conference/Workshop Running	£1,545	£3,713	£5,258
Total Directly Incurred Non-Staff (B)	**£4,687**	**£7,692**	**£12,379**
Directly Incurred Total (A+B=C) (C)	**£54,004**	**£108,980**	**£162,984**
Directly Allocated	**April 08 – March 09**	**April 09 – March 10**	**TOTAL £**
Staff: (Rahtz 0.1FTE; Fenley 0.1FTE; Marshall 0.1FTE) (or 248 hours each over the life of the project).	[redacted]		
Estates			
Other			
Directly Allocated Total (D)			
Indirect Costs (E)	**£60,073**	**£121,791**	**£181,864**
Total Project Cost (C+D+E)	[redacted]		
Amount Requested from JISC	**£95,985**	**£194,193**	**£290,178**
Institutional Contributions	**£33,695**	**£68,313**	**£102,008**
Percentage Contributions over the life of the project	**JISC** **74 %**	**Partners** **26 %**	**Total** **100%**

Appendix B. Work Packages

WP 1: Management
1. Establishing project advisory group
2. Recruiting and training of staff
3. Development and management of work plan
4. Reporting to JISC

WP 2: Communication and dissemination
1. Running local informal workshops to gather requirements and raise awareness
2. Organising two formal meetings for University staff to report on progress and assess impact
3. Setting up a national workshop to share experiences

WP 3: OxPoints This activity involves:
1. Establishing data standards
2. Gathering data
3. Providing tools for management of data
4. Defining and providing web services to access data

WP 4: Geo-location demonstrators
1. Enhancing existing services with geo-location data
2. Defining and implementing new services which take advantage of new data

WP 5: Mobilising Sakai
1. Mobilisation of PDA portal
2. Identifying an ordered list of tools for mobilisation (this list will be ordered on the basis of greatest impact to the student population)
3. Obtaining and evaluating the suitability of the tutorial sign-up tool for mobile access
4. Creating an alternative mobile-friendly front end to the tutorial sign-up tool
5. Identifying current shortcomings in the PDA portal and rectifying these shortcomings
6. Starting at the top of the ranked list of tools:

(a) evaluating tools in terms of mobile-friendliness
(b) rectifying any issues

WP 6: Creating guidelines for how institutions can work with mobile access
1. Report on current practice
2. Report on penetration of project concepts after 9 months
3. Report on effectiveness of the Erewhon work and recommendations to other institutions

WP 7: Evaluating student and staff use of resources and demonstrators
This activity will consist of continuous evaluation of the extent to which new services and data are being used, and whether they are making a significant contribution to University teaching, research, administration or public relations.

Task	Start	End	Duration	Completed	Dependencies	Total Cost	Assigned	Planned Start	Start Variance	Constraint Start	Planned End	End Variance
0) Erewhon	17/10/2008 08:00	02/04/2010 17:00	76w 1d	0%				10/10/2008 08:00	1w		02/04/2010 17:00	
1) WP1	17/10/2008 08:00	02/04/2010 17:00	76w 1d	0%				17/10/2008 00:00			02/04/2010 17:00	
1.1) Establish local advisory committee	17/10/2008 08:00	21/11/2008 17:00	5w 1d	0%				17/10/2008 00:00			02/04/2010 17:00	-71w
1.2) R1 - Progress Report to JISC	16/03/2009 08:00	27/03/2009 17:00	2w	0%				17/10/2008 00:00	21w 1d		02/04/2010 17:00	-53w
1.3) R2 - Progress Report to JISC	05/10/2009 08:00	16/10/2009 17:00	2w	0%	1.2			17/10/2008 00:00	50w 1d		02/04/2010 17:00	-24w
1.4) R3 - Final Progress Report to JISC	08/02/2010 08:00	02/04/2010 17:00	8w	0%	1.3			17/10/2008 00:00	68w 1d		02/04/2010 17:00	
2) WP2	17/10/2008 08:00	12/02/2010 17:00	69w 1d	0%				17/10/2008 00:00			02/04/2010 17:00	-7w
2.1) W1 - Local Requirements Workshop	05/12/2008 17:00	05/12/2008 17:00		0%	1.1, 2.2			17/10/2008 00:00	7w 1d		02/04/2010 17:00	-69w
2.2) W1 - Work for 1st Workshop	17/10/2008 08:00	05/12/2008 17:00	7w 1d	0%				17/10/2008 00:00			02/04/2010 17:00	-69w
2.3) W2 - Progress Workshop	08/12/2008 08:00	17/04/2009 17:00	19w	0%	2.2			17/10/2008 00:00	7w 1d		02/04/2010 17:00	-50w
2.4) W3 - National Workshop	20/04/2009 08:00	16/10/2009 17:00	26w	0%	2.3			17/10/2008 00:00	26w 1d		02/04/2010 17:00	-24w
2.5) W4 - Progress Workshop	19/10/2009 08:00	12/02/2010 17:00	17w	0%	2.4			17/10/2008 00:00	52w 1d		02/04/2010 17:00	-7w
3) WP3	17/10/2008 08:00	16/10/2009 17:00	52w 1d	0%				17/10/2008 00:00			02/04/2010 17:00	-24w
3.1) Establishing Data Standards	17/10/2008 08:00	30/01/2009 17:00	15w 1d	0%				10/10/2008 08:00	1w		10/10/2008 17:00	16w
3.2) Tool for Management of Data	08/12/2008 08:00	16/10/2009 17:00	45w	0%				10/10/2008 08:00	8w 1d		10/10/2008 17:00	53w
3.3) General web services to access data	08/12/2008 08:00	16/10/2009 17:00	45w	0%				10/10/2008 08:00	8w 1d		10/10/2008 17:00	53w

Erewhon Task List

3.4) Gathering Data	17/10/2008 08:00	17/04/2009 17:00	26w 1d	0%						
4) WP4	20/04/2009 08:00	19/03/2010 17:00	48w	0%		17/10/2008 00:00	26w 1d	02/04/2010 17:00	-2w	
4.1) Enhancing OXPOINTS Geolocation Data	20/04/2009 08:00	17/07/2009 17:00	13w	0%	3.4, 4.2SF					
4.2) Defining and implementing new services	17/07/2009 08:00	19/03/2010 17:00	35w 1d	0%						
5) WP5	05/01/2009 08:00	19/03/2010 17:00	63w	0%		17/10/2008 00:00	11w 1d	02/04/2010 17:00	-2w	
5.1) Identify tools for mobilisation	05/01/2009 08:00	30/01/2009 17:00	4w	0%		10/10/2008 08:00	12w 1d	10/10/2008 17:00	16w	
5.2) Evaluating tutorial sign-up tool	23/03/2009 08:00	17/04/2009 17:00	4w	0%	5.1	10/10/2008 08:00	23w 1d	10/10/2008 17:00	27w	
5.3) Alternative front end to the tutorial sign-up tool	20/04/2009 08:00	17/07/2009 17:00	13w	0%	5.2	10/10/2008 08:00	27w 1d	10/10/2008 17:00	40w	
5.4) Mobilisation of the PDA portal	20/07/2009 08:00	16/10/2009 17:00	13w	0%	5.3	10/10/2008 08:00	40w 1d	10/10/2008 17:00	53w	
5.5) Mobilisation of other tools	20/07/2009 08:00	19/03/2010 17:00	35w	0%		10/10/2008 08:00	40w 1d	10/10/2008 17:00	75w	
6) WP6	05/01/2009 08:00	02/04/2010 17:00	65w	0%		17/10/2008 00:00	11w 1d	02/04/2010 17:00		
6.1) Report on current practice	05/01/2009 08:00	30/01/2009 17:00	4w	0%		10/10/2008 08:00	12w 1d	10/10/2008 17:00	16w	
6.2) Report on penetration of project concepts	08/06/2009 08:00	17/07/2009 17:00	6w	0%	6.1	10/10/2008 08:00	34w 1d	10/10/2008 17:00	40w	
6.3) Report on effectiveness of the Erewhon work	11/01/2010 08:00	02/04/2010 17:00	12w	0%	6.2	10/10/2008 08:00	65w 1d	10/10/2008 17:00	77w	
7) WP7	13/04/2009 08:00	02/04/2010 17:00	51w	0%		17/10/2008 00:00	25w 1d	02/04/2010 17:00		
7.1) ER1 - Evaluative Report 1	13/04/2009 08:00	17/04/2009 17:00	1w	0%		10/10/2008 08:00	26w 1d	10/10/2008 17:00	27w	
7.2) ER2 - Evaluative Report 2	13/07/2009 08:00	17/07/2009 17:00	1w	0%		10/10/2008 08:00	39w 1d	10/10/2008 17:00	40w	
7.3) ER3 - Evaluative Report 3	12/10/2009 08:00	16/10/2009 17:00	1w	0%		10/10/2008 08:00	52w 1d	10/10/2008 17:00	53w	
7.4) ER4 - Evaluative Report 4	11/01/2010 08:00	15/01/2010 17:00	1w	0%		10/10/2008 08:00	65w 1d	10/10/2008 17:00	66w	
7.5) ER5 - Evaluative Report 5	29/03/2010 08:00	02/04/2010 17:00	1w	0%		10/10/2008 08:00	76w 1d	10/10/2008 17:00	77w	
8) Milestones	17/10/2008 08:00	02/04/2010 17:00	76w 1d	0%		17/10/2008 00:00		02/04/2010 17:00		
8.1) Day 0	17/10/2008 08:00	17/10/2008 08:00		0%		17/10/2008 00:00		02/04/2010 17:00	-76w 1d	
8.2) 3 Month	30/01/2009 17:00	30/01/2009 17:00		0%	3.1FF, 5.1FF, 6.1FF	17/10/2008 00:00	15w 1d	02/04/2010 17:00	-61w	
8.3) 6 Month	17/04/2009 17:00	17/04/2009 17:00		0%	2.3FF, 3.4FF, 5.2FF, 7.1FF, 1.2FF	17/10/2008 00:00	26w 1d	02/04/2010 17:00	-50w	
8.4) 9 Month	17/07/2009 17:00	17/07/2009 17:00		0%	4.1FF, 5.3FF, 6.2FF	17/10/2008 00:00	39w 1d	02/04/2010 17:00	-37w	
8.5) 12 Month	16/10/2009 17:00	16/10/2009 17:00		0%	2.4FF, 3.3FF, 5.4FF, 1.3	17/10/2008 00:00	52w 1d	02/04/2010 17:00	-24w	
8.6) 15 Month	15/01/2010 17:00	15/01/2010 17:00		0%	7.4FF	17/10/2008 00:00	65w 1d	02/04/2010 17:00	-11w	
8.7) 18 Month	02/04/2010 17:00	02/04/2010 17:00		0%	6.3FF, 1.4	17/10/2008 00:00	76w 1d	02/04/2010 17:00		

Appendix B. Work Packages

- Task
  - 1) WP1
    - *Management*
    - 1.1) Establish local advisory committee
    - 1.2) R1 – Progress Report to JISC
    - 1.3) R2 – Progress Report to JISC
    - 1.4) R3 – Final Progress Report to JISC
  - 2) WP2
    - *Communication and dissemination*
    - 2.1) W1 – Local Requirements Workshop
    - 2.2) W1 – Work for 1st Workshop
    - 2.3) W2 – Progress Workshop
    - 2.4) W3 – National Workshop
    - 2.5) W4 – Progress Workshop
  - 3) WP3
    - *OxPoints*
    - 3.1) Establishing Data Standards
    - 3.2) Tool for Management of Data
    - 3.3) General web services to access data
    - 3.4) Gathering Data
  - 4) WP4
    - *Geolocation demonstrators*
    - 4.1) Enhancing OXPOINTS Geolocation Data
    - 4.2) Defining and implementing new services
  - 5) WP5
    - *Mobilising Sakai*
    - 5.1) Identify tools for mobilisation
    - 5.2) Evaluating tutorial sign-up tool
    - 5.3) Alternative front end to the tutorial sign-up tool
    - 5.4) Mobilisation of the PDA portal
    - 5.5) Mobilisation of other tools
  - 6) WP6
    - *Creating guidelines for how institutions can work with...*
    - 6.1) Report on current practice
    - 6.2) Report on penetration of project concepts
    - 6.3) Report on effectiveness of the Erewhon work
  - 7) WP7
    - *Evaluating student and staff use of resources and...*
    - 7.1) ER1 – Evaluative Report 1
    - 7.2) ER2 – Evaluative Report 2
    - 7.3) ER3 – Evaluative Report 3
    - 7.4) ER4 – Evaluative Report 4
    - 7.5) ER5 – Evaluative Report 5
  - 8) Milestones
    - 8.1) Day 0
    - 8.2) 3 Month
    - 8.3) 6 Month
    - 8.4) 9 Month
    - 8.5) 12 Month
    - 8.6) 15 Month
    - 8.7) 18 Month