

<b>Cover Sheet for Proposals</b> (All sections must be completed)	<i>JISC Capital Programme</i>
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<b>Name of Capital Programme:</b>	JISC Capital Programme: Cross-institutional use of e-learning to support lifelong learners
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<b>Name of Lead Institution:</b>	University of Nottingham
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<b>Name of Proposed Project:</b>	<b>JOSEPH</b> <b>Joining up Organisations to support new Engineering Pathways into Higher Education</b>
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<b>Name of Project Partners:</b>	City of Nottingham Children's Services (Passportfolio, Aimhigher, Connexions) Top Valley School and Engineering College Castle College Nottingham Trent University Department of Civil Engineering Nottinghamshire and Derbyshire Lifelong Learning Network Toyota-Lexus Academy Edexcel
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<b>Length of Project:</b> 2.5 years
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<b>Project Start and End Dates:</b> September 2006–March 2009
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<b>Total Funding Requested from JISC:</b> £200,000
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<b>Funding Broken Down over Project Years:</b> 2006: £51,570; 2007: £107,206; 2008: £86,802; 2009: £23,296
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<b>Total Institutional Contributions:</b> £93,727
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<b>Outline Project Description</b>
We are proposing: <ul style="list-style-type: none"> <li>(a) to build upon the RIPPLL project work on ePortfolios for transition by working with the 14-19 Nottingham partnership (Connexions, Aim Higher, Children's Services in the City and County) to identify web services to enhance Information, Advice and Guidance for students in local schools/colleges, taking full account of the need to link to the regional on-line 14-19 prospectus to be introduced by August 2007</li> <li>(b) to focus this practically and strategically, by concentrating on the</li> </ul>

<p>development of IAG services for the new Specialised Diplomas which will be coming on stream in 2008, choosing one occupational sector, Engineering, which is among the first group of Specialised Diplomas to be introduced</p> <p>(c) to specify e-Portfolio-enabled web services for IAG for learners following the kinds of cross-institutional programmes which will be characteristic of the new Diplomas, and to provide an instantiation of the 'e-Portfolio engine' (generic web services that can be applied in a range of different settings), currently proposed by the e-Portfolio Reference Model, in relation to IAG requirements to support learners preparing for transition to HE from Specialised Diploma programmes.</p> <p>(d) to provide and evaluate year-long pilot implementations in 07-08 with specific groups of learners who will be using the new Nottingham Passportfolio, involved in a pilot for the new Specialised Diploma in Engineering and considering applying for entry to FE and/or HE</p> <p>(e) to produce a scalable solution and demonstrate its scalability by supporting the take-up of the outcomes of the project across the Nottinghamshire/Derbyshire Lifelong Learning Network 2007-2010.</p>		
<p><b>I have read the Circular and associated Terms and Conditions of Grant at Appendix B (Tick Box)</b></p>	<p><b>YES</b></p>	

## **Introduction**

### Realising national policy for e-Portfolios for Lifelong Learning

e-Portfolios for transition are identified in the 3square report of April 2006 for the DfES as a priority for early implementation. The same report also references the e-Portfolio work carried out in Nottingham (the impact of the 14-19 City of Nottingham Passport and the University of Nottingham JISC projects – Specifying an e-Portfolio; RIPPLL and the e-Portfolio Reference Model) as providing a significant exemplification of cross-institutional, web-services oriented pedagogy and technology. 3square, the DfES Technical Group and JISC consultants have endorsed the ‘thin’ e-Portfolio model proposed by the Reference Model project (see Appendix 1) as representing a flexible, affordable solution, which can be applied to institutional systems but lends itself particularly well to the institution-free, learner-centred e-Portfolio implementations which would provide ideal support for lifelong learning.

Thus the Nottingham work has become central to the e-systems strand of the Lifelong Learning Network (LLN) proposal from Nottinghamshire and Derbyshire, due to be submitted to HEFCE in July (see further discussion below).

At this point, practical instantiations of the ‘thin’ e-Portfolio model are needed to test the transferability of the web services which it has already proposed. One focus of this proposal is on the Information, Advice and Guidance services (IAG) needed to complete and test a range of web services required for e-Portfolios for transition through an implementation involving multiple partner institutions.

The dissemination of the RIPPLL and reference Model Projects has identified a requirement from stakeholders to scope and develop applications of an ‘ePortfolio engine’ (illustrated in Appendix 2) that contains those generic web services and associated data structures that can be applied in a range of different environments. This project will include a sample instantiation of the ePortfolio engine within the Information, Advice and Guidance services requirements for transition. From its strong community and key stakeholder links, the project will suggest workable application profiles that will accelerate data standards developments in the ePortfolio domain.

### Connecting with national curriculum development: Specialised Diplomas

The new 14-19 Specialised Diplomas, due to be introduced from 2008, represent a major move towards opening access to HE to a wider range of students following both vocational and mixed academic/vocational pathways. Diploma students will build personalised study programmes, across a range of institutions and providers. This new route, designed in part to increase participation in HE, calls for new developments in IAG to support it. It also demands that we increase cross-institutional working and provide e-Portfolio technology that is truly learner-centred, supports the personalisation and integration of learning for the individual and is institution-free. The proposed project will build and implement e-Portfolio-enabled services for IAG in specific relation to the needs of learners taking the new Specialised Diploma in Engineering (among the first to be introduced) and using the Nottingham Passport architecture and systems. This interaction of e-Portfolio with IAG for transition to HE in a key occupational sector is of compelling interest to the LLN. The resulting instantiation of the ePortfolio engine will provide a basis for applications in other areas, such as recording achievement from the partners involved in the delivery of Diplomas.

### Value to the community

This proposal would seek to provide the answers which the community needs to key questions:

- Impact on Widening Participation: How might e-Portfolio services, informed by the eFramework, maximise support to the wider range of learners seeking to progress to HE via the new Specialised Diploma route from 2008?
- What is involved in customising a generic, institution-free e-Portfolio system (Nottingham Passport) for learner progression in a specific occupational sector, to accommodate several providers of the Specialist Diploma at the same time?
- How will e-Portfolios interoperate with the variety of on-line resources and on-line and/or face-to-face advice services provided by IAG organisations (primarily Connexions, but also FE/HE/workplace mentors) in a Specialised Diploma learner’s preparation for application to HE?
- How representative is the technology required for progression to HE on this route, in a vocational specialism governed by sector bodies, including transitions not just between educational institutions, but including training and employment?

### Building upon previous JISC project outcomes

This proposal builds on the JISC DeL regional project, RIPPLL, led by the University of Nottingham 2004-06; the MLEs project: Specifying an e-Portfolio, under which the Nottingham-UCAS work started to address the implications of Schwartz for on-line HE admissions practice for widening participation; and the e-Portfolio Reference Model project, which has situated e-Portfolio-enabled services clearly in terms of the e-Framework. RIPPLL, an interoperability project, has demonstrated the feasibility of joining up all the e-progress file and e-Portfolio systems in 14-19 and HE in Nottinghamshire to support a complete lifelong learning journey, including progression to work. This has been achieved using the UKLeaP interoperability standard and the new Nottingham Passportfolio system has now been developed with a high degree of granularity to be as UK LeaP compliant as possible. RIPPLL originally concentrated on use of UKLeaP to facilitate linear transfer of mapped learner data between institutions' MIS systems, but is now working on developing its use to support collation and aggregation of distributed ePortfolio data using web services, including implementing a service-oriented approach to facilitate learner transition from key stage 4 into FE, via a new electronic FE admissions system for Nottinghamshire which is being piloted from September 2006. These technical developments are learner centred, built upon consensus among practitioners and technologists and designed to assist the drive for widening participation to both FE and HE.

#### A test-bed for e-innovations planned for the Notts/Derbys. Lifelong Learning Network

This proposal comes from the existing Nottingham e-Portfolio consortium, based on the mature RIPPLL partnership which has already delivered important outcomes. RIPPLL has been requested to lead the planning of the e-systems strand of the Nottinghamshire and Derbyshire Lifelong Learning Network (LLN). Given the remit of the LLNs, to facilitate progression into and through HE for able, non-traditional learners at any stage in their careers, the steering committee for the Notts-Derbys LLN wishes to see the current outcomes of the existing RIPPLL project rolled out across both counties in Phase 1 of the LLN programme and specifically endorses this proposal to trial e-Portfolios for a specialised diploma in Engineering, supported by IAG services and used to establish a new progression route into HE, in order to implement the outcomes across this and its three other priority vocational sectors across the whole LLN region in Phase 2.

#### Nature of the proposal

The proposed project will specify, build and pilot a version of the Passportfolio customised for Specialised Diploma students in Engineering, working across multiple institutions. To facilitate this, the project will also scope, specify, implement and evaluate instantiations of the proposed 'e-Portfolio engine' (generic web services) required for IAG (from a range of sources, including HE and employer mentoring) to support Diploma students using the Passportfolio to apply for further study or work and then progressing from KS4 to FE or from FE to HE. This will be done in full consultation with practitioners, students, employers and professional bodies. ePortfolios will have a major role in the implementation of Specialist Diplomas. The architectural developments planned using instantiations of the proposed ePortfolio engine will provide the basis of models involving, in addition to IAG, assessment, action planning and recording achievement.

The project will also examine how far the same web services for IAG for progression from a level 1 or level 2 Engineering Diploma at the KS4-FE transition prove to be reusable at other progression points, locating this innovative work within the e-Framework and a developing a key testbed activity to inform the regional work of the LLN.

#### Fit of project to institutional priorities within the partnership

- University of Nottingham – see attached letter of support from Professor Herb Sewell, PVC for eLearning, which sets out the strategic fit of this project both for the Engineering Faculty and for ePortfolio developments within the lead institution.
- City of Nottingham LA - Passportfolio - see attached letter of support from Phil Harley, 14-19 Strategy Manger, City of Nottingham Childrens' Services which also covers Connexions, and the document appended to his letter which details the range and depth of the partnership around the Passportfolio and commitment to ongoing collaborations, including with the University of Nottingham  
From September 2006, Passportfolio is being transferred from the local authority to Nottinghamshire Connexions, whilst remaining under the strategic management of the 14-19 partnership. Connexions advisers in every school and college will be using Passportfolio with students as part of the delivery of IAG. Thus, the proposal to specify the interfaces between IAG services and the Passportfolio, in preparation for the introduction of the new Specialised Diploma in Engineering in 2008, presents a transferable model of great interest to the organisation.
- Specialist school and college  
The specialist school for Engineering in the City, Top Valley School and Engineering College, is leading the development of the Specialised Diploma with training providers, LSC representatives and FE colleagues. Nottingham University is represented on this group.

Top Valley brings a further established partnership into collaboration with the ePortfolio consortium, including Fernwood School, Castle College and NETTA (Nottingham Engineering Training Agency). The brand new Engineering Centre at the School is the sister institution to the Castle College Engineering Centre; both centres are already linked to the University of Nottingham and by Toyota sponsorship.

- Nottingham Trent University, a member of the ePortfolio consortium, is committed to widening participation in Civil and Design Engineering, partly through developing Foundation degrees in Civil Engineering in partnership with FECs. Its provision in honours Engineering courses complements well the more traditional range of subjects at the University of Nottingham; for example, it includes 'new' subjects like Industrial and Product Design, part-time study for work-based learners and sandwich courses.

The project will start in September 2006 and end in March 2009. The implementation phase is timed to link the piloting of the Engineering Diploma version of the Passportfolio with the specialist school/college pilot of Level 1 and 2 Diplomas in the second project year, 2007-2008, followed by the first implementation of the level 3 Diploma (equivalent to A level and crucial for progression to HE) which does not occur until the start of 2008-09.

## ***Project description***

By commissioning a further development from the Passportfolio development team at Atomic, the project will produce a customised Passportfolio designed to support learners following the new Specialised Diploma in Engineering from 2008, and will implement this over a complete year at Top Valley School and Engineering College with their pilot cohort of students starting in September 2007 and learning in cross-institutional settings, including workplaces.

This project will also scope, specify, build and pilot a service-oriented architecture solution to co-ordinate the use of the Nottingham Passportfolio in the context of the new Specialised Diploma in Engineering, to prepare learners for eventual application and transition to work or training, or to higher education courses in Engineering. The special focus will be upon the interaction between the Passportfolio and IAG services (mainly through Connexions but including FE/HE/Employer supplied mentoring) and also including links to the new on-line 14-19 prospectus and UCAS course entry information.

The implementations will test one of the main propositions emerging from the e-Portfolio Reference Model project, that an e-Portfolio 'engine' made up of a set of generic web services can be instantiated to meet the requirements of different scenarios in different settings, including in the cross-institutional use of elearning. To validate and where appropriate update the constituent services within the eFramework, the project will seek to test the web service definitions proposed by the Reference Model project for the use of e-Portfolios with IAG in developing a personal statement in various forms and at several different points in the learner journey in Engineering from KS4 to work, looking for and interrogating apparently repeated patterns and the implication of reusability. The instantiations will be based on the production of formative self presentations for:

- Review of progress and plans with a range of advisers during KS4, FE and HE
- Iterative use of draft versions of a personal statement for UCAS application or application for work, with feedback
- Rethinking plans in the light of disappointing assessment outcomes or progression problems
- Providing the basis for an induction interview, on entry to the new institution.

### ***Scenario: School student***

Jo is a year 10 student studying for a specialised diploma in IT. She has recently been working on an individual learning plan on Passportfolio as part of her personal development programme. Some of the activities cause her to reflect on her learning style and interests. She uses the site to explore other career opportunities and arrange a meeting with her Connexions Adviser. The outcome of this and further research via the Passport cause her to message her school tutor to find out if it would be possible to switch to an Engineering Diploma. The answer is negative but the advice offered suggests that the generic nature of the Diploma at Level 1 would mean she could change at a later date without too much problem. Not content to rely on this, Jo contacts an Aimhigher adviser to see if they could arrange mentoring with an Engineering student at a local university to demonstrate her genuine interest in Engineering. The adviser is happy to do this and Jo is able to use the Passport for e-mentoring, once the university student is given clearance to access the Passport. Jo and her mentor develop some really useful exchanges on her latest ILP in preparation for applying for the Level 2 Diploma in Engineering.

### **Scenario: College student**

Amir is a Year 12 student with 5 A-C grade GCSEs. He now wants to study a more practical subject and enrolls on a Level 3 Specialised Diploma in Engineering at a local FE college. Amir has been using Passportfolio at school since Year 9, and during induction his Connexions Adviser introduces him to the version customised for Engineering, which allows him to access all his existing material and Amir begins to build an Engineering-specific ePortfolio. He works on his ILP within the Passportfolio and shares it with his personal tutor. Amir feels that he needs to work on his Maths skills and his Connexions advisor helps him to locate a suitable evening class at another local college. Amir uses his Passportfolio to record his achievements and reflections on this course. Amir's personal tutor suggests that as he is particularly enjoying the project element of his diploma he might like to study Engineering at University. Amir selects material from his Passportfolio to build a profile of himself which his Connexions adviser uses to help him find and match himself to the requirements of suitable HE Engineering courses. Amir uses evidence from his Passportfolio to build a trial personal statement, which he shares with his Connexions adviser and personal tutor. They help him devise an action plan to strengthen his application. Amir and his adviser are able to iterate this process over several months until Amir is confident that he can submit his application via UCAS Apply.

### Planning principles

With a project of this nature, where an essential feature is a full-scale, real-life pilot, it is important that the planning reflects the reality of ensuring that the system is useable and sustainable throughout the pilot period. This project aims to address this by ensuring that the technical solution is sufficiently robust and has sufficient coverage of the process to gain the buy-in of the end-users - in this case the students and the advisers. Because the most mature and consistent element of the technical solution is the Passportfolio, concentration of effort will be on delivering web services from this platform. Systems supporting IAG are much less well-defined at present, so the project will aim to use throwaway technology around these technologies that prove the concept of producing and consuming web services, but in a much more flexible environment allowing for rapid changes.

The project will therefore aim to develop the Passportfolio elements first, so that the students can start to use this from the start of session 2007, allowing time for the technology to bed in and be populated with data. Web services will then be developed from the Passportfolio in order to be used for the transition planning stage in May 2008. The IAG end will consist of simple web pages which consume the web services provided by the Passportfolio in such a way that all relevant information for the IAG phase is gathered together. Again simple web forms will allow the adviser and student to make decisions and feed these back to the Passportfolio, again via web services. Rapid modifications to the IAG elements will then be possible to ensure that the pilot is successful and produces meaningful results.

### Outline of proposed activities

The fit of this proposal to partners' existing strategies and agendas is very strong; yet, there is still the need for a long lead-in time, to allow for variability of technical readiness among new partners and to accommodate the timelines of major related cross-institutional developments with which we plan to work. These are indicated on the timetable below.

In Year One therefore, the cross-institutional partnership based on the RIPPLL team would convene two working groups, one technical, one pedagogic, introducing new representatives from Connexions, Aim Higher, Top Valley School and Engineering College, Castle College, Toyota Academy, and staff from the faculties of Engineering in both universities and from two specialist centres at the University of Nottingham: the CETL for Integrative Learning and the Learning Sciences Research Institute. The work of both groups would be kept informed of progress by the awarding bodies in developing the 14-19 Diploma qualification, a process running in parallel with the timeline of this project, through the project's collaboration with Clive Church of Edexcel, who will provide regular validity and reality checks for our work in this respect. In addition a wider reference group drawn from the LLN would be identified to inform developments in Nottingham, prior to subsequent roll-out to the LLN beyond the project. This will involve representatives of the Derbyshire CoVEs in Engineering and IAG specialists developing strategies for the support of vocationally-based lifelong learners for the LLN.

Year One will require detailed preparation work in all areas of the project:

1. Develop relationships between the existing consortium members and new partners and set up technical and pedagogic teams; begin liaison work with the local group(s) developing the Specialised

- Diploma at levels 2 and 3 and connect with national developments via the Sector Skills Council, the Diploma Development Partnership for Engineering, and professional and employer bodies; provide links into the preparation of the local and national 14-19 prospectuses.
2. Initiate technical work by researching existing web services and identifying any that might be reused or repurposed within the project, following the example of the JISC DeL project, MANSLE, which has demonstrated the repackaging of existing web services and begun to exemplify the 'thin' e-Portfolio model.
  3. Research a baseline evaluation of how learners in Engineering in both school (KS4) and FE, in dialogue with their different advisers (Connexions, parents, teachers, friends, mentors from HE or employment ) begin to use the generic Passportfolio in combination with on-line (e.g. the Aimhigher progression pathway database, available from September 2006) and face-to-face IAG services, to develop an ILP focused on progression to the next stage of learning in FE and HE respectively
  4. Explore the possibility of running a similar sort of exercise within the University of Nottingham, by linking a learner-owned ePF system with Signposter (representing vendor involvement) and the IAG services available through the University's Centre for Career Development in an Integrative Learning project under the aegis of the University of Nottingham CETL for Integrative Learning, supporting the retention and progression of WP students in Engineering in the development of plans and personal statements for applying for work placement or graduate employment.
  5. Convene workshops for tutors from KS4, FE and HE, Aim Higher advisers, Connexions advisers and students to identify changes to processes and specify the web services which will be required for learners to integrate their cross-institutional learning (including work-based) for the Diploma, from 2008, and for IAG to support them in developing ILPs and personal statements for application to FE / HE / work
  6. Produce use cases, develop specifications and commission developers to customise the Passportfolio for school and college students of Engineering and to build the specified e-Portfolio-enabled web-services for IAG processes in support of application and progression
  7. Convene workshops for central admissions staff and admissions tutors in Engineering in HE to establish how they would use the wider range of learner information provided from the Specialised Diplomas to assess the achievements, aptitude and potential of WP applicants both within the admissions process and, for the successful students, at induction

Year Two will be devoted to the pilot implementation of web services for IAG combining with the use of the Engineering version of the Passportfolio. Building upon the baseline evaluation conducted in Year 1, regular qualitative and quantitative evaluations and reviews will be carried out, by colleagues specialising in human-computer-interaction research and e-Portfolio-based learning. The results will both inform the iterations of the work to refine the IAG technology and lead to the provision of robust evidence for reports to policy makers and for formal research publications.

## Timetable

Quarter from	Sept 2006	Jan 2007	Apr 2007	July 2007	Oct 2007	Jan 2008	Apr 2008	July 2008	Oct 2008	Jan 2009
<b>Workpackage</b>										
Scope existing provision: IAG										
Scope/map existing technology/web services										
Use case workshops										
Develop specialised Passportfolio										
Pilot passportfolio/Specialised Diploma										
Pilot post-results IAG services										
Assess and report										
<b>External events</b>										
Launch of general Passportfolio in Nottingham schools & colleges										
Awarding bodies developing Specialised Diploma syllabus										
QCA pilot of level 3 projects										
HE summer schools										
Publication of 14-19 online prospectus										
Top Valley school pilot levels 1 & 2										
Teaching of Specialised Diploma begins in schools and colleges										

## Deliverables

- Pilot of customised Passportfolio for Engineering to support delivery of Specialised Diploma with cross-institutional accessibility
- Quantitative evaluation report
- Pedagogic evaluation report (to include evaluation of influence of Passportfolio use on learning)
- Set of scenarios and use cases scoping IAG requirements for learners following Specialised Diplomas at each level and for a variety of pathways
- Case studies to inform further projects working in other discipline areas, including the LLN
- Report giving feedback on use of the 'eportfolio engine' and its feasibility for use in this area
- Set of reusable web services to support delivery of IAG in conjunction with ePortfolio
- Final project report
- Project website
- Presentations for dissemination events

## Risk assessment

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to prevent/manage risk
Loss of key staff	3	4	12	Clear and regularly reviewed documentation; regular progress reviews to ensure smooth handover
Partner institutions unwilling/unable to do required work	2	4	8	Early commitment from senior management; work helps support core business; regular reviews to facilitate support from other partners
Scope of project grows beyond resources	4	2	8	Regular review of aims and achievements; close working with LLN to enable them to take on work with wider regional implications; clear management of expectations of all partners
Slippage of development work	3	4	12	Clear specification for contractors; regular communication and review meetings; payment tied to results
Technology does not fulfil expectations	1	3	3	Clear management of expectations of all partners from early stage; communication with other projects to share findings and solutions to problems

## IPR

We do not anticipate any IPR issues directly connected with the project. Any web services created will be open source for contribution to the JISC eFramework and use cases will belong to the community. Partners will be asked to sign consortium agreements showing they understand this.

## Sustainability

The project work will contribute to the continuing take-up and use of Passportfolio as hosted by Connexions in Nottinghamshire. Lessons learned from the customisation for Engineering will be applicable to further development of Passportfolio to support Specialised Diplomas in other areas. The customised version will be offered to support roll-out of the Diploma to other institutions following its official start of teaching in September 2008. Web services produced will be offered for inclusion in the e-Framework for further take-up and reuse by other projects. The regional partnership between FE and HE in this area will support the continuing WP offering to local students. The Centre for Integrative Learning is interested in the evaluation results of the project which will feed into other integrative learning projects sponsored within the University of Nottingham. The project will also feed constantly into the work of the LLN, and its overall sustainability will be tied to that of the LLN in the region.

## Budget

	JISC Contribution Requested				Institution Contribution				Total
	2006	2007	2008	2009	2006	2007	2008	2009	
<b>Staff (UoN)</b>									
<i>Project Director</i>	■	■	■	■					■
<i>Project Manager</i>	■	■	■	■	■	■	■	■	■

Administrator									
Technical Developer									
Researcher									
CETIS consultant @£400 per day	1200	2000	2000	800	-	-	-	-	6000
Phil Harley consultancy @400 per day	6000	-	-	-	-	-	-	-	6000
Website developer	2350	940	940	470	-	-	-	-	4700
Atomic Solutions	4700	17860	4700	940	-	-	-	-	28200
Supply cover: Top Valley	800	2400	2400	400	-	-	-	-	6000
Supply cover: Castle College	800	2400	2400	400	-	-	-	-	6000
Scenario-building workshops x 10 (2 staff from 3 institutions per workshop = 6 days @ £400 pp pd per workshop)	12000	12000	-	-	-	-	-	-	24000
<b>Staff Sub total</b>	<b>40493</b>	<b>76100</b>	<b>54243</b>	<b>12197</b>	<b>7078</b>	<b>17506</b>	<b>19759</b>	<b>4299</b>	<b>231676</b>
Travel & Subsistence (include attendance at relevant programme meetings)	2000	4000	3000	1000	-	-	-	-	10000
Equipment (specify individual items over £10k)*	-	-	-	-					0
Dissemination activities	400	3200	6400	2000	-	-	-	-	12000
Evaluation activities	800	4000	4000	3200	-	-	-	-	12000
Other (please specify)									
Consumables	800	2400	2400	600	-	-	-	-	6200
Contingency									
<b>Sub total</b>	<b>44493</b>	<b>89700</b>	<b>67043</b>	<b>18997</b>	<b>7078</b>	<b>17506</b>	<b>19759</b>	<b>4299</b>	<b>271876</b>
UoN fEC-related cost									21851
<b>Total cost</b>									<b>293727</b>
<b>Total requested from JISC</b>									<b>200000</b>

\*Use of UoN equipment represented in fEC figure

The University of Nottingham sees this project as providing support to its programme of Widening Participation for Engineering, which is a recruiting subject, and as supporting the draft University plan, which emphasises the need to provide increased support for local students. The University's Centre for Integrative Learning will provide a technical developer and research and evaluation time from a Research Associate as the work supports the ePortfolio strand in this CETL; the Learning Sciences Research Institute will also contribute some research time as the project is directly relevant to its specialism in new learning technologies. Top Valley school and Castle College will benefit from resulting services to support their pioneering work with Diploma students in the area.

## Key personnel

**Dr Angela Smallwood** is Director of the Centre for International ePortfolio Development and Co-Director of the Centre for Integrative Learning at the University of Nottingham. A National Teaching Fellow, she has received several grants of FDTL and DfES funding for a series of influential collaborative projects linking personal development planning in UK universities with 16–19 education and employment, and has a strong record in project development and dissemination. She is a contributor to CETIS and EPICC work and an experienced workshop leader. She was Director of the successful JISC MLE project 'Specifying an ePortfolio: enhanced learner information for flexible admissions and transitions into Higher Education' and is currently Project Director for the University of Nottingham-led RIPPLL and ePortfolio Reference Model JISC projects. She is also leader of the eLearning strand of the proposed Nottinghamshire/Derbyshire Lifelong Learning Network.

**Sandra Kingston** is project manager for the RIPPLL and ePortfolio Reference Model projects led by the Centre for International ePortfolio Development at the University of Nottingham and was also part of the

project team for 'Specifying an ePortfolio'. She was formerly a primary school teacher and has worked as a technical developer in the public sector.

**Phil Harley** is 14-19 Strategy Manager for Childrens' Services at the City of Nottingham, working with schools, colleges and local HEIs. Formerly a senior manager in a 14–19 Community College, he is an Area Advisor for Action on Access. He is actively involved in the UK's East Midlands Regional Aimhigher management group. He developed an electronic we-based progress file, the City of Nottingham Passport, which has now been developed further as Passportfolio and is being rolled out to all schools and colleges in the City of Nottingham and Nottinghamshire and is the basis for an electronic admissions process for FE in the Nottingham area.

**Ryan Baker** is a Research Fellow in the Learning Sciences Research Institute at the University of Nottingham. He graduated from Carnegie Mellon University's School of Computer Science in December 2005, with a PhD in Human-Computer Interaction. His interests are at the intersection of data mining, educational psychology, and human-computer interaction. He uses quantitative observation and data mining to study how students differ in their use of interactive learning environments, such as intelligent tutoring systems and educational games, and how these choices affect student learning. He has also developed generalisable detectors of student behaviours associated with poorer learning outcomes, and has incorporated behaviour detectors into learning environments in order to drive adaptation to differences in student behaviour, concretely improving student learning outcomes

**Shafique Fazal** is Assistant Headteacher at Top Valley School and Engineering College in the City of Nottingham. He is a key member of the group developing the Specialised Diploma in Engineering in Nottingham, in partnership with local HEIs and training providers.

**Jill Baggeley** is Director of Technology and Construction at Castle College, Nottingham. Castle College is a Centre of Vocational Excellence in Engineering and is working in partnership with Top Valley on development of the Specialised Diploma in this area.

**Technical developer** from University of Nottingham Centre for Integrative Learning (to be appointed July 2006)

The project will be under the overall direction of Angela Smallwood and managed by Sandra Kingston at the University of Nottingham Centre for International ePortfolio Development, which will be responsible for centralised administration and budgeting. The project will report to the Steering Committee of the Centre for International ePortfolio Development, whose membership includes representatives of the DfES, Connexions Nottinghamshire, Becta, Nottingham Trent University and the City of Nottingham LA.

## ***Supporting letters***

The following letters of support have been received and are included with this document as separate pdf files

- Professor Herb Sewell, University of Nottingham
- Phil Harley, 14–19 Strategy Manager, City of Nottingham Children's Services
- Shafique Fazal, Assistant Headteacher, Top Valley School & Engineering College
- Keith Dennis, Executive Team, Castle College
- Hilary Whaley, Interim Project Manager for Nottinghamshire/Derbyshire Lifelong Learning Network Steering Group
- Andrew Wilson, Head of Employer Solution, Edexcel

Further letters from the following are expected but have not been received in time for inclusion with this document:

- Connexions, Nottinghamshire
- Toyota/Lexus Academy
- Nottingham Trent University

## Appendix 1

Flow of web services for use of e-Portfolio to develop an ILP leading to application for HE, developed by the Nottingham e-Portfolio Reference Model project. The proposed project would drill down into the IAG area and specify basic services to be trialled in the implementation phase.

[Diagram to follow separately as file has become corrupted]

## Appendix 2: Abstract use case on IAG for a learner taking the Specialised Diploma route towards application for HE

### Context

The University of Nottingham has a particular interest in the development of the Specialised 14-19 Diploma for Engineering (see [www.engineeringdiploma.com](http://www.engineeringdiploma.com) for details). A college student following this route locates a number of potential use cases which contextualise the one example use case, which was developed for the potential vendor. The scenario and use cases are intended to be generic so that they could be adapted for other Specialised Diplomas and other qualifications in other subject areas and at other educational levels.

### Scenario Overview

Local schools, colleges and universities are strengthening links with employers and aligning their expression of competencies. **Potential Use Case:** a template and rubric library shared between partners that could support the development of consensus and the application of a common understanding.

School and College Students need to identify opportunities for work experience/work placements / apprenticeships. **Potential Use Case:** Nottingham has commissioned a set of generic web services to enable students to map themselves against opportunities. The current use case is focused on college students mapping themselves to HE courses, but is intended to be adaptable for college students seeking employment opportunities and for other levels of education. This use case takes place within the context of IAG.

Summer schools and master classes offered by a university would also follow this same pattern and could form a further version of the above Potential Use Case

Mapping themselves against the profile of an opportunity, students provide a starting point for induction into a working environment and an introduction to their supervisor. This forms a **Potential Use Case** and the same pattern is repeated for university summer schools.

**The Use Case:** a student may undertake a work placement and a set of master classes in addition to their college work, but needs to integrate what they are learning in each of these contexts in terms of the common rubrics agreed between the partners. This will form the basis of a discussion with their advisor and a basis for action planning. The draft outline use case provided here focuses on this issue.

Typically the IAG meeting with an advisor will lead to the development (or amendment) of an Individual Learning Plan. Nottingham has developed an **outline, generic use case of the use of ILP**. More specific use cases could be developed for the creation and amendment of ILP.

On the admin side, students in work environments require specific forms of training in Health and Safety. **Potential Use Case:** a shared, authenticated record of Health and Safety Training according to rubrics agreed across the partnership.

### The Use Case

I am a college student aged 17 completing Year 12. After my exams I must meet with my advisor to discuss the past year and draw up an Individual Learning Plan for Year 13 (the final year before HE). I will need to decide if I will apply for Higher Education or employment (or

both). I have undertaken work experience and a set of master classes at the local university leading to a summer school next month. I use my e-Portfolio to:

1. Review my existing ILP (for the demo, a flat file) to assess how well I have progressed.
2. This is straightforward for my college work, but I must integrate what I have learned through employment and HE in Year 12. For each I:
  - review the profile of myself I drew up of myself against what they said about the opportunity,
  - then review the reflection I added to my private e-Portfolio,
  - the feedback from my workplace supervisor and my university mentor for master classes,
  - what I discussed with my college advisor.

My uncle works for a railway company and I also had some useful chats with him on-line which I take into account.

3. I list how each of these experiences helped me meet the core competencies set out in my last ILP and what I've learned by changing the plan to deal with problems and new opportunities.
4. The HE stuff took me beyond the basic requirements I had to meet and also offered future possibilities; but these lead in two different directions! I want to use the university summer school to help me explore these possibilities
5. I draw up a list of questions for my advisor, of which this is the main one.
6. I add a smiley face to my report and link it through to:
  - some personal reflections about what I did what I want to do next, in the short term and the longer term
  - some comments from college, employment and university supervisors,
  - some photos of what I did,
  - the diagrams, of which I'm very proud

I submit my report to my advisor with links and permissions into my e-Portfolio.

Peter Rees Jones 2006 06 08