

Joint Information Systems Committee (JISC)

High Level Domain Map of Higher Education: Synthesis of Sources

Invitation to Tender

Summary

1. This document invites proposals to undertake a synthesis study of education institutions' high-level functions taking account of more detailed and process mapping activities which have been carried out to date, and present these findings to the JISC in order to inform the planning of future work in the area.
2. It is anticipated that the study will begin no later than 29 May 2007 and will provide the final report by 17 August 2007. In addition, an interim report will be provided by 13 July 2007. The recommendations from the study will inform the design of future work concerning the ongoing development and refinement of a mapping of the UK higher (HE) and possibly further (FE) education landscape, through facilitated engagement with institutions and other expert stakeholders.
3. Total funding of up to £35,000 including VAT, travel and subsistence expenses is available for this study.
4. The deadline for proposals is 1300 hours on 30 April 2007. It is anticipated that a decision will be announced by 21 May 2007.
5. Proposals are invited from consortia and partnerships as well as single organisations/individuals. For example some bidders might consider that forming a partnership is necessary to deliver the different aspects of the study.

Background and context

6. The Joint Information Systems Committee (JISC¹) is a committee of the UK FE and HE funding bodies that, through funding of services and the management of development programmes, aims to help and facilitate institutions in their use of the Internet and other Information and Communications Technology (ICT) applications.
7. The JISC operates via six committees whose range of remits allows the JISC to meet its strategic aims and objectives. The JISC Organisational Support (JOS) committee funds programme activity under the following themes:
 - i. The role of technology within the strategic management of institutions;
 - ii. e-Framework and architectures;
 - iii. Changing staff roles, relationships and associated skills;
 - iv. e-Administration;
 - v. Business innovation.
8. The committee considers the high-level mapping of educational business functions to be one of the foundation activities within its *e-Framework and architectures* theme, from which lessons can be learnt which will impact on future programme design decisions, and upon which some immediate future work will be based.

¹ www.jisc.ac.uk

9. Work in this area will seek to develop a high level domain map or maps² of UK higher education institutions' (HEIs') functions of teaching, learning, research, administration, libraries and IT services (ie the five domains within the e-Framework for Education and Research³). A 'function' here is taken to mean *what is done* and a 'process' is taken as meaning *how the function is performed*. For example, all institutions perform a student enrolment function, but the processes they use to carry it out may differ). The domain map also includes the principal roles involved and the main relationships between the various functions. As well as providing an integrated overview of an institution's functions and information models, a domain map provides the context in which more detailed process modelling can be located. Where more detailed process modelling is available, these can be used to help identify functions.
10. Some areas have had processes mapped in detail already (eg course validation in the Course Validation Reference Model (COVARM)⁴ project under the JISC e-Learning programme's Framework and Tools strand) but a more complete high level picture (domain map) is now required in order to understand better the inter-relationships between processes both within and across these domains, to determine areas where priority should be given to technology-based interventions that can bring about high value improvements, and to identify areas which would benefit from better alignment between technology and business strategies.
11. The map(s) will help the JISC to discuss institutional processes with the sector (eg when engaging in consultation with UCISA, AUA, AHUA and others), to help identify new, and confirm suspected, areas of concern. It will also help institutions articulate their needs when in discussion with software developers and with the JISC. In both cases it will help parties to highlight where 'pain points' are (in the context of business processes) – and hence where the application of ICT may alleviate administrative burdens, and where there are opportunities for innovation in technology and in practice to affect a step change in effectiveness, efficiency and/or quality of delivery.
12. The New Zealand Ministry of Education, an e-Framework partner, has commissioned high level domain maps that cover the New Zealand schools and universities sectors. However it should be noted that this reflects a business / administration view of core processes, so any top level domain map produced for the UK should ensure that it also encompasses the senior academic view of the functions for which they are responsible, to see where there is commonality (or to highlight where the perspectives of a process are different).

Objectives

13. The domain mapping exercise will inform much of JOS' future work (such as the wider *e-Administration* theme, and any work in the area of enterprise architectures under its *e-Frameworks and architectures* theme, which could be designed to help institutions achieve a more comprehensive join-up between their ICT systems and business processes). It will also inform work funded by other JISC sub committees in the area of domain mapping.
14. This study, will provide the JOS committee with a synthesis of work which has been undertaken to date (within the UK, carried out by and on behalf of institutions – through JISC-funding and otherwise) in the area of high level education and research function and process mapping. This knowledge will be brought to bear on the planning of, and become an important source for, future work (which is intended to develop further a map (or maps) of the UK education domains through consultation with key stakeholder groups across the sector).

² See the briefing paper on Domain, process and Service Usage Models at http://www.jisc.ac.uk/media/documents/programmes/capital/e-framework_domain_process_and_service_models_briefing.pdf for more details on Domain Maps.

³ See the e-Framework website at www.e-framework.org and the briefing paper at http://www.jisc.ac.uk/uploaded_documents/JISC-BP-e-framework-FINAL.pdf for further details.

⁴ <http://covarm.tvu.ac.uk/covarm/>

Terms of reference

15. The study will synthesise the findings from a range of past work in the area of functional and business process mapping in higher education institutions, presenting initial domain map or maps based on this work and reporting accordingly. Specifically the study should consider the following:
 - i. What can be learned from developing a domain map of the UK HE sector – where the value is (and to whom) in developing a map / maps, listing key stakeholders and summarising potential benefits. This should also include an appraisal of where and when such a domain map is or is not an appropriate tool through which to develop an understanding of functions / processes, or articulate relationships / data flows, etc.;
 - ii. Whether current evidence suggests that a single high level domain map is an achievable goal (and if so, at how high a level of abstraction would the map need to be in order to be of value to the JISC and to the stakeholders in the sector); whether, for example, there are sufficient differences across the home nations, and/or across old and new universities to require separate domain maps; whether some degree of fragmentation and clustering would need to be applied in order to align a manageably small number of different models to ‘types’ of institution; or whether commonality can be established at some appropriate level of abstraction and a ‘reference’ domain map can be created which is not exactly instantiated by any single institution but represents sufficient commonality to enable actual differences to be easily identified.
 - iii. Whether the landscape is so complex that it should be broken down into component areas (such as internal – institutional functions and operations, and the relationships between them; and external – across institutions, eg Funding Council data returns, HESA statistics, research data, etc.), or by other means (to be determined by the study) through which to maintain focus and increase the opportunity for representing generic functions;
 - iv. The way in which functions are implemented as processes can be expected to differ across institutions and to remain open to future improvement and innovation. However they may be close enough for it to be possible to abstract a common or canonical model, as was done in the COVARM project (referred to above). If other such work can be identified it would be useful to highlight it.
 - v. There is also some scope for identifying instances of processes that are sufficiently more effective and/or efficient implementations of a function which can be identified as examples of good practice.
 - vi. Generic themes and issues which can be pulled out of the work done to date, which may suggest areas of commonality between different process models;
 - vii. Recurring areas of profound difference between models, and between case studies within models, which may suggest areas that cannot be effectively abstracted up to a common view (and instead may sit outside of any generic map of the educational domains);
 - viii. Vocabularies and taxonomies which have grown up through particular modelling exercises, and how these might be harmonised;
 - ix. Recommendations for methods by which a more detailed map (or maps) of HE (and potentially FE) functions / processes may be identified, articulated and developed, based on the synthesis of current knowledge produced by this study. This study should make recommendations which could be fed into the planning of future work;
 - x. Any other issues raised during this synthesis process which should be considered as part of any future work in the area.

Sources of information

16. The study will consider the following primary sources of material:
 - i. JISC e-Learning Framework reference model projects⁵, particularly the COVARM⁶ project;
 - ii. JISC infoNet's Business Classification Scheme⁷, which provides a generic 'map' of the functions and activities undertaken by HEIs;
 - iii. New Zealand Education Sector Standing Committee's ICT Strategic Framework for Education⁸ and Education Sector Architecture Framework⁹;
 - iv. Lessons from and recommendations of the Management and Administrative Computing (MAC) initiative¹⁰ 1988-1995;
 - v. JISC infoNet's Managed Learning Environment (MLE) InfoKit¹¹;
 - vi. Leadership Foundation organisational development group¹²;
 - vii. HEA e-Learning Benchmarking exercise¹³ and its use of e-Learning maturity models;
 - viii. European Framework for Quality Management (EFQM) Excellence Model - Higher Education Version, based on the EFQM excellence model¹⁴.
17. The JISC Executive will provide documentation about previous JISC work. The successful contractor may wish to propose further data-gathering processes and sources.

Deliverables

18. The contractor is required to produce an initial domain map or maps of the UK HE sector, synthesised from existing sources of work, with any process modelling mapped to the appropriate function in the high level domain map (and providing a reference or link to the relevant source). This will be accompanied by a detailed report presenting the findings of the synthesis work and any resulting recommendations.
19. The primary audience for this work is the JOS committee and JISC Executive. It is intended that after initial review and comment by these groups the report will form the basis for decisions on the future development work of the committee.
20. The final report is required by 17 August 2007, though a substantial interim report is also required by 13 July 2007. Both are required to assist the JISC Executive in planning and focusing the priorities for related work. The contractor may be required to present to the JISC Organisational Support committee in September 2007 and others to be determined.

⁵ <http://www.elframework.org/refmodels/>

⁶ <http://covarm.tvu.ac.uk/covarm/>

⁷ <http://www.jiscinfonet.ac.uk/partnerships/records-retention-he>

⁸ http://www.minedu.govt.nz/web/downloadable/d111734_v1/supporting-document-for-ict-strategic-framework-co.pdf and www.minedu.govt.nz/goto/ictframework

⁹ http://www.middleware.edu.au/docs/forum/Leach_Forum_Aug06.pdf

¹⁰ http://www.ucisa.ac.uk/events/1999/conference/price_files/TextOnly/index.html

¹¹ <http://www.jiscinfonet.ac.uk/InfoKits/creating-an-mle/one-more-time/index.html>

¹² <http://www.lfhe.ac.uk/networks/od/odgroup.html>

¹³ <http://www.heacademy.ac.uk/benchmarking.htm>

¹⁴ <http://www.efqm.org/Default.aspx?tabid=35> and http://www.shu.ac.uk/research/integralexcellence/docs/embracing_excellence.pdf

Intellectual Property

21. Any information gathered during the course of the review and not already in the public domain is deemed to be the property of HEFCE, on behalf of JISC and its funding partners. The information provided in the report, and the rights to all other outputs, shall become the property of HEFCE, on behalf of JISC and its funding partners.

Funding available and timetable

22. Total funding of up to £35,000 including VAT and all travel and subsistence is available for this study.
23. The successful bidder will be expected to begin work by 29 May 2007 at the latest.
24. A detailed work-plan and timetable will be required by 12 June 2007.
25. A substantial interim report will be required by 13 July 2007, with the final report by 17 August 2007.

Format of bids

26. The tender proposal should clearly identify:
 - i. relevant experience in similar projects / initiatives;
 - ii. the proposed method / methods to be used;
 - iii. a detailed work plan with milestones and deliverables;
 - iv. the basis on which the fee would be calculated, broken down into different phases as appropriate, and showing the relevant daily rates against each member of the team to be employed on the project;
 - v. the staff to be used in the main areas of work and where management responsibility for the project will rest. A single point of contact for all correspondence relating to the project should be provided;
 - vi. confirmation that work can start by 29 May 2007 at the latest;
 - vii. full contact details for the project leader, including email address.

Evaluation criteria

27. Tenders will be evaluated on the basis of the following criteria:
 - i. a full understanding of the specification, including the purpose and scope of the study;
 - ii. an understanding of HE institutions' education and research business processes and functions;
 - iii. the suitability of proposed method / methods;
 - iv. the clarity and feasibility of detailed work-plan;
 - v. the relevance of the previous experience of the tendering organisation(s) and of the particular consultants / researchers to the project with particular regard to the specialised areas of knowledge required;
 - vi. an analysis of risks to successful completion of the study;
 - vii. value for money.

Bidding Guidance

28. A guide to bidding for JISC projects can be found at <http://www.jisc.ac.uk/fundingopportunities/bidguide.aspx>

Management of the study

29. The contractor will be expected to communicate any amendments to the detailed work plan to the JISC Executive and to keep the JISC Executive informed of progress with periodic summary reports. The JISC Executive will also wish to have the opportunity to comment on any draft reports before they are finalised.

30. The management of the study will be carried out by the JISC Executive, in particular by Andy Dyson, Programme Director and other members of the JISC Executive.
31. Projects will be expected to follow JISC's Project Management Guidelines ¹⁵ including adherence to good project management practice and regular reporting etc.

Submission of Proposals

32. Proposals of no more than six single-sided A4 sheets, typeset in Arial or a similar font at no less than 10pt size, should be submitted as an electronic copy, in Word (DOC), Rich Text Format (RTF) or Portable Document Format (PDF). This should be submitted via e-mail as one file or a zipped folder. **The deadline for submissions is 1300 hrs on 30 April 2007.** Proposals should also be accompanied by a completed cover sheet (see Appendix A) in addition to the six page limit. CVs may be attached as appendices to the six page proposal and should be no longer than one side of A4 each.
33. The proposal **MUST** be received by the deadline which will be strictly adhered to. Faxed or late proposals will **NOT** be accepted
34. If the bid exceeds the page limit guidance, evaluators will be advised to disregard information provided beyond the indicated page limit.
35. Each bid must be accompanied by letters of support from an authorised senior manager at each institution / organisation named in a bid. The support letters do not count towards the six-page limit.
36. An expert evaluation panel will review the bids and recommend funding. The JISC will endeavour to notify bidders of the outcome of the evaluation process by 21 May 2007.
37. The JISC reserves the right not to award a contract.

Enquiries

38. General enquiries about this invitation to tender should be addressed to Andy Dyson (a.dyson@jisc.ac.uk).
39. Enquiries regarding the bidding process should be addressed to Georgia Slade (g.slade@jisc.ac.uk).

¹⁵ http://www.jisc.ac.uk/fundingopportunities/proj_manguide.aspx#guidelines

Appendix A

Cover sheet for proposals (all sections must be completed)

JISC ITT: High Level Domain Map of Higher Education – Synthesis of Sources

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|-------------------------------------------------------------------------------------------------------------------|
| Name of institution/organisation: |
| Project partners (if applicable): |
| Full contact details for primary contact: Name: Position: Email: Address: Tel: Fax: |
| Length of Project: |
| Project Start & End Dates: |
| Total Funding Requested from JISC: |
| Outline Project Description |