

Draft JISC Strategy 2007-2009

26 July 2006

The JISC is undertaking a consultation process on the draft strategy document to inform the final version of the JISC Strategy 2007-2009

Responses to the consultation are invited from higher and further education institutions, partners and other relevant organisations.

Responses should be sent to strategy@jisc.ac.uk by close of play on Monday 25 September 2006

The final version of the Strategy will be published in November/December 2006

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Draft JISC Strategy 2007-2009

1. Introduction

- 1.1 This document builds on the JISC Strategy 2004-2006 and can be seen as a natural progression of the vision and approach identified in 2004. The strategy has been updated partly due to changes in the external environment within which JISC operates and also to clarify new areas of work that have since been identified, such as the e-framework.
- 1.2 JISC activities support institutions in a wide range of contexts from research and learning and teaching to the management of institutions and engagement with the wider community. Overall JISC shall set a continuing need to: provide value for money through economies of scale; to provide research and development; to provide increasingly attractive services and resources; to consolidate increasingly with partners; and to continue JISC's predominantly collegial approach.

2. JISC Mission and Vision

- 2.1 JISC's mission is to provide world-class leadership in the innovative use of Information and Communications Technology to support education and research.
- 2.2 Information and Communications Technology (ICT) is an integral and embedded part of education and research. JISC's vision underlying the JISC Strategy 2007-09 continues to be one of ubiquitous and reliable access to electronic information so that every user – whether learner, researcher, teacher or administrator – is able to enjoy world-class technologies in support of their areas of work and study.
- 2.3 A user of electronic information is simultaneously a member of several communities: researcher, student, administrator, teacher and also employee, citizen, consumer. Users are increasingly mobile, demanding reliable access at home, at work and whilst travelling. Their information needs are immediate, and they exploit an increasing variety and quantity of resources.
- 2.4 Users in education and research need the same information access and delivery interfaces for different applications. A member of staff wishes to access information in the same way when doing research, when assessing student performance and when producing and delivering learning materials. Students wish to access learning materials and primary and secondary sources in the same way throughout their learning experience. Managers need easy tools to collate student progression data with financial and other administrative data.
- 2.5 Such expectations demand a coherent underlying infrastructure and value added services operating in a genuinely pervasive way, accessible when and where required. Intelligent machine-to-machine dialogue is replacing many routine processes, leaving the user free to use and benefit from information in the ways that they choose. Universities and colleges need to continue to meet such demanding user needs. JISC must continue to support institutions so that technology can support modern ways of working within education and research.

3. Strategic Aims and Objectives 2007-2009

- 3.1 JISC has updated its aims and objectives. The previous aims and objectives continue to remain valid but the new aims reflect a refocusing on outcomes and impact.
- 3.2 The strategic aims reflect JISC's need to support both government objectives and the needs of the education and research communities. In achieving its aims JISC will work with key strategic partners and will advise, inform and help implement the strategies of government, funding councils and research councils.

Strategic Aims

- 3.3 JISC will deliver its mission through:
1. innovative and sustainable ICT infrastructure, services and practice that support institutions in meeting their mission;
 2. promoting the development, uptake and effective use of ICT to support learning and teaching;
 3. supporting the uptake and effective use of e-research;
 4. enhancing its activities to support the management of institutions;
 5. developing and implementing a programme to support institutions' engagement with the wider community;
 6. continuing to improve its own working practices.
- 3.4 In order to achieve these aims, a number of priority activities and key deliverables have been identified and updated.

Aim One

To deliver innovative and sustainable ICT infrastructure, services and practice that support institutions in meeting their missions.

- 3.5 JISC will set about providing a comprehensive range of national infrastructure services to address the needs of all users in HE and FE. Working with key strategic partners such as Becta, the British Library, and the Museums Libraries and Archives Council, JISC will seek to make this infrastructure available to other education and research users in the UK.
- 3.6 The academic network (JANET, operated by UKERNA) is the core service and JISC will make available other infrastructures that facilitate the use of the network, such as access management and security services, seeking to build upon the efficiencies of this primary service-provider where possible. The key ambitions underlying the academic network are JISC's drive to improve reliability, scalability, separability (different contemporaneous activities) and flexibility.
- 3.7 On-line content is an important resource where significant economies of scale can be found by national procurement and delivery. The key ambitions underlying this major development include improving accessibility, saving time and money, and improving management. JISC specialises in digital library content, including primary and secondary sources and research data of wide applicability. JISC seeks to do this across all disciplines and will enhance its

delivery of content through the incorporation of JISC Collections as a company limited by guarantee, thereby enabling considerably greater flexibility and scope for the negotiation of large scale agreements for access to content. JISC will also consider reviewing content subscriptions to promote wider availability within the sector.

- 3.8 JISC envisages continuing to develop the two JISC National Data Centres (Edina and MIMAS) as primary service-partners for a range of content and production services. JISC will also seek to improve access to content and resources through a range of resource discovery services and through support for open access and a range of other business models.
- 3.9 In order to help an institution manage and make available its own content whether research data and outputs or learning and teaching resources, JISC is defining and developing tools and applications for interoperable subject and institutional repositories.
- 3.10 An important element of JISC activities is to achieve common tools and applications that enable the readily and convenient exchange of data, e.g. between learning platforms and administrative systems, or between research and learning applications. To do this JISC is heavily involved with other countries in defining a map of common applications and those that need to interoperate, based on open standards (the 'e-framework').
- 3.11 In the increasingly fast moving and technical area of ICT, there are considerable benefits from providing leadership, advice and guidance to the sector, through advisory services such as the Regional Support Centres, TechWatch, OSS Watch, JISC Legal, JISC Infonet, TechDis, TASI, BUFVC, CETIS, UKOLN, Digital Curation Centre, JISC Plagiarism Advisory Service and Netskills. These services are also a valuable source of input to JISC on the evolving needs of the community and JISC will seek to expand and extend the range and scope of such services.

Priorities and Key Deliverables to meet Aim One

1) Maintain a first-class network infrastructure:

- i) Use of JANET continues to demonstrate that user requirements are being met (through quarterly usage monitoring and annual review);
- ii) Use of JANET Roaming Service is adopted by 50% of UK HEIs (July 2008);
- iii) Use of JANET Voice over IP Service is adopted by 50% of UK HEIs (July 2008);
- iv) Administrative and charging/funding policies for SuperJANET 5 Managed Bandwidth service are put in place to ensure service can be fully utilised when launched (timing to be agreed).

2) Ensure that JISC Collections delivers sustainable electronic content licensing negotiations:

- i) Company operating effectively within budget allocated by JISC (July 2007);
- ii) JISC to review content subscriptions to promote wider availability within the sector (December 2007);

- iii) Company undertaking negotiations for communities beyond UK HE and FE (July 2008).
- 3) Improve access to electronic resources through: digitisation and national delivery of key resources in multiple formats; and working with other public sector e-content providers to better co-ordinate activities and strive towards a more common information environment:
- i) Have a new digitisation capital programme in place (July 2007)
 - ii) Develop an agreed e-content framework with key partners and recruit staff to enable implementation (July 2007);
 - iii) Implementation of the e-content framework (July 2009).
- 4) Develop a consistent approach towards common services and e-infrastructure (e-Framework):
- i) Establish a developed e-Framework information base to support the community (July 2007);
 - ii) Populate the e-Framework with relevant JISC information and resources (December 2007).
- 5) Identify and promote a consistent approach towards next generation environments for learning, teaching, research and administration:
- i) Prototype a range of next generation and personal e-administration tools and demonstrators for the community (March 2009).
- 6) Build a national infrastructure of interoperable digital repositories (addressing both institutional and subject repositories) and a national learning object repository:
- i) Establish a Repositories Support Service for the community (April 2007);
 - ii) Develop tools to increase the flexibility and usability of repository systems for the community (December 2008);
 - iii) Develop a UK-oriented repository search infrastructure for the community (July 2009);
 - iv) Develop software and management tools to assist the community in the use of digital repositories to support digital preservation (December 2008);
 - v) Have 200 User Institutions registered to the Jorum service (July 2008).
- 7) Embed new authentication and authorisation services within the community:
- i) Launch Shibboleth as a national authentication service for the JISC community (March 2007);
 - ii) Establish middleware 'assisted take-up' services for the community (March 2007).
- 8) Enable the effective use of the JISC Information Environment:
- i) Agree a shared community approach towards resource discovery (July 2007);
 - ii) Further develop interoperability between publishers, aggregators, and the JISC Information Environment (August 2007);
 - iii) Enhance interoperability and provide economies of scale for the community through Shared Infrastructure Services (March 2009).

9) Provide cost-effective and user-led advisory and support services to help institutions manage and plan effective investments in ICT:

- i) Align JISC Services under a new management structure and develop a consistent reporting structure and approach (July 2007);
- ii) Carry out value for money studies to ensure the services are cost-effective in relation to the benefits received by the JISC community and their continued appropriateness (July 2009).

Aim Two

To promote the development, uptake and effective use of ICT to support learning and teaching.

- 3.12 JISC has responsibility for taking forward with the HE Academy, the e-learning strategies of the UK Funding Councils. The JISC is also working in partnership with Becta to support the DfES e-strategy. JISC intends to do this informed by the needs of HE and FE and wherever possible to provide infrastructure and applications that benefit the wider education community, including lifelong learners. The key ambitions include connectivity, flexibility, interactivity and collaboration.
- 3.13 Although the provision of learning content is not a priority for the JISC, platforms for its delivery in a convenient and legal manner is an area which JISC is actively exploring through the experimental JORUM learning materials repository service.
- 3.14 JISC will maintain an innovative development programme, determined by user needs to support HE and FE institutions in their delivery of e-learning. JISC's particular priorities are personalised services, e-assessment and e-portfolios. This programme will be focused on improving the quality and flexibility of learning and teaching and widening participation.
- 3.15 JISC will work in partnership with the HE Academy to provide a Centre that will deliver to institutions a unified collection of joint resources on all aspects of e-learning, to ensure effective implementation of HEFCE's e-learning strategy.

Priorities and Key Deliverables to meet Aim Two

10) Support the delivery of Funding Council e-Learning Strategies across the UK, in partnership with the HE Academy:

- i) Produce good practice guidance on e-assessment and learner experiences of e-learning and a guide to learning design (July 2007);
- ii) Improve the electronic admissions process to support the e-portfolios agenda, working in partnership with agencies such as UCAS (July 2008);
- iii) Fund a range of technical pilots within and between institutions that support the delivery of effective e-learning; identify good practice and disseminate as appropriate (July 2009);
- iv) Fund a number of collaborative projects to support the delivery of HE in an FE college (July 2009).

Aim Three

To support the uptake and effective use of e-research.

- 3.16 The demands of the research community for e-infrastructure and data management have increased enormously over the past few years. JISC is helping to shape the OST's e-infrastructure plans which will in turn inform JISC's strategic direction both in terms of the infrastructure and services provided and JISC's development programmes.
- 3.17 Recently JISC has invested heavily in supporting the joint research councils e-Science Core Programme. JISC now intends to work on helping the research community exploit the programme's outputs in all relevant disciplines and in assisting the Research Councils with their objective to improve research quality.
- 3.18 JISC will continue to provide services that support the research community, e.g. the National Grid Service, the Digital Curation Centre, the Text Mining Centre, particularly in the integration of research data and its analysis. JISC will work with the Research Information Network on better integration.

Priorities and Key Deliverables to meet Aim Three

11) Develop a coherent UK e-Research infrastructure and use in collaboration with the Research Councils and other relevant organisations:

- i) Have in place robust sustainable central services supporting the processes of research and which facilitate high quality research (July 2009);
- ii) In collaboration with the Research Councils provide a robust, trustworthy, secure, interoperable and scalable infrastructure for the transmission, storage, sharing, accessibility and dissemination of research data and outputs (July 2009);
- iii) Provide the infrastructure and tools to allow research communities to create multidisciplinary research environments which enhance cross-discipline research and to facilitate research collaboration within and between institutions (March 2009).

Aim Four

To enhance JISC activities to support the management of institutions

- 3.19 ICT is an integral part of education and research and users will have a broad range of skills and ways of working that will need to be supported by institutions and their staff. JISC will look to help institutions identify gaps in ICT skills to help address the needs of next generation users.
- 3.20 JISC intends to continue work in encouraging effective use of ICT in the management of institutions, including advice and guidance on policy, strategic planning, risk management and sustainability of their ICT investments and to help institutions meet their records management and freedom of information and other legal compliances. There are considerable benefits to be gained from the better integration of information management across institutions to provide better management data, especially by linking up learning and research activities with administration.

- 3.21 JISC will also begin to promote the evaluation and implementation of effective business practices, from the commercial sector if necessary, where these are appropriate for the purpose of creating ICT efficiency gains for education and research institutions.

Priorities and Key Deliverables to meet Aim Four

- 12) Enhance JISC's activities to support the management of institutions:
- i) Define a programme work for JISC to deliver (currently in progress) (November 2006);
 - ii) Implement the programme of work defined (July 2009).

Aim Five

To develop and implement a programme to support institutions' engagement with the wider community.

- 3.22 Institutions are engaging with their local communities through 'third stream' activities, running alongside and integrated with teaching and research. These include engagement with the business community, the commercial exploitation of world-class research, knowledge transfer, workforce development and involvement with cultural and community activities.
- 3.23 This stream of work is important to institutions and JISC will commission work and be guided by the institutions in identifying any activities that the JISC can provide to HEIs and their business partners that would be of value. Feedback to date suggests that much of what JISC already provides will be of great benefit to institutions' activities in Third Stream and additional requirements can be built upon existing services and programme.

Priorities and Key Deliverables to meet Aim Five

- 13) Develop JISC's role to support institutions' engagement with the wider community:
- i) Define a programme of work which supports higher education institutions engagement with business and the community based on the outcomes of the recent scoping study and think tank and subject to funding (currently in progress) (November 2006);
 - ii) Implement the programme of work defined (July 2008).

Aim Six

Continuing to improve JISC's own working practices.

- 3.24 JISC intends to continue to improve its own working practices, using best practice such as formal programme management methods and risk management techniques. JISC will monitor the effectiveness of its activities and approaches. JISC will also establish an internal evaluation mechanism to co-ordinate and interpret evidence on use and changing contexts and improve user requirements gathering.

- 3.25 JISC will improve information to demonstrate how its activities provide value for money to the community and will review its approach to sustainability. JISC will continue to nurture and develop its collaborative partnerships.

Priorities and Key Deliverables to meet Aim Six

14) Improve dissemination and feedback mechanisms between JISC and its target audiences:

- i) Develop and deliver communications and marketing plans across all of JISC's activities, working to ensure that the consolidated view across JISC supports the aims of the JISC Strategy (December 2007);
- ii) Develop the capabilities of the JISC web site along with new communications technology to improve access to and engagement with JISC's work (July 2007);
- iii) Improve the targeting and relevance of communication by introducing systems for contact management and project information management (July 2008);
- iv) Establish a market research team to provide information about the monitoring, evaluation and impact of JISC's work (July 2007).

15) Engage with appropriate partners in the UK and internationally:

- i) Monitor and maintain appropriate relations with JISC formal partners (ongoing);
- ii) Develop a coherent approach to the management of JISC's relations with industry (July 2008);
- iii) Develop a revised policy and approach to support the effective management of JISC's international activities (July 2008).

16) Continue to improve the effectiveness of JISC to carry out its operations:

- i) Explore the development to service and sustainability issues associated with JISC activities (July 2008);
- ii) Review JISC's approach to presenting and managing its budget (July 2007);
- iii) Review and update governance documentation (July 2007);
- iv) Review and improve induction procedures for staff and committee members (July 2007);
- v) Increase the range and effectiveness of cross committee discussions (July 2008).

4. Changes in the External Environment

Funding Partners

- 4.1 JISC is an agent of the UK Higher and Further Education funding bodies. JISC's mode of working is collegiate and driven by the needs of the communities it serves. JISC's "customers" are the institutions. Although it is this community, through JISC committees, that provide the driving force for JISC, it also needs to deliver against the aims and objectives of the funding councils and the DfES; and to help meet their efficiency targets. JISC's funding partners are increasingly developing their own strategies which JISC contributes to; and helps to implement.
- 4.2 The JISC has a strong focus in HE and research. JISC's strategic approach to supporting HE has not changed and JISC will work with the HE Academy to deliver HEFCE's e-Learning Strategy and equivalent strategies in the devolved countries. JISC will continue to support HE provision beyond HEIs (e.g. colleges, work place, adult learning) and this will complement JISC's further education activities.
- 4.3 JISC has increased its support to the research community over the past few years and is working with the Research Councils to help to deliver the government's 'Science and Investment Framework 2004-2014'. Much of this has been in response to the OST's e-science core programme. JISC currently helps to provide an e-infrastructure for e-science methodologies as well as to more traditional research. JISC intends to take a more strategic involvement in some e-infrastructure support activities in future, such as the National Grid Service, in collaboration with the Research Councils.
- 4.4 The JISC seeks to provide benefits through partnerships across education and research. This policy will continue with a full commitment from the devolved countries for JISC activities to support further education. Support in England will focus on the delivery of a core package of services to further education including the network, the regional support centres and a range of other advisory services.
- 4.5 Under the DfES e-strategy there are a number of cross sector activities where JISC will play a role, such as the network, e-portfolios, e-assessment and making content more widely available. JISC's strength is in its ability to work in partnership to support education as a whole, as appropriate, and JISC will pursue work in schools only in partnership with Becta and other agencies; dependent on resources being made available.

Capital Investment

- 4.6 JISC has received significant additional capital funding from its funding partners to enhance the UK's digital infrastructure in future years through SuperJANET 5. HEFCE and HEFCW have also provided additional capital funding over the coming years for a wide range of benefits for the higher education and research sectors, including digitisation, e-content collaboration, e-learning, e-research infrastructure, user environments, repositories, shared services and preservation.

- 4.7 The additional funding will inevitably impact on JISC's strategy and enable JISC to accelerate the pace of change. The capital funded programmes have been incorporated into JISC's new aims and objectives and are integrated with existing core-funded programmes.

New Technology Approaches

- 4.8 An important function of JISC development activities is to enable the JISC community to explore new technologies and develop innovative applications to address its wider needs. In doing this it has to strike a balance between being open to whatever the community suggests and providing technical direction, and between being driven by the advances in, and the new opportunities afforded by, the technology and meeting immediate needs.
- 4.9 While JISC only provides advice to the community on technology and standards matters, when it comes to funding projects, the JISC can be more prescriptive about how funds should be used. The general principles used are that, as far as possible, things that are developed under JISC funding should:
- i. meet the needs of the community, as well as of the funded institution;
 - ii. work together with other funded developments and with existing systems;
 - iii. be reusable in future developments.
- 4.10 These principles can also be seen as leading to increased value to the community and increased sustainability of technology outputs.

i. Community Engagement: The first principle leads to the need for a broad involvement of the community across the development process to ensure that their needs are being addressed. User involvement has been identified by the Standish Group as the single highest factor in software projects that deliver on time and within budget. JISC's development programmes have been steadily increasing the level of user engagement to ensure that innovative development of technology is integrated with corresponding innovation in practices and processes. The aim is to ensure that technology is used effectively and efficiently in the support of user and institutional goals.

ii. Open Standards: The second principle is one of the factors leading to the strong emphasis that the JISC puts on open standards. This is sometimes confused with a recommendation to use open source, but open standards support interoperability between systems whether commercial or open source and, where available and broadly adopted, allow institutions to mix and match products of either type and to replace products without high switching costs. The approach to open standards is not limited to software and systems; the JISC makes recommendations to the supplier communities about standards, for example for digitisation of primary resources, in order to increase interoperability and to allow the use of resources in a range of technical environments. One of the JISC's key objectives is to create an open, seamless environment that will provide appropriate content to the end user at the right time and in the right place. Various sectors within UK education and research need to work together in this key area. The JISC has a coherent approach to the technology required to make it possible to achieve this at an institutional and national level; the approach has been articulated as part of the Information Environment activity and open standards are now being included as a key part of the new international e-Framework for Education and Research which JISC is leading in partnership with the Australian Department of Education, Skills

and Training. The commitment to openness also extends to the JISC's interest in supporting the open access agenda.

iii. Modularity: The third principle encourages the adoption of a modular approach to development. This is addressed through the adoption of a service oriented approach which is being widely taken up in the commercial world as the basis for a more adaptive infrastructure, as well as in the Grid world and by the JISC's Information Environment architecture and earlier e-Learning Framework. The service oriented approach, along with open standards, is expressed as a strong principle in the e-Framework. At the user interface level, the principle of modularity is being taken forward through JISC's portals programmes, and more recently through exploration of emerging Rich Client Platforms which provide a plug-in framework for sophisticated desktop tools, designed to create, access and analyse the information and data on remote services.

- 4.11 A crucial aspect of current technology development and implementation for the JISC is cross-institutional access management. It is in the process of setting up the UK Access Management Federation, likely to be joined by the FE and the Schools sectors, based on Shibboleth technology. As well as supporting single sign-on access to commercial content that JISC makes available to the community, the same sign-on will be used to securely access internal resources as well as enable cross-institutional collaborations. This is an example of the application of all three principles: Shibboleth is based on open standards, is modular in that it supports multiple authentication and authorisation systems distributed across participating institutions, and has been successfully piloted in the HE & FE communities through two early adopter programmes. It is also an example of an enabling technology which opens the way for further initiatives, for example to address the enhanced security and authentication requirements of the GRID community or the multiple-affiliation, multiple-location requirements of lifelong-learner access to electronic resources.

5. Approach

- 5.1 Since 2004 JISC's funding partners have reviewed the governance of JISC. The current view is that JISC should remain part of the funding council structure for at least the next few years.
- 5.2 The strategy gives an overall direction to the work of the JISC sub-committees and programmes. The JISC Board will receive a six monthly report detailing how progress is being made towards the achievement of the JISC's strategic aims. The strategy will thus be kept under continuous review. The strategy is supported by an operating plan which is an articulation of how the aims and priorities will be achieved. This is a dynamic plan, reviewed and updated on a quarterly basis by the JISC Executive's Senior Management Team.
- 5.3 JISC's process of consultation and consideration by its committees is thorough but as the Executive has grown, it has increasingly provided significant strategic as well as operational input. The Executive also has greater autonomy and decision making powers, independently of the committees, than used to be the case. It is necessary therefore, to increase the level of contact between Executive staff and committee members; there should be even more discussion and consultation outside formal committee meetings with interested members and representative community bodies.

- 5.4 JISC's work is carried out through the funding of innovative development programmes, by leadership and the management of broadly based services. JISC serves a number of different communities and specialist groups. Generic solutions can be found in many areas, but JISC's work programme can usefully be considered as a matrix model.
- 5.5 JISC broadly provides four types of outputs:
- National infrastructure provision;
 - Advice and guidance, including strategic leadership;
 - Research and development;
 - Value added services.
- 5.6 JISC wishes to make national infrastructure (e.g. JANET, security, middleware, content) available across all of education and research where possible and subject to funding. These infrastructures are designed and built to meet the needs of JISC funding communities but should be available to other sectors where this does not compromise the service to JISC's core community.
- 5.7 JISC supports the application areas of e-Learning, e-Research and e-Administration and Management by providing national generic infrastructures, innovative development programmes and comprehensive outreach, advice and guidance.
- 5.8 JISC services are provided for a number of reasons:
- To support national infrastructure (e.g. MIMAS, Edina, UKERNA);
 - To support research and development (e.g. CETIS, UKOLN);
 - To advise the community on the effective exploitation of ICT, disseminate good practice and research and development outputs (e.g. JISC Infonet, RSCs, BUFVC);
 - To advise the community on technical and associated issues (e.g. JISC Legal, JISC Plagiarism Advisory Service, TechDis, TASI);
 - To add value to existing content (e.g. Digimap Service).
- 5.9 The community tends to "see" the infrastructure and advisory services but is not always aware of the research and development needed to underpin these services and the extent to which that development builds capacity and capability in the sector.
- 5.10 The key areas of interest for JISC development activities include ambitions to improve connectivity, interoperability, standards, security/privacy, access, collaboration, simplification and quality control.
- 5.11 JISC funds programmes rather than projects which are intended to meet national aims and objectives. They are planned with the JISC sub-committees to meet short-term and long-term goals that are set by the JISC Board and its sub-committees. The intended outcomes are identified from national strategies and from consideration of the current priorities of the sector.
- 5.12 The majority of development funding goes into the education sector where it supports the primary outcome: to build capacity, knowledge and skills and stimulate positive and informed change in the sector through piloting new

technologies and approaches. The JISC's approach is to focus upon the current requirements of the sector to identify its priorities and to feed back the outcomes and knowledge gained from its activities to its future planning. This cyclical approach may be termed 'action research' in some communities; it bridges the gap between pure research and cultural change in organisations.

5.13 The five outcomes that are achieved through JISC research and development activities are:

- Build capacity, knowledge and skills and stimulate positive and informed change in the sector through piloting new technologies and/or approaches;
- Provide guidance to the sector on 'good practice' models for using technology that can be used at departmental, institutional, regional or national levels;
- Provide expert strategic leadership to the sector and other bodies in specialist areas and influence national and international agendas;
- Gain knowledge and experience as a basis for future decisions for the JISC and its sub committees;
- Develop services, infrastructure or applications that may be used at departmental, institutional, regional or national levels.

5.14 To achieve its five outcomes the JISC funds activities through a range of different development models. These include short and long-term projects within strategic programme areas (for example, digital repositories or e-learning practice); scoping and planning activities; community engagement and facilitation; the funding of the creation, testing and deployment of technical specifications and standards; deployment and testing of new technologies within an institutional context. JISC research and development also uses its high international profile in order to inform and influence.

5.15 The JISC works within a coherent and complex set of regional, national and international partnerships. These development partners are crucial to the JISC being able to achieve its objectives, in particular its underlying agenda to support the use of open standards and open access.

Sustainability

5.16 From August 2006 JISC has contributed towards the full economic cost for all new projects and services it funds within UK higher education institutions. JISC is also addressing issues of sustainability within the activities it funds. Improved processes have been implemented that identify approaches to sustainability earlier in the development cycle, and that build upon the work that has been started to develop clearer links between development and service activities.

5.17 Project proposals will demonstrate consideration of a range of exit strategies to encourage life after development funding. At regular review points the appropriateness and relevance of these will be re-evaluated, based on any new information that comes to light during the project lifecycle. It may be desirable to modify project plans based on these ongoing assessments, or at least feed the information into the planning of subsequent developments and links to JISC services. Projects sustained as services will, periodically, review end user experiences and provide a feed into subsequent JISC development activities in order to enhance and "upgrade" the overall service offering to the community.

- 5.18 In line with current government strategy, the JISC is aware of the potential for open source software and has developed an open source policy published in 2005. The open source models will be considered as part of the approaches to sustainability.
- 5.19 JISC considers partnerships to be an important element of sustainability and works actively with a range of partners to plan for the sustaining of outputs by other organisations as appropriate.

Partnerships

- 5.20 Pervasiveness of ICT across education and research means that the potential for collaboration and partnership continues to grow. The size and nature of JISC's audience has changed and JISC will require partners with closer ties to these newer constituents, in order to serve the entire institution.
- 5.21 JISC ensures the effective management of its partnerships according to an established set of principles. Continued refinement of these principles will occur with experience, though significant modification is not anticipated.
- 5.22 JISC sustains a range of partnerships: reflecting investment to achieve its strategic priorities; dialogue to encourage policy development; collaboration to ensure activity join up; opportunities for organisational and staff development; and support for good working relations.
- 5.23 JISC will continue to require a number of national partnerships to ensure the effective delivery of its strategy. However, there is an increasing level of global infrastructure and European policy development requiring an international approach. As a leading innovator in policy and solutions development, JISC will work internationally, with organisations in support of the global infrastructure, to ensure appropriate and sustainable ICT provision for the UK education and research communities.

Communications and Marketing

- 5.24 The JISC approach to communications and marketing is to address both the corporate and thematic levels. Throughout the communications processes the aim is either to create awareness, provide additional information or call the target audience to action.
- 5.25 By careful segmentation of audience and stakeholder groups, communications activity is directed toward the particular interests of the stakeholders, using appropriate messages through communication channels relevant to the audience.
- 5.26 Communication activity uses a range of established techniques for maximum impact: a broad suite of printed publications; a programme of events, conferences and exhibitions, including those organised by JISC and those from other organisations; electronic media including web based material, increasingly blog and wiki technologies, and in the future podcasts to help increase the 'reach' of communications; press & media activities at a national and specialist press level; public relations activities; and formal partnership and specific relationship management roles.

6. Further Information

Becta: <http://www.becta.org.uk>
British Library: <http://www.bl.uk>
BUFVC: <http://www.bufvc.ac.uk>
CETIS: <http://www.cetis.ac.uk/>
DfES e-strategy: <http://www.dfes.gov.uk/publications/e-strategy/>
Digimap Service: <http://www.edina.ac.uk/digimap/>
Digital Curation Centre: <http://www.dcc.ac.uk>
DTI Science and Innovation Framework 2004-2014:
http://www.hmtreasury.gov.uk/spending_review/spend_sr04/associated_documents/spending_sr04_science.cfm
Edina: <http://www.edina.ac.uk/>
e-framework: http://www.jisc.ac.uk/programme_frameworks.html
eScience Core Programme: <http://www.rcuk.ac.uk/escience/>
Full Economic Cost: http://www.jisc.ac.uk/full_economic_costing.html
GRID: <http://www.grid-support.ac.uk/>
HEFCE strategy for e-learning: http://www.hefce.ac.uk/pubs/hefce/2005/05_12/
Higher Education Academy: <http://www.heacademy.ac.uk>
JANET: <http://www.ja.net/>
JISC: <http://www.jisc.ac.uk/about.html>
JISC Capital Programme: <http://www.jisc.ac.uk/capital.html>
JISC Collections: <http://www.jisc.ac.uk/coll.html>
JISC Development: http://www.jisc.ac.uk/development_overview.html
JISC Infonet: <http://www.jiscinfonet.ac.uk/>
JISC Information Environment: http://www.jisc.ac.uk/ie_home.html
JISC Legal: <http://www.jisclegal.ac.uk/>
JISC Open Source Policy: http://www.jisc.ac.uk/about_opensourcepolicy.html
JISC Plagiarism Advisory Service: <http://www.jiscpas.ac.uk/>
JISC Services: http://www.jisc.ac.uk/about_services.html
MIMAS: <http://www.mimas.ac.uk/>
Museums Libraries and Archives Council: <http://www.mla.gov.uk>
Netskills: <http://www.netskills.ac.uk/content/index.html>
OSS Watch: <http://www.oss-watch.ac.uk/>
Regional Support Centres: <http://www.jisc.ac.uk/rsc.html>
Research Councils: <http://www.rcuk.ac.uk/>
Research Information Network: <http://www.rin.ac.uk>
Standish Group: <http://www.standishgroup.com/>
SuperJANET 5: <http://www.ukerna.ac.uk/sj5/index.html>
TASI: <http://www.tasi.ac.uk/>
TechDis: <http://www.techdis.ac.uk/>
Technology and Standards Watch: http://www.jisc.ac.uk/techwatch_home.html
UKERNA: www.ukerna.ac.uk
UKOLN: <http://www.ukoln.ac.uk/>