

Information Strategy 2006 - 2009

The Information Strategy exists to support the University's mission and its objectives in research, teaching and learning, and knowledge transfer. It is a key operational strategy underpinning the University's Corporate Plan for 2006 - 2009, *Our shared vision*. The Information Strategy aims to develop an information culture in which all members of the University understand the importance of information in relation to their roles, in which the informational aspects of all University activities and policies are fully taken into account, and which equips the University to work effectively in the external information environment.

The planning period to which this Information Strategy refers is characterised by a number of information-related challenges for the University, its departments, and its individual members. As a knowledge-based organisation, the University's dependence on the effective management of information is more critical than it has ever been. Almost all the University's business areas are becoming information- and technology-dependent: an example of this is the rapidly growing take-up of the University's virtual learning environments to deliver a richer learning experience for students on campus as well as those studying at a distance, or on work-based placements. At the same time, effective information management can minimise the risks posed by information overload.

Sustained investment in the University's information infrastructure is needed; yet the pace of development in information technology means that decisions on where and when to make that investment require a high level of technical knowledge and advanced project management skills. The legislative and regulatory frameworks for managing information continue to become more demanding, as do the costs of compliance. And the costs of procuring access to externally generated knowledge-based information continue to rise.

The Information Strategy will not lessen these challenges, but it will help the University to meet them effectively by articulating the key principles of good information management, and encouraging all members of the University to put them into practice.

Professor Paul White
Pro Vice-Chancellor for Information Services

1 Introduction

The Information Strategy is concerned with all forms of information, independent of the medium of storage or access. While the Strategy will facilitate the development of digital information resources and services, it recognises that print-based information is likely to continue to play an important role well into the future. The Strategy aims to address both

internally-generated information (information that the University owns and/or creates) and externally-generated information (information owned or created by third parties).

The Information Strategy has the following objectives:

1. to make information more accessible
2. to reduce the cost and effort of managing and using information
3. to improve the availability and exploitation of management information
4. to encourage the development of information skills so that members of the University are confident and effective in their use of information
5. to improve the quality and reliability of information.
6. to ensure that the University's information processes comply with legislative requirements and, as far as possible, with appropriate national and international standards.

These broad objectives are closely aligned with the goals articulated in the Corporate Plan. These are set out below, with an indication of how the Information Strategy facilitates their achievement.

The achievement of excellence

High quality information systems will enhance the student experience, improving the efficiency and effectiveness of the corporate processes that support learning and teaching. The Information Strategy will facilitate the development of a content-rich learning environment, blending external knowledge-based content with local delivery, and making it easier for students to access the learning resources they need. Teaching staff will also benefit from enhanced information skills, enabling them to exploit innovative approaches to learning and teaching.

The frontiers of knowledge

The Information Strategy directly supports the generation of new knowledge and understanding, facilitating access to the global knowledge base, and providing a range of information and computing resources that enhance and extend the research capability of individuals, groups and multi-institution collaborations. The Information Strategy also emphasises the effective dissemination of research outputs and encourages this to be seen as an integral part of the research process.

The impact of innovation

Protection and exploitation of the University's intellectual property is an important dimension of the Information Strategy. By enabling information to be shared rapidly and securely with trusted partners, high quality information systems leverage the value of our research and learning enterprise.

The power of people: staff

The effective use of information in all its forms is crucial to the effectiveness of staff at every level. The systems, resources and support which the Information Strategy aims to foster will enable staff to be productive and confident in their use of information. The Information Strategy places a strong emphasis on staff development and training

to enable all staff to benefit fully from the provision of high quality information systems and resources.

The power of people: students

The Information Strategy supports the development of information literacy amongst students; a key attribute of the Sheffield graduate set out in the Learning teaching and assessment strategy. Our students will have the opportunity to acquire valuable transferable skills in the discovery, access, use and management of information.

The sense of belonging

Effective use of modern information systems will underpin the development of better internal communications, and enrich our interactions with the University's external communities, locally, regionally and beyond. It will facilitate the development of lifetime relationships with students, and make it easier for them to support their University.

Delivering on our promises

The capture and analysis of high quality management information, and the ability to derive intelligence from it, is crucial to assuring the quality of all of the University's key business areas, and managing the risks associated with them. Information systems and resources also extend staff capabilities, and make it easier for them to deliver high quality services to the University's customers.

The Information Strategy is a dynamic and cross-cutting framework within which more detailed policies relating to information creation, use and management can be developed. These policies, and the Information Strategy itself, will be kept under review by the Information Services Division Executive (see section 9 *Implementation, monitoring and review*).

Within each of the broad headings below, general principles are described. These are the essence of the Information Strategy. For each heading, key operational considerations indicate actions required for implementation (these are not intended to be exhaustive), and the associated documentation that should be in place. The Appendix is a schedule of work derived from these sections, to be overseen by the Information Services Division Executive, and intended also to inform the strategic and operational planning of other key committees.

2 Information needs

General principles

Key to the Information Strategy is an understanding of the information needs of the University and its members, and the way information flows through the organisation. This understanding must start with the academic processes that are at the heart of the University's mission. Stakeholders include academic staff, ranging from Deans to individual contract research staff and research students, senior officers and those engaged in corporate planning; administrative and support service staff and managers; graduate and undergraduate students; the University's key partners, such as the NHS; and its customers and external communities.

Heads of academic planning units should play an active part in identifying and understanding the flows of information involving their staff and students. Directors of interdisciplinary

research centres should also consider the information needs of their units: interdisciplinary research is often data-intensive and may involve meeting particular information management challenges. At an institutional level the University will assist this process, for example by providing a range of information to support academic planning.

Operational considerations

All business areas of the University, including academic planning units and central services departments, should consider information requirements and flows in reviewing their policies and operational procedures. Business processes should be reviewed to improve efficiency and reduce information overload.

The information management overhead of new policies, projects and procurements must be fully assessed and costed.

Members of the University should use the appropriate channels for responding to external requests for information, for example consulting with the Division of Marketing and Communications in respect of media enquiries, with CiCS in respect of data protection, and with their departmental contact in respect of enquiries under the Freedom of Information Act.

Documentation

Internal communications strategy

Marketing and communications strategy

3 Information access

General principles

All members of the University should have access to the information they might reasonably need in order to execute their duties or to undertake their research or programme of study effectively, and in order to participate as a full member of the University community. Information should be accessible in an appropriate format and available with minimum delay. Information should normally be available freely to members of the University and to other parties unless there is good reason for it to be restricted, and such restrictions are compliant with the Freedom of Information Act. Information should be readily accessible to all members of the University and to external enquirers regardless of any disability they might have.

The University should make available appropriate information to external stakeholders, including prospective students, current and potential research partners and the local and regional community.

Information should be held securely, and protected to ensure its confidentiality, integrity and availability. In particular, there should be appropriate provision for the preservation, migration and curation of digital data and information.

Operational considerations

All members of the University need access to appropriate IT systems (see *Information Systems* below) and suitable hardware on which to access those systems. Effective management information and reporting systems are required. Financial resource is needed to acquire externally produced information. A regularly updated Publication Scheme is required for compliance with the Freedom of Information Act.

Policies relating to Information Security are required and a security culture needs to be promoted throughout the University.

The University needs to be fully aware of the legal issues surrounding information access. Currently these include the Data Protection Act, the Freedom of Information Act, the Regulation of Investigatory Powers Act, the Copyright, Designs and Patents Act, the Disability Discrimination Act and the Special Educational Needs and Disability Act.

Documentation

FoIA Publication Scheme

Information access policy

Data protection and personal information policies

Information Security Policy

Digital preservation strategy

4 Information skills

General principles

All members of the University should be helped to develop the appropriate skills to enable them to access the information they need, to use it effectively, and to comply with their obligations under such information policies as may be applicable. The University will make available training and learning resources to enable every member to acquire the necessary skills.

Operational considerations

Responsibility for the provision of student information skills needs to be clearly articulated.

Provision of training for UG and PGT students in information skills (academic departments, Library, CiCS in partnership).

Training for PGR students (RTP modules largely in place plus specific training on applications/systems/information resources).

Training for staff (SDU plus Library and CiCS), including induction training for new staff.

Self study resources in information skills for non campus-based students.

Integration of information skills resources into the University's virtual learning environment.

Documentation

Learning, teaching and assessment strategy

Policy IT/Information skills for students: policy (possibly as component of learning teaching and assessment strategy, linked to wider delivery of transferable skills)

University and departmental staff development policies and plans.

5 Knowledge management

General principles

Members of the University require access to both internally- and externally-generated information in order to execute their duties or to undertake their research or programme of study.

The University will therefore procure access to that part of the external knowledge base required in order to meet its members' information needs, to the extent that resources permit. This will include refereed journals in print and electronic form, research monographs, student texts, report literature, recordings, multimedia materials, and data. The University will also provide indexes, abstracts and other forms of secondary material to facilitate resource discovery and navigation.

The costs of providing access to research information and to learning resources for taught students will be considered integrally with the business planning of new academic developments.

Data and information management is an integral part of the research process, and researchers should consider this aspect of their research projects. The University will comply with the requirements of research sponsors in relation to the dissemination of research outputs, such as the open archiving of research papers, and will extend its capacity to advise on data and information solutions for research.

The efficient management of the University's records is necessary to support its core functions, to comply with its legal and regulatory obligations, and to contribute to the effective overall management of the institution.

The University will assist its members in the creation and dissemination of new knowledge, and will protect and exploit its intellectual property. It will respect the intellectual property and copyright of other organisations and individuals.

Operational considerations

The University will provide appropriate information resources locally, or through networked access or document delivery. This will include sustained development of our library collections of books and journals in print and electronic form.

There should be close liaison between academic staff and Information Services on new academic developments, and the adequacy of existing information resources should be taken into account in proposing new programmes and accepting research proposals.

The University will provide infrastructure to enable researchers to deposit copies of their research output in an appropriate open access repository.

The University should ensure effective oversight and management of all copyright and intellectual property rights issues, and the awareness of these should be raised significantly.

Awareness of new possibilities for electronic publication and dissemination of information should be maintained, including developments in the global information marketplace.

A records management service will be established and appropriate policies put in place to ensure that records vital to the overall operation of all parts of the University are identified, preserved and managed correctly.

The University should have the capacity to digitise a range of print-based, manuscript and photographic materials in order to facilitate access and preservation.

Documentation

Library Strategic Plan

Library Collection Development Policy

Patents management policy

Copyright management policy

Commercialisation policy

Records management policy

Digital preservation strategy

6 Information systems

General principles

The University will provide an infrastructure and systems which make available appropriate and accurate information to members of the University and to external stakeholders, and information services that support research and teaching to the highest levels.

The University's information systems will recognise the continuing importance of print-based material and provide appropriate places in which this can be accessed.

The critical dependence of the University's key business areas on its information resources and systems will be reflected in its approach to risk management.

Operational considerations

The University will provide appropriate physical environments for staff and students to use print based and electronic information in an integrated way.

The University's risk register will include reference to major information-related risks and appropriate risk management plans will be developed.

The University will work towards a communications and information technology infrastructure where:

- Systems and infrastructure are robust and reliable – “always on”.
- There is ubiquitous access to information and services, using the web as a delivery mechanism and delivering to mobile devices. “Anyone, Anywhere, Any time, Any device”.
- Communication technologies are media-rich and interactive, integrating data, voice and video.
- Research Groups have access to first-class computational facilities and high-speed network links.
- An information-rich, Managed Learning Environment forms part of an integrated digital campus.
- Emphasis is on self-service and most aspects of the University's core functions are conducted electronically.
- Information and services are accessed through secure single sign-on (authorization and authentication) which allows remote access to all central systems and resources.
- Information is tailored to the user's needs.
- There are secure, high quality campus-wide corporate information systems providing unified access to coherent corporate data.
- Centrally-held and locally-held data can be integrated effectively by machine-based systems.

The above will depend upon an appropriate programme of funding for replacement of equipment and for new developments. Academic planning units and central service departments will regularly review and update their IT requirements, liaising with CiCS as necessary; will provide effective local resources for the management of desktop computing; and will compile departmental IT strategies.

Documentation

University IT Strategy

Telecommunications Strategy

CIS development strategy
Departmental IT Strategies
Corporate risk register

7 Information sharing

General principles

Information created in or imported into the University should be capable of being accessed from multiple platforms and applications, or transferred easily and without loss of accuracy or quality between them. Data should be held in as few locations and systems as possible, and ideally in a single logical location (with appropriate backups for security and resilience). Data should be capable of being accessed and manipulated in a user-friendly environment and with a user-friendly interface. Electronic sharing, processing and storage of information should be facilitated. Information and systems should be able to be accessed remotely.

Operational considerations

Provision of Web based interfaces to applications wherever possible, including Corporate Information Systems. Where web based delivery systems are not available, consideration should be given to how users of all platform, including remote users, will access information.

Integration of all Corporate Information Systems in one database.

Provision of a personalised portal to facilitate access to information and systems.

File incompatibility between different versions of software, and different software suites to be minimised.

Provision of high-speed links to external organisations and to other HE and research institutions.

Facilitation of group and collaborative working, including managing documents, schedules and workflow electronically.

Documentation

University IT strategy
Electronic document and resource management policy

8 Marketing and communications

General principles

Effective information management and presentation of information underpins the University's marketing and communications strategy, including the corporate web presence, media relations, and internal communications.

Operational considerations

IT support for the University's central and departmental marketing and communications strategy, facilitating implementation of the corporate identity.

Appropriate channels provided to support effective internal communications.

Documentation

Marketing and communications strategy

9 Implementation, monitoring and review

General principles

Responsibility for information rests with all members of the University, in an individual or managerial capacity. The Information Services Division Executive is responsible for oversight of the Information Strategy. In particular, ISDE will:

- monitor implementation of the Information Strategy at institutional and departmental levels
- facilitate the provision of advice, guidance and support to individual and departments in implementing the Information Strategy
- oversee the work programme and supporting documentation required by the Information Strategy
- review and revise the Information Strategy at intervals
- ensure that the Information Strategy is fully aligned with the corporate planning process
- ensure that implementation of the Information Strategy proceeds in a cost-effective way.

Operational considerations

Reporting and links with other groups and committees

Key performance targets to be set

Monitoring strategies to be determined.

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Information policies and documentation

The Information Strategy has highlighted a number of areas where clearly defined and agreed information policies are required.

Appropriate tracking, monitoring and audit systems will need to be put in place, together with a programme of awareness raising, publicity and training.

A complete list of all documents identified is given below, together with their status; these form the basis of an action plan for the implementation of the Information Strategy.

Documentation	Information strategy section	Status	Action	Responsibility
Internal communications strategy	2		To be drafted	SRAM
Marketing and communications strategy	2, 8		To be drafted	SRAM
Fol publication Scheme	3	In existence	Review and Monitoring	Fol Steering group
Information access policy	3		To be drafted	ISD Executive
Data protection and personal information policies	3	In existence	Review and Monitoring	CiCS
Information security policy	3	In existence	Review and Monitoring	CiCS
Learning, teaching and assessment strategy	4	Under development		Learning and Teaching Committee
Policy on IT/Information skills for students	4		To be drafted	Learning and Teaching Committee
University and departmental staff development policies and plans	4	Under development or in existence	Review and Monitoring	Departments, SDU
Library strategic plan	5	In existence	Review and Monitoring	Library
Library collection	5	In existence	Review and	Library

Documentation	Information strategy section	Status	Action	Responsibility
development policy			Monitoring	
Patents management policy	5			
Copyright management policy	5	Under development	Policy to be approved by Council and operationalised	JBOD/MJL/RAV
Commercialisation policy	5		To be drafted	JBOD
Records Management policy	5	In existence	Review and Monitoring	CiCS
IT Strategy	6, 7	In existence	Review and Monitoring	CiCS
Telecommunications strategy	6	In existence	Review and Monitoring	CiCS
CIS development strategy	6	In existence	Review and Monitoring	CiCS
Departmental IT strategies	6	Under development or in existence	Review and Monitoring	Departments/ CiCS
Digital preservation strategy	5		To be drafted	CiCS/Library
Electronic document and resource management policy	7		To be drafted	CiCS