



University College Dublin

*Strategy for
Electronic Information &
Communications Technology
2003 - 2007*



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1. Introduction

The purpose of this document is to set out the Electronic Information & Communications Technology Strategy (EICT) for UCD, which will support the goals and objectives of the University Strategic Plan. The strategy is based on a College wide consultative process which was initiated in Sept. 2001. The purpose of this initiative was to include all services which provide information and technology to the UCD community and to agree a strategy which would span all aspects of the use of Information and Technology services in UCD.

The context for the strategy is to support the broader objectives of UCD as set out in its “Teaching and Learning Policy and Strategy” and “Research Policy and Strategy” and also to support eGovernment and academic initiatives at national and international level. In developing the strategy UCD will also continue to review the implications of the debate regarding intellectual property rights and particularly its implications for on-line teaching and learning materials.

Recognising that electronic communications and electronic information play a central role in teaching & learning, research and the management of the University, this EICT strategy envisages that UCD will:

- **Create an environment where all staff and students will have access to information resources and technology through electronic access both on and off campus.**
- **Provide a virtual communication and collaborative environment to support the teaching, learning and research objectives of the University.**
- **Ensure that all activities and goals of the university are managed and supported by a comprehensive, secure, integrated and efficient business and management information system.**
- **Deliver information and content electronically to support all the activities of UCD.**
- **Use information technology to facilitate the management of the University and to provide services efficiently.**
- **Support and train staff and students in the use of these services.**

It was agreed that the strategy should take a 3 to 5 year perspective - planning in detail for the next 3 years, while setting the strategic direction for the next 5 years.

Background

The following stages were used in arriving at the EICT Strategy:

1. Identify and categorise the user community and their requirements.
2. Identify the EICT services which will meet these needs.
3. Agree the strategic objectives and priorities for development.
4. Develop a coordinated implementation plan.

Based on information gathered during this exercise, the strategy provides a basis for identifying gaps in existing services and as a means to co-ordinate projects to ensure that Information and Technology are delivered in a unified way across UCD.

2. User Community for EICT Services

The user community for UCD EICT services was categorised into eight major groups, covering the widest possible access provision i.e. from internal staff and student use to community, industry and public access.

In broad terms the user base splits into two very different segments:

Regular Users of the services who have high support, access, infrastructure and information requirements, together with specific additional needs based on their work (e.g. Research , Teaching/Learning or Administration)

Occasional Users of the services whose main requirement is for information and access, with some specific additional needs (e.g. participation in learning or research, access to business processes or use of information resources).

The key difference between these users is the frequency of access to services and the intensity of their use. They may also have quite different support patterns and access needs. The regular user community places a very heavy and seasonal load on all services and have high availability requirements based around the academic year. The occasional user community have a greater diversity of requirements, less familiarity with how services operate and consequently may place very different demands on support and operational services.

The primary use and need for UCD EICT services by each group are identified in the following table. The purpose of this is to allow us to assess the requirements of all users and then to identify objectives and priorities for services to meet these needs.

User Category	EICT Service Use / Needs
<i>REGULAR USERS</i>	
Academic staff:	Research, Teaching & Learning Information Resources, Business Support Access, Infrastructure & Support Services
Undergraduate & post-graduate taught students:	Teaching & Learning Information Resources Access, Infrastructure & Support Services
Research groups (staff, students, institutes, wider academic community, external partners & industry):	Research Information Resources Access, Infrastructure & Support Services
Administrative and service staff:	Business Support, Information Resources, Access, Infrastructure & Support Services
<i>OCCASIONAL USERS</i>	
Adult education & outreach students	Information Resources Access & Support Services Teaching & Learning Services
Alumni & continuing education	Information Resources Access Services, Customer Service Teaching & Learning Services
Government, HEA, other 2nd / 3rd level groups	Information Resources Access Services, Customer Service Business Support
General public, prospective students:	Information Resource Access services, Customer Service

The most widespread shared requirement from this initial analysis is for Access Services and Information Resources which are used by all groups. The more concentrated EICT needs are for "Research", "Teaching & Learning" & "Business Process Support" where services are targeted at specific user groups. The underlying Infrastructure and IT support services are generally aimed at staff and students within the University. (It should also be noted that the groups are not mutually exclusive and customers may belong to more than one.)

3. EICT Strategy Framework

Based on the requirements of these user categories we have developed a framework for EICT services, which will span the needs of the entire community. The EICT strategy framework consists of targeted EICT services to meet the needs of three core activity areas within the University– these are: "Teaching & Learning", "Research Activities", and "Business Support". In conjunction with these specific services we must also provide underlying access, support, information and technology resources to complete and deliver the service to both full-time and part-time users.

The following are the more detailed definitions of each of the services used in the EICT framework, including both Targeted Services and General & Support Services.

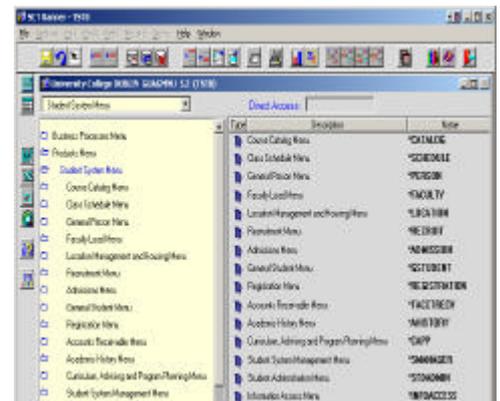
EICT Targeted Services

- **Teaching & Learning Applications and Technology** - which encompasses the electronic environment for delivery of courses, the applications required by students & staff throughout the learning cycle and the technology required to deliver both information and applications to students. e.g. E-Learning software, electronic library access, teaching applications, external information access, collaboration tools.



- **Research Applications & Technology** - which encompasses the supporting technology, networks and applications for all research activities. Ensuring adequate network bandwidth and storage capacity to support research projects and to provide fast access to research material and data. Providing access and collaboration tools to enable links with the wider academic community and industry. e.g. research networks, storage, access services, information sources, high performance / grid computing environments, email, collaboration & group software.

- **Business Support & Management Information**- including all the necessary information gathering and business support applications to facilitate the efficient management of the University. Provision of information and access to business processes to staff and students, with relevant links for business partners / suppliers. e.g. MIS, Financial, HR & Student management applications, web enabled business systems, e-procurement. etc.



Community Students Faculty Institutes Industry

Access & Personal Technology - Training & Support Services

INFORMATION RESOURCES

Teaching /
Learning
Applications &
Technology

Research
Applications,
& Technology

Business
Support &
Management
Information

RECORD MANAGEMENT

Infrastructure, Communication & Technology Services

EICT General & Support Services

To deliver these targeted EICT services to users, a set of supporting technology, information, access, training and support services are also required:

➤ **Access Services and Personal Technology -**

including the availability of suitable desktop and personal technology for staff and students, the implementation of access services, authentication, applications and content delivery targeted to the needs of each user group. This covers delivery via the web of information from more detailed underlying



applications in the teaching, research and MIS areas, together with web access to EICT services. e.g. Portal services, ISP access, email, office & standard applications, PCs, laptops, and widespread “anywhere-anytime” access facilities.

- **Training & Support Services (EICT)**- encompassing both central and local support services for applications and technology, provided through a co-ordinated delivery mechanism with single call-logging & tracking systems. Provision of training and electronic training materials for staff and students. e.g. central help desk, local technology support, specific application support, teaching technology support etc.
- **Information Resources & Record Management** - encompassing the co-ordination and access to information resources within the University. Including record management, library and archive information resources, and the co-ordination of electronic publication of material relating to University activities. In the longer term, it is envisaged that this will require the implementation of content management and sophisticated information retrieval systems. e.g. UCD Web site management, content management systems, library & information resource access, electronic archive developments, access to research material etc.



- **Infrastructure, Communication & Technology Services** - provision of the network and storage infrastructure and operational support services to guarantee delivery of the core ICT applications, services and electronic communication facilities. Management of the operational environment, hosting of technology for customers and provision of technical

advisory services. e.g. provision of central storage, provision and management of network infrastructure, load & performance management, hosting of Departmental Servers etc..



4. Strategic Objectives

This section of the strategy identifies key objectives for each of these EICT service areas - recognising both short term needs and long term goals. These objectives are intended to provide a high level context for more detailed plans which meet the specific needs of individual Faculties, Research, Students, Administration and Services.

EICT Service	Objective	Priority
Teaching & Learning Applications & Technology	Implement eLearning electronic environment and promote its use for all courses	High
	Install in-class ICT facilities with appropriate support and training for academic staff	High
	Provide for extended delivery of teaching / learning – outreach, overseas, industry, distance etc..	Med
	Promote long-term affiliation – lifelong learning etc..	Med
	Employ technology to ease the teaching / research resource conflict	Med
Research Applications & Technology	Support & develop services which would facilitate research projects & groups (e.g. grid computing, storage facilities, networks & communications.)	High
	Provide quality network bandwidth for research activities – local & international	High
	Provide targeted support for research projects and groups. e.g. technical, Linux,	Med
	Provide collaborative environment and tools for sharing information	Med

EICT Service	Objective	Priority
Business Support & Management Information	Reduce the overall administrative and management burden by streamlining the recording and processing of data through the use of appropriate technology incorporating self-service, e-transactions, and web based technology.	High
	Review business processes, incorporating technology where appropriate, to generate efficiencies.	High
	Use the business support systems as the source of information on business transactions and activities, and as the means of business communication - within the University and with the broader community.	Med
	Provide easily accessible information which has been structured and analysed to support the quality and timeliness of management and decision making throughout the university.	Med
Access & Personal Technology	Enable access to a quality PC for all staff and students – encouraging personal use e.g. through laptop ownership, home pc etc..	High
	Provide high quality network access for all departments and users	High
	Provide anytime / anywhere access	High
	Extend access / services to broader user community – e.g. alumni, schools, industry	Med
Training & Support Services	Provide simpler and coherent access to support services and information. Implement distributed support model.	High
	Introduce training/development path to ensure IT literate staff and students	High
	Introduce model for developing & acquiring E-Learning material with training and support	High

EICT Service	Objective	Priority
Information Resources	Provide targeted /personalized access to reading & research material	High
	Provide a comprehensive base of electronic information resources	High
	Improve content management and information retrieval, through appropriate technology	Med
	Develop UCD as an information resource	Med
Infrastructure & Technology Services	Implement network infrastructure to support EICT services – WAN, LAN, wireless	High
	Implement flexible architecture which will facilitate expansion of services, storage, access and provide for contingency.	High
	Develop & improve performance of existing computing resources to meet needs of teaching / research / business support.	High
	Promote the wider use of technology – e.g. phone, video, wireless, text etc.	Med

The objectives described above are inter-dependant, so it is important in selecting projects that the necessary supporting services are in place to enable the specific targeted services to be delivered. For example – the provision of network infrastructure appears under a number of headings and is an essential component needed to deliver all services.

There is also a mix of long term and potentially costly objectives, with more short term easily achievable “quick wins”. In setting the priorities, there is a balance required across each of the main targeted service areas – Research, Teaching and Business Support. The general services priorities are determined by the need to support and provide access to these areas.

5. Proposed Projects

In prioritising projects, the following approach identifies one major project from each of the targeted EICT Services as the focus for development in that area. The necessary supporting projects, which are required to implement these projects, are then identified. It is proposed that this set of projects will be the focus of the initial EICT strategic plan. A number of supplementary projects for further investigation and development are also identified – these consist of either “quick-win” projects which will assist the overall plan, or on-going developments which are important to the strategy.

All of the main projects are selected from the high priority category in the overall list, and target direct requirements of users as identified in the needs analysis. For each project a group / committee has been identified with primary responsibility for co-ordinating the implementation.

EICT Targeted Service Projects

1. Teaching & Learning: Implement eLearning electronic environment and promote its use for all courses. Introduce model for developing & acquiring E-Learning material with training and support.

Primary Responsibility: Telematics Committee

2. Research: Support & develop services which would facilitate research projects and groups (e.g. grid computing, storage facilities, networks & communications.).

Primary Responsibility: Computing Services Board

3. Business Support: Reduce the overall administrative and management burden by streamlining the recording and processing of data through the use of appropriate technology incorporating self-service, e-transactions, and web based technology.

Primary Responsibility: Administration Systems Committee

EICT General & Support Projects

Each of these projects is required to enable the implementation of the 3 targeted projects

4. Infrastructure: Implement network infrastructure to support EICT services – WAN, LAN, wireless. Provide high quality network access for all departments and users.

Primary Responsibility: Computing Services Board

5. Technology: Install in-class ICT facilities to support electronic learning environment with appropriate support and training for academic staff.

Primary Responsibility: Telematics Committee

6. Access & Personal Technology: Enable access to a quality PC for all staff and students – encouraging personal use e.g. through laptop ownership, home PC etc.

Primary Responsibility: Computing Services Board & Faculties

7. Information: Provide a comprehensive base of electronic information resources.

Primary Responsibility: Library & Web Committee

8. Training: Introduce training/development path to ensure IT literate staff and students.

Primary Responsibility: Training Co-ordination Committee & others

10. Support: Provide simpler and coherent access to support services and information.

Implement distributed / local support model for all aspects of EICT.

Primary Responsibility: Computing Services Board

Supplementary Projects:

- Provide targeted /personalized access to reading & research material
- Provide collaborative environment and tools for sharing information (UCD Connect)
- Provide anytime / anywhere access to services & information (through UCD Connect)
- Review business processes, incorporating technology where appropriate, to generate efficiencies. (ASPIRE project)
- Improve content management and information retrieval, through appropriate technology. Investigate and recommend on the requirements for Content Management.
- Develop & improve performance of existing computing resources.
- Implement a flexible IT architecture which will facilitate expansion of services, storage, access and provide for contingency.

Appendix: Consultative Process

The Computing Services Board in August 2001 proposed that a small sub-group should meet and prepare a discussion document with a view to developing a full EICT strategy in 2002. A draft document was prepared and widespread consultation was initiated through the relevant UCD committees, Faculties and various planning activities.

Input to the Strategy was sought through:

- Deans & Officers Group
- Faculty planning and IT planning meetings
- Computing Services Board & Computer User Advisory Committee
- Administration Systems Committee
- Web Committee
- Library & other services

In April 2002 an initial document based on these discussions was circulated to all Faculties for comment. In preparing this document a variety of material from existing academic and technology plans were taken into consideration including: UCD Corporate, Faculty and Service plans, general trends and developments in technology and the academic sector. Following this circulation, discussions were held with individuals and feedback from the different groups was incorporated into the strategy.

Based on the combined feedback from this process a revised draft was prepared for August 2002 and subsequently discussed and presented to the groups identified above. On 5th December 2002 the Computing Services Board and the Administration Systems Committee met jointly to consider the Draft EICT Strategy. The document was finalised and approved by both groups in January 2003.

The President has established a Strategic IT Committee, which held its first meeting on 26th March 2003 and formally approved the EICT Strategy document for publication.