

Information Technology Strategy

New Mission of the ICT Centre

“Supporting the University to achieve its goals by providing a quality and reliable Information Technology based service”

Introduction

Information Technology (IT) plays a key supporting and enabling role in an ever increasing amount of the University’s activities. As a result, there is an increasing requirement to manage IT as a strategic resource by the University. A strategic plan for Information Technology aims to ensure that the IT capability that is in place and future initiatives related to IT are aligned with the strategic and operational priorities of the University. It is intended to incorporate the applications of IT in the University (i.e. faculties, departments, centres, units, administrative branches). The IT strategy provides a fundamental context for growth and change in the use of technology for the University. For this purpose 3 major strategic goals were focused on in developing the IT strategy; namely:

- To deliver high quality IT services to all users
- To deliver an outstanding IT support structure that is dynamic and responsive to the rapid pace of change in technology and user demand
- To implement IT governance and IT management in order to accomplish the above

The IT strategy encompasses:

- Systems: for learning and teaching; to enable research; to support faculty, departmental and administrative needs
- Services: help, support, training, systems development, business and systems analysis, programme and project management; to ensure systems and infrastructure provide reliable services
- Infrastructure: networking, computing environments and machinery

All of these require clear, well-defined, and agreed IT management and governance structures in order to deliver the aims and objectives of this IT Strategy.

The Strategy is intended to set direction for the period from 2012 to 2016.

In order to obtain feedback of IT services provided presently as well as to determine future requirements to provide a best possible service, various stakeholders were consulted both formally and informally. In addition, IT/IS Strategies of reputed universities were also studied to identify current trends and best practices. Through this exercise seven core areas were identified as key aims to achieve and also to provide direction when developing the Information Technology Road Map.

Summary of Aims

Aim 1 (Education): To support education by creating an IT enabled environment to enhance teaching and learning experience

Aim 2 (Research): To support research by creating a conducive IT environment

Aim 3 (Management): To support management (both academic and administrative) by providing efficient and effective processes, enabled by well-designed, integrated information systems

Aim 4 (Users): To ensure that all members of the University are well supported, trained and equipped to fulfill their roles

Aim 5 (Access): To provide access to core IT facilities for members of the University, wherever they are, whenever they need to use IT based services

Aim 6 (Service): To provide excellent, responsive and resilient IT services for the University

Aim 7 (Governance): To establish a clear IT governance model for strategic planning and development, coordination, decision making, resource allocation and funding in relation to IT

Aims and Objectives

Aim 1 (Education): To support education by creating an IT enabled environment to enhance teaching and learning experience

Objectives

1.1 Provide suitably equipped places to promote teaching and student learning, enabled by IT

Activities

- Providing central computing laboratories for teaching and learning to be used as common facilities for the entire university
- In order to maximize resource utilization setup a common computer laboratory with high end equipment and software to be used by different departments/programmes
- Providing faculty and departmental computer laboratories for respective faculties and departments based on requirements
- Increase availability of IT resources at central facilities such as the University's library
- Places for "informal" group work, with access to appropriate IT resources

- 1.2 Provide a rich set of online resources to complement face-to-face teaching and to enhance students' learning

Activities

- Provide staff and students online tools, including Learning Management Systems
- Integrating and standardizing Learning Management Systems to enhance reliability and manageability
- Investigate innovative applications of technology to facilitate learning

- 1.3 Enable efficient and effective processes for student assessment

Activities

- Improve processes for management of examinations, including recording and communication of marks and results
- Develop standard facilities and mechanisms for e-Assessment

- 1.4 Improve communication with staff and students

Activities

- Single point of access to University, Faculty and Departmental information
- Determine a reliable set of tools for communication with staff and students

- 1.5 Provide effective support and training facilities so that staff and students may make the best use of facilities available (*covered by Aim 4*)

Aim 2 (Research): To support research by creating a conducive IT environment

Objectives

- 2.1 To provide required IT facilities for research

Activities

- Developing an IT environment that supports and facilitates research activities

- 2.2 Provide means of open access to research data and publications

Activities

- Developing a capable repository to store research publications

- 2.3 Provide easily accessible, well integrated information resources

Activities

- Develop a single point to access all externally available e-resources and internally available resources (*Key role should be played by the University's library*)

Aim 3 (Management): To support management (both academic and administrative) by providing efficient and effective processes, enabled by well-designed, integrated information systems

Objectives

- 3.1 Develop a common understanding and a process model of the University's strategy, relating to operational management of the organization

Activities

- Develop a process model incorporating the University's key business processes with the view of improving these processes where necessary
- 3.2 Provide integrated systems to meet requirements of management

Activities

- Develop integrated systems supporting multiple business processes spanning multiple domains and levels (e.g. finance, HR, student management and administration, faculties and departments)

Aim 4 (Users): To ensure that all members of the University are well supported, trained and equipped to fulfill their roles

Objectives

- 4.1 Provide clear, concise information on what IT services are available

Activities

- Development of a portal to provide information on IT services available
- 4.2 Provide suitable IT skills training for staff and students to ensure that they have the underlying competencies to get the most benefit from the IT facilities at their disposal

Activities

- Conduct need analysis surveys with the intention of ensuring that training resources are focused on the areas of greatest need

- Develop capabilities within the University to train both staff and students on commonly required IT skills for teaching, learning, and administration
- Conduct appropriate training programmes based on need analysis
- Provide good quality support, documentation and training for the most commonly used IT systems and software
- Provide information literacy and information skills training, so that users may be able to make effective and appropriate use of information resources

4.3 Ensure that Professional IT staff has appropriate training and development so that they are able to provide and support the high quality IT Service which the University needs

Activities

- Identify training needs of IT staff and train them accordingly

Aim 5 (Access): To provide access to IT facilities for members of the University, wherever they are, whenever they need to use IT based services

Objectives

5.1 Provide systems which enable easy, location-independent access

Activities

- Development of key systems to be accessed from anywhere and anytime
- Increase reliability of these services provided

5.2 Investigate and experiment with innovative applications of IT, especially relating to new web-based methods of access, communication and collaboration

5.3 Support digitization and increased provision of resources online

5.4 Continue to develop and integrate internal information repositories (such as past examination papers, images, research publications etc.)

5.5 Provide access to information resources from a single point

Aim 6 (Service): To provide excellent, responsive and resilient IT services for the University

Objectives

6.1 Consultation and communication with all stakeholders on IT services and strategic development

Activities

- Conduct regular surveys on IT service requirements among staff and students

- Define service levels for key services offered to the University
- Include 'ICT matters' as a permanent item of Faculty Board Meetings

6.2 Provide clear information on how to get help and support, preferably via a single point of contact

Activities

- Establishment of a Help Desk for ICT related services

6.3 Provide IT infrastructure which is well designed and managed and fit for purpose. Critical IT Infrastructure should be robust and resilient against risks of systems failure

Activities

- Upgrade the key infrastructure components to ensure stipulated level of services could be provided
- Setting up of secure server rooms to house critical systems with high availability computing facilities

6.4 The University must continue to invest in IT infrastructure.

Activities

- Develop and maintain an enterprise-level technical architecture to provide the infrastructure to underpin University-wide IT services

Aim 7 (Governance): To establish a clear IT governance model for strategic planning and development, coordination, decision making, resource allocation and funding

Objectives

7.1 Carry out a review of IT provision across the University

Activities

- Review the status of IT in the University regular basis
- Recommend the most appropriate management and decision making structures for provision of IT services.
- Develop an integrated plan for IT investments across faculties, departments and administrative branches
- Review the plan on a regular basis to ensure objectives of IT investments are achieved

7.2 Initiate a “development plan” for implementation of information systems

Activities

- Review the current status regarding information systems
- Identify potential systems and prioritize requirements based on current needs of the University

7.3 Ensure effective IT related policies and procedures are in place

Activities

- Assess risks associated with critical systems
- Develop policies to ensure systems are secure based on risk analysis
- Develop policies to ensure systems are optimally used

7.4 Streamline IT related activities

Activities

- Develop data exchange standards to support exchange of data between both internal and external systems
- Ensure “ownership” exists for all IT related systems
- Streamline policies and procedures relating to procurement of IT equipment and services
- Creation of groups for development and management of systems
- Streamline hardware and software used and supported by the University
- Adoption of an appropriate IT governance framework

Role of the ICT Centre

The ICT Centre, formerly known as the Computer Centre, was initially created in the mid 1980s to provide computing skills to students. With the advances in Information Technology and the change of the role played by technology (which has become a part of people's daily lives), the ICT Centre has become the ICT services provider for the university.

Services provided by the ICT Centre at present include, maintenance of the university's network including fiber-optics backbone, email services to staff, conducting of Computer Literacy courses for almost all students of the university, offering advanced courses in programming, Web designing and hardware for selected students, installation of hardware and software, maintenance of hardware, training staff, advising and recommending procurement of ICT related equipment, etc.

Although the role of IT played in the University as well as expectations of stakeholders of IT has changed considerably, the ICT Centre was not able to change its role to meet new demands and expectations. This is mainly due to the lack of resources, especially of human resources and lack of attention paid into management of IT by the University. This has resulted in duplications in equipment and systems, lack of availability of equipment, reliability and security issues, developing systems without proper planning, etc. leading to waste of IT resources and failing to provide an acceptable level of service to users.

After analyzing feedback received from stakeholders such as academic staff, non-academic staff and students, and also reviewing the role played by IT in the University as well as in other universities (including both local and foreign), the following recommendations are made to redefine the role played by the ICT Centre of the University.

- The ICT Centre should be converted into a fully-fledged service centre for the university
- In order to meet the increasing demand for services, the strength of the technical staff should be increased
- Different groups should be formed to carry out different activities (information systems development and management, systems management, web development and management, teaching and training, network management, etc.) coordinated by the ICT Centre
- The ICT Centre should play an advisory role in procurement of general purpose IT equipment
- The ICT Centre should ensure personnel are available on a 24 hour basis to continuously provide critical services such as accessibility to WWW, email, e-learning, etc.
- In order to improve reliability and security of systems as well as to maximize resource utilization, services which could be offered as centralized services such as LMS, Websites, should be provided as centralized services through the ICT Centre
- Multiple secure server rooms should be developed by the ICT Centre at identified locations with uninterrupted power, lightning protection and controlled climate capable of supporting critical systems running as 'high available systems'
- The ICT Centre should advise the university when installing central IT based systems and should take the "ownership" of these systems in managing and maintaining them in order to ensure systems function smoothly

- As the ICT Centre serves the entire university, it is recommended to convert it into a unit under direct administrative oversight of the University rather than the Faculty of Science other than in matters relating to courses conducted
- In order to reflect the changing focus of services of the ICT Centre, it is recommended to change the name to “IT Services, University of Kelaniya” and develop a proper governance structure to oversee the activities of the new service unit

In compiling the IT Strategy, IT Security Policy, Acceptable User Policy, and Role of ICT Centre, existing policy documents in reputed universities including Universities of Bath (UK), Birmingham (UK), Kingston (UK), Loughborough (UK), Charles Stuart (Australia), Queensland (Australia), and Helsinki (Finland) were reviewed. In addition, opinion of staff and results of surveys conducted among students were also considered.