

# UCSI University

## ICT Strategy

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Version 2

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# UCSI University ICT Strategy

The University is committed to establishing a first class learning environment incorporating the highest standards of technology, support and use of cutting edge learning facilities: a learning environment where students flourish and develop academically and socially, and are sought after by employers locally and globally.

In this context, the ICT Strategy aligns with the University's Vision and Mission to offer 24/7 access through web-enabled portals and other systems on campus to support its learning, teaching, research and administration. To maintain its resilience and reliability, the Strategy will constantly be upgraded and updated with new technology and resources through the implementation of tactical projects over the next two years, to ensure that it meets future user expectations and requirements.

Information management, information systems, information technology and access to information are fundamentals to the core teaching and learning, research and administrative activities of the University. As such, it is essential that the University continues to invest in people, systems and technology to improve access to, and the management of, information. Thus, the ICT Strategy will state the technical direction for technology-based activities and services at the University. Consequently, the ICT Review Group which reports on ICT-related issues has formulated the University ICT Strategy to involve the following:

- a) Reviewing the existing information systems and technology adopted
- b) Considering the future of the information systems and technology
- c) Conducting consultations and discussions with various levels of users (faculties and senior management)
- d) Determining IT projects critical to the University
- e) Considering the impact of external pressures and influences, as well as feedback from students

This effort by the ICT Review Group which has been in place for the past 5 years, has resulted in major changes and improvements to ICT at the University. The first major effort started in 2002 when the University appointed a Vice President for ICT to focus resources and efforts into this change. The first ICT plan and policy which was drafted in 2003/2004 when the institution was a University College, later became the ICT Strategic Plan which has been revised and reviewed several times since.

## **ICT Strategic Vision**

The University's strategic vision for its ICT services is:

**“To provide quality, efficient and effective integrated information systems that support the University's students, lecturers and administrators”**

## **ICT Principles**

The principles underpinning the ICT Strategy are:

- a) Focussed primarily on achieving the University's vision and fulfilling the operational information needs of students, lecturers and administrators by guiding it in its service delivery, decision-making and planning.
- b) To adopt industry standards, using best practices and the latest technology.
- c) To implement tactical projects wherever possible for the integration of systems and information for an efficient flow of information across boundaries within the University.
- d) To enrich and enhance student experience in learning by providing them with employment skills, lifelong learning and value-added experiences to optimize their usefulness.
- e) To invest in ICT resources through sound management and good governance based on cost-effective and efficient methods
- f) To recognize the importance of ICT and be prepared to invest in the continual development and improvement of its resources.
- g) To extend ICT applications to manage its critical functions and business with more aware and literate ICT users with better access to reliable, secure, integrated and easy to use services.

## **ICT Strategy**

The ICT Strategy Plan has 5 key areas to be completed within the next 3 years (2009-2011) which support it and is constantly reviewed, namely:

- **Infrastructure**
- **Information Content**
- **Access to Information and Communication**
- **Management and Governance**
- **Services**

## **Area 1: Infrastructure (Network, Communication, Server and Hardware)**

The University will develop and maintain an advanced ICT infrastructure to establish efficient information content delivery which is not time or location limited, and which will be available on a 24/7 basis to both mobile/wireless and wired users.

The ICT infrastructure will be secure, authenticated and resilient, using the latest technology to improve its reliability and to reduce costs. Thus, the University will take a pro-active approach to invest in equipment, software and staff expertise to ensure that network security will be constantly maintained and upgraded with new technological developments.

There will be standard hardware and software platforms, with a minimum specification for PCs, notebooks and peripherals, to minimise barriers to information flow and integration.

However, the University will maintain support for Unix/Linux and Windows operating systems with the choice of operating system for servers being primarily determined by the requirements of the applications hosted on each server.

The University will also maintain support for Oracle, Microsoft SQL and other forms of database systems with the choice for applications being primarily determined by users' requirements.

On future communication demands, the University will maintain the communication infrastructure, monitor the traffic and bandwidth usage and evaluate future technological communication developments.

The University wireless network coverage will allow for connectivity from hand-held devices and wireless-enabled notebooks.

Currently, Kuala Lumpur, Sarawak and Terengganu campuses are interconnected via broadband line. As the University intends all its campuses to be open-learning centres with its remote offices interconnected in a single Wide Area Network (WAN), a project to upgrade all its applications is already in place. Fully-implemented, all services at the Kuala Lumpur campus will be available to the other campuses.

## **Area 2: Information Content**

The University will maintain its investment on high quality content (electronic and print) to support research, learning and teaching by expanding its central data centre capacity to ensure that all users have appropriate levels of storage capacity available on the University's network or in cloud environment. Thus, all critical administration data will be held centrally and users are provided fixed and external storage devices for information storage, with access to the centre provided to users with specific requests and authorization.

Systems containing information which require security will be password-protected. These would include academic records, electronic resources, e-mails, student and personnel records and finance. Every student and staff will have his/her own individual login which restricts access only to those information deemed appropriate. The content is protected at the network and application levels to ensure that any security breach at the network level will not lead to direct access to critical information.

As part of its ICT contingency and disaster recovery planning, critical data are backed-up and kept externally from the central data centre.

### **Area 3: Information and Communication Access**

As a basic principle, all users will have access to the information they reasonably need to complete their studies, do their research and perform their required tasks. This information will be available in appropriate and user-friendly formats in print or electronic format.

The University users (faculty, students and staff) will be able to use their university credentials (user login and password) for access to any of the portals or system for information to empower them in their decision-making processes. Thus, common data queries can be shared across faculties, departments and institutional boundaries in anticipation and response to the constantly evolving needs of students and stakeholders for easily accessed information.

The University will use standard web browsers or “thin client” technologies for user access to core applications which will be adapted or replaced to enable users to access, enter or change information as easily as using a web browser.

The University will continue to ensure that staff and students are aware of ICT structures and applications developments to maximize Internet use and other related technologies to facilitate communication, both internally and externally. It will also use clear communication mechanisms for disseminating information to all users – written, verbal and electronic. There will be enhanced use of web-based communication within the University by the Corporate Communications team as the University’s primary means of both internal and external communication. In addition, the University will install large e-notice boards in all its campuses for use by Corporate Communications to disseminate information to all students.

However, the University website ([www.ucsi.edu.my](http://www.ucsi.edu.my)) will continue to be a key marketing tool for the promotion of University information in terms of course and student information, staff information and stakeholder (parents, potential customers, employers and authorities) information. It will also continue to be the main contact point for accessing other resources such as University e-mails and network resources via the Internet at all times.

### **Area 4: Management and Governance**

The leadership and top management of the University realises that ICT affects all individuals and units on campus. As such, it needs an IT management and governance structure that is consultative, collaborative, advisory and open comprising all levels of staff i.e. one that encompasses all areas of the University community.

The University has a complex ICT infrastructure which is developed and managed by a team of staff qualified in software, hardware and network (Computer Services Department). The manager reports to the Group Executive Officer who is a member of the Senior Management Team. Budget and purchases on ICT is approved finally by the Head of Department (HOD), Vice President (VP) and Finance Department which recognise and support ICT’s role at the University.

There is an ICT Review Group composed of representatives from the teaching staff, management, support services and administration which advises on direction, focus and priorities for ICT budgeting and for reviewing, and which contributes to ICT strategic planning. It also acts as a Project Management team responsible for prioritising projects and ensuring they are properly planned, resourced and monitored. Small scale individual projects are delegated to small focus teams who must report progress to the ICT Review Group.

The Manager of the Computer Services Department allocates teams to projects and monitors that they are delivered within the agreed timeline and budget. He/She also assigns project teams to deal with each identified area and reviews their progress against action plans.

## **Area 5: Services**

A core value and belief of the University that every student matters, is evidenced by the establishment of a set of personalised online services for our users to experience in their daily lives – credit card payment, online access to check their courses, timetable, evaluation, academic results, job placement and Google. As our services become more complex, covering a wider range of academic and business processes, the challenge for the University is understandably greater.

Although several areas of the University already have such systems implemented, the University is currently undergoing major upgrades to transform the current system into a single integrated system. This is a long-term undertaking and requires a substantial amount of collaboration from all units at the University.

The University continually addresses the concerns of balancing security issues with easy accessibility to computers in the laboratories. In addition to the public computer laboratories on each campus, designated teaching computer laboratories are also open and accessible to students at all times. Since 2003, the University has introduced a subsidy programme for students to purchase HP computer notebooks. Besides these, the campus has wireless coverage to almost 85% of the entire place and 100% coverage inside buildings and hostels. Free internet access is available to all students at points of access. The University has invested in extensive external links for students' access to the Internet for information through their study portal areas and e-mails.

Meanwhile, current ICT projects continue to improve the external links to provide better access to users from anywhere in the world.

In recognition of students' need to communicate with lecturers by e-mail or collaborate via social networking tools (forum, chat, blogs and etc.) both, internally and externally, all students at UCSI University are allocated an email address and login for portal accessibility via the external link.

Thus, the University responds to any software requests for additional assistance to support students' needs in using this technology.

## **Challenges ahead....**

Developing and maintaining a dynamic ICT Strategy for a rapidly-expanding University is an exciting and challenging endeavour. These are a few of the challenges:

1. The push to adopt and adapt Web (3.0) technologies into the classroom.
2. Emergence of new gadgets and devices in the areas of mobile devices and smart gadgets.
3. The changes in research modes and the need for innovation at all levels.
4. Students are different (Generation Z), while a lot of teaching materials are not.
5. New skills in formal classroom instruction – not just IT literacy, but visual and technological literacy.
6. Increasing globalization affecting the ways we teach, collaborate and communicate.

The above challenges are not exhaustive. Thus, as we progress into the second decade of the 21<sup>st</sup> century, we have to be aware and mindful of these challenges so that the ICT strategies and actions formulated take these into consideration.

## **Conclusion**

The ICT Strategic document is a dynamic blueprint intended to guide the University to better integrate technology into its academic endeavours not only for the next three years, but beyond. We must also recognize that technology alone working in isolation will not provide the necessary success or breakthrough. While technology continues to play a vital role at UCSI University, industry trends show that only initiatives which focus on the integration of people, processes, and technology will deliver the highest value and benefits. Consequently, we need to review and re-engineer existing people's mindsets, processes and procedures to make more effective use of new and emergent technologies in the University's learning, teaching, research and administrative environments.

With this blueprint, the University will be in a better position to enhance the quality of teaching, research and support for students to deliver a higher level of service to all its customers and stakeholders, while simultaneously maintaining its competitive edge in Malaysia and globally.

This dynamic blueprint is written with the intention that it be reviewed and updated regularly to assist the University navigate new technologies.