

Information Technology Strategy 2008 – 2013

Information Technology is a powerful enabler. All IT systems will be designed to allow the work and life of the University to run smoothly in this digital information age and support high quality teaching and learning.

IT investment must be as flexible as possible to allow for future changes in requirements and technology. IT staffing resource needs to expand in line with staff and student growth, and as new systems are deployed, to allow support levels to remain appropriate.

Staff effort and ongoing investment will always be devoted to support and maintenance of existing IT first, with spare capacity then being aimed at new developments and projects. The IT infrastructure will be designed to be as resilient as possible.

Over the next 5 years we will have the following four key objectives:

1. Implementation of core technology required for delivery of teaching, learning and assessment in a 21st century University.
2. Improved flexibility of IT provision for staff and students.
3. Expansion of Technology capacity in line with other University strategic plans and goals.
4. Reduction in the running costs and environmental impact of IT.

In particular, subject to funding, we will aim to deploy wireless in all buildings at all campuses and install AV and IT in all teaching rooms. We will enable flexible and mobile working for staff, and deliver student software in a controlled way to where it is needed.

We will seek to expand IT facilities in line with university growth, and will plan for a new data centre on North Holmes Road. We will look to expand and integrate Apple Mac provision, and improve the ability to store and deliver digital media.

Information Technology Strategy 2008 – 2013

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1 Overview

1.1 Purpose of the Strategy

Information Technology is a powerful enabler: it allows the work and life of the University to run smoothly in this digital information age, and teaching and learning to be delivered in ways that suit the student. This strategy is designed to provide a context and direction for all Information Technology (IT) at Canterbury Christ Church University.

The complexity and interaction of IT systems, linked to the requirements for resilience, value for money, risk mitigation and delivery of wider goals require that some directions, controls and priorities are defined. Without this strategic focus, IT cannot be cost effective, and is impossible to support effectively.

This strategy sets out the principles that will govern IT at this University and provides a framework for that technology. It provides a vision of the future, detailing the fundamental goals and objectives we shall aim for over the next 5 years.

1.2 Definition of Information Technology

The term Information Technology (IT) can mean different things to different groups, and it is important to establish the scope of this strategy. For the purposes of this document IT is defined to be all computer infrastructure, networking, hardware and software that enables the delivery of the business of the University. This strategy does not cover the user software systems which run on the IT infrastructure (eg Agresso, Blackboard etc) but does define how those and other systems are delivered. It covers all user facing technology in use in classrooms, offices and open areas, used by staff and by students.

The strategy is wider than any single support department and although the majority of the operational delivery of the strategy will be by Computing Services, some responsibility will also fall to Corporate Information Systems and the Learning and Teaching Enhancement Unit.

1.3 Process

Things do not remain constant and any strategy must be reviewed to ensure it remains aligned with business needs and reflects changing technology and staff/student requirements. It is proposed to review the strategy annually, keeping its horizon at 3 to 5 years. Each year the operational plan and a capital programme of work will be delivered. An annual service review, which is a reflection on how well the departments involved in the strategy have performed, will also be carried out. This process is shown in Figure 1.

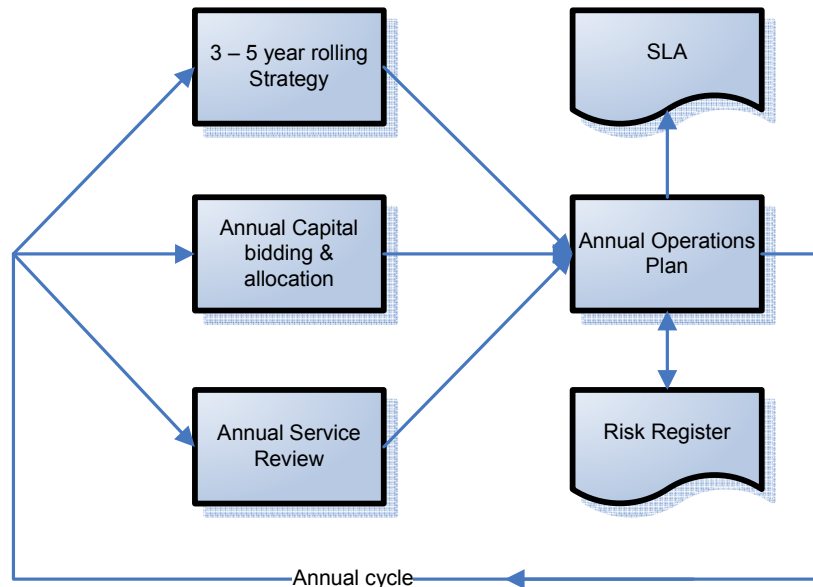


Figure 1

2 Strategic Context

This strategy cannot, and does not, stand alone. There are multiple influences and drivers that must be considered; a large number of operational needs; and other strategies.

2.1 The University

Over the next 5 years, it has been estimated that student numbers will grow between 18 and 27%. The current (2007/08) student headcount of just over 15,500 (10,800 FTE) could therefore potentially rise to between 17,000 and 19,000 headcount (13,000 – 14,000 FTE). This reflects the past 8 years which has seen similar growth levels, although the current economic situation and changes in government funding policy could see these predictions much reduced.

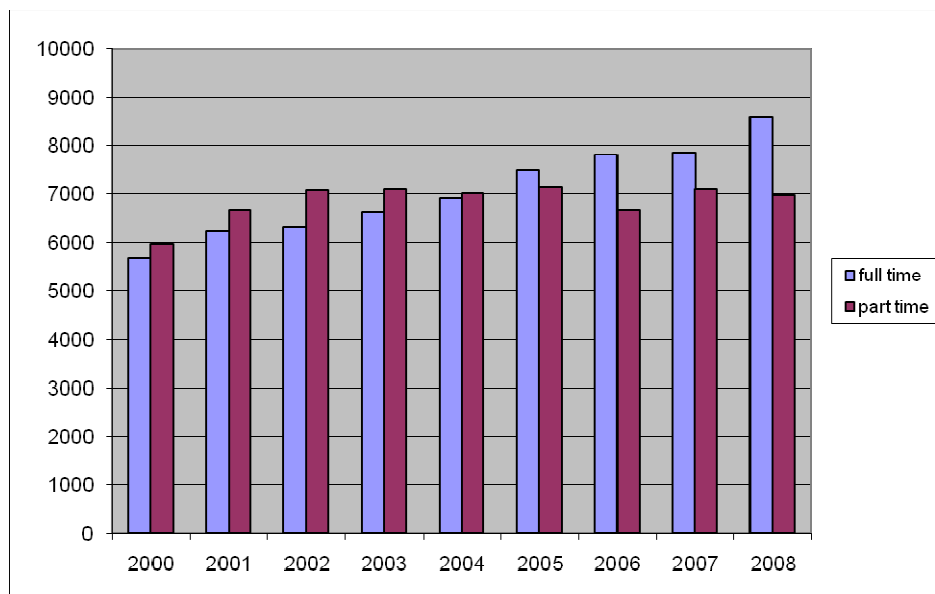


Figure 2

The University has traditionally had a more or less even split between full and part time students, with perhaps a tendency to more part time, due to the nature of many vocational based courses.

However, over the past three years this has shifted, and in 07/08 55.2% of students were full time, with part time numbers starting to drop. This change puts pressure on IT as full time students make considerably more use and place more demands on the computer infrastructure.

The University has expanded beyond its original Canterbury base, although around 81% of students (headcount) are still based in the city. We now have 4 other main campuses, Medway (8.6% of students), Broadstairs, Folkestone (5.8% combined) and Salomons (4.2%).

For 2006/07 the split between faculties shows Education with the majority of students (33.0%) closely followed by Health (31.9%). Business and Science follow (21.3%) with Arts and Humanities the smallest faculty (13.9%). However, these raw figures hide the types of students in each area with very high IT requirements for example, Journalism and Media. Both education and health students are often peripatetic and mobile, spending long periods away from any campus.

Finally, with 41.1% of students under 25, a large number of students will have been immersed in technology for years and have expectations and usage that is far different to previous generations. However with 36.4% of part time students over 30 years of age, we must be careful not to focus wholly on the "digital native".

2.2 Other strategies

The University has an overall strategic plan, as well as an established Learning and Teaching Strategy. There is an Information Strategy which is directly relevant to this IT strategy, as well as a recently published Corporate Information Systems (CIS) strategy. In addition CIS are developing a strategy for the University's use of the web, and the new marketing department are establishing a strategy as well.

The IT strategy is perhaps best seen as the foundation on which all these others can deliver. Meanwhile, alongside everything is the Estates Strategy for the next 10 years which has now been published. These relationships are shown in Figure 3.

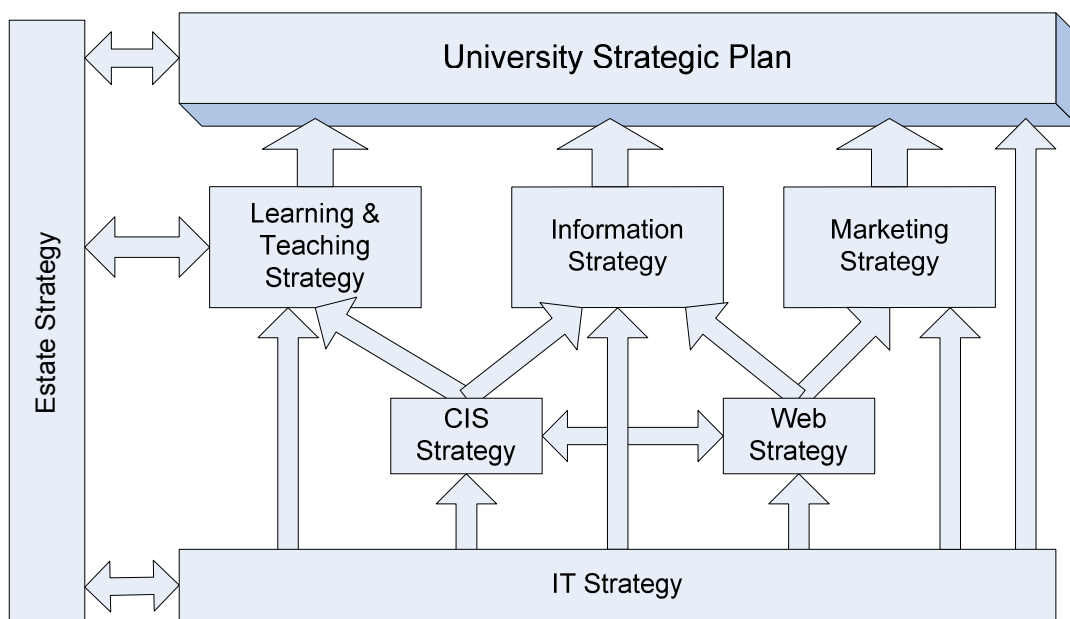


Figure 3

2.3 Finance

High quality IT requires ongoing investment, both in equipment and importantly in people. Most equipment has a 4-5 year lifetime, after which it will need replacement. However, as Figure 3 shows, IT underpins and enables the entire business of the University, and the business benefits from effective and efficient IT are clear.

2.3.1 Overall IT Spend

Comparative analysis of our IT spend as a percentage of annual turnover shows that we are slightly below average (Figure 4a). This data is from UCISA survey in 2006/07 and includes all IT costs of staff and equipment, in all areas. In each graph, CCCU is marked in red, with spend of other universities for comparison. Analysis of our IT spend per FTE student (Figure 4b) puts us nearly at the bottom of the graph, while spend per FTE staff (Figure 4c) also has us close to the bottom quartile.

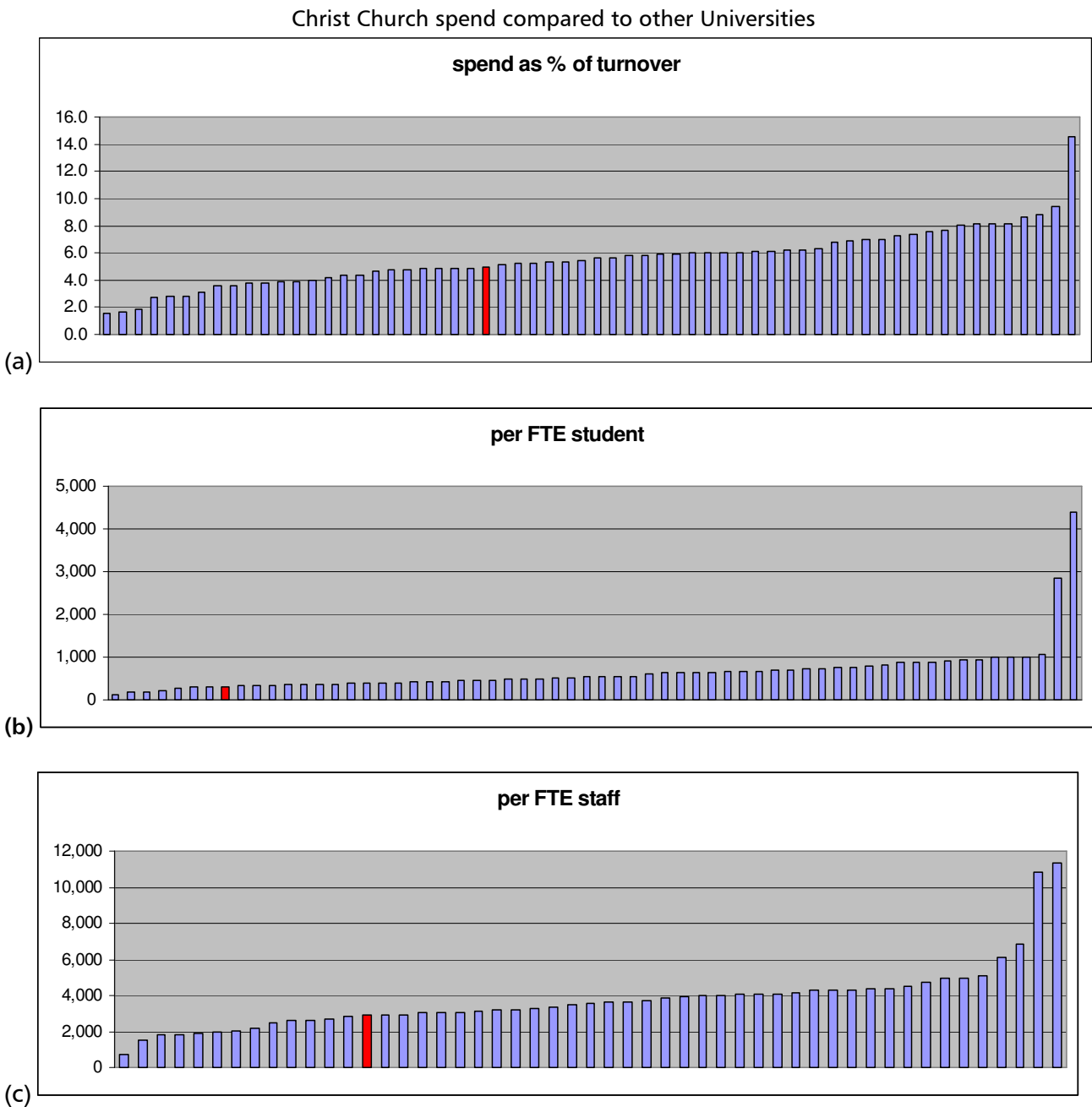


Figure 4

This data is a couple of years old, and in the past year, while overall turnover has increased, IT spend has reduced. The next 2 years may see a further reduction in central IT allocation, which will put the University well below its peers in this important indicator.

2.3.2 Financial Planning

Another area which causes significant problems is the frequent contraction of the planning process, and requests for new or modified equipment for the delivery of courses. In an ideal situation, there would be sufficient time between the course planning and approval process to allow the purchase and installation of the required IT well in advance.

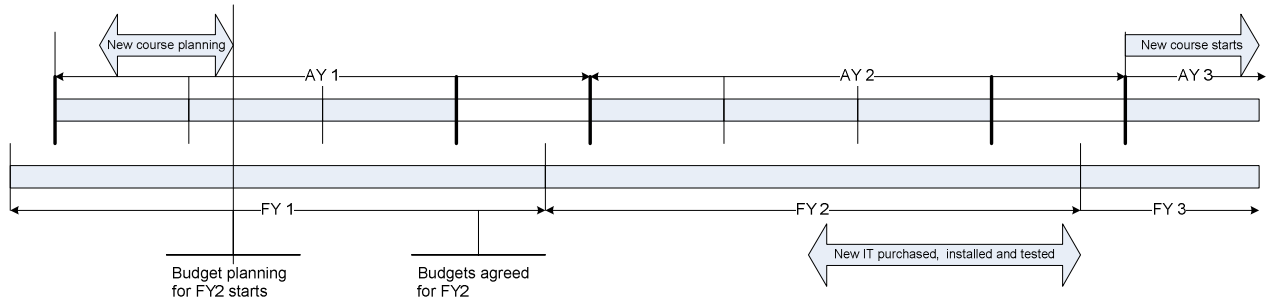


Figure 5

Figure 5 shows that to allow for both the budgeting and installation of equipment, there needs to be a clear Academic Year between a course being planned and started. However, this rarely happens, with a more usual situation being as in Figure 6.

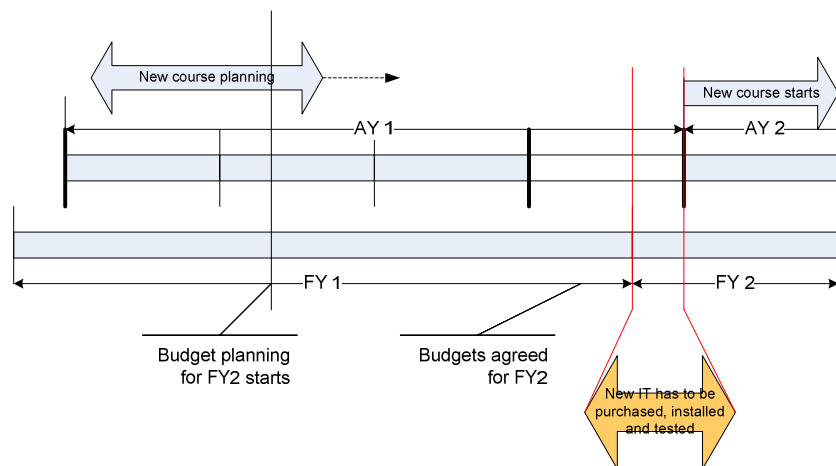


Figure 6

In this case, the course planning takes place just before (and sometimes after) the budget planning and so all IT work needs to be crammed into a very short period. This is compounded by this being at the peak of holiday period, and also when we upgrade most existing classroom equipment as it is not being used.

2.3.3 Capital Investment

The Estates Strategy contains a section on the overall capital programme. Due to the large investment in new buildings during the next couple of years, the University's borrowing will be at its affordable limit. This leaves little available for developing IT, and the capital allocation for 2009/10 and 2010/11 will be significantly reduced from previous years, allowing only a replacement programme of work, and few new projects.

However, that strategy suggests that around £5M per annum could be available to be spent on IT and equipment from 2011 to 2017¹, although this is still to be confirmed. It is likely that around £2M of this would be available for IT. If this strategy is to be realised, then it must be resourced, as there are many areas of IT where we have under-invested in the past. The strategic objectives in Section 5 cannot be delivered on existing investment levels – most of which goes simply on keeping the large current infrastructure running smoothly and reliably. These objectives are not intended to be radical or outrageous, but set out the basic technological requirements of any University of our size and nature.

3 Principles for Information Technology

As stated earlier, there must be some guiding principles for information technology and its use at the University. Without these, investment will be poorly directed, value for money will not be delivered and staff and students will struggle to carry out their work.

The following were adhered to in developing this strategy, and should be adhered to in all future use and investment in IT. In all cases, levels of service and technology depend on budget being available.

1. New IT investment will be as flexible as possible to allow for future changes in requirements and technology
2. Staff effort and ongoing investment will always be devoted to support and maintenance of existing IT first, with capacity then being aimed at new developments and projects
3. IT infrastructure and the software and systems running on it, must always be appropriately secure and conform to all legal requirements surrounding IT
4. We will actively use IT to enable the University's green agenda.
5. User location will, as far as possible, not limit access to IT facilities. Central systems, filestore and email will be accessible by everyone from all locations, including remote and mobile.
6. Computing provision will as far as is possible be equitable across all University Campuses, with provision being made for any specific requirements as determined by campus activity.
7. Where any central information system is provided it must be used for its stated purpose. Individuals and departments may not create their own "islands" of technology which do not interface with core systems.
8. All systems requiring authentication will be by the same single login and password
9. An identical core desktop with all standard software will be provided for staff, with specialised software installed for those who need it
10. The core underpinning infrastructure will be designed to be as resilient as possible and disaster recovery plans will exist for all systems.
11. Where there are agreed technology standards, these need to be adhered to by all users

¹ Estates Strategy, p20

12. All new information systems will be deployed on virtualised servers.
13. Individual users will not be able to modify systems or the infrastructure where this would affect any other IT, system or users. All infrastructure and systems will be managed centrally.
14. We will invest in sufficient, well trained and high quality staff to manage and develop IT
15. We will expand the IT staffing resource in line with staff and student growth and as new systems are deployed, to allow support levels to remain appropriate.
16. The core desktop technology will be PC and Windows based.
17. We will invest in Apple Mac technology for specific areas where it is the industry standard. Mac systems will be integrated into the wider infrastructure.
18. All technology will be appropriate to the required use and fit for purpose

4 Strategic Framework

As well as these principles outlined above, there is also the operational framework for technology to be considered. This framework governs *how* technology is delivered; the principles govern *what* is deployed.

1. All IT infrastructure will be managed and procured via Computing Services
2. All technology will be purchased via negotiated agreements and will demonstrate value for money
3. All servers will be virtualised where possible
4. We will move to delivery of as much software as possible via virtual and "on demand" methods.
5. We will consider the impact of any IT investment on the environment, and aim to reduce our carbon impact and waste wherever possible.
6. Computing Services will retain a percentage of capital budget in each year to be spent on 'in year' academic programmes approved at short notice.
7. A strategic group drawn from all areas will exist with responsibility for oversight of the IT strategy and annual operational plans.

5 Strategic Objectives

By 2013 the following high level goals will have been met:

- 1. Implementation of the technology required for the delivery of teaching, learning and assessment in a 21st century University:**
 - 1.1. All teaching rooms will have appropriate and up-to-date built in AV and IT
 - 1.2. Easy to use and secure wireless to be available in all buildings at all campuses
 - 1.3. Interactive collaborative tutorial and student teaching support system in use, including video, voice and application sharing, to enable flexible technology enhanced learning.
 - 1.4. Improved digital media storage service in place, allowing delivery of video-cast and audio-cast material as required.
- 2. Improved flexibility of IT provision for staff and students:**
 - 2.1. Remote and mobile working will be fully enabled for staff, with secure access to required applications and data wherever they are working
 - 2.2. Flexibility of provision of staff IT, to reflect increasing numbers of peripatetic staff
 - 2.3. All student PCs to have a simplified core desktop of basic software only. All other specialised software will be deployed on demand as required, with software metering
 - 2.4. Some software able to be deployed to student-owned devices in a controlled and monitored manner
 - 2.5. Single domain and coherent public IP numbering scheme in place, allowing deployment of video conferencing and other Web 2.0 technologies
 - 2.6. If proved successful, we will extend the iBorrow concept to other buildings and campuses
- 3. Expansion of technology capacity in line with other University strategic plans and goals.**
 - 3.1. Expansion of student IT facilities and IT support staff in line with student growth
 - 3.2. Increased provision of IT for research, including a University data and report repository
 - 3.3. Agreed plans in place for a 200m² Tier 3 server room complex on redeveloped North Holmes road site
 - 3.4. Expanded and upgraded Apple Mac teaching rooms, with high speed storage infrastructure and HD video editing capability
- 4. Reduction in running costs and environmental impact of IT**
 - 4.1. Improved management and use of printers
 - 4.2. Progress towards improved electronic document storage and management
 - 4.3. Virtualisation of all appropriate servers

Document History

Document control/change history				
Version	Author(s)	Date	Circulation	Comments
1	Ian Ellery	August 2008		First draft based on other documents
2	Ian Ellery	November 2008	CS Managers	Internal discussion
3	Ian Ellery	December 2008	CS leaders + QuILT	Wider consultation
4	Ian Ellery	February 2009	ISC	Final draft
5	Ian Ellery	March 2009	Academic Board	Edited from ISC comments
6	Ian Ellery	April 2009	University	Approved by Academic Board