Annual Report 2008/09

Service Plan 2009/10

21/11/2009
Information Systems Services
John Murphy
Director IS Services (Acting)

Introduction

Information Systems Services (IS Services) are the central Information Technology service provider for College supporting 25,000 users across the main campus and 18 off campus locations. IS Services are housed in two buildings in College, the Support Service is delivered from the ground floor of Aras an Phiarsaigh and the main data centre and the remainder of IS Services are located in 200 Pearse St. IS Services also has staff in the two main teaching hospitals at St James's and the AMNCH at Tallaght.

The department has three main management streams, **Support Services** which has responsibility for desktop support, user training, support for teaching and learning facilities, student computing and photography and audio visual.

The **Computer Systems Group** has responsibility for the main College servers, the College network and Infrastructure and delivers many services such as email and web to the College community. The group is also responsible for the development of the College network which now supports links to many off-campus locations and College's main Internet connectivity. The group manages the main data centre in College which houses over 150 servers which provide a number of services to the College community. The College network has over 100 communications rooms across 19 locations and there are 15,000 active network points and 650 wireless access points providing a wireless network service to nearly 5,000 users. There are currently over 20,000 registered users of College's IT services.

The **Management Information Systems Group** has responsibility for database management and administration, application acquisition and administration and application development & maintenance.

IS Services also has a responsibility for ensuring Disaster Recovery and Business Continuity and has a role to play in IT and data security. IS Services work closely with the College IT Security Officer, the College Auditor and External Auditors to ensure compliance. Although IS Services are responsible for the central provision of IT, there are a number of Schools that have IT staff or internal IT departments. IS Services staff liaise closely with these areas and support staff in the faculties to ensure the overall smooth operation of the IT infrastructure.

At a strategic level, IS Services senior management contribute to the e-Strategy program and advise administrative and support areas, faculties and Schools on IT requirements and ensure that IS Services strategy is aligned with the College's goals and objectives. The department is involved in the following committees (a) The Information Policy Committee (b) Library Committee (c) The Web Management Committee. The Director (Acting) also contributes to an Executive Officer call-over group which meets fortnightly to discuss strategic issues and their implementation. IS Services has also developed many external links with other universities and strategic partners and senior managers are involved in many cross sector initiatives.

At an operational level, the department deploys a Customer Relationship Management (CRM) tool which logs and tracks all interactions with end users and supplies valuable information on the performance of the department. The department uses Key Performance Indicators and formal Project Management techniques to manage its work program. A departmental organogram is included as **Appendix A.**

The department has an annual budget of €8 million of which approximately €3 million is non-pay and €5 million is pay. The Director of IS Services, Mr. Michael Nowlan retired in Dec 2007 and an interim senior management team was put in place.

Review of the year – key achievements

Strategic Developments

Developing the digital campus further with 24/7 access for staff and students was one of the core objectives for IS Services in 2009. With reducing budgets, cost optimisation was a priority and targeted savings were achieved by greater use of new technologies such as virtualisation.

The Director (Acting) was chair of the Information Provision section of the strategic plan and many of the initiatives identified have been included in the work-plan for 2010. The establishment of a Programme Office in IS Services has given greater transparency to the demands being placed on the service from all areas of College. Work was completed on the identification of all major IT projects requests and the prioritisation of these requests. These projects varied in complexity and cost and the full list of same are now published on the IS Services website and in the appendices.

 Appendix B shows a full list of projects completed by IS Services in 2008/09.The work program contains developments for 2010 and support some of the main College strategic themes in Information Management, IT Architecture, Teaching and Learning technology, Student mobility, Research infrastructure and enhancing the College's web presence and these are included as Appendix C.

IS Services has started a major strategic initiative with the Director of Buildings Office to map out a future for Unified Communications in College. Unified Communications has the ability to bring multiple technologies onto one infrastructure greatly enhancing user experience, reducing costs and improving productivity.

IT Performance

IS Services management monitors IT performance and service availability. There were substantial improvements in performance over the previous year. IS Services measures the performance of the following critical services and their availability. These measures are for five day (Mon-Fri) periods and do not include maintenance or scheduled upgrade outages.

Service	Availability
Internet	100%
Staff email	100%
Student email	99.5%
Staff and Student storage facilities	100%
Student printing	98.5%
Off-campus network connectivity	100%
Virus and SPAM protection	99%
Admin Systems (further breakdown available)	98.3%

Support Services – Achievements 2008/09

The User Support staff dealt with the following number of requests during 2008/09.

Help Desk Statistics

Phone Calls Answered	18497
Emails Processed	12546
Front Desk Callers	15197
New Network Connection Requests	1733 (Staff and Office New Network Connections)
Student Network connections	4200

All helpdesk statistics are now updated weekly on the IS Services web site and any staff or student can track their request to see how it is progressing.

Software Support

In line with developments in the commercial world IS Services support staff were fully trained to offer support for the new Microsoft Operating System (Vista) and the new Microsoft Office 2007 which now come pre-installed on many College PC's and Laptops. Apple also released a new operating system (Leopard) and support staff is now fully trained to support this development.

Anti Virus & Anti Spyware

The success of implementing virus control tools meant there were no major virus outbreaks in academic year 2008/09.

Training Group

Following a very significant increase in its training schedule in 2007-08, the Training and Publications group increased the number of IT training sessions made available to College staff and postgraduate students in 2008-09 by a further 5% to 197 courses.
Over 1,200 staff and postgraduate students attended courses that formed part of the department's published training schedule. A further 400 attended courses that were specifically requested by College course coordinators, schools and departments. Use of the department's training room exceeded 85% capacity during term time in 2009-09.
Much of the continuing development of training courses in 2008-09 focused on meeting the skills needs of postgraduate students.. Training sessions were conducted in Effective Presentations using PowerPoint, Planning Thesis Production Using MS Word. The Training and Publications team continues to work closely with the Trinity Access Programme in ensuring their students are equipped with the necessary IT skills.

Audio Visual and Photography

Audio Visual Room Upgrades
Three rooms in College Green and two rooms in AAP were upgraded to include
- new controllers
- new lecterns and PCs
- provision of additional network points to facilitate the networking of AV equipment

- New projectors were fitted in JM Synge Theatre and LB04 in the Lloyd Building and a new Visualizer was installed in Museum Room 20 at the request of the Faculty of Engineering and Science.

- New High Definition Video Conferencing units were installed in AVMS TV Studio and FEMS Meeting Room. The AVMS TV Studio also had new furniture and a green screen for enhanced filming provision installed.

AMX Room Management System for the Remote Monitoring and Management of AV Equipment was installed in 47 Theatres and Seminar Rooms across College. This will significantly reduce costs and will also ensure greater reliability of equipment.
- AAP – 5 Rooms
- Arts Building – 26 Rooms
- College Green – 3 Rooms
- Goldsmith – 1 Room
- East End – 7 Rooms
- Lloyd – 2 Rooms
- Museum – 3 Rooms

Video Production

A DVD "Aspergers Syndrome – A Practical Guide for Parents, Teachers, Young People and Other Professionals" was completed for the School of Education. This DVD was produced for the Education Department for distribution throughout the country's schools and was launched by Minister for Education at an event in TCD.

The Annual TCD Orientation Video was updated and completed for use by offices in College such as Senior Tutors.

Photographic Centre

It was a busy year for the Photographic Centre and the year finished with the retirement of the College Photographer, Mr. Brendan Dempsey. The following is a list of work completed during 2008/09.
- Photographing of college paintings for inclusion in the TCD Modern Art Collection database.
- Contribution of chapter to 'A Manual of Experimental Philosophy' by David Scott.
- Departmental Portraits - photographs taken in the studio / numbering over one hundred individual people Philosophy Dept—Economics Dept--English Dept —— Classics Dept
- End of year formal group shots e.g. School of Pharmacy, Social Work And Social Policy, Statistics Dept, Pharmacology And Therapeutics Group

- Continual updating of stock shots around college covering events such as fresher's week / Open Day. Updating stock shots depicting College life, buildings, people. These images are drawn upon for various publications and web use.
- Maintaining updating and providing images to College for example- The Web Office
- Individual location portraits on request in College for Lecturers / Administration for promotional purposes in publications or web.
- Special project photo shoots for example Long Room Conservation team at work

Computer Systems Group Achievements 2008/09

Growth in passive network infrastructure

A total of 71 projects were undertaken to provide an additional 746 dual network outlets to the College network. Of these, 16 were projects were in support of Director of Buildings projects providing 129 additional dual outlets and 55 were commissioned by IS Services on behalf of IS Services and College departments providing an additional 617 dual outlets. The total spend excluding Director Of Buildings projects was €121,330.00, down from €193,000 in 2007-8.The average cost of a dual outlet in 2008-9 was €196 which was a significant decrease on €335 in 2007-8

Wireless network growth

The number of College wireless users increased from 2150 in 2007/08 to 3750 in 2008/09 a 75% growth. An additional 1,890 guest users availed of the commercial quality guest wireless service. The table below shows comparative growth from the introduction of the service.

Wireless network			
Year	User numbers	Growth	Access Points
2004/5	200		145
2005/6	750	275%	290
2006/7	1500	100%	469
2007/8	2150	43%	607
2008/9	3750	75%	650

Network Admission Control NAC Student (self service) access to College network

Following on from the success of the introduction of the first large scale NAC deployment in Ireland in 2005/6, the numbers of users grew from 2600 in 2006-7 to 4200 in 2007-8 a growth rate of 61%. The growth rate in 2009 was approximately 50%

Network Admission Control user growth		
Year	User numbers	Growth
2005/6	1300	
2006/7	2600	100%
2007/8	4200	60%
2008/9	6112	50% (approx)

Exchange Hosted services –Virus and Spam filtering Service

In December 2006 IS Services introduced a new SPAM filtering service for the College email system. All mail coming into College is now filtered and quarantined by a Microsoft service called Exchange Hosted Services (EHS). On average 60% of all e-mail sent to TCD was spam for the period from January to December 2008. The following monthly summary figures show the breakdown on a month by month basis of the percentage of e-mail that was delivered, that was classified as spam and that was classified as a virus from January 2009 to mid December 2009. This clearly shows the value of the email filtering system.

Year -2009	Millions	%	%
	Email Delivered	Spam	Virus
Jan	26.66	73	0.11
Feb	28.29	71	0.09
Mar	28.1	71.75	0.13
Apr	36.65	62.75	0.59
May	34.15	62.2	0.64
Jun	43.01	55.99	1.0
Jul	43.68	55.61	0.70
Aug	44.87	54.86	0.26
Sep	44.82	54.03	1.15
Oct	45.88	53.15	0.95
Nov	46	52.67	1.33
Dec	48.56	51.16	0.26

Averages: *39.22million*   *59.84%*   *0.6%*

**Student Email -Gmail –Student Mail and Collaboration Service**

IS Services began offering a new email service for students in June 2007, this is provided in collaboration with Google. The service gives Students a centralised login point to access their College e-mail and other services such as calendar and chat. This service allows Trinity Students to now retain their College email address for life and offers many benefits including over 7GB storage space. The service has been very successful to-date. This project offers students email for life and is an important strategic development for College as it helps maintain links with former students and alumni.The following diagram shows the number of TCD Students and past students that are registered for the service.
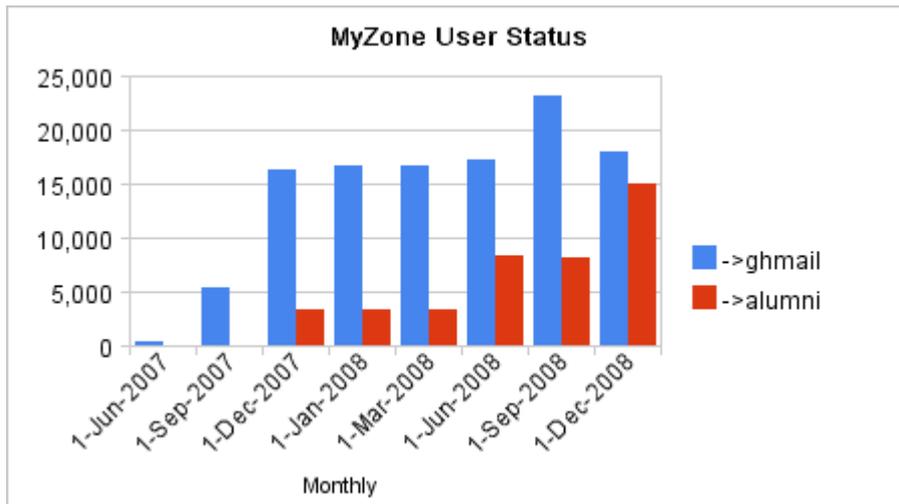
Key: **ghmail** = current students - **alumni** = past students

Number of accesses to the TCD Home page - total per month

Enhancing the College's presence on the web is a key strategic priority for disseminating information and heightening College's presences world-wide. Over the past year the web infrastructure has been enhanced to support the type of numbers that access College via the web. The table below shows the numbers that accessed the TCD global homepage

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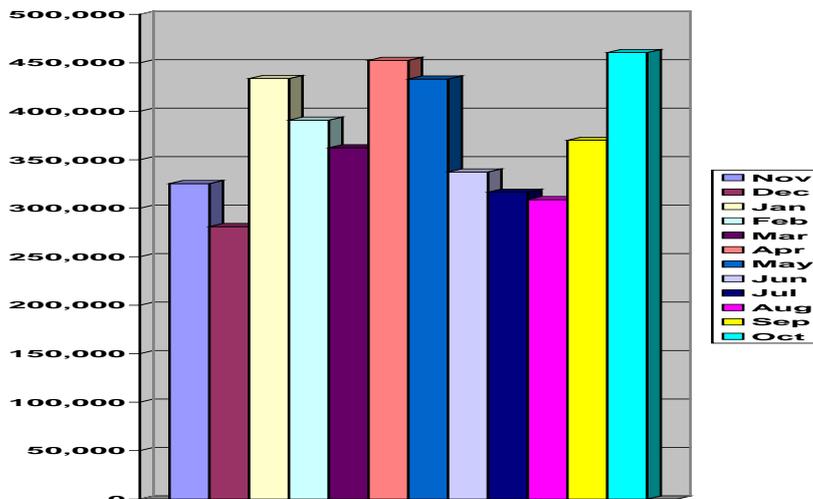
Management Information Systems (MIS)

In addition to new development, MIS continued to support and maintain all existing systems, databases, utilities, interfaces, reports, lists, etc. As the inventory of new systems increases, so also does the maintenance and support burden. In particular, the move to a packaged approach has shifted the support burden from development teams to the database support team, which must maintain individual environments for each application; manage and support vendor software releases and upgrades; manage vendor performance at a technical level; provide secure remote access to vendors, and ensure that vendors adhere to our technical standards. During 2008/09 a number of projects were completed and more were initiated.

Major Projects - Completed

Project	Description
Media Directory	A project for the Communications Office which allows members of the media to search for an expert based on various criteria. This is an element of College's strategy to facilitate communication between researchers and the mass media.
WiSER	A project for the Centre for Women in Science and Engineering Research. A Gender Indicators Database was designed and implemented -its primary objective is to produce an annual report for Board with a view to encouraging the establishment of a set of achievable targets for greater gender equality. Important secondary objectives were to design a system which could be used by to monitor gender equality within any College unit and which would be relatively easily extensible to monitor other equality grounds
Student Records 1 & 2	Two projects in the Office of the Vice Provost area:- 1) Procedure for continuing student file (PCSF), this is an annual process with sets up the student records for the next academic year and archives/ removes and graduates other records. This system was totally re written to facilitate new requirements and remove dependency on Legacy architecture. 2) Tutor Upload. This is a new application which allows the admissions office to bulk assign tutor codes to students.
CORE HR Upgrade	The project involved the upgrade of CoreHR Human Resource Information System moving from client/server to web architecture. It has put in place the infrastructure necessary to facilitate implementation of additional modules, including e-Recruitment, in the future. The project included replacement of existing hardware and upgrade of the database management system to a more recent version, ensuring continued support by suppliers.
Nursing Allocation	The School of Nursing and Midwifery have 1200 student nurses attending both theory and clinical placements throughout the academic year. As a professional course, attendance must be planned, monitored, recorded and reported in accordance with the standards and requirements of An Bord Altranais (ABA). Due to the increased number of students a more accurate and less labour intensive system became essential. This project addressed the clinical placements monitoring requirement.

Smaller projects completed

Project	Description
Expertise Ireland	The RSS interface was redeveloped to map to the j4B back end. This allowed TCD to become the only university to populate Expertise Ireland with link backs to full text articles (in the online TARA repository).
Research Audits:	A number of research audits were carried out, among others, the School of Business Financial Times audit and the Social Sciences review
Research Showcase	The Research Showcase is a publicly accessible website that exposes the breadth and depth of College's research activity to Funding and Governmental agencies, other academics and students and the general public. Data is extracted from the RSS to provide functionality to search for an expert and to browse people and publications based on Research Themes
Research Themes Sub-system:	The Research Themes Sub-system is an extension to the RSS that contains essential data and models the relationship between College's research entities. Academics will be able to associate themselves and their publications to the research entities. This data is fed to the Research Showcase.
RSS Release 1.2	Release 1.2 was an upgrade to the RSS that delivered on several change requests including Dissertations Supervised, Role Allocation, PubMed Import, Representation Details, Email Alerts for Shared Publications, TARA Error Handling, TARA Workflow Indicator, TARA publication reference fix, Expertise Ireland Feed validation, Publications table trigger fix.
SIS Release 1.1	Release 1.1 of the Student Information System was an upgrade which delivered on several change requests including Student Record Page (reorganisation of Course info, Student Notes), New Email list using Nationality or Country/County code functionality, New functionality in order view a Colleague's timetable, New functionality to view any Supervisor's Chamber list, Access to most recent SIS Access Grid provided through Portal, New functionality of Course Timetabling.
DRM	The Data Reconciliation Module is a portal application which allows the Trinity Foundation and the Alumni Office to manage the flow of data to and from the Raiser's Edge fundraising system and the Alumni system. Occasional MIS intervention facilitates the smooth transition of records.

Fees PPSN	Web interface provided to Fees Office to facilitate refunds of tax on tuition fees, where applicable.
e-Reports Upgrade	A major upgrade of the reports delivered to College disciplines and research principal investigators was undertaken in the last quarter of 2009. This was undertaken with the assistance of Treasurers Office to ensure that additional reporting requirements e.g. FP7, Benefit in Kind and Matching Funding is presented and that the new format of these reports clearly identifies the total charged for specific cost codes. General Ledger and Research Transaction Details Reports recaptures invoice total and has been reformatted to ease reading and identify costs.

IT Security

The 2008-09 academic year marked a notable rise in IT Security threats globally and consequently to the College Data network. An increased number of Security incidents were recorded in 2008-09 these included most notably targeted phishing attacks against third level institutions.

The scale of College operations, the rapid adoption of new technologies and the large number of new systems/applications implemented in College every year contribute to a challenging environment in which to implement security controls however Information Systems Services have made significant progress in the following key areas as discussed below.

Phishing - Third level institutions worldwide have been under attack this year from targeted phishing scams. Trinity College has been experiencing an ongoing low level of attacks punctuated by a number of notable larger scale more sustained attacks in March, June and October.

A number of users compromised their credentials in the first attack however following numerous informational emails and alerts on the Information Systems Services website the numbers of users responding to subsequent attacks was greatly reduced

Virus/Malware - The comprehensive antivirus software in place on all desktop and server systems has continued to successfully minimise disruption caused by viruses and worms.

As an additional service Information Systems Services use the data produced by the College anti-virus system to contact users experiencing repeated virus detections in order to provide assistance in identifying any underlying issues or vulnerabilities associated with their computers.

Software Updates - Monthly roll-outs of Microsoft Security patches continue to approximately 4500 workstations and servers in College. These rollouts are managed by the User Support Group and are successfully ensuring that College machines are compliant with the most up-to-date security levels. This provides further protection against virus infection and system compromise.

Account and password management - A number of initiatives have been progressed to help ensure the integrity of College user accounts and passwords. Information Systems Services have implemented a 180 day mandatory password change policy to ensure that users update their passwords in a timely manner. Additionally Information Systems Services has provided a remote password change/reset service Password Manager.

Intrusion Detection - The College Intrusion detection system which proactively detects threats to the College network was upgraded and fine-tuned to cover the College data network more comprehensively. This system has proven particularly successful in alerting Information Systems Services to security incidents in a timely manner.

User Awareness - Information Systems Services has continued to provide high quality information and advice to users on measures to secure their IT equipment via user notes and an informational website.

Service Plan 2010

The service plan for 2010 will address some of the key issues that the College faces in delivering IT services in a cost efficient and effective manner. The following strategic initiatives (aligned with the College's Strategic Plan 2009-14) and the IS Services work programme (Appendix B) will help to ensure that investment in IT across College will be prioritised to meet the College's strategic objectives and maximise the yield on IT expenditure. Key to the successful delivery of IT projects and IT service delivery is IT governance. The issue of IT governance will be addressed in the Information Strategy when it is finalised in Feb 2010 and will be brought to the relevant committee/group for ratification.

IS Services strategic initiatives and corresponding Strategic Plan objective.

6.10 Make TCD a Green Campus

Development of a new Green Data Centre for College increased efficiencies and effectiveness reducing power consumption and carbon footprint. It will also tackle duplication of service provision across College and will mitigate the risk that the College currently has in this area. It is hoped that the new Data Centre will be completed in 2010.

6.11 Develop and publish an Information Strategy, and keep this strategy under review

The Information Strategy will set out the long-term vision for the information management and sharing in College. The Information Strategy will incorporate the E-Strategy programme requirements as well as the other information needs across College. It will allow College to have a structured approach to Information Systems and ensure maximum yield on all Information Systems investment by avoiding duplication of facilities, resources, staffing and generating efficiencies and greater effectiveness in information provision. A key component of the information strategy is the enterprise architecture.

6.11 Enterprise Architecture

The enterprise architecture will provide the framework for the communication, interpretation and implementation of College's objectives and will enable the evolution of a strongly aligned IT environment. The enterprise architecture will also address the areas of services architecture, information architecture, services platform helping e-Strategy progress and addressing the issue of legacy systems which has been identified on the College's High Level Risk Register

6.12 Establish a virtual learning environment (VLE) and a virtual research environment (VRE)

The establishment by the College of a VLE and VRE further facilitates collaborative learning and knowledge creation. The VLE will be delivered in 2010 via a new cross functional group in College which involves members of the Centre for Learning Technology working with IS Services and the Web Office. Work will commence of the delivery of a VRE which will be delivered in 2010 by a cross functional team of end users, and staff from IS Services and The Centre for High Performance Computing.

6.13 Transform the campus experience with mobile web

As students and staff become increasingly accustomed to incorporating their mobile communications devices information into their daily routines, the requirement to access College services with these devices will also increase. Access to mobile services will enhance

productivity. A pilot project is already in place which will enable students access some Information Systems using mobile devices such as smart phones and notebooks.

6.12 Build an integrated communications technology platform

Build an integrated communications technology platform that will deliver improved efficiencies while simultaneously meeting the evolving needs of the College's academic, research, administration and support staff (Action 6.27). This project is a key deliverable for the Biosciences building and a cross-functional team between the Director of Buildings and IS Services has been setup under the guidance of the Interim Chief Operating Officer.
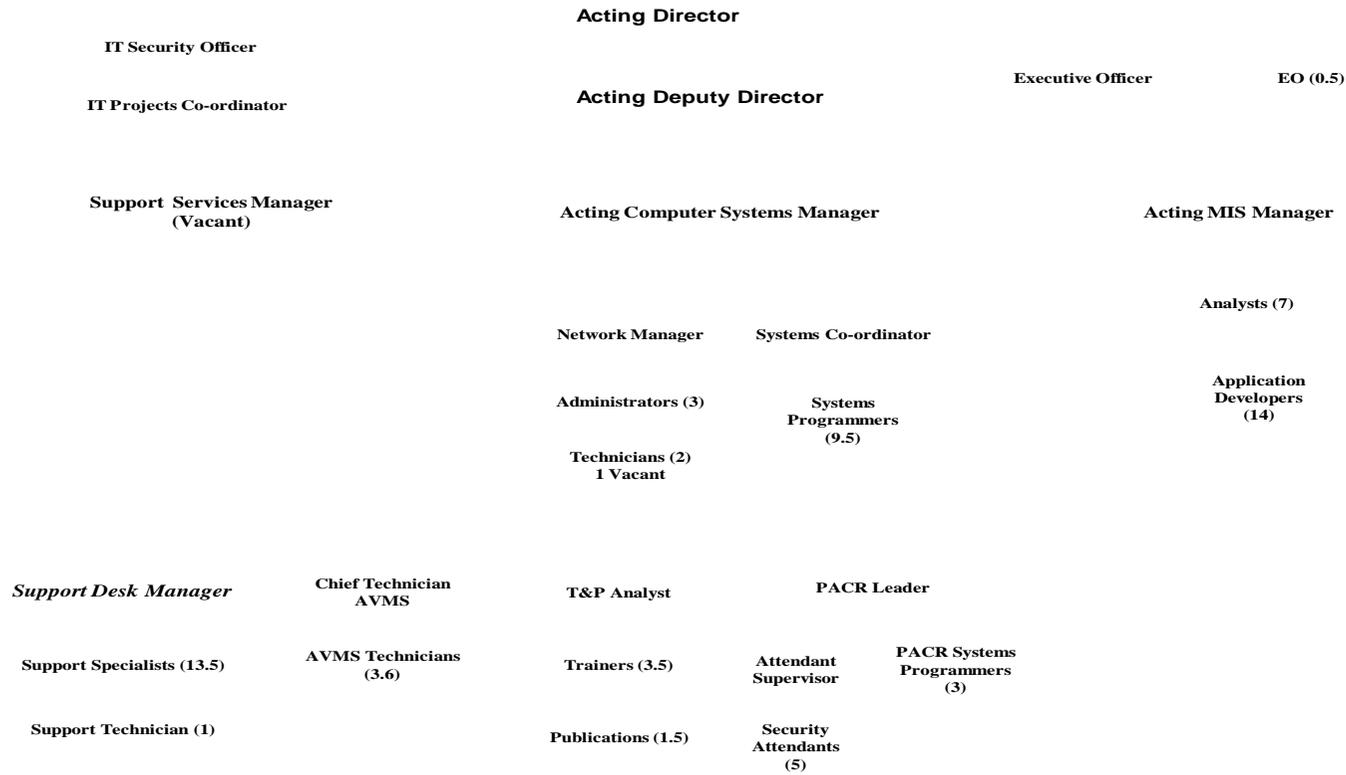
6.15 Build a cyber infrastructure to support research

Build a cyber infrastructure of high speed networks and advanced computational resources and applications that will connect researchers and educators around the world in a digital environment to promote further discovery and education. Work is in progress to develop a 10GB dedicated research network and to upgrade the main College network to 10GB simultaneously. This is a ten-fold increase in bandwidth and will provide the infrastructure to add new buildings like the Biosciences Building and Long Room Hub.

Appendix A – Information Systems Services – Organogram

IS Services Division Structure: Sept 2009

Acting Director

IT Security Officer

Executive Officer   EO (0.5)

IT Projects Co-ordinator   **Acting Deputy Director**

Support Services Manager
(Vacant)

Acting Computer Systems Manager   **Acting MIS Manager**

Analysts (7)

Network Manager   Systems Co-ordinator

Administrators (3)   Systems
Programmers
(9.5)

Application
Developers
(14)

Technicians (2)
1 Vacant

Support Desk Manager   Chief Technician
AVMS   T&P Analyst   PACR Leader

Support Specialists (13.5)   AVMS Technicians
(3.6)   Trainers (3.5)   Attendant
Supervisor   PACR Systems
Programmers
(3)

Support Technician (1)   Publications (1.5)   Security
Attendants
(5)

Appendix B – List of completed IS Services Projects 2008-2009

AMX RMS (Q4 2009)

The project involves the networking of the AV Equipment. Emails are now being sent to AVMS Staff when equipment goes offline. It is now possible to control the equipment in these rooms from the system.

Internet Access Point Upgrade (Q4 2009)

Upgrade of the College's internet access point to improve resilience and redundancy.

Upgrade of College Web Server (Q4 2009)

Project to upgrade existing College web server infrastructure and software.

Mobile Devices (Q3 2009)

More and more College staff are using mobile handheld devices such as Blackberry, Smartphone, and iPhones and want to use these devices 'on the move; to communicate effectively and enhance their work experience by accessing their email and calendaring services. We have tested three of the mainstream smartphones and provided comprehensive support for them.

Redesign of IS Services Website (Q3 2009)

The IS Services website: http://isservices.tcd.ie/ serves as the primary source of information for the College community regarding the range of services offered by the department. The previous version of the site was designed in 2004 with some modest design changes applied in 2006. The new website was launched in Summer 2009 and not only aligns the look and feel of the IS Services web pages with recent developments in College website design but has also been designed to incorporate user feedback and analysis of use of the site to improve navigation and ease of use.

Regent's House AV Equipment (Q3 2009)

This project upgraded the Audio Visual equipment in Regent's House.

Server Replacement (Q3 2009)

A server replacement for the Treasurer's Office.

Password Consolidation UNIX Systems (Q3 2009)

To integrate authenticated access to password protected pages on the College web server to the main central user access database (network or active directory username/password).

Bloomfield Hospital (Q3 2009)

To provide offsite facilities for TCD nursing students studying in Bloomfield Hospital. This room is equipped with AV equipment and computers to function as a computer lab and seminar room.

Seminar Room Upgrade - St. James' Hospital (Q3 2009)

The upgrading of AV equipment in a number of seminar rooms in the Trinity Centre for the School of Medicine.

Upgrade Lectern in Corteel Room (Q3 2009)

Some of the AV equipment for this room was located outside the Corteel Room and linked via wireless. This project was to relocate most of the equipment into the Corteel Room to ensure reliability.

National Rehabilitation Hospital for School of Medicine (Q3 2009)

Providing an offsite computer lab for TCD nursing students in National Rehabilitation Hospital.

Ricoh Printer Account Crediting System (Q3 2009)

This allows students to put credit on their printing account using three new payment methods where previously it was only possible to do via a cash machine. The system allows payment using the Web, Mobile Phone or WAP service.

Gartner Higher Education (Q3 2009)

The Gartner Core Research program is a comprehensive initiative designed to provide access to expert analysis on Information Technology topics. Much of the published material is research targeted and written specifically for Education institutions.

Storage Backup Upgrade (Q3 2009)

Extend the current centralised SAN storage area network by 30 Terabytes to meet current and planned capacity needs for the next 12 months.

Extension of EHS Facilities to TCD Subdomains (Q3 2009)

This project aims to allow TCD subdomains make use of the virus and spam filtering facilities already successfully implemented for tcd.ie.

Remedy Helpdesk System Upgrade (Q2 2009)

Upgrade of the Remedy Helpdesk system.   The new system will ensure that ISS is using a Help Desk system that is compliant with the industry best practice standards (ITIL Standards) for IT support provision.   This will include a new web interface that will not only allow a TCD user to log a call with the Help Desk but also to track the progress of this call until it is resolved.

Irish African Partnership (Q2 2009)

Intensive process undertaken in a short time to assist HPC extend College's Research Support System for use in African Colleges.

Exam-R Upgrade (Q2 2009)

Upgrade to ensure a legacy system can process examination results.

www.tcd.ie to VM (Q2 2009)

Relocation of the main College Web server service from a legacy hardware host to a virtual host within the IS Services virtual server infrastructure.

IP3 Guest Network Appliance (Q2 2009)

To upgrade the current Guest network gateways from 100Mbps to 1Gbps.

Migrate Existing Student Oracle to CS Host (Q2 2009)

The object of this change is to migrate an Oracle application from a legacy IS Services host to a host provided by Computer Science. The application is used by Computer Science students to support teaching and learning. The IS Services host will be decommissioned following migration.

PAC-3 Upgrade (Q1 2009)

Further functionality added to the Postgraduate Applications system. The functionality for this upgrade will allow research courses into PAC and also adds error handling functionality.

Q-Matic Upgrade of Helpdesk Ticketing System (Q1 2009)

The purpose of this project is to introduce a more effective queuing system at the ISS Help Desk walk-in service. The upgrade will provide real-time information, such as current queue waiting times, that will be accessible to all via the college intranet.

Office 2007 Training & Documentation (Q1 2009)

With the introduction of Microsoft Office 2007 there is a requirement to provide new training courses and associated documentation to help with the transition to the new versions of Word, PowerPoint, Excel and Access.

Westland Row Houses 15 & 16 - New Building (Q4 2008)

The offices located in Houses 15 & 16 Westland Row are currently undergoing a refurbishment. IS Services are commissioning the required data network infrastructure including a new communications facility which will provide these new office units with both wired and wireless connectivity to the main College network.

Upgrade to Network Link to Trinity Hall Dartry (Q4 2008)

IS Services are currently working with an external service provider to upgrade the existing microwave network link between the halls of residence at Trinity Hall Dartry and the main College campus to a high speed fiber optic link.

Dr. Davies Research Labs, Trinity Centre St. James' (Q4 2008)

Dr. Davies research team are located in a number of labs in the Trinity Centre St. James Hospital. ISS are working with this research team to deliver a solution which will facilitate the integration of the specialist research equipment in use in these labs with the main College network.

St. Patrick's Hospital - New Building (Q4 2008)

Project to extend all ICT services to the 3 new locations in St. Patrick's Hospital - the Medical Research Library, the Research Centre and the Research Building.

Server Tender (Q4 2008)

Project to tender for the supply of servers to Trinity College Dublin.

HP Simms Management System (Q4 2008)

Project to implement HP Systems management software, this enables system hardware, operating system and connectivity monitoring and alerting for HP servers.

Coda Financials System Upgrade (Q4 2008)

This project involves an upgrade of the College Financials system from version 9.004 to V10.101 of Coda Financials and Procurement. Underpinning the Application upgrade are server, database and reporting tool upgrades with the provision of live, test and replication environments.

Nursing Allocations (Q4 2008)

The School of Nursing and Midwifery have 1200 student nurses attending both theory and clinical placements throughout the academic year. As a professional course, attendance must be planned, monitored, recorded and reported in accordance with the standards and requirements of An Bord Altranais (ABA). Due to the increased number of students a more accurate and less labour intensive system became essential. This project addressed the clinical placements monitoring requirement.

27/28 Westland Row New Building (Q4 2008)

The offices in Houses 27/28 Westland Row have recently undergone refurbishment. IS Services have commissioned the required data network infrastructure including a new communications facility to provide these new office units with both wired and wireless connectivity to the main College network.

Extension of Virtual Server Infrastructure (Q4 2008)

The services delivered in the last year include a redundant and flexible Virtual Server Infrastructure. The requirements of College systems now includes the need for applications to provide a more flexible architecture that will facilitate the ability to quickly and efficiently deploy customized services where they are needed. A virtualised environment is a way of utilising server hardware to its fullest by making one computer do the work of many. IS Services have installed an extensive virtual server environment and this new infrastructure now supports a highly redundant service, it can be centrally managed and allows for the faster provisioning of new services. Some major services, amongst 60 new virtual servers being delivered in this environment, include the newly announced library proxy service (EZProxy), a new Library service for College including online catalogue to be delivered in 2009 and a new College web server.

Centralised Data Storage (SAN) (Q4 2008)

IS Services are continuing to expand the Storage Area Network (SAN) to allow for a growing requirement for centralised data storage in College. We currently provide and manage data centrally for a large number of College projects, both research and academic, for departmental document storage and backups and other user requirements.

Student Desktop Health Promotion (Q4 2008)

This research project feasibility study was carried out by the Health Promotion Research Centre at the National University of Ireland, Galway and was funded by student services National University of Ireland, Galway in conjunction with the Health Service Executive. The project aimed to explore the feasibility of developing internet-based health promotion materials for students available through universities computer services systems. Required exploration of participating universities policy and procedures in relation to both provisions of health information and computer services to students. Various expertise from a broad range of areas from within the participating third level institutions of University College Cork, Trinity College, Dublin and NUI, Galway was required.

Google MyZone Email Accounts for Life for Past Students (Q4 2008)

Students who had left College prior to the introduction of the Google MyZone email service for students, and who had set email forwarding from their old College email addresses, were invited to switch to using the new MyZone service in order to access email sent to their old College email address. They will, like all current students, be able to retain this MyZone email account for life.

Library Proxy Access - EZproxy (Q4 2008)

The Library Proxy (EZproxy) service provides members of College with access to over 30,000 electronic journals (many with full text articles in PDF format) in a wide range of subjects from the sciences to the humanities. Using the library proxy service these journals are accessible to registered staff and students from anywhere they have internet access (on campus, at home, or elsewhere).

Student Records and Tutor Upload (Q4 2008)

Two projects in the Office of the Vice Provost area:

Procedure for continuing student file (PCSF), this is an annual process with sets up the student records for the next academic year and archives/ removes and graduates other records. This system was totally re written to facilitate new requirements and remove dependency on Legacy architecture.

Tutor Upload. This is a new application which allows the admissions office to bulk assign tutor codes to students.

Online Induction Module Upgrade (Q4 2008)

The online induction module for new incoming students is a web-based interface introducing new students to the IT facilities provided by IS Services. This project involved creating new dynamic Flash-based movie content and rewriting the information for the new academic year.

CoreHR Upgrade (Q4 2008)

The project involved the upgrade of CoreHR Human Resource Information System moving from client/server to web architecture. It has put in place the infrastructure necessary to facilitate implementation of additional modules, including e-Recruitment, in the future. The project included replacement of existing hardware and upgrade of the database management system to a more recent version, ensuring continued support by suppliers.

APPENDIX C – IS SERVICES PROJECT LIST FOR 2010

Wireless Network Architecture Upgrade (Q1 2010)

To transition College's large WiFi network of over 600 wireless access points from legacy autonomous to a modern controller based lightweight architecture.

Upgrade of the College Antivirus Management System (ePOL) (Q1 2010)

The centralised antivirus management application (Epolic Orchestrator) is being upgraded to the latest version as is Windows desktop and server antivirus software. This will provide much improved detection, management and reporting of virus and malware threats in College.

eRecruitment (Q1 2010)

This project involves implementation of the eRecruitment module of the CoreHR application. The eRecruitment module facilities online job applications and offers potential for reducing the high levels of manual activity involved in the recruitment of staff. It provides a central repository of recruitment data. This project is being undertaken with the Staff Office.

Disk File Encryption (Q1 2010)

Trinity College is committed to protecting all College data held in electronic format and ensuring that confidentiality is not compromised due to inappropriate access or loss/theft of devices. The objective of this project is to select and implement appropriate products which can be used to encrypt data on users' laptops and other mobile used devices.

Titanium Feasibility Study (Q1 2010)

Titanium Schedule is Counselling Centre Management software, designed in the United States for University and College Counselling Centres.

Government VPN (Q1 2010)

College procurement requires access to the Government VPN. HEAnet link between TCD and Government Networks has been provisioned. Government Networks will issue TCD with IP addressing scheme for the Firewall Interface.

KVM Upgrade (Q1 2010)

With the continued growth in IS Services managed servers located in data rooms, there is a requirement to replace our existing KVM system for Video/Keyboard/Monitor access. IS Services will tender for a new solution which will provide both local KVM access as well as remote KVM-over-IP access to over 200 servers.

Nursing Time & Attendance System (Q1 2010)

The School of Nursing and Midwifery have 1200 student nurses attending both theory and clinical placements throughout the academic year. As a professional course, attendance must be planned, monitored, recorded and reported in accordance with the standards and requirements of An Bord Altranais (ABA). Due to the increased number of students a more accurate and less labour intensive system became essential. This project addressed the requirement to monitor attendance at theory modules.

ABC - Accommodation, Banqueting & Catering (Q1 2010)

The ABC project, set up to source a new system to support Accommodation management, the management of banquets and other catering events and the management of conferences held in TCD, completed its evaluation of products in November 2007. The Kx system from Kinetic Solutions has been chosen to fulfil this need, and contracts were signed in December 2007. Kx will be released in 4 phases, with banqueting and conference management due to go live around Easter 2008, followed by summer accommodation at the end of summer 2008, student accommodation in February 2009 and student on line payments in September 2009.

CampusM (Q1 2010)

CampusM is a mobile application that will enable students to receive University information directly to their mobile phone. One quick click will give students access to comprehensive information about their university, up and coming events, campus maps directions, library records, contacts, latest news and important alerts.

Internal iTunesU (Q1 2010)

To upgrade the operating system to Snow Leopard, this provides extended Podcasting features to the end user. This upgrade will create an internal iTunesU site and allow access for staff and students to the internal podcast repository from outside College.

Exchange 2007 and Calendar Migration (Q1 2010)

This system will enable users to use the facilities of Microsoft Exchange 2007, including private shared calendars, email, mobile services and web access. The technical configuration has been completed and planning for migration has been completed. Rollout will start in January 2010.

Casigma Feasibility Study (Q1 2010)

TARGETconnect is a software package that has been specifically designed as a total solution for careers service. An analysis of the proposed solution has been completed and the client advised that a project proposal document should be prepared.

TCD/UCD Innovation Alliance (Q1 2010)

Old banking hall in Foster Place will be refurbished to provide a workspace for TCD/UCD innovation alliance.

Tara Upgrade (Q1 2010)

The main objective of the project is to upgrade the institutional repository (TARA) to use the latest release version of dspace (1.6). The project will be delivered in two phases.

HEA Federated Access (Q1 2010)

Federated Access is an enabling technology which will allow Trinity students and staff to avail of services provided by other companies and institutions using their TCD identity. In the broader context, HEAnet are facilitating the establishment of a Federation between all third level institutes in Ireland called EduGate (www.edugate.ie). IS Services are participating in the EduGate pilot project, and intend to join the EduGate federation when it is established.

eReports Upgrade (Q2 2010)

A major upgrade to existing eReports system.

Lambda Service and 10Gb Upgrade (Q2 2010)

Project to upgrade College's Internet connection to 10Gb and to provide 10Gb lambda circuits to research community.

Enabling Project Management(Q2 2010)

The Project is to define and implement a project management framework for use throughout ISS. Incorporated into this project is the implementation of MS Project Enterprise Server within ISS which would support the framework. Also included in this project is the upgrade of SharePoint 2003 to SharePoint 2007 which is required to support MS Project Enterprise Server implementation.

Irish School of Ecumenics (ISE) Belfast (Q4 2010)

This project will link the ISE campuses in Dublin and Belfast and integrate them on the College Network.

Library Hub - New Building (Q4 2010)

The Library Hub is a new College building development managed by the Director of Buildings department. IS Services are in the process of drawing up a design specification for the provision of the data network infrastructure for this building which will include a new communications facility, horizontal cabling to provide both wired and wireless connectivity and high speed fibre optic cabling to link this new building to the main College network.

Wired Network Upgrade to 1000Mbs (Q4 2011)

There are over 150 data communications facilities distributed across all campus and remote sites. These facilities provide the horizontal cabling and active switching equipment required to connect local offices and departments to the main College network. The existing 100Mbs switching equipment in these facilities is being replaced on an ongoing basis with 1000Mbs technology. End users in upgraded areas will have 'gigabit to the desktop' connectivity to the College network.

BioSciences Institute - New Building (Q4 2010)

Construction of the new Biosciences Institute is underway at the site of the old An Post car park between Cumberland and Sandwith St. IS Services have submitted a specification for the data and network infrastructure requirements for this building to include a new dedicated communications facility, horizontal cabling to facilitate both wired and wireless connectivity and high speed fibre optic cabling to connect the building to the main College network.