Coláiste na Tríonóide, Baile Átha Cliath
Trinity College Dublin

Ollscoil Átha Cliath | The University of Dublin

Information Technology Services

Annual Report 2015-2016

Service Plan 2016-2017

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Information Technology is a key enabler of the delivery of the University's strategic business goals. In 2016 IT Services continued its commitment to support these goals in order to deliver services that meet and exceed the requirements of the University community.

In support of the University goals a Digital Transformation Strategy (2017-20) was developed. The strategy was formulated around assumptions, trends, and worldwide developments in teaching, learning and research; and takes account of new business models in the delivery of academic programmes particularly in the area of open access. As part of the implementation of the strategy, the impact of digital technologies on the conduct and process of research in universities will need to be acknowledged and addressed and in particular open access to scientific publications.

The strategy takes cognizance to the fact that digital skills are becoming increasingly important in a wide variety of professions, including the academic and we need to respond to this as part of this strategy and ensure our staff and students have the required digital skill-sets and competencies.

We continued to prioritise our mission of understanding the IT needs of the Trinity community, undertaking a number of projects in 2015-16 to review our service offering and how we interact with you. One of the highlights was an engagement with students to deliver an innovative mobile solution that allows students access key information systems from any mobile device. This App was launched by the Provost in Fresher's week 2016. This and other projects are all covered in detail in the annual report.

The staff in IT Services are to be commended for their commitment and dedication over the past year for continuing to deliver innovative solutions on time and within budget during these difficult fiscal times.

I hope you enjoy reading the report and if you have feedback I can be contacted at jmurphy@tcd.ie

John Murphy

Director, IT Services

December 2016

2   HIGHLIGHTS OF THE YEAR

PROJECT HIGHLIGHTS DURING 2015-2016

ENHANCING MOBILITY IN THE UNIVERSITY

The mobility project was completed, delivering a significantly enhanced and expanded Wi-Fi service for Trinity. Trinity's Wi-Fi services now operate on the latest technology and the network is the most advanced and largest gigabit Wi-Fi type in Ireland.

OFFICE 365 FOR STAFF

IT Services successfully migrated 7,000 staff mailboxes from the previous in-house email system to the popular online email and collaboration platform, Microsoft Office 365. As well as delivering significantly increased services and functionality to staff, this project also removed a number of technology and business continuity risks for the university.

MYDAY STUDENT PORTAL

IT Services successfully released MyDay, a new student portal, in Q3 2016, which gives students a single application to interact with their most important technology and services.

VIRTUAL LEARNING ENVIRONMENT

The virtual learning environment project (VLE) successfully procured and implemented a VLE for Trinity for the period 2016-21. This removes compliance and contract risks for the university.

PROCESS AUTOMATION AND HR FORMS HUB

Working with HR, IT Services have delivered the staff nomination form, which went live in Q1 2016, as part of the HR forms project. This project improves the user experience and increases efficiencies by providing web enabled forms with automated approval workflow.

CAMPUS NETWORK IMPROVEMENTS

The campus network architecture project has been successful in delivering a solution whereby approximately 80% of university buildings have now been migrated to a new high-performance architecture with the remaining 20% due for completion in Q1 2017.

ASSISTANCE TO CAPITAL PROJECTS

Extensive consultancy was provided by IT Services to support the university's capital projects including engagement with Estates and Facilities on new building works. Projects completed include Stack B and the Institute of Pharmaceutical Health, Tallaght. Current projects include the new Business School, Oisín House, Trailhead and the Global Brain Health Institute.

OPEN REPOSITORIES CONFERENCE 2016

Trinity successfully hosted the 11th international Annual Conference on Open Repositories in June 2016, with over 500 attendees from across the globe.

TEACHING AND LEARNING IT

VIRTUAL LEARNING ENVIRONMENT

This joint project between IT Services and CAPSL achieved the procurement and implementation of a cloud based Virtual Learning Environment (VLE) for Trinity, with additional functionality, integrations and process improvements that will scale to meet the university's strategic and operational needs from 2016 to 2021.

This project will continue in 2016-2017 to implement further technology, features, process improvements and integrations that will enable the university to achieve the delivery of operational targets and strategic initiatives such as the Trinity education and online education projects.

AUDIO VISUAL EQUIPMENT UPGRADES

IT Services continued its annual programme of audio visual equipment replacement and upgrades to support teaching and learning in Senior Lecturer Area pool theatres and seminar rooms. During the year, equipment including full HD laser projectors, video conferencing terminals, large display screens and audio playback systems were installed in 12 locations.

LECTURE CAPTURE SOFTWARE

A project was initiated to replace the current Mac-based podcasting service which is now end of life. The project identified a replacement product, Panopto, which is a widely-used and well-developed lecture capture system for both Mac and PC. The Panopto pilot went live in Q4 2015 and is on trial in the upgraded teaching spaces that were previously equipped for podcasting.

ENHANCING THE USER EXPERIENCE

STAFF EMAIL UPGRADE

Following on the successful delivery of Microsoft Office Pro-Plus 365 for students last year, IT Services successfully migrated 7,000 staff mailboxes from the previous in-house email system to Office 365, removing our reliance on old technology and further mitigating technology risk in Trinity.

Office 365 now provides all staff with a 50 Gb mailbox and access to the latest version of Microsoft Office (Word, Excel, PowerPoint, OneNote) for PC, Mac and mobile devices. Users also benefit from the availability of 1 Tb of personal file storage on OneDrive.

In the coming year IT Services plans to further develop and release new services on the Office 365 platform that will facilitate secure data storage and processing for all staff.

MYDAY STUDENT APP AND PORTAL

IT Services successfully released MyDay, a new student app and portal, in Q3 2016, which provides students with a single application specifically designed to cater for the way they interact with technology and services. It provides students with access to university applications such as module timetable, Blackboard Learn, library, Myzone, tasks, account balances, social media feeds and Student Counselling

Services. The MyDay app will make a significant contribution to enhancing the student experience in Trinity with further integration and development of the app throughout the year.

BUILDING ON OUR INVESTMENT IN MOBILITY

To realise the full benefits of the recent significant investment in the Trinity Wi-Fi network infrastructure, a corresponding enhancement and improvement in staff access to the Wi-Fi network and internet is being implemented. The staff "bring your own device" (BYOD) project is delivering an always-available, easy-to-use, self-service method for connecting staff laptops and mobile Wi-Fi devices. This enhancement will expand the variety of devices that can be connected to the internal cloud network and to the Internet and provide a 24x7x365 automated easy-connect self-service.

MANAGEMENT SERVICES

SITS UPGRADE

With the rollout of SITS version 9.2.0 in Q1 2017 the university will implement the latest functionality available from Tribal SITS and will ensure the continuing support of this strategic application. The updated version provides an attractive interface to the SITS Vision portal when it is accessed from devices such as tablets and smartphones. Modules will be implemented on a prioritised basis to assist students' day-to-day business to be carried out more easily on the portal.

PROCESS AUTOMATION AND HR FORMS HUB

IT Services are working in partnership with Human Resources to build a hub of web forms using SharePoint technology to support their process and service improvement programme. The project identified a number of forms for development including the staff requisition form; nomination form; leaver form; probation form and promotions form, with associated automated approval workflow processes. The staff requisition form went live in Q2 2016 and the staff probation form and the staff promotions form will go live Q1 2017.

IMPROVING CAREERS SERVICES

IT Services are working with the Careers Advisory Service to implement the TARGETConnect system, which will replace existing fragmented systems and spreadsheets. It will provide a unified online system for careers services management of students, graduates, employers, and staff. The project will allow the Careers Advisory Service to manage online, the provision of employers' vacancies, customer relationship management, event management, careers news items, and advisory appointments. This project will be delivered by Q2 2017.

BUSINESS SCHOOL ACCREDITATION SYSTEM

Achieving international business school accreditations is fundamental to the success of the Trinity Business School's strategy. Attaining these accreditations involves managing large amounts of data that will also be used on an ongoing basis for general reporting purposes in the school. An IT system is required to manage the data associated with this project. IT Services is working with the business school accreditation and rankings team to procure, install and integrate a new system with existing university IT systems and data. This project will include the delivery of an appropriate accreditation data management system through which the school may apply for, and maintain accreditations to help it attract sufficient numbers of students to the school to fund its development plan.

ACCOMMODATION SYSTEM ENHANCEMENTS

This project involves the implementation of new modules for the Accommodation system. The Kx inspections module will provide a more consistent method for recording, evaluating and charging for damage to residential rooms. The Kx request module will enable students to request services such as overnight guests, kitchen packs, room moves and early departures using the Kx student web site. This project will end in Q4 2016.

SCHOOL OF NURSING TIME AND ATTENDANCE SYSTEM UPGRADE

The nursing attendance project will enable the School of Nursing and Midwifery to meet the requirements of the Nursing and Midwifery Board of Ireland for recording student nursing attendance. The early identification of students falling below required attendance levels ensures that timely assistance can be provided to students and will assist the maintenance of course retention rates. This project will continue in 2016-2017.

STUDENT COMPLAINTS SYSTEM

The 2011 review of the Office of the Vice-Provost identified the need for a university-wide student complaints procedure. The objective of this project is to deliver an automated online workflow system to support the administration of student complaints procedure and allow the OVP to manage the student complaint process more effectively. The new system will provide a standard experience for students lodging a complaint, will facilitate case tracking and storage of standard case data, enable standard and ad-hoc reporting, and facilitate consistent decision making.

SPORTS CENTRE UPGRADE

The Sports Centre upgrade project involves implementing an online booking system. This will help to improve sales and the customer experience by allowing them to book and pay for classes online and to get notifications of timetable changes, vacant booking slots for courts, halls, pitches and new classes or special offers. Sport centre staff will have more time to focus on membership sales and general enquiries and drive retention and renewals. Further functionality of the new system will allow for better reporting on sales and customer analysis for future decision making to improve and enhance the overall service.

RESEARCH IT

LIBRARY MANUSCRIPTS

Library Manuscripts and Circulation required specialist functionality not supported by standard, MARC-based, library management systems (including the Sierra LMS in use in Trinity Library). Axiell's CALM LMS is a specialist product that provides the required functionality, and includes a public catalogue interface. The underlying infrastructure and software was upgraded in Q3 2016. This ensures that the Library Manuscripts Department can continue to support and attract Trinity research through the improved visibility of their unique research asset.

COLLECTIONS MANAGEMENT SYSTEM

IT Services is working with the curator of the university art collections to provide a collection management system including an electronic catalogue of artworks and collections. The implementation of this system, which will go live in Q4 2016, will make the Trinity collections databases available online for research, teaching and outreach purposes.

NATIONAL COLLECTION OF CHILDREN'S BOOKS (NCCB)

This project is providing a centralised catalogue of children's books collections in five Irish libraries: Trinity College Library; Church of Ireland College of Education Library; Dublin City Library and Archive; the National Library of Ireland; and Cregan Library, St Patrick's College (DCU). Users can search for items across the five libraries and the main catalogue includes all titles in over 90 languages. It is hoped that the project will contribute to the continuing development of the strong Irish profile in children's literature research by providing a centralised online platform that will attract both national and international scholars and encourage new research in the area.

IMAGE ARCHIVING AND COMMUNICATION SYSTEM

This system, for the Trinity Institute of Neuroscience, manages the MRI scans generated in the Lloyd Institute and enables staff and students to reuse previous scans in new research. The system also enables access to the system by radiologists in Tallaght hospital for diagnostic purposes.

OPEN REPOSITORIES CONFERENCE

In June 2016, Trinity hosted the 11th international Annual Conference on Open Repositories. With over 500 attendees from across the globe, this conference leads the development of practice, policy and technology in preservation and access to digital material in universities, museums, archives and media. The local organisation was entirely undertaken by Research IT, and several team members presented at the conference on their work in these areas.

DISASTER RECOVERY AND IMPLEMENTATION PROJECT

The disaster recovery project has enabled IT Services to successfully provide the university with a highly resilient IT infrastructure with contingency to recover from a disaster event in a timely manner and without loss of data.

To date the project has delivered:

- An offsite disaster recovery site where critical data is backed up and where university systems can be operated from in the event of a disaster event that affects the campus.
- The relocation and consolidation of essential communications equipment to provide increased resilience and superior facilities such as fire suppression and a lower flood risk.
- A communications upgrade for the university campus involving the installation of a new fibre ring. This provides the university with network resilience in the event of infrastructure failures or of damage to cables during on-campus construction projects.

The final deliverable for the project is to provide a backup power solution for the university secondary data centre and is due for completion in Q2 2017.

ENHANCING MOBILE CONNECTIONS

Designing, deploying and maintaining enterprise Wi-Fi networks is to some degree a continuous process. Small gaps in actual coverage relative to designed coverage can be expected and the Wi-Fi environment can change over time due to physical space changes.

This project will address 22 residual coverage gaps identified by surveys and user feedback. A service extension in Santry playing fields to provide coverage adjacent to the existing buildings will also be completed. It expected this project will complete by Q4 2016.

IMPROVING CORE NETWORK CONNECTIONS

In line with our strategy to continually improve the main university networks, this project will deliver new high-performance equipment and will make the network more robust and resilient. The increase in the number of distributed high-bandwidth 10 Gb/s links throughout campus will be capable of supporting the performance demands of future and next generation data, voice and mobility services. Approximately 80% of university buildings have now been migrated to this new architecture and the installation of a resilient pair of 1Gb/s links to the halls of residence in Dartry is being finalised, with the first of these links having come into service in April 2016. This project will complete in Q2 2017.

ENHANCING THE CENTRAL DOCUMENT STORAGE AND WORKFLOW SERVICE

The university SharePoint service, which provides central document storage and automated workflow capabilities, is being upgraded to latest versions. The project will provide higher availability and improved functionality. It will be completed in Q1 2017.

SUPPORTING THE ESTATES BUILDING PROGRAMME

IT Services is working closely with the university's Estates and Facilities Department building programme to support the delivery of several key projects, including:

- Trailhead – Regent gate and Nassau Street entrance
- Oisín House
- New Business School
- Global Brain Health Institute.

SECURING OUR USERS AND NETWORKS

The central anti-virus service that monitors virus and malware activity on the staff networks for some 5,000 computer clients was upgraded during the year, ending in Q4 2015. A phased migration of all computer clients took place over a six-month period to provide improved service for staff to help maintain a more secure, virus- and malware-free environment on the staff networks.

Core network uptime	100%
Internet connection uptime	100%
Active directory availability	100%
Total TCDconnect users	13,900
Total TCDconnect devices	25,600
Virtual servers	420
Total storage	515 Tb
Total databases	190
Total emails delivered to students	108,000,000
Total emails delivered to staff	37,000,000
SPAM blocked	23,000,000
Malware/viruses blocked	236,000
Total MyZone accounts	95,800
Total visitors to www.tcd.ie	5,040,000
Total pages accessed on www.tcd.ie	113,570,000
Cumulative devices seen on all networks	210,000
Staff wired devices	7,700
Staff wireless devices	2,390
Staff BYOD wireless devices	1,700
Total student accounts	19,100
Total students on TCDconnect	13,900
Total student wireless devices	24,600
Total guest wireless accounts issued	20,300
Total enquiries to service desk	42,200
Enquiries resolved at service desk	81%
Enquiries resolved at service desk on first contact	63%
Total IT training bookings	1,230
Training course satisfaction rating	99%
Service desk average waiting time – staff	2.3 minutes
Service desk average waiting time - students	3 minutes
Service desk phone waiting time	3.5 minutes

The following enhancements were made to SITS during 2015-16:

- Student automations, enabling the automatic update of multiples data tables following a student data change
- Student orientation timetable, enabling a new entrant student to access an orientation-specific timetable during fresher's week
- Cohort billing, enabling the billing of different cohorts of students on the same course
- TSM examination results calculations, enabling final year TSM calculation to be made
- Enhanced hospital placements for nursing students
- Plagiarism recording and reporting
- Bank payments and refunds
- Seanad election functionality
- Disability service registration

The following enterprise systems were upgraded:

- Collection Management for Art and Zoology
- Time and Attendance for Library
- FIM / Office 365 (email lists generation, CoreHR integration)
- Library Management System
- Counselling system upgrade

Additional functionality was provided for the HR Forms Hub:

- Staffing request process
- Probation process
- Performance enhancement process
- Senior academic promotion process

OPERATIONAL UPGRADES, MAINTENANCE AND IMPROVEMENTS

- The central Firewall infrastructure was upgraded to provide high-speed 10 Gb/s connections to the Internet and to future-proof the infrastructure for further growth.
- A major upgrade of the central computing facilities in the three data centres (Green Data Centre in AAP, Lloyd Institute and off-site at ServeCentric) took place over a two week period in August 2016 with no interruption of service.
- The virtual private network (VPN) providing remote access to the university network was upgraded in September 2016.
- New high-speed dual 1 Gb/s network links for the halls of residence in Dartry were commissioned, replacing previous 300 Mb and 100 Mb circuits.
- A 1 Gb/s link was provided to the School of Medicine Institute of Pharmaceutical Health Building in Tallaght
- A pair of 1 Gb/s links were provided to Stack B in Docklands for both the main university and the School of Computer Science and Statistics networks
- Improvements were made to the network infrastructure to provide secure connections for the research community to support the secure transmission of data between researchers and peer organisations.
- A significant milestone was reached with the retirement of the Admin1 and Admin5 physical servers, which served as the cornerstone of user account management for many years before this functionality was migrated to the FIM identity management system. Legacy server web22 was also decommissioned and the decommissioning of VMS1, which was used to manage email accounts and mailing lists prior to Office 365 email, is almost complete. The retirement of these machines, which served the university well over many years, mitigated significant technology risks to Trinity.
- In keeping with the university's cloud first policy, a cloud storage environment was introduced in April 2016. This is a highly secure storage service and to date approximately 30 Tb of storage has been provisioned from a 200 Tb allocation.
- Several database upgrades took place in 2015-2016, including SITS, Core HR, SITS Unity Reporting, Raiser's Edge Alumni, myday.tcd.ie, Library and Counselling time and attendance systems and Student Counselling system.

REPLACEMENT OF COMPUTERS IN ACADEMIC AREAS

193 PCs and 37 Macs were replaced in IT Services computer rooms and upgrades were completed to audio visual facilities in Senior Lecturer Area pool rooms.

IMPROVING SOFTWARE DELIVERY FOR STUDENTS

Application Jukebox, a software service that simplifies and makes traditional software delivery more efficient and cost-effective, was implemented for Windows applications on Windows desktops PCs to all computer rooms, theatres and seminar rooms across the university.

VIDEO PRODUCTIONS

IT Services produced several videos during the year for various academic areas of the university. Two of particular note are a video for The School of Social Work and Social Policy entitled 'Supporting People with Intellectual Disabilities to become Co-Lecturers in The School of Social Work and Social Policy' and a video of a play entitled 'The Fir Tree and the Ivy' for the Department of Philosophy.

RESEARCH IT

LIBRARY

Research IT supports many activities in the Library and this year we assisted with the 'Utterly Changed' and 'Fit as Fiddles' projects commemorating the events of 1916 at home and abroad. We also continue to support Trinity's digital collections infrastructure allowing global access to the unique collection in the Trinity library as they are digitized.

RESEARCH DATA MANAGEMENT

Research IT have been further developing policies and processes to support research data management (RDM) across university. While there is no specific RDM mandate from any Irish funding agency yet, meetings with SFI have indicated that it is just a matter of time before they

follow the Horizon 2020 and Welcome Trust lead in mandating the open sharing of research data. Building on experiences in managing digital repositories in DRI and for the Library's digital collections, Research IT is well placed to deliver this service university-wide in the future.

IMPROVING THE RESEARCH SUPPORT SYSTEM

Ongoing development of the Research Support System (RSS) continues in conjunction with the Library. This year's upgrade to Oracle Apex 5 brought improved navigation, charts and reports, and mobile access to the RSS's related web applications. We also added support for ORCID which makes it easier to add research works data to the RSS. This year we have also integrated RSS into the SFI reporting tools and the system is currently being tested by the CONNECT research centre.
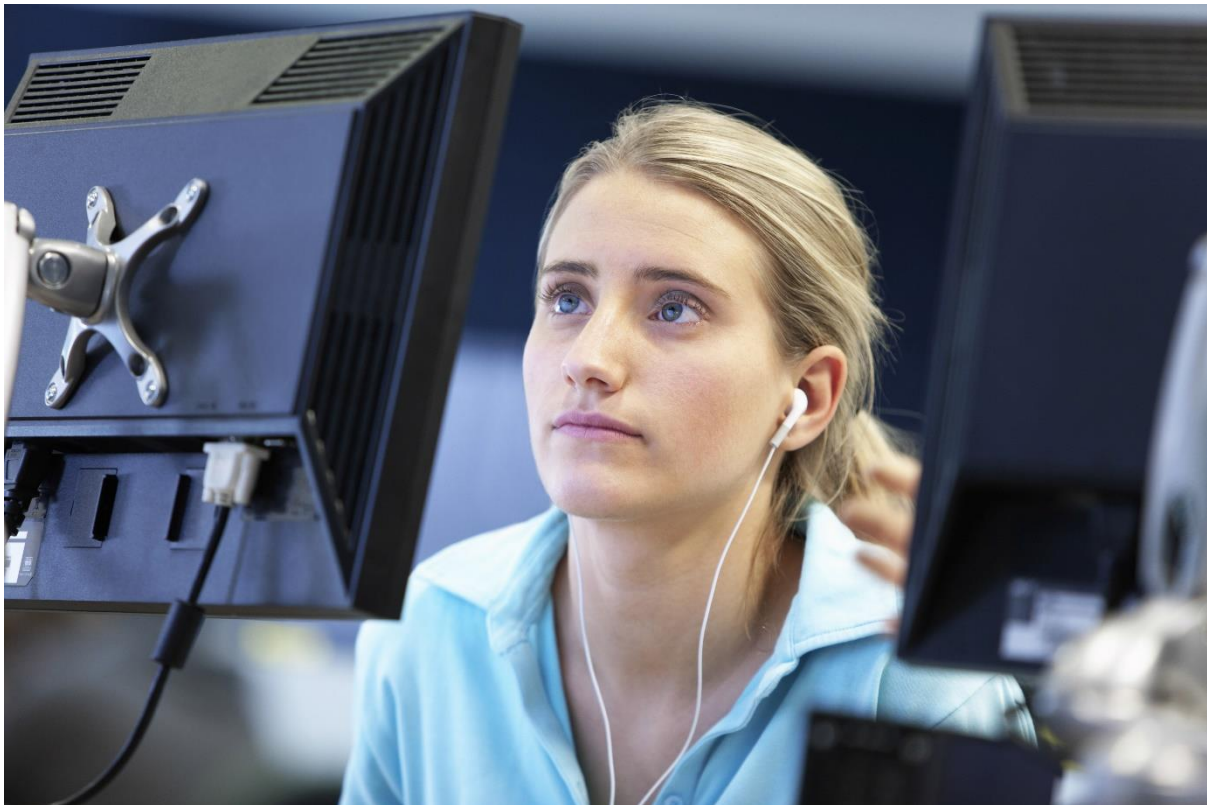
NEW IT SERVICE DESK FOR IMPROVED USER EXPERIENCE

IT Services were pleased to announce the adoption of Enterprise Service Desk (ESD), which is already implemented in the Academic Registry, as the new application for recording and managing enquiries to the IT Service Desk, in January 2016. This was a replacement for the incident management system, Remedy, and brought in a modern web based system that enables IT Services to more effectively manage support requests, improve user experience, integrate better with other groups and reduce complexity.

SUPPORTING STAFF TO MOVE TO OFFICE365

IT Service Desk provided support for the new staff email and calendar service in Office 365. Between February and June 2016 IT Services moved all staff email and calendars from Microsoft Exchange Service to Microsoft Office 365.

IT SERVICES SATISFACTION SURVEY 2016

The fourth annual satisfaction survey was carried out in January 2016. While the results were largely positive, some responses highlight the challenges facing the department and the university in the provision of services to staff and students.

Staff key points

- 85% of staff expressed satisfaction with IT Services in the year, which was a decline of 5% on the previous year
- 95% of staff found that services provided by IT services had either remained the same or improved during the year
- 98% of staff agree that the systems and services offered by IT Services are important or very important to their work
- There is a very high level of usage of computing devices among staff, with 90% using them for over 16 hours a week, 37% over 28 hours a week and 34% over 37 hours a week

Student key points

- 72% of students expressed satisfaction with IT services in the year, a 9% decline on the previous year
- 79% of students found that services provided by IT services had either remained the same or improved during the year
- 97% of students agree that the systems and services offered by IT Services are important or very important to their studies

COMMUNICATING WITH THE UNIVERSITY COMMUNITY

During the year, IT Services published over 60 news items in a newly designed and much improved News section on its website. We also continued to keep the community informed through Twitter posts, email notices, surveys, brochures and online and classroom-based training. A new service catalogue was published to define clearly the services provided to our users. To keep staff updated on the cyber threats we face, and particularly the dangers of phishing, IT services updated

information on our website advising all users how to deal with such attacks, which are a serious threat to the university information systems.

CONTINUING STAFF TRAINING AND DEVELOPMENT

IT Services also continued its programme of user training and delivered online video and classroom-based training for a wide variety of topics, including specific training for SITS to support the Academic Registry enhancement programme. Our training courses achieved a 99% satisfaction rating from participants.

The top three course during the year were:

- Planning thesis production
- Data processing using Excel
- Maintaining college websites

6   FINANCIAL PERFORMANCE 2015-2016

PAY AND NON-PAY EXPENDITURE 2007-2008 TO 2015-2016

The table below shows pay and non-pay expenditure from 2007-2008 to 2015-2016.

| Year	Non Pay	Pay	Total Expenditure	Increase/ Reduction	%
2007-08	2,681,926	5,842,000	8,523,926		
2008-09	2,356,686	5,747,000	8,103,686	-420,240	-5.00%
2009-10	2,547,445	5,136,000	7,683,445	-420,241	-5.00%
2010-11	2,369,354	4,852,492	7,221,846	-461,599	-6.00%
2011-12	2,067,791	4,443,423	6,511,214	-710,632	-10.00%
2012-13	1,631,194	4,663,425	6,294,619	-216,595	-3.00%
2013-14	1,950,691	4,737,891	6,688,582	393,963	6.00%
2014-15	1,999,972	6,127,063	8,127,035	1,438,453	22.00%
2015-16	2,584,775	5,938,273	8,523,048	396,013	5.00%

PAY

While pay costs had risen in the previous two years, due to the incorporation of staff from the Student User Support Unit and from Estates and Facilities into IT Services, they have fallen back again during 2015-2016, accounted for by non-replacement of some staff on career breaks and the ending of some contracts.

NON-PAY

Expenditure of almost €2.6 million on non-pay items is primarily spend on recurring, non-discretionary items that support the university at an enterprise level. These include software and database licensing for enterprise applications; software licensing for academics and students; the Internet connection for the university; telecommunications connections to remote sites; licensing of the VLE; maintenance of our core network and computing infrastructure, and support and upgrade of audio visual facilities in lecture rooms and theatres.

The increase in non-pay costs is attributable to several factors, including a wide-scale refresh of the student labs, refurbishing of IT Services offices, the new service desk call management system and an investment in new personal computers in the department.

Pay and Non-Pay Expenditure
2007-08 to 2015-16
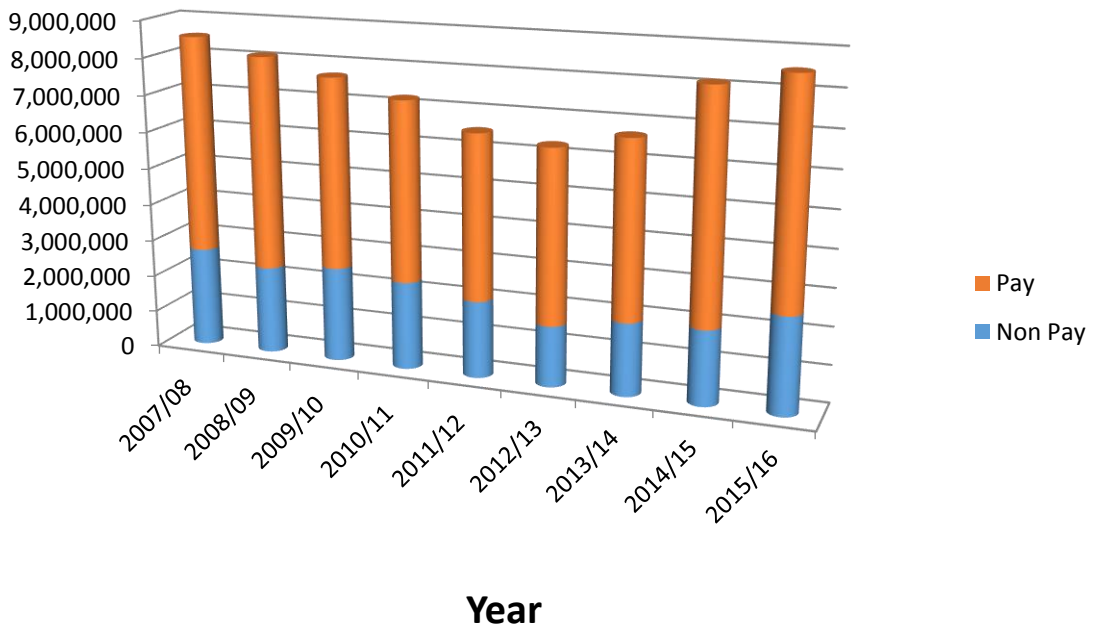
WEB TRANSFORMATION

This project will examine and optimise the university's web services to ensure that the Trinity website is enhanced as a key digital marketing tool for attracting and converting prospective students and other stakeholders to the university. Included in this project will be the delivery of a web content management and customer relationship management systems.

ENHANCING COLLABORATION IN TRINITY

This project will procure and implement a cloud based integrated unified communications and collaboration solution for Trinity. The project will build directly on the staff email upgrade project and provide presence, replace the aging telephone system, ensure that staff have access to collaborative document management sites, and provide the ability to communicate and collaborate using both real-time and non-real time services.

STAFF AND STUDENT UPSKILLING AND TRAINING PROGRAMME

A project will be initiated during 2016-2017 to provide an online learning portal for staff and students in the university. The objective of the training programme is to improve staff skills in using existing technology available in the university. It will provide a uniform standard of training to staff and will also measure the outcome of training. It will also provide the basis for the development of an ongoing training programme to be managed and delivered through Human Resources.

In later phases, the project will make available, in consultation with the academic community and students, online learning materials for pedagogical purposes and for self-paced personal development.

BUSINESS INTELLIGENCE AND DECISION SUPPORT

Business intelligence (BI) is a set of technologies, tools and processes that assist organisations and decision makers in using data to understand and analyse organisational performance. Under the umbrella of the university's digital transformation strategy we continue to propose a business intelligence initiative to meet the BI and reporting needs of the university. We expect to continue work towards the goals of this project during 2016-2017.

VIRTUAL LEARNING ENVIRONMENT

We will continue the development of the university VLE to support the university's strategy and, in particular, the Trinity Education Project and Online Education

FURTHER ENHANCEMENTS TO STAFF EMAIL

Continuing enhancements will be implemented for the staff email service to facilitate secure data storage and processing. Other improvements will be implemented as they become available and have been tested.

DISASTER RECOVERY

The final stage of the disaster recovery project will be delivered through the procurement and commissioning of a backup power solution for the secondary data centre in the Lloyd Institute.

USER AUTHENTICATION SERVICE UPGRADE

The Active Directory service manages user and computer accounts, provides login and authentication services, and manages policies and access to network resources for all central IT systems. The supporting technology for this key service will be upgraded to the latest versions to ensure continued vendor support and to introduce performance improvements and new features. This upgrade will take place in Q1 2017.

MANAGING ACCESS TO NETWORKS AND SYSTEMS

IT Services will continue to upgrade the enterprise identity management service - Forefront Identity Manager (FIM) - in 2017. This service is used to create and manage user accounts for the university's 25,000 users, which are stored in the Active Directory database. Microsoft Identity Manager (MIM) is the latest update to FIM and it is planned to upgrade to this environment during Q2 and Q3 2017. The upgrade will introduce additional enhancements and self-service features for user password and account management.

CONTINUED PROGRAMME OF WINDOWS SERVER UPGRADES

The university data centres host approximately 400 Windows servers that support the majority of university business and academic applications and deliver the diverse range of IT Services.

A continued program of upgrades is underway to ensure that older Windows operating systems are retired or replaced with Windows Server 2012 R2 equivalents at a minimum. Windows Server 2016 has also been recently released and will undergo evaluation with a view to becoming the default Windows Server operating system for deployment within the next 12 months.

INFRASTRUCTURE AS A SERVICE UPGRADE PROGRAMME

Infrastructure as a Service (IaaS) refers to the infrastructure in the university data centres upon which all central university business systems, academic applications, and their underlying server operating systems are hosted. It comprises virtualisation technologies; local storage; cloud storage; backup and disaster recovery components; networking equipment; hosting equipment and server management tools. The current IaaS components went in to service in 2012 and some of those components are due for replacement in 2017, in particular the backup and SAN storage infrastructure.

TIMETABLING SYSTEM UPGRADE

A project to upgrade the current university CMIS timetabling system will take place in 2017. This will ensure a supported environment for Windows 10 PCs and the underlying Oracle database.

MANAGING LICENSED SOFTWARE

A new project will be established in 2017 to implement a software asset management system to assist in ensuring that Trinity complies with software licensing requirements. The implementation of the system will enable improved management and reporting of software which is licensed on a university-wide basis; this can reduce the overall cost to Trinity and deliver better terms and conditions through economies of scale rather than through separate purchases by various departments.

IMPROVING TECHNICAL SERVICES AND CAPABILITIES

During 2016-2017 a number of developments will be undertaken to improve technical capabilities and the delivery of services. These will include:

- An upgrade to the university's open data service to provide new functionality and improve software testing, build and release
- The development and publication of standards for software code written in-house
- Improved controls and reporting on applications and interfaces to improve quality and reporting
- IT Services project management tool upgrade

OTHER IT PROJECTS

Projects currently in progress will be further advanced or completed during 2016-2017. These include:

- Replacement of the Internet firewall
- Completion of School of Nursing and Midwifery time and attendance system
- Completion of TARGETconnect for Careers Advisory Service
- Completion of accommodation system enhancements project for CRU
- Completion of the disaster recovery project
- Completion of the Wi-Fi rework project
- Completion of the network re-architecture project
- Business School accreditation system
- Completion of the SharePoint upgrade.
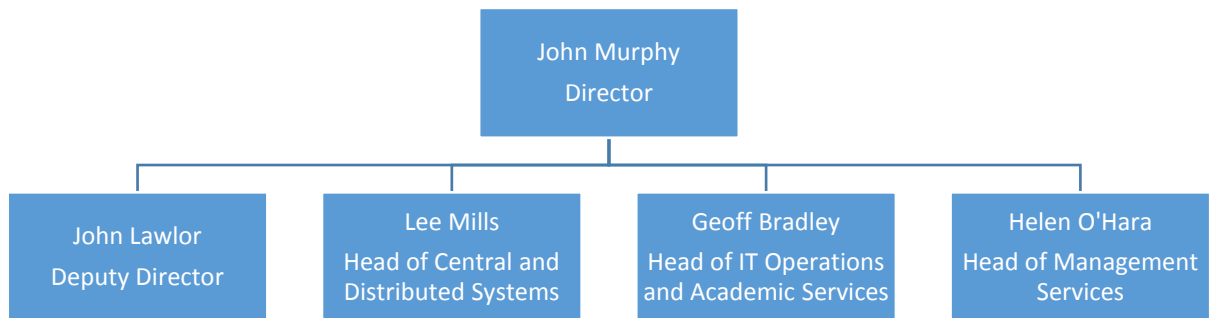
Functional Responsibilties

JOHN LAWLOR, DEPUTY DIRECTOR

Administration

Enterprise Architecture

IT Project Management

IT Security

Vendor Relationships.

GEOFF BRADLEY, HEAD OF IT OPERATIONS AND ACADEMIC SERVICES

Teaching and Learning IT

Research IT

Infrastructure and Operations

ICT Facilities.

HELEN O'HARA, HEAD OF MANAGEMENT SERVICES

Application Design and Development

Programming and Integration

Business Application Support

Business Intelligence.

LEE MILLS, HEAD OF CENTRAL AND DISTRIBUTED SYSTEMS

Service Desk; Service Delivery; Training and User Communications.

We aim to deliver excellent customer services. The customer charter tells you, as our customers, what standard of service you should expect when dealing with IT Services. It defines a high and consistent standard of customer care that we will strive to achieve.

What you can expect from IT Services

We are committed to providing responsive, timely, effective and consistent services to you.

We will be	What this means
Customer focused	Excellent customer experience Fair and respectful treatment Friendly and professional service Answering queries promptly Easy to use services
Good Communicators	Jargon free communications Accurate and up to date information Open and transparent service management Listening to and valuing your feedback
Innovators	Seek out new technology and opportunities Think creatively about providing solutions Embrace change Flexible and agile service delivery

What we ask in return

Expect the best from us

- Let us know if our services do not reach the standards that you expect
- Tell us what you think, we welcome your comments and feedback.

Help us help you

- Provide us with clear information about your service request or problem
- Be patient and understand that sometimes serious incidents need to take priority
- Be respectful in your interactions with our staff and be mindful of the rights of fellow students and staff when using our services
- Use our services in accordance with terms or use, licensing agreements and the IT Usage Policy.