In completing my first half year with the University, it is an honour and privilege to be associated with this incredible institution and the outstanding teaching, research and nurturing of talent that occurs on this historic campus and our many connected locations.

At the outset I must acknowledge the role of my predecessor, Mr. John Murphy, who had been a Trinity institution himself, boy and man, during his 31 years of significant contribution to the university. John is the father of the existing IT Strategy, the author of the much-referenced Digital Campus vision and the designer of a very impactful reorganisation of the IT Services team shaped by best practices for service delivery.

John was the Director of IT Services until the start of February 2017 and so many, if not most, of the achievements that are outlined in this year’s annual report reflect on his leadership of the program of work for 2016/17. John, in a curious blend of Dick Withington and Robin Hood, has found streets elsewhere to be paved with gold and is using this to do good at his new university home in making an impact for students and staff alike.

IT Services do not currently manage and support the entire University infrastructure and all systems, however what we are responsible for does affect each and every student, researcher, academic and member of the administration community. Much of the work this team does is unseen – the university infrastructure is made up of thousands of components working together to serve the WiFi and wireless network, authenticating Trinity staff and students, serving key applications that are designed for high levels of resilience and performance. Our metrics don’t call out the patching, the replacement of failed components or the maintenance changes applied. This largely unseen effort consumes nearly 70% of my team’s effort - and more than 90% of our budget - and it is the most important work we undertake.

The changing nature of cybersecurity threats came to the fore over the past year with the global impacts of the WannaCry and subsequent malwares that combine ransomware with aggressive and fast-spreading ‘worms’. Your IT team worked collectively to respond to these threats and we invested considerable effort in awareness and in reviewing our current security policies to protect the university. This is an ongoing and probably never-ending process.

In 2017 Trinity celebrates its 425th anniversary, a historic milestone, a remarkable achievement and a testament to the vision of the patrons, fellow, and provosts that have guided this ancient university through the centuries and have kept it relevant as a place of scholarship, development and research and through three industrial revolutions by investing in the future while protecting the heritage. As we are now in the midst of what is often termed the fourth industrial revolution, I look forward to working with the University Leadership, our important customers and with the support of the IT Services team and the CSD division, to continue to help protect the university and pivot our services to the needs and expectations of our increasingly sophisticated, connected and global customers.

We will be very significantly involved over the next two years in the advancement of the Trinity Education Project, the most significant and strategic change program for the undergraduate curriculum in many years. We will continue to advance elements of the digital campus that enhance the student engagement and experience at Trinity and allow for greater engagement with our
valued Alumni community. We will respond to the changing cyber security threats and support the requirements of the new Data Protection regulation, GDPR, which comes into effect on 25th May 2018.

Finally, I want to thank the entire IT Services team for the great support, dedication and service to the University during this past year.
FUNCTIONAL RESPONSIBILITIES

John Lawlor, Deputy Director

- IT Project Management
- IT Security
- Enterprise Architecture
- Vendor Relationships
- Administration.

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.
3 HIGHLIGHTS OF THE YEAR

PROJECT HIGHLIGHTS DURING 2017-2017

IMPROVING TELEPHONY SERVICES
In April 2017 IT Services successfully completed the Unified Communications Phase 1 project to deliver a fully supported modern telephone system for the university. This project enables the university to introduce affordable IP desk phones where needed and provides a platform upon which Unified Communications can be delivered in the future.

MANAGING CAREER SERVICES FOR STUDENTS AND GRADUATES
IT Services successfully completed a project with the Careers Advisory Service in Q3 2017 to deliver a unified online system for careers services management of students, graduates, employers, and staff using the TargetConnect cloud service.

INTEGRATING THE VIRTUAL LEARNING ENVIRONMENT WITH UNIVERSITY SYSTEMS
In 2016/17 the Virtual Learning Environment Project (VLE) continued to meet its objectives by successfully delivering a number of key integrations and training. These included integrating Turnitin with Blackboard and integrating the university events calendar and the students timetable Module into the students Blackboard Calendar.

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 projects and refurbishments including Oisín House Development, New Business School, Global Brain Health Institute and the MV Project.

AUTOMATING HR PROCESSES AND WORKFLOWS
Working with HR, IT Services successfully delivered the Senior Academic Promotions form in Q2 2017 and the Junior Academic Staff Promotions form in Q3 2017 as part of the HR Forms project. This project will improve the user experience by providing web enabled forms with automated approval workflow.

SECURING OUR NETWORK INFRASTRUCTURE
The Firewall replacement project will complete in Q4 2017 delivering a best-in-class firewall service. It will provide capacity for the continued rise in internet traffic, provide new features for implementing security policies and will contribute to GDPR compliance by providing a state-of-the-art technical control.

ENSURING AVAILABILITY AND RESILIENCE OF OUR ENTERPRISE SYSTEMS
The Data Storage and Backup replacement project is due for completion in Q1 2018 and will provide continuity of 120 IT systems, and of departmental and research storage. It will avoid the need to incur high maintenance and support costs and will reduce electrical power consumption on storage and backup infrastructure.
CONTINUING IMPROVEMENTS IN AUDIO VISUAL SERVICES

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 2016/17, equipment such as full HD laser projectors, full HD document cameras, video conferencing terminals, large display screens and audio playback systems were installed in 15 locations.

EASY ACCESS TO ACADEMIC SOFTWARE APPLICATIONS

A project was initiated in 2016 to develop “MYTRINITYAPPS”, a service to allow students to access a range of academic software from their own Windows and Macintosh computers both on and off campus.

ENHANCING STAFF SKILLS THROUGH ONLINE LEARNING

The online learning portal, Lynda.com, was implemented in February 2017 and made available, following a pilot phase, to all staff in September 2017. Lynda.com provides access to over 6,000 training courses and over 200,000 training videos on a variety of topics including software, business, creativity and personal development. By end September 2017, 390 users had completed 332 courses and watched 17,900 training videos. A survey of users revealed a very positive response to the service.
“Since 2015, I’ve managed the Enterprise Architecture team in IT Services. Each year, my team and I contribute to many interesting IT initiatives across the University. This year, one of the most satisfying was working with Global Relations to link their Customer Relationship Management (CRM) software with our Central IT Platforms.

Global were Trinity’s early adopters of CRM software, which IT Services recognised as progressive, and a good strategic fit to Trinity’s other IT investments. Once the IT Services Senior Management Team gave their support to the work, the Enterprise Architecture team were able to draw on expertise from across the IT department to deliver a result that has been very positive.

The work done facilitates better communication between Global and incoming international students, and their recruitment activities are also better supported, whether that’s gathering new leads or converting registered students.

It’s been a reminder that Trinity staff all across the world depend on our IT systems being well integrated in order to do their best work, and feedback from them has been very positive.

As a technology professional, enabling positive change in the way colleagues work and communicate is what it’s all about. We look forward to finding new opportunities to do this over the coming year.”
IT Services Annual Report 2016/17 Statistical Infographic

52,000
Total Service Desk enquiries

131 million
Total email delivered

121 million
Total accesses to Trinity home page

26,400
Number of student wireless devices connected to the network

12,800
Number of staff devices connected to the network

133 million
SPAM blocked

237,000
Malware & viruses blocked

100%
Active Directory availability

100%
Internet connection uptime

100%
Core network uptime

Trinity College Dublin
IT Services
(email) itservices@tcd.ie  |  (phone) 01 896 2000  |  (web) www.tcd.ie/itservices
SUSTAINING THE IT INFRASTRUCTURE

UNIFIED COMMUNICATIONS PHASE 1
The Unified Communication project was initiated as the existing telephone exchange was reaching end of life and support was coming to an end. This highly critical service supports some 3,500 internal telephones and faxes on campus. This project was successfully completed in April 2017 with all its objectives delivered. It provides a fully supported modern telephone system, enabling the university to introduce affordable IP desk phones where needed and provides a platform upon which Unified Communications can be delivered in the future. The project objectives achieved were:

- To upgrade the current end-of-life Mitel telephone exchange so that all hardware and software components are back in full vendor support.
- To vacate room 0.07 in Áras An Phia rsaigh as this space is to be demolished and repurposed as part of the Oisín House redevelopment project.
- To move the intelligence and call handling features of the telephone exchange from legacy single points of failure hardware in Aras An Phia rsaigh into resilient data centres.
- To facilitate resilience in the Mitel telephone service.

DISASTER RECOVERY IMPLEMENTATION PROJECT
Disaster recovery is the process and accompanying technologies that allow an organisation to recover from an event that affects a significant portion of their computing environment. This could be a loss of power, a fire, flood, or a cyber security incident.

The Disaster Recovery project was successfully completed in July 2017. It addressed many significant infrastructural and procedural shortcomings that had been identified by external review as likely to result in serious prolonged disruption to many university activities and impede our ability to recover key IT communications, teaching, research and business capabilities in the event of a disaster.
On completion of the Disaster Recovery project the university now has a fully resilient disaster recovery/business continuity infrastructure in place to ensure that central IT systems and data are protected in the event of a disaster.

The university now has a primary data centre in Áras an Pháirsí and a secondary data centre in the Lloyd building which are of a suitable professional standard and fully covered by fire suppression and resilient independent backup power.

A communications upgrade comprising of the physical installation of a new fibre ring has provided the university with network resilience in the event of infrastructure failures or damage to cables.

In addition, all central university data is backed up to disk in an off-campus location. This facility also hosts computing and storage equipment which can be used to run essential services in the event of a disaster event that affects both on-campus data centres.

IT Services also have a fully documented business continuity plan in place which is tested regularly. 11 successful infrastructure disaster recovery tests were conducted by IT Services during the year; these comprised of tests of the core network; Internet access; internal and external load balancers; authentication services and the TCDconnect service. It should be noted that the tests conducted by IT Services only apply to the recovery of underlying infrastructure and that schools and administrative areas should also prepare Business Continuity and Disaster Recovery plans, which should be tested regularly.

**CYBER SECURITY THREATS IN 2016/17**

2016/17 saw the emergence of significant threats to the security of Trinity computers and data from viruses, ransomware and phishing attacks.

IT Services constantly monitors the Trinity data network for evidence of virus infections and provides a managed anti-virus service using McAfee ePolicy Orchestrator and McAfee Endpoint Security. In 2016/17 this service successfully detected and removed thousands of malware threats.

Ransomware is malicious software which, when installed on a PC, can prevent proper use of the PC. Sometimes ransomware locks a PC so that the user cannot access programs and files, but it can also encrypt files on a PC. The software will then demand a ‘ransom’ or payment from the user to get access to programs or files again. Ransomware mostly affects PC users, though it is also a growing risk on Macs. In 2016/17 IT Services successfully dealt with two instances of general ransomware on the Trinity network.

In May 2017 a significant global ransomware attack emerged affecting Windows computers. This ransomware, known as “Wannacry”, is estimated to have affected 300,000 computers across 150 countries. Notably, it caused significant damage to computers in the UK health service.

Windows computers could be protected from Wannacry by applying a security update from Microsoft which was made available in March 2017. IT Services had already applied this update to all servers and managed desktop computers prior to the emergence of “Wannacry” and, therefore, the vast majority of Trinity computers were protected, and the impact of “Wannacry” on the Trinity network was very low.

Trinity staff and student email accounts continued to be significant targets for phishing attacks in 2016/17. Phishing is the fraudulent practice of sending emails purporting to be from reputable
organisations in order to induce individuals to reveal personal information, such as passwords and credit card numbers.

Trinity staff and students were targeted by phishing scams attempting to gain access to their Trinity username and password. Attackers then used credentials to send further spam from victims’ email accounts or to access library journals and other resources.

In 2016/17 IT Services ran a Phishing Awareness and Education Campaign to reduce risk and inform staff. This involved IT Services sending “phishing” messages to all staff. Any staff member who provided their credentials in response to the phishing email was provided with training on how to avoid future phishing scams. IT Services will continue with this education campaign in 2017/18.

IT SECURITY WEEK AND DATA PROTECTION DAY 2016
IT Services held its annual IT Security week (23-27 January 2017) to raise awareness of IT Security issues affecting staff and students in the university.

This year IT Security week addressed the issues of ransomware and data encryption and provided guidance on how to identify security risks affecting email services such as spam, phishing and other online fraud.

Many interesting news items that offered tips and guidance on the latest IT Security developments were posted daily to the IT Services website.

To mark International Data Protection Day on the 26th January 2016 IT Services collaborated with Information Compliance and the Science Gallery to run a number of interesting and successful events. These included a drop-in data protection clinic which offered staff and students advice on a wide range of data protection and IT security issues ranging from protecting personal data in their day-to-day lives to advice for researchers who collect and analyse personal and sensitive data in their professional work.

In the evening an interesting panel discussion entitled Personal Data: Weapon or Defence took place in the JM Synge Theatre. Speakers included technology journalist and biomedical researcher Orla Hardiman. The discussion focused on the scientific and political value of data, as well as the new technologies that are improving people’s lives, while collecting their data.

CONNECTING STAFF MOBILE DEVICES TO THE UNIVERSITY NETWORK
A project was initiated to provide an Internet Connect WiFi service for staff to connect their own personal devices, smartphones and tablets to the internet. The project was successfully completed, and the service was released in Q3 2017.

IMPROVING MOBILE CONNECTIONS

This project was delivered in 2016/17 and resolved issues with twenty-two residual coverage gaps identified in 2015/16 by surveys and by user feedback via the IT Services Support Desk.

Additionally, the WiFi service was extended to Santry playing fields in Q3 2017 to provide coverage adjacent to the existing buildings.
PROVIDING BEST-IN-CLASS NETWORK SERVICES

The Campus Network Re-Architecture Project was successfully completed in Q3 2017.

The objective of the project was to redesign the university network to align it with best practice design for enterprise-scale campus networks.

The project implemented new router-switches that provide resilient high-capacity links from each university buildings to the network core. This allowed for the subsequent move of staff wired network services to the new service, massively reducing the load on the core router and providing a highly available and resilient network.

The completion of this work was a key enabler for the university mobility project which provided 1,000 additional access points providing wireless network services to staff and students.

The project also improved network security by enforcing central registration of all devices, and enabled IPv6 routing on the network core. The first dual-homed dynamic resilient network connection between the university campus and the off-site Trinity Hall student residences in Dartry, Dublin 6 was also implemented. This ensures full automatic failover to the backup network link in the event of failure of the primary.

SUPPORTING THE ESTATES BUILDING PROGRAMME

Extensive consultancy was provided by IT Services to support the university’s capital projects including engagement with Estates and Facilities on new building projects. The following were completed in 2016/17:

- TBSI Cat2
- IPH Tallaght
- Two refurbishments projects for the Sports Centre.

ENHANCING THE USER EXPERIENCE

STAFF EMAIL AND OFFICE 365 UPGRADE

In 2016/17 IT Services built on the work of 2015/16 when 7,000 staff mailboxes from the previous in-house email system were migrated to the popular online email and collaboration platform, Microsoft Office 365.

In 2016/17 IT Services successfully migrated the university’s 8,000 mailing lists to the new Office 365 platform and decommissioned the legacy hardware and software. The project successfully completed within budget in April 2017.

Office 365 now provides all staff with a new large 50GB exchange 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 (terabyte) of personal file storage on OneDrive. Files stored on OneDrive can be accessed from any device in any location and easily shared with internal and external collaborators.
TEACHING AND LEARNING IT

AUDIO VISUAL EQUIPMENT UPGRADES
IT Services continued its annual programme of audio visual equipment upgrades to support teaching and learning. During the academic year, 15 locations underwent substantial improvement, which included the provision of full HD laser projection; touch panel control; teaching desks; sound systems; HD document cameras, and collaboration screens, devices, custom tables and switching.

IMPROVING APPLE DEVICE MANAGEMENT WITH CASPER SUITE
IT Services successfully delivered a project in Q4 2016 to implement an Apple device management system (Casper Suite) to install software on Apple Mac computers in the IT Services computer rooms, theatres and seminar rooms. This software tool improves and simplifies the management of MACs and ensures that they comply with our enterprise technical requirements.

MANAGEMENT SERVICES

ANNUAL SITS UPGRADE
This project upgraded Trinity’s Tribal SITS student administration system from version 8.7.1 to version 9.2.0 - an upgrade of four versions. Tribal SITS is a flagship enterprise-level solution in the university and minimising downtime or impact on business areas was a key requirement of the project. The upgraded system went live in February 2017.

The upgrade allowed the university to benefit from the latest functionality available from Tribal SITS and ensures the continuing support of the application by the vendor. The upgraded version offers an attractive interface to the SITS Vision portal when accessed from devices such as tablets and smartphones.

ACCOMMODATION SYSTEM UPGRADE AND ENHANCEMENTS
This project involved the upgrade of the Kx Accommodation system software and the implementation of new modules. This included modules to enable students to request services such as overnight guests, kitchen packs, room moves and early departures using the Kx student web site. This module will make it easier for the student to make requests and streamline the office work necessary to process them.

SUPPORTING AN IMPROVED CAREERS SERVICES
IT Services worked with the Careers Advisory Service to adopt the TARGETConnect system for TCD. The project was completed in Q3 2017. TARGETConnect replaces existing fragmented systems, spreadsheets, and paper by providing a unified online system for careers services management of students, graduates, employers, and staff. The project provides a range of features to the Careers

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Advisory Service, including managing the provision of employers' vacancies; customer relationship management; event booking and management; careers news items; advisory appointments and many other items. The software is specifically designed to create efficiencies in the operations of a Careers Advisory Service at an enterprise level and as such, increase graduate employment outcomes and graduate satisfaction.

**RESEARCH IT**

**IRISH BIOENGINEERING INNOVATION FORUM (IBIF)**
The Irish Bioengineering Innovation Forum (IBIF) is a web platform created by Research IT to allow health care professionals to connect with research engineers (both academic and industry based) to identify unmet clinical needs and solve contemporary biomedical engineering problems by working together to provide creative, effective, and affordable engineering solutions to these problems. The IBIF platform will go live in November 2017 and is hosted on Research IT infrastructure (https://ibif.ie).

**ST. ANDREWS RECORDS WEB APPLICATION**
This is a collaborative community history project between students in the School of History in Trinity College Dublin and the St. Andrews Resource Centre on Pearse St, Dublin 2. The ongoing objective is to digitize the school records of the former St. Andrew’s National School from 1895, and to provide the Resource Centre with a valuable online record of the detailed registers at their disposal. The purpose is to create an open source history for the local residents and for the diaspora of this Dublin city centre school.

Research IT has implemented the web application for this project. The web application will include a full text and metadata search engine. The final version of this web application will be hosted on Research IT infrastructure and opened to the public.

**MAMMI DATABASE**
The Maternal Health and Maternal Morbidity in Ireland (MAMMI) Study is looking at the health and health problems of women during pregnancy and during the first year after the birth of their first baby. Data is being collected in multiple waves by the TCD School of Nursing. Research IT have migrated and curated legacy data and implemented a database and notification system to help the researchers manage their contacts with participants in the survey.

**RESEARCH ETHICS PILOT WEB APPLICATION**
Research IT are running a pilot web application to capture the Research Ethics Committee (REC) application process in an online system. The system is designed to provide a means for researchers, their PIs, REC members, REC admins and REC chairs to interact in a well-defined review and approval workflow. REC application documents are uploaded to a website, and then the application goes through the review and approval workflow following manual and automated status updates. The pilot system has been in operation since September 2016, with the School of Medicine and School of Computer Science and Statistics RECs taking part.
REDCAP CONSORTIUM MEMBERSHIP

A number of current Research IT projects involve online collection of clinical or similar data relating to project participants. Up to now this has required the purchase of third party software for online data collection, or Research IT have created custom web applications for this purpose.

To enhance the ability to cater for future online data collection projects, Research IT have obtained membership of the REDCap Consortium (https://www.project-redcap.org) for TCD. REDCap is a free web-based application for managing online surveys and databases. REDCap has been deployed on servers hosted on the Research IT private cloud and a number of early-stage projects have started to use it.

RESEARCH SUPPORT SYSTEM

Faculty Research Metrics (FRM) for FAHSS and FHS.
Each Faculty has defined research excellence criteria based on data from the Research Support System and the Research Proposal and Award Management System. The FRM report lists the academics in each school that meet the FRM criteria. This report is available for schools in the Faculty of Arts, Humanities and Social Sciences and the Faculty of Health Sciences. Work is in progress for the Faculty of Engineering, Mathematics and Science.

Promotions CV for Senior Academic Promotions and Junior Academic Progressions.
A promotions wizard has been added to the MyRSS web application to facilitate the generation of a Promotions CV for Senior Academic Promotions and Junior Academic Progressions. The CV, in MS Word format, contains data from the Research Support System and the Research Proposal and Award Management System as well as new data entered in the wizard by the applicant. After any necessary manual editing, the CV is uploaded by the applicant to the e-Recruitment website as part of the application process.

E-thesis process
The e-thesis process is live and in general use. Following approval by Board and Council, the Academic Registry marks a thesis as eligible to upload in SITS. The student can then edit the title via the RSS and enter extra metadata including: other title, abstract, included/quoted works, sponsors and keywords, before uploading the full text of the thesis to TARA, the institutional repository. From there the student can order the printing of hardbound copies by the Thesis Centre, Camden Street or elect to self-print.
CLUSTER / HPC SUPPORT

Upgrade of Boyle Cluster
An additional 23 compute nodes were added to the Boyle computer cluster which is managed by Research IT. This provides an additional 17 TFlops of computing power (at 83% of theoretical peak performance) in less than half a rack.

Upgrade of Boole Cluster
The Boole cluster is used by the multi institutional ADAPT Centre to run computationally intensive machine learning related applications. It is hosted in the Lloyd data centre and managed by Research IT. Research IT extended the cluster to include seven new servers and an additional server for running tasks which require large amounts of memory.
SUSTAINING THE IT INFRASTRUCTURE

DATA STORAGE AND BACKUP REPLACEMENT PROJECT
This project will upgrade the university’s primary and secondary data storage appliances and data backup appliances, that hold the transactions and records of 120 IT systems, including the Student System, Finance System and HR Systems, along with departmental data and research data. On completion of the project in Q1 2018 continuity of 120 IT systems and of departmental and research storage will be in place, the need to incur high maintenance and support costs will be significantly reduced, and – in line with our Green IT agenda - electrical power consumption on storage and backup infrastructure will be reduced.

FIREFWALL REPLACEMENT PROJECT
The firewall service has a crucial role in the multi-layered defence that IT Services provides to protect the university from information security threats. The existing firewall service must be replaced, and a project commenced in Q2 2017 to procure the hardware, software and professional expertise required to assist IT Services in providing a state-of-the-art replacement. In Q3 2017 a tender invitation was issued to firewall suppliers using an Office of Government Procurement (OGP) framework process. At the end of Q3 2017 the supplier was engaged to deliver their proposed solution. The detailed project planning commenced thereafter, and the high-level design was agreed. In Q4 2017 the final low-level design will be completed and agreed, hardware and software will be commissioned, current security policies will be implemented, new security features will be configured and IT Services staff will be trained to maintain and operate the new firewall service.

The cutover to the new service has been scheduled for the end of Q4 2017. The successful completion of the project will provide the firewall service with best-in-class hardware and software, provide capacity for the continued rise in internet traffic, provide new features for implementing security policies and will contribute to GDPR compliance by providing state-of-the-art technical control.

TEACHING AND LEARNING IT

IMPROVING THE VIRTUAL LEARNING ENVIRONMENT
The Virtual Learning Environment (VLE) Project is an initiative to procure and implement a cloud-based VLE for the university, with additional functionality, integrations and process improvements that will scale to meet the university’s strategic and operational needs from 2016 to 2021.

Working with other stakeholders, including Online Education; Trinity Education Project; CAPSL; Academic
Registry; Schools, students’ representatives and the Library, the following integrations were completed in 2016/17:

- Integrating Turnitin with Blackboard to allow its use inside Blackboard
- Integrating the university events calendar and the students timetable module into their Blackboard calendar for all students
- Integrating Library search facility into the student Blackboard homepage.

A large number of training materials and sessions for Turnitin and the events calendar have also been delivered.

Work is continuing on the integration of SITS and Blackboard, allowing the flow of assessment information (marks and grades) on a module and module body basis. This work is on schedule for completion in Q1 2018.

**ENHANCING THE USER EXPERIENCE**

**SKILLS ENHANCEMENT WITH LYNDACOM**

IT Services implemented the Microsoft Office 365 software suite in 2016 and identified Lynda.com as a suitable platform to support the rollout with online training. Working with HR, IT Services implemented Lynda.com in February 2017 and, following a pilot phase, provided access to all staff in September 2017.

Lynda.com is a high-quality eLearning resource covering a broad range of topics from business to technology. Access is available online, offline, on PC, mobile and tablet. The University has taken out licenses for 3,000 staff and at the end of September 2017 there were 390 registered users who had watched 17,900 videos and completed 332 courses. Courses covered a wide variety of topics including Office 365 (Skype, Outlook, Excel, OneDrive); Project Management; Leadership; Communications; Influencing; Social Media; Public Speaking; Business Intelligence, and Cyber Security. Customised playlists have been developed and distributed to staff. The range of courses viewed provides good examples of self-directed learning.

A survey of registered users was conducted in September 2017 and its key findings were:

- 92% accessed Lynda.com
- 91% were either very satisfied or satisfied with the ease of using Lynda.com
- 89% were either very satisfied or satisfied with the quality of the video training
- 88% stated that Lynda.com would meet their training needs and objectives
- 96% would recommend Lynda.com to colleagues
- 96% indicated they would recommend we continue to provide access to Lynda.com.

IT Services and HR will continue to roll out Lynda.com to staff and to incorporate it into staff development programmes and activities. The ultimate goal for Lynda.com is to provide access to the entire university community.
This project was initiated in 2016 to deliver a service which would allow students to access a range of academic software from their own Windows and Macintosh computers, which up to now was only available via DVD or in specific public access computer rooms.

- Phase 1 of the project was completed in February 2017 delivering a service to students who use Windows computers to allow them to access the range of academic software from the “mytrinityapps” portal website.
- Phase 2 will complete in Q4 2017 and will extend the service to allow students with Macintosh computer to access a range of academic software from the “mytrinityapps” portal website.
- Phase 3 will allow staff who use Windows and Macintosh computers to also access the range of academic software from the “mytrinityapps” portal website.
- Phase 4 is due to be completed in February 2018 and will provide access to a range of academic software from the “mytrinityapps” portal website from the internet for staff and students with Windows and Macintosh computers.

MANAGEMENT SERVICES

ANNUAL SITS UPGRADE - UNIVERSITY STUDENT ADMINISTRATION SYSTEM

IT Services is working with Academic Registry on a project to upgrade the university Student Administration System SITS (from version 9.2.0 to version 9.4.0). The project will complete in December 2017. When complete it will ensure that the Student Administration System is fully supported by the vendor.

AUTOMATION OF HUMAN RESOURCES PROCESSES

As part of the strategy (2014-2019) to improve its administration, Human Resources is delivering a range of service and process improvements to enhance the user experience by automating HR processes and streamlining approval workflows, thereby reducing paperwork and processing timescales.

IT Services is working in partnership with Human Resources to build a hub of web forms using SharePoint technology to support their strategy. The project identified a number of forms for development including the Staff Requisition form; Academic Staff Promotions forms; Staff Probation form and Leaver form with associated automated approval processes. It is also possible to track progress through the recruitment process online through the Hub. The Project continued to deliver on its

CORE HR SERVICE UPGRADE
IT Services have been working in partnership with Human Resources on their project to upgrade the university’s HR Service. An evaluation phase was completed by the project in Q3 2017 and the project is at the high-level planning and high-level design phase. The project aims to be completed in 2018 and will deliver a secure, robust Human Resources system that continues to meet the needs of the university into the future.

ESD CALL MANAGEMENT SERVICE UPGRADE
IT Services worked with the Academic Registry on a project to upgrade the ESD call management service. The project will complete in January 2018 and will ensure that ESD service remains fully supported by the vendor.

CMIS TIMETABLING SERVICE UPGRADE
IT Services worked with the Academic Registry on a project to upgrade the CMIS Timetabling service. The project will complete in December 2017 and will ensure that CMIS remains fully supported by the vendor.

SCHOOL OF NURSING AND MIDWIFERY (SNM) - STUDENT TIME AND ATTENDANCE SYSTEM
A project was initiated by the School of Nursing and Midwifery to upgrade their Student Time and Attendance System. The project role for IT Services was the delivery of technical services including architectural design; data integration; server and database implementation; provision of network points; authentication and other facilities.

Most of the technical elements are now delivered and it is expected that rollout by the School will proceed in November 2017.

SPORTS CENTRE UPGRADE
IT Services have been working with the Department of Sport and Recreation on a project to upgrade their Sports System. The Sports Centre Upgrade project involves implementing a new online booking system. This will bring a number of key benefits to Trinity Sport. It will improve sales and it will improve the overall customer experience by allowing them to book and pay for classes online as well as get notifications of any timetable changes; vacant booking slots for courts, halls and pitches; new classes, or special offers. It will also reduce the overhead of booking classes for staff and the need to handle cash at reception.

Sport Centre staff will have more time to focus on membership sales and general enquiries to 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 enhance the overall service.

To date, the new infrastructure has been commissioned and the installation of the new modules and the upgrading of the existing system is complete. Following configuration and customisation and extensive testing the new service will go live in the first quarter of 2018.
BUSINESS SCHOOL ACCREDITATION SYSTEM PROJECT

Achieving AACSB (Association to Advance Collegiate Schools of Business) and EQUIS (EFMD Quality Improvement System) accreditations and entering the Financial Times (FT) rankings are fundamental to the success of the Trinity Business School’s strategy. IT Services have commissioned the new architecture required for the Accreditation and Rankings system and work is continuing on integrating this new system with existing university IT systems and exploiting existing university systems to access data. It will also give them access to data for general reporting purposes in the School. Once complete this project will deliver an appropriate accreditation data management system with which Trinity Business School may apply for, and maintain, AACSB and EQUIS accreditations. The project is planned to be delivered in Q1 2018.

IT DELIVERY FOR UNIVERSITYS BUILDING PROGRAMME

IT Services are currently working with Estates and Facilities in the design, specification and installation of the ICT equipment required for the new Business School Project. This large capital project is due for substantial completion in September 2018 and for occupation in January 2019. So far it is envisaged that there will be up to 26 separate spaces with Audio Visual installations: 8 x Lecture Theatres, 2 x Boardrooms and 16 meeting rooms, lounges and ideas and breakout spaces, over 100 IP Telephones, over 200 Wireless Access Points and over 1,700 Data Points.

Other current Capital building projects include:

- Oisin House Development
- New Business School
- Global Brain Health Institute
- MV Project
- iLofar phase 2
- Arts Block Refurbishment
- South Leinster Street – Computer Science
- Trailhead – Arts and Regent House.
## Key Performance Indicators

<table>
<thead>
<tr>
<th>Metric</th>
<th>2015-16</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core network uptime</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Internet connection uptime</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Active directory availability</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Total TCDconnect users</td>
<td>13,900</td>
<td>14,220</td>
</tr>
<tr>
<td>Total TCDconnect devices</td>
<td>25,600</td>
<td>26,340</td>
</tr>
<tr>
<td>Virtual servers</td>
<td>420</td>
<td>440</td>
</tr>
<tr>
<td>Total storage (terabytes)</td>
<td>515</td>
<td>523</td>
</tr>
<tr>
<td>Total databases</td>
<td>190</td>
<td>206</td>
</tr>
<tr>
<td>Total emails delivered to students</td>
<td>108,000,000</td>
<td>131,000,000</td>
</tr>
<tr>
<td>Total emails delivered to staff</td>
<td>37,000,000</td>
<td>*</td>
</tr>
<tr>
<td>SPAM blocked</td>
<td>23,000,000</td>
<td>237,300</td>
</tr>
<tr>
<td>Malware/viruses blocked</td>
<td>236,000</td>
<td>237,300</td>
</tr>
<tr>
<td>Total MyZone accounts</td>
<td>95,800</td>
<td>104,030</td>
</tr>
<tr>
<td>Total visitors to <a href="http://www.tcd.ie">www.tcd.ie</a></td>
<td>5,040,000</td>
<td>5,462,500</td>
</tr>
<tr>
<td>Total pages accessed on <a href="http://www.tcd.ie">www.tcd.ie</a></td>
<td>113,570,000</td>
<td>120,595,400</td>
</tr>
<tr>
<td>Cumulative devices seen on all networks</td>
<td>210,000</td>
<td>178,900</td>
</tr>
<tr>
<td>Staff wired devices</td>
<td>7,700</td>
<td>8,030</td>
</tr>
<tr>
<td>Staff wireless devices</td>
<td>2,390</td>
<td>2,170</td>
</tr>
<tr>
<td>Staff BYOD wireless devices</td>
<td>1,700</td>
<td>2,590</td>
</tr>
<tr>
<td>Total student accounts</td>
<td>19,100</td>
<td>18,760</td>
</tr>
<tr>
<td>Total students on TCDconnect</td>
<td>13,900</td>
<td>14,220</td>
</tr>
<tr>
<td>Total student wireless devices</td>
<td>24,600</td>
<td>26,350</td>
</tr>
<tr>
<td>Total guest wireless accounts issued and used</td>
<td>20,300</td>
<td>25,000</td>
</tr>
<tr>
<td>Total enquiries to service desk</td>
<td>42,200</td>
<td>51,640</td>
</tr>
<tr>
<td>Enquiries resolved at service desk</td>
<td>81%</td>
<td>78%</td>
</tr>
<tr>
<td>Enquiries resolved at service desk on first contact</td>
<td>63%</td>
<td>62%</td>
</tr>
<tr>
<td>Total IT training bookings</td>
<td>1,230</td>
<td>1,402</td>
</tr>
<tr>
<td>Training course satisfaction rating</td>
<td>99%</td>
<td>98%</td>
</tr>
<tr>
<td>Service desk average waiting time – staff (minutes)</td>
<td>2.3</td>
<td>3.13</td>
</tr>
<tr>
<td>Service desk average waiting time - students (minutes)</td>
<td>3</td>
<td>4.20</td>
</tr>
<tr>
<td>Service desk phone waiting time (minutes)</td>
<td>3.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Total internet data (petabytes)</td>
<td>2.6</td>
<td>2.9</td>
</tr>
<tr>
<td>Internet speed during teaching (gigabytes per second)</td>
<td>1.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Cloud storage provisioned (from 200 terabyte allocation)</td>
<td>30</td>
<td>40</td>
</tr>
</tbody>
</table>

*With the move from the older Exchange mail service to Office 365, it is no longer possible to report separately on email delivered to staff and students.*

<table>
<thead>
<tr>
<th>Year</th>
<th>Non Pay</th>
<th>Pay</th>
<th>Total Expenditure</th>
<th>Increase/reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Non-pay</td>
</tr>
<tr>
<td>2008-09</td>
<td>2,356,686</td>
<td>5,747,000</td>
<td>8,103,686</td>
<td></td>
</tr>
<tr>
<td>2009-10</td>
<td>2,547,445</td>
<td>5,136,000</td>
<td>7,683,445</td>
<td>190,759</td>
</tr>
<tr>
<td>2010-11</td>
<td>2,369,354</td>
<td>4,852,492</td>
<td>7,221,846</td>
<td>-178,091</td>
</tr>
<tr>
<td>2011-12</td>
<td>2,067,791</td>
<td>4,443,423</td>
<td>6,511,214</td>
<td>-301,563</td>
</tr>
<tr>
<td>2013-14</td>
<td>1,950,691</td>
<td>4,737,891</td>
<td>6,688,582</td>
<td>319,497</td>
</tr>
<tr>
<td>2014-15</td>
<td>1,999,972</td>
<td>6,127,063</td>
<td>8,127,035</td>
<td>49,281</td>
</tr>
<tr>
<td>2015-16</td>
<td>3,242,379</td>
<td>6,477,348</td>
<td>9,719,727</td>
<td>1,242,407</td>
</tr>
<tr>
<td>2016-17</td>
<td>3,750,386</td>
<td>6,419,099</td>
<td>10,169,485</td>
<td>508,007</td>
</tr>
</tbody>
</table>

Pay and Non-Pay Expenditure 2008-09 to 2016-17
PAY

Pay costs are in line with last year’s costs. An detailed analysis of staff in the department as at 30 September 2017 is provided in Appendix 2.

NON-PAY

Expenditure 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 this year is attributable to new or additional expenditure on the following items:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackboard</td>
<td>307,400</td>
</tr>
<tr>
<td>Recurring IOPs legacy support</td>
<td>93,250</td>
</tr>
<tr>
<td>Software2Hub</td>
<td>67,000</td>
</tr>
<tr>
<td>Lynda</td>
<td>45,500</td>
</tr>
<tr>
<td>WCMS</td>
<td>35,000</td>
</tr>
<tr>
<td>New blades</td>
<td>30,000</td>
</tr>
<tr>
<td>Service area refurb</td>
<td>26,000</td>
</tr>
<tr>
<td>Panopto</td>
<td>25,800</td>
</tr>
<tr>
<td>Agency recruitment fees</td>
<td>18,400</td>
</tr>
<tr>
<td>Software increase</td>
<td>12,500</td>
</tr>
<tr>
<td>Fluke Tester</td>
<td>9,200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>670,050</strong></td>
</tr>
</tbody>
</table>
## INCOME 2016-2017

<table>
<thead>
<tr>
<th>Source of Income</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephones</td>
<td>641,900</td>
</tr>
<tr>
<td>IaaS sinking fund</td>
<td>340,210</td>
</tr>
<tr>
<td>Network points</td>
<td>284,740</td>
</tr>
<tr>
<td>T&amp;L backlog maintenance (E&amp;F)</td>
<td>270,000</td>
</tr>
<tr>
<td>Salary chargeback - Accommodation</td>
<td>161,210</td>
</tr>
<tr>
<td>Research IT (SLA’s, Lecturing, Research O/H)</td>
<td>78,860</td>
</tr>
<tr>
<td>Project account</td>
<td>39,840</td>
</tr>
<tr>
<td>Prepayment accrual</td>
<td>33,620</td>
</tr>
<tr>
<td>MS Campus and laptop encryption</td>
<td>27,770</td>
</tr>
<tr>
<td>Photography/old Macs</td>
<td>8,460</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,886,610</strong></td>
</tr>
</tbody>
</table>

![Income 2016-2017](image-url)
The central firewall infrastructure, which is the essential first line of defence for our networks, was upgraded to the latest revision. Support for IPv6 (the unique world-wide addressing system for all devices on our network) was provided, enabling 10 Gb/s access to the Internet.

Bradford Campus Manager, the system that manages students’ wired and wireless network access through a self-services approach, was upgraded in June 2017.

Additional computing resources were installed in both the Green Data Centre in Áras an Phiarsaigh the Research IT Data Centre in the Lloyd Building. These improvements were necessary to support the upgrade of our our-of-date telephony system.

A major upgrade of data centre network equipment, backup software and components was completed in each of our three data centres: Green Data Centre, Research IT Data Centre and off-site ServeCentric data centre in Blanchardstown to provide continuing resilience and availability of our key computing capability. This was completed over a two week period in July 2016 without any interruption to service.

The ongoing programme of Oracle and SQL Server database patching and upgrades continued, ensuring support for systems such as CORE and SITS.

Final migration of all staff email and calendaring services to Office 365 was completed.
• We continue to improve performance on the central core network infrastructure through design changes and the rollout of high-speed distribution zones across the campus. Through these improvements, we have reduced baseline CPU utilisation from 65% at peak in 2014 to 35% at peak in 2016/17, while simultaneously supporting growth in devices from 35,400 to over 52,200 in the same period.

• During the year, Internet traffic grew from 2.6 Pb to 2.9 Pb (A petabyte of data is equal to about 250 billion pages of text; it would take over 2,000 years to play a petabyte of standard MP3 music tracks). Despite this growth, Internet access speeds during teaching increased by 38% from 1.3 Gb/s to 1.8 Gb/s.

• The university’s internet connections were migrated to a new 100 Gb/s-ready service provided by HEAnet which will allow for growth in internet traffic in the medium term. The resilience of the internet service was improved with the move of the standby internet router to the secondary data centre in the Lloyd building with full UPS and generator backup.

• We support approximately 440 virtual servers in our IaaS hosting environment (70% Windows Server and 30% Linux/Red Hat) across our three data centres.

• Last year, we reached a significant milestone with the retirement of the Admin1 and Admin5 physical servers. This year, under our ongoing “legacy replacement” plan, a further milestone was reached with the retirement of the physical VMS1 Server running the legacy AlphaOS operating system. This machine, which first went into service in November 1997, was used to manage all of the university’s email accounts and mailing lists. This functionality has now been fully migrated to Office 365 and the Forefront Identity Management systems.

CENTRAL AND DISTRIBUTED SUPPORT

INTERNET CONNECT
The new Internet Connect WiFi service at Trinity is for staff to connect their own personal devices, smartphones and tablets, to the internet using the Trinity Wi-Fi network. The service provides fast, secure internet access as well as access to most of the local Trinity IT services.

PASSWORD MANAGER
The Password Manager service was upgraded in 2016/17 and continues to provide a self-service web interface that allows Trinity staff and students to manage their password, even if they have forgotten it, from anywhere they can connect to the Internet.

KEEPING COMPUTERS SAFE ON THE TRINITY NETWORK.

Windows PC or Apple Macs on the Trinity network in offices and labs have McAfee anti-virus protection installed and Windows computer are automatically kept up-to-date. The IT Service Desk manage the central services, McAfee and SCCM, that continue to ensure that the necessary updates for computer are applied to stay safe online.
SERVICE IMPROVEMENTS FOR OUR USERS

To ensure the IT Service Desk continues to improve our services during 2016/17, we have:

- Restructured and renovated the IT Service Desk area in Áras An Phiarsaigh to improve the overall experience for visitors
- Upgraded the Remote Support Services
- Upgraded the Call Management Service
- Upgraded and released a new version of the Bradford system on the TCDconnect Service which makes it quicker and easier to connect to the Trinity network
- Updated the operating systems supported on TCDconnect to include Windows 10 and Mac OS 10.12 Sierra
- To ensure IT security all Windows Vista machines have been removed from the TCDConnect Service

SERVICE LEVEL AGREEMENTS

It Services has developed an IT Services Corporate Service Level Agreement (SLA) for our university customers. This details the core services provided to all Trinity staff and students and defines the performance standards that are to be expected. Ten areas of service, as identified in the Service Catalogue, are mirrored in the Corporate SLA and in the new Service Level Achievements Matrix (SLAM) Report.

During the last year Service Delivery has further engaged with various areas of Trinity with a view to formalising service and support arrangements for specific departments’ IT needs or for specific services. We now have a Customer Service Level Agreement in place with the Accommodation Office, covering all IT services provided specifically to this area. We have also put in place over 2016/17 service-specific Service Level Agreements with the Careers Advisory Service, for the new TARGETconnect careers management system and with the Student Health Service for their Health Management IT system.

MONTHLY REPORTING ON OUR PERFORMANCE

Over 2016/17 we have established our Service Level Achievement Matrix (SLAM) Report and this is now compiled and published monthly with details of the level of service achieved over a rolling 12-month period for the 10 service areas of the IT Services Corporate Service Level Agreement.
COMMUNICATIONS WITH THE UNIVERSITY COMMUNITY

Over 2016/17 we have continued to keep the Trinity community up-to-date with information from IT Services, including over 40 online news items, emails to staff and students and updates on Twitter (@TCDITServices). This year we also had an addition channel to connect with the Trinity community through our participation in the “YourTrinity” day.

Our key aim is to provide relevant user-friendly communications and this year there was a significant focus on IT Security communications with 25% of news items related to this topic.

The following are noted communications highlights for 2016/17:

Office 365 Getting started Brochure
As part of the implementation of Office 365 we produced a brochure ‘Getting Started with Office 365’. This aim of this brochure was to provide staff with a quick guide to Office 365 that can be kept on their desks for easy reference. This guide was full of visual elements and step by step instructions, greatly aiding Trinity staff in the changeover to Office 365.

IT Security Information Campaign
In response to the ongoing threat to IT Security we ran an IT Security Information Campaign to highlight this major issue to the Trinity community. This campaign included a new IT Security ‘What You need to Know’ video and flyer, additional online news items and emails to the staff and students. We also completed a full review of our IT Security webpages and updated the information into a more user friendly and clear format.

PHISHING EDUCATION AND AWARENESS
With the ongoing threat to IT security from phishing attacks during 2016/17 we run a Phishing Awareness and Education Campaign with the aim of helping us learn how Trinity staff respond when they receive a phishing message, so that, in turn, we can help our staff to be prepared and respond better.

During 2016/17 we ran two phishing awareness campaigns, one in February and one in July. Each phishing campaign comprised a fake phishing email message delivered to all Trinity staff. In the first campaign staff were requested to click on an unknown link and login with their Trinity username and password and in the second campaign they were requested to open an unknown document.

Users that fell victim to either of the Phishing Awareness Campaigns received follow up emails with information explaining that they has just been phished and with links to further educational information about phishing, including a video and a quiz. This campaign has, so far, helped highlight the issue of phishing and will continue into the new academic year.
CONTINUING STAFF TRAINING AND DEVELOPMENT

Our IT training courses, which are specifically designed to meet the training needs of Trinity community, have continued to be popular with staff and postgraduate students and we ran 104 training sessions during 2016/17. In response to training needs, we developed new MS Office Training for the Trinity Centre for People with Intellectual Disabilities (TCPID). We have also introduced more detailed information on Data Protection into our Survey Monkey and Maintaining Websites courses aiming to familiarise our attendees with these concepts with the upcoming implementation of GDPR.

A full review of all training material was completed in 2016/17 and material using MS Office was updated in preparation for the move to MS Office 2016 training in the coming academic year.

Between September 2016 and August 2017 IT Services provided 1402 booked training places in our scheduled programme of IT skills development training sessions. In addition to the scheduled training sessions we provided a further 16 on-demand training session for specific Schools for 131 people.

We ask for feedback to assess the IT training sessions we provide and the overall satisfaction rating for 2016/17 was 98.33%

ORIENTATION 2016

IT Services provides a comprehensive range of additional services to students during the orientation period at the start of each academic year. These complement the normal services provided by IT Service Desk. Key supports included:

- 918 additional hours, or 122 extra person days, of support (Training/TCDConnect Clinics/Information Desk) were provided in addition to normal service levels from Fresher’s Week to 14 October
- 12,064 support calls were handled
- 23% of the overall annual call volume (based on previous academic year) were handled in the first 6 weeks of Semester
- IT Services Training and User Communications attended New Student Orientation Events and met 4,070 new students
- 14,239 students registered and connected 25,103 devices to TCDconnect by the end of October 2016. This was an increase of 719 students and 1,262 devices connected against the same time period in 2015.
- 970 students (6.5% of student population) attended TCDconnect clinics
- Calls to the IT Service Desk increased by 30% on the previous year and were the highest since 2012
- 42% increase on the previous year in calls to the IT Service Desk in the first week of teaching
- IT account and password issues accounted for 66% of all the student visits and 58% of all staff visits to the IT Service Desk
• “Quick Query” Information Desk operated in addition to the IT Service Desk and provided 240 person hours of additional support in September/October 2016
• 10,000 User Guides were published
• 85 TCDconnect daytime and evening clinics were run on the main campus and during daytime in Dartry

**Online Service Releases for Orientation 2016**

In Fresher’s Week 2016 we were pleased to announce that all students would have access to the new Trinity Student (MyDay) App and again have access to the Digital ID App and the Microsoft Office 365 ProPlus suite of software, free of charge. During September 2016, 4,036 students downloaded the MyDay app and 1,131 students downloaded the Trinity Digital ID.

**Office 365 ProPlus**

Office 365 ProPlus was first made available in September 2015 and again the roadshow for this service was available in the foyer of the Arts building from the 26th – 28th September 2016.
UNIFIED COMMUNICATIONS AND COLLABORATION PHASE 2
Building on the project completed in 2016/17, we will introduce enhanced team-working services built on our Microsoft platform and enhance the security of our services in line with the approved IT security policy changes.

TRINITY EDUCATION PROJECT
The Trinity Education Project is one of the central initiatives of the Strategic Plan 2014-19. Its overall purpose is to ensure that the undergraduate curriculum is developed in such a way that enhances Trinity’s reputation for excellence, and that it continues to evolve in light of new discoveries in disciplinary knowledge, pedagogy, and also in the recognition that the context in which our graduates participate is ever-changing.

Following the approval of a new common architecture (for courses included in Phase 1 of the project), along with the approval of a revised academic year structure and a revised assessment framework, IT Services, in collaboration with the Academic Registry, conducted 55 workshops over a period of 4 months (June – September 2017). The purpose of the workshops was to establish the impact of the approvals on processes and systems as they pertained to SITS and the Academic Registry. Organisational structure, data, reporting and change management requirements were also reviewed. This enabled the production of a project plan for the implementation of the approvals in both SITS and the Academic Registry. Planning for the implementation is well underway and some aspects of delivery commenced in Michaelmas term 2017. Delivery of all other aspects will commence in Hilary term 2017.

It is expected that the assessment of the impact of the approval of Phase 2 of the common architecture will take place during 2017/2018 and will include the delivery of a fixed timetable and completion of the common architecture. This will likely bring more systems changes.

REPORTING
While funding in relation to a Business Intelligence (BI) project was not secured in 2016/17, significant progress was made with stabilising the current BI system for the Academic Registry. Alongside the delivery of systems requirements for the Trinity Education Project, it is anticipated that almost all aspects of reporting, included data warehouses, cubes and dashboards will be delivered to the Academic Registry through investment in the internal reporting development services. This will enable an extension of the reporting technologies to be extended to other areas of university.

INTEGRATED WORKPLACE MANAGEMENT SYSTEM PROJECT
IT Services are assisting the Estates and Facilities project to replace the existing Estates and Facilities system with a state of the art Integrated Workplace Management System (IWMS) which is capable of meeting the current and emerging business requirements of the organisation.
COMMERCIAL REVENUE MANAGEMENT SYSTEM PROJECT
IT Services are working with Commercial Revenue on their Project to implement a software system that will act as a single database for all visitors to the Book of Kells and the Old Library Exhibition. The software will provide an online booking system and will integrate with ticket kiosks on campus. The project will improve the overall customer experience and will streamline processes for the planning and management of the Book of Kells capacity.

RADIATION THERAPY PROJECT
IT Services are working with the Discipline of Radiation Therapy in the School of Medicine on a project to procure a treatment planning system to replace the current end of life system. The system has a requirement to be available at the commencement of Hilary Term for educational and research purposes.

DEPARTMENTAL REVIEW
IT Services will undergo a quality review in the academic year 2018/19 and preparations are already under way for the review.

OTHER IT PROJECTS PLANNED:
- University user authentication service upgrade (Active Directory Service)
- Upgrade to the university’s Enterprise Identity Management Service (FIM to MIM)
- GDPR IT Services Review.
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.

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

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.
## APPENDIX 2 - STAFF POSITION AT 30 SEPTEMBER 2017

### HEADCOUNT BY CONTRACT TYPE – EXCHEQUER FUNDED

<table>
<thead>
<tr>
<th>Contract Full-time</th>
<th>Indefinite Full-time</th>
<th>Indefinite Part-time</th>
<th>Permanent Full-time</th>
<th>Permanent Part-time</th>
<th>Total Headcount</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1</td>
<td></td>
<td>23</td>
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### IT Services Headcount by Contract Type - Exchequer Funded

- **Academic Services and IT Operations**
- **Central and Distributed Support**
- **CSD Leadership Team**
- **Deputy Director Group**
- **IT Services Leadership Team**
- **Management Services**
## Headcount by Contract Type – Non-Exchequer Funded

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### IT Services Headcount by Contract Type

Non-Exchequer Funded

- **PP**
- **PF**
- **IF**
- **CP**
- **CF**

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**Page 35**
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</table>

Off payroll (career break) 1

![Headcount Bar Chart]

*Exchequer*  *Non-Exchequer*
FTE

- Administrative 1
- Administrative 2
- Administrative 3
- Chief Technical Officer (Specialist)
- Executive Officer
- Senior Administrative 1
- Senior Administrative 2
- Senior Administrative 3
- Senior Laboratory Attendant
- Senior Technical Officer
- Research Assistant
- Research Fellow

Exchequer
Non-Exchequer