I am delighted to present our Annual Review 2013-2014 which is a snapshot of many of the areas of IT that IS Services staff have been working on over the past year. Over the next few pages you will get a summary of a number of key initiatives that have commenced and a number of continuous improvement projects that have been completed over the past year.

Two major initiatives that started in the past year are the Disaster Recovery/Business Continuity project which aims to ensure that the College’s key systems are always available even in the event of a disaster; and the Mobility Project that will bring high speed/high density wireless access to all areas of the College campus and all remote sites owned or managed by the College. A key component of this initiative is to ensure that all student residences including those at Dartry and Goldsmith Hall have the latest wireless technology.

In support of the College’s Strategic Plan 2014-19, a new Information Technology Strategy was developed which focuses on a more agile approach to adopting new technologies, a “cloud first” policy and “mobile first” policy where appropriate.

In order to meet the new demands being placed on IS Services from the consumerisation of IT, the exponential increase in wireless technologies and the “Bring your own Device” phenomena, the department is in the process of reorganisation to better meet the needs of College.

As always we welcome feedback on any of the initiatives we have introduced or are in the process of introducing. We look forward to providing and supporting your IT requirements over the coming year.

John Murphy
Director of IS Services
Over the last year a College-wide Information Technology Strategy has been developed to accompany the new College Strategic Plan 2014-19. The guiding principles are that the strategy will:

**Support College’s mission of teaching & learning and research** | By providing appropriate support for all stakeholders and supporting and promoting e-Learning and e-Research. By providing reliable access to high-quality, current information from anywhere.

**Makes best use of College resources** | Is cost-effective and provides value for money, is in-line with best-practice and is benchmarked and avoids duplication.

**Supports innovation and provides flexibility** | By recognising the needs of diverse stakeholders and facilitating diverse platforms and by identifying external technological developments and identifying how these could be incorporated into the Technology roadmap.

**Is consistent with good governance and compliant with relevant legislation** | Informs decision-making on investment and portfolio management and adopts best practice standards.

IS Services is continuing to transform and reorganise under the auspices of START to ensure that the correct structure is in place to enable the delivery of this ambitious new plan.

**POLICY**

The Library and Information Policy Committee (LIPC) is the principal committee in College tasked with setting and amending IT policy. In the last year a number of important policy changes were approved including the introduction of the College cloud policy. The cloud policy sets out how staff and students can evaluate, purchase and use cloud services which hold College data and provides a system for classifying College data. The Research Committee also approved an updated Good Research Practice document which includes additional information on Data management for research projects.

**IMPLEMENTATION**

The IS Services Project Office works with the College Project Management Office to carry out large scale IT projects. In the last year, IS Services successfully introduced a new “project light” approach to handle smaller scale Continuous Service Improvement projects to ensure that our infrastructure, systems, software and applications are promptly maintained and improved to meet the needs and expectations of our customers. Over the last year 84 improvement projects have been delivered and the Project Office captures and reports on the benefits of these works. This has brought additional structure, clarity and discipline to the definition and delivery of the benefits of projects.

A few key IT initiatives completed in 2014:

- Upgraded the student Network Access Control system and provide remote scan and registration
- Completed implementation of the Student Information System, SITS
- Redesigned the IS Services website to provide easier access to IT material
- Completed the private cloud project and provide cost effective cloud self-service facilities to the College community
FOUNDATIONS OF IT AT COLLEGE

The need for technology grows every day and we have been making improvements to the foundations of IT in College to ensure a reliable, safe and easy-to-use experience for staff and students.

This includes an enhanced spam-protection service for staff email, an advanced systems management tool which distributes security patches to computers and works to build a more robust and agile network infrastructure that is in keeping with industry standards.

PREPARING FOR DISASTER: DISASTER RECOVERY AND BUSINESS CONTINUITY

In line with global trends, College staff and students are increasingly dependent on the College’s IT systems and infrastructure in the course of their daily College experiences.

With this in mind, it is more vital than ever that IS Services ensure that the services which we all use such as email, websites, the Student Information System and our many business applications are available for use and protected against preventable service outages.

In 2013-2014, the College IT Security Officer led a project to implement significantly improved Business Continuity Processes in IS Services. These measures will ensure that our IT Services are resilient and can withstand predictable events such as hardware failures and temporary power outages and even disaster events such as fires and floods.

This year we have successfully implemented:

- A new data backup solution which enables us to back-up all our important College data off-campus and restore it quickly again when it is needed.
- An off-site recovery location where we can operate services in the event of a disaster or other event which affects the data centres or networks on campus.

These developments support the College’s strategic objectives by greatly strengthening and improving the underlying IT infrastructure which enables so many of the teaching, research and business functions of College.

COLLEGE MOBILITY PROJECT: EXTENDING THE CAMPUS

College Mobility is one of the initial group of projects selected to conform to College Project Management Office (PMO) governance arrangements.

The procurement stage, to be awarded by EU level public tender, was prepared in 2014 and will be completed by December enabling a build out of the new Wi-Fi network to commence January 2015. Residences without existing Wi-Fi are the highest priority areas targeted for early commissioning prior to the end of quarter one 2015.

The design stage commenced in late February and is now complete. A UK based design supplier was selected by public national tender. 156 buildings comprising of nearly 300,000 sq. m. of floor space were surveyed to assess the Wi-Fi requirements envisaged for the next five years.

The design stage outputs detailed the number of Wi-Fi access points required, locations and photos, performance specifications, coverage heat maps, uplink cabling, network switching and comms rooms requirements.

This extensive final design specification extending to thousands of pages was quality reviewed by IS Services prior to commencing the procurement stage tender.
With approximately 12,000 students connecting over 18,500 desktops, laptops and mobile devices to the College network in 2013-2014, we have recorded the highest usage ever of the TCDconnect service.

That is why a large portion of the work we do to improve the student experience centres on TCDconnect so that it will be a reliable and easy-to-use network.

With the Summer 2014 upgrade, we have ensured a service that can continue to meet growing demands and allow the rollout of new features that were not previously available.

Developments in 2013-2014 for the TCDconnect service include:

- Support for a wider variety of mobile devices, such as Windows RT devices (adding to the existing support for iOS and Android).
- A new ‘remote registration’ feature that provides students with the ability to register their device with the TCDconnect service before arriving on campus.
- Support for a wider range of popular AntiVirus applications, including: McAfee Home Versions and McAfee Internet Security.

**NEW FEATURES IN MYZONE**

This past year we have enabled Google+ in the student MyZone email service. Through Google+, students can use Hangouts and Circles to stay connected and talk to each other in multi-way video rooms. As well, students can use Hangouts to share screens and integrate with Google Docs, Sheets, and Slides for collaborative editing.

**NEW STUDENT ORIENTATION**

Significant changes were made to the way IS Services provide information to new students during orientation week.

We moved away from classroom-based induction sessions and, in consultation with several of Schools, we added a short IT presentation to individual School and Departmental orientations talks. This allowed us access to greater numbers of new students in order to provide them directly with the information that they need to get started with IT in College.

**NEW TEACHING FACILITIES:**

Significant upgrade works to the Audio Visual and Media Services equipment in the College central teaching spaces, included:

- **Burke Lecture Theatre** – re-design and upgrade including installation of a new teaching desk, document camera, provision of additional microphones on the stage area.
- **Micro Teaching Video Classroom (Arts Building Room 3131)** – upgrade to the video and audio recording equipment.
- **Emmet Lecture Theatre** – installation of an HD data projector.
- **Goldsmith Hall** – upgrade & redesign to include installation of new screens.
- **AaP 3.19** – dual projection system installed
- **Trinity Centre (St James, Tallaght)** – upgrade to PCs
- **Lecture Theatres Emmet, Davis, JM Synge, M20 & M21** – new document cameras
Whether helping researchers streamline the way they collect and share data or assisting research administrators in their work, IS Services are doing their part to develop systems to support the research community.

Over this last year, we further developed the Research Proposal and Awards Management Solution (RPAMS) and developed the Research Support System (RSS).

**RESEARCH SUPPORT SYSTEM DEVELOPMENTS**

New Research Outputs | 27 new research outputs were added to the Research Support System. These capture the diversity of the College’s research activity.

MyRSS | A new MyRSS application was launched giving all RSS users access to data visualisations and interactive reporting related to their Research Support System data.

Themes Review | Research Support System users have been asked to enter their CV and track record data for the review of the TCD Strategic Research Themes. Theme Champions and Proxies can review and output this data to Word via the RSS Theme Analytics application.

ABC Research Productivity | The ABC Research Productivity report is available to school and faculty administrators on the RSS Metrics application.

TARA Institutional Repository Upgrade | Project facilitation to assist with the upgrade of the College’s Institutional Repository.

Below you can read some case studies of how our work is supporting the College Research Community.

**CASE STUDY: BRINGING IRISH HISTORY ON-LINE**

2014 saw the 1000 year anniversary of the Battle of Clontarf, probably the most famous battle in Irish history. The battle was fought by the forces of Brian Boru, who was the High King of Ireland, and the armies of Kings of Dublin and Leinster with their Viking allies. As most school children know, Boru won the battle but lost his life on Good Friday, 1014.

As part of the College’s celebration of this event, IS Services developed an interactive website (dh.tcd.ie/clontarf) describing Boru’s rise to power, the competing political interests in Ireland at the time and, of course, the Battle itself. The open-source website platform Drupal was used to build the site and a number of custom components were written to extend and enhance the functionality of the site. Aided by scholars from the School of History and the Long Room Hub, IS Services built a collection of timelines and mapping interfaces to bring the story to life.

The website was launched by Professor Sean Duffy, a world expert on Brian Boru and Clontarf, at a 400 person conference held in Trinity College in April 2013. Since then, the site has attracted visitors from across the globe looking to learn about pre-medieval Ireland. The site forms part of a suite of online initiatives, including The 1641 Depositions, The Irish Chancery, The Down Survey and The Letters of 1916 supported by IS Services to further the College’s Digital Humanities research theme.

**CASE STUDY: HELLO BRAIN PROJECT**

“A Sharing Approach to Promoting Science” (ASAPS) was a collaborative EU funded project coordinated by Dr Sabina Brennan of Trinity College Dublin. ASAPS seeks to promote health research and healthy ageing. Its specific focus is on brain research and brain health and transforms empirical research into usable, easy-to-understand and engaging health and well-being information.

This information is available across multiple platforms and in multiple languages via a website (http://hellobrain.eu) and mobile app that IS Services developed and hosts on the high performance research computing infrastructure. The website provides beneficial information, news and resources, including videos, tips, blogs and quizzes. The website also links to social media platforms as a way to encourage a discussion between researchers and the general public.

The Hello Brain Campaign challenges people to do one thing everyday to help their brain stay healthy. The free Hello Brain app (available for iOS and many Android devices) provides daily suggestions that are grounded in science across five activity categories: physical, social, mental, attitude and lifestyle.
IT systems play a crucial role in College administration and this was a significant year in the continued development of systems to support College business and activity. Some case studies show real-world examples of how our work helps different areas of College.

BUILDING VALUABLE SYSTEMS AND SERVICES

Human Resources | Our work with the Human Resources Project continues with technology improvements which deliver a better service to staff and external applicants.

Student Information System | SITS has now been in operation for its second full academic year and provides a platform for managing student data, registration, examination, progression and fee collection.

Identity Management Project | The first phase of the Identity Management Project is coming to an end and will allow us to retire old outdated systems, streamline provision of ICT and College services to users and will also enable more self-service to College IT systems.

College Calendar Online | The College’s Calendar (www.tcd.ie/calendar) was brought to the web in 2014 and is now available as an interactive, mobile-friendly, Content Management System that can be managed by end users and is integrated with the College’s Google search appliance.

Staff Directory | Our previous staff directory, People Finder, has been replaced with a new, modern, mobile-friendly application that offers more functionality, scalability and ease of use. The application has reduced our dependency on legacy hardware and software, reduced support total cost of ownership and is based on best practice standards for systems development.

Below you can read some case studies of how our work is supporting strategic initiatives in College Business.

CASE STUDY: TRINITY GLOBAL GRADUATE FORUM CONFERENCE APP

In November 2013, Trinity held TGGF, a two-day forum in which Trinity global graduates were invited back to the university to help us formulate plans to tackle some of the major challenges facing modern higher education. The graduates came from 16 countries representing 19 professions.

As part of this forum, we were asked to develop a mobile app for attendees. The TGGF mobile application allowed attendees view session schedules and descriptions, view venue maps, read presenter biographies, see a list of attendees and exhibitors and give session feedback from the palm of their hands – all designed to enhance their experience of this event.

CASE STUDY: GLOBAL RELATIONS AND VIDEO CONFERENCING

The Global Relations Office is the gateway between Trinity College Dublin and our global community of international students, institutional partners, academic collaborators and alumni network.

The Global Relations team have a need to find new ways to keep in touch. IS Services piloted a desktop video conferencing service with the Global Relations Office in 2014. HEAnet’s Desktop Video Conferencing Service was trialled and provides a telepresence quality video conferencing experience to desktops and hand-held devices using Vidyo client software.

Users across the world can create their own virtual meetings and invite participants by sending them a link to the meeting. Content could be shared between the participating sites as well as providing them with the ability to record these sessions.
LISTENING TO THE COLLEGE COMMUNITY

One challenge we face within IS Services is accommodating the varying technological needs of staff and students across diverse academic and administrative departments.

We tackle this challenge by listening to staff and students via our annual satisfaction survey and by working closely with representatives from the student unions and the IS Services Users Group.

A NEW WEBSITE FOR IS SERVICES

One major service improvement which has arisen out of staff and student feedback has been the redesign of our website.

Our focus with this redesign was to build a site that is easy-to-use and packed with rich content and IT training resources to assist staff and students in their time at Trinity. We have an entire section devoted to IT security. The Keeping IT Secure section is full of practical tips on how to stay safe online with links to the College IT Security policies and procedures.

Based on feedback from both staff and students, the IS Services website is more agile and easy-to-use. In addition, we have built in a responsive design fit for mobile devices and developed an overall visual design consistent with Trinity websites.

ANNUAL SATISFACTION SURVEY & RESULTS

In January 2014, we launched our third annual Satisfaction Survey. The response to the survey was very good and 1776 staff and students from across the College told us what they thought of our services.

The survey ensures we maintain an up-to-date understanding of what is important to the College community regarding the services we provide. This understanding enables us to target improvements or changes directly to the areas that will have the greatest impact. So what did we hear:

• Students ranked the Wi-Fi service as of most value to them while staff ranked as their most valuable service the Helpdesk
• Both staff and students rated the email services as the most satisfactory service provided

The survey gives staff and students a voice to influence IS Services priorities and potential initiatives.

To analyse the responses to the open questions we created Word Clouds. A word cloud is a weighted list in visual design with an increased font for the most important words. Below you’ll see our word cloud for student responses for: What recommendation would you wish to make to IS Services that would most improve the services we offer to College?
2013-2014: STATISTICS SNAPSHOT

11,846 students registered for the TCDconnect service at the start of the 2013-2014 Academic Year

5,589 students attended orientation events for IT services at College during the first week of the 2013-2014 Academic Year

337 million hits on www.tcd.ie websites between September 2013 to August 2014

43,969 calls to the Helpdesk with just over 31,000 of these simply seeking IT advice or requesting an IT service from us

125 million spam emails blocked by the staff email spam protection service