IS Services recognises the transformative role that technology can play in enabling and enhancing teaching and learning, research and innovation, support and administration and the student experience in College.

Everyday staff access IT systems to balance budgets, store sensitive information and develop research proposals. Students connect to the network, gather course materials and exchange ideas online. This work, these efforts are supported by IS Services.

Our focus is on setting the highest possible standard for excellence. We strive to engage with staff and students alike, understand their needs and meet their IT requirements, while also improving IT services so that College can thrive.

We support over 25,000 people in College. Let us take a few moments over the next few pages to explain what we have done for them in 2012/2013.

John Murphy
Director of IS Services
Improving the student experience

One challenge we face within IS Services is accommodating the varying technological needs of students across diverse academic departments. We tackle this challenge by listening to students via our annual satisfaction survey and by working closely with representatives from the student unions and the IS Services Users group. These means for gathering feedback give students a greater voice and here is a summary of how we answered their needs.

Students wanted a streamlined process for connecting to and registering for the College network. In response, we simplified the connection steps for the TCDconnect service, expanded the help pages to include more comprehensive topics, and introduced support for additional anti-virus software so that registration for the service would be more straightforward.

The most sought-after development came in December 2012 by way of providing connection for iOS mobile devices to the College Wi-Fi network, with Android devices being brought on later in the year. Increased devices on the network means increased usage. With that in mind, we added high-density Wi-Fi coverage in high traffic areas such as the Buttery Café and in certain areas of the Libraries.

From September 2012, new students were provided with their username and password information upon completing online registration for College. This meant that new students could access College IT services before they even arrived on Campus.

Also, a new password recovery service was developed in the Spring 2013. This self-service allows students to set a new College password from any location and at any time via their mobile phone.
Technology can add a tremendous benefit to the work we do and can be a means to make our workdays go by a little better. Thus, IS Services has implemented a continuous improvement process which includes on-going efforts to test and provide support for a range of existing and emerging IT systems and services. Our goal is to get tech tools in the hands of staff and help them best use those tools.

Within the past year, IS Services has adopted support for new desktop and laptop operating systems, specifically Microsoft Windows 8 and Mac OS X 10.8. Extensive testing was completed to gauge the compatibility of these operating systems with existing College systems, and relevant supporting documentation was published to the IS Services website.

In December 2012, we provided Wi-Fi connectivity for those staff using smartphones and tablets running the iOS and Android operating systems. This development saw close to 4,000 such devices connect.

As well in 2012, we undertook work to provide an enhancement to the network printing facility in offices and labs which would allow staff using devices connected to the staff Wi-Fi network to print to networked printers. This enhancement removed the requirement to print from computers with ‘wired’ network connections.

A new software download website was produced allowing staff to easily download site-licenced software, without the need to call in person to the IS Services Helpdesk to collect installation media. This means staff have faster access from anywhere on the College network to the resources they need.
The virtual learning environment allows learning to take place anytime and anywhere as long as a computing device and an internet connection are available. Within the virtual learning environment, the emphasis is on engaging students directly in the content so that they learn through activity.

Working alongside our colleagues in the Centre for Academic Practice and eLearning (CAPSL), we launched Blackboard Learn 9.1 (also known as mymodule.tcd.ie) in September 2012. Blackboard Learn 9.1 is what students and academic staff use to exchange ideas and grow when not in the physical classroom. This service allows students to move beyond the pen and notebook to collaborate online, post and store documents, and improve educational efficiency. Blackboard Learn 9.1 makes it easier to promote interactive learning, project-based learning, and helps students see content in a way that they couldn’t before.

The usage statistics show that staff and students are embracing the virtual learning experience. With 4,100 daily logins recorded in March 2013, and 84,500 unique logins in February 2013, we can see Blackboard Learn 9.1 as a very positive development for eLearning in College. The Blackboard Learn 9.1 service is supported by CAPSL.

Inside the classroom, teaching tools are rapidly developing and IS Services are ensuring that academic staff have the best presentation tools and access to the latest teaching technology. Over the summers 2012 and 2013, we carried out a wide range of improvements to the audio visual and media equipment in College lecture theatres and seminar rooms. Most notably, digital microphones were installed to fulfil the requirements of the analogue switch, and older projectors were replaced and moved to widescreen format. In the last year, over 40 rooms across campus have received audio-visual equipment upgrades.
Interactive simulations and illustrations can produce a much greater depth of understanding of a concept. When virtual manipulatives are used in a classroom setting they can go far beyond chalk and talk.

High performance computing (HPC) harnesses the power of hundreds of computers at the same time to tackle a problem that is too complicated to be solved with a single computer and is used in many industries to avoid carrying out expensive or dangerous experiments. Research computing falls in the space between personal computing and HPC. It facilitates the advancement of complex research and utilises computing services in ways that extend beyond simple spreadsheets and word documents.

The High Performance and Research Computing unit in IS Services has been providing compute, data management and visualisation services for over 15 years. Users of this service cover all three faculties, 16 schools and many of the College’s strategic research themes.

In January 2013, IS Services delivered the Research Support System. The RSS School Analytics Application is a TCD Web Systems application which facilitates monitoring and support of research activity within College including: researcher profiles, research projects, publications and other research outputs, generation of College calendar, generation of research related reports, interfacing with other internal systems including TARA, the institutional repository, import of publication metadata from external databases, maintenance of the TCD strategic research themes, provision of data to the research website, media directory of experts, e-theses and Research Quality Metrics (RQM).
Staying mobile

Technology can be your best friend when it comes to doing your work while at your desk or while on-the-move. We know this and that is why we do our best to ensure that staff and students are connected to each other and the College network, while also having continual access to major College systems from any location.

This means enhancing the Wi-Fi services on campus. Over the last year, we increased Wi-Fi coverage across College, as well as rolled-out high density Wi-Fi in the Burke Lecture Theatre, the Buttery Food Court and Cafe, the Biomedical Institute, and the 1st and 3rd floors of Ussher Library to accommodate large numbers of connections.

A major College initiative is now underway that will further enhance Wi-Fi coverage and connectivity in the next two years; an effort which will push the TCD Wi-Fi network to the top of the nation’s list of data networks. The vast majority of devices connected to the College network will see faster speeds and higher data rates.

The ability for authorised staff across College to provide login credentials for guests wishing to use the Guest Wi-Fi service was introduced, greatly speeding up the process of getting guests connected.

The VPN service for staff working from remote locations, such as those working from home, was upgraded to the new Cisco Anyconnect service, providing support for a greater range of operating systems.

Recommended USB-to-Ethernet cables were identified through testing, to allow modern, lightweight laptops such as the MacBook Air and PC Ultrabooks to connect to the College wired network.
IT systems play a crucial role in most College administration and support areas. In recent years the College eStrategy initiative has defined the requirements for new HR, Finance and Student Information Systems. Each of these, along with a fourth Enterprise Architecture strand, achieved significant progress in the past year.

This was the first complete academic year using the new Student Information System, SITS. IS Services staff worked closely with the GeneSIS project team in developing and improving the infrastructure of this new system which has provided a more efficient platform for managing student data and handling student admission, registration, examination, progression and fee collection.

Also in the past year IS Services worked with the Treasurer’s Office in developing a new College-wide integrated Financial Information System (FIS). The new financial system will provide improved process automation and enable access to high quality financial information. This will allow staff to make better decisions and ensure efficient financial management. This will help in reducing costs, improving quality controls and managing risk.

IS Services also worked closely with HR in planning a programme of work to implement process and technology improvements which will streamline the delivery of HR information and services, again helping to reduce costs and improve efficiencies.

The first project of the Enterprise Architecture strand of eStrategy is Identity Management, and planning and development work has been underway to deliver a platform that will better manage user access to College resources such as data, IT systems, buildings, equipment and other facilities. The new platform will also enable more self-service capabilities on a range of College IT systems, and improve communication across College.

The coming year will see most of these strands develop further, and we anticipate the improvements will affect all staff and students in College.
Over 20,000 students and staff depend on IT services every day. With PCs, laptops, and smart phones connected to servers 24 hours a day and 7 days a week, it’s safe to say that as our need for technology grows, so does our carbon footprint. The question then arises: how do we become more energy efficient while also continuing to grow and change with technology to meet daily business needs? Enter the Green Data Centre.

During 2011, TCD approached a number of data centre companies with an opportunity to tender for the design and construction of an ultra flexible, ultra green physical infrastructure platform. The goal for the facility was to deliver 99.999% uptime of IT services; to provide a physical infrastructure capable of operating over the next 20 years; and, to lead as an example of Global energy efficiency excellence with a focus on sustainability, reduced operational costs, reduced carbon footprint and return on investment.

In March 2013, the College’s Green Data Centre was opened. Since then, existing servers and IT services are in process of being transferred to this energy efficient host. Over the next five years, IS Services and Future-Tech (partner suppliers) will work together on maintaining the data centre so that it continues to deliver reliable uninterrupted IT services to TCD and to operate as one of the most energy efficient data centres in the world. The delivery of the Green Data Centre will allow IS Services to provision Infrastructure as a Service (IaaS) and cloud computing for College.

The project was short-listed as a finalist for the Leaders in the Public Sector Aware at the Annual DatacentreDynamics EMEA Awards event. Although the facility lost out on the winning spot, it is a major achievement to make it to the top four of such a hotly contested category.

GREEN IT at TCD
Keeping IT safe at TCD

IS Services and the College IT Security Officer hosted IT Security week at the end of January 2013. It was an initiative designed to raise IT security awareness and prove clear up-to-date IT security information for students and staff.

Booths were set up in both the Arts Building and the Hamilton to give access to student and staff with questions to the College IT Security Officer, Sara McAneney, and student representatives from the student computing societies DUCSS and NETSOC.

Each day that week a news item was posted to the IS Services website which covered practical tips for protecting and securing mobile devices, computers and files. Topics included:

- How to keep your accounts secure with strong passwords
- How to recognise a phishing attack
- How to keep your computing devices malware free
- Top tips for data back-up and how to recover when disaster strikes
- Top IT Security privacy tips for social media users

What did you think overall of the week?

(Sara McAneney, IT Security Officer) The purpose of the week was to generally raise the profile of IT Security as an issue that staff and students need to be aware of in their day-to-day computing activity. Judging from the feedback that I received from staff members who have been in touch and students who I met during the week I am confident that we have achieved this. Staff were interested in creating and storing secure passwords and students were interested in encryption and security for their phones and tablet devices.

(Ben Doyle, DUCSS) We reached a lot of people who were interested in learning about securing their devices and information, but didn’t necessarily know how to go about doing that. We were busy on the stands and there was a good turnout for the talk, I was very impressed by the number of students who weren’t just interested in the free chocolate or entering the prize draw and had specific questions about how they could go about being safer online, or protecting their laptops/phones/tablets. It was great to see that a lot of the student body actually care about their personal data.
From the School of English to the School of Medicine, to Human Resources to Accommodation and Catering Services, technology can benefit and assist all areas of College. With this in mind, we want TCD staff and students to be informed and engaged with IT.

During this academic year, we have put substantial focus into improving the communications from IS Services to the wider College community. Here is what we have done over the last academic year:

- launched and published five editions of a new IS Services newsletter
- launched a new IS Services YouTube channel with easy access to online videos and information about services
- increased our use of Twitter to broadcast service alerts
- introduced a formal process for project communications and announcements
- formalised an IT power user group with members from all areas of College to disseminate news of IT service work and gain approval from various areas of College
- updated all standard and automated emails from IS Services to create a more consistent and user-friendly tone
- developed our online training presence with new online training material, including increased numbers of supplemental videos for follow-up after training courses
- added training courses to cater for students and staff off-campus in the Trinity Centre in St James Hospital
- increased presence on campus with IT Security Week, involvement with Postgrad Week and Green Week, as well as Freshers Week
- launched our second annual Satisfaction Survey and produced a full report on your level of satisfaction with services
- increased the representation of the IS Services Users Group; a group that reports into the Library and Information Policy Committee.

Engaging with staff and students
2012-13 IN NUMBERS

Helpdesk Statistics

45,438 calls received
3.5% lower than last year
71% of calls are requests for information, advice or for a standard service

Major Service Availability

Network core 99.99%
Staff email 99.85%
Student email 99.95%

Keeping you informed

5 eNewsletters
506 tweets
185 website alerts
96 blog entries

In April 2013 alone 746 College staff and students used eduroam to connect from 36 different countries across the world

12,800 devices on TCDconnect
13,800 Guest Wi-Fi accounts
700,000 logins to Blackboard Learn
128 million visits to College web pages
350 million emails processed