



UCD IT Services
Seirbhísí TF UCD



Annual Review

2013

The Numbers

2013

32,595

The number of unique people logged into Infohub/SISWeb during September 2013



2,175,446

The number of InfoHub/SISWeb reports run in September 2013, 2.6 times the number for September 2012



67,739

The number of unique devices on the UCD wireless network during November 2013



4,245

The number of first year students who attended IT Induction in 2013 and received an 8GB USB pen

235kW

During 2013 the energy consumption of the Data Centre was reduced by 33% from 350kW to 235kW. This saving equates to the energy required for 6 return journeys to the moon in a Nissan Leaf



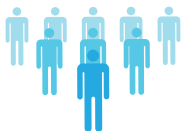
35,170

The total number of support cases logged with IT Services during 2013



86

The number of staff working in IT Services



70%

The percentage of buildings on the UCD Belfield campus that are covered by the wireless service



400

The number of staff who attended Microsoft Office training in 2013

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Introduction

Information Technology is a key enabler of the delivery of the University's strategic business goals.

In 2013 UCD IT Services continued its commitment to support these goals in order to deliver services that meet and exceed the requirements of the UCD community.

Our focus is now on sustaining and enhancing the high-quality services we provide, while utilising the new service models available.

In an ever-changing technology landscape, our service delivery model is evolving to a "service broker" style and during 2013 we made the Big Move to Gmail for UCD staff.

We continue to prioritise our mission of understanding the IT needs of the UCD community, undertaking a number of projects in 2013 to review our service offering and how we interact with you.

I hope you enjoy our 2013 Annual Review.

Seamus Shaw
Chief Technology Officer
University College Dublin

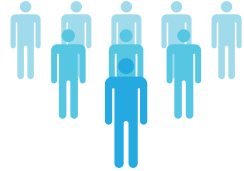


Customer Engagement Survey Highlights 2013

What UCD staff say about IT Services



1,013 members of staff responded to the survey



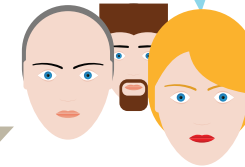
92%



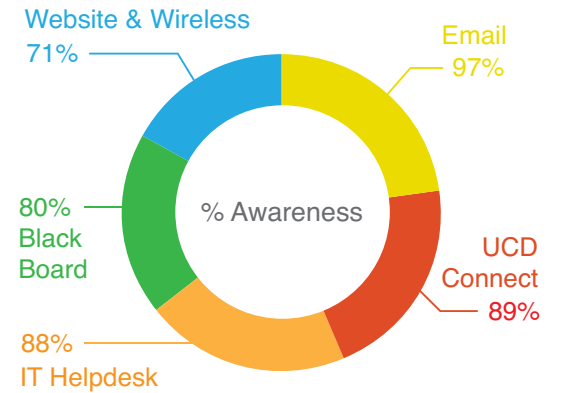
of respondents felt IT Services either met or exceeded expectations

83%

of respondents said they were satisfied with the IT services overall



Top 5 services...



Dealing with your IT problem..



57% of respondents had an IT problem in the past year



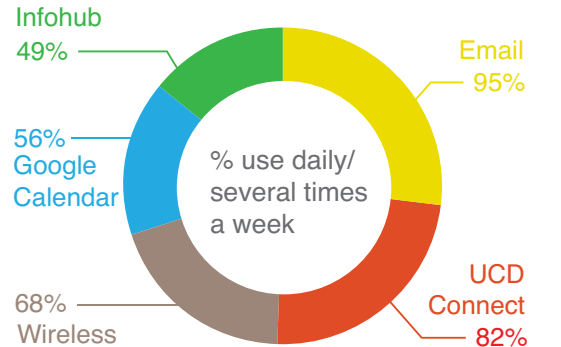
74%

of those who had an IT problem last year, contacted the IT Helpdesk or another IT Services contact



92%

of these were satisfied with the level of professionalism of dealing with their query



99%



of respondents said that reliability and speed of dealing with their request were 'important' aspects of service



86%



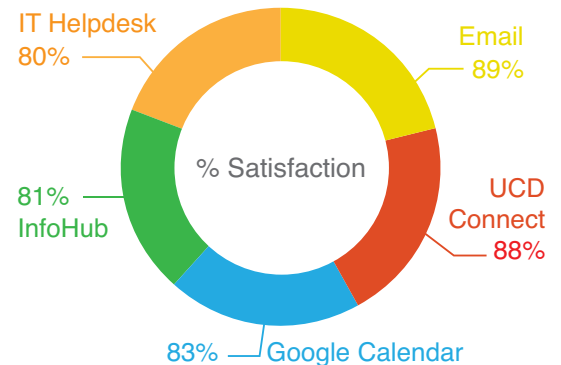
were satisfied with the reliability of service. 10% were unsure and 4% were dissatisfied



89%

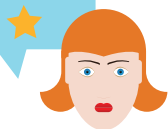


of these were satisfied with the time taken to resolve their query, while 11% were dissatisfied



Some comments received...

"The Helpdesk is the jewel in the crown of IT Services... they'll always get back to you and are willing to go the extra mile"



"Reliability of wireless network needs to be improved... Better support for Mac users"



"More training, on systems and software.."

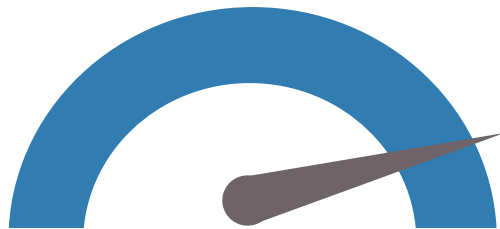


Thank you to UCD staff for participating!

ECAR Study of Undergraduate Students Use of Technology 2013


568 students from UCD participated in the ECAR survey amongst 113,035 respondents from 251 institutions...

 in **14** different countries

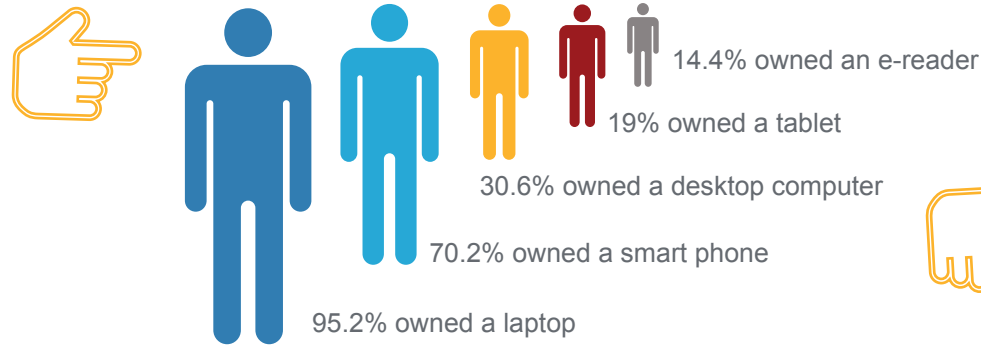


87.1% of UCD respondents ranked it as important that they be better skilled at using technologies


71% of UCD respondents indicated a preference for modules with some online components



UCD Students ownership of devices



70% of laptop users linked usage of their device with academic success



What UCD students say about technology



88.5% were Windows users



11.5% were Mac users



Over **80%** of respondents at UCD were unaware of what a MOOC was

5.5% had taken an online course at UCD

32.6% of respondents across all institutions had taken a completely online course at their home institution



98.8% of UCD respondents had one or more internet capable devices, the majority **67.9%** had two or three internet capable devices

Q. What could UCD do with technology to better facilitate academic success?



A. Ensure lecturers have a unified approach to use and storage of documents and assignments on Blackboard



A. Further use of tablets, more interactive classroom environments



Thank you to UCD students for participating!

Over 4,000 staff access their mail service daily with over 4,700 using it during any given week. By the end of 2013, 14.3TB of storage was in use.



Our Big Move to the Cloud - Gmail for Staff



Following the successful migration of the Student Mail service in 2011 to Google Apps for Education, including Gmail, UCD IT Services completed the transition of UCD Staff Mail to Google. This involved supporting approximately 6,000 staff through a migration of over 65 million mails.

The project was rolled out on a phased basis, location by location, with staff members transitioned in weekly batches. The rollout of the service took five months from January to June with dedicated support offered to University staff throughout. By 22 April 2013, 3,829 staff members had used the new service.

With over 30,000 smartphone and tablet devices on the UCD network, ease of access via mobiles to Gmail, Google Calendar and Google Drive was an important factor in this transition. Additionally, Google's continuous innovation process brings service improvements without impacting service availability.

A great deal of emphasis was placed on security and data governance. UCD IT Services completed a due diligence review and received legal advice prior to embarking on the transition.

Feedback from the move was positive overall. Some of the benefits this move has brought include: a seven-fold increase in each customer's quota, over 160Tb of storage for UCD staff use, plus improved smartphone synchronisation. The service, which is advertisement-free, incurs no additional cost to the University.

65,000,000 mails were moved across to the new system

6,000 staff accounts were involved

886 staff responded to our brief survey about the Big Move:

58% of respondents found the move easy or very easy while 25% found it to be neither easy nor difficult

50% of respondents didn't need support during the transition

23% contacted the IT Helpdesk and

25% availed of our outreach support programme within the school or unit

Key benefits of the move, identified by staff are:

- increased personal storage to 30GB
- ease of use
- 24x7 service availability (99.9% SLA)

Staff in UCD use multiple clients to access their mail:

- 50% respondents use a webmail client
- 33% use Outlook
- 33% use their phones

Over 4,000 staff access their mail service daily with over 4,700 using it during any given week. By the end of 2013, 14.3TB of storage was in use.

Customer Feedback:

"My Big Move to Google has gone well.. we were given lots of notice about the move which I appreciated. Communication was good. On the day of the move, one of your colleagues was knocking on doors making sure we were ok with the migration, this was wonderful. I don't think it has happened before. In terms of customer service excellence, it was up there."

I have left Outlook behind completely and while some aspects of the new system take time to get used to - I see it as a positive move."

*Charles Harper
Research Manager
UCD Forestry*



Advancing Continuing Professional Development

A new flexible booking centre developed by UCD IT Services was launched in 2013 to help offer an increasing number of small courses aimed at maintaining or enhancing professional knowledge and competence. The UCD Continuing Professional Development (CPD) Board of Studies university-wide consultation process in 2012 found that the regular online registration was not designed for students taking short courses. For the purposes of CPD, the system has been trialled by the UCD School of Veterinary Medicine and UCD School of Medicine & Medical Science.

Dr Jason Last is Associate Dean for Programmes & Educational Innovation at UCD School of Medicine & Medical Science. In addition, as Chair of the University CPD Board of Studies, his work involves facilitating colleagues in considering how existing educational activities might be adapted and how new courses might develop for the professional working community, often using technology to expand the reach of courses and strengthen links between geographical locations.

Championing the development and delivery of quality online content is part of his goal and the introduction of the new booking centre is facilitating the expansion and growth of blended learning courses.

Prior to the booking centre being set up, participants would have to complete the full registration process which was time-consuming and a deterrent. The booking centre makes the process a lot easier for learning professionals. It also helps UCD with tracking and management aspects. As with all new systems, there is a period of adaptation but most are finding it to be an easy to use centralised service that offers a straightforward way to manage the fee payments, and monitor the demand for a course.

The School of Medicine's CPD offerings currently being trialled through the booking centre, include the Centre for Emergency Medical Science (CEMS) and Diagnostic Imaging courses. There is a CPD framework now in place in the School of Medicine so that a process exists for any potential future courses. Previously, people developing new ideas for seminars, short courses and standalone modules aimed at the professional community didn't have a mechanism by which to launch them. "The fact that we can offer flexible modules is a game changer and it allows new content to be enjoyed by a new and wider audience," says Dr Last.

According to Dr Last, "Technology offers us a means of enhancing existing programmes and creating new opportunities in the way we teach and learn." He gives the example of doctors taking advanced courses in Dermatology. This programme was adapted so that a large portion of the content was delivered online rather than face to face. This significantly enhanced the reach and accessibility of the programme and has enabled further development towards internationalisation.

"Digital content is proving to be very popular and although time-poor, geographically dispersed graduates are the obvious beneficiaries, the educational resources produced can also be repurposed for other cohorts and re-used where applicable across different streams. Professor Niall Tubridy's YouTube videos on Neurology are an example of this." These videos amassed 75,000 views in the first six months.

Finally, asked about the future use of the booking centre, Dr Last says, "The booking centre is facilitating a smooth experience for all stakeholders involved. A full review of the CPD pilot will take place but so far the feedback from the academic community is very positive and we hope to offer more educational products via this channel in the future."



One of Olga Murdoch's goals for UCD Online is to replicate the social space that is the UCD campus, but online. "Google+ is going some way to help with this as social posts can be made, which helps to create a sense of community and the hangouts feature has also been used successfully for tutorials."

UCD Online - Paving the Way for Flexible Learning


UCD IT Services provides the flexible infrastructure that supports the delivery of the online programmes offered through the UCD Online initiative. Olga Murdoch is the Project Manager and Educational Support Specialist for this pilot. Working closely with Professor Joe Carthy, College Principal for the College of Science, a large part of her job involves supporting academics technically to design and develop eLearning content, as well as managing the UCD Online website www.ucd.ie/online.

There are currently five courses being piloted – the MSc in Environmental Sustainability (Negotiated Learning); an MSc in Food, Nutrition and Health; Professional Diploma in Data Analytics; Professional Diploma in Education Studies; and a Professional Diploma in Architecture.

Articulate Storyline is a popular means of creating the digital content for these courses. Other tools include Adobe Captivate, Articulate Studio and Echo Capture. This new means of delivering lessons takes time to set up, and involves various technical challenges, however there are benefits. Olga explains, "Creating content that can be re-used in different environments e.g. Blackboard, Moodle, YouTube, means it can be leveraged to reach a much wider audience."

Take-up of the five courses has been very good so far. They have also reached a new 'type' of student: working professionals, mainly locally based but who don't have time to attend classes on campus. The nature of the asynchronous modules within the online courses allows them to choose when to study at their own convenience.

"UCD IT Services were great in the setting-up of the pilot, troubleshooting issues, providing technical support for academics and creating promotional videos," says Olga. IT Services also amended the existing online applications system to include the online courses and implemented a route for enquiry management.



Duchas.ie, an Irish folklore repository, uses UCD IT Services' cloud service 'CloudEdu' to store its digital images. Duchas.ie came about as a result of a partnership between the National Folklore Collection, UCD, Fiontar, DCU and the Department of Arts, Heritage and the Gaeltacht and has recently received additional funding to digitise the National Folklore Collection.

Image 'Clos Scoile' courtesy of Críostóir Mac Cárthaigh, National Folklore Collection at UCD

Supporting the Research Community

High Performance Compute Clusters

Along with cloud services, on-demand high performance computing resources are also available to the UCD Research community. The new ICHEC supercomputer called Fionn provides two levels of service, a national level service known as Tier1 and an institutional level shared service known as Tier2 (both infiniband). Fionn is an SGI-built hybrid system, its compute nodes have different hardware configurations which allow them to be applied to varying research scenarios. The UCD Tier2 shared service on Fionn comprises of 384 CPU cores and 30TB of high performance storage. One of the Tier2 service users is Maryam Hajimohammadpoor of the UCD School of Chemistry and Chemical Biology, who uses the Gaussian program on Fionn for computational chemistry.

UCD IT Services also has a new cluster called Sonic, for Tier3 workloads (Gb ethernet), which is available to all UCD users. This Dell system has a total of almost 2.4TB of RAM across 18 nodes, which provides users with a platform suitable for running memory intensive code. With Sonic, researchers share time and resources allowing everyone to harness the computing power to support their research. Users of this system include Viola Volpato from UCD School of Computer Science and Informatics. "The Sonic cluster is a huge benefit to my research. I deal with big data sets and require powerful systems able to analyse

them," says Viola. "Sonic supports lots of simultaneous processes that can run for a long time and allows jobs that require great amounts of resources. Overall, it improves speed of analysis. I use Sonic for a Bioinformatics project for training Neural Network models on protein data sets to predict protein functional and structural information."

UCD IT Services' dedicated Matlab cluster runs Version 2013b and consists of 64 cores of IBM equipment. This University resource gives registered users the ability to solve computational and data-intensive problems using multicore processors. Plus, users can connect to the cluster via their desktop Matlab client, submit their jobs to the cluster and once completed, collect the output without having to continually run Matlab on their desktop.

One such user is Colm Doyle, a PhD researcher from the Financial Mathematics and Computation Research Cluster in the School of Business. Colm's research is in the area of quantitative pension-fund management. He explains, "The cluster has enabled me to run key parts of my code at between 10 and 15 times the speed that I had been previously running them. As a result I can consider far more complex environments, which greatly increases the scope and potential of my work."

Research Foresight Exercise

In 2013 a Strategic Foresight Exercise was carried out with a five year time horizon. Its purpose was to position Research IT Services to deliver on the emerging and future needs of the research community. The approach was to look at best international practice, identify emerging trends and run a number of focus groups. In order to gain the broadest possible perspective, researchers from across all disciplines were invited to attend the focus groups.

For progress updates and to see the final report 'UCD Research IT Service Needs, Addressing the future IT needs of the UCD Research Community' which was published in September 2013, visit: <http://www.ucd.ie/itservices/researchforesight>.

Good Practice in Blackboard Design

A new Blackboard module template was launched in 2013. Áine Galvin is the Director of UCD Teaching and Learning and her role in the redesign of the Blackboard module template was to lead and coordinate the collaborative project, which involved a detailed consultative process, research and benchmarking of good practice in the online environment.

The project came about as a result of feedback received from both staff and students that they sometimes find it hard to place or find teaching material in Blackboard. Lecturers had different methods for managing the online content so approaches across schools and programmes would vary greatly. Strategically, it also made sense to evolve the templates and instil a level of consistency across Blackboard modules.

UCD IT Services were involved in creating guidelines and designing and testing the new template. As a result of the research and consultation phase a set of best practice educational principles were communicated to support staff. These principles, which were fed into the design process, introduced some simple strategies for enhanced student learning via Blackboard and promoted consistency of navigation and layout of content. Workshops were then facilitated by UCD IT Services in schools to support academics to customise their existing Blackboard modules to align with the new template. Pilot schools also played an important role in the process by testing the new guidelines. The UCD Access Centre and UCD Online, who have adopted the template, were also involved.

According to Áine, one of the main challenges with this project was that although all new modules will automatically appear with the new template, it has to be manually applied to existing modules, so the roll-out was timed to coincide with when module preparation begins so that academics could then add the new layout alongside their content. Many found that while doing this they learned a lot more about Blackboard.

In the future Áine plans to create exemplar modules to show the full extent to which Blackboard can be used as a teaching and learning tool.



Digital Media Initiative Goes Global

During 2013 UCD IT Services designed and developed 'Live Safe!', an interactive questionnaire for the Mater-Bronx Rapid HIV Testing research project (M-BRiHT). This HIV screening programme is run by the UCD HIV Molecular Research Group in the Mater Hospital Emergency Department in collaboration with the Jacobi Medical Centre, Bronx, New York.

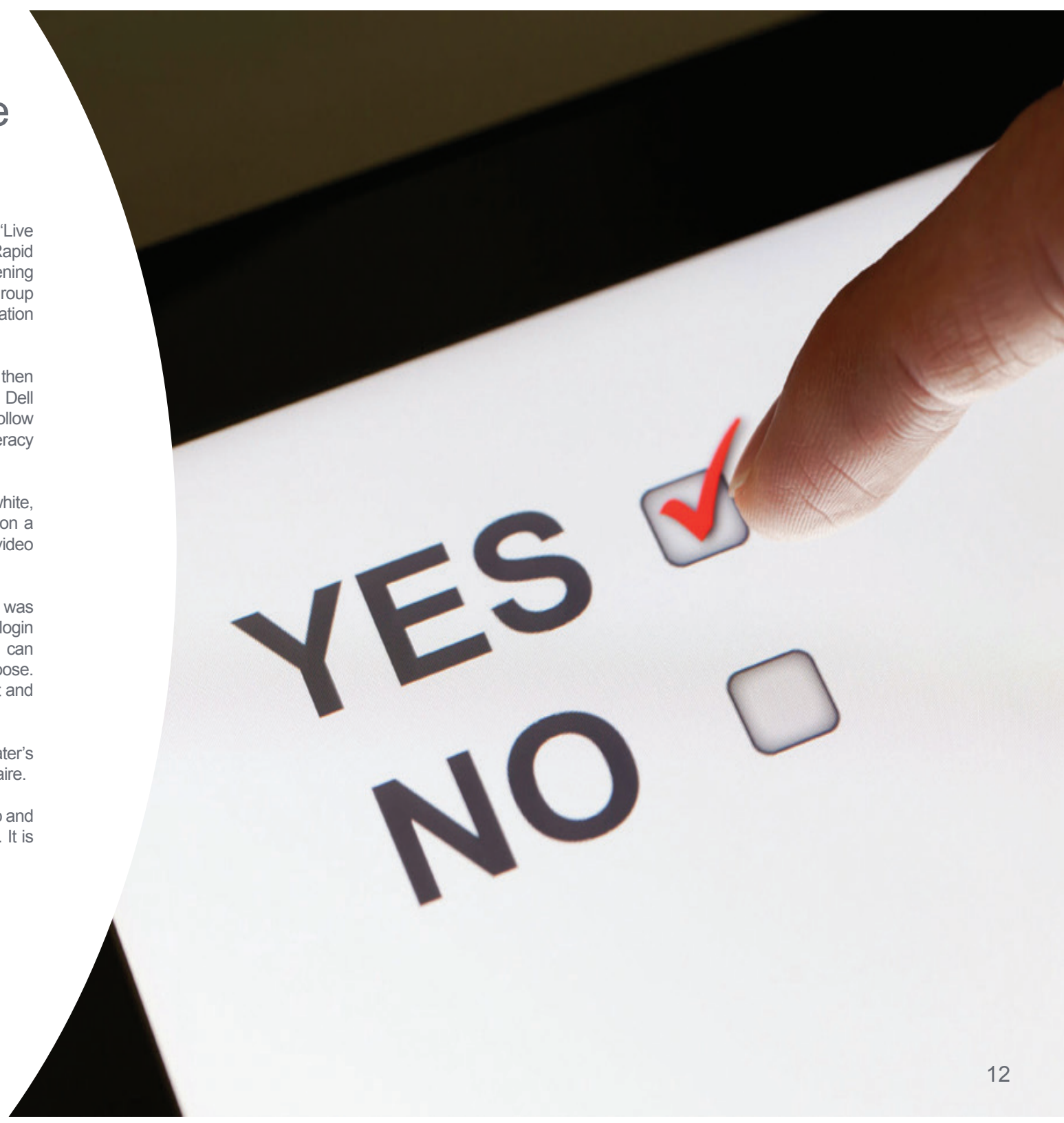
Participants watch videos of a doctor asking questions and then record their answers on a touch-sensitive screen using a Dell tablet. Both the language and technology are simple to follow since some participants may have low levels of English literacy and poor computer skills.

The participants have a choice of four doctors - black or white, and male or female. The questionnaire was developed on a series of specially designed web pages, which run the video clips and display the questions in text, as well as audio.

A 'back-end' for test administration by research assistants was also developed by IT Services. The research assistant can login and register the participants using a unique number and can randomly assign a doctor, or allow the participant to choose. Responses are saved to a MySQL database on the tablet and can then be transferred to the main database.

By December 2013 over 7,500 people attending the Mater's Emergency department had agreed to take the questionnaire.

Project leader Dr Gerard O'Connor is getting the system up and running in Manchester, England, for the summer of 2014. It is planned to run in Modena, Italy, in the near future.



A Day in the Life of an IT Guy

Michael Kinsella joined UCD IT Services on a nine-month Jobsbridge internship after finishing his studies in Data Networking and Engineering. When an opening on the Customer Services team developed, he joined as an IT team member. In this role, Michael provides frontline support from the IT Centres on campus or via desk-side call outs.

Working in an IT Centre brings lots of variety. “Students and staff drop in with all sorts of IT queries to do with Blackboard, browser compatibility, software download issues, and so on. We have gained a good all-round knowledge of all of the services available and even some that are not,” says Michael. Often he will research solutions himself, other times this requires liaising with different teams in IT Services.

In terms of the challenges the job brings, Michael says, “When you have an open network like UCD and a ‘bring-your-own-device’ (BYOD) campus, you get every and any smart technology you can think of through the door. We’ve learned a lot about configuring and troubleshooting all kinds of devices! But we love a challenge!”

Michael was involved in the Big Move to Google Mail in 2013, supporting staff with desk-side visits throughout the transition. He has also supported students through their first week in UCD, helping with IT Induction and the many queries that flood in during start of term. 4,245 students attended the IT Induction courses in 2013, which took the form of a short video including vox pops from students, highlighting the flexibility of IT at UCD.

To sum up the life of an IT guy, Michael adds “Every day is different, dealing with different queries, meeting new people. We’re not like ‘*The IT Crowd*’ stuck in a basement somewhere!”



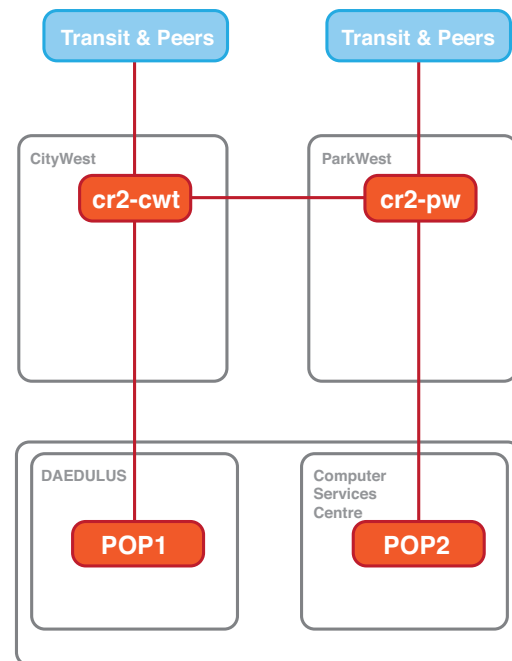
Future Proofing

Network Resilience

In April 2013 a second independent internet point-of-presence (POP) was built on the UCD campus, in the UCD Computer Centre. This was in addition to the existing POP in the Daedalus building.

The two POPs provide physical site network resilience in the sense that one POP can be lost but no service outage will take place as the second POP will automatically direct the traffic. The completion of the works involved fibre rerouting and using independent link providers on the HEAnet network. Both internet links are 10Gigabit-per-second connections.

UCD's Network Service



10GB Bandwidth Connectivity

Science East and the new Sutherland School of Law are the first buildings in the Higher Education community in Ireland with 10Gigabit-per-second bandwidth connectivity.

UCD became the first Irish university to connect to the internet using 10GB links to HEAnet. Following on from that UCD IT Services has been working on delivering a best-in-class network service.

With the opening of two new state-of-the-art buildings, UCD Science East and Sutherland School of Law, staff and students within both buildings, are availing of the fastest internet speed in Ireland. This is a massive upgrade of link speeds for buildings and will become the normal connection speed for all of UCD's buildings, giving the staff and students of UCD the best possible network service available globally to aid research, teaching and learning.

Inter-institutional Information & Communications Technology (ICT) Collaborative Framework

During 2013 an ICT Strategic Development Framework was created by the seven University IT Directors. It will foster greater collaboration and integration of ICT developments across the Higher Education sector.

The main purpose of the Framework is to:

- drive maximum value for money in the delivery of Information Technology
- foster collaboration while enabling diversity and autonomy across the Higher Education landscape
- build upon successful collaboration in ICT across the universities, for example HEAnet which has been an exemplar of successfully delivered shared services



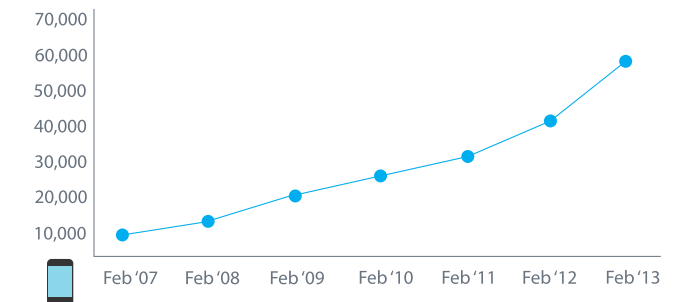
Wireless Management

In November 2013, UCD IT Services provided service to 67,739 different physical mobile devices on the wireless network, up from 54,501 for the same period in 2012 and 40,170 in 2011. With unprecedented numbers of devices on campus, a necessary upgrade of the wireless service was required.

The new wireless service has been renamed 'UCD Wireless' and the upgrade provides better use of the underlying IP address resources and facilitates seamless roaming on campus.

Since the upgrade, results show levels of congestion have ceased in all areas fully upgraded and reduced significantly in other areas.

Yearly Unique Devices on the Wireless Network

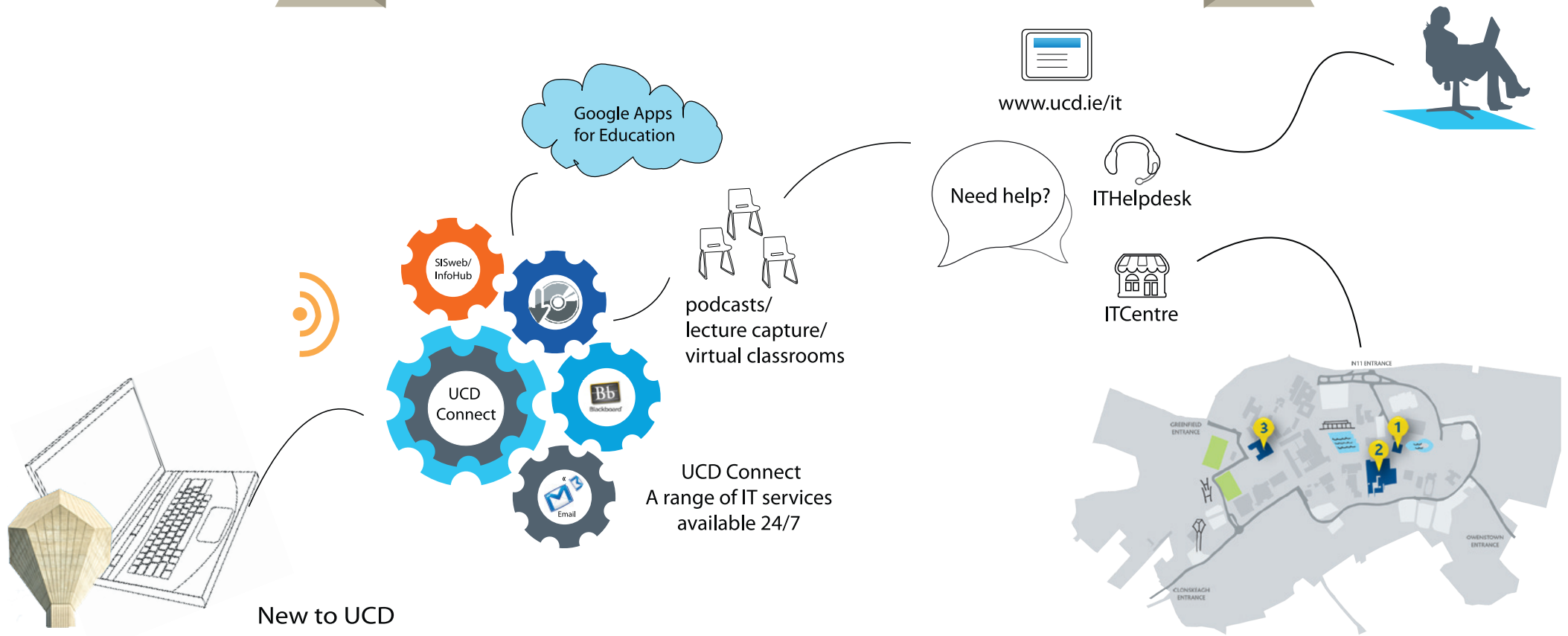


Corporate Social Responsibility - PC Recycling

UCD IT Services aims to recycle PCs whenever possible. In September 2013, 25 recycled laptops and a laptop cart were donated to the Camara Ireland organisation which provides low-income schools with these computers.



Exploring the customer journey



Contact UCD IT Services

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