UNIVERSITY OF
LIVERPOOL
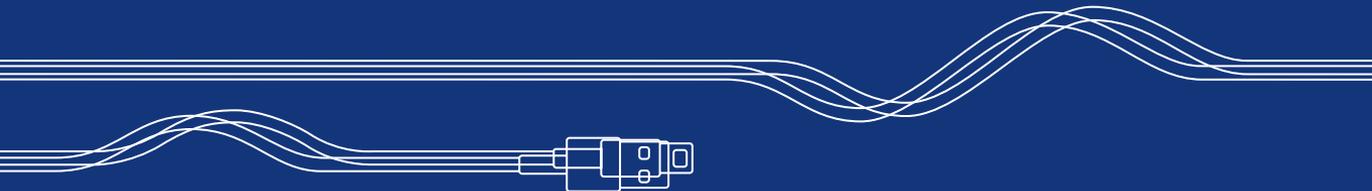
Innovate. Invest. Interpret.

**Computing Services Department
Annual Report 2017/18**

Looking to our digital future

The Computing Services Department has been transformed by a year of challenges and opportunities; ones that have called on us to be innovative and forward-thinking in our approach. While it is no mean feat to future-proof services in the face of rapidly changing technology, we have undertaken pivotal projects to ensure our services meet industry standards and serve our staff and students.

Our most ambitious project kicked off this year with the investment of £3.5m to increase the resilience and performance of our data centres. All functions at the University are increasingly dependent on IT. This investment is essential to ensure our 'digital future', and it allows us to interpret the ever-growing demand for high performance services into resilient solutions.

This year we sought and achieved Cyber Essentials accreditation for our Managed Windows Service. This success confirms our drive to deliver industry standard, efficient, and secure IT services across our campuses.

Our commitment to innovation is echoed throughout the University. At this year's staff awards, our Research Finance Forecasting Tool team received the Innovation of the Year (Team) gong. The team developed an online tool to allow research income and costs to be forecast more effectively and accurately than ever before. We applaud our staff for their excellent work.

It's always exciting to showcase our standout achievements, but it is the quality of our everyday work and support that I am particularly proud of. From our Service Desk which resolves over 200 queries each day to the Desktop Services team who maintain all campus IT equipment; these are the vital services that allow University business to continue unhindered.

Our priority is to provide dynamic, user-friendly services while keeping another eye on what our services will look like down the line. The University's staff and students are our yardstick and as such, we always look forward to their feedback so that we can keep improving.

I must thank my colleagues across CSD for their invaluable contributions to our success. This report is a testament to their dedication, innovation and skill. In closing, I'm reminded of this very important observation by the late, great Arthur C. Clarke: "Any sufficiently advanced technology is indistinguishable from magic."

Yours in service and magic,

John Cartwright
Director

Our Mission

To develop and deliver IT services that drive forward the vision, strategy, plans and people of the University of Liverpool

Our Objectives

To Interpret

We are here to serve the University's aims. We make it a priority to understand and interpret the present and future needs of all University members so that our solutions enhance teaching, learning, research and support.

To Innovate

We are working towards tomorrow's IT solutions. As our environment evolves, we are inspired by this change to think laterally and innovatively, and in turn provide creative, thoughtful IT solutions.

To Secure

The quantity and complexity of information continues to grow and, with that, so do the threats to information security. We will expand our measures to manage risk, maintain vigilance and raise awareness, to promote responsible and safe use of our systems to keep University data secure.
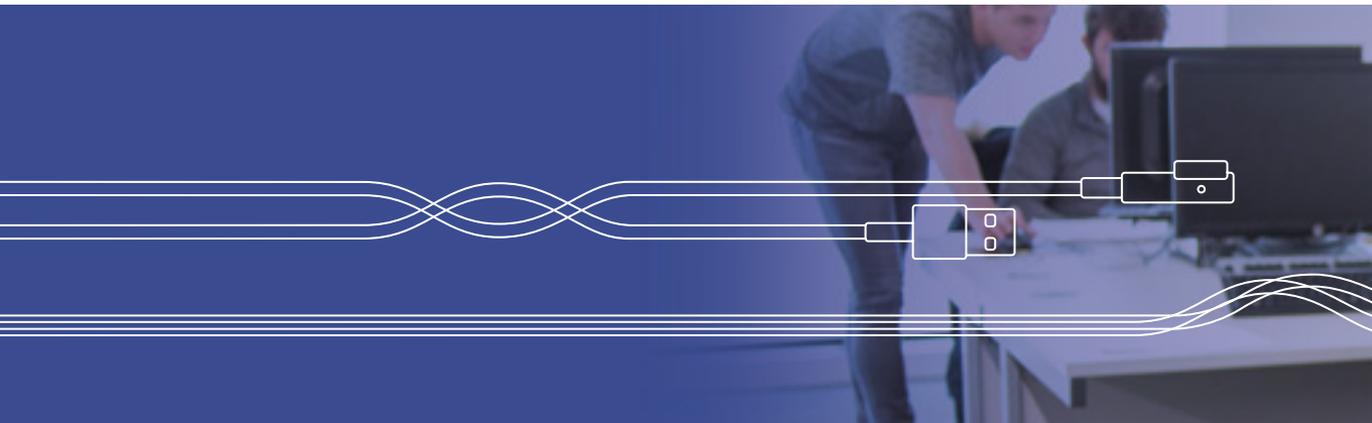
To Deliver

Service delivery is at the heart of what we do. We will re-evaluate all our processes and provisions to ensure that our services meet the University's needs, and that they are efficient, accessible and effective.

To Invest

Taking stock of evolving technologies isn't enough. Firstly we will invest in our people – our biggest asset – as it is their skills and insight that deliver the outstanding service we provide. Furthermore we will invest in designing services that are future-proof, forward-thinking and fit-for-purpose in the University environment.

To Collaborate

We recognise our role in the ecosystem of the University; we will embrace opportunities to work together with departments and individuals to achieve results and deliver better services.

Computing Services Activities

1st August 2017 - 31st July 2018

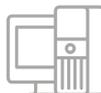**49** New opportunities assessed

9 Process reviews

13 Business analysis reviews

18 Major projects underway

14,232 PCs supported

777 New PCs and laptops supplied

53,342 Unique devices connected to Wi-Fi

5,000 VoIP phones

1,357 University mobiles

41 Apps developed

100,000 Mobile apps downloaded

11,922,427 Visitors to university websites

200 Terabytes of storage used

107,250,923 Emails delivered

112,975,143 Malicious emails blocked

26%
Reduction in pages printed

1,530
Trees saved through Records Management

12,536
Lectures recorded on Stream Capture

3,221,131
Viewings of recorded lectures

34,150
Unique teaching centre users

5,400
CPU years of resource used on advanced research computing facilities

1050
Staff attended CSD training courses

3,496
Twitter followers

58,347
Support incidents resolved

2,682
IT equipment securely disposed

60,000
Active network points

6,758,390
Logins to VITAL

Key Achievements 2017/18

Acting now, thinking ahead

The transient nature of our technological (and physical) environment requires us to always consider not just the way things work now, but the way they could work in the future. This reality has inspired innovative, creative projects across CSD this year that allow us to be resilient and adaptable in the face of possibly unfathomable advancements in technology. We have focused on security, resilience, future-proofing and empowerment. These are some of our key achievements.

Security: A Priority

CSD has invested in evolving its security tools. We have introduced a dedicated security team within our Infrastructure department, making sure our digital environments are defended against online threats and cyber attacks. Furthermore, the University received Cyber Essentials accreditation for its Managed Windows Service (MWS). This accreditation is industry best practice and is received on the back of the introduction of the Admin Rights Manager (ARM) programme on all MWS machines, a development that keeps our devices and information secure by restricting administrative rights to defined timeframes and actions. Additionally, Cyber Essentials accreditation allows the University to continue to work and secure research opportunities; an imperative for us as a Russell Group University.

Empowering Through Knowledge

We want our staff and students to know that the answer to their IT problem is at their fingertips. In conjunction with the launch of our new-look self-service portal, we strengthened our knowledge production capabilities to give CSD staff the power to easily share their expertise with the University community. With hundreds of self-help articles readily available, and new advice created every day, we've made it easier than ever to resolve your IT issue without picking up a phone or sending an email.

Banner 9 Upgrade

This year we successfully upgraded to Banner 9 as part of the Student Records System Upgrade (SRSU) Project. Completing the upgrade represents a key milestone for the institution – providing a solid, stable base to support a major programme of business change and improvement activity, aimed at enhancing both the staff and student experience. This upgrade, which improves how we collect and manage our student data, marks the completion of phase one of the SRSU project.

Curriculum Manager

Curriculum Manager is a single, central repository for all academic programme and module specifications with role-based access available to staff across the University. This system replaces Programme Planner as it better facilitates the University's approval workflows and processes, and streamlines the way in which we develop our academic offering.
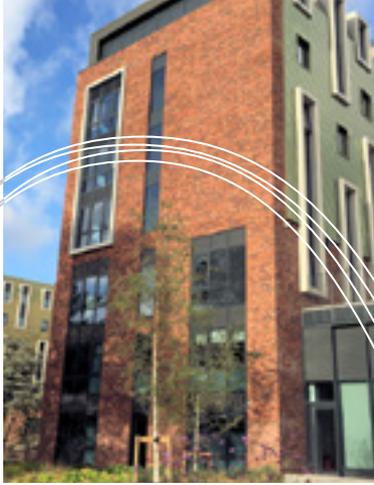
Networked for Success

In addition to replacing and repositioning hundreds of older Wi-Fi access points each month in response to new and changing requirements, we've invested heavily in improving the bandwidth and resilience of our network. The connection between the campus and Greenbank Student Village has been upgraded to introduce ten times the previous bandwidth. With an average of 50 000 devices connecting to our Wi-Fi service each week, transferring 155TB of data, our network is working harder than ever; as are we to ensure it meets our staff and students' requirements.

Library App

One of the highlights of the 41 apps developed by our team this year is the Library App. Built in conjunction with the Library staff, the app allows Library users to see their loan history, when their books are due and renew within the app. One of its most useful features is that it produces a virtual ID card, allowing access to the Library by simply scanning your phone.

Clearing Enhancement

We undertook extensive work to enhance our telephone service infrastructure in advance of Clearing activities this year. This was to ensure that inbound calls to the University's Clearing Centre were handled as a priority and without disruption. Part of this work included appointing a new supplier that provided live reports on inbound call traffic to allow management teams to make informed decisions in real time and react to increased demand, capabilities the University had not had before.

HPC Barkla

As of 2018, The University has two parallel Linux clusters that are the main high performance computing resources on campus. The newest system is Barkla, containing 105 nodes, each with 40 cores and 384GB of memory; 200TB networked storage for ordinary computations; and all nodes are connected by a 100 gbit/s OmniPath network.

Find out more about these projects at
liverpool.ac.uk/csd/about

On the Horizon

Data Centre Project

The University of Liverpool is investing £3.5 million to increase the resilience and performance of its data centres in response to an ever-growing demand for high performance digital services. Work has already started on replacing one data centre, with upgrades completed in the remaining facilities. All works are scheduled to be completed within 18 months.

Two-factor Authentication

Two-factor authentication (2FA) is a valuable security feature that protects accounts from being compromised due to password reuse or phishing. It works by using a phone or other personal device to verify yourself as the account holder when logging into a service. Due to advancements in technology and the Internet of Things, a username and password is simply no longer fit for purpose when securing access to services.

Office 365 Trial

Following a short pilot, we will explore how best to deploy Office 365 - maximising the value and benefit this will deliver whilst maintaining safety and security both for individuals and the institution. Deployment will result in improvements to collaborative working as well as introducing new tools and increased flexibility and mobility.

Cisco Identity Services Engine

We are looking to introduce Cisco's Identity Services Engine into our network offering as it delivers superior user and device visibility which support enterprise mobility experiences, and helps manage access.

Upskilling Programme

Our Strategy and Planning Department will be implementing a Continuous Improvement Upskilling Programme following a successful pilot. This development programme consists of workshops and mentoring sessions aimed at helping staff across the University make lasting improvements to their processes.

Improving our Data

Consistency, reliability and accuracy of data are critical foundations for effective decision-making. We will deliver an institutional data strategy that will enable us to use and manage our data to its full capacity - providing access to real-time data to assist with planning and giving increased capacity to handling, storing and using our institutional data.