S2 Software2 **numecent®**

Kingston University.

Case Study

The Kingston University campus is spread across 4 locations around the town of Kingston upon Thames.

Eight miles from the centre of London and serving more than 20,000 students studying across five faculties and partner colleges, at home and abroad, Kingston University is proud of its diverse and multi-cultural student population, and it welcomes many students who are the first in their family to attend university.

Kingston University London

Why Software2?

Application deployment specialists

Education-focused; understood issues and challenges

Industry-specific user events and online community

Personal and customer-focused service and support

Supporting STEM apps.

Recently Kingston University strategically merged three faculties, Science, Engineering and Computing, to bring these academic disciplines together under one umbrella.

This merger created an interdisciplinary faculty designed to allow students and staff to fully appreciate the benefit from working alongside individuals with related spheres of interest and expertise.

This move encompassed around 40% of the university's total student numbers, creating a large faculty with complex and diverse computing requirements. Over 850 software applications, of which 50% directly support STEM-based subject areas (Science, Technology, Engineering and Maths), are utilised by staff and students.

It's rare outside of higher education to find examples where thousands of people (students) have access to thousands of computers and use any one of hundreds of possible apps, often across multiple locations. And on demand, too.

Providing an awesome student experience.

As part of the university strategy to ensure quality end point destinations and high employability of its students at the start of their careers, significant investment in providing 'industry standard' software for the student experience is required to adequately prepare students for diverse careers.

The deployment and availability of the 'specialist' software packages is key in maintaining a high level of service provision, adding real business value to the student experience and to resource utilization, university-wide.

Students' expectations are that the resource they require should be available to them 24/7, from wherever they choose to study.

To meet the criteria the faculty moved away, where possible, from small, specialist computer labs and created larger, more flexible facilities. This had the immediate benefit of reducing unnecessary and expensive duplication of lectures, and increased the availability of resources to students

# Supplying specialist apps, anywhere.

The biggest challenge was finding a solution that could achieve flexibility by ensuring specialist software availability across all its computing resources, whilst maintaining the specialist raquirements of the individual disciplines.

This facilitated students being able to utilize additional computing facilities that were available outside of the Faculty, in Leaming Resource Centres (LRC's) and Centrally Programmed Teaching (CPT) rooms, for specialist apps in addition to the common apps delivered to all university PCs.

The considerable challenge of installing apps on thousands of PCs within the department was becoming an increasingly time-consuming process, and reducing resource availability. Large base image sizes meant that it could sometimes take upwards of 10 hours to deploy software onto a PC.

This inhibited the installation of a large range of specialist apps in communal areas such as the LRC, meaning students were unable to access such apps on a 24/7 basis. Kingston were keen to find a solution that would allow them to make specialist resources more widely available, increasing the service delivery to students. The aim was to significantly increase the added business value of these facilities, whilst reducing deployment and service costs.
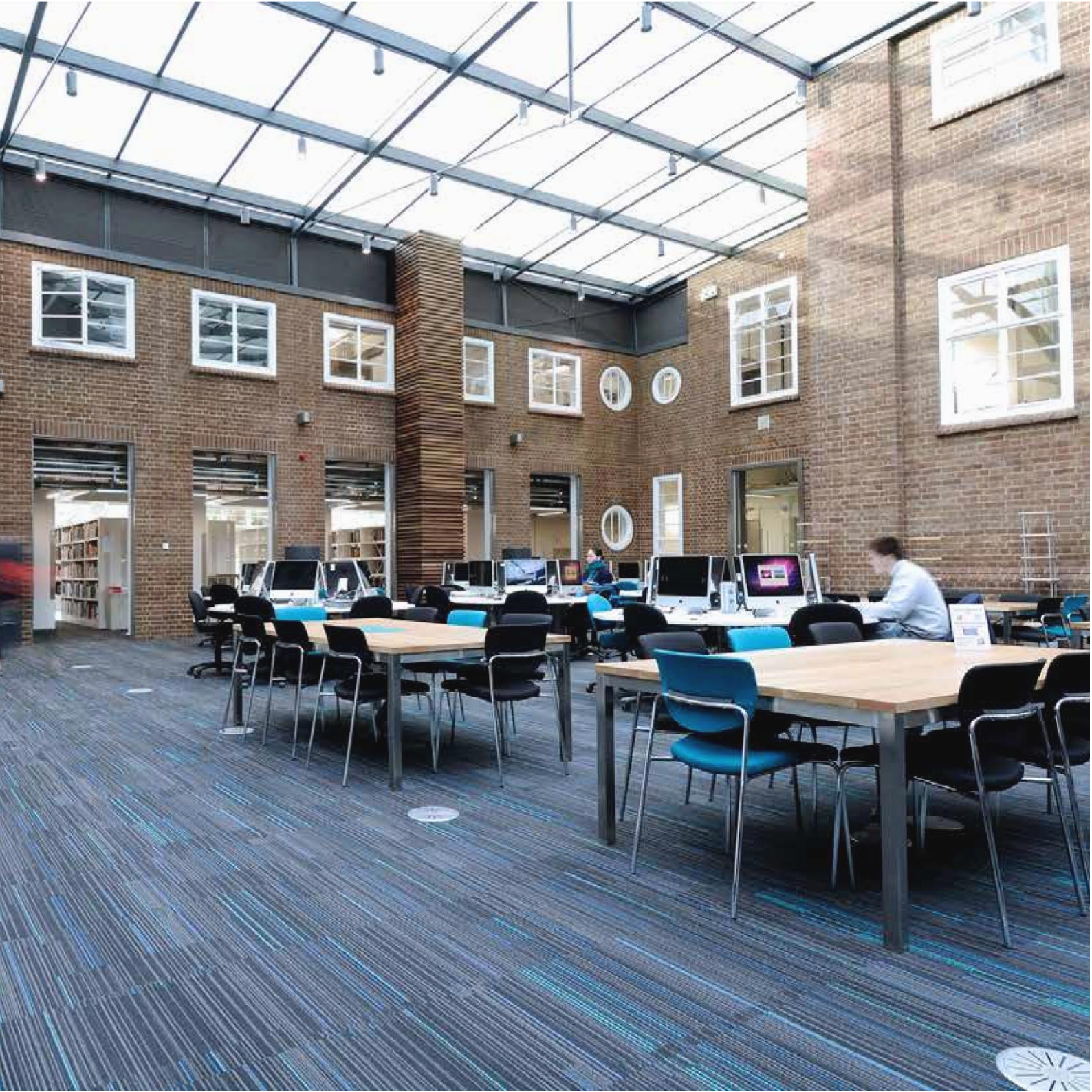
Finding the solution.

The University had a great deal of experience using common application virtualization technologies, which had limitations and were only able to accommodate around 20% of the apps needed for specialist teaching areas.

These limitations meant that resources that added real value to the students' learning environment were not available outside specialist faculty facilities (these being the larger apps that were not standalone and needed to integrate with other apps).

With this backdrop, a project team was allocated funding by the university to carry out an in-depth study of available technologies. In all, fifteen products were identified for testing, which was carried out against strict criteria.

AppsAnywhere was selected as the resounding front-runner, not only because of its technological merits and potential, but also because of the strong working relationship that developed between the university and education specialists Software2.

The benefits of using AppsAnywhere

1. **Increased number of virtualized apps** from 20% to 96%

2. **Reduced image size** now takes just 45 minutes to deploy machines (reduction from around 10-12 hours previously!)

3. **No application testing conflicts** using AppsAnywhere

4. **Students now access apps from any location** (not just labs!), 24/7

5. **Saved costs (£750-900 per machine)** in computing labs **whilst improving service delivery**

The use of AppsAnywhere resulted in an increase from 20% of applications virtualized to 96%, and the biggest benefits were quickly recognised.

Problems with Image size have been vastly reduced, with a Windows 7 machine now taking lass than 45 minutes to deploy - a huge reduction on the previous time of ten to twelve hours.

The system provides flexibility in timetabling and availability of not only common apps but specialist faculty software, in Centrally Programmed Teaching (CPT) and Learning Resource Centres (LRCs) adding to a number of KPIs.

There have also been no application testing conflicts with AppsAnywhere. It has aided the ability of technology to help bridge the gap between declining resources and increasing demand for services, whilst ensuring user satisfaction remains high.

Added benefits.

The benefit for students is the ability to access software from any location, whether in specialist labs or the Learning Resource Centre, on a 24/7 basis, which is a significant improvement as well as value to Kingston's courses.

The duplication of teaching sessions has also greatly reduced. As an example, one particular class that was being taught six times a week is now covered by three larger sessions. The computing resource availability for SEC students to access specialist applications has been increased by 300%.

In addition to the benefits experienced by students, there are also substantial savings in resources and costs. The necessity to increasae the number of specialist computing labs In the university has been reduced; in fact, the Faculty of SEC has achieved a reduction in its computing labs whilst offering an increase in the quality of service delivery. The resulting savings in hardware and maintenance (between £750 and £900 per machine) can be redirected elsewhere.

It's expected that AppsAnywhere will now be rolled out across the whole university, so that other savings can be realized and equally that business added value of computing resources is increased.

The impact on the end users.

Feedback from end users highlighted they're only interested in accessing and running apps that are determined by their business requirements, and in the most effective way possible; the delivery methodology is of no interest to them.

To this end, when they log in, they have access to a 'Service Store' of applications. They select the applications required and these are added to the start menu, making it appear that their applications, and no others, are installed wherever they log in. These are actually AppsAnywhere shortcuts and integrate with the target PC, allowing it to deliver software exactly as if it were locally Installed.

The result is that users have instant, seamless, flexible access to as wide a range of software as required, to meet their individual requirements without the need for complex delivery processes. Benefits to academic staff teaching also include the availability of all software to enhance the teaching environment, and not just the main ones listed in the module guides. Having to identify specialist software resource requirements in advance has largely disappeared.

A number of factors that drive usar satisfaction have been increased by using AppsAnywhere; Supporting service delivery, enabling quality services for all end users whilst meeting operational and managerial needs; Hardware and business systems fully utilized to meet end point requirements; Reliable systems, ensuring low down-time and high presence of service support, facilitating required upgrades and service requests.

The introduction of the AppsAnywhere-delivered software solution has also facilitated a greatly improved management tool. Quantitative data on the use of software applications across the academic year and localization of usage will provide quantitative information, which will be used for strategic planning and review of software resource implication across the faculty.

A big advantage that Kingston found working with Software2 was that the HE sector had a large amount of input into the development of the product, responding to specific needs. In the past the only solutions had been commercial offerings, which had to be adapted, along with existing working processes, in order to fit the product into the environment. In general, AppsAnywhere has allowed Kingston to have a much more responsive approach to end user requirements, in terms of software delivery.

AppsAnywhere has largely addressed demands from students for greater flexibility and availability of all their software requirements, irrespective of their location within the university, on a 24/7 basis. In addition, managing to both reduce deployment and service costs, whilst increasing the quality of service delivery and end user satisfaction, both are critical KPIs.

From a systems perspective, software upgrades and problem resolution can be taken offline without consideration of imaging schedules and avoiding operational down-time. In addition the service desk calls for software installations have largely disappeared for teaching environments.

From a business perspective, Kingston University can easily tell what applications are used and for how long, when and where, as well as the total usage time for any application/person to ascertain business value of any application.

What's the future at Kingston?

Looking to the future, Kingston is starting to use AppsAnywhere to tackle the problems faced with a BYOD (Bring Your Own Device) environment, and how to service applications to their students' own devices. Kingston University are also looking at multi-node / parallel computing, and using AppsAnywhere as part of the HPC computing node set-up, to provision 'worker nodes' quickly, as a base OS, and use AppsAnywhere to deploy software to them as required.

Students in the Faculty of Science, Engineering and Computing, and across the university in all other faculties, are realizing the benefits of the project and the increased accessibility to their specialist software, enhancing their learning experience.

About Software2.

We specialize in awesome solutions for software distribution and delivery, within the education sectors throughout the UK, Europe and North America.

By bringing AppsAnywhere to universities and colleges, we've successfully enabled many institutions to realise their software deployment strategies, efficiently and cost-effectively.

We strive to provide customer service levels that are unparalleled. We work hard to make sure our customers get the maximum support from day one, and with our support team you can guarantee that you'll get a personal one-to-one service with all your queries.

About Numecent.

Numecent is a pioneer and technology leader in rapid, secure and friction-free provisioning of native applications from the cloud through virtualization. The groundbreaking Cloudpaging technology can deliver a native application from the cloud between 20x to 100x faster compared to a linear digital download and execute on the client platform without installation.

We are a software technology company, building software intellectual property and assets, as well as providing software and professional services for application delivery. Our primary customers are Enterprise Customers, Independent Software Vendors (ISVs), Original Equipment Manufacturers (OEM's) and Managed Service Providers (MSPs). Numecent is based in Irvine, California.

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