

Westcon™



Selling into Education with Extreme Networks Solutions Brief



01 RISING IT COSTS

02 INFRASTRUCTURE MAINTENANCE

Necessary for a highly-connected and engaging learning experience.

03 TECHNOLOGY OBSOLESCENCE

Sophisticated learning management systems, enhanced video, online collaborative tools and the advent of the consumerisation of IT have many education institutions struggling to keep pace.

04 DISTANCE EDUCATION

Rapidly becoming mainstream, online and blended learning are gaining firm footholds in the curricula and are quickly becoming an essential revenue stream for UK institutions.

The choices made to upgrade existing infrastructure and leverage future investments become **decisions of strategic importance** — maintaining the Status Quo is no longer relevant.

Education is now a **competitive business** and with university fees in the UK tripling in recent years, the need to fill every space is paramount. Making sure that students are retained during their study is key to ensuring that funding is maximised, and a poor student experience can result in disillusioned students looking for alternative education options.

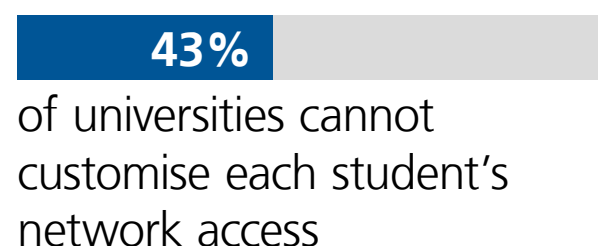
MEGA TRENDS

- FUNDING & RESOURCING**
- MANAGEMENT & OPERATIONS**
- STUDENT RETENTION**
- STRATEGIC AGILITY**
- STUDENT EXPERIENCE**
- USE OF TECHNOLOGY IN TEACHING**



BYOD, WIRELESS AND THE DIGITAL NATIVE

University students are bringing typically **between 3 and 5 mobile wireless devices on campus**, including smartphones, gaming devices, tablets, music players, laptops and cameras. They are digital natives who have **never known a world without Internet**. In addition, faculty and admin have their own wireless devices that need safe access to secure campus resources.



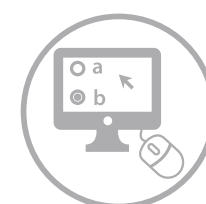
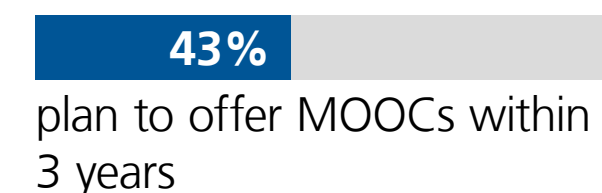
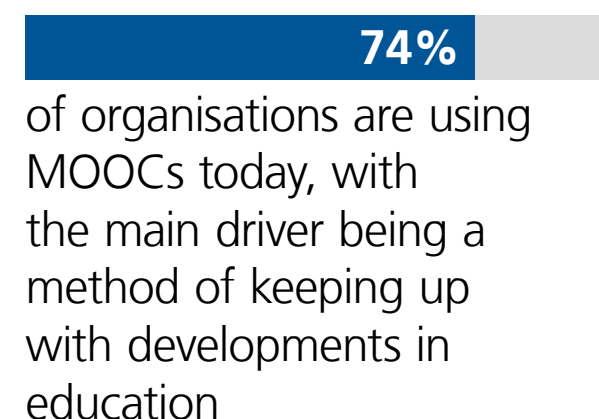
THE CONVERGED CLASSROOM

Higher education institutions are finding new ways to create adaptive and cost-effective learning spaces to support today's sophisticated styles of teaching and learning. It therefore becomes increasingly important that the underlying technology delivers a platform to run **audio & video streams, share content remotely** and encourage a collaborative learning environment.



MASSIVE OPEN ONLINE COURSES (MOOCs)

MOOCs are available **online, for free, to a massive/wide audience**. Students take the **courses together, share assignments** through online forums and study groups, and often evaluate each others' work. MOOCs material tends to be distributed across the Internet via blogs, research sites, discussion boards, etc.



ONLINE TESTING

Online testing demands maximum network performance to deal with **peaks in traffic** and numerous users accessing the network at the same time. The ability to run analytics gives network administrators the ability to understand the performance being delivered both on-site and off-site to remote testing servers.

Students within the same classroom can be restricted or granted access to appropriate resources, helping ensure that adequate network bandwidth is available to those that are sitting the test.



STRATEGIC OBJECTIVES



SOCIAL MEDIA

Social media isn't going away — instructors are using it to **engage students** and students are learning that a **strong digital footprint can boost their chances of finding the right employment**. It is therefore important to understand what social activity is traversing the network.



of schools use/will use social media in the classroom within 12 months



of instructors update social networking site for work purposes



APPS

Educational apps are the most downloaded apps from iTunes. Last year more than 70 billion education-based apps were downloaded.



of educational apps specifically target students



DIGITAL CONTENT

The emergence of digital textbooks and extensive use of video on campus require **high speed and density data streaming**, in turn requiring a high performance and resilient network to ensure that the faculty have **uninterrupted access** throughout the campus.



STUDENT RETENTION

- Case-management systems for tracking students
- Creation of a positive student technology experience to grow loyalty



COST REDUCTION AND OPERATIONAL EFFICIENCY

Looking at admin services, facilities, curriculum management, etc.:

- Cloud
- Collaborative software
- Business Analytics



CLASSROOM INNOVATION

- WiFi everywhere
- Digital and video content throughout the campus
- Online testing
- Adaptive learning and textbooks
- MOOCs
- Global connected classrooms



TRANSFORMATION

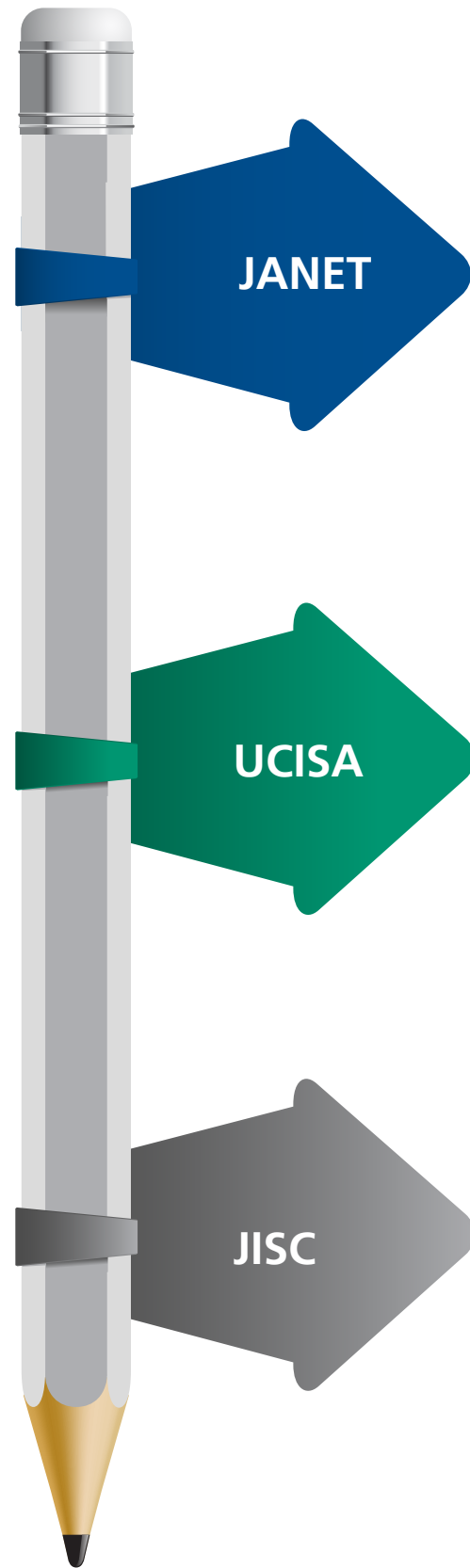
- Build the right infrastructure
- Provide the right applications and services
- Transform the IT organisation
- Support institutional transformation



WHO WILL YOU BE SELLING TO...

	UNIVERSITY CIO	DIRECTOR OF IT (HE & FE)	IT MANAGER (FE & SCHOOLS)
DEMOGRAPHICS	<ul style="list-style-type: none"> • 41-55 yrs old • Married with children • Undergraduate education 	<ul style="list-style-type: none"> • 35-50 yrs old • Married with children • Undergraduate education 	<ul style="list-style-type: none"> • 41-55 yrs old • Married with children • Undergraduate education, often have IT experience outside of schools
METRICS	<ul style="list-style-type: none"> • Image in industry • Business growth • User surveys 	<ul style="list-style-type: none"> • User surveys • Operational efficiency • Unscheduled downtime • Help desk responsiveness 	<ul style="list-style-type: none"> • Operational efficiency • Network performance in the classroom • Unscheduled downtime • Help desk responsiveness
NEWS SOURCES	<p>Google, Twitter, UCISA (UK), JANET (UK), email</p>	<p>email, Google, JISC Networkshop (UK), Twitter</p>	<p>eSchool News (UK), email, Twitter, Google</p>
KEYWORDS	<ul style="list-style-type: none"> • University network design • Network infrastructure • WiFi & BYOD • MOOC • Digital transformation and badges 	<ul style="list-style-type: none"> • Wireless campus • BYOD • Campus WiFi 	<ul style="list-style-type: none"> • Classroom technology • Firewall • BYOD and school WiFi • Digital citizenship • Social media in education
GOALS AND CHALLENGES	<ul style="list-style-type: none"> • Stay ahead of technology trends (especially digital transformation) • Keep all users happy • Provide leadership among C-staff • Grow student recruitment and retention 	<ul style="list-style-type: none"> • Keep IT opex down • Provide great WiFi coverage • Implement BYOD • Protect the network • Support innovative styles of teaching 	<ul style="list-style-type: none"> • Keep all costs (Capex + Opex) down • Provide broad, dense WiFi coverage • Implement BYOD or 1:1 • Protect the children (bullying, content, footprint) • Support innovative styles of teaching • Be ready for online assessment • Provide great service & responsiveness

UK EDUCATION-FOCUSED ORGANISATIONS



The Janet network connects UK universities, FE colleges, research councils, specialist colleges and adult and community learning providers.

[Visit their website](#)



Universities and Colleges Information Systems Association (UCISA) represents the whole of higher education, and increasingly further education, in the provision and development of academic, management and administrative information systems, providing a network of contacts and a powerful lobbying voice.

[Visit their website](#)



Registered charity that champion the use of digital technologies in UK education and research

[Visit their website](#)



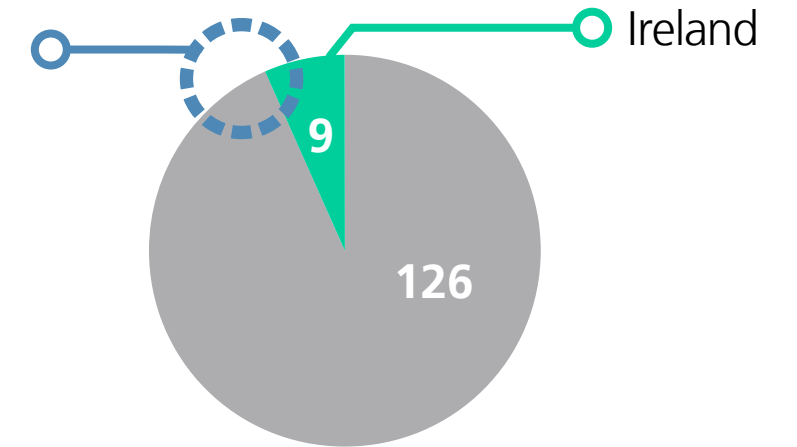
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UK MARKET OPPORTUNITY

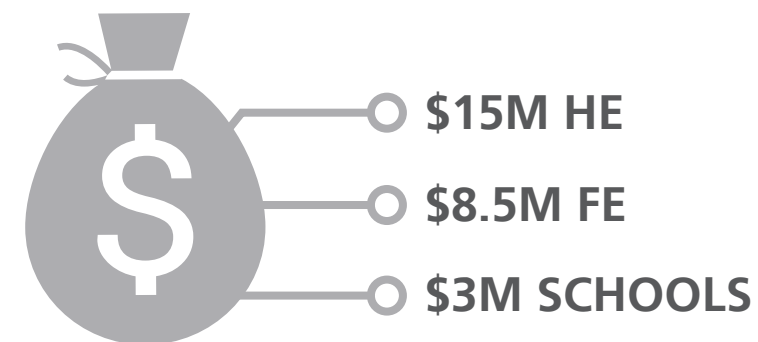
135 UK UNIVERSITIES:

46 DEGREE AWARDING COLLEGES

800+ FE COLLEGES



ESTIMATED ADDRESSABLE MARKET:



27% YOY GROWTH
FY13-FY14

23% NEW BUSINESS

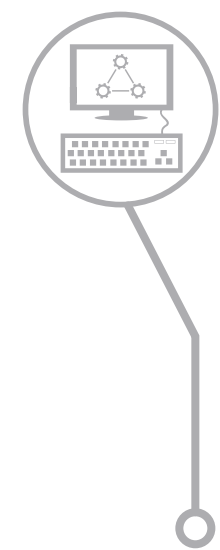
THE RIGHT TIME:



The education sector typically makes changes to their networks during the Christmas, Easter and Summer holidays.

WHAT MAKES EXTREME NETWORKS DIFFERENT?

Extreme Networks deliver the **most educationally focused networking solutions** in the industry and offer a **resilient, intelligent and sustainable foundation**. Their products are built for converged campus networks with user and device mobility in mind, as well as for Data Centre/Cloud administrators to virtualise their servers and storage over a high-performance Ethernet infrastructure.



STANDARDS-BASED, CENTRALISED & SIMPLIFIED MANAGEMENT



Networks are typically built of several components from **different vendors**. This can lead to a complex environment with multiple management consoles.

E Since Extreme Networks offers **standards-based solutions**, IT staff can manage the institution's existing network infrastructure, including third party products. The existing third party infrastructure and the Extreme Networks infrastructure can be managed from a **single database** through NetSight, a powerful, but easy-to-use management tool.



SOFTWARE-DEFINED NETWORKING (SDN) WITHOUT THE LOCK IN

SDN is a hot topic within networking today, so it is important to work with a vendor that delivers on the benefits without locking you in to proprietary deployments.

E Extreme Networks have embraced the qualities of using an **open, standards-based** element blended with a vendor specific API. This allows for **strong interoperability in a multi vendor environment**, plus some **specific off-the-shelf applications** tailored to the customer. This provides customers with further choice as to whether they develop their own applications or take advantage of an SDN development community.



GUESTS CAN BE CONNECTED EASILY AND SECURELY

Visitors to the Campus **expect ubiquitous connectivity**. The creation of new user logins and accounts could be a burden on IT.

E Extreme Networks Wireless includes an integrated Guest Portal (without a separate SSID) including an easy-to-use graphical user interface allowing **non-technical personnel to create temporary guest accounts** and distribute credentials.





KNOWLEDGE IS POWER

Understanding the **detail of what is happening on the network** within the Campus has several benefits and can lead to better decision making.



E Tools such as Extreme Application Analytics can:

- Help achieve an optimal design
- Help make sure that the most important applications get the network performance they need
- Determine **where performance delays are located**, onsite or off-site (this is especially important in preparing for online assessments)
- Provide security benefits such as **proactive security analysis** to monitor, limit or restrict usage of certain websites and applications based on user, device type, location and time
- Analyse what software version and revision level is being used so that security holes can be identified



ENCOURAGING RICH MEDIA WITHIN LEARNING

Today's student is a digital native. University data indicates that students not only utilise Internet resources but also tend to **prefer courses with a high proportion of online media**. This demand on high bandwidth applications leads to IT managers needing to allocate the right amount of bandwidth.

E Extreme Networks solutions allow an optional, "differentiated" access to resources where **all users/ devices need not be treated alike** — a faculty member should be able to access different resources and have a different bandwidth allocation than a student. Users are **based on their identity:**



- WHO you are
- WHERE you are
- WHAT DEVICE you have
- WHAT TIME of day

Since user profiles are **accessed from any LDAP**, the Institution can empower services utilising existing resources.



PROTECTING THE CURRICULAR ENVIRONMENT

E The Extreme Networks solution provides **complete visibility** over the institution's network as well as its airspace. Utilising tuneable parameters relating to signal strength and location, a WiFi-enabled device operating within the coverage of the education facility can be **automatically detected** and identified as an unauthorised access point so it cannot be used.

Additionally, Extreme Networks' intelligent wireless solutions can **filter and shape Apple Bonjour or Google Chromecast traffic**, improving bandwidth and protecting the curricular environment for essential functions.



- Q ... MAKE SURE THAT STUDENTS & STAFF ACCESS THE NETWORK SIMPLY AND SECURELY?**
A Extreme Network Access Control will make sure that this process is hassle free.
- Q ... KEEP A CLOSE EYE ON WHAT'S RUNNING ON THE NETWORK (FOR EXAMPLE VIDEO STREAMING, SOCIAL NETWORKING, ETC.)?**
A Extreme Application Analytics gives the granularity required.
- Q ... MAKE SURE THAT THE NETWORK IS ROBUST?**
A Extreme Networks features such as MLAG, Stacking, EAPS/ERPS and Virtual Chassis bonding ensure the network is resilient.
- Q ... STAFF ADOPT NEW TECHNOLOGIES?**
A Extreme Networks' technology is robust and simple to adopt or on-board.
- Q ... MAKE SURE THAT STUDENTS ARE UTILISING THE INVESTMENT IN THE NETWORK?**
A Extreme Application Analytics gives the information necessary to measure this.

- Q ... KNOW WHO'S DOING WHAT WHEN AND WHERE?**
A Extreme Network Access Control and Extreme Application Analytics give the policy and management insight needed.
- Q ... KEEP NETWORK FEATURES CURRENT?**
A Extreme Networks' single OS makes keeping up with the latest feature set simple.
- Q ... REDUCE THE TIME SPENT MANAGING THE NETWORK?**
A Use the Extreme Networks Management and Network Automation tools.
- Q ... MAKE SURE THE NETWORK IS "SDN" READY?**
A Extreme Networks have invested in SDN, giving users the choice and flexibility of a standards-based approach coupled with some tailor-made applications.

ADDITIONAL RESOURCES

[View case studies from Extreme Networks](#)

[Watch the video "Extreme Networks for Education"](#)



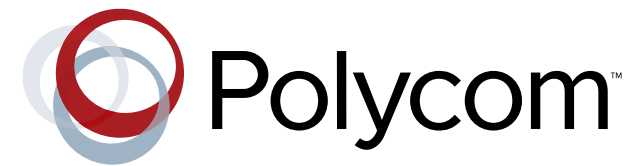
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SMART provides innovative and interactive solutions for Education which help teachers bring more collaboration and interactivity into the classroom. Because SMART products are so easy to use, teachers can quickly incorporate them into their teaching to transform student learning and increase engagement.

The SMART Notebook software provides the tools to create and deliver engaging and interactive learning experiences across grades, subjects and learning styles.

[View the SMART infographic](#)



Polycom provides rich, interactive visual solutions that improve all facets of education such as student administration, course development, curriculum delivery and content management. Polycom RealPresence video solutions, along with tailored education programmes and content, make rich blended learning a reality even for the most challenged budgets. Polycom solutions give teachers the tools to engage students with more interactive and innovative educational experiences. The technology pays for itself by reducing administrative costs and improving staff productivity.

[View the Polycom infographic](#)



Schools, colleges and university staff are always mobile. Spectralink Wi-Fi 8400 series mobile telephones allow educators to be contactable on a personal extension of the PABX wherever they are. Spectralink Wi-Fi 8400 series telephones all support PTT groups (push-to-talk, two-way radio type communication and paging) over the Extreme Networks wireless network, allowing all users to communicate in a group.

[Learn more about the Spectralink 8400 series wireless telephones](#)



SMART, Polycom and Spectralink solutions are all available from Westcon - [contact us today!](#)



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<http://j.mp/1s1qRGg>