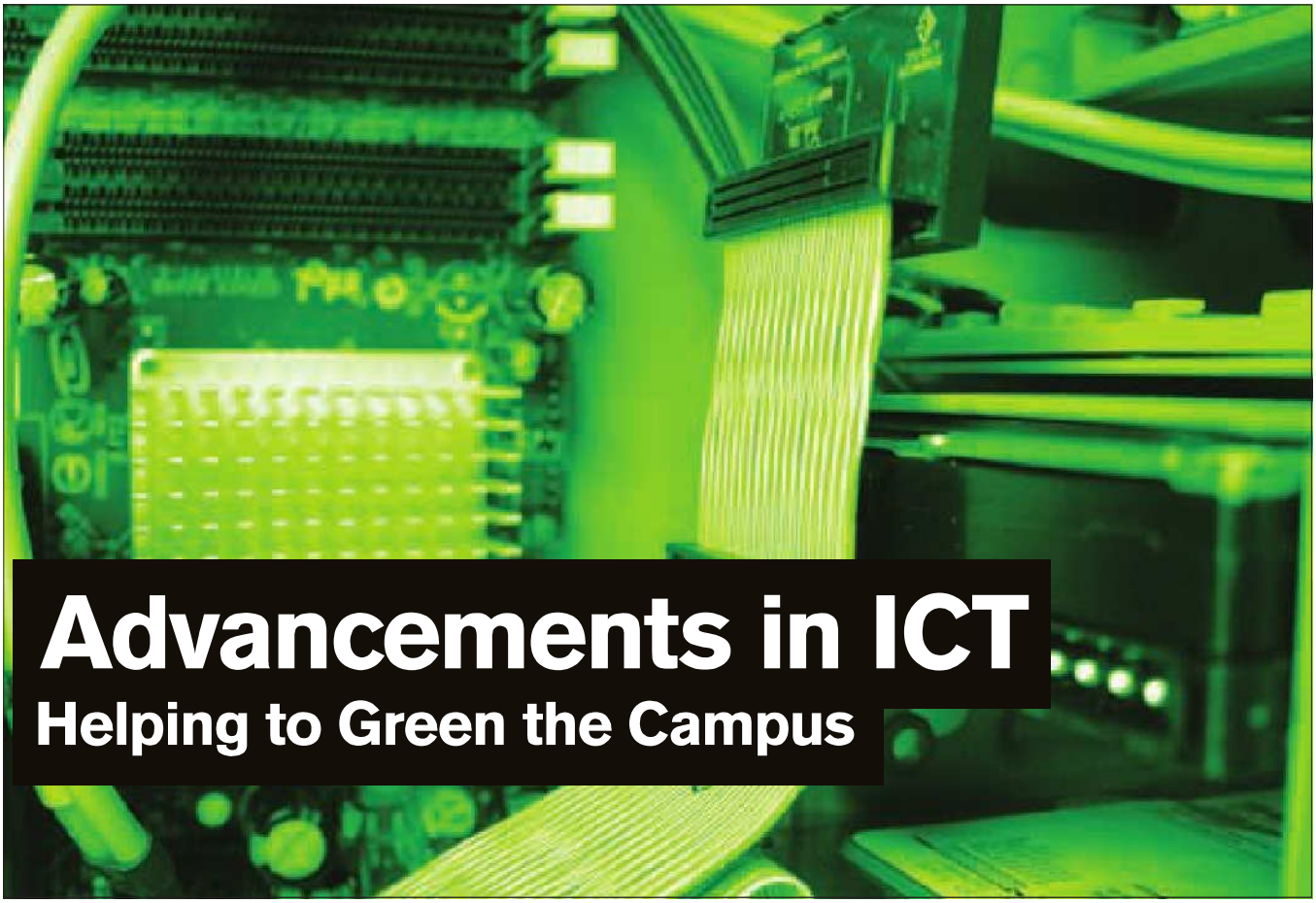
EDUCATIONAL TECHNOLOGY



Advancements in ICT

Helping to Green the Campus

Servers are among the main consumers of ICT-related energy

The EAUC's Nicola Hogan discusses JISC's green ICT project

The September 2010 *University Business* article on Green ICT featured the institutional benefits of implementing more sustainable systems. This was followed in February 2011 by an article on how JISC was funding several green research projects whose results were providing novel and valuable data and information on the most sustainable use of ICT equipment. This data changed the way institutions utilised their ICT equipment and saved thousands of pounds in energy bills as a result. The February article also featured the EAUC's JISC-funded SUSTE-TECH project and how UK further and higher education (FHE) institutions benchmarked their ICT-related energy use through the use of the Suste-IT Tool.

The remit of the SUSTE-TECH project has since changed. It has gone from one of primarily a carbon accounting project (with an aim to demonstrate a reduction in ICT-related energy use in UK FHEs), to one that focuses on creating awareness of sustainable solutions and offers support to institutions that want to increase their ICT related energy efficiency. The newly revised remit also involves creating awareness of JISC's other greening projects, the results of which will change how institutions utilise ICT equipment. On the foot of this, a series of green workshops has been organised to showcase examples of institutional best practice and cutting-edge research in sustainable ICT.

WORKSHOPS

The first SUSTE-TECH procurement workshop took place on May 24 in Birmingham.

The event brought managers of ICT, energy and environmental departments together to bridge any gaps in knowledge of the procurement process that existed between them and those who purchased their ICT equipment. Speakers included members from the Association of University Procurement Officers (AUPO), the Department of Environment Food and Rural Affairs (DEFRA), ESD Consulting and from the JISC Greening of ICT programme, PROCO2. Additional workshops have been planned for the rest of 2011 and will cover networks, cloud computing and ICT improvements to managing estates.

RESULTS FROM THE SUSTE-TECH PROJECT

Assisting the 16 SUSTE-TECH project participants with greening their ICT systems and ensuring they adhere to their commitment to stay the course of the project is still very much the primary concern of the project manager. To date, the project has recruited 15 institutions and has received 10 completed Suste-IT tools with 14 accompanying Action Plans from seven York and Humberside, three Welsh and five South West FHE institutions. The participants are a mixture of HE and FE institutions. The Suste-IT tool results indicated that servers, PCs and networks (switches, rooters, cabling, etc) are the main con-

sumers of ICT-related energy followed by imaging and to a lesser extent higher performance computers (HPCs), telephones and video conferencing (VC) equipment. Each of the institutions are experiencing similar ICT-related energy use problems and are implementing the same types of sustainable solutions.

11 institutions are decommissioning, virtualising or consolidating their servers or moving them off site altogether. 14 institutions are tackling computer energy consumption by replacing them with thin client technology, installing PC powerdowns, virtualising their desktops and procuring for greener computers.

To reduce paper use, seven institutions are either consolidating to multi-functional devices (MFDs), introducing charged or code printing or setting their printers to print double-sided by default.

Just two institutions are tackling their networks' energy use and only one institution has stated they intend to increase their use of VC and will be addressing their phone use to reduce energy waste.

In addition to this each of the participants are implementing a 'general' energy management system. They are each either automating the powerdown or switch-off of their various types of ICT equipment, creating awareness of campus-wide energy use, recycling old equipment, or procuring for greener equipment. Institutions use their participation in the SUSTE-TECH project as an opportunity to audit and consolidate their ICT equipment thus establishing a baseline of how much equipment they have in operation and what their combined power usage is so they can lower running costs and reduce waste.

However, while there has been significant improvements in ICT performance in the past five years, there is still huge scope for improvement. Many of the changes are simple 'quick wins' that require minimal costs and are easy to implement. Other JISC projects have demonstrated this, along with the findings that improvement in institutional ICT management is key. Of the JISC-funded projects that have demonstrated how management improvements can save money, some have been funded for an additional 12 months. Under Strand 1 – Rapid Innovation, JISC have funded six new projects, at least two of which are continuations of successful JISC projects from 2010. Strand 2 – Estates Led Sustainable ICT Projects and Strand 3 – Exemplars of ICT Enabled Transition to Environmentally Sustainable Campus are funding a total of nine new projects.

It is hoped the combined results of JISC's greening of ICT projects will demonstrate change in not only the way end users use equipment but also how ICT equipment can help the end user change their energy consumption habits. ●

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Ask4 Reduce Energy Consumption

Having spent years building a strong relationship with leading universities and private accommodation providers as an Internet service provider, ask4 were intrigued to discover how a technology-led approach could be applied to solve some of the biggest problems facing owners of large, multi-tenanted units (MTUs). After only a few meetings it became clear that there was one overriding issue facing large building owners – energy consumption.

Energy costs for large buildings can easily reach many thousands of pounds and with corporate social responsibility now a key operational objective, reducing energy consumption offers the opportunity to meet two targets with one project.

Existing solutions were targeted on either the domestic market where the consumer pays for their energy or for an industrial or commercial environment. The cost of installing a standard building management system after construction is also a limiting factor. MTUs present a different challenge as the occupant does not pay for energy usage so has little incentive to limit their consumption.

Energy costs for large buildings can easily reach many thousands of pounds

Having developed a system of monitoring energy consumption at each distribution board within a building and that could be fitted with minimal work or cost. ask4 engaged Sheffield Hallam University's Cultural, Communication and Computing Research Institute (C3RI) to develop a way of effectively using this information to reduce energy consumption.

Working together ask4 and C3RI have now produced a fully functioning online system that engages with building occupants allowing them to quantify and compare their energy consumption whilst educating and encouraging them to reduce their consumption.

ask4's Eco-Smart energy management system is now helping building operators across the UK to meet their energy reduction targets.

For more information please contact ask4 on 0844 55 55 050 or sales@ask4.com