University of Surrey

Guildford, Surrey UK

University of Surrey Learns to Save Energy with Crestron Lighting Control and Advanced Classroom Technology Upgrades

Increasingly, universities are looking at integrated AV and lighting control systems as a tool, not only to provide an enhanced learning experience for students, but as a way to reduce their carbon footprint to meet government energy saving targets.

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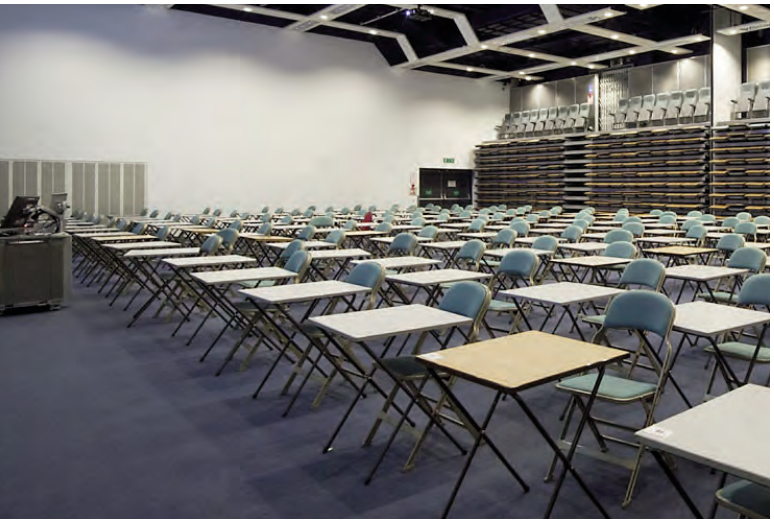
A new project at the University of Surrey in Guildford, demonstrates how Crestron classroom technology, including simple-to-use multimedia presentation systems and lighting control is helping achieve all these goals, with the added benefit of providing the IT department with a model for future substantial cost savings through a well-planned investment in technology.

The University of Surrey, home to 12,000 students and 3,000 staff, selected its Austin Pearce Building to be the first phase of an upgrade program that will eventually encompass the whole campus. The building includes two large lecture theatres that required 21st century audio/video equipment to satisfy the needs of students and faculty alike.



Featuring new HD projectors and audio system, projection screens and document cameras, the theatres also showcase new high efficiency LED lighting which replaced an inefficient, energy draining lighting system. All systems were designed for optimum environmental-friendliness, and as a result, the two upgrade paths (lighting and AV) opened up separate outside funding streams.

Crestron technology including multi-channel dimmers, occupancy sensors, touchpanels, RoomView™ enterprise management software, and QuickMedia® integrates and streamlines it all into an affordable, easy-to-use single-platform solution.

Securing the appropriate funding allowed the project team - Simon Loder, Manager of IT Services at the University, Dale Meadows of Estates & Facilities, and Crestron, the preferred technology partner - to design a fully-integrated system that would incorporate the best technology available to the education sector.

Given the age of the existing lighting dimmers, it was impossible to properly control them with the new control system, so the decision was made to install new LED lighting to support the university's energy saving goals.

A major objective of the project was to standardize, which allowed the implementation team to incorporate Crestron lighting control, and eliminate the need for yet another independent and disparate system. Standardizing on a Crestron single-platform solution also enabled centralizing the operating and technical support services

for the entire system, which reduces help desk calls significantly, and requires less support staff.

As Loder explains, "Once we began the project we decided to take advantage of the Crestron control system, allowing us to intrinsically link the lighting and AV for the theatres into a single, integrated system. This was invaluable from an energy savings point of view as it allowed us to really step up the control and monitoring of our lighting scheme, which was proving costly on a number of levels."

"The new LED luminaires are saving us an enormous amount of maintenance hours, since they are far cheaper to run and lifecycle costs are minimal," he continues.

Energy monitors from Merlin Gerin are fitted to the distribution boards and staff can monitor both the lighting and AV systems independently in real time, using Crestron RoomView™ enterprise management software. An additional project now in the planning phases will extend the display of energy consumption to the University's digital signage network to communicate progress throughout the campus.

Two control systems were used to meet the University's needs. In phase 1 (6 Large Theatres) in the AP and LT Buildings, AV2 Dual Bus Control Systems control the switchers and an array of other equipment, providing a versatile system linking all four theatres in AP as required.

In Phase 2 (22 medium sized teaching spaces), Crestron MPS-200 Multimedia Presentation Systems provide complete AV presentation control and signal routing for classrooms in the LT, TB and AC Buildings. MPS-200 is a complete classroom solution, combining a control system, multimedia switcher, audio processor, and amplifier into a single rackmount package, thus eliminating the need for multiple and separate components.

MPS-200 delivers high-performance switching of the 4 video and 4 RGB computer sources to the displays. Throughout the building, Crestron QuickMedia® technology feeds signals straight to the primary display devices over Ethernet, providing a clean, low-cost, long- distance wiring solution, while eliminating bulky and expensive cabling requirements. The MPS-200 seamlessly integrates with Roomview™ to ensure every classroom is connected and supported on the managed network.

Crestron GLS-ODT-C-2000 Dual-Technology Ceiling Mount Occupancy Sensors detect when a room is occupied and continually analyze occupancy behavior and environmental conditions in the room, adjusting itself for optimal functionality so lights turn on and stay on while the room is occupied, and remain off when no one is present.

Each DIN-1DIM4 DIN Rail Dimmer provides 4 channels of manual or preset dimming from podium- and desk-mounted Crestron TPS-4L and TPS-6L touchpanels. With a single button touch, faculty can select a media source, lower a projection screen, and dim the lights, and start the presentation, allowing them to focus solely on delivering their lecture and teaching their students.

The project was managed by the University's IT Services and Estates & Facilities departments working together. This project, built on planning, partnership and cutting-edge Crestron technology, proves that saving energy can be a driving force in AV systems and classroom technology upgrades for universities, which in turn upgrade the teaching/learning experience by delivering reliable, easy-to-use systems for faculty and students.

The AV upgrade qualified for funds from HEFCE (Higher Education Funding Council for England), an organization that helps higher education institutions with new technology investments and strategies. A Salix-funded upgrade to the lighting systems was also secured. Salix finance is designed to help English public sector bodies reduce their carbon footprint.

With the greater efficiencies in control, monitoring and management provided by the Crestron solution, the resulting reduction in energy usage and increased cost savings more than justified updating the existing energy consuming lighting systems in the lecture halls.

AV departments in higher education can look to campus-wide control systems with confidence to maximize their technology investment. "The Crestron solution we have specified has offered a fantastic ROI," says Loder. "Universities are increasingly being run as businesses and there is immense pressure to reduce costs and cut carbon footprint. The intuitive features offered by Crestron technology have allowed us to achieve our goals and keep everyone happy. I think our experience offers an excellent blueprint for other universities to build on."