The Business Academy
Bexley

"Installing LED lighting was the logical next step in our efforts to develop a greener and healthier learning environment for our students. We discussed the additional features that a lighting control system would offer us."

– Sam Elms, Chief Executive of The Business Academy, Bexley

Background:

The Business Academy is housed in a predominantly glass structure, built around three glazed atriums. Due to the high levels of natural light pouring into these spaces at certain times of the day, the potential for energy savings with lighting control was immense. Following a series of energy efficient improvements to reduce the school's overheads and maintenance costs, the lighting was reviewed.

The challenge:

The management team wanted a more energy efficient lighting solution that could be put in with minimal interference to the school's working day, promoted sustainability, would dramatically reduce the academy's lighting bill and have no up-front costs.

The wireless nature of Lutron's Energi TriPak solution enables retrofits to be carried on with minimum disruption

Lutron's Energi TriPak solution delivers significant energy savings with short payback periods

Lutron's Energi TriPak solution is able to control and dim LEDs

The solution:

As well as a bespoke, LED lighting solution, designed by 8point3 LED, Lutron's Energi TriPak™ wireless retrofit solution was brought in to give light 'when it was wanted'.

With sustainability a priority for the academy, the existing trunking infrastructure was used and custom made gear trays, lighting engines, diffusers and Lutron's 5 Series LED drivers were created and bespoke LEDs added. The fittings were then integrated with Lutron's Energi TriPak to achieve maximum savings.

As speed of installation was key to the success of the project, the wireless nature of Lutron's Energi TriPak was invaluable for quick and easy installation and re-programming. Over 150 Lutron PowPak® load controllers, 280 Lutron Radio Powr Savr® wireless occupancy/vacancy and daylight sensors, over 100 Lutron Pico® wireless controls and 1,800 Lutron 5 Series LED drivers were installed throughout the school, so that light levels could be adjusted based on the natural light levels pouring into the rooms.

The results:

An innovative seven year pay-back scheme was set up with a European bank that involved no capital investment from the academy. It enables the academy to embrace the latest in LED technology and controls, whilst paying the bank back out of the energy savings it achieves from its reduced lighting bills. In addition, the academy is insulated from electricity price rises on its lighting bill over the coming years and can reap significant savings on the school's lighting maintenance costs.

Thanks to its new LED lighting and controls solution, the Academy is now able to save £25,000 on its electricity bill and 125 tons of CO_2 per year. As well as providing a stimulating learning space that adapts its lighting throughout the day and evening to external light levels, The Business Academy Bexley now has one of the most energy efficient lighting schemes in academia.

Client:	The Business Academy, Bexley
Lighting Project:	8point3 LED
Electrical Installer:	Mears Plc
Photography:	Lutron
Lutron Products:	Lutron's Energi TriPak retrofit solution
Finance Service:	Afm solutions