SMARTSYSTEMSUK
SWITCHED ON LIGHTING SOLUTIONS

CASE STUDY
LLOYDS REGISTER, LONDON EC3

FOUNDED IN 1760, LLOYDS SPECIALISE IN PROVIDING PROFESSIONAL SERVICES FOR ENGINEERING AND TECHNOLOGY.

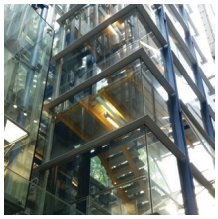
APPLICATION
Building core staircases.

INSTALLED LIGHTING DETAIL
The existing light fittings are linear bespoke architectural style with a direct/indirect feature and 36 watt fluorescent lamp.

PROBLEM
The light fittings are left on 24 hours per day, 365 days a year which not only wastes energy but also decreases lamp life and due to the bespoke nature of the light fitting, it is impossible to replace the lamps and control gear without dismantling the fitting.

SOLUTION
We were tasked with providing a solution to halve running costs, reduce maintenance bills but retain the existing luminaires.

We designed and developed a linear led gear tray which would fit exactly onto the original fixings for the fluorescent lamp and gear. In addition, we upgraded the driver to Dali and fitted a Bluetooth node and pir so that we could create a 'smart' luminaire. This node enabled the light fitting to talk to other fittings as well as being dimmed and switched on and off in response to activity on the staircase.



RESULT
The new gear tray operates at 21 watts which, compared with the original at 41 watts, is impressive enough but further savings are won by 'smart' use of the Bluetooth controls.

Working with the on site F.M company have programmed the luminaires so that they operate at just 20% of full load when no presence is detected but immediately jump up to 100% level as soon as someone enters the staircase lobby, this also activates the light fittings on both the next floor up and also down to anticipate the movement of the person. In addition, the node has been set to turn the light fitting off completely if no presence has been detected for one hour. The Bluetooth device is hugely flexible and can be programmed on site simply via a smartphone app.

ORIGINAL LOAD
80 x 41 watts = 3280 watts

NEW LOAD
80 x 21 watts = 1680 watts

The led control gear and PCB is covered by a 5 year manufacturer's warranty so a considerable increase in lifetime over the existing fluorescent components and reduced headaches for the maintenance team.