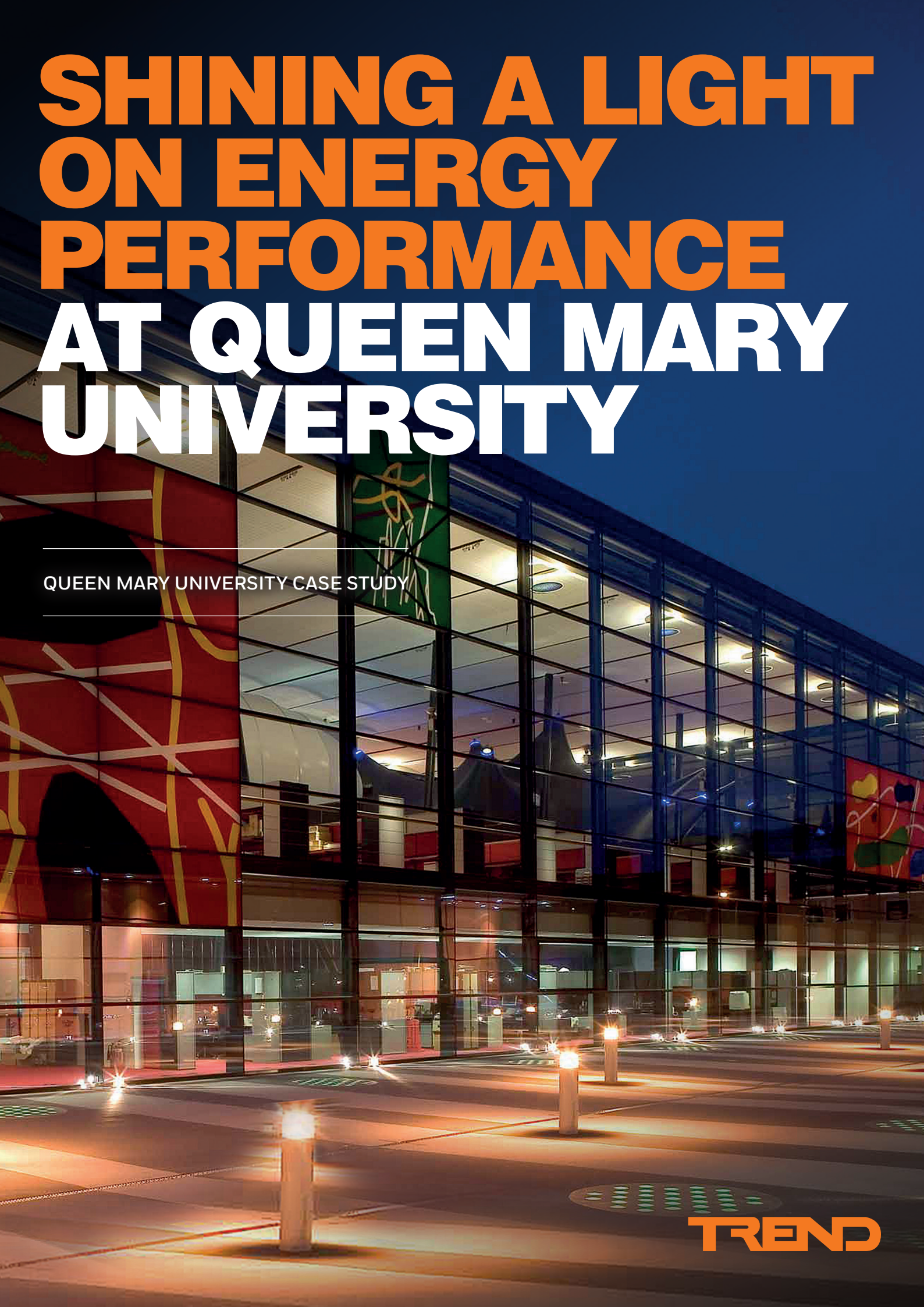
SHINING A LIGHT ON ENERGY PERFORMANCE AT QUEEN MARY UNIVERSITY

QUEEN MARY UNIVERSITY CASE STUDY



TREND

Carbon Numbers leverages Trend technology to help Queen Mary University achieve significant reductions in energy use.

Queen Mary University of London is one of the UK's leading research-focused higher education institutes. In line with its mission to deliver an exceptional learning environment, the University is committed to the continuous improvement of its facilities. Most recently, its focus turned towards the iconic Blizard building, hub of the Whitechapel campus and home of the University's prestigious dental school.

THE CHALLENGE

Enhancing comfort while reducing emissions

To meet the evolving demands of a modern teaching hospital, the University required a new Building Energy Management System (BEMS) to help enhance teaching quality, improve the student and patient experience, and increase control over building performance. Energy intelligence specialist and Trend Technology Partner, Carbon Numbers, was engaged to design, install and commission a new integrated system for the building's state-of-the-art laboratory facilities, study spaces and lecture theatre. The first step, though, was to secure funding.

Salix Finance provides government loans to the public sector to help enable organizations to improve energy efficiency, reduce carbon emissions and lower energy bills. Carbon Numbers worked with Queen Mary's to develop a robust business case, including conducting a detailed survey and monitoring to prove the impact of the planned improvements on the building's carbon footprint to secure funding.

> ***"We were confident that by integrating the latest Trend technology with our own Carbon Cloud platform, we would be able to enhance the learning experience while significantly reducing energy consumption,"***
>
> **NEIL FRIGHT,** CARBON NUMBERS' CEO

THE SOLUTION

The modernisation began with a comprehensive lighting upgrade. The new LED DALI luminaries are optimised for the exacting needs of precision dentistry. They are controlled by Honeywell Ex-Or DALI64 sensors which send light level data to the BEMS. Using DALI64 further enhances energy saving using occupancy-based controls. The lighting and blinds are also automated, to offer daylight savings and minimise light pollution.

The building's BEMS control strategies were reviewed and modified to create a demand-driven site, automated to selfoptimise along with seasonal weather conditions. This included an upgrade of 140 Trend IQ2 series controllers to the IQ4 series for enhanced building monitoring and control and the installation of a new Trend IQVISION front-end with modern graphical user interface, hosted on Carbon Numbers' Carbon Cloud platform. Temperature, humidity, light lux levels and air quality are now all monitored, and data used to evolve BMS control strategies.

AN AWARD-WINNING OUTCOME

This project was a critical part of the University's effort to create smart campuses and reduce its carbon footprint. By enhancing visibility of live building performance data and integrating systems for optimum control, it has more than delivered on its aims. Indeed, Carbon Numbers was named the 2021 BCIA Smart Buildings Award winner for its work on this project.

Connecting the blinds and corridor lighting resulted in a 90% reduction in energy consumption throughout the Blizard building and significant improvement in lighting levels. The University also recorded a 30% reduction in energy demand by linking lighting control to the BEMS.

> IPSWICH HIGH SCHOOL
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> ***"These results are testament to our shared commitment to delivering tangible savings and better environments," "Critically, our collaboration with Carbon Numbers and Salix, utilising Trend products, has allowed us to do this in a cost effective and transparent manner that de-risked the entire process"***
>
> **TIM LEE,** TECHNICAL MANAGER AT QUEEN MARY UNIVERSITY OF LONDON

For further information on this project, please contact Neil Fright at Carbon Numbers (neil.fright@carbonnumbers.co.uk, 01206 263390) or the Marketing team at Trend (casey.wells@trendcontrols.com).

ABOUT TREND CONTROL SYSTEMS

With a worldwide distribution and support network covering more than 50 countries, Trend Control Systems is a major international supplier of building energy management solutions (BEMS). The majority of Trend's control systems are supplied, engineered and commissioned by approved systems integrators. Trend Control Systems is part of Honeywell Building Technologies. Learn more **HERE**.

Trend Control Systems

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