



## Schneider Electric helps make The Edge “the world’s most sustainable office building”

SmartStruxure™ solution BMS, electrical distribution and field devices ensure energy and operational efficiency

Located in Zuidas, Europe’s fastest growing business and knowledge district, The Edge in Amsterdam, The Netherlands, is heralded as the world’s most sustainable office building. Officially opened in May 2015, this 40,000 m<sup>2</sup> multi-tenant, Class A office building was conceived by OVG Real Estate, a Dutch commercial real estate developer committed to green development, in partnership with Deloitte, a global professional services firm and the building’s primary occupant.

### Open and flexible architecture

The Edge is designed according to ‘The New World of Work’ principles, which challenges traditional organizational culture to create an agile, high-performance workplace where innovation can thrive in an open and flexible environment. Adhering to that philosophy, The Edge is designed with a breathtaking glass exterior and large, open floor plans situated in a U-shape around a majestic 15-story, north-facing atrium. The atrium is surrounded by balconies and residents can easily move between levels to gather in naturally-lighted meeting areas.

### Technically as well as visually impressive

A marvel of architectural design, behind the scenes at The Edge is a comprehensive array of building engineering and energy efficiency ecosystems that make it outstanding both operationally and environmentally as well as aesthetically.

A broad range of Schneider Electric integrated building management solutions, electrical distribution systems, and IT infrastructure are employed throughout The Edge. Schneider Electric was pleased to unite once again with OVG at The Edge following their successful collaborations a few years earlier at the carbon-neutral TNT Centre (Hoofddorp, The Netherlands). They also introduced OVG to the project’s lead system integrator, HC Groep.

A transversal team from Schneider Electric EcoBuilding Division and Partner Business served as liaisons between Schneider Electric entities and several other well-respected participants in their industries, including: primary end user (Deloitte); engineering consultant and specifier (Deerns); and contractor (Homij Bosman Combinatie), as well as other integrators and panel builders.

“During the bidding process we worked closely with Schneider Electric to ensure that the newest building automation technology was available and could be integrated in all the emerging new technology in The Edge,” says Jacob Jansen, General Manager of HC Groep, a leading system integrator in The Netherlands for 25 years. “Because of the important scope of this project, a mock-up was built in our climate laboratory to demonstrate the feasibility and integration options.”

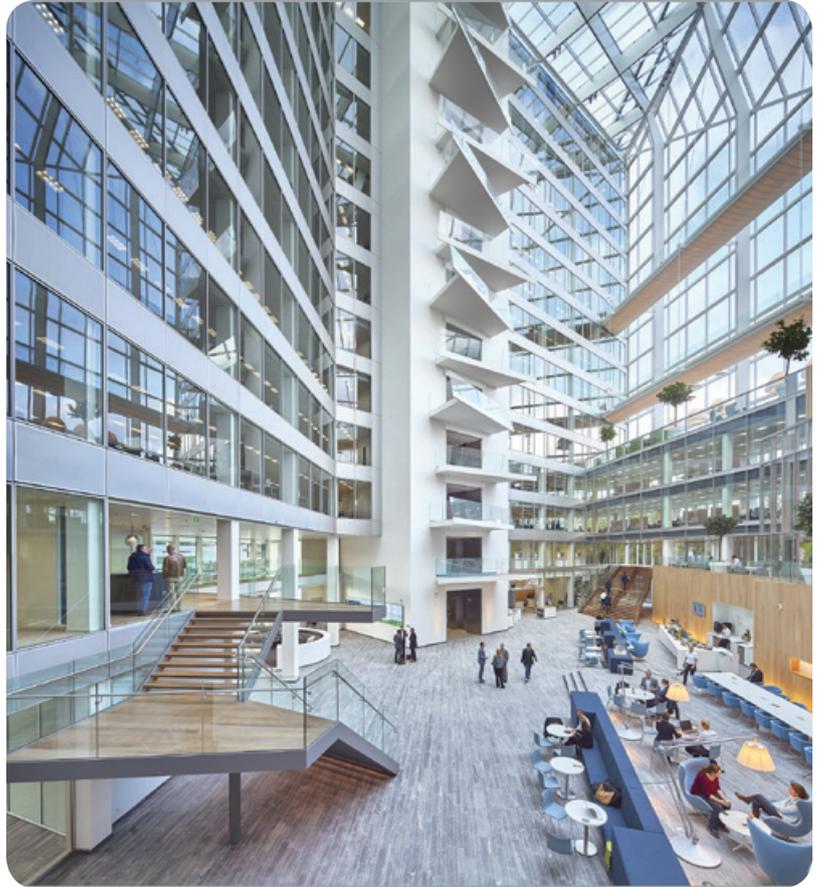
### Smart Building Approach

SmartStruxure™ solution, Schneider Electric’s premier building management system (BMS) powered by StruxureWare™ Building Operation software, is used at The Edge, including 50 Automation Servers. BMS-compatible field devices are installed in ceilings and in technical rooms, including sensors, valves, actuators and heat meters, which provide energy related measurement of thermal energy used in the building.

The Edge facility managers are able to manage building operations and energy use on-site or remotely to maintain optimal comfort for occupants. Access to critical building data is available via easy-to-use dashboards and advanced reporting to make information-based decisions to optimize HVAC energy use and reduce waste.

Schneider Electric electrical distribution products are also used throughout the building, including electrical panels, busbars, energy meters and frequency drives located in technical rooms. Over 180 energy and heat meters are installed in the building and energy measurement information is captured in StruxureWare Power Monitoring Expert software.

**The customized integrated system allows building and facility managers to monitor, measure and control – in a single view – the building’s HVAC and room control systems, as well as its state-of-the-art aquifer thermal energy storage and solar-generated energy.**



Cool air from the ground floor at The Edge is circulated to the top of the atrium to thermo wheels then released to the outside.

“This was a very complex job and Schneider Electric demonstrated that we have a full complement of vision and expertise as well as products, systems and solutions to help simplify the entire experience for our customers,” says Erik Zwaan, EcoBuilding Commercial Manager at Schneider Electric in The Netherlands. “The success at this impressive edifice, including a full spectrum of building ecosystems, demonstrates our comprehensive team approach and ability to deliver results as a true multi-faceted project management organization.”

The Edge also features other impressive building efficiency measures: It is the first building to utilize a third party’s Ethernet-powered LED connected lighting, which enables employees to use an application on their smartphones to regulate the lighting and climate in their individual workspaces. This innovative technology not only saves money on energy costs, but also provides information and data analytics about how the building is running.



**Estimated energy consumption at The Edge is less than 0.3 kWh/m<sup>2</sup>/yr.**

The Edge is also a net-zero energy building. To achieve this, the south façade is fitted with solar panels on all non-window surfaces. Additionally, aquifer thermal energy storage (approximately 130 m below ground) generates all energy required for building heating and cooling. Rainwater harvesting, electric vehicle charging stations, and motion-sensored ventilation are some of the other eco-friendly features at The Edge.

### A feat of modern engineering and sustainability

The Edge not only sets a new global benchmark for the built environment, but also prioritizes the comfort, health and productivity of its occupants. Schneider Electric was able to partner directly with the property developer, lead occupant, specifier, system integrator and other essential participants from the early stages of the project. Schneider Electric's energy management expertise and ability to understand and plan for the life cycle of the building helped The Edge earn the highest score ever awarded by the Building Research Establishment (BRE®) – 98.36 per cent – and the distinction of BREEAM® NL New Construction certification of 'Outstanding.'



Real time energy consumption and efficiency data gathered from the SmartStruxure solution BMS are shared with building occupants and visitors via a dashboard located on a video screen located in The Edge lobby.



**“Sustainability is about more than a great BREEAM rating. It is also about a building’s overall comfort and efficiency for its occupants, so that they can operate with ease in a productive and healthy environment.”**

**- Coen van Oostrom,  
Founder and CEO of OVG Real Estate**



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