

FUTURE

A new smart building on La Défense skyline

Tour Majunga – Paris, France

Schneider Electric designed and implemented the building's electrical distribution with EcoStruxure™ for Buildings solution.

se.com/ecostruxure-workplace-advisor

Life Is On

Schneider
Electric

Background

In the heart of La Défense — Europe's largest purpose-built business district — stands the Majunga tower, owned by Unibail Rodamco. This skyscraper reinvents the concept of office buildings, in that it is designed to be at the service of the people who use it and to harmonize with its business and city surroundings. At 195 meters, Tour Majunga is the second-tallest tower in France, after the First tower.

Breaking with the monolithic architecture that characterized towers of generations past, Majunga is a building that is open, bright, and environmentally friendly. Distinguishing features include a façade comprising three vertical strips that suggest movement through subtle variations in their shape, to offer outdoor areas on every floor (loggias or balconies), an open area every two panels, and 2,000 m² of terraces and gardens around the base of the building.

Ever since its design phase, the Majunga project has aimed to create a building that enables its occupants to significantly reduce their energy consumption and carbon footprint. Specifically, the building has a primary energy consumption of less than 80 kWh PE/m²/year, which is five times more efficient than other office blocks¹. Meanwhile, its carbon footprint is four times lower than the average for buildings on the outskirts of Paris. In recognition of this, the tower won a BREEAM Award in 2012, and attained BREEAM and HQE certification in the 'Excellent' category in the design phase. Schneider Electric — a global specialist in energy management and leader in energy efficiency — played an important role in the Majunga project, providing the building with its electrical distribution system with digital services and solutions that bring greater efficiency and comfort.

'Unibail-Rodamco envision Majunga upon the concept of "new way of working" with changing working patterns,' says Bruno Donjon de Saint Martin, Managing Director — Offices — France at Unibail-Rodamco. 'For this, it is essential to be able to provide operators with suitable tools for energy and space management but also provide residents with services making their life easier, both for comfort and collaboration services. Schneider Electric's solution meets these expectations in a digital way, which is perfectly in line with our vision of the commercial property.'

Goal

Creating a comfortable and productive work environment while reducing energy consumption and carbon footprint.

Story

The iconic building at the heart of La Défense wanted to install a building management system that was both intuitive as well as ensured that its occupants had the highest levels of comfort and safety. Schneider Electric did not disappoint with its end-to-end solution encompassing a host of products and solutions.

Solution

- Schneider Electric's smart office technology solution (now known as EcoStruxure Workplace Advisor*)
- EcoStruxure™ Building Operation**
- Smart Panels

Results

- Increased comfort for office workers
- Energy consumption of less than 80kWh PE/m²/year
- 'Excellent' category placement in BREEAM & HQE certification
- Optimized energy usage and performance

(1) Source : Ademe – Agence de l'environnement et de la maîtrise de l'énergie – Agency for the Environment and Energy Management
(2) Total Gross Leasing Area (Surface brute locative)



Tour Majunga in La Défense, reinvents the concept of office buildings



EcoStruxure Building Operation

The backbone of a smart building is its BMS (Building Management System)

A key part of Schneider Electric’s collaboration in the creation of Majunga was the integration of its building energy management system, EcoStruxure Building Operation, helping to achieve the very highest levels of space management and energy efficiency. This system improves upon traditional BMSs, and offers a wide range of services to satisfy users and owner expectations in terms of both comfort and efficiency.

The EcoStruxure Building Operation solution enables analysis and monitoring of the building’s performance throughout its entire life cycle, bringing together control and management of the building’s energy distribution, HVAC, lighting, blinds, and fire safety.

Comfort and space management

In order to create a work environment that is both comfortable and productive, while simultaneously reducing energy consumption, Schneider Electric implemented its smart office solution in the Majunga tower. The system connects a network of sensors (installed in strategic positions throughout the building) with radio frequency identification (RFID) tags inserted into

employees badge holders. Anonymity is respected at all times and there is no risk to people’s health. The tags transmit information to the sensors via radio, meaning that real-time occupation of each different space can be monitored. In this way, the system can use the data collected in different zones to assign spaces and make sizing calculations according to real needs at any given time. It can also adjust lighting and HVAC levels to optimize energy performance.

This technology proves to be extremely useful, for example, for improved management of meeting room reservations in large workplaces. With an app, employees can see which rooms are available, and they can reserve them from their computer, tablet, or smartphone in line with their needs, which could relate to the type of space (meeting room, cubicle) or the location (floor, zone, etc.). When a room is reserved at a certain time, the system can detect whether the space is occupied in the first 15 minutes; if not, it can send a cancellation email to the person that made the reservation or cancel the reservation directly. If the administrator agrees to cancel the reservation, the room automatically appears as available again on all the other users’ mobile terminals.

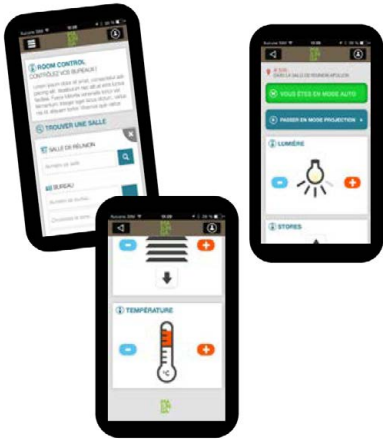
80
kWh PE/m²/yr

Energy consumption

“Schneider Electric’s solution meets our expectations in a digital way, which is perfectly in line with our vision of the commercial property.”

— Bruno Donjon de Saint Martin, Managing Director – Offices France at Unibail-Rodamco

Key figures
Height: 195 m
45 floors
Total surface area: 67 200 GLA⁽²⁾
Offices surface area: 61 500 GLA
Capacity: 5000 employees
Terraces and loggias: 2,000 m²



Upon their arrival, users can connect to the Majunga tower services portal, enabling them to remotely control the room's lighting, temperature, and blinds or see the real-time availability and book a meeting room

Better-informed decisions regarding energy savings and efficiency

Furthermore, the system compares real occupancy rates with the reservations made and each room's capacity. This provides additional information on the rooms' real usage and occupancy, which can be of great use if it later becomes necessary to redistribute the space. Thanks to the information provided, it is possible to track the use of space throughout the building life cycle, some valuable data for real estate managers.

Upon their arrival, users can connect to the Majunga tower services portal, enabling them to remotely control the rooms' lighting, temperature, and blinds from their smartphone, thereby adjusting their workspace comfort to their own taste. The system also makes it possible to regulate the building automatically in accordance with the sustainability objectives defined by the Energy Efficiency Manager. The system turns off devices that are not in use, instead of setting them in stand-by mode. As an example, turning off a DVD player can save up to 80-90% on its total energy consumption. Thanks to integrated 3D modelization of the building, the SunTraking™ feature calculates the sun trajectory and its impact on each window, so as to pilot the blinds and light accordingly, respecting users' comfort and energy efficiency. Finally, the system gives a real-time view of all of the building's consumption defined by type of use and by zone. This provides improved knowledge of the building's performance, which in turn leads to better-informed decisions regarding energy savings and efficiency.

EcoStruxure™ for Building
Innovation At Every Level



EcoStruxure™

Innovation At Every Level

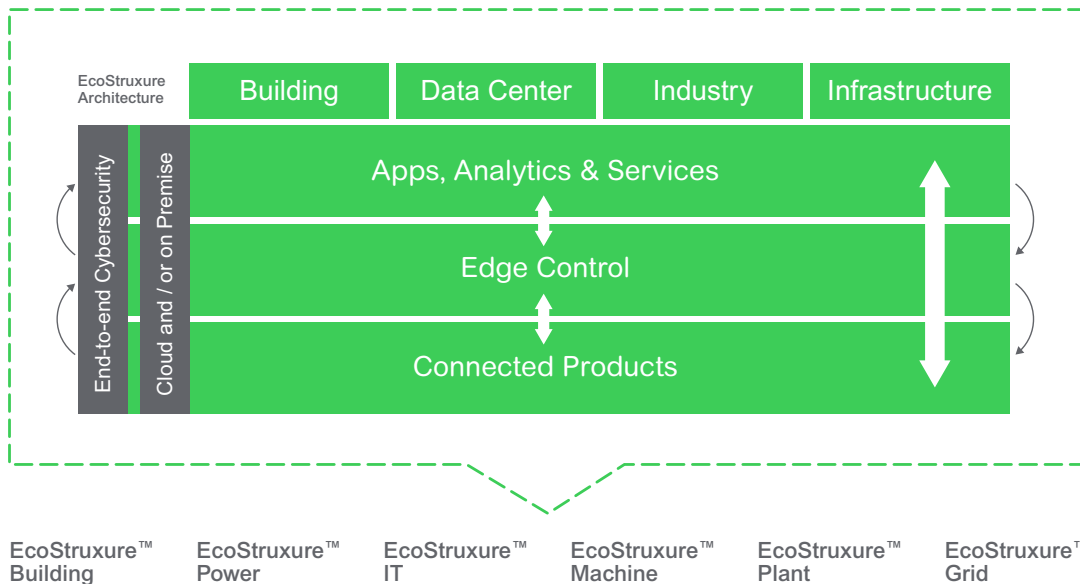
IoT-enabled solutions that drive operational and energy efficiency

EcoStruxure is Schneider Electric’s open, interoperable, IoT-enabled system architecture and platform.

EcoStruxure delivers enhanced value around safety, reliability, efficiency, sustainability, and connectivity for our customers.

EcoStruxure leverages advancements in IoT, mobility, sensing, cloud, analytics, and cybersecurity to deliver Innovation at Every Level including Connected Products, Edge Control, and Apps, Analytics & Services. EcoStruxure™ has been deployed in 480,000+ sites, with the support of 20,000+ system integrators and developers, connecting over 1.6 million assets under management through 40+ digital services.

One EcoStruxure architecture, serving 4 End Markets with 6 Domains of Expertise



Connected Products

The Internet of Things starts with the best things. Our IoT-enabled best-in-class connected products include breakers, drives, UPSs, relays, sensors, and more. Devices with embedded intelligence drive better decision-making throughout operations.

Edge Control

Mission-critical scenarios can be unpredictable, so control of devices at the edge of the IoT network is a must. This essential capability provides real-time solutions that enable local control at the edge, protecting safety and uptime.

Apps, Analytics & Services

Interoperability is imperative to supporting the diverse hardware and systems in building, data center, industry, and grid environments. EcoStruxure enables a breadth of agnostic Applications, Analytics, & Services for seamless enterprise integration.

Find out more about EcoStruxure

schneider-electric.com/ecostruxure

Learn More



Discover EcoStruxure™



Discover EcoStruxure™ Building



Learn more about our Building Automation & Control Solutions



Contact us to start your journey



Sheraton on the Park saves 15% on energy bill thanks to EcoStruxure™ Building upgrade



EcoStruxure™ Energy Expert increases electrical and mechanical efficiency for Lake Land College

Schneider Electric

Andover R&D Center
800 Federal Street
Andover, MA 01810 USA
Phone: + 1 978 794 0800

www.schneider-electric.com

February 2019

*Workplace Efficiency has been replaced with a new offer called EcoStruxure™ Workplace Advisor
**Formerly known as SmartStruxure solution

©2019 Schneider Electric. All Rights Reserved. Life Is On Schneider Electric is a trademark and the property of Schneider Electric SE, its subsidiaries and affiliated companies. All other trademarks are the property of their respective owners.

998-20427470_GMA-US

Life Is On

Schneider
Electric