In Our Buildings

At Schneider Electric, our mission is to serve our customers by developing innovative products and solutions that simplify the lives of those who use them. We bring together our expertise and solutions to drive new possibilities for efficiency and savings.

As the global specialist in energy management and automation, we are committed to worldwide improvement in connectivity, sustainability, efficiency, and reliability and safety in five primary areas: in our homes, cities, industries, buildings and in the cloud.

Smart Buildings

Kuala Lumpur’s Petronas Twin Towers. New York’s Freedom Tower. Beijing’s Nest Olympic Stadium. The Sydney Opera House. These buildings are monumental, magnificent — and green. Like thousands of other buildings across the world, they rely on Schneider Electric to stay up and running in as efficient a manner as possible.

Buildings consume 40% of global energy today — and that consumption will soon climb to 60%. Many cities are struggling to make their buildings smarter to improve occupant safety, comfort, and productivity, as well as be more energy-efficient in the process.

In this domain, Schneider Electric expertise includes energy management systems, security controls, energy and carbon dashboards, and active energy controls.

In developed economies, at least half of the buildings that will be in use in 2050 have already been built. In many of those buildings, older or outdated building systems are the number one cause of large-scale inefficiencies. Our solutions update aging infrastructure to monitor, measure, and optimise energy consumption throughout the lifecycle of a building, regardless of age or existing systems.

Our building management systems provide data output customised to the needs of every stakeholder, from the facility manager to senior management. As a result, both facility engineering and business executive personnel are able to quickly access
relevant, aggregated information and make decisions that map to their energy goals and business priorities.

Smart buildings break down traditional energy management silos by integrating disparate systems without the need to perform a costly ‘rip and replace’ installation. Benefits of smart buildings can be applied to chains of buildings, multisite branches, or single buildings.

Building management systems are connected to lighting, HVAC, access control, space management, blinds, computers, and all kinds of sensors and sensing devices. The result is data — lots and lots of data.

Our energy software expertise allows us to review and analyse this data, and to transform raw information from thousands of disparate sources into valuable insights that can improve operational efficiency and increase the bottom line.

Schneider Electric Building Analytics is an advanced lifecycle managed service that delivers automated fault detection, diagnosis, and real-time performance monitoring for buildings. Information is captured from building systems and sent to our cloud-based data storage. From that point, our advanced analytics engine uses artificial intelligence to process building data and continuously diagnose facility performance by identifying equipment and system faults, sequence of operation improvements, system trends, and energy usage.

Using expert guidance from our team of building engineers and analysts, Schneider delivers a prioritised listing of the most impactful recommendations for a building. These recommendations allow facility managers or their service providers to target maintenance activities by confirming that building equipment is running at peak efficiency.

When building analytics recommendations are implemented, the results are obvious – enhanced building performance, optimised energy efficiency through continual commissioning, and reduced operating costs — all with a strong return on investment and an improved building environment.

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<th>Building Analytics</th>
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<td>Building Analytics converts the data created by metering solutions and building automation systems into actionable intelligence, enabling owners and managers to identify and prioritise cost-saving opportunities and mechanical system inefficiencies.</td>
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<td>Building Analytics delivers a prioritised listing of the most impactful recommendations for a building.</td>
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Healthcare facilities are a perfect example. Energy availability and reliability are critical to patient care and safety. Our integrated healthcare infrastructure solutions combine hardware, software, services, and our global experience, enabling healthcare facilities to see, measure, and manage energy use across their organisation. We ensure hospital security and patient safety through reliable power, security, and IT solutions. This allows hospital staff members to make informed decisions and improve operational efficiency.
The hotel industry, which has some of the toughest, most discerning customers, is another good example of how integrated energy management solutions cut costs and allow stakeholders to control their environment. From check-in to checkout, guests expect everything to simply work. A power outage or security breach provokes the ire of even the most patient guests.

Hotels around the world — including brands like Hilton and Sheraton — collaborate with Schneider Electric to make their properties reliable and connected. Sound power systems ensure uninterrupted meeting facilities and activities. Building management solutions make it simple to manage indoor climates, lighting, blinds, and fire safety on a single IP platform. Sustainability is also very important to the hospitality industry; and we are helping hotels transform into green and efficient buildings.

While it may appear that economies of scale favour energy initiatives in skyscrapers and mega-hotels, more and more attention is turning to small- and medium-sized buildings, such as restaurants, retail outlets, and sports facilities. Buildings with a footprint of 10,000 m² (100,000 ft²) or less represent a majority of all commercial buildings. However, less than 10% of these facilities benefit from the ROI delivered by building management systems. Controlling energy costs, asset reliability, and safety are just as important in these smaller buildings.

Power Management

We offer power management systems that help customers maximise power availability, power reliability, and power quality, while simultaneously improving energy efficiency and cost management across the entire range of their enterprise.

- PME, PSE, advanced meters
- Basic meters and capacitors
- Contactors and protection relays
- Circuit breaker trip units
- Smart panel communications
- Power factor correction

Our electrical hardware devices — circuit breakers, switches, meters, gateways, switchboards, and UPS systems — are globally recognised as the most reliable performance equipment for protection, control, and measurement. An integrated power management system incorporates all of these components.

Our solutions are interoperable and complementary, integrate easily into existing systems, and offer scalability in size and performance.

With a host of solutions like SmartStruxure™ Lite tailored specifically for small and medium buildings, we make energy cost control and improved comfort quick and easy. Web and wireless technology is used to control HVAC, lighting, and metering, all accessible remotely by facility management personnel. Such technology integration enables advanced, predictive customer service: for example, shutters adjust as a customer sits by a window, and smart presence detection alerts a shopkeeper that a visitor is entering the store. As building management needs grow, the SmartStruxure Lite solution can be integrated into larger BMS solutions.
Building owners and occupants are now focusing on workplace efficiency. From comfort to space, and occupant services to management dashboards, organisations are now placing more emphasis on well-being at work. This is made possible by a range of emerging technologies, including RFID cards. Schneider Electric is at the forefront of this innovation, providing building owners with an innovative new way to measure the quality of workspace.

**SmartStruxure Solution**

SmartStruxure is Schneider Electric’s premier building management system. A SmartStruxure solution includes software, hardware, and services that enable smarter, more efficient and effective buildings.

This scalable solution helps facility managers and building owners gain control over heating, ventilation, and air conditioning (HVAC) and lighting systems, and integrates other critical building systems such as power management.

SmartStruxure delivers new levels of insight and analysis of energy and operational data.

SmartStruxure is extremely scalable and designed for customers with a wide range of building management needs. With a SmartStruxure Lite solution, we can provide cost-effective control into small and multisite facilities, such as hotel and retail sites.

SmartStruxure provides customisable, intuitive interfaces, simplified engineering, seamless scalability and information efficiency, and sustainability. The result is efficient buildings that also deliver occupant comfort and safety.

**Security**

For many public and private institutions, enhanced safety initiatives call for the deployment of video security technologies. Video security provides situational awareness, accelerates response, and can deter crimes like vandalism and theft. In addition to standard office buildings, these technologies can be applied to bridges and airports, refineries and pipelines, seaports and highways. Pelco by Schneider Electric has increased the overall safety of the public by providing durable and reliable video security solutions.

At Schneider Electric, we understand that buildings are not about infrastructure but about people. Creating environments where people feel comfortable and safe enables a culture of business collaboration, which, in the end, helps businesses to establish competitive advantage.

**Pelco by Schneider Electric**

Pelco produces the security industry’s most respected offering of discreet security camera domes and enclosures, video matrix systems, virtual matrix, video management software, next-generation DVRs, full HD LCD displays and HD megapixel cameras, IP cameras, and other IP/IT solutions.

Our Pelco product lines offer the best solutions for video security, intrusion detection, and access control.
Buildings Case Study

The most sustainable office building in the world

A quiet revolution is occurring within the buildings industry. With the need to accommodate more stringent environmental and economic requirements, building owners are implementing changes that result in lower energy consumption and more comfortable, healthier working conditions for occupants.

Located in Amsterdam’s Zuidas area, Europe’s fastest growing business and knowledge district, The Edge is heralded as the world’s most sustainable office building. It has earned the highest score ever awarded by the Building Research Establishment (BRE®) — 98.36% — and the distinction of BREEAM® NL New Construction certification of ‘Outstanding’.

Coen van Oostrom, Founder and CEO of OVG Real Estate, said: ‘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’.

- With the Schneider Electric SmartStruxure solution in place, The Edge delivers impressive benefits:
  - The building has achieved net-zero energy status by using solar panels and thermal energy underground storage for heating and cooling.
  - Rainwater harvesting, electric vehicle charging stations, and motion-sensor ventilation also contribute to the sustainability approach.
  - Employees can use a smartphone application to regulate lighting and climate in their workspaces.
  - A video screen dashboard in the lobby shares real-time energy consumption and efficiency data with building occupants and visitors.
  - Facility managers maintain optimal comfort for occupants with on-site and remote monitoring and control capabilities.