

Schneider Electric

Next Generation Building Automation

Open and Secure System for Operational Excellence

AN OPEN AND SECURE NETWORK YOU CAN TRUST

Why risk choosing systems that can't reduce costs and protect investments long term?

A fully integrated building is the cornerstone of your ongoing efforts to run every process at peak efficiency and performance. IoT-driven applications, advanced analytics and cloud computing are changing the performance expectations facility managers and tenants have for local control and integration. With new technology increasingly making today's proprietary building management system (BMS) tomorrow's obsolete installation, it's vital to choose a solution that combines mobile and web-based accessibility with the cyber security, flexibility and scalability advantages of EcoStruxure™ Building.

Interoperability is a smarter choice for the bottom line

A modern BMS is commonly comprised of many devices and dedicated pieces of interconnected equipment communicating over networks to software systems that present information through user interfaces. To be flexible, scalable and open, it should integrate all subsystems and devices regardless of manufacturer, or communication method. Unlike EcoStruxure Building, most existing platforms have built-in barriers that make it more difficult to provide ongoing support of protocols, operating systems, multiple programming languages, middleware and interfaces. This often results in additional effort, cost, complexity and risk as requirements change, technology evolves and building lifecycles are prolonged.

A system that is truly open offers several advantages:

- » Freedom to choose components that best meet price, quality or functionality requirements
- » Ability to select the best suppliers according to their areas of expertise and innovation
- » Choice of the best installers and service providers for maintenance, upgrades and feature enhancements
- » Interoperability beyond standard/historical BMS framework.

Though many systems claim to be open, they suffer from structural constraints and multiple programming languages that limit the ease and cost-effectiveness of their interoperability.



FUTURE SCALABILITY IS BUILT ON TODAY'S OPTIMIZED TECHNOLOGY

To offer advantages comparable to the flexible, open framework of EcoStruxure Building, alternate systems need to provide an equivalent degree of straightforward interoperability. This would include the ability to facilitate seamless integration between building infrastructures, trouble-free Internet data transfer with the ability to display information via any mobile device and browser, secure, real-time information sharing and more. Achieving that goal requires a number of factors to be in place:

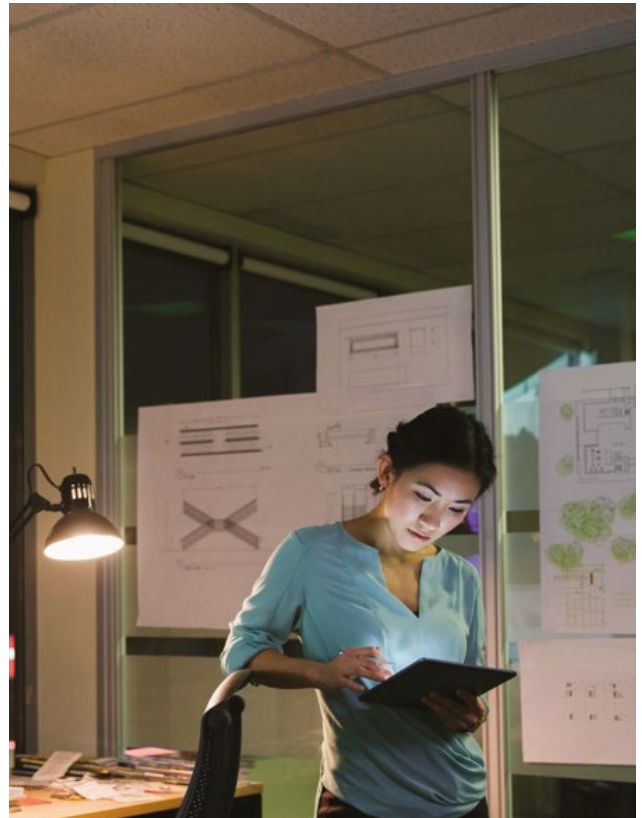
- » **Open interfaces:** used to uphold interoperability between third-party products and BMS subsystems. This is achieved by supporting major BMS protocols through the use of generic drivers.
- » **Open integration:** the ability for a program to interface with and control the resources provided by another piece of software. Through the use of application programming interfaces and software development kits, custom drivers and middleware can support information exchange between data bases and custom protocols.
- » **Open technologies:** consist of standard operating systems, browsers and IT protocols like HTTPS and SMTP, that are tapped by hosts in a communications network. These are used to support IT and cybersecurity technologies that protect against unauthorized changes, intrusions, and attacks.
- » **Certified distribution:** an open framework and distribution model that enables competitive bidding for installation and maintenance and lets integrators specify products from any vendor.

TRUE INTEROPERABILITY - THE DEVIL IS IN THE DETAILS

Building infrastructure comprises many subsystems, and numerous “standard” protocols are in use. Whether it’s BACnet for HVAC, DALI for lighting, LonWorks for equipment communication or Modbus for metering, the aspiration of a single unified standard for building management is still a long way off. Extensive engineering time is often required to ensure that data from multiple systems can be properly integrated, while the configuration required by top-level supervisory software to render custom displays, dashboards and reports remains complex and specialized.

Not until data from multiple systems can be automated will the dream of leaving manual intervention behind be fully realized. Meanwhile, many building management systems promoting open interfaces, integration, technologies and distribution present numerous barriers to doing so without considerable extra cost and difficulty:

- » **Third-party drivers and equipment** – add complication and cost as they must be purchased separately, while being subject to incompatibilities and rework for new releases.
- » **Multi-vendor complexity** – third-party middleware software development can introduce unexpected expense, uncertainty and possible incongruities during development and operation.
- » **Security vulnerabilities** – system components sourced from third parties can create undetected risks and security vulnerabilities that add IT cost and require extra effort to mitigate, especially during operation.
- » **Reseller, integrator risk** – time consuming due diligence is frequently required to assure project execution and service benchmarks are met.



Not until data from multiple systems can be automated, will the dream of leaving manual intervention behind be fully realized.

ECOSTRUXURE™ BUILDING SOLUTIONS DELIVER TRUE INTEROPERABILITY AND SUPERIOR VALUE

EcoStruxure Building advantages begin with comprehensive cyber security. In 2019, Schneider Electric was certified to the Security Development Lifecycle (SDL) process, a globally recognized standard: IEC 62443-4-1.

An extensive portfolio of devices, validated solutions and integrated services is also available for building professionals that need an integrated solution without the complication of coordinating different vendors. Schneider Electric provides complete building lifecycle solutions, from field devices to controllers, to software as a service (SaaS) for end-to-end cybersecurity.

From small buildings to large, complex multi-site enterprises, tailoring an EcoStruxure Building system to solve each installation’s unique needs is straightforward. Simply select from high performance products engineered to the highest standards, certified system integrators, common programming language and commissioning from Schneider Electric, or integrate third-party components as required.





AN OPTIMIZED, EFFICIENT BUILDING IS FOSTERED ON INNOVATION

EcoStruxure Building incorporates a fresh approach to interoperability by natively supporting, testing, and validating all open protocols at no extra cost or annual license fees beyond that of associated initial hardware, software purchases and upgrades. It includes a complete range of hardware, software and cloud services designed to open and secure standards, while accommodating technologies that support a connected, scalable building management solution.

EcoStruxure Building components work together natively, while also being able to integrate with third-party products and systems. This key feature of EcoStruxure Building is vital to mitigating the interoperability and cyber security risks inherent in contracting integration tasks to uncertified technology partners. The result is a series of highly beneficial outcomes:

- » **Efficient, cost-effective engineering** – native protocol support at the enterprise, server or device level greatly reduces engineering complexity and cost when integrating and interfacing with third-party products and systems, all while providing confirmed performance and security.
- » **Proven, tested third-party integration** – common programming application development by approved, accountable partners contributes to validated framework solutions that offer the guaranteed compatibility most other BMS's cannot match.
- » **Greatly reduced security vulnerabilities** – by supporting standard, open technologies, operating systems and IT protocols, EcoStruxure Building offers enhanced, built in cyber security capabilities that are tested and validated before installation and commissioning.
- » **Best-in-class project execution** – a large network of local EcoXpert™ integrators, resellers and installers who are required to receive rigorous, best-in-class training on the EcoStruxure systems and solutions. Unlike other BMS suppliers, this facilitates competitive bidding and genuine choice for installation and commissioning, while bringing trusted professional competencies to every project.

Reduce risk by choosing systems that are truly open, flexible, scalable, cyber secure, and built on innovation.

With these capabilities as your foundational design for building infrastructure systems, integrations and processes can easily be optimized and operate efficiently, while providing your facility managers and tenants actionable insights and control.

As the leader in intelligent building software, ranked by Guidehouse Insights (formerly Navigant Research), this technology is transforming the buildings of tomorrow.