A more efficient, reliable, and safer healthcare facility.

Discover how EcoStruxure solution for Healthcare lowers operating expenses, reduces risk, improves clinical outcomes, and increases patient satisfaction.
Make a positive impact on your facility and bottom line.

Schneider Electric puts you in control of your operations and financial health.

Keeping a hospital financially strong without jeopardizing the environment of care can be a daunting task. By spending less on operations, you may adversely affect the most important elements of your healthcare business — patient and staff satisfaction and revenue. Poor facility performance and equipment failure could result in lower quality metrics, severely disrupted clinical processes, and compromised safety.

To meet this challenge, you need a partner with the proven experience, capabilities, and industry expertise to make a difference for your facility. From design to technology integration and deployment, Schneider Electric™ is your partner of choice.

EcoStruxure™ solution for Healthcare will integrate the healthcare facility infrastructure to provide continuous analysis, commissioning, and maintenance for optimal system operation. We will help you create a sustainable cycle of lower operating costs, improved clinical outcomes, enhanced safety, and increased equipment reliability.

Let us show you how to

› Improve Financial Performance
› Increase Patient Satisfaction
› Reduce Life Cycle and Energy Costs
› Simplify Regulatory Compliance Practices
› Improve Staff Productivity and Retention
Build your hospital to operate efficiently the first time.

Schneider Electric has the road map for sustainability and productivity you need.

25% of a building’s life cycle cost is financing and construction.

75% of a building’s life cycle cost is operational.

Properly designed and executed, EcoStuxure for Healthcare combines information technology and infrastructure to design a hospital around interoperability.

CABA building life cycle costs are based on U.S. data.

71.8% Mechanical Services

Energy comprises a little over half the typical U.S. hospital’s operating and maintenance budget. Mechanical (and related) systems make up more than 70 percent of that energy use in hospitals, with mechanical reheat and cooling consuming more than half.

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Take a strategic approach to your energy management life cycle.

Improve financial performance through utility cost savings that are sustained throughout the life cycle of the facility.

To find and drive efficiencies, healthcare facilities need to adopt an energy management life cycle approach to their energy use. With the average age of a hospital in the U.S. at 27 years, and the industry having a reputation of stretching facility life cycles, an energy management life cycle approach prepares facilities, and the organizations that own them, for long-term operating success.

The energy management life cycle plan addresses:

- Sustainability
- Energy procurement
- Power reliability and metering
- Infrastructure and efficiency
- Measurement and reporting
Don’t compromise on facility life cycle performance.

Expand your horizons using the Integrated Control Platform.

The complexity of running a hospital requires its facility management infrastructure to be dynamic, flexible, and aligned to respond rapidly to changes within the healthcare environment. A lack of interoperability between existing facility systems and stand-alone technologies results in lower operational performance and patient satisfaction challenges.

As the nucleus of EcoStruxure solution for Healthcare, an Integrated Control Platform helps you improve interoperability, efficiency, and overall patient care.

Through the combination of a converged IP network and open communications protocols, the Integrated Control Platform functionally integrates core mechanical, electrical, information and communication technology, and security systems into a single, intelligent control system. This seamless integration ensures optimal operation with clear, actionable information, allowing staff to quickly and accurately analyze and respond to events to provide the most efficient, comfortable, and secure environment possible.

As the nucleus of EcoStruxure solution for Healthcare, the Integrated Control Platform improves operational performance and patient care by bringing together a large variety of different hospital systems into a single, intelligent control system.
Your facility’s infrastructure is a key component in supporting your organization’s healthcare mission. Each division of infrastructure functions to bind your physical environment to clinical outcomes — to provide safe, comfortable, and reliable environments for quality patient care, while ensuring the financial viability of the organization.

The following infrastructure areas are united together via the Integrated Control Platform to create a fully integrated healthcare facilities infrastructure:

- Mechanical systems
- Electrical systems
- Information and communications technology (ICT) systems
- Security systems

For improved facility efficiency, the Integrated Control Platform serves as the single, simple, consolidated technology interface to ensure the facility is performing against design and baseline profiles, notifying staff of anomalies and presenting actionable energy data to help facility managers make more informed building decisions. Improved clinical efficiencies are realized by consolidating workflows and automating tedious record-keeping practices.
EcoStruxure solution for Healthcare.
An integrated healthcare facilities infrastructure.

Supporting Sequences, Technologies, and Systems

**Mechanical**
- Building Automation System
- Central Plant Control
- Medical Gas
- Building Optimization
- Setback Sequences
- Environmental Control
- Pressure Regimes
- Control Strategies
- Air Quality
- Demand Limit/Response
- Peak Demand/Load Shed
- Utility Metering
- Computerized Maintenance Management System (CMMS)

**Electrical**
- Lighting Control
- Electrical Distribution
- Metering
- Renewables
- Selective Coordination
- Branch Circuit Monitoring
- Harmonic Monitoring
- Power Quality
- Backup Generator Testing
- Energy Dashboards
- Intelligent Trip Units
- Life Safety/Fire Alarm System
- Transient Voltage Surge Suppressor (TVSS)
- Integrated Power and Control Equipment
- Computerized Maintenance Management System (CMMS)

**Security**
- Card Access
- Video Surveillance
- Visitor Management
- Biometrics
- RTLS – Asset, Infant, Patient
- Intercom
- Paging/Mass Notification
- Code Blue
- Point of Sale
- Pneumatic Tube
- Drug Dispensing System
- Computerized Maintenance Management System (CMMS)

**Information and Communication Technology**
- ICT Backbone
- Purpose-Built Data Center
- Uninterruptible Power Supply/Power Distribution Unit
- Monitoring
- Operating Room
- Cooling
- Card Access
- Video
- Simple Network Management Protocol (SNMP)
- Information Assurance
- ICT Interoperability and Mobility
- Computerized Maintenance Management System (CMMS)
The operational benefits are clear.

The Integrated Control Platform can improve performance, productivity, patient safety, and satisfaction.

The Integrated Control Platform yields efficiency and business value by simplifying operation in normally complex areas of a hospital. Clearly defined integration use cases help organizations increase and maintain energy savings, simplify regulatory compliance, improve patient experience and staff productivity, and enhance safety and security.

**Increase and Maintain Energy Savings**

> **Operating Theater Optimization** — improves energy efficiency and surgical suite management. A visual dashboard highlights key infrastructure elements, including occupancy state and schedule, environmental conditions, alarm status, medical gas, and isolated power system information. The Integrated Control Platform manages the temperature, humidity, pressurization, and ventilation based upon the occupancy schedule. During unoccupied periods, the air changes per hour and space temperature are set back to the allowable code levels. The schedule returns the theater to an occupied state unless the state is overridden within the system through the hospital’s surgical scheduling system or at the operating theater touch screen. All pertinent regulatory information is monitored, recorded, and archived.

> **Building Analytics** — delivers automated fault detection, diagnosis, and real-time performance monitoring with a prioritized list of facility issues based on energy cost, severity, and comfort impact. Users can view the potential cost savings associated with issue resolution and recommended operational changes, such as adjustments to control sequences. Trending data captured from construction into occupancy will enable the implementation of Continuous Commissioning® to maintain equipment performance and adherence to identified key performance indicators for the system.

> **Patient Area Setback** — makes real-time temperature and air-exchange adjustments when patient rooms are unoccupied, by tracking when patients are admitted, transferred, or discharged. Setback control and energy-saving algorithms are implemented through integration of the Integrated Control Platform and the Admission, Discharge, Transfer (ADT) systems via Health Level Seven® (HL7®) protocols in the patient rooms. Further integration with nurse call and bed management systems may deliver additional savings through minor temperature adjustments when patients are scheduled out of the room for therapy and testing. All changes are tracked by the Integrated Control Platform for compliance and can be overridden or altered when a need arises.
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> Total Environment Management — monitors critical parameters, such as access, temperature, humidity, and pressurization for key environments that are heavily regulated by local, state, and federal codes, including but not limited to:
  - Blood Bank/Tissue Storage Refrigerators
  - Pharmacy Refrigerators and Freezers
  - Laboratory Refrigerated Storage
  - Operating Theater
  - Catheterization Laboratory
  - Central Sterile Processing and Sterile Supply
  - Airborne Infectious/Protective Environment Isolation and Anteroom
  - Labor and Delivery Room
  - IV PREP
  - Endoscopy/Bronchoscopy
  - Dietary Refrigerators and Freezers
  - ETO Sterilizer Space
  - Emergency Department Decontamination Areas
  - Nuclear Medicine
  - Telecommunications Service Entrance Room, Technology Equipment Center, and Technology Distribution Rooms

Using detailed audit trails and enforced operator responses, the Integrated Control Platform maintains a complete archive of all system events, consolidated into a single reporting structure for effortless search and retrieval.

> Emergency Power Supply Systems (EPSS) Testing — automates the periodic testing and reporting of facility generators and automatic transfer switches (ATS) to meet regulatory requirements, and ensures backup power is available when needed. The Integrated Control Platform records and archives numerous parameters during the test process, including waveforms of critical equipment, generator engine parameters, electrical parameters from generators and ATS, engine start times, and ATS transfer times.

> Operating Theater Environment and Isolated Power — permits critical systems to remain online in a hazardous current situation. As operating theaters are now classified as wet areas under the updated National Fire Protection Association (NFPA) 99 Standard for Health Care Facilities, isolated power systems offer an invaluable advantage in the surgical setting. The Integrated Control Platform monitors hazard current and generates alarms if levels exceed preset thresholds without disconnecting the electrical circuit. These alarms can be shown on local displays, at the nurses station, or on the facility staff’s mobile devices.
Enhance your patient and staff experience.
Satisfaction improvements are yours for the taking.

An Improved Patient Experience and Staff Productivity

> **Patient Room Control** — allows patients to directly control their individual microclimates, including temperature, room and task lighting, and mechanical window shading, using a pillow speaker, integral or boom-mounted bedside terminal, or integration to the patient entertainment system and room television. The Integrated Control Platform communication is accomplished through either a hardwire interface to the HVAC control system or through wireless routers used as part of the intelligent bed management system. Additional interfaces can be expanded to incorporate asset management, real-time location system interoperability, room sanitation status, and alarming.

> **Real-Time Location System (RTLS)** — provides accurate location information for patients, infants, staff, and assets using Wi-Fi® signals and RFID tags to quickly locate medical equipment, reduce the risk of infant abduction, and protect against patient wandering. Integration with the Integrated Control Platform adds value by noting if tagged assets or patients are outside of their defined areas and alerting security staff to the event, queuing cameras for video surveillance and locking down areas if required.

> **Wireless Tablet Applications** — Clinical work flow information from the Integrated Control Platform that is natively available to these can be supported through mobile applications. Information such as asset and staff locations, patient room occupancy, temperature, humidity, space pressurization, power quality, power availability, medical gas status, and security alerts can be easily sourced to these applications. These Web services are supported with authentication, audit trail, and security, and are flexible across numerous operating platforms. They are scalable to support performance across multiple buildings on a campus or an enterprise-level healthcare organization.

**Air Quality/Contamination**
- Smoke Detection
- Temperature
- Humidity

**Touch Pad Interface**
- Internet
- Telephone
- TV/Radio
- Room Control
- Lighting Control
- Auto Blinds
- Daylight Control

**Staff Base HMI**

**Nurse Call**
Protect your patients, staff, and assets.
A unique opportunity for enhanced protection.

Enhanced Patient and Staff Safety and Security

> **Hand Hygiene** — The Integrated Control Platform will monitor, manage, and document hand hygiene within patient areas. If staff, patients, or visitors enter or leave the room without using the sanitizer, a visible and audible warning will be issued to the device and a violation recorded in the Integrated Control Platform. Proper uses and violations are logged in the system to show compliance with infection control policies for the department.

> **Data Closets and Rack Security** — The Information and Communications Technology infrastructure is typically decentralized with a data closet on each floor of every wing. With the Integrated Control Platform, security for the room and the data rack can be managed with a single card. The simple process of opening the door on the rack can send alerts with video monitoring to both the security center as well as IT. This same equipment can also provide monitoring of temperature, humidity, and power.

> **Visitor Management** — Online visitor preregistration, integration with admissions software, and kiosk-based issuance allows access cards to be issued for visitors. This can be successfully accomplished through fast and seamless integration between the visitor management system and the Integrated Control Platform at an enterprise level. Additional integration to local sex offender registries and restraining orders can validate a visitor and determine if an escort is needed before issuing a card.
Integrated healthcare facilities management and control.

Only Schneider Electric can bring it all together.

As your energy expert and full-service partner, Schneider Electric provides end-to-end support from building conceptualization through technology integration. Our industry-leading technologies and systems integration expertise, in combination with our deep understanding of high-performance healthcare facilities, are proven to deliver solutions that address your business, environmental, and regulatory challenges. We help you achieve sustainable savings that decrease operating expenses and boost your bottom-line performance.

Leveraging the power of our global brands

Pelco™ by Schneider Electric is a world leader in the design, development, and manufacturing of video security systems ideal for any industry. APC™ by Schneider Electric ensures high availability and reliability in security technology as a pioneer in data center infrastructure. Square D™ by Schneider Electric is one of the most trusted names in electrical distribution, power, and control — from residential to industrial construction. These brands are integral parts of the Schneider Electric portfolio.

Make the most of your energy℠