



Digitalization and electrification:
Solutions enabling the healthcare facility ahead of its time

Life Is On

Schneider
Electric

Enabling the healthcare facility **ahead of its time**

Evolving patient expectations, advancements in technology, and decarbonization needs are driving a shift in the **global healthcare landscape**.

Challenges stemming from insufficient infrastructure, rising costs, and workforce constraints only add to the pressure. These powerful forces are transforming traditional delivery of care and healthcare infrastructure management.

Confronted with a growing list of challenges, and fewer resources to solve them, healthcare leaders are turning to technology to adapt, investing in digital solutions that are **ready for today, and flexible for tomorrow**.



Workforce challenges



Increasing cost-pressures



Insufficient infrastructure



Evolving patient expectations



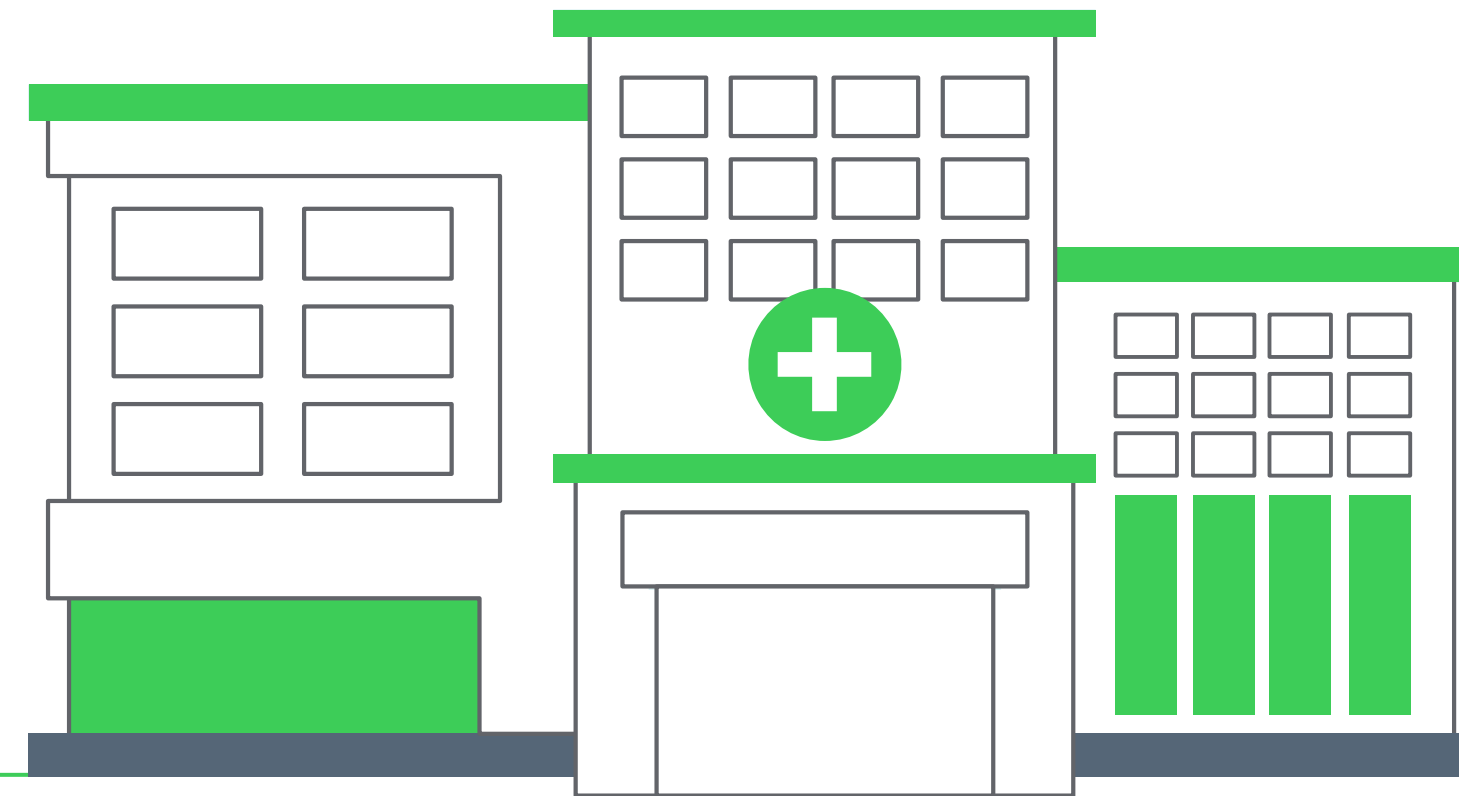
Decarbonization acceleration



At Schneider Electric, we partner with healthcare organizations to design and deliver digital solutions that are **ready for today and flexible for tomorrow.**

From building new to transforming existing hospitals, our specialized expertise and planning tools help to design, modernize, and optimize your entire building systems infrastructure, from electrical systems to building automation technologies.

Our EcoStruxure™ for Healthcare platform offers digital technologies that unify disparate systems for enhanced performance, empowered by an integrated range of consulting, on-site, and digital services that adapt to your evolving needs.



Discover how we help healthcare customers harness the power of digitalization and electrification to **achieve four essential outcomes:**

Resilient

Ensure resilient and secure infrastructure to protect patients and staff against every threat.

Efficient

Unify systems and support staff to enable high-performing facility operations and maximize resources.

Care-Centric

Empower patient autonomy and streamline staff workflows for uncompromised clinical outcomes.

Sustainable

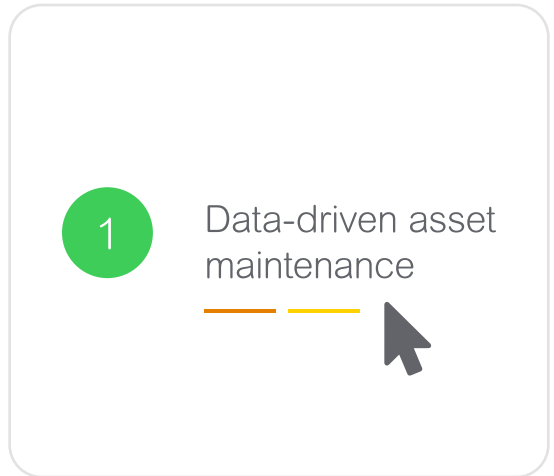
Progress your decarbonization journey from roadmap to realization with smart energy management and all-electric infrastructure.



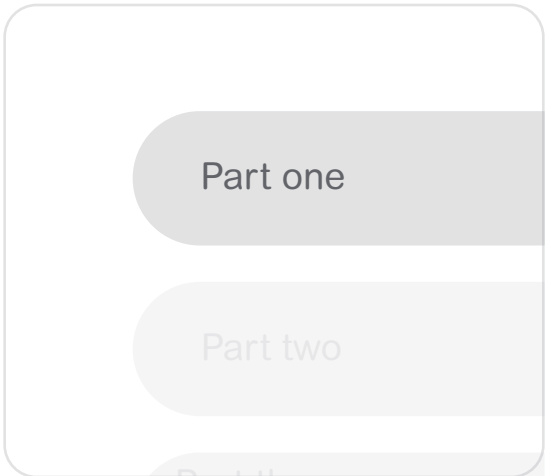
Welcome to St Murphy's, our **exemplar hospital**

Use the interactive menu on the next page to discover innovative solutions, example scenarios and customer successes.

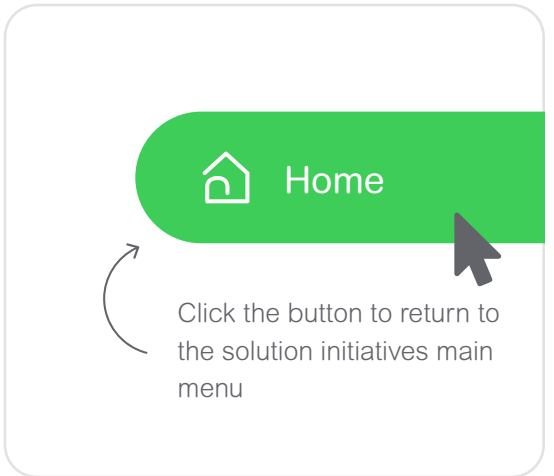
How to navigate this document:



Click the solution initiative you wish to explore to be taken straight to the page. Essential outcomes of that particular initiative are shown below the text.



The grey tabs to the right of the page indicate which part of the solution initiative you are viewing.

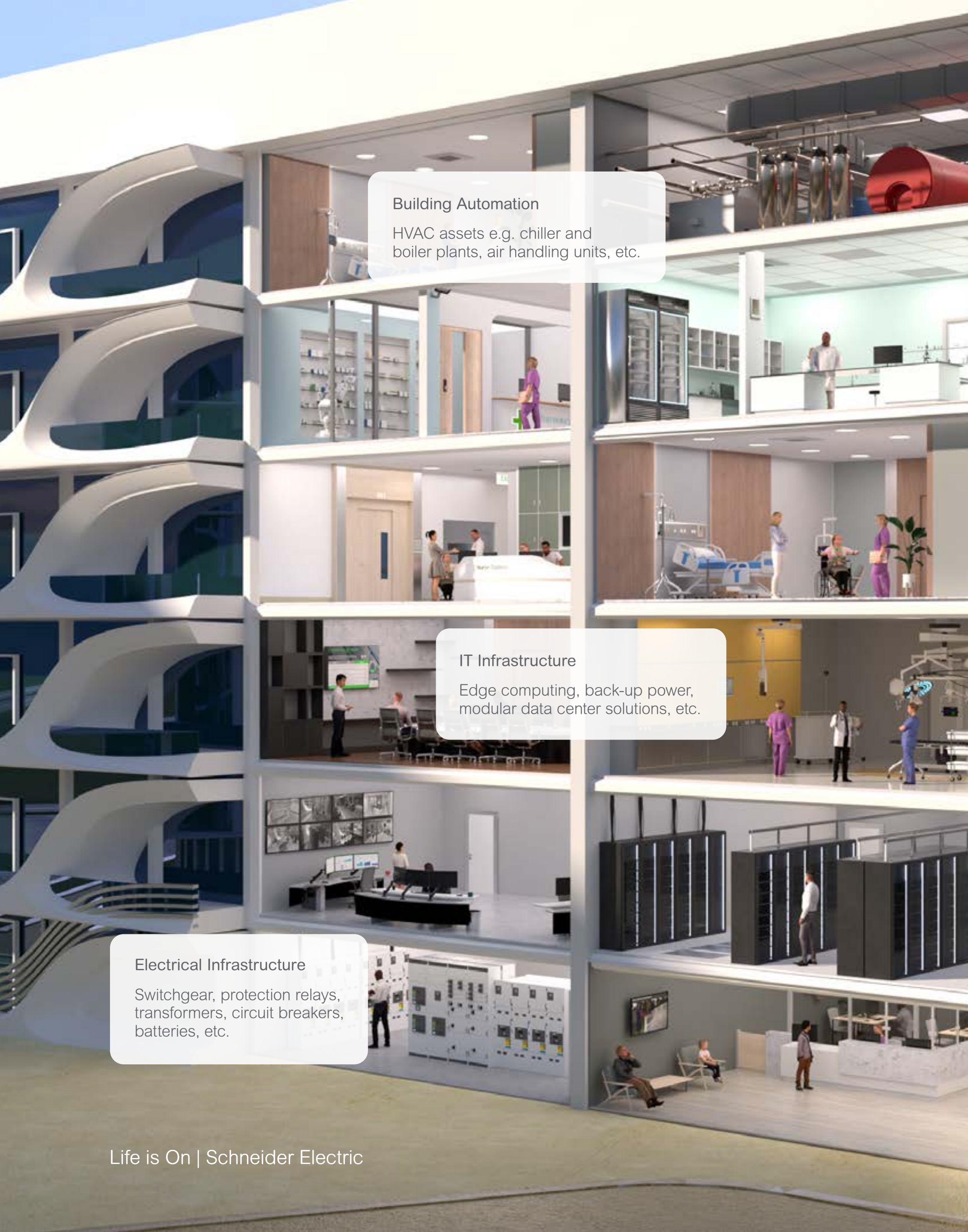


To return to the solution initiative menu, click the green home button.



EcoStruxure™ for Healthcare

Digital and electric solutions to enable the healthcare facility ahead of its time



Building Automation
 HVAC assets e.g. chiller and boiler plants, air handling units, etc.

IT Infrastructure
 Edge computing, back-up power, modular data center solutions, etc.

Electrical Infrastructure
 Switchgear, protection relays, transformers, circuit breakers, batteries, etc.

Data-driven asset maintenance

Part one

Part two

Part three

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The challenge



£11.6 billion - the total cost to eradicate maintenance backlog for NHS England

Source - NHS England 2022/23

For many healthcare organizations ‘maintenance backlogs’ threaten patient and staff safety. This problem is exacerbated by maintenance staff shortages and shortfalls in investment.

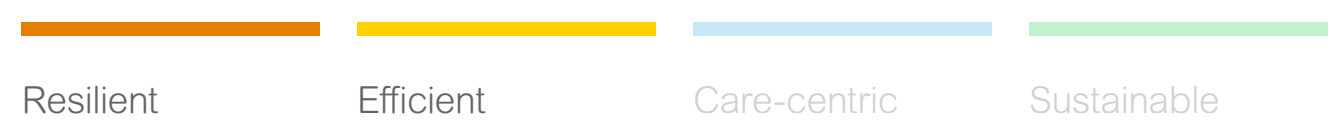
The solution

Data-driven asset maintenance involves IoT-enabled sensor technology that connects critical assets across your essential infrastructure, generating insights into operating conditions such as humidity, vibration, and temperature. When combined with control software, advanced analytics, and services this solution informs and enables predictive and condition-based maintenance programs.

Enabling hospitals to:

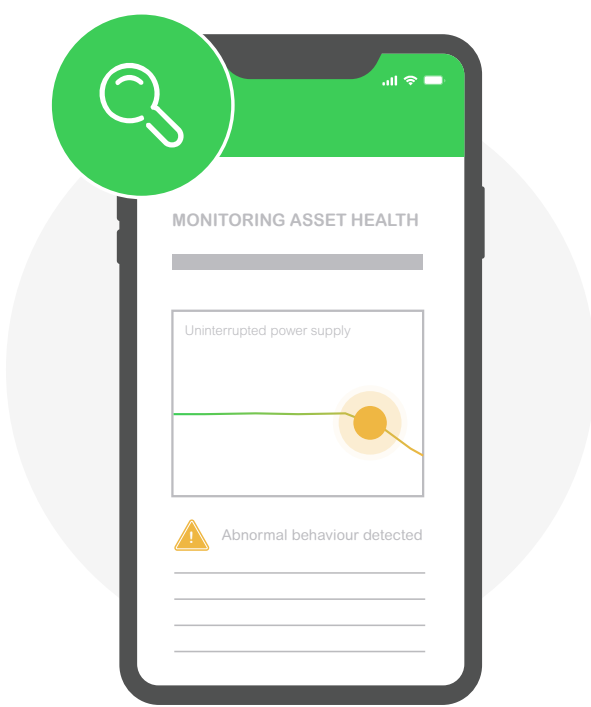
- Perform real-time monitoring and automatic optimization of asset performance and operations.
- Monitor asset health, pre-empt and predict asset failure, including dynamic end-of-life estimation.
- Access remote operations and support maintenance teams with 24/7 assistance from Schneider Electric’s Bureau.
- Consolidate asset management strategies via integration with Computerized Maintenance Management Systems (CMMS).

Essential outcomes:



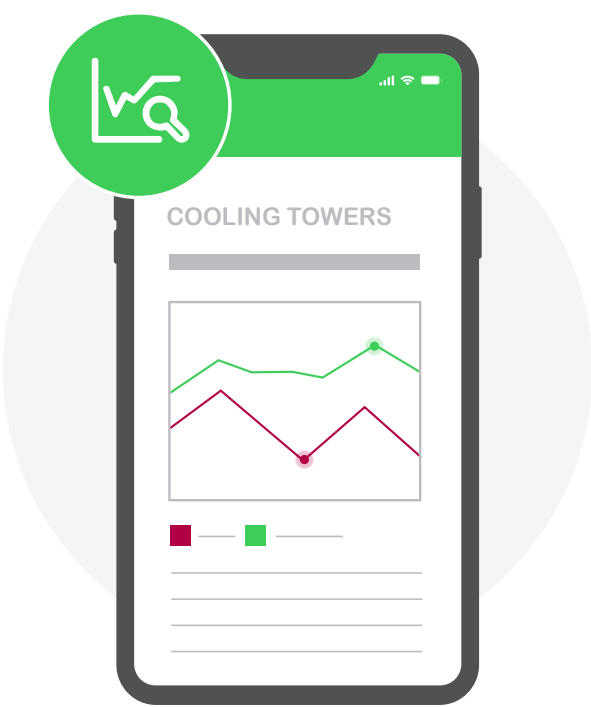
Data-driven asset maintenance

The scenario



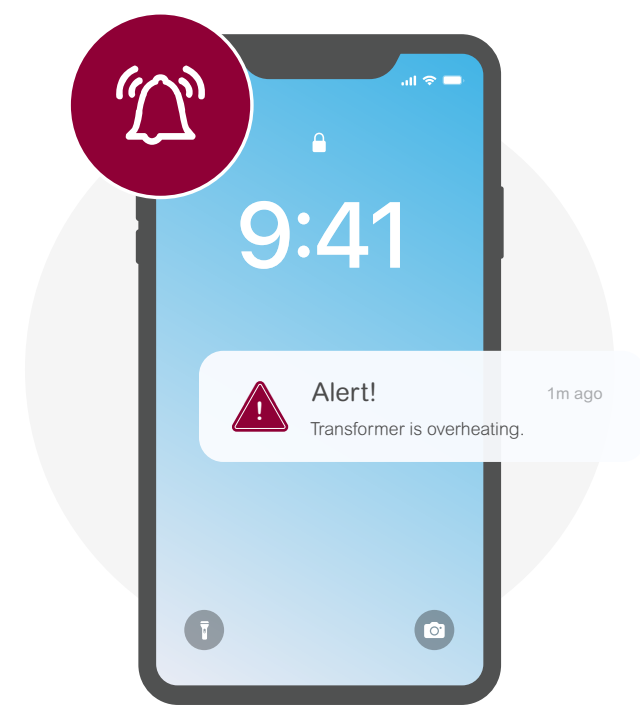
Provide **real-time insights** into **critical asset health**

The facility team receives an alarm: Abnormal behavior has been detected for a critical Uninterruptable Power Supply (UPS) that supports a Micro Data Center in St Murphy's research facility. The analytics platform recommends replacing a faulty battery within the UPS. This replacement extends the predicted end of life of the UPS from 6 months to 3 years.



Optimize **building performance** for **energy efficiency**

St Murphy's energy usage has been unusually high over the past few weeks. An energy performance report confirms the cooling towers have been operating inefficiently throughout the summer. The report suggests a new control strategy so the cooling towers will operate at their optimal performance set point.



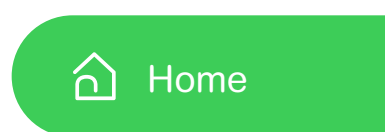
Pre-empt potential **failure** of critical equipment

The facility manager receives a critical alarm indicating an urgent issue with a transformer. The analytics platform shows the asset is overheating and that ambient conditions should be modified to correct the issue; the team acts immediately to avoid a potential power outage.

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Institut
Cœur
Poumon

Customer profile

Chu de Lille University Hospital

📍 France

+3,000 hospital beds

1.4 million outpatients annually

16,000 employees

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Data-driven asset maintenance

The challenge

Control energy costs and increase operational efficiency while maintaining power quality.

The solution

Modernize and connect critical infrastructure across high and low voltage electrical equipment and implement power monitoring software to aggregate data, allowing real-time decision making and active energy and power management of a large campus.

Featuring:

- EcoStruxure™ Asset Advisor
- EcoStruxure™ Power Monitoring Expert
- Connected critical assets

The impact



15% reduction in hospital energy consumption
(expected result)



Centralized data enables predictive maintenance strategy



24/7 uptime to ensure patient and staff safety

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Critical power and energy management

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The challenge



80% of power quality issues originate on site, with the other 20% from the energy provider

Source - Energy Management Magazine

Hospitals must reduce carbon emissions. Meanwhile, more sophisticated medical equipment requires reliable power, and the new energy landscape adds complexity to estates management.

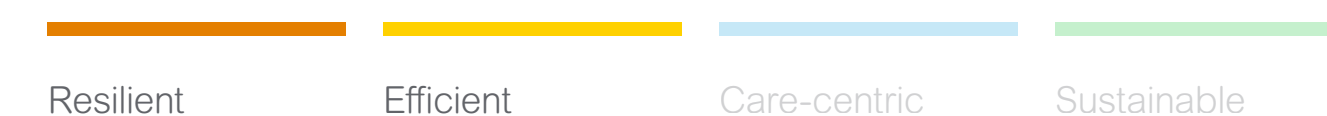
The solution

The EPMS brings together your hospital's critical power infrastructure, from metering, to power quality correction (e.g. Active Harmonic Filters), electrical control and protection assets (e.g. breakers and protection relays), and, coupled with advanced analytics and services, provides optimized power availability and energy efficiency.

Supporting hospitals with:

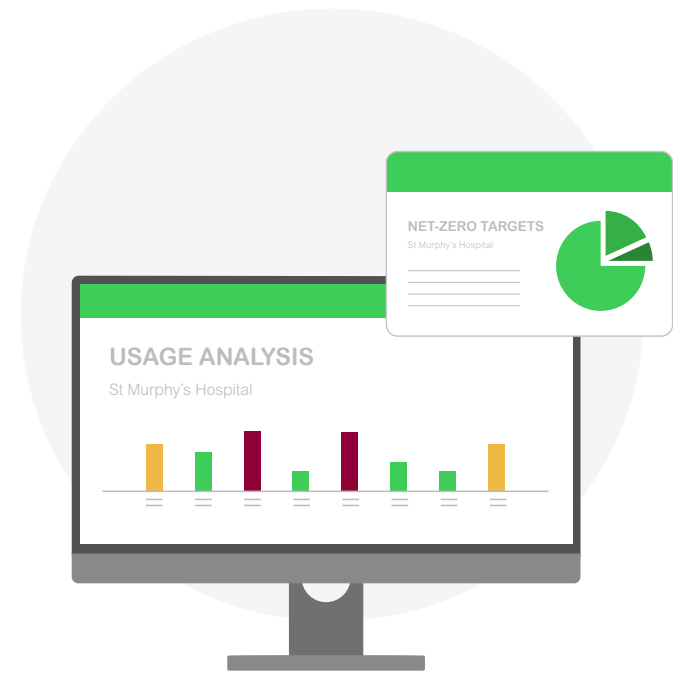
- Power Monitoring and Event Analysis
- Energy Performance Monitoring and Analysis
- Asset Health Monitoring
- Power Protection and Control

Essential outcomes:



Critical power and energy management

The scenario



Monitor and **report** on energy consumption and power infrastructure performance

The hospital's Chief Sustainability Officer needs to validate St. Murphy's energy performance data against its yearly net-zero targets. The FM team enters the energy management platform to run a detailed usage analysis, allowing them to generate the required energy report in just a few clicks.



Automatically detect faults in the power infrastructure and **deliver smart alarms** to the right stakeholders

The facility manager receives a real-time alarm indicating a high level of harmonics in one of the clinical equipment circuits, potentially causing equipment heating, damage, and interference. The facility team uses the power monitoring platform to identify the source of the disturbance and correct the issue.



Manage area and **tenancy** shadow sub-billing across utilities

St. Murphy's has received a complaint from a third-party café tenant regarding last month's electricity bill. The facility team accesses the sub-billing information, in real-time, to confirm the electricity consumption and subsequent charges to rule out any errors.

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Customer profile

Huashan Hospital North, Fudan University

Shanghai, China

1,216 hospital beds

300 million patients annually

3,101 employees

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Critical power and energy management

The challenge

Improve power reliability, energy consumption and operational efficiency with **digital solutions ready for the digital era.**

The solution

Built on the EcoStruxure™ for Healthcare architecture and platform, Huashan harmonized digital solutions, remote monitoring, and real-time data insights to reduce energy consumption and enable a proactive approach to power safety.

Featuring:

- EcoStruxure™ Power Advisor
- EcoStruxure™ Power Monitoring Expert
- EcoStruxure™ Building Operation

The impact



15% reduction in hospital energy consumption



20% increase in management efficiency



Improved patient and staff safety

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End-to-end security management

The challenge



Healthcare organizations experienced **1,426 attacks per week in 2022**

Source - Checkpoint 2022

Ensuring safety for all in healthcare is crucial. Besides physical security such as intruders, digital transformation demands protection of patient data and infrastructure from cyber threats.

The solution

Physical and cybersecurity solutions deployed across the operational technology layer, unify your hospital's security infrastructure and management systems into a single platform as your first line of defense in building security.

This solution provides:

- An integrated security system including access control, intrusion detection, duress and visitor management.
- Whole life system upgrades, integration management and system troubleshooting.
- Remote access management and cyber security policy enforcement.
- Cybersecurity management across all OT systems.

Essential outcomes:



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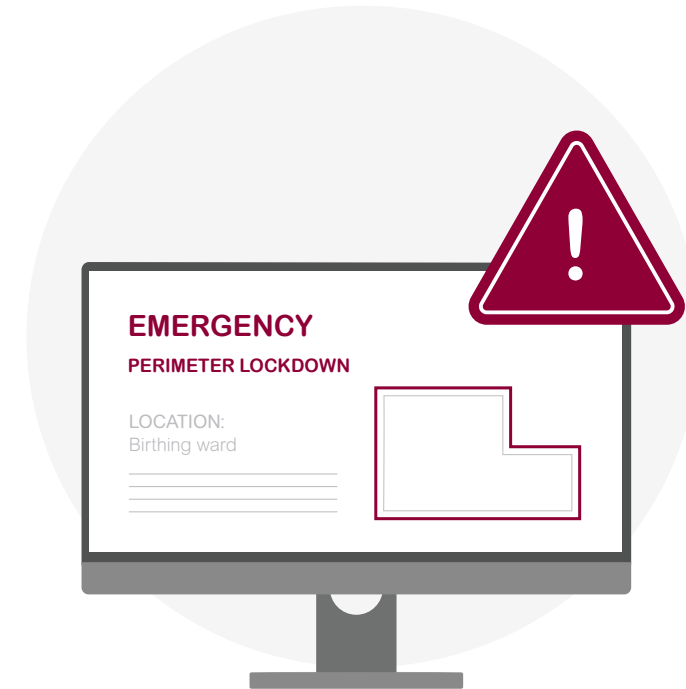
End-to-end security management

The scenario



Ensure **operational technology** cyber-security

St Murphy's is undergoing its monthly cyber-security audit. The CIO accesses the latest vulnerability assessment report to validate the secure network design of the Operational Technology, and the system hardening measures implemented as part of the IEC 62443 standard compliance.



Integrate **RTLS** with facility systems to protect patients

After detecting a baby abduction alarm in the birthing ward, the access control system automatically triggers an emergency lockdown in the perimeter of the alarm location, and the lights are automatically turned on to provide visibility for the security team.



Enforce **access control policies** for building security

The security system detects unsuccessful attempts to access St Murphy's pharmacy after hours, using an access card issued to a contractor. The system automatically deactivates the card and notifies the relevant contractor company via integration with the Maintenance Management System.

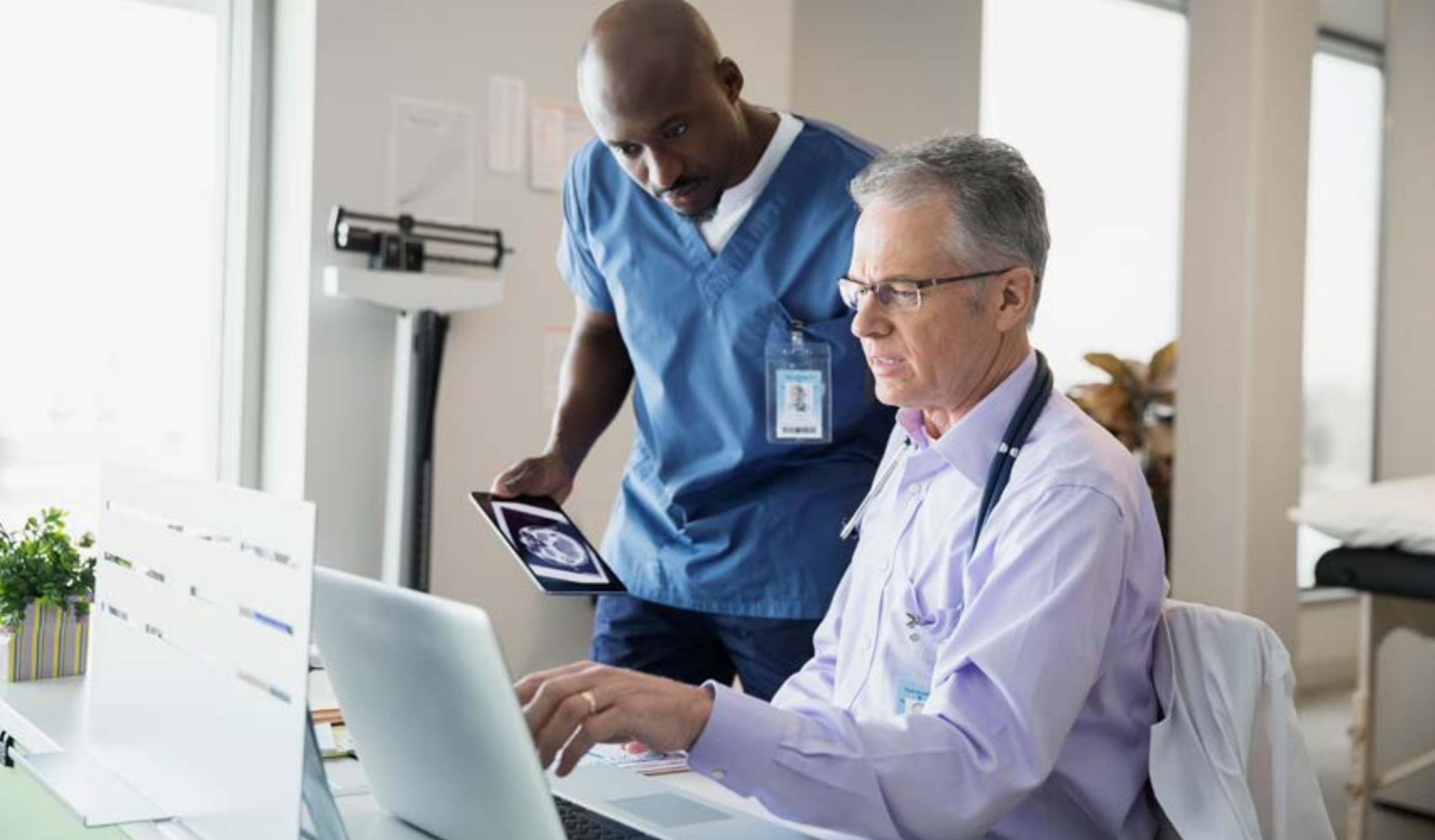
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Customer profile

Cancer Treatment Centre

Australia

Multi-level facility

600 outpatients annually

32k m² built-up area

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End-to-end security management

The challenge

Secure a first-of-its kind cancer treatment center with an integrated digital solution for **maximum security** and **enhanced sustainability**.

The solution

This hospital's integrated security management solutions ensure continuity of world-class care, security, and complete peace-of-mind to staff, patients, and visitors.

Featuring:

- EcoStruxure™ Building Advisor
- EcoStruxure™ Power Advisor
- EcoStruxure™ Building Operation
- EcoStruxure™ Security Expert
- EcoStruxure™ Power Monitoring Expert
- Pelco VideoXpert

The impact



10-20% reduction
in agressions
(expected)



Up to 50% improvement
in incident response time
(expected)



LEED Gold
certification

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Electrify and optimize energy sources

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The challenge

“Powering health-care facilities through decentralized renewable energy is a **concrete action to build climate resilience.**”

Source- Energizing health: Accelerating electricity access in health-care facilities: executive summary (WHO)

Hospitals are proactively investing in onsite renewable energy sources to produce green energy and safeguard against grid instability. This approach is especially crucial for hospitals in developing regions that lack a reliable power supply.

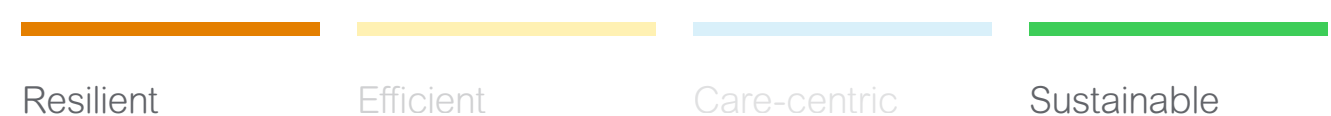
The solution

End-to-end smart energy management solutions maximize onsite energy generation and protect hospital infrastructure against unstable grid power supply by monitoring and controlling distributed energy resources (DERs) and analyzing grid conditions.

This solution enables:

- Predictive DER control to forecast production and consumption.
- Analytics-capable equipment and controllers to understand grid operation.
- Electric Vehicle charging and load management.
- All-electric infrastructure and electrical design digitization
- Grid-responsive estates with opportunities for energy trading and tariff optimization

Essential outcomes:



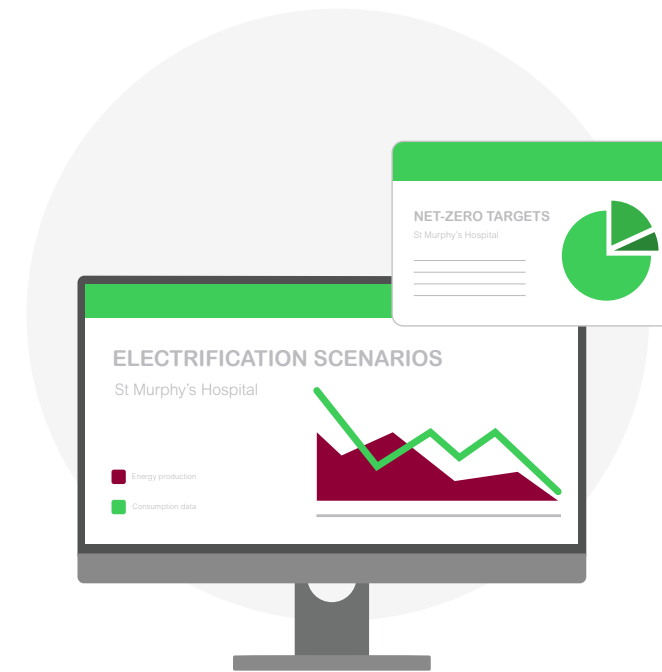
Electrify and optimize energy sources

The scenario



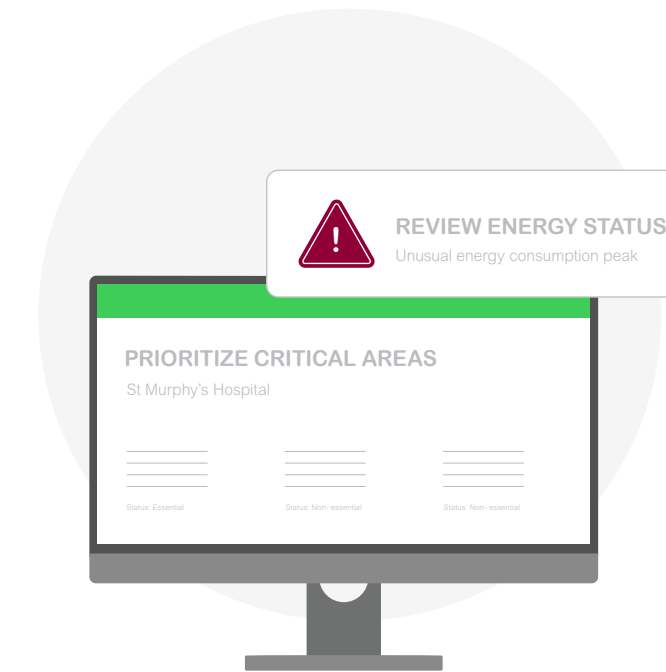
Optimize the **use of onsite renewables** to reduce costs

Following operational budget cuts and an increase in energy-intensive medical equipment, St Murphy's Energy Manager must reduce energy costs. The smart energy management platform forecasts and optimizes when to consume, produce, store or sell energy based on weather forecasts, demand response requests and energy market pricing to minimize energy costs without compromising operational continuity.



Design an **electrification strategy** using real data and digital tools

The estates team is reviewing St Murphy's long-term electrification strategy to address net zero carbon targets. The team utilizes electrical digital twin software that uses actual energy production and consumption data to simulate various 'electrification scenarios' to understand their impact on existing infrastructure.



Ensure **power supply stability** for critical areas

During an unusual energy consumption peak (e.g. a heatwave), St Murphy's must review their energy status. The power management system predicts that power demand will exceed onsite energy production, as a result, it automatically sheds non-essential energy loads to prioritize critical areas and equipment.

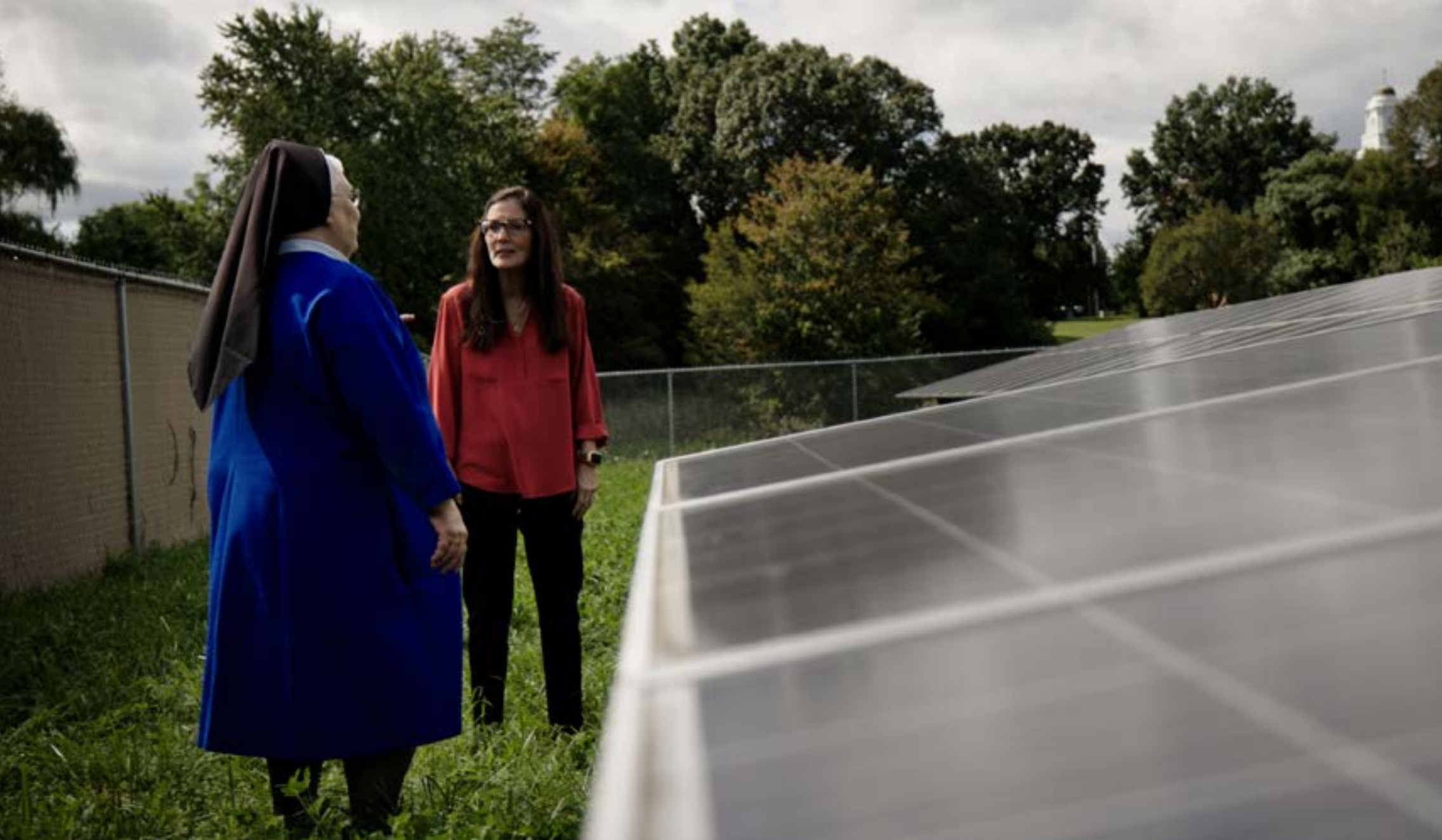
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Customer profile

The Daughters of Mary of Immaculate Conception Campus

📍 Connecticut, USA

4 critical facilities

137 acre campus

Specialized community care

Electrify and optimize energy sources

The challenge

Ensure **resilience** and **energy efficiency** for enhanced sustainability at a legacy estate.

The solution

Navigating complex state-run funding programs and in partnership with Citizens Energy, Schneider Electric flips the switch on a one-of-a-kind microgrid, transitioning four critical community facilities to 100% renewable energy for more reliable, efficient, and sustainable power.

Featuring:

- EcoStruxure™ Microgrid Advisor
- EcoStruxure™ Microgrid Operation

The impact



1.2MW of onsite renewable energy



Up-to 19 Days of continuous power with additional battery storage



Operating on 100% renewable energy around the clock and in island mode

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Project master planning and delivery optimization

The challenge

New hospitals with the value of **\$11 Billion are being built** in sub-Saharan Africa.

Source - Database on electrification of health-care facilities (WHO)

Worldwide demand for specialized and smart healthcare facilities is on the rise due to population growth, urbanization, and tech advancements.

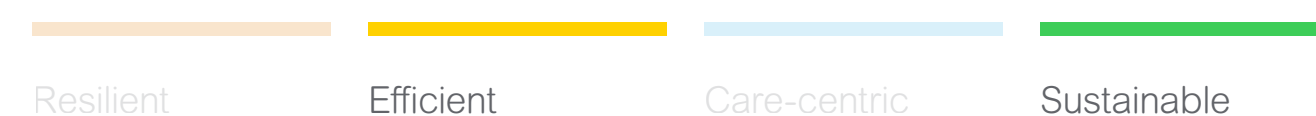
The solution

Supporting master planning, capital project management and infrastructure upgrades with solutions that integrate key construction processes and tools into a single platform, with full data availability from design and build to operate.

This solution enables:

- Analytics-based construction project processes and tools.
- Carbon currency and carbon footprint tracking across construction project processes and systems.
- Construction project multi-scenario simulation to improve scheduling and delivery.
- Asset and maintenance planning during the project phase.
- Early identification of project risks via data analytics.
- Data-driven labor and resource allocation.
- Consolidated digitized design documentation.

Essential outcomes:



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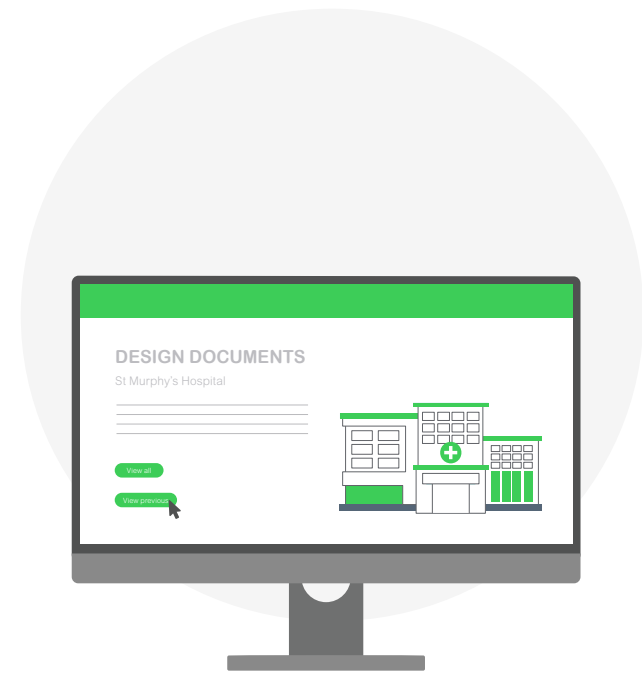
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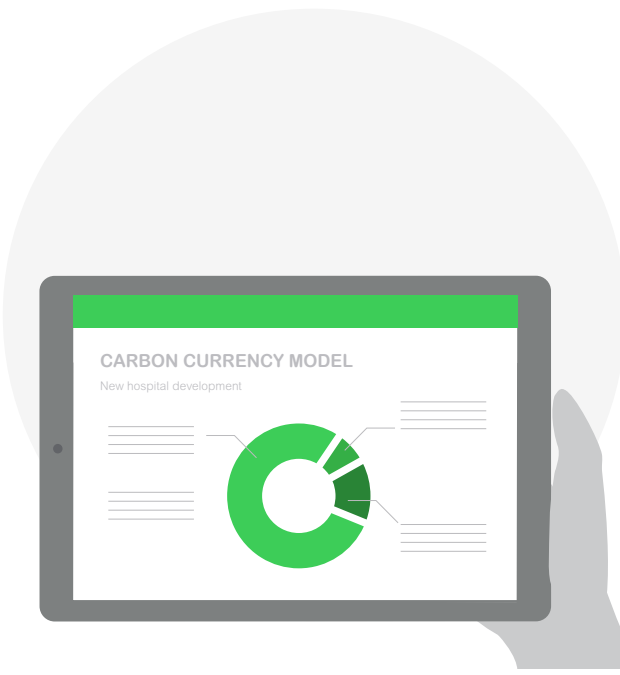
Project master planning and delivery optimization

The scenario



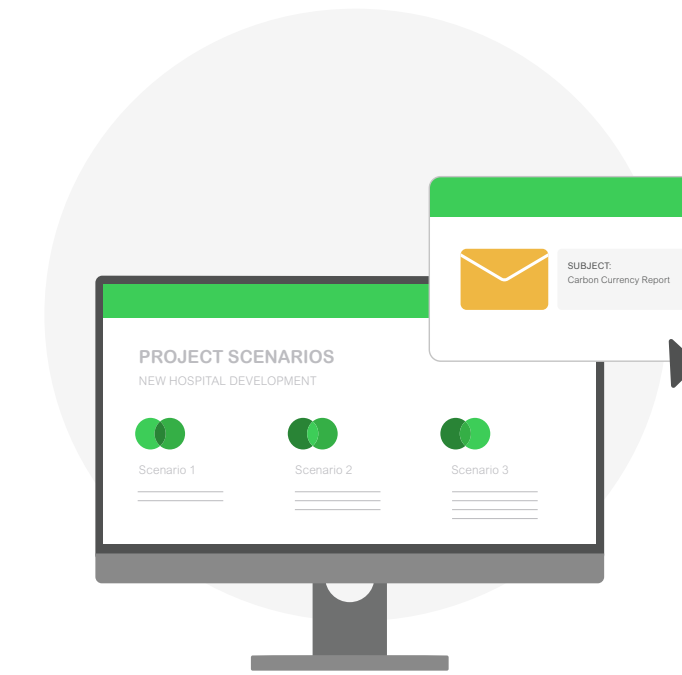
Integrate all design outcomes during the **project lifecycle**

During a major development to modernize St. Murphy's hospital, the main project stakeholders, including the capital projects team, design firms, general contractors, and subcontractors, simultaneously access past and current design documents, using the construction project's digital twin to ensure they are working with the latest versions and that all design documentation is up-to-date.



Measure construction project **carbon footprint**

St Murphy's is building a new hospital to accommodate the town's growing population. The sustainability manager wants to understand how the project impacts St Murphy's net zero by 2040 ambitions. They enter the 'Construction Project Digital Twin' platform which uses a carbon currency model to automatically translate construction projects into their associated carbon footprint.



Simulate **multiple project scenarios**

St Murphy's capital project team uses the construction project digital twin to simulate different project scenarios to reduce project delivery risk and minimize carbon footprint. This information is automatically reported to the CEO.

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Customer profile

A leading healthcare estate

📍 Germany

Complex portfolio of assets

Largest employer in the region

15,000 employees

Project master planning and delivery optimization

The challenge

Deliver permanent availability of energy resources to ensure a **reliable, safe and efficient clinical practice**.

The solution

As one of the most modern treatment centers in Europe, operational stability, continuous supply and patient safety are this hospital's top priorities. To achieve this, Schneider Electric deployed digital solutions from medium voltage to the socket, paired with a digital project management platform.

Featuring:

- Medium-voltage systems and transformers
- RIB iTwo iFM Delivery in pursuit
- Secure Power Infrastructure
- EcoStruxure Advisors

The impact



Improved **system scalability** through digital solutions



85% building fire load reduction



30 year expected asset service life

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Digitization and electrification

The challenge

This “All-electric hospital will be the **country’s first** when it opens in 2025” - UCI, US.

Source - UCI Health Article

Project teams are endeavouring to build all-electric hospitals, eliminating fossil fuels in new facilities. Healthcare organizations also seek to electrify existing estates.

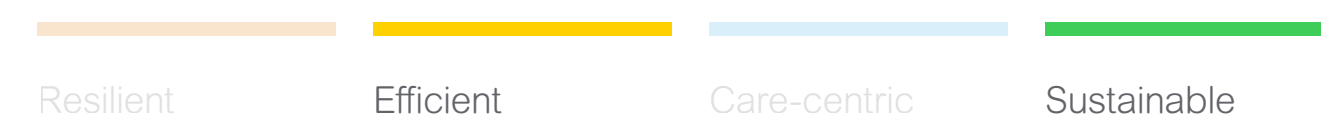
The solution

All-digital, all-electric infrastructure supported by a digital twin of your electrical design providing simulation and real-time monitoring for complete digital transformation of projects while adapting to evolving system requirements.

This solution supports:

- Digitization and modelling of electrical infrastructure designs.
- Simulation of design changes for scenario planning across projects.
- Digital transformation strategy and solutions to monitor power, data center, secure power and building control infrastructure and assets.
- Integrated solutions to digitize facility management operations and building management services.

Essential outcomes:



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Digitization and electrification

The scenario



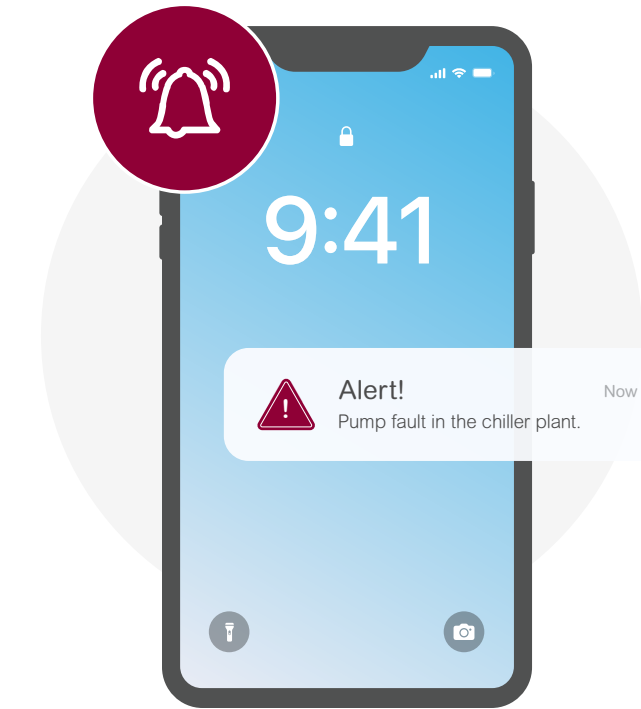
Support intelligent planning with an **electrical design digital twin**

As part of their decarbonization strategy, St Murphy's is considering installing more solar PV onsite. The capital projects team utilize the electrical digital twin model to simulate different scenarios to upgrade the infrastructure and analyze outcomes (e.g. predicted energy production) and constraints (e.g. existing infrastructure limitations) in real-time, using the digital model.



Digitalize **operational workflows** of building services

Following issues with power capacity at the hospital, the FM team accesses the electrical digital twin model that is enriched with real-time power and energy meters to identify sheddable loads and configure automatic triggers based on real-time consumption and grid capacity.



Digitalize building **asset management strategies**

Following a pump fault in the chiller plant, a critical alarm is generated and analyzed by the data-driven asset management platform. A work order is automatically generated via backend integration with the asset management platform and the relevant team is dispatched to the site to rectify the issue.

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Customer profile

A university teaching hospital

United Kingdom

550 patient beds

500,000 patients annually

4,000 employees

Digitization and electrification

The challenge

Electrify an existing estate while planning for the development of a brand new **all-electric hospital** via a **software-driven approach**.

The solution

Accredited as a NHS Global Digital Leader, this university teaching hospital is advancing the digitization and electrification journey with a dynamic energy management and planning tool to support the business case and long-term migration to an electrified healthcare estate.

Featuring:

- ETAP™ Digital Twin

Targeted outcomes

- Sustainable master plan for convergence of new and old estate.
- Energy cost reduction
- Decarbonization
- Uncompromised resilience
- Minimize construction costs / waste for ongoing retrofit projects
- Long term integration of renewable generation and storage

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Clinical space management

The challenge



Good infection prevention control (IPC) programmes can **reduce health care infections by 70%**

Source- Report on infection prevention (WHO)

Healthcare organizations must address infectious disease control while maintaining 24/7 operations in critical clinical environments.

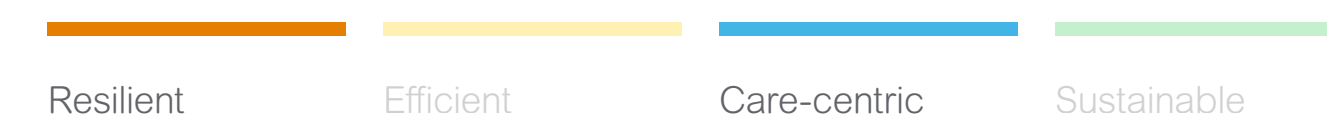
The solution

Covering all clinical areas from operating theatres to laboratory spaces, our compliant solutions assist with design and enhance operations across key facility and clinical systems, from reliable power to environmental control.

This solution includes:

- Critical power, isolated power and building automation within patient areas.
- Electrical infrastructure and building control reference designs, equipment and digital solutions in all hospital areas.
- Compliance management and reporting in regulated environments.
- Integration between clinical and facility systems for monitoring, alarming and workflow orchestration.
- Solution-based design methodology.

Essential outcomes:



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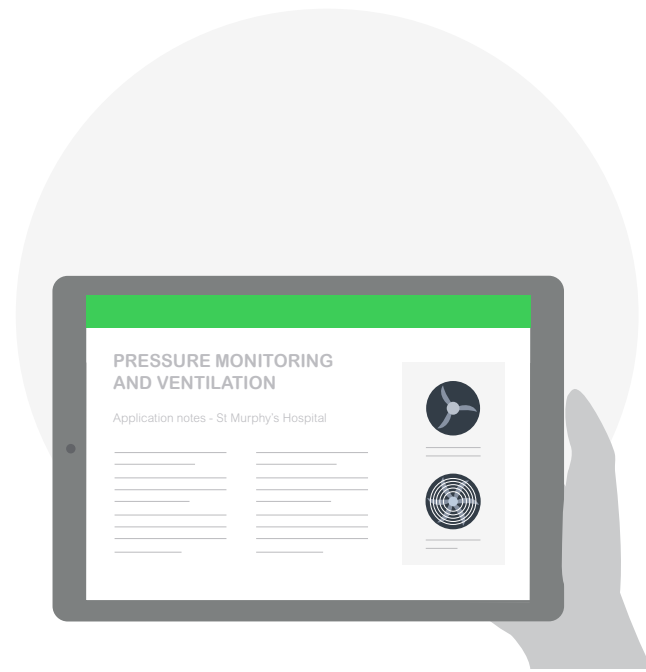
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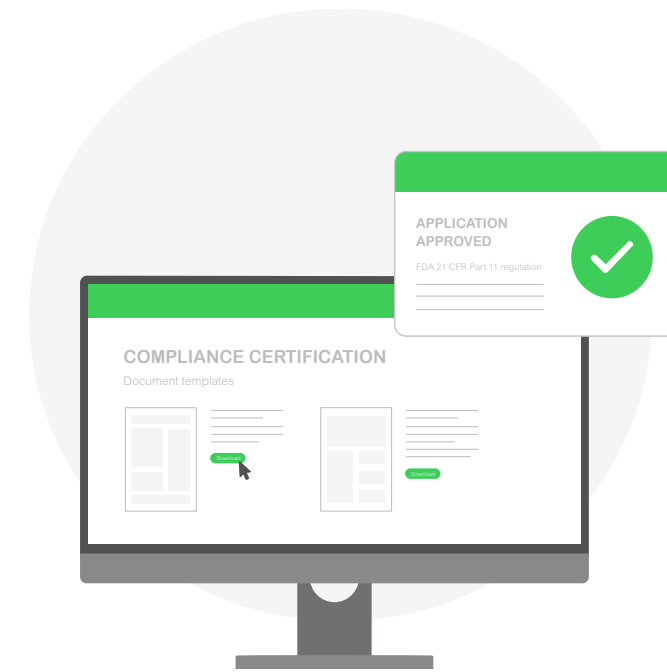
Clinical space management

The scenario



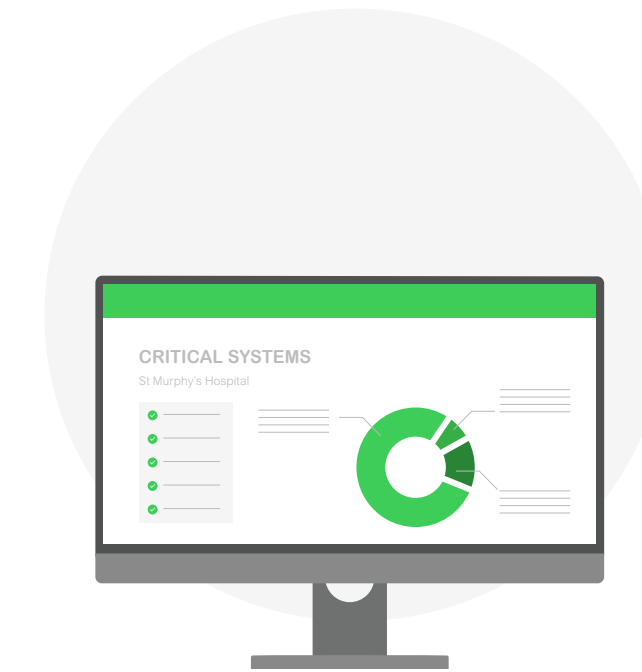
Value **Engineered clinical spaces** and **systems**

During the final stages of upgrading St Murphy's laboratory space, the mechanical contractors contact Schneider Electric to access existing application notes to understand the specific pressure monitoring and ventilation requirements to avoid over specification of sensors and actuators.



Manage **regulatory compliance**

During the commissioning phase of a drug manufacturing area at St Murphy's, the project team is uncertain about the required compliance documentation. They access existing compliance certification templates and commissioning sheets provided by Schneider Electric to ensure compliance with FDA 21 CFR Part 11 regulation.



Increase the safety of surgery via **validated system integration**

St Murphy's clinical teams request more visibility into facility infrastructure (e.g. back-up power, isolated power) conditions during procedures, to ensure all medical equipment is operated safely. The team are provided with a single pane of glass view into the real-time status of critical systems in the operating room, and the status of all building services.

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Image reference

Customer profile

Moorfields Eye Hospital

London, UK

100+ year old facility

780,000 patients annually

2000 employees

Clinical space management

Enhance operating theatre resilience at a century-old medical facility with **innovative building management** and **power monitoring solutions**.

The solution

EcoStruxure™ for Healthcare delivers an integrated view into critical data to ensure patient safety during surgeries and, coupled with connected Real Time Location Systems (RTLS), improves the patient journey and experience throughout the hospital.

Featuring:

- EcoStruxure™ Building Advisor
- EcoStruxure™ Power Monitoring Expert
- Connected Real Time Location System (RTLS)

The impact



Reduced operating costs



Outstanding Care Quality Commission (CQC) Inspections



Improved Power monitoring for operating theaters

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Integrated patient experience

The challenge

40% of people who travel for medical tourism go in search of **higher quality treatment** than they can find at home

Source - Medical Tourism (William Russell)

Patients now expect seamless digital experiences, convenient health record access, and active involvement in decision-making. There's also a rising demand for patient-centered care focusing on wellness.

The solution

An intelligent environment that puts the patient's needs first, enabled by low-voltage integration of patient-room equipment with building, clinical and patient administration systems under a single digital platform.

This solution provides:

- Harmonized control strategy across all key systems involved in the patient room
- Adaptability to patient's medical conditions and preferences via integration with clinical systems.
- Integration with facility management and clinical systems to orchestrate workflows.
- Automatic scheduling of cleaning and maintenance activities via integration with facility management systems.
- Single Point of Access and control for room control, care and entertainment.

Essential outcomes:



Part one

Part two

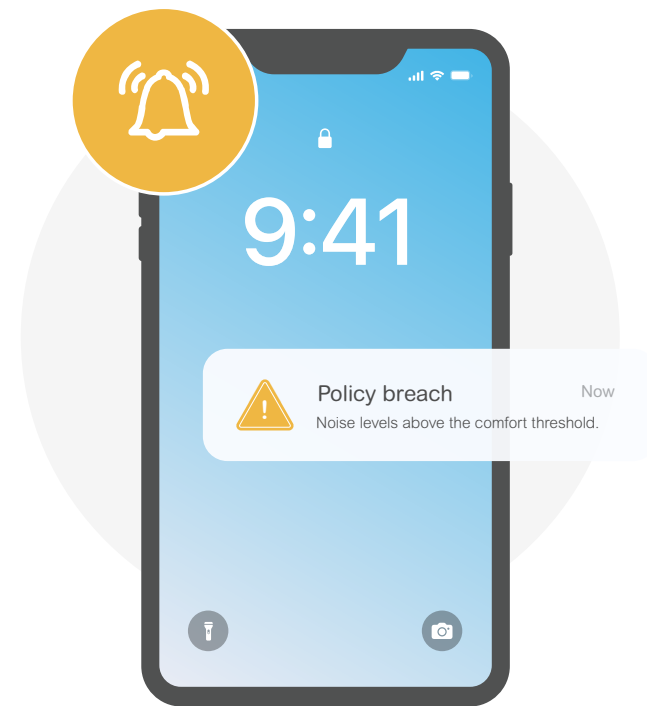
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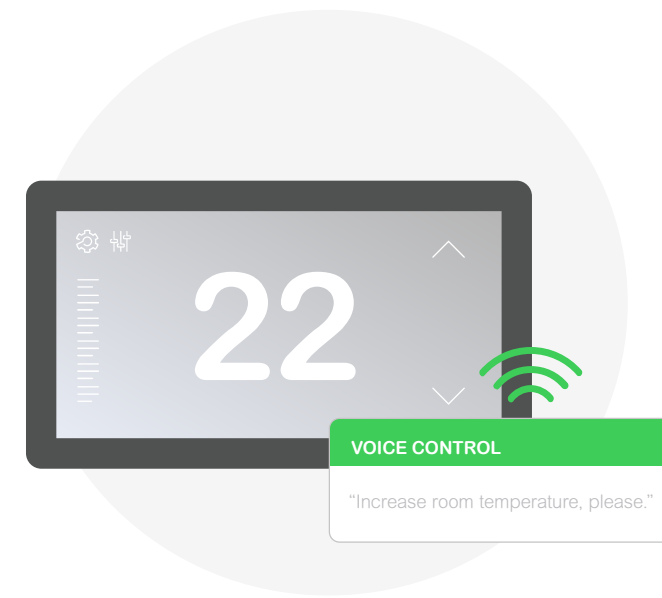
Integrated patient experience

The scenario



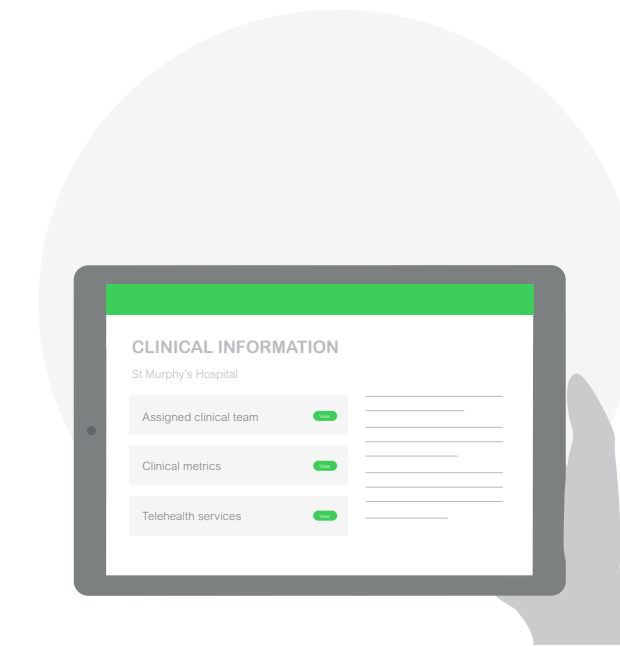
Harmonize control platforms to **improve patient comfort**

Following multiple noise complaints on inpatient ward 3, an insight 'multisensor' detects occupancy levels that exceed St Murphy's visitor policy, and noise levels above the comfort threshold. The control platform triggers a nurse call alarm to notify the clinical teams of a policy breach.



Empower patients with voice control over their environment

In a trauma ward at St Murphy's, patients with limited mobility use voice control over their environment to adjust room parameters such as light levels, blind position, privacy glass status, temperature setpoints and the patient entertainment system, from any area of the patient room.



Provide patients with **peace of mind** and **personalized care**

Patients have requested visibility into clinical information of their room. Via integration with clinical systems, the patients can access real-time clinical metrics, assigned clinical team information, telehealth services, patient entertainment, and monitoring and control of ambient conditions from the patient room.

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Image reference

Customer profile

The Pavilion at Penn Medicine

📍 Pennsylvania, USA

504 private patient rooms

47 operating theaters

1.5m ft² / 457k m²

Life is On | Schneider Electric

Integrated patient experience

The challenge

Boost **patient satisfaction**, **enhance clinical workflows** and **lower recurring costs** through lower voltage integration and a digital footwall.

The solution

Integrated project delivery to design and build state-of-the-art pavilion featuring smart building technology inclusive of smart building technology for power and building management systems for improved patient satisfaction.

Featuring:

- EcoStruxure™ Building Operation
- EcoStruxure™ Building Advisor
- EcoStruxure™ Asset Advisor
- EcoStruxure™ Power Monitoring Expert
- Onsite integration lab

The impact



2x Improvement
in HCAHPS scores



5% CapEx savings
eliminating unnecessary
material procurement



LEED® Gold Certified
Largest Healthcare project
in the world to achieve this
recognition

Part one

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Integrated building operation platform

The challenge



66% of facility professionals identified **staffing** and **retention** as a **top challenge in 2023**.

Source - Training outlook survey 2023 (McMorrow Reports)

The healthcare industry faces workforce challenges across clinical and facility disciplines, including shortages, high turnover, burnout, and administrative burdens.

The solution

An open, cyber-secure solution that connects information technology (IT) to operational technology (OT), creating a system of devices, software and processes to integrate facility and key clinical systems for complete visibility and optimization.

This solution includes:

- Delivery and management of Master System Integration (MSI) projects.
- Facility systems monitoring and alarming across operational and system alarms.
- Automatic optimization of critical asset operation.
- Building and facility systems data integration and management.
- Orchestration of operational workflows across facility and clinical systems.
- Integration with key clinical systems and data to enhance facility operations.

Essential outcomes:



Part one

Part two

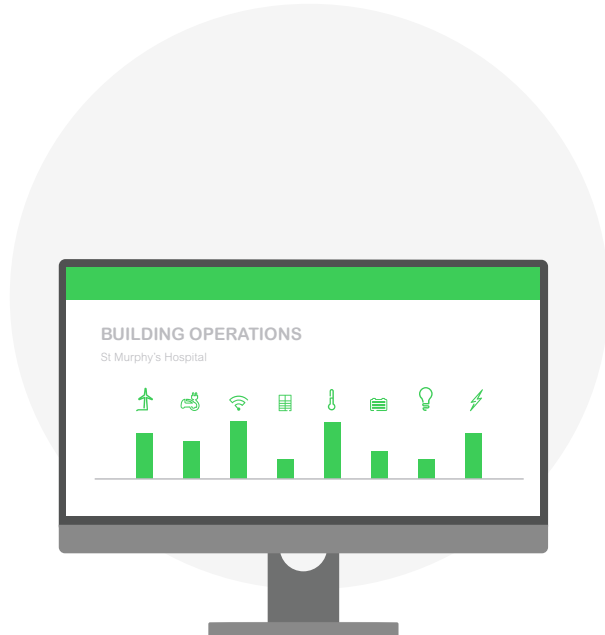
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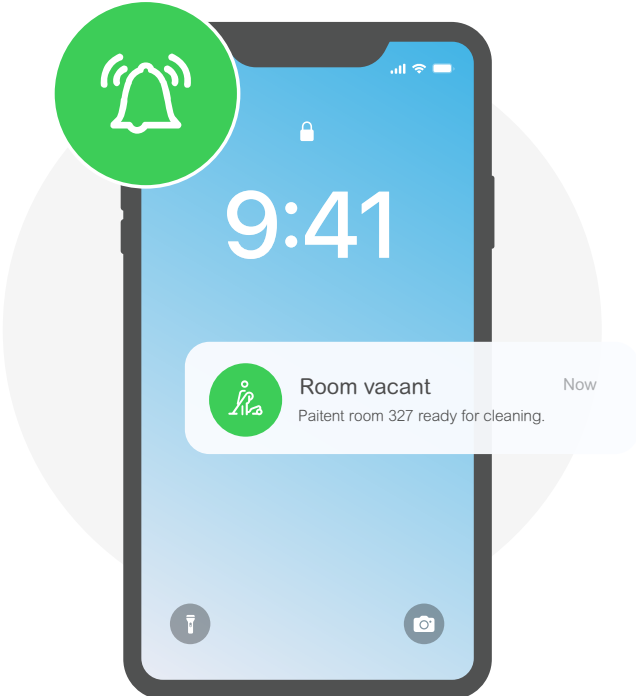
Integrated building operation platform

The scenario



Unifying systems to manage a complex estate

The Head of Facilities has a shortage of FM staff, managing and an increasingly complex estate is a growing challenge. The modern BMS provides a single view into building systems, unifying microgrids, EV charging, IoT, lighting, power, and more. This supports the facilities team with increased visibility and control over building operations and alarm management.



Integrating systems to **automatically streamline workflows**

A patient has been transported to the operating room to undergo surgery. The patient administration system informs the building management system that their patient room is vacant, triggering a scene that sets all patient room systems (e.g. heating) into standby mode. This saves energy and notifies facility staff to clean the room.



Consolidate alarms and notifications for **streamlined maintenance**

The facilities team are transforming their maintenance regime to a condition-based, data-driven approach. St. Murphy's Asset and Maintenance Management platform helps by collecting real-time asset data and performing analysis to automatically perform maintenance tasks, where possible, and prioritize and schedule the remaining workorders and projects to the team.

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Integrated building operation platform

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Customer profile

Acute and maternity hospital

Adelaide, Australia

200+ hospital beds

180,000 paediatric patients annually

Specialized medical facility

The challenge

Gain visibility and control over an aging infrastructure for improved **sustainability, resilience, and patient experience.**

The solution

Schneider Electric implemented a holistic upgrade strategy involving new connected assets, consolidated control systems, analytics-based asset management digital tools and sustainability strategy.

Featuring:

- EcoStruxure™ Building Operation
- EcoStruxure™ Building Advisor
- EcoStruxure™ Asset Advisor
- EcoStruxure™ Power Monitoring Expert
- EcoStruxure™ Resource Advisor

The impact



Up to **33% fewer** patient complaints



Up to **20% reduced** energy consumption



Up to **29% less** scheduled maintenance



100% visibility to energy utilization supporting sustainability strategy



Sustainability and decarbonization strategies

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The challenge



US\$8.1 trillion - estimated annual global financial impact of health-related issues caused by **poor air quality**

Source - 2024 Global Health Care Sector Outlook

Climate change significantly impacts human health through increased air pollution, extreme temperatures, pandemic risks, and jeopardized critical services due to climate-related weather events.

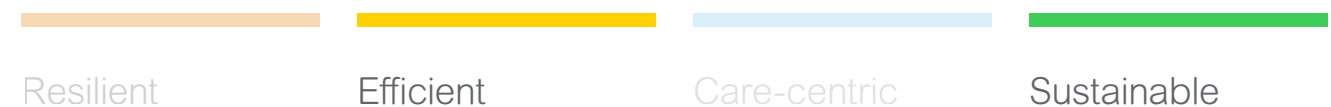
The solution

Supporting your decarbonization journey across all three emission scopes, with comprehensive services, green-premium products, energy management solutions, and advanced data insights, from roadmap development to execution.

This solution includes:

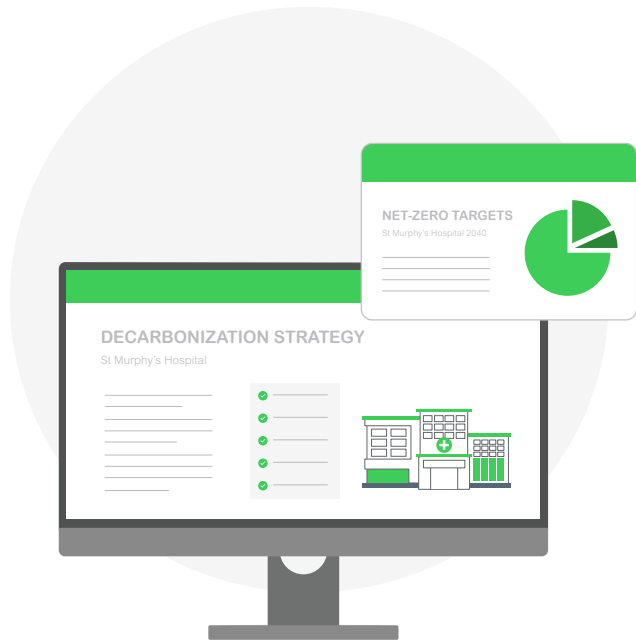
- Sustainability strategy design, implementation and continuous development.
- Cloud-based software that provides centralized performance visibility, helping facility staff to measure, manage and action energy, carbon footprint and efficiency data.
- Environmentally compliant green-premium products, including end-of-life instructions to support circularity.
- All-digital, all-electric solutions spanning smart energy management, load management, grid optimization and energy efficiency services.

Essential outcomes:



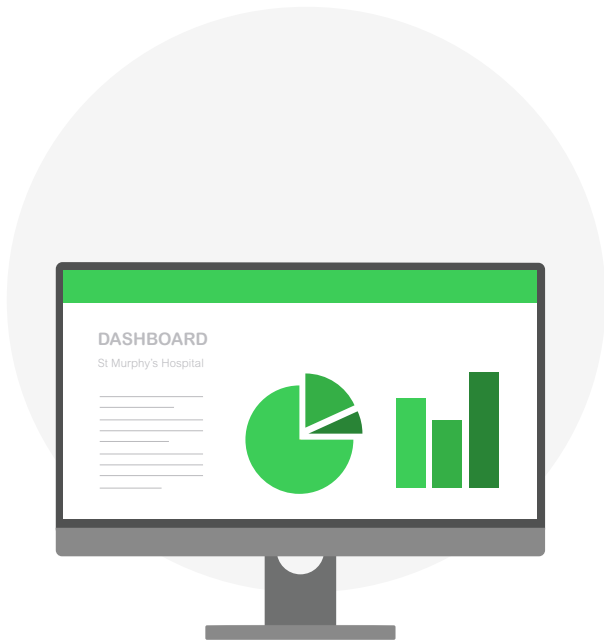
Sustainability and decarbonization strategies

The scenario



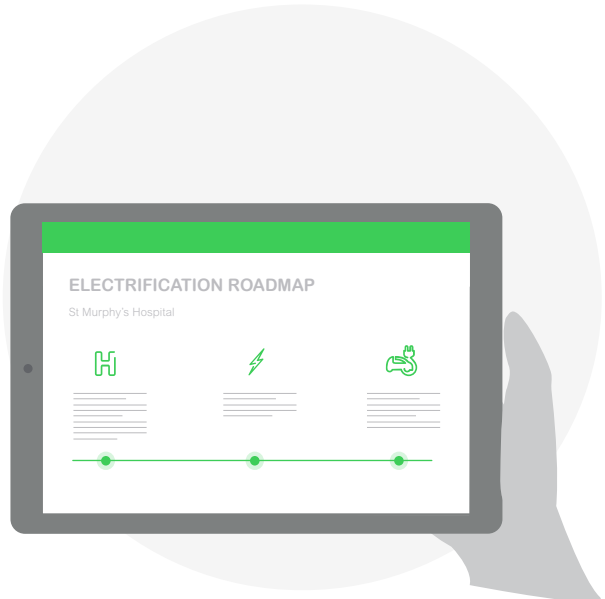
Strategize

Following the latest Conference of Parties (COP) summit, St. Murphy's Hospital is accelerating its net-zero ambitions, to 2040. They engage Schneider Electric to design the overall decarbonization strategy, including a precise implementation and target tracking plan, serving as a blueprint to mobilize the next steps.



Digitize

As part of their decarbonization strategy, St. Murphy's must reduce energy usage significantly. The sustainability manager uses energy management software to track, dashboard, and visualize energy consumption to establish baseline data, drive improvement and compliance, and assess sustainability profiles against standardized criteria, including BREEAM and LEED.



Decarbonize

Alongside energy efficiency measures, decarbonizing their energy supply is essential to achieve net zero. St. Murphy's develops a phased electrification roadmap, including replacing carbon-intensive energy sources with newer and cleaner options, like electric heat pumps, and fleet electrification and provisions for electric vehicle (EV) charging for patients, visitors, and staff.

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Customer profile

USL Toscana Nord Ovest Versilia Hospital

📍 Italy

3,000 patient beds

13 hospitals in the tuscan region

14,400 employees

Sustainability and decarbonization strategies

The challenge

Become a reference point of excellence in **energy savings** and **operational efficiency** across Italy.

The solution

Delivered in collaboration with SST, a master EcoXpert partner and empowered by an adaptable, dynamic information system, Versilia hospital utilizes advanced data insights to dynamically monitor energy utilization for more efficient and sustainable facility operations

Featuring:

- EcoStruxure Building Operation
- Energy Metering & Monitoring - Power Logic™
- Smart HVAC devices - SpaceLogic™

The impact



40% energy savings



3.2M€ annual savings in gas, electricity, and maintenance



41% CO₂ savings the equivalent of 15,000 fewer cars each year

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Conclusion



Your partner to enable the **healthcare facility ahead of its time.**



Specialized expertise

With deep sector and domain expertise, our global network of Healthcare Consultants and Solution Specialists expertly design and deliver integrated digital solutions that are care-centric, compliant, and cost-efficient.



Ecosystem of partners

We complement our capabilities with a world-class ecosystem of industry-leading partners, delivering research, reference architectures, APIs and innovation at scale.



Investment in R&D

We actively leverage our capital, talent, and access to worldwide R&D to innovate, develop, and validate integrated digital solutions for the healthcare facility ahead of its time.



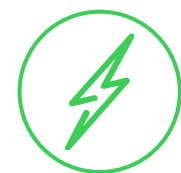
End-to-end interoperability and automation

With advanced analytics, AI insights, and machine learning capabilities, our EcoStruxure for Healthcare platform enables end-to-end interoperability and automation for more resilient, efficient, and sustainable facility operations.



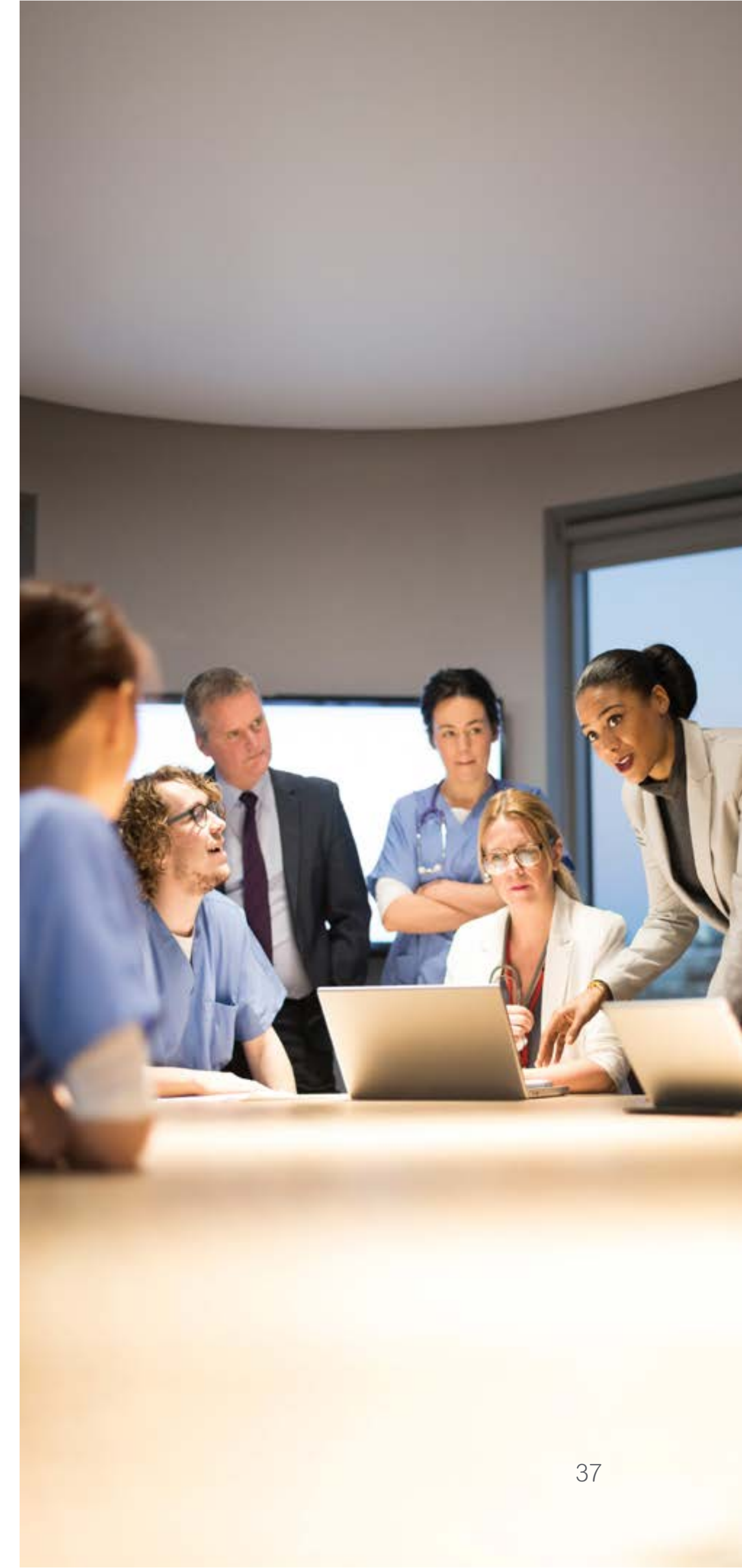
Lifecycle software for digitalization

Our best-in-class portfolio of software solutions enables lifecycle digitalization, driving efficiency, sustainability, and business value for stakeholders at every level of your healthcare organization.

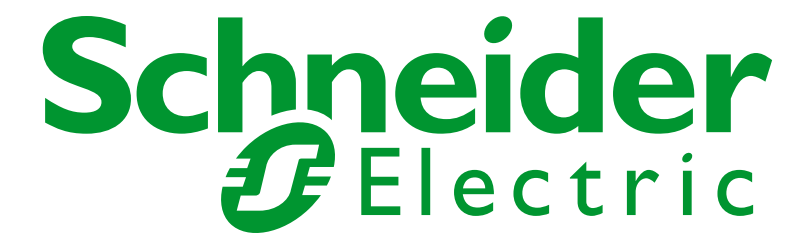


Infrastructure solutions for the all-electric hospital.

With expertise in electrical distribution, power digitalization, integration of renewables, end-to-end eMobility solutions and an Electrical Digital Twin Platform, we enable electrification for energy efficiency, enhanced resilience, and accelerated sustainability.



Life Is On



For more information about
EcoStruxure for Healthcare visit:



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