

OpenBlue Healthcare

Upgrade Your Healthcare Facility to Improve Patient Care, Sustainability and Your Bottom Line



How a technology retrofit from Johnson Controls can help

Challenges for today's healthcare facilities cover every aspect of operations. It's imperative that you keep patients safe, including reducing reinfection rates. There's increasing pressure to attract and retain staff, and with that comes security challenges ranging from workplace violence, data breaches and the need to stay on top of changing technology – even as resources are limited. You need to manage regulatory compliance and meet sustainability pledges and requirements. And, at the core, you want to enhance patient outcomes.

This increased emphasis on patient experience, the need to reduce costs and meet net zero emission goals is driving healthcare organizations to upgrade facilities – from infrastructure projects that improve energy, comfort and safety to technology projects that improve processes, operations and staff productivity.

Make your building part of the care team

Healthcare facilities generate a mind-boggling amount of data. This enormous reservoir of data represents information on building, business and clinical systems that often remains siloed. Organizations can extract enormous value by connecting siloed data and using the insights to make decisions that improve everything from comfort and safety to building operations, operational costs and productivity.

Johnson Controls understands your challenges and brings together our expertise with industry-leading data platforms and applications, core building systems, edge computing, and strategic partners to deliver on your goals.

Enhance patient experience and satisfaction.

Give patients more autonomy and control over their environment to provide a better experience while enhancing their safety and security.

Increase staff acquisition and retention.

Make hiring and retaining talent easier by reducing non-clinical tasks – freeing staff to focus on what they do best, providing care.

Reduce operating costs.

Increase asset uptime and minimize lifecycle operating costs.

Advance toward net zero and other sustainability goals.

Optimize building performance to reduce energy use and greenhouse gas emissions.

Streamline compliance.

Make it easier to gather and report required data. Automate compliance reporting for critical environments like operating rooms, labs and pharma freezers.

50

petabytes of data are used annually by a typical hospital¹

97%

of the data generated by a typical hospital in a year goes unused²

200+

systems exist in a typical hospital (clinical, operational, facility and business platforms) with an estimated

300+

interfaces³



1 <https://www.johnsoncontrols.com/insights/2021/thought-leadership/health-facilities-got-the-data>

2 <https://www.weforum.org/agenda/2019/12/four-ways-data-is-improving-healthcare>

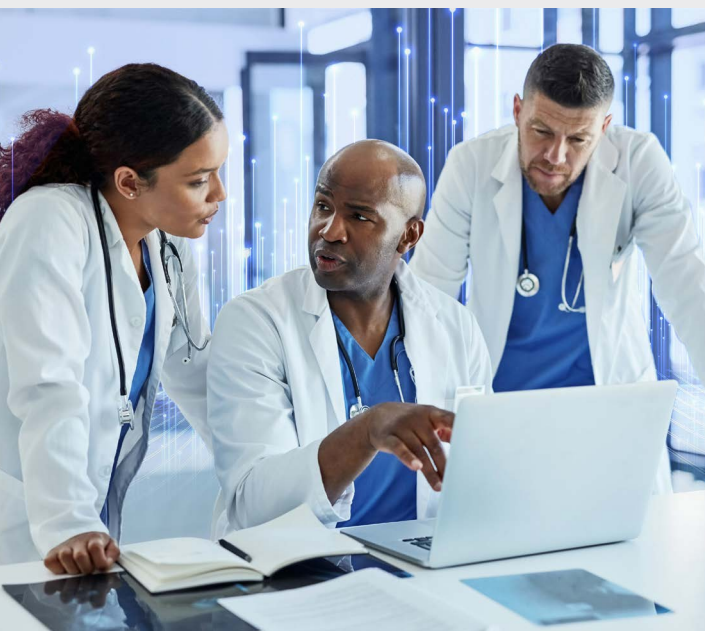
3 <https://www.johnsoncontrols.com/insights/2021/thought-leadership/health-facilities-got-the-data>

How Johnson Controls can help you upgrade

The process of retrofitting or renovating an existing building requires more than just installing a few sensors or smart applications. Becoming a truly smart healthcare facility requires a holistic approach that looks beyond the physical infrastructure to the vision and purpose of the building, driving the planning, design, construction and operations. We cover all aspects of a retrofit – from helping you identify organizational goals, desired outcomes, equipment and technology to deployment, systems integration and service.

We keep your healthcare facility operating at peak performance with tailored services – from individual and packaged offerings to remote monitoring, fully embedded on-site operations and maintenance teams. Our goal is to keep your facility comfortable, operationally efficient, safe and code-compliant.

In addition to industry-leading smart building technology and services, Johnson Controls creates financial solutions to make retrofit and renovation projects more affordable. We help remove the barriers needed to initiate a project because building owners don't need an up-front capital investment. Budget-smart funding solutions for projects of all sizes are available from Johnson Controls Capital – the team has funded more than \$6B in customer projects worldwide and can tailor a solution to your specific needs, including public-private partnerships and performance contracting.



Using retrofits to drive net zero outcomes

Healthcare in America is responsible for 8.5% of greenhouse gas emissions. As healthcare gets more competitive, demonstrating a commitment to sustainability is significantly growing within hospitals⁴. Additionally, the Department of Health and Human Services (HHS) recently formed its Office of Climate Change and Health Equity, which will treat climate change as a public health issue.

However, healthcare organizations cannot implement zero-carbon and renewable energy goals for their facilities without discussing the digital technology that is essential to achieving building and operational efficiencies.

⁴ Achieving sustainability in healthcare: Trends and practices - IHF (ihf-fih.org)



Actionable infrastructure upgrades for hospitals to achieve net zero emissions

Through the strategic implementation of efficiency-focused infrastructure solutions, healthcare campuses can begin to achieve their sustainability goals. There are a wide variety of solutions that healthcare organizations can implement:

- Central utility plant optimization software leverages the Johnson Controls OpenBlue digital platform to connect systems and data for intelligent, automated decision-making. This drives down costs and increases reliability while advancing sustainability goals.
- Touchless environments use mobile, voice or web-based interfaces to allow clinical staff to control and optimize room elements, such as lighting and temperature to save energy.
- Occupancy sensors can automatically shut down buildings systems in unused rooms to reduce energy waste.
- Water-efficient building solution upgrades increase efficiency and reduce municipal water loss through improved leak detection, accurate meter sizing and other retrofits.
- Integrated Facility Command Centers help facilities monitor and control every aspect of the building and its operations from a single dashboard. These digital platforms use sophisticated Application Programming Interfaces (APIs) to gather data from an army of disparate apps and systems, connect and analyze the various data streams and insights, and display results in one dashboard.

Johnson Controls OpenBlue Net Zero Buildings as a Service offering provides a one-stop shop for organizations looking to achieve decarbonization and renewable energy goals using the OpenBlue suite of connected technologies. The holistic suite includes OpenBlue Healthy Buildings, net zero building roadmaps and real-time performance reporting that analyzes energy, water, materials and emissions.

Similarly, Johnson Controls offers OpenBlue Enterprise Manager, a comprehensive suite of apps that monitor and improve energy efficiency, support reporting, and predict energy demand and consumption. Enterprise Manager tracks, manages and analyzes all energy use and sources, including utility bills for thermal, water, electrical storage and carbon. The technology leverages AI and machine learning to predict energy demand and consumption, allowing building operators to take proactive action to avoid unplanned spend.

Hospitals are some of the most heavily regulated building environments, so they need to ensure compliance with sustainability-focused regulatory bodies like the EPA and the DOE as well as state-specific regulations. Thanks to holistic infrastructure technology solutions and compliance support from Johnson Controls, healthcare facilities can maximize efficiency while remaining compliant with these strict regulations to make good on net zero emissions goals.

Improving Patient Care

By connecting patient data (like diagnosis and condition) with facility data (like room temperature and lighting) and staffing information, hospitals can create smart patient rooms that adapt to, communicate with and protect patients and clinical staff. Smart digital solutions allow patients to control room temperature, position beds, open and close blinds, describe pain levels, order food and call staff.



Nobody has more experience and expertise planning, designing, constructing and operating converged technology solutions to produce smarter buildings than Johnson Controls. **To see how we can help you with a technology retrofit, visit <https://www.johnsoncontrols.com/industries/healthcare>. And to learn more about Johnson Controls Capital Funding Solutions and how we can help your organization, visit <https://www.johnsoncontrols.com/services-and-support/capital-funding-solutions>.**

About Johnson Controls

At Johnson Controls (NYSE:JCI), we transform the environments where people live, work, learn and play. As the global leader in smart, healthy and sustainable buildings, our mission is to reimagine the performance of buildings to serve people, places and the planet. Building on a proud history of more than 135 years of innovation, we deliver the blueprint of the future for industries such as healthcare, schools, data centers, airports, stadiums, manufacturing and beyond through OpenBlue, our comprehensive digital offering.

Today, with a global team of 100,000 experts in more than 150 countries, Johnson Controls offers the world's largest portfolio of building technology and software as well as service solutions from some of the most trusted names in the industry.

