

# OpenBlue Healthy Buildings

## Healthcare Insights Guide

A practical resource for ensuring safe, efficient and optimized healthcare facilities



After surveying hundreds of healthcare providers from 19 different countries worldwide, including a wide range of key decision-makers, Johnson Controls has put together this guide on how to overcome current and prevalent challenges within the healthcare industry.

## Transforming challenges into healthy outcomes

Healthcare leaders are transforming their learnings, largely in response to the pandemic, into actions as medical facilities are forever changed, and the world settles down to an uncertain new normal.

In this ever-changing landscape, maintaining the highest quality patient care and protecting staff, visitors and patients while operating cost-effective buildings are crucial for success.

On a journey toward affordable, accessible and first-rate care, megatrends like the aging population, new technological developments and emergencies like the pandemic strongly influence healthcare. For many providers, it's a balancing act to keep patients and professionals alike safe, increase healthcare outcomes, reduce costs and lessen their carbon footprint.

These ongoing challenges place new demands on your facilities.

We surveyed healthcare specialists in Europe, the Middle East and Latin America and found three key priorities:

Keeping patients and staff safe



Keeping buildings healthy through up-to-date, holistic technology



Operational resilience and flexibility in response to the dynamic, constantly evolving environment of healthcare



Your buildings and their technologies facilitate your primary healthcare processes, having a significant influence on the welfare of your patients and how physicians, specialists and nursing staff perform.

With more than 135 years of contributing to the advancement of healthcare, Johnson Controls understands its specific needs and can provide tailor-made solutions purposely designed to minimize daily disruptions and mitigate risks.

For decades, we have partnered with hospitals, nursing homes and other healthcare facilities to understand and address their challenges, providing innovative solutions for today and into the future.

## OpenBlue Healthy Buildings

At the heart of our vision for optimal healing environments is our OpenBlue Healthy Buildings.






Smart, connected and game-changing, its leading-edge technology coupled with healthcare-specific solutions empowers the advancement of healthy people, healthy places and a healthy planet, delivering the greatest impact when meeting your hospital's goals.

Through our strategic technology integration, healthcare facilities become leading-edge instruments of healing that power the outcomes that matter most.



## Anticipating healthcare facility design for the future

### Key trends

Stronger focus on community-centered healthcare with smaller facilities	
Elective care delivered via telemedicine and remote diagnostics	
Different sites for elective procedures versus emergency care	
Enhanced infection control through flexible and modular buildings	
Net zero future for new hospitals to adopt low-carbon materials, novel design and improved energy efficiency	

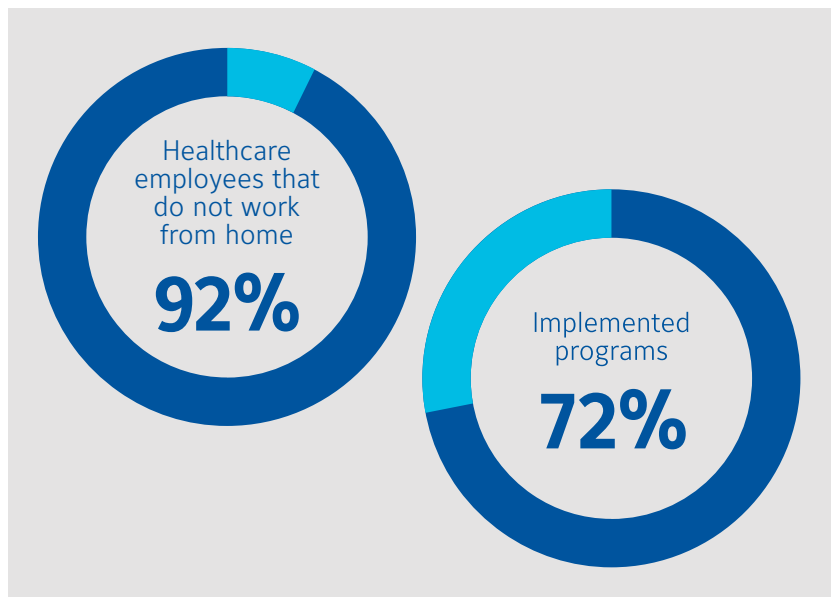
Whether a new or existing structure, Johnson Controls has the knowledge to advise healthcare leaders on how to achieve optimized healing environments successfully.

### How healthcare stacks up to OpenBlue Healthy Buildings

Hospitals are substantial properties to manage and have dense occupation levels. Moreover, unlike most industries, shifting entire teams offsite is unrealistic.

According to our survey, out of all the industries we assessed, healthcare had the highest percentage (**92 percent**) of non-work-from-home employees, twice the global average and proof that deploying solutions to keep both staff and patients safe is especially critical in healthcare.

Not surprisingly, healthcare is a frontrunner in implementing some healthy building programs aimed at people, health and safety. At **72 percent**, it demonstrates its goals to eliminate the spread of disease and support people's physical, psychological and social health.



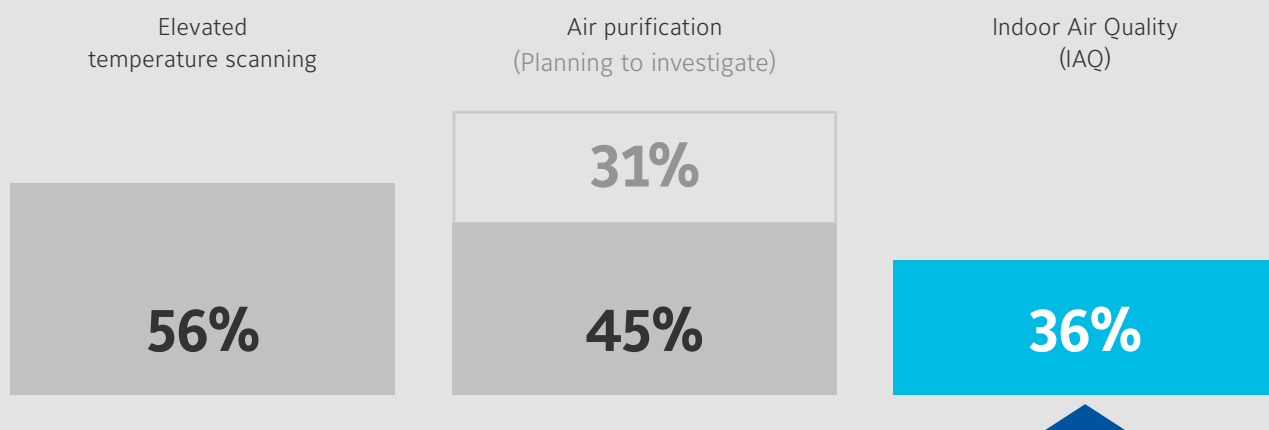
Going further, we found that healthcare building managers are deploying technologies to stop the spread of COVID, with the most popular being elevated temperature scanning at **56 percent**, air purification at **45 percent** – with **31 percent** planning to investigate it – and Indoor Air Quality (IAQ) at **36 percent**.

Of the healthcare organizations we surveyed, only **30 percent** have already adopted the technology to support other efforts such as social distancing, for instance. In this busy, frequently frenetic environment, our respondents said that confirming people stay adequately apart can be a near-impossible task. However, our solutions can help remedy these seemingly insurmountable pain points to make building safety and efficiency go the extra mile.

In addition, we were interested in discovering how the healthcare sector changed the way they use their patient care sites. We found they scored very high on making their work settings more flexible and changing how they operate within their building spaces.

Our solutions  
can help make  
building safety  
and efficiency go  
the extra mile.

#### Deploying technologies to stop the spread of COVID



#### Further findings for patient care sites

Moved to a more flexible way of working, i.e., digital health solutions for remote patient appointments

**81%**

Made space optimization a priority for improved patient triage

**65%**

Plan to reduce office space for more than 20 percent of employees as work from home viable option for some healthcare employees

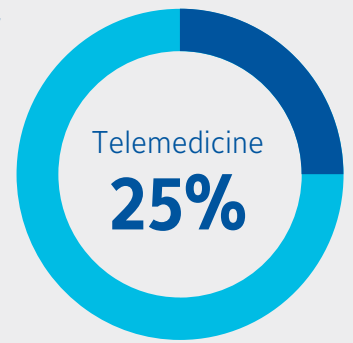
**27%**



As per a separate report by McKinsey & Company, **25 percent of outpatient care could move to telemedicine in the future.**

Yet, resilience is fundamental across healthcare facilities for optimal efficiency in caregiving response. Buildings and operations need to be ready to respond to the next public health emergency effectively.

**Have you thought about your future preparedness and how you'll get there?**



## An unrivaled spectrum of solutions and services

Are there weaknesses in the healthcare industry's efforts to create healthier, safer settings for patients and providers? Absolutely.

With the right direction and exploration of different technologies, it's possible to move the needle in the direction of outcomes that deliver enhanced patient experiences, reduce operating and lifecycle costs, maintain high-quality patient care, and mitigate financial impacts.

Our OpenBlue Healthy Buildings provides comprehensive solutions with rapid return on investment, transforming your healthcare settings into highly efficient and intelligent spaces that fluidly respond to changing needs. Paired with our expert guidance, you'll be proficiently planning your priorities and determining the next steps to deliver on your patient, staff and sustainability promises.

## Energy efficiency, steps toward sustainability – a win-win for patient and organizational health

Logically, healthy buildings go hand in hand with sustainability. However, according to an article in the *New England Journal of Medicine*, healthcare's climate footprint accounts for nearly **five percent of global net emissions**. Correspondingly, sustainability wasn't top of mind for healthcare decision-makers, our survey showed, with only **29 percent** of facilities implementing any form of sustainable action.

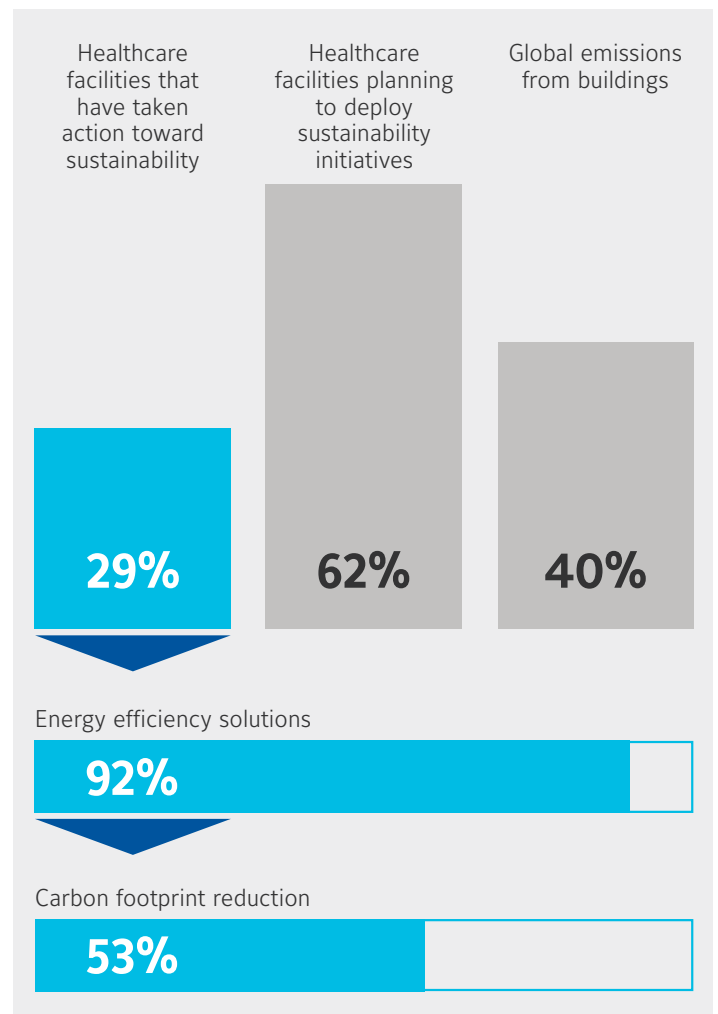
However, the impact of those facilities that did act toward sustainability has been significant.

- **Ninety-two percent** implemented energy efficiency solutions, leading to a **53 percent** carbon footprint reduction.
- **Sixty-two percent** of those surveyed plan to deploy sustainability initiatives within the next 12 months.

Given the looming regulatory requirements, it's worth noting that many solutions to keep buildings clear of viruses can have a dual benefit of reducing carbon emissions – a win-win for healthcare operators.

Although buildings account for some **40 percent** of global emissions, yours doesn't have to add to this statistic.






While specific certifications might not be in place now, it's worth engaging with a net zero expert to put your healthcare facility's sustainability plans in motion, creating momentum for optimized building performance and all the positive outcomes that come with it.



# Your OpenBlue Healthy Buildings strategy

A leading care environment promotes fast patient recovery, safe working conditions and optimal workflows, resulting in better healthcare results, less absence and a stronger competitive situation. By developing a smart, healthy building strategy with us for new and existing facilities, you'll gain significant benefits on many levels.

## What makes a building healthy?

 <p><b>Occupant health and wellness</b></p> <ul style="list-style-type: none"><li>• Clean air</li><li>• Ergonomics</li><li>• Security</li><li>• Cleanliness</li><li>• Risk mitigation</li></ul>	 <p><b>Resource health</b></p> <ul style="list-style-type: none"><li>• Renewable energy</li><li>• Reduced carbon footprint</li><li>• Resource conservation</li><li>• Reduced emissions</li><li>• Sustainability</li></ul>	 <p><b>System health</b></p> <ul style="list-style-type: none"><li>• Automated systems</li><li>• Networks</li><li>• Electrical systems</li><li>• Metering systems</li></ul>	 <p><b>Process and operations health</b></p> <ul style="list-style-type: none"><li>• Workflows</li><li>• Audit</li><li>• Permits</li><li>• Scheduled tasks</li></ul>	 <p><b>Life safety and security health</b></p> <ul style="list-style-type: none"><li>• Life safety systems</li><li>• Security and access control</li><li>• Cybersecurity</li><li>• Emergency response</li><li>• Alarm management</li></ul>
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## People first

Leading with a people-first approach by prioritizing safety and wellbeing for your occupants, adapting space design and maximizing energy efficiency and other green efforts can grow staff and patient loyalty, boost your reputation, strengthen your competitiveness, give you greater access to funding and improve your bottom line.

## Starters for your OpenBlue Healthy Buildings strategy HVAC for improved Indoor Air Quality (IAQ)

Today's HVAC equipment is driving clean air improvements, filtering and deactivating volatile organic compounds that can cause illnesses.

When paired with smart, connected HVAC controls, the possibilities for guaranteed clean air delivery and future-proofing the technology that delivers good air quality are far-reaching.

Also, with the rise in regulatory requirements, it's important to reconfigure older HVAC equipment. Current advancements allow for retrofitting with newer, cleaner agents, enabling chillers to achieve sustainability goals while ramping up protection.

As technology has bounded on and opened up far more functionalities, it pays to take stock of your current system, regardless of age.

## Questions to consider

- Have you thought about advanced air solutions, including HEPA-grade filters and airflow technologies that detect and inactivate pathogens?
- Can your system handle the amount of air changes per hour that your spaces need to maintain optimum ventilation?
- Does your system provide time-saving remote monitoring of your IAQ to empower building management to make faster, better-informed decisions?
- Is your building meeting the legal requirements set in place by your local regulators?

Through OpenBlue Indoor Air Quality as a Service (IAQaaS), Johnson Controls can guide you in defining and delivering a turnkey clean air solution that unlocks the full value of your people, resources and investments. This unique subscription service addresses your key pain points and empowers your organization with an impressive range of benefits at a predictable monthly fee, setting you on a manageable path to IAQ success.

### Social distance monitoring

It may seem impossible to monitor and enforce social distancing in healthcare settings. Yet maybe it's time to take another look.

#### Questions to consider

- Have you looked into data-driven building systems that can lessen the challenge by managing occupancy levels and social distancing rules?
- Does it make sense for you to audit your current setup to see where you might be able to add new solutions with the least disruption to your systems?

Sometimes, taking a breather to reassess your circumstances can bring new ideas – and solutions.

### Space and adaptability

How you realize value from space could make all the difference to how your facilities perform, eliminate wasted resources and assets, and promote a healthier environment.

#### Questions to consider

- Have you given thought to how you might alter your healthcare setting layout to meet the challenges of the pandemic?
- Do you have the detailed usage and occupancy information you need to optimize the use of spaces within your buildings?
- Could data-driven building systems make it so much easier for you to manage your spaces and realize every penny of ROI from each square foot of your facilities?
- How can the changes you're making also address your energy management and CO2 reduction goals? Are you on course to achieve your sustainability goals?

The smallest modifications can have a major impact on a building's performance. Invest some time in exploring how you can reconfigure your medical facility for enhanced functionality, preparedness and efficiency.

### About OpenBlue

OpenBlue is a complete suite of connected solutions that serves industries from workplaces to schools, hospitals to campuses, and beyond. This platform includes tailored, AI-infused service solutions such as remote diagnostics, predictive maintenance, compliance monitoring, advanced risk assessments, and more. A dynamic new space from Johnson Controls, OpenBlue is how buildings come alive.

## OpenBlue – The blueprint of the future

### What is OpenBlue Healthy Buildings?

OpenBlue Healthy Buildings provides an unmatched suite of smart buildings solutions that can resolve the traditional conflict between cost savings and sustainability. It achieves this by connecting technologies that support healthy employees and patients, improve building performance, and deliver on green goals.

### Who we are

Johnson Controls is a global leader in creating and developing healthy buildings that keep the workforce safe and healthy and hospitals and other caregiving facilities thriving. We are keen to build a long-term partnership with you as you strive to create safe, healthy and productive spaces for your people and patients.

### How we can help

Not sure where to turn for trusted advice on your healthy building program? Look no further than Johnson Controls.

You can book a Digital Innovation Session where our expert Smart Building Specialists will work with you to understand your unique healthcare challenges. We will then produce a bespoke Healthy Building Journey Report to kickstart your strategy. We partner with you and provide tailored advice as we seek to give you the answer, not just a general answer.

**"We're here to partner with our customers to understand what's going on within their building."**

**Tyler Smith, Executive Director,  
OpenBlue Healthy Buildings**