

# A HEALTHIER FUTURE **STARTS INDOORS: HIGHER EDUCATION**

The COVID-19 pandemic has presented a massive challenge for colleges and universities. While significant evidence suggests that in-person learning may be more effective than online, the benefits and positive impact of returning to campus this fall must be weighed against the potential health risks to both students and faculty. And there are unique risks inherent on college campuses due to student activity, density and travel from near and far.

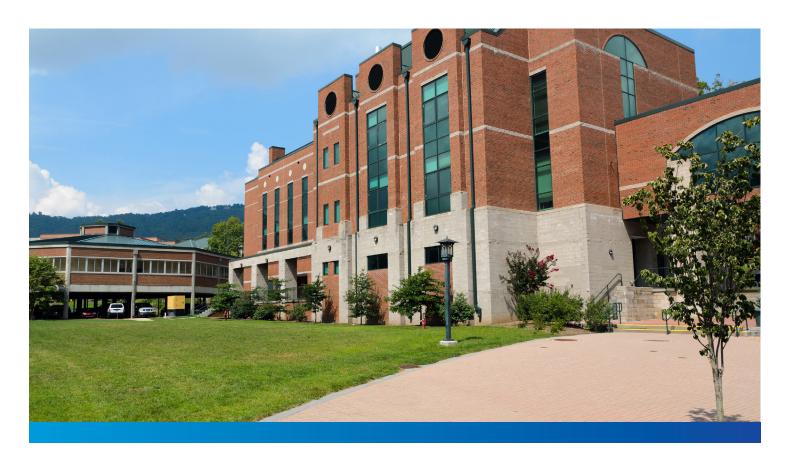
With this in mind, now more than ever, higher education is evaluating buildings with a health lens – designing and retrofitting buildings for health to enable learning, research and living on campuses. Through healthy building strategies, colleges and universities can take steps to reduce the risk of COVID-19 transmission as they welcome students back to campus – and turn schools into powerful tools for student health and progress moving forward.

#### **UNIVERSITY PRIORITIES**



#### THE SCIENCE OF HEALTHY COLLEGES AND UNIVERSITIES

While the current urgency around healthy indoor environments on college campuses revolves around stopping the spread of COVID-19, research has shown the potential impact of healthy environments to be much greater. So as we look to keep students healthy in the short term, we must also harness opportunities to drive overall student health, performance and productivity through healthy building strategies.



#### HEALTHY COLLEGES AND UNIVERSITIES IN ACTION

From immediate solutions to assist in a safe reopening to more ongoing and long-term healthy building strategies, leaders in higher education can take a number of actions to improve indoor air quality (IAQ), reduce the spread of infection and transform any campus building into a healthy building.

#### **REOPENING SOLUTIONS**



#### **BUILDING RE-USE**

**COVID** residence halls

Upgrade filtration

Increase outside air Install UVGI lighting



# **BUILDING IMPROVEMENT**

HVAC equipment on demand to reopen quickly and safely

Detailed site evaluations

Ensure system is able to meet new ventilation and IAQ requirements



# IAQ AND VENTILATION ASSESSMENT

Test indoor air quality and current ventilation rates

- Particulate matter
- Volatile organic compounds
- · Air changes/hour



#### SUSTAINING HEALTHY BUILDING STRATEGIES



# BUILDING OPERATIONS & MAINTENANCE

Retro-commissioning of all building systems

Controls upgrades

Implement new best practices

Ongoing air quality monitoring



# WELLNESS ASSESSMENT

Healthy Building certifications

Updated preventive maintenance

Education of campus community via signage, public programming and reporting



#### SAFETY & SECURITY

Provide security solutions and upgrades

Remote monitoring and diagnostics



#### LONG-TERM HEALTHY BUILDINGS STRATEGIES



## **BUILDING UPGRADES**

Ongoing commissioning of HVAC equipment

Implement best practices

Capital planning for system upgrades



# DEVELOPMENT OF NEW METRICS

Monitoring:

- Energy
- IAQ
- Carbon emissions
- Healthy Building indicators

Financing structures



# NEW CONSTRUCTION GUIDELINES

Intelligent buildings

New construction certifications

Develop campus-wide IAQ engineering standards



# CARRIER HEALTHY BUILDINGS PROGRAM

As the inventors of modern air conditioning and a world leader in HVAC, refrigeration, and fire and security solutions, Carrier has a legacy of creating safe and comfortable buildings. Now we're building on that legacy through the launch of our Healthy Buildings Program. Our experts have in-depth knowledge and experience in higher education and a holistic suite of healthy building technologies and services to address the immediate pandemic concerns and long into the future.

# HEALTHY BUILDINGS ASSESSMENTS FOR HIGHER EDUCATION

At Carrier, we understand that many colleges and universities are facing uncertainty with how to move forward in developing a healthy building strategy. Retrofits, modernizations and upgrades must be done with student health and safety as a top priority, while being smart about costs, budgets and future requirements. Our experts are here to help – starting with assessments across various aspects of a building.



INDOOR AIR QUALITY
THERMAL COMFORT
OCCUPANCY FLOW
BUILDING MAINTENANCE
REGULAR HOUSEKEEPING
ENERGY EFFICIENCY

#### HEALTHY BUILDINGS SOLUTIONS FOR HIGHER EDUCATION

Carrier offers a full suite of products and services designed to help create safe and healthy environments for students, faculty and staff. The following are just a few highlights of our offering.

#### **AIRSIDE TECHNOLOGIES**



OPTICLEAN™ AIR SCRUBBER



ACTIVAIR™ ACTIVE CHILLED BEAMS



AGION®-COATED AIR-HANDLING UNIT

# **TOUCHLESS ACCESS**



READERS AND PHYSICAL CREDENTIALS



APP AND MOBILE CREDENTIALS



**EXPANDING TECHNOLOGIES** 

## **FIRE SAFETY**



SMARTCELL™ WIRELESS FIRE DETECTION



FIRECELL™ WIRELESS DOOR CONTROL



FIREWORKS® INCIDENT
MANAGEMENT PLATFORM

# **GET STARTED WITH AN EXPERT**

From a safe return to campus to ongoing enhancements to student health and performance, a healthier future starts indoors. Let's work together to unlock the enormous potential of healthy colleges and universities. Visit us at <a href="mailto:carrier.com/healthybuildings">carrier.com/healthybuildings</a> to learn more about our Healthy Buildings Program and connect with one of our experts.