

Johnson Controls is powering the safe reopening of higher education campuses

Solutions and capabilities for safer, more secure, comfortable and resilient buildings

Reopening solutions

- BAS, lighting and security systems adjustments
- Life safety inspections and maintenance
- Mechanical equipment inspections and maintenance
- Safety, compliance and risk inspections
- Energy cost control
- Disinfectant lighting solutions
- Air quality assessments and strategy
- Water testing, cleaning and treatment

Resilient/flexible infrastructure support

- Infrastructure readiness for “pandemic mode” or other emergencies
- Flexible facilities and space repurposing
- Technology resources and expertise
- Energy and operational saving strategies

Safe and healthy environment solutions

- Elevated skin temperature screening
- Space planning and occupancy strategies
- Location based services
- Social distancing strategy and enablement
- Preventative cleaning strategies and enablement
- Occupant hygiene strategies and enablement
- Frictionless, touchless environments
- Classroom, meeting and collaboration space management
- Enhanced communications

Student, staff and visitor screening solutions

- Elevated skin temperature screening
- Visitor screening and management
- Credentials management

Remote services

- Remote monitoring and maintenance of building systems
- Preventative and predictive maintenance programs

As colleges and universities embark on the journey to a “new normal,” administrators need to consider how best to reduce the transmission of disease among students and staff, maintain healthy campus operations, and strive to provide a safe learning environment.

Higher education officers concerned with how best to reopen university buildings, classrooms, residence halls and other campus facilities to ensure the safe return of students, teachers and staff are confronted with the following challenges:

- What do I need to do to open up buildings?
- How can I keep the buildings and people inside them safe, secure and healthy?
- What opportunities do I have to reduce my operating costs and improve building efficiency?

- How can I ensure flexibility and resiliency of my campus to support a spectrum of future states, including pandemics and alternative learning environments?

Johnson Controls can deliver solutions that help enhance student and staff safety, comfort, wellness and building performance. Working with colleges and universities during this difficult time, our local Johnson Controls workforce can meet your immediate needs while streamlining operations and use of resources for when school is back in session and students are back on campus.

The power behind **your mission**



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Guidance on relief funding and financing options

Currently, the CARES Act and state stimulus funding may be used as follows, and we will work with you to ensure the campus facility improvements you choose to make align accordingly with funding.

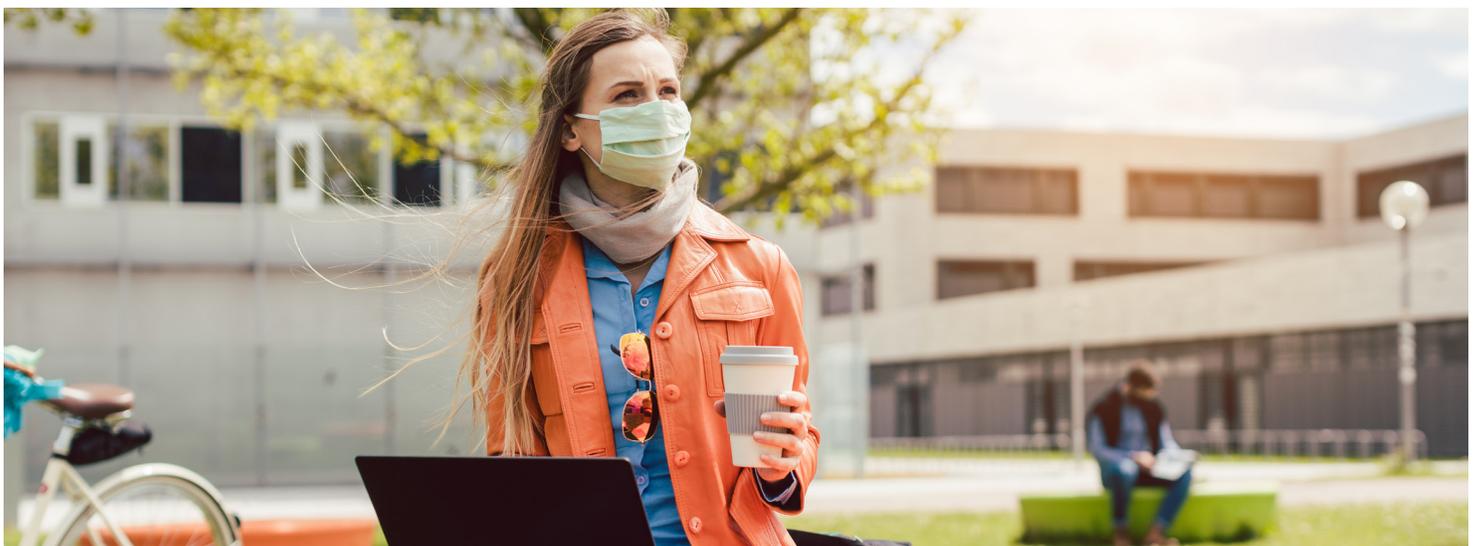
- Planning for and coordinating during long-term campus closures and return to operations
- Temporary structures for student healthcare delivery services
- Facility modifications, renovations and capital improvements
- Technology and supplies required to support student care, safety, and facility operations

Additional stimulus and grant funding will be available through state relief bonds and grants, FEMA grants, and anticipated infrastructure stimulus in the U.S. Your Johnson Controls team is prepared to help support your applications for all available funding resources as they become available, and we will collaborate with you now so your campus is positioned with shovel-ready projects when funding is available.

Colleges and universities can streamline major renovations through a variety of financing options that exist between campuses and the private sector to build public infrastructure. These financing options available through Johnson Controls can help you preserve valuable cash while improving the operational efficiency of your facilities. You can bundle needed upgrades and leverage Energy Performance Contracts to put the improvements within financial reach. Our experienced, dedicated Structured Finance Team is available to assist you with funding your campus improvements.

Essential Workforce in Your Community

- Johnson Controls solutions are in more than 2,880 higher education campuses, providing solutions and customized upgrades to reduce costs and improve building efficiency
- Our energy and infrastructure solutions delivered through performance contracts have produced over \$1 billion in guaranteed savings
- We partner with APPA, NACUBO, NASEO, ACHA and NAICU
- 120 branch locations in North America supported by 25,000 employees
- 13,600 field technicians and mechanics in North America
- Recognized by federal, state and local governments as a provider of essential products
- Adhere to safety measures prescribed by the CDC using detailed COVID-19 Site Safety Plans



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Johnson Controls solutions and capabilities support colleges and universities during recovery, reopening and the new normal. The checklist below follows suggestions made by NACUBO, as well as the ASHRAE Epidemic Task Force and Centers for Disease Control and Prevention guidance on mitigating potential health risks during reopening of buildings closed during the COVID-19 pandemic.

Reopen your buildings

As you prepare to reopen buildings for students and staff, steps should be taken to ensure the environment is safe and able to maintain a healthy learning atmosphere. Consider the following guidelines for operational readiness:

- Ensure preventive maintenance inspections are up-to-date on all building systems
- Ensure fire/life safety inspections are up-to-date per NFPA and other regulatory bodies, and equipment is performing properly
- Perform systemic start-up procedures for mechanical equipment such as chillers
- Flush out air and water systems and replace filters
- Clean, test and treat cooling towers and other water sources to prevent harmful bacteria
- Review new occupancy levels, schedules and update:
 - Fire/life safety systems/services based on new fire risk profiles
 - Security systems/services based on new security risk/loss profiles
 - Sequences/schedules in security, building automation and lighting control systems
- Verify HVAC system performance to provide proper airflow, temperature and humidity



Keep building occupants safe, secure, comfortable and well

Consider the different ways you'll be educating students, changes to occupancy, how students and staff interact with each other, visitors and the building. These suggestions can help maintain the safety, security and wellness of your people, buildings and spaces:

- Initiate ventilation, filtration, humidification and air cleaning strategies to control the risk of airborne infectious contaminants to building occupants
- Utilize zoning to allow treatment of individual classrooms and small offices to avoid re-circulated air and airborne pathogens from being transmitted
- Validate access control settings and reinforce new policies for entering the building with:
 - Additional visitor management processes/technologies
 - Deploy elevated skin temperature screening
- Use security, video surveillance, lighting and building automation systems to:
 - Enforce social distancing policies, monitor student activity and intrusion detection
 - Reduce density or enforce maximum occupancy policies
 - Optimize cleaning practices
- Add disinfectant lighting systems
- Enable location based services for social distance monitoring and contact tracing
- Create touchless environments:
 - Cover and lock thermostats
 - Replace light switches with occupancy sensors
 - Create mobile/web-based interfaces to allow occupants to control lighting and temperature
 - Use access control, sensors and interlocks with doors and elevators to provide "frictionless" movement throughout the building
 - Install hands-free fixtures in bathrooms and kitchens
- Enhance communications systems:
 - Install mass notification systems to support routine communications (weather, school opening delays, bus issues etc.) and emergency communications
 - Install wireless duress buttons
 - Use unified communications to support a campus-wide emergency response

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Ensure large spaces operate safely

Large, open spaces like cafeterias, gymnasiums, libraries, laboratories and auditoriums present unique challenges for safely hosting students and staff. Consider these steps:

- Use video surveillance and access control to define and support separation
- Leverage occupancy/access control data to evaluate new usage patterns
- Enable location based services for social distance monitoring and contact tracing

Ensure cost-effective operations

The need to reduce costs and improve operational efficiency is more important than ever. We help you do both with these suggestions:

- Seek guidance on funding sources and financing options to preserve valuable cash and improve the safety of your facilities in these difficult times
- Add remote monitoring of HVAC and security systems to diagnose and resolve many systems issues quickly over the phone, minimizing staff requirements
- Enable preventative and predictive maintenance programs to ensure equipment uptime and reliability
- Employ self-testing of fire alarm equipment using addressable notification to ensure compliance
- Explore energy cost control measures through optimized equipment and lighting strategies

Prepare for resilient, flexible spaces and operations

Finally, no one knows what the future holds, but we can take what we've learned to prepare buildings for future states, including pandemics and surges, and optimize the building infrastructure to support flexible, resilient spaces. Consider these modifications:

- Enable dynamic and flexible control of building systems to handle a spectrum of future states:
 - Add additional modes of operation to the building automation system, lighting control, and security systems for pandemics, energy efficiency, air quality, minimal occupancy, demand response or other specialized conditions
- Add additional capability to monitor, operate and service the building and building systems remotely



Your partner for reopening your campus buildings

Our solutions create a safe, secure, healthy and comfortable environment that helps keep students, visitors and staff safe. When you partner with Johnson Controls, we treat your mission as our own. We put our deep expertise, leading technology and world-class products to work for you, never resting until you achieve your goals.

Learn more when you visit us: www.johnsoncontrols.com

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