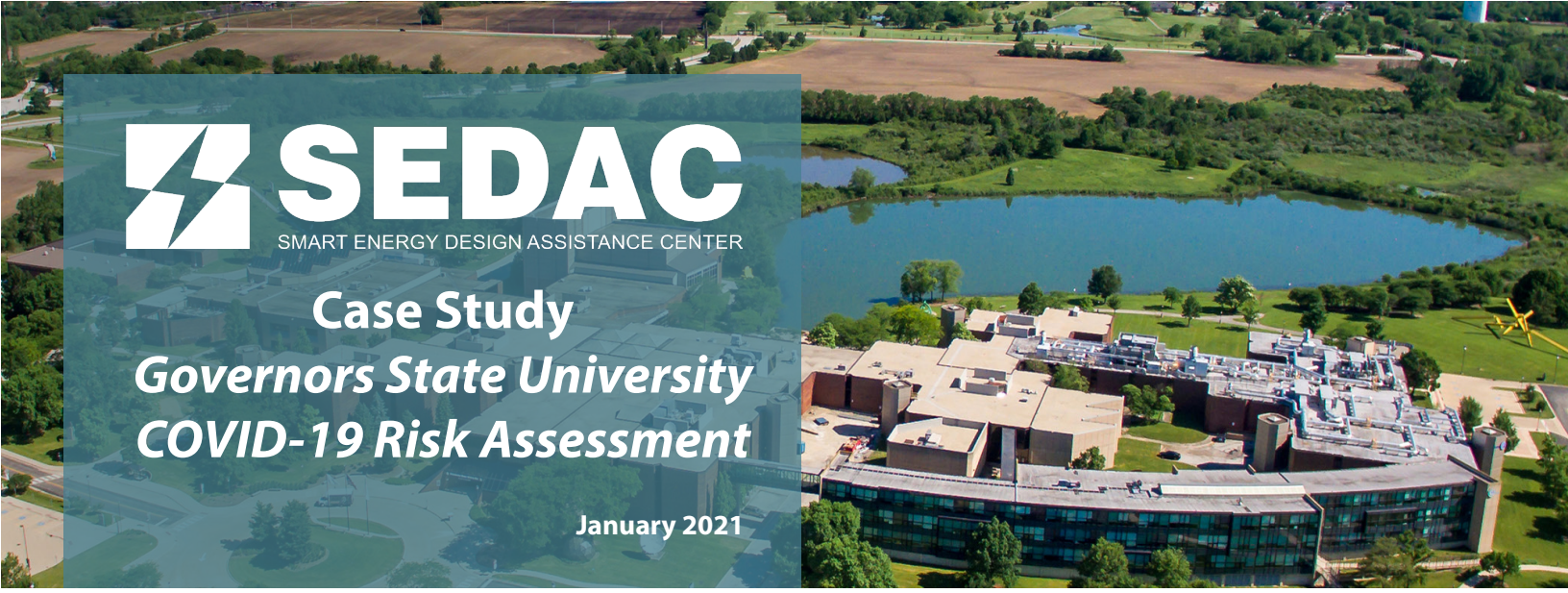


SEDAC

SMART ENERGY DESIGN ASSISTANCE CENTER

Case Study

Governors State University COVID-19 Risk Assessment

January 2021

What measures can help buildings be as safe as possible during the pandemic? Governors State University (GSU) has taken proactive steps to mitigate the risk of virus transmission in their facilities. While most of their classes are being held remotely, they wanted to make sure that their on-site classes and labs could be conducted safely. They also recognized that improving facility safety would help them prepare for future health crises.

GSU reached out to SEDAC for an in-depth risk assessment of their facilities, and identification of recommendations for reducing virus transmission. "We had worked with SEDAC in the past on energy assessments and wanted a methodical plan to improve our facilities, not a knee-jerk reaction," GSU Associate Vice President for Facilities Development and Management John Potempa and Chief Engineer Michael Sullivan explained. SEDAC identified low, moderate, and high risk spaces in all buildings by assessing risk factors associated with space usage, ventilation equipment, and conditioned air flows. Based on this risk assessment, SEDAC recommended measures to reduce the risk of COVID-19 transmission, as well as strategies to mitigate the energy cost impacts of safety measures.

Primary Preventative Measures

GSU is already implementing the primary control measures that are most effective at mitigating virus transmission: behavioral best practices and space configuration to encourage social distancing.

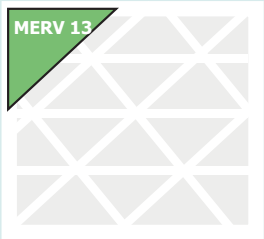
GSU requires **mask wearing** and **hand washing**. They ensure that there are adequate supplies, and they use signage to promote hygiene.

They **promote social distancing** through **reduced in-person operations** and **spatial configurations**. They have marked floors to maintain 6 ft of separation, moved or blocked off furniture to promote distancing, and installed plexigass guards.

SEDAC suggested additional distancing measures to mitigate risk by removing furniture from social spaces and installing plexiglass barriers at all service counters and reception desks.

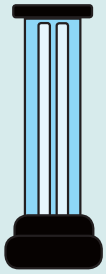
Mechanical Measures

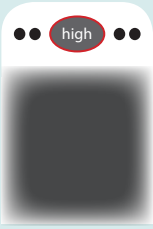
SEDAC recommended the following mechanical measures in select spaces to reduce risk of virus transmission. SEDAC calculated the install costs, as well as the energy impact of each measure.



Improve HVAC air filtration to capture airborne virus particles, with MERV 13 (or higher) rated filters.

Install Untraviolet Germicidal Irradiation (UVGI) at cooling coils to destroy virus particles.





Install HEPA Air Purifiers for point-source reduction of air contaminants.

Implementing measures

GSU is using the report to prioritize measures to implement. The cost estimates are helping them decide how to budget for the measures that will have the most impact on building safety.

They are in the process of incorporating the recommendations into a master plan and have shared the information from the report with architects and engineers.

Evaluating risk

SEDAC assessed occupant loads, activities, space size, and mechanical system characteristics to identify spaces that present low, moderate, and high risk of virus transmission. The gymnasium and athletics rooms, for instance, were higher risk because of the activities in those rooms.

"Making our facilities safer is the right thing to do. Though the measures may increase energy costs, we can't sacrifice people's health over energy savings. SEDAC has helped us identify our strengths and weaknesses and develop a methodical plan to improve our facilities." --John Potempa

Learn more

SEDAC's COVID-19 risk assessments can help identify spaces with higher risk of virus transmission. We'll assess your building and HVAC to identify measures that make your facility healthier and more resilient. See **sedac.org/covid-assessments**

Who we are

The Smart Energy Design Assistance Center assists buildings and communities in achieving energy efficiency, saving money, improving indoor air quality, and becoming more sustainable. SEDAC is an applied research program at the University of Illinois at Urbana-Champaign. SEDAC services to save energy and money include:

Quick Advice I Energy Assessments I New Construction Design Assistance I Long-term Climate Action Planning I Retro-Commissioning

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