Johnson Controls

OpenBlue
Healthy Buildings

Indoor Air Quality assessment case study

Richmond School District, Sussex, Wisconsin

The COVID-19 pandemic has intensified the need for optimal Indoor Air Quality (IAQ) in schools and other academic settings. Ensuring students and staff are confident in the air they breathe is essential. Studies have shown how buildings with clean air help occupants to be healthier, happier and more productive.

We've created our OpenBlue IAQ as a Service solution to enhance the air quality of schools and other buildings. The first step in the improvement process is a thorough assessment of a school's IAQ and ventilation systems to identify areas of risk and determine where to best focus time, effort and resources. Recently, Richmond School District in Sussex, Wisconsin, invested in an air quality assessment, and what they learned brought critical benefits to their students and their staff.

The challenges

The latest data from the US Environmental Protection Agency states that 90 percent of our day is spent indoors. Recent studies have also established a direct link between a school's air quality and student academic performance.

Richmond School District was concerned that poor IAQ could increase the risk of student and staff illnesses, leading to absenteeism and impacting student progress. The most important of all their requirements, though, was to mitigate the risk of transmitting airborne pathogens, including COVID-19.

They turned to Johnson Controls to identify an efficient, sustainable solution.

The solutions

The first and most critical step in designing an IAQ solution is a thorough understanding of the condition, and needs, of the building and its systems.

Johnson Controls began the IAQ assessment by deploying air quality sensors in key locations and measuring CO_2, CO, PM2.5, temperature and relative humidity over several days. As IAQ changes along with building occupancy, activities (like art classes or cooking in the cafeteria) and the weather, a multi-day measurement program creates the most accurate picture of the building's baseline performance under typical conditions.

When the IAQ Assessment was completed, the district was provided with a comprehensive report showing critical data and pinpointing areas of concern.

The results

This assessment of the building's IAQ uncovered energy savings opportunities and areas for immediate IAQ improvement, such as adding an in-zone filter to clean the art classroom's air.

The baseline performance measured during the assessment also laid the foundation for further IAQ enhancements by delivering data that can be used to design a solution that meets the needs – and the budget – of the school district.

Testimonial

"I believe that air quality is crucial to our staff and students. You would never be able to know the CO_2 levels, air particle concentrations, or energy efficiency and airflow factors without a formal IAQ assessment. If a school has not had one or needs to replace any HVAC equipment, I would highly recommend it."

Dr Jeanne Siegenthaler,
District Administrator,
Richmond School District

Visit **www.johnsoncontrols.com/openblue/openblue-healthybuildings/iaq-as-a-service** to learn more.

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.

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