

How do you help ensure a safe, healthy indoor environment for your students, staff and educators?

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It is well understood that indoor environments have a tremendous impact on the health, productivity, and well-being of building occupants and this is even more true in the learning environment. Contaminants inside a facility can adversely affect occupants, from classrooms and study halls to dormitories and research labs.

Consequences of a Poor Indoor Environment			
Potential Impact to Students/Educators	Potential Impact to Education		
 Increases sickness, fatigue, asthma, allergies, and headaches 	Decreases productivity		
	Increases absenteeism		
Decreases concentration	Increases employee turnover		
Reduces satisfaction	Creates risk to continuity of education		
Heightens stress and fear			
Reduces trust and loyalty	Potential legal rees and tarnished brand		

Airborne Contaminates and the Respiratory System

Airborne contaminants less than 10 microns, which includes mold, mildew, bacteria, and an assortment of viruses, pose the greatest health risk because they can penetrate deep into the lungs.



Facilities often address contaminates using a traditional approach. For example, increasing the ventilation rates or installing more effective air filters. However, this may increase energy consumption and noise, and it might not resolve the problem.

Controlling indoor environments can be complex due to the varying interactions between the outdoor climate, building occupants, potential contaminants, operations, and the HVAC system.

DID YOU KNOW?

- Pollutants can penetrate inside a building and be 2-5 times higher than the outdoors.¹
- North Americans, on average, spend approximately 90% of their time indoors.²
- Performance losses due to poor indoor air typically equal 2-4%.³
- 1 in 5 Canadians have have allergies.⁴
- 1-3 Environmental Protection Agency
- 4 Asthma Canada



Successful mitigation of contaminant risk

For the best result, issues need to be addressed and variables that impact the indoor environment need to be monitored and managed. These variables include contaminates, ventilation, maintenance effectiveness, and precise building control parameters including temperature, humidity, and building differential pressure.

Siemens Smart Air Quality[™] Program

Siemens Smart Air Quality Program provides a holistic approach to mitigate contaminant risk. With the support of our knowledgeable professionals, the latest technology, and smart processes, we can provide a customized service program that helps you achieve your goals.

Detailed Assessment	Project Implementation	Ongoing Services
 Comprehensive Ventilation Assessment 	 UV, Ionization, Other Advanced Technologies 	 Preventative Maintenance for HVAC / BMS
Assess Equipment	 Duct and Coil Cleaning 	Building Temp Humidity
Maintenance	Filtration Improvements	Management
Review Contamination Sources	Precise System Control	Building Pressurization
 Prepare Findings and Budget for Customer Repairs to HVAC / B 	Repairs to HVAC / BMS	 Energy Monitoring
		Monitor KPIs for New Technologies
	Customer Outcomes	



Primary Contaminants and Technology to Mitigate Risk			
Contaminant Type	Examples	Mitigation Technology	
Particulate	Dust, Lint, Hair, Dirt, Soot	Maintenance of filtration systems	
Biological	Bacteria, Viruses, Molds, Pollen	Ozone-free, needlepoint bipolar ionization ultraviolet (UV) light	
Gaseous	Volatile Organic Compounds (Vocs), Chemicals Vapors, Cleaning Solvents Off Gases, Carbon Dioxide (Co ₂)	Advanced filtration	

Contact your local Siemens office today to learn how Siemens Smart Air Quality Program can help you achieve a healthy indoor environment at siemens.ca/K12 Siemens Canada Limited Smart Infrastructure 1577 North Service Road East Oakville, Ontario L6H 0H6

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