HVAC refinement for a safe and healthy environment
Although many commercial buildings are currently “closed” or starting to open again due to the health emergency situation, there are still a lot of facilities that must be kept working regardless of, or especially because of, this crisis.

Many of these buildings run at least on average or above average capacity with a high number of occupants, while there are also buildings that are fully operational but almost empty.

Even when the main precaution and safety measures firmly rely on each individual, such as social distancing, washing hands and following all the rules specified by local governments and health authorities, buildings can further support individual efforts when operated and monitored correctly.

Recommendations of renowned industry associations (REHVA and ASHRAE) as well as our own Siemens HVAC industry experience, point towards pathogen spread being affected by airflow patterns and HVAC operations. Optimizing the regulation of the building ventilation system in this regard can have an impact.

The measures are:
- Increase ventilation rates.
- Increase the percentage of outside air that circulates in the system.

Can buildings really help in the battle against the current coronavirus crisis to better protect those who use the premises through building equipment and systems like HVAC and Building Management Systems? At Siemens, we believe that they can.
Optimize BMS and HVAC operations for improved safety of building occupants

Using HVAC and other Building Management System functions, buildings must be operated in the best possible way. Today, this often means a temporary shift from energy efficiency to operational efficiency to help protect the people inside these buildings, to the best possible extent.

Pathogen spread and the number of people exposed can be affected both positively and negatively by airflow patterns in a space and by heating, ventilating and air-conditioning (HVAC) and local exhaust ventilation systems.

Optimizing Building Management system and HVAC operations, you can ensure multiple measures which hugely reduce the risk of infection:

- Outside air only.
- Extend operation times.
- Disable demand control (full operation when any person is in the building).
- Switch off room air-circulation – fan-coils.
- Maintain controlled airflow direction.
- Refine monitoring (alarming and trending).
- Create dedicated reports.
Extended added value through a constantly optimized, reliable and resilient HVAC system

All at once and beyond

We provide our customers the HVAC refinement by optimizing their system settings for a healthy and safe environment, through an adjustment to latest Rehva/Ashrae guidance.

After analyzing each customer’s needs to determine the right measures, our technicians will execute the refinement by optimizing BMS and HVAC automation settings on-site OR remotely with a secure connection.

From a long-term perspective, a digitally-enabled HVAC system protects the buildings’ occupants now, and ensures a highly efficient system in the new ‘normal’, based on transparency, operational savings and energy optimization.

We go one step further to support our customers with a continuous optimization to ensure a truly resilient HVAC. Our Desigo and Service platforms allow our technical experts to:

- Monitor the system and execute a complete fault-detection protocol.
- Set-up pandemic specific alarming and trending.
- Create specific reports.
- Provide continuously updated local guidance.
- Optimize and monitor the system constantly via analytics services.
- Deploy Siemens “rule-based analytics” kit for pandemic environmental monitoring.
- Optionally, combine all this with energy efficient rules for later optimization.
Customized solutions to increase business continuity and reduce risks

It is our priority to support you to create the safest and healthiest indoor environments to make business continuity possible, whilst also detecting and reducing any risk for the building’s occupants. To do this, we additionally identified the following solutions:

• Remote connection and services provide remote operational support, including remote diagnosis for a faster detection of any issue; quick and safe repair and maintenance; commissioning when needed, and performance monitoring.

   The highlight: ensure correct system functionality while reducing operational costs and the number of technicians on-site, resulting in energy savings from a monitored and optimum performance of the system.

• The smart sensor technology of our subsidiary Enlighted Inc. provides advanced motion tracking. The sensors can be installed in any light fixture or workstation and collect and monitor real-time occupancy, space utilization, light levels, temperatures and help to control energy usage.

   The highlight: contact tracing plays an increasing role to track and prevent the further spread of the virus.

• Thermal imaging cameras with Elevated Skin Temperature that enable a contactless way of measuring body temperature.

   The highlight: from a technology perspective, these cameras can be integrated into a building’s existing security and access solution systems.

"We work constantly to support your projects in all ways, including financially services. Please contact us and let us know how we can provide you with help to achieve your goals now, when you need it most."

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