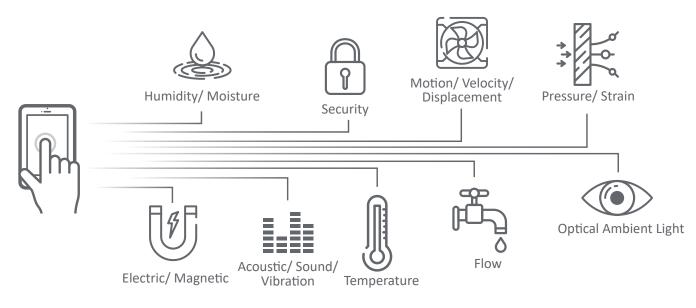


The sustainable movement introduced a number of technologies developed to optimize system performance. Centered on energy management controls, operators have gained visibility into building system energy utilization. In recent years, this has evolved into more advanced metering, power distribution and programming. Now, "machine to machine" (M2M or IoT) technologies are offering an additional level of efficiency through the integration of Bluetooth-enabled devices. Building operators are finding new efficiencies in managing human resources, building operations, and space utilization with real-time reporting of unit performance, capacity, and potential system compromises.

30 BILLION **Smart Objects building systems** are optimized and personalized experiences are

accentuated.

With over





## Sensory Impacts

There are some unique scents that trigger positive reactions – a new car, raw lumber, baked goods – and others that have a negative impact on human behaviors. In the AEC industry, there has been attention to VOCs in turning over a building, but what about the flow and handing of product in spaces designed for storage and distribution?

New materials introduced to a space undergo the same off gassing as building materials. In a study co-authored by Hargis for ASHRAE, VOCs in a retail environment were measured in relationship to building ventilation schedules. In locations where the HVAC systems were turned off at night to save energy, there was a significantly higher concentration of VOCs in the morning. There was another noticeable discovery: impulse purchases at the register were down in the morning.

This reinforces two important factors: understanding building operations - beyond system functions – and HVAC control strategies and use of VOC sensors to trigger increased ventilation in these spaces for health/safety and overall occupant alertness.

## Agile**Teaming**Environment

When the ability to meet virtually was considered a differentiating asset, firms invested in technologyenriched conference spaces. They were unique, purpose-oriented, and required a reservation. Today, virtual meetings are expected to be a business mainstay. The number of participants, location, and the ability to seamlessly interact with one another have increased exponentially. The need to collaborate in real time with a physical asset has shifted provisioning for these 'special' spaces from what previously was a small percentage of the workplace into office-wide breakout areas with 100% audio-visual systems saturation to bridge the in-person and virtual team. With the increased utilization of these AV intensive spaces there is a heightened level of coordination across disciplines to account for acoustics, glare detection, viewing area, white noise, impromptu storyboarding/visualization, and user-friendly controls.







## Why**Now**?

The Clean Buildings Standard has been in headlines since enacted in 2019. The timeline for compliance seems generous. However, when overlaid with budgeting and funding cycles against current labor and supply trends, the sense of urgency to start the process sooner rather than later becomes evident.

We are offering a series of sessions designed specifically for our clients' operating portfolio and business operations:

Commercial/Healthcare Buildings

Tuesday, November 16 / 10:30am-12:00pm **Seattle Commercial Buildings** 

Thursday, November 18 / 10:30am-12:00pm

**LEARN MORE REGISTER**  K-12

Tuesday, November 30 / 11:30am-12:30pm

Higher Education, Civic (State/Local) Wednesday, December 1 / 10:00am-11:00am

LEARN MORE **REGISTER**