

cloud managed networks



Smart Buildings – Sensors and Savings as Workers Head Back

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For over 10 years, building managers have been managing facilities remotely, using new hardware and software capabilities to improve electrical and HVAC-related efficiencies, reducing energy consumption and costs in the process.

As increasing numbers of systems get monitored from a single dashboard, it becomes paramount to choose partners who can provide end-to-end solutions, handle radio frequency-based and Wi-Fi enabled technologies, and do so while ensuring the robustness and security of your existing network.

Although there are special considerations for commercial spaces right now, which are discussed below, commercial, industrial and residential real estate property managers and building operators have similar needs when it comes to the building envelope and use of common spaces.

There was a time when motion detectors were activated when people enter the room, and the lights simply came on. Now, wireless sensors monitor light levels (both artificial and natural), to assess the ambient lighting based on the tasks to be conducted in various spaces. Sophisticated systems enable these sensors to assess how much light is needed based on room occupancy, desk occupancy (more IoT at play) and other office environment factors, while still enabling individual users to have control of the light in their own spaces.

For companies to adopt this technology, fast start-up power, along with the ability to deliver higher luminosity for brighter lighting fixtures, becomes important. As does being able to get the lights back on quickly during a power outage. Cisco, one of the manufacturers with which we work, offers a perpetual UPOE solution that guarantees fast start-up and non-stop power to get your lights back on within five seconds during a blackout, or other power interruption.

Today, however, it's not enough to simply measure energy use. Comfort sensors measure temperature, humidity and air quality, including CO₂ and non-organic particulate levels, and evaluate the data, factoring in the number of people in the space (using presence sensors), to ensure that occupants are comfortable, in a cost-efficient manner. To do so, HVAC systems also need to be part of the overall configuration.

For industrial buildings, this may likely also mean looking at temperature levels on loading docks, and synching these zones with the temperature in the warehouses and on the trucks – all of which requires coordination of multiple data transmission buckets. Not to mention coordinating inventory that is monitored using RFID tags or smart water and dust.



When configuring the system, it is prudent to also connect the backup generators and monitor the battery life generators, while doing so for your data centres, too.

Security, CCTV, elevators, badging and other systems also need to be included in the overall network architecture.

Obviously, sensors have become an integral part of the data management. In a smart building, there are likely hundreds and hundreds of IoT devices, all with sensors transferring data to the network. In a smart building, maintaining the physical asset requires maintaining and monitoring the sensor network, too, and this is something best performed with dynamic application programs. Many property managers building owners are choosing to go with Managed Services Providers, so they can take care of the other tasks associated with running a building.

What's the extra twist for Commercial property owners and building managers?

There are several. The most critical, however: Personal safety, connectivity and network security.



As tenants return to work, there is an added impetus to prevent the spread of germs, while providing good network connectivity experiences, despite the staggered remote working schedules and spaced-out seating not envisioned when the original heat maps were done.

Some offices are already recognizing that previous collaboration spaces will need to be replaced with other options – which means the ability to schedule and book meeting spaces that

conform to the new requirements becomes even more important. Desk sensors, tied into booking systems, can be useful tools as our remote collaboration tools, such as WebEx.

In some offices, with fewer people working on the floor, personal safety also becomes a concern. For this reason, many offices are installing interior security cameras that are monitored and/or have recording capabilities, where data can be stored both locally and in the cloud. With the wireless solutions available today, it is a relatively simple network addition.

The ASHRAE guidelines for operating HVAC systems post COVID-19 also be taken into account – and systems, and monitoring requirements, updated accordingly.

It also becomes imperative to know when washrooms and other spaces were cleaned, and to what level of sanitization. Cleaning protocols are being legislated in some municipalities and you will need to be able to show compliance. With more frequent cleaning, there are often additional workers in the building after hours – and sometimes during the business day, too. Sensors can only do so much. In some stations, linking your sensors and security cameras can be helpful.

In addition, there are often mobile applications, frequently accessed by employees' or third-party providers' own cell phones, to be factored into the new maintenance standards required at individual assets' locations.

With myriad wireless connections, and a slew of devices connecting into the network, security from the edge to all endpoints is critical. Cybersecurity insurance requirements are also escalating in areas beyond privacy concerns, which means property owners and building managers must perform regular vulnerability audits and penetration testing to ensure buildings remain up and running. At the same time, there is increasing demand for all of this to be done more remotely than has ever been the case.

Experts agree that now is the time to engage more closely with resellers who work with multiple manufacturers, and who network and cybersecurity specialists. We happen to fit the bill.

For more information on upgrading your network, integrating more IoT technology, securing your system from edge to endpoint, please visit our website (www.cloudmanged.ca) or contact us at info@cloudmanged.ca or by phone 416.429.0796 or 1.877.238.9944 (toll free).

