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Canadian University Deploys Space Management Solution

Canadian Public Research University

Industry Sector: Higher education, University
Geography: Canada
Service Solution: People Counting Sensors
Strategic Partner: Feedback Solutions Inc

We're always looking at our operations efficiencies, because we're continually asked to do more with fewer resources.

University Associate Director of Operations

Organisation

The University is a public resarch university in Canada.

Business issue

The University had embarked upon a major expansion that added several new buildings and large volumes of classrooms, research space and meeting rooms to its campus. The Operations Group of the university understood that the recent building boom meant there was a significant increase in the operational and maintenance footprint, and that an accurate picture of occupancy in key spaces would allow them to use the data to streamline their operations, saving manpower, resources and energy. Further, the data would have to be made available on BACnet for easy integration with their Building Automation System.

Searching for a solution, the University team were inspired by the retail industry's ever-evolving work to count people accurately in real-time. Through its research, the University became particularly interested in thermal people counting technology because of its proven track record to provide highly accurate traffic and utilisation data that does not encroach on a building occupant's privacy. Looking at being able to deliver the data on BACnet was a key deciding factor to go for an integrated solution.

Solution

The University began implementing Feedback Solutions' Space Management Solution, which is equipped with Irisys' thermal people counters, and an occupancy controller. This enabled delivery of occupancy data on BACnet, to determine the utilisation of its facilities after completing a two-classroom proof of concept phase in a small building in 2013.

A wider rollout into 3 other buildings occurred in 2014. People counters installed at the entrances of classrooms and large meeting spaces provided an accurate, real-time measurement of room utilisation. That data was then fed via BACnet communications protocol into the university's Building Automation System (BAS) for review and operational efficiency activation.

The University's opening requirement was two-fold – first, to know exactly when, and how many, people are using a room in real time as a means to streamline operational efficiencies. Secondly, to continue expanding upon its environmental sustainability strategies by leveraging the data to optimise energy-hungry systems, like HVAC through its BAS.

Business Benefits

Through Feedback Solutions' system, the university is better positioned to justify its expansion – and to use data to form future expansion strategies. Furthermore, the University is now beginning to use the data to identify variances in utilisation that fluctuate each semester and are developing a more comprehensive accurate understanding of actual space usage.

This insight is allowing the University to significantly drive down energy consumption and associated costs by ventilating classrooms to their proper level based upon actual usage instead of capacity – e.g. for 25 occupants instead of 50 assumed occupants. Additionally, the data is empowering the university to pinpoint potential savings by consolidating room usage to fewer buildings. This in turn is leading to better scheduling of annual building upgrades and maintenance, optimising room cleaning schedules, and determining what systems can be shut down entirely depending on season, building layout and HVAC configuration.

When asked why the University had adopted people counting technology, the University Associate Director of Operations stated, 'We needed to understand the real time usage of our facilities, and we were intrigued with how the retail industry had leveraged the people counting technology. It didn't take long before we found Feedback Solutions.'

He continued, 'We're always looking at our operations' efficiencies, because we're continually asked to do more with fewer resources. We have over 18 million sqft of buildings which adds up to a fairly large annual energy bill. If we can save 2 percent to 3 percent of that, it's a significant amount of money. If we can save 10 percent of that, we've really achieved a new benchmark. People counting technology for buildings has the potential to open up new ways of thinking around campus facilities and operations. That goal is one of the reasons why sustainability is a big driver on our campus, and why we are implementing this technology.'

The university plans to continue its rollout strategy with implementation in additional buildings, beginning with the university's largest building.

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