Building security trends: Smart cameras, hybrid cloud and open platforms

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Building managers attach great importance to security. At the same time, they are looking for ways to improve a building's overall efficiency and energy savings. In this note we look at some smart building solutions that help managers achieve those objectives.

Needless to say, security is of paramount importance in commercial buildings, where we work, get business done or visit clients. People and assets need to be well protected. Accidents and mishaps can cause financial losses and reputational damage to building owners. To provide a safe and secure environment for tenants and visitors, building managers turn to smart technologies, some of which are discussed as follows.

Smart cameras

Smart cameras can play a key role in building security and safety. They are also called AI cameras. Typically deployed on the edge, smart cameras are equipped with AI analytics to detect objects and abnormalities, for example flames and weapons.

"One vital use of smart cameras in building security is the role they can play in fire and safety prevention through the early detection of flames, smoke or spills in buildings. Video analytics combined with AI and computer vision are able to detect incidents in an early state and trigger alarms faster and more reliably than humans. This can lead to the lowering of insurance costs for a facility as well," said Casey Rawlins, Technical Solutions Consultant at Security & Safety Things. "Smart cameras can also offer early and real-time detection of weapons, such as knives and guns, identify potentially suspicious behaviors such as lurking or loitering in certain areas or detect a suspicious package left behind."

Smart cameras can also perform people counting functions to make buildings more efficient. "The same set of analytics can also detect a large crowd of people at the base of an escalator or analyze other building foot traffic patterns, produced by people counting or flow detection video analytic apps. This information can be useful to building decision-makers and owners to improve building design through the removal of obstructions that cause bottlenecking, or chokepoints at access points," Rawlins said.

Finally, smart cameras can help with disease control and prevention, amid and post-pandemic. "The first and most obvious solution (amid COVID) is probably touchless and contactless technologies. For smart cameras, this can be facial recognition for employee entrance into a workplace. In parking garages, it can be license plate recognition for barrier-free entry and automated payments – resulting

in a touch-free and contactless experience. These types of entry and exit solutions I anticipate seeing become more and more in demand, as they not only promote safe hygiene practices, but also an optimized experience," Rawlins said.

Hybrid cloud

A hybrid cloud approach is increasingly seen in building security. Conventionally, building security entails an onsite architecture. Yet more and more, building managers turn to hybrid cloud for more scalability and flexibility.

"The misconception often is that smaller businesses are looking to make the switch to cloud but that's not always true. We are seeing a number of large enterprise end users deploying cloud for some of their smaller sites or locations for a more hybrid, mixed approach between on-premises and cloud. While on-premises will never fully go away, cloud does offer ease-of-use and less infrastructure that is really attractive to some businesses," said Chris Sessa, Director of Key Accounts at Salient Systems.

Integration and open platforms

Building security can benefit a lot from integration and open platforms. Managers can view on a single dashboard data generated from various systems. These can be both security- and non-security. One example is integration between security and a building's HVAC system. "HVAC systems can be programmed to minimize power demand charges and equipment cycling times by adjusting temperature to live traffic and occupancy. HVAC systems can also be integrated with the building's security system to adjust room temperature to a specific person's preferences using facial recognition and historical data on that person," Rawlins said.

End users from various industries may want to integrate their vertical-specific systems with security to streamline their business. "For example, in healthcare environments, many end users want the ability to integrate cameras and their video management system with software that allows them to track assets, such as patients, staff, medical goods and pharmaceuticals. They also want to integrate medical scope management, which is everything doctors log into a system – from surgeries, COVID tests and more, into the video management system," Sessa said. "Financial institutions might use a VMS for security purposes, but they can also tie different platforms into it to see what's happening in their other locations across different states."

This, then, underscores the need to have open platforms, which have become increasingly important in building security. "In an ideal scenario, all security devices would be integrated into one single VMS, access control system or a larger platform; but having worked with systems integrators for quite some time, we know that many systems are still set up as silos. This is due to a large number of proprietary security systems that all use different protocols and standards," Rawlins said. "However, end user demand continues to grow for custom solutions and unique integrations to solve their specific pain points. This will no doubt increase the popularity of open platforms and standardized approaches, such as what we offer at Security & Safety Things."

Integrating all types of systems into one platform, including building management for large enterprise end customers, is becoming more prevalent, as they invest more into other software to streamline processes. VMS manufacturers have to be open to what can be integrated into a platform, from video surveillance and facial recognition, access control badging – it's all fed into one system," Sessa said.

Integrator's role

Amid the latest building security trends, systems integrators should be aware of the latest technologies and solutions to provide tenants and customers with what they need. Cybersecurity, meanwhile, is another issue SIs need to look at. "When working with an end user, integrators should ensure building security is scalable, open and easy-to-use. Complex systems tend to worry customers and present more opportunities for things to go wrong," Sessa said. "Cybersecurity is a main concern across all sectors right now, as it should be. If you're an integrator, you should plan for and have certifications to ensure you're up to date on all best practices. Integrators should make sure they work with manufacturers that take cyber security seriously and offer hardened products." a&S