

Small town feel with world-class security.

The town of Billerica relies on intelligent surveillance technology from Axis and Sound Intelligence to keep residents safe and happy in the suburbs.



Organization:

Town of Billerica

Location:

Billerica, Massachusetts, USA

Industry segment:

City Surveillance

Application:

Safety and security, remote monitoring

Axis partner:

Sound Intelligence

Mission

As a small municipality in the shadow of a big city, the Town of Billerica shares the same concerns as any size municipality would recognize: a need to keep its residents and visitors safe while in a welcoming environment. Even without major incidents, the Billerica Police Department (BPD) needed an upgrade to its analog camera system to register a better picture for more effective and proactive security measures.

Solution

The town's surveillance system continues to grow year-over-year in a variety of locations such as the library, town hall, and recreational areas. Starting from Axis network cameras to integrating physical access control and sound analytics, officers have an intelligent surveillance solution to keep the peace and improve responses as incidents happen.

Result

BPD has seen many positive developments along the way. It is notably easier for officers to quickly address incidents and retrieve video, as seen when BPD caught troublemakers in the town's skate park and pulled detailed evidence for the case file. Axis Lightfinder technology on many of the town's cameras provide clear, color footage at night when loitering and violations tend to occur.

The department also found opportunities to better manage the liability of individuals taken into custody with physical access control and Sound Intelligence's Aggression Detector. With all this success comes more technology explorations for the future, especially around sound analytics, radar technology and network audio speakers.



Protecting the suburbs

Sitting about 20 miles northwest of Boston, the suburban town of Billerica, Massachusetts is home to roughly 40,000 residents. With a selection of public venues and service facilities, the Billerica Police Department (BPD) requires network security solutions to help guide their way to rapid, more effective responses to emergencies and incidents that unfold.

As the school department previously had Axis IP products installed, BPD got started by paying them a visit to learn more. "When we went to upgrade our system, they recommended the Axis products," recalled Greg Katz, Lieutenant and Accreditation & Technology Manager with the Billerica Police Department.

Deterrence in action

Since its origins, BPD covers many spots around town, including the Town Hall building, library, recreation areas and the Apparatus Bays of the Fire Department. In the early stages, the cameras were installed for two primary purposes: as a deterrent and as a reactive tool.

Given that one of the recreation areas often transforms into a gathering spot for kids and families, visible cameras onsite give a simple reminder that BPD will not tolerate illegal activity on their grounds. Between the skate park, basketball courts and playground, cameras provide a way to deter general problems like drug activity and vandalism.

AXIS P33 Network Camera Series have proven well for these areas. The exterior models function in a variety of weather and temperature conditions. Axis Light-finder technology embedded on the cameras is an important tool for officers responding to claims of nighttime activity. Now they can see full color images in near complete darkness.

Reliably reactive

BPD does not focus on live monitoring the video feeds, but rather uses surveillance reactively by responding to system-activated alerts or retrieving evidence for investigations. To process and use the footage, the town relies on AXIS Camera Station video management software.

In the case of a man causing a minor ruckus at the skate park one night, officers were able to go back on the video footage and apprehend the suspect. The video caught the whole incident and was added to the case file. "AXIS Camera Station has been working well for us," Lt. Katz noted. "We use the mobile app as well. It's all very functional for what we need.

One step at a time

These installations were just the initial phase of deployments in Billerica followed by a major project that outfitted the department's building with a new, complete IP-based solution and removed the old analog system. The plan comprised of arming the dispatch area with the tools needed to monitor alerts that require immediate action around town.

These efforts started around the safety complex with AXIS P3365-V Network Cameras in the lobby and stairwells. Two AXIS Q3709-PVE cameras are mounted on each side of the building to grab a full 180° view at 4K resolution for detailed coverage over a wide area. AXIS Q8414-LVS cameras were included in and around the holding cells for a perfect fit without any ligature points.

Additionally, Katz and his team ripped out an old access control system to implement AXIS A1001 Network Door Controllers at both the BPD station and the Town Hall. Controlled through settings on AXIS Entry Manager, BPD has an updated door security solution that "has been very good; very reliable and very easy to use," Lt. Katz mentioned.

"The cameras definitely give us a good image, and I like the ease of deployment. One thing I do appreciate a lot is the licensing model, where once I buy licenses I don't need to go renewing support contracts every year. If a camera is six years old, I can still call in and get help. [Axis is] probably one of the best vendors I've dealt with as far as support and access to support."

Greg Katz, Lieutenant and Accreditation & Technology Manager, Billerica Police Department



Managing liability

As with other law enforcement agencies around the country, BPD faces a great deal of liability for individuals held into custody. "We're responsible for the well-being of those people" Lt. Katz explained. "It's our duty to supervise them and make sure they don't hurt themselves."

The station has policies in place to have personnel monitor the individual in the holding cell every 15 minutes. To quickly provide a log of these wellness checks, Lt. Katz pulls a report from AXIS Entry Manager in seconds that shows each time the identification card was read in that cell block. While the log is helpful for state inspections, BPD is piloting sound analytics as a proactive tool to alert staff at the first signs of aggressive behavior.



Integrating the power of sound

Embedded on the AXIS Q8414-LVS camera mounted to the ceiling corner of each cellblock, Sound Intelligence's Aggression Detection analytic detects hostile sound waves, such as a person yelling. Once detected, an alert is then sent to AXIS Camera Station in the dispatch center as well as the officer's mobile phone. The notification indicates the cellblock number with the disturbance and an image from the camera feed for a visual identification of the situation.



"Incorporating Sound Intelligence into an existing solution is very cost-effective" explained Lt. Katz. "The great part about all the IP technology is that it's not hard to integrate with many different things."

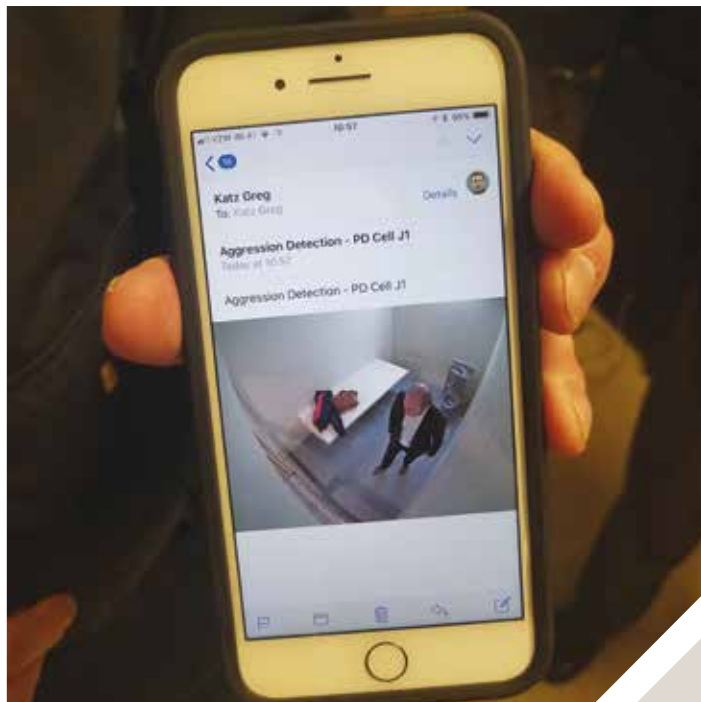
His next step is to install an AXIS C2005 Network Speaker in the station's dispatch center. This way, when that analytic picks up aggression, it can trigger an audio alert such as "Disturbance in cellblock #2. Please check."

A proactive approach all over town

BPD foresees opportunity with sound analytics to secure other parts of the town, especially schools and recreational areas. These areas are typically dark, quiet at night and prone to vandalism, graffiti and illegal activity that often goes unnoticed until the damage is done.

"We definitely see possibilities in the near future" explained Lt. Katz. "The good thing about sound analytics is that it is an effective tool to alert you when something comes up and gives you the opportunity to respond while it's happening." declared Lt. Katz.

BPD also intends to investigate how sound analytics can be augmented with motion detection applications and the new radar technology from Axis. "Every police officer wants to catch criminals in the act, not take a report on after the fact" concluded Lt. Katz. "That's really where I want to head to so officers can be proactive, know when something is going on, respond and address the situation before any damage might happen."



About Axis Communications

Axis offers intelligent security solutions that enable a smarter, safer world. As the market leader in network video, Axis is driving the industry by continually launching innovative network products based on an open platform - delivering high value to customers through a global partner network. Axis has long-term relationships with partners and provides them with knowledge and ground-breaking network products in existing and new markets.

Axis has more than 2,700 dedicated employees in more than 50 countries around the world, supported by a global network of over 90,000 partners. Founded in 1984, Axis is a Sweden-based company listed on NASDAQ Stockholm under the ticker AXIS.

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