

Safer travel with network cameras from Axis Communications. Axis network cameras make the trip safer and save time for SL's travelers and drivers.



Organization:
SL – Storstockholms
Lokaltrafik AB

Location:
Stockholm, Sweden

Industry segment:
Transportation

Application:
Safety and security, and
prevention of vandalism

Mission

Storstockholm's Lokaltrafik AB (SL) transports 700,000 passengers daily, by bus and train, within the Stockholm area. To create a safer environment and a stress-free journey for both travelers and personnel, it is necessary to have complete surveillance of buses, trains, stations, waiting rooms, pathways and train depots. In 2005, SL began the Security Project (Trygghetsprojektet) with the intention of creating a safer travel and work environment, minimizing interruptions in traffic, and lowering the high costs of graffiti and vandalism control, and sanitation. Surveillance cameras are a significant part of the Security Project and, in 2007, installations were begun, using Axis network cameras in buses, on subway trains, and in waiting rooms and train depots.

Solution

SL knew the strict requirements for the installation. The cameras in the driver's workplace and in the passenger areas must withstand both sabotage and unfavorable environments. Because there was no special camera for the transportation market, Axis was given the assignment, together with SL, to design a whole new camera that would fulfill the specific demands.

The result was AXIS 209FD-R, a small compact camera that can withstand a large amount of abuse. Approximately 10,000 network cameras have been installed in 2,200 buses. There have been about 4,500 fixed cameras, both AXIS 225FD with vandalism protection, as well as AXIS 212 PTZ with fisheye optics, installed in subway and commuter stations, in waiting rooms, pathways, train depots and train coaches. All cameras at the stations are connected to SL's Security Central, where all events are registered and responded to. With almost 14,500 network cameras, this installation is the largest in Sweden.

Result

The Security Project contributes to a safer environment for both personnel and travelers. The surveillance system has a preventative effect because the number of crimes decreases with camera surveillance. Through the 24-hour Security Central, SL can decrease the interruptions in traffic. The system also helps the police to secure evidence against any wrongdoers, as digital image technology offers a clear identification of objects and people. In the long run, SL can lower costs for graffiti control, sanitation and other maintenance costs, in addition to improving SL's traffic planning and the security of the traffic.



Intelligent and robust innovations

In the new surveillance system, Axis contributes to the development of network cameras for surveillance, identification and guarding of non-authorized entry to train tracks. The digital images are stored in a mobile video and alarm surveillance system (Mobile Digital Video Storage System) that has been integrated into SL's existing traffic and safety system.

SL had strict requirements for the network cameras. The cameras that were being installed in the buses, at the drivers' seats and in the passenger areas needed to be very durable against possible sabotage, and also withstand moisture, dust and vibrations. At the same time, the cameras could not be too hard or sharp, risking injury to passengers during an accident. Axis and SL sat down and designed a whole new type of intelligent camera that could withstand abuse.

"We had to try to identify every stress that a camera can be subjected to in a public environment. AXIS 209FD-R is designed to handle the most unfavorable conditions and has built-in intelligence, meaning that the camera itself sends an alarm if something is wrong with it. For example, if there is a person standing in the way of the camera, the alarm will activate. If the camera has been sprayed with paint, the event is registered," says Kent Fransson, Product Manager at Axis Communications.

Because the AXIS 209FD-R continuously records images, and because the surveillance system is integrated with SL's traffic system, the camera's images can be marked with bus stop information and GPS synchronized time.

High image quality and flexibility with Axis network cameras

To make the security even better, SL has chosen to install about 4,500 cameras in the surrounding areas. About 3,500 fixed cameras, specifically AXIS 225FD with an aluminum cover, have been installed in escalators, on station platforms and along tracks. The aluminum cover protects against vandalism, and the camera has such a high image quality that it can fulfill two functions: monitoring the status of the train platform, and monitoring the tracks. By the turnstile booth, and at certain corners in the stations, SL has chosen to install about 900 fixed cameras, namely the AXIS 212 PTZ with fisheye optics, that can identify people.

Because all cameras are connected to the already existing IT network, SL did not have to install new cables for electricity and video. New installations in the future will be easier, and it is also cost-effective to use the same cables for both power supply and network video, using Power over Ethernet. Flexibility is also better because cameras can be installed virtually anywhere.

Axis' market-leading position for network cameras, the flexibility of the system, and Axis' ability to meet SL's clear requirements for a durable camera for surveillance of drivers' seat and passenger areas, were all important reasons for choosing Axis as a cooperating partner.

"We had the privilege to be involved very early in the Security Project, and because of this, we have been able to develop specific cameras and features as needed. It is a big advantage that we, as a product supplier, can take part in the project's development phase. We can be an active part in problem-solving with quick turnaround. It is also incredibly enjoyable and instructive for us to work in such a close relationship with the end user."

Magnus Zederfeldt, Area Sales Manager Nordics and Baltics, Axis Communications.

"The surveillance system and the Security Project have been positive changes for us. It has given us more return than we had predicted. Among other things, we find that graffiti has decreased. We can also plan traffic better through the ability to act quickly and, if needed, put extra trains into service if the load gets too high, and also in connection with construction and other things. The surveillance system gives us the ability to encourage drivers to be extra careful if there are a lot of people on the platform," says Stefan Danielsson, Project Manager for SL's Security Project.

Because of the high image quality, the police can make good use of the image material as evidence. The police can, if needed, request recorded material, and the police image analysis group is working daily to solve crimes with the help of the cameras in the Security Project. Each year, there are between 500-600 images requested from SL, and the police say that, in cases where there is recorded material, they find that almost all of the images are so good that they can be used by the current investigator. Among other things, the police image analysis group has, since their beginning in 2007, solved several robberies, and they have also been able to catch a serial rapist in Söderort, in Stockholm, with the help of a camera on a night bus.

Good surveillance creates a safe journey

About 3,000 security-related events occur every month within SL's traffic area. With the help of the new surveillance system, the operator can go to the right camera to see what event tripped the alarm. An operator with special authority assesses the situation and can request appropriate resources, such as a security guard or the police.

"Because of the high resolution of the network cameras, it is significantly easier to identify people and events. This makes it easy to act quickly. But we are, of course, protecting personal privacy. All image material is handled with confidentiality and, in the event of a possible crime, all images are handed over to the police. We do not carry out any investigation ourselves, and our staff has no ability to review recorded material," says Bengt Carlsson, SL's Security Manager.

The new surveillance system with Axis network cameras creates a safer environment for both personnel and travelers. Another aspect is that SL can lower the costs of traffic interruptions, graffiti and vandalism control, and sanitation.



About Axis Communications

Axis is an IT company offering network video solutions for professional installations. The company is the global market leader in network video, driving the ongoing shift from analog to digital video surveillance. Axis products and solutions focus on security surveillance and remote monitoring, and are based on innovative, open technology platforms.

Axis is a Swedish-based company, operating worldwide with offices in more than 20 countries and cooperating with partners in more than 70 countries. Founded in 1984, Axis is listed on the NASDAQ OMX Stockholm under the ticker AXIS. For more information about Axis, please visit our website at www.axis.com