Genetec™

Brussels-Capital Region

How the City of Brussels evolves into a Smart City by unifying video

Industry
Public Safety

Location
Brussels, Belgium

Products
Security Center, Omnicast

Partners
Engie Fabricom, ACIC, Briefcam

Brussels-Capital Region strengthens security using the Security Center Omnicast video surveillance solution

As the location for many international organizations' headquarters, the Brussels region decided to strengthen urban security. To effectively accomplish this, they centralized video monitoring using the Genetec Security Center video surveillance solution.

Some of the challenges of a legacy system

The Brussels-Capital Region aims to become one of Europe's first Smart Cities. According to Christian Banken, Regional Security Coordinator at the Brussels Regional Informatics Center (BRIC), this requires collaboration.

"As the home to major international institutions such as the Council of the European Union and the seat of NATO, the Brussels Region has a particular interest in ensuring the highest levels of security. And by the highest levels, I mean having coordinated security measures in place, as the Region includes not just the city of Brussels itself, but eighteen communes, each with their own individual administrations," explained Christian Banken.

In 2013, the Brussels region decided to streamline its security operations. At the time, the BRIC team faced a major challenge—public service departments had already implemented their own video surveillance systems which were not compatible with one another.

"Ten departments were using video surveillance systems: six police stations, the subway system (STIB), the port of Brussels, the fire and emergency medical assistance department (SIAMU - Service

d'Incendie et d'Aide Médicale Urgente), as well as Brussels Mobility (the public service department responsible for traffic management, signals and tunnels). This represented a total of 1600 cameras, managed by eight different video surveillance systems," continued Christian Banken.

Overcoming political stalemate with the right video solution

Trying to find a solution, the BRIC team considered many options. "We looked at installing a new solution that would help us manage the eight existing video surveillance systems but achieving compatibility between the different interfaces was too technologically complex. We then considered another approach—to make everyone switch to the same video system. But this just resulted in a political stalemate. None of the users had the same needs or the same regulations, and therefore it was impossible to suggest that they share the same system," said Christian Banken.

Choosing the right solution involved a thorough and lengthy process. It began in the summer 2014 when a call for tender was issued shortly after the regional government approved the funding.

"We analyzed the bids as well as the reliability of each integrator. The Genetec Security Center solution caught our eye because it was a single platform that could unify all our video surveillance systems. Only one other competing product enabled video to be sent to the regional operations center but transfers could not happen in real time. This would lead to peaks in activity at certain times of the day, which would totally clog up our network. Security Center, on the other hand, sends images using multicasting which is a network-efficient streaming method," explained Christian Banken.

In the end, the BRIC team chose the Security Center Omnicast video surveillance system— a solution that allowed all departments to keep existing investments while giving the regional team a bird's-eye-view of all city systems. While there were many integrators offering Security Center, the BRIC selected Engie Fabricom as its supplier due to the company's proven expertise.

The team equipped all the departments with the same Omnicast system so that the video feeds from all cameras could be sent to regional level without restrictions. Each department still has independent access to the software, so they can keep control over their own video and how it is shared.

"Each public service team can manage video from their cameras at their own control center, and then decides which clips will be forwarded to the regional team," explained Christian Banken.

Building efficient multi-site monitoring and archiving

Within a year, the Engie Fabricom team had installed Security Center on dedicated servers (an archiver, as well as a directory server and access manager) in each data center.

"We believe that video surveillance must be separate from the rest of the infrastructure so that it is impossible for anyone to access video through another network application; it was a policy choice," stated Christian Banken.

At each public service department, a data center stores video for three days. At the Regional BRIC data center, a 2.5 PB disk array provides storage for all video archives for the mandated 30-day period. That means video is saved to the local archiver at each public service department and simultaneously sent back to the local disk array at the BRIC data center via cable with a bandwidth of between 1 and 10 Gbit/s.

"If we take one of the police stations as an example, only video from cameras located on public highways is sent to Regional level; whereas video from cameras that monitor jail cells remains at the police station," explained Christian Banken.

By mid-2017, three police stations, the subway agency, and the port were already managing their own Security Center systems. These agencies monitor 250 private and 700 public cameras total.

All video from these cameras is sent back to the regional operations center. In certain areas around the city, some cameras are more than 15 years old and still need to be replaced before they can be integrated into the new system.

"We have avoided a political stalemate by allowing each institution to manage the video they wish to share with the Region. Furthermore, Security Center is so seamless that institutions can also benefit from the Regional archiving capabilities to view archived video as effortlessly as if the video clips were stored on their own servers," said Christian Banken.

Ranking among the European Smart Cities

When it comes to usability, Christian Banken praised the solution's simplicity. "If a service department wants to view video from over three days ago which is no longer stored on local archivers, their Security Center solution will search for the specific video clips on the central BRIC archiver. The process is fully transparent to the user. Viewing the video is as easy and seamless as if it were accessed locally," he said.

The platform was also extremely straightforward to configure and expanding functionality has been seamless for the BRIC team. "Security Center has a vast range of software modules and third-party integrations. Therefore, we were able to add a video analytics tool, ACIC Video Analytics, which displays an on-screen warning to the operator when it detects a specific scenario such as illegal parking or a large group of people, for example," stated Christian Banken.

BRIC also integrated the BriefCam analytics solution, which allows the Security Center platform to bookmark all video clips where movement is detected in a video frame. "Our next step will be to integrate facial and number plate recognition," said the BRIC regional security coordinator.

After successfully installing such an extensive video surveillance network, Christian Banken is especially pleased with the BRIC team's success in unifying the different video systems into one platform.

"This project is important for the reputation of the Brussels Region—we know how to deploy cutting-edge digital solutions to ensure the security of our citizens and thus become one of the first Smart City Regions in Europe. We think these efforts will encourage both companies and tourists to come here," he concluded.

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