VERKEHRS-GESELLSCHAFT FRANKFURT

Frankfurt, Germany

FACTS

Customer:
Verkehrsgesellschaft Frankfurt (VGF)

Vertical Market:
Municipal transport company

Product:
Qognify VMS

INNOVATIVE, INTEGRATED AND FLEXIBLE:

Complete solution for maximum security in public transport in the banking metropolis of Frankfurt

When passengers feel safe travelling on public transport it has a positive influence on acceptance and use. With Germany the host nation for the FIFA World Cup in 2006 and Frankfurt chosen as a host city, VGF had already invested extensively in a service and security center with an operations control system and integrated video and emergency call technology. However, the legal framework for critical infrastructure and the requirements of the VGF had changed since then. In addition, technological innovations offered new opportunities.

THE CHALLENGE

In 2017, the VGF therefore initiated the project „Service and Security – Renewal, Migration and Expansion" (SuS-EME). An important building block of this initiative was the renewal and expansion of the video system, since the technology available in this area had advanced considerably. It was also necessary to link threat detection directly with the capabilities of a modern operations control system.

Qognify

„Thanks to the new operations control system, we were able to significantly improve the management of incidents."

Felix Müller, Project Manager at VGF

A major focus was on the quick and effective coordination of an incident together with the police, fire brigade and rescue services. The aim of the project was to create an overall solution with independent components in which all applications, from operations control to video management and GIS (geographic information system), communicate with each other via standardized interfaces. In addition, a modular structure would reduce dependency on individual suppliers and offer more scope for technical innovations.

VGF awarded the contract for general planning, including project support, to Genius Technology & Management Consulting GmbH, a planning office specializing in integrated control center and security technology in the KRITIS environment. Ulrich Matern, Managing Director of Genius TMC, accepted the challenge: *„Due to the many operational and legal requirements and all the technical and organizational interfaces, the requirements for system planning were very complex. An essential aspect for the successful implementation of the project was the high motivation of all project participants from planning to deployment. Practical workshops gave everyone involved a picture of the project goal at an early stage."*

THE SOLUTION

A tender published throughout the EU in 2019 led to the project being awarded to Hexagon in 2020 as general contractor and supplier of the operations control system. As a system integrator, vi2vi GmbH took on the renewal and expansion of the video system, using IP cameras from Axis and video management software (VMS) from Qognify. The basis for the project was a detailed specification drawn up in 2020. The system conversion began in March 2021 - under exceptional conditions, as Felix Müller, project manager at VGF, emphasizes: *„Due to the travel and contact restrictions caused by the COVID pandemic, we had to carry out the project virtually with online collaboration tools and video conferences. Above all, the virtual factory acceptance test was something special:*

THE CUSTOMER

Frankfurt is Germany's most important financial center and internationally known. Almost 300 banks have their headquarters there – including the Deutsche Bundesbank and the European Central Bank. As Hesse's most populous city, Frankfurt wants to offer an attractive environment for people and business. One of the elementary factors to achieve this is an efficient local transport network. The Verkehrsgesellschaft Frankfurt am Main mbH – VGF – is responsible for this. With around 2,600 employees and 400 vehicles, it transports up to 200 million people per year across the underground and tram network.

The system integrator set up a control center in his premises and simulated all processes in the operational control system and in the video management system. The content of all screens was then transmitted in real time to the project team members. Thanks to the extraordinary commitment of everyone involved and the highly solution-oriented cooperation, we were able to complete the project on time in December 2021, despite all the challenges."

Process-oriented, fully integrated control center

Today, VGF works with one of the most modern service and security control centers in public transport. All organizational areas involved are connected via a uniform system landscape and are optimally supported. The result is an innovative overall solution that guarantees a holistic, structured management of events based on predefined processes. Powerful video components help the staff in the control center to quickly and comprehensively assess the situation on site.

Most of the incidents processed by the team in the VGF service and security control center are reported by passengers via emergency phones at the stations and bus stops. An incident is automatically created in the operations control system for each service or emergency call. Staff in the SuS control center who answer the call immediately see the exact location of the event on a map via the GIS integrated in the operations control system. At the same time, nearby cameras are displayed automatically. This gives the employees a comprehensive overview of the situation on site in real time. All details about the incident can be quickly recorded in dynamic electronic forms. Depending on the type of incident, the operations control system displays a catalog of measures that must be processed step by step. This ensures a standardized and fast response. The employees in the control center can also use the operations control system to alert nearby VGF security staff. The communication takes place via app, thus avoiding media discontinuity. Once the incident is closed, it is transferred to a web-based digital guard book. In this way, the VGF's internal investigation group can also provide the police with relevant information in a prepared report. A database-based reporting tool also provides detailed statistics on recorded incidents. On this basis, VGF can continuously improve its reaction processes.

The solution is also innovative from a technical point of view - Felix Müller: *"As a transport company, we are subject to the regulations for critical infrastructure. That is why standardization, fail-safety and reliability are particularly important to us in IT systems. For this reason, we operate both the operational control system and the video management in a fully virtualized environment in several data centers."* When setting up the camera network, VGF also placed great value on reliable and fail-safe solutions. Thus, Barox extenders that are designed for digital video systems were used. VGF currently operates around 500 camera channels for 27 underground and 16 above-ground stations as well as several properties and depots. They are managed and activated centrally in the VMS.

THE RESULT

The system has been in use since the end of 2021. Felix Müller is very satisfied with the result: *"We are aware that security technology cannot completely prevent criminal offenses. However, through the right measures and improvements to the individual system components, we can now act in a more targeted and effective manner. Thanks to the new operations control system, we were able to significantly improve the management of incidents. Key success factors are the app for quick localization and coordination of the security service and the digital guard book for greater transparency and better cooperation with investigative groups and authorities."*

The video system has also proven its flexibility: *"Beyond the original project, we have already added further properties and a total of more than 50 cameras to the video system. In further expansion stages, we expect a total of around 1,000 cameras in the medium term. Thanks to the open architecture, we can add new functions in the future – for example, intelligent video analysis to measure passenger flows."*

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