

Case Study

Flemish tunnels safer thanks to Tein Technology's automated central tunnel management system



The Flemish Tunnel and Control Centre (Vlaams Tunnel- en Controlecentrum - VTC) provides a permanent service, 24/7. Safety and mobility are priorities. Tein Technology is carrying out the transition from various historical platforms to a robust central tunnel management system with intelligent automation and maximum reliability.

The secret of Tein Technology's management platform lies in the combination of modern software technology and the open system design

Flanders invests in roads and tunnels

In Flanders, investment budgets for all forms of transport are rising to an all-time record.

Until the end of 2019, Flanders will free up 2.7 billion euros for road works, including the upgrading and safety of all tunnels in accordance with the relevant EU directive.

The works are necessary to meet the mobility needs of today and in the future.

Traffic jams have doubled since 2011. Statistics expects a 44% increase in freight traffic and an 11% increase in passenger traffic by 2030.

Automated central tunnel management system

The Flemish Tunnel and Control Centre (VTC) acts as the central control room for the tunnels in Flanders.

Particular attention will be paid to the tunnels on the Trans European Road Network (TERN). The VTC detects all tunnel incidents and monitors them in close cooperation with the Flemish Traffic Centre (VVC) and the emergency services.

Tein Technology has been commissioned to carry out the complete modernization of the VTC.

The intelligent platform integrates tunnel technology

With this project, Tein Technology confirms its leading position as a specialist integrator.

The deep expertise in the most modern IT technology meets the strict requirements of mission-critical environments - in particular continuity, reliability and availability.

Automation is evolving rapidly. The new VTC tunnel management system is based on the technology of our Austrian partner Evon.

This software (XamControl) is implemented as a software layer on top of the existing tunnel systems.

This overarching software layer integrates far-reaching video, voice and data applications together.

The entire platform can be controlled in a user-friendly manner and can be managed from the command center.



An integrated total solution

Thanks to XAMControl, we can offer the customer one software package for a complete solution - from the PLC controlled via SCADA to a global evaluation, obviously with built-in redundancy and modular construction.

The current traffic flow situation, coupled with rule-based optimizations, helps you to react faster and better to changes.

The practice confirms the solidity

The VTC Central Tunnel Management System Command Centre is fully equipped and operational.

The operators have a video wall and LCD screens with a user-friendly interface. They check the different tunnel techniques and functional links, the fixed and movable CCTV cameras, the variable message signs and the central communication platform (PABX, intercom, broadcasting system).

The management system also uses a series of fully automatic emergency scenarios developed by Tein Technology.

Additional functionalities allow operators to respond to emergency situations and - in situation of danger or evacuation - to send messages via the loudspeakers in the tunnels. Tein Technology systematically accommodates all tunnels in the new platform. Migration is running smoothly.

The tunnel under Deurne airport was followed by the A11 tunnels, the TERN tunnels (Craeybeckx, Kennedy, Tijmans, Beveren and Vierarmen Tunnels) and the tunnel of the North-South Kempen connection in Kasterlee.

Phase 1 of the project was completed in September 2017 and the tunnels will be connected to the platform in the next 4 years.

Client & Solutions

Client

Vlaams Tunnel- en Controlecentrum

Project Date

2017

Solutions



Traffic

Efficient traffic management heightens the capacity, efficiency and safety of road networks.

Traffic data collection and analytics reveal predictive traffic flows and open the way to traffic modeling and preventive action.

Our in-house know-how and experience combined with our proven relationships with city and state authorities enable us to provide innovative traffic management systems on scales ranging from the small to the very large.

- Fixed and mobile Automatic Number Plate Recognition solutions (ANPR)
- Automatic Incident Detection (AID)
- Traffic data collection
- Traffic management and enforcement

To find out how your organisation can benefit from Tein Technology's expertise , contact:

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About Tein Technology

Tein Technology is a leading-edge provider in the integration of voice and video platforms for mission critical environments such as financial trading rooms, traffic control for road, rail and waterways, port monitoring, city surveillance and public transport.

Tein Technology runs a team of 60 highly qualified specialists and is based in Brussels and Amsterdam.