

Project reference ..... Liefkenshoektunnel,  
Belgium

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Siqura is part of TKH Security Solutions, a division of the TKH Group. TKH Security Solutions offers a wide range of systems for access control, surveillance, intrusion detection and video management.



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Project  
reference

# Liefkenshoektunnel, Belgium

The port of Antwerp ranks among the world's largest sea ports. Each day, more than half a million tons of cargo enter and leave its docks. As a result, traffic on connecting roads can be very heavy. To alleviate the pressure on the city's ring road, the 1,374-metre-long Liefkenshoektunnel was constructed. This toll tunnel is the second of three sequential road tunnels running under the river Scheldt and the port installations on its banks.



opened on 10 July

1991

2x2  
parallel



city with most  
inhabitants  
of Belgium



7,348,095



1,37 km long



tunnel takes its name  
from 4 centuries old fort

#### Customer

NV Tunnel Liefkenshoek  
(Belgium)

#### Distributor

Elbex Technologies bvba

#### Systems integrators

Imtech Traffic & Infra, VHP

#### Technology

Fiber-based video network

#### Market

Transportation - Traffic

#### Challenge

Boosting the safety level of  
Antwerp's main toll tunnel

#### Solution

Surveillance cameras with  
high image quality, automatic  
incident detection (AID), fiber  
components

#### The challenge

Tunnels are real bottlenecks. Even the smallest of disruptions may cause severe traffic jams. After a series of accidents, the management of Antwerp's Liefkenshoektunnel decided to review its video surveillance system. Several flaws were found: the system lacked automatic incident detection (AID), the cameras weren't capable of zooming in on events, oncoming traffic couldn't be monitored and there were no surveillance cameras in the emergency corridors.

#### The solution

Together with distributor Elbex Technologies and systems integrators Imtech Traffic & Infra and VHP, Siqura implemented a cost-effective solution designed to take advantage of the tunnel's existing infrastructure.

To deal with the tunnel's low-light conditions, Siqura's BC14WDR camera was selected. This box camera boasts a 1/3" Pixim DPS Seawolf imager with super-wide dynamic range. Unlike older analogue CCD image sensors, the Pixim DPS Seawolf doesn't smear, bloom or generate colour noise. That makes it the perfect candidate for video content analysis (VCA) applications, such as automatic incident detection. The vandal-resistant FD12, a fixed dome camera, was implemented in the emergency corridors. Its integrated varifocal lens with backlight compensation and automatic day/night functionality provides high-resolution (520 TVL) pictures. Siqura's Up-the-Fiber digital video receivers and VAD optical multiplexers were chosen for their high-quality signal transmission.

Extra cameras on strategic locations, superior image quality and automated incident detection: these three elements have greatly improved the safety situation of the critically important Liefkenshoektunnel.