

CASE STUDY



The Fløyfjell tunnel

- Customer: Mesta Elektro
- Place: Bergen, Norway
- Tunnel length: 3,6 kilometers

Solutions delivered by TRAFSYS:
Video surveillance, LED signs and
PREVISION traffic management.

Video improves traffic in Bergen

The Fløyfjell tunnel actually refers to two tunnels, which runs through one of Bergen's famous seven mountains. The tunnels were completed in 1989 and were originally designed to lead the traffic outside the historic city centre. In 2012 it was decided to upgrade the surveillance of the tunnel by investing in a traffic video surveillance solution from TRAFSYS.



Video and LED systems reduced tunnel closures

Problem: closed the tunnels 216 times in one year

Car tyres, loose fire extinguishers, dogs and roadside assistance efforts created a lot of problems for commuters travelling through the Fløyfjell tunnel in Bergen. The tunnel was closed 216 times during 2010, which equalled 110 hours and 10 minutes. "This is very costly for the society" said Terje Totland, operations leader at the Traffic Management Centre (Veitrafikksentralen – VTS).

"When we get a notification about something in the road, we have to close down the traffic for safety's sake while we investigate the underlying cause" says Totland, who also pointed out that there are camera surveillance outside the tunnel entrance, but not within the tunnel itself. This means that the Traffic Management Centre is dependent on information from road users if there are obstacles on the road inside the tunnel.

To improve the traffic flow, it was decided to upgrade the surveillance, and TRAFSYS won the tender to deliver a new traffic video surveillance solution.

Solution: Video Surveillance and Flexible LED signals from TRAFSYS

TRAFSYS have delivered 72 rugged cameras which are installed in both the north- and south-heading tunnels. Each camera are placed in a heavy duty steel casing which is both water and dust-proof. The operator at the Traffic Management Central can now access relevant pictures on a video-wall and resolve the situation fast, either by controlling the traffic flow using the variable LED signals (delivered by TRAFSYS), or close the tunnel if necessary. It is therefore possible for the operator to find the problem quickly, and thereby reduce or even avoid tunnel closure.

The video surveillance solution from TRAFSYS is future-proof and can be upgraded to include Automatic Incident Detection (AID) features such as travel time calculations, queue tail monitoring, congestion monitoring, tunnel access control and a number of other essential features.

Intelligent Traffic Management Software

The video surveillance system inside the Fløyfjell tunnel is connected to the PREVISION traffic management software, which is a user-friendly management system that gives the operator full overview over incoming alarms. The system offers the possibility to show video as well as accept audio conversations from emergency roadside telephones. The PREVISION traffic management software also provide decision-support to the operator in the form of pre-prepared emergency plans, so that the operator can take well considered actions in the case of an emergency situation. This also contribute both to improve safety and ensure optimal traffic flow through the Fløyfjell tunnel.

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