

CASE STUDY



The Jondal Tunnel

- Customer: Kvinnherad Elektro
- Place: Jondal, Hordaland (Norway)
- Tunnel length: 10,6 km

Solutions delivered by TRAFSYS: PREVISION traffic management, radio system, SOS roadside telephones, radar detection and variable LED signals.

Intelligent Tunnel in Jondal

The Jondal road tunnel connects Kvinnherad with Jondal on the west coast of Norway. The tunnel is designed to improve the traffic between the two largest cities in Norway, Bergen and Oslo. TRAFSYS has delivered many ITS solutions to this tunnel, including PREVISION, a user-friendly traffic management system.



Prime Minister Jens Stoltenberg opened the Jondal Tunnel in 2012

Roadside telephones, radio system, LED signals and radar from TRAFSYS

TRAFSYS has installed a range of intelligent traffic solutions (ITS) inside the 10,6 km tunnel, including a radio system with a dedicated channels for the emergency services, Norphonic roadside telephones, variable LED signs and an energy-saving radar detection system, which automatically switch on the lights when a car approaches the tunnel. All systems are connected to PREVISION, which is an intelligent traffic management solutions developed by TRAFSYS.

PREVISION – manage tunnel traffic in real time

Using PREVISION, the operator located at the remote Traffic Management Centre (Veitrafikksentralen - VTS) in Bergen, can manage and control the traffic inside the tunnel in real time. This is particularly useful in emergency situations such as road traffic accidents or in case of a tunnel fire. When the Norphonic emergency telephones are used, the operator will receive a message about the exact location of the road user. The operator will also have the possibility to give messages to the traffic users by overriding the radio broadcasts in the tunnel, or by controlling the variable LED signs inside the tunnel. Using PREVISION, the Traffic Management Centre can handle the traffic challenges effectively, which results in improved people-safety as well as improved traffic flow.

PREVISION – providing expert advice

If a critical situation should occur, PREVISION can use pre-prepared information about emergency or evacuation plans to give useful advice to the traffic operator. This saves a lot of time in an emergency situation, and also ensures that measured responses are given to individual situations. PREVISION also ensures that the operator is not bombarded with meaningless follow-up alarms from equipment, as alarms can be split into different levels. PREVISION is based on open international standards and can take input from any OPC based automation system. This means that the system is future-proof as it can be expanded in tandem with the user needs.

A proven solution – flexible and scalable

PREVISION is a proven technology. It is used to monitor and control over 350 tunnels, bridges and mountain passes in Norway (over 30,000 objects), including the Lærdal tunnel – the world's longest road tunnel (24,5 km), the T-connection tunnel (8,9 km), Hardanger bridge - the longest suspension bridge in Europe, Bømlafjord tunnel – Europe's longest undersea tunnel (7,9 km) and Ulriken railway tunnel in Bergen (7,6 km). PREVISION is also used to manage Norway's most famous mountain passes, including Haukelifjell, Filefjell, Hardangervidda, Hemsedalssjfellet, Vikafjellet, and Strynefjellet.

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