



## Clearer, safer communication in tunnels

Every day, around 90,000 vehicles travel via the Mersey Tunnels between central Liverpool and districts on the right bank of the River Mersey.

To help keep drivers safe in the event of an emergency, the tunnels are equipped with a public address (PA) system. When the system became outdated and flawed, the tunnel authority had to act. A fully IP-based distributed public address system with a high degree of flexibility was needed to help overcome the limitations of the current system.

# Summary



## PROJECT

Tunnels  
Mersey Tunnel,  
United Kingdom



## Benefits

- Cost-efficient – integrates into existing infrastructure
- Flexible and scalable solution
- Reliable from the moment of installation



## Product solutions

**Public Address voice alarm system**  
PRAESENSA – an IP-based public address and voice alarm system

## A flexible, networkable solution was required



The cost-efficient and dependable IP-based PRAESENSA public address and voice alarm system from Bosch was chosen as the ideal fit. The system features a smart-power concept and integrated redundancies, making it perfect for both centralized and decentralized network topologies. Its flexible design allowed for integration into both the tunnel's existing fiber network and the loudspeaker system.

Now the two control rooms can broadcast pre-recorded or live announcements in crystal-clear audio quality along the 8 kilometers of tunnel. The 16 equipment outstations monitor and provide status reports remotely via the network in real-time.

## Fully functional at all times

Designed to bypass a faulty device, the system stays fully functional even in the event of a major failure. The no-single-point-of-failure concept with built-in redundancy covers devices, network connections, critical signal paths and functions, all of which can be constantly monitored.

The tunnel authority was delighted to rollout the upgraded PA system quickly and cost effectively.

Today the solution is fully operational without any issues. What's more, operators appreciate how easy PRAESENSA makes broadcasting messages and monitoring tunnel operations.