

Smart Tunnels - your performance optimised

DATA COLLECTION, MONITORING, EVALUATION AND IMPROVEMENT PROPOSALS

Did you know that by actively cooling the 176 cross passages in the 57 km long Gotthard Base Tunnel we maintain temperatures below 40°C? Curious to know how we monitor and analyse climatic data?

SITUATION OVERVIEW

By now, underground systems like tunnels are, especially during construction phase, operating in 'blind flight'. Their ventilation system is operating based on assumptions and simplifications. Here is where Pöyry's experts jump in to capture data to be able to optimise the ventilation system as well as to get a better insight of remote locations.

CLIENT ISSUES

Climatic conditions have a huge impact on the reliability of underground structure systems. On-site inspections are expensive and inconvenient.

Typical challenges tunnel contractors and operators face include:

- Humidity occurrences and their causes
- Necessity to run the ventilation system
- Ensure permissible climatic conditions for safety-relevant technical devices
- Monitor sensor data in remote locations

YOUR TRUSTED PARTNER

Clients depend on Pöyry as their trusted partner to overcome these issues together.

Pöyry is one of the world's leading tunnelling and underground structures engineering companies. We bring insight from projects such as the iconic 57 km Gotthard Base Tunnel. By connecting our insight and expertise we create smart and sustainable

solutions, which take advantage of the latest in digitalisation.

SMART TUNNELLING SERVICES

Do you want to know what is going on in your tunnel? Are you ready to act before you are forced to react?

Whatever the scale or complexity of your tunnelling or underground structure project is, Pöyry can provide smart tunnelling services that help you keep things firmly under control.

HOW THE SERVICE WORKS

Using our decade-long experience in planning and implementing tunnel ventilation systems we have developed, and constantly improved, web-enabled measuring devices. They are designed to withstand some of the most challenging environments - including aggressive atmospheres, as well as high speed train pressure waves.

Pöyry provides live data monitoring services of your tunnel using available WLAN, LAN or GSM connections. This saves money, as the requirement for round on-site tours can be drastically reduced. All data is made available in the cloud and automatically visualised and reported using our data analysis tools.

As experts in tunnel ventilation systems we aim to deliver high quality measurements. Furthermore, we have deep experience of analysing and evaluating the generated data to recommend robust solutions. With Pöyry you get a complete solution from one partner.

KEY BENEFITS

1. **High quality** - accurate measurement of climatic conditions
2. **Complete solution** - from one expert partner
3. **Save money** - by reducing on-site inspections
4. **Peace of mind** - data analysis and solutions by proven experts

CONTACT US TODAY TO FIND OUT HOW YOU CAN OPTIMISE PERFORMANCE WITH PÖYRY'S SMART TUNNELLING SERVICES.

