

UNDERGROUND RESCUE 2018 - 2021

MINE FOR BUSINESS

CALLIO

PYHÄJÄRVI, FINLAND

PROJECT OBJECTIVE

UNDERGROUND RESCUE -project will develop a new training, development and innovation environment for the industrial safety and mine rescue operators as well as for technology providers by utilizing the unique infrastructure of the Pyhäsalmi mine, the deepest known place in Europe.

NEEDS

- There is a clear need (business perspective) for the underground environment of the specific education and training exercises for occupational health and safety.
- Underground safety, rescue and protection education and training environment enables significant new business, also internationally in the future.
- Opportunities for the application of theory, practice and technology to challenging underground (hot) and arctic (cold) conditions in Finland are missing almost completely.

OUR APPROACH

- Characterizing the Pyhäsalmi mine for training needs.
- Identifying safety & rescue technology testing needs.
- Developing training and practice area for a shaft and tunnel rescue purposes according ISO 45001 standard.
- Implementation of an occupational health and safety digital learning environment for underground facilities.
- Developing a new business model of the training center.

BENEFITS

- This project creates a nationwide, significant and tangible new theme in the education, training and innovation area.
- The training center will improve the capacity to act properly in the event of an emergency and will help to prevent the emergence of underground accidents.

Keywords: fire, rescue, protection, training center, underground infrastructure, shaft, tunnel, technology



CHALLENGES AND MEGATRENDS

- Urbanization, growth in passenger and freight traffic and the demands of sustainable development increase the need for underground energy, transport, production and maintenance systems.
- At the same time, the social significance of underground facilities and the activities placed therein will be further emphasized.
- In underground areas, fire is particularly dangerous: safe exit is slow, the smoke and the toxic gases move towards the exit, the smoke removal efficiency is often inadequate, and the rescue staff's work underground is also challenging due to difficult access, harsh conditions and long distances.