

FutureMINE

CALLIO

2023 - 2025

PYHÄJÄRVI, FINLAND

1.1.2023 - 31.12.2025

**BUSINESS
FINLAND**

PROJECT OBJECTIVE

RRF – Innovation infrastructures

The aim is to transform Pyhäsalmi Mine into a world's best test mine, which will impact to the entire mining industry, its digitalization and electrification, in Finland and internationally. The project will support development of future technologies by offering a proving ground to new equipment and evaluating their customer value in real life operating, durability and endurance testing. The project develops a novel test environment utilizing the unique underground infrastructure of the Pyhäsalmi Mine for the piloting needs of technologies and business. The target group is technology suppliers for all mining processes, mining service providers, and digital technology players developing novel new products and future solutions for their international end-customers.

WHAT ARE MARKET AND BUSINESS NEEDS?

- Finland is home to the world-leading high-tech mining players, manufacturers of mining, quarrying and material handling equipment, as well as mining service companies.
- Surface mining and other terrestrial industry sites utilize GPS positioning or the public data transmission networks in their operations. In the future underground mines will be digitally connected although they are getting deeper.
- FutureMINE builds a proving ground for the piloting & test environment, where the future autonomous, electric or battery operated, digital mining and tunnelling equipment operate.

OUR APPROACH FOR ADDRESSING THIS NEED?

- Requirements of the test environment utilizing the unique underground infrastructure of the Pyhäsalmi mine and the needs of the business community will be clarified.
- New digital innovations and services will be explored to get people out of dangerous working conditions to improve the productivity of mining processes.
- The Pyhäsalmi mine will be developed into a “future test mine” that could influence the digitalization and electrification of the mining industry.

HOW DO WE PLAN TO DO IT?

- Co-operation with the mining industry and the mineral cluster, development and innovation activities to improve productivity, sustainability and safety.
- Developing a roadmap of Callio FutureMINE operations and business plan of services portfolio for years 2023–2028.
- A project consortium of actors in the mining industry and digitalization players will be formed, in which the actors involved will commit to the preparation of a larger investment and development project to be funded by Business Finland.



WHAT ARE USER ADVANTAGES?

- Pyhäsalmi Mine and Callio will provide businesses with a unique, safe and stable environment – even when measured against the most stringent global standards – to leverage diverse testing activities and adaptive large-scale experiments in the future.
- Pyhäsalmi Mine has been past six decades in the forefront of mining mechanization and automation. Mining equipment is developed in close co-operation with domestic technology suppliers, all leading global players in the field.
- Enhanced mine infrastructure will provide excellent proving ground for mining industry to drive new era of sustainable underground mining long time ahead.