

## Callio FutureMINE digital testmine of the future – 2,1 m€ Business Finland funding has been secured

**Callio FutureMINE project develops the Pyhäsalmi mine's infrastructure into a digital test mine of the future, which can influence the electrification and digitalization of the entire mining industry in Finland and internationally.**

The mining industry is moving towards a more digital and electronic era. In the future, genuine underground mining test environment are required, where the cluster members involved plan their operating models and develop their testing services in close cooperation with ODM's and other technology vendors, and where the mining industry products and solutions are studied, developed, and tested in both real and simulated digital development environment.

### **The real operating conditions of the Pyhäsalmi mine with about the 1.4 km depth and the 11 km long decline tunnel brings credibility to technology testing and development**

Pyhäjärvi is the home of the deepest base metal mine in Europe, the Pyhäsalmi mine, which reaches almost 1450 meters. In the innovation cluster emerging in the Callio business park, prerequisites are created for a testing businesses and services and emerging innovation networks supporting Callio Pyhäjärvi's strategic ambitions for future. For example, via connected digital mine and 5G network, the test mine can take giant development steps towards a safer and more sustainable future.

*"Our test mine will be unique, looking for its peers on a global scale, and at the same time promoting our opportunities as a developer of test environments for new innovations. The mining machines and equipment of the future will be digital and automated: training, operation, maintenance, and service will become more efficient, and workers will be removed from the mines when the equipment and mining operations are controlled remotely. It's amazing to do development work that can change the entire mining industry",* says Mr Sakari Nokela, Chief Development Officer at Callio Pyhäjärvi.

### **In the future, the emphasis will be on testing a new technology and ensuring end to end operational safety**

One of the key target groups of the FutureMINE innovation cluster project is manufacturers and end users of the battery-powered technology (e.g., batteries, charging points, battery-powered work machines, vehicles and equipment, servers, and backup power services) whose activities emphasize testing new technology and ensuring end to end operational safety. Such safety needs include, for example, tunnel construction and the placement of machines and charging equipment in an old underground and closed spaces. The target group also includes companies related to the transport, energy storages and use of explosives and explosive materials.

*"Building a digital test mine environment in Callio Pyhäjärvi supports Finland's goals for promoting prosperity and growth in many ways. It offers companies a genuine environment for developing and testing new technologies in cooperation, as well as increasing the export of the world's leading mining technology solutions in the future. Electrification and autonomy improve the sustainability and safety of mining operations. Utilizing Finland's mineral resources in a sustainable way and using the world's best technologies brings prosperity and increases Finland's resilience and Europe's self-sufficiency. In addition, the orientation and drive in setting up such test environments ensures that they serve the companies' research and innovation activities in the best way",* comments Mr Matti Mannonen, Executive Director, Innovations and Economic Policy at Technology Industries of Finland.



## Automation and autonomy will take the reins in mines

Digital solutions are coming to mines at an accelerating pace, which increase the safety of personnel, the efficiency of operations and reduce the load on the environment. Testing such solutions in the real Callio Pyhäjärvi environment is an important opportunity that strengthens Finland's reputation as a leading mining expert.

*"This kind of an opportunity to test new mining technology in a real environment strengthens the entire mining industry. Every step in the development of expertise can also attract new technology suppliers to Finland",* says Mr Pekka Suomela, CEO of the Finnish Mining Industry.

## The planned testmine will generate new technology business for Pyhäjärvi and the whole of Finland

The business developed in the project significantly promotes the business opportunities of other companies and has a positive effect on Finnish companies engaged in export activities or aiming for the export markets in future.

*"Callio Pyhäjärvi is a unique operating environment as a whole, through which we can reuse the Pyhäsalmi mine's existing underground infrastructure. At the same time, we can support many kinds of companies with new opportunities such as with training, research, and product development activities. This funding granted by Business Finland accelerates our strategic plans and enables the content of testmine to be expanded in a way that improves business acceleration",* says Mr Henrik Kiviniemi, CEO of the Callio Pyhäjärvi.



*The Callio FutureMINE – the future digital test mine project, coordinated by Pyhäsalmen Kvanttikinteistöt Ltd, has been granted a European Union NextGenerationEU funding from Finland's Sustainable Growth program. The amount of the grant awarded by Business Finland is €1,050,000, the total budget of the project is €2,100,000. The project will be implemented between 2023–2025.*

<https://callio.info/fi/invest-opportunities/futuremine/>

### Further information

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