

Contact point for this idea: **Prof Alan R Butcher - GTK – [alan.butcher@gtk.fi](mailto:alan.butcher@gtk.fi)**

## Upscaling from Laboratory- to Real World Mine-scale Operations

- **Thematic Areas/Technology/Topic of focus + key elements of the idea/problem**

Base metal, precious metal, industrial mineral, & REE ores all need to have their mineral processing behaviour and performance tested and improved throughout the life of a mine. This needs to be done both at the laboratory-scale and at the real world mine-scale. The Geological Survey of Finland has facilities that span these scales of observation, including a mine-scale mineral processing plant with fully integrated, laboratory-based, advanced mineralogical capabilities.

(watch a video here of our Mintec facilities in Outokumpu at the following link: [http://en.gtk.fi/news/communication\\_materials/videos/](http://en.gtk.fi/news/communication_materials/videos/))

- **Expected synergies and complementarities**

Projects that involve the physical extraction and processing of ores could benefit from using this facility (drilling, blasting, mining, crushing, grinding, sizing, separation, concentration, waste disposal). We are open to any ideas that will make use of this unique capability, where test runs need to be conducted over several days at a time, on large volumes of ore, and particularly where new and innovative mineral processing technologies need to be housed, tested and monitored over extended periods.

- **Market & Business opportunities**

Expected improvement to the bottom-line of a mining operation through process improvement, optimal plant design, and continuous monitoring of feed, concentrates and tailings.

- **Partners already identified**

Oulu Mining School, Outotec, Lappeenranta University of Technology

- **Wanted additional partners**

More academic (university), research (private & government) and industrial (mining company, junior exploration company) partners wanted!

[Short Title Idea]

[Room for supporting diagram or picture if necessary]