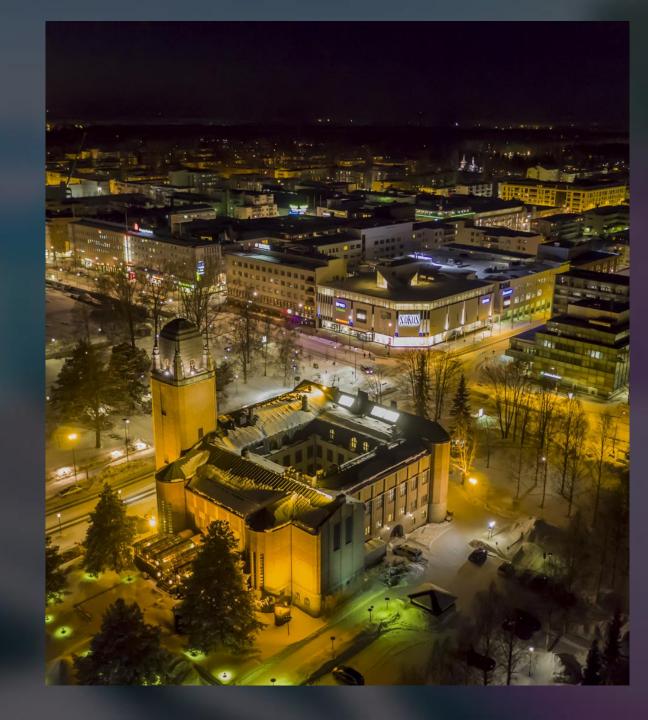
Mining industry and global value chains – S3 thematic partnership

Ilkka Nykänen Business Joensuu, North Karelia 24th June 2020



Business Joensuu Oy

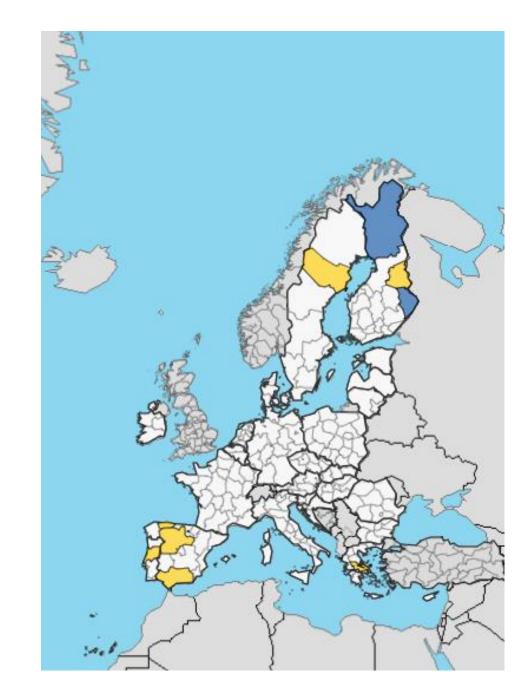
Supporting companies to grow and become international, providing expertise to help to invest and relocate





Participating regions

- North Karelia (FI), leading region
- Lapland (FI), co-leader
- Kainuu (FI)
- Castilla y Leon (ES)
- Asturias (ES)
- Andalusia (ES)
- Västerbotten (SE)
- Centro Portugal (PT)
- Sterea Ellada (GR)



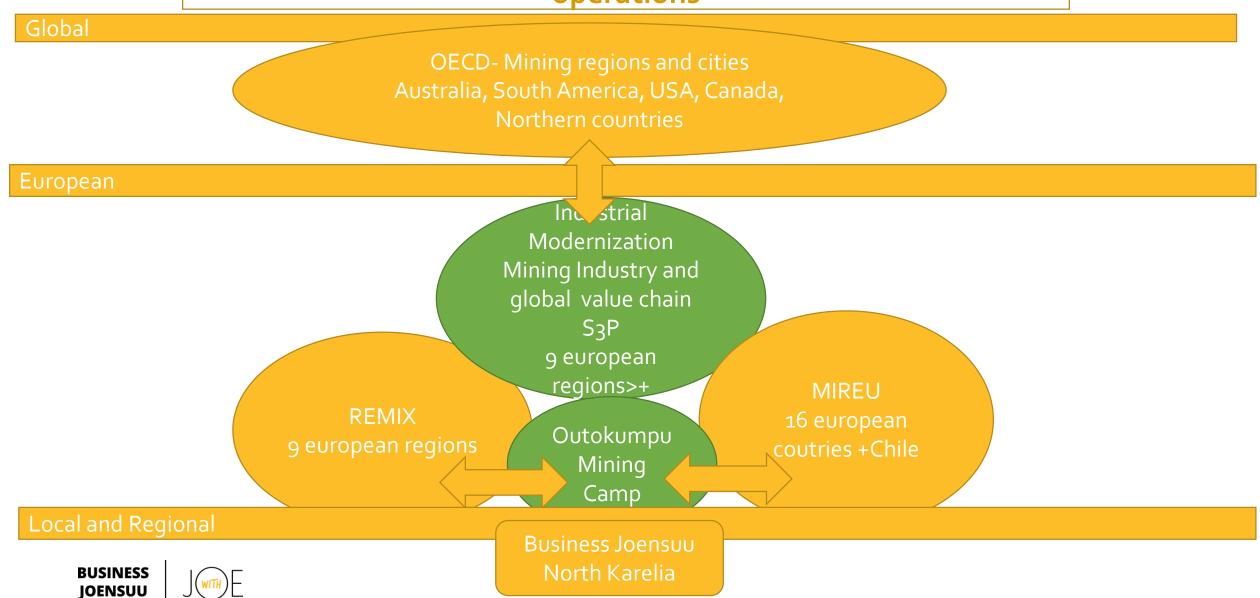
Preliminary thematic areas for S₃P Mining industry

- Empowerment of SMEs in Global Value Chains
 - Critical raw material production
 - New technologies and sustainable mining
 Looking for meet you again it
 - Industrial circular economy
 - Social acceptance of mining through stakeholder involvement
 - Education and training in mining and related industries





International Network of Business Joensuu Mining related operations



Mining workers' Vocational School started in 1950's Mining workers training tradition

Maintains remarkable mining heritage

BU

Old Mine and Mining Museum

Social Licence of Operate in Mining Industry FINNCOBALT-Cobalt-Nickel-Copper Mine Project

Outokumpu Mining Camp

-innovation ekosystem

University of Eastern Finland- UEF

Revitalisation of the Outokumpu Mining Camp

Aiming to produce responsible and traceable chemicals for the battery industry

Geological Survey of Finland Pilot Plant and Mineral Processing Laboratory

The Mineral processing aboratory provides research services to the mining industry

Outokumpu Industrial Park

> has been operating for over 30 years as an organizer of business in Outokumpu

Outokumpu Industrial Park

- In the city of Outokumpu exists a great mining related know-how inside one square km;
- FinnCobalt, cobalt mine project
- **Mintec**, research laboratory of Geological Survey of Finland
- **Outotec** and other technology providers



Outotec Oyj

Finnish listed technology and project company, selling complex mining technology and plant projects. Equipment manufacturing is carried out at Outotec's workshop in the city of Outokumpu.

- Manufacturing Project Management
- World class welding and machining capabilities
- Experienced assembly and testing staff
- Customer support (cost estimation, productization)









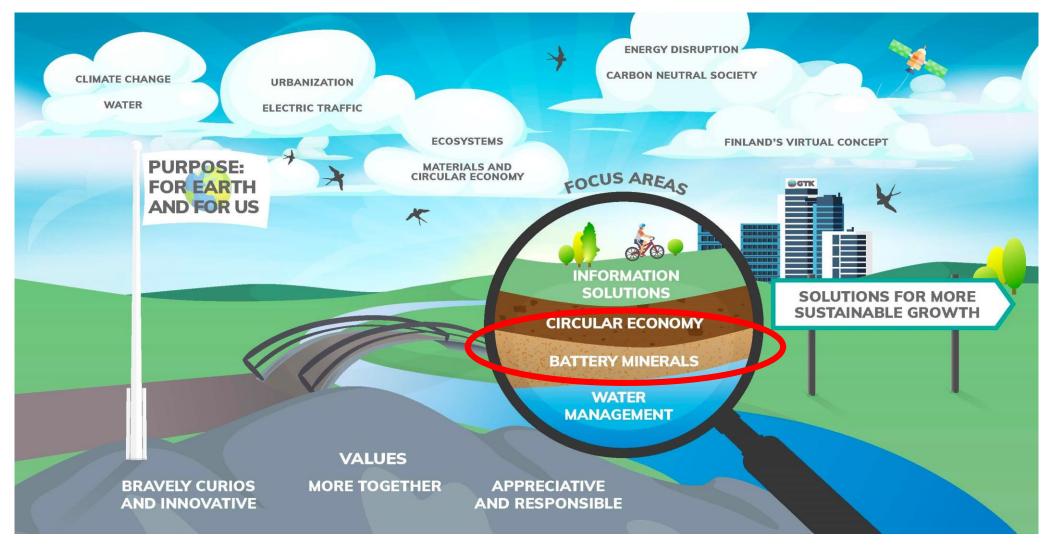
GTK Mintec DEVELOPMENT PLAN

- Video: http://www.gtk.fi/ajankohtaista/viestintamateriaalit/videot/
- New pilot plant: Two Simultaneous processes
- Capacity up to 20.000 tons / pilot
- DigiTwinMin
- Co-working Space for post-docs
- Smart Tailings Pond
- Fully Automated Chemical analysis
- Deep cooperation with Technology Suppliers: e.g. FLS, Startups -> Technology partnership





Strategy 2020-2023







Thank you!

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