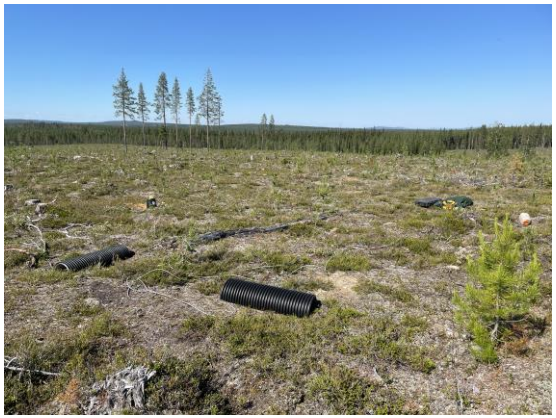


Fieldwork in Sweden, July 2021

Objectives of the D-Rex Project

Mineral deposits are a small part of a very large geological context, the so-called mineral system.

- The first objective is to build onto this new paradigm with geophysical data from three prospective areas in Sweden, Greenland, and Finland
- The second objective is the integration of multi-facetted geophysical data acquired at those prospective areas.
- The third objective is the unification, optimum integration, and visualization of geological and geophysical data based on the Common Earth Modelling (CEM) concept.

ERAMIN2 Project D-Rex

ERA-MIN aims to support the European Innovation Partnership on Raw Materials, the EU Raw Materials Initiative and further develop the raw materials sector in Europe through funding of transnational research and innovation activities.

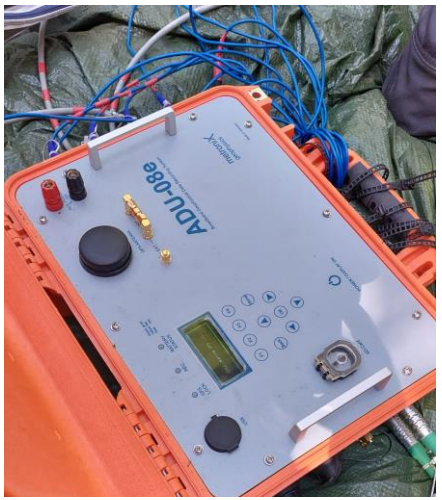
The goal of the D-Rex project is to develop novel technologies and workflows that directly address Europe's goal to become self-sufficient in terms of raw materials through an improved understanding of the geological history of key mineral districts in Greenland, Sweden, and Finland and by proxy also other similar or related European metallogenic

For more information,
visit the D-REX website:
https://mt.research.ltu.se/web/

This project is funded by the ERAMIN2 research & innovation programme. ERA-NET Cofund on Raw Materials (ERA-MIN 2) is public-public partnership based on the ERA-NET Cofund scheme under European Union's Horizon 2020

D-REX

Deposit-to-Regional scale Exploration



Fieldwork in Pyhäsalmi, Finland, July 2021

The D-Rex project joins **4 international academic institutions and 5 industry partners,** working together to advance **novel methods and applications for mineral exploration**. The D-Rex approach will improve resource assessment and identification of previously unexplored endowed target areas.

Research Partners

Luleå University of Technology
Institute of Geophysics of the Czech Academy of Sciences
Geological Survey of Finland GTK
Earth Science Institute of the Slovak Academy of Sciences

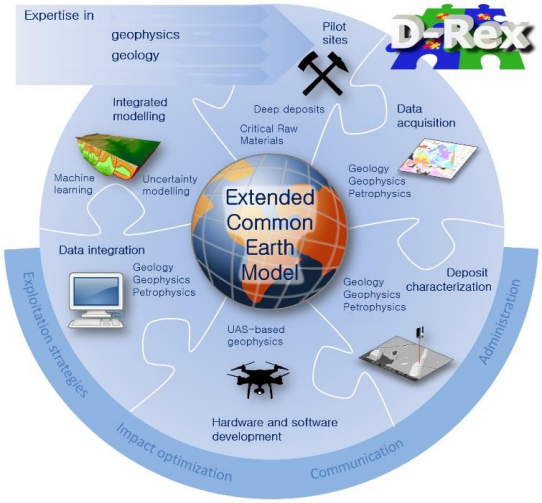
Industry Partners

Boliden AB
Boliden FinnEx Oy
LKAB Minerals Oy
Bluejay Mining
Loop and Line Oy

International Advisors

Prof. Dr. Florian Wellmann
RWTH Aachen University (Germany)

Dr. Björn Heincke
Geological Survey of Denmark



Deposit-to-Regional scale Exploration

Key element of the project involves: Electromagnetic (deposit scale) surveys; Development of multimethod 3D modelling/inversion technique; Joint inversion assisted by machine learning techniques to couple different geophysical parameters, to uncover correlations between them as well as their absence; Regional to deposit scale models integration into Common Earth Model based on all available geophysical and geological data; Building predictivity maps based on the regional models; Correlation and interpretation of regional scale together with deposit scale models.