



RawMaterials

Connecting matters

Spectral Ground Penetrating Radar in Raw Materials industry

Brokerage Event & Expert Forum³ | 13-14 October 2021



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SHORT DESCRIPTION OF THE IDEA

SGPR.TECH creates a completely new approach to ground penetrating radars (Spectral Ground Penetrating Radar); with proprietary radar technology, software and application of deep learning.

We are building complete and unique solution, made of the:

- Eye (a new generation of ground-penetrating radar - Frequency-Modulated Continuous-Wave GPR)
- Brain (cloud-based data processing software) to both reach out for data and understand it.

Due to proven 60m of penetration depth (up to 300-400m with a low frequency design) and signal/noise ratio improved by two orders of magnitude, **we aim to disrupt the mining and quarrying industry by improving:**



Improving
exploration

(continuous information)



Providing Data for
Block models



Continuous TFS
monitoring

(fixed sensor-based)



Support ongoing
work planning



Monitoring of
stability and safety

(fixed sensor-based)



Improving processes
related to haul

THEMATIC SCOPE OF THE PROJECT PROPOSAL

SGPR technology deployment can directly affect and improve aims of the Sustainable Discovery and Supply Lighthouse as within KAVA Call 9 by:

- Targeted exploration of Strategic Materials and/or CRMs – **Improvement of information** during the whole exploration and studies development stage. The information SGPR provides regarding subsurface structures is **cheaper, faster, very precise and is almost continuous** with centimetres between data points.
- Environmental-Social-Governance (ESG) – SGPR technology was already tested in environmental protection applications. Our technology can be used in **environmental impact monitoring** related to water and chemical pollution.

Our approach to deployment of the solution is focused on the following steps:

1. Based on calls from potential clients or research institutions, we are jointly testing real life SGPR technology applicability,
2. Technical as well as operational rollout approach is being developed and tested once technology itself is proven to be applicable in selected applications (PoC),
3. Ongoing cooperation is being implemented based on findings of the previous stages.

CURRENT STATUS OF THE PROPOSAL



Current status of the proposal:

- Technology proven in industrial environment with multiple benefits over other noninvasive ground penetrating methods,
- Ongoing tests aiming at confirmation of multiple use cases in mining and aggregates industry,
- First commercial operations are expected to start October/November 2021,
- We are actively engaging in partnerships and technical dialogue with partners, clients and science.

Our key goals regarding our further development is:



Attracting clients in mining and aggregates industry willing to test and potentially deploy SGPR technology,



Finding partners from geology/geophysics/geotechnical surveying sector to help our technology scale globally,



Engaging in scientific cooperation with universities and research organisations to expand our capabilities and fields of use of the SGPR.

CONTACT PERSON



Full name: Miroslaw Trzesniowski

E-mail address: m.trzesniowski@sgpr.tech

Mobile: +48 608 106 411