

## TechConnect Ventures Sprint Challenge Brief:

### Advancements In Sub-Surface Detection and Inspection Technologies

#### BACKGROUND

Dundee Precious Metals, a Canadian exploration and mining company with sites around the globe, is interested in next-generation technologies to enhance its operations. Specifically, the company is interested in technologies which will accelerate the decision-making process for exploration of metals located within a site, including non-disturbing technologies that don't require drilling.

Currently, the exploration phase of a mining operation requires physical access to a site, drilling technology, and a significant time commitment to adequately explore the location. Technologies proposed through this project will increase the speed and sustainability of the extraction process by improving awareness of high value regions within a site.

#### Detection Parameters:

- Depth: surface to approximately 2km
- Soil type: varies by location
  - Loose soil and rocks in some locations, compacted earth in others
- Primary targets:
  - Gold
  - Copper
  - Silver
  - Critical rare earth elements.

Dundee Precious Metals is interested in all approaches that provide estimates of the location and size of targeted metals within a given volume. Sensor platforms and analytical software packages are equally of interest, including but not limited to:

- Hyperspectral imaging
- Ground, Borehole and airborne EM systems. Passive and active source Seismic surveys
- Earth observation platforms:
  - Drone-based
  - Space-based
- Tomography, including methodology used in medical topography.
- Industrial inspection technologies adapted from other industries including:
  - Oil
  - Gas
  - Released military technologies.
- Software for:
  - Data QC, Analysis, joint inversions.
  - Correlation
  - Visualisation
  - Mapping
  - Prediction (ML/AI)

Solutions which combine multiple sources of sensor data along with software for analysis and mapping are highly desirable. Furthermore, approaches which allow for ease of mobility from site to site or within a site are preferred.

Technologies originating in academic or corporate labs are in scope. While technologies closer to commercial use are preferred, Dundee Precious Metals is interested in all approaches with the potential to accelerate the site exploration process.

Dundee Precious Metals will invite selected respondents to participate in a virtual Pitch Event to be held online in late June 2023. Participants will have the opportunity to present an overview of their technology and company to a diverse array of representatives from Dundee, encompassing technical, business and innovation roles with the company.

The goal of this sprint is to facilitate contact and interactions between the Sprint sponsor and commercial entities (including Start-ups) or technology developers or research organization/university in this space. Submissions from all viable subject matter experts are of interest including those from academia and commercial entities.

## REQUIREMENTS

Solvers submitting an Entry are encouraged to highlight capabilities in their Submission that meet criteria including:

- Technology Overview:
  - Detection
    - Deposit(s) detected
    - Depth limit
    - Detection threshold
    - Scan volume, speed, & accuracy
  - Software
    - Data type(s) acquired, processed
    - Imaging & Mapping capabilities
    - Predictive capacity and reliability
- Commercialization timeline
- Availability of performance data
  - Demonstration OR
  - Real Project
- Technical maturity

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## BUSINESS OPPORTUNITY FOR SOLVERS

All complete and eligible Entries will be included in an exclusive Innovation Opportunity Report that will be presented to our client. Solvers with well-matched capabilities may be contacted directly by either TechConnect Ventures or the client to discuss potential partnership opportunities, including – but not limited to – demonstrations, consulting, contract research, licensing, and more. Top-rated Entries may also be invited to register or participate in an upcoming TechConnect Ventures event or pitch program.

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## PARTICIPATION RULES & GUIDELINES

Solvers are encouraged to review the [Rules](#) and [Guidelines](#) provided on the Sprint page for details about participation, including submission criteria, eligibility information, and more.

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**QUESTIONS?** Contact [challenge@techconnectventures.com](mailto:challenge@techconnectventures.com)