



expande
Impulsando soluciones para
la minería del futuro

**Challenge:
“Characterization of
drawpoints in
underground mining”**

August, 2019

Articula:



Socios estratégicos:



Gracias al aporte de:



Apoya:



Introduction and context

The Mining Open Innovation Program, Expande, is a public-private initiative designed and executed by Fundación Chile. The purpose is to promote innovation and make possible a better future for global mining, enhancing the mining ecosystem in Chile together with constituting a collaborative model that enables the best solutions for the high complexity challenges of mining today and tomorrow.

In this context, CODELCO has asked Expande to prospect the local and international ecosystem to identify technological solutions that respond to the technical challenge “**Characterization of drawpoints in underground mining**”

Description of the challenge

General Framework

The management and planning of each drawpoint of mines exploited by caving method is carried out with discrete information captured manually.

Daily, specialist personnel traces the production levels for mineral sampling and analysis of chemical composition, mineralogy, grade, humidity, particle size and other variables for mine planning and operation.

Description of the challenge

Prospecting Objectives

Identify available or developing technological solutions in the local or international market that allow the characterization of the mineral at drawpoints of underground mines exploited by caving method.

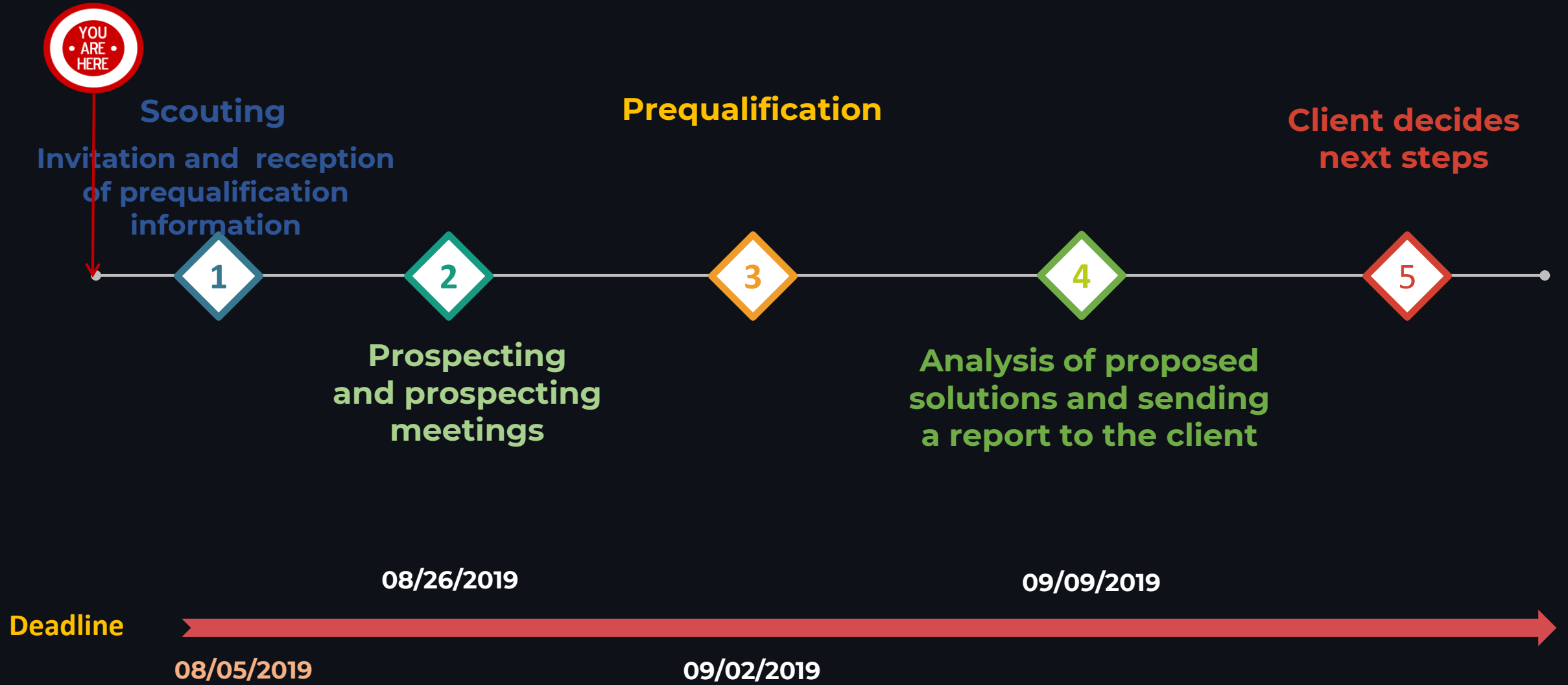
The information required corresponds to: total copper, molybdenum, moisture, mineralogy and granulometric distribution. (all of the above or some of them)

Description of the challenge

Solutions Requirements

- Portability and location: Portable, Mining equipment, Safety equipment, In-Situ.
- Transmission Capacity (Balance between Edge and Online): Manual, Offline, Discrete, Online.
- Pre-processing location: On-site or remote.
- Energy Autonomy: Wired or Wireless, battery life or similar (UPS). If wired features to be supplied (voltage, current)
- Data Storage Autonomy: GB - Storage capacity and / or days before starting to overwrite.
- Transmission Protocols: Wifi, Bluetooth, LTE, 5G, Manual.
- Required Temperature Range: (Celcius)
- Brightness Required: Minimum Lumens (If required)
- Rugged or not Rugged: Resistance to hostile environments (IP67 or similar)

Stages of the process



Documentation requested

To participate in the Scouting stage, please send the following information to innovacion.abierta@fch.cl:

- Experience of the company in this technological field
- Technical data of the proposed solution
- Testing and/or validation level (Technology Readiness Level, TRL)
- Proposed Business Model: technology sales, services or other

The information delivery format is free (pptx, pdf, image) and can be a brochure or presentation of the company's capabilities and technological solutions that apply to the proposed challenge.



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