

THINK & ACT DIFFERENTLY, POWERED BY BHP ANNOUNCES EIGHT FINALISTS FOR THE DEEP MINING OPEN CALL



Advanced Navigation, live streamed their technology from the Callio test mine in Finland (pictured).

Think & Act Differently (TAD), BHP's innovation team, together with Unerthed Solutions, announced eight finalists for its Deep Mining Open Call, chosen from over ninety applications received from around the world.

The Deep Mining Open Call, launched in September 2024, aimed to identify innovators with capability that could be applied to deep underground mining. The focus was on addressing challenges such as high temperature, high rock stress, and hypersaline conditions in deep mining environments.

BHP Innovation Vice President Jessica Farrell stated, “Collaborating for innovative solutions is critical to our industry, providing the opportunity to truly step change safety, sustainability and productivity potential for our resources. The Deep Mining challenge, brings people and resources together, with expertise across underground mining, automation, robotics, sensors, thermal imaging, and AI-assisted technologies with the potential to building a safer more productive outcome in underground mining.”

The eight teams have been selected to receive support to accelerate and grow their ideas in a supportive environment that includes BHP funding, technical mentoring, opportunities for collaboration and access to BHP data and samples. Through 6 Cohorts, BHP has supported 52 innovators.

The cohort got together today for their first technical roundtable, and as a part of this activity, cohort innovator Advanced Navigation, live streamed their technology from the Callio test mine in Finland.

The eight teams selected are:

- Tripleye - Survey grade asset location software

Team Capability: Expertise in robotics, AI, and real-time perception, focusing on high-precision survey & navigation systems.

- Intelligent Robotics - Robotic automation of equipment

Team Capability: Deep expertise in AI-driven robotic automated solutions, 3D vision, digital twins, and telerobotics to optimize industrial workflows and remote operations.

- LoopX - Thermal imaging-based situational awareness system (SAS)

Team Capability: Focus on real-time situational awareness, autonomous control systems, and smart mining platforms.

- Minpraxis - Orebody knowledge mobile drill-core analysis technology

Team Capability: Innovations in real-time drill-core analysis and data integration for enhanced mining decision-making.

- CSIRO - Composite lattice girder-based support systems

Team Capability: Expertise in composite lattice girder-based support systems (integrated with shotcrete and meshes) as an alternative, superior ground support, compared to conventional steel-arches, for stabilising cave mining infrastructure.

- Veracio & Roqsense - Cross-hole tomography sensors

Team Capability: Expertise in geophysics and sensor technology for enhanced subsurface data collection for better mining decision-making.

- Advanced Navigation - Fiber optic gyroscope survey technology

Team Capability: Solutions for precise underground mapping and navigation in challenging mining environments.

- Special Teams - Reviewing cohort member's capability & scoped experiments, to identify & help facilitate business adoption opportunities

Team Capability: Strategic guidance and operational expertise to maximise the impact of various technologies.

"These teams represent the forefront of innovation in deep mining technology," added Holly Bridgwater, Co-Founder, Uearthed Solutions. "Their solutions hold the potential to revolutionise how we approach deep mining practices, enhancing operational efficiencies and sustainability across the industry."

In the coming months, the selected teams will collaborate closely with Think & Act Differently, Powered by BHP to develop their technologies and concepts in relation to real-world deep mining environments. Their progress and achievements will be closely monitored and supported to maximise impact and scalability.

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