

# DIGITAL, Canada's Global Innovation Cluster for Digital Tech, Invests in Subsurface Intelligence for Critical Minerals

VANCOUVER, BC, CANADA, September 9, 2024 /EINPresswire.com/ -- DIGITAL, Canada's Global Innovation Cluster for digital technologies, has announced its co-investment in the [Unlocking Critical Minerals project \(UCM\)](#). This project aims to deliver a subsurface imaging solution to the global mining industry that reduces time to market, cost, risk and environmental impact, while facilitating development of the sustainable supply chains needed to fuel the energy transition.



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*Gary Agnew, CEO & Co-Founder, Ideon Technologies*

Led by subsurface intelligence pioneer [Ideon Technologies](#) and in partnership with Simon Fraser University (SFU), Dias Geophysical, VRIFY Technology, and Fireweed Metals, the Unlocking Critical Minerals project will build on the foundational technologies for mining exploration established during the [Earth X-Ray for Low-Impact Mining project](#), also supported by DIGITAL (2021-23). The consortium will now expand its focus to include unlocking supply across the full mining value chain – from exploration through operations to tailings management,

reclamation, and aftercare.

The UCM project team will build, test and deploy subsurface intelligence solutions that will help precision-target deposits, accurately map, and continuously monitor mine operations. It will develop, protect, and introduce new-to-the-world proprietary sensing technologies, a suite of software including novel multi-physics inversion techniques, AI algorithms, geostatistical methods, and subsurface modelling capabilities. These technologies will be demonstrated in field trials with the world's largest and most innovative mining companies. The project benefits from the direct involvement and support of global mining leaders like fellow DIGITAL member Rio Tinto ([www.riotinto.com](http://www.riotinto.com)).

To power the global transition to electrification, wind, solar, nuclear, and other clean-energy technologies, production of many critical minerals and metals needs to increase by nearly 500% over the next 20 to 30 years. "Mining companies currently rely heavily on drilling to understand what's happening beneath the Earth's surface. They are also investing heavily in new mining

techniques to understand and unlock more challenging deposits, but need reliable subsurface mapping and monitoring capabilities to make critical decisions with confidence,” said Gary Agnew, Ideon Technologies CEO and Co-Founder. “Incorporating and leveraging multiple geophysical data streams, AI, and advanced 3D and 4D visualization, our consortium aims to deliver the highest-resolution digital model of the Earth’s subsurface available on the market. We will provide dynamic mapping, monitoring, and upgrading of subsurface insights that help mining companies make better decisions and get metals to market faster.”

Industry partners in the project will apply their deep expertise in exploration, geology, and geophysics to help inform product design and trials, economic value analysis, and commercialization strategy. The Unlocking Critical Minerals project has a total investment of C\$46 million, with C\$30 million invested by industry and C\$16 million co-invested by DIGITAL.

“AI is a foundation for Canada’s economic success,” said Sue Paish, CEO of DIGITAL. “By uniting industry leaders, innovators, and academic partners, we’re building the foundation for tomorrow’s breakthroughs and ensuring Canada remains at the cutting-edge of global AI innovation. We’re proud to continue supporting Canadian innovators like Ideon Technologies to revolutionize the global mining sector, while facilitating development of the sustainable supply chains needed to fuel the clean energy transition.”

\*Consortium Partners\*

Ideon Technologies (<https://ideon.ai>)

Vancouver-based Ideon Technologies uses the energy from supernova explosions to image deep beneath the Earth’s surface. A world pioneer in cosmic-ray muon tomography, Ideon transforms muon data into reliable 3D density maps, helping geologists identify, map, characterize, and monitor subsurface geological structures with confidence.

Dias Geophysical (<https://diasgeo.com>)

Saskatoon-based Dias Geophysical brings unique know-how in quantum magnetometry and synthetic diamond chip production.

VRIFY Technology (<https://vrify.com>)

Vancouver-based VRIFY helps mining leaders optimize every investor interaction by equipping them with a set of 3D visualization and 360-degree presentation tools that stand out, remove complexity, and drive meaningful dialogue.

Fireweed Metals ([www.fireweedmetals.com](http://www.fireweedmetals.com))

Fireweed Metals Corp. (TSXV: FWZ; OTCQX: FWEDF; FSE:M0G) is an exploration company unlocking significant value in a new critical metals district located in Yukon and Northwest Territories, Canada.

Simon Fraser University ([www.sfu.ca/research](http://www.sfu.ca/research))

SFU contributes internationally recognized expertise in advanced industrial fabrication for micro-electromechanical systems (MEMS) technology, as well as in Statistics and Earth Sciences. We are committed to global sustainability.

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About DIGITAL ([www.digitalsupercluster.ca](http://www.digitalsupercluster.ca))

DIGITAL is Canada's leader in accelerating the development and commercialization of Canadian-made digital technologies that address some of the most pressing needs across our economy and society. DIGITAL's model of collaborative innovation and co-investment advances the success of Canadian businesses through the development, adoption and commercialization of Canadian-made technologies while also growing a workforce that is skilled to fill the jobs of a growing digital economy.

DIGITAL brings together businesses, academia, community and government agencies to solve some of industry and society's biggest challenges - better and faster than any single organization can do on its own. Through the powerful model that combines cross-sector collaboration, Canadian IP creation and results-based co-investment, we unlock the potential of Canadian industry to lead and succeed in the digital world. Ahead of the curve starts here.

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