CORFO

Canada and Chile call for R&D projects

Chilean companies seeking for Canadian SME

SmartGestión

www.smartgestion.cl

Smart Gestión Chile is the machinery manufacturing branch of Smart Gestión International, specializing in industrial and mining equipment. With over 25 years of experience, they serve major clients like Codelco, SQM, and AMSA. Their products include vacuum trucks, pressure washers, and specialized cleaning and material-handling machines. These are built to endure harsh mining conditions and improve operational safety. Their focus is on efficiency, innovation, and reducing risks in high-hazard environments.

Type of technology to be develop with a Canadian partner

It develops radio-controlled, electric rovers focused on R&D for complex mining operations. Their robust, waterproof and dustproof rover is already validated and in operation in Chile. Built with military-grade materials, it endures harsh mining conditions. They seek to co-develop with a Canadian partner a material recovery and reintegration system to enhance the rover's capabilities. This collaboration would improve resource efficiency and reduce environmental impact in mining.

Idea R&D

The company is fully capable of integrating advanced technologies and modular upgrades into its 30 cm-high, 300 kg rover, designed for hazardous environments. The goal is to enhance material recovery, data collection, and operational performance while maintaining access to high-risk areas. They aim to co-develop with a Canadian partner a system that boosts recovery efficiency by 30–50% and enables 80% autonomous operation. The platform allows for the integration of new sensors, actuators, and firmware updates without structural redesign. This collaboration seeks to advance adaptable, durable robotic solutions for extreme mining conditions.

Type of Canadian partner

We seek to collaborate with Canadian SMEs specialized in robust industrial systems for a compact rover operating in hazardous environments. I'm especially interested in hydraulic, mechanical, data collection, and basic automation solutions that prioritize simplicity, durability, and modularity. Ideal partners can integrate compact systems into tight spaces and harsh conditions. Solutions should enable efficient material recovery, real-time monitoring, and minimal human intervention. My focus is on practical, adaptable technologies for extreme industrial settings.

Contact Information

CEO
Ignacio ponce
contacto@smartgestion.cl

Photio

www.photio.cl

Photio is a science-based technology company that develops and markets innovative environmental solutions to fight air pollution and climate change. Its core technology is a nanotech additive that, when applied to surfaces like paint, concrete, or asphalt, breaks down pollutants using sunlight or artificial light. The material targets NOx, VOCs, CO, and CH_4, turning them into harmless substances without altering surface appearance. The technology is validated through lab and real-scale pilots in Latin America and is advancing toward carbon credit certification. Founded in Chile, Photio holds a pending patent and partners with universities, governments, and private companies.

Type of technology to be develop with a Canadian partner

We aim to develop Gretta, an AI-powered platform that optimizes formulations by adjusting Photio's five nanoparticles or adding new ones for air purification. These nanoparticle-based formulations integrate into paints, concrete, and other materials to degrade pollutants using sunlight or artificial light. Gretta adapts compositions to specific pollutants, substrates, and local climate, enhancing efficiency and economic viability. It incorporates parameters like degradation performance, product lifecycle, and GHG reduction potential. This scalable technology targets cities seeking sustainable, traceable solutions to improve air quality.

Idea R&D

We aim to co-develop and validate Gretta, an AI system that recommends photocatalytic formulations to capture pollutants like CO, NOx, VOCs, and methane. These can be integrated into paints or construction materials to reduce urban pollution. We have a functional prototype and lab validation from Chile. With a Canadian SME, we seek to adapt the system to local climates and regulations. The goal is to improve impact traceability and create a user-friendly interface for municipalities and companies.

Type of Canadian partner

We seek a Canadian SME working in clean technologies, environmental monitoring, geospatial data analysis, or sustainability-focused software. Ideally, they have experience in urban projects, air quality, environmental sensors, or digital climate solutions. Knowledge of impact reporting and verification systems is also valued. This partner would help strengthen Gretta, validate its results, and support market implementation.

Contact Information

Constanza Escobar
constanza.escobar@photio.cl

Plaza Ingeniería SpA

www.plzingeniería.cl

Plaza Ingeniería is a Chilean company developing innovative technological solutions for the mining industry, focused on emissions control and environmental sustainability. Its main product, InnovAire Pro, is an intelligent system that uses environmental sensors, AI, and automation to optimize real-time dust suppression. Aiming for zero-emission operations, it combines applied engineering, data analysis, and autonomous control. The company also promotes open innovation and international collaboration to scale its technological impact.

Type of technology to be develop with a Canadian partner

We seek to collaborate with a Canadian SME specialized in AI and automation to enhance our InnovAire Pro system, which controls dust suppression in mining using sensors and decision-making algorithms. The goal is to evolve its neural network with advanced machine learning, edge computing, and predictive analytics. This will enable more accurate and adaptive autonomous decisions in dynamic environments. The partnership aims to boost system performance, responsiveness, and scalability for complex operational challenges.

Idea R&D

We aim to develop a collaborative project with a Canadian SME to enhance and validate InnovAire Pro, an autonomous dust suppression system at TRL 6. It uses environmental sensors, data processing, and a neural network for real-time decision-making in mining operations. The project seeks to integrate Canadian expertise in AI, automation, and edge computing to strengthen control algorithms and adaptability. This partnership will help scale the solution, add new features, and validate its field performance. The goal is to ensure industrial efficiency, sustainability, and large-scale applicability.

Type of Canadian partner

We seek a Canadian SME specialized in AI-based solutions, with expertise in advanced data handling, industrial automation, and real-time control. Key capabilities include sensor integration, edge computing, and adaptive algorithms for demanding environments like mining or heavy industry. We value partners able to co-develop robust, scalable technologies that integrate with existing systems and perform under real-world conditions. Low-cost system development is also a priority.

Contact Information

Cristián Plaza Orellana
plzingenieria@gmail.com

SHEN Ingeniería Ltda

www.shen-re.cl

www.hydroshen.cl

We are an engineering company with 18 years in the market, specializing in reliability, condition monitoring, and asset management. Four years ago, we began working in the hydrogen sector and have been Corfo beneficiaries. Our work includes retrofitting heavy machinery from fossil fuels to hydrogen-based systems (fuel cells, batteries, supercapacitors). We also supplied the hydrogen-GPL flame for the Santiago 2023 Pan and Parapan American Games, which operated for over a month.

Type of technology to be develop with a Canadian partner

As Corfo beneficiaries, we are developing a hydrogen-powered excavator retrofit with a strong focus on safety and operational efficiency. Our goal is to create a remote and/or autonomous operation system to avoid exposing operators to hazardous conditions and to increase productivity. The solution will combine customized hardware and software to initially enable remote control. It will then integrate with the existing hydrogen retrofit control system. Ultimately, we aim to develop a georeferenced autonomous operation.

Idea R&D

The project involves designing and evaluating technical-economic alternatives to implement a remote and/or autonomous operation system for a hydrogen-retrofitted backhoe. The first phase includes setting up a remote-control system (with cameras and interface to the existing control unit), followed by evaluation of georeferenced autonomous operation. This approach improves safety, increases hydrogen storage capacity, and reduces ergonomic risks for operators. Integration is required between the operation system and the control unit managing fuel cells, batteries, supercapacitors, hydraulics, and drivetrain components. This could enable future retrofits for electrically driven backhoes.

Type of Canadian partner

We seek a remote operation technology company ideally capable of delivering a full solution, including hardware definition (cameras, wiring or wireless systems, data acquisition, georeferencing, signal storage and transmission) and software (native language programming and communication via protocols such as CANbus). Experience in implementing systems on manually operated heavy machinery or mobile platforms like drones is highly valued. Preferably, the company also works with decision-making algorithms for autonomous vehicle operations or similar technologies.

Contact Information

Eduardo Salamanca
eduardo.salamanca@shen-re.cl

IMAC Investigación e Ingeniería SpA

www.terrawaveai.com

TerraWave is a Chilean tech company developing deep geological targeting solutions using geophysical intelligence and hybrid AI. Its system combines custom vibration sensors, a symbolic-AI engine, and a geological interface that learns from real mining events. It detects mineralization patterns without satellite images or exploratory drilling. The technology is field-validated and scaling up. The team has experience across Latin America and Africa in geoscience, AI, and mining operations.

Type of technology to be develop with a Canadian partner

This collaboration aims to co-develop technical and operational improvements to the TerraWave system, in both hardware and software. Goals include enhancing Terranods with low-noise electronics and robust communication protocols for harsh environments, and co-designing seismic filtering algorithms tailored to mining. The project also seeks to ensure interoperability with Canadian geophysical software. Overall, this work will strengthen TerraWave's architecture for global deployment and accelerate commercial readiness.

Idea R&D

We propose the joint development and validation of a new TerraWave module adapted to mining conditions in Canada, especially in subarctic, remote, or high industrial seismic zones. The collaboration includes co-design of sensor and algorithm improvements, hardware/software integration under shared industrial standards, and field validation at a Canadian mine site. The current system is a validated prototype (TRL 6–7) with successful tests in Chilean copper mines. This project will strengthen technical performance, enable international benchmarking, and open joint market opportunities.

Type of Canadian partner

We are looking for a Canadian tech SME with experience in seismic instrumentation or precision geophysical sensors, embedded hardware design for extreme environments, and seismic signal processing in noisy conditions. Ideally, the company collaborates with mining sites or geological R&D centers in Canada and has access to field pilots. Experience with AI platform interoperability and a willingness to co-develop joint intellectual property are also highly valued.

Contact Information

Sabine Macaya
sabine.macaya@singularitywork.com

Máfico SpA

www.mafico.cl

Máfico is a Chilean deep-tech company that developed the world's first polymeric concrete 3D printer using recycled plastics—cement-, water-, and emission-free—for sustainable construction. REMA, its partner, offers biotech solutions for mine closure, including a microbial bio-stabilizer that restores degraded soils and captures CO_2. Together, they combine expertise in advanced manufacturing, environmental biotech, and field validation. Their teams have led over 10 R&D projects, raised public and private funding, and hold international patents. Both operate hybrid infrastructures with strong links to academia, industry, and investors.

Type of technology to be develop with a Canadian partner

The project proposes developing a new heavy-metal-free aggregate from remediated mine tailings, bound with bioadhesives to produce polymeric concrete for 3D printing. This cement- and water-free material turns mining waste into low-impact prefabricated building components. The process includes phytoremediation to extract heavy metals and uses biopolymers for agglomeration. Components will be digitally optimized and bio-inspired to reduce material use without compromising strength. The result is a low-emission concrete for sustainable, circular construction across scales.

Idea R&D

The project aims to develop sustainable prefabricated elements using advanced manufacturing and polymeric bio-concrete made from processed mining waste. It brings together REMA (phytoremediation), Máfico (sustainable 3D printing), and a Canadian prefab construction company. The goal is to create cement- and water-free concrete components from remediated tailings, suitable for additive manufacturing. The partnership will co-develop MVPs for early market validation, replacing traditional concrete with low-impact, optimized forms. The team already has prototypes and industry engagement, enabling rapid piloting and scalability.

Type of Canadian partner

We seek a Canadian SME engaged in the development and/or manufacturing of prefabricated concrete products, building components, or infrastructure solutions. Ideally, the company has design, engineering, or commercialization capabilities and is interested in integrating advanced manufacturing and sustainable materials. The partner would co-develop minimum viable products (MVPs) and support validation and market entry, especially for mining, construction, or built environment sectors. Experience in industrial piloting, tech scaling, and distribution networks is highly valued.

Contact Information

Nicolás Cabargas Mori
nicolas@máfico.cl

CIPYCS

www.cipycs.cl

The Interdisciplinary Center for Productivity and Sustainable Construction (CIPYCS) is a Chilean institution that fosters innovation, productivity, and sustainability in the construction industry. It connects academia, public, and private sectors to address structural challenges through applied research and technological collaboration. Initially funded by ANID, CIPYCS now leads various R&D programs. With regional hubs across Chile, it offers tech solutions, lab services, technical support, and joint projects with companies. Its focus includes industrialized construction, digitalization (BIM, AI, sensors), sustainability, and innovation management

Type of technology to be develop with a Canadian partner

We aim to develop SuRIS, a digital tool for sectoral monitoring and risk management in the context of circular economy in construction. The platform will integrate satellite imagery, drone data, and GIS to detect and prioritize illegal construction waste disposal and unauthorized aggregate extraction sites. It will use automated image processing and classification algorithms to support Chilean agencies like SMA and SENAPRED. Partnering with a Canadian SME would enhance the system with expertise in remote sensing, automated recognition, and spatial data processing. This addresses a pressing environmental challenge in Chile.

Idea R&D

The project aims to design and validate an early-stage tech tool for detecting, characterizing, and monitoring illegal construction waste sites and aggregate extraction, integrated with Chilean government alert and enforcement systems. Called SuRIS, the tool will feature interconnected modules that process satellite and drone data to generate risk maps and early warnings. Collaboration with a Canadian SME will focus on co-developing image analysis algorithms and GIS integration. The partnership leverages Canada's expertise in environmental monitoring and automated systems. The goal is to build a functional prototype tailored to Chile's regulatory and territorial context.

Type of Canadian partner

We are looking for a Canadian SME with experience in remote sensing, satellite image processing, and drone data analytics. The company should ideally have expertise in spatial data management software, including GIS platforms and classification algorithms for multispectral or hyperspectral imagery. Experience in environmental monitoring, land-use planning, natural resource management, or automated enforcement—especially in regulated or high-risk areas—is highly valued. Prior international collaboration and the ability to transfer knowledge and tools to Latin American technical teams are also desirable.

Contact Information

Roberto Luna
raluna@cipycs.cl
María Renee Oliva
maria@cipycs.cl

CORFO

Canada and Chile call for R&D projects

Chilean companies seeking for Canadian SMEs

For more information, please contact us at:
difusioninnova@corfo.cl