

Innovation Award History

Innovation Award 2024

This year's winner for Most Novel Innovation is [Polycontrols Technologies Inc.](#) for their cold spray hybrid additive manufacturing. Polycontrols technology has enormous potential to provide significant cost savings and become a powerful tool to lower long-term maintenance cost for both corrosion and wear across the mining industry, a sector known for its stringent requirements for durability and efficiency.

[Metaspectral's](#) ORES: Ore Resource Evaluation System took home the award for Most Actionable Innovation. Their hyperspectral-based innovation leverages the unique spectral signatures of minerals to provide comprehensive, real-time data on ore composition and distribution. A technology capable of fully automating the sampling of potash and uranium ores would be highly valuable and could not only improve operational efficiency by providing real-time, accurate mineral analysis but also support sustainable mining practices by reducing environmental impact and enhancing worker safety.

"IMII remains committed to fostering innovation for Saskatchewan's minerals industry. The Innovation Award is a testament to our dedication to recognizing and supporting technologies that drive productivity and sustainability," stated Al Shpyth, Executive Director of the IMII.

The award-winning technologies were selected from among the applications submitted for DEMOday, an event that invites innovators to pitch their solutions to industry needs to a panel of experts from IMII's principal minerals company members, including BHP, Cameco, Fission Uranium, Mosaic, and Nutrien.

Innovation Award 2023

Extract Energy (Cambridge, ON) and the Extract Energy heat engine, has been selected by its minerals industry members BHP, Cameco, Mosaic and Nutrien, as the **Innovation Award** winner for 2023. This announcement is being made in association with IMII's 9th Let's Talk Minerals event and Innovation Week in Saskatchewan and nationally.

"Extract Energy has a novel application of the shape memory alloy heat engine that is designed to harvest low-grade heat from industrial applications, including the minerals industry," says Al Shpyth, IMII Executive Director. "An attractive feature of the technology is that it targets waste heat temperature ranges below that which any commercially available energy harvesting system can operate, and the resulting electricity generated can be used on-site to offset demand from electrical grids. This is both good for the planet and for the competitiveness of the minerals industry" he adds.

Extract Energy's heat engine was one of six technologies selected for *DEMOday 2023* and will now be reviewed further by IMII's funding partners for a potential technology demonstration project. Some estimates suggest that more than half of the energy generated worldwide is lost as unused thermal



energy because of the lack of efficient technologies for harnessing low-grade heat. Harvesting this low-grade thermal energy is highly desirable for efficient industrial processes and environmental impact – making such technology potentially good for both competitiveness and the planet.

Innovation Award 2022

2S Water (Edmonton, AB) – developer of the Aquavalid Sensor, has been selected by its minerals industry members BHP, Cameco, Mosaic and Nutrien, as the **Innovation Award** winner for 2022.

“2S Water has a mission of protecting water with real time data, and this mission is shared with the mining industry and IMII’s minerals member company specifically,” says Al Shpyth, IMII Executive Director. “The automated sensor has the potential to assist the minerals industry with process optimization, incident prevention and effluent monitoring and make a meaningful contribution to our members’ ESG efforts” he adds.

For the first time, IMII is also awarding honourable mentions to two other technology developers who were invited to pitch their innovations at *DEMOday 2022*:

- Copperstone Technologies (Edmonton, AB), in collaboration with the MMKL Group of Companies in Saskatoon and Birch Narrows Dene Development for HELIX – Amphibious Robots for Hazardous Site Investigation; and
- SolarSteam (Calgary, AB) for their solar heat for industrial processes technology.

Innovation Award 2020

EECOL Electric and SafeBox System was named the 2020 Innovation Award winner by the industry members of the International Minerals Innovation Institute (IMII) today. The Innovation Award winner was selected for the first time this year from among those innovative supply chain companies chosen to participate in IMII’s DEMOday on December 1st.

“SafeBox was selected as the award winner as it is both a safety and technical innovation,” says Al Shpyth, IMII’s Executive Director. “It offers a distributed energy isolation and single point lock -and-tag system which allows users to execute complex, system-wide lockouts in a matter of seconds. It automates what has historically been a manual process and presents an opportunity to improve productivity and safety.”

The SafeBox System was nominated by EECOL Electric’s Oil & Gas, Mining Industrial Division of Estevan, SK and developed by Ionic Mechatronics of Lively, ON. More information may be found at [SafeBox™ – Reduce Lockout Time to Seconds \(safeboxsystems.com\)](https://www.safeboxsystems.com).



Innovation Award 2019

International Minerals Innovation Institute (IMII), on behalf of its major minerals member companies and Innovation Saskatchewan, is pleased to announce the winner of its **Best New Technology Product** Innovation Award for 2019 – Continental Mine & Industrial Supply Ltd.'s DC-54-UG Underground Dust Collection System.

Selected from among applications submitted by Saskatchewan supply chain companies, this award for the best new technology product represents the most innovative new or applied technology emerging from the supply chain for the minerals industry in the province in 2018, as judged by a panel of subject matter experts from IMII's minerals company members and Innovation Saskatchewan.

This year's Innovation Award winner has the potential to have a positive impact on the province's potash industry. It offers an advantage over existing technologies available for underground potash mining to collect dust at transfer points that could otherwise be vented into the work environment and cover equipment, improving reliability and lowering maintenance requirements.

IMII announced Continental Mine & Industrial Supply Ltd. as its Innovation Award winner for 2019 during the official opening of the 11th Annual Saskatchewan Mining Supply Chain Forum at Prairieland Park in Saskatoon. Receiving the award on behalf of CMI was Dwayne Howatt, P.Eng.

Innovation Award 2018

The International Minerals Innovation Institute (IMII) announced a new awards program that recognizes outstanding innovations of benefit to the Saskatchewan minerals industry. In our inaugural year, the Best Prototype Award was awarded for the first time on the evening of the 10th Annual Saskatchewan Mining Supply Chain Forum in April 2018 in Saskatoon.

International Minerals Innovation Institute (IMII), on behalf of its member companies and Innovation Saskatchewan, announced Prairie Machine & Parts Mfg.'s (PMP) Hardrock Gopher prototype as the winner of IMII's inaugural Innovation Award. The Gopher has been designed for tough mining conditions, with the objective of replacing diesel-powered vehicles with a safer, cleaner, more robust electric vehicle.

PMP's Hardrock Gopher was selected from among several prototypes submitted by Saskatchewan supply chain companies as it offers a noteworthy value proposition to the minerals industry in both reducing GHG and other air emissions and enhancing safety in underground operations. It is currently under trial, and PMP is prepared to take commercial orders.

Selected from among technologies submitted by Saskatchewan companies, this award for the best prototype presents the most innovative emerging technology from the supply chain for the minerals industry in the province. The winning prototype demonstrates that it solves a significant problem for the minerals industry, offers a noteworthy value proposition, and will be commercially available to the industry this year.