

AWARDS 2019



The annual Mining Magazine Awards recognise outstanding **companies**, **projects** and **technologies** that have made a mark on the mining sector over the past year.

Exploration



Exyn Technologies

Exyn has created a technology that it says is revolutionising data collection for previously closed mines, leading to re-exploration. According to the company, the use of A3Rs (Advanced Autonomous Aerial Robots) for data collection is a win for all stakeholders: investors can reduce costs, companies can reduce environmental impacts and make better data-driven decisions, and people working in challenging environments are safer. Exyn believes that the combination of hardware, software and AI is the future of robotics.

Load and Haul



Metso

Leaning on decades of experience from rubber-lining truck boxes, Metso came up with its own unique 'one-piece' Metso Truck Body to fit directly on a truck. It is designed to increase hauling capacity and revenues while at the same time lowering OPEX and downtime for service. An optimised and lighter construction in high-strength steel allows for big savings in weight, while the module-based rubber lining takes on the lion share of the impact from hauling. The weight savings equals more payload and also contributes to a lower the fuel consumption of the truck.

And the winners are:

Software



Dingo

Dingo's Trakka Predictive Analytics solution utilises artificial intelligence and machine learning to predict impending equipment failures, allowing users to proactively perform corrective maintenance actions to minimise downtime and optimise asset life. These proven anomaly detection and failure prediction models were built by uniting failure data from actual equipment, Dingo's industry expertise, and data science to address common component specific failure modes and boast greater than 85% accuracy.

Safety



Hexagon

The HxGN MineProtect Operator Alertness System Light Vehicle (OAS-LV) is a fatigue and distraction edge computing detection unit. Using computer vision AI, it provides real-time monitoring of operator alertness inside the cab of all auxiliary and medium-sized mobile equipment, as well as in light vehicles, buses and semi-trucks.

In the event of distraction, drowsiness and microsleeps, drivers receive real-time notifications, allowing them to act, thus preventing an accident.

The in-cab device is easy to install and works in both light and dark conditions, and through prescription glasses and/or lenses. The OAS-LV device communicates and integrates seamlessly with the OAS-HV Analytics server.

Bulk Handling



FLSmidth

The first of its kind - a hybrid belt-over-apron feeder that delivers the advantages of both technologies, along with a low-profile loading deck and a completely modular design. The Hybrid Apron Belt (HAB) feeder is designed specifically for abrasive materials.

Technology



MineHub

It has built a technology solution with IBM that will help innovation and digitalisation within the mining and metals industry. MineHub Technologies is an innovative technology company focused on improving efficiency in the supply chain and bringing trust to the management and trading of natural resources. MineHub's core services digitise the key interactions between participants, bringing automation, cost savings, security, ESG and regulatory compliance to a large set of stakeholders.

The MineHub Platform offers comprehensive functionality by allowing miners to capture mineral digital contracts with buyers and streamline post-trade operations, including document flow, financing and logistics.

Mineral Processing



Clean Mining

In June 2019, Clean Mining launched a cleaner and safer processing solution for gold miners, which has the potential to transform the gold sector and responsible mining globally. The innovative and cost-effective solution replaces toxic sodium cyanide, used in gold processing since 1887, with an inorganic compound known as thiosulphate, which acts as a reagent when used with Clean Mining's innovative leaching and de-watering processes.

The low-environmental impact solution, originally developed over more than a decade by CSIRO, was proven in trial at an industrial scale before being launched and promoted to miners of all scales this year.

Drill and Blast

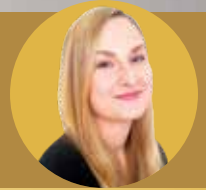


Teck and Maxam

Canadian miner Teck, as part of its efforts to improve water quality in the Elk Valley region in British Columbia, is piloting a new blasting process to prevent nitrate from entering the environment. The research project is supported by explosives provider Maxam and liner supplier Friesen Plastics.

In order to prevent the nitrate from interacting with water during the blasting process (as nitrates can leach out of blastholes into the natural environment), the project team is using plastic liners in the blastholes.

Editor's award: Inmarsat and Knight Piésold



In early 2019, Inmarsat joined forces with Knight Piésold UK with the aim to deliver highly accurate tailings dam monitoring, analysis and real-time management capabilities for the mining industry.

Inmarsat's satellite-enabled IoT solution was combined with Knight Piésold's industry-leading consultancy to enable smarter decision-making, improved safety standards and support regulatory compliance; offering a new approach to the way tailings dams are currently audited and managed.

Environmental Excellence



Komatsu

Komatsu partnered with Green Forests Work, a non-profit organisation dedicated to restoring mined lands in the Appalachian region of the US, to restore nearly 1,000 acres of forest over the next three years in West Virginia's Monongahela National Forest. The partnership aims to establish healthy, productive forests on the formerly mined land and to improve water quality in the Lambert Run watershed. Komatsu's partnership with GFW includes equipment loans, employee volunteers to plant, money to cover the costs of site preparation and tree seedlings, and shared advocacy of the need for mine reclamation methods that allow growth of natural vegetation and forests.

Service and Support



Stantec and Stratalis

Faced with negative yearly cash flows and major capital expenditures over the next five years, a global diversified miner wanted to use technology to improve the situation. The owner sought to understand and model the impacts new technologies would have on the operation. Recognising that the traditional method of applying technologies in isolation wouldn't lead to accurate results, buy-in or change, Stantec and Stratalis developed an innovative form of techno-economic modelling and digital twinning to maximise profitability and eliminate bottlenecks by applying the Theory of Constraints and 'technologies suites' to the digital twin.