Case study: Helping our customers reduce their environmental and social impacts

By providing a range of new products and technologies that supports our customers to reduce emissions, minimise the environmental impacts of mineral extraction, and work more precisely, efficiently and safely.

Demand for minerals like copper, lithium, nickel, manganese and cobalt, that are needed for electric cars, solar panels and other parts of the energy transition, is growing. The challenge is that these minerals are found deeper underground and are more expensive and complex to mine.

Orica has responded with a range of new technologies and products that support the improvement of mining methods through precision blasting, waste reduction, spill prevention and safety enhancements. Here are some examples:

WebGen™ 200: Improving precision and safety underground

WebGen™ is the first fully wireless system in the world that can communicate through hundreds of metres of rock, air and water to initiate precise (and therefore smaller) blasts. Mine personnel spend less time in the dangerous zones of a mine compared to traditional blasting systems because there are no downlines and surface connecting wires.

Fortis Protect: Lowering the impact of bulk explosives on waterways

Nitrate is a key ingredient in explosives, but it must be safely stored and handled to prevent groundwater pollution, environmental damage and risks to human health.

Orica has developed a Nitrate Risk Reduction framework that assesses the risk of nitrate loss at a customer site, benchmarks existing approaches against best practices, and recommends solutions to improve nitrate risk management. Meanwhile our Fortis™ Protect bulk explosives products use advanced surface chemistry and increased viscosity to significantly reduce the risk of nitrate leaching from blasting operations as well as post-blast nitrate/nitrite fumes.

Cyclo: Reusing and reducing waste oil from remote mine sites, while reducing emissions

Our innovative Cyclo™ service uses modular, relocatable units to process oil on mine sites and replace up to 50 per cent of the virgin diesel used to make emulsions with recycled oil. A greenhouse gas lifecycle analysis has also confirmed that the total lifecycle emissions of 'Cyclo' treated waste oil are 20 per cent lower than virgin diesel. This means our customers can simultaneously reduce waste and their greenhouse gas emissions.