

*Serious about safety*

Hexagon's operator alertness system combats fatigue and distraction

Picture the scene: You're behind the wheel of a bus transporting your co-workers to the pit along a winding, monotonous highway in the pouring rain. It's the same highway you drive every day and your eyes are heavy because you got almost zero sleep last night. Oh, for a nap ...

It's no secret that operator fatigue is one of the leading causes of accidents in mines. Heavy machinery, monotonous work, and long hours heighten the dangers. Combined with distraction, fatigue is said to be behind 65 per cent of accidents in open pit mines.

According to NIOSH (the U.S. federal agency, National Institute for Occupational Safety and Health) employee fatigue contributes to at least 20% of all workplace incidents and costs employers at least \$135 billion per year.

The OAS-LV detects operator fatigue and distraction, ensuring everyone gets home safely

HEXAGON SERIOUS ABOUT SAFETY

Hexagon AB, a global leader in sensor, software and autonomous solutions, is well aware of the risks its mining customers face. Operators are often

unaware of critical situations, so help detecting fatigue levels is essential to mitigate the associated risks.

In 2019, the company launched HxGN MineProtect Operator Alertness System Light Vehicle (OAS-LV). It's a long name for a product that will save lives. OAS-LV is based on the same proven technology used in its big brother, OAS-HV, which protects operators of haul trucks.

"Operator fatigue and distraction are recurring hazards in mining and other industries," said Hexagon President and CEO, Ola Rollén at the product's launch last summer. "OAS-LV is a valuable integration to our market-leading MineProtect safety portfolio and further proof that Hexagon — like its customers — is serious about safety."

OAS-LV EXPLAINED

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,

enabling full heavy- and light-vehicle fleet monitoring.

OAS-LV provides the most advanced remote operator alertness monitoring within a proven intervention framework, as well as performance measurement for pro-active decision-making and reporting. It features a web platform to continuously assess in real time the fatigue and distraction risks of individual operators and the complete fleet, allowing intervention, if necessary.

EXPANDING A MARKET-LEADING SAFETY PORTFOLIO

Besides integrating with Hexagon's MineEnterprise analytics and reporting portfolio, OAS-LV extends protection against fatigue and distraction to a mine's entire fleet. It expands Hexagon's market-leading MineProtect portfolio, which comprises systems for collision avoidance, fatigue monitoring, personal protection, tracking radar and vehicle intervention. Using 360-degree proximity detection, HxGN MineProtect Collision Avoidance System protects the operators of more than 35,000 vehicles in mines worldwide.

Hexagon firmly believes that the most important asset coming out of a mine are the people who make mining possible. Committing to a comprehensive safety portfolio might be the smartest investment a mine can make.

OAS-LV is the latest advance in helping customers pursue zero harm in their mines. And one more way to ensure that everyone gets home safely.

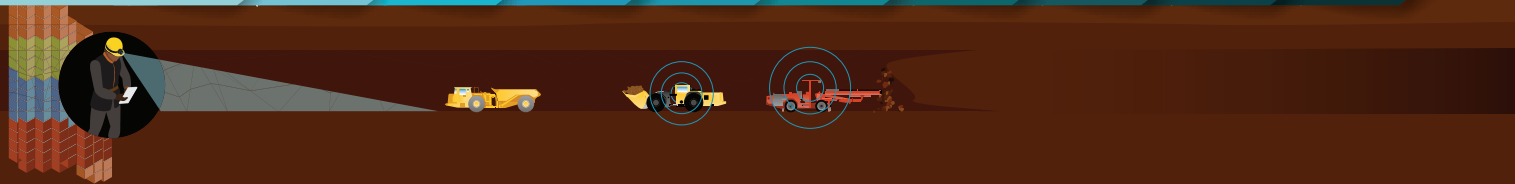


SOLUTIONS FOR THE LIFE OF YOUR MINE



24/7 SERVICES

EXPLORE PLAN PRODUCE OPERATE PROTECT SURVEY MONITOR ANALYZE REPORT OPTIMIZE



Empowering safer, more sustainable mining

As energy costs fluctuate, high-grade ores become scarcer, and profit margins tighten, productive mines recognize that technology is essential to their success. Companies must be smarter, safer, and quicker to respond to change. Their future depends on it.

Hexagon recognizes that the competitive edge of its customers depends on empowering an autonomous future by integrating, automating, and optimizing critical workflows.

This means smart mines that are efficient to operate, maximize safety and minimally impact the environment.