

MOZAL ALUMINIUM

ELEVATING SAFETY WITH GUARDIAN

Mozal Aluminium, a leading aluminium smelter producing approximately 575,000 tonnes annually, operates continuously – 24 hours a day, 7 days a week. With complex operations including the transport of molten metal and other intermediate products, Mozal faces significant exposure to vehicle interaction risks. To strengthen its proactive safety culture and mitigate these risks, Mozal deployed Guardian technology across its fleet.

Client problem

- 24/7 operations with year-round production
- Production vehicles transporting molten metal and other intermediate products create high exposure to risk
- Incident investigations identified fatigue and distraction as major contributing factors in vehicle-related events
- Needed a proven, non-invasive system to detect fatigue and distraction in real time and reduce safety risks



Guardian solution

- Proactive tool for improving fatigue and distraction controls, directly aligned with Mozal's and South32's rigorous risk management system
- Advanced algorithms accurately detect fatigue and distraction, delivering real-time alerts to protect workers from potentially fatal incidents in a high-risk industry
- Initially implemented Guardian in 2019 through a service provider transporting final product to port, where risk was heightened by public road exposure
- Results provided clear evidence of Guardian's effectiveness, prompting Mozal to expand its use to employee buses in 2023, before installing the system across 50+ internal vehicles in 2024

"Controls save lives."

Anna May Fauconnier-Williams, VPO, Mozal Aluminium

The results

- Reduced microsleep events by 93%
- Demonstrated clear improvements in other fatigue and distraction trends across Mozal's operations, including a visible reduction in mobile use related events
- Strengthened safety culture through real-time alerts and operator self-management
- Upskilled Mozal technicians as certified Guardian installation and maintenance specialists, building in-house capability to support ongoing deployment and servicing
- Increased competitive advantage as a mature safety leader, demonstrating greater control over critical risks
- Aligned with Mozal's and South32's strong commitment to eliminating vehicle-related incidents and safeguarding employees