

SMART CAP

CASE STUDY: LARGE COPPER MINING OPERATION IN EAST ASIA

SmartCap's installation at this open-cut copper mining operation in East Asia followed multiple successful deployments in Australian coal operations across the business's global portfolio. Fatigue had been identified as a potential hazard, with the mine's haulage fleet recognised as the highest-risk asset class.

Following the initial deployment to 38 mining trucks, SmartCap has since been additionally deployed to:

- the bus fleet responsible for transporting personnel to and from the local airport and around the mining lease
- the over-the-road truck fleets responsible for moving copper concentrate from the site to its final destination.



Original Install Date

SmartCap was deployed in September 2015, with full rollout to the mining operation completed in January 2016.



Number of Trucks and Drivers

The number of vehicles and drivers that benefited from each stage of the deployment are as follows:

Open-cut operation: 45 mining vehicles and 386 operators

Bus fleet: 15 buses, 2 light vehicles and 45 drivers

Concentrate truck fleets: 173 trucks and 250 drivers



Deployment Statistics

Over the past year, SmartCap's usage on this operation has totalled 316,000 hours and 11,430,000km of driving.

Broken down over the three different areas of the deployment, this equates to:

Open-cut operation: 240,000 hours (at 30km/h) and 7.2 million km

Bus fleet: 11,000 hours (at 30km/h) and 330,000km

Logistics: 65,000 hours (at 60km/h) and 3.9 million km

RESULTS

Statistics following this deployment show:

- There have been zero fatigue incidents for SmartCap operators across 3.5 years and 1.1 million hours of operation.
- There has been a 68% reduction in the fatigue alarm rate.
- Early warning alerts have resulted in 97.7% effective operator self-management actions.
- The SmartCap data has generated the business insight that there is an 80% increase in the fatigue risk alarm rate during the sub-zero winters compared to summer periods.