



# How Implementing Life by SmartCap eliminated driver fatigue-related incidents at AngloGold Ashanti's Iduapriem Gold Mine in Ghana

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## Introduction/Abstract

Driver fatigue, and the potential risks it creates, is an area of concern to fleet operators in many industries, including mining.

The Life by SmartCap fatigue monitoring system that RAMJACK Technology Solutions (RTS) implemented at AngloGold Ashanti's Iduapriem Gold Mine in Ghana has eliminated driver fatigue-related incidents at this mine.

## CHALLENGE

Fatigue in heavy equipment operators and drivers is more serious than many people realize; a fatigued driver can be as dangerous as a drunk one!

Because they usually have a sizeable fleet of very heavy trucks operating in close proximity to other vehicles and equipment, and sometimes miners on foot, open pit/surface mines are especially vulnerable to driver fatigue-related incidents that endanger the safety of personnel, cause damage to vehicles and other equipment, and disrupt production.

Iduapriem gold mine, with its fleet of 35 Caterpillar CAT 777 mine haul/dump trucks is no exception.

"We have had fatigue incidents on the mine in the past. We tried some other technology before, and have now moved on to SmartCap" – Stephen Asante Yamoah, Senior Manager: Mining – AGA Iduapriem Mine



## PLAYERS

The Iduapriem gold mine in Ghana's Western Region, an open pit-operation owned by AngloGold Ashanti.

**RAMJACK Technology Solutions (RTS)** – a specialized, systems integrator dedicated to operations technology for the mining

industry in Africa, Europe, and the Middle East

**SmartCap Technologies** – developers and manufacturers of the Life by SmartCap fatigue monitoring system.



## TECHNOLOGY

SmartCap products are predictive in nature rather than reactive, helping to prevent extremely dangerous microsleeps rather than only taking action after they occur.

The technology used in SmartCap's wearable fatigue monitoring devices is based on electroencephalography (EEG), as used extensively in medical circles. Unlike some other methods used in fatigue monitoring systems, EEG is not affected by glare, humidity, head turns, eye disease or behaviour.

The technology used in Life by SmartCap was validated by:

- The Monash University Accident Research Centre (MUARC)
- Austin Health Institute of Breathing and Sleep (IBAS)

Extensive field validation has been undertaken by participating SmartCap customers and analysed by experts from the Faculty of Medicine at the University of Chile.

## IMPLEMENTATION

Because the system is based on a few easy-to-use components, implementation of the Life by SmartCap is very simple.

1. The driver is supplied with a LifeBand wearable technology device that can be paired with headwear like a cap, beanie, or hard hat, or simply used on its own.
2. Life is downloaded to a suitable device, e.g. a tablet or smartphone.
3. The LifeBand being worn by the driver connects to the LifeApp via Bluetooth, and a speedometer-style view on the screen allows the driver to proactively monitor their fatigue levels via real time alerts, preventing microsleeps before they happen.

## RESULTS

*"Since the commencement of this trial at the operation where we've trialled it, we've had zero injuries and/or property damage as a result of fatigue-related incidents."* – R. Deane Macpherson, Senior Manager: Safety, Risk, and Training – Anglo Gold Ashanti Continental Africa Region

Absolutely no driver fatigue related incidents have been recorded at the Iduapriem Gold Mine since RAMJACK implemented the Life by SmartCap fatigue monitoring system at this location. The Iduapriem Mine has since commissioned a full deployment on 30 heavy vehicles and their 90 heavy equipment operators. Over the coming months, the deployment will expand to 72 vehicles and 216 operators. AGA has plans to embark on a corporate initiative with RAMJACK to roll SmartCap out to all their African operations.



## VIDEO

For more information on the Life by SmartCap fatigue monitoring system, watch this short video.

For more information on how Life by SmartCap can help you eliminate driver fatigue-related incidents, please send us a message using the Contact Us page and a RAMJACK representative will contact you.



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