

# Over 1 billion litres of fuel and oils annually authorised by nedap at australian mines

## CUSTOMER STORY

Every year over 1 billion litres of fuel consumption is registered and recorded in Australia's largest mining operations utilising Nedap's solution for long-range vehicle identification. FluidIntel's AdaptFMS is installed on 50 mine sites, including BHP Billiton, Rio Tinto, BMA Coal, AngloAmerican, Newcrest, Vale and Xstrata. AdaptFMS is the world's leading FMS for hydrocarbon management on mine sites. Nedap's TRANSIT was selected based on proven reliability in rugged and hazardous environments that the mining industry is known for.

### Specific requirements

For installation at mining operations an extremely reliable and accurate RFID reading performance was required. A system matching these requirements was needed to ensure accurate hydrocarbon management of all vehicles operating in the mine allowing for allocation of fuel consumption to the correct equipment. Additionally the system needed to be able to operate under the harshest environmental conditions as experienced in the mining industry.

### Reliable in harsh environmental conditions

Nedap's TRANSIT was chosen because it undoubtedly matches all of the criteria. The robust [TRANSIT readers](#) are built to withstand the harsh conditions encountered on the mining sites. The RFID readers, which enable automatic vehicle identification at distances of up to 10 m (33 ft.), are installed at hydrocarbon storage tanks located on different areas of the mining site.

The readers are integrated into the [FluidIntel](#) fuel management system (AdaptFMS) and especially designed in ruggedized housing to withstand the severest conditions.

The system's remote tank monitoring provides a graphic display of fuel and oil storage tank levels across any site. Each dispense transaction for every vehicle is registered with the Nedap TRANSIT system and automatically recorded and displayed in AdaptFMS.

Every equipment item (including all contractors and subcontractors, lighting plant, generators, heavy mining equipment), operating in the mine is equipped with Nedap's [Heavy Duty Tag](#). The ATEX-certified tag is installed on a wide variety of heavy duty vehicles such as haul trucks, dump trucks, excavators and cranes to record fuel transaction data for each vehicle on the mine. On bigger sites, the rolling stock is also fitted with a Heavy Duty Tag. This durable, weather proof protected tag is ideal for applications requiring reliable long-range identification in the toughest environmental conditions, such as the Australian mines. Some vehicles are also equipped with a Compact Tag or Window Button.



## Central Hub

FluidIntel's AdaptFMS is the central web-based hub that provides tracking of all hydrocarbon storage, deliveries, transfers and dispenses across one or many mine sites. Featuring a ruggedized 10" touch screen with solid-state construction, the AdaptMAC is the in-field access point to authorize users and equipment, buffer and relay tank levels and recording transaction data. The system can monitor any number of products at any one dispensing point. It allows for simultaneous dispensing and deliveries and will authorise thousands of equipment items and/or field users.

## Track hydrocarbon consumption

By monitoring how much fuel the equipment uses, it is possible to pinpoint exactly where the fuel dollars are being spent. The system accurately determines burn rates, calculates running costs and makes decisions that will contribute to cost savings. By capturing engine hours, companies can accurately budget for fuel and proactively plan maintenance. All hydrocarbon usage, storage levels and alarms can be monitored anywhere. Automated tank gauging provides up to the minute inventory levels and facilitates comprehensive stock management.



“Automated tank gauging provides up to the minute inventory levels and facilitates comprehensive stock management. But the captured data is only as good as the instrumentation used to measure it. To ensure efficient FMS data collection only the best technology was selected, which could operate under the challenging and harsh environments encountered in the mining industry throughout Australia. The requirements were a very accurate detection accuracy on a wide variety of mining vehicles such as haul trucks, rigid dump trucks and other vehicles especially engineered for use in the mining environments. The TRANSIT system could resolve this, and facilitates the large scale rollout. Over hundreds of readers and thousands of tags are in use.”



Evelien O’Sullivan, sales manager Asia Pacific for Nedap Identification Systems.

“AdaptFMS provides live tank monitoring and registers all fuel transactions into and out of any tank. The RFID tag system will only allow authorized equipment to refuel with the transactions allocated to the correct equipment item and/or contractor. Using Nedap’s TRANSIT improves fuel usage data accuracy, eliminates the ‘human error’ factor and ensures that only authorized vehicles have access to fuel”



Adam Dennis from FluidIntel.