

## Innodisk Case Study

**Title:** SSD Stabilizes Operational Flow for Mining Fleet Management

**Company:** Australian Mining Company

**Project:** Mining Management System



### The Situation

An Australian mining company had challenges with the transport and communication procedures between their vehicles, mining operation hubs, and their mineral processing plant. Their procedures and monitoring engagements were no longer effective, especially when mining dig sites could potentially move further away from operation hubs and processing plants. These methods made it difficult to maintain an operational flow of information and ensure efficient communications at each mining phase.

As a safe guard, the company moved from a paper system to digital data management. This transition did improve efficiencies in operations and communications, such as routing systems that calculated distance and distribution frequency for the production load, and vehicle tracking control by collecting logged information at different vehicle locations. Moreover, it allowed fleet management to communicate more effectively with drivers, track vehicles, and generate more productivity for the control center.

The client developed a mining management system with a customized PC on the dashboard of the vehicle. It monitored their location to the hub and the mining plant as well as communicated all data to their control center. For this type of system, the customer used a commercial SSD device for storage that was unreliable due to the constant vibration of the vehicle in motion. Also playing a factor were the harsh environmental conditions. The cold, dusty and humid locations, affected their in-vehicle systems, which cause frequent instability.

The commercial grade SSD device they chose did not perform under the stringent environmental challenges that existed and was not able to provide the real-time data needed to monitor all aspects of their in-vehicle fleet process.



## **The Solution**

The company presented their situation to our Innodisk team outlining their communications and in-vehicle performance factors. It was clear that they needed monitoring of:

- The GPS tracking log
- The equipment status
- The vehicle engine code
- The imaging of recorded and data related driving behaviors
- The access to the storage device systems that back-up and replace the data

Given the current issues and the storage requirements by the client, our Innodisk team suggested the industrial-grade SSD SLC with wide-temperature for their system. Innodisk's SLC was more reliable because it offered 60,000 times the P/E cycle, a wide temperature (-40°C ~85°C) supporting a wide range of environment conditions, and the industrial-grade SSD device was resistant to shock and vibration. These features were critical with collecting data, backing up data storage, and providing real-time monitoring of communications. In addition, understanding that this had to be a long-term solution, the team provided a 5-year lifetime warranty and technical support services.

## **The Pay Off**

Innodisk SLC solution effectively solved the reliability and performance issues of the company's system. It provided stability and reduced the vehicle's operation down time due to extreme over use and harsh environmental conditions. It also ensured quality data control, monitored accessibility and managed the storage capacity. Because these factors are key components of effective fleet management, ultimately it provided increased productivity. Additionally, the long-term warranty provided the client with maintenance support. Innodisk's BOM-control service ensured ongoing support of fixed products and it avoided any compatibility issues due to component replacements.