



Case study

Light vehicle fleet study

Client: Copper-gold mine operation **Location:** Papua New Guinea **Duration:** March-July 2018

Context

Our client's greenfield copper-gold mine is in the feasibility phase and, if developed, will be the largest, deepest and most complex underground mine in the country. Leaders identified the current condition and operating costs of its light vehicle (LV) fleet were not sustainable to meet future operational needs. Minset was engaged to undertake a desktop study to evaluate the fleet's performance and provide insights into maintenance services and the options to procure a new fleet. With LV fleets often a lower priority to heavy vehicles in mining, this formed a new area for the business to deliver further performance improvement.

Approach

The study covered three phases:

- ▶ A finance and work management data assessment on the current fleet's maintenance practices and performance to identify improvement opportunities and recommendations
- ▶ Development of an LV management strategy, from procurement to disposal
- ▶ Development of new criteria and standards to improve safety and performance – then using these standards to recommend replacement LVs across the operation

Minset drew on insights from work with mining LV fleets at other mining operations as an initial benchmark. The result provided clear visibility of issues and impacts on productivity, including analysing the impacts of off-site servicing. Recommendations were tailored to the mine's specific context to improve safety, efficiency, availability and cost performance. This included reviewing the nature of third-party supplier services and the transparency and quality of their offers. The ultimate criteria and standards provided a measurable foundation for improvements and guidance on best-matched vehicle replacement options, supported by a transition plan. The study considered team, market, financial and regulatory factors to deliver a holistic approach aligned to the mine's long-term surface and underground needs.

Results

Physical

- ▶ Identified measurable opportunities to improve average fleet availability by at least 17% and maintenance costs by potentially 20%
- ▶ Confirmed the value of plans for an on-site LV workshop to reduce risks and improve productivity
- ▶ Provided financial and decision-making parameters to support vehicle replacement
- ▶ Recommended replacement LVs by manufacturer and model

Process

- ▶ Identified key issues to support focused action for maintaining and replacing fleet
- ▶ Confirmed value in embedding a preventative maintenance culture and approach
- ▶ Provided priority-based criteria to support ongoing vehicle assessments to trigger disposal and replacement
- ▶ Delivered a new LV standard for procurement of new vehicles to meet industry safety standards and business requirements

People

- ▶ Reorganised team structure, leadership and roles to support the sustainability of improved maintenance practices

