MINSET

YOUR PERFORMANCE ADVANTAGE

# Case study

## Mobile equipment service strategy optimisation

**Client:** Gold producer **Location:** Victoria **Duration:** April-October 2017

### Context

Due to our client's brownfield expansion, asset performance was ripe for optimisation. With the site using equipment supplied by multiple original equipment manufacturers (OEMs), of varying ages (including key production equipment of ages exceeding 10 years), the servicing strategy needed review. Key production equipment units were being serviced based on both time and utilisation, contributing to 'over servicing' and presenting a significant opportunity to reduce costs and improve fleet uptime. Existing service strategies also required the use of contract maintainers, creating additional, preventable costs.

### Approach

Minset's scope focused on reviewing the equipment service strategy for the main fleet (development and production drills, trucks, loaders and charge-up equipment) and exploring varied strategies based on the fleet's age and performance. This included initial observations to identify service quality and workgroup productivity opportunities, and a review of fleet service strategy documentation and performance data. The result was a new strategy shifting from partially time-based servicing to a total utilisation-based approach. The Minset team prioritised the mobile equipment that was creating the greatest production bottleneck, and developed an implementation plan to align teams on new processes as well as stage changes effectively. This work was supported by an improved daily inspections routine and initiatives such as restructured and streamlined service sheets to improve efficiency. The review also revealed that the defect capture process was inadequate, resulting in excessive unplanned corrective maintenance work and increased equipment downtime. In response, a complete revision of that process was delivered in parallel.

### Results

**Physical**

- Approx. $1.4m saved per year in servicing costs for development and production drills, haul trucks and loaders
- Fleet uptime improved by an estimated 6,300 hours across the fleet annually
- Production potential expanded by approx. 300 development and 3,800 production metres per year
- 9,936 hours saved in maintenance per year
- 6,456 hours eliminated in planned equipment downtime per year

**Process**

- Defect rectification improved, with labour time freed to enable 36% of previously critical (breakdown) tasks to be converted to non-critical (unscheduled) tasks for the period
- Over-servicing decreased, leading to cost savings in parts and labour and exponential increases in production output
- Servicing-related mine traffic reduced significantly

**People**

- Maintenance resource requirements reduced and time for corrective work increased
- Knowledge transfer program delivered to support continuous improvement
- Engagement activities delivered, supporting high levels of commitment by work groups and key stakeholders