

Client Reference

Mining | Underground Coal Mining On Key and Reliability Service

Primary equipment availability increases and sustains:
Enhancing equipment reliability in underground mining
through lifecycle component tracking with On Key.

92.7%

Asset availability

Realtime

Decision-making

Key challenges

- ▶ In the harsh and demanding environment of underground mining, the reliability of mobile and fixed equipment is critical.
- ▶ Frequent component failures, unplanned stoppages, and limited visibility into component lifespans made it difficult to maintain production efficiency and control maintenance costs. This lack of visibility also hampered planning efforts and limited risk mitigation for assets and components.
- ▶ A significant portion of maintenance activities were reactive, resulting in frequent unplanned breakdowns, production losses, and elevated repair costs.

Our approach

- ▶ Our team addressed these challenges by leveraging the adaptability of On Key and its Insights reports.
- ▶ We expanded the use of custom fields, and components were added under the asset tree with tracking information to support the creation of custom reports and dashboards.
- ▶ This significantly improved visibility into component performance.
- ▶ With access to this data, our reliability engineer was able to generate targeted reliability reports, identify equipment risks, and implement action plans to mitigate failures and enhance equipment reliability.



Value add

- ▶ Using On Key's Lifecycle Component Tracking reports and dashboards, the team could monitor component performance across the fleet in realtime. The platform delivered detailed insights into usage hours, failure patterns, and historical replacements, enabling more proactive, data-driven decisions. As a result, the main piece of primary equipment, the continuous miner, achieved an average availability of 92% over the past year.
- ▶ Impactful decisions enabled:
 - ▶ Data-driven component replacement: Maintenance intervals were optimised using actual wear-and-tear data, significantly reducing both premature replacements and unexpected failures.
 - ▶ Improved equipment availability: The ability to track high-risk components enabled teams to schedule maintenance proactively, improving asset availability.
 - ▶ Strategic lifecycle costing insights: Better insights into component lifecycle costing support informed decisions on replacement and refurbishment strategies.

Client background

Our client is a significant player in the Mpumalanga coal mining sector, operating as a contract mining company near Ogies.

Their operations rely heavily on the performance and availability of critical mining equipment, including continuous miners (Komatsu Joy and Sandvik MC4xx machines), shuttle cars, roof-bolters, and feeder breakers. Ensuring the reliability of this machinery is paramount to achieving production targets and maintaining a safe working environment.

