



Above Century Mine, Queensland, Australia

**Like many brownfield mining and processing operations MMG is striving to extract maximum value from its assets by increasing utilisation and efficiency and reducing costs for both fixed and mobile plant.**

Ausenco Rylson has been working successfully at Century to reduce the site's operating costs without jeopardising reliability of the assets. We had previously spent some time at Century and were confident of being able to achieve significant savings.

In fact we were so confident that we agreed to undertake a Cost and Reliability Optimisation Project under a performance based contract – essentially if we didn't achieve at least 10% savings in site maintenance costs we would not get paid!

As a starting point we worked with Century to agree key performance targets set against maintenance costs, trade productivity and equipment reliability. Based on those targets we completed a review of Century's cost performance, future requirements and maintenance strategy.

From this review cost and performance were baselined and this formed the foundation of a gap analysis where opportunities for improvement were identified and presented to MMG for consideration.

Following the gap analysis a list of cost reduction initiatives were presented to Century. These cost reduction initiatives were supported by detailed processes and methodologies to demonstrate how the outcomes would be achieved within the required timeframes. After reviewing and agreeing the cost reduction initiatives the project then moved onto the optimisation phase.

The Ausenco Rylson project team ran the agreed processes for all critical assets using **Rylson8**, Ausenco Rylson's proprietary enterprise asset management system. This system allows us to test savings identified against the additional risk created for the business. After the optimisation phase was complete we had identified significant cost savings with minimal increased risk to the business.

In conjunction with the budgeting exercise the site Work Management System (WMS) was updated to improve planning and scheduling of maintenance activities across the site.

Also, importantly, a program of mentoring, training and guidance was implemented to up skill the existing work force. As part of this program short term and long term productivity goals were set and agreed. This will lead to increased productivity of the workforce.

# Optimisation of MMG's Century Mine Mobile Fleet and Processing Plant

Figure 1 demonstrates that we can quantify the risk level associated with optimising operational hours. From this task risk analysis MMG could determine the risk they are willing to carry at Century Mine.

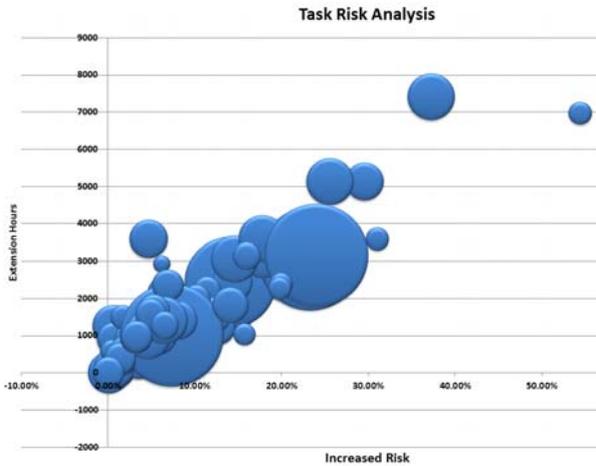


Figure 1 - Visualisation of risk enables the client to set its maximum risk exposure

From the outcomes of the optimisation phase a fully detailed activity based budget was developed for all mobile and process plant assets over the life of the operation. Historical data was analysed to understand where component life could be extended to extract maximum value from each piece of equipment.

Figure 2 shows that we use a systematic process to analyse each maintenance task and extract maximum value.

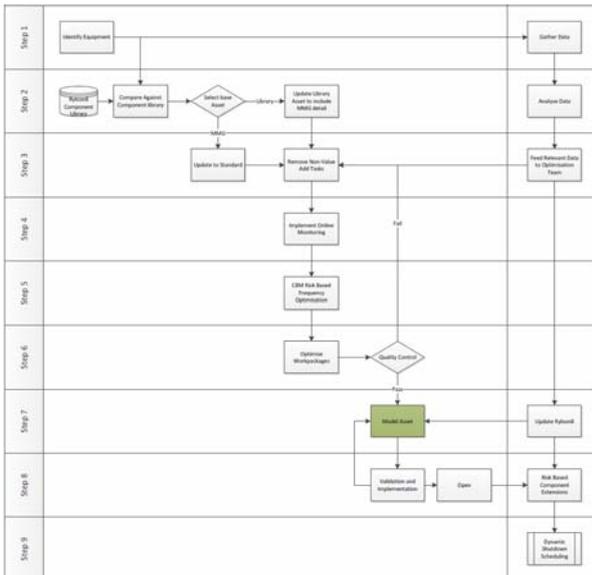


Figure 2 – Ausenco Rylson Methodology

Ausenco Rylson's cost reduction initiatives enabled Century to reduce lifecycle plan costs by tens of millions of dollars. Ausenco Rylson implemented a program that will provide a sustainable 17% reduction in lifecycle plan costs far exceeding the initial target of 10% cost reduction.

Figure 3 shows the 17% savings in lifecycle plan costs, a direct result of the Ausenco Rylson Cost and Reliability Optimisation Project.

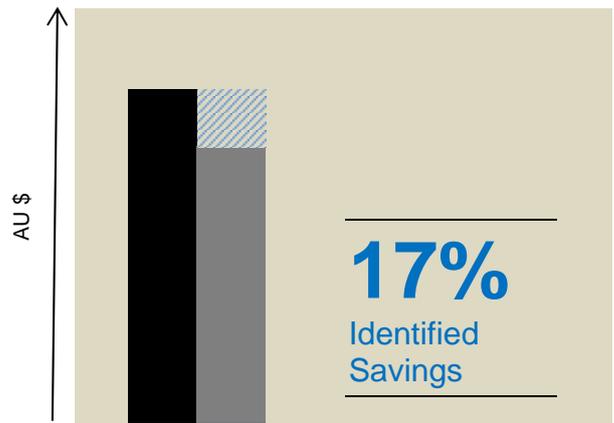


Figure 3 - AU \$ Savings

The 17% cost savings was found by focusing on key target areas to maximise component lives and reduce maintenance spend (while minimising risk).

The key areas targeted during the optimisation phase included the removal of non-value adding tasks, risk-based analysis of task frequencies, risk-based analysis of component lives, a review of labour productivity and dynamic management of future shutdown schedules.

By utilising our specialist asset management and reliability engineering capabilities, Ausenco Rylson has helped Century deliver a 17% reduction in costs. This has been achieved through targeted analysis of Century assets, review and optimisation of the maintenance program based on a fully transparent view of the associated risk profile and by assisting Century in driving the initiatives through to implementation.

The processes, techniques and experience we have brought to Century are equally relevant for any asset, or industry, in any location. We are confident that our approach can show the same benefits to any party committed to delivering a sustainable reduction of their direct operating costs.