

Problem Statement Worksheet – Monalco Mining

What are some reasonable ways to cut down on Monalco's operating costs to more closely match the market price of iron ore?

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1 Context

Monalco Mining has invested more capital into increasing their production rate in order to meet market demand. However, the market price of iron ore has dropped from \$110 per ton to \$55, because of rapidly increasing supply. Our current operating costs are at \$50 per ton, and the objective is to reduce these operating costs in order to increase our profit. The target goal of cost reduction is expected around 20%.

2 Criteria for success

Our goal is to correctly identify areas of spending that can be reasonably be cut down on, in order to meet Monalco's goal of a 20% reduction in costs.

3 Scope of solution space

Results of data analysis.

4 Constraints within solution space

- **Resistance from the reliability engineering team**
- **Minimum of at least one maintenance event every 50,000 tons of ore processed**

5 Stakeholders to provide key insight

- Reliability Engineer
- Asset Integrity Manager
- Maintenance SME
- Principal Maintenance
- Change Manager

6 Key data sources

- **Data Historian** – provides data regarding the performance of the new ore crushers
- **Ellipse** – provides information on old work orders for equipment before production was improved upon
- **SAP** – provides information for equipment logs and work order requests for the new equipment
- **T3000 DCS**
- **Ore Crusher System**

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