**Problem Statement Worksheet (Hypothesis Formation)**

**How Monalco Mining can reduce operational costs within this year, by reducing 20% of the maintenance costs and maintain profitability?**

**H**

Context

Monalco invested heavily in equipment to meet demand for iron ore after prices went to $110/ton. While trying to catch-up with the market needs, the now they have a surplus of supply. By increasing the supply, the demand has been met and pushed down prices where there is a profitability risk. Operational expenses must be reduced to account for future market shift and maintain profitability.

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Constraints within solution space

* Need one maintenance event every 50,000 ton
* Iron ore price ( at $50/ton operating breakeven)
* resistance from the reliability engineering team

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Criteria for success

* Reduce maintenance costs by at least 20%
* Maintain profitability

Stakeholders to provide key insight

* Chanel Adams – Reliability Engineer
* Jonas Richards – Asset Integrity Manager
* Bruce Banner – Maintenance SME
* Jane Steere - Principal Maintenance
* Fargo Williams – Change Manager
* Tara Starr - Maintenance SME

Key data sources

* Data Historian: ore crusher tonnes processed
* Ellipse: old work orders
* SAP: work orders requests and equipment log

Scope of solution space

* Reduced the use of the ore crusher, given the decreasing demand
* Conduct maintenance for the ore crushers every three years, instead of every year

**E**

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