

# Problem Statement Worksheet (Hypothesis Formation)

**How can Monalco Mining reduce operating cost by at least 20% over one year. Reduction in ore gathering, maintenance of ore crushers, and other expenses so the company can be profitable until prices are back up.**

## 1 Context

Monalco Mining being one of the largest iron mining company invested heavily into iron resources in Bass-Shingle Basin in West Australia. At the time demand for iron was \$110/ton thus they invested heavily into operational and maintenance costs to gather these iron ores but since prices have plummeted to \$55/ton

## 2 Criteria for success

Profit margin is increased and exceeds cost of operation of business. Company is able to reduce overall operation cost by 20% within one year

## 3 Scope of solution space

Reducing iron gathering, maintenance of ore crushers, and wear on the ore crushers.

## 4 Constraints within solution space

Most likely lack the resources to both increase profits and reduce operational costs. Hard to reduce worker hours and cost of iron gathering as this impacts workers who seek more pay. Might lead to reduction of total iron gathered for future and effect future profits if demand and need for iron increases and competition dies down. t

## 5 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, Chris Hui

## 6 Key data sources

We need to know how much iron is being gathered and each ore crushers maintenance logs. We need to consult on the reduction of maintenance of the ore crushers.