Problem Statement Worksheet (Hypothesis Formation)

How does Monalco Mining company push to reduce maintenance costs from the forecast 45M to 30M of previous year and keep operating costs break-even due to the low future ore price?

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1 Context

Monalco Mining, a large iron ore mining company, has invested a lot money in ore crushers to maximize production due to high demand in the market and high price $110 per ton averaged. Prices has dropped to $55/ton now and the operating break-even is around $50/ton. The managements need to have spending discipline and cut operating costs to acceptable level to make profits this year.

2 Criteria for success

- Spending discipline will be exhibited to reduce the number of maintenance work requests;
- The corresponding costs need to be reduced and scaled back to 30M instead of the forecast 45M due to the low price now

3 Scope of solution space

20% reduction of overall operating costs will be enough and acceptable to keep break-even.

4 Constraints within solution space

Excess-wear of ore crushers is the key concern due to the operations beyond the limits of the equipment and one maintenance is a must for every 50,000 tons of iron ore processed.

5 Stakeholders to provide key insight

- Chanel Adams (reliability manager)
- Jonas Richard (Asset integrity manager)
- Bruce Banner (Maintenance SME)
- Jane Steere (Principal Maintenance)
- Fargo Williams (Change manger)
- Tara Starr (Maintenance SME)

6 Key data sources

- Data Historian
- Ellipse
- SAP
- T3000 DCS
- Ore crusher system

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