Monalco Mining Problem (Hypothesis Formation)

What opportunities exist for Monalco Mining to reduce annual operational costs by at least 20% by the year 2019 through reduction of required maintenance expenditure?

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1 Context

As one of the world's largest iron ore mining companies, Monalco Mining has invested on upgrading its ore-crushers with high maintenance costs to meet the increasing demand for iron. However, increased market supply has dropped the price of iron from $110/ton to $55/ton, close to the break-even value of $50/ton. According to calculations, cutting annual maintenance costs and limiting equipment use to prevent excess wear can reduce costs by at least 20%.

2 Criteria for success

Annual ore-crusher maintenance costs will be deducted by at least 20% within a year.

3 Scope of solution space

An increased discipline in applying the OEM guide limits for ore-crushers to 1) reduce maintenance costs by 20% 2) reduce to maintenance of every 3 years 3) efficient and mindful use of equipment to prevent excess wear.

4 Constraints within solution space

Resistance from the reliability engineering team.

The recommended OEM limit of one maintenance event at every 50,000 tons of iron ore processed.

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

6 Key data sources

Data historian - includes the amount of iron ore processed using ore crushers
Ellipse - old work orders for maintenance before upgrade to SAP
SAP - includes recent work order requests raised for maintenance