



Smart Solutions

Case study: Maximizing equipment capabilities

Application: *Surface – iron ore*

Location: *Africa*

Products featured: *P&H 2800XPB's*

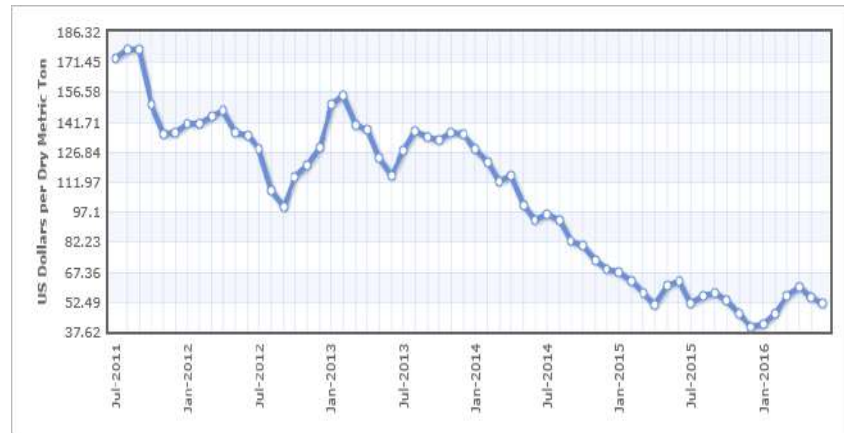
Challenge: Fleet productivity improvements

Falling commodity prices have forced mining operators to do more in their day to day operations with less

A Smart Solutions team worked with management to identify improvement opportunities and help eliminate waste

Contributing factors:

- Budget adjustments and reductions
- Declining ore grades
- Workforce turnover



Engagement process: Understand value in the eyes of the customer

A cross functional Smart Solutions team made up of maintenance, production, and commercial representatives worked with the customer to identify and prioritize key issues / opportunities

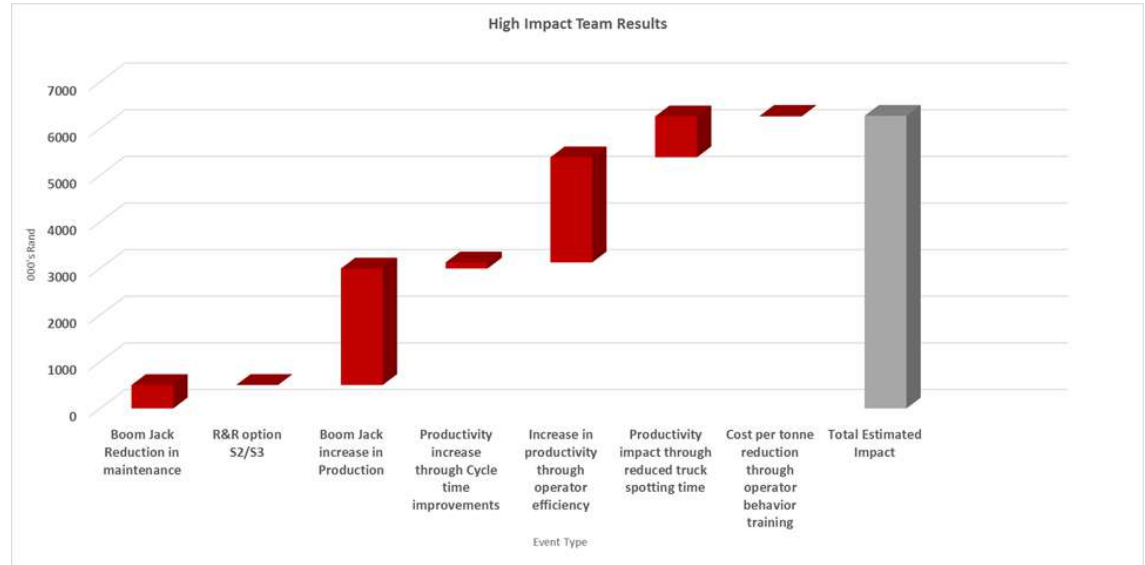
Fundamental to this engagement was the co-development of scorecards and KPI's, along with daily engagement with both mine management and operations



Solution: Prioritization and root cause analysis

Teams identified more than 100 opportunities for improvement across all aspects of the operation

A High Impact Audit identified several production improvements to provide the customer the largest return on investment



Results: Continuous improvement

Modification, training and reinforcement of operator practices resulted in an improvement of:

Tons per hour due to lower cycle time: **↑ 2.8 %**

Tons per hour due to improvements in operator efficiency: **↑ 7.2%**

