



DELIVERING VALUE BASED PERFORMANCE - GETTING THE MOST OUT OF YOUR EXISTING MINING AND PROCESSING PLANTS

ENSURING “MINE TO MILL” SUCCESS

The resource industry continues to face challenges surrounding the need to reduce costs and increase performance, all within strict resource limitations. Knowing where and how to focus those precious resources is a critical component of the overall strategy.

“Stability, Capability and only then Capital” - Continuous Improvement Mantra.

A proven journey to success is to first focus on the stability of the process, followed by “Mine to Mill” optimization and finally determination of proper equipment sizing in preparation for any capital expenditure. This accelerated program delivers timely results within a one year cycle through intensive analysis, a ready-to-go support team and a practical implementation approach.

ASSESSMENT

The outcome of the assessment will provide a customized implementation and improvement roadmap. Key elements of the assessment includes:

- Evaluating the impact of systems and people on driving improvement.
- Understanding where the losses are and how the losses move from process to process (variation and constraints).
- Defining the core problem(s).
- Lay out the road map and building the improvement plan, including internal / external resources required.

STABILITY

Improvement can only be achieved and sustained with a proper foundation of stability. Stability starts with identifying the main sources of variation (x’s) and improving their respective interactions with systems and people.

- A series of Continuous Improvement events are set-up to quickly and effectively understand problems and have the team generate sustainable solutions.
- Following the proven “Define, Measure, Analyze, Improve and Control” approach will lead to an understanding of the biggest sources of variation and allocating appropriate priority.
- Bottleneck identification through data analysis and simulations.

CAPABILITY

The key is to understand and optimize the relationship between mining and milling. This typically includes:

- Geo-metallurgical study and planning including sophisticated ore evaluations of new mill feed for different ore types.
- Ore Sorting and Blending for improving the economics of ore stock for enhanced recovery, reducing impacts of deleterious minerals and reducing feed variation.
- Establishing, planning and optimizing future plant running conditions based on block model/ LOMP simulation.

CAPITAL

Only after appropriate effort is applied with improving the Stability and Capability of the process should new Capital be considered. This activity includes the evaluation of the optimum sizing for critical equipment and optimized running parameters.

A detailed review and update of process bottlenecks is also required. This step identifies and quantifies the magnitude of the main and secondary bottlenecks through constraint theory and modeling. Capital investment is understood and optimized.

ACADEMIC AND GOVERNMENT

NSERC CRD grants aim to develop experience and expertise of future professionals in their respective fields. This program comes with support from McGill University’s Mining and Materials Engineering Department.

The Canadian Government believes in this innovative initiative with reimbursement of up to \$2 for every \$1 spent in combined cash and in-kind expenses.

FOR MORE INFORMATION

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