

# Managing Continuous Improvement of Mine to Mill begins with Measurement

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Keywords: Mine to Mill, Continuous Improvement, Measurement, Blast Movement, Blast Fragmentation

## ABSTRACT

All mining operations, including iron ore, maintain a focus of continuous improvement and asset optimisation in their operations. As all the operations in the Mine-to-Mill value chain are inter-dependent, available technologies that address efficiencies across the value chain are once again in the spotlight as companies are driven to improve productivity and maximise mine site profits to increase return on capital invested.

Core to continuous improvement is the need to understand the baseline and the impact of changes to the process. In this paper, we discuss some of the key attributes in the mine to mill process, including their influence on productivity and cost, the need for direct measurement and areas where they should be applied. Many initiatives can be considered to improve mine to mill processes.

Mining operations are planned and executed based on designs and models to achieve the operation's objectives. However, there are many variables in the different parts of the value chain, such as blasting, material handling, crushing and screening. Measurement of the key attributes establishes the baseline for Mine to Mill (or Pit to Plant) performance which is necessary to understand the impact of any proposed improvements to the process design and execution and to monitor the outcomes on an ongoing basis to sustain the improvements that have been implemented.

We have focused this paper on two types of measurement – blast movement and particle size of materials through the mine to mill process. Several innovative technologies are already available to measure these attributes and assist operations improve productivity and mine site profits.