



Building materials

This use case demonstrates how Qnum Analytics can significantly reduce inventory shrinkage losses and increase operational productivity for the bulk building materials industry. Qnum Analytics' OI Platform applies state-of-the-art stockpile survey technology that automates 85% of the measurement process to drive enhanced accuracy while saving valuable time.

Overview

A producer of high-quality silica which is used in the production of glass and graded sand was purchased in 2006 by a dominant player in the glass and building industry. The investors introduced stricter controls and wanted a significant improvement in operational efficiency. The silica producer had been struggling for a couple of years with accurately accounting for and containing inventory shrinkage losses.

The silica production operation relied on manual stock survey methods that took days to complete. The surveying of the multiple stockpiles across the plant using archaic methods meant that physical stock level verification was done only once a month. As a result, the business was unable to control waste and theft during the month. Excessive variances between financial records and physical stock on the floor would be reported at the end of the month resulting in costly inventory write-off losses.

Qnum Analytics was requested to analyse the end-to-end silica production operation and digitise inventory data points to provide real-time visibility. In addition, Qnum Analytics was to employ the stockpile survey technology to drive physical stock verification daily thus enabling financial and audit controls that systematically eliminate discrepancies and inefficiencies at source.

Results

The OI Platform, which is a Software-as-a-Service (SaaS) platform designed to provide real-time stock visibility, continuous stock reconciliation, and the AI-driven identification and elimination of process inefficiencies was implemented for a 2-month paid trial.

Bottom line impact:

- 56% reduction in inventory variances.
- \$289,400 savings in inventory write-off losses caused by waste and theft.
- 85% saving in the time spent by key resources conducting financial reconciliation and manual stock counts.



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Approach

1. The silica producer enlisted the assistance of Qnum Analytics in providing a means to gain access to accurate inventory insights in real-time while enabling controls that allow for the management of variances daily.



2. The success criteria agreed for the trial were to:

- Provide end-to-end visibility of stock movements
- Unlock real-time stock level insights
- Control operational inefficiencies and increase productivity



3. At the end of the trial period results were analysed:

- The Financial Manager could continuously reconcile inventory using the built-in process controls which allowed for the proactive management of variances that lead to inventory write-off losses.
- The operations staff saved a lot of time due to the adoption of stock survey technology.

Concluding remarks:

The following inventory management practices were exposing the business to unnecessary losses in terms of shrinkage and productivity:

- The silica producer employed an Enterprise Resource Planning software that could only track inbound and outbound material transactions, which left a massive blind spot in internal material management.
- The outbound transactions could not be verified against any other system of record which opened opportunities for theft.
- The stock survey technology deployed relied heavily on human intervention resulting in errors.