Qnum Analytics Case Study

How Timely Access to Reliable Inventory Insights Unlocked Tighter Operational Controls during the COVID-19 Pandemic

Overview

Qnum's Operational Intelligence Solution helped the Largest Producer of Sodium Products in Southern Africa navigate through the negative effects of the COVID-19 pandemic. The ability to have real-time visibility of inbound, internal, and outbound stock movements enabled a capacity to isolate and control issues at source while elevating accountability.

The following landed benefits were unlocked for the client:

1. Reduction in costs related to product quality and delivery issues
2. Increased meeting of monthly tonnage output targets
3. Reduced occurrence of material stock-outs

Background

In response to the COVID-19 pandemic our client was exploring opportunities to stop the bleeding and drive the sustainability of the business.

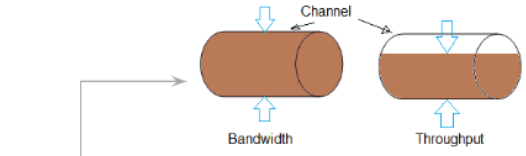
Our client has invested significant time and resources in attempts to resolve the stock challenges. Investments in various scanner survey systems from different providers has yielded more frustration with inconsistent physical stock measurements produced or malfunctioning of devices periodically. Additionally, the data capture at different points in the operation has proven to be a challenge to collate in a timely manner for reporting purposes. The above issues limited timely access stock-related data that is critically required for business decision making.

Core Challenge and Business Impact

The fragmented data recording practices were limiting our client's ability to access critical inventory data. This challenge impacted on the business's ability to proactively manage product output performance as well as contain operational costs. With a throttled throughput and an inability to isolate and address waste in a timely manner the business was at risk during the pandemic. Key changes needed to be made. The diagram below captures the core challenges and the financial impacts.

High-Level Challenge Areas

1. **Limited ability to timeously access operational data**
   a. Dispatch and material receipts data is handled multiple times in the preparation of reports (excel spreadsheets)
      i. Risk of errors
      ii. Delays in accessing inventory information
   b. Internal material movement data currently not recorded
      i. Change in product value due to spillages or damage may not be correctly accounted for
      ii. Risk of stock balances being inaccurate
2. **Limited ability to proactively track and control process variability**
   a. Delays / limitations in sourcing operational data making it difficult track operational deviations
      i. Planned sales vs. actual (dispatched tonnage variance)
      ii. Inventory level variance (theoretical vs. actual)
      iii. Material receipts variance
      iv. Product quality variance



Business Impact

Higher cost per ton output

Constrained Revenue

Solution Implemented and Landed Value

Enter Qnum Analytics with its OI Solution (Inventory Control Solution). The OI Solution was able to integrate core data from the product testing laboratory, dispatch room, production control room and the current ERP system to provide a dashboard that displayed all key operational data on a single screen.

This centrally available data allowed the Sales, SHEQ, Inventory Control, and Finance departments to have enhanced control over the plant operations. The departments were able to leverage the following business performance indicators to detect issues sooner and resolve them:

- Dispatch volumes to clients - *planned vs. actual*
- Inventory level - *theoretical vs. actual*
- Product quality incidents per month
- Operational safety incidents per month

With these controls in place the following results were observed:

- 90% reduction in variance between theoretical and actual stock levels
- Monthly sales target achieved (dispatched sales) - 116%+ for the first 3 months of solution use
- Significant reduction in procurement costs - *less stock-outs*
- Zero safety incidents for the first 3 months of solution use