

Ensuring Inventory Accuracy Through Data-Driven Precision

ABOUT THE CUSTOMER

Our client is a prominent retail organization that operates numerous partner stores across a broad region. They depend on accurate, real-time inventory data to drive efficient supply chain operations, reduce losses, and support informed business decisions. With multiple inventory systems in place, achieving consistency and integration has been a critical priority.

THE CUSTOMER'S CLIENTS

The primary stakeholders are store managers, supply chain teams, and internal IT squads who rely on reliable data to manage day-to-day operations and strategic planning. Additionally, internal business units use this data for financial reporting, performance monitoring, and forecasting. In short, the entire organization depends on a unified view of inventory levels to optimize product availability and customer satisfaction.

THE CHALLENGE:

The organization faced the challenge of increasing confidence in its IT systems by demonstrating accurate inventory matching across multiple platforms. Variations often led to time-consuming clean-up efforts, making discrepancies appear larger than they were and undermining trust in the systems. Additionally, the organization lacked a method to flag inconsistencies and a centralized view of the data to analyze these discrepancies for root causes.



“I just wanted to tell you thank you again for everything you did for the Inventory Project and Shield Team! You were a great asset to the JD/FINL IT Team and I know everyone enjoyed working with you.”

— STORE TECHNOLOGY DIRECTOR

The Solution

The cross-functional Shield Team was assembled to address these issues head on.

Over a three-month observation period (with data collection extending over five months), the team gathered detailed data from 10 partner stores and performed a rigorous analysis of both inventory balances and activities. They defined a robust data architecture and automation framework, developed interactive Looker dashboards to monitor discrepancies in real time, and established automated alerts based on defined tolerances. This comprehensive, data-driven approach:

- Unified the disparate systems
- Provided an ongoing monitoring system
- Built analysis capabilities
- Offered actionable insights for timely issue resolution
- Minimized discrepancies
- Enabled proactive decision-making.

Key Success Factor

Providing Data Insights and Problem-Solving Capabilities

The team delivered valuable data insights through well-designed dashboards used for continuous inventory validation. They demonstrated that the systems were matching at a 3-4 sigma level, meeting industry standards. Additionally, the team created a robust framework capable of identifying and troubleshooting data discrepancies. A comprehensive data architecture was also defined, allowing for the easy integration of additional systems in future versions. This approach delivered precise insights and enabled proactive resolution of issues, setting the stage for ongoing improvements in inventory accuracy.

Areas of Focus



System Integration: Unifying data across 3+ major systems with architecture, and other supporting systems.



Data Accuracy: Rigorously validating inventory balances and activities to ensure consistency.



Process Automation: Streamlining workflows to reduce manual intervention and accelerate issue detection.



Visualization & Reporting: Creating dynamic dashboards and interactive Looker explores to provide real-time insights.



Continuous Monitoring: Implementing automated alerts and run books to proactively flag and address misalignments.

Business Value

The implemented solution has transformed inventory management for the client:



Enhanced Efficiency:
Processing times have been drastically reduced, enabling faster data reconciliation.



Cost Savings:
Automation and streamlined processes have lowered administrative costs by minimizing manual interventions.



Actionable Insights:
Real-time dashboards empower teams to detect and resolve discrepancies promptly, ensuring smooth operations across all stores and confidence in IT systems.

Lessons Learned

- Early and continuous stakeholder engagement is essential for identifying critical data gaps.
- Consistency in data naming, structure, and collection methods is key to reliable inventory validation.
- Iterative testing minimizes disruptions and sharpens accuracy.

Next Steps

- Extend the validation analysis framework for more comprehensive insights and continue as new systems are added.
- Continually refine the data architecture and automation tools to support scalable, future-ready inventory management.

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