

# Alteryx for Inventory Management

Optimize inventory levels with governed, AI-ready data and automation

Learn how Coca-Cola created **600+** personalized inventory reports for its partners [▶](#)

## Balance cost, service, and inventory risk

Inventory decisions now carry more risk than ever, as volatility, disruptions, and shifting demand patterns make it harder to balance cost and service. According to McKinsey [45% of companies](#) impacted by tariffs and implementing countermeasures, for example, are increasing inventory as a mitigation strategy, often tying up working capital. However, without governed, contextual data, organizations struggle to move beyond reactive buffers toward optimized, scalable inventory performance.

## Challenge and approach

Inventory teams constantly balance cost efficiency with service levels, but fragmented data makes optimization difficult. Signals from ERP, WMS, and planning systems rarely align, leaving teams reconciling inconsistent views of stock and demand. As volatility increases, organizations rely on excess inventory buffers, tying up working capital without improving responsiveness to actual demand shifts.

AI promises more precise inventory optimization, but without governed, contextual data, it often reinforces reactive behaviors instead of replacing them. Alteryx One connects and enriches data across systems, embedding governance into automated workflows. This creates a trusted foundation where inventory decisions are transparent, continuously updated, and aligned to real conditions.

*"I remember building out a prototype for 10 stores. It ran in less than one minute. I was standing at my desk jumping up and down, saying, 'This can't be right!' People outside my office were asking if I was okay... I can't even imagine how long it would have taken me to build and run that kind of analysis."*

Jay Caplan, Senior Business Analytics Manager, Coca Cola

## Common Challenges

Inconsistent demand signals lead to overstocking or stockouts across locations

Limited visibility into inventory levels across warehouses, channels, and regions

Manual replenishment processes slow response to demand variability and disruptions

Lack of transparency reduces trust in inventory decisions and allocation strategies

## 5 AI Challenges in Inventory Management

1. AI models fail when inventory data lacks context like lead times or constraints
2. Weak governance limits traceability, reducing trust in inventory optimization outputs
3. Fragmented data sources delay updates and degrade inventory model performance over time
4. Missing domain expertise prevents embedding replenishment rules into AI-ready datasets
5. Unmonitored data drift causes inaccurate inventory decisions when demand patterns shift

# 5 Ways to Optimize Inventory Management

## Unify fragmented inventory and demand data

Disconnected systems make it difficult to align inventory levels with actual demand across locations and channels. Bring together ERP, WMS, and demand signals into a single, governed dataset. This creates a consistent inventory view that reduces reconciliation effort, improves stock accuracy, and enables faster, more coordinated decisions across supply chain and operations teams.

## Optimize replenishment decisions with scenario modeling

Static replenishment rules limit your ability to respond to volatility and changing supply conditions. Model and compare scenarios based on demand variability, supplier lead times, and capacity constraints. This helps teams evaluate tradeoffs earlier, reduce excess safety stock, and make more informed replenishment decisions that balance cost efficiency with service levels.

## Incorporate external and real-time signals into inventory planning

Relying only on historical demand data misses rapid shifts in customer behavior and supply conditions. Integrate external signals like weather, economic indicators, and supplier disruptions into inventory workflows. This improves responsiveness to real-world demand shifts and enables earlier adjustments to inventory positioning across distribution networks.

## Automate inventory workflows and replenishment processes

Manual data preparation and replenishment planning slow response times and introduce inconsistencies. Automate these workflows so inventory levels, reorder points, and planning outputs are continuously updated. This reduces manual effort, shortens planning cycles, and ensures teams operate with accurate, up-to-date inventory insights when making allocation and replenishment decisions.

## Deliver governed, AI-ready inventory data

AI initiatives often fail when inventory data lacks context, lineage, or embedded business rules. Use Alteryx One to prepare governed, explainable datasets enriched with operational logic and traceability. With integrated GenAI tools to surface drivers and explain outputs, teams gain trusted inventory insights that improve decision quality and scale confidently across supply chain operations.

## What You Will Need

Access to inventory, demand, and order data across ERP and WMS systems


Visibility into supplier lead times, constraints, and replenishment policies across locations

External signals such as demand trends, disruptions, and economic or seasonal factors

Alignment on inventory targets, service levels, and business rules for replenishment decisions

## What Alteryx One Delivers for Inventory Management

1. Unified, governed datasets combining inventory, demand, and supply signals across systems
2. Automated workflows that continuously update inventory levels and replenishment recommendations
3. Scenario modeling capabilities to test inventory strategies under changing demand conditions
4. AI-assisted tools to explain inventory drivers and accelerate insight generation
5. Transparent, auditable pipelines that ensure inventory decisions remain explainable and trusted

**PepsiCo's slow, manual data preparation limited forecasting agility and increased supply risk, until automation improved reporting efficiency by 70% **