



Solution Brief

Excess Inventory Intelligence



AI-Powered Visibility for Inventory Risk and Overstock Prevention

Excess inventory is the silent margin killer – it ties up working capital, accelerates markdowns, and ages into write-offs before teams realize what happened. **Beamup provides a continuous intelligence layer**, transforming demand signals, purchase order data, and lifecycle patterns into actionable alerts before overstock becomes a crisis.

IN-2237806

Vendor MOQ constraint causing 186% excess inventory for SKU #TH-40192 across 6 DCs

Overview Resolution Activity Owner Status **New**

Insight

SKU #TH-40192 currently carries 14.3 weeks of supply across the 6 distribution centers in the network, significantly exceeding the vendor minimum order quantity (MOQ) of 8,400 units by 186% absorbed by project network.

Actions

- Flag vendor in procurement scorecard for MOQ renegotiation in next buying cycle with data-backed case showing 186% excess **Create task**
- Initiate promotional or markdown strategy for SKU #TH-40192 to accelerate sell-through and minimize aging inventory risk **Create task**

Reasoning Trace

How the agent arrived at this insight:

- ERP purchase order analysis reveals vendor MOQ constraint significantly exceeds demand forecast**
 - SKU #TH-40192 vendor minimum order quantity (MOQ): 24,000 units [View source](#)
 - Demand Planning System 3-month forecast: 8,400 units
 - MOQ exceeds forecast by 15,600 units (186% excess)
 - Purchase order PO-9482733 placed for 24,000 units to meet MOQ requirement
- WMS inventory analysis shows excess supply distributed across 6 distribution centers**
 - Total on-hand inventory across network: 24,000 units [View source](#)
 - Distributed across DCs: DC-234 (4,200), DC-641 (3,800), DC-211 (4,500), DC-118 (3,900), DC-445 (4,100), DC-772 (3,500)
 - Current run rate: 1,680 units per week (based on 3-month forecast)
 - Calculated weeks of supply: 14.3 weeks (industry target: 4-6 weeks)

The Three Missions of Inventory Integrity

Beamup monitors your inventory through three distinct lenses to ensure every SKU position is justified and every planning decision is accountable.

Guard Alerts: Real-Time Risk Detection

MISSION

Monitor open purchase commitments against rolling demand signals before inventory lands.

HOW IT WORKS

At PO confirmation, Beamup calculates projected on-hand at arrival. If projected WoS exceeds threshold, a cancellation or redirect flag fires immediately – before the overbuy is locked.

INVENTORY FOCUS

Detecting **MOQ Overbuys** or **Early Arrival Gluts** – purchase orders that exceed forecast or arrive before demand materializes, creating instant excess before the season opens.

Detective Insights: Historical Pattern Analysis

MISSION

Surface systemic weaknesses in your inventory planning and buying process.

HOW IT WORKS

By analyzing resolved overstock events, Beamup identifies which SKUs, vendors, buyers, or promotional programs consistently generate excess, and quantifies the markdown liability each pattern creates.

INVENTORY FOCUS

Identifying **Promo Forecast Failures** or **Recurring Vendor MOQ Violations** – promotions that did not repeat or vendor deal incentives that drove overbuy beyond what demand could absorb, cycle after cycle.

Predictive Alerts: Upstream Risk Signals

MISSION

Intervene before inventory commits are locked and before markdown risk is unavoidable.

HOW IT WORKS

Detects risks early in the planning chain – such as declining lifecycle signals against open POs, or channel-shift patterns emerging in sell-through data enabling cancellations, redirects, or adjustments before goods arrive.

INVENTORY FOCUS

Flagging **Lifecycle Decline** against committed buy plans or **Allocation Mismatches** before product is distributed to stores and DCs, saving weeks of rebalancing cost and preventing slow-mover accumulation.

Key Use Case Scenarios

CATEGORY	ROOT CAUSE / SCENARIO	BEAMUP CAPABILITY	SUCCESS OUTCOME
Operational Risk	Bad Cycle Count / Inventory Inaccuracy: Stock count errors inflate on-hand figures, causing planners to under-order then over-correct on the next cycle.	Guard: Detects anomalous Inventory Accuracy Rate drops by location and SKU. Triggers recount task before the error propagates to the next purchase order.	Break the overbuy feedback loop driven by phantom inventory, eliminating a leading cause of structural overstock at the DC level.
Network Risk	Allocation Imbalance & Channel Shift: Inventory staged for wrong stores or channels; online-to-store demand shifts leave product stranded in the wrong node.	Detective: Flags Channel Destination Mismatch and Allocation Accuracy Rate anomalies the moment product is staged for distribution. Surfaces Fill Rate by Channel divergence in real time.	Eliminate rebalancing logistics costs and prevent slow-mover accumulation from misaligned distribution before product leaves the DC.
Lifecycle Risk	Declining Lifecycle & Slow Movers: Items near end-of-life not identified early; slow movers accumulate undetected until Weeks of Supply becomes critical.	Detective + Predictive: Tracks Aging Inventory Rate and Weeks of Supply against threshold. Cross-references SKU Affinity Index to detect new product cannibalization of existing lines.	Early lifecycle flags trigger markdown or discontinuation weeks ahead of the crisis window, reducing end-of-life write-off exposure.
Seasonality Risk	Incorrect Seasonality Model & Case-Pack Minimums: Forecast models mispredict seasonal demand curves; vendor case-pack minimums force overbuy on top of the error.	Predictive: Monitors Sell-Through % by Week against seasonal curve. Flags EOQ Variance and Order Qty vs. Forecast Delta when case-pack logic overrides demand signal.	Post-season markdown percentage reduced by catching seasonality model drift mid-season and adjusting replenishment before the sell window closes.

The Beamup Advantage



End-to-End Signal Fusion

Combines PO data, sell-through rates, lifecycle signals, and historical promo performance into a single Source of Truth for every SKU.



Human-Validated AI

Risk signals are prioritized for your Planning, Buying, or Loss Prevention teams – ensuring experts focus only on high-probability overstock threats, not noise.



Vendor Accountability

Move beyond anecdotes. Use hard data to hold vendors accountable for MOQ overages, promo lift accuracy, and lead time commitments that drive excess inventory.

Ready to eliminate excess inventory risk?

Schedule a custom demo today: sales@beamup.ai

Visit us at beamup.ai

We protect customer loyalty **at scale.**

Beamup uses purpose-built AI agents to diagnose the supply chain failures that erode customer loyalty, then with your approval, run the fix automatically the next time the same failure mode appears. So delivery promises hold, NPS climbs, and repeat customers stay.



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