How a Single-State Supermarket Operator Achieved a 4.2 Point On-Shelf Availability Improvement and Recovered 3.8% of Annual Revenue with Demand-Driven Replenishment

Order Management → Replenishment Planning

At a Glance

The Problem

- 9.5% stockout rate on top-300 velocity SKUs
- Static reorder points with no link to current demand
- Promo spikes unaccounted for — shelves empty by day 3
- Supplier lead time variability absorbed entirely by stores

The Solution

- Demand-driven replenishment engine with daily recalculation
- Promotional calendar integrated into order quantities
- Dynamic safety stock based on lead time distributions
- Exception management dashboard for planners

The Result

- 4.2 point on-shelf availability improvement in 12 weeks
- 3.8% of annual revenue recovered
- 9 point service level improvement
- 55% emergency replenishment order reduction

Business Context

A single-state supermarket operator running 42 stores had managed replenishment through static reorder points and experienced planners making manual calls. For years, the approach worked. But as SKU count grew to 18,000 and promotional calendars intensified, the cracks began to show and the cost of those cracks was becoming impossible to ignore.

A 9.5% stockout rate on the top 300 velocity SKUs was costing an estimated $4.5M in lost annual revenue, and that figure excluded the loyalty erosion that comes when customers stop expecting certain products to be reliably available. The planning team understood the problem; what they needed was a fix that didn't require doubling the planning headcount.

Client Profile

Industry:
Grocery / Supermarket

Geography:
Single-State Operator

Scale:
42 stores, 1 Distribution Centre

Revenue:
$160–250M annual revenue range

SKUs:
18,000 active SKUs, 7-day replenishment cycle

The Challenge In Depth

The replenishment process had not fundamentally changed in six years. Reorder points were set during annual range reviews and left largely untouched — regardless of how demand patterns, promotional calendars, or supplier performance changed through the year.

- **Lost Sales Exposure:** A 9.5% stockout rate on high-velocity SKUs during promotional windows generated an estimated $4.5M in annual lost sales — with the true figure higher when accounting for basket abandonment and repeat visit attrition.
- **Disconnected Planning:** Replenishment orders were calculated against static prior-year thresholds with no connection to current POS signals — planners spent 60% of their day firefighting exceptions rather than forward planning.
- **Promo Blindness:** Promotional events drove demand spikes 2–4x above baseline, but replenishment quantities were not adjusted in advance; stores routinely stocked out by day 3 of a 7-day event, eliminating much of the promotional return.
- **Lead Time Risk:** Supplier lead time variability was absorbed entirely by stores when deliveries slipped; shelves went bare because safety stock was calculated on fixed lead time assumptions.

Our Approach

1. From Static Thresholds to Dynamic, Demand-Led Reorder Points

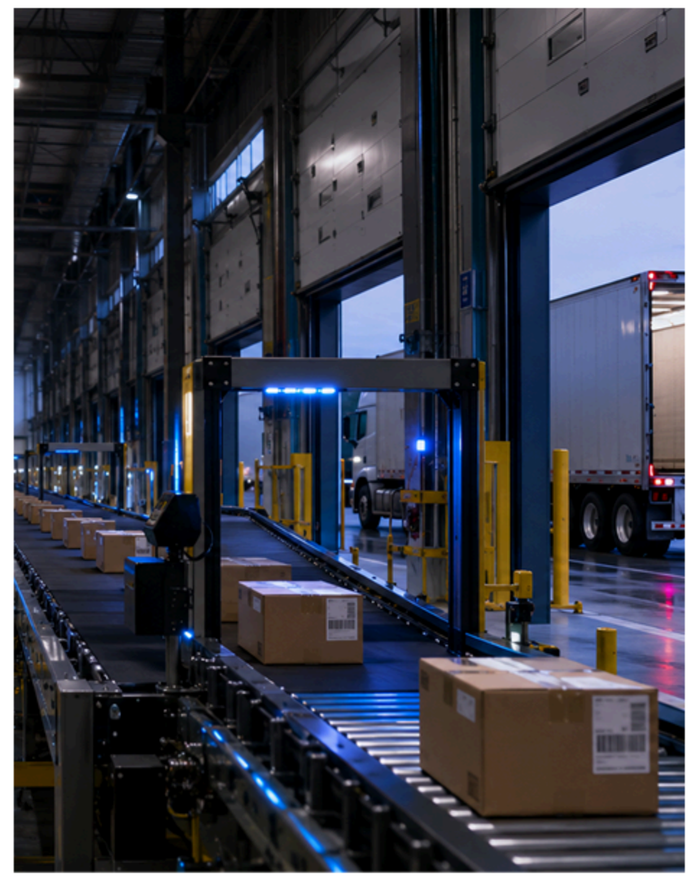
Techverx replaced the static reorder point model with a demand-driven replenishment engine recalculating order quantities daily from POS velocity, promotional calendars, and rolling demand patterns. Reorder points became dynamic — adjusting automatically for day-of-week variation, seasonal trends, and store-level differences across all 42 locations.

2. Building Promotional Demand into Every Replenishment Cycle

The replenishment engine was integrated with the promotional planning calendar, automatically pre-positioning stock ahead of events. For the first time, order quantities reflected expected promotional uplift rather than last week's average movement. Promo-related stockout events improved 71% in the first full promotional cycle post-implementation.

3. Supplier Lead Time Variability Built into Safety Stock

Historical supplier lead time distributions were modelled for each top 30 supplier. Safety stock calculations moved from fixed days-of-supply buffers to statistically derived levels reflecting actual delivery variability. Emergency replenishment orders saw a 55% improvement in the first quarter, cutting both cost and planner workload significantly.



Replenishment on demand, delivered timely using our platform

Results and Impact

Within 12 weeks of deployment, on-shelf availability improved 4.2 points — recovering approximately 3.8% of annual revenue previously lost to stockouts. Service level to stores improved 9 points. Emergency replenishment orders saw a 55% improvement. Planner time on exception management dropped from 60% to under 25%, releasing capacity for forward-looking planning.

What Happened Next

- **Weeks 1–12:** Demand-driven replenishment engine deployed for top-300 velocity SKUs; on-shelf availability improved 4.2 points.
- **Month 4:** Full rollout extended to all 18,000 SKUs across the entire store network.
- **Month 7:** Supplier portal launched providing shared replenishment signal visibility to top-30 suppliers; lead time surprises reduced significantly.
- **Currently:** Evaluating network inventory balancing to redistribute surplus stock between stores before stockout events occur.

4.2 pt

On-Shelf Availability Improvement (12 Wks)

3.8%

Lost Revenue Recovery

09 pt

Service Level Improvement

55%

Emergency Replen Order Reduction

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