Executive Summary

A Data-Driven Inventory Optimization Strategy for Urban Retail Co.

Introduction

This report summarizes the findings of a comprehensive data analytics project aimed at solving critical inventory inefficiencies at Urban Retail Co. Our analysis of sales and inventory data confirms that significant financial drain and missed revenue opportunities are occurring due to a lack of data-driven practices. The following is a summary of our most critical findings and a proposed action plan to drive immediate improvement.

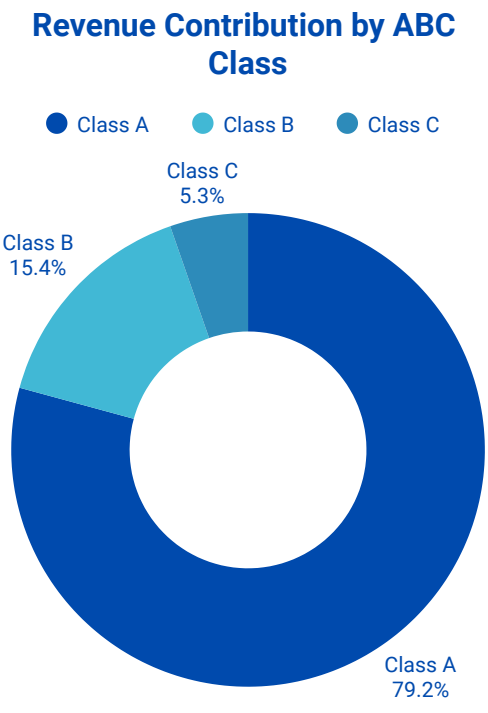
Headline KPIs: Quantifying the Challenge

Obsolete Stock Value	Inventory Turnover Ratio
$29.53M	2.3
Capital trapped in non-selling stock for over 180 days.	Indicates a major opportunity to improve the efficiency of our working capital.

Finding 1: Capital is Critically Misallocated in Obsolete & Non-Core Product

Our analysis reveals that a staggering amount of capital is trapped in "dead" stock, while our investment is not focused on the products that truly drive the business.

- The Obsolete Stock Crisis: Our Obsolete Stock Detection query pinpoints $29.53 million in inventory value from products that have generated zero sales in the last six months. The 'Furniture' and 'Clothing' categories are the most significant contributors.
- The Imbalance of Value: The ABC Analysis query shows that our revenue follows an "80/20" pattern. The top 75% of our products (Class A) drive 79% of revenue, meaning a wide range of products are critical to our success, while the bottom 8% (Class C) contribute only 5% of revenue but make up a disproportionate amount of our overstock.



Finding 2: Operational Inconsistencies are Driving Stockouts

The problem of stockouts is not random; it is concentrated in specific regions, pointing to systemic weaknesses and a lack of standardized best practices.

- Regional Disparity: The Regional Inventory Efficiency Scorecard identifies the 'North' region as a top performer with a near-zero stockout rate (0%) and a high turnover (0.5). This proves that operational excellence is achievable within our current system.
- Forecasting Gaps: Systemic over-forecasting, identified by the Forecast vs. Actuals query, results in an average of 18,380 excess units being ordered each month, contributing directly to the overstock problem.

Strategy & Implementation

Recommendation	Action to Take	Expected Business Impact
1. Launch Capital Recovery Program	Immediately form a task force to liquidate the identified $29.53M in obsolete stock through targeted clearance sales and promotions.	• Free up significant working capital. • Reduce warehousing and holding costs.
2. Implement Differentiated Inventory Control	Formally adopt the ABC Analysis model. Set high service level targets for the critical "Class A" products and aggressively reduce safety stock on non-critical "Class C" items.	• Protect sales of our most important products. • Reduce investment in slow-moving inventory.
3. Adopt a Proactive Replenishment Model	Phase out manual reordering in favor of a statistical model. Use the Dynamic Reorder Point and Seasonal Demand analysis to set data-driven stock targets.	• Reduce stockouts caused by sales volatility. • Maximize sales during predictable peak seasons.
4. Standardize Regional Best Practices	Document the successful inventory management processes from the top-performing 'North' region and create a standardized "Operational Playbook" to be rolled out to all other regions.	• Improve inventory turnover across the company. • Reduce operational inconsistencies.