

Inventory Performance Analysis Report

Executive Summary

Our inventory analysis reveals significant opportunities to optimize stock levels and improve capital efficiency. Analysis of slow-moving and overstocked items across regions, product categories, and seasonal patterns provides actionable insights for immediate implementation.

Key Findings:

- 28% of inventory items are classified as slow-moving (326 items)
- 15% of inventory items are overstocked (183 items)
- Average inventory days of 24.7 exceed target by 3.2 days
- Electronics category represents the highest proportion of slow-moving items (32%)
- Summer season shows both highest sales performance and highest overstocking rate

Inventory Performance Metrics

Metric	Current Value	Target	Variance
Total Inventory Value	\$2,457,890	\$2,200,000	+\$257,890
Slow-Moving Items	326 (28%)	230 (20%)	+96 items
Overstocked Items	183 (15%)	115 (10%)	+68 items
Average Inventory Days	24.7 days	21.5 days	+3.2 days
Inventory Turnover Ratio	7.9	9.0	-1.1

Regional Performance Analysis

The Northeast and Western regions show the highest proportion of slow-moving items, particularly in the Electronics and Furniture categories. The Southern region demonstrates the most efficient inventory management practices with the lowest percentage of slow-moving items (19%) and fewest overstocked items (9%).

Regional Distribution of Slow-Moving Items:

- Northeast: 31%
- Western: 30%
- Midwest: 24%
- Southern: 19%

Seasonal Trends

Summer season products drive the highest sales volume but also contribute significantly to overstocking issues. The data suggests a potential mismatch between seasonal purchasing patterns and actual demand, particularly in the Electronics and Clothing categories.

Sales by Season:

1. Summer: \$183,250
2. Fall: \$142,800
3. Winter: \$126,540
4. Spring: \$107,980

Category-Specific Insights

Electronics represents the largest challenge area, with the highest proportion of both slow-moving and overstocked items. This category's high unit value magnifies the financial impact of suboptimal inventory levels.

Slow-Moving Items by Category:

- Electronics: 32%
- Furniture: 24%
- Clothing: 18%
- Office Supplies: 15%
- Other: 11%

Correlation Analysis

Our analysis identifies a moderate positive correlation ($r=0.63$) between inventory age and quantity levels, suggesting that purchasing decisions may not be adequately adjusted based on historical sales data. Products with inventory days exceeding 45 days show a 76% likelihood of being overstocked.

Strategic Recommendations

For Slow-Moving Items

1. Implement Category-Specific Pricing Strategies

- Apply graduated discounts based on inventory age:
 - 30-45 days: 15% discount
 - 45-60 days: 20% discount
 - 60+ days: 25-30% discount
- Prioritize Electronics and Furniture categories for immediate action

2. Optimize Cross-Regional Distribution

- Reallocate slow-moving Furniture items from the Northeast to the Southern region
- Transfer Electronics inventory from Western to Midwest locations based on demand patterns
- Implement regular cross-regional inventory reviews (bi-weekly)

3. Enhance Product Bundling

- Bundle slow-moving Electronics with complementary fast-moving accessories
- Create seasonal promotional bundles for Clothing items
- Develop "complete solution" packages for Office Supplies

4. Refine Seasonal Planning

- Adjust purchase quantities for Winter seasonal items based on historical data
- Implement earlier clearance schedules for end-of-season items
- Develop more precise seasonal forecasting models

For Overstocked Items

1. Revise Reorder Quantities

- Implement data-driven reorder point calculations based on actual consumption
- Establish category-specific safety stock levels
- Introduce automated alerts when inventory exceeds optimal levels

2. Develop Targeted Promotions

- Create specific marketing campaigns for high-value overstocked Electronics
- Implement flash sales for seasonal overstocked items
- Develop B2B bulk purchase incentives for Office Supplies

3. Optimize Supply Chain Coordination

- Improve communication between purchasing, sales, and warehouse teams
- Establish regular inventory review meetings with cross-functional representation
- Implement vendor-managed inventory for appropriate product categories

Implementation Timeline

Action Item	Responsible Team	Timeline	Expected Impact
Graduated discount implementation	Pricing & Marketing	Immediate (0-15 days)	15-20% reduction in slow-moving items
Cross-regional reallocation	Logistics & Operations	Short-term (15-30 days)	10-15% improvement in regional inventory balance
Product bundling strategy	Marketing & Merchandising	Short-term (15-30 days)	25% sales increase for targeted slow-moving items
Reorder quantity revision	Purchasing & Supply Chain	Medium-term (30-60 days)	30% reduction in new overstocking instances
Seasonal planning refinement	Planning & Forecasting	Long-term (60-90 days)	20% improvement in seasonal inventory accuracy

Performance Tracking Metrics

Metric	Current	30-Day Target	90-Day Target
Slow-Moving Items %	28%	25%	20%
Overstocked Items %	15%	13%	10%
Avg. Inventory Days	24.7	23.0	21.5
Inventory Turnover	7.9	8.3	9.0
Inventory Value	\$2,457,890	\$2,350,000	\$2,200,000

Conclusion

The current inventory situation presents significant opportunities for optimization. Implementing the recommended strategies can potentially free up \$257,890 in working capital while improving operational efficiency and reducing carrying costs. Cross-functional collaboration will be essential to successfully address the identified inventory challenges.

This report was generated from Tableau Dashboard analysis on May 19, 2025