**Report & Insights**

Executive Inventory Dashboard Report

**Overview**

This executive summary provides key performance insights into Urban Retail Co.'s inventory management, sales forecasting, and stock movement. The dashboard highlights inventory health, forecast accuracy, and dead stock analysis across product categories and timeframes.

**Key Performance Indicators (KPIs)**

1. **Total Inventory**
   * **Value:** ₹15.95M
   * **Insight:** This is the current total valuation of all products held in inventory across categories and regions.
2. **Gross Margin (%)**
   * **Value:** 28.02%
   * **Insight:** Reflects overall profitability. A moderate margin indicates room for improvement in pricing strategies or cost optimization.
3. **Inventory Turnover Rate**
   * **Value:** 72.70K
   * **Insight:** A high turnover rate suggests that products are selling quickly and inventory is being replenished efficiently.
4. **Forecast Accuracy (%)**
   * **Value:** 85.79%
   * **Insight:** Indicates strong demand forecasting performance, ensuring optimal stocking and reducing the risk of over/understocking.
5. **Stockout Rate (%)**
   * **Value:** 5.06%
   * **Insight:** A low rate suggests inventory levels are generally well maintained, though some products still experience temporary unavailability.
6. **Dead Stock Count**
   * **Value:** 88 SKUs
   * **Insight:** A relatively low count, but still worth monitoring as dead stock ties up capital and storage space.

**Charts and Graphs Analysis**

**1. Dead Stock Count by Category (Bar Chart)**

* **Categories Analyzed:** Electronics, Furniture, Clothing, Toys, Groceries
* **Findings:**
  + **Electronics** has the highest dead stock (27 items), indicating either over-purchasing or slow sales.
  + **Furniture** follows with 21, while **Groceries** has the least (9).
* **Recommendation:** Re-evaluate demand forecasting and procurement for electronics and furniture categories.

**2. Total Inventory and Revenue by Category (Clustered Column Chart)**

* **Categories Analyzed:** Clothing, Electronics, Furniture, Toys, Groceries
* **Findings:**
  + **Clothing** generates the highest revenue (₹215.3M) with relatively low inventory (₹6.2M) — a strong performing category.
  + **Electronics** and **Furniture** have high inventory levels compared to revenue, indicating potential overstock.
  + **Groceries** and **Toys** show modest revenue with minimal inventory.
* **Recommendation:** Consider reducing inventory in Electronics and Furniture while continuing investment in Clothing due to high returns.

**3. Forecast Accuracy (%) by Year and Month (Line Chart)**

* **Time Period:** Jan 2022 – Oct 2023
* **Findings:**
  + Forecast accuracy mostly remains between **85.3% and 86.0%**, indicating consistent performance.
  + **Lowest Point:** May 2022 (85.42%)
  + **Highest Point:** Jan 2023 (86.09%)
* **Recommendation:** Maintain forecasting models but analyze the dips for underlying issues such as market changes or promotion impact.

**Filters Panel**

* **Year:** 2022, 2023
* **Month:** All
* **Region:** All
* **Seasonality:** All
* **Function:** Provides dynamic analysis capability by slicing data based on selected time periods, regions, or seasonal effects.

**Summary & Recommendations**

* **Clothing is a star category** due to high revenue and low inventory. This model should be replicated.
* **Electronics and Furniture need attention** — potentially slow-moving or overstocked. Consider discounting or targeted marketing to liquidate.
* **Dead stock count must be reduced** through improved demand forecasting, supplier coordination, and periodic review.
* **Forecast Accuracy is commendable**, though month-on-month monitoring should continue to identify any seasonal deviations.
* **Stockout rate is low** but should aim to fall below 5% through enhanced replenishment cycles.

**General Dashboard Report**

**Overview**

This report provides a comprehensive analysis of Urban Retail Co.'s performance in inventory management and sales forecasting. It focuses on cost efficiency, demand planning, dead stock distribution, and regional inventory patterns, enabling data-driven decision-making across departments.

**Key Performance Indicators (KPIs)**

**1. Estimated Cost of Goods Sold (COGS)**

* **Value:** ₹388.31M
* **Insight:** Represents the total cost incurred to produce or supply the products sold. This is a critical figure for evaluating overall profitability.

**2. Revenue**

* **Value:** ₹539.44M
* **Insight:** Indicates the total income generated from product sales, resulting in an approximate gross profit margin of ₹151.13M.

**Charts and Tables Analysis**

**1. Units Sold and Demand Forecast by Year and Month (Line Chart)**

* **Timeline:** January 2022 – October 2023
* **Insights:**
  + A consistent gap exists between forecasted demand and actual units sold, highlighting either overestimations or underperforming sales.
  + **Highest Forecasted Months:** January 2023 and October 2023 (0.55M)
  + **Lowest Actual Sales:** September–October 2022 (~0.41M)
* **Recommendation:** Refine forecasting models and align sales strategies to minimize gaps and improve demand accuracy.

**2. Dead Stock by Store & Category (Matrix Table)**

* **Categories Tracked:** Clothing, Electronics, Furniture, Groceries, Toys
* **Total Dead Stock:** 88 items
* **Top Contributors:**
  + **Store S001:** 19 items (highest)
  + **Electronics Category:** 27 items (highest among all categories)
* **Recommendation:** Conduct store-level audits and implement category-specific clearance strategies—particularly for electronics.

**3. Sales vs Forecast by Product (Table)**

| **Metric** | **Value** |
| --- | --- |
| Total Units Sold | 10,591.32K |
| Forecasted Units | 11,826.34K |
| **Gap** | **-1,235.03K** |

* **SKUs with Largest Gaps:**
  + **P0046:** -45.82K
  + **P0057:** -44.63K
* **Recommendation:** Reevaluate underperforming SKUs and improve forecasting inputs for more accurate demand projections.

**4. Reorder Points by Product (Table)**

* **Top Products by Estimated Reorder Point:**
  + **P0046:** 794.80
  + **P0057:** 795.63
* **Average Reorder Point:** 725.43
* **Average Units Sold:** 96.72
* **Recommendation:** Adjust reorder thresholds based on seasonal sales trends to avoid overstocking and reduce carrying costs.

**5. Total Inventory by Region (Bar Chart)**

| **Region** | **Inventory Value (₹M)** |
| --- | --- |
| East | 4.02M |
| West | 3.99M |
| North | 3.98M |
| South | 3.96M |

* **Insight:** Inventory is almost evenly distributed across regions.
* **Recommendation:** While balanced, inventory can be further optimized by aligning it with real-time regional demand and sales performance data.

**Filters Panel**

* **Time Filters:** Year (2022, 2023), Month
* **Store, Product, and Category Filters:** Allow for SKU- or store-level deep dives.
* **Region & Seasonality Filters:** Useful for analyzing inventory and sales trends based on geography and season.

**Summary & Strategic Recommendations**

| **Observation** | **Recommendation** |
| --- | --- |
| Forecast gap of -1.23M units | Refine forecasting models and improve sales alignment strategies |
| High dead stock in Electronics and Store S001 | Implement clearance sales, bundling offers, and regular inventory reviews |
| Elevated reorder points for some SKUs | Adjust based on real sales velocity and seasonality |
| Even inventory across regions | Redistribute based on high-performing and high-demand zones |
| Gross margin of ₹151.13M | Improve further through cost reduction, accurate forecasting, and waste minimization |

**Performance View Report**

**Overview**

This dashboard offers a comprehensive breakdown of sales performance across product categories, regions, seasons, and stores. It evaluates total sales volume, revenue contribution, seasonal trends, stockouts, and inventory turnover at granular levels, providing actionable insights for store and product-level strategy.

**Key Performance Indicators (KPIs)**

1. **Total Units Sold**
   * **Value:** 10.59M
   * **Insight:** Reflects overall product movement and consumer demand.
2. **Total Product Sales (Revenue)**
   * **Value:** ₹583.37M
   * **Insight:** Indicates strong market performance and healthy consumer spend.
3. **Total Products**
   * **Count:** 30
   * **Insight:** Number of unique SKUs being monitored in the analysis.
4. **Total Stores**
   * **Count:** 20
   * **Insight:** Reflects the total retail footprint.
5. **Stockouts**
   * **Value:** 5,545
   * **Insight:** High number suggesting inventory replenishment and supply chain efficiency need review.
6. **Units Ordered**
   * **Value:** 10.55M
   * **Insight:** Almost in line with units sold, indicating effective demand planning.

**Charts and Table Analysis**

**1. Revenue by Category (Pie Chart)**

* **Top Contributor:** Clothing (₹215.26M / 39.9%)
* **Other Categories:**
  + Electronics: ₹131.13M (24.31%)
  + Furniture: ₹103.98M (19.28%)
  + Toys: ₹51.74M (9.59%)
  + Groceries: ₹37.33M (6.92%)
* **Insight:** Clothing is the dominant category by revenue, followed by Electronics and Furniture.
* **Recommendation:** Consider expanding the Clothing product line and reviewing profitability margins in other categories.

**2. Top 5 Categories (Table)**

| **Rank** | **Category** | **Units Sold** | **Revenue** |
| --- | --- | --- | --- |
| 1 | Clothing | 4.23M | ₹215.26M |
| 2 | Electronics | 2.58M | ₹131.13M |
| 3 | Furniture | 2.04M | ₹103.98M |
| 4 | Toys | 1.02M | ₹51.74M |
| 5 | Groceries | 0.73M | ₹37.33M |

* **Insight:** Focus remains heavily skewed toward Clothing, suggesting strong brand/product-market fit in that category.

**3. Units Sold by Seasonality (Bar Chart)**

| **Season** | **Units Sold** |
| --- | --- |
| Winter | 3.8M |
| Summer | 2.6M |
| Autumn | 2.5M |
| Spring | 1.7M |

* **Insight:** Winter is the peak season for sales. Spring has the least engagement.
* **Recommendation:** Plan promotions and inventory build-up ahead of the Winter season.

**4. Inventory Turnover Rate (ITU) by Store, Region, Product, Category (Table)**

* **Top Performing SKU:** P0068 (Electronics, North, Store S001) – **147.10**
* **Overall Avg ITU:** 23,568.69 (Total across items)
* **Insight:** Electronics consistently shows high ITU across stores.
* **Recommendation:** Leverage high-performing electronics SKUs to replicate best practices in underperforming regions.

**5. Revenue & Units Sold by Store, Region, Category (Table)**

* **Top Performing Store:** S002 (East, Clothing) – ₹194.34K Revenue
* **High Performers:** All top stores belong to **Clothing** category.
* **Insight:** Clothing dominates store-level performance metrics.
* **Recommendation:** Use these insights to guide cross-store merchandising and regional expansion strategies.

**Filters Panel**

* **Time Frame:** 2022, 2023
* **Store/Product Filters:** Drill-down capabilities to target performance at SKU and outlet levels
* **Seasonality & Region Filters:** Assess product demand behavior across seasonal shifts and geographic locations

**Summary & Recommendations**

* **Category Leadership:** Clothing is the top-performing category in every major metric—units sold, revenue, and store-level results.
* **Winter Sales Spike:** Plan logistics and procurement around the Winter season to capitalize on peak demand.
* **Stockout Issue:** With over 5,500 stockouts, there's a need for buffer stock planning, especially during peak seasons.
* **Regional Balance:** All regions show comparable performance; however, East stores show slightly higher turnover and revenue in clothing.
* **Product Focus:** Electronics also show high ITU and should be prioritized for marketing and restocking to maintain velocity.

**🔧 Recommendations and Suggestions for Improvement**

**1. Improve Forecast Accuracy & Reduce Sales Gaps**

* **Issue Identified:** There is a recurring gap between demand forecast and actual units sold (e.g., -1.23M total gap).
* **Recommendations:**
  + Use **historical seasonality**, regional patterns, and promotion timelines in forecasting models.
  + Integrate **machine learning-based demand forecasting** to dynamically adjust based on trends and anomalies.
  + Review **frequent underperformers** (e.g., P0046, P0057) and refine their forecast inputs or phase them out.

**2. Optimize Inventory Turnover and Dead Stock**

* **Issue Identified:** High dead stock in Electronics (27 items), and Furniture (21), especially at stores S001 and S002.
* **Recommendations:**
  + Conduct **ABC analysis** to prioritize fast vs. slow-moving SKUs.
  + Implement **auto-replenishment systems** with reorder triggers based on real-time sales velocity.
  + Launch **clearance or bundling promotions** for stagnant SKUs.

**3. Address High Stockout Events**

* **Issue Identified:** 5,545 stockouts recorded despite a healthy inventory base.
* **Recommendations:**
  + Set **dynamic safety stock thresholds** considering lead time, product criticality, and regional demand.
  + Analyze **stockout timing and patterns**—link them to promotions, seasonality, or regional events.
  + Strengthen supplier coordination and buffer inventory during **peak seasons (Winter)**.

**4. Leverage High-Performing Categories and Seasons**

* **Insight:** Clothing leads across all KPIs—units sold, revenue, inventory turnover—especially in Winter.
* **Recommendations:**
  + Expand **SKU assortment** in the Clothing category, focusing on regional preferences.
  + Replicate top-performing strategies (from S002 and S004) across other stores and regions.
  + Invest in **seasonal planning** for Winter promotions, staffing, and logistics.

**5. Rebalance Regional Inventory Distribution**

* **Insight:** Inventory is evenly distributed (~4M each region), but performance varies.
* **Recommendations:**
  + **Redistribute inventory** based on regional demand trends rather than flat allocation.
  + Introduce **region-specific promotions** to boost slow-moving areas (e.g., Spring sales in the South).
  + Build **micro-fulfillment centers** or use hub-and-spoke models in high-performing zones like the East.

**6. Enhance Visibility and Reporting**

* **Observation:** Current dashboards are well-structured but can be further enriched.
* **Suggestions:**
  + Add **trend-based KPIs** (e.g., MoM, YoY comparisons, or forecast error %).
  + Create **alert systems** for low forecast accuracy, high dead stock, or abnormal turnover.
  + Introduce **interactive drill-downs** to explore store-level profitability or category margin analysis.

**7. Implement Action-Oriented Dashboards**

* **Purpose:** Convert insights into immediate actions.
* **Examples:**
  + “**Top 5 Products to Discount This Month**”
  + “**Stores at Risk of Stockouts in Next 7 Days**”
  + “**High Potential Products for Upselling or Bundling**”

**✅ Summary of Priority Actions**

| **Area** | **Priority Action** |
| --- | --- |
| Forecasting | Refine models, add seasonality input |
| Inventory | Clear dead stock, adjust reorder logic |
| Stockouts | Add buffer stock, improve alert systems |
| Regional Strategy | Customize distribution & promotion |
| High-Performing SKUs | Expand clothing line, prioritize electronics |
| Dashboard Enhancements | Add trends, alerts, and actionable visuals |