

## Case Study: Demand Forecasting for a Food Distributor

### Client Background:

Our client, a national distributor of perishable food goods, sells to retailers across the United States. To meet demand, the operations group instructs packing locations to prepare multiple stock-keeping units (SKUs) in advance of shipping. However, the highly variable lead times and specific packaging requirements for branded and unbranded SKUs create significant challenges in managing inventory and meeting retailer demand.

### Challenges:

1. Uncertain Retailer Demand:
  - Last-minute demand surges often required repacking goods, driving up labor costs.
  - Repacked food items remained outside cold storage, leading to waste and reduced sales.
  - Unmet demand harmed relationships with retail customers, risking loss of business to alternative suppliers.
2. Inventory Visibility Issues:
  - Low transparency into cold storage inventory made locating SKUs difficult, increasing lead times & unmet demand.
  - Demand information was only available a week in advance, whereas some SKUs had longer lead times, resulting in frequent “fire drills” to prepare finished goods.

### Root Causes:

1. Inventory Management: Missing transparency into cold storage inventory complicated the process of locating SKUs and fulfilling orders promptly.
2. Demand Forecasting: Short notice of demand forecasts hindered efficient preparation and allocation of resources to meet customer requirements.

### Solutions:

1. Inventory Visibility Improvement:
  - Diagnosed the inventory visibility problem by analyzing five years of inventory data.
  - Recommended and implemented a third-party solution to capture critical food information prior to cold storage, enhancing management’s visibility into unfinished products.
2. Demand Forecasting:
  - Developed and deployed demand forecasts for hundreds of individual SKUs.
  - Guided the operations team in setting the right service level for each customer based on their importance to the company.
  - Forecasts were refreshed weekly and published to a central Tableau reporting dashboard.

### Results:

1. Enhanced Inventory Management:
  - Improved transparency into cold storage inventory reduced lead times and minimized unmet demand.
  - Efficient SKU location and preparation processes were established.
2. Accurate Demand Forecasting:
  - Weekly refreshed demand forecasts provided timely insights, enabling proactive planning and reducing the need for last-minute adjustments.
  - Guided service level settings improved customer satisfaction and reduced the risk of losing business to competitors.
3. Cost Reduction and Waste Minimization:
  - Reduced labor costs by decreasing the frequency of repacking goods.
  - Minimized food waste by ensuring items remained within cold storage until needed for shipping.

### Client Testimonial:

*"Labs8's demand forecasting and inventory management solutions have transformed our operations. We now have better visibility into our inventory and can anticipate retailer demand more accurately. This has significantly reduced our labor costs and food wastage while improving our customer relationships." — Operations Manager, Food Distributor.*