



Market6 Key Application Area: Replenishment

CPG manufacturers are being pressured to reduce distribution center inventory while maintaining in-stock and customer service levels. To accomplish this, there is a need for better collaboration with retailer customers in the replenishment process. DemandView™ Ordering can support these replenishment goals through Vendor Managed Inventory.

The DemandView™ ordering process starts with the output of the DemandView™ analytic engine:

- **Forecast:** Demand decomposed into 1) Baseline Volume, 2) Turn Volume, and 3) Promotional Volume. Algorithms are applied and tuned based upon the item movement in every specific store (a unique algorithm is created for each item/store combination) and are updated daily with the previous day's data.
- **Perpetual Inventory (PI):** Inventory is modeled according to best available information on shipments, POS movement, shrink and inventory updates.
- **Perpetual Inventory Anomaly:** PI is evaluated on the probability that the PI estimate is in error. Factors used in determining anomalies are velocity, shrink, inventory level vs. historical, demand fluctuation, etc.
- **Forecasted Orders:** With an accurate demand forecast and balance on hand inventory estimate, actual store orders are forecasted.

Business rules are applied to the DemandView™ forecasts and perpetual inventory to derive an order.

These business rules may include:

- **Shelf minimums:** "Presentation stock" – how the shelf should appear when the next order arrives.
- **Service Level:** by item, by store.
- **Safety Stock:** Based on item/store demand variance.
- **Forecast lost sales from out-of-stocks:** Acceptable opportunity loss from set service level.
- **Inventory updates:** How many of the items identified as high potential inventory anomalies are to be verified - this can be set by size of anomaly, number of anomalies, etc.

For each item and store, Market6 establishes a shelf capacity, service level, and merchandising minimum that results in a **target** in-store inventory and a suggested order profile. This capability increases clarity on service expectations with retail customers and makes the process of setting performance targets with customers scientific, achievable, and collaborative.

The DemandView™ order is based on the orders in transit, the forecasted upcoming demand updated with yesterday's sales results, accurate perpetual inventory and business rules & conditions specific to that particular item in that store. Store level demand and forecasted orders are then rolled up into a distribution center forecast, which is applied to a distribution order management system such as CRP provided by IBM. In this way, demand sensing is reflected in DC orders.

Ordering Scorecards are kept and results can be shared at any level in the organization. Scorecard metrics include:

- Days of Supply
- Percent of items at or below minimum
- Percent of inventory between minimum and target
- Inventory variance (high/low) vs. target inventory
- Suggested orders vs. actual orders

Timely availability of Market6 enhanced supply chain data (inventory/order estimates, inventory anomalies, anticipated OOS, etc.) enables CPG manufacturers and retailers to correct operational issues and better anticipate future needs, leading to more effective buying, ordering and inventory management.