



Synchronizing Order and Inventory Management for Competitive Differentiation and Growth

Introduction

Order and inventory management have always been the center of supply chain management. To remain globally competitive, organizations must effectively manage the inventory of a network of distribution systems, in harmony with order management. The business process lines in the supply chain are optimized by various software packages available in today's market.

This paper presents a model organization's order and inventory management system. The manufacturer operates its own plants, while sourcing from vendors for specialized products. It operates its own logistics and transportation system for distribution and retails its product lines through its own captive stores.

Inventory Management

Inventory management is at the core of the entire supply chain. It begins with the demand forecast, based on historical and market trends data. Optimal inventory management requires a fine balance between the two prime competing factors of customer satisfaction and cost. Figure 1 presents the inventory management process flow, from forecast through fulfillment.

Demand Management

When a store receives an order, it reserves inventory for that order, based on inventory

availability at the store. An inventory shortage allows store associates to source from a regional distribution center (RDC), the plant, the store or another vendor.

Supply Management

Supply is the future inventory, as well as the physical inventory available in the store. The supply in a store is managed in the following ways:

- Replenishment orders
- Inventory adjustments
- Blind receiving
- Returned orders

Replenishment orders: The inventory at the store can be replenished through a transfer order or purchase order. This could be a manual process or a system-generated one. These orders are placed by forecasting the demand for a product. They are designed to even out the fluctuations in supply and demand, while meeting customer needs.

Inventory adjustments: Store associates can adjust inventory in the system by providing the reason for the adjustment. These adjustments provide the ability to handle situations such as damaged inventory, synchronizing system inventory with the store's physically available inventory and manual ship errors.

Inventory Management Process Flow

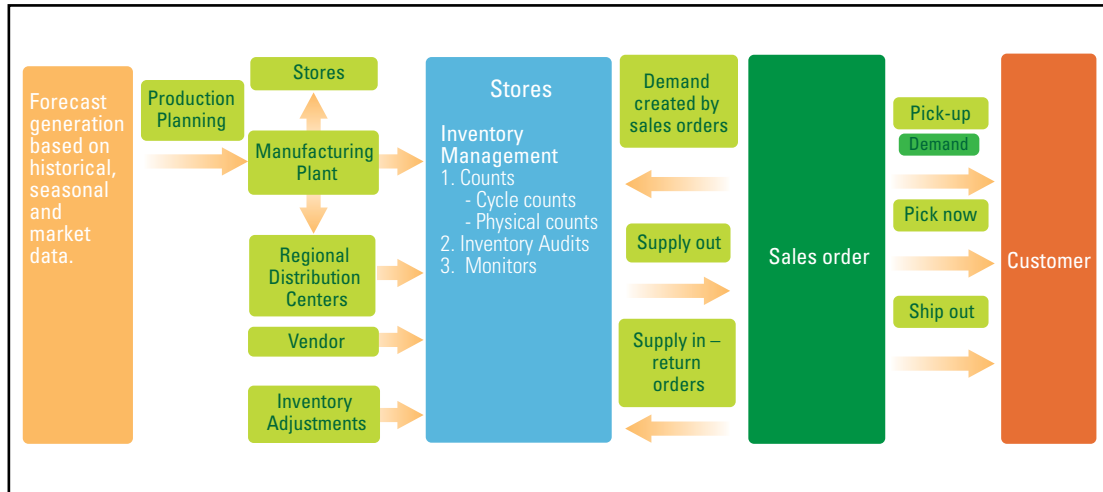


Figure 1

Blind receiving: When goods are received that are not tagged to a specific scheduled store order, the inventory of those goods is adjusted in the store.

Return orders: Customers can return the products back to a sales service center. These returns are obtained either with or without authorization (sales receipts), and product inventory is adjusted in the sales service center.

Counts

Customers may request orders in quantities that differ from the packaged unit of measure. When packages are opened, this introduces a human factor into the inventory count, which requires manual count systems to execute in a planned or ad hoc manner to maintain accuracy in the system.

There are two types of counts that are maintained:

- **Physical count:** This planned count process is performed annually to count all items in inventory to verify the accuracy of system inventory records. Once the physical count process has begun at a store, the system needs to prevent any inventory change transactions at that store. The manually generated counts are compared with the system inventory records. If the variance level is acceptable, then the system inventory will be adjusted to the count that has been entered.

- **Cycle count:** This is an ad hoc count process that can be requested by the inventory control department, or it can be initiated by the system. During this process, users perform counts manually for an item. In the event that a discrepancy exists between the system inventory level and the amount returned in the count, the store manager may decide to correct the count in the system based on the inventory audits. This process is executed on a quarterly basis.

Inventory Audit

Inventory audits provide a means to view inventory modifications and actions that have been performed on a product and to track the changes at closer levels.

Manual Allocation and De-allocation of Inventory

If there is a shortage at the store, it can be procured from an RDC or a vendor through sourcing options during the order capture process. When a viable sourcing option cannot be found, store associates may want to promise the order based on inventory already allocated to another order. This process is called “manual allocation and de-allocation of inventory.”

Another situation is if an inventory shortage is detected in the store not during order capture but during inventory operations, such as receiving,

cycle count or backroom pick (when the customer comes for pickup). Since this kind of inventory shortage may potentially affect multiple orders, the store associate has to decide which of the orders takes the hit. This scenario is also handled by the same process of manual allocation and de-allocation of inventory.

Inventory Monitors

System-driven background jobs can be run to monitor inventory and raise alerts to relevant users or user groups.

- If the available inventory becomes negative, the system will send an alert to all relevant users or user groups.
- If the items are not received by a specified number of days past the purchase order creation date, the system will send an alert to all the relevant users or user groups.
- If the items are not received within a specified number of the days before the sales order completion date, then the system will send an alert to all the relevant users or user groups.

Order Management System

Demand is generated by orders. There are various types of orders and fulfillment processes:

Customer order capture: Order capture is a sales order placed by a customer. There are four order capture scenarios:

- Grab-and-go
- Pick later
- Ship-out
- A combination of these

The process could also potentially trigger the placing of related purchase and transfer orders, based on the availability of the items ordered.

1. The store associate initiates the order entry process by specifying items to be placed on an order.
2. For items not available immediately, the store associate chooses various options to source the product.
3. Once sourcing options are chosen, the store associate must define the fulfillment options and associated details. The available options are "grab-and-go," "pick later" or "ship-out."
4. Pricing is determined for all the items on the order. Taxes and charges like energy surcharge and freight charges are applied.
5. A summary of the total order value is displayed.
6. For orders for which a payment/advance must be collected, the customer has multiple payment options: On-account, cash, check or credit card.

Grab-and-go order: This details the flow of an order when the customer walks into the store, picks up the order right away and pays for the

Grab-and-Go Overview

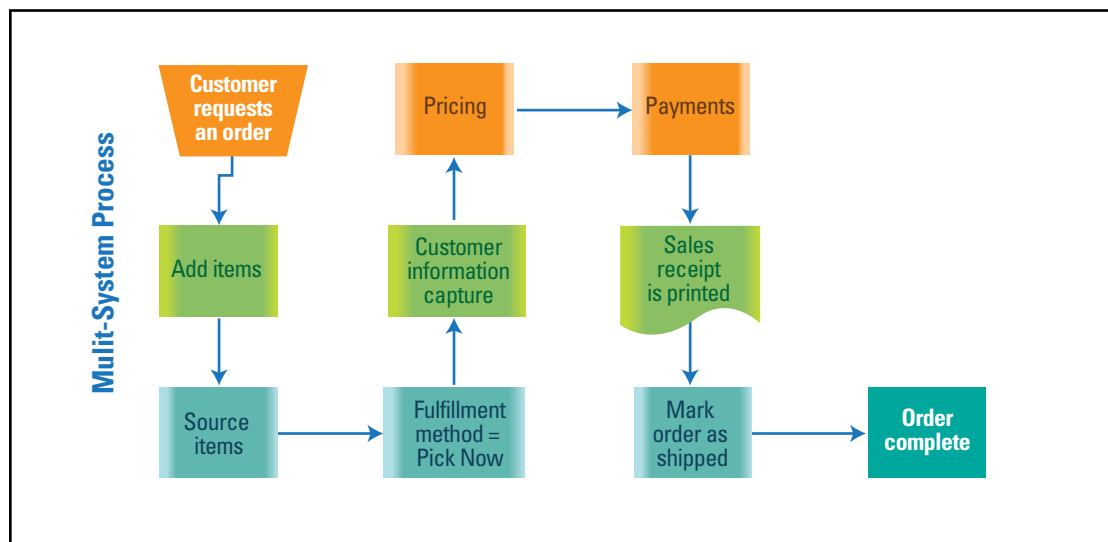


Figure 2

Order Management Process Flow

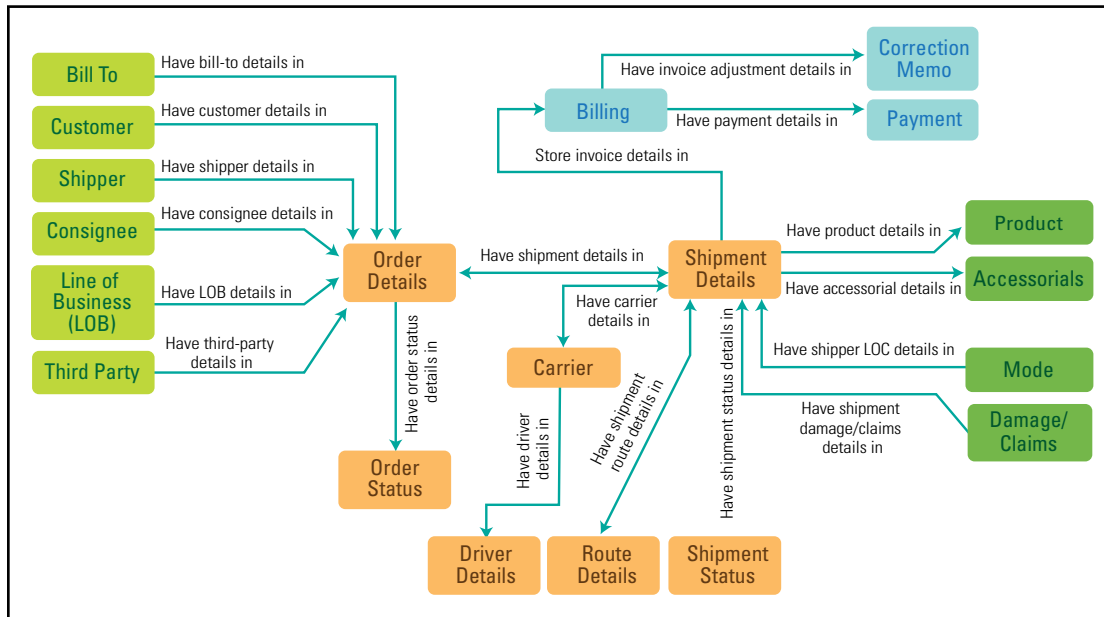


Figure 3

order. The order fulfillment for a grab-and-go scenario is triggered during confirmation of the order, and the sales receipt is printed at the end of the order creation process (see Figure 2).

Transfer/purchase order: When a customer places an order with items for which there is not enough inventory available, the system can be made to automatically create a transfer order or purchase order by pre-defining sourcing rules. In the case of a transfer order, once it is confirmed by the receiving store, the shipping store fulfills it and ships the items to the requested store. Then, the requested store receives and fulfills the customer's order.

In the case of a purchase order, a request with the list of items is sent to the procurement system. The vendor ships the items to the receiving store, at which point the customer's order is fulfilled. A sample order flow diagram is depicted in Figure 3.

Conclusion

If order and inventory management activities are synchronized, organizations can achieve goals such as on-time delivery, optimal logistics options and high-quality customer service. This can help organizations in their pursuit of competitive differentiation and growth in the marketplace.

About Cognizant

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