Warehouse management and prevision models of stock

Warehouse and inventory management is a crucial part of running a profitable business. Establishing an effective inventory management process can help you:

- Increase your working capital
- Analyze sales patterns
- Turn inventory into cash

Inventory management practices can help you plan, control, and organize the goods and materials required for your business. They will enable you to order the right type and amount of inventory to meet your customers' needs and keep your goods moving off the shelves.

If inventory control is managed properly, it can help your business reduce its costs, achieve economies of scale and prepare your business for uncertainties.

Daily management functions include:

1. Planning - finalizing the daily plan for receiving dock activity, selecting the workload/orders to be processed in the day or shift, (this may also be done by the business system), and calculating an estimate of the labor and vehicles required to pick and ship the orders to ensure the staffing is appropriate, and carriers are notified in time to meet the daily requirements.
2. Organizing - sequencing the orders to be picked. Organizing orders for picking can be accomplished in many ways, meeting the needs of the user. The primary objective is to be intentional, and not pick the orders in the sequence in which they were received unless the company wants to pay a carrier make sense for transportation and delivery. The initial way of organizing was called Wave Planning or Wave Picking, with two objectives, a. to minimize need for dock staging space, by having orders arrive at the shipping dock in trailer load sequence, and b. to create an order of flow that will support monitoring the progress through the day and eliminate/reduce last minute requests for overtime or delay of carrier departure, etc.
3. Staffing - assign staff to work functions and areas, by Wave, to minimize staging.
4. Directing - ensuring the documented processes and procedures are embedded in the WMS and are consistently applied, used and appropriate for the nature of the work and service level intentions of the company (e.g., International Standards Organization 9000 (www.iso.org)). This function may also be used to divide individual orders into logical work units and the ability to assign them to separate individuals for performance, consistent throughput requirements and physical layout, e.g., separating individual case picking from each unit picking, and individual pallet load picking, to improve productivity and supporting Control.
5. Controlling - providing milestones for management to monitor progress through the day, providing the opportunity to respond to problems in a timely way, and report data for performance analysis.

Best practices:

- Keep accurate inventory records: consider using inventory control software to track and analyze your sales and inventory levels.
- Put just-in-time inventory management into practice: find suppliers that can meet your needs as you fill orders.
- Pay attention to consumer and industry trends: find out what hot new items are coming to the market so you are not left with obsolete inventory.
- If you are having trouble selling items in your inventory, consider offering discounts or donating them to charity.
- Plan for the unexpected: make sure you have a good relationship with back-up suppliers to ensure that goods will be delivered if your main supplier cannot supply your products.

Set targets:

Keeping too much inventory can be expensive, and you risk losing sales if you don't have what your customers need. Setting targets for service levels can help you find a balance that works for you and your customers.

You may want to set targets and measure:

- The percentage of orders filled
- The amount of time it takes for a customer to receive an order
- The number of sales you lose if you don't have the customer's item in stock

Measure performance on a regular basis so you can adjust the targets or your process to meet your goals. Talking to your customers about their expectations can help you set suitable service level targets, so don't be shy — keep the lines of communication open.

Sales forecasting:

Sales forecasting can be a challenging process, but developing an accurate sales forecast will help you estimate how much inventory you will need to have on hand.

You can predict future sales by:

- Using past sales figures to predict future demand
- Benchmarking your company against other firms in your industry
- Analyzing your potential market

Inventory strategies:

Le François proposed three steps for creating an inventory strategy for business:

1. **Decide how much stock to keep** - The first step is to decide the number of days of supply to keep for each item. You want enough to handle customer demand or, in the case of raw materials, to meet production needs. The ideal amount varies by item and industry.

   Appropriate levels also depend on factors such as variability in demand, costs, lead time, supplier reliability, and the accuracy of your sales forecasts and inventory monitoring.

   Inventory levels should also be based on your production and distribution strategy along with your overall business strategy. For example, does it make sense to buy a full truck load of products to obtain a volume discount? What if you wind up with excess stock?

   "You may decide not to carry some low-volume products at all," Le François says. "Instead, you might decide to order them only on demand."

   Once you set your target levels, be sure to track your actual inventory usage and supplier performance to optimize your stock levels.

2. **Decide where to store it** - Decide where to keep inventory of various types.

   "You want to reduce the amount of handling and transport," Le François says. "For example, you can store raw materials or work in progress near the machines they'll be used with."

   With other items, such as finished goods, you may prefer to keep them in a single designated storage area. Stock is easier to measure when it's in one place.

   The choices become more complex if you operate in several locations. Here, you may need to balance customer service targets (i.e., having stock near customers) against the cost of operating multiple storage facilities.

Regularly check stock to make sure it's properly identified, accurately recorded in your system and in the right location.

3. **Decide how to replenish it** - Another important component of your strategy is how to replenish inventory. You have two main options - a push or a pull approach.

   The push approach, the more conventional of the two, involves replenishing inventory based on sales forecasts. "Push can be a good approach if your demand is stable, or if you get a lot of savings from buying large quantities or making large product batches," Le François says.

   The main risk is having too much or too little inventory on hand if your forecasts are wrong.

   The pull approach involves replenishing inventory based on demand. You purchase stock in response to orders. This is a leaner approach and might be your best option if you've got highly variable or uncertain demand. It can work well if your suppliers offer short lead times and provide reliable delivery with minimal errors.

   You can also use a blend of push for some inventory items and pull for others.