



SUCCESSFUL INVENTORY MANAGEMENT IN MAKING PURCHASING DECISIONS

Successful inventory management consists of the following:

1. Increasing Inventory Turnover without sacrificing your level of service.
2. Having an efficient inventory system in place that helps you make good business decisions based on what is truly happening;
3. Adherence to basic procedures for inventory replenishment;
4. Knowing when to purchase the proper variety of goods in quantities that maintain inventory levels consistent with business requirements;
5. Knowing how much to buy and what to buy to get the most out of working capital;
6. Reducing unneeded inventories quickly, so that money made available from getting rid of overstocks can be reinvested in merchandise with a greater market potential;
7. Maintaining correct, understandable and current records;

1. Increase Inventory Turnover without Sacrificing Your Service Level

Turnover

To measure the effectiveness of inventory management, run the **annual inventory turnover ratio**. This determines how a company is succeeding in the marketplace. Your turnover rate tells you how many times your average inventory is sold during a year. A high ratio probably indicates that the company has efficient inventory controls in place. A low ratio may indicate that the inventory is either becoming obsolete, overstated or not salable. When this is the case, write-offs may be necessary. Keep in mind, then, that inventory write-offs can make turnover appear to be better than it really is. This is one reason why it is important to compare current inventory turnover ratio numbers with the company's past ratios and industry average numbers.

A rule of thumb is that the higher the turnover rate, the better the company, and the more sales volume you are producing from a given investment in inventory. For example, a turnover rate of 4 times per year would indicate twice as many sales from the same inventory investment as a turnover rate of 2.



However, there is still a balance that every firm needs to achieve. Firms prefer to sell as much as possible without having to tie too much capital in inventories. High inventory turnover rates mean they are expending low amounts of capital in their inventories, yet at the same time this indicates a higher probability of lost sales because the inventory was not on hand when the customer wanted it. Having a lower inventory turn would have indicated that when the customer came in to purchase, the item would more than likely have been in stock. A low inventory turnover rate means that the company has enough products to meet the demand, but it might also indicate that money is tied up in inventory which could have been better used elsewhere. This is another reason it is important to look at industry averages to gauge what is a reasonable turnover rate.

The annual turnover rate is calculated as follows:

Cost of Goods from Sales
Divided by: Average Inventory (at cost)
Equals Annual Turnover Rate

Fishbowl offers this report for you. You could run it once a year or if you would like to take a more conservative approach, you could run it on a quarterly basis. To figure this turnover ratio, you put in the dates for the quarter, and the software will prorate the turnover based on a full year. You need to be conscious that the demand for some items, change throughout the year. For example, if you were a retailer that sold tennis rackets, the demand would be much less in the winter than it would be in the summer.

2. Have an Efficient Inventory System to Make Business Decisions Based on Your Business

Adapt to Your Own Business

The techniques described herein are general guidelines that companies should adapt to the needs of their customers, their own business culture, and their available working capital. If you apply these techniques and augment them with your own professional judgment, you will be able unearth problems before it is too late and prevent potential problems from ever occurring.



PROBLEM IDENTIFICATION

Ratios of Sales to Inventory

Inventory quantities are often expressed in terms of an equivalent number of days', weeks', or months' sales. For example, an automotive parts dealer could keep a three-month supply of fast-moving items. This means having an adequate supply on hand to fill expected sales in the coming three-month period. Yet, a produce broker, facing problems of spoilage and high-cost refrigerated storage space, has to bear a much smaller inventory, maybe only supplies for a few days. If you determine inventory levels in terms of a corresponding number of days, weeks, or months in reserve, this allows you to do the following:

- Evaluate the inventory of individual items (**Part Item Report, and the ABC Inventory Profile Report**) so that prompt action can be taken to correct shortages or excesses.
- Establish replenishment policies so that inventories can be sustained at realistic levels, minimizing the possibility of lost sales or excessive investments [**Use the wizard for Reorder Point (ROP) and Order Up to Level (OUL)**].
- Compare your inventory levels with comparable establishments to detect overstocking that should be corrected.

3. Adhere to Basic Procedures for Inventory Replenishment

Successful inventory management control comes through adhering to procedures for inventory replenishment. A company's ability to anticipate customer demand for certain items will help them plan for inventory purchases so that sufficient stocks are on hand to accommodate sales volume without excesses that cause other problems.

Planning purchases will also help a company to avoid shortages that can only be filled through forfeiture of discounts or absorption of premium shipping charges.

Establishing Inventory Guidelines

In most areas swimsuits are a seasonal item. Let's assume that an apparel shop decides to maintain no more than a three month supply. How would they arrive at that figure? Why not four months, or two months, or even just one month?

In some cases, **product shelf life** may be the determining factor. If the grocer stocked more than a two days' supply of cupcakes, they would get stale and the grocer would lose customers. Delivery is immediate. The grocer gives the order directly to the catering truck driver and the driver fills the order in minutes.



Yet, more often, there are several other factors involved. Take the case of the retailer who may require two weeks to receive delivery from suppliers on most items. On an emergency basis, the retailer may be able to restock inventory more promptly, but only by forfeiting quantity discounts or incurring extra delivery charges. For most items, it is better to accept normal delivery, taking full advantage of all available discounts and minimizing freight charges.

The length of time between Sending out a purchase order and the receipt of goods is called **lead-time**. If the lead-time were two weeks, would it be sufficient to establish a minimum inventory level of a two weeks' supply? It is not likely. If no order was placed until the supply of a certain item reached two weeks, there would probably be just enough stock on hand to cover expected sales until the order arrived. However, if anything went wrong (and Murphy's Law says it always does), there would be a stock-out before the order was received. An unexpected request from a customer for a large order might not be filled because of a shortage in inventory. There could be shipping delays, a strike, manufacturing problems, or unanticipated weather conditions which could delay the receipt of the goods so that a stock-out could last for several weeks. Therefore, most companies maintain a safety, or cushion stock as protection against such occurrences.

The size of the **safety stock** depends upon the number and extent of the factors that could interrupt deliveries. Suitable guidelines would have to be based upon your own experience in the industry.

4. Know When to Purchase Inventory - Controlling Inventory Levels

It is essential to purchase proper inventory levels so that good selections and supplies are available to meet market requirements. Yet at the same time, businesses must minimize the risk of excessive inventories. Ordering should be done early enough before being affected by market shortages, where it becomes impossible to purchase more products from vendors who normally fulfill those items.

It is important to understand your cash flow and how long it normally takes your vendors to fulfill an order. Many companies stagger ordering throughout the month so that they purchase items when there is more capital available. Manufacturers also need to take production times into account so that they have enough inventories on hand to build components or subcomponents of their finished goods.

In other words, invest in inventory wisely so that capital is not tied up unnecessarily. The investment should not oblige more borrowing and interest expense, nor necessitate that more space be required. Planning inventory



purchases helps companies to avoid cash flow problems because purchasing too much of a slow moving product, or too little of a product as a result of shortages. Shortages result in lost sales, paying premium shipping charges, or losing the ability to pass on discounts that could increase customer volume and loyalty. Success comes through finding the balance of having sufficient stocks on hand to accommodate the expected sales volume without having inventory excesses that take away from working capital.

However, before a decision is made as to what level of inventory needs to be ordered, a company must determine how long the inventory in stock will last. For example, in manufacturing, a business should formulate a plan to make sure they have enough inventories on hand for production of a finished product. Likewise, a retailer needs to formulate a plan to ensure the greatest number of units they would need on hand. To help with purchasing decisions, there are specific formulas that can be incorporated to help with this process. Fishbowl Inventory's™ **ABC Inventory Profile Report** is pivotal in producing the feedback needed to make purchasing decisions.

While no business can be run by formulas alone, they are important in making sound decisions. Deviations should be the exception. So if a business deviates from ordering formulas, they should be sure that they have good reason. A possible reason for deviating from ordering formulas is if there is an opportunity of receiving quantity discounts and/or price specials. This often helps the bottom line. But, if quantity discounts force a company to order a lot more than is needed, the discount earned may later be lost if the company is forced to close out the remaining merchandise at a loss.

Fishbowl's Practical Applications for Knowing When to Order:

- The Fishbowl Inventory's **On Hand Report** allows you too see how much inventory you have on hand in each location inventory is stored for any date in time. This can be used as a benchmark to determine what the current state of inventory is for the company and compare it to what it was for a certain date in the past. This report allows a business to determine seasonal differences in inventory quantity.
- The **Inventory Valuation Summary Report** tells you the total sum of the cost of all inventory items in stock. This allows you to see your current inventory status and how much money is tied up in inventory so you can make time appropriate purchasing decisions.
- The **ABC Inventory Profile Report** breaks inventory into 3 quadrants (ABC). It shows the number of items consumed in manufacturing and the number of items otherwise sold and their aggregate total. The report also shows the percentage of overall sales each particular item represents the current quantity on hand and the projected amount of days on hand the item will last in inventory based on previous sales. Quadrant "A" represents those items which represent 80% of the



company's sales, Quadrant "B" represents the next 15% of sales, and Quadrant "C" represents the lowest 5% of company sales. For each of these quadrants the report shows the percentage of those items that have been on hand for the average (mean) number of days. This helps you determine reorder levels and how to adjust for them. It also reveals which parts are static, and can help determine if you need to get rid of inventory. This allows you to determine the parts that are not moving, and your top selling products. You can also analyze seasonal trends on particular part activities. Purchasing decisions can be made by analyzing this report. If there is a lot of activity on a particular item, and determine if the right time to order more inventories is now.

- The **Part Activity Report** allows you to see the history of selected parts. This allows you to discover the movement of parts from one warehouse to another and when the parts were shipped out the door.
- The **Sales by Count Report** also gives you a list of inventory items and how many have sold between given dates. This helps businesses determine which items are stagnant and which items are fast moving so that they can make purchasing decisions for when to order inventory stock.

5. Knowing How much to Buy, When to Buy and What to Buy to get the most out of Your Working Capital

It is important to know how much to buy when to buy and what to buy. These questions can be answered by establishing a **Reorder Point (ROP)** and an **Order up to Level (OUL)** for any item you carry. When to buy is partially ascertained by developing a **Reorder Point** on each item you carry. Assume that the **lead-time** (the time it takes your vendor to fulfill a PO) for an item is one week. The **safety stock** (A cushion of inventory that can get you through shortages or delayed shipping) that your business desires to maintain is a three weeks' supply. Additionally, it is necessary to have a one-week **basic stock** (That which a company would have on display). The desired inventory level would be established as the sum of these factors:

Lead-Time	1 week
+ Safety Stock	3 weeks
+ Basic Stock	<u>2 weeks</u>
= The Reorder Point (ROP)	6 weeks

When to Buy – The Reorder Point (ROP)

The **Reorder Point** can be set up through a Wizard within Fishbowl Inventory. This can be duplicated for at a glance view within the **Monitor Module** of Fishbowl Inventory™ as the **alert level**. When the quantity of an item falls below the ROP,



you are alerted that it needs to be ordered. For example, if a computer store desires to maintain a 6 week supply of mouse pads in inventory and the average sales of the mouse pads are 30 per week, the Reorder Point would be 180 (30 x 6) pads. When inventory drops below 180 mouse pads, more should be ordered.

How Much to Buy – The Order Up to Level (OUL)

The **OUL** is measured by a couple factors. The Fishbowl Wizard in the Parts Module can also help you determine this level as well. To help you understand how the process works, do the following. First, take into account how often you reorder from that vendor. In the example above, if you reorder from that vendor every three weeks, you would add in the quantity that is sold over a three week period, and then add that to the **Reorder Point (ROP)**.

The calculation would be as follows:

Order interval is 3 Weeks	
Sales during Order interval	90 (30 X3 weeks)
+ Reorder Point	<u>180</u>
= OUL	270

Assuming that there are 160 mouse pads in stock, an **order quantity** could then be calculated as follows:

Order Quantity = OUL – Stock on Hand + Items on order – Allocated inventory
Order Quantity + 270 – 160 + 0 - 0 =
Order Quantity = 110 mouse pads

Sometimes reorder cycles are much shorter, and you would need to use other methods to calculate the Reorder Point. For example, if a grocery store planned to carry a two days supply of pre-made cupcakes, and average daily sales were 25 boxes of cupcakes, then a desirable inventory level could be calculated as follows:

Inventory Level = Days' Supply x Average Daily Sales
Inventory Level = 2 x 25
Inventory Level = 50

If the supply on hand is less than 50 boxes of cupcakes, then more cupcakes must be purchased. If the actual stock were 30 boxes of cupcakes then the grocer would have to purchase 20 (50 - 30) boxes. The example of the grocer is relatively simple. Purchases are made directly from the catering truck. Sales in the last few days are a reasonable indicator of sales over the next two days. There is no waiting period for deliveries and supply is reliable. In many businesses, the problem becomes far more complex.

These calculations can be automated within Fishbowl using the auto PO functions.



Sales Forecasting

The first step in estimating expected sales in coming months is to look at the **Part Activity Report** or the **ABC Inventory Profile Report** to discover the actual sales during an appropriate review period. For example, if you want to determine an appropriate inventory level for winter coats on October 1, there would be of no benefit to consider sales in July, August, or September. The average monthly sales for the entire year reveals little or nothing either. A more suitable review period would be the months of October, November, and December of the previous year. In addition, if your sales showed a year-to-year increase in growth rate, you should adjust the review period sales for the average sales growth that you have experienced in the previous year.

Consider the following example. A women's apparel store wants to maintain a three months' supply of swimsuits in inventory. On May 1, the store is determining a suitable inventory level so that an order can be prepared to build inventory to the three-month level. Sales of swimsuits have increased 20% from year to year. Sales in June, July, and August of the previous year were as follows:

June - 20
July - 15
August - 10

Adding 20% to each of these amounts projects the anticipated sales growth, and so expected sales for the present year would be as follows:

June – 24
July – 18
August – 12

Expected sales for the three-month period would be 54 (24 + 18 + 12). Therefore, the store should try to have this quantity in inventory by June 1. Another factor that should be considered in demand forecasting is whether or not stock outs that prohibited a sale's request from being fulfilled affected sales during the examined period. Forecasting requires measuring customer demand for a particular item, the number of pieces customers wanted to purchase, and not just those orders that you were able to sell. If information is available, such requests should be added to actual sales for the review period in order to reach a more realistic estimate of demand for the coming months. In some companies, precise records are kept on all unfulfilled customer requests. This permits management to establish more accurate demand figures in determining inventory replenishment requirements and making decisions to add new items to inventory.

The **Product List Report** also helps you to determine other factors on which to base ordering decisions on. For example, you may enter all items where your



margin is greater than or less than a predefined threshold margin. So for example, if you wanted to know all the items in your inventory that you made more than a thirty percent margin on, you could print out a list of those products. Then if you compared that with the **Sales by Count Report**, you could determine if the correlation between margins and the amount of sales made of a particular item. The same can be done using the **Product List Report** to view items that cost less or more than a predetermined sales price.

In every company, the proper inventory level should be calculated by considering projected sales in the coming period. For products that show a steady sales pattern regardless of season or the latest craze, calculations can be based upon average monthly sales.

In using Fishbowl Inventory™ to find proper levels, simply run the **Sales by Count Report** to determine the number of a product that moved within a given week, or Month. In the example of the mouse pads, the report shows that the number of mouse pads that were shipped over the past month was 120, and the number sold last week was 31, so that the weekly average is 30. Next, perform the following calculation to determine your **order up to level**.

Lead-Time	1 week
+ Safety Stock	3 weeks
+ Basic Stock	<u>2 weeks</u>
= Reorder Point	6 weeks (30) = 180

After determining the **Reorder Point**, you need to determine the **order up to level**. Take into account how often you reorder from that vendor. In this case, since you reorder from that vendor every three weeks, and the **Sales by Count Report** verifies that you would average selling 90 mouse pads over a three week period, you add that to the Reorder Point:

Order interval is 3 Weeks	
Sales during Order interval	90 (30 X3 weeks)
+ Reorder Point	<u>180</u>
= OUL	270

Next, look at your **On Hand Report**, and see that you currently have 160 mouse pads in inventory. Once that is done, subtract 160 from 270, and you determine that the number to order is 110.

Once that is done, you can go into the **Parts Module** within Fishbowl, and select the Mouse Pad part, then go to the Inventory tab and press the Reorder Point icon on the right hand side of the screen. A wizard walks you through the steps. Enter the OUL level of 270, and then enter the Reorder Point of 180. When an item drops below the order point, you can see it in the **Monitor Module** within Fishbowl



Inventory™. When the quantity of an item falls below this point, you are alerted that it needs to be ordered.

Periodic Inventory Changes

Inventory levels constantly change. As goods are purchased or produced, inventories increase. As goods are sold, inventories diminish. To determine the inventory for any given period, you begin with printing out the **Inventory on Hand Report** and the **Inventory Valuation Summary** at the beginning of the period. This gives you information on total amount of inventory on hand and the value of the inventory on hand. Then, at the ending of the period, inventory can be calculated by running the same reports. By comparing the differences you can detect trends which might spur you on to modify the quantities you reorder.

6. Reduce Bad Inventory - Reinvest in items with greater market potential.

Capital Restriction

Maintaining adequate inventories to meet all customer requirements would be easy if you had unlimited money available to acquire it. Unfortunately, this is the exception. In most small businesses, capital for inventories is limited and inventory levels must be held within these limits. Excessive inventory investments tie up working capital that may be sorely needed for other purposes. Therefore, the basic problem confronting small business management is to maintain inventory investments at reasonable levels while providing sufficient inventory to meet market demands.

Managing Inventory Control

A methodical comparison of inventory sales versus purchases is the best way of preventing overstocks and avoiding lost sales. The use of the **ABC Days on Hand Inventory Profile Report**, combined with your own judgment, should guide you in making sound purchasing decisions. The **ABC Days on Hand Inventory Profile Report** allows you to see the parts that are responsible for total sales. The report breaks down which parts are responsible for the top 80% of total sales (A), those that are responsible for 6-20% of total sales (B) and which parts account for the lowest 5% of total sales, or those that have not moved at all (C). If you have enough "C" parts on hand to last for say 230 days, you are overstocked. One common cause of disproportionate inventories is that many inventory dollars are tied up in slow-moving items that may not be marketable anymore. Although the total inventory investment appears adequate or even excessive, sales are lost because capital is tied up in slow-moving items. This capital could be more



profitably invested in faster moving inventory that would have a far higher sales and profit potential.

7. Maintain Accurate, Understandable Records

Maintaining accurate, up-to-date records helps identify and prevent shortages and serves as a catalyst for decisions. The Fishbowl Inventory System is only as good as the data put into it. If you don't use the complete Fishbowl solution, which is completely integrated, you won't have accurate data to make the proper purchasing decisions. You should be mainly concerned with inventory additions and inventory deductions. Having the proper system in place alleviates inaccuracies.

Additions to inventory normally include the following:

- Receiving purchases
- Returns from customers

Deductions from inventory normally include:

- Sales
- Returns to vendors
- Scrappage
- Pilferage
- Inventory adjustments

Inventory Valuation Inventory calculations, based upon units, are useful when determining the inventory of a particular item. More often, however, you may want to know the dollar value of inventory, particularly your total inventory. For this you would print out the **Inventory Valuation Summary Report**. Total inventory can be evaluated in total dollars only since it usually includes a mix of various items such as apples and oranges, which cannot be added together. Fishbowl inventory includes the valuation at cost. For example, a retailer purchases brushes for \$1.50 each and sells them for \$3.50 each. The value assigned to each hair drier in inventory would be \$1.50.

When calculating the value of inventory, consistency requires that all factors be evaluated on the same basis. If inventory is valued at cost, purchases must be entered at cost when determining deductions. If inventory is valued at retail, sales and receipts must also be measured at retail. A school supplies distributor has a beginning inventory on June 1 of \$200,000. During the month, sales are \$50,000. The cost of these sales is \$35,000. New supplies are received with a cost of \$40,000. You would calculate the June 30 inventory as follows: Beginning Inventory \$200,000 + Production 40,000 - Sales 35,000 = Ending Inventory



\$205,000 Note that sales are recorded at cost, not actual selling prices, to be consistent with the wholesaler's inventory valuation basis.

RECORDING INVENTORY

Purpose To manage your inventory successfully, you should maintain accurate and up-to-date records of sales and stock on hand for every item that you sell. Inventory records tell you what you have. This is why companies purchase Fishbowl to begin with. The SO and POS modules allocate inventory to ship out the door. Anytime there is a shortage, that item goes onto the **Reorder Report**. This tells you what you need. If you have a default vendor you purchase inventory from, you may use the Auto PO feature, and a PO will automatically be generated. When using the Inventory reports you can make the following decisions:

- Purchases for inventory replenishment.
- Scrapping or clearing of obsolete items that are no longer in demand.
- Addition of new items to inventory.

SUMMARY

Success in Inventory Management

The success of many companies depends on their abilities to provide the customer with the right products in the right place at the right time. The right products are the items that the customer desires; the right place is in your inventory, not a supplier's warehouse; the right time is now.

Failure to have the right products on hand immediately often leads to lost sales and, even worse, to lost customers. If they cannot purchase what they want right now from your business, you will lose sales and the competition will gain the competitive edge along with your customers.