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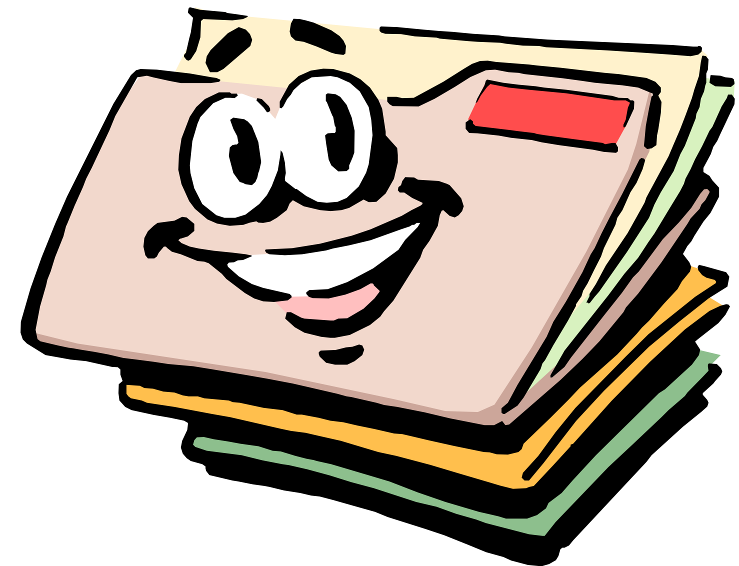
# BUSINESS BASICS:

## *Inventory Management*



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## Inventory Approach

In recent years two approaches have had a major impact on inventory management: Material Requirements Planning (MRP) and Just-In-Time (JIT). Their application is primarily within manufacturing but suppliers might find new requirements placed on them and sometimes buyers of manufactured items will experience a difference in delivery.

***Material Requirements Planning*** *is basically an information system in which sales are converted directly into loads on the facility by subunit and time period. Materials are scheduled more closely thereby reducing inventories and delivery times become shorter and more predictable. Its primary use is with products composed of many components. MRP systems are practical for smaller firms. The computer system is only one part of the total project which is usually long-term, taking one to three years to develop.*

***Just-In-Time*** *inventory management is an approach which works to eliminate inventories rather than optimize them. The inventory of raw materials and work-in-process falls to that needed in a single day. This is accomplished by reducing setup times and lead times so that small lots may be ordered. Suppliers may have to make several deliveries a day or move close to the user plants to support this plan.*

Good inventory management has become increasingly critical in recent years. The improvement of inventory management requires recordkeeping systems and then improved decision making based on the information. Quite simple systems can contribute greatly in the beginning. Later when people have gained the discipline to make these systems work, more advanced systems and computers can add to performance. Some companies improve their inventory management to increase their own profitability; others have to do better to keep their more demanding customers. But all must bring about an improvement in a major company resource inventory.

# How Do I Control Inventory?

In many small businesses, inventory is one of the more visible and tangible aspects of doing business. Raw materials, goods in process, and finished goods, all represent various forms of inventory. Each type represents money tied up until the inventory leaves the company as purchased products. Likewise merchandise stocks in a retail stores helps to contribute to profits only when their sale actually puts money into the cash register.

In a literal sense, inventory refers to stocks of anything necessary to do business. These stocks represent a large portion of the business investment and must be well managed in order to maximize profits. In fact, many small businesses cannot absorb the types of losses arising from poor inventory management. Unless inventories are controlled they are unreliable, inefficient, and costly. In attempting to control inventories, managers often lean toward keeping inventory levels on the high side, yet this greater investment (given a constant amount of profit), increases risk and yields a lower return on the dollar invested. This is one of the contradictory demands made upon the manager with respect to keeping inventory. Others include:

1) Maintaining a wide assortment of stock, without spreading too thin on the rapidly moving items;

2) Increasing inventory turnover without sacrificing the level of customer service provided;

3) Keeping stock low without sacrificing on either service or performance;

4) Obtaining lower prices by making volume purchases, without ending up with slow moving inventory; and

5) Having an adequate inventory on hand, without getting caught with obsolete items.

Successful inventory management involves simultaneously attempting to balance the costs of inventory with the benefits of inventory. Many small business owners fail to appreciate fully the true cost of carrying inventory; which includes not only the direct costs of storage, insurance, taxes, etc., but also the cost of money tied up in inventory. The total annual cost may amount to 15 to 25 percent. Inventory also ties up capital, which may strain a business and lead to a severe crisis. Good inventory management improves customer service, increases sales, increases profit and increases working capital without having to borrow money.

One commonly used, simple measure of managerial performance is inventory turnover. This value gives a rough guideline by which managers can set goals and measure their performance, but it must be realized that the turnover rate varies with the function of inventory, the type of business, and how the ratio is calculated (whether on sales of cost of goods sold). For example, on a cost of goods sold basis, the average inventory turnover rate for manufacturer's of paperboard containers ranges from 4.5 to 21.0.

Values such as these are published periodically by the trade associations and professional organizations for the industry. They can be useful in setting guidelines for one's own company, but must be used with care.

## Recordkeeping

At a very basic level, business inventory records provide the information needed to make decisions about inventory management. But the number and kinds of records maintained, as well as the type of control system needed, depends upon the type and size of inventory involved. In very small businesses where visual control is used, such records may not be needed at all or needed only for slowly moving or expensive items. But in a larger organization where many items from various suppliers are involved more formal inventory records are appropriate. In such a case, regardless of the type of records maintained, the accuracy and discipline of the recording system is critical.

It is important to remember that in many cases attempts to improve management and reduce costs fail, not simply because of insufficient records, but rather because of inaccurate and carelessly recorded inventory data.

Many small business manufacturers, wholesalers, and retailers with relatively few items in inventory choose to use a manual inventory control system. They use card records inventory tags, and accounting data to capture the historical information necessary to establish economic order quantities, order points, and other parameters for effective inventory control. However, as the number of items suppliers, and general importance of inventory increases, it is often desirable to consider use of a computerized system for inventory control.

Today, the use of computer systems to control inventory is far more feasible for small business than ever before, both through the widespread existence of computer service organizations (listed in the yellow pages of many telephone directories) and because of the decreasing cost of personal computers. Often the justification for such a computer-based system is enhanced by the fact the company accounting and billing procedures can also be handled on the computer.

If the use of computers is being considered, the further question of whether to purchase your own in-house capability or to employ a service bureau must be addressed.