ROVER
DATA SYSTEMS, INC

white paper

Inventory Control:

Control it before it controls you

Introduction

The purpose of this paper is to offer up ideas and discussion points on the importance of inventory control for businesses. The manner in which inventory is controlled will depend a great deal on the size of your company and the amount of inventory you are required to carry. Many small and start-up companies can maintain their inventory using off-the-shelf, prepackaged software and still others will use tools such as Microsoft Excel or Access. The need to control inventory and the need of a software solution to control inventory will grow together, exponentially, as the business grows.

A rose by any other name…

Any discussion of inventory requires that we first discuss the type of business that you represent. Throughout this paper, we will be attempting to address general inventory concerns, but invariably it will come down to what "inventory" means to you. Without intentionally leaving anyone out, let's recap the different types of businesses we are addressing:

Manufacture to stock – builds to stock according to a plan, then waits for orders to come

Manufacture to order – waits for orders to come, then builds a customer specific product

Distributor – purchases and stocks product, then sells to customer

Kitter – purchases and keeps detailed inventory on hand, then quickly assembles or packs to deliver to the customer when ordered

As you can see, "inventory" has a slightly different meaning to all of these business types:

Manufacture to stock – needs to have component and subassembly inventory available to meet the planned build schedule

Manufacture to order – needs to have component and subassembly inventory available to meet the requirements of the customer when the order arrives

Distributor – needs to purchase the stock at the correct inventory levels to meet expected customer orders

Kitter – needs to purchase the stock at the correct inventory levels to meet expected customer orders in the kit configuration the customer requires

Notice, however, that they all have one thing in common: customer orders. Such a simple concept: sell a product to a customer at a profit. The act of selling and the resulting profit (or lack thereof) will be addressed in another white paper. For now, we're going to concentrate on the issues of inventory.

Such a simple concept: sell a product to a customer at a profit

Where is my inventory?

This is an important question when it comes to both selling to your customer and to being able to have product available. For a manufacturer, inventory needs to be available to the production floor when it is required and in the quantity that is required. For a distributor, having the product available means the difference between making the sale and your competitor getting the sale.

So, where is your inventory? There are two main problems with finding your inventory. The first is initially acquiring the inventory and having it delivered to your warehouse. The second is finding the product within your warehouse.

The acquisition, or purchase, of the inventory is done by one or more persons within your company. For the purpose of inventory control, we have to assume that they are doing their job correctly and the material is on the way to you and on time. The bigger problem is visibility. Who knows when it's going to arrive and how much of it there will be? If that is only the purchasing agent, then you have a potential bottleneck of information. When a customer calls and wants to place a big order, but needs some level of guarantee that you will have the product ready on time, how many hoops will your sales people need to jump through to get that information? Do they have to keep calling purchasing to check on status?

Locating inventory within the warehouse can be another potential bottleneck. Many times, inventory control consists of personnel on the floor maintaining a spreadsheet of some kind and manually updating the inventory levels and locations. That may work for them, but again, the sales people may have no way of knowing what's available for delivery.

If your warehouse is small enough to be able to scan for product quickly, then a single inventory location may be all you need. However, depending upon the size of your warehouse, you may want to consider multiple inventory locations. Think in general terms, at first, like finished goods, raw material, receiving inspection. If those locations are still too big to easily find inventory, consider using bin numbers. Bin numbers can help identify exactly where in a specific inventory location the part you are looking for is stored. A bin can be a row, a shelf, an aisle, or anything that can break down the entire location into smaller areas. If you have a limited number of parts, you can use reference bins. With this method, the same parts will go into the same bins every time. This reduces the amount of paperwork and data entry that are required for full bin control. If your warehouse is constantly changing regarding where parts are stored (i.e. when material arrives, it gets stored wherever there is room), then full bin control is called for. Using this method, each time a part is moved, both put away or pulled, the bin number is referenced and the system can keep track of exactly where the parts are at any point in time. Using bar code devices can make this task easier.

An equally important question to "Where" is "Who else can find the inventory?" It is one thing for selected personnel to have good visibility, but entirely another to make that visibility available to everyone who needs it.

The more people that have inventory visibility, the better

Who needs visibility?

In a word, everybody. Many times there are "islands of information" throughout a business, usually developed by persons who don't feel confident in the central area of storage. The more people that have inventory visibility, the better. Customer service, inventory control, production, purchasing, accounting; everyone needs to know what's on hand, on order and on the way.

There are two primary causes of lack of visibility. First, someone is keeping the inventory in a spreadsheet format (e.g. Excel). While this may, or may not, allow them to track inventory accurately, it becomes very difficult to keep others within the organization aware of inventory status. Even if the spreadsheet is posted to a shared area of a network, the spreadsheet is only as accurate as the last time it was updated. Delayed data can sometimes be as disastrous as no data. The second most common cause is non-integrated systems. Through the time your business was growing, different systems were brought in to take care of selected areas. For example, an off the shelf accounting system was used for AR and AP, but another system was brought in to attempt to track inventory. This may be one step better than the spreadsheet method, but still does not address the overall need for company-wide inventory visibility and access.

Is my inventory accurate?

Obviously, having visibility of the inventory is important, but worthless if the inventory is not accurate. There is an old saying "GIGO" (Garbage In, Garbage Out). The meaning here is that inventory accuracy is everybody's responsibility. Everyone who makes updates or movements to inventory on your system must be accountable to the accuracy. This is difficult if there is no central system in place, or if the system you have has no error checking and/or allows users to make errors easily. On the other hand, if your system is too difficult to work with, users may not be making accurate adjustments, either.

There are several areas where inventory accuracy can be addressed. First, if the transactions being processed are validated upon entry, the number of errors will be greatly reduced. This type of an error stems from someone putting the wrong part number into your system, probably caused by a simple data entry error. One simple way to solve this is to use bar codes to scan the part number into the system, rather than type it. This greatly reduces the number of errors.
Beyond data entry errors, there is always the problem of inventory "shrinkage".

Shrinkage occurs through waste, testing, carelessness and sometimes even theft. This type of problem is generally not recognized until someone goes out to the floor to get inventory that the system says it there, but it's gone. Many companies do not recognize this inventory change until they do a complete physical inventory. This may occur once a year, or sometimes once a quarter. Using a cycle count technique, you can more quickly discover inventory problems. Cycle counting is the verification of some percentage of your inventory counts every day. All parts are weighted by cost and/or usage and assigned an ABC code. Parts with an A code are high dollar or high usage parts and get counted more often than B's and C's. Many companies have found that by going to a cycle count technique, they can eliminate the annual physical inventory. If they cannot fully eliminate it, then at least the dollar value of any inventory variances are of less impact.

What is it costing me?

While this white paper is not aimed at answering detailed costing methodologies, there are really two questions in this area. The first, "What does the inventory cost me to have it in stock?" The second is, "What does the inventory cost me NOT to have it in stock?" The answer to this question may well depend upon the type of business you are in and to what type of customers you are selling. If getting the sale depends upon have the right part in stock at the time the customer calls, then inventory carrying costs are a necessary cost of running the business. If, however, your customer can wait until you provide the product, then there is no reason to carry the inventory until it is needed. There are many acronyms swirling around this subject: ERP, JIT, Lean and SCM, to name a few. Whatever the acronym, the bottom line comes back to doing what you need to do to satisfy the customer requirements while minimizing the cost of carrying the inventory.

When can I promise delivery?

For a distributor, the availability of inventory means you either have it in stock, or you can get it in time to satisfy the customer's requirement. For a manufacturer, availability either means you can build it in time, or you have already built in and it's waiting in stock. If you have it in stock, is it because you put together an accurate plan and executed it flawlessly, or did you just get lucky and happen to have the right part at the right time? We'll leave the planning for another white paper. Let's concentrate on what effect inventory visibility has on sales.

When a customer calls and wants to order one of your products, several things can occur. With the correct inventory controls in place, you can take that customer order and either ship from stock, or know with confidence that you will be able to meet their requirements by either building it or acquiring it in time. Without the correct inventory controls in place, you can take the order, then hold that order until the parts become available and hope the customer is willing to wait. Or, upon taking the order, the sales person must run around to the different points of control

for the inventory and find out if it's in stock, if it's on the way and/or if it can be built. Not only is this inefficient from a time standpoint, but you have just added hidden cost to that sale that won't show up on a gross sales report, but will eventually hit your bottom line. Additionally, that sales person is not making additional sales while their running around trying to find product.

A strong inventory system will provide on-line, immediate access to the inventory status, including what's on hand and what's being built or ordered. Further, calculations such as Available to Promise will give them a calendar-style display of how many of the product will be available on which dates. Ideally, all of the information will be available during the order entry portion of the system.

Conclusion

Feel free to draw your own conclusions from the information and ideas offered in this paper. As we mentioned throughout, the amount and type of control is dependent upon the type and size of company you are.

The managing of inventory for a business is one of the most important, and often least handled, functions for a business owner. Everything revolves around it: Sales, Customer Service, Accounting, Planning, Shop Floor Control, Purchasing, etc. You get the picture: Control it before it controls you.

About Rover Data Systems

Rover Data Systems is a business software provider specializing in offering Millennium III (M3), an affordable ERP solution to small and mid-size businesses. They have been in business since 1989, offering a superior competitive product and unparalleled customer service. The M3 system includes every critical component necessary to manage a growing organization, combined with the flexibility and scalability to meet today's and tomorrow's business challenges.

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