

No Fancy Tools Required

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ISM Mastery Model®

Core Competency: **Sales and Operations Planning**

Knowing how to interpret data can help an organization better manage inventory and improve its bottom line.

Whether large or small, many companies continue to struggle with inventory management. Larger companies can afford more complex software tools with forecasting algorithms, but often don't have anyone in supply management with the skills to understand these tools and apply them properly. Smaller companies don't have fancy inventory management tools; their inventory data is often stored in a home-grown database system.

Regardless of company size, the challenges associated with inventory management are primarily the same. The use of analytics to help solve some of these challenges can be applied to all company sizes. Here are some strategic ways to look at data that don't require complex software tools or large budgets.

ABC INVENTORY ANALYSIS

Most supply chain professionals understand the concept of performing an ABC analysis on inventory. Essentially, it's a way to prioritize inventory items according to their value.

Value can be interpreted in several ways. Some companies define "value" in an ABC analysis as the cost of inventory. For these organizations, the A group is the list of items making up 80 percent of the cost of inventory, which usually amounts to 20 to 30 percent of items. The A Group is the most closely monitored list of inventory items.

Using a view of value that I prefer, ABC inventory can be related to its profit contribution. For example, if I'm a distributor of finished goods, I would calculate the gross profit as the sale price of an item minus its allocated cost. The allocated cost is the cost of purchasing one of those items, including shipping to my dock or warehouse.

To explain my ABC categories, I will start with Group C, which contains all items that are being sold for a negative gross profit. Yes, this can happen in the real world. Sometimes a company is unaware that it is selling a product for less than its allocated cost. Mostly, this occurs when a company has a sale event but is unaware of the cost value assigned to that item. It can also happen when a company has ordered product from a supplier with a rush delivery. Groups A and B are all of the items that are being sold for a positive gross profit. Group A is comprised of the items that contribute 80 percent of the positive profit. Group B contributes the remaining 20 percent of the positive gross profit.

In a traditional ABC analysis, the most closely monitored group is A. In my segmentation, A is still a closely monitored group in order to protect profit generation. However, it's important to investigate Group C to find out why money is being lost on these items. Perhaps these items should no longer be offered — or perhaps the selling price should be raised to ensure profitability.

UNDERSTANDING CUSTOMER PATTERNS

Virtually all companies can export data from their systems. This capability allows a company to perform customized analyses to better understand customers.

The following examples can help explain how. For one manufacturer, a study of part-number usage revealed which parts were high volume ("high runners") and which weren't. Frequently used parts are a priority to keep in stock since they're tied to the most popular product offerings. However, this manufacturer also discovered that it was carrying inventory for products ordered only once every six months. Looking at the monthly parts usage, this manufacturer could see that certain high-volume parts were also highly variable. Having this knowledge allowed the company to adjust its ordering strategy.

In addition to manufacturers, customer-pattern analysis is also applicable to distributors of finished goods. For example, if you are working with a liquor distributor, analytics can help answer such questions as:

- Which products are being carried but ordered infrequently?
- Which products show seasonal-demand patterns or yearly trends?

- How volatile is the ordering of each product or part?
- Which products produce most of the gross profit?
- Which products produce a negative gross profit?

DUPLICATE SPEND COST SAVINGS

It is not atypical for large companies to form through organic growth as well as acquisition. When two companies merge, each company has its own set of suppliers and supplier contracts. While it may take some time to analyze, identifying duplicate spend within both companies can reveal cost-savings opportunities. Careful planning and timing can yield savings from large-volume discounts after combining common needs. Severing of extraneous contracts should be performed in accordance with termination clauses in each contract.

Even without a merger, a single company should periodically scan for duplicate spend across functional areas. Smaller companies have fewer purchases on formal contracts, so as they grow, it is easy to create duplicate spend patterns that are not visible to purchasing professionals.

VARIABILITY IN SUPPLIER DELIVERY

In many inventory systems, promised lead time is used as a factor to calculate how much to order and when. That can yield a few surprises when supplier delivery performance doesn't match what was promised in a contract.

For example, suppose one of your suppliers has a contract promising to deliver product to your dock or warehouse in two weeks. You find that you are occasionally running out of these parts and losing customer orders. You decide to pull data from your system to compare the dates on which you placed orders and the dates on which you received product on your dock. You find that the supplier's on-time rate is 80 percent. Analytics can be used to take supplier delivery analysis beyond the "percent-on-time" metric to viewing histograms (frequency charts) of supplier delivery patterns.

Suppose that with the 20 percent of shipments identified as late, you stocked out and left customers waiting. A customer waiting can be a customer lost. With analytics, the ability to know more about a supplier's performance than just an overall on-time metric can be very valuable.

By using these tools to interpret data, you can improve inventory management while helping the company's bottom line. **ISM**

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