Warehouse Management

In recent years, Warehouse Management Systems have taken the industry by storm. This paper reviews why these systems are being utilized more frequently and explains some of the new features of Warehouse Management.

The Challenge

The task of managing a warehouse has become as complex and challenging as any in business today. Many factors contribute to the complexity and challenges which confront warehouse management. Some of these factors are:

- Inflation
- Rapidly increasing labor costs
- Increasing costs to maintain warehouse facilities
- Customers are more perceptive and demanding of their needs
- Cost and availability of capital

In today's global environment, businesses can exercise little or no control over many of the factors which impact profit. Therefore, they must concentrate on those things that they *can* control and influence.

In interviews with hundreds of wholesalers at every management level, one point becomes very clear. Warehousing is a function in our quickly evolving 'new world' which can provide effective logistics support and derive a genuine profit contribution to the organization. The challenge in today's environment is to improve a profit margin that provides continued growth and a reasonable rate of return.

The core of the wholesaler's business is receiving and shipping merchandise. Therefore, in meeting today's challenges, a wholesaler must focus on improving performance in this critical area. Customers' demands must be quickly picked to provide them with the merchandise they want, when and where they want it. With thousands of merchandise movements on a daily basis, this is not an easy task.

In hopes of cashing in on the promises of higher productivity, higher accuracy and tighter control over operations, virtually all new distribution centers are installing Warehouse Management Systems. This is a major undertaking for them and will provide them much more information for the decision making process.

Today's Warehouse Management Systems

In today's environment, the Warehouse Management systems don't stop with inventory location as they did in the past. The software manages all the information about inventory, orders and activities throughout the warehouse. In addition, with the help of EDI, the software can be hooked into the flow of inventory beginning at the vendor's shipping docks and ending at the customer's receiving docks.

These software enhancements are driven by the stepped-up demands of customers. The Distribution Center is the last place in which a company has a good chance of messing up an order after everything has been done flawlessly. There are clearly more ways than ever to make that mess. Customers now place smaller orders more frequently with shorter turnaround times. Many of these customers will specify the shipping cartons as well as the type of label on the carton. Furthermore, they insist on advanced notification of shipments. Bar codes confirm accuracy while radio frequency (RF) devices speed the exchange of information in the warehouse.

The most comprehensive systems are in the greatest demand by those who work in the Just-In-Time environments. Even the smallest companies cannot risk the loss of customers.

Managing the Data

While most companies are focused on the superstructure of their information systems, industry leaders are taking a new look at how and where operational data enters into the system and evaluating who needs access to it. Managers from operations and information systems are teaming up to extend established information systems and are also assessing the automatic data collection technologies that can be used to build these essential databases.

To manage all of these individual tasks effectively, warehouse management software relies on accurate data. While most software will accept keyboard entry, the bulk of the information will be collected from bar codes in batches or in real time. Typically, real time data systems rely on radio frequency data communication technology.

In addition, management of the data can extend beyond the walls of the warehouse. EDI capabilities allow rapid, accurate exchange of order and shipment information between the warehouse and its customers and vendors.

Warehouse systems also integrate into the other information systems within the company. Single-level bills of materials are starting to appear, allowing firms to build customer kits to order within the distribution center. Some systems even provide cartonization, the selection of the appropriately-sized overpack carton for items that ship together.

Why consider a Warehouse Management System?

Modern warehousing is in the process of evolutionary change from an emphasis on storage to an emphasis on flowthrough, from inventories at rest to inventories in motion. Computers and software permit the user to make this transition faster. The following is a partial list of reasons why companies are considering a Warehouse Management System:

1. Better inventory accuracy
2. Higher order fill rates
3. Better personnel utilization
4. Increased space utilization
5. Higher inventory turns
6. Less shrinkage and damage
7. Increased shipping accuracy
8. Reduced order cycle times
9. More timely shipments
10. Improved customer relationships

Ultimately, the key to selecting the most appropriate package rests in understanding the level of operational discipline and process automation that you can live with and that your trading partners require.

In Conclusion

There is no commonly recognized approach to integrating data collected in the warehouse into an enterprise-wide information system. Almost invariably, it is a step-by-step process that takes into account strategic objectives, operational needs and information systems already in place. Typically, the best solutions serve equally well a company's short-term and long-term plans. As data collection and related information technologies evolve, building integrated information systems will surely become easier; but thinking through why the information is being collected and how it will be used will remain a prerequisite to success.

The payoff, however, is that by integrating automatic data collection into enterprise-wide information systems, companies can remove waste, shorten the supply pipeline and reduce costs! Can anyone afford *not* to be part of the process?