

"WHAT TO DO UNTIL THE CONSULTANT ARRIVES"

The life span of a distribution center is finite. There may come a time when the business grows and customers demand more, selling patterns change, or internal resources and facilities have been stretched as far as they will go. The company knows that it has to do something. There is a choice of making changes internally or going outside and using a management consultant. In either case information and data must be collected and analyzed.

If you use a management consultant you have to inform your operating staff that a consultant is coming and why. At the same time you should let your Information Systems staff know that you will be using outside support. The data that is required will come from your data files, and some recommendations may include changes in your information systems.

The three criteria for selecting real estate are location, location, location. If you study a distribution center, the three criteria for a successful project are data, data, data. The specific data required will vary based on the scope of the project, but most distribution center projects require similar base data.

If an existing operation has to be improved, the first requirement is to obtain a blueprint or Computer Aided Design (CAD) file of the building. If this is not available the building has to be measured and put on a blue print or CAD drawing. With the drawing, a list of available material handling and storage equipment should be prepared. Comments should include the physical condition of each item. Note which equipment is owned or leased. For racks, beam and upright capacities and dimensions must be included. For lift trucks capacity, aisle width requirements, heights, age and running hours are important.

The assistance of the Information Systems (IS) staff is needed to gather information on each Stock Keeping Unit (SKU.) Much of the movement information will have been captured as part of the sales history. Information about units and cube shipped by week or month for the last year is important. In many cases the history is available in dollars which has to be converted to units. Dollar information is not useful in determining requirements. Many of the recommendations that will result in the final design will depend on this volume data. Because of the amount of data involved, it would be desirable to obtain this data in a machine-readable format, i.e., disks or tape.

The second piece of data that should be collected is inventory by SKU. Because any inventory is just a snapshot, it is helpful if inventories can be provided for more than one period. Of particular importance are the peaks and seasonality. Often, this information is available from computer records. Along with the inventory in units and cube, it is important to collect data on the physical aspects of the products; number of units per carton, carton sizes, cartons per pallet and carton weights. Again, conversion from dollar inventory records may be required. The study time will be reduced if this data can be provided in a machine-readable format.

This is some of the information that the internal or external consultant will use to design optimum storage and handling combinations for a distribution business. Often that will account for the largest amount of the space in the distribution center, but it is not the part of the operation that is most critical to the success of a business. The reason for a distribution center is to move products to a customer. To make that part of the operation effective, information about customer order patterns are necessary. Here, again, the IS department can help by creating machine-readable files to be used in the analyses. Provide sales histories for twelve months, at a minimum. Create files of the orders that shipped from the DC during those months. If information about what orders did not ship on schedule (requested ship vs. actual ship dates, backorders, cancellations) is available that should also be included. Information on costs, selling prices, and margins are unimportant to the design. The characteristics of number of orders, number of lines, number of

pieces, cube, etc. are the essential data. Information on special handling and processing requests such as temperature requirements or hazmat classifications are important.

Other key components of information collection are the projections or forecasts for use in anticipating future requirements during the foreseeable life of the facility. These include increases in the volume of existing SKUs, increases or decreases in the number of SKUs, additions to services to be provided or changes in the sales units. While forecasts are not always accurate, it is important to get the best possible forecasts.

To understand the flow of material across the dock, the activity logs are a good place to start. If they are not available, information on both inbound and outbound shipments should be collected as soon as possible. Start logs that include:

- Time of arrival
- Time that a dock door was in use
- Number of pallets loaded or unloaded
- Number of SKUs
- Number of non-palletized cartons loaded or unloaded
- Time of departure

If the project scope includes changes to procedures, collect any documentation that exists on present operations. Save copies of the forms that are in use. It is helpful to have a complete set of documents that follow an order through its complete life cycle.

The data collection phase of consulting projects is absolutely necessary for a successful project. The lack of good information is the greatest cause of delays in the completion of a DC design project. Using the time to gather information until the internal or external consultants arrive will go a long way toward a successful project.

QUESTIONS FOR BUSINESS UNIT MANAGERS

Product Line:

- Anticipated changes affecting the warehouse operation?
- Receiving patterns?
 - a. More frequently, smaller quantities?
 - b. Seasonality?
 - c. Commodity pricing/ advantageous buys?
- Unit load changes?
- Packaging changes?
- Product stackability changes?
- Customer demands for labor intensive services?
 - a. Customization?

Technical Articles/ White Papers

- b. Bar code labeling?
- c. Repackaging?
- d. Other?
- Customer ordering patterns?
 - a. More frequently, smaller quantities?
 - b. Seasonality?
- Anticipated changes in the mix of vendors?
- Vendor provided services?
- Anticipated changes in the mix of SKUs?
- Number of SKUs?
- Handling and storage requirements?
- Indoor vs. shed vs. outdoor?
- Anticipated unit volume growth?
- Anticipated unit inventory growth?

In summary, the data will be the key to designing an efficient operation.

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