



Distribution Center MANAGEMENT

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Managing people, materials and costs in the warehouse or DC

From the Golden Zone

How to address DC inventory tradeoffs, discrepancies, and inaccuracies

By Thomas L. Tanel

When it comes to inventory, DC operators often face challenges in terms of discrepancies, inaccuracies, and tradeoffs with other aspects of the operation. Here is advice for dealing with each of those challenges.

Understanding inventory tradeoffs

A challenge facing many DCs is managing the tradeoffs among transportation, inventory control, warehousing, and customer service. It's easy to forget that tradeoff opportunities are usually created by difficult economic conditions.

The following rules of thumb can help make sense of these tradeoffs:

- Higher-cost transportation can contribute to lower levels of inventory, fewer DC facilities, and higher levels of customer service.
- Higher levels of inventory control contribute to less reliance on priority transportation or emergency shipments, more warehousing, and higher levels of customer service.
- A large number of DC locations contribute to higher costs of transportation due to a larger number of smaller shipments, higher inventories resulting in more inventory investment, and better customer service.
- Higher levels of customer service result in higher transportation costs, higher inventory levels, and a larger number of DC facilities.

Identifying inventory discrepancies

It's important to find out the reasons for inventory discrepancies before making any inventory adjustments. Usually, inventory discrepancies occur because of physical inventory discrepancies; damage or destruction; obsolescence or deterioration; loss, theft, or pilferage; operational errors; returns; excess stock sales; and transfers to scrap or disposal.

Researching inventory discrepancies should tell you where to focus your future inventory management and control efforts. Based on my years of experience, when conducting causative research for inventory adjustments, you should:

- Identify all documents, records, and computer entries, which relate directly to the variance (receipts, issues, replenishments, stock outs, backorders, and adjustments), and obtain copies of the documents. Use date of last inventory as a starting point for this process.
- Use these records to build a temporary research file for each item.
- Compare the information to actual postings to see if posting errors exist. Check status on return, stock out, partial order fills, and backorder transactions to find out if actions were completed but not posted.
- Identify the DC facility function (such as break bulk, receipt, issue) responsible for the area where the variance most likely occurred.

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- Determine at what point the actual administrative error or computer entry error possibly occurred.

- Document the circumstances that caused the variance and the procedure used to resolve the error. Make changes in operating procedures to prevent errors responsible for the variance from recurring.

- Record a condensed version of the above on the inventory adjustment documentation or inventory adjustment computer log.

- Remove the documents from the temporary research file and re-file them in their original location after completing the research.

Causative research should be completed within a specified time frame following completion of the inventory. Causative research will be conducted at the direction of the auditors or management.

Reducing inventory inaccuracies

Inventory record inaccuracies (IRI) are the major cause of inventory errors and discrepancies. So focus on areas that will lead to the most improvement in your DC's inventory reconciliation and accuracy. For example:

- IRI is positively associated with the sales quantity of an item. In other words, the more units sold, the greater its IRI. Inventory records with

greater numbers of transactions are more likely to be inaccurate.

- IRI is negatively associated with the cost of an item. In other words, the inventory of less expensive items is less accurate than more expensive items. Your workers are more likely to scrutinize transactions for higher cost items.

- Records for items received directly from suppliers and vendors have greater accuracy than transfers or shipments from an organization's own storage facilities and DCs.

- High levels of DC inventory density are associated with high levels of IRI. High levels of inventory are associated with a high workload, that in turn generates workplace pressure, a variable that leads to human error.

- Higher levels of IRI are associated with higher levels of line item variety. Increasing variety brings increasing complexity with similar items, as well as different sizes, weights, shapes, and configurable SKUs.

- IRI increases with the number of days from the last physical audit. Errors increase, accumulate, and are compounded until records are updated by a physical inventory. Cycle counting could help to alleviate this IRI.

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