



# **Inventory Data Conversion: Overlooked Opportunities**

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## OVERVIEW

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Successfully implementing a Computerized Maintenance Management System (CMMS) requires following several paths. One of the main paths that any implementation team must travel is the one that leads to a successful Inventory Data Conversion at its end. Whether done manually from hardcopy or “electro-magically” from legacy systems, the data resources on the team will be focused on data mapping, data scrubbing and data loading.

Often overlooked during data migration is the opportunity to “clean house”. The focus on getting a data record into the new product is so intent on completeness and accuracy, that the question of whether or not the record should be there at all is often not asked.

The data migration / data scrubbing exercise offers the client the best opportunity they’ll ever have to clean out and reorganize the storeroom. This is especially true for companies that have been formed by acquisition. Moving from one owner to the next, these companies usually drag along a wealth of redundant and obsolete inventory that no one ever has the chance to clean out. The implementation of a new CMMS and its data migration activities offer the perfect opportunity to review the contents of the storeroom and find opportunities to reduce costs and storage requirements.

## WHAT ARE SOME OF THOSE OPPORTUNITIES?

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- **Duplicates** - Do you keep the same thing in inventory under multiple identities? This can easily happen when two companies merge inventory files. It also happens when individuals buy their own MRO parts and materials instead of going through a centralized purchasing agent.

Record comparisons are the usual method of identifying duplicates. The lists that your data migration resources are using can be structured into side-by-side columns and sorted in various ways so that comparisons can be done on values such as vendor number, manufacturer’s part number, noun / qualifier combinations, unit cost, unit-of-measure, description and part characteristics like size measurements. Experienced warehouse material handlers, maintenance technicians and buyers can also provide helpful leads when searching out duplicate items.

When this situation is found, determine what the correct stocking level is, determine what the “one” identifier should be, and consolidate all of the items in one location. If the stock level is below the desired level, order more. If the stock level is too high, set the reorder parameters to delay purchase until the excess is used up. A tickler message needs to be set in a manner that will remind the inventory manager to reset the reorder parameters, once the correct stocking level is reached.

- **Equivalentents** - Do you have similar items that can be used interchangeably? This situation develops in the same way the duplicate item situation develops. Analyzing this is a little more difficult. You must determine that similar items are in fact “equivalent”.

Equivalentents can be identified in a similar manner as are duplicates. Noun/qualifier, description and part characteristic (e.g. size, capacity) comparisons work best. Care must be taken, particularly where health, safety and environmentally critical parts are concerned, that the specification of the equivalentent meets that of the item being

replaced. Engineering and operations should review any candidates for replacement before committing to the change. Using yellow gloves instead of red may be acceptable. Replacing a seal for a nuclear reactor inspection port with one of lesser quality is not acceptable.

The item to be stocked is then selected and the stocking level determined. Then the inventory system must be set up to point an item record to the equivalent part that will be issued to the work order.

- **Obsolete Items** - Do you have items in inventory for which there is no longer a need? This is often caused by the merger effect. Two companies merge and obsolete inventory from the acquired company is carried over because to eliminate it would depress the value on the books. This situation also develops when, for example, a production line is decommissioned and its MRO spares are no longer needed.

Reviewing your inventory turns by item is usually the best way to identify parts that may be obsolete. Items that haven't been used in six months are suspect. Also, decommissioning a production line should have a spare parts review as a line in the project plan.

The action on this situation is to first isolate the obsolete items from an accounting point of view, if not physically. Have your engineers review the obsolete items to see if they can be used for some other application. If not, look for a broker that will take the material off your hands and resell it. This can be done as a discounted sale or a consignment.

- **Shared MRO Stores** - Do you use the same inventory items in more than one location? If your implementation is for multiple sites, and shipping time between the two is reasonable, you might be able to reduce total corporate inventory levels by sharing or having one location be the "main" warehouse and re-stock the other. The "main" location then does all the reordering based on demand from all sites it restocks.

Site-to-site comparison of items by manufacturer's number, noun / qualifier, description and characteristics is how candidates for shared inventory are found. This takes serious analysis of demand, replenishment patterns and transportation times. It also takes the political will of the various sites to share inventory.

- **Positioned Spares** - Do you have high cost, low failure spares that are needed at more than one location? This is a variation on shared stores. High cost, mission critical or emergency spares are candidates for this. An example is a back-up generator, palletized at the most central location, ready to be shipped out to a sister site at a moment's notice. A site-to-site comparison of low-turn, high cost items is the way to identify potential positioned spares.

The risk of doing this must be evaluated carefully. These are often mission critical spares. The risk may be acceptable if loss of the item will not cause undue equipment, product or safety problems while it is in transport. The item should have a relatively low failure rate and the time and availability of transportation must be guaranteed.

## CAN YOUR VENDOR HELP?

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The suggestions so far have been directed at things a CMMS implementer can do internally to improve their inventory position. The vendors who supply your MRO parts and materials can also help.

- **Take Backs** - A vendor may be willing to take back excess inventory as a goodwill gesture or at the cost of a restocking fee. This frees up cash and space.
- **Vendor Positioned Stock** - You may be able to arrange for vendors to maintain a supply of high-turn items at their location near your plant. This is usually done as part of a purchase contract for a minimum dollar amount over a defined period of time (usually one year). This also frees up cash flow and space.
- **Vendor Maintained Inventory** - High turn, low cost items can often be turned over to a vendor for maintenance at your site. Fasteners and linear products (pipe, boards) are often candidates for this type of an arrangement. The vendor is responsible for keeping an agreed to level of inventory on hand. He bills your company as he replaces what is consumed.
- **Vendor Consigned Inventory** - This is a variation of vendor positioned and maintained inventory. The vendor positions inventory in your location, but he owns it until you consume it. At the time a consignment item is issued, a voucher is generated to pay the vendor. This arrangement puts the burden of maintaining inventory on the vendor, reducing your overhead and improving your cash flow.

## WHY DO THESE THINGS?

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By cleaning your inventory house you gain many benefits:

- The right items are in stock so that repairs are not delayed, which would inflate maintenance costs (wasted time) and potentially have an adverse effect on production.
- You free up space. Seems silly, but a lot of time is wasted moving the wrong stuff out of the way to get to the right stuff. Also, there is a rent cost to the space occupied by unneeded inventory.
- Cash flow is improved by not having money tied up in excess or unneeded inventory.
- Overhead is reduced. Because of the items above, fewer pallet moves and less space means less handling equipment and utility costs. Companies have been known to purchase pallet rack systems in order to store excess and obsolete inventory, not thinking to eliminate the unneeded items instead.

## WHY DO IT DURING A CMMS IMPLEMENTATION?

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The implementation project presents an opportunity that doesn't come along very often.

First, the process of doing data migration requires a thorough and complete review of data records. This is the best time to find out what you think you have and ask the questions: a) Do I have it? and b) Is it the right thing to have?

Secondly, because the implementation of a new system naturally requires review of current processes and facilities, it allows the opportunity to challenge past decisions while avoiding embarrassing political questions.

## **WHO NEEDS TO BE INVOLVED?**

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The right people need to be involved in order to make this effort successful. This is not work for the uninformed fill-in worker. The storeroom or warehouse manager needs to lead this effort. It's their house that's being cleaned. He needs the assistance of the maintenance planning organization and production in order to determine what the demand for the items being reviewed will be. He needs engineering support to identify alternate uses or future uses of what may currently be excess or obsolete inventory. His buyer or purchasing agent will assist to set up vendor arrangements. The plant accountant will direct how inventory changes are handled through the ledger. And certainly, the plant manager must sponsor and bless the effort because he must authorize the resources needed to do this "house cleaning".

In summary, this is not meant to be an exhaustive review of techniques for optimizing the contents of MRO storerooms. It is intended to inform of an opportunity that presents itself when a company undertakes a system implementation. It also presents a few of the techniques that successful CMMS implementers have used to optimize their MRO storeroom and free up cash.

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