

VENDOR MANAGED INVENTORY FOR MRO PLANNING

A SIMPLE BUT IMPACTFUL PRODUCTIVITY TOOL
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Years ago while attending a local APICS sponsored meeting we heard a presentation by the Purchasing Director at Bose Corporation. Unfortunately I do not recall the gentleman's name, but I will never forget the message: His topic was purchasing productivity gains. He used a technique he called it Just in time II or JIT II. In the presentation he described a truly unique (at that time) process of full-time suppliers associates located physically within Bose; continuing to be full-time supplier employees. His logic was irrefutable: He said something like 'In our MRP system we assign preferred suppliers to each purchased component. If the only thing Bose associates do is read the MRP output, consolidate demand and place PO's why not have the supplier do it? They're going to get the business anyway!'

He went on to describe more details of this arrangement. He had everyone's

attention and many of us ultimately were convinced of his wisdom. He then offered another bombshell by saying something like this: "Besides this purchase arrangement, with the complex business we're in and with the advancing technological capabilities of our suppliers I'd even invite supplier representatives in to certain new product design discussions."

Wow, now there's some radical thinking!

I could feel the excitement in the audience...Something new! A simple productivity process, that apparently works! What could we say but; Why not?

Look at the advantages:

First we free up an internal resource. Second we'll likely get great on time deliveries; what better way to expedite something than with the company's own associate identifying the needs and calling the shots. Additionally they know the right buttons to push in the home facility. Quality issues? No question their representative would be on the front lines during the weekly or as-required Material Review Board (MRB) meetings. Speed of issue resolution becomes a reality. In the end it all made total sense, the only prerequisite being that volumes were enough to warrant the strategy. Although we don't hear much about JIT II today we certainly haven't lost site of the concept.

Clearly what we saw then with JIT II was the precursor to what is commonly known now as Vendor Managed Inventory (VMI).

VMI takes many shapes and forms today. MRO materials, direct materials, on site, remote, MRP systems interface, other electronic methods of communication. With VMI the common thread: everyone wins. What productivity tool exists today that most all who implement it see the rewards on both sides: Supplier and Customer? VMI has so many advantages it is a wonderful place to start on the path to productivity improvements. A good place to initiate a VMI activity is with Indirect materials or Maintenance Repair and Operating (MRO) supplies. However success stories abound with people using VMI to control direct materials too.

VMI may take shape in something as rudimentary as the “bread-man” process where vendor supplied items are physically located next to the facility back door, often near the receiving dock. Items are stored in open shelves accessible to shop floor associates who simply retrieve what they need, when they need it; no paperwork, no transactions. Each item has its reorder point pre-established; possibly a two bin process where the first bin is the working inventory and the second containing inventory enough to cover demand during leadtime. The supplier’s representative arrives at the back door, and just like the bread man in the supermarket replenishment supplies are on board their truck parked in the receiving area. A quick walk-around check of current inventories and replenishment needs are identified. Next, a quick return to the truck, inventory gathered and stores replenished. Some small housekeeping tasks, perhaps a word with one of the shop floor supervisors, exceptions noted and then off to the next customer site. One annual Blanket PO, weekly or monthly invoices, usage rules for the shop, everyone wins.

A VMI process that I was involved with addressed MRO inventory. Although more complex due to some of the IT methods we used, the bread-man concept was at the core of the process. The before saw the MRO supplies managed centrally with two people in overlapping shifts providing 12 hour coverage within an inventory stores area we called the tool crib. The tool crib serviced approximately 100 machinists operating within about 10 different cells, covering about 95,000 square feet of factory, often working two full shifts, sometimes three with Saturday work a given. Motivating factors driving the change was the time the machine operators spent getting supplies, and the cost. Our tool crib process encouraged material hoarding on the shop floor, overstocking in the tool crib, and provided inadequate service coverage.



Our implementation was facilitated by the suppliers involved. After due diligence, we selected just one MRO parts supplier to manage all item replenishment, and in return get all of our MRO business. This was a reduction from about 20 or so different suppliers. We also partnered with a technology supplier who provided inventory storage cabinets where inventory would ultimately reside; one cabinet to one cell. Our strategy involved the use of cell located cabinets where inventory would be stored; accessible to cell associates 24x7x365.

A team of motivated organizations was formed: Us, the cabinet supplier and the MRO supplier. We all had skin in the game and we all were working hard to come up with a success. In hindsight perhaps a little more involvement from the shop floor associates would have been good, but they quickly became advocates as the Pilot proved the process to be simple, sound, secure, easily serviceable and successful.

The after success saw cabinets located within each cell, with access restricted to associates within the cell. As withdrawals were made, item transactions were processed in an off site server, updated perpetually via internet communications. Shop floor associates accessed their items via cabinet specific touch screens, scrolling item lists by category until the desired item appeared. A simple

transaction to report quantity required provided access to the item. The shop floor associate then took what they needed and returned to work. In the item database, each item knew its manufacturer's item number, our internal part number, and the specific cabinet(s) in which it was stored. When the item / cabinet hit reorder point an e mail was sent to the supplier noting that this item for this (order up to maximum) quantity was needed for this cabinet. The supplier shipped next day and the remaining tool crib attendant (our second shift attendant was retrained and reassigned) who was now recognized as the MRO Analyst, processed all receipts, transacted all putaways, expedited as necessary, adjusted order point quantities, removed old and brought in new. Some items were common between cells, and in a pinch we could "borrow", but that was a rare occurrence.

Everyone was very pleased with the results: Tool crib associates, shop floor associates, cabinet supplier team, MRO supplier team, the implementation team, plant management and Finance.

Overall, MRO costs went down, service went up.

Today, eight years and one plant ownership turnover later the system remains up and running, performing as designed.

Not the simplest interpretation of VMI but one that was very successful. Keys to our success:

- Teamwork
- Communication
- homework
- item rationalization
- item list stability
- good historical usage information
- great cooperation from all suppliers
- IT customer and IT supplier cooperation
- in house management and shop floor associate support

Starting with a Pilot in a cell where the supervisor and the shop floor associates were motivated and cooperative was also a key ingredient to our success.

Not rocket science, but a significant achievement none the less.
Vendor Managed Inventory: A great productivity tool for everyone.

