Jada Management Systems
Sensible Supply Chain Solutions

The JMS Guide to Successful Vendor Managed Inventory (VMI) Partnership Programs

The purpose of Supply Chain Partnership programs is to electronically share information between members of the supply chain resulting in shorter lead times, reduced inventory, reduced obsolescence, and more efficient manufacturing. The up-stream member of the supply chain (the supplier) takes on more decision making for what to supply to the customer. The result is a more leveraged relationship for the supplier and improved service for the customer. The shared information can include the following:

Inventory on hand	Desired inventory levels	Min/Max
Inventory in transit	Purchase order numbers	Order Points
Production schedules	Product expiration dates	Lead times
Forecasts	Order quantities (lot size)	Release qtys/Kanban signals

Not all this information is required for a successful supply chain program. The inclusion or exclusion of this data makes each program unique to the relationship. As the relationship changes over time, elements can be added or subtracted as needed.

This document covers four important topics that pertain to the successful implementation of a VMI supply chain partnership.

- **The Three Types of Programs**
- **Marketing & Selling the Program to the Customer or Supplier**
- **Planning Strategies**
- **Technical Interfaces**

At this moment, SCP is forecasting, planning & recommending replenishments for billions of dollars of goods in 12 countries

The Three Types of Programs

Manufacturer to Retailer: The most common method is for the manufacturer to receive point of sale information from the retailer. This would be inventory on hand, inventory on order (in transit), order point data, suggested release quantity, order quantity/lot size, and purchase order numbers. The manufacturer would replenish the retail location based on the information & business rules provided by the retailer. One important business rule would be the amount below the order point required to authorize a shipment.

Manufacturer to Wholesaler/Distributor: This is the most simple and common type of program used throughout industry. It is a true ship-to-stock program. The shared information can be as simple as "release/ship this quantity" or can be expanded to include "maintain on-hand inventory". For the latter, the customer informs the supplier to maintain a level of inventory and issues a blanket purchase order to ship against. The program can be expanded to utilize forecasts which are used by the supplier to manufacture ahead of the time needed by the customer, and maintain a "cover of forecast" e.g. insure 4 weeks of forecast is always in stock. In this case there are typically business rule agreements regarding how far out the forecast can be used to manufacture against. Other examples of shared information are lot sizes, lead times, & in transit inventory.

Manufacturer to Manufacturer: This is the most complex form of supply chain partnership programs and involves the greatest amount of shared information. This relationship can be simplified by considering the customer/manufacturer to be a wholesaler/distributor and follow one of the methods noted above, however this will not yield the maximum benefits. In a manufacturer-to-manufacturer partnership, the supplier's product is a component of the customer's product (OEM). Here, the critical information is the customer's *production schedule* which is used by the supplier to drive the supplier's shipment and manufacturing schedule. There are two goals in this partnership.

- The supplier ships enough product to cover a pre-agreed time period of the customer's production schedule, which could be as short as a production shift, with delivery *directly* to the customer's work center.
- The supplier manufactures ahead of time to cover a period of time noted in the production schedule (as authorized by the customer). The customer can also provide a forecast for periods in the future not covered by a production schedule.

As expected, the accuracy of the production schedule and the forecast becomes paramount in this relationship. The concept of "freezing" the production schedule or forecast has to be addressed. *There are large benefits to both parties* when a portion of the production schedules or forecasts can be frozen.

- The customer can reduce their inventory to almost zero with no obsolescence.
- The supplier would not only see lower inventory levels, but could use the information to better sequence jobs, lowering set-up and manufacturing costs.

Marketing & Selling the Program to the Customer or Supplier

Customer's Point of View: For the customer, the leverage already exists. The customer's top priority is to have zero inventory on the books. This usually means "consignment stock", with invoices accepted upon use of the product. These programs are called **"SMI"** or Supplier Managed Inventory programs. Using this approach dramatically reduces the number of suppliers and in some cases single-sources a product or groups of products. Note there is a delivery risk the customer must consider in addition to a loss of pricing leverage.

The customer will define what information will be provided and how it is going to be communicated e.g. EDI, web based, XML, or machine to machine. The supplier must conform to these methods and will require a flexible solution to accommodate each customer's differences.

Supplier's Point of View: For the supplier, it is about gaining leverage and becoming a single source for the customer. It can even present the opportunity to administer a supply chain program between a supplier's customer & that customer's clients which would insure that the supplier's material is prevalent all the way through the supply chain.

To market the program, the supplier needs to show the benefits to the customer

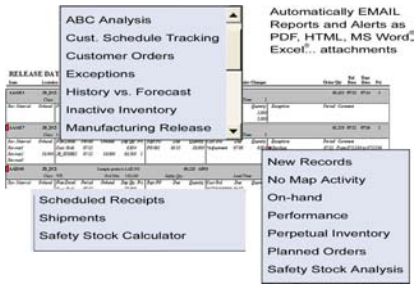
- Consignment or reduced inventory
- Less overhead (fewer planners/buyers)
- Faster & better service
- Reduced or zero obsolescence

The concept *must* be sold to the highest level of management at the customer

- purchasing director
- supply chain executive
- IT manager
- general manager
- operations manager

The supplier should suggest (the customer should request) a pilot to prove these objectives. The general steps to the program are as follows:

1. Customer analysis, project definition/scope
2. Assign two project champions
3. Conduct pilot to prove objectives, methods
4. Correct/refocus objectives
5. Roll out complete solution
6. Periodic audit & changes



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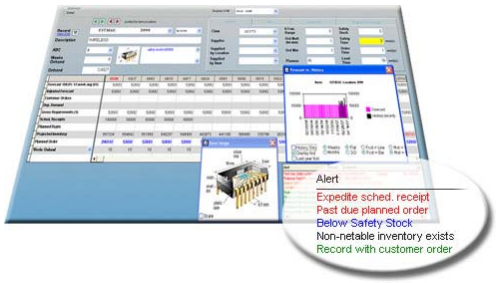
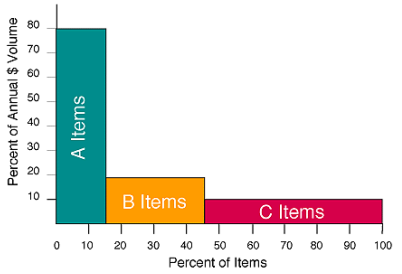
Planning Strategies

A common manage-by-exception planning tool that can execute all the supply chain program types mentioned above is very important. The tool must feature time-phased planning plus shop floor scheduling. The Jada Management SCP 4.0 software was built specifically with VMI in mind and offers all the flexibility needed for all VMI models.



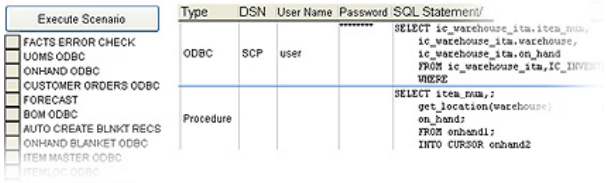
To effectively plan, all items must go through an ABC ranking approach. The use of the ABC technique dictates the frequency of shipments & manufacturing builds. A's will be shipped & built more frequently than B's. And it follows that B's will be shipped & built more frequently than C's. Since A's are shipped & built more frequently and account for most of the $ volume, inventory investment will be minimized.



Another key strategy in the VMI approach for the supplier is to build "family orders" for the shop floor. By using the time-phased approach to planning, the supplier can pull in part numbers that have similar attributes to build shop floor orders that use the same set up. Since the supplier is running A's more frequently, they can look at B's & C's for like attributes when releasing shop orders. In that manner less B's & C's will need to be manufactured, while still meeting the minimum run size. This lowers overall inventory & strategically protects against obsolescence, to which B's & C's are the main contributors.

Technical (Interfaces)

A good VMI solution has to be flexible enough to accommodate a wide range of data formats, the delivery method of data between partners, and any business rules required. Without these capabilities, a VMI initiative will require significantly more technical and financial resources.



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