



INVENTORY MANAGMENT

A SIMPLE RECOMMENDATION

Report By

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OVERVIEW 2
THE BASIC CONTROL EQUATION 3
PRE REQUISITES 3
THE PROCESS 5
REVIEW RECOMMENDATIONS 6
GENERAL NOTES 7

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OVERVIEW

Just in time inventory is a primary requirement of any cost saving initiative. Components, raw material and assemblies account for 55 to 70 % of the cost of any engineered products. Maintaining the right level of inventory to balance investment, maintain on-time delivery to customer requirements and capability to address fluctuating market demands is a highly complex exercise. This requires the right blend of accurate data management, high level of discipline, frequent status reviews, intelligent and aggressive decisions.

Low demand market conditions challenge industries to introduce innovative solutions to drive growth, maintain profits and increase cash flows. The market demands a very high level of discipline at all fronts. Every person involved in the customer to cash or customer to customer cycle has to exhibit a high level of discipline to ensure that the organization's objectives are achieved and consequently, the person's objective are also met. Judicious investments, efficient processes and thrift are essential to maximize growth, profits and cash flow.

Managing right level of inventories to attain organization's objectives ensure availability of adequate cash flows. This cash can be leveraged to improve employee satisfaction and retention thus driving profitable growth.

Finally, this compilation is an attempt to collate various thoughts proposed at many low-level interactions with Ingersoll Rand employees in India.

THE BASIC CONTROL EQUATION

$$\sum \text{On Hand Stock} + \sum \text{On Order Stock} = \text{Period Review Consumption} \times \text{Total Procurement Lead Time}$$

On Hand Stock = Physical Stock Of Component in Plant

On Order Stock = Open purchase orders for the component

Period Review Consumption = Average consumption of the component for shipment for the review period. If production and shipment reviews are done every week then it is the average weekly consumption of the component

Total Procurement Lead Time = Total time for procurement from order placement to final ready-to-use at point-of-use or assembly station.

PRE REQUISITES

Item Data Accuracy: Planner, buyer, all lead time and cost data has to be accurate. This ensures that the system information and messages are directed to the right person for quick and accurate actions.

Inventory Accuracy: System inventory data has to be accurate and real-time. Clearly defined responsibilities, review frequencies, data updating frequencies, physical count frequencies and consolidation processes have to be explicitly defined and followed diligently to ensure system inventory data is accurate and real-time.

Bills Of Material Accuracy: Post manufacturing bills of material (BOM) audits, periodic BOM audits and feedback system should be established and followed diligently to achieve defined BOM accuracy levels. This will ensure accurate inventory debits and consumption reporting.

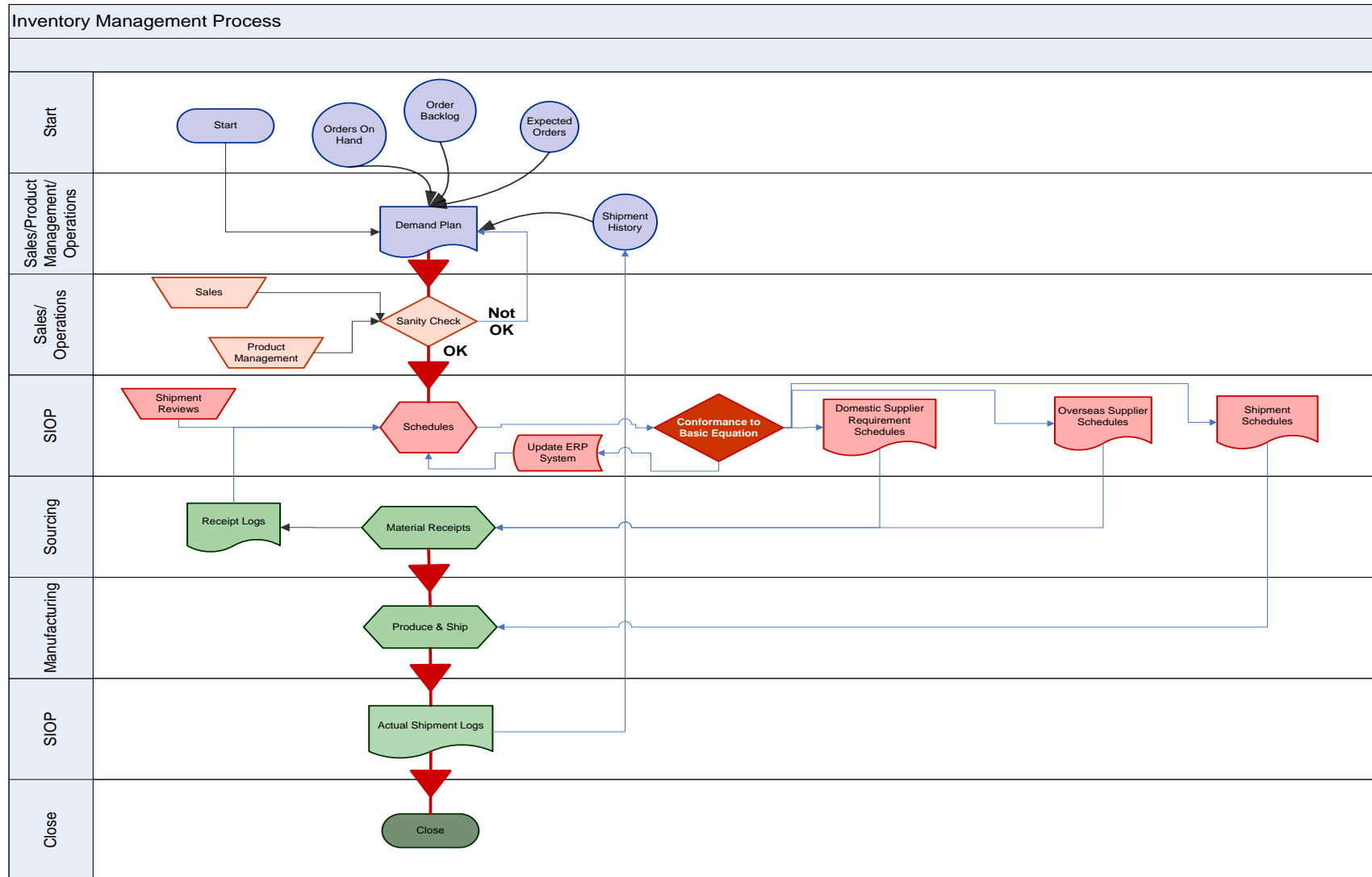
Demand Plan Quality: Achievement of planned inventory levels is a function of the difference between planned and actual shipments. Lower the difference, closer is the actual inventory level to plan. Hence, it is essential to consider all variables like new product launches, market changes, product cannibalization, historical shipment data and all other pertinent details to ensure that the demand plan is of the highest quality and fully reflects shipment requirements.

Process Compliance: It is essential to comply with deployed processes to achieve team goals. Processes have to be developed and deployed on a consensus of all stake holders. Once deployed, it has to be followed diligently. Processes can be questioned, but till the process has been updated or replaced by consensus, it has to be followed by all the stake holders.

Review Frequency: The frequency of reviews will have a major impact on the results. Higher the frequency, closer will be results to targets. Reviews are forums to review available options and achieve decisions by consensus. Reviews are not forums for status updates.

Financial System Alignment: Rewards, recognitions, cash payouts, investments and cash deployment strategies should be targeted to encourage inventory management metrics.

THE PROCESS



SIOP – Sales Inventory Operations Plan

REVIEW RECOMMENDATIONS

Review Frequency	Review Day	Participants	Process	Responsibility	Output
Weekly	Friday*	Sales/SIOP	Review shipment till date, material position & update plans for next four weeks	SIOP	<ol style="list-style-type: none"> 1. Domestic supplier schedules for min review window. 2. Overseas supplier schedule for min review window. 3. Material receipt plan for next four weeks. 4. Shipment Plan for next four weeks. 5. List of Purchase orders to be updated in ERP for excess material basis basic control equation.
Monthly	Friday**	Sales/Product Management/SIOP	Review shipment till date, material position & update plans for next fifty two weeks	SIOP	<ol style="list-style-type: none"> 1. Domestic supplier schedules for next 52 weeks. 2. Overseas supplier schedule for next 52 weeks 3. Demand Plan Update for next 52 weeks

- 1.** The minimum review window in each category will be equal to the longest lead time of the component in that category. E.g. if the longest lead time in the domestic supplier category is 12 weeks, then the minimum review window will be 12 weeks. If the longest lead time in the overseas supplier category is 26 weeks, then the minimum review window for the overseas category will be 26 weeks.
- 2.** Achievement of set inventory targets will be based on the level of focus on the following areas :
 - a.** Difference between planned and actual shipments to be zero
 - b.** Frequent interactions between participants, particularly sales and operations and dynamic , real-time. decisions

* **If the day is a holiday, then shift to previous day**

** **Last Friday of the month. If it is a holiday, then the previous day.**

GENERAL NOTES

- The foregoing pages are recommendations that may be adapted to suit plant situations
- Review frequencies will decide the achieved results. Higher the frequencies, closer will be the results to targets.
- Developing and complying to basic guidelines will help achieve results.