

NESTLÉ THAILAND'S BEST PRACTICE, A SUPPORT IDEA ON SUPPORT BEST PRACTICE VMI: AN ENABLER OF CONCEPTUAL COLLABORATION

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Abstract: This paper purposed to present collaboration support a best practice through the implementation for Vendor Manage Inventory (VMI). The desire to get rid of the non-value-added costs associated with trading partners' relationship and explore basic issues of Nestlé's Thailand related to her best practice mission as a case study. One of key is related to VMI implementation, including its benefits/pitfalls and higher service level. The empirical data were collected through site visit with an interview and discussion with sophomore practitioners. This studying, Nestlé's VMI implementation explained into illustration. Findings, VMI technologies as information systems can develop collaboration among the partners. The organization was under win/win concept, increment of partners' relationship and reduction of sales lost, bullwhip, with evolution of ordering system. Findings of this study showed all the features of VMI influenced value in service level improvement significantly. The best practice approaches were explored. This paper conclusion values for academic's learning and practitioner's knowledge. The scope of study only within range of VMI practiced as a single tool in best practice concept. Practical implications, this paper confirms the power of VMI - a collaboration concept is most concerned factor, especially "trust" among partner with benefits for costs and waste reduction. The paper discussed implementation challenges, identifies adoption phases and reviews VMI key success factors. Results identified the biggest challenge as not for IT experts in determining how to integrate VMI with existing partners, recapitalized or investment but customer relationship (trust) and the volume of purchasing are the main factors of the difficulty in VMI implementation to enhance the company's best practice.

Keywords: Best practice, Collaboration, Service Level, Trust, Vendor Inventory.

1. Introduction

The rapid growth of convenience stores and its distribution in logistics supply chain call for a greater insight into the relationship between retailers and its vendors' competitiveness: response time and replenishment. The purpose of this article is to give a better understanding of supply vendor's perceptions of value from collaboration on vendor manage inventory processes through VMI application.

In this study, the empirical research illustrated a case study with functional VMI processes explaining the relationship between three phenomenons, first the supplier-customer relationship. Second, trust and collaboration reviews, and VMI implementation process.

Good food, Good life is a slogan to remind its consumers, Nestlé implemented VMI since 1998. In order to reduce the delivery time for as fresh as a good food offer to their customers. (Nestlé, 2009)

Some information about Nestlé:

- The world leading nutrition health & wellness company
- In Thailand, Nestlé product has been marketed since 1893
- Current, Nestlé employed than 3000 staffs
- There are 6 Nestlé factories in Thailand

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The product categories divided into: coffee, beverage, chocolate, confectionery, Water; Food service; Nutrition; Pet Food, Culinary; Ice cream, Dairy and Cereal.

Agenda

To highlight her mission, Nestlé had set up keys activities of Supply Chain Management for Best Practices, which are: Cross – Docking, Ex – Factory, Back-Hauling, (Vendor Managed Inventory) and customer service center. The paper focuses on VMI Implementation and explained in her processes sequentially in section 3.

2. Literature Review

- Convenience

Kotler (1997), explained convenience as a situation that customers buy or use a product/service regularly, without delay with least possible effort in comparison with other products. Rahimiparvar (2014), his findings showed that convenience had the most impact on customer satisfaction, therefore creating a convenient community with clear instructions, providing loyalty programs via communities may help in attracting customers and could draw more customer satisfaction. Fewer companies provide timely information about their products and services availability. Thus, he recommended companies should fill this gap by providing more timely information about their products and services.

- Needs of VMI

Wills (1975), explained that in the old day traditional planed processes for collect data from sales, forecast, collect data on inventory and then compare, decide, and then just start an for delivery activity. The changing to VMI is a promised to change responsibility with KPI (Key agreed for data transfer. Therefore, VMI is shifting from traditional to more modernize practices by collect data of sales on real time, forecast with data on current inventory, compare-decide-deliver are in a same pack of decision. This is a main

different between today and traditional practice, that its does not wait to until the decision had been made and then focus on deliver activity. But all three activities were integrated into a decision as an assigned considerate module.

Bruce, Robert and Ireland (2002), in his study, in 1998 Sainsbury began sharing POS data with its largest single supplier, Nestlé. Nestlé was also provided with visibility of the inventory being held in Sainsbury distribution center, warehouses, and stores. Companies realized that their relationship needed to be based on mutual interdependency, trust and the sharing of information.

Sari (2007), exploring the benefits of vendor managed inventory, their results also show that unless the retailer provides additional information to the distributor to resolve the uncertainty, higher levels of uncertainty in market demand create significant reductions in the savings realized by VMI.

Wills (1975), said it is important to note that Nestlé U.K. moved to shrink wrapping assists the channel member to improve his profitability by reduced handling expense as well as improved visual impact. This, as well as the reduction in breakages, works to Nestlé's advantage. Equally important is the marketing trade-off with logistics timing. Roberts (1973), suggested reinforces the obvious need to view packaging on a total systems basis rather than in isolation. This would help them to carry the thing easier and faster with a re-design packaging idea.

- Collaboration and relationship

David, Philip & Edith (2009), designed a framework for implementation of supply chain collaboration program to 1) increase sales revenue. 2) reduce cost to maximize profits. 3) implementation of collaboration initiatives to improve the firm's were 3.1) operational performance 3.2) strengthen its relationship with trading partners.

There were several tools for Best practice concept, such as ERP, enterprise resources planning, collaboration, or

building up a good relationship among the supply chain's members. Collaboration with Negotiation needs understanding, such a meeting between to and several fellow employees whose collaboration is needed to get a job done (Goh, 2009).

Småros, Lehtonen, Appelqvist and Holmström (2003), said key finding was that even for products with stable demand a partial improvement of demand visibility can improve production and inventory control efficiency, but that the value of visibility greatly depends on the target products' replenishment frequencies and the production planning cycle employed by the manufacturer. The ideal situation of demand data has to be readily available from all downstream partners, or focuses on relationships involving only one vendor and one customer. However, Sari (2007) claimed that there were little researches discussing the problems related to dealing with a mix of VMI & non-VMI customers. Same issue as several problems in research context limitation (Pisoot, 2015).

- Trust and the Hardness

Jaiswal and Kaushik (2005), presents the best practice case highlighting, how business network systems can be redesigned using enterprise systems to strengthen relationships with business partners and to enhance value to consumers, in terms of deploying enterprise systems across their value chain.

Barratt (2003), the hardness of collaboration is to truly enable organizations in supply chain must move beyond a closer relationship with just a customer. To ensure more trust and confidences, Collaborative initiatives would be highlight, in terms of planning and forecasting, must be extended to upstream suppliers.

Zammori, Braglia & Frosolini (2009), identified the main issues that must be covered in the agreement to fit the needs of both parties and to assure benefits on both sides. Partners must focus on their core competencies and keep together the expertise of external partners.

The way to create more trust was, by working together on the planning and execution of promotional activity. Eqs (2001), including the close to real time use of POS data. Since success of a promotion in terms of its sales volume could be more accurately estimated. Finally, such a joint approach to managing promotions has reduced promotional "out of stocks" by 20% and saved directly more 2.5 ponds in administration and wastage costs (Barratt, and Green, 2001).

Vigtil (2007), stated current inventory status and sales forecasts are the most important kinds of information to be made available to the supplier in a VMI relationship. There is a different kind of information and problem, such as when the customer makes to stock than when he is a wholesaler or a manufacturer making to order. VMI can assure an efficient product assortment by over filling the whole pipeline.

- VMI competitive and best practice

VMI offers a competitive advantage for retailers because it results in higher product availability and service level as well as lower inventory monitoring and ordering cost. For vendors, on the other hand, it results in reduced bullwhip effect and better utilization of manufacturing capacity, as well as better synchronization of replenishment planning (Sari, 2007).

3. VMI Application

What's VMI?

VMI is Vendor Manage Inventory, which supplier is responsible for retailer's inventory level. Replenish decisions are made by supplier based on retailer's inventory data (Nestlé has implement VMI since 1998)

What is the objective?

Pochaman (2009), stated in her course description and objectives that VMI is a continuous replenishment concept for inventory reduction, a good sample was a key observation from Manufacturer –

Nestlé Thailand's practicing. VMI involves buyer outsourcing its inventory management operations to supplier.

Therefore, there is clearly a need to develop a better understanding of ERP success. As customer satisfaction and replenishment are immediate objectives of clear picture in agreement. Thus, company spends the emphasized on VMI in their mission and plans. The main objectives of Nestlé to implement VMI are:-

- Eliminate the non-value-added costs associated with current trading partners' relationship.

- Over Stock or Shortage
- Logistics inefficiency
- Non Value added administration (see fig-1)

Figure 1: VMI in Nestlé's concept

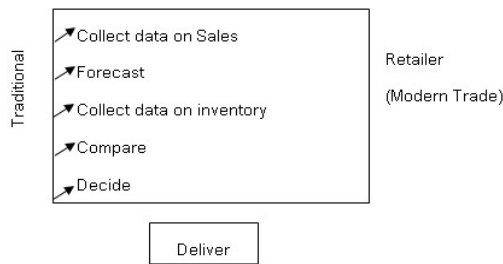


Figure1 presented a wholesale in China town, collected data manually from their 3rd tiers to implement VMI

The next stage, divided in term of including delivery, figure 2 shows, there were exchange data and joint process as well as the delivery from manufacturer.

Figure 2: VMI including Delivery

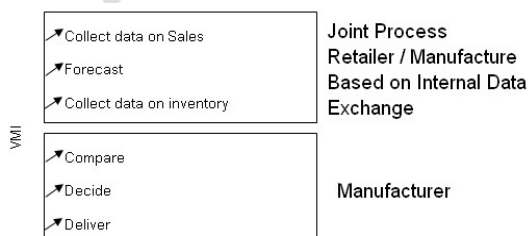


Figure 3: Upstream-Downstream VMI

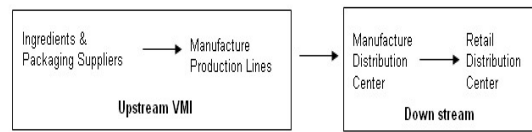


Figure3 showed the upstream & downstream portion of the direction for VMI implementation.

How to Start?

Use Key data to manage

1. Stock-on Hand
2. Sales-data
3. Agreed Stock target (for not over or shortage)

CMI (Co-Managed Inventory) = Customer can "Change" and "Update the data" as Co-purpose. Some retailers don't want to use VMI because don't want to disclose their stock on hand.

Who is using it? Who are concerned?

Nestlé as the supplier will implement this system with certain customer and they are consider on the collaboration idea under based of win/win solution, if the implement didn't take only one side's benefit. Such as not much purchase quantity, then no need to implement together as it's very costly. Some customer also want to push all the implementation cost of using VMI to Nestlé's account only but this is a further discussion case as all are based on mutual benefit preference.

Where is it using?

Recently VMI of Nestlé is only for local (within Thailand) as the other neighbors countries are having their sole agents or authorized distributors to order through another system as same as the Far east or South Africa. The international partners are using other module based as Export and Lead-time management not in same VMI system for local but slightly the same concept to fulfill their replenishment.

The linkages are between Nestlé as the supplier and 2 types of customers:

- a) Modern Trade (PULL)
- b) Distributors (PUSH)

The difficulty is how to make distributor to understand and change their strategic to be pull system.

When it is using?

Any partners who need to collaborate for mutual benefit with the below conditions:-

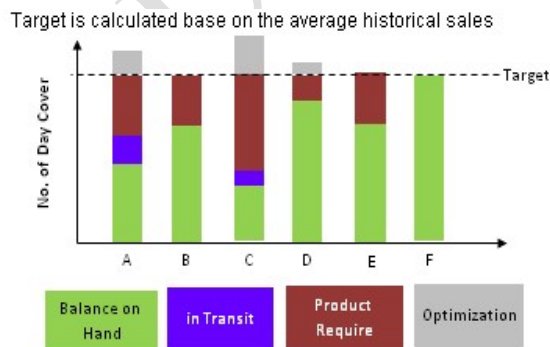
- Stock out = If want to have solution for stock out.
- Order Pattern = who have the order pattern in record as historic data for base
- Trust of shop = the customer must be reliable.

When a selected partner are agreed to using VMI under collaboration concept, they must start to implement by collect the historic data, change the format into EDI pattern and test the transmission. Nestlé will set up a temporary set up team during the implementation only and thereafter will assign a staff to take care operation of order proposal and confirmation.

The implementation

Target is calculated base on the average historical sales (See fig.4)

Fig 4: Replenish concept



Target of stock cover agreed depend on distances, and fleet to lead-time to be considered. (A to F are names of retailers).

How to implement?

There are total 4 steps of phases:

1) Preparation Phase

- Ensure data accuracy & real time update Stock & Sales data
- Set up operation process flow & communication flow
- Agreed target stock cover divided by replenishment cycle
- set up data transfer / communication
- set up Parameters in VMI program training

2) Data collection Phase

- Test sending & receiving data. Whether EDI format can sent and received without garble and data are accurate.

- Collect historical sale date. Most will use approx 21 days to 28 days for historical data in order to understand the need of safety stock

3) Testing Phase (approx 3 to 4 weeks)

- Suggest order proposal and fine tune order proposal. Under the software calculation will give the suggestion for batch, pallet, layers, and volume that adjustable to suitable requirement.

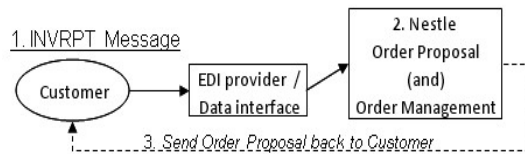
4) Go live Phase

- Monitor Performance and regular review the process. It's take sometime to understand the flow and volume and policy that what's the best options in quantity of volume, types and times that will be ordered and deliver so monitoring are need to make sure that all are in control and accurate when online.

How VMI Process...Starting? (see fig.5)

1. Receiving inventory report from customer
2. VMI suggests order
3. Send back order proposal and customer send the P.O.
4. Customer service process order and delivery to customer

Fig 5: Daily Work Flow (for Order Management) - Sample Schedule



Scheduling:

The company launched out the schedule time to indicate all time frames to commence and control on working process among the parties: vendor, customer and operation. The time frame was breakdown in to each hour for more understanding and clarified:

AT Vendor's side:

7:00 AM Received Data (EDI)

8:00 AM Start replenishment calculation

9:00 AM Import data, monitor, prepare response (3 Hrs)

- Inventory data will be integrated by VMI back-office
- Check / Optimize and round up (on EWR (VMI Calculation Software)
- Create Order Proposal : 1) Stock Quantity, 2) See Average and 3) Cover (Unit of Measurement for replenishment can be specified either in case / layer / pallet all are under VMI Software Calculation)

11:00 AM Sent Order Proposal, they service management/order

- Validate Order Proposal :
- Export data --> Export Order send to Service provider

At Customer's side:

15:00 PM Customer start general order proposal to P.O

16:00 PM Generate P.O. data to transfer to DC.

At Operation's side:

12:00 AM Order transfer to retail-DC

14:00 PM Warehouse starts the Picking

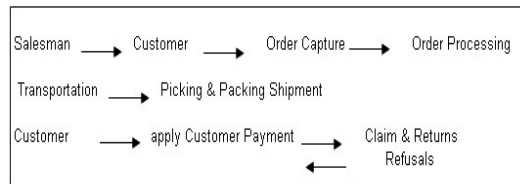
18:00 PM Finished Picking (2 Hrs.)

(Buffer time for loading onto Truck or Truck's container)

20:00 PM Trucks leave DC

Fig 6: Order to Cash Process

Order to Cash Process



VMI is aligned by the historic and today data but the future is unpredicted or cover the forecast since impacts are almost cause by the customer's in-house promotion. The two stages scenarios were introduced.

Scenario (i)

New product launch:

- EDI Mapping new product code
- Check description, Pack size and Pricing with Customer
- Inform to customer's DC or buyers for first replenishment
- First order quantity should be provided (DC level)

Promotion Items:

- Get promotion details and demand forecast from commercial
- Replenish by customer agreement or by historical of dispatch
- Stock day for promotion item is to be committed.

Scenario (ii)

Pitfall & Learning:

- Surge demand
- Forecasting by the historical of dispatching
- Time lag of data receiving
- Collaboration

4. Findings

Key Success Factor

- Data accuracy / alignment and real time communication.
- Clear Process flow and accurate in communication for exception situation.
- New product launch
- Promotion Plan

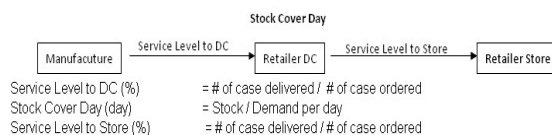
- Other significant demand variation (i.e. special big volume order)
- Software Reliability and I.T. connection (served for 270-280 SKUs on everyday)
- Supplier and Logistics Reliability
- Trust and mind set of "Pull Concept"

Performance Measurement

The measurement was made to see the performance by using stocking cover day to compare the service level.

Such concept is shown in figure 7.

Fig 7: Stock Cover Day vs. Service Level



Service levels are measured into 2 stages, first, route from the manufacture to the retailer's distribution center, by number of cases delivered divided by number of cases ordered. At this step, the manufacture also could plan for a buffer (safety stock) as stock cover day which is the stock that needed to cover for the demand per day. Secondly, the route from retailer DC to the retailer store.

5. Discussion

Benefit for Manufacture (VMI Implementation)

- > Increase customers service level and lead to improve Sales & Profit
- > Improve logistics efficiency (such as truck utilization / warehouse operation and order pattern). For example, term Ex-fact direct delivery from factory to customer DC without pass-through any cross-dock or DC.

> Increase "Trust" which leads to better relationship with customer.

> More time to focus on Sell-out yet productivity improved.

- > Better visibility of demand leads to improved planning
- Lower inventory
- Better asset utilization
- > All are direct to same direction to the Best Practice vision.

Benefit for Retailer (VMI Implementation)

- > Ensure stock availability for Sales lead to improvement of sales profit
- > Inventory Reduction / Improve Stock Turn & Freshness
- > Less warehouse space & inventory control
- > Reduce workload in order placement

Impacts / Difficulties:

- If a customer's behavior as shop-around for the lowest price. Their supplier's selection perception and strategy is only based on the best lowest price to place the order.
- If the customers doing their in-house promotion without prior notice to Nestlé.

This was same warning by Simchi-Levi et al. (2003, p. 161). VMI or lead to failures in VMI programs. For instance, a grocery chain, Spartan Stores, shut down its VMI effort about one year after due in part to VMI vendors' inability to deal with product promotions. Similarly, Kmart cut a substantial amount of VMI contracts because they were not satisfied with the ability of VMI vendors' forecasting. Sari (2007) claimed that most of these research studies were limited to identifying the factors that play an important role in these failures, because only concentrate on the internal dynamics of VMI. He mentioned for two factors from his earlier studies which be failed VMI programs: first, the sharing of outdated or inaccurate sales and inventory data due in part to a lack of adequate information technology, Pisoot (2013b) supported that "the accurate data is most important during input process", as well as a lack of mutual trust; and secondly, inaccurate demand forecast owing to the fact that under VMI tasks, retailers are

excluded from the demand forecasting process.

How to increasing service level?

Goods on arrival, wastage insurance must be considered and damage in transit leading to returns timeframe a routine delivery. Packaging is not simply a marketing or distribution adjunct but pervades the total systems view (Wills, 1975).

Beside VMI, in physical distribution practice, the way of material handling is also one variable to impact the service level, time in delivery and ease of use. This was recommend by Roberts (1973), explained for the advent of supermarkets and the consequent increase in young female labour, it was essential to have cases of such a size that they could be handled by young girls often with well-manicured fingernails.” Consequently, not only have case packs diminished in size, incurring additional problems for the distribution manager. This also a great deal of thought has been given to easy-opening methods for cartons. A revolutionary breakthrough came with the introduction of shrink film packages.

Why Service Levels are increased?

Commitment by vendor to its customers, the pilot project set as a top heading for how to do. The illustration had been qualified by succeed rate as 10 days achieved, service level from 93% to 95%, this by focused on consistent inventory ensure to reduce. And the final successful result achieved only within 7 days.

Multi-disciplines, most were mainly discussed about packing and stags ability, utilization of truck's space per truck's loaded. This is congruent supported by what in works of Wills, G.(1975) which had well explain for the case of Nestlé's in multi countries, Nestlé's move into shrink wrapping affords a different but equally illuminating illustration of how packaging helps profitability. The issue leads to more in product packages design its packaging of how packaging helps profitability (Roberts, 1973). This suggestion is a similar issue

supported by work of Gordon Wills, 1975 in his study, recommended about its packaging was a highlight source of profit for Nestlé's since year 1973.

A concept of implementing VMI and management strategy similar to eCRM work of Rahimiparvar (2014), and the CRM work of Darrell, Frederick, and Phil, 2002; Liu, 2007 that to reinforce relations with customers at the same time reduce cost and enhance productivity, leads for a profitability in a business. CRM process allows companies to analyze customers' data quickly and enhance customer loyalty through their products and services in accordance with their customers' needs (Darrell, et al., 2002; Liu, 2007). And it provides a well-defined platform for all business units to interact with their clients and fulfill all their needs and demands very effectively in order to build a long-term relationship with them.

VMI, are often used as surrogates of success of businesses, a good way to increase service level success is to examine the relationship between VMI performed once delivery accomplished number of orders rate, from manufacture to the distribution center and again from the DC to the retails stores.

How to increasing trust?

Pochaman (2009), recommended for trust increasing. First, drives vendor 'buy in' to agreed achieving stock & stock levels. Second, increases vendor flexibility in providing appropriate stock to DC, third, vendor commits resource, and forth, reduces pressure on buyer's replenishment resources. Nixon (2005), recommend building a trust focus on only win-win solution, through a mutual benefits which concentration on negotiation. Negotiation is means by which people deal with their differences. Although a partner may feel a bit unfavorable in benefit than another partner, however, it's usually better than under the thought of win-lose or lose-win, since finally such alternatives will lead to lose-lose. This was confirmed by Zammori

et al. (2009) at aforementioned, the main issues between partners' agreement must fit needs of all parties to assure mutual benefits. Among supply chain's members, they have to focus on their core competency together with the expertise of their partners and build up a relationship for exchanges.

Forming this kind of relationship with customers is not easy to manage and it depends on how systematically and flexibly a CRM system is implemented or integrated. Try to avoid overlook your internal customer too. (Pisoot & Heesawat, 2015). But once it is accomplished it serves the best way in dealing with customers. In turn customers feels gratitude of self-satisfaction and loyalty which results in better bonding with supplier and hence increasing business profitability (Rahimiparvar, 2014).

6. Conclusions and Recommendations

VMI using for the agreed partners in Collaboration purpose in term of building the better relationship to solve the stock, inventory, delivery. The retailer's role shifts from managing inventory to simply renting retailing space, (Simchi-Levi et al., 2003; Sari, 2007).

This is leading to the best practice in term of higher service level. Set up a temporary team during the implementation under win/win concept for mutual benefits. The limitation is by the purchased volume or amount is suitable to implement VMI system as it's costly on the set up cost and also the online cost for EDI charge. Some customers want the better service level but prefer not to disclose its inventory to the vendor cause the broken chain among its chain members.

For practitioners, this paper purposed to study and understand the impact of various environmental, operational factors on the performance increase achieved by VMI. Hence, they can better analyze their specific business conditions to prepare organizations for more successful strategic programs.

However, many factors might be included in further study, this is a suggestion from theoretical ground base of purchasing management, according to Leenders (2002, p. 244) suggested Effective inventory fulfillment services depend on a variety of issues, from freight optimization to the location of distribution centers. This means that company has to consider more any other dimensions involved to be included, not only focus on a VMI tooling as an Information system which is only a single driver. For further studies, VMI regarded as just a strategic tools for only partners' in supply chain benefits only a side in cost reduction and better timeframe management in fulfill the replenishment. However, the competitive advantages and steps to sustainability of the firm should be adapted more variables such as service ability, service access and assessment, performance quality (Pisoot, 2013a). All these can leads to customer's satisfaction and re-purchasing with loyalty.

The customer behavior is also a factor of the hardest in supply chain management that they love push model as well as some loves lowest price offer only (Pisoot, 2014), these factors are main collaboration and the relationship tie-up failures where all areas are need to change either trust, reliable, and volume to reflect the indeed relationship or alliance requirement to return back into the form of ROI and higher Service level in the hi-competitive market as well as it is the reflection of organization's best practice approach (Pisoot, 2015).

ABBREV.

CMI	Co-Manage Inventory
CSL	Custom Stock Level
INVRPT	Invoice Report
OOS	Out of Stock
OSA	On Shelf availability
ROI	Return on Investment
SKU	Stock Keeping Unit
VMI	Vendor Manage Inventory

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