

Example of lean management report

Business, Company



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Management

Management

Introduction

This report seeks to evaluate lean systems, inventory management, aggregate production planning and master scheduling and recommend the best philosophy to be adopted by Unico Plant.

Lean system, which is also known as Just in Time (JIT) system refers to a system that seeks to purchase or produce components or products when they are required for use or by customers and not for stock. Lean system is a pull system that responds to consumer or internal demand. Therefore, lean systems can be applied in both production and purchasing. Lean systems seeks to eliminate non-value adding activities, keep zero inventory, have zero defects, zero break downs and 100 per cent on time deliveries. To

achieve these objectives Lean systems are dedicated on eliminating waste. JIT philosophy defines waste as any activity that does not add value such as storage, queuing and inspection. Lean systems are also characterized by a factory layout that seeks to minimize time wastage between one process to another due waiting time and time needed to set up machines in each stage.

Lean systems would make Unico Plant to save on costs on various fronts. First, by eliminating non-value adding activities, Unico Plant will save the funds that were used to finance these activities. Secondly, lean systems seek to achieve zero inventories thus eliminating storage and other incidental costs. Lastly, by ensuring zero defects and 100 per cent on time deliveries the firm will eliminate stock out costs as well as improve the firm's goodwill. However, there are additional costs associated with lean system. Firstly, the firm will not obtain quantity discounts since lean system emphasise on purchasing just the required quantity at a given point in time. Secondly, the firm will not benefit from economies of scale by producing just what is required. However, adopting lean systems will be beneficial since the cost savings outweigh the additional costs that will be incurred.

Inventory Management

Inventory management involves controlling and overseeing ordering and storage of production components and raw material as well as finished products that are ready for sale. It should be appreciated that inventory is represents a significant fraction of assets of any company. An organization should seek to minimize costs associated with inventory but at the same time keep optimal levels of inventories so that they do not incur stock out

costs. Costs associated with inventory include holding costs and ordering costs. The most commonly used technique in inventory management is the Economic Order Quantity (EOQ) model. Economic Order Quantity refers to the optimal level of inventory that minimizes both holding costs and ordering costs. The EOQ model uses mathematical formulae to derive the optimal quantity basing on certain assumptions. It assumes demand is known and certain, ordering costs and storage costs are also known in advance, the firm will order the same quantity each time they place an order and that the lead time is zero.

Inventory management system has a number of advantages that result in cost savings. Firstly, inventory management ensures that there are no stock out costs since the firm will always have a buffer to meet unexpected demand. Secondly, the firm will be able to minimize both holding costs and storage cost associated with keeping inventories of goods. However, there are several drawbacks of adopting inventory management systems. Firstly, by keeping inventories of goods a firm incurs costs associated with inventory storage thus increasing operating costs and overheads. Secondly, there is an opportunity loss since the funds that are tied up in inventories could be invested in other profitable ventures. It is also worth noting that all the assumptions made by the EOQ model do not hold. Therefore, the resulting figure may not be optimal after all. Therefore, I would not recommend Unico Plant to adopt this system.

Aggregate Production Planning

Aggregate Production planning refers a system that seeks to determine production, inventory level, and labor needed to satisfy fluctuating demand

over a given planning horizon. The planning horizon could range from three month (quarterly) to one year. The resources of the firm are usually assumed to be fixed during the chosen planning horizon. Therefore, the firm focuses on how best to utilize those resources given the demand requirements. Aggregate Production planning seeks to eliminate chances of abruptly changing a firm's production schedule since it is expensive, creates uncertainty and insecurity. Planning for possible changes in the production plan implies that any changes in the production schedule is smooth since they were already anticipated and a proper plan is in place to guide the changes.

There are several advantages that accrue from adopting Aggregate Production planning. First, aggregate production planning ensures optimal resource allocation since it ensures production capacity is responsive to changes in demand over time. In addition, it minimizes the costs of changing production schedule while increasing production efficiency. Secondly, it minimises the risks of overproduction. Overproduction during demand slump results in wastage of resources, increased storage costs and depressed prices. Aggregate Production Planning avoids this by reducing production during demand slump. However, the effectiveness of these plans depends on the accuracy of data that was used in developing the plan. In addition, planners' biases cannot be ruled out since some forecasts are subjective. Lastly, there are certain unforeseen contingencies that cannot be anticipated. A good example is a strike by workers or political unrest. Some of these drawbacks can be eliminated if proper measures are instituted and the firm uses conservative estimates then.

Master Scheduling

Master scheduling is a system that involves preparing detailed plans that seek to track production output and match it against demand requirements. Master scheduling is similar to Aggregate Production Planning in that they both seek to determine production, inventory level, and labor needed to satisfy fluctuating demand over a given duration. The difference between the two systems is that Master Scheduling gives the exact dates when production components will be purchased and when customers will place their orders. Due to the complexities and in depth details required to develop Master Schedules, they are usually developed by computer software specifically designed to produce Master Schedules.

The advantages and disadvantages of Master Scheduling and Aggregate Production Planning are almost similar given the similarity between the two concepts. First, master scheduling ensures optimal production since it ensures production capacity is responsive to changes in demand over time. In addition, it minimizes the costs of changing production schedule while increasing production efficiency. Secondly, it minimises the risks of overproduction. Overproduction during demand slump results in wastage of resources, increased storage costs and depressed prices. Master Scheduling avoids this by reducing production during demand slump. However, the success of a master schedule depends on the viability and accuracy of the master plan. Computers produce master plans based on the input data keyed into the computer. Inaccurate data will result in an inaccurate master plan that may inflate costs and lead to damages if followed. However,

management can improve the viability of a master plan by verifying the input data and assessing its accuracy.

Conclusion

This report recommends that Unico Plant should implement the lean system. This is because the lean system incorporates the other philosophies. Just like Master Scheduling and Aggregate Production Planning, Lean systems attempts to ensure optimal resource allocation by matching production with demand. On the other hand, inventory management seeks to minimize costs associated with holding inventories of goods. Similarly, lean systems seek to minimize inventory holding costs as well as other non-value adding costs.

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