

Understanding factors and processes that impact inventory management

Understanding the relationship between various organizational processes and successful inventory management is difficult. Primarily because there are several factors that must be accounted for, and many of the connections are indirect.

Our master's thesis studied how the business unit gasketed plate heat exchangers (GPHE) at Alfa Laval can ensure that the right items are in stock and that the inventory being held is serving a purpose. Currently, GPHE is implementing an initiative that is focused on creating a global inventory management process which includes planning principles and follow up measures to assess the plans performance. The title of this thesis is, *"Inventory management: A high level analysis of selected process elements, and factors impacting plan performance"*.

In addition to implementing their current initiative, we found that GPHE should focus on three main aspects. These are their minimizing finished goods inventory, implementing better forecasting methods, and improving their performance measurement system for monitoring the success of their plans.

Companies with Alfa Laval's production approach should not have finished goods in theory. However, their strategy is to be responsive to customers so some level of finished goods is required. Therefore, to better manage this inventory, it is crucial to establish proper classification and ownership, so that the relevant stakeholders

are aware of their responsibilities and motivated to reduce excess inventory. On the other hand, when looking at raw material and component inventory, high levels are usually an indication that demand for those items is not fully understood. This presents a forecasting problem. Therefore, to reduce this type of inventory, better forecasting processes that explain the specific demand patterns for them should be implemented.

Lastly, to appropriately follow up on the success of the inventory management plan, performance measures should be created. This includes separating measures more clearly and creating a model that shows the relationships between different measures.

In general, this study found that while the GPHE has a good grasp of foundational aspects of inventory management, they need to broaden the scope of their approach. By doing so, they will be able to better understand and manage uncertainty related to their inventory, and have a clear picture of the management plans success.

This thesis provides valuable insights for Alfa Laval as it studied inventory management from the company's unique context. Therefore, the solutions presented are specific to their business processes. However, the broad outline of factors impacting successful inventory management could be used on a more general level. This thesis provides a case for comprehensive inventory management.

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