Controlling the returnable packaging material flow

Mapping the usage of returnable packaging material and a proposal for improvements - A Case Study at Haldex AB in Landskrona

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Increased competition is forcing companies to reduce costs and optimize their supply chain in different aspects. The reverse supply chain of returnable packaging material is a new topic that has been raised in the logistic area during the past two decades. Organizations are turning their attention to optimize the reverse supply chain of returnable packaging material in supply chain management.

In its essence, the reverse supply chain is the flow of products from customer back to vendor, i.e. the opposite to the traditional supply chain. The reverse supply chain can be a return system for final products as well as for packaging material. There are several reasons for the increased interest in the reverse supply chain in the last two decades, such as economic beneficials, sustainability, environmental regulations or pressure from customers. Challenges with the reverse supply chain is controlling the reverse flow and minimizing the common problem with losses of returnable packages. Returnable packaging requires controlling packaging logistics, i.e. having the right amount of packaging material at the right place at the right time while minimizing costs.

The purpose of this study has been to first perform a mapping of the usage of the packaging material flow at Haldex to create an overview and then suggest how the usage of the returnable flow can be improved and controlled.

The study was conducted as a single case study including a literature review, interviews with people working with packages at Haldex and corporate documents with information about the packaging flow. It was found that the reverse flow of packages can be improved because there are losses for some of the returnable packaging material in the flow that was investigated which leads to extra purchasing costs. The loss of packaging material can be connected to the lack of visibility which can be attained by a throughout control system. It is recommended to implement a control system to keep track of where the packages, owned by Haldex, are in the flow. In the system, both the on-hand stock at Haldex and at customer should be tracked for all packages that are owned by Haldex. This system will make it possible to see the position of a package and it can easily be found how many packages are not returned by the customers. In this way, the shrinkage of packaging and loss of money can decrease.

The control system that is recommended to Haldex can be suitable for other companies as well. It increases the visibility and traceability of the returnable packaging material flow in both the forward supply chain and the reverse supply chain.