

Unlocking a warehouse's true potential through the receiving of goods

Many efforts to optimize the efficiency of a warehouse focus on the picking activity. This thesis challenges that approach and suggests that focusing the efforts on the receiving activity might be equally, if not more, important.

Original thesis title: Evaluating and improving a spare parts warehouse in the mining industry – a case study at Sandvik AB

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With the rise of e-commerce and heavy focus on the customers, the need to improve the efficiency of warehouses in distributing companies is as present as ever. Warehousing theory and practice often recommend using the picking activity as a basis when trying to improve the efficiency of the operation. This is an understandable choice since it is said that picking accounts for 55% of the operating cost of the entire warehouse. For retail warehouses in companies such as Amazon, Walmart and H&M, this focus is justified because of the extreme importance of quickly completing as many sales orders as possible. For spare parts warehouses however, focusing that heavily on the picking activity might instead hinder you from seeing improvement potential in other areas.

A fundamental cause of how well a warehouse performs is the state of the goods coming into the receiving docks. Neatly packaged items with the correct logotypes, bar codes and batch size will flow through the warehouse like a river, minimizing the stress put on other activities. The result of this study is that through focusing on the receiving activity, several other areas in the warehouse will also improve second handedly. This is an approach that can shed new light on warehouse optimization that we recommend others in similar fields to try.

Sandvik AB is a major actor in the mining industry, they manufacture and maintain equipment used for gathering raw material that for instance is used to make roads and buildings. To improve the particular warehouse that is the focus of the study, the warehouse operation was profiled based on purpose, function and set-up. By comparing the warehouse to existing literature, it became clear what main issues that could be found within and ultimately how these issues were connected to, and could be addressed through, the receiving activity.

The finding of the study is that several improvement suggestions that affect the entire warehouse can be based on the receiving operation. For this warehouse the four main solutions were to redesign the receiving area, implement a warehouse management system based on the receiving needs, hire additional warehouse operators and change packaging solution for incoming goods. By implementing these suggestions, the warehouse's ability to fulfill customer demand without creating backorders is estimated to increase.