ABSTRACT

This project sets out to highlight how a leading chilled and frozen distribution center, with its continuous improvement drive, has leveraged DMAIC Six Sigma potential to realize cost savings and improved the routing and scheduling of the company. The company examines the routing issue which deals with finding a way to change the transport model from fix routing to dynamic routing. The goal of this project is, therefore, to improve the truck space utilization and reduce the transportation cost up to 20% which could increase the company’s competitive advantage in the logistics and supply chain business.

By applying DMAIC Six Sigma, the company identified the current situation that the chilled and frozen distribution center’s operations were in as well as determining the possible saving. The company identified the savings method to increase the truck space utilization by finding new routing and scheduling.

The results of the study show that when routing are implemented and are not implemented by the savings method it is significantly different. It was found that, by using the savings method, the truck utilization rate and total distance along the routing are improved and the company could minimize the number of trucks used. The transportation cost could be greatly reduced. The case study shows DMAIC Six Sigma is an effective approach for chilled and frozen distribution center to improve the quality of processes and profitability through driving down operating costs.