ABSTRACT

Shipping policy decision making is very important in the distribution of products. Trigger delivery becomes the main thing, and should be able to describe the condition of the real needs. Information visibility across the supply chain elements required in order to determine demand with basic stock information criticality can run well. in addition, the distribution can’t be separated from the delivery scheduling. In the delivery scheduling, distance and uncertainty during the shipping process must be considered, whether this occurs at factory, traveling, or at the location of the consumer. In this study, simulation modeling will be done for the condition of the existing policy on a case study sack cement delivery. Then the simulation modeling improvements will be done by considering the criticality of each distributor stock which served to increase the demand fulfillment. In addition, the scheduling will be implemented by applying cluster segmentation delivery time by sending a short distance, intermediate and far to reduce cycle times and improve truck productivity. From the results of this research, the reduction of cycle time by 10 hours, or about 16% of the average cycle time. Cycle time reduction also causes more rapid turnover truck so the truck increased productivity and reduced the number of trucks required.

Keywords: Stock criticality, Decision shipping, Segmentation Delivery Time, Information Visibility, ARENA Simulation