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OPTIMIZATION OF OPERATIONS IN INBOUND LOGISTICS TO REDUCE VEHICLE TRANSIT TIME: A CASE STUDY OF INDIA'S LARGES

Abstract:

The present case study has been conducted in India's largest edible oil manufacturing plant, which satisfies about 70% of India's total demand. Being the mother plant of the company, it has always been under constant pressure to fulfill the demand all across the country and to some extent, globally as well. To cope up with the never-ending demand, it is necessary for the plant to ensure that all the finish good (FG) products should be delivered to various depots at desired time. The success of previously mentioned necessities largely depends on the Inbound logistics operations. Vehicle Transit time is one such aspect that depicts the efficiency of the operations that are performed in the plant itself. More the transit time of the vehicle, less is the efficiency of the company. In the present paper we have analysed the weaker points of the current system and have made an attempt to develop two models to counter it. First model segregates the most fast moving FG products i.e. ABC analysis over 840 variants and the second model helps in eliminating the unnecessary steps that were performed as a set of procedures i.e. Link person, SAP (System, Application, Products) Software module and E-Documentation. This exploratory study assesses the contribution of each proposed model in the reduction of Overall Vehicle Transit time. The applicability of the proposed optimization model was then verified by experts, which was latter applied in one of the rack for trial purpose. The results have shown a significant reduction in the overall time spent to 22% by the vehicle in the plant premises.

Keywords:

ABC analysis, Inbound Logistics operations, SAP, Vehicle Transit time.

JEL Classification: C67, L99