IMPROVING DAILY TOTAL COMPLETE SHIPMENT
BY USING SYSTEM DYNAMICS SIMULATION
IN AN INDONESIAN CAR SPARE PARTS MANUFACTURER

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

PT. Nusahadi Citraharmonis is a leading manufacturing company in Indonesia that produces spare parts for various automotive industries. The company is an active supplier for several well-known car manufacturer in Indonesia, which are: NTC, HMMI, TMMIN, and ASKA. However, the company is currently having difficulty in fulfilling all customer on time. Thus, creating backlogged order in the system and decreasing the daily total complete shipment. The objective of this research is to redesign new inventory level to increase the daily total complete shipment. To fix the problem, system dynamics simulation is used as a tool for improvement. From the result of system dynamics simulation, the newly redesigned inventory level is able to decrease the backlogged order in the system and increase the daily total complete shipment. Besides the system dynamics simulation, standard operating procedure for operating the system is also made and given to the company for future use.

Keywords: Manufacturing, Automotive, Backlogged Order, Daily Total Complete Shipment, System Dynamics Simulation.
DEDICATION

I dedicate this thesis to myself.
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