Abstract

The changing trends in the courier service business have posed challenges for PT Pos Indonesia in improving its service processes. A Market Research Platform survey shows customer preferences: J&T 44%, JNE 28%, SiCepat 10%, Pos Indonesia 3%, and late delivery rate (LDR) over than 5%. This highlights the need for Business Process Reengineering, especially by implementing robotic sorting machines in the middle mile process. This study aims to identify and analyze inefficiencies in the middle mile supply chain of PT Pos Indonesia Surabaya Processing Centre and propose improvements, such as implementing robotic mega bots sorting machines and determining the number needed for increased production volumes. The research Methods used include desk research methods in the form of quantitative information collected through observations, interviews, and computer simulations using DES (Discrete Event Simulation) and SPSS (Statistical Product and Service Solutions) programs. Tools used include Value Stream Mapping (VSM) process flow diagram and Business Process Reengineering (BPR) concepts to enhance business process efficiency. Results indicate that using mega bot robots positively impacts the company's reputation. The recommendation for management is that robotic sorting is appropriate and significantly improves effectiveness and efficiency, adding value to business process improvements.

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