

ABSTRACT

Increasingly intense industrial competition demands that companies produce high-quality products at competitive prices with timely delivery. PT. Krisma Living Indonesia, a make-to-order cushion manufacturer, continues to face unstable production output for its one-seater sofa cushion unit, characterized by material queues, waiting time, and inefficient workflow. These conditions reflect the presence of waste that drives up production time and reduces operational efficiency. This study aims to identify the dominant types of waste, analyze the application of Value Stream Mapping (VSM), and formulate process improvement recommendations through a lean manufacturing approach.

This study employs a qualitative approach with an exploratory case study design. Data were collected through observation, interviews, and documentation, with informants selected via purposive sampling from management and production divisions. Analysis was conducted using VSM to map material and information flows, and Process Activity Mapping (PAM) to classify activities into value added (VA), necessary but non-value added (NNVA), and non-value added (NVA).

The results show a total production time of 271.04 minutes per piece, comprising 199.25 minutes of VA, 30.34 minutes of NNVA, and 41.15 minutes of NVA. Dominant waste was found in waiting, transportation, motion, and inefficient process activities, with the highest NVA recorded in the inserting process. VSM identified approximately 71 minutes of waste per piece, while PAM recorded 58 production activities consisting of 44 operations, 5 transportation activities, 2 inspections, and 7 delays. Actual production time remains well above the company's takt time of 80 minutes per piece. This study demonstrates that the application of lean manufacturing through VSM and PAM is effective in identifying waste and provides a foundation for improving material flow, work methods, and production process integration.

Keywords: lean manufacturing, Value Stream Mapping, Process Activity Mapping, waste, production efficiency, furniture industry

