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SCHOOL OF MECHANICAL, INDUSTRIAL & AERONAUTICAL ENGINEERING

THE CURRENT UNDERSTANDING OF LEAN WAREHOUSING PRINCIPLES IN A THIRD PARTY LOGISTICS PROVIDER IN SOUTH AFRICA

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Abstract

A single case study of a major third party logistics provider (3PL) in South Africa was completed for this research. A total of four warehouses, including 43 workers partook in the study.

The primary objective of this research was to determine how well employees within the warehousing industry understand Lean principles, and to illustrate the gap in Lean knowledge between the employment levels, i.e. Managers, Supervisors and Material Handlers. Group-administered questionnaires were used as the principle means of gathering data.

All participants for each respective warehouse were present in a “classroom” format during completion of the questionnaires. The author was also present during all sessions to ensure consistency and to clarify any questions that participants had.

The questionnaire tested each participant’s understanding with regards to seven key Lean principles in warehousing. These seven principles were identified from previous research on Lean within warehousing. The results gathered from the questionnaires were then validated using semi-structured follow-up interviews.

It was found that a real gap in Lean knowledge exists between Managers and Material Handlers (shop-floor workers). Managers understand the key Lean principles within warehousing, as well as the importance thereof. While the employees actually working on the floor do not. The main reasons for this are due to a lack of suitable training and knowledge sharing.

Based on the seven key Lean warehousing principles, the following were identified in the study as the most important ones to focus on: Continuous Improvement and Visual Management. These are believed to be basics in warehousing. However, employees still seem to struggle with the true understanding and significance thereof.

It is imperative that the understanding of Lean principles and the involvement of management exist when striving to be successful with Lean. The gaps in Lean knowledge have been identified and laid out in this report. The reasons for each gap have also been investigated and discussed in detail.

Finally, pertinent areas have been highlighted to assist with the development of Lean training material. This will ensure that the current gap of Lean understanding among warehousing employees is closed.