Manpower Reduction in the Component Shop of Volvo Bus Manufacturing Plant

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Abstract:

Globalisation forces the organisations to be competitive. Many organisations are struggling to improve their operating performance in response to market demands for lower costs, higher-quality products and shorter lead times, if the organisation wants to remain competitive and profitable. It must accept Lean manufacturing concepts as a guide to improve competitiveness.

Lean concepts were essential in the component line of the logistics department of Volvo Bus Manufacturing Plant, which was missing and the luxury bus segment is filled with competition. The component line was a critical process and there were manpower allocation issues.

This work addresses the application of Lean tools to eliminate wastes and improve operational procedures in the component line of Volvo Bus Manufacturing Plant. The aim was to reduce the manpower used in internal logistics by 20%. Value Stream Mapping (VSM) was used to depict both value and identify wastes in the current manufacturing practices. Time study was done on the operators delivering the material to understand the time taken by operators to perform their tasks and also systematic methodology was followed to attain the objective.

The aim of the project was achieved through the development of a future state map and implementing the same. The results from this study reveal that by implementing Lean manufacturing principles, manpower reduction of 25% was achieved in the component line, manpower reduction of 50% was achieved in the shearing section of the component line. Standard Operating Procedure was helpful in identifying non-value adding activities by standardising the processes to follow, which acted as a foundation for the project.