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A closer look at lean: The changes that occur within an organisation striving for operational excellence

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Abstract

A single case study of a major South African Maintenance, Repair and Overhaul facility was completed over a five week period from November 2012 to January 2013. The primary objective of the research was to track the changes that occur within an organisation which is striving for operational excellence in the context of lean production practices. A systems approach combined with the Baldridge Criteria for Performance Excellence was used to construct a theoretical framework for the study. Three main systems were identified within this theoretical framework, namely; social, technical and structural systems. Each of these systems encompassed individual change elements. Semi-structured interviews and participant observations were used as the principle means of gathering data.

Changes were observed within each of the systems, particularly within the department in which lean had been formally implemented. The technical system was found to be the most influenced. This was evidenced by management of resources, particularly of workforce input toward continuous improvement initiatives, and also of equipment and tooling. The quality system was found to be influenced through a continuous assessment of procedures and processes to remove waste within them. The structural system was found to embody many of the lean principles, however low correlation was found between the lean initiative and the respondents' existing knowledge.

The social system was found to be the least influenced, and in some cases its state was found to completely contradict the norms which lean theoretical underpinnings would suggest. A possible reason for this was that that the organisation was in the early stages of lean implementation.

The theoretical framework developed for the purpose of the study was considered to be applicable when analysing changes within organisations implementing lean. The framework could also be considered applicable in the analysis of other improvement initiatives. The framework's structure allows for distinctions to be made between changes brought about by the initiative itself and consequential changes of normal organisational development.