Similarities and differences between TQM, six sigma and lean

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Abstract

Purpose
During the last decades, different quality management concepts, including total quality management (TQM), six sigma and lean, have been applied by many different organisations. Although much important work has been documented regarding TQM, six sigma and lean, a number of questions remain concerning the applicability of these concepts in various organisations and contexts. Hence, the purpose of this paper is to describe the similarities and differences between the concepts, including an evaluation and criticism of each concept.

Design/methodology/approach
Within a case study, a literature review and face-to-face interviews in typical TQM, six sigma and lean organisations have been carried out.

Findings
While TQM, six sigma and lean have many similarities, especially concerning origin, methodologies, tools and effects, they differ in some areas, in particular concerning the main theory, approach and the main criticism. The lean concept is slightly different from TQM and six sigma. However, there is a lot to gain if organisations are able to combine these three concepts, as they are complementary. Six sigma and lean are excellent road-maps, which could be used one by one or combined, together with the values in TQM.

Originality/value
The paper provides guidance to organisations regarding the applicability and properties of quality concepts. Organisations need to work continuously with customer-orientated activities in order to survive; irrespective of how these activities are labelled. The paper will also serve as a basis for further research in this area, focusing on practical experience of these concepts.

Keywords
Quality management, six sigma, total quality management, lean production, quality improvement

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Total Quality Management (TQM) also offers lean trainings, as does the German work optimization organization REFA, Total Productive Maintenance (TPM), Methods-Time-Measurement (MTM), and others. However, Six Sigma is by far the most successful organization doing so, since they had a stroke of genius . . . To summarize, I need to distinguish between the original Six Sigma tolerance requirements and Lean Six Sigma. The original Six Sigma tolerance requirements do not work! Period! This article looks at the similarities and differences between different quality improvement methods. It covers lean vs six sigma, plus other methods. Lean and six sigma are both techniques managers use to help improve quality and efficiency. With lean, businesses are able to control their costs, eliminate wastes and create a flow in the production process. On the other hand, six sigma help businesses improve their processes by reducing the chance of any errors occurring. Both methods help businesses to boost profits, quality of products and services as well as profitability. Therefore, lean and six sigma help businesses to achieve the same goal. They eliminate wastes and improve the overall efficiency of the business process. However, they Lean Six Sigma and TQM (Total Quality Management) are both methods for monitoring the quality of your products, processes, and services. TQM is aimed at overhauling the way that companies do things. Lean Six Sigma is aimed toward obtaining the fastest change possible in a company. While both methods aim at improving quality, there are important differences between them. Lean Six Sigma. Lean Six Sigma arose out of a combination of Six Sigma principles and Lean manufacturing methodology. The principles behind Lean Six Sigma include: Customer-satisfaction-based initiatives for quality improvement. The TQM Magazine

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Roy Andersson, Henrik Eriksson, Håkan Torstensson, Article information: To cite this document: Roy Andersson, Henrik Eriksson, Håkan Torstensson, (2006) "Similarities and differences between TQM, six sigma and lean", The TQM Magazine, Vol. 18 Issue: 3, pp.282-296, https://doi.org/10.1108/09544780610660004 Permanent link to this document: Downloaded on Hence, the purpose of this paper is to describe the similarities and differences between the concepts, including an evaluation and criticism of each concept. You've reached the end of your free preview. Want to read all 25 pages?