

MODEL FOR IMPLEMENTATION OF LEAN MANUFACTURING CONCEPTS AND TECHNIQUES

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Business operations play a key role in both manufacturing and service business environments. Different techniques and methods have been introduced by many experts to business operations in order to achieve organizational goals. Lean Manufacturing focuses on improving the productivity in a systematic manner by identifying and eliminating non-value-adding activities through continuous improvement. This paper attempts to develop a model that could be used by manufacturing organizations in identifying and minimizing the non-value-adding activities through Lean Manufacturing concepts and techniques with a step by step approach. Only a limited number of models are available in the literature on the application of Lean Manufacturing concepts and techniques. A study of this type is important to minimize the theoretical and practical confusion in the subject area. A desk research with a comprehensive literature review has been conducted to build the model. It illustrates and reviews different models which were taken as the base to develop the analytical model on implementation of Lean Manufacturing concepts and techniques. The developed model consists of five main levels. 'Leaders' commitment' and 'strategy and goals' comprise the first level. On this level, the model defines how leaders should think, act, and guide, while incorporating the organizational goals and strategies. The second level is the 'Application level', and it comprises of the stages of the identification of waste, elimination of waste, and performance measurements. These measures need to be carried out in all the 'Resource Levels', namely, Man, Machine, Method, Material and Money. Information and Environment are the third level in the model. All the resources need to focus on the fourth level, namely the Operational level. It consists of Input, Process, and Output of each process. These operational levels should be focused on each 'System Levels' as Job, Cell, Line, Plant, Supply chain in the final level. The findings of the research indicate that this model could be used by future researchers. It is important that the organization applies 'step by step' and 'top to bottom' procedures in making changes to the existing process and employees with an effective use of lean tools and proper communication.

Keywords: Lean manufacturing, Non-value adding activities, Supply chain