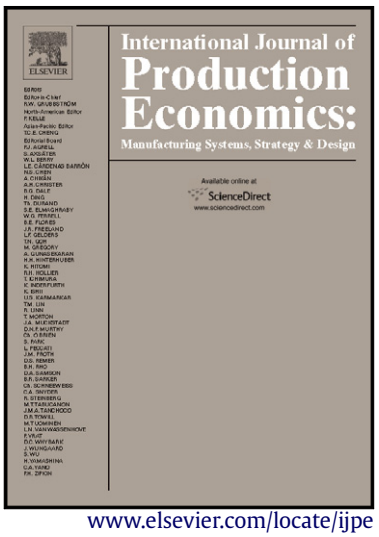

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Value stream mapping to reduce the lead-time of product development process

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Abstract*: Product development (PD) is a broad field of endeavor dealing with the planning, design, creation, and marketing of a new product. This revolutionary research domain has become of paramount importance to beat the competition for multidisciplinary products which are larger in size and have a longer development time. The main focus of this paper is to exploit lean thinking concepts in order to manage, improve and develop the product faster while improving or at least maintaining the level of performance and quality. Lean thinking concepts encompass a board range of tools and methods intended to produce bottom line results however, value stream mapping (VSM) method is used to explore the wastes, inefficiencies, non-valued added steps in a single, definable process out of complete product development process (PDP). This single step is highly complex and occurs once while the PDP lasts for 3-5 years. A case study of gas turbine product has been discussed to illustrate and justify the use of proposed framework. In order to achieve this, the following have been performed: First of all a current state map is developed using the Gemba walk. Furthermore, Subject Matter Experts (SMEs) brainstormed to explore the wastes and their root causes found during the Gemba walk and current state mapping. A future state map is also developed with removing all the wastes/inefficiencies. Besides numerous intangible benefits, it is expected that the VSM framework will help the development teams to reduce the PD lead-time by 50%.*

Keywords: *Product development, lean thinking concepts, value stream mapping, gemba walk*