How Project Management Overlaps with Lean Six Sigma

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ABSTRACT

This article seeks to discuss how project management can help the Lean Six Sigma methodology impact project outcomes. It is found that projects managers play a vital role in the successful implementation of the LSS tools and on meeting customer requirements. This article analyzes and identifies the factors and constraints that projects face with the implementation of Lean Six Sigma methodology within the project management perspective. Further, this study provides a comparative analysis of different studies based on LSS tools and analyzes their applicability in different industries. This study found that there is a strong need for project management concepts and tools in the LSS methodology and vice versa. The article also identifies specific concepts and tools of project management that can help to improve the likelihood of success of LSS projects and initiatives. This article discusses how these project specific concepts and tools can be effectively used in LSS environments.

KEYWORDS

Project Management, Lean management, Six Sigma, Lean Six Sigma

1. INTRODUCTION

1.1. Background

Today, organizations must execute projects that comply or exceed the expectations of their customers. However, there are many projects that don’t succeed and are not completed within the budget or take longer than expected. Further, some projects don’t meet the quality standards and requirements demanded by customers. There are several reasons why projects fail, which are reflected by weak processes and a mix of problems, such as poor cost estimations, lack of adequate planning, poor timing, ineffective project management, lack of control of requirements, and inadequate contingency plans.

For instance, Lean Six Sigma is used in organizations mainly as a methodology to improve processes to achieve project success. It is a disciplined, data-oriented approach and methodology to eliminate defects from any process. The fundamental objective of the Lean Six Sigma methodology is to implement a strategy based on measurements, which focuses on improving processes and reducing variation as well as achieving organizational change through aligning processes and people.

The difference between Project Management and Lean Six Sigma lies in the fact that Lean Six Sigma offers a structured and disciplined approach to solve business problems. Also, it is data-oriented and focuses on statistically significant causes and solutions. On the other hand, the tools and techniques of project management focus on attributes of a project such as its start, planning, execution, control, and closing. The purpose of this paper aims to determine if the integration of these two approaches can help an organization create improvements in the processes that are robust,
consistent, and controlled. This combination could lead to both the reduction of shortcomings and the success of project outcomes.

Thus, this paper is organized into six chapters. The second section presents the literature review used for the development of this research through three parts: Project Management (PM), Lean Six Sigma (LSS), and differences between PM and LSS. The third section includes the methodology used to find the investigations relating to the topic and explains how the information will be broken down to develop the hypothesis. Further, the fourth section describes the findings, which are divided into key factors and barriers. The fifth section discusses the implications and applications of LSS methodology in PM. The concluding section presents the conclusions, recommendations for future work, and limitations this study faced.

1.2. Research Objective

In this globalizing era, organizations seek to reduce operating costs and generate high-quality products or services to maintain excellent customer satisfaction levels. The Project Management methodology has brought high benefits to organizations to meet their goals through the formulation of standards that optimize projects results. On the other hand, the Lean Six Sigma methodology, which is the combination of Lean Manufacturing, developed by Toyota (Galli & Kaviani, 2017; Hanizan, Venkateswarlu, & Dirk, 2017), and Six Sigma, developed by Motorola (Darshak, 2013), focus on the implementation of quality improvements through the analysis of variables such as speed, waste, efficiency, and effectiveness to meet customer requirements. However, even PM and LSS are different methodologies and the integration of both seems mutually inclusive. Therefore, this study aims to analyze how Project Management can help Lean Six Sigma impact project outcomes.

1.3. Originality

The purpose of this study is to contribute to existing literature regarding the effectiveness of project management applied on LSS environments. Moreover, it seeks to compare project management maturity concepts and tools in the context of LSS environments by focusing on their assessment tools. Data is derived from different studies and combined in a well-mannered approach. This paper is based on original research conducted to check the hypotheses.

The study has taken the viewpoints from different researchers and recommends new ways to resolve already existing issues. The purpose of the study and hypotheses are described. In the paper, the methodology is discussed along with its findings. Using a design-science-investigate strategy, authorizing a valuable growth reveal for both reasonable and hypothetical applications, develops a valid assessment model of project management applied on LSS environments. This paper initially provides an outline of development models with attention to their evaluation instruments as an answer to the examination question. An explanation is provided about the strategy utilized for the outline and assessment of the evaluation instrument. The consequences of the meetings are also laid out in the analysis. This is trailed by the initial discoveries and suggestions in the conclusion, which also plots investigative limitations and future research ideas.

This article contributes to the profession by adding to the slender body of literature on the subject to applying project management in LSS environments. There are findings within this article that highlight some of the benefits of utilizing project management applied on LSS environments, and the pitfalls that can occur with project management without thinking of maturity and sustainability. This study uses real-world examples to highlight the value of taking the theories that we work with and examining them in the context of the real world. The practice of project management applied on LSS environments is inherently practical, so there is significant value in a study that not only examines these subjects in theory but also in practice.
Managing Corporate E-Mail Systems: A Contemporary Study
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