

Forty Sixth CIRP Conference on Manufacturing Systems 2013

## Lean Leadership – fundamental principles and their application

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### Abstract

Lean production systems (LPS) have become state of the art in today's production facilities. But still, few enterprises succeed in maintaining a sustainable continuous improvement process (CIP). In many LPS, solely methods and tools are in focus of the implementation. But they merely represent the superficial elements of LPS. The actual key success factor is the involvement of employees in daily improvement. This can be achieved through a different way of leadership, the lean leadership. Although the importance of lean leadership has already been emphasized by many authors, so far no consistent structure or definition of this approach exist. Therefore, a literature study has been carried out, aimed at identifying the relevant principles of lean leadership. A subsequent survey reveals the application of lean leadership and points out future possibilities for improvement. The majority of participants confirms the particular importance of lean leadership and claim to apply almost all its elements in their enterprises. But the results also indicate that some elements have been misinterpreted and others are not used as thoroughly as they should.

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Selection and peer-review under responsibility of Professor Pedro Filipe do Carmo Cunha

*Keywords:* Lean Leadership, Lean Production, Employee Orientation, Survey

### 1. Introduction

Lean production has evolved to the state of the art in manufacturing. [1] The results of an international survey showed, that 80 % of the participants claim to use the principles of lean production systems (LPS). More than half finished the implementation and improve their LPS continuously. [2] Other studies show comparable results. [3-4]

However, in many enterprises the results do not meet the initial expectations or do not last very long. [5-7] Often, people focus on methods, but methods are just the visible part of LPS. Key factor for the sustainable success are the employees. [6][8-9] Methods and tools are very important but they cannot achieve any results if leaders do not have a deeper understanding of lean. [10] The implementation of methods and tools is indeed the far easier part of LPS implementation. However, the biggest challenge is the change in behavior and mindset of employees and leaders. [11] Main difference between lean and former mass production approaches is the role of employees. The separation of white and blue-collar

workers does not exist in lean production. The task of optimizing processes is more decentralized in order to benefit from the employees' tacit knowledge about operative issues. The employees are the first ones who notice deviations from the standard and they know best about common defects and disturbances. [12]

The real scope of LPS implementation can be described with Liker's 4P model (figure 1). [7] It names four relevant aspects of lean: philosophy, process, people and partners as well as problem solving. Most enterprises have focused on the process and have eliminated waste by using one piece flow, error proofing, standardized work and many more. But they have neglected the other three P of lean. [6-7] This is also described as toolbox lean [6] because people thought they could pick some single tools and have thereby implemented a lean production system.

The aim is to continuously improve every process every day and to achieve a so-called continuous improvement process (CIP). Of course, employees cannot shoulder this alone. Often, they are strictly bound to their workplace and they usually work in standardized work systems that do not leave much time for idle or

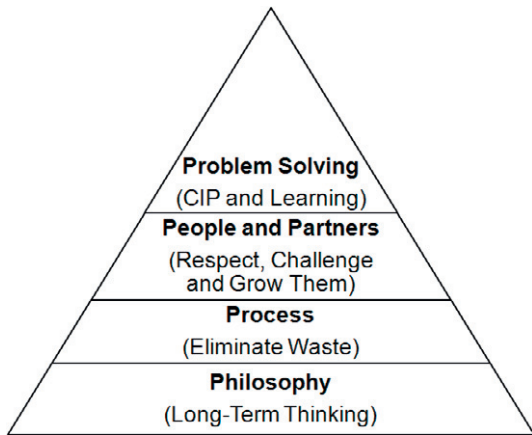


Figure 1. 4 P model of lean production systems [7]

improvement. Therefore, the organizational structure has to provide time and trained employees for improvement. This is often solved by establishing the hancho position. The hancho controls the improvement actions on the shop floor level. [1]

This change on the operational level has a strong impact on the daily cooperation between shop floor workers and operative management. In the past, management instructed the workers in their improvement actions. Now, operative employees have to point out improvement possibilities, too. Therefore, leadership needs more employee participation and employees need basic knowledge about lean production systems. Otherwise, improvement actions are not focused and will not benefit the LPS.

Since employee participation and employee knowledge are the foundation for lean leadership, they have been described in earlier papers [13-15]. Several authors acknowledge the importance of lean leadership in LPS implementation [5-7][11][16-17]. Lean leadership seems to be the missing link between lean production with its widely known methods and a self-improving enterprise with a true CIP. [11][6] However, no consistent approach for the structure, principles and methods exists so far.

This paper shows different approaches for leadership in lean production and combines them to an integrated lean leadership system.

**2. Basics of Lean Leadership**

Customer value has an extraordinary importance in lean production systems. The customer decides whether an activity is value adding or not. Generally, the customer pays for the shape and the correct operation of a product but not for organizational activities at the producer’s facility. According to this, leadership can never be value-adding. A lean leader has to be aware that he is not the person who adds value to the product; it is the shop floor worker. Leadership can only set up the required

framework for an ideal value creation. In other words, the workers are the outfield players, they score. The leader is the coach who creates the strategy, builds the team and develops their skills. [5]

Lean leadership is not a substitute for LPS nor is it an additional feature. It is necessary to achieve a continuous improvement of the LPS and all its processes. Lean leadership is the missing link between toolbox lean and the learning and continuously improving organization of lean thinking. [6] [11]

Since continuous improvement has to be provoked by shop floor workers [1][5][12][18], lean leadership focuses on operative employees but is also valid for every other leadership relation. As the 4P model describes, a lean philosophy with a long-term thinking should be an inherent part of lean leadership. This also results in a long-term and sustainable development of employees and leaders. An often quoted saying from Toyota describes this matter felicitously: “Before we build cars, we build people.” [7][19]

Based on these requirements, lean leadership can be defined as follows:

Lean leadership is a methodical system for the sustainable implementation and continuous improvement of LPS. It describes the cooperation of employees and leaders in their mutual striving for perfection. This includes the customer focus of all processes as well as the long-term development of employees and leaders.

In order to describe the lean leadership system comprehensively, various approaches of different authors have been analyzed and five basic principles could be derived (figure 2).

The *improvement culture* comprises all attitudes and behaviors that result in a continuous striving to perfection. Of course, perfection is often not achievable, it describes a state with zero defects, zero inventories and none of the other kinds of waste. An important aspect of this principle is the long-term thinking. [7] Part of the improvement culture is a different understanding of failure. A failure shows possibilities for improvement and learning. The goal is to find the root cause of the failure and to make sure, this failure will not occur

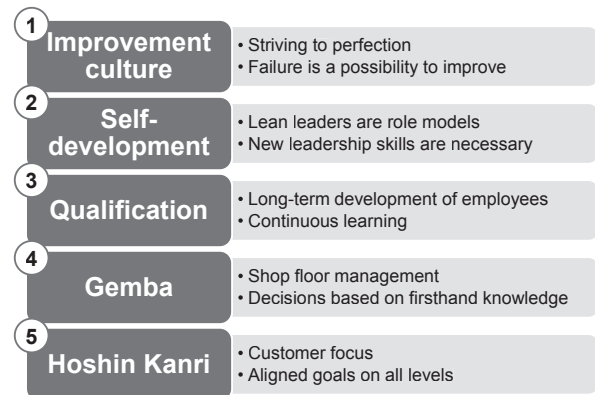


Figure 2. The five principles of lean leadership

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