

Chapter X

The Impact of the Process Integration on Business Management: Case Studies using Six Sigma Methodology

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ABSTRACT

This chapter explains how the successful theories about process integration can be implemented in different industrial fields by introducing a rigorous methodology. Starting from the consideration that processes must be managed to achieve customer satisfaction, the companies necessitate changing their old paradigms and focusing on an integrated management of their functions. In this chapter, the proposed solution is the Six Sigma methodology. It can be applied to every industrial field, anywhere the need for a global, shared objective and improvement is advised. To better show the opportunities and advantages, due to the implementation of Six Sigma in business strategies and activities, three case studies are discussed.

INTRODUCTION

The purpose of this chapter is to show the power of process integration in increasing the performance level of industrial systems using the Six Sigma methodology.

The need for globalization, the saturation and instability of markets, the life-cycle time reduction of products, the growth of item variety and customer demands are the main factors that have contributed to a radical change of management conceptions and strategies. In the modern complex environment, managing uncertainty is a very hard skill. This is reflected in companies that follow narrow paths to achieve flexibility and leanness (Liker, 2004). The only certainty for the company is the focus on the final customer. In a modern business conception, the customer is not the only one who could benefit from the output of companies but, above all, it is the starting point on which the strategic decisions of a company are based (Koufteros, Vonderembse, & Jarayam, 2005). In fact, the market has changed to a customer-driven one; in particular, demand has considerably decreased, becoming more and more unpredictable, while markets require higher and higher quality in products and services. So markets become highly conditioned by customers who require a great input in design and technology innovation and in customer service improvement from enterprises, along with a very astute evaluation of product prices (Ortiz, Lario, & Ros, 1999).

As a consequence, companies are called to change their old paradigms and search for the keys to achieve competitiveness and profits. The way to reach customer satisfaction, measured by service level indicators, is not univocal and there is not a specific methodological tool that can solve the problem by itself. Companies have to assimilate that the customer is the target and that his or her requirements (products, services or information) drive the processes, generating flows that involve a series of players, functions

and activities concurrent to the transformation and movement of the required goods.

Companies have to develop a new philosophy, understanding that now the principle by which the company had boundaries to defend has to be archived definitively. Leaving the conception that management is a closed engineering activity, they must focus on process organic coordination, interactivity and cross-function aims. The importance of flow coordination, first of all within the company, moved by customer orders, means managerial logics have to be based on a “pull” system, with a “lean” organization of flows (Liker, 2004; Tan, 1998).

In this chapter, a successful methodology is explained. Applying this correct and rigorous method to any kind of process, a company can assimilate its main goals and move towards them in a systematic and simple way. This chapter intends to emphasize the importance of process integration in modern managerial strategies and show how it can be supported by developing a common method that enables a company to define, measure, analyse and improve its global performance level. Whatever the field of application and particular objective of the company, if the method is correctly understood, shared and applied, it leads to significant advantages.

PROCESS INTEGRATION TO REACH CUSTOMER SATISFACTION

One topic characterizes modern managerial philosophies: All functions and players involved in a common process have to share a common language to achieve customer satisfaction and, as a consequence, to increase the profits of the company. This topic is frequently mentioned in an industrial environment, as it is very over-worked and has wide and various meanings. It is not so easy to simplify, classify and resume various characteristics and meanings of integration; nevertheless, at every level, between all

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