

Contribution of Continuous Improvement Workshop method in telecom company

Marcelo Paranzini

CEETEPS - Centro Estadual de Educação Tecnológica Paula Souza
marceloparanzini@uol.com.br

Valmir Adelino de Moura

CEETEPS - Centro Estadual de Educação Tecnológica Paula Souza

Sergio Tenório dos Santos Neto

CEETEPS - Centro Estadual de Educação Tecnológica Paula Souza

Getulio Kasue Akabane

CEETEPS - Centro Estadual de Educação Tecnológica Paula Souza

Neemias Ferreira

CEETEPS - Centro Estadual de Educação Tecnológica Paula Souza

Abstract

The present article shows value chain repositioning with bottleneck solving. It aims to improve company internal process repositioning as continuous improvement. It's a case report telecom company in Brazil.

Keywords: Theory of Constraints (TOC); Continuous Improvement; Value Chain; Constraints.

INTRODUCTION

With the increasingly fierce competition among companies in the Telecommunications segment, it is necessary that each organization find ways to operate with its resources creating the best possible result.

The adoption of old tools and management techniques end up not generating the competitive advantages necessary for companies to stand out and to be able to achieve continuity on its market.

It is observed that some companies are not always acting focused on the main activities of its value chain, not even on the constraints, with this, their business efficiency is then decreased.

A differentiator for the companies would be looking into themselves, applying a continuous improvement method that would help them to achieve a result that could not be achieved by its competitors.

Thereby, how can a company improve its internal processes by identifying and acting on the points that will lead it to the results of operational and strategic efficiency?

This article aims to present a method that allows identifying and defining actions that prioritize the points that limit the achievement of efficiency on results, enabling the repositioning of constraints within the Value Chain.

Yet, as a secondary objective, to establish a focus of improvement on adding value to business, preventing that the Value Chain's support activities limit the main activities.

THEORICAL REFERENCE

Continuous Improvement

Caffyn (1999) defines as continuous improvement processes focused on incremental innovation that involves the organizations.

To Bessant and Francis (1999), continuous improvement is a broad focused organizational process that is supported by a targeted approach to incremental improvement.

Kennedy (2012) conceptualizes continuous improvement as a process where corporations seek to improve its services, processes and products. Also according to this author, the successful continuous improvement processes incorporate measurement, evaluation and monitoring mechanisms, which take into account the needs of customers. This view of the author leads us to link the process of continuous improvement to the quality systems of organizations.

According to Mesquita and Alliprandini (2003), the existing expertise in organizations, when a continuous improvement practice is made, can lead to continuous improvement of processes. The vision of the authors demonstrates that the existing expertise in organizations through their body of employees, should be taken to continuous improvement processes. Yet according to the authors, it can be checked at many organizations, some improvement activities and processes that are called "continuous improvement" processes.

Opprime et al. (2011) mentions that continuous improvement can be regarded as a foundation of production management models based on total quality management and lean production.

According to Bessant and Francis (1999), continuous improvement can be an important management tool for organizations to shape their competitive strategies.

Continuous improvement can be implemented in any organization through an independent program, which produces cumulative advances in result indicators of an organization (Opprime et al. 2011).

To Bessant et al. (1994), continuous improvement can be considered a strategic process that needs to be managed focused on long-term.

Value Chain

According to Porter (1989) Value Chain is an instrument that allows the company to examine its activities and their interaction, seeking greater competitiveness; value activities can also be divided into primary, the ones involved in the physical creation of a product and its sale, transfer and post-sale to a buyer (inbound logistics, operations, outbound logistics, marketing, sales and service) and support ones, which are all the remaining activities underlined on the primary activities and itself (the company's infrastructure, human resources, technology development and acquisition). The bonds inside the Value Chain are shaped up in two ways: optimization and coordination, leading to lower costs.

The definition of the value chain is then redirected, not only being identified as the management level and strategies of companies, but the business plan as a whole (Nehme 2009).

The Value Chain can be used as an understanding mechanism of how business involvement in global markets happen, and one can thus understand how the fulfillment of commitments allows an increased ability to upgrade and improve competitiveness. (Kadariusman e Nadvi 2013).

In this regard, according to Elola et al. (2013), since the technological change and diffusion of knowledge can also affect the supplier's capacity and their relationship with the leading companies, changing the existing type of governance standards among them, the main company establishes a determining hierarchical level on the chains for improved competitiveness.

It's noticed then the need for continuous changes in business models to create value for shareholders and owners, having as a counterpart the creation of value to consumers, thereby obtaining a competitive advantage when compared to other competing companies (Brito 2011).

A competitive advantage can be achieved when a company integrates its value chain to the value chain of its customers, standing out among its competitors (Porter 1989).

Theory of Constraints – TOC

The Theory of Constraints originated from an information system called Optimized Production Technology (OPT), encompassing production planning, constraints management and synchronization of manufacturing, and it was developed to obtain gain, through the efficient management of resources and restrictions of each company (Ferreira 2007).

According to Reis (2007), seeking to differentiate restriction and constraints within the TOC, one can say that a restriction can occur anywhere in a company, or even beyond, as it happens with market restrictions and a constraint will depend on the relationship between capacity and volume of demand for industrial resources.

The basis of TOC is that any system has at least one restriction, otherwise it would produce an infinite amount of its product (Zattar 2004).

According to Goldratt and Cox (2014), the TOC leads to an improvement that not only covers the costs (operating expenses), but mainly the increase in operating earnings on existing constraints.

In this sense, Alves et al. (2011) indicate that the TOC, places the gain as the most important thing; Inventory as second; and third most important, the cost (operating expenses). It is evident that with the application of the TOC, one can get improved results, which has a positive impact on organizational performance (Pacheco 2014).

According to Zattar (2004) when using the TOC, nine optimization principles are proposed: balancing the flow and not the system capacity; it is not the resource potential that determines its level, but other restrictions of the system; the use and activation of a resource are not synonymous; an hour lost in a constraint is an hour lost in the whole process; an hour saved on resource that is other than a constraint will not generate results in the system; constraints set gain and inventory; the transfer and process batch and cannot, and often should not be equal; the process batch shall be variable and not fixed and the programs should be established considering all constraints simultaneously.

The application of the TOC consists of: system constraints identification; decide on how the constraints should be explored; the subordination of all the resources to the previous decision; the elimination of system constraints and continuous action on the resources that will have a constraint migration (Goldratt e Cox 2014).

METHODOLOGY

For theoretical foundation, it was made a bibliographical research on already published materials such as books, magazines, publications in journals, scientific papers, monographs, internet, etc.

A research on data base was also made (for example Google Academico; Portal de Periódicos CAPES e EBSCO), and the following key-words were searched: Value Chain; Theory of Constraints; bottleneck; continuous improvement.

It was also used as a research method, the case report, such as exploratory research, and the sample object of this study was chosen by convenience, from the practical experience of an author who worked in the company from April 2000 to March-2008 on a multinational Telecommunications segment, ranked among the three largest in the world as being the responsible person for monitoring the results obtained by the supplier companies that were part of the supply chain and the access to documentation of the applied continuous improvement method and monitored some of these suppliers.

Exploratory studies are applicable to fully describe certain phenomenon, as well as quantitative and qualitative descriptions as accumulation of detailed information as those obtained through participating observation (Marconi e Lakatos 2003).

The following continuous improvement method was implemented in the company:

- Reunião de sensibilização com o grupo de trabalho, envolvendo também os executivos da empresa;
- Clarification of the method and clarification of doubts;
- Mobilization of the working groups, the managers of the company at first;
- Measurement of initial parameters before improvement;
- Request of company employees list;
- Preparation of the macro flow of the company;
- Identification of the employees list, their amount and where each one was performing his/her activities;
- Value Chain structuring and positioning of staff on main and support activities;
- Identifying the constraints to be explored;
- Detailed description of the constraints processes;
- Survey of the potential areas for improvement of the processes described by identifying the causes;
- Proposed solutions to potential issues raised, in order to solve all the improvement points (causes) identified;
- Simulation of the solution proposals to its applicability;
- Return on investment calculation for solutions that contemplated financial investment;
- Measurement of post-implemented improvement results;
- Filling reports of the work performed;
- Preparation of work made for presentation;
- Presentation of results to executives.

RESULTS AND DISCUSSION

As a first result, the value chain was obtained as shown in Figure 1.

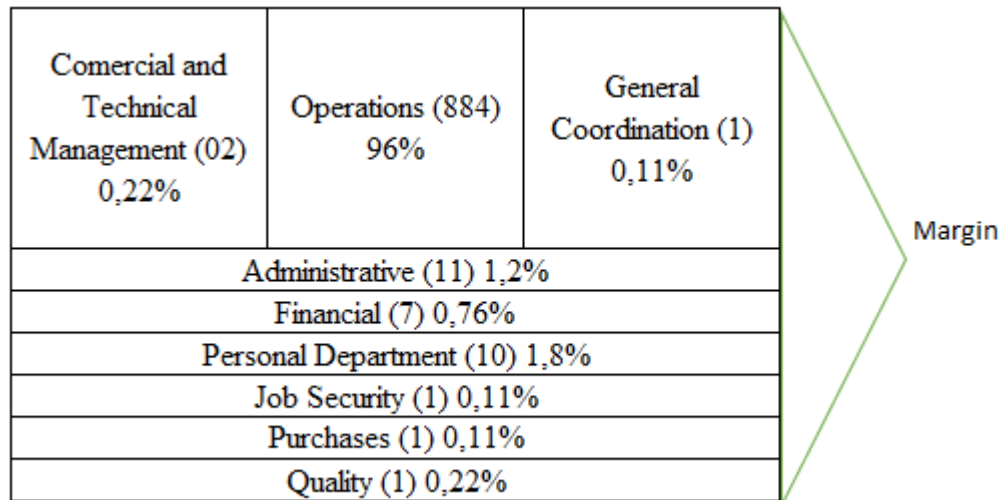


Figure 1 - Value Chain. Source: authors

It is evident from Figure 1 that the human resources of the company (number of people in parentheses) is well applied, since over 96% of its labor (percentages presented after the numbers of people) are performing activities that add value to the company (primary activities). However, one can see the importance of the joint application of the theory of constraints, for analyzing the constraints, as a second result, it was found that the same was placed in administrative activity, that means, support activity restricting the main activities.

Describing in a detailed manner the Administrative activities, identifying areas for improvement and proposing and implementing solutions, the constraint was quickly repositioned to the main operation activity.

When the Operation activities were also described in a detailed manner, the improvement points and proposals were identified and solutions were implemented, easing the operation constraints and facilitating the flow.

With this method, 271 points of constraint improvements were identified and 55 solutions were proposed and implemented in order to ease the constraints.

An average of 66% business productivity improvements were generated as the final result of these solutions.

On values, these 66% represent an annual gain of approximately US \$ 3 million.

With these results, the company found out that its strategy for improving its result was an internal strategy rather than an external one. Within the chain, customers need the services to be performed, but the internal constraints limited the company to get better results, being the market a usual constraint that holds the company from achieving better results.

It is also evident that continuous improvement is a way that the company had to rethink its processes, its flows, in a macro and in a detailed way, its human, physical, financial, and other resources, and thus, it also enables innovation processes, which has a low investment and a high return.

FINAL CONSIDERATIONS

This paper has aimed to demonstrate that it's possible to identify internal areas for improvement when applying a continuous improvement method, and when the right solutions are

proposed and implemented, it will lead the company to achieve operational efficiencies, and thus it will enable the redefinition of their strategies.

A simple method was presented, which were formed by two old and well known methodologies, but when they are applied together, they enable that the action priorities are identified, and that the acting focus is directed to them.

It is perceived that with the methodology, a higher added value is obtained, since when repositioning the constraints in the value chain, it makes it possible not to limit the flow of the main activities by supporting activities within the chain and so the company evolves in its operational efficiency.

After the obtained results, this method was applied by several other competitors, about 28, who also managed to obtain operational efficiency results, proving the viability of the adoption of it as a methodology for continuous improvement, based on the integration of the Value Chain and the Theory of Constraints methods.

This report presents a path for future studies by companies and institutions of any other segment and size to apply this methodology, adapting its structure through prioritization of action points inherent in its reality, culture and strategies, since the integration of the Values Chain and the Theory of Constraints allows each company to use their market experience, knowledge and information inherited to its competitors to improve its performance and as well as the results obtained generate conditions so that companies may expand and achieve continuity on their markets.

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