Chapter 9
Information Management Applied to the Development of the Management Process and Improving Energy Efficiency in Transport

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ABSTRACT

Energy Efficiency (EE) refers to actions of various kinds culminating in reducing the energy needed to meet the demands of society for energy services in the form of light, heat / cold, drive, transport and use in processes. This chapter aims to develop an energy efficiency management process aimed at improving performance of transport companies in relation to diesel consumption, which was applied in Transnordestina Railway. In parallel were developed activity streams for information management, ensuring the standardization of procedures created, more training of staff involved, monitoring of activities and greater ease in obtaining data and information. The result of this work was the implementation of the suggested processes, resulting in reduced spending on diesel fuel consumed by the Transnordestina railroad, improving the energy efficiency indicator by more than 10% and a real financial gain for the company.

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INTRODUCTION

Countries that have better development in the world have in common a consistent infrastructure covering the various productive sectors in order to provide the conditions for efficient service to internal demands as well as ensuring adequate costs to make your product export competitive.

Graciano (1971) states that the transport of people, goods and information is very important for the growth of a nation and that the more fast, safe and cheap for such movement, the greater the chances of a dawning country in the global economy.

According to the National Confederation of Transport (CNT), Brazil has a transport matrix with significant imbalances are considered the various modes, making necessary the upgrading of this matrix in order to promote greater competitiveness and sustainable economic development. The same position was supported by the Federation of São Paulo State Industries (FIESP) (2013).

Statistical Bulletin of information CNT (2015) indicate that the transport matrix loads of Brazil, the road is responsible for 61.1% of the movement; followed by rail, with 20.7%. There are big differences in costs and adjustments needs.

Brazil has advanced in domestic grain production, qualifying the country for the export of its surplus volumes with grand entrance in the international market. However, against this trend, the country has also lost growth opportunities due to the logistical bottlenecks. According to the United Nations (UN) report (2008), the country had that year a very significant position in the international arena as the exported volumes, getting then first place in the international market for exports of sugar, coffee, tobacco, cotton and other equally competitive, as beef and iron ore. The recent global crisis started in the United States of America (USA) interfered considerably in the business demands worldwide and, despite having significantly affected the decline in product volumes exported by Brazil, the low competitiveness due to high logistics costs It has been fundamental to Brazil's fall in the international arena export of some products.

The Growth Acceleration Program (PAC1 and PAC2) and Logistics Investment Program (LIP), launched by the Federal Government, define a series of measures and guidelines aimed at improving rail freight transportation in the country to ensure greater fluidity such transport, expanding the existing network and improving the logistics flow. Investment proposals are intended to make the productions, especially those outputs of the field, come to the main ports and may have reduced their transportation costs; also reducing the current logistics bottlenecks in the country, such as the national ports.

National railways thus play a fundamental role for Brazil to achieve greater competitiveness, especially in the international market. Therefore, it is important, in addition to structuring the national rail network, improve internal processes of the current railways, aimed at reducing the costs of these companies. Currently, in most cases, are private organizations arising from the grant of the federal railway network.

According to the survey, it was found that the cost of diesel fuel in charge of railways in Brazil represent the second or even the higher cost of these companies, leading to financial imbalance. With higher operating costs, there is a decreased possibility of investments in infrastructure improvements. There are also reduced competitiveness due to the national transportation network. To balance the finances, these companies are forced to offer transport services less competitive freight than they could actually present.

Even rail freight still being more advantageous than those charged by other modes such as road, for example, the national railways could be even more competitive and work with better profit margins if the diesel costs were reduced.