Strategic Alignment Between Business and Information Technology

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INTRODUCTION

Information technology (IT) has assumed an important position in the strategic function of the leading companies in the competitive markets (Porter, 2001). Particularly, e-commerce and e-business have been highlighted among IT applications (Porter, 2001). Two basic points of view can be used for understanding IT's role: the acquisition of a competitive advantage at the value chain, and the creation and enhancement of core competencies (Porter & Millar, 1985; Duhan, Levy, & Powell, 2001).

Several problems have been discussed concerned with IT project results in effectiveness of their management. Effectiveness, in the context of this article, is the measurement of the capacity of the outputs of an information system or of an IT application to fulfill the requirements of the company and to achieve its goals, making this company more competitive (Shimizu, Carvalho, & Laurindo, 2006).

There is a general consensus about the difficulty of finding evidence of returns over the investments in IT (the "productivity paradox"), even though this problem can be satisfactorily explained (Farrell, 2003). Carr (2005) defends the idea that IT in itself has no more strategic value, since it is so widely disseminated that it could not be a source of strategic differentiation anymore.

In order to better use these investments, organizations should evaluate IT effectiveness, which allows the strategic alignment of objectives of implemented IT applications and their results with the company business vision (Shpilberg, Berez, Puryear, & Shah, 2007; Laurindo & Moraes, 2006). Besides, it must be highlighted that if IT applications are associated with changes in business processes, it is possible to notice greater impacts in business performance (Farrell, 2003).

According to Benko and McFarlan (2003), three aspects must be taken into account about IT strategic alignment: IT projects portfolio, business objectives, and the constantly changing situation of business environment.

Thus, the comparison and evaluation of business and IT strategies and between business and IT structures must be a continuous process, since the company situation is constantly changing to meet market realities and dynamics.

THEORETICAL BACKGROUND

Finding Strategic IT Applications

The discussion about the strategic impact of IT applications started in the 1970s, when technology began to provide more powerful alternatives not only for solving companies' problems but also for increasing their business competitiveness (Shimizu et al., 2006).

One of the first important proposals for studying the strategic role of IT was that of *critical success factors* (CSFs), which is still a widespread method used for linking IT applications to business goals, and for planning and prioritizing information systems projects. This method was proposed by Rockart (1979) and states that the information systems, especially executive and management information systems, are based on the current needs of the top executives. These information needs should focus on the CSFs.

Rockart defines CSFs as the areas where satisfactory results "ensure successful competitive performance for the organization." This author states that CSFs' prime sources are the structure of the industry, business (or competitive) strategy, industry position, geographic location, environment, and temporal factors.

Basically, the CSF method includes the analysis of the structure of the particular industry and the business strategy, and the goals of the organization and its competitors. This analysis is followed by two or three sessions of interviews with the executives, in order to identify the critical success factors related to business goals, define respective measures (quantitative or qualitative) for the CSFs, and define infor-

mation systems for controlling CSFs and their measures (Shimizu et al., 2006).

For Rockart, this process can be useful at each level of the company and should be repeated periodically, since CSFs can change through the time and also can differ from one individual executive to another.

The CSF method had an important impact on managerial and strategic planning practices, even though it was primarily conceived for information systems design, especially management and executive information systems.

Besides the utilization in information systems planning and information systems project management, it has been used in strategic planning and strategy implementation, management of change, and as a competitive analysis technique.

Furthermore, the continuous measurement of CSFs allows companies to identify strengths and weaknesses in their core areas, processes, and functions (Rockart, 1979).

More details of the process of implementation of the CSF method can be found in Rockart and Crescenzi (1984).

Understanding IT Strategic Role in Companies

McFarlan (1984) proposed the Strategic Grid that analyzes the impacts of IT-existent applications (present) and of an applications portfolio (future), defining four boxes, each one representing one possible role for IT in the enterprise: "Support," "Factory," "Turnaround," and "Strategic" (see Figure 1).
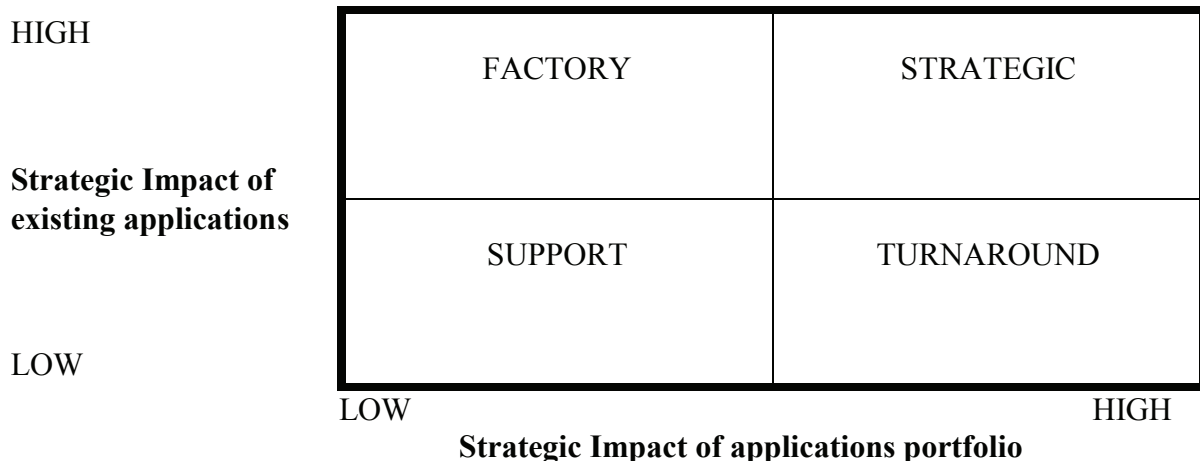
- *Support:* IT has little influence in present and future company strategies.
- *Factory:* Existent IT applications are important for the company's operations success, but there is no new strategic IT application planned for the future.
- *Turnaround:* IT is changing from one situation of little importance ("support" box) to a more important situation in business strategy.
- *Strategic:* IT is very important in business strategy in the present, and new planned applications will maintain this strategic importance of IT in the future.

In order to assess the strategic impact of IT, McFarlan proposed the analysis of five basic questions about IT applications, related to the competitive forces (Porter, 2008):

Can IT applications:
- build barriers to the entry of new competitors in the industry?
- build switching costs for suppliers?

Figure 1. Strategic grid of impacts of IT applications (McFarlan, 1984)

HIGH	FACTORY	STRATEGIC
Strategic Impact of existing applications	SUPPORT	TURNAROUND
LOW	LOW	HIGH

Strategic Impact of applications portfolio

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