

# **Strategic technology and business alignment: a case study in a credit bureau**

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## **Abstract**

The present study research seeks a degree of alignment between IT and business through qualitative case study under Audy and Brodbeck (2003) model. The convenience data gathering through structured questionnaire interviews with organization executives in a different areas, demonstrated degree of adherence of solutions implemented among business and IT strategies.

**Keywords:** strategic technology, business alignment, credit bureau, IT

## **INTRODUCTION**

To advance the strategic alignment in the companies between the Information Technology (IT) and business areas is always challenging.

It's necessary to get IT to work in harmony with the corporate areas objectives, once the systemic solutions provided by IT sustain the information management responsible processes that uphold the daily basis operations, which never been so dependent of IT to reach its goals, its growth and the competitive advantage in the market.

The existence of this alignment of IT strategies and organization strategies has been appointed as one of the major factors of the return over investments e business value gathering (Byrd; Lewis; Bryan, 2006; Audy; Brodbeck, 2003; Henderson; Venkatraman, 1993).

Even with that, IT executives seems to consider this alignment their major challenge, as pointed by Luftman, Kempaiah e Nash (2006).

Added to this the technological advances that IT brings constantly new solutions been released by companies in the market, many of them computer major companies, e offered directly to the business public, many times as the cost center responsible by the financing of this acquisitions, been in the majority to times the business areas do not dominate the impacts or efforts necessities for a implantation, as well as integration aspects and needed infrastructure for the system functions, and if the maintenance cost – many times seen only by IT – would not preclude the investment once is bigger than the return.

In that way, is responsibility of the IT professionals also support the business areas in the understanding what the innovative solutions can offer, been able to discuss together the benefits that those IT news can aggregate to the business process, and creating conditions to evaluate the importance to the companies and organizations objectives.

The objective of this study is to evaluate the maturity level of this alignment as well as the role of IT in this context. To evaluate this alignment level, will be utilized instruments developed by others researches, especially Audy and Brodbeck (2003).

After the documental analysis and the executive interviews, was possible to conclude that the company researched is doing significant effort to align their IT strategies with the business strategy, considering that all the elements of alignment evaluated will be able to be ranked in high level. It was possible also to conclude that the solution implemented are aligned to the strategies, and not only promoting adjusts and corrections to the internal organization process.

## **THEORICAL FRAME OF REFERENCE**

In the corporate world, 'strategy' may be understood as the set of new rules and guidelines that orient the development of organizations (Marino, 2005). Kaplan and Norton (2000) warn that, regardless of the way the strategy is formulated, the capacity to carry out the strategy is more important than the quality of the strategy in itself.

IT is seen as one of corporate resources that can support the strategies at the operational level, favoring the business in achieving competitive advantage (LUFTMAN; LEWIS & OLDACH, 1993; SABHERWAL & CHAN, 2001).

In order to the IT investments generate value to the organization, the managers have to secure a clear connection between the business objectives and IT objectives that supports it (CHAN et al., 1997). Organizations that reach this alignment manifest better performance. Chan et al. (1997) suggest that the economic performance is directly related to the ability of the manager to create a strategy that is adequate to the position of the organization in the market in relation to its competition, and an adequate administrative structure to maintain the execution.

The management of IT in corporation is not restrict to the operationalization of objectives. The evaluation of these alignments however, must include a wider perspective, which consider the functional and strategic integration as well as concern for the constant adjustment and strategic feedback.

There are several models in the literature oriented to identification and evaluation of the level of alignment between business and IT in organizations, among which are those covered by the following items.

## Henderson and Venkatraman's Alignment model (1993)

The model Venkatraman and Henderson (1993) is one of the most studied referenced in the literature. It is considered a precursor model for other works such as Audy and Brodbeck (2003). The alignment concept of the authors takes into account four key areas: business strategy, IT strategy, infrastructure and organizational processes, and infrastructure and IT processes (see Figure 1). In the view of these authors, business strategy involves: formulation (choices about competitive approach, products and markets) and implementation (decisions on the structure and capabilities that will perform the products of choices and markets). Similarly, IT strategy should involve: choices about the types of information technology to be employed and their means of use and acquisition (formulation) as well as decisions about the IT infrastructure must be set up and managed (Implementation).

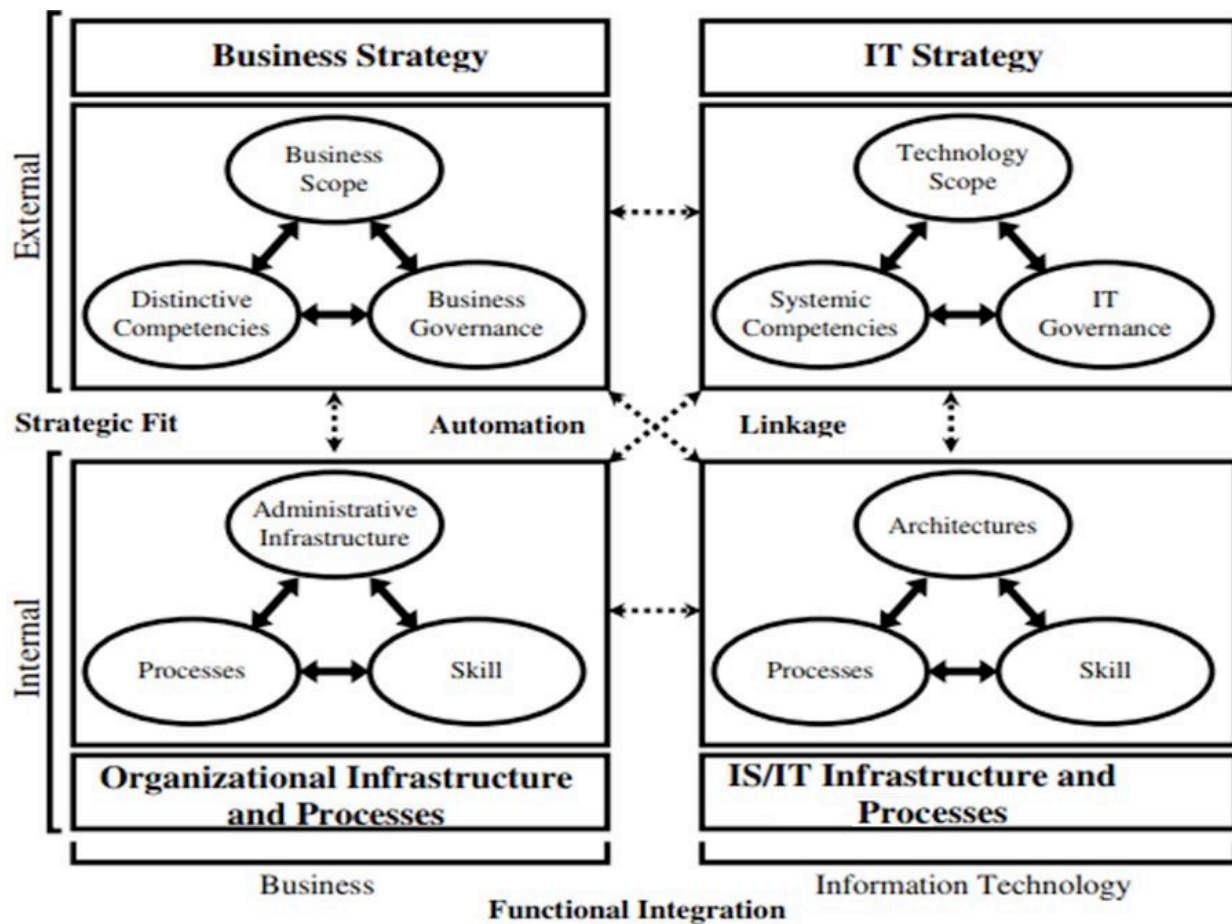


Figure 1- Strategic Alignment Model Henderson and Venkatraman 1993  
 Source: Prepared from the documentary research (2006)

To Henderson and Venkatraman (1993) socio-economic, competitive and technological conditions under which each business area is inserted exert great influence on the role that IT can perform as well as in obtaining returns on IT investments. On the other hand, the strategic alignment model of Henderson and Venkatraman (1993) features reciprocal integration, and expected the development of two simultaneous plans and are based on two assumptions: (a) economic performance is directly related to the management skill aimed at establishing a strategic adjustment;

and (b) the strategic fit is fundamentally dynamic, as can be seen in Figure 1. Considering these assumptions, the strategic alignment is not an isolated occurrence but a continuous process of adaptation and change.

### **Brodbeck and Hoppen's Alignment model (2003)**

To Brodbeck and Hoppen (2003), the model of Henderson and Venkatraman (1993) focuses, to promote the alignment, the continuous review process, i.e. during the implementation and evaluation of projects. The model reflects the desire of the authors to formalize the strategic components and ensure the similarity of the planning processes - business and IT, indicating that can be parallel or even establish mutual support. The functional integration between the planes is represented in both directions, pointing the multidimensional model, as well as in continuous flow processes. The model offers two alignment elements: strategic fit, indicating the meaning or direction of alignment, and functional integration, pointing how is the flow of the operation when performed in an integrated manner.

Brodbeck and Hoppen (2003) proposes a model for promoting strategic IT alignment, extended to strategy execution stage (Figure 2). This is an extension of the original model of Venkatraman and Henderson (1993).

The model adopts a spatial vision, containing a front plan is the promotion of alignment between business and IT during the formulation stage of strategic planning. The various backgrounds represent the promotion of continuous alignment during the different stages of strategy execution (implementation).

According to Brodbeck and Hoppen (2003), the template can be interpreted as a cube formed by each planning cycle process - representing continuity of promoting alignment - expressed by:

- circular alignment (in the plan) between goals and business and IT strategies, indicating that both can redirect the alignment at any moment; and
- cyclical and growing alignment in time and space, indicating the movement of the planned items of this state to the future state.

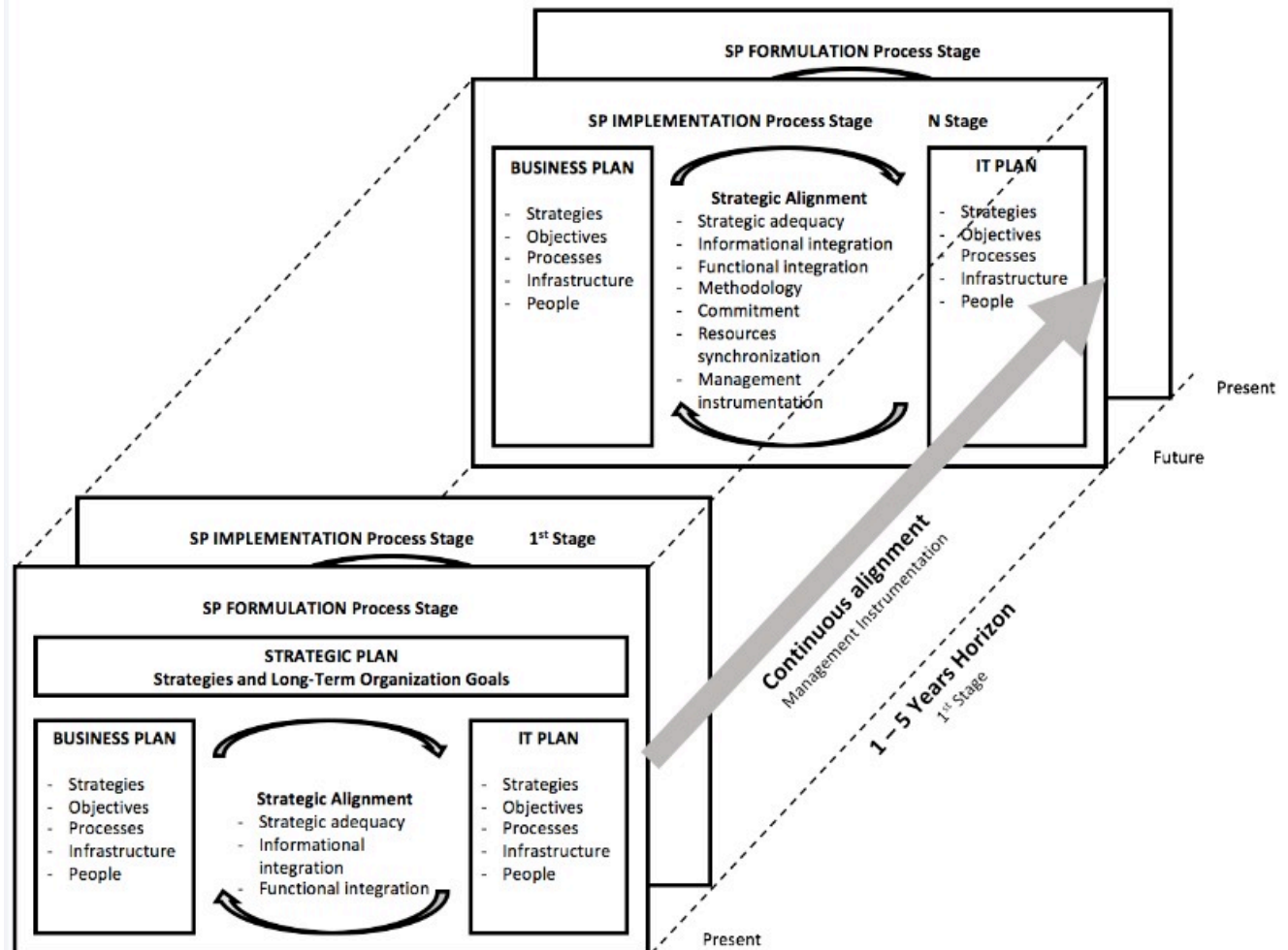


Figure (2) Strategic Alignment Model [Brodbeck e Hoppen 2003]  
Source: Prepared from the documentary research (2006)

## CASE STUDY: THE COMPANY

The organization, the object of study of this research is a credit bureau company. It is a private Brazilian company, analysis and economic and financial information and registration, in order to support credit decisions. It was created by the banks to centralize information, in order to streamline administrative costs and increase the degree of specialization in credit assignment area.

## METHOD

The purpose of this research was to check a degree of alignment between IT and business in a credit bureau. To reach the proposed objective, a bibliographic survey was carried out, then a case study which led to observe the influence of the between IT and business on the strategic objectives of an organization responsible. The case study format was chosen because it is the most recommendable strategy to examine contemporaneous events when the relevant behaviors to be

studied cannot be handled and the context in which these behaviors take place cannot be disregarded (Yin, 2005).

The criteria used for choosing the organization was for convenience, that is, an organization that was studied Figure 2 - Strategic Alignment Model (adapted model Brodbeck and Hoppen 2003) presented motivation and condition for the completion of the work. In this section will be a brief description of the studied company, and the research protocol used. The operationalization of the case study followed the protocol shown in table 1.

*Table 1 - The operationalization of the case study*

<b>Overall objective of the case study</b>	research seeks a degree of alignment between IT and business in a credit bureau
<b>Data collection: In-depth interviews</b>	structured questionnaire interviews with organization executives in a different areas in order to understand the current situation and detect opportunities for improvement
<b>Data collection: document analysis</b>	The document analysis was conducted to know the level of integration, showing the IT plans are being carried out simultaneously to the business and plans lead the organization's
<b>Data collection: direct observation</b>	The researchers worked in the organization and has access to talk direct
<b>Aspects analyzed</b>	Processes carried out; flow of activities; tools used; qualification of the people involved; conformance of the system; indicators; roles and responsibilities.
<b>Data collection instrument</b>	The aspects analyzed were operationalized in structured questionnaire interviews and observation script.
<b>Study timeline</b>	The project was carried out in November 2015. The data analyzed
<b>Data analysis</b>	The data was analyzed considering the degree of adherence of solutions

*Source: Developed by the authors*

## Research Protocol

In order to analyze the degree of alignment between strategy and technology in an organization according to the previously presented model (Figure 1), several authors (Henderson and Venkatraman, 1993; Luftman, 1996; Chan cited BRODBECK and HOPPEN, 2000; ZVIRAN, 1990; REICH et al., 1996) concluded that some variables must be observed. Brodbeck and Hoppen (2000) grouped these variables in a single protocol research (Table 2) classifying them into specific constructs and adapting them to a single scale to measure the level of alignment promoted during the process stage of strategic planning. Brodbeck and Hoppen (2000) add, "This instrument has been extensively tested in previous research, plus two PETI experts have carried out a review in this grade, in 2000," in order to improve their understanding and make the most complete instrument.

Table 2 - Study Case Protocol

<b>Construct</b>	<b>Alignment of the measurement elements (variables)</b>	<b>Level</b>
<i>Strategic Planning</i>	<i>The business plan is situated IT needs</i>	
	<i>IT strategy and plan are well documented</i>	
	<i>The business and IT plan to bring actions prioritization</i>	
	<i>The IT plan makes reference to the items listed in the business plan</i>	
	<i>The IT plan is checked against the business plan</i>	
	<i>Managers of business areas actively participate in IT planning</i>	
	<i>The IT manager participates in the development of new products</i>	
	<i>The business and IT planning of resource time are synchronized</i>	
	<i>IT is prepared for strategic changes</i>	
	<i>Understanding of organizational goals both by business managers as the IT Manager</i>	
	<i>Strategic change of the evaluation of emerging technologies</i>	
<i>Consistency between the objectives of the Business and IT Goals</i>	<i>Revenue growth compared with timely information of customer orders</i>	
	<i>Supply of products and services compared with timely information of customer</i>	
	<i>Service improvement compared with timely information of customer orders</i>	
	<i>Improving administrative efficiency compared with information on sales and sales forecast</i>	
	<i>Gain of competitive advantages compared with information on the competitiveness of products and services</i>	
	<i>Improvement in product quality compared with Integrated Information Systems</i>	
	<i>Increased organizational productivity compared with Integrated Information Systems</i>	

Source: Developed by the authors

The Item construct design is based on medium-term planning, while the construct Consistency between business goals and IT goals are based on short-term planning, and show basic strategies of business strategic plans associated with their respective IT objective.

## ANALYSIS AND DISCUSSION

The strategic alignment analysis was observed in this study according to the duration of the strategic plan (short and medium term), which allows to evaluate the alignment enlightened by Brodbeck and Hoppen model, that is, short-term planning allows you to check the functional integration degree within the company, while the medium-term planning allow to check strategic integration and strategic adjustment between the business and IT strategies.

It was noticed while analyzing the data collected through the interviews that measure construct about consistency between the goals of the business and IT objectives, the degree of alignment of the short-term strategic planning "Consistency between business objectives and IT" was high, in other words, there is a strong control and operational information management within the company, as well as a good business strategic management control. So, there is a strong functional integration in the company between business and IT as Henderson and Venkatraman defined as one of the essential strategic alignment factors on the above theoretical model (Figure 1).

Also it was observed, based on the model of Brodbeck and Hoppen (2003), the continuous monitoring function: where the company has a good degree of alignment regarding strategic adjustment, since it was found in the company a continuous process of reviewing the measures and strategies in the meetings held quarterly. The degree of alignment construct "Items of planning," the medium Strategic planning was high, since mostly has been gather through answers pointing this level of alignment. Based on this result, it is believed that there is also an average degree of alignment in the aspect strategic integration of business and IT, because, according to Henderson and Venkatraman (1993), the strategic integration is the link between the strategic plans of business and IT and the shape and capacity of supporting the business strategy.

Analyzing the communication variable, it appears that IT directors and business have agreed among themselves, the understanding of business by IT is fully applicable to the organization and occurs efficiently; and adopted behavior in relation to communication between IT and business is very efficient, reaching an extra corporate level.

The strategic business plan formalization and IT is held together and integrated with business partners: customers, suppliers and investors. The budget control occurs in for- ma investment centers. It is understood, by the patient's response, that IT is considered as an investment, not simply as an expense. The management of IT investments is based on the value delivered to the business, extended to business partners. The prioritization of IT projects is based on the principle of partner that adds value to the organization.

It was observed that, in the director's business vision, the role of IT in relation to business processes is related to business strategy, with a visible scope within the organization, and the relationship between areas follows the same pattern in all business units.

For the skills variable, both directors show the same view on each of the criteria set out in the model in question - said they believe that innovation and entrepreneurship are standard features of the organization. Both admitted that decisions are taken jointly by all business executives.

IT management is based on relationships and the ability to adapt to changes in the IT field staff is high and is directly related to the Strategic Alignment when flexibility, or adapt to changes.

However, the director of IT and Business, agrees that there is a need to invest more time in developing the knowledge of IT business area in order to ensure greater speed in decision-making and Target Implementation of these.

## **FINAL CONSIDERATIONS**

The main objective of this study was to verify the degree of alignment between business strategy and IT in a credit bureau enterprise. In general, it was noted that the degree of strategic alignment of IT with business is high on the object of study company. Among the reasons for this hypothesis are: culture already consolidated in the development of company and implementation of strategic planning; stable and mature use of an integrated management system and the strong presence of a rigid model of management and control. For all these reasons, it is believed strongly that the application of alignment analysis technique has a promising future together national companies, as it was found that there are few studies on how effective are IT projects conducted in Brazilian organizations.



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