

PROPOSAL FOR INFORMATION TECHNOLOGY STRATEGIC PLANNING APPROACH

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ABSTRACT

This research aims to propose a systematic approach for the development and implementation of an Information Technology Strategic Plan. For this purpose, are addressed, based on the literature, main features and elements from both the strategic planning, as the IT planning concepts. In this sense, the differential use of IT within companies is presented, not only as a tool for reduction of costs and productivity / quality improvement, but also as a strategic element to provide innovation in products, services and processes. Therefore, it is important that the IT strategic planning be done in conjunction with the corporate business plan, due the fact that there is a direct relationship between them, from an information infrastructure build, to IT governance and applications maintainability, to ensure that availability, accesibility and security of IT services are provided to its stakeholders. In terms of methodology, this work is a categorized as an applied research, qualitative as related to the problem approach, descriptive in relation to the objective, and adopts, as technical procedures, literature review. In the survey, may be highlighted the need for alignment between business and IT, both with respect to adjustments, as the connection form between the company strategy and IT strategy, for cost savings and competitive advantage aquisition. An IT strategic plan should be comprehensive and aligned with business objectives, easy to understand, and with a future-oriented perspective. As a result, based on the literature, was presented the systematic approach to prepare the IT strategic plan, containing the main stages, expected results, and methodologies or practices adopted. Thus, the paper presents relevance within the IT area of expertise, since the literature points out the need to align the IT strategic plan with the business, otherwise the organization does not get the expected returns on its IT investments.

Keywords:

IT Strategic Planning; Information Technology; Entreprise Business Plan; Services.

1. Introduction

Information technology (IT) is an area that uses, generally, computing as a means to manage diverse data so that they can be sorted, organized, and handled, delivering useful information that allows decision making towards some goal. This set of activities enables an improvement in strategic and functional levels of an organization, enabling it to improve its planning process, and achieving more productively results.

For Vieira, Coelho and Lima (2013), IT becomes essential in managing flows between the partners of company chains, enabling integration, synchronization, visibility, and greater power of response. Authors state that, specifically in logistics, with performance increase, companies offer better and lower cost services, and for that these companies underlie in IT solutions to provide such performance, such as TMS systems (Transportation Management Systems), RFID (Radio Frequency Identification) technology adoption, and EDI (Electronic Data Interchange) usage, all of them being accessible by Internet.

The role of IT, based on technological advances of the mid-twentieth century, migrated from a technology provider to a strategic partner, adopting administrative models of information structure, which necessarily lead to the modification of the form of action of its professionals, incorporating new knowledge of their processes, in order to promote the generation and dissemination of knowledge between teams (Carvalho, 2005).

IT became, therefore, essential for organizations to maintain an effective decision-making process, and to keep control over its operations. However, this technology also brought a number of processes related to management and maintenance, requiring aspects of quality, such as efficiency, efficacy, and effectiveness in information control (TAROUCO and GRAEML, 2011).

Every organization operates on a set of assumptions about their business, what are their goals, how to produce value to customers, who their customers are, and how to deliver this value to such customers, as best as possible (DRUCKER, 1999). It is noticed that the organizational managers have to find answers to such strategic issues of their businesses, in order to create value for all stakeholders.

In that sense, Hunter and Westerman (2009) state that IT contributes to adding value through two specific ways: greater assertiveness in the decision-making process due to increased information quality; and agility in their production, optimizing business processes, contributing to its efficiency.

Weill and Ross (2009) agree with this approach, stating that IT is effective when used mainly for business processes standardization and integration.

Being a link between the company and the market, the strategy has great importance for organizations (regardless of the industry sector), it is through this ally that the organization can respond, or to anticipate some changes, and also to promote appropriate actions to link organizational activities with its operating environment (PEREIRA and AGAPITO, 2007). New internal processes are affected (and also affect) the company strategy, then IT applications implementation, responsible for such management, become important variables in the corporate strategic process, whose dynamics needs to be widely known.

To this end, strategic goals and objectives are plotted along the strategic planning, performance measurement indicators are designed for, and responsibilities are assigned. Thus, the creation of projects related to these strategic objectives contribute to the achievement of strategic goals, outlined in the plan.

Nowadays organizations have become dependent on information technology. In this sense, in most established businesses, regardless of their business sector, would become unviable, or at least uncompetitive,

operate without IT support. Due to the organizations complexity, and market requirement to answer quickly and in an effective manner, IT is an important component for the corporate plans and projects implementation.

It is increasingly important to the organization to have useful information about all key elements of its operations, thus helping to reduce costs, increase productivity, gain market share, improve profits, and generating value for the business.

Based on this, the general purpose of the paper is to present how information technology can be a differentiator in the organization strategy, and how to create an IT strategic plan aligned to the strategic targets and management.

2. Methodology

Marconi and Lakatos (2010) state that a problem should be defined clearly and an objective way. Thus, the gap being investigated in this paper is described by the following question: **How to elaborate, based on the literature, a proposal for an IT Strategic Planning?**

Also, according to Marconi and Lakatos (2010), a survey can be classified into four dimensions: nature, approach, goals, and technical procedures.

The authors indicate that, in respect of its nature, a survey may be considered basic or applied. This research is classified as an applied research because it aims, based on the literature about IT strategic planning theme, propose an approach to develop an IT strategic plan that can be applied to business environment.

With regard to the manner of addressing the problem, Marconi and Lakatos (2010) explain that the search can be classified as quantitative or qualitative. This work fits in a qualitative research, due to the method of data interpretation, being the process and its significance its main focus.

Qualitative research can be defined as a non-statistical study, which identifies and analyzes in depth data of a certain group of individuals, in relation to a specific problem. These include feelings, sensations and motivations that may explain certain behaviors, seized with the focus on acquiring meaning for individuals (HART, BERVIAN, DA SILVA, 2007).

The qualitative research for this work seeks to present information on the importance of strategic planning, information technology, and IT strategy.

Marconi and Lakatos (2010) argue that, with respect to the objective, the research can be classified as exploratory, descriptive or explanatory. This paper presents characteristics of a descriptive research because it involves literature review, and proposition of a systematic way for IT strategic plan development.

With regard to technical procedures, Marconi and Lakatos (2010) indicate that a research can be categorized as: bibliographical, documentary, experimental, case studie, ex-post-facto research, or participatory research. This work is based on concepts and techniques described in the literature, and its application to elaborate an IT strategic planning, therefore classified as bibliographical.

For the research execution, a systematic review of the literature will be done, in order to obtain knowledge about concepts and elements related to the proposed theme. Following, will be to proposed an approach for the development of the IT strategic plan.

3. Business Strategic Planning

According to Ghemawat (2000), the term strategy means, in principle, the action of lead or conduct armies, representing a means of overcoming the enemy. For Lobato *et al.* (2009), due to its Greek origin (*Stratos*, "army," and *ago*, "leadership" or "command"), the literature relates the word strategy with political situations, wars or games, which makes it easier to understand strategy characteristics: the scope of a particular competitive performance. Therefore, "strategic thinking has become appropriate for the business environment, and its development related to the pace of change, both in society and in the business world" (LOBATO *et al.*, 2009, p. 20).

Following another direction, Camargos and Days (2000) argue that the strategy has a broad concept, with different meanings in the course of its development, ranging from a series of military actions to the prominent position occupied in the field of administration. Since any company adopts a strategy, it uses concepts and practical reasons that increase the number of organizational consulting companies, and scientific production, to define forms and actions to achieve the ultimate goal.

There are several strategy definitions. In this sense, the work of Mintzberg, Ahlstrand and Lampel (2010) stand out to cover a wide range of views on the strategy playing field. The authors say that strategy does not have a single definition, but requires several of them to be understood properly. The authors conceptualize the strategy in five different ways:

- a) Strategy as a plan, a direction, for organizations to develop and achieve their future goals;
- b) Strategy as a pattern, or the behavior adopted by the company over time. In this case, the strategy refers both to what is done of the organization's plans, as to past behavior, the result of which is decided by the senior management, and behavior patterns that may emerge from the various organizational levels;
- c) Strategy as a position, in which the strategy is seen as a way to take and defend a unique position in the market, which generates competitive advantage for the organization;
- d) Strategy as perspective, looking into the organization and to the strategist vision, and corresponds to a particular form that the company has adopted to deal with the world around them;
- e) Strategy as a trick, a specific maneuver to deceive an opponent or competitor.

Mintzberg, Ahlstrand and Lampel (2010, p. 21) argue that the strategic process can be described broadly for ten schools of strategic thinking, which "emerged at different stages of strategic management development. Some have already peaked and declined, others are now being developed, and others remain small, but significant in terms of publishing and practice".

Schools are divided into three categories: i) prescriptive nature (design, planning and positioning), which emphasizes how the strategies should be formulated, rather than how they are formulated; ii) descriptive nature (entrepreneurial, cognitive, learning, power, cultural and environmental), which emphasizes the description of strategies formulation, understanding the process of strategy formation based on their deployment; iii) hybrid nature, containing only one school, configuration, and seeks the integration of prescriptive and descriptive (Lobato *et al.*, 2009, p. 25).

While there are, in the literature, several strategic thinking schools, the design approach will be focused in this paper, which, for Mintzberg, Ahlstrand and Lampel (2010), and Mintzberg and Lampel (1999), is the most influential view in strategy formation, proposing a model that fits internal capabilities, and external possibilities. The design school follows a model based on the assessment of external conditions (technological, economic, political and social), and internal situations, in addition to managerial values and social responsibility. After the determination of strategic alternatives, this school suggests that one should be selected, and then deployed throughout the organization. One of their tools is the SWOT Analysis, which assesses the internal environment (with its strengths and weaknesses), and external environment (with their opportunities and threats), besides organizational values and social responsibility (LOBATO *et al.*, 2009; TERRA, 2010).

Vieira (2006) points out that SWOT is the combination of the initials, in English, the four key elements of this strategic review, namely:

- Strengths: Internal advantages of the company over the competition;
- Weaknesses: Interior disadvantages the company against their competitors;
- Opportunities: Positive aspects of the external environment, with the potential to grow the company's competitive advantage;
- Threats: negative aspects of the external environment with the potential to compromise the company's competitive advantage.

Thus, the SWOT technique looks for a match between the internal and external expertise to the organization. The importance of the environment, as well as external and internal evaluation, are valuation principles, as Figure 1 illustrates.

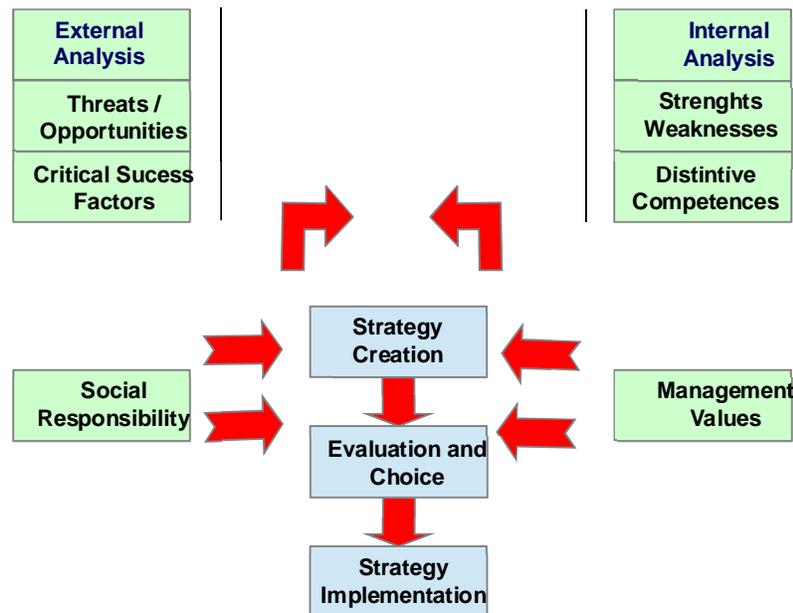


Figure 1: Internal and External Environment Analysis. Source: Machado (2012)

4. IT Strategic Planning.

As stated by Harmon (2007), the business strategy defines what are the company goals, what products or services will be provided, how the enterprise will compete, and what will be the design and the policy configuration that will support the achievement of these goals. It also describes how a company will create value for its customers, its shareholders, and other interested parties.

For a business strategy achieve its objectives, other organizational areas must support the designed plan, and be aligned with business objectives, which includes finance and IT areas. In this paper, the analysis is focused on IT.

In this sense, Moreira and Ribeiro (2014) state that "the greater the complexity of the organizational technology park, the greater the demands on the information integrity and availability". Authors complement, indicating that it is essential that information types be defined for effective communication, and also be adherent to both IT and business, to enable the IT return of investments.

IT is composed of software features and hardware used to capture, store, process and provide data for making safely decisions in organizational processes.

So, IT strategy can be defined as:

"It is a set of decisions taken by the IT management that allow the realization of business strategy. It involves more than technology and infrastructure, the technological options to support the business strategy. These options allow the company to become more competitive" (LUFTMAN et al., 2004).

According to Saviani (2004), IT strategy should include six components:

- Application systems: describes the company business functions;
- Application development: discussing plans for new systems implementation, and how they should be acquired;
- Infrastructure: provides information about physical IT assets in the company;
- Maintenance: provides support and maintenance strategy for application components, and infrastructure;
- Operations: includes personnel, quality control, user training and support, data center and disaster recovery;
- Security: involves internal and external security policies, accesses privileges, firewall, and spam procedure of emails and virus protection.

Turban and Volonino (2013) claim that for the strategic business planning with IT, it is essential definition of information architecture, consisting of high-level information needs, and how those needs will be met, considering both the immediate and future requirements, associated with the need for information, the corresponding technological infrastructure, and applications that enable them.

According to Bridge Consulting (2011), the information flow must be increasingly fast and accurate, making the right information be delivered to the right people, in the time required for the decision-making process. Information systems and technology itself, support most of the activities in organizations, making IT continuously essential. Currently, the level of automation and integration of a company is used as

competitiveness indicator on its market. IT has become an asset that, when properly managed, is powerful to leverage the business. To Moreira and Ribeiro (2014), the identification, search and use of information is motivated by the need to solve problems and / or meet business goals, and it can be characterized as one of two types of needs, defined by Figueiredo (1979): i. Acquire knowledge; ii) Action base on it, that is, to carry out activities within the professional or personal context, including the knowledge generated by such information. Thus, the information made available by IT should be relevant and useful for action, in order to add value to that activity or process.

In this sense, researches of Bienstock and Rayne (2010), Iskandar and Saadah (2010), Lao *et al.* (2012), and Wang *et al.* (2008), demonstrated that IT is critical, and at the same time, crucial for logistics companies performance and competitiveness, and explain that companies with the best combination of performance and efficiency are delivering the most advanced IT solutions, which directly affect the synchronization of activities and coordination of the supply chain. In addition, other benefits identified in the literature include: greater flexibility in order processing, higher productivity, greater flexibility in services deployment, increased service levels, better management of resources, and errors, failures and problems on daily operations, reduced lead times, leaned administrative activities, as well as the decrease of raw materials, inventory, and transaction costs needs (HAUGHTON, 2006; LAO *et al.*, 2012. POKHAREL, 2005; WANG *et al.*, 2008). Albertin and Albertin (2008) include, as benefits, increased quality, and innovation in products, services and processes.

Vieira, Coelho and Luna (2013), Vehovar and Lesjak (2007) argue that low satisfaction with IT investments is directly related to poor implementations, particularly related to cultural and organizational changes. Other causes pointed by Vieira, Coelho and Luna (2013) comprise unmet expectations of IT. Pokharel (2005) and Rodrigues *et al.* (2008) also include: lack of systematic information handling, inefficient cooperation and compatibility between supply chain partners, incomplete or inexistent support management, problems with information flows, and data errors identified during IT implementations.

Strategic planning of information technology aims to structure all appropriate information for the organization and IT, as well as its emerging resources, assisting the organization in decision-making at the strategic, tactical and operational levels, linked to quality, performance, efficiency, profitability, ability to adapt to new trends, and competitive and business intelligence (REZENDE, 2002).

The IT strategic planning, in line with the business strategy, ensures that IT is supporting and leveraging the business in the right direction, generating a guide to actions to be put in place, to achieve certain goals (AUDY and BRODBECK, 2003). Moreira and Ribeiro (2014) complement, indicating that IT has become vital to organizational survival, since it is considered a strategic element, which implies the identification of challenges, goals, objectives and IT requirements to enable the delivery of goods and services that are aligned to business needs. Authors cite still as value added by IT, the help of "promoting competitive and business intelligence over their competitors". In addition, a well-executed and shared planning ensures that the entire organization understands the role of IT, and the benefits that can be achieved with its use, extracting the highest possible value of the investments made in this area.

In this sense, Moreira and Ribeiro (2014) explain that the big challenge is to:

- Rethink isolated processes on business and IT, and turns them into an integrated process;
- Define the way to promote this alignment during the strategic planning implementation, continuously.

The implementation of IT, according to Vieira, Coelho and Luna (2013), is the second course in the adoption of technology, being preceded by the selection of this technology, and as subsequent process its maintenance. Swanson (1994) states that the IT implementation process "convert a concept into operational reality" to provide customer value, and to this end considers the life cycle of technology for this purpose. Still, Karagiannaki *et al.* (2011) indicate that although the technical quality of IT is verified during the selection process, only its implementation is ensuring proper operation and use, through the process redesign, and associated information flows.

Additionally, based on Vieira, Coelho and Luna (2013), the IT implementation process should be in accordance with the type of IT innovation which, according to Swanson (1994), can be of three types:

- 1 Innovations related to optimization of administrative activities;
- 2 Innovations from the implementation of products and solutions in the organization's key processes without, however, providing competitive advantage;
- 3 Innovations that integrate products and IT services with the organization's key technologies, changing business processes and providing competitive advantage.

The Bridge Consulting (2011) points out that at the time of the organizational strategy development, IT must actively participate in the process of identifying the business needs to understand what are the possible points of IT performance, and then formulate their own strategies. Demand for actions related to IT must be built together with the entire organization, not just reactively identified through simple, direct questions about what are desired projects for each area.

The formulation of IT strategy usually follows the business strategy, where business management and IT management are harmonized to fix the time horizon of the IT strategy, adjusted to the time horizon of the business strategy (AKABANE, 2012).

Therefore, the IT plan involves setting a long-term planning horizon for investments in the areas of human resources, expertise, technology, hardware and software needed to exploit the opportunities that may arise in the course of the process (BAKER, 1995).

The adoption of the IT strategic planning brings numerous benefits to organizations. Among them are: the definition in the medium and long term, IT needed infrastructure in terms of hardware, software and people; integration between different technological perceptions; the mechanisms to monitor and evaluate the risks inherent to IT investments; the availability of means to evaluate and measure the quality in the IT field; promoting IT alignment with business developed goal (BOAR, 1993).

Despite the benefits of the IT strategic planning, many organizations still qualify IT as an expense, and not as an investment. Graeml (2000, p. 34) states that "companies that make decisions involving IT as if they were investments, seek to use technology to deploy processes that link IT activities to business objectives, and to strategic goals of the company".

Even if objectives and IT role be clear in the organization, strategy implementation often fails because

efforts to plan and execute become competitive, not complementary. It is needed that IT and business planning be conducted jointly in the strategy development process. This bridge is one of the greatest challenges, and one of the most critical factors for the strategy successful realization.

Apart from this factor, it is important to emphasize that the strategy can not be set in rigid form, determining policies and projects for a too long period. According to the dynamics of the market, it must be sufficient flexible to rethink and adapt the plans and objectives to new competition conditions. This is one of the factors that collaborate to the failures of strategies implementation. Often the IT strategic planning becomes just a historical document, instead of being a dynamic tool that records the accumulation of decisions, to guide the IT organization to the desired goals (AKABANE, 2012).

Another point identified by Motwani *et al.* (2002), it is that companies that have successfully implemented IT solutions generally consider practices and change management techniques to support these implementations. Vieira, Coelho and Luna (2013), Filicetti (2007) and Kotter (2011) argue that change management can be defined as the establishment of a set of tools or structures which aim to maintain the effort to change and / or transition to a future state, under control, considering people, teams, and organization, by modifying processes and behaviors.

Vieira, Coelho and Luna (2013) state that, with respect to technology change management, the elaboration of an action plan to obtain the adoption of IT should be formulated, and transformed into an implementation process that can take two approaches: i) a fragmented implementation in which the IT is first installed, and then is made the change process; b) a joint approach, in which the changing process takes place during IT implementation, choice also mentioned by Robey *et al.* (2002).

Vieira, Coelho and Luna (2013) complement, considering that such change processes imply the theory of BRP (Business Process Reengineering) which, according to Anderson and Anderson (2002), comprises four main stages: i) identification of process review and analysis this current process; ii) the new process design; iii) testing, and; iv) implementation of these changes in the new process.

Still based on Vieira, Coelho and Luna (2013), the process of change can be implemented in a radical way ("big bang"), or incremental. The radical approach considers that the entire system is changed at a single time, while the incremental consider an implementation in stages, in which the IT modules are put into operation gradually. Several authors, as Madritsch and May (2009) and Ruta (2005) show benefits with incremental deployment, such as the construction of a knowledge base, reducing faults risks, and a greater degree of acceptance.

Thus Vieira, Coelho and Luna (2013) support the need for a change management approach to adopt IT, since faults in these IT projects happen, in most cases, not for technical reasons, but by behavioral and/or social.

5. IT Strategic Plan Proposal

As a result of this research, Akabane (2012) shows that there are links among information systems, information technology and business strategic planning, which have been considered a vital process in the integration of business activities, in order to promote organizational success and the achievement of business operations competitiveness.

A first verification, based in Rodrigues (2010, p.26), Santos and Neto (2014), is that IT is critical to achieve business objectives, and to improve and optimize processes, opposing the view advocated by some authors, such as Carr (2003), which sustains the view that IT is a commodity, and do not represent a source of competitive advantage.

IT executives have also considered the alignment between business strategies and IT as one of the main objectives of the area, by the possibility of new business opportunities identification, and for obtaining competitive advantages based IT solutions (NIEDERMAN, BRACHEAU and WETHERBE, 1991; PORTER, 2001).

The strategic planning process of IT is highly dependent on the context in which the company operates, which is governed by the internal and external environmental variables, sensitive in defining the organizational perspective.

Rezende (2003) emphasizes that this alignment between IT and business is relevant also due the fact that this synergy support the definition of the entire informational structure, instead of opting for varied applicability of information technology within the organization. This generates significant returns, including serving as a key tool to help business leverage, and its business intelligence.

Rezende (2003) also states that both plans play a role of change agent in the organization, especially the potential benefits offered by its result, and the possibilities of business opportunities.

The alignment between business and IT becomes necessary so that administrators can make appropriate investments and make decisions related to IT as a facilitator for the business strategy implementation.

Strategic alignment is the degree to which resources are directed to each of the dimensions of the IT strategic orientation, and that are consistent with the emphasis on the strength of the organization, which are corresponding to each dimension of the strategic business direction (CHAN, 1993).

A critical factor for the success of this alignment is the involvement degree of senior management, as well as the level of participation of the IT responsible in formulating the business plan itself. Chan et al. (2006) find that the more sophisticated design, the greater the involvement of people with different expertise areas, and hence the greater the level of shared knowledge and alignment needed.

So, can be highlighted the alignment needed between business and IT, as the starting point to build an IT strategic plan.

In this sense, based on the literature review, it is proposed in this paper, the application of the adapted model of Inoue (2008), as basis for the IT strategic planning, as shown in the Figure 2.

IT STRATEGIC PLANNING PROPOSAL		
PHASE	RESULTS	REFERENCE
1. IT Plan Launching Step 1.1 Execution Structure Formation 1.2 Assumptions and Constraints Elaboration	Project Execution Structure IT Strategy Definition Project Resources Allocation Project Constraints Identification	APQC, COBIT, PMBOK Models
2. IT Internal Environ. Analysis 2.1 Business Processes Analysis 2.2 IT Internal Environment Analysis	Current Processes Status Current SLA Status Business Limitations	BPM, VSM Business Process Modeling
3. IT External Environment Analysis 3.1 IT Usage Best Practices 3.2 IT Trend Evaluation	Benchmarking IT Trends External Constraints	Benchmarking
4. Business Process Model Building 4.1 Business Process Building 4.2 Required IT Environment Building	Business Process Summary IT Environment Summary!	BPM, VSM Business Process Modeling
5. IT Strategic Plan Elabor. 5.1 Gaps Analysis 5.2 IT Strategies Form.	IT Strategic Plan Document IT Gaps Tables IT Thematic Issues	COBIT, Risk Analysis
6. IT Strategy Detailing 6.1 Busin. Proc. Maint. 6.2 IT Services Policy 6.3 Risks Managem. 6.4 Control 6.5 IT Resources	IT Strategic Plan Execution	BSC (<i>Balanced Scorecard</i>)
7. Plan Conclusion	Checklist IT Plan Execution Deliverables Acceptance	ROI (<i>Return of Investments</i>).

Figure 2: IT Strategic Plan Elements. Source: Adapted from Inoue (2008, p.50)

In this sense, topics described by Akabane (2012) for composition of the IT strategic plan will be adopted:

- Premises of the IT strategy: address the presentation of the issues and assumptions for the formulation of the IT plan, contained in the business plan, the informational process, and analysis of the IT environment;
- Trends and evolution of IT: evaluates technology trends, and also best practices;
- Gap Analysis: is based on the survey and the identification of possible gaps between the current and the proposed business process, and improvements in the IT plan;
- Overview of informational plan and proposed systems: description of the information objectives and processes needed functions, to be made possible, including the service level expected of the IT to support the new business process;
- Design and priorities of the new IT model: has the general objective of the selected projects, its products and expected results, expectations and needs, the general interdependence, cost / benefit and the establishment of general priorities of the projects, as business needs;
- Schedule for IT system, projects and model: is the general schedule of the selected IT initiatives for each project, which consists of relevant information for human resources allocation, technology acquisition, and infrastructure deployment, which requires the definition of the overall budget;
- Organizational structure: set out the structure of the IT plan, its role, how to control and monitor the project progress, and the method and frequency of communication and formal meetings, the method of presentation of the status of each initiative, as well as the development of a change management plan, as identified by Motwani *et al.* (2002), Vieira, Coelho and Luna (2013), Filicetti (2007), Kotter (2011) and Robey *et al.* (2002);
- ROI (Return of Investments) Assessment: included overhead during the introduction of the system, the acquisition and development costs, operating and maintenance costs after system deployment. And finally, the expected benefits for the implementation of the new system are also computed.

In addition, for the success of whole process of establishing and implementing the strategic IT plan, it is vital to have governance over it. Governance, according to ISACA (2012), "ensures that the needs, conditions and options of stakeholders are analyzed to determine that balanced and mutually agreed objectives be achieved by setting direction, through prioritization and decision making. Governance also ensures monitoring and compliance of the direction and goals previously established by mutual agreement".

With respect to behavioral issues related to the use of IT, Morris *et al.* (2003) *apud* Vieira, Carvalho and Luna (2013) propose the application of the theory of the Unified Theory of Acceptance of Use of Technology (UTAUT), which is based on four constructs:

1. Expectancy performance, related to the individual expectation that the new technology will help to achieve performance gains at work;
2. Effort expectancy, represented by the degree of ease associated with the IT use;
3. Social Influence, indicating the degree to which the individual realizes that important people believe they should use technology;
4. Conditions facilitators, related to the perception that the necessary technical infrastructure and organizational support are available for technology adoption.

And finally, as the implementation strategy, the proposal advocates incremental approach from Madritsch and May (2009), and Ruta (2005), in favour of a knowledge base generation, and also by the reduction in risk of failure.

To effectively measure performance regarding the IT plan implementation, is suggested the adoption of the BSC (Balanced Scorecard), as the metric system.

Thus, although the IT strategic plan proposed implementation, based on Inoue (2008), has some gaps to be addressed, it considers elements present in the literature that support the IT strategic planning, and are therefore useful and relevant in support of this business process.

6. Final Considerations

This research aimed to present information on the importance of IT in organizations, especially for the realization of the business strategic planning. Even in companies that are not in the technology industry, the advantages were presented to implement the strategic planning of IT aligned with the needs, and the elements of the strategic business plan.

As identified in the literature, there are challenges to achieve alignment, not only the business strategic planning, but also the business demand with time and availability of IT responses. The time required for the implementation of a system, or an equipment acquisition can not be, sometimes, what the company needs to serve its customers, or to plan, aiming at future opportunities. But companies that can perform this alignment and meet the needs of both areas have differential and competitive advantage over its competitors, and new business opportunities.

In this sense, the paper proposed to suggest an approach to the implementation of an IT strategic plan that considers the constraints and elements identified in the literature, and at the same time, could provide support to this process. Thus, it was suggested the adapted model of Inoue (2008), combining methodologies and practices described throughout the literature.

At final consideration, therefore, is that organizations have the opportunity and resources, and several references in the literature, so that they can plan their businesses jointly with IT, in a systemic manner, under a synergistic process, and strategic nature. This type of planning becomes less costly for the company, because depending on the business sector, the technology use can not only be a differentiator in business, but also a legal requirement imposed by the government, with implementation deadline.

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