THE IT AS COMPANIES DECISION MAKING TOOLS: A FIELD SURVEY

The environment in which enterprises conduct business is changing dramatically in today's word. With the improvements in technology of communication, increase of capacities and security guards of both sea and air navigation and governance policy in opening markets for new goods and services, the word is making an every time less place.

Models of information that support integrated systems into the business environment cannot be available for limited uses and owners.

Technology re-defines opportunities and its adoption provides to executives in exploring these opportunities, since it produces new capacities to enterprise getting in. As result, the organizations are able to develop and to strengthen current business and, in some cases, to build and participate in new business enlarging in this way the possibility of competition.

Planning is essential to survive and to stay competitive in this new global environment.

Then the present study aims to survey companies located in São Paulo-Brazil state how they are planning IT resources to remain competitive in a information based business environment.

Key words: business environment, technology alignment, strategic planning

INTRODUCTION

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More and more enterprises are competing outside with traditional domestic competitors.

The changes that take place in new business demand make enterprises react quickly to find answers for new and growing challenges will be necessary that planners and decision makers align his programs of investments in information technology-IT with vision for the future allocate resources of intelligent form

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organizations are able to develop and to strengthen current business and, in some cases, to build and participate in new business enlarging in this way the possibility of competition. Planning is essential to survive and to stay competitive in this new global environment.

Then the present study aims to survey companies located in São Paulo-Brazil state how they are planning IT resources to remain competitive in a information based business environment. Driven by rapid developments in the fields of knowledge and technology, the external framework within which businesses now operate is changing at an ever-increasing rate. The natural outcome of these changes is that businesses have to constantly adapt themselves to remain aligned with their environment. This in turn requires businesses to change their underlying business models at a faster rate CHAHARBAGHI et al., 2003).

Hage (1978) provides a distinction in which a static or stable environment is considered as one that exhibits linear change in a particular environmental variable, whereas in a dynamic environment changes in environmental variables are non-linear in nature. These differences in Patterns of change imply that businesses operating in different environments need to address different issues. In stable environments, for example, optimization and incremental improvements are given a greater emphasis than in fast-moving environments, where survival and speed of adaptation become dominant issues.

The nature of decision making is also different for different environments. Decision making in stable environments usually involves making a choice between a finite numbers of alternatives based on the prediction of the consequences of each alternative. Decision making in environments with higher levels of change, in contrast, usually involves successive approximations and a continuing search for alternatives, as the prediction of the consequences of a certain choice is much more unreliable and the number of potential alternatives increases dramatically (CHAHARBAGHI, and WILLIS, 1998).

Strategic Planning/Strategic Technology Planning

Organizations are under pressure to increase efficiencies in their strategic processes (Cooper and Zmud, 1990). Although Itami and Numagami (1992) assert "Technology is the most fundamental of the core capabilities of a firm," for many years technology planning was limited not by inherent technology functionality, but by human conceptualizations of technology's usefulness (Pyburn, 1983).

Technology planning was considered at the unit level or implemented as steps in project development, and focused on enhancing processing speed, improving efficiency, reducing errors, and increasing data integrity rather than as a strategic means of supporting the mission and basic objectives of the organization (Pyburn, 1983; King, 1978).

Organizational strategy and information technology were perceived as related, but technology was considered at the operational rather than the strategic level.

In 1978, King proposed a practical method of developing information technology strategy based on an organization's overall strategy. King's operational methodologies represented one of the first attempts to position and apply information technology at a high level and link it to the organization's overall business strategy. King proposed "an operationally feasible approach for identifying and utilizing the elements of the organization's "strategy set" to plan for the MIS".

(King, 1978); this process involved transforming mission, objectives, strategy, and other strategic organizational attributes into system objectives (purpose of the information system), system constraints (internal and external rules and regulations that must be observed, such as budget limitations [internal] and industry regulations (external]), and system design strategies (explicit or implicit desires for the system and/or standards by which the operation of the system will be measured) (King, 1978). However, the link between the organizational strategy set and the MIS strategy set may not be easy to make. Informal or public relations focused organizational strategic planning tends to yield fewer, less comprehensive or less sophisticated reference documents for the MIS designer to access (King, 1978). This increases the amount and complexity of the analysis IT strategists must make while simultaneously reducing directly perceived, factual information on which to base decisions. Additionally, Mintzberg and Waters (1985) posit that strategies may not always be deliberate or intended. According to these authors, strategy formulation and implementation is not necessarily a result of a previously considered and deliberately thought out 22 planning process. Strategies can be realized in spite of, or in the absence of conscious intentions. Mintzberg and Waters write, "Planning suggests clear and articulated intentions, backed up by formal controls to ensure their pursuit, in an environment that is acquiescent." These are conditions that may not exist, yet strategic planning and implementation may occur through emergent strategies rather than through intended strategies.

After King's publication in 1975, research relating organizational strategy to information technology strategy began to proliferate. Recognizing the strategic ability of technology, studies focused on the possibilities (Henderson and Venkatraman, 1999; Wiseman, 1985;

Benjamin, Rockart, Morton and Wyman, 1984; McFarlan, 1984; Porter, 1980) and difficulties of applying technology strategically (Lederer and Mendelow, 1988). Although authors examined the contributions and interactions of technology and strategy on large-scale organizational objectives, such as achieving and sustaining competitive advantage, improving organizational performance, and increasing organizational effectiveness, findings in the research on strategic planning and technology strategy are contradictory.

Then the present study aims to survey companies located in São Paulo-Brazil state how they are planning IT resources to remain competitive in information based business environment. Corporate governance (CG).

According to OECD - Organization for Cooperation and Economical Development, is defined as a set of relations between enterprise administration, board of administration, shareholders and other interested parts. Also it provides the structure that defines the enterprise objectives like how to reach them and manage of performances (FLÔRES, 2004).

Corporate governance read with ways for which corporations shareholders secure what will have return of their investments (Shleifer, Vishny, 1997). Then CG can be considered as set of mechanisms which outside investors (shareholders or creditors) are protected against expropriation by part of inside investors (executives or controllers). The first ones have no guarantee of the resources will be treated by the last ones with proper diligences (duty of care) and, principally, with loyalty (duty of loyalty) (LA PORTA et. al., 2000).

The perspective of CG is intimately connected with perspective of Agency, which refers to separation between owner and controller (SHLEIFER, VISHNY, 1997). So, a system of governance

establishes mechanisms, structures and incentives, which compose control system of enterprise management and conduct the administrators behavior to fulfill objectives stipulated by the shareholders / owners (MARTIN, 2004).

Information Technology Governance (ITG)

Since IT introduction in the organizations, academics and IT professionals have made researches, developed theories and best practices in this emergent knowledge area (Peterson apud Gremberger et. al 2004). In this evolution, a variety of concepts and definitions of ITG appeared. In the bellow some definitions cited in a reference:

"Organizational capacity of controlling the formulation and implementation of IT strategy and drive in the same direction adapted with purpose of producing corporate competitive advantages " (THE MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY, 2003)."

"IT governance is responsibility of the Body of directors and high management. ITG integrates Corporate Governance and consist of leadership mechanisms, organizational structure and processes that guarantee what organization's IT maintains and reaches the corporate strategies and objectives " (BOARD BRIEFING ON IT GOVERNANCE, 2006)."

" IT governance is the organizational capacity practiced by Directors, Executive Management and IT Management to control IT strategy formulation and implementation and in this way to secure fusion of business and IT " (GREMBERGER et. al., 2004)."

" IT governance is the model like decisions are taken and responsibilities directed to encourage a desirable behavior in IT use " (WEILL, ROSS,2004)."

Though above definitions are different in some aspects, they have like principal focused same subject: the connection between business and IT. The ITGI definition of IT governance, nevertheless, also sets out that IT governance is an integrant part of the Corporate Governance Though Weill and Ross (2004) definition does not quote straightly the question of alignment with enterprise business, Weill (2004), in the article " Don't Just Lead, Govern, How Top-Performing Firms govern IT " emphasizes that " desirable behavior ", it is that one solid with corporate mission, strategy, values, standards and culture.

Desirable behavior also includes the promotion of entrepreneurship and share of IT resource and reuse with cost reduction purposes. In other words, Weill and Ross (2004) concept also extols the alignment between IT and enterprise business.

 IT GOVERNANCE AND CORPORATE GOVERNANCE

Definition of IT Governance proposed by the IGTI expresses that " IT Governance

is responsibility of the Director and Executive Management and that IT Governance makes part Enterprise Governance". Bellow figure shows the connection between Corporate Governance and IT Governance proposed by CISR of MIT Sloan School, where it is realized what IT is one of the assets controlled by the Corporate Governance.

KEY ASSET CORPORATE GOVERNANCE

Source: CISR, 2003.
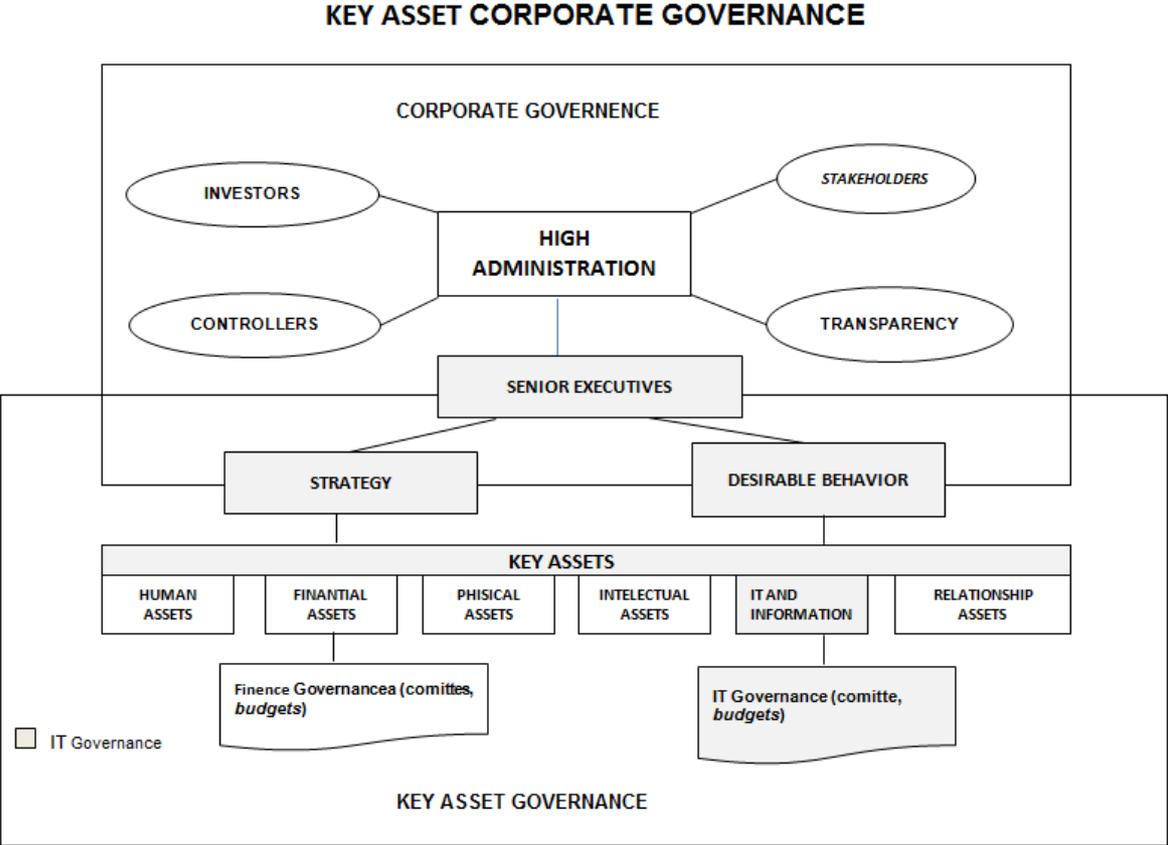
In the superior part of model, are highlighted relationships between enterprise board with shareholders, practices of monitoring and disclosure to compose the CG. The executives of enterprise, like directors agent articulate strategies and actions to produce desirable behaviors what it makes possible that board directives are become real. To implement such strategy, will be necessary appropriate enterprise assets governance including the ITs (Weill, Ross, 2004).

THE PLANNING MECHANISM

The process of enterprise business strategy formulation has to include necessarily the creation of favorable conditions so that planning adjustment is small besides necessary flexibility face to environmental changes.

The planning and forecast mechanisms are critical elements of an organization. An organization can improve efficiencies if it can make secure predictions its business environment, to anticipate problems and develop plans to respond positively to these questions. In fact, there is a reciprocal relation between the process of plan and forecasted results. Planning allows strategies and actions that need to be taken on basis of the current and predicted results.

Another important aspect is that organizations need relevant data to the government regulations, demographic data, potential of sales, available resources, competitors and production data for planning and forecasting activities.

An organization creates a plan based on given data (environmental resources, historical, current and forecasted results and possible restrictions) and, next, it adjusts on basis of directives from the high administration. If the predicted results are not according to the expected one, then they are feed backed for planning process. This closed loop continues up to reaching expected result according to the forecast.

When the high administration is satisfied by the predicted result, decisions are taken with preparation of action plan to the operation phase.

Also it is important to point out that real results reached may not necessarily equivalent to the predicted result. If defined indicators are not producing desired results then organization can pass by another cycle of planning and forecast. This is a very dynamic process and it evolves according to business requirements and change of necessities.

PLANNING AND FORECAST FRAMEWORK
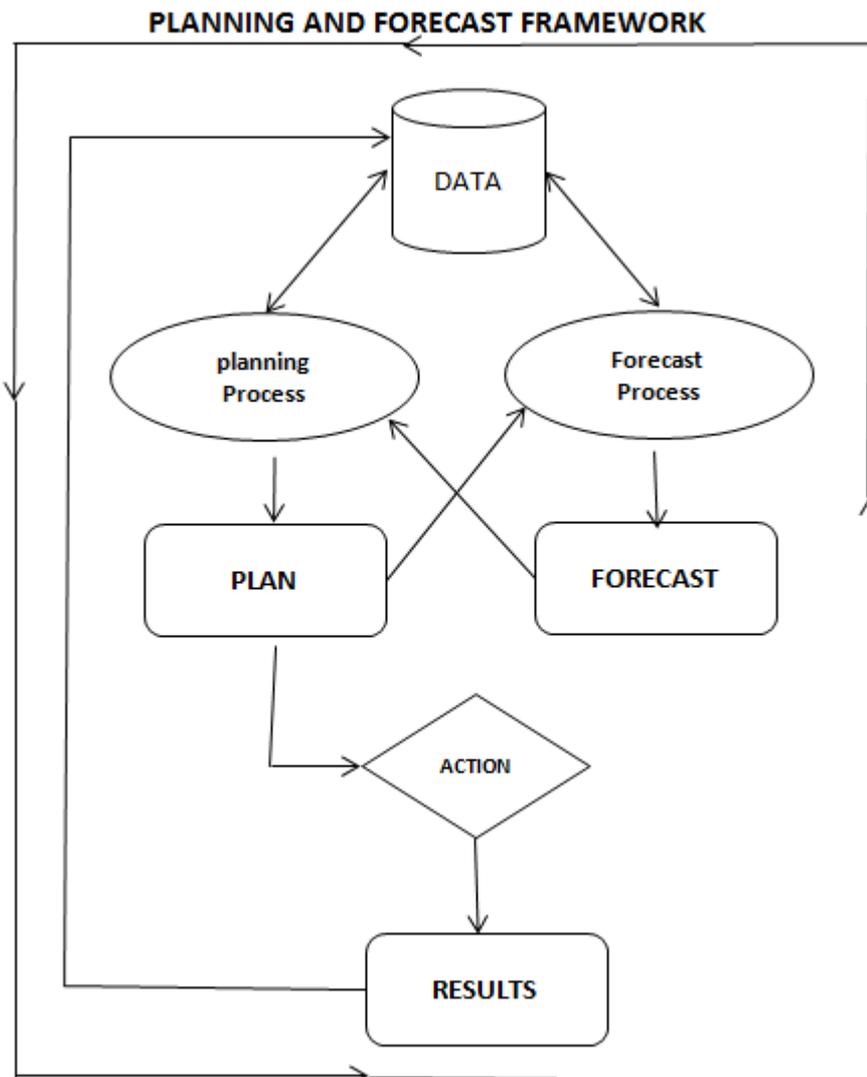
Source: Krishnapillai, 2009, pg. 14

So, planning process is essential to survive and to stand out in the new global environment for organizations in getting profits or to a government agency in search of knowledge and information for benefit of citizens.

So, the process of plan is essential to survive and to stand out in the new global environment, be for organization in getting profits or for a governance agency in the search of the knowledge and of information for the benefit of citizens.

A plan demands that elements of vision have connection with targets and a base of knowledge for resource allocation according to programs portfolio under direction and orientation from superior hierarchy of the organization.

The plan has not necessarily to include all organization levels, since it can be carried out by any one of the areas, but it needs to be identified.

Another aspect of a solid plan is the relation between objectives and target of several organization levels. The superior elements of the vision are organization highest objectives and, as such, they are positioned in a more extent environments.

From the business point of view, vision is divided in targets among several business units, however it is important maintain all activities centered in unique vision of organization. Though general vision is defined by the organization for each in the business unit, the decomposition allows to create own vision for each units.

Independently of organization level in which planning occurs, certain elements must be present to be successful: long term direction, process that interconnects decision make, to be an active document and to be organized in the specific form for each finality. The planning process is not a solution of all organization issues; it helps them to minimize degree of uncertainty observed in a political, economical, technological and social changes.

STRATEGIC PLANNING

Gilley and Maycunich (1998) define strategic plan as:

" a process in which organizations look at the future to identify a vision, to create a declaration of mission in order to develop drive values and principles to execute activities ".

What differentiates strategy from other planning forms is the focus in a wide future objective, a vision of what to introduce in the market, and in what segment it intends to act. The general objective of strategic plan is to identify for where the market it is walking and to find forms to keep on serving (YOUR IT 2007 STRATEGIC PLAN, 2006).

A strategic plan refers to the vision of an organization, its global objectives, up to individual programs, activities and technologies for realization. As soon as are identified, a strategic plan is going to include a general business plan.

CORPORATE PLAN STRUCTURE

DECISION LEVEL/FORMULATION	PLANNING LEVEL	TIME FRAME	RESULTS
HIGH ADMINISTRATION LEVEL (STRATEGIC VIEW)	STRATEGIC PLAN (CORPORATE LEVEL)	LONG TERM	OBJECTIVES
MANAGEMENT LEVEL (TACTIC VIEW)	TACTICAL PLAN (DEPARTAMENT LEVEL)	MIDDLE TERM	GOAL
OPERATIONAL LEVEL (PROCESS VIEW)	OPERATIONAL PLAN (EXECUTION LEVEL)	SHORT TERM	TARGET

Source: The Author

So, strategic plan is defined as a glance for where wants to achieve in the future and to join necessary resources (tangible and intangible goods, persons) for the realization.

Kaufman et al. (1996) divided and defined planning model in three levels:

1. a strategic plan: a proactive option for future where general plan includes an entire organization vision and as result the objective to be reached.

2. tactic plan: part of organization that faces in day by day battles and must support organization strategic vision to realize determined targets.

3. operational plan: treats the execution of functions that evolve tactic plans aiming to reach determined short term results.

The time frame in a planning process, in general, represents period of time among beginning of execution and its conclusion (McLEAN and SODEN, 1977).

It can be seen as resource set allocation to reach objectives in a determined period of time (Das, 1991), so it is seen as an independent variable. Also it can be seen as a result of management decision making in a certain interval of time; for this case, turn a dependent variable (LEE and LIEBENAU, 1999).

The concepts presented in above general framework form the base of strategic plan formulation.

In this form, strategic plan is a process created for:

1. evaluation of internal and external opportunities and challenges of the organization;

2. identification of several perspectives of organization leadership in regard to opportunities and challenges;

3. consolidation of leadership under several points of view with one shared vision that is described through measurable objectives;

4. a articulation of clear vision shared by entire organization;

5. determination in re-orientating work efforts to reach the vision of efficient and effective form;

6. source of an disciplined approach to monitor and measure of progress of the plan (THE ART AND PROCESS, 2005, p. 12).

A strategic plan is different than business plan. The first one is a (very) short document, and business plan is generally much more substantial and it forms a detailed document. So, a strategic plan can supply foundation task and structure for business plan.

A strategic plan also is different than operational plan. While the first one must be a visionary, conceptual and driver, operational plan in contrast, it is sensitive of being more than short term, tactic, with implemental focus and measurable. As example, to compare a vacation process (where, when, budget, duration, who goes, and travel itself are all strategic issues) with the final preparations (tasks, period, resources, time, cases, carriers and so on; they are all operational issues).

A satisfactory strategic plan must be realistic and possible, in way to allow to managers and businessmen to think strategically and to act operationally.

EVOLUTION OF IT STRATEGIC PLAN

Questions that evolve information systems (IS) / information technology (IT) / strategic plan (SP) are considered a vital process in integrating business activities in a way to promote organizational success and getting competitiveness in the business operations.

In according to Ward and Peppard (2002), management information system era occurred in the 1970s. The high volume of data was stored and combined with harmonic and flexible form through appropriated tools allowed to managers to access and to manipulate to attending their necessities. The main focus on this time was management performance efficiency and improvement and in decision making through best use of the data.

The IS plan focused in information system portfolio to support and easiness in decision making process, in monitoring and control employee activities.

The IT plan also was centered in network implantations for better integration of applications and data base and to priories organizational information requisites, in the coordination for end users training and in organizational structures the optimization. McKay and Marshall (2001) made a special observation: in the era of data processing and management information systems (MIS) era they took internal orientation of the organizations as a priority.

Strategic IT was seen flexible, focused externally and driven by business initiatives and necessities (SOMOGYI and GALLIERS, 1987). During IS strategy era, the planners were stimulated looking for besides the frontiers of organization and considering the extern factors like competition, new technologies, to be protected, to defend or to re-positioning the organization in order to achieve the best use of factors and internal and extern resources.
In a decades of 1980 and 1990 had the advent of information systems strategic plan (ISSP), to understanding and positioning of systems were more and more orientated to improve enterprise competitive position into the market, changing the way of doing business and / or establishing more close relations with business partners and clients.

So an enterprise IT strategic plan (ITSP) has a significant impact on business strategic plan (BSP), in other words, requires from IT managers a skill to articulate strong and weak points of technologies and to understand implication levels of these strategies in the entire corporation (KARIMI et al., 1996).

Then, IT appeared so, to fulfill a prominent paper in the organization existence, leading to belief of which IS strategy must be aligned with business strategy.

The strategic alignment between IS and business has been traditionally one of principal problems faced in IT management.
It is noticed that the reason for the approach in the enterprise IS strategic alignment is not treated only as IS success but also by organizational success. Consequently, Hirschhelm and Sabherwal (2001) observe that difficulties in the way for alignment can be turbulent.

An efficient information system must join and distribute organizations resources in a uniform

and viable posture according to the IS strategic plan processes (QUINN, 1980). So, IS resources can be aggregated to other organization capacities to allow this differentiation. Why does that happen, organizations may believe such resources can go besides of operational services like filing or impression.

IT INVESTMENTS

48%

IT into the budget ...

IT investment 2010 = U$ 170.000   Budget 2011 = U$ 300.000
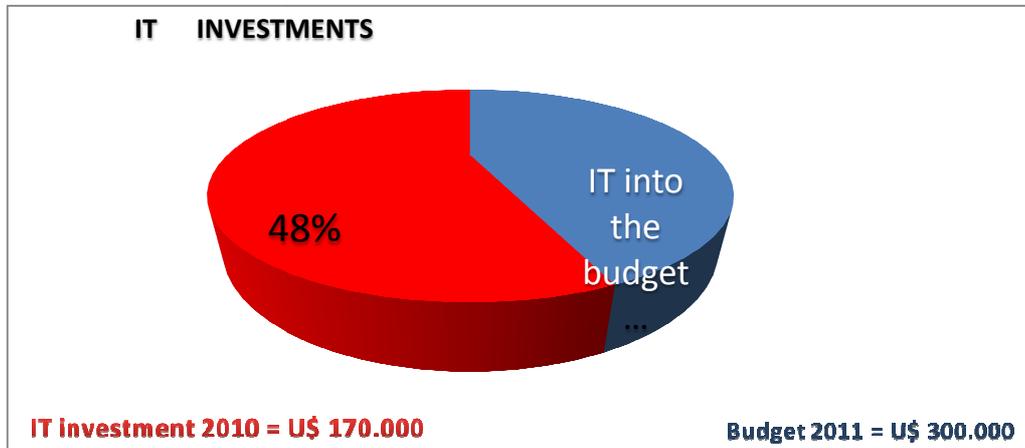
Specially with the Internet advancement and growth, is observed e-commerce and e-business in a strategic plan formulation enlarging concepts for e-strategy introduction.

The process of IT strategic plan is extremely context dependent in enterprise operation environment, which is governed by internal and external environmental variables sensible in a definition of organizational perspective.

Hackney and Little (1999) point out that organizational decisions are significantly influenced by politics, cultural and behaviors situations of the environment in that enterprise acts. Consequently, will be required an appropriate analysis of business and organizational structure with sufficient knowledge of complexities environment in which organization is wrapped in it operations.
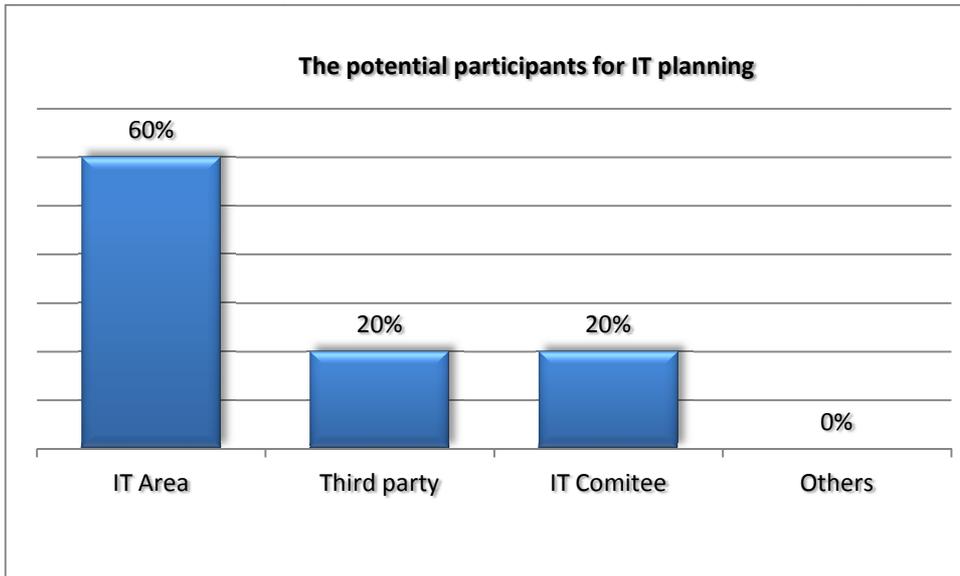
Then, it wraps a long term time frame of planning process for the investments in areas as human resources, technological specialization and competence in hardware and software to explore opportunities that could appear in a course of process (BAKER, 1995).

As result, the problems will be minimized when time frame are specified in a planning process formulation.

DSS Application

35%	13%	31%	
Payment	Finance	HR	Materials Management
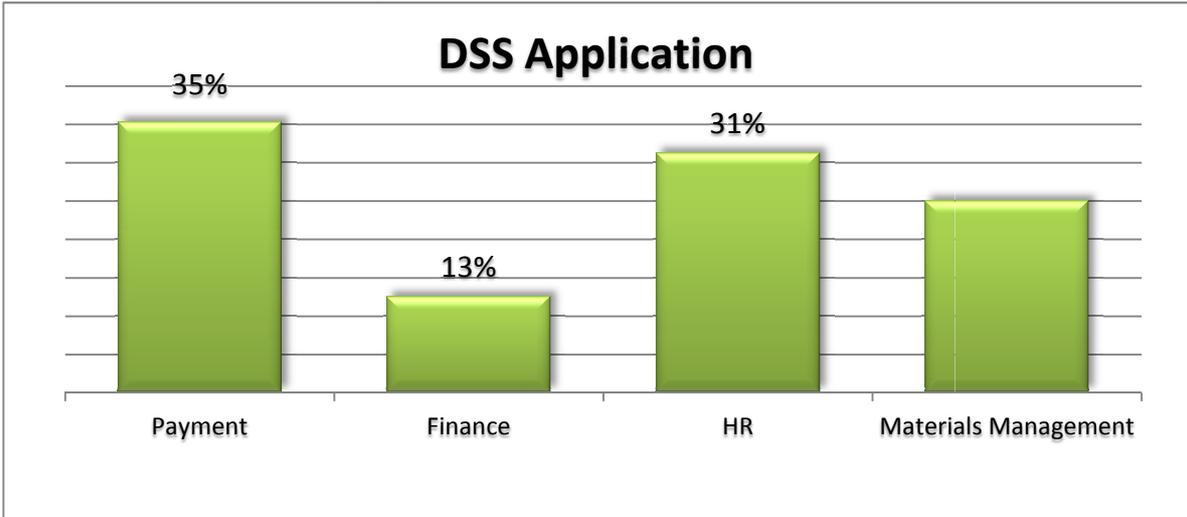
TIME FRAME

IT strategy formulation normally follows the business strategy, where business management and IT management coincide to fix IS strategy time frame to a certain point to adjusted to the business strategy time frame.

The potential participants for IT planning

60%	20%	20%	0%
IT Area	Third party	IT Comitee	Others

Along the time, effective IT users have based on time frame like a control mechanism adherent to the activities schedule. Then obligate to solve problems that could compromise existing target fulfillment.

As result, problems will be able to minimized when time frame are specified in planning formulation process.

So, it wraps a horizon of plan of long term for the investments in the human resources areas,

technological specialization and competence in necessary hardware and software to explore the opportunities that could appear in the course of the process (BAKER, 1995).

The time frame in a IS/IT strategic plan found in inquiries near user enterprises vary from one to five years with the average of 3,7 years (NEWKIRK and LEDERER, 2006).

CONCLUSION

In this work we are aware of the fact of most of respondents are from information technology area which represents a slant of the survey. Studies carried out on sector of IT office's and business areas perception, demonstrate that there is difference in perception of these groups on the aspects associated to performance management that perception of business executives on IT, it was below perception of IT executives.

In the process of plan of IT, the horizon of time can vary depending on the business plan, system of management, styles and other organization factors (MARTIN, 1982).

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