Critical Information as a Success Factor in Organizations: Objective and Methodological Approach

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Abstract

We are witnessing the need for a quick and intelligent reaction from organizations to the level and speed of change in business processes. These imperatives are very often associated to the emerging of new information systems and technologies, sometimes bursting change and other times being burst, which bring more challenges to organizations. The arising problems can be: from wrong information that lasts; systems not fully used or explored; too much staff; slow reaction to change; etc. This can be summarized in a governance problem that requires two main confluent action methods: people to synchronize their visions, ideas and strategies in the whole organization; and, in that context, select the information that strictly answers to the performance factors at the right moment. The proposed methodology is adequate here, once it turns to the potential of approach to the entrepreneurial architecture as well as to the potential of the information system in order to iteratively select and integrate the data and resources needed for that performance. The modeling of an information architecture of the company and its business helps in the identification of critical information, that is, of the one which is according to the mission, prospects and critical factors of business success at the required moment.

Key-words: critical information, entrepreneurial architecture, information architecture, real-time business intelligence

JEL Classification: O33

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INTRODUCTION

Since the transition from the industrial society to the information society, it was necessary to organize and select data in enterprises. This organization gave rise to new values, equal to or more important than the traditional ones, such as information and knowledge. Technology has made so much difference that its association with human capital has made emerge a greater potential of this. The joint exploitation of these two dimensions, technological and human, is actually the basis for organizational innovation. Information technologies are the platform for the company's ability to develop information systems that meet the new requirements of management. For example, the increasing ability to control large volumes of information in huge databases, such as the *data warehouses* using advanced tools for debugging these data (*data mining*), responds to even more selective and varied public. It is necessary to rethink the ways to present products or services and also to seek for different dissemination channels. Facing these challenges, companies should develop new solutions to maintain or enhance their competitive position in the market.

The roles that information society and knowledge management play are absolutely relevant and complementary in current business scenarios. Connectivity, mobility, real-time reaction and innovation are some of the keywords in today's vocabulary of organizations. The sustainable competitive advantage is found on the ability of a company to channel the critical information to generate the business intelligence that enables it to constantly rethink its goals and methods to suit its needs in real time. An international consultant for innovation (Basadur, researcher and founder of the enterprise *Basadur Applied Creativity*) said that many companies have good ideas or initiatives, 'but not at the right time'. Given the actual pace of change and business instability, companies have to deal well with real-time business events. This requires that organizations and professionals adopt new attitudes and ways of managing the business intelligence to address numerous emerging events.

POTENTIAL IN INFORMATION SYSTEMS

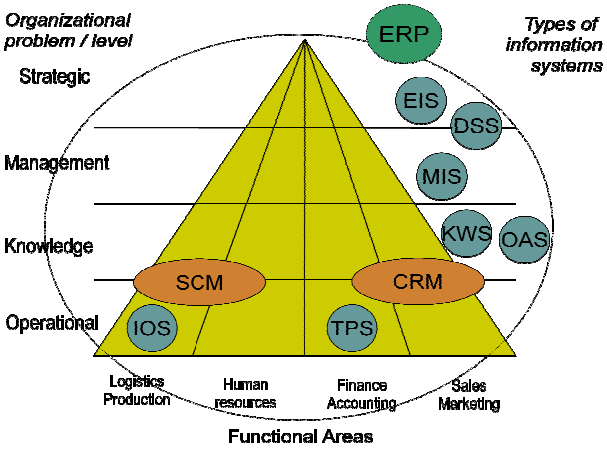
In Portugal, the companies (mostly small and medium-sized) invest little in information systems and technologies due to their limited financial and organizational capacity. One form of innovation these companies should bet on, especially those with a culture of customer service, is the creation of a platform based on technological tools easy to use, such as CRM (Customer Relationship Management systems), CMS (Content Management Systems) and ERP (Enterprise Resource Planning systems). These tools, converging on well planned platforms, contribute to the implementation of new business ideas, design of new products and services, improvement of existing processes and creation of new processes. Given this enormous potential, which may lead to a total reconfiguration of an organization, entrepreneurs should not only be familiar with this type of infrastructures, but also get involved from the very beginning of their adoption covering everyone in the organization.

The ERP systems, for example, have followed the financial systems which automatically processed invoices and other reports from the balance sheet such as income statements according to the legislation. Analyzing the process of decision support, it was found that managers make decisions based on many other documents and data to know what products they can offer, in what amount, what is the best way of distribution, the best location for shopping, how to organize the transport, etc. And adding to this, the enormous amount of data that result from having a *website* which leads to use new tools for database management with advanced statistics, especially based on data and process's integration. The ERP can do this work, allowing greater traceability of product information, from the moment of the order until knowing its stock level. Information flows result more rapid, complete and

correct, contributing to a better inventory management and a greater consistency with the customer's order. Some companies have resisted the adoption of an ERP system due to the time of adaptation/ conversion from existing systems to the ERP, which has become in some cases too extensive. This explains why some companies do not want to adopt ERP systems as these can disrupt their normal activities (Vasilev and Georgiev, 2003).

Currently, technology companies are committed to put into their ERP new modules tailored to the business reality of several sectors (industry, health, banking, commerce, etc.) to turn them more flexible and complementary. Unlike departmental systems, the ERP are multifunctional covering different levels and functions in the organization. They are integrated systems, making the information flow easily between different areas and departments to be shared by different processes (Figure 1). The information is then accumulated in a single huge repository (*data warehouse*), which is available to all business units at all functional levels. Managers have all the information they need more accurately and in real-time (Laudon and Laudon, 2004). For example, this type of system allows issues such as: immediately inform customer if the product he ordered is in stock; maintain customer informed of the whole processing course of his order; production communicate easily with the financial area to know new production plans, etc. Departmental systems, in contrast, create much fragmentation of data which results in expensive and complex links that proliferate in companies as these systems function separately by departments. The ERP systems, by consolidating the available data, help to eliminate unnecessary or redundant links having a positive impact on the efficiency of business performance.

Figure 1 - ERP and its degree of integration compared to other enterprise information systems (*IS*)
Source: own elaboration



CRM tools, which consist of analytical functions to manage the relationship with clients, consolidate information from different sources or channels of communication (phone, email, Web, *wireless* points) to answer questions such as: what is the value of a certain client for the company; which are the most loyal customers; which are the most profitable ones, etc. Then companies can use the answers to these questions for acquiring new customers; improve their products and services to further customize them according to customers' preferences; etc. CRM techniques are used to select and combine key information, from different points of view, to help companies to create unique services and successful innovations. CRM processes can, by means of advanced techniques like *data mining*, capture profiles,

attitudes and behaviors that were not perceived before. These tools become effective in engaging the customer to the point of expecting for the goods or services that he has previously outlined. However, users of these tools in the company are not often familiar with the criteria inherent to the related analytical algorithms, which require proper training (Vasilev and Georgiev, 2003).

CRITICAL MANAGEMENT IMPLICATIONS

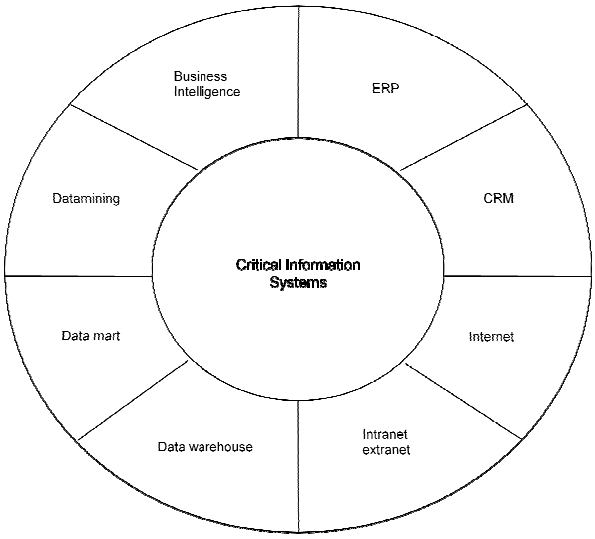
The expansion of the internet platform and the exponential amount of customers and employees it brought to companies using this platform to promote and sell their products, has led to a need for tools that could help to cope with this trend. The major challenge is keeping the same patterns of relationship interacting with more customers and stakeholders. The multiplier effect of this aspect, from a growing number of companies placed online, adds the need to compete more in real time. This justifies the increased adoption of the enterprise information systems mentioned above such as ERP, CRM, CMS, among others. Companies should therefore consider the implementation of these tools from a strategic perspective, for fully exploitation of their potential straightly in line with business needs for better business event monitoring. There is a persistent problem in companies, related to an increasing amount of unnecessary information or misinformation that lasts for a long time, damaging their daily performance and their relationships with customers and employees. There are essentially two factors leading to this problem:

- one refers to the fact that there are many new information systems and technologies in organizations (such as m-ERP, e-CRM, CMS, SCM, etc.) whose potential is far from being fully exploited, either in themselves or in integration with other previous systems;

- other factor is that people work differently, one from another, differing in terms of: training, willingness to work with technologies, willingness to cooperate with others, among other individual differences.

These factors raise the need for a working model in which people can synchronize their 'visions' throughout the organization and together, within the same mind-set targets, conduct an exercise of collecting critical information. Therefore, this paper aims to develop a methodology to analyze this problem, which can be referred as an approach for systems of critical information. It should be understood here, as system of critical information, the platform of tools and methodologies of business intelligence (relational databases, ERP, CRM, *data warehouse*, *data mining*, intranet, etc. - Figure 2) combined to filter only the data that match critical business success factors at the right time. It is not the system that is critical (such as those systems in medicine, security or other areas dealing with risk or critical time lags), critical is the information through those data that are event-oriented giving executives the right answers to decide in real time. This should be the main objective to consider in structuring data in the company's databases. A *data warehouse* is the most appropriate 'data center' for this, because it normally contains data from all departments and functions in the organization. Separate databases get in trouble for lacking uniformity, being from different manufacturers, and lacking integration incurring in errors, delays, repeatable data and more staff than is necessary. This approach to critical information systems requires an action to be taken at the level of information architecture in order to link the 'performance profile' (based on the performance indicators of the information system) with the 'competitive profile' (based on the performance indicators or critical success factors of the business).

Figure 2 - Technologies and tools for business intelligence
Source: Santos (2004)



Legend: Business Intelligence* - this section in Figure 2 includes forecast analysis, performance analysis, production reporting, *benchmarking*, *text mining*, among other analytical tools and methodologies.

The concept of critical information system considered here (center of Figure 2) is a platform of tools and methodologies for business intelligence (relational databases, ERP, CRM, *data warehouse*, *data mining*, intranet, etc.) combined to filter the data that match business success factors on time. Real-time business intelligence is the process of delivering information about business operations as they occur. In this context, real-time means a too short time to answer after the business event occurred. While traditional business intelligence presents historical data for manual analysis, real-time business intelligence compares current business events with historical patterns to detect problems or opportunities automatically. This automated analysis capability enables corrective actions to be initiated or business rules to be adjusted to optimize business processes. An alternative approach to event driven architectures is to increase the refresh cycle of an existing *data warehouse* to update the data more frequently. These real-time data warehouse systems can achieve near real-time update of data, where the data latency typically is in higher ranges of time.

Facing the current market instability and its informational asymmetries, the changing business processes and consequent uncertainty, even the theory of creativity has realized the growing need for immediate responses to which should contribute the ideas from everyone in the organization.

CONTRIBUTION OF THE CREATIVITY CULTURE

Florida (2002) stated that creativity is the most recent economic resource, as being the ability to have new ideas and improve procedures. Empirical evidence suggests that creative people have common personality traits: an enormous self-confidence, persistence, energy and willingness to take risks. They inspire and provide synergy to others through their vision towards innovation and a strong

conviction of their mission. Amabile (1998), studying about the creation of a creativity culture, said that in recent decades researches have favored the aspects of individual creativity over the aspects of social environment. These and other studies on creativity culture show that creative and motivated employees are those who work together for the same purpose and whose roles and ideas are valued there. It appears that these conditions greatly contribute to the competitiveness and growth of organizations although sometimes the organizational system, unintentionally, stifle the creative efforts of a few.

The higher is the exchange of ideas and their joint debate, involving everyone in the company, the wider is their knowledge base and faster is the resulting intelligence. Therefore, also more time is freed for other activities or new discoveries. Once employees perceive the value they bring to organization´s performance, the greater is their motivation and the enthusiasm they broadcast to customers, which reflects on enterprise's own image. Customers should also participate in this culture through their own single ideas. This is where a growing trend enters, especially among web services, of integrating web forums for customer participation, real-time personalization process, among other facilities.

One fact is certain: people are what an organization is, not its technology. It is not the technology that drives people or has ideas, this is just a set of tools which, if well used and integrated, can significantly reduce the serious problem related with the volume of misinformation that persists in organizations. But if people do not synchronize their views and ideas in order to achieve real-time business performance, the organization will have difficulties in responding to the continuous and increasingly intangible challenges (such as: degree of organizational change; loyalty level of a customer; level of confidence in a service; among others). To simply illustrate the importance of synchronizing people's views, imagine a car with two steering wheels: if each driver wants to drive it in a different way, the car will get quickly disoriented resulting in a serious accident from losing its control.

Creative organizations have similarities which provide them with similar cultures: they usually encourage experimentation and reward both success and failure (Robbins, 2006). At Hewlett-Packard, for example, the leaders were successful in creating an organizational culture that supports people who get failure (Sheridan, 1994). Therefore, people who work in creative organizations are willing to present new ideas without fear if it is guaranteed that, in case of failure, they are not penalized. Their managers know that the failure can be a product of adventuring into the unknown. The potential sources of creativity and innovation that have been more studied are structural variables (Robbins, 2006). Meta-analytic reviews (Damangone, 1991; Camisón-Zornoza, Lapiedra-Alcami, Segarra-Ciprés and Boronat-Navarro, 2004), addressing the relationship between organizational structure and creativity, had the following conclusions: first, organic structures positively influence innovation and creativity as they have lower vertical differentiation, formalization, centralization and provide the flexibility, adaptability, multi-fertilization determinants of creativity; second, the length of experience in managing the company is related to creativity and innovation. The experience seems to provide legitimacy and knowledge in performing tasks and obtaining the desired results.

And third, creativity and innovation allow the organization to know how to acquire new ideas, assume the costs incurred on the creation of new things and learn how to absorb the possible failures. Finally, internal communication is powerful and fluid in creative and innovative organizations. Such organizations commonly resort to committees, task forces, multi-functional teams and other functional designs that facilitate the interaction between departments.

In the context of human resources, innovative organizations actively promote training and development of their members in order to enable them to remain updated, ensuring their employability so that they do not fear making mistakes and encouraging them to become the 'champions of change' (Howell and Higgins, 1994). Whenever a new idea is developed, champions of change know how to promote it enthusiastically, how to gain support, how to overcome resistance and ensure the idea's implementation.

A methodological issue emerges here: regarding the main arguments of this paper, how can such harmony of views be found and act at the information architecture's level to achieve the linkage between the 'performance profile' (performance indicators of the information system) and the 'competitive profile' (performance indicators or critical success factors of the business)?

REFERENCE TO ARCHITECTURE AND MODELING

Managers of several companies, such as Google and IKEA, in different areas, argue that the two previously mentioned factors, of converging employees' visions towards the obtainance of critical business information, are essential in the ability to manage problems taking opportunities from stormy changes. In an interview for the magazine *Fast Company,* the vice-president of Google Inc. referred to the nine innovation principles of the company (Mayer, 2008). One of them is that the employees are comfortable with each other considering each other's ideas. For example, at Google's headquarters, also known as Googleplex, the vast majority of the members joins at Charlie's Place and sit randomly so that they can talk openly with the Googlers from different parts of the company about different topics, ranging from trivial to technical ones. Another basic principle in Google emphasizes innovation and commitment (identification and assignment of members to the projects and objectives of the company) and, therefore, cost control in Google is not achieved by reducing expenses but by an additional effort from each member to develop the company.

Communication is desirable and necessary in transferring knowledge in the organization. One of the stages in the knowledge creation model of Nonaka and Takeuchi (1995) is socialization, which arises from tacit knowledge's exchange between individuals. The shared experiences and their articulation consolidate knowledge, creating shared mental models and forms of trust. Nonaka said that knowledge is created by individuals (an organization can not create knowledge without individuals), and the organization has a role in expanding the knowledge created by its individuals and "crystallize" it as a part of the organizational knowledge network.

Systems' analysts and engineers are those that deal more with the need to synchronize views in dialoguing with the entities that request them for systems' development. For this, they use models to represent the reality they need to appreciate, like a structured design or architecture, to quickly explore and find a solution. Accordingly, ontologies have been increasingly used as they are models that represent a set of concepts within a domain and the relationships between them, in order to make inference on the objects of that domain. Ontologies generally describe individuals, classes, attributes, relationships and are used in artificial intelligence, web semantic, software engineering and information architecture as forms of representing knowledge about any event. New computing paradigms, given the speed of emergency and change they cause in business processes, should be increasingly addressed using the entrepreneurial architecture approach. The next point concerns the contribution that entrepreneurial architecture can have to the methodology under discussion, in which is implicit the increasing need of modeling data, process flows, among other issues, for better discerning and acting at the linkage between 'performance analysis' (indicators of the information

system performance) and 'competitive analysis' (indicators of the company's performance which are its critical success factors).

Contribution of the Entrepreneurial Architecture

This concept reflects the concern on drawing or modeling the organization's processes for a better adequation of the IS/IT (information systems/information technologies) in supporting business requirements. It started with the architectures of distributed systems which include structuring activities, standards, technology transfer and software development to validate the architecture used. A model pioneered by ANSA (1989) (*Advanced Networked Systems Architecture*) has the following layers (Table 1):

Table 1 – The approach of ANSA's entrepreneurial architecture
Source: ANSA (1989)

Company	Treats the information system's role in the organization. Includes the objectives of IS in terms of people's roles, actions, policies, etc. Specifies the activities that use the IS and people's roles in the interaction of the organization with the system and the environment
Information	Describes the information requirements of the IS. Includes the structure of the information elements, rules of relationship between these elements and restrictions. Shows how the information is partitioned according to logical and qualitative attributes
Computing	Provides programming frameworks and tools for the applications' developers
Engineering	Provides operating systems and interpreters to support computing in different platforms
Technology	Includes the technical components and standards for installing the system. Also includes hardware and software devices (input/output, storage, communications, etc.) mapped in the previous layer

This architecture operates as a whole so that users do not realize its distributive layers. But all these have to be accomplished in order to ensure an appropriate structure. Other entrepreneurial architectures have emerged, such as the Architecture for Open Systems (ISO, 1995), the Architecture for Integrated Systems (IAF, 1999) and the Architecture of the *Open Group* (TOGAF, 2003). The development of this last model consists of an iterate process of raising all the necessary components that exist in the company and in its sector. In each iteration it is decided the scope of coverage over the organization, the level of detail, the deadlines and the components from previous iterations.

Another architecture is from the Center for Organizational Engineering (CEO, 2005) whose main objective is to model the definition of criteria to align business processes with the information and supporting IS/IT. The resulting model consists of a set of 5 layers or perspectives: *Technology*, *Application*, *Information*, *Business* and *Organization*. This architecture is based on three concepts: entities, roles and activities. Entities are the components that make up the organization (people, machines, places, etc.). Roles are the observable behaviors of entities and the activities reflect how a set of entities collaborate through their roles to reach a result.

Entrepreneurial architectures can contribute to the present methodology in what Zachman's (1987) framework proposes, which is crossing the prospects of the company's management with the support given by the information system (this approach also has served internal IS creation). The resulting matrix of this crossing exercise has the following structure (Table 2):

Table 2 – The approach of Zachman's entrepreneurial architecture
Source: Zachman (1987)

	What	*How*	*Where*	*Who*	*When*	*Why*
	Data	Functions	Network	People	Time	Motivation
Scope (contextual)	Identification datatypes	Identification procedures changes	Identification types of networks	Identification organizational types	Identification deadlines	Identification motives
Business model (conceptual)	Definition business entities	Definition business inputs	Definition locations and business connections	Definition roles, business tasks	Definition cycles, business events	Definition means, business goals
System model (logical)	Representation system entities	Representation system inputs	Representation locations and system connections	Representation roles, system tasks	Representation cycles, system events	Representation means, system goals
Technology model (physical)	Specification technological entities	Specification technological inputs	Specification locations and technological connections	Specification roles, technological tasks	Specification cycles, technological events	Specification means, technological goals
Components/ details	Configuration entities components	Configuration component inputs	Configuration locations and component connections	Configuration roles, component tasks	Configuration cycles, component events	Configuration means, component goals
Operations/ classes	Creation operational entities	Creation operational inputs	Creation locations and operational connections	Creation roles, operational tasks	Creation cycles, operational events	Creation means, operational goals

Legend: *What?*: data and relationships between them;
How?: processes (functional description);
Where?: network (components' location in the company);
Who?: who performs the job, leadership chain, participation level;
When ?: when events occur;
Why?: motivations, purposes, goals, strategies.

In its turn, the EAP model (*Enterprise Architecture Planning*) by Spewak and Hill (1992) proposed the layers and components that answer to four key issues (Table 3):

Table 3 – The approach of EAP's entrepreneurial architecture
Source: Spewak and Hill (1992)

How to get there?	Required implementation and migration plans
Where do we want to be?	Data necessary to support sustainable business
Where are we today?	Current knowledge base about the business and information used to manage it
Starting point	How is the work done now and what methodology is used

There are several other models of entrepreneurial architectures, such as the EUP (*Enterprise Unified Process*), an extension of the RUP (*Rational Unified Process*) from Ambler et al. (2005), doing a more comprehensive and complete collection of these aspects. One should note however the generic nature of description in these models, whose aim is at focusing the present methodology on the questions raised by Zachman's matrix and EAP method of Spewak and Hill. These questions, through

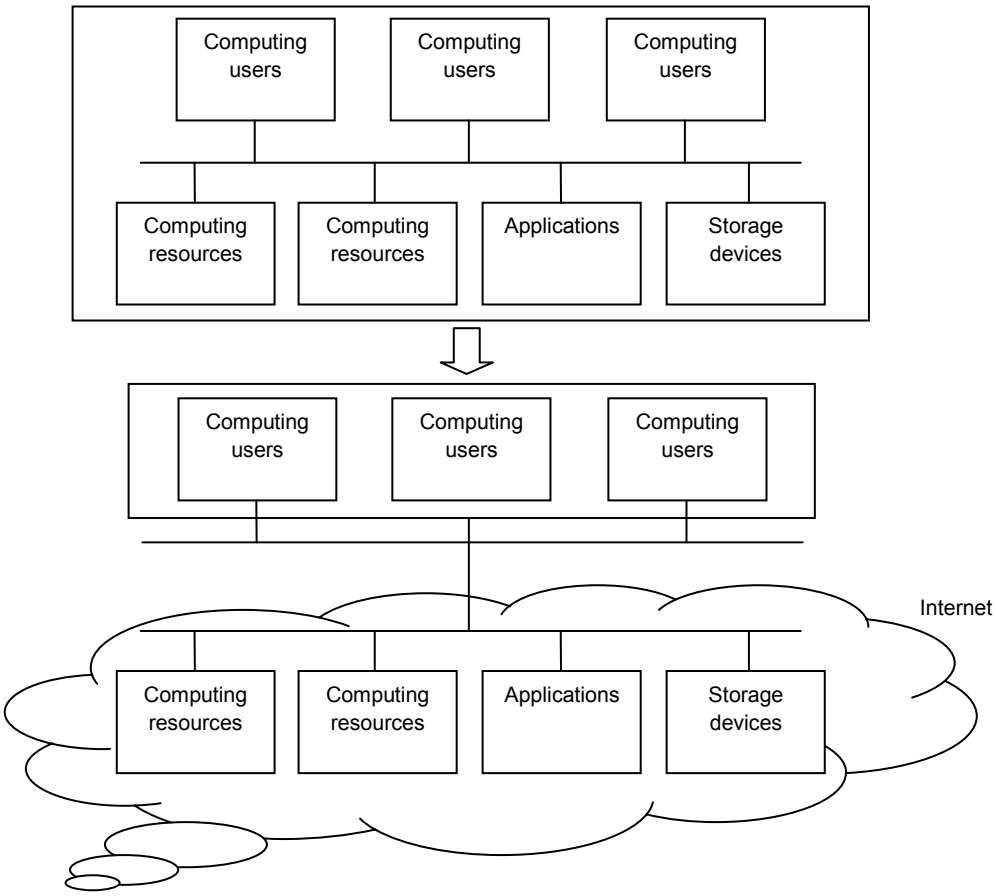
an iterate procedure, could help assessing the linkage in discussion: between the perspectives of company's management and the support given by the IS. Among the mentioned models, only the EAP and the EUP pay attention to social, human and cultural factors for the success of their development. But they all consider the factor 'organizational change' as an external force, resulting from environmental and/or technological changes, which affects business requirements. These models generally ignore organizational changes caused by the development and implementation of the architecture itself.

Current Trends

One of the trends in modern computing architectures is *SOA* (*Service Oriented Architecture*). This is a service-oriented architecture that may have an important role for the methodology under study, since it is designed to flexibly provide the right services, not just at the right time, but also at the right level of generality. This term relates to the objectives of: reducing the customer's effort to use the service and thus the impact of change; re-using the service without having to go through the source code; ensuring that the service is usable throughout the whole organization and also re-designable together.

Another current trend is *cloud computing*, an architecture in which a service is resolved or provided through several computers that may not function in the same place. Forming like a computing "cloud" they share tools, services, software and information through the interconnection of different systems via internet instead of having these resources locally in internal servers. Thus companies do not spend much time maintaining their systems, data, applications and information, adding value to the management of the connection intended to be better in organizations: between the perspectives of company's management and the support given by its information system (Figure 3).

Figure 3 – Cloud Computing basic structure
Source: Wikipedia



METHODOLOGY APPLICATION

In order to test the methodology under discussion, a survey should be implemented to collect the necessary data. The selected sample should focus on firms within the same sector, since there are several factors (external and internal) influencing the different sectors, which lead to biased results and conclusions. Recalling the methodological issue in focus - act on the connection between the 'performance analysis' (indicators of the information system's performance) and 'competitive analysis' (indicators of company's performance or business success factors) - the necessary data should focus particularly on knowing: what information systems and technologies companies have; what are their critical success factors; if those systems and technologies are helping to meet them; if they use entrepreneurial and information architecture approaches; if their systems are planned to obtain real-time critical information; if some of their systems are not being fully explored and what functions are affected; and if they are using any *cloud services*.

The survey under discussion, in order to catch attributes of the commented connection between 'performance analysis' of the IS and 'competitive analysis' of the company/ business, shall include a first block of research topics (questions) to assess a set of ten core indicators of IS performance: 1. Efficiency; 2. Quality; 3. Control; 4. Confidence; 5. Integration; 6. Response time; 7. Sensitivity; 8. Mobility; 9. Complexity; 10. Up-to-date. The descriptions of these are as follows:

1) Fast communications allowing to send or receive messages on time?
Does the IS allow quick order processing and customer responsiveness?

2) Outputs generated by the right set of inputs (people, hardware, software, budget)?

3) Are the rules and procedures for the IS use well defined?
Are there procedures against errors, invasion, fraud and virus?

4) Can the storage space handle current and future requirements?
Is the documentation of the IS still valid?
Do changes to make in its documentation reflect the needs?

5) Are the processes and databases integrated?
Lack of integration and associated problems (delays, duplications, errors)?

6) Does the IS take time to respond to users during peak processing?

7) Does the IS support the objectives of the several areas in the company?
Are the costs of operation and development as expected?

8) Does the IS help the organization with its mission?
Are the needs of agents with which the company relates satisfied?
Is there adequate staff to carry out present and future tasks?

9) Is the IS complex or difficult to operate or maintain?
Are there training programs for users and staff to deal with the IS?

10) Are the databases updated and correct?
Are the hardware and software updated to handle current and future needs?

The proposed research topics are here translated into questions to be answered in the survey through a *Likert*'s scale of choices. This scale has four options: [1. Poor; 2. Reasonable; 3. Considerable; 4. High]. The subsequent analysis of choices will reveal the intensity in each of those ten indicators. The results for each company will provide a diagnosis of some aspects in the connection under study regarding the IS performance.

A second block in the survey shall focus on the issues of an entrepreneurial architecture designed to conciliate corporate visions towards obtaining business critical information. And, from this, seek for diagnosing the organizational performance and compare it with the first diagnosis of IS performance. The architecture to be used could integrate the issues raised by the Zachman's matrix with those of EAP's model of Spewak and Hill:

EAP's model

How to get there?	Required implementation and migration plans
Where do we want to be?	Data necessary to support sustainable business
Where are we today?	Current knowledge base about the business and information used to manage it
Starting point	How is the work done now and what methodology is used

Zachman's matrix issues:
What?: data and relationships between them;
How?: processes (functional description);
Where?: network (components' location in the company);
Who?: who performs the job, leadership chain, participation level;
When ?: when events occur;
Why?: motivations, purposes, goals, strategies.

The statistical analysis of responses to both blocks of questions in the survey (one for the indicators of IS performance and other for the indicators of organizational performance through those entrepreneurial architecture's issues), will help to collect relevant information for improving the connection between the prospects of company's management and the support given by the IS to better respond with critical information in real-time.

CONCLUSION AND FUTURE RESEARCH

The nature of business processes is changing, often due to the speed of emergence of information technologies. This brings many challenges to organizations, which join those that were not yet fully resolved. Such events boil down to two main drivers of the present methodology: there are so many systems and technologies that organizations are not coming to make the best of them; and people do not continuously tune their visions and ideas, at different levels of the organization, in order to obtain real-time information as now required. These two facts lead to the necessity of a working model (architecture) to plan and facilitate that alignment throughout the entire organization, iteratively selecting critical business information on time.

An informational architecture of the company and its business, easy to understand and communicate, can help the identification of critical information, which is consistent with the company's mission, objectives and critical success factors. It is mainly modeled with objects such as: activities (functional and cross-functional, internal and external); resources (functional and cross-functional, internal and external) and products (internal and external). It then supports information systems' management as it helps the identification of requirements for those systems in harmony with business needs. However, given the heterogeneity of these objects and data that characterize them, one of the most pressing problems has been the conversion between structured and unstructured data. On this subject, the authors Carvalho and Ferreira (2001) did a survey for technological tools' assessment, related with knowledge management and conversion between tacit and explicit knowledge, discussing their internalization or outsourcing. Some of these tools are: knowledge portals (corporate *intranets* and *extranets*); knowledge maps (lists of "who knows what": skills/profiles); EDM (Electronic Document Management: cataloging, indexing, etc.); OLAP (Online Analytical Processes for data normalization); *Data mining* (advanced techniques to explore large amounts of data looking for consistent patterns); qualitative analysis' tools; among others.

In this context, the *Web2* platform, a concept that means the second-generation of community-based web services involving social networks, may well provide models and methods on the subject of enterprise information architectures. Although this term seems to have as connotation a new version for the Web, it does not refer to any technical specification's update, but to a change in the way it is perceived by users and developers as an environment for interaction and sharing which today encompasses numerous visions and motivations. Future research on the methodology covered in this paper will focus on analyzing the results from the survey's application and the inclusion of new levels and issues, mostly related with the computing trends and the socialization of communication channels such as the *Web2*, *SOA* architectures and *cloud computing*.

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