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Investment on Management Information Systems and its Effect on the Efficiency of Public Organizations through the Alignment of Information Technology Goverance

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Abstract

In this globalized world, companies creating software, try to standardize the problems for all organizations, whether public or private. And while there are powerful tools for the analysis, design and management systems, some public enterprises acquire systems instead of creating them, with costly maintenance and unproductively. The Balanced Scorecard should be used to measure the productivity of these systems through the library information technology infrastructure to make efficient investments in Information and Communication Technologies. This is an exploratory research which will review the degree of control over the systems that exist in public organizations.

Key Words

INFORMATION TECHNOLOGY, BALANCED SCORECARD, STRATEGIC MANAGEMENT, PUBLIC ENTERPRISES, INFORMATION TECHNOLOGY GOVERNANCE.

Introduction

Within the national development plan in the electricity sector strategy section 15.10, reads: "To strengthen the business, adopting standards and business practices of the industry at the international level in the industry, improving processes with the use of quality systems and high-tech, and promoting a more efficient use of their current spending and investment " (República, 2007).

There is a need to promote efficient use of investment; public companies invested a lot of money in management information systems (MIS).

But how do you know whether or systems offered by software development organizations are efficient for this type of organization?

There is news of a significant waste of resources for investment in Information Technology (IT), and that usually there are computer systems poorly designed, unnecessary and costly.

Investing in MIS, applies to internal control procedures of the organization, which measured and reported the efficiency and productivity of the conduct of the organization.

But not measured the efficiency of computer systems as such and therefore can not be properly define the needs of IT within a public company.

The answer is to utilize the alignment of the Information Technology Governance (ITG) and the Balanced Scorecard (BSC) to measure the impact on operational efficiency in public enterprises.

Also identify the parameters through the Information Technology Infrastructure Library (ITIL) for such companies.

When viewing the variables obtained in the model of integration (IGT, ITIL and BSC), will be the information needed to evaluate leg investment in MIS. Therefore the management of public companies will be more efficient.

Public Companies Management

Public companies are run by politicians, who are unable to properly define the mission and vision of those organizations (Matthias, 2007). Organizations usually tend to create a vision and mission outside its reality.

Therefore, this reality it is very difficult to implement in the organization (Robbins, 2004), as the management can not be effective because the work is not consistent with what we want to be in the future.

Because they are not clear about the direction of the organization, the employees are asked to make serious projects that ultimately do not have a fully developed and, therefore, it is a fruitless work.

This work costs the organization time, money and above all is a distraction to what we really should be doing. Consequently, if not properly declaring mission organization has no idea where to go (David, 2003), and thus loses the way.

This road was lost, because work is lost and can be work not only employees, supervisors and managers but of the directors or politicians. Likewise when there really is a project that will bear fruit for the organization, employees fail to see this innovation or improvement, and the project ends up not achieved.

Therefore, as can be ordered efficient outcomes such enterprises if there is no trail planned to reach the goal of the organization.

The road to public enterprises raised on many occasions, responding to a political plan, which includes goals and strategies to win elections and not to provide an efficient service to their customers.

Therefore, the civil service must know what is your business (Drucker, 1999), to evaluate the results of their actions with clear and transparent information and thus avoid inefficient production (Rosales, 2004).

Continuous improvement (Drucker, 1996), will give the possibility that the processes are more suitable, efficient and can be synthesized in the MIS fast and efficient.

Management Information Systems

Businesses today, whether public or private need to inform and be informed properly. The MIS is a valuable aid to managers to meet their business.

These systems operate in several processes of the company, reporting on accounting, sales, human resources and other processes (Laudon, et al, 2004). They operate with a collection of records that display information on the services that are provided to clients, workers' performance and financial results among other information.

These collections of records are organized in databases fast, reliable and especially today (Date, 2001). These systems that manage data information are not repeated offer reliable.

If we join the modern techniques of programming, as is the analysis and design of object-oriented systems (Martin et al, 1992) that creates variable properties or attributes and methods by creating its functionality, thus, such objects or variables can be found in the databases ready to be consulted.

But with the Internet that is based on client server schema (McLeod, 2000), where computers through simple, consult through browser-Explorer from Microsoft and Mozilla firefox among others-the software that through amending methods, consult databases to obtain reports that the organization needed for its administration.

The new business models (Barber, 2007), are based on the use of Internet, Extranet and Intranet, providing interfaces between computers and users.

The Intranet helps public companies to inform their employees (Ochoa, et al, 2004), mission, vision, policies, procedures, and other functions that are trying to improve the efficiency of the working methods used by workers such organization.

Public companies can and should use this communication model, and surely will improve internal processes.

On the other hand, systems development should be divided into clearly defined steps and processes (Stair & Reynolds, 2000) for creating software. If PEs establishing panels to create infrastructure, it will be more efficient use of IT.

Therefore maintenance, it will be more efficient, since it has a team of specialists attentive to any emergency.

But subsistence systems, is linked to their use of these users, so it is necessary to have a system for complaints to see if procedures, functionality and availability are efficient.

Complaints help suppliers to be more efficient with customers (Barlon, et al, 1996), why not create a system of complaints for users of the processes of the company? Is highly recommended discover how to improve procedures in which users complain.

The ITIL was developed as a system for complaints, in which systems are operating in the organization, are monitored and capture information from your behavior.

Information Technology Infrastructure Library

ITIL was developed to recognize that organizations are increasingly dependent on computing to achieve its corporate objectives.

This increasing reliance has resulted in a growing need for computer service quality that are consistent with business objectives, and meeting the requirements and customer expectations.

The IT application only contributes to achieving the corporate objectives if the system is available to users in the event of failure or necessary modifications is supported by the processes of maintenance and operations.

The central ITIL books have been grouped into two, covering the areas of the Service Support and Service Delivery (OSIARIS, 2007).

a) Support service

The support service is concerned with all aspects to ensure continuity, availability and quality of service provided to the user. To achieve these aspects is required to manage properly the following systems:

- The Incident Management. It aims to resolve any incident causing an interruption in service as quickly and efficiently as possible.
- Management Problems. It is charged with investigating the underlying cause's alterations, actual or potential, IT service, identify possible solutions to them and propose any requests for changes necessary to restore the quality of service.
- Management changes in the infrastructure. Evaluation and planning of the change process to ensure that, if it takes place, is done in the most efficient manner, following established procedures at all times and ensuring the quality and continuity of service of IT.
- Management Configurations. Maintain control of all configuration elements of the IT infrastructure with the appropriate level of detail and manage that information through the Database Configuration.

b) Provision of Service

The provision of the service deals with the services offered in themselves. In particular service levels, availability, continuity, and financial viability, the necessary capacity of the IT infrastructure and the level of security required.

- The Management of Access. Optimize and monitor the IT services so that they operate continuously and reliably.
- Financial Management is to assess and control the costs associated with the IT services so as to provide quality service to customers with an efficient use of IT resources required.
- The Capacity Management is responsible for all IT services are backed by a capacity to process and sufficient storage and dimensioned correctly.

- The Continuity Management Service is concerned about preventing an unexpected and severe disruption of IT services due to natural disasters or other forces greater cause, have catastrophic consequences for the business.
- The Security Management should ensure that the information is correct, is available to the business and is used only by those who are authorized to do so.

The information collected ITIL should be the entrance to the BSC and the ITG.

Information Technology Governance

The ITG is the responsibility of the board of directors or senior management of organizations.

It is an essential part of corporate governance as a whole, bringing together the organizational structure and management necessary for ensuring that information technology support and facilitates the development of the strategic objectives defined (AEMES 2006) objectives ITG are:

- Strategically align with business goals.
- Optimize its management through constant monitoring and continuous improvement of their processes.
- Improving the organization's ability to manage opportunities and maximize profits.
- Using resources responsibly in fulfilling the goals.
- Properly manage their risks.
- Publicize the organization profits earned by the investments made.

Requirements for a good ITG (Carrillo, 2006):

1) Existence of a good framework:
    1. Structure: Who makes the decisions? What organizational structures will be created, and who will participate in them and what will assume responsibilities?
    2. Processes. How will decisions be made to invest in IT? What are the decisions making process to propose investments, revise, approve and prioritize investments?
    3. Communication. How will they be tracked, measured and communicated the results of these processes? What mechanisms will be used to inform investment decisions the board, executive management, business management, IT management, employees and shareholders?
2) Be clear about the principles governing the role of IT in the organization.
3) Not to be confused with tactical and strategic actions for the operational implementation of ITG.
4) The responsibility for the decision to begin the process of government is the Governing Council / Executive direction.
5) The Chief Information Officer must be the promoter of the idea and responsible for setting up the processes of government.
6) The key to success is to decide who makes the decisions and on the basis that factors.
7) It is a continuous process of learning and the cycle is continuous improvement.

The ITG, properly implemented, is a discipline of Corporate Governance (Zamora, 2007). The Board of Directors should be "directed" Operation and Management of Information Technology. The ITG must be established and managed considering the three dimensions of Corporate Governance: Compliance, Performance and accountability.

Strategic planning is a management process that is to develop and maintain a strategic fit between objectives and resources of the company and its changing market opportunities.

Therefore, we must define the elements or indicators for measuring the BSC.

Balanced Scorecard

The BSC transforms the vision and strategy targets and indicators organized into four different perspectives: financial, customer, internal processes, and training and growth (Kaplan et al, 1996).

This table provides a framework, a structure and language to communicate the vision and strategy, use measurements to inform employees about the causes of current success and future.

The BSC is more than just a measurement system tactical or operational. Innovative companies are using it as a strategic management system to manage its long-term strategy and to perform critical management processes:

- Clarify and translating or transforming the strategic vision.
- Communicating and link objectives and strategic indicators.
- Planning, setting goals and align strategic initiatives.
- Increase strategic feedback and training.

The BSC retains financial perspective, as the financial indicators are valuable to summarize the economic implications, readily measurable actions that have already been made. The measures of financial performance indicate whether the strategy of a company, its implementation and enforcement, are contributing to the improvement of the minimum acceptable.

In the perspective of the client managers identify customer segments and markets, where the company will compete and measures of the performance of the same in these selected segments. Key indicators include satisfaction, retention, acquisition of new customers and customer profitability and market share in selected segments.

The prospect of internal process executives identifies critical processes in which the organization should be excellent. Measures of internal processes focus on the processes that will have the greatest impact on customer satisfaction and achieving the financial goals of an organization.

Perspective identifies training and infrastructure growth that the company should build to create an improvement and long-term growth. The prospects of the customer and the internal process identify the most critical factors for the current success and future.

It is unlikely that public companies will be able to achieve its long-term objectives for the internal processes and clients using current technologies and capabilities, in addition, intense global competition requires that companies continually improve their abilities to deliver value to their customers and shareholders.

The formation and growth of an organization comes from three main sources: people, systems and procedures of the organization.

The capabilities of information systems can be measured through the real-time availability of reliable and important information about customers and internal processes, which will be provided to employees who are at the forefront of decision-making and action.

Discussion

We know that public enterprises invest huge amounts of money in IT, what is not known is how to measure the efficiency of ICT and correctly to say that investment in IT is properly assessed.

Some of the most important questions are of two types: for administrators and for users of information technology services, for the first are:

- Are the processes in the areas of systems and technologies are clear?
- Does the system comply with the internal control of the organization?
- How is the strategy for IT in public companies?
- Is the current state of computing area?
- Is there an excellent cost-benefit ratio?

- Is there security for staff, data, hardware, software and facilities?
- How is it decided which projects and initiatives make?
- Does the company have any public objectively assess the performance of IT?

For the latter are:

- It has ensured greater integrity, confidentiality, availability and reliability of information?
- Do you support the role computing to the goals and objectives of the organization?
- Can Increase user satisfaction of computer systems?
- Is there training and education on the SI?

Although ITIL seeks to answer these and other questions, this system seeks ideas for making efficient systems of the organization by arresting statistics of the flaws in the systems and data relating to customer satisfaction.

In public companies it is easy to change a system on the other, with only know that the second one is better equipped, is a quality that surpasses the previous one and that fact is bought and installed.

The problem is the high cost systems should have a reasonable response in people's productivity, process or even better quality customer service, and it is not.

If we really valued spending on IT managers could increase to 100% with the use of systems to use 100% of these systems.

The variables to be measured in the BSC must be obtained from the most reliable source, which is the use of the systems, the complaints usually is more reliable system to use, since there are most failures.

In organizations where there is not a system of complaints, apparently nothing wrong and even though these systems, in many instances the same personnel prevents such failures are made public. The complaints are a very important to find out how services are delivered in any company.

Although ITIL is not a complaint system should be used as such, as it is a system that has procedures with the best practices in the management of computer resources. ITIL indicates variables which will be necessary to obtain statistics from the use of the systems.

Likewise, we must manage the variables from a control panel, and this is where the BSC help with the correct strategy, aligning such variables to the goals or objectives raised by the management of the company.

If you get high ratings, they indicate that the use of the systems is to help staff, administrators; managers had done their job properly.

Where there are satisfied customers, there will good grades to the services the company provides, and if so, the systems actually help you get customer satisfaction.

Therefore, investments in IT are correct. If it is to be assessed is happening with the strategic planning of the enterprise systems and investments in IT.

The hypothesis of this paper seeks to help understand how investments are made in IT.

"Si se aplica en las empresas públicas una adecuada alineación del Gobierno de Tecnologías de Información a través del Cuadro de Mando Integral (*Balanced Scorecard*) mediante la identificación de parámetros apropiados; entonces se tendrá un uso eficiente de la inversión en sistemas de información gerencial, para hacer más rentable la operación de este tipo de empresas".

Conclusion

The result of this research is to demonstrate the efficiency or inefficiency of information systems.

It also help managers to take into account the MIS that have been used in public enterprises, whether successful or not, and those who used to form a database of this information.

The expected results of the investigation in the civil service are as follows:

- Development of a methodology to make it more cost-effective information systems management.
- Establishing a model for aligning processes computing in the public sector.
- Identify the appropriate alignment parameters for public companies.
- Contributing factors to the theory of the administration of public enterprises.

Therefore they must take into account the following phases:

- To conduct exploratory research to obtain information on existing systems
- Conducting interviews and questionnaires, with users of systems to verify their liking or displeasure with the service offered by the area of systems.
- Describe the costs of the systems in the public company.
- Documenting the existence of ITIL and ITG use in the public company.

Obtaining this information will be set up mechanisms for the model systems ITIL, IGT and generate the BSC with specific parameters for measuring public enterprises.

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