Maximizing Return on Investment (ROI) of Enterprise Resource Planning Systems (ERP) for Nonprofit Organizations: Proposed Model

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Abstract

ERP are the core business application for many companies; and it's very apparent that organization spending on those systems is in a continuous rise, on the other hand this also raised the issue of how can ERP systems pay those spending; and when that investment can reach ROI point. In this study the researcher will attempt to propose a model that contains guide line phases for nonprofit organizations in order to speed up the stage in which ERP system can reach ROI, the researcher opted for universities since they are one of the main nonprofit organizations that employ ERP in their processes.

Keywords: *Educational enterprise recourse planning (EERP), return on investment (ROI).*

1. Introduction

ERP systems are considered costly that require effective time and change management, and organizations need solid justification in order to convince decision makers to invest in such systems; one of these justifications is the return on investment and when the system will reach that point.

One of the most organizations that face challenges in terms of ROI are nonprofit organization such as universities and other governmental funded organizations, many of those has already applied ERP but not in an evaluated matter which led to disappointment and system deficiency or inadaptability which led to some sort of system failure to achieve full potential; also this illustrated some cases of failure to apply that system and not being able to achieve ROI point. (7)

ERP systems are hard to measure in terms of efficiency and benefits added to processes since it takes a long time to appear; which can lead to system neglect and losing assets used in that investment. Universities are non profit governmental organizations that are one of the hardest cases of achieving ERP system benefits; those benefits can be summed in reducing running costs and process improvements which may not vividly apparent in financial terms. The researcher will attempt to provide a

model can be followed by universities apply in order to accelerate ROI achievement.

2. Guide-line for Maximize the Chance to Reach the ROI of EERP

The researcher have identified a group of phases in the model to assist universities in clarifying reasons behind late ROI of EERP systems, the researcher used many papers in systems ROI such as (7,8), special studies on systems selection such as (4,5,9,2), studies on systems standards such as (6) and change management studies such as (10,3), where universities can use this model to review their systems in order to achieve the best ROI of their EERP.

The challenge that universities face is how to feel of EERP return on their investment, the researcher grouped six steps that the universities EERP project managers must follow to maximize the ROI of EERP.
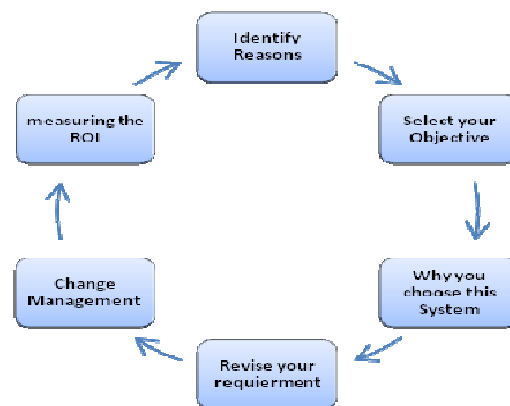

Figure1: maximizing ROI for EERP model

2.1 Why Are You Changing Your System

A previous study mentioned that organizations are migrating to ERP for the following reasons: Lack of features, obsolete technology foundation or infrastructure

of ERPs, cost of maintenance and support, or lack of available customization. (5)

Universities must choose for what reason they need to apply ERP; that is a very important point in reaching ROI since it helps to compare organization position after applying that system

2.2 What are the Objectives that you expect to reach?

Universities must determine the goal of applying ERP system; where the organization applying such system follow cost reduction, improving customer response or business growth. (8)

These goals must objective and realistic based on the reasons mentioned above; and they must comply with strategic plan, vision and goals of the organization.

2.3 Why you choose this System provider?

In this phase the university must make sure that systems and providers are in compliance with the previous goals mentioned earlier, the system must act in accordance with internal and external environment and must be in coherence with existing systems.(4) Universities usually use biddings to select providers, this method works with system selection and sorting process that include value chain and scorecards in order to select the best offer according to the current resources. (1)

2.4 Did you revise your requirement?

University must make sure that specific requirements are made in order to build the system on it; project manager role here is to review this point in order to attain system match with requirements, since he is the one making budget and time schedule of the project. (2) A its well known, the core business of universities is education not system building and management, so the university must cooperate with staff, students, technical support and higher management in order to identify system requirements such as registration, students databases and other managerial processes such as inventory, human resources and other processes served by the EERP. (9)

2.5 Did you apply the change Management?

Upon applying new system such as EERP, the university must take in consideration the change management issue; one the main topics in change management is change resistance, there are many levels of change resistance that are related to the change occurring from EERP application. Resistance levels include organization change resistance (processes), technology (university

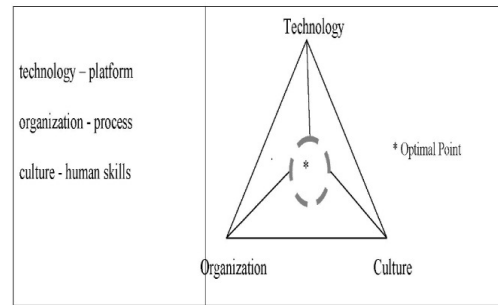infrastructure) and organization culture (personnel skills effected by the systems). (3)

Figure 2: Actors of ERP project (3)

To enhance university change management of EERP and obtaining best results; the gap between resistance level (organization, technology, culture) must be reduced to achieve optimal point according to the figure. The more the university is closer to optimal point the more the chance is higher to achieve ROI and gaining from EERP.

The researcher used Belasco model to help universities accelerate optimal point achievement; Belasco says that change management could be performed on resistance levels in order to raise success rated to apply new technology according to the following steps: (10)

1- University must focus on individual motivation (employees and students), through illustrating what EERP will add to them, also by seeking leader character of each and persuade him to establish more embracement of the new system in a faster manner.
2- Finding a clear path to achieve the mentioned goals in phase two to be followed by individuals which helps to maximize confidence in themselves and the university.
3- Layout change plans that include processes, individual skills and technology infrastructure.
4- Enforce good behavior by university, in this phase the university must seek resistance and find the catalyst in order to handle it.
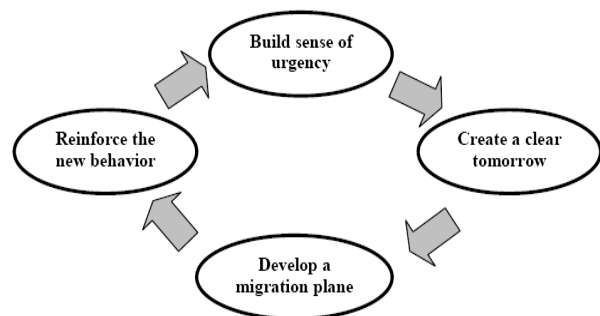

Figure (3): organizational change process (10).

2.6 How to measure the ROI?

The university project manager must provide change measurement standards for EERP application; this is an underhanded issue since each case impose its own terms, and ERP is a customized system, so it is hard to deduct guidelines from previous cases and the university must apply its own standards, and the process of measurement should be based on work change not on system application. So standards must be selected on the base on work and processes change in relation with employees, students and providers. (10)

There more than one way to manage measurement process; one is to employ special consulting firms in this area or to create a department leaded by project manager in order to identify system measurement standards and to measure change due to applying EERP to the university.(9)

The measurement process must commence directly after system application, and carry a before and after comparison; where the project manager must evaluate benefits, the comparison must cover all processes effected by the system such as DBMS, registration, financial management, library management, human resources and purchase departments. Also the measurement must check easy process operations, user friendly, operations cost reduction, system connectivity of all processes and measure system ability to reduce administrative work. (6)

As we mentioned before; EERP system are not a fast results systems, but in universities the results will show in a processes forms not direct financial gains, EERP will enable more in regard of efficient process making. If this phase is not satisfactory, the previous five phases must be reconsidered since the problem could be not in the system; but in the goals, requirements of change management.

3. Conclusion

The issue of achieving ROI in ERP application is very common in organizations applying that system especially nonprofit organizations, this paper has provided a guideline that can be used by universities in order to achieve ROI point in EERP application more efficiently, which can summed in:

Why are you changing your system, What are the Objectives that you expect to reach, Why you choose this System provider, Did you revise your requirement, Did you apply the change Management, How to measure the ROI.

The researcher will attempt in the future to apply this model on university cases in order to prove it statistically.

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