

Issues posted to ERP implementation in manufacturing/public sector organizations

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Abstrak

Penerapan Enterprise Resource Planning (ERP) membantu untuk mengontrol dan mengintegrasikan proses bisnis dan fungsi dalam sebuah organisasi di bawah satu platform bersama. Tujuan dari implementasi ini adalah untuk terhubung dengan informasi secara real-time yang dipasok oleh seluruh departemen dan memastikan transparansi. Meskipun sistem memberikan gambaran yang lebih baik dari seluruh kegiatan operasi dan pengelolaan organisasi, masih banyak masalah yang timbul dalam pengimplementasian ERP. Isu-isu ini berhubungan dengan kegagalan untuk mencapai target dan harapan organisasi. Dengan demikian, penulisan ini membahas alasan mengapa organisasi memutuskan untuk mengadopsi sistem ERP. Kemudian membahas beberapa isu-isu mengenai implementasi ERP di bidang manufaktur/organisasi sektor publik.

Kata kunci: ERP, implementasi ERP

Abstract

Implementing an Enterprise Resource Planning (ERP) helps to control and integrate the business processes and functions in an organization under one common platform. The purpose of this implementation is to connect with the real-time information supplied by the entire departments and ensures the transparency. Despite the system gives a better overview of all of the organization's operating and managing activities, there are still many issues that arise in ERP implementations. These issues are related to the failure to achieve the organization's target and expectations. Thus, this article examines the reasons why organizations decide to adopt ERP systems. Then, the article discusses some issues regarding ERP implementation in manufacturing/public sector organizations.

Keywords: ERP, ERP implementation

manufacturing/public sector organizations.

1 Introduction

There are many reasons organizations take an initiative to engage in ERP implementations. One of the factors is about the ability of ERP that could integrate all of organization's information needs in a single system. ERP offers management a better overview of the entire activities within an organization. Hence, many of organizations decide to implement the ERP systems. It causes extensively grow of the popularity of ERP system implementations. However, there are a number of issues that appear in ERP implementations. These issues have a great impact to an organization which associated with time and cost. Thus, firstly, this paper will examine the reasons why organizations decide to adopt ERP systems. Then, the paper will discuss some issues and provide a number of recommendations regarding ERP implementation in

2 Enterprise Resource Planning (ERP)

ERP are enterprise-wide systems that integrate all of organization's data from numerous different core functions such as manufacturing, finance, logistics, and human resources (Amoako 2004). This system consists of single application, one database and a unified interface across the entire organizations which helps share data and knowledge, and improve management of business processes (Aladwani 2001) (Bingi et. al 1999). There are several benefits to organizations derived from ERP implementation which divides in five dimensional levels, such as:

- Operational: 'Automation of business processes' (Velcu 2007);

- Managerial: ‘Better quality of reports-financial statements’ and ‘improve planning and management of organizational resources’ (Spathis & Constantinides 2003) (Velcu 2007);
- Strategic: ‘Support business growth and competitive advantage’ (Velcu 2007);
- IT infrastructure: ‘Reduce the IT costs’ and ‘easy maintenance of databases’ (Velcu 2007) (Spathis & Constantinides 2003);
- Organizational: ‘Enabling business learning and staff empowerment’ (Velcu 2007).

Due to the benefits in implementing ERP systems, the popularity of this system is growing significantly. A number of world’s largest companies decide to adopt ERP system in order to replace their obsolete system with automate system (Ceccarelli 2009). The new system would improve decision making process, internal communication, and coordination between departments which affect efficiency and effectiveness of the business processes (Spathis & Constantinides 2003). Thus, this illustrates that ERP systems are becoming very widely use and different from other IT systems.

In spite of the benefits, many ERP systems deal with implementation difficulties due to their complexity and enterprise-wide scope (Beretta 2002) (Kumar et. al 2003). The main challenges in ERP implementation projects are ‘the large-scale organizational changes in transition to new systems and business processes’ (Kumar et. al 2003). These projects require large project teams and millions of dollar budgets to achieve the organization’s target and expectations (Bingi et. al 1999) (Xu et. al 2002). Due to the large expenses, lot of organizations are not rashly adopting ERP systems. This is because once the systems are implemented into the organizations, it will enormously difficult and expensive for organizations to undo the changes (Bingi et. al 1999) (Buonanno 2005) (Helo et. al 2008) (Ifinedo 2007). Furthermore, the key to success in ERP implementation project is extensive preparation before implementation. A number of issues must be addressed when dealing with ERP system (Bingi et. al 1999). Thus, the following sections will discuss the issues in more detail.

3 Organizational issues

Organizational issues that influence ERP implementation projects include top management, change management, project management, and communication.

Top management

Top management commitment and support are the critical factor to the success of ERP implementations

(Finney & Corbett 2007) (Françoise 2009) (Ifinedo 2008). This associated with the need to allocate time and the essential resources for the project to be executed properly. The management have to provide direction and define new objectives in order to give an obvious vision to the employees regarding the new system to be implemented (Françoise 2009) (Ifinedo 2008). These actions will help the employees to get a clear understanding about the new system and manage the employees’ anxiety and resistance to ERP (Aladwani 2001). However, Xu et. al (2002) argues that ‘top management support was not addressed as an issue in ERP implementation’. This is because top management will certainly support their decision to implement an ERP. Furthermore, the strong and committed leadership at the top management level would anticipate any problem that would be encountered which will ensure the success of ERP implementation (Finney & Corbett 2007).

Change management

The other factor that important to the success of ERP implementation is change management. This concept refers to the creation of an environment that appropriate to implement the change (Kemp & Low 2008) (Finney & Corbett 2007). According to Kemp & Low (2008), a number of activities that would support change management are ‘project championship, communication of system features and benefits, communication of new business processes and original structure, reward and incentives, and training’. These activities will encourage the user to accept the new environment which usually becomes an issue in change management. Thus, the key of change management is building ‘the user acceptance of the project and a positive employee attitude’ (Finney & Corbett 2007).

Project management

Project management represents the ongoing management which consists of a set of activities to ensure the implementation proceeds as planned (Finney & Corbett 2007) (Françoise 2009). A number of issues that occur are related to enterprise-wide scope, large resource commitment, and complexity of ERP projects (Kumar et. al 2003). Thus, this concept requires the whole project team especially project manager to have a good knowledge, abilities and experience of project management. Having good skills related to the project phase such as planning, follow up, organization and control over the project are fundamental (Françoise 2009) (Kumar et. al 2003). Thus, all of these elements represent the mainly used criteria in project management, especially for selecting ERP project manager.

Communication

The need for effective communication within ERP implementation projects is vital (Aladwani 2001).

Lack of communication will affect the entire processes in ERP projects such as not clear about the definition of objectives and roles in the projects. This condition may cause the conflict which will result the failure in ERP implementation (Aladwani 2001) (Kemp & Low 2008). Communication among various levels leads to the development of trust and exchange of information needed. For example communication between business professionals and IT personnel, it would help IT personnel enhanced understand the new systems' needs (Amoako 2004) (Xu et. al 2002). Moreover, the open communication could deliver better information and knowledge about what the system can provide to the organization and what kind of actions that can be taken by employees to build anticipation for the system (Finney & Corbett 2007).

4 People Issues

Some of the people issues that would determine ERP implementation include end-user attitudes and training.

End-user attitudes

Key aspect of the success of ERP implementation is a major commitment from top management as well as end-users (Velcu 2007) (Françoise 2009). The attitude of end-users towards the new system illustrates the reluctance to change (Xu et. al 2002). This happen because 'end-users are more concerned about the new systems' ability to facilitate their daily jobs' (Amoako 2004). If there is a problem in a new system, end-users prefer to blame the new system rather than trying to resolve the problem. End-users usually compare the ease of use of the old system with new system when the same problem occurred. Thus, the solution to this issue is top manager need to maintain and develop end-users' motivation during the project. The good support and relation with end-users would likely to motivate them to contribute to the new system's implementation (Xu et. al 2002) (Finney & Corbett 2007). Further, end-users have knowledge about the processes and institutional history of an organization which determines continuity the ERP implementation processes (Grossman & Walsh 2004).

Training

Training end-users is essential due to ERP systems are enormously complex and require comprehensive training (Finney & Corbett 2007) (Bingi et. al 1999). End-users need to learn new processes and gain better understanding of the new system which helps them to know how their data will affect the entire organizations (Ross & Vitale 2000) (Bingi et. al 1999). The problems that appear, such as lack computer literacy or computer phobia, would delay the implementation processes which represent the increasing of cost (Grossman & Walsh 2004). In spite of enhance the cost and time delay, the purpose of the training is to synchronize and

encompass the understanding of ERP system between end-users and top management (Amoako 2004). This is important in creating the awareness on how the ERP system works to ensure meet the objectives and goals of the projects (Aladwani 2001).

5 Technical Issues

Examples of the technical issues include data quality and External expertise. (Kumar et. al 2003)

Data quality

One of the factors that lead organization to obtain competitive advantage, perform well, and survive in global competition is managing data quality issues (Xu et. al 2002). It is essential that organization should take any action to deal with the issues. The issues are related to inaccurate, inconsistency, and incomplete data which may badly affect the competitive success of an organization. Thus, numerous actions should be addressed such as examine data quality issues, conduct sufficient training and establish effective communication (Xu et. al 2002) (Ceccarelli 2009). All of these actions would help organizations obtain a better understanding of data quality issues during the implementation process.

External expertise

External expertise refers to consultants and vendors who provide consultation, maintenance, training, and other technical support during and after ERP projects (Kumar et. al 2003) (Ifinedo 2008). In the process of adopting or implementing the new system, external expertise has a major role. External expertise has a significant influence in convincing organizations for ERP initiatives. Cooperate with low quality expertise will result in a negative influence to the entire organization (Ifinedo 2007). Hence, the ERP success is strongly related to the engagement with quality external expertise (Helo et. al 2008).

6 Conclusions

To summarise, there are several issues that have a significant influence to the success of ERP implementation projects. The issues are grouped into three sections such as organizational, people, and technical issues. These issues illustrate complexity and warrant a careful planning of ERP implementation within organizations. Organizations need to address all of these issues in order to achieve the objectives and goals of the project. Furthermore, ERP implementation illustrates distinct advantages and potentially risky investment for an organization.

References

[1] Aladwani, AM 2001, "Change management

- strategies for successful ERP implementation”, *Business Process Management Journal*, vol. 7, pp. 266-275.
- [2] Amoako, K 2004, “ERP implementation factors: A comparison of managerial and end-user perspectives”, *Business Process Management Journal*, vol. 10, pp. 171-183.
- [3] Beretta, S 2002, “Unleashing the integration potential of ERP systems: The role of process-based performance measurement systems”, *Business Process Management Journal*, vol. 8, pp. 254-277.
- [4] Bingi, P, Sharma, MK & Godla, JK 1999, “Critical issues affecting an ERP implementation”, *Information systems management*, vol. 16, pp. 7-14.
- [5] Buonanno, G, Faverio, P, Pigni, F, Ravarini, A, Sciuto, D & Tagliavini, M 2005, “Factors affecting ERP system adoption: A comparative analysis between SMEs and large companies”, *Journal of Enterprise Information Management*, vol. 18, pp. 384-426.
- [6] Ceccarelli, R 2009, “Less pain, more gain – 10 things to consider before starting an ERP system implementation”, *Accounting today*, vol. 23, pp. 26.
- [7] Finney, S & Corbett, M 2007, “ERP implementation: a compilation and analysis of critical success factors”, *Business Process Management Journal*, vol. 13, pp. 329-347.
- [8] Françoise, O, Bourgault, M & Pellerin, R 2009, “ERP implementation through critical success factors’ management”, *Business Process Management Journal*, vol. 15, pp. 371-394.
- [9] Grossman, T & Walsh, J 2004, “Avoiding the Pitfalls of ERP System Implementation”, *Information Systems Management*, vol. 21, pp. 38-42.
- [10] Helo, P, Anussornnitisarn, P & Phusavat, K 2008, “Expectation and reality in ERP implementation: consultant and solution provider perspective”, *Industrial Management & Data Systems*, vol. 108, pp. 1045-1059.
- [11] Ifinedo, P 2007, “An empirical study of ERP success evaluations by business and IT managers”, *Information Management & Computer Security*, vol. 15, pp. 270-282.
- [12] Ifinedo, P 2008, “Impacts of business vision, top management support, and external expertise on ERP success”, *Business Process Management Journal*, vol. 14, pp. 551-568.
- [13] Kemp, MJ & Low, GC 2008, “ERP innovation implementation model incorporating change management”, *Business Process Management Journal*, vol. 14, pp. 228-242.
- [14] Kumar, V, Maheshwari, B & Kumar, U 2003, “An investigation of critical management issues in ERP implementation: empirical evidence from Canadian organizations”, *Technovation*, vol. 23, pp. 793-807.
- [15] Ross, JW & Vitale, MR 2000, “The ERP Revolution: Surviving vs. Thriving”, *Journal Information Systems Frontiers*, vol. 2, pp. 233-241.
- [16] Spathis, C & Constantinides, S 2003, “The usefulness of ERP systems for effective management”, *Industrial Management & Data Systems*, vol. 103, pp. 677-685.
- [17] Velcu, O 2007, “Exploring the effects of ERP systems on organizational performance: Evidence from Finnish companies”, *Industrial Management & Data Systems*, vol. 107, pp. 1316-1334.
- [18] Xu, H, Nord, JH, Brown, N & Nord, GD 2002, “Data quality issues in implementing an ERP”, *Industrial Management & Data Systems*, vol. 102, pp. 47-56.