ERP System Implementation success factors in the Middle East Region: Case Study of Oman Telecommunication Company (Omantel)

Faisal Al Yahyaee
Sultan Qaboos University, Sultanate of Oman, faisalwell@squ.edu.om

Abstract— ERP system has an important effect of the success of the business and to the management of the enterprise. However, many enterprises face a lot of challenges in the implementation of ERP and the integration within their legacy system. This paper analyzes and explores a list of success and failure factors of ERP implementation in the Middle East region, the differences between the implementation in private and government sectors, and a case study of an ERP implementation by Omantel which is the first telecommunication company in Oman.

Keywords—ERP, enterprise systems, business process, enterprise resource planning, Challenges, Implementation, ERP, Critical Success Factor

I. INTRODUCTION

Enterprise resource planning (ERP) is the most important and complicated field of information systems implementation in any governmental or private organizations. ERP has many advantages in terms of Productivity, Management, Finance and the integration between these sections to provide an integrated system processes for good management, optimization and allocation of resources [2].

A Failure or a limited Success was a conclusion of many ERP implementations. The failure rate is high with a percentage exceeds 60 % [6].

The main objectives of this paper were to justify the success factors of the ERP implementation, to compare the differences in ERP implementation in private and government organization, to study the factors which affect the ERP implementation in the Middle East Region, to evaluate Omantel ERP implementation strategy, and finally to find a suitable ERP implementation strategy that will not affect the organization business during the implementation period.

This study is significant because identifying the success factors is important to increase the percentage of successful ERP implementations in the Middle East area, and this will help to boost the business and improve the productivity in public and private organizations.

II. ERP OVERVIEW

The idea of ERP is to integrate and automate all business process in one single database for better communication between the departments of the organization. In addition, ERP supports the decision making and helps to predict the future of the business.

III. PUBLIC VS PRIVATE ORGANIZATIONS

ERP implementation in a Private sector is easier than the implementation in the government sector, especially in the Middle East region due to many reasons. In the private sector, there are flexible procedures and well-known business rules. However, the rules and procedures in the government sector are restricted for all government organizations and no one from the organization can change them. In addition, the top management in the private sector has the same vision and they are all working to boost the business and improve the productivity. On the other hand, top management members on the government sector are fighting for a position and many of them have different visions and points of view. One example is Sultan Qaboos University, as a head of IT section in my department, there were many meetings regarding an implementation of Information System to manage the research projects in the university and to store the publication and researcher information in one profile. The deputy vice chancellor of Postgraduate and research request a database for researchers for security reasons. Our team decided to integrate that database with the current research management system. The postgraduate team decided to develop a small database system or use the website to display the information without storing in database. However, the DVC office team decided to build an internal database but the director of the Information Systems center refuses the idea of developing a new database and decided to have a new ERP system to manage the Research projects, the students and staff information and graduation system and to integrate it with the current ERP system which is an Oracle product. Since 2014, the Information system center team is searching and evaluating many ERP vendors to choose suitable packages. In contrast, they don't know anything about the business requirements from our side as a deanship of research and from the deputy vice chancellor team, and we don’t know when they will implement the system.
IV. ERP Critical Success Factors

Everyone knows what the key success factors of ERP implementation are. However, critical success factors in each organization or area are different according to the structure of that organization, the size and the expertise in that organization. In addition to the regulation, rules and procedures of a certain area. In the Middle East area, there are three major factors of a successful ERP implementation as many studies and researches done in this field. The top management support is the most critical success factors in ERP implementation done in the region [5]. The second critical factor is the project management. Poor allocation of resources, unrealizable expectations, and a changing requirement during the implementation will harm the implementation process. However, if all requirements are fulfilled and resources allocated in the right way, the implementation will go smoothly until the Go live phase in the implementation life cycle. Thus, no maintenance will need unless there are some changes in business processes and the system will work fine. The third critical factor is the Business process re-engineering. This is really an important phase because the package may not support all the business process and thus customization is needed. Most of correctly customized packages have better success percentage [1].

V. ERP Critical Failure Factors

There are many factors that cause a failure of ERP implementation. The main two factors in the Middle East region are that many organizations didn’t recognize the importance of risk management in their organizations. The weakness of risk management is a critical failure factor of ERP implementation because staring in a project without considering the risks is a huge problem and may cause dramatic bankruptcy. Also, the lack of knowledge about ERP packages and vendors will lead to a wrong choice of a package or vendor. Thus, the ERP implementation will fail because that package may not fulfill the business requirement.

VI. Case Study

Omantel in the first Telecommunication Company and Oman. It is a service provider of the internet, fixed line and GSM service. The government of Oman is about 49% shareholder of Omantel. Omantel decided to implement ERP for two reasons. The first reason was that Omantel want to ensure that it is ready to lead the future of telecommunication in Oman. The second reason was to meet the national development requirements as identified by the United Nations (UN). Omantel started the implementation through certain phases. All phases are critical success factors.

1. Stakeholder consultation: Customers are an important part of Omantel. Without satisfied customer, the business will go down. Omantel felt that customers must provide their ideas to support the implementation process.

2. Selection of vendor: Omantel had chosen "Oracle". The choice was based on a recommendation by Omantel in-house software evaluation team. They thought of the impact of integrating ERP with their legacy system and Oracle provided them with the best solution.

3. Project management phase: Omantel started with a phased implementation approach with key milestones such as Project dashboard definition, an establishment of baseline procedure, Compatibility of Customer premises equipment, Awareness of Stakeholders, Migration cases and issues, testing cases, hardware and network compatibility testing, post-implementation review, migration of all customers and the go live phase.

4. Stakeholder management and communication: Omantel wanted to inform the stakeholder about the process of implementation because many customers may find some difficulties or issues while using some services provided by Omantel.

5. Training.

6. Risk management.

7. System testing and software customization.

Figure 1: Omantel ERP implementation Methodology
Omantel faced many challenges during the implementation of ERP. The first challenge is that they think they could finish the implementation within six months. However, they spent about 18 months. This is due to the lack of knowledge on oracle ERP packages. "Oracle" changes the contract with Omantel from an implementation contract to a consultation contract at the beginning. Also, "Omantel" team didn't recognize the importance of Stakeholders' involvement philosophy adaption at early stages so they started over again after certain time because they felt the importance of stakeholders' involvement. From the above graph, it is clear that the revenue of Omantel is increasing year by year due to a successful management with the assistance of the ERP system.

VII. RECOMMENDATIONS

Many small or medium size organization in addition to some government organization couldn't realize the importance of the ERP system. However, some of these organizations realize the importance but they couldn’t implement an ERP system because of its cost. The approach of Hybrid EPR implementation will help them to reduce the cost by about 80% by implementing the ERP in the cloud. Some process needs huge resources and the organization couldn’t host within the required capacity and capability. The idea of this approach is to implement a part of ERP in-house and implement some parts in a private or public cloud.

There are many advantages of this approach. The implementation will take shorter time.

Also, the maintenance cycle will be less and short. In addition, it will provide better load balancing and it will be fully vendor independence [7].

On the other hand, there are many concerns about this approach regarding to the management of master data, coordinating support activities, the integration of the business processes within different hosting areas, and the user interface of the system hosted in different places. User should not see any difference performance and appearance across the models.

VIII. CONCLUSION

There are many differences in ERP Implementation between the government and the private sector. The weakness of Risk management and the weakness of the selection process of ERP are the most common failure factors in ERP implementation in the Middle East [4].

In Omantel case study, Stakeholders' involvement philosophy adaption at the early stage was an important success factor in ERP implementation in Omantel [3]. Customers are the most important part of Omantel. Without involvement, ERP implementation was about to fail.

A Hybrid ERP implementation success probability is higher than normal aspect. The idea is to separate the functions into categories according to the importance of them. Each category can be hosted locally or in a cloud service provider. This will reduce the cost by about 80% [7]. However, there are some concerns about it.

REFERENCES


