Abstract

In the modern times, Information Technology(IT) has become the backbone of development. Enterprise Resource Planning (ERP) is an application of IT which is nowadays considered most important part of any industry because it allows organizations to connect and interact with employees and administrative units, manage data and many more. However, many ERP implementations fail or exceed scheduling and budgeting constraints. Therefore, the purpose of this paper is to discuss critical factors that affect enterprise resource planning (ERP) systems implementation in few companies. There are many factors that affect ERP implementation and in this paper we mostly discuss strategic success factors which are Top Management Support, Project Management and Business Process Reengineering.

The study was conducted by analyzing case-studies associated with ERP implementation for two organizations which are CN Creative and GBG.

Introduction

ERP systems are costly frameworks of programming that organizations use to facilitate a corporation to manage the use of all kind of necessary resources by providing total integrated solution for organization's information. ERP softwares have been one of the largest frameworks as of recent years and assume a huge supporting part in the majority of significant industries including airlines, media communications, transport, government, and so on.

They take care of the issue of fragmentation of information or "Islands of information". ERP frameworks oversee everyday business exercises, for example, accounting, procurement, project management, risk management and compliance, and supply chain operations. A complete ERP suite likewise incorporates performance management, software that helps plan, budget, predict, and report on an organization's financial results. An ERP bundle underpins and incorporates pretty much every useful zone of business activities. ERP software is additionally intended to change alongside development of organization business.

ERP systems has the capacity to transform the industry in which it is implemented. But it comes with a disadvantage. The level of complexity for ERP implementation is nothing to joke about. Highly skilled manpower and long period of analysis and speculation is required. The business process itself needs to change in order to implement ERP. The factors affecting ERP implementation must be closely studied and overcome. This paper discusses the strategic success factors for ERP implementation.

Shahin Dezdar explains the strategic ERP implementation factors as:

1. Top Management Support:Strong and sustained top management support is crucial in successful ERP implementation. Clear support from top management allows all individuals in organization to act in unison and with clear vision. Implementing an ERP system is not a matter of changing software systems; rather it is a matter of repositioning the company and transforming the business practices. So, public, explicit, and sincere support for the ERP project must be present to emphasize the priority of the project (Somers and Nelson, 2004).

2. Project management: A strong project management team is a must because of the complexity of ERP systems. The vast combination of software and hardware, and political and social issues that arise in ERP development is nothing to be taken lightly. Umble et al.(2003) suggested that successful implementation of ERP requires best project management as well as documentation of objective, progress and many more.

3. Business process re-engineering: Companies trying to implement ERP may not have its internal business process well-matched with tools and utilities provided by the ERP system. Due to this, the company may have to change its business processes to take

full advantage of ERP softwares. Nah et al.(2003) said that the business process must be reengineered as much as possible to conform to ERP package.

Tactical Factors are:
1. Enterprise-Wide Communication: Communication across every part of organization is important for successful ERP implementation. Good communication has great impact in change management in project and also is essential in creating approvals.
2. User Training and Education: ERP systems are complex so user training and education is important to use it. The users of ERP should be provided with logic and overall concept of ERP to help them use it. This is also key part in ERP implementation.
3. Vendor Support: ERPs are long running software. In the long run many bugs may arise and changes may take place in business activities. To solve this the vendors should supplement skill sets of their internal teams.

Tactical factors are also as important as strategic factors but they are beyond the scope of this paper.

Literature Review

Even though lots of advantages of ERP are described above, adoption of ERP is not as common as one would expect. ERP implementation has very high cost and failure rates. A recent study shows that 64% percent of ERP spent more than allotted budget, and 74% took longer than the expected completion time. Another study suggests 90 percent of ERP implementation have been delayed, 66% companies experienced some form of disruption in their operations during the implementation of their ERP systems. Furthermore, only companies with high revenue can afford ERP implementation. And testing and other related projects can shoot up the budget by 50 percent. But clients that spend more than allotted budget also report that they are happy with their implementation.

There are many factors that affect ERP implementation in an industry. It may be technical, political, economical or many others. Careful examination of these factors can lead to fluent development process thereby increasing chances of success. The whole project must be documented beforehand and coordinated by experienced management team. Failure in implementation may result in huge loss of time, money and resources.

There are many factors that are crucial to achieving predetermined aim of ERP implementation. Critical Success Factors(CSF) approach facilitates the identification of such factors. Identification of such critical constituents at the ERP implementation project leads to successful implementation. Strategic factors are those that address larger picture whereas tactical factors are those that involve skillful methods and details.

CSFs for ERP has been studied by numerous authors and they have provided different insights. Some studies are now reviewed.

Holland and Light (1999), categorizes CSF into two main groups which are strategic factors which cover whole ERP implementation project and tactical factors that are applicable to specific ERP project parts.

Esteves-Sousa and Pastor-Collado (2000) came to conclusion that CSFs of ERP implementation should have four major parts which are strategic, tactical, organizational and technical.

Case Studies

Gradient Consulting is a highly regarded consultancy providing businesses established in 2007 in UK. It has helped many large companies select, implement and improve their business systems. In this paper, we analyse the case studies of two companies that implemented ERP by consulting with Gradient. Case studies provided by Gradient has been of great help in

writing this paper. Case studies of two companies that implemented ERP with help of Gradient are discussed below.

1. GBG Client

   GBG are global specialists in identity data intelligence established in 1989. They help their clients in identification of people online and make right decisions about their customers and employees. GBG uses their proprietary software to gather billions of data records from all over the world. Their main operations are Identity Verification, Fraud and Compliance, Location Intelligence and Data Network.

   Over-committed internal project management team were already on initiatives for ERP implementation. They were faced with a challenge at a different scale, a programme affecting multiple business units, making accurate and timely reporting to stakeholders a challenge. A project leader had to act as a bridge between stakeholders and delivery teams to ensure all project phases were studied and prioritized carefully. Keeping synergy between different divisions was also a challenge. GBG also decided to implement a higher level of governance at the business and executive level.

   Pete Doyle, project manager who has been working for Gradient for 13 years was assigned for the project. His high level of expertise in managing large professional services and software development teams was surely necessary. Keeping in mind the satisfaction of stakeholders and market expectations, the project development had to shift from waterfall development to agile approach. Actions taken to implement ERP are:

   ○ Establishing a project timetable with help of Head of Architecture to meet directives of head of Product.
   ○ Actively collected, monitored, analysed , mitigated and escalated risks.
   ○ Regular communication and transparent data and statistics were imperative throught.
   ○ Monitored project against predetermined timescale to know early about delays.
   ○ Coached teams to use only one framework throughout.

   Benefits of the actions were:

   ○ Introduction of standard on presentation of data. GBG got introduced to best practices in presenting clear information which had to be interpreted.
   ○ Resource did not need to stretch to cater to the project requirements.
   ○ GBG gained new ways to manage and report projects using simple templates.
   ○ GBG improved its company culture and business processes and also united all its workers.

2. CN Creative

   CN Creative are North West-based healthcare company providing sustainable solutions to chain smokers to reduce smoking and smoking-related illnesses. When they were analyzing on areas to make replacements on their outdated systems, they quickly realized how difficult ERP selection process could be. Even after 8 months of vendor demonstrations they couldn't come close to choose a suitable system. They were forced to contact Gradient Consulting to help them identify the best ERP for their company.

   Gradient then by working with CN Creative's internal project team, introduced a structured process that helped them select the right system for them. The selection process involved a series of site visits and interviews with clients and employees. Gradient transcribed Creative's business into a comprehensive system requirements document. Responses from specific list of vendors were analyzed and Gradient shortlisted three vendors who provided detailed demonstrations and Microsoft Nav was finally decided as the optimum choice. "Azzure really gave us the most confidence. It

was their attitude and their honesty that clinched it," Creative Finance Director Tim Byrne explains. Critical actions taken were:

- Series of site visits and interviews with key users.
- Creating a comprehensive system requirement document.
- Analysing the feedback of document from stakeholders.

Benefits of taking such actions were:

- Introduction of structured selection process to help project team identify key business benefits.
- Accommodation of current activities while also enabling future growth.

Success factors

Identification of critical success factors will ensure successful implementation of ERP. According to Rabaa'I, "a set of activities that needs special considerations and continual attention for planning and implementing an ERP system" are CSFs.

Both the companies GBG and CN creative were fairly successful companies beforehand. But still ERP implementation made a huge dent in their accounts. Just for selection of vendor, they both had to take help of another professional team called Gradient. Highly professional members were assigned as project manager and the team for development was also advanced. This caused the cost of ERP to skyrocket.

Both the companies' business processes had to be thoroughly analysed by field visits and interviews. The vendors also had to give special demonstration to all the clients. Security and testing is also important in ERP implementation. Doing all these tasks require lots of manpower and time. CN creative toke more than 8 months just to choose suitable vendor. The development processes itself takes very long time and the implementation and training step takes more. GBG had to shift its model from waterfall to agile approach. These kinds of detouring takes more time than one would think.

The initial cost of ERP software when compared with the expected returns from ERP over a span of time gives the Return on Investment(ROI) analysis. GBG being company on identity data intelligence, benefits of ERP was way higher no matter the cost so it was a no-brainer. But CN Creative must've had some hiccups in doing so. They couldn't invest on expensive ERPs.

Strategic Success Factors in GBG

The teams that led the project implementation were highly experienced people which was one of the key factor of success. Pete Doyle, man with 13 year experience was assigned to the project. They established project timetable and maintained regular communication which is what a good project manager would do. According to his recommendation the company changed its business culture. GBG had to reorganize its governing body during implementation. They also changed from waterfall model of development to fully agile approach.

"*We gained new ideas on managing and reporting on projects due to Pete's involvement. His technical expertise meant he could contribute to the project outside of the initial scope of governance which added to the quality of the team overall*", said Mick Hegarty, MD.

The Strategic success factors in ERP implementation in GBG was top management team and business re-engineering according to their recommendation.

Strategic Success Factors in CN Creatives

The ERP for CN creative was not so advanced as GBG. So top management support was not the main issue here. But they changed their business model. There was large amount of double keying in their database. To solve this, the integrated ERP was implemented such that

there was only one point of entry. It will also have one source of data and subsequently, inherent traceability right throughout the supply chain. They have now developed an IT strategy that can accommodate their current activities and also ensuring future growth. "*Having carried out an initial search for an ERP system we were unable to distinguish between a long list of system vendors. Gradient Consulting enabled us to identify our detailed requirements, and how each system would cater for them. This resulted in an expedient process that allowed us to hit our incredibly tight deadlines*", said Time Bryne, Director.

Conclusion

This paper gave an overall introduction of ERP systems, including definitions, some statistics in ERP implementation and some factors influencing ERP implementation. Furthermore, it explained the CSF's concept and also provided general information on ways for successful implementation using this approach.

We discussed the major strategic success factors that determine ERP implementation and also reviewed some case studies to identify how these factors played role in real life scenario. ERP implementation is no doubt a daunting task requiring high level skilled manpower, large budget and lot of time. The above mentioned companies are well established companies and with the help of Consulting company, they selected the right ERP for their business. Their case studies show how the factors for successful implementation was identified and overcome. Every year many new companies decide to implement ERP. The use of ERP without a doubt brings transformation in business culture of any industry if the implementation is done in right manner. If the CSFs of ERP implementation as mentioned in this paper are given attention beforehand, the implementation will undoubtedly succeed and the company will flourish.

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