



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 5.2
IJAR 2016; 2(11): 565-568
www.allresearchjournal.com
Received: 15-09-2016
Accepted: 20-10-2016

Dr. CC Motiani
Faculty, Institute of
Management Studies, Devi
Ahilya University, Indore,
Madhya Pradesh, India

Achal Hardia
Faculty, Institute of
Management Studies, Devi
Ahilya University Indore,
Madhya Pradesh, India

Implementation of ERP in Bharat Petroleum Corporation limited

Dr. CC Motiani and Achal Hardia

Abstract

Work culture in organizations are changing due to innovations in information and communication technologies. For growth it is required and the organizations are realizing this and working on the most popular IT tool, ERP. IT has changed the Indian businesses and drastically improved their efficiency. ERP is rapidly gaining importance in Indian organizations. Though numbers of organizations have started using ERP in their organizations is rapidly growing but still it is in a very early stage. High cost, implementation problems and lack of trained personals in organizations are some of the causes for the same. The paper discusses the implementation process of ERP in Bharat Petroleum Corporation Ltd. (BPCL).

Keywords: Enterprise Resource Planning ERP in Bharat Petroleum, Information Technology (IT)

Introduction

Businesses today are Information Technology (IT) driven, they are rapidly shifting from manual processes to IT based and want to include IT based solutions for their business process. Businesses are using IT infrastructure for their internal as well as external process. Majority of IT companies are working constantly towards promoting and expanding IT solutions for business processes. Today Enterprise Resource Planning (ERP) is playing a prominent role in the growth of business organization.

ERP software solutions were initially used only for back office functions. They were not given the due importance and treated just like any another supporting function. Reasons like lack of awareness formed one part while other reasons were costs and technical difficulties which hampered the use of ERP extensively in organizations.

Although ERP requires huge initial investments but it streamlines the functionality and technicality of a software solution in an organization. Thus provide an added advantage in generating higher return on investment.

Demand for ERP is increasing day by day in organizations and business. Fierce competition fast processing, up to date information and various other factors have motivated companies to go in for ERP. Today companies are not adopting ERP because they feel it is necessary but they are left with no choice now. They have realized importance of ERP that applications and started using it for the entire organization not just restricting it to back office function.

ERP cost is a major burden for ERP market in India. Many companies hesitate to invest in ERP because at initial stage of ERP implementation it seems that ERP solutions are very costly. Only on later stage organizations realises that deploying of ERP is beneficial for them.

Enterprise Resource Planning

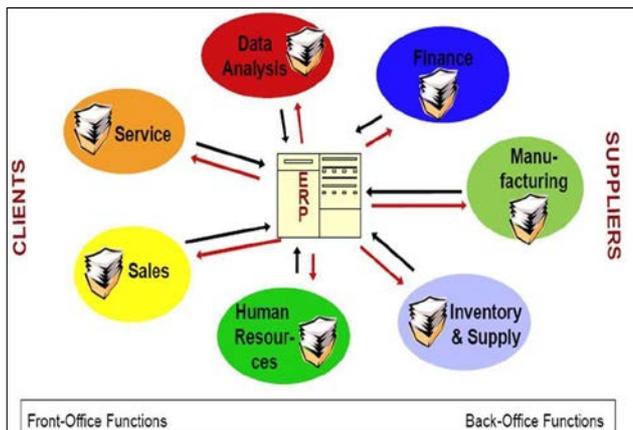
Prior to the advent of concept of ERP every department in an organization had its own customized computer system which was not bind other departments of same organization This lead to problem of integration of data Organizations were buying different software from different vendors which failed to provide centralised flow of database.

For example, an HR computer system (often called HRMS or HRIS) would typically manage only employee information while the payroll department would only calculate and store pay check information for each employee, and the financial department would only store financial transactions for the organization.

Correspondence
Dr. CC Motiani
Faculty, Institute of
Management Studies, Devi
Ahilya University, Indore,
Madhya Pradesh, India

Each system would have to integrate using a predefined set of common data which would be transferred between each computer system. Any deviation in the data format or the integration schedule often resulted in problems.

Enterprise Resource Planning focuses on planning of resources in an enterprise (business). The key objective is to increase smooth flow of information within various departments of an organization. If an organization develops better ERP it improves its business processes as well as enhances its profits. ERP is an efficient automated tool used to connect and improve all areas of business to focus on creating strong interaction in between various business functions or departments. All are coordinated so as to save, improve, acquire information resources and facilitate its better flow.



Source: www.bloorresearch.com

Companies intending to improve flow of data within its different departments and grow fast should use ERP. Many multinational corporations refuse to do business with organization which do not have ERP implemented in their organization.

ERP System automates and integrates core business processes such as taking customer orders, scheduling operations, and keeping inventory records and financial data. It leads to improvements in the effectiveness of any organization by:

- Defining business processes and ensuring they are integrated throughout the supply chain.
- Ensuring security of critical business data through well-defined roles and security access.
- Enabling to plan work load based on existing orders and forecasts
- Providing with the tools to give a high level of service to customers
- Translating data into decision making information

Value Creation through ERP

Old information system were functionally based and not integrated across multiple locations or functional areas. The same information was captured multiple times, in multiple places and was not available in real time. As a result, the data was not up to date and captured more space to store. When information did go global often there were different informational reports of the same events. Thus there were information asymmetries between the different local and functional groups and top management. Enterprise Resource Planning system provides firms with transaction-processing

models that are integrated with other activities of the firm, such as production planning and human resources etc.

By implementing standard enterprise processes and a single database that spans the range of enterprise activities and location, ERP systems provides integration across multiple locations and functional areas. As a result, ERP systems have led to improved decision-making capabilities that manifest themselves in a wide range of metrics, such as decreased inventory (raw materials, in-process and finished goods), personnel reductions, speeding up the financial close process and others. Thus, ERP can be used to help firms create value. In particular ERP facilitates value creation by changing the basic nature of organizations in a number of different ways, such as:

- Integrate the organization's activities
- Force the use of 'best practices'
- Enable organizational standardization
- Eliminate information asymmetries
- Provide on-line and real-time information
- Allow simultaneous access to the same data for planning and control
- Facilitate intra-organization communication
- Enable inter-organization collaboration

Some of the salient features of ERP are

1. Accommodating variety

The ERP software solution provides both multi lingual and multi-currency capabilities. Also multi-mode manufacturing and multi-facility provide the capability required to compete and succeed globally.

2. Integrated Management Information:

1. Today's business managers use ERP for Flexible reporting tools to extract the information as and when needed without depending on an information system department (MIS department).
2. Electronic data interchange (EDI) to electronically accept customer information like purchase orders, schedule amendments, or cash payment and electronically send order acknowledgement and invoices to customers.
3. Imaging to provide the ability to display drawings or specification, ability to- store original sale orders, purchase orders, and quotations, and contracts.
4. Data base creation: Starting with time and attendance reporting, monitoring and control of machines and post-sales statistics.

ERP Implementation in BPCL

Bharat Petroleum Corporation Ltd. (BPCL) a major player in oil market in India had comprised 4,500 outlets, 60% of which were company-owned or leased in 2001. BPCL's market share was 32% in petrol and 27% in diesel. BPCL planned to increase its emphasis on retail business and increase its non-fuel revenues, by leveraging on the strength of its retail network by providing value-added services like convenience stores, automated teller machines (ATMs) and internet kiosks. Off late company realized the importance of IT and started working to implement IT in its business process.

At initial level of IT deployment BPCL divided its IT initiatives into three parts; company planned to establish a communication network within the organization; to create a basic information network for the entire corporation and to

process transactions with customers all over the country. The strategy was devised after the company divided the organization into six SBUs and conducted a detailed evaluation of the company as a whole. Six SBU's were Retail, Aviation, Lubricants, Liquefied Petroleum Gas (LPG), Industrial & Commercial (I&C), and Refinery. These SBUs were integrated with support entities like Information Systems, Finance, Human Resources, Strategy and Brand Management. The organization was restructured to help focus on specific customer segments and address their individual needs. For this, BPCL needed a speedy and effective communication system. The company's senior management realized that unless the procedures were streamlined and communication improved, faster decision-making would be very difficult. The communication structure was seen as hampering the integration of its activities. The problem areas included high costs of traditional communications, quick access to executives, and the need to communicate with recipients over multiple locations. To improve communication systems within the organization, BPCL decided to establish an intranet.

Company decided to implement ERP in their business process to ease their problem. This implementation of ERP was part of the company's 'Project CUSEC (Customer Service and Satisfaction)', which had to meet the challenge of an imbalance between refining and marketing.

BPCL appointed different teams to analyse various ERP solutions that were present in market and they had to choose best ERP tool for their company to fulfil their requirements. After analysing various tools they came on consensus that SAP R/3 was best for them as it was already being successfully used by major oil companies in the world. It was also the only package which had an oil industry specific package and an India specific package. BPCL appointed consultants Coopers and Lybrand for the planning process of SAP R/3's implementation. The consultants worked in close co-ordination with functional experts within the company. The first phase of the implementation began in April 2000.

At the time of implementation they had to make many changes in their organizations like they had to change their computer systems according to SAP R/3 requirement, networking of the whole organizations was redesigned and restructured. Their network to interlink their all branches so that they can easily access shared database of ERP. This was done through routers and switches, which were in turn connected to servers and workstations.

SAP R/3 helped BPCL to successfully launch its e-biz initiatives, the first of which was to allow customers to track the status of their orders online. This not only allowed the company to retain existing customers, but also helped in attracting new customers. According to company sources, BPCL's biggest advantage from the ERP implementation was regarding the management of inventory. Before ERP implementation, the company's practice of monthly inventory reviews frequently led to time lag in processing orders. However, after ERP, this problem was eradicated. It was now possible for the company to know the details of receivable of inventories, which in turn made cash management also easier. The company expected the ERP to achieve a payback by 2003.

After successful implementation of ERP in corporation, they launched Petrocard which was made by plastic and

embedded with 4K-microprocessor, which was used at retail outlets across the country.

By March 2001, more than 2.5 lakh customers were started using Petrocard with over 20,000 daily transactions taking place at BPCL's retail outlets throughout the country. Petrocard's success put all doubts about BPCL's ERP implementation to rest. After this, BPCL also introduced a Fleet card for transport companies, which made it easier for them to track the position of their inventory. The company also integrated the manufacturing execution system of its refinery with the system.

Encouraged by the success of Petrocard and Fleet card, BPCL planned to introduce an online payment system, to be used to make credit card payments. Ashok Sinha, Finance Director of BPCL said, "The basic idea is to translate operations which have been so far considered B2B, into B2C." The system will be integrated at depots with the help of SAP. We plan more retail disbursements through SAP once RBI's payment disbursement norms are passed." Before the successful implementation of SAP R/3 at BPCL, the ERP market had been proclaimed dead by many analysts because of the number of failures of ERP implementation exercises. Experts hailed implementation as the revival of the ERP market in India.

Issues in ERP Implementation

ERP Implementation seems simple but it is difficult to implement in an organization because of following reasons:

1. It is very important that implementation is done in stages. Trying to implement everything at once will lead to a lot of confusion and chaos.
2. Appropriate training is very essential during and after the implementation. The staff should be comfortable in using the application or else it will backfire with redundant work and functional inefficiencies.
3. Lack of proper analysis of requirements will lead to non-availability of certain essential functionalities. This might affect the operations in the long run and reduce the productivity and profitability.
4. Lack of support from senior management will lead to unnecessary frustrations in work place. Also, it will cause delay in operations and ineffective decisions. So, it is essential to ensure that the senior management supports the transformation.
5. Compatibility issues with ERP Modules lead to issues in integration of modules. Companies associate different vendors to implement different ERP modules, based on their competency. It is very essential that there is a way to handle compatibility issues.
6. Cost overheads will result, if requirements are not properly discussed and decided during the planning phase. So, before execution, a detailed plan with a complete breakdown of requirements should be worked out.
7. Investment in infrastructure is very essential. ERP applications modules will require good processing speed and adequate storage. Not allocating suitable budget for infrastructure will result in reduced application speed and other software issues. Hardware and Software Security is also equally important.

Conclusion

This paper discusses the role of ERP in the Indian organizations. The growing need and importance of ERP

has been highlighted in the paper. Current status of ERP in India is the main crux of the paper. It has been found that Indian organizations are rapidly shifting towards improving their businesses with the help of ERP implementation. Although there is a rapid move in this but the situation is still far from satisfactory. Lot of efforts need to apply ERP implementation. The problems in the field of effective implementations such as poor investment in IT etc. are some of the bottlenecks in the way. Moving towards ERP from traditional approach is difficult for senior management as well as end users also acceptance is a big issue. Though ERP implementation is seems to be costly implementation but later in after a year Indian organizations realizes that these types of implementation will be beneficial for their businesses.

References

1. Aladwani AM. Change management strategies for successful ERP implementation, *Business Process Management Journal*. 2001;7(3):266-75.
2. Alexis L. Enterprise Resource Planning, Tata McGraw-Hill, New Delhi; c2008.
3. Alshawi S, Irani Z, Baldwin L. Benchmarking information technology investment and benefits extraction, *Benchmarking: An International Journal*. 2003;10(4):414-23.
4. Faullant R, Matzler K, Fuller J. The impact of satisfaction and image on loyalty: the case of Alpine ski resorts", *Managing Service Quality*. 2008;18(2):163-78.
5. Fornell C, Larcker DF. Evaluating structural equations models with observable variables and measurement error, *Journal of Marketing Research*. 1981;8(1):39-50.
6. Frost and Sullivan Indian ERP market shares; c2008. March 17. Available At: www.livemint.com/Articles/2008/03/17003617/D508C9E8-FAD0-4336-9160-1BA04D043AF5ArtVPF.pdf (accessed May 8, 2010).
7. Jacobs FR, Bendoly E. Enterprise resource planning: developments and directions for operations management research, *European Journal of Operational Research*. 2003;146:233-40.
8. Jaehun J. An adoption of semantic web from the perspective of technology innovation – a qualitative research approach, *Communications of the International Business Information Management Association*. 2008;5(20):170-7, available at: www.ibima.org/pub/journals/CIBIMA/volume5/v5n20.html (accessed May 11, 2010).
9. Jafari SM, Osman MR, Yusuf RM, Tang SH. ERP systems implementation in Malaysia: the importance of critical success factors, *International Journal of Engineering and Technology*. 2006;3(1):125-31.
10. Jaiswal M, Vanapalli G. Enterprise Resource Planning, Macmillan Publishing, Chennai; c2008.
11. Katerrattanakul P, Hong S, Lee J. Enterprise resource planning survey of Korean manufacturing firms, *Management Research News*. 2006;29(12):830-7.
12. Kennerley M, Neely A. A framework of the factors affecting the evolution of performance measurement systems, *International Journal of Operations & Management*. 2002;22(11):1222-45.
13. Kouki R, Poulin D, Pellerin R. ERP assimilation challenge: An integrative framework for a better post-implementation assimilation", *Interuniversity Research Centre on Enterprise Networks, Logistics and Transportation (CIRRELT) Working Paper No. DT-2006-DP-1*; c2006.
14. Tang L.-L, Lu M.-T, Tsou H.-T. The effect of green product vendors' quality assurance management mode on business performance for electronics industry; c2009. Available at: www.yzu.edu.tw/admin/rd/files/rdso/9716-24/47-APIEMS%202008.pdf (Accessed May 20, 2010).
15. Wan TB, Wah LT. Validation of a user satisfaction instrument for office automation success", *Information & Management*. 1999;4:203-8.
16. Wang C.-Y, Chou S.-C.-T, Chang H.-C. Emotion and motivation: understanding user behaviour of Web 2.0 application", *proceedings of the sixth International Conference on information technology: New Generations, Las Vegas, NV*; c2009. p. 1341-6.
17. Wu J.-H, Wang Y.-M. Measuring ERP success: the ultimate user's view, *International Journal of Operation and Production Management*. 2006;26(8):882-903.
18. Xinhua BI, Cuiling YU. Absorptive capacity of information technology and its conceptual model, *Journal of Tsinghua Science and Technology*. 2008;13(3):337-43.
19. Yang C, Su Y.-F. The impact of ERP implementation on corporate SCM performance: from an operational and information integration perspective, *Proceedings of the IEEE Conference on Industrial Engineering and Engineering Management, Singapore*; c2008. p. 1668-72.