

# Essence of Digital Enterprise: Enterprise Resource Planning

**Shailesh Malviya**

Assistant Professor, Department of Commerce, Mahamaya Government Degree College, Kaushambi

## **Abstract:**

Digitalization of enterprise is necessary for moving in global environment. Enterprise resource planning system is essential part of digital enterprise. When traditional enterprise adopted information technology, then it convert itself in digital enterprise and move towards the integration of various enterprise functions and optimum resource utilization. It is a transformation of traditional enterprise to modern enterprise. These transformations take place when we use software packages according to our business needs. If we adopt right way of Implementation of ERP, then we enjoy, smoothly work culture in our organization. In this paper we try to discuss thrust of ERP for every organization.

**Keywords:** Enterprise, Resources, Integration, Information Technology, Culture, Implementation, digitalization and optimization.

## **INTRODUCTION**

Survival, Success and Status (SSS) of an enterprise depend on its innate capability. It represents the psychology of the enterprise, which is the result of organizational philosophy. Today every enterprise is trying to keep pace with recent global business environment. To cope with business environment and extent to which the business environment is conducive to the development of enterprise, the SSS of an enterprise depend on its innate strength, resources at its command and its optimum utilization including financial resources, human resources, material resources, technological resources, information resources, enterprise adaptability to the environment and the extent to which the environment is favorable to the development and movement of the enterprise. Thus, survival success and status of any enterprise depend on the internal environment as well external environment (Cherunilam F,2002).

External environment provides opportunities or threats to the enterprise for development. Nowadays, globalization, liberalization and WTO convention are the core elements of external environment, playing crucial role in the development of organizational culture. Internal environment is the strength and weakness of the organization, which affects work nature, work place, work force, work culture, working efficiency, working time, and Psychological environment in the organization have undergone and will continue to undergo enormous change bringing both opportunities and challenges for those involved and interacted in the organization by organizational development, behavior and culture (Aswathappa K., 2000).

## **RESEARCH OBJECTIVE**

In this paper we examine, why ERP is necessary for modern organization.

## **RESEARCH METHODOLOGY**

This paper is based on resources available in various company websites, articles, research papers, news and institutional websites.

## **REVIEW OF LITERATURE**

AlBar, et.al., (2014) discuss enterprise resource planning, its emergence, implementation, importance of using it within organizations and the different challenges related to its implementation. Finally, discussion will be identified to review the most important issues and provide suggestions on the practical level to make effective use of this system. The Enterprise Resource Planning (ERP) has emerged as a technique to balance between demand and supply of firm, reinforce business productivity and promote the quality of processes. ERP systems have proved themselves to be very efficient systems that can be used by different organizations specialized in different fields and services. Although there are many challenges that could hinder the effective implementation of ERP.

Patil, et.al., (2015) discuss dynamic behavior of Enterprise Resource Planning system. It is highly essential to study the evolution of modern ERP system on time and technology axes. Their work critically analyses how the changing need of industries changed nature of ERP technologies. They studied evaluation of hardware, software and integration aspects of ERP. Evolution of modern ERP system from old legacy system clearly indicates that as the need of organizations changed in the competitive environment, the system also changed their nature.

Cadili and Whitley, (2005), studies explores the interpretative flexibility of ERP systems through the study of a project to implement a hosted system for the Central Accounting Department of a large multinational. They discuss intensive case study data around the decision to implement the system and analyses it in terms of the interpretative flexibility of the system. They analyses questions the extent to which technological features of the new system influence the perceived flexibility of the system.

Seethamraju, (2005), explain advantages of ERP for organization. Enterprise Resource Planning systems have been adopted by many businesses, small and large to take advantage of their typical features, information integration, business processes perspective, transaction processing efficiency and instantaneous availability of information for decision support. He analyses the implication of enterprise resource planning systems for organizations in general and for managers and professionals in particular.

Zhou, et.al., (2013), studies to meet the changes of internal and external environment of enterprise. Enterprise Resources Planning (ERP) system needs to have a good flexibility. Flexibility is an indispensable request and is also a way that must be taken during the establishment process of ERP. An index system for flexibility measurement of ERP system is presented with the interdependence and feedback relationships among criteria and indices being taken into account. Due to the vagueness and uncertainty information during the process of flexibility measurement, triangular fuzzy numbers are used to indicate the preference opinions of experts and decision makers. The flexibility level of ERP system can be measured by the weights and scores of ERP.

Ahn and Ahn, (2020), they explain that enterprises have interests in enterprise resource planning (ERP) transitions from an existing on-premise method to a cloud-based system. Their study conducts a comprehensive analysis using the technology-organization-environment, diffusion of innovation, and the model of innovation resistance frameworks. Ahn empirical analysis shows that the factors of organizational culture, regulatory environment, relative advantage, trialability, and vendor lock-in all had a significant influence on the intention to adopt cloud-based ERP, while information and

communications technology skill, complexity, observability, data security, and customization had no significant influence on the intention to adopt cloud-based ERP. This study's findings provide meaningful guidance for companies that want to adopt cloud-based ERP, governments that support enterprise digitalization, and vendors who sell cloud-based ERP systems.

Azhar et.al.(2022) explain many business organizations across the globe have adopted enterprise resource planning (ERP) to manage their massive and important data for various decision-making purposes. ERP plays an important role in handling complex workloads through its integrative features that can help organizations to create value. More recently, a growing number of organizations have shifted from traditional ERP to cloud ERP for better access and flexibility. In their study, they focus on how the implementation of cloud ERP in an engineering company has created value to its business operations.

Greasley and Wang, (2016), trace the implementation of an information system in the form of ERP modules covering tenant and contract management in a Chinese service company. These processes are facilitated within an informal organizational structure and based on human interactions undertaken within the formal organization, rather than to attempt to suppress the emergence of the informal organization, the company decided to channel the energies of staff involved in informal processes towards organizational goals. The company achieved this by harnessing the capabilities of what we term a hybrid ERP system, combining the functionality of a traditional (formal) ERP installation with the capabilities of Enterprise Social Software (ESS). However the company recognized that the successful operation of the hybrid ERP system would require a number of changes in organizational design in areas such as reporting structures and communication channels. This leads to definition of the characteristics of the hybrid organization and strategies for enabling a hybrid organization, facilitated by a hybrid ERP system, which directs formal and informal behavior towards organizational goals and provides a template for future hybrid implementations.

Bandara, et.al.(2023), explain that organizations are integrating big data technologies with Enterprise Resource Planning (ERP) systems with an aim to enhance ERP responsiveness yet, organizations are struggling to manage the integration between the ERP systems and big data technologies, leading to lack of ERP responsiveness. This study examined the factors leading to ERP responsiveness with a focus on big data technologies. The conceptual model which was developed through a systematic literature review was tested using Structural equation modeling (SEM) performed on the survey data. An understanding of the factors which impact on ERP responsiveness contributes to the literature on ERP and big data management as well as offers significant practical implications for ERP and big data management practice.

Staehr, et.at.(2012), explain the framework for achieving business benefits from ERP system. ERP systems are large integrated packaged software systems used by thousands of major organizations around the world. Yet outcomes from ERP use can be very different, and there is still not an adequate understanding of how and why organizations have such varying outcomes. They retrospectively examined the post-implementation periods in four manufacturing companies as processes within context over time. The new framework extends knowledge in two ways. It identifies new themes and the underlying relationships between them that explain and increase our understanding of how and why organizations have or have not achieved business benefits from ERP systems.

### **Why ERP is necessary**

Every enterprise has certain goals and objectives to achieve. Any enterprise will succeed when all the departments of enterprise have to work towards this common goal. In every enterprise, each department will have its own goals and procedures and they work for their objectives. Managers of every department should know what is happening in the other parts of the enterprise. In new scenario, it is not enough that each department manages its activities efficiently, but it should also help the other department of the enterprise so that, they can work efficiently (Hunt and Shelley, 2000). This can be happen when they must relinquish their isolation and never act as an island of information.

Nowadays, it is necessary for success that each and every department should know what its counterparts are doing, how its activities will affect the other departments. This kind of information sharing was difficult in the early days. Now, with the help of information technology, this kind of information sharing is possible. Enterprise has ensured to smooth and seamless flow of information across the department with the help of information technology. Thus information technology has developed and maintain enterprise-wide database for an enterprise. This database will eliminate the isolation of each department as an island of data and make the enterprise data accessible across the department boundaries. This type of database will fulfill the enterprise requirement of information and communication system for barrier less movement of information in the competitive environment. The enterprise-wide data sharing is the essence of enterprise resource planning.

### **ERP Environment:**

An ERP system is the planning of 6M's: Man, Money, Material, Machine, Method and Market. The ERP system provides methodology of assessing the requirement of resources for a certain business plans, to achieve certain business objective and goals. Now information technology provides systems with holistic view of the enterprise. Such a system is related to care business activities and should facilitate seamless flow of information across the various departmental barriers. Such system can also optimally plan all resources of the enterprise; hence it is called Enterprise Resource Planning Systems. (Lean, 2001)., observes that, Enterprise Resource Planning cover the techniques and concepts employed for the integrated management of business as a whole, from the point of view the effective use of management resources, to improve the efficiency of an enterprise.

(Prased, et. al.,2003).clarify that, Enterprise Resource Planning system is a fully integrated business management system that integrate the core business and management process to provide an organization a structured environment in which decision concerning demand, supply, operation, personnel, finance, logistics etc. are fully supported by accurate and reliable real-time information. (Koch, 2002), identified that Enterprise Resource Planning is a attempts to integrate all departments and functions across a company on to a single computer system, that can serve although different departments' particulars needs.

In ERP, any form or record is stored once and is utilized by all the departments of the enterprise. ERP system is knowledge based system (Diwan and Sharma ,2001). This is designed for entire resource planning of an enterprise. The ERP system deals with the planning and application of resource management in business environment.

ERP is an enterprise –wide system, which encompasses corporate mission, objectives, targets, beliefs, values, attitudes, norms, operating style and people who make and drive the organization. ERP system is not limited to any particular industry but it is relevant to all types of business activities, which provides

automatic data exchange among different organs of the business. It is modular and open system, i.e. any module can be interfaced or detached whenever required, without affecting the other modules of the systems. (Henry and Lucas, 1997). ERP system is a flexible system in which multi-languages, multi-currencies, multi-accounting standard can be used (Stedman, 1999). The ERP system is playing central role in sound connectivity system of an enterprise just like nervous system in human body (Patnaik,2001).

### **Key Modules:**

The ERP system is dynamically balancing and optimizing the resource of an enterprise with the help of software packages. The ERP packages are integrated (various activities of enterprise) software packages that support the ERP. The ERP software aims to serve as a backbone of our whole business. A complete ERP application can typically be subdivided into the following key modules of application:

**Financial Management Module:** FM module of ERP helps in financial activities, automate and support the financial planning, analysis accounting process and other needs of the organization. It manages the flow of cash and assets into, out of and with in enterprise. FM module is tracking thousands of transactions, setting fiscal goals for various departments and allowing you to project future financial health as you record today's profit. It increases speed and transparency in your financial reporting.

**Human Resource Modules:** The HR modules provide solution for planning and managing of human resource of a company. It offers comprehensive process driven solution that cover all the aspects of procedure around the employees and their working relationship (including training, hiring, promotion, role, benefits, compensation and payroll).

**Sales and Distribution module:** A module of ERP application which manage information on sales lead, sales calls, inquiries, quotation, marketing campaigns, pricing, shipping management, transportation etc.. It is actively supported with outstanding function of pricing, prompt order processing and on-time delivery, a direct interface to profitability analysis and production and interactive multilevel variant configuration.

**Enterprise Asset Management Module:** It offers the tools directly control your enterprise performance to make the most out of what you have today. It provides the organization to track, monitor and manage organization assets, in order to maintain and extend its assets.

**Quality management Modules:** It improves all process relevant to your product quality along the entire supply chain, co-ordinate inspection and initiates corrective measures. It is used as part of the central logistics information systems at different management levels to plan, monitor, evaluate and control quality.

Some other important ERP modules are material management module, marketing management module, maintenance management module, logistics management module, enterprise controlling module, service management module, project module, dispatching module, library module, lab module, supplier collaboration module, customer collaboration, partner collaboration module and so on.

### **ERP Implementation:**

ERP implementation is a crucial phase of adoption of ERP, which is begun after purchase or development of ERP. Successful implementation is the great achievement of an enterprise that has adopted ERP systems with open arms and keeps pace with the new environment. An ERP implementation is a very special event because it is an adoption of new culture by every segment of



enterprise, that is the entire organization is participating in this event, over a period of time. (Garg, et. al. 2003) observe that implementation bring together different functionality, people, procedure, and ideologies and leads to sweeping changes throughout the organization. They follow the following steps of implementation:-

- Formation of implementation team
- Implementation planning
- Mapping of business processes
- Gap analysis
- Customization
- Reengineering
- Installation
- Testing and training
- Going live
- Post implementation.
- System monitoring and fine tuning.

The implementation procedure of ERP in the organization is a procedure in which organizational work culture is modified or totally changed. Implementation of an ERP package has to be done on a phased manner. We should follow logical order of the implementation. You have an ERP package by purchase of ERP or development of ERP but we must follow the necessary steps of implementation (Mishra, 2002). The step by step method of implementation will yield a better result than big-bang introduction. The total time required for successfully implementation an ERP package will depend upon shape, size and nature of implementation project.

### **Role of ERP:**

Every organization has basic values, attitudes, beliefs and norms which shape organizational goals, policies, structures, strategies, status and success. Therefore, the organizational ways of doing things may differ in different organizations, with changing scenario, where globalization liberalization and WTO Convention play crucial role in global market, so that the market has become extremely competitive. There are now more players in the market in every area of business.

Therefore it has become imperative for every business organization to achieve enterprise excellence, while striving for excellence by adopting more and more advanced technologies of management. ERP system is one of such advanced technology, which plays the vital role and essence of digital firm through central position in sound connectivity in the enterprise.(Robert , et.al.2002). Within the enterprise, it is individuals who are responsible for creating goals as well as criticizing and evaluating the organizational culture and encourages a healthy reciprocity between central databases and the various functions or departments of the organization. This reciprocity is necessary but not a sufficient condition for enterprise connectivity excellence. It is also necessary for the organization work culture to be an integrating as well as automating work culture. The digital firm is the combination of value, vision, visibility, velocity, vigilance, victory and viability. Out of these viability is important because it has a direct bearing on the velocity and victory of the organization (Lowenthal, 1994). The following are some important ERP roles in achieving enterprise digitalization:-

- To integrate all business process.
- Provide support system for adopting best business practices.

- Enable implementation of these practices with a view towards enhancing productivity.
- Empower the customers and suppliers to modify the implemented business processes to suit their need.
- Provide information to external and internal bodies, when they are needed.
- To automate all business function.
- Utilization of maximum time.
- To performed business activities more economically.
- To utilized maximum resources.
- Reduced complexity of enterprise information system through centralization of information.
- To reduce inconsistency of information.
- To get flexibility in enterprise information system.
- To create a communication network in an enterprise.
- To improve impartiality, validity and reliability of information.

### Conclusion:

Digital firm is the result of better enterprise governance through informational technology and which is the consequence of adoption of ERP. Enterprise governance emerged as a response to enterprise failure and widespread dissatisfaction with the way many enterprise functions have led to the realization, globally of the need to put in a place, a proper system for enterprise governance. ERP systems fulfill these requirements. The governance framework is there to encourage the efficient use of resources and equally to require accountability for the stewardship of those resources. It is concerned with the efficiency of the resource use, value addition and wealth creation with the enterprise philosophy established by enterprise digitalization. Such changes improve productivity and efficiency and move towards strategic resource planning. It is possible only by the adoption of Enterprise Resource Planning System.

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