

Managing Business Workflow Using ERP

Riteesh M Mandi¹, Gowrishankar S Nath²

¹Dept of Computer and Science Engineering

²Professor, Dept of Computer and Science Engineering

^{1,2}Dr. Ambedkar Institute of Technology, Bangalore

Abstract- Enterprise Resource Planning (ERP) systems have been known to be most prominent topic by many researchers and managers as one of the major IT Systems for managing the business activities. ERP solutions integrate and simplify the business activities and their datasets concerned with workflow. What makes these technologies more attractive to organizations is that the enhancement of the ability to integrate commercial and advanced technology. However, as in this technological field, researches in the ERP field is still lacking and there is lot of gap in ERP literature. This research paper is going to explain major areas presented in ERP activities.

Keywords- Enterprise resource planning, management, business performance, ERP deployment

I. INTRODUCTION

In this fast phase of business environment, Enterprise Resource Planning systems (ERP) provides the powerful and most useful software in the enterprise. In today's business world, they have become an important software without which the majority of enterprises could no longer function. ERP systems are the principal infrastructure of information systems helping an organization to prosper under the present day economic conditions. Successful usage of ERP systems creates organizational strategy, which gives a great platform for the development of particularly efficient processes necessary for the success of an organization. As in practice, using the ERP system usually does not justify the expectations of an enterprise, costs much more than expected, and its implementation lasts for a considerably longer period of time than planned. Therefore the businesses have to analyze benefits of the ERP before using it.

The main theme of this paper is to know how the ERP in company is used to set up the business success. Use of the ERP systems is highly complex which is not only influenced by technical factors, but also by other factors like growth of the business as well as organization. The rest of the paper is organized as follows: Section 2 provides the types of ERP deployment, Section 3 gives the information of leading ERP systems. In Section 4 functional areas of ERP is discussed. Section 5 provides key benefits of ERP.

II. TYPES OF ERP DEPLOYMENT

The three important types of ERP deployment are Cloud-ERP, On-Premise ERP and hybrid ERP as explained below:

1. Cloud-ERP

The Cloud-ERP is the software that works on the source computer platform. The maintenance of software is handled by source or the provider. It has the capability of employing a private cloud or public cloud. It has the lower costs compared to past and is widely accepted by people.

2. On-Premise ERP

This is a typical software delivery model where the managers control everything. ERP software is typically installed on to the Enterprise data center in the business environment of the company. Maintenance and installation of hardware and software are the responsibility of company's managers. Almost all the Enterprises are updating their advanced ERP software's to incorporate deployment.

3. Hybrid ERP

For the Enterprise that requires the mixture of both to fulfill the wants of their management, the hybrid cloud ERP system is used. It has most of the ERP programs and datasets that are been kept inside the cloud and few are at the core. This is often sometimes referred to as two-level ERP.

III. LEADING ERP SYSTEMS

Here are the some of the leading software vendors for ERP:

1. SAP ERP

SAP-ERP is a business planning system found by German based company SAP SE. This ERP covers important enterprise activities of an organization. SAP ERP (V.6.0) is the latest version which was available from 2006. This latest Enhancement Package (EHP8) package of SAP ERP 6.0 came into existence from 2016. Business planning process that are

available in SAP-ERP are Operations, Finance, Human Capital Management, and Company Services.

2. Oracle ERP

Oracle-ERP is the cloud software system used to perform office processes and everyday business operations. It includes the financial management, procurement management, project management, accounting and etc. This provides Software as a Service (SaaS) that manages business activities. The system operates the Oracle technology stack on Oracle cloud facilities. It is available for public cloud, private cloud deployment and also supports deployment in hybrid manner. Oracle provides updates to the Oracle-ERP Cloud two times a year. It has nine different software modules that make up the Oracle-ERP Cloud suite.

3. Microsoft Dynamics 365

Microsoft Dynamics 365 is the cloud-based ERP system that incorporates components of both Customer Relationship Management (CRM) and enterprise resource planning (ERP), including the productivity applications and Artificial Intelligence (AI) tools. Dynamics 365 was released in 2016, and Microsoft was one of the first major vendors to combine the capabilities of ERP and CRM natively.

IV. FUNCTIONAL AREAS OF ERP

Organizations use ERP systems for a variety of reasons. While one of reason is that organization may want to simplify its to-cash process, another may be more inclined to refine its hiring methods. ERP is designed to simplify data sharing across tasks. In choosing business planning platform, enterprises must consider related ERP modules that are aligned with their economic, strategic and technical goals. Here are some of the functional areas of ERP are:

1. Supply Chain Management (SCM)

ERP modules also supports SCM in which it includes procurement functions, product suspension, supplier planning, inventory testing, claim processing, inventory storage and many more. Successfully refining the supply chain management function is the trophy of manufacturing companies that accommodate building materials, innovation, integration and energy. ERP software can make it easier to simplify the production processes domestically and internationally. When managing alternatives such as production-to-country production, currency flexibility and import or export regulations, an ERP solution that is well

versed in supply chain management is often an important asset.

2. Human Resources

Employee modules within the ERP system may include dashboards and tools for data acquisition and interpretation of training, employment, payroll benefits. ERP solutions with a human resource module can improve human resource management throughout the system and can be of great benefit to any organization regardless of its size. Robust Power is not needed for any organization, other than the people who need it, than other providers that offer it.

3. Accounting / Finance

Accounting and Financial operations related to budgeting, expenditure and financial management, operating costs and other financial activities are controlled by ERP wherein it helps the business in providing the real time performance and data interpretation, also ensuring compliance with regulation of finance. All the financial activities in the organization can benefit from an integrated ERP system. It empowers the organization to manage financially with a modern, integrated interface designed for high levels of productivity and transparency.

4. Marketing/Sales

Marketing and Sales departments can track customer feedback from presale services, starting with customer contact, through specific customer order shipping. Activities related to costs, customer visits, shipping, invoice billing, forecasting and competitive analysis are done through the ERP. Employees are able to connect to customers to track orders and follow the fait invoices. On other hand marketing staff can monitor their objectives, wherein also be analyzed and integrated by management and business clients.

5. Customer Relationship Management (CRM)

ERP systems includes CRM modules that specifically address how an entity communicate with their customers. This includes departments like sales and marketing, also functions like customer communication data, sales pipeline management, customer retention and prioritization. Many ERP programs have e-commerce functionality. Some get along well with private e-commerce programs. In any case, you will be able to get better data by making sure your e-commerce activity is not deployed. Better understanding of data can further improve your customer service.

V. KEY BENEFITS OF ERP

Here are some key benefits of ERP:

1. Improved Efficiency

In line with decreased training costs, ERP decreases time and energy required employees to perform their daily tasks. ERP system can significantly reduce manual processes, thus making team members free from performing costly tasks. ERP system can likewise assist in adopting and implementing of industry leading processes, harmonizing all business planning practices. Cutting edge technologies such as robotic automation process (RPA), AI and ML back up the default capabilities and suggestions can be seen in most ERP software. These features of the ERP software can easily manage the enterprise operations like creating demand forecasts, purchase orders and tracking.

2. Data Security and Quality

Securing data is one of the key features of ERP software. The core part of the ERP module is data. ERP systems have internal operations to ensure the security of the datasets in them. In addition, ERP platforms have single input system to maintain a high level of information security. Combining data from multiple systems often creates conflicts between sources, but using ERP has advantage of single data repository which helps to improve the accuracy, consistency and security of any company's data. Both up-to-date ERP systems and cloud infrastructure give any organization the next level of security. ERP software data system works and enables to integrate the backups of sensitive data. As all the company's data is kept on cloud, many vendors use security experts to ensure that their servers are secured. It makes difficult for hackers to launch the attack as they can find themselves on a personal server.

3. Focused IT Costs

An ERP system is the costly investment, basically it improves company's efficiency. Although using resources for several systems where each of them requires dedicated managers, support teams, infrastructure and licenses, these users will be able to focus on these costs in a single ERP system. The total cost is saved using isolated systems than on single ERP. This single program of ERP reduces the training needs of users or the managers, as they have to learn a one program instead of interacting with many individual applications. While ERP includes many functions like customer resource management (CRM), accounting, HR

management (HRM) and supply chain management (SCM), system visibility will model.

4. Improved Collaboration and Workflows

Important part of thriving business is collaboration. The ERP system simplifies the processes of interacting with others by giving employees to access the information they have after they want it. They do this by providing information that includes departments, where information from the each department is distributed in single place. This allows the company to do real time project better and communicate within the organization. ERP system is a suite, as every function has the desired access to the enterprise complete information resources, allowing them to determine the larger image. And this gives the company's employees to use the tools they have to make effective decisions by making them feel more important.

VI. CONCLUSION

In this paper we have discussed how Enterprise Resource Planning integrates business activities by managing company's data. The ERP is most reliable system as it has different types of ERP deployed like Cloud-ERP, On-Premise and Hybrid-ERP, functional areas of ERP like Supply Chain Management, Human Resource Management, Accounting or Finance, Marketing or Sales and about Customer Relationship Management CRM, and finally we have discussed key benefits of ERP.

REFERENCES

- [1] Curtis G. & Cobham, D. (2008) Business Information Systems: Analysis, Design and Practice. 6th edition. Harlow: FT Prentice Hall.
- [2] EHunton, J.; Lippincott, B.; Reck, J. L. Enterprise resource planning systems: Comparing firm performance of adopters and nonadopters. *Int. J. Account. Inf. Syst.* **2003**, *4*, 165–184.
- [3] Yusuf, Y.; Gunasekaran, A.; Abthorpe, M. S. Enterprise information systems project implementation. *Int. J. Prod. Econ.* **2004**, *87*, 251–266.
- [4] Wieder, B.; Booth, P.; Matolcsy, Z. P.; Ossimitz, M. - L. The impact of ERP systems on firm and business process performance. *J. Enterp. Inf. Manag.* **2006**, *19*, 13–29.
- [5] Ağaoğlu, M.; Yurtkoru, E. S.; Ekmekçi, A. K. The Effect of ERP Implementation on Business Performance: An Empirical Study on Users' Perception. *Procedia Soc. Behav. Sci.* **2015**, *210*, 35–42.
- [6] Gable, G. G.; Sedera, D.; Chan, T. Enterprise System Success: A Measurement Model. In Proceedings of the

Twenty-Fourth International Conference on Information Systems, Seattle, DC, USA, 14–17 December 2003.

- [7] Costa, C.J.; Aparicio, M.; Raposo, J. Determinants of the management learning performance in ERP context. *Heliyon* **2020**, *6*, e03689.