



A STUDY ON SELECTING AND IMPLEMENTING ENTERPRISE RESOURCE PLANNING IN CURRENT DIGITAL TRANSFORMATION ERA

Dr. Shaik Shamshuddin

Assistant Professor,
GITAM Institute of Management,
GITAM Deemed to be University,
Visakhapatnam

T.Venkateswarulu

Assistant Professor,
GITAM Institute of Management,
GITAM Deemed to be University,
Visakhapatnam

ABSTRACT

The Marketing plays a pivotal role in the growth and development of a country irrespective of a country irrespective of size, population and the concepts are so interlinked that, in the absence of one, another virtually cannot survive. It is a historical fact that the development of marketing has always kept pace with the economic growth of the country. The objective of modern marketing is to make profits through satisfying consumer's needs and wants. Hence, the marketers must understand the real needs, wants, beliefs and attitudes of the consumers towards their products and services. ERP is the planning of the four enterprise resources - Man, Money, Materials, and Machines - to their best synergistic value. While earlier on, the manufacturing of the organizations had the most to gain by implementing these tenets, today, the whole gamut has expanded to also include non-manufacturing types of industries. Currently, aerospace, software and hardware organizations, manufacturing and pharmaceuticals, which are trying hard to hook up to customer-oriented domains. The present study completely depends upon the secondary data and resources available through various social websites in connection with ERP implementation in respective areas of the business.

INTRODUCTION

Using Information Technology (IT) does not mean setting up computers to manage jobs. It also does not mean getting streamlined, creating transparent departments and improving workflow. IT deployment is all this and much more. If one wants to choose a single word for defining the importance and relevance of IT to organizations, it is 'oneness.' Enterprise Resource Planning (ERP) is a definition for this great commonality that IT tends to transform most business processes into. In the age of the turbulent global business environment, today's manufacturing organizations are complex 'systems' that require interaction between the various functions such as sales, marketing and distribution, manufacturing, materials, finance, and human resources. ERP is a way of dealing with certain pressing issues that have emerged in the age of global competition and stringent demands on the production and distribution systems. Integrated ERP solutions optimize resource utilization by providing up-to-the-minute information on demand for quick decision making. Industries that successfully implement ERP can lead to an increase in per capita productivity, quick response times, lower inventory levels, better customer orientation and sharing of information seamlessly across the enterprise and just-in-time

management, all of which lead to higher customer satisfaction.

OBJECTIVES OF THE STUDY

- To study the various needs and requirements established due to the modernization and Technological advancements of ERP system.
- To access the need of implementation and establishment of an ERP System in the prospects organization by effective understanding of their challenges.
- To make suggestions in the key marketing strategies for improvement of their product visibility and scalability through ERP system.
- To find out the value exploration and how the company can explore the new value opportunity in terms of their new partnership with developed ERP system.

REVIEW OF LITERATURE

Review of Literature is one of the key elements for research to draw the problem hypothesis and outcomes. Young. B. Moon (2007) This article is a review of work published in various journals on the topics of Enterprise Resource Planning (ERP) between January 2000 and May



2006. A total of 313 articles from 79 journals are reviewed. The article intends to serve three goals. First, it will be useful to researchers who are interested in understanding what kinds of questions have been addressed in the area of ERP. Second, the article will be a useful resource for searching for research topics. Third, it will serve as a comprehensive bibliography of the articles published during the period. The literature is analyzed under six major themes and nine sub-themes. Mahmood ali and Liyor (2017) Enterprise resource planning (ERP) implementation brings with it a set of challenges. In order to gain a better understanding of these and they can be mitigated during the implementation process, the purpose of this paper is to use Esteves and Bohórquez (2007) classification based on ERP lifecycle framework, and content analysis to review the literature on ERP implementation in a structured format with a focus on larger enterprises, and provide a platform for practitioners to plan implementation with minimum possibility of failure. Angella De Lellis and Antonii (2018) opined in their study the ERP system will enable the change management in the context of a growing company: the ABC enterprise. The first step of the proposed methodological framework involves the construction of the As-is process model, adopting the standard BPMN language. The model is based on an accurate analysis of the data concerning the resources and activities of the company being analyzed, in order to perform a computational simulation of its business processes. Clara S. Nisteche (2018) opined Enterprise collaboration systems (ECS) are evolving, heterogeneous and sociotechnical systems. They begin life as empty shells without content and their meaning and value unfold over time as users interact with and shape the system to their needs. This paper is part of our research to understand how ECS are being shaped and designed through use. In this paper, we examine coordination mechanisms (CM) as traces of design activity in ECS. Through a structured analysis of two ECS communities we identify key examples of user-designed coordination mechanisms and show how they are used to inscribe specific purposes into ECS communities. Our findings reveal preliminary insights into the way's users are using CM to shape ECS, thus designing them to meet their specific needs.

RESEARCH METHODOLOGY

Descriptive Research study is done for the study of implementation of ERP systems in India and understanding consumer buying behavior. In this most of the research to be conducted in the first phase is based on a descriptive approach since we aim to establish and outline existing models used for evaluating ERP-system investments. The later phases include explorative research elements, where secondary data is examined in order to develop

understanding of the research area. During this phase we will also be able to more clearly define purpose as well as the limitations adopted during the descriptive research. The second part of this study will be prescriptive in nature, since this part focuses on constructing a method for identifying and measuring the cost and benefit characteristics of ERP-system investment for this we use an analytical approach for case analysis from secondary sources. Data Collection Methodology often called as Research methodology is a way to solve the research problem. It may be understood as the science of studying how research problems are done scientifically. It is the procedure using which researchers go about their work of describing, explaining and predicting phenomena, is called Methodology. Methods comprise the procedures used for generating, collecting, and evaluating data. Methods are the ways of obtaining information useful for assessing a possible explanation of a study or research problem. It is the data collected by means of a survey. The micro level analysis of customer perception towards an ERP System regarding awareness, value creation and understanding of investment nature was done. It is the data already existing, which has gone through some standard analysis. Under the secondary data, the company's annual reports, brochure, websites, newspapers, journals, stock market screeners, secondary platforms and internet were taken into consideration.

LIMITATIONS OF THE STUDY

- The present research is restricted to selected Social website connections and few potential customers only.
- The sample size taken is only 100 and as such is small, this is due to the constraints of time and limited reachability due to the current COVID scenario.
- Respondents might have responded with the actual feelings of facts while giving responses to the questionnaire.
- Time being a limiting factor was not enough to gather opinions from most of the respondents, who form part of the universal sample.
- Some respondents may have responded without prior understanding of the ERP Systems

DATA ANALYSIS

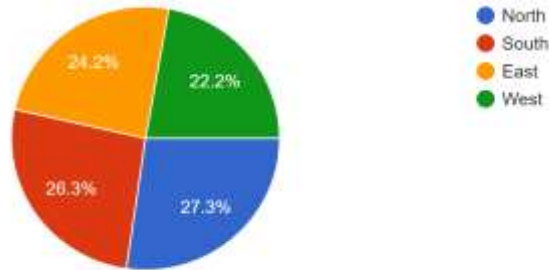
ERP software is one of largest expenditure of corporate information technology (IT) budgets. The core idea of implementing an ERP solution is to get tangible business benefits that would improve the performance of the organization and achieve certain business objectives. This includes inventory reduction, less time to market, reduce manufacturing



and order processing cycle times, etc. The fact that implementation of the world-class packages requires tremendous effort in enforcing change management

coupled with the inability of these firms to respond to that challenge have compounded the problems of establishment and implementation further.

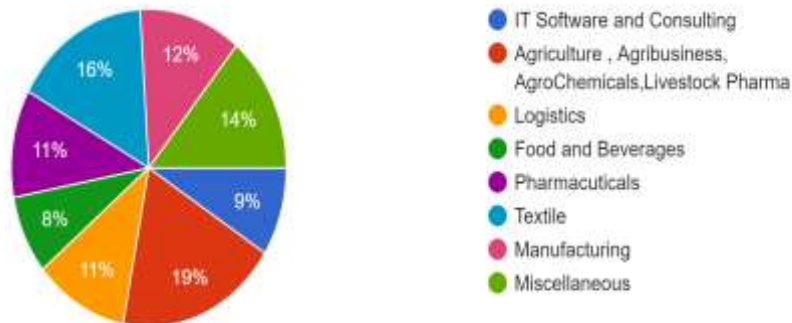
Location
99 responses



Although Geographically the concentration of organizations remained same with the 27.3% industries in the North, 26.3% in the South and 24.2% and 22.2% in the East and the West regions.

Major chunk of these Industries was in regions what can know be called as hotspots such as Delhi, Mumbai, Chennai, Bangalore, Hyderabad, Gujarat.

Industry Sector
100 responses



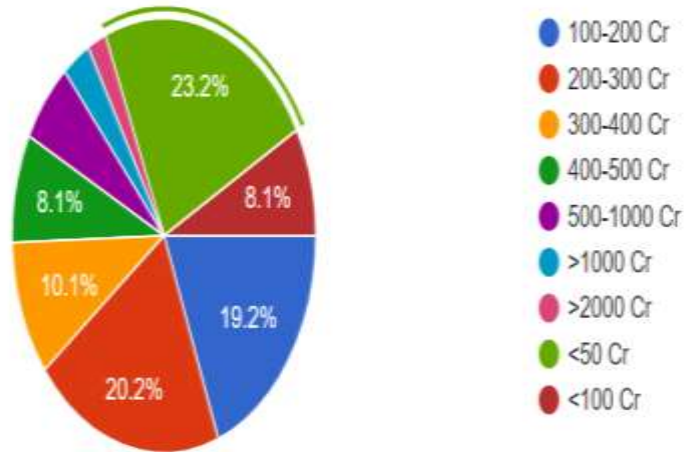
This states that although much diversity cannot determine in the classification among different

Industry Sectors, scope of implementation highly varies.



Annual Revenue

99 responses

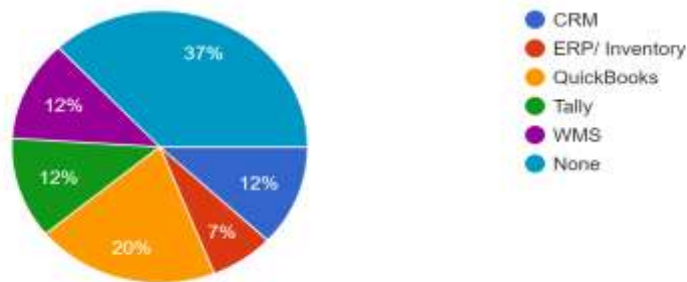


This led to targeting the customer base by classifying them in different revenue buckets such as above and

positioning them as small, medium and large enterprises.

What is the Current Application Environment?

100 responses

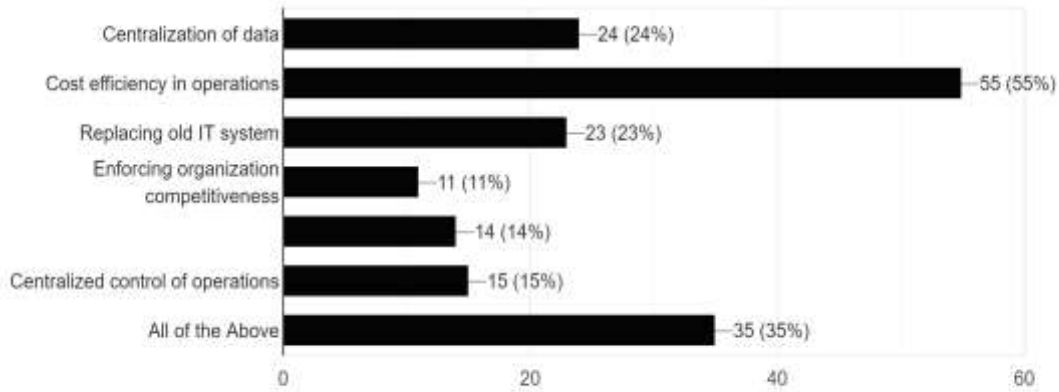


Through this analysis we can understand the possibility of scope of establishment of ERP Systems

and analyze the drawbacks of existing application environment.

What is the main objectives of your current application environment?

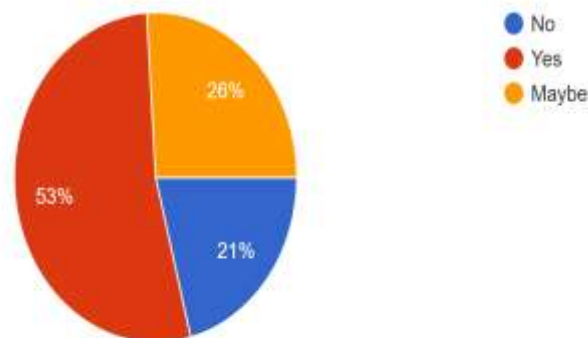
100 responses



Hence Cost efficiency has become a key determining factor of implementation masking the forethought of future growth.

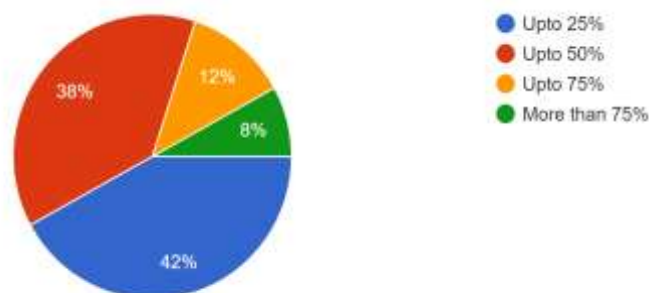
Do you feel that the objectives have been achieved in general?

100 responses



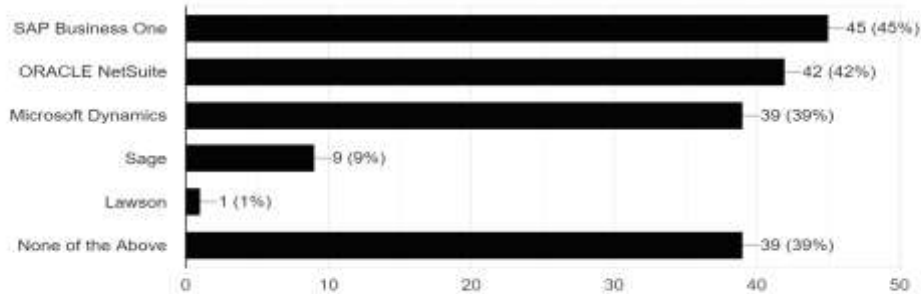
If Yes, in what amount have they been achieved (%)?

100 responses



This states the lack of achievement of software and the need for implementation of a more centralized software.

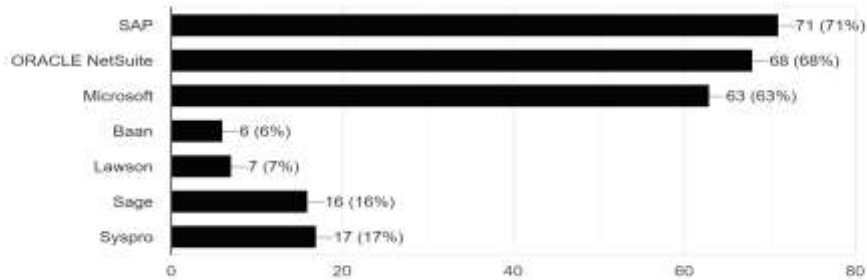
Which ERP System are you familiar with or aware of?
100 responses



But this attribute has formed the base of my sales qualifier questionnaire as this research question determines the need to identify the prospects

understanding of ERP Systems as it establishes the path sales.

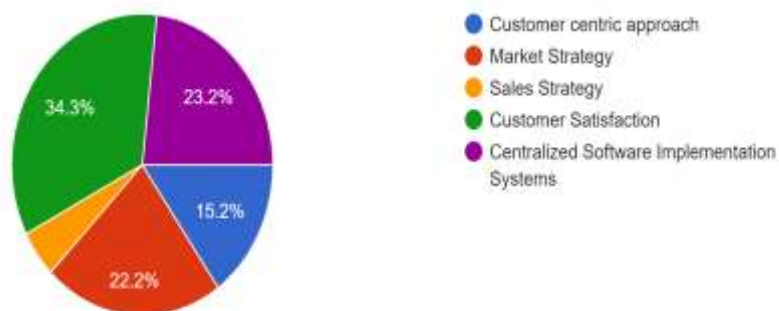
Which ERP software are you likely to implement, based on the vendor?
100 responses



When we analyze the scale it can be seen that the vendor plays a major role in determining the sale of the ERP Systems, all the TIRE 1 systems with well-

established vendors have been highly nominated by the organizations this shows the credibility and trust in the vendor systems and their implementation

How do you differentiate yourselves in your market space?
99 responses

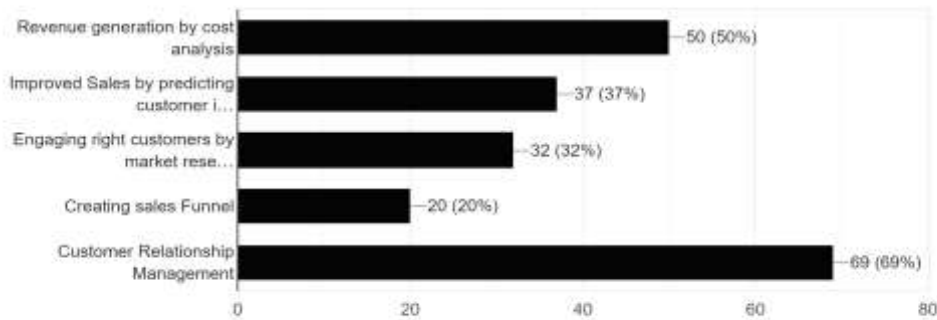


This not only differentiated them in the marketplace but made them emerge with highest revenue and least operational costs.



Where do you expect to drive growth and how?

100 responses

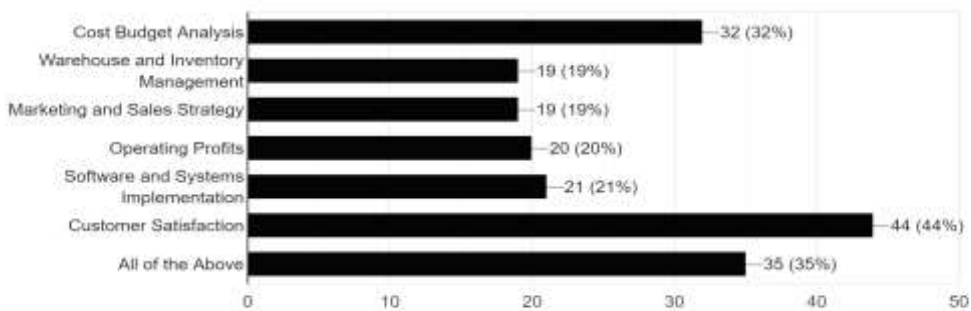


The results of the survey state that 69% of the population is CRM as a growth driver this shows that

CRM is the most promising area that is expected to drive growth within and external to an organization.

What areas do you need to be excellent to succeed?

100 responses

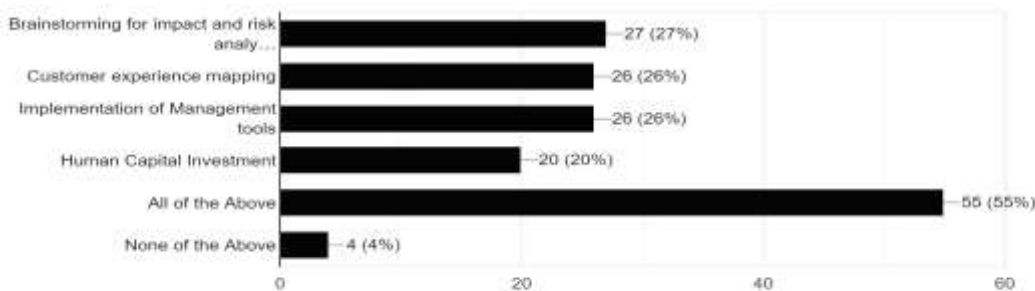


The main area of focus of organization lies in Customer satisfaction and cost benefit analysis in

implementing software and systems thus determining the ROI of investment made.

What business processes have you addressed to increase efficiencies?

100 responses

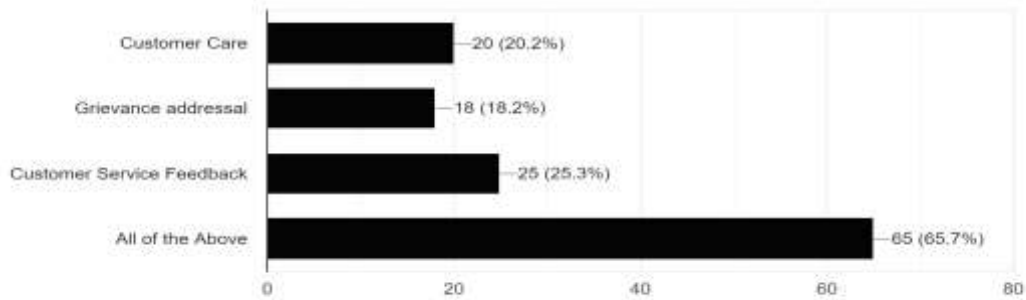


This helps to pitch the ERP system and establish why ERP system is a one stop destination to all business process.



What are you doing to create a better customer experience?

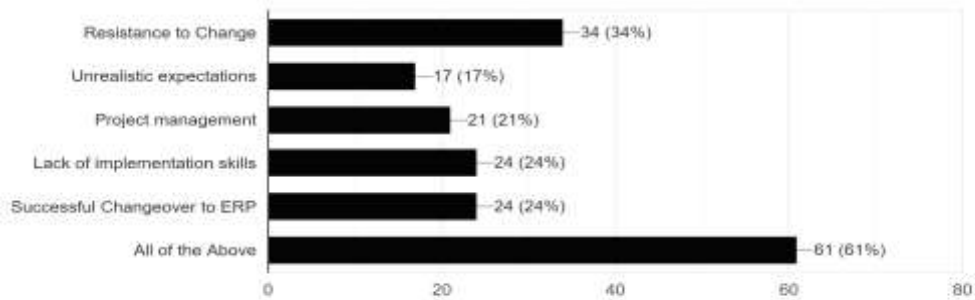
99 responses



This data helped analyze the market demand need and necessity and formed the basis of sales strategy.

What are the major challenges do you see in ERP implementation?

100 responses

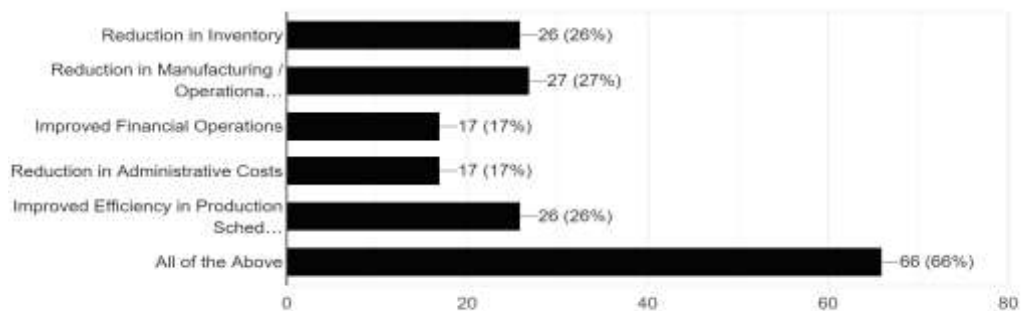


This determines the challenges faced by various organizations in implementing ERP Systems. The major challenges can be summarized as follows- Resistance to change, time overruns, cost overruns,

unrealistic expectations, lack of implementation skills and unattributed cost accounting have proved to be key challenging aspects.

What according to you is highest benefit of ERP Implementation ?

100 responses



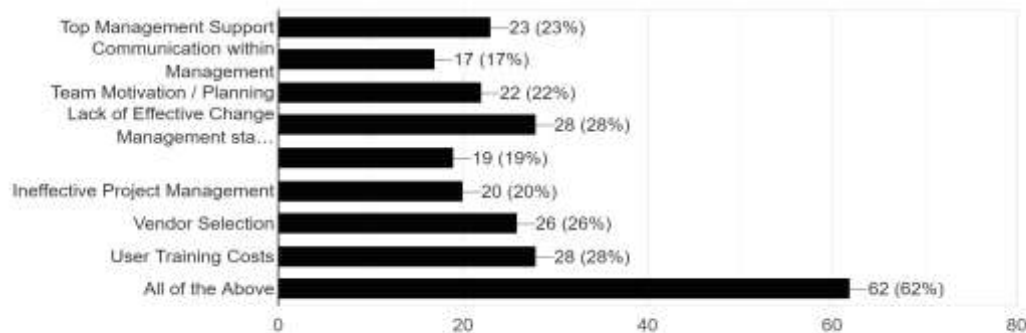
The analysis determines the benefits of ERP implementation, this creates an understanding in the minds of the customer enabling him to review his

current application software and go for an upgrade if necessary.



What were the most Critical Factors enabling the successful ERP software implementation?

100 responses



Thus, the three key issues that could determine the success of an ERP implementation and work towards delivering quicker, better ROI are functionality, technology, and implementation of solution overcoming the deterministic challenges. Not only this but the survey also helps us analyze the current and future market scenario of ERP software implementation.

MAJOR FINDINGS

- ERP systems have large-scale business involvement, internal and external process integration capabilities. They can assist in achieving the strategic competitive advantages. With a centralized database and built in data analysis capabilities, ERP systems provide informational benefits to management decision making.
- As the different parts of the organization relate to each other, people have faster access to information and require less time to do their tasks. This helps to improve the time and resources for decision-making.
- As all the departments and the functions in the organization are integrated and linked to one single database, data needs to be entered only once into the system. It can then be accessed by different departments according to their needs.
- Developing software in-house requires a great amount of investment, experienced professionals and tremendous amount of time. The payback from the in-house system takes an equally longer time.
- As ERP software packages are developed by vendors who have the required expertise, they are basically off the shelf packages that companies pick up that require minor customizations as per company requirements, and so they don't involve an in-depth development like the in-house software.
- The ERP system helps companies to do away with the erroneous ways of carrying out the different business functions and introduces business best practices.
- Most of the problems get resolved as the vendors who develop ERP software packages, take the best ideas from all their customers and incorporate them into their products.
- ERP Systems are already developed to suit the general businesses. But as every company has a slightly different way of operating, only minor changes may be needed to customize the system to suit the company's business requirements.
- Once the information is entered into the single database, everyone in the organization has access to the information and sees the same computer screen.
- In the paper-based system, the order moved from basket to basket around the organization, and often caused delays, errors in processing due to repeated entries by the different departments or got lost. With the ERP system, the order process moves quickly through the organization.
- Sudden and fast changes are bound to increase the scope of ERP in enterprise operations. ERP in its initial phase was back office function orientation and later spread its wings to all the operations in the enterprise.
- Enterprise Resource Planning software has a constant necessity for a restructuring in the technical aspects. The future of the business that has already implemented and deployed ERP remains a big question mark.
- One of the most important determinants of the ERP market in India is finance. Some bigger companies still hesitate to invest in ERP due to the exorbitant costs. It is indeed encouraging to find that a vast majority of



them have realized its benefits and have determined to go for it.

SUGGESTIONS

- A pragmatic approach should be used to implement the ERP system in an evolutionary manner. This means that the entire implementation moves in cycles from the basic to the sophisticated, where the basic features of all the modules are implemented first, and the more sophisticated features are implemented in incremental steps.
- The fundamental mistake committed by an Indian organization is that they view Enterprise Resource planning as an IT solution alone and not as a management tool. Therefore, there is little involvement of the Enterprise Resource Planning and end users during the decision-making process. This lack of end-user involvement results in many breaks in the implementation stages causing frustration, time delays, and unanticipated costs. Hence, it is suggested that it is best to understand the environment and implement the ERP in various verticals such as warehousing, CRM, inventory management and post sales follow up in order to retarget and retain the customer.
- Customize and implement more tailor-made approaches as this would reduce the cost and create a feasible model and increased establishment opportunities among various organizations.

CONCLUSION

In the past, most Indian organizations grew by managing the environment, rather than focusing on their internal efficiencies. With the entry of most efficient foreign players in many of the markets, Indian industry needs to change the way it conducts business to remain competitive. Now, more than ever, Indian manufacturing organizations need to implement ERP systems to improve their efficiency and effectiveness in the marketplace. An Indian economy has reached a level of maturity that demands advanced technology. Many Indian firms already have realized the need for ERP solutions, and the industry related market growth should match the expansion of the sector. India is developing its infrastructure; ERP manpower requirements and the Indian mindset is changing with the times. While the Indian agriculture sector has not yet automated, and there is little potential need for agriculture-based ERP in the foreseeable future, the service sector offers a largely untapped potential. ERP is an important tool to achieve competitive advantage. If an Indian organization is to survive and grow in the global economy, then the ERP is an effective tool

that can integrate the organization, provide faster information for decision making, and cut costs to increase efficiency. The survey not only helped in my market research but it helped me, in segmenting targeting and positioning of the market on a whole and this helped me devise effective sales strategy not only this it also created a base for my sales qualifier questionnaire, which in turn helped me generate effective lead database.

REFERENCES

1. Young B. Moon (2007), "Enterprise Resource Planning (ERP): a review of the literature", *International Journal of Management and Enterprise Development*, Vol. 4, No. 3, pp. 235-264.
2. T. H. Davenport and J. D. Brooks, "Enterprise systems and the supply chain," *Journal of Enterprise Information Management*, vol. 17, pp. 8-19, 2004.
3. J. W. Ross and M. R. Vitale, "The ERP Revolution: Surviving vs. Thriving," *Information Systems Frontiers*, vol. 2, pp. 233-241, 2000.
4. H. A. Akkermans and K. Van Helden, "Vicious and virtuous cycles in ERP implementation: a case study of interrelations between critical success factors," *European Journal of Information Systems*, vol. 11, pp. 35-46, 2002.
5. O. Volkoff, D. Strong, and M. Elmes, "Technological Embeddedness and Organizational Change," *Organization Science*, vol. 18, pp. 832-848, 2007.
6. D. Robey, J. W. Ross, and M.-C. Boudreau, "Learning to Implement Enterprise Systems: An Exploratory Study of the Dialectics of Change," *Journal of Management Information Systems*, vol. 19, pp. 17-46, Summer 2002 2002.
7. C. Sheu, H. R. Yen, and D. Krumwiede, "The effect of national differences on multinational ERP implementation: An exploratory study," *Total Quality Management & Business Excellence*, vol. 14, pp. 641-657, 2003.
8. M. Krumbholz, J. Galliers, N. Coulianos, and N. A. M. Maiden, "Implementing enterprise resource planning packages in different corporate and national cultures," *Journal of Information Technology (Routledge, Ltd.)*, vol. 15, pp. 267-279, 2000.
9. F. Carton and F. Adam, "Analysing the impact of the enterprise resource planning systems roll-outs in multi-national companies," *Electronic Journal of Information Systems Evaluation*, vol. 6, pp. 21-32, 2003.
10. M. Ali and L. Miller, "ERP system implementation in large enterprises – a systematic literature review," *Journal of Enterprise Information Management*, vol. 30, pp. 666-692, 2017.



11. J. Esteves and V. W. Bohórquez, "An updated ERP systems annotated bibliography: 2001-2005," *Communications of the Association for Information Systems*, vol. 19, pp. 386-446, 2007.
12. J. V. Gavidia, "Impact of parent-subsidiary conflict on ERP implementation," *Journal of Enterprise Information Management*, vol. 29, pp. 97-117, 2016.
13. B. Kitchenham, O. P. Brereton, D. Budgen, M. Turner, J. Bailey, and S. Linkman, "Systematic literature reviews in software engineering—a systematic literature review," *Information and software technology*, vol. 51, pp. 7-15, 2009.
14. B. Kitchenham, "Procedures for performing systematic reviews," *Keele, UK, Keele University*, vol. 33, pp. 1-26, 2004.
15. T. M. Somers and K. G. Nelson, "A taxonomy of players and activities across the ERP project life cycle," *Information & Management*, vol. 41, pp. 257-278, 2004.
16. E. J. Umble, R. R. Haft, and M. M. Umble, "Enterprise resource planning: Implementation procedures and critical success factors," *European Journal of Operational Research*, vol. 146, pp. 241-257, 4/16/2003.
17. Y. M. Ha and H. J. Ahn, "Factors affecting the performance of Enterprise Resource Planning (ERP) systems in the post-implementation stage," *Behavior & Information Technology*, vol. 33, pp. 1065-1081, 2014.
18. M. L. Williams and B. C. Wheeler, "The Four Faces of Deploying Global Common Systems: Understanding Global and Local Objectives," *MIS Quarterly Executive*, vol. 8, 2009.
19. M. Haddara and T. Hetlevik, "Investigating the Effectiveness of Traditional Support Structures & Self-organizing Entities within the ERP Shakedown Phase," *Procedia Computer Science*, vol. 100, pp. 507-516, 2016.
20. J. Malaurent and D. Avison, "Reconciling global and local needs: a canonical action research project to deal with workarounds," *Information Systems Journal*, vol. 26, pp. 227-257, 2016. F. Rahimi, C. Møller, and L. Hvam, "Succeeding in process standardization: Explaining the fit with international management strategy.," *Business Process Management Journal*, vol. 22, pp. 1212-1246, 2016.
21. C. C. Law, C. C. Chen, and B. J. Wu, "Managing the full ERP life-cycle: Considerations of maintenance and support requirements and IT governance practice as integral elements of the formula for successful ERP adoption," *Computers in Industry*, vol. 61, pp. 297-308, 2010. P. Ifinedo, B. Rapp, A. Ifinedo, and K. Sundberg, "Relationships among ERP post-implementation success constructs: An analysis at the organizational level," *Computers in Human Behavior*, vol. 26, pp. 1136-1148, 2010.
22. T. Almeida, L. Teixeira, and C. Ferreira, "Enterprise Resource Planning System in a Multinational Enterprise: Users' Attitude Post Implementation," in *Enterprise Information Systems: International Conference, CENTERIS 2010, Viana do Castelo, Portugal, October 20-22, 2010, Proceedings, Part II*, J. E. Quintela Varajão, M. M. Cruz-Cunha, G. D. Putnik, and A. Trigo, Eds., ed Berlin, Heidelberg: Springer Berlin Heidelberg, 2010, pp. 264-273.
23. L. Häkkinen and O.-P. Hilmola, "Life after ERP implementation: Long-term development of user perceptions of system success in an after-sales environment," *Journal of Enterprise Information Management*, vol. 21, pp. 285-310, 2008.
24. V. Vathanophas, "Business process approach towards an inter-organizational enterprise system," *Business Process Management Journal*, vol. 13, pp. 433-450, 2007.
25. Ali, M. and Miller, L. (2017), "ERP system implementation in large enterprises – a systematic literature review", *Journal of Enterprise Information Management*, Vol. 30 No. 4, pp. 666-692. <https://doi.org/10.1108/JEIM-07-2014-0071>.