Develop Construction Project Management Soft Tool for Small Enterprises

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Abstract

Enterprise Resource Planning (ERP) is now being hailed as a foundation for integrating organisation-wide information systems. ERP systems link the entire organisation's operations together, such as accounting, finance, human resources, manufacturing and distribution, etc. Moreover, they also connect the organisation to its customers and suppliers through the different stages of the product or the process life cycle. There are very few studies conducted about implementing ERP systems in the construction industry, particularly for construction contractors. The focus so far has been on client organisations, engineering and design firms. This paper aims to investigate the suitability and implementation status of ERP systems in contractor firms. The methodology employed is a mix of literature review, market studies and detailed questionnaire survey. It is found that the majority of contractor firms have awareness about the ERP systems, but very few organisations have so far implemented such systems. The major reason is that the implementation of any ERP system needs huge investment in time, money and resources. However, when implemented to solve the right problems, these ERP systems can be a powerful tool for business improvement.

Keywords: - *ERP software, ERP system, ERP feature*

INTRODUCTION

The construction industry is highly fragmented. It needs to communicate on a large scale with other related businesses such as material and equipment suppliers, vendors, subcontractors and clients. Construction companies are using construction project management software to improve responsiveness in relation to customers, strengthen supply chain partnerships, enhance organisational flexibility, improve decision-making capabilities, reduce project completion time, and lower costs. Some companies use such ERP software that cost them around lakhs or carors. Due to high cost of software many small companies can't afford it and problems like – They can't generate bill by own, they have to hire a person for this work.

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They cannot make raw material stock because they have to pay high for raw materials, etc. So we made a lite version of ERP software same as windows and Linux, pubg and pubg lite, etc., which will overcome all the problems mentioned above. Due to the lite version and low cost, we can increase outreach.

Objective:

- In this era of technology, we have developed, and designed software that reduces
- Human affords effective time, manpower, cost and error. And increase productivity and efficiency of manpower, by providing software at an affordable cost, easy to use in regional language.
- To reduce the final cost of software, we are going to post company ads in the software like- youtube.
- The small construction company can improve their project management.
- We are providing the best service to do construction work.
- Software is developed according to the user requirements, objective and scope of the project.

LITERATURE REVIEW

(S.Kłos, J.Patalas. 2008) The paper proposes a benchmarking methodology based on ERP system evaluation. The research is based on the case study of three enterprises, X, Y and Z, implementing the same ERP system in 2003. The benchmarking is based on financial ratios and data extracted from the ERP system. The enterprises are investigated against 26 different ratios. The selection of ratios depends on critical goals for ERP system implementation. The benchmarking result shows that the implementation of ERP in enterprises X and Z was very good and almost at the same level (about 30 points). The implementation of ERP in enterprise Y has not produced that good effects. Benchmarking can be repeated only for selected functional areas of an enterprise such as sales, production and logistic.

Joseph Anto, The study's main purpose was to show the enterprise resource planning systems as information technology, its origin, factors for successful ERP implementation, and the critical success factors of ERP systems. The interviews of Construction companies implementing the ERP systems are made through summary and discussion of the successful ERP implementation. The ERP success model will be helpful for the construction industry executives and decision-makers to have a better understanding of the success of ERP system implementation. Organisations can develop their company by using the success model of ERP system implementation.

(Kang Yuena1, Wen Yangeng2, Zhou Qun2 2012) Knowledge management and ERP are generated to adapt to the development of enterprise management forms. This paper begins with the concept, logical comparison of the similarities between ERP and KMS, based on the proposed Multi-Agent based ERP knowledge management system framework. In this research, the following conceptual model based on thinking from the management, software implementation, the three integrated systems perspective of the relationship between ERP and KMS to form enterprises to adapt to the combination of ERP and KMS integration of knowledge management model, which can be powerful to promote knowledge management enterprises.

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(Shadi Abo Abdoa, Abdulaziz Aldhoienab, Hashbol Al-Amribb 2019) Considering the competitive environment in the construction industry, construction companies should improve their efficiency and effectiveness in managing projects. Several IT tools are created to enhance the performance of managing construction projects over their whole life cycle. However, the integration of these systems is considered a big challenge. ERP systems provide a suitable solution for these integration challenges. Many studies have been conducted to study the benefits of ERP systems in construction. However, in order to achieve the benefits of ERP systems, the critical success factors of the implementation process should be investigated.

(Alaska, O*.Pinedo-Cuenca, R. Ahmad 2019) It is essential for SMEs to successfully implement an ERP system to trade in the existing competitive environment; however, due to many SMEs' limited knowledge regarding ERP systems, the literature indicated that a need existed for more research into a framework for selecting appropriate ERP system, primarily for SMEs. Thus, a theoretical framework that SMEs can use to select the most appropriate ERP system was developed in this study. The framework consists of three phases: Define, Evaluate and Select. The framework was developed and validated using a case study approach. The case study results indicated that the proposed procedure is useful for selecting a successful ERP system for SMEs according to the company processes, instead of using so-called "common sense" or blind selection.

(Justyna Patalas-Maliszewska, Sławomir Kłos 2019) The proposed approach is completely consistent with the concept of data, information and knowledge-driven smart manufacturing. Small and medium manufacturing enterprises must implement ERP systems to improve business processes and exchange data with their partners, mostly large companies, such as sales, purchases, etc. It is necessary to undertake activities that will encourage SMEs to conduct processes consistent with the idea of sustainable development. Evermore, SMEs want to produce products profitably and products that do not adversely affect the environment.

Matthew J. Liberatore (April 2001) this paper focuses on future research and project management software in the construction industry. Over the past five years, there has been a significant increase in the usage of PM software. Almost all construction respondents use PM software, and those using software for their projects have nearly doubled. The initial usage of PM software by the construction respondents increased slowly until the 1980s when it increased after the introduction of the PC. Project complexity is the most influential factor used by construction respondents to determine when to use and when not to use PM software. Software capabilities, size of projects and client requests are also strong influencing factors affecting usage.

(Boo Young Chung, Mirosław J. Skibniewski and Young Hoon Kwak 2009) The main purpose of this research was to show the development process of the ERP success model and identify the factors and indicators associated with the ERP success. Most IT/IS research in construction management in the past developed surveys or proposed research models without IT/IS theories because this type of research approach is still relatively new in construction research. Previous

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researchers mainly identified the importance of factors by simply comparing the mean values of factors and ranked them according to their importance, showing the higher mean value as the more important factor.

Mladen Vukomanovi, Mladen Radujkovi, Zlata Dola Ek Alduk (2012) Along with the managerial purposes, the PMS can also serve as a quality management system. Thus, it can act as an enabler of PM and IS an improvement, and as such, it plays an integral part in the management of construction projects. The presence of the PMS becomes even more important when considering the fact that many construction organisations in the transitional economies have no such system in place as management education was not present in SEE during the socialist regime. Furthermore, in IS, resource and IT management have become the most frequent topics of discussion today.

Mrs Parvathy Mohandas This paper tried to identify the major and supporting factors that affect the successful functioning of ERP in a construction firm. Based on the responses received from Kolte Patil and Kalpataru Builders through a structured questionnaire and analysed that factors or variables like output, image, result from demonstrability, internal support, consultant support, system reliability, perceived usefulness, and perceived ease of use can be considered for the successful functioning of ERP system.

CONCLUSION

- By this survey, we found that these all software very uses full, but some of them are given only 2-3 features, some are very costly, some are not working properly etc.
- By using normal software, we have to work 5-6 software for one construction work.
- So here we provide all full use features in one software at an affordable price.

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