Technical Knowledge Management in Construction Industry

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***Abstract*— The construction industry in the India stands for an association among 4 main capital forms namely financial, commercial, property and industrial. This arrangement is ordered by the strategies of the top most organizations in construction sector. Structure of the industry in India is mostly formed by the JV (Joint Ventures) between local and foreign organizations. Usually local shareholders describes for 51 percent of share capital because of 49 percent restriction in foreign ownership in firms registered in the India. Nevertheless, profits distribution is flexible and is unnecessary associated with the ownership percentage**

1. INTRODUCTION

Projects in the construction field have transformed into more interactive, dynamic, and complicated situation. Project managers are continuously needed to fast thoughtful and timely decision making. Thus knowledge is considered as one of the essential capital which contributes towards decision making of the manager and improves the competitive advantage of firm conducting such projects (Carrillo, 2004). In 21stcentury, KM can be technically used by administrators and managers of the construction industries by building knowledge classification system at three main levels like engineering, procurement and construction that is based on business process. Thus the business administration uses the KM in many different formats and it has three main components of usage for data, information and knowledge, overall gaining an intelligent assistance.

II- PROBLEMS

Even though there are numerous benefits associated with the implementation of knowledge management in construction industry at the same time, misunderstanding was seen in the practice of knowledge and management field. Construction sector gives expensive and customized in built facilities at the final process of construction and it highly relies on the input of the knowledge. As a result of management of knowledge, it saves more time and energy and delay reinventing the vehicle was commonly found within the construction sector and being determined to reach greater user satisfaction, control in timing and cost and better innovation. It was predicted by Voetsch et al (2004) that there is significant and positive link between knowledge management and technical skills of project managers with the time performance with relative to the construction projects. Likewise El-Sayegh and Faridi (2006) also agree with the findings of Voetsch et al, 2004 and stated that certain business firms always prefer employees as their biggest asset at the same time have improper handling mechanisms to tackle the knowledge or intellectual knowledge that is exemplify in these employees. Significance of knowledge management is being understood and firms are starting to formulate strategies and invest in systems that will improve them for handling their corporate knowledge.

III- SIGNIFICANCE OF THE RESEARCH

Knowledge is recognized as valuable benefit in any organization which is highlighted by various practitioners and academics. This study explores the idea of technical knowledge management system in Middle East construction industry. This research will assist the construction industry for understanding the necessity of technical knowledge management system. At the same time, this will be very much helpful to the construction industry to explore the role and importance of adopting technical knowledge management system. This research demonstrates the various tools in enhancing the technical skills of employees in construction sector with respect to

Middle East. Further this research would provide various suggestions, strategies which support in creating technical knowledge management specific to Middle East construction project. In addition to these, this research will be eye opener for construction industry gives valuable insights to the future researchers and investigators.

IV- AIM OF THE RESEARCH

The main aim of the study is to analyse technical knowledge management system with respect to construction industry.

V-RESEARCH DESIGN

Hakim (2000) observes that design is primarily concerned with "... aims, uses, purposes, intentions and plans within the practical constraint of location, time, money" and the availability of the researcher. Creswell (2014) believes that researchers must question themselves about the knowledge claims and theoretical perspectives that they are bringing to any research, they must reflect upon the strategies they intend to use within their study which will in turn inform their methods, and have questioned how they will collect and analyze information. Thus a research design helps an investigator to generalize his findings provided he has taken due care in defining the population, selecting the sample, deriving appropriate statistical analysis etc. while preparing the research design. Burns and Grove (2003) define a research design as "a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings". Thus a good research design is one which is methodologically prepared and should ensure that generalization is possible. The research design can be classified into two categories include: conclusive and exploratory research design.

VI- CONCLUSION AND RECOMMENDATIONS

It is recommendable that construction firms in the India should make design reuse an integral part of their project activities. This is necessary in order to manage the dynamics of the industry. For example, the development of new designs based on proven existing designs can guarantee the robustness and reliability of the new designs. It is however important that design reuse be done with a clear rationale in mind. Precisely, construction firms engaging in design reuse should focus on achieving clear objectives such as improving quality while ensuring low project costs and completion of projects within a short duration. The design reuse process should also be properly planned. Failure to plan properly through strategies such as the use of prototypes increases the risk of committing errors. Such errors in turn necessitate reworking which leads to repetitive costs and wastage of resources.

In order for construction firms to benefit from design reuse, it is recommendable that they focus on the creation of internal repositories of knowledge. In specific, information on any designs used in construction projects should be stored and continually updated in order to develop a reliable reference point for future projects. Ideally, the information should be stored in a variety of forms such as design, documents, spreadsheets and project committee notes. In order to enhance ease of use of such information it is important for the construction firms to store the data in standardized formats. Standardization of information performs an important role in limiting instances of limited access due to incompatibility problems.