

4th World Congress and Exhibition on

Construction & Steel Structure

October 16-18, 2017 Atlanta, USA

Risk management in the construction projects facilitation by building information modeling

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Every day thousands of building projects are realized all over the world that each phase of the construction projects are required to have good decisions, which could be possible by the help of Building Information Modeling (BIM) in order to take a step further towards the success of the project. The purpose of BIM is to predict, reduce and avoid the risks and their consequences by the auto coordinated all trade drawings and documents. Risks can also be transferred to other parts of the project in order to achieve the best final results in each area of the project in ahead of time by the help of BIM models. A building project is a process where each activity and phase includes different risks that should be handled by the project participants. Nowadays, the building market is developing very fast and it is important to deliver the project to the client on time and within the budget, each decision made in the conceptual design phase can have an impact on other phases and bring consequences that could be negative for the building project in each phase of a building project, such as conceptual, preliminary, design development and construction execution has to be performed by a project participant according to his role, can also be referred to a project or a project task, because it contains the parts that the project teams work on within a company. The risks related to critical events in the project tasks are managed by the project participants according to their responsibilities defined in the contract documents. The risks managed in the project tasks are an integral part of the risk existing in the building projects, to understand the concept of risks in building projects, it is worth to study how a typical building project is organized and how it works in practice. A good knowledge about the forms of building projects would help to identify the risks in all the phases of the construction projects. The structure of a building project, depending on its scope, varies with the number of project teams and form of management. Also the form of contract plays an important role regarding that, what kind of risk that should be taken into consideration and how to handle it. The aim of this paper is to identify the decisive risk approaches to manage the risk at every phase of the construction from conceptual design to close out to complete the project on time and within the budget facilitation by BIM.

Biography

M Manikandan is the Senior Structural Engineer at Gulf Consult, Kuwait with responsibility for designing and construction consultation of the tall buildings, colleges, shopping complexes, multi-story car parks, hospitals, bridges and deep underground structures by considering the structural requirements and adequate constructible systems to complete the projects within allocated budget and time schedule. Prior to joining Gulf Consult, Kuwait, he has worked as a Structural Engineer at several companies, including RECAFCO, Kuwait, Saeed Hadi Aldoosary EST, Saudi Arabia, where he has completed many precast structures and treatment plant including the deep underground structures with heavy equipment. Notable, he is in the construction industry since past 15 years and has completed many land mark projects in Kuwait as well in Saudi Arabia. He has received his PhD in Risk Management in International Construction Projects as an External Part-time Researcher with Vels University, Chennai, India. He has received Civil Engineering degree from Kamraj University Madurai in 2000 and MBA in Project Management from Sikkim Manipal University, India in 2012. His professional interests focus on construction/project management, structural management and risk management in the construction projects. He has published 50 papers in international and national journals.

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