

A Preparatory Method for Building Construction Implemented in a Case Study in Brazil

Authors : Aline Valverde Arroteia, Tatiana Gondim do Amaral, Silvio Burrattino Melhado

Abstract : During the last twenty years, the construction field in Brazil has evolved significantly in response to its market growing and competitiveness. However, this evolving path has faced many obstacles such as cultural barriers and the lack of efforts to achieve quality at the construction site. At the same time, the greatest amount of information generated on the designing or construction phases is lost due to the lack of an effective coordination of these activities. Face this problem, the aim of this research was to implement a French method named PEO which means preparation for building construction (in Portuguese) seeking to understand the design management process and its interface with the building construction phase. The research method applied was qualitative, and it was carried out through two case studies in the city of Goiania, in Goias, Brazil. The research was divided into two stages called pilot study at Company A and implementation of PEO at Company B. After the implementation; the results demonstrated the PEO method's effectiveness and feasibility while a booster on the quality improvement of design management. The analysis showed that the method has a purpose to improve the design and allow the reduction of failures, errors and rework commonly found in the production of buildings. Therefore, it can be concluded that the PEO is feasible to be applied to real estate and building companies. But, companies need to believe in the contribution they can make to the discovery of design failures in conjunction with other stakeholders forming a construction team. The result of PEO can be maximized when adopting the principles of simultaneous engineering and insertion of new computer technologies, which use a three-dimensional model of the building with BIM process.

Keywords : communication, design and construction interface management, preparation for building construction (PEO), proactive coordination (CPA)

Conference Title : ICBINMCFP 2018 : International Conference on Building Information Models, Current and Future Practice

Conference Location : Dublin, Ireland

Conference Dates : October 22-23, 2018