

Big Data in Construction Project Management: The Colombian Northeast Case

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Abstract : In recent years, information related to project management in organizations has been increasing exponentially. Performance data, management statistics, indicator results have forced the collection, analysis, traceability, and dissemination of project managers to be essential. In this sense, there are current trends to facilitate efficient decision-making in emerging technology projects, such as: Machine Learning, Data Analytics, Data Mining, and Big Data. The latter is the most interesting in this project. This research is part of the thematic line Construction methods and project management. Many authors present the relevance that the use of emerging technologies, such as Big Data, has taken in recent years in project management in the construction sector. The main focus is the optimization of time, scope, budget, and in general mitigating risks. This research was developed in the northeastern region of Colombia-South America. The first phase was aimed at diagnosing the use of emerging technologies (Big-Data) in the construction sector. In Colombia, the construction sector represents more than 50% of the productive system, and more than 2 million people participate in this economic segment. The quantitative approach was used. A survey was applied to a sample of 91 companies in the construction sector. Preliminary results indicate that the use of Big Data and other emerging technologies is very low and also that there is interest in modernizing project management. There is evidence of a correlation between the interest in using new data management technologies and the incorporation of Building Information Modeling BIM. The next phase of the research will allow the generation of guidelines and strategies for the incorporation of technological tools in the construction sector in Colombia.

Keywords : big data, building information modeling, tecnology, project manamegent

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