

## ABSTRACT

Construction industry is still basically the same as it was hundreds of years ago, from a set of drawings, a building is erected. For the most part, these drawings are never without errors and omissions, causing many delays, multiple change order items, and late projects completion. Building Information Modeling (BIM) software helped out the designers and architects to design and construct the building digitally before the construction phase can start on site. On other word this simulation gives the project team the opportunity to examine the building and solve any problem. Moreover BIM can enhance productivity in construction, reduce requests for information, eliminate coordination problems, reduce construction time, and improve quality.

Understanding that BIM software has to offer and implement into the construction industry can be the next challenge will face the construction sector. The aim of this research is to understand the benefits and obstacles of BIM and to explore the current uses of BIM in Sudanese construction industry and why organization are not fully adopting BIM and also to identify obstacles and challenges that face the implementation of BIM. Hence, this research was conducted through literature review and a questionnaire survey in order to achieve these objectives.

The research concludes that BIM is in the early stage of implementation and has many obstacles that could slow down the adoption, such as training, cost of implementation, and lack of demands from clients and governments bodies. Also the questionnaires survey showed that some sophisticated software has begun to use widely in Sudanese construction industry such as Revit architecture Revit structure which is consider a great indicator to start adopting BIM. Finally can be concluded from this research, Sudanese construction industry has great opportunity to adopt and implement BIM in near future.

**Keywords:** Building Information Modeling, Construction industry, Productivity, challenges, Obstacles, Implementation, Cost, Improve.