

ADOPTION OF BIM TO REDUCE CLAIMS IN SRI LANKAN CONSTRUCTION INDUSTRY

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Degree of Master of Science in Construction Law and Dispute Resolution

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DECLARATION

I declare that this is my own work, and this dissertation does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other University or Institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text. I retain the right to use this content in whole or part in future works (such as articles or books).

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Date: .01.2026

The above candidate has carried out research for the Masters dissertation under my supervision. I confirm that the declaration made above by the student is true and correct.

Name of Supervisor: Ch. QS. Prof. (Mrs). Anuradha Waidyasekara

Signature of the Supervisor:

Date:

DEDICATION

*To my beloved parents who upgraded my life providing their boundless love, care
and encouragement*

*To my all relatives and friends for their valuable support to make this research
success*

*To my dear research supervisor Ch. QS. Prof. (Mrs). Anuradha Waidyasekara for
her great supervision to make this success*

I dedicated this research to all of them

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ABSTRACT

Disputes and claims are unavoidable in the construction industry due to its inherent characteristics. Construction companies throughout the world are increasingly considering how to embrace new ideas and engage with new techniques in the management of construction claims due to the growing interest in modern building processes and new technologies. The construction sector has been enhanced by Building Information Modeling (BIM), a potent combination of technologies for design, construction, and management. When considering the Sri Lankan construction industry, it requires a faster and effective Claim Management (CM) and claim reduction techniques with the gradual increase of the complexity and number of construction projects. Hence, there is a pressure to accelerate the system digitalisation since the technology can manage more complicated claims in Sri Lankan construction industry. Hence, this research was conducted with the aim of investigating the potential of BIM to reduce and manage construction claims in the Sri Lankan construction industry. Accordingly, a comprehensive literature review was conducted followed by semi-structured interviews with 10 construction industry claims specialists selected through purposive sampling method under the qualitative research approach. The collected data were analysed through thematic analysis.

According to the findings, BIM is not broadly used in Sri Lankan construction industry, but initially used for such as quantity measuring, costing, Revit, cost X like software. However, most of the interviewees were not satisfied with the current BIM adaptation level in Sri Lanka. Besides, all the interviewees were aware about claims, causes of claims and CM process. However, the study revealed that interviewees were not satisfied with the current CM process and proposed several suggestions to improve CM process in Sri Lankan construction industry. Interviewees stated that BIM features to control the causes of claims like Clash Detection, Project visualization and etc... BIM features can be effectively used in the CM process in Sri Lanka. The benefits include faster and more effective processes, quick identification and mitigation of claims, accurate design and costing. The findings of this research will assist the Sri Lankan construction industry to enhance the efficiency and effectiveness of CM process and Claim Reduction.

Keywords: Building Information Modeling (BIM); Claims; Claims Management (CM); Construction Industry; Sri Lanka.

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LIST OF ABBREVIATIONS

Abbreviation	Description
AEC	Architecture, Engineering and Construction
AECO	Architecture, Engineering, Construction and Operations
AECOO	Architecture, Engineering, Construction, Owner and Operations
AIA	American Institute of Architects
BIM	Building Information Modeling
CAD	Computer Aided Design
CDE	Common Data Environment
CIC	Construction Industry Council's
CM	Claim Management
COBie	Construction Operations Building Information Exchange
DR	Dispute Resolution
IFC	Industry Foundation Classes
IPD	Integrated Project Delivery
UK	United Kingdom
USA	United State of America

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