



# **Impact of Real-Time Information Management on the Timeliness of Construction Dispute Settlements**

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I certify that I have read this thesis and that, in my opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Science.

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# DECLARATION

This is to certify that the work is entirely my own and not of any other person, unless explicitly acknowledged (including citation of published and unpublished sources). The work has not previously been submitted in any form to the Sri Lanka Institute of Information Technology or to any other institution for assessment for any other purpose.



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# ABSTRACT

## Impact of Real-Time Information Management on the Timeliness of Construction Dispute Settlements

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The construction industry's complexity, often involving numerous stakeholders, frequently leads to disputes that disrupt project timelines and escalate costs. Traditional dispute resolution methods are frequently hindered by delayed or incomplete information flows, limiting efficiency. This thesis explores the potential of Real-Time Information Management (RTIM) to enhance dispute resolution timeliness and effectiveness within the construction sector. RTIM offers immediate data-sharing capabilities through tools like digital project management software and Building Information Modeling (BIM), fostering rapid communication and decision-making. This study specifically investigates RTIM's impact on reducing dispute settlement times by addressing delays related to information fragmentation and procedural inefficiencies in traditional dispute processes. Through a mixed-methods approach, combining case studies and interviews, the research reveals that RTIM can significantly reduce the time required for dispute resolution by improving data accessibility and accuracy, thus enabling prompt, data-driven responses. The findings highlight the advantages of RTIM in mitigating delays, enhancing communication among stakeholders, and promoting transparency. However, challenges such as implementation costs and data security are noted as potential barriers. This study provides construction professionals and policymakers with insights into RTIM's role in modernizing dispute management practices, contributing to better project outcomes and streamlined operations. The research underscores RTIM's value in the digital transformation of construction project management and offers practical recommendations for effective RTIM integration in dispute management.

**Key words:** Construction Disputes, Real-Time Information Management, Dispute Resolution Timeliness

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## Table of Contents

DECLARATION.....	2
ABSTRACT.....	3
ACKNOWLEDGEMENT .....	4
List of figures.....	8
Chapter 1    Introduction.....	9
1.1    Background .....	9
1.2    Research Problem.....	10
1.3    Objectives.....	10
1.4    Significance of the Study .....	11
1.5    Definition of Key Terms.....	12
1.6    Structure of the Thesis.....	13
Chapter 2    Literature Review.....	14
2.1    Overview of Real-Time Information Management (RTIM) in Construction .....	14
2.1.1    Definition and Evolution of RTIM .....	14
2.1.2    Applications of RTIM in Construction .....	19
2.1.3    Challenges and Limitations of RTIM Implementation .....	24
2.2    Construction Dispute Resolution Methods .....	31
2.2.1    Common Causes of Disputes in Construction Projects .....	31
2.2.2    Emerging Dispute Resolution Techniques in Construction .....	39
2.3    Real-Time Information Management in Dispute Resolution.....	45
2.3.2    Preventing Dispute Escalation with Real-Time Data .....	48
2.3.3    Limitations and Barriers to RTIM Adoption in Dispute Resolution.....	49
2.4    Gaps in the Literature.....	52
2.4.3    Gaps in Cross-Industry Research.....	56
2.5    Chapter Summary.....	57
Chapter 3    Research Design and Methodology .....	60

3.1	Research Philosophy and Approach .....	60
3.2	Research Strategy .....	60
3.3	Data Collection Methods.....	60
3.3.1	Questionnaire Structure .....	61
3.4	Data Analysis Techniques .....	62
3.4.1	Triangulation for Enhanced Validity .....	62
3.4.2	Data Visualization .....	62
3.4.3	Research Concept Hypotheses Model .....	63
3.4.4	Hypotheses Model .....	64
Chapter 4	Findings and Analysis .....	65
4.1	Tools and Techniques for Quantitative Data Analysis .....	65
4.2	Data Processing .....	65
4.3	Quantitative Data Analysis and Interpretation .....	66
4.4	Tools and Techniques for Qualitative Data Analysis .....	66
4.4.1	Presentation of Themes and Sub-Themes with Illustrative Quotes .....	67
4.5	Motivations for Adoption .....	71
4.6	Challenges Identified.....	72
4.7	Adoption Strategies .....	73
Chapter 5	Discussion .....	75
5.1	Interpretation of Findings.....	75
5.1.1	Qualitative Findings.....	75
5.1.2	Qualitative Findings.....	79
5.1.3	Comparison of Qualitative and Quantitative Findings .....	83
5.2	Implications for Practice .....	84
5.3	Theoretical Implications.....	87
Chapter 6	Conclusion and Recommendations.....	89
6.1	Summary of Key Findings .....	89

6.2	Practical Recommendations .....	90
6.3	Limitations of the Study .....	92
6.4	Future Research Directions .....	93
Chapter 7	References .....	94



## List of figures

Figure 1 - Conceptual Diagram.....	64
Figure 2 - RTIM Usage in the Construction Industry .....	80
Figure 3 - Reduction in Dispute Resolution Timeline .....	81
Figure 4 - RTIM Budget Allocation in Construction Projects .....	82