

Posten Book



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CONTENTS

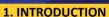
- 01 Contents
- 02 Preface
- 03 Welcome remarks
- 04 Exhibition layout
- **05** Event programme
- **06 List of entries**
- 07 Poster category: Academician & Professionals
- **08** Poster category: Postgraduate
- Poster category: Undergraduate
- 10 Appreciation

CONCEPTUAL FRAMEWORK OF CONSTRUCTION PROFESSIONALS' BIM **COMPETENCIES ASSESSMENT**

20 JANUARY 2023

International Invention, Innovation & Design for Built Environment and Engineering 2023







- ding Information Modelling Real-time collaboration
 - Greater visibility
 - Better decision making

4. RESEARCH METHODOLOGY

Literature Review - Narrative

A defined literature search from January 2011 - January 2023

CONCEPTUAL FRAMEWORK

Google Science Academia Scholar Direct (n=4,587) (n=15,100)(n=1,057)

> Citation screened after duplicated removed (n=40)

Full-text publications reviewed for potential inclusion (n=32)

> Additional references identified by manual research (n=4)

Excluded (n=10)

- No methods described
- Importance of journal
- Number of references
- Contents Redundancy

Total articles included (n=24)

2. PROBLEM STATEMENTS



tool to assessment evaluate the level of BIM competencies (Memon and Rahman, 2014; Ishak and Fadzil, 2021)

3. OBJECTIVES



To illustrate the conceptual framework in BIM Competencies developing Tools construction Assessment for professionals.

5. FINDINGS



Issues

ce of BIM

Solutions

ISSUES

- Unaware of the current
- BIM competency level Lack of knowledgeable workforce among construction stakeholders Lack of enforcement and proper guideline to
- implement BIM Absence of assessment tool in the Malaysian Construction Industry

Current practices of RIM in

Malaysian

construction industry

Proposed Improvement of

construction industry

the Malaysian

SOLUTIONS

- Identification current level of individual competencies in implementation
- of BIM Identification initiatives that need to be fulfilled by construction professionals in order to be BIM-competent

via **BIM Competency** Framework

Assessment tool for BIM professionals to be competent in order to involve in project with BIM implementation



BIM-Competent Initiatives

Results - Align with National Agenda 1. Twelfth Malaysia Plan (2021-2025)

- Leverage mechanization through utilization of disruptive technology to expedite project completion
- Promote green and resilient city tools

2. National Construction Policy 2030

- Integrate BIM in all construction projects to improve quality, and productivity and minimize inefficiencies
- Construction 4.0 Strategic Plan (2021-2025)
- Shaping the construction industry in preparation for Construction 4.0
- PWD Strategic Plan (2021-2025)
- Achieve BIM implementation up to 50%-80% of project in Malaysia

6. NOVELTY



Assist in narrowing down the gap in BIM implementation



Supporting initiatives of increasing productivity construction projects through innovative technologies.



7. CONCLUSIONS

The conceptual framework developed is to illustrate and assist in developing the BIM Competency Framework to identify existing problems that lead to incompetent construction stakeholders and the activities that could improve the competency of construction professionals in the BIM organisation. Hence, it is expected to be able to reflect the Government's aim to promote successful BIM in the Malaysian construction industry, especially in terms of people, process, technology, policy, information, and organization.