



UNIVERSITI  
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Cawangan Perak



## **BUILDCON2023**

**COMPILATION OF PROJECT INNOVATION IDEAS  
SEMESTER MARCH – AUGUST 2023**

*EMBRACING SMART CONSTRUCTION TRANSFORMATION*

# **BUILDERS' CONVENTION DAY 2023**

**Department of Built Environment Studies and Technology  
College of Built Environment  
Universiti Teknologi MARA Perak Branch**

**BUILDCON 2023**  
**COMPILATION OF PROJECT INNOVATION IDEAS**  
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**Organised by**  
Department of Built Environment Studies and Technology  
College of Built Environment  
Universiti Teknologi MARA Perak Branch  
Malaysia

# **BUILDCON 2023**

## **COMPILATION OF PROJECT INNOVATION IDEAS**

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#### **Editors**

*Siti Akhtar Mahayuddin*

*Noor Rizallinda Ishak*

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*Sallehan Ismail*

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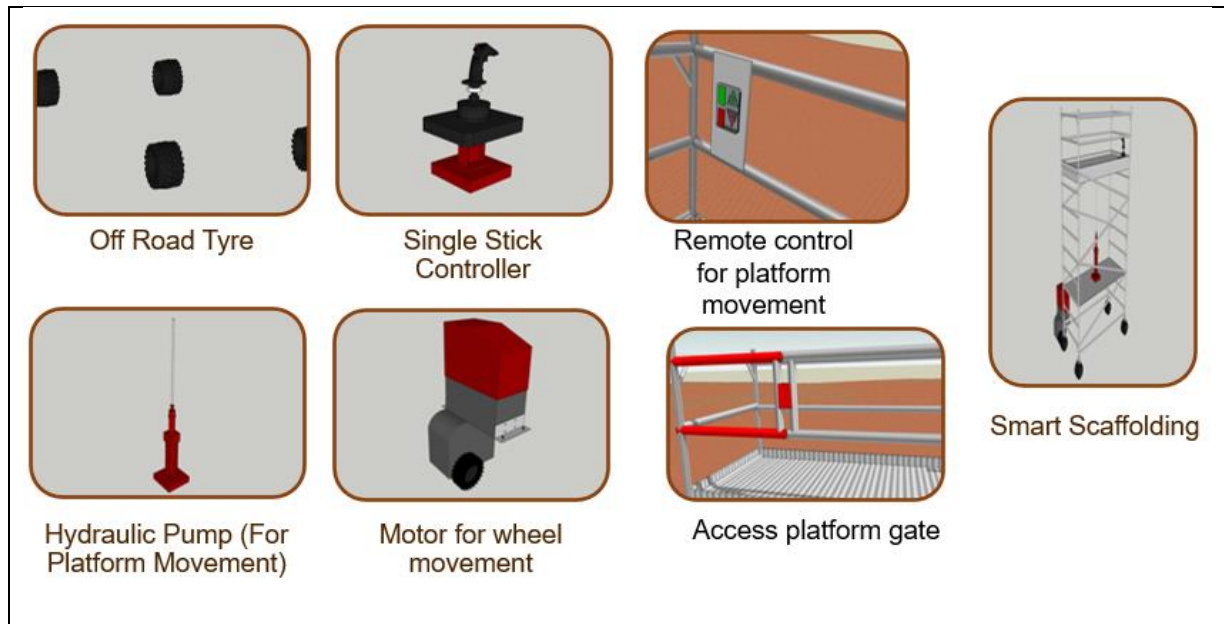
## SMART SCAFFOLDING

Muhammad Afiq Mohd Farid<sup>1</sup> and Nor Azizah Talkis<sup>2</sup>

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Smart Scaffolding

### Innovation Idea:

This study concentrates on proposing an innovative idea to solve the problem in scaffolding construction. Scaffolding is a structure that allows work at elevated heights while ensuring user safety. The structure is widely used on construction sites to gain access to elevated and hard-to-reach areas. It is emphasised that key elements affecting the safety of scaffolding, including anchors, supports, platforms, guardrails, and toe-boards, have been considered. Each of these elements was assessed in every scaffold under consideration. Thus, gaining a better understanding of the actual issues is deemed to be important. As for that, review from the previous studies is important in which the problem related to the said issues can be clearly identified. Based on the review, several issues related to the causes of failure in scaffolding have been identified. Therefore, an innovation idea has been proposed as an improvement to solve the identified issues, hence enhancing the quality of scaffolding. The proposed innovation idea involves the creation of a singular scaffolding named “Smart Scaffolding”. This concept builds upon previous and current innovation projects related to the topic. Even though the idea of this innovation draws from previous innovations, it presents a notable improvement over previous innovations. In terms of fundamental outcomes, it is believed that “Smart Scaffolding” will yield a positive impact on the construction industry.

Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim  
Rektor  
Universiti Teknologi MARA  
Cawangan Perak



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Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

“BERKHIDMAT UNTUK NEGARA”

Saya yang menjalankan amanah,

**SITI BASRIYAH SHAIK BAHARUDIN**  
Timbalan Ketua Pustakawan

*nar*

*Setuju.*

*27.1.2023*

PROF. MADYA DR. NUR HISHAM IBRAHIM  
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