



UNIVERSITI
TEKNOLOGI
MARA

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**

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Organised by
Department of Built Environment Studies and Technology
College of Built Environment
Universiti Teknologi MARA Perak Branch
Malaysia

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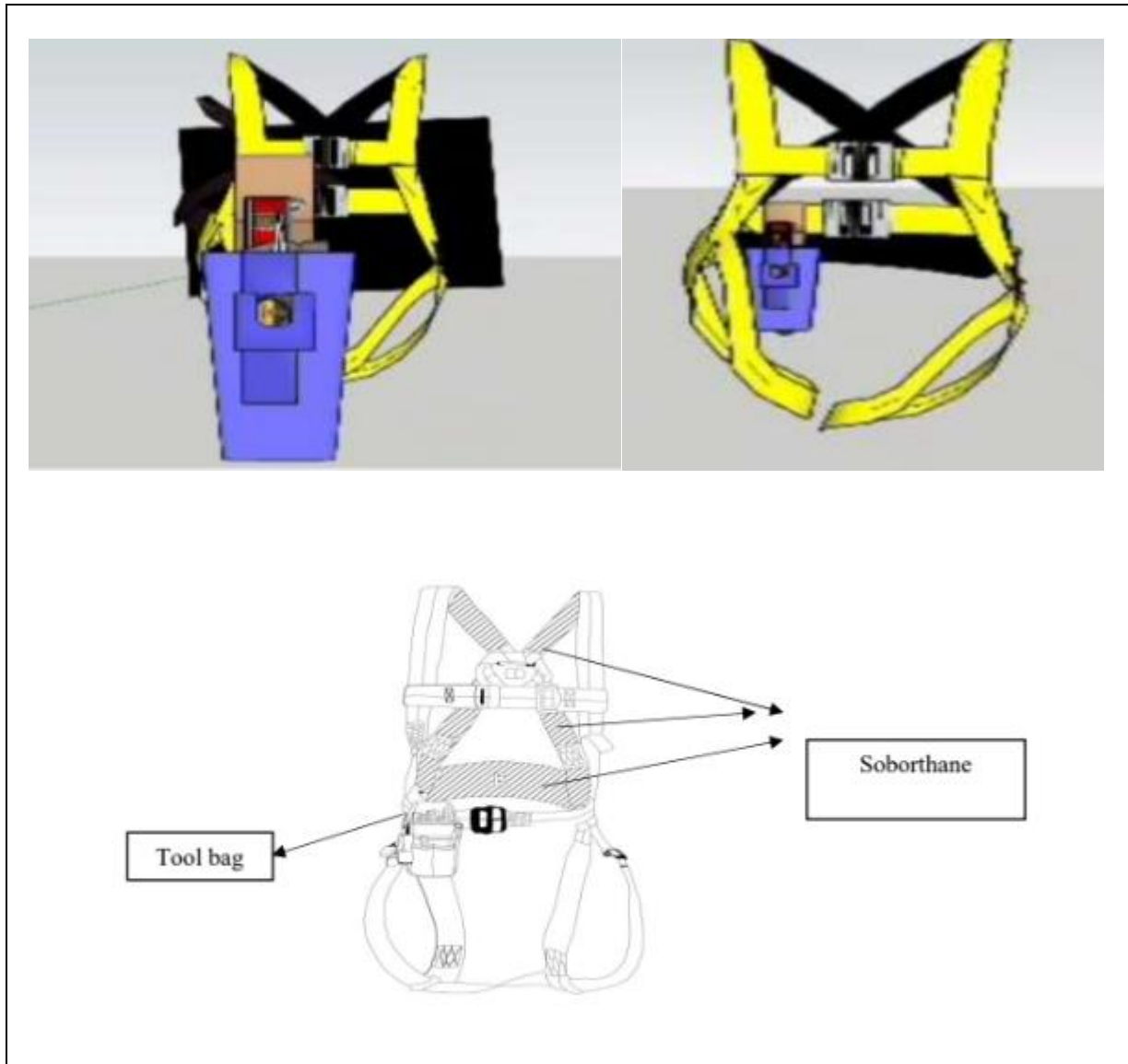
ADVANCE SAFETY HARNESS

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Advance Safety Harness

Innovation Idea:

This study focuses on worker safety on construction sites because on-site accidents are among the most prevalent. This study addresses the issue of injuries resulting from falls at construction sites, especially those involving tall buildings. The aim of the study is to minimise accidents involving falling objects and reduce injuries resulting from falls from high places. The objective is to design an early safety harness, create a simulation based on an early safety improvised design, assess the performance of state-of-the-art safety harnesses, and demonstrate entrepreneurial skills in proposing marketable safety harnesses. The methods involved in this study are document analysis, design thinking, and 3D

modelling. This product is depicted in SketchUp software. Document analysis was employed to gather information about the safety harness. The result of this study is an improved tool, namely the advance safety harness. It now includes a pressure-absorbing device, sorbothane, and a small tool bag for storing tools used at elevated workspaces. Sorbothane is the best material capable of absorbing pressure up to 94.7%. Sustainable Development Goal (SDG) no 8 and 17 were selected for this study. The SDG numbers portray the proportion of staff working with collections in a safe and secure work environment. For future researchers, it is hoped that this product will be available in a physical form.

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



Tuan,

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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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