



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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SAFETY BOOT WITH PRESSURE SENSOR LED LIGHT

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Safety Boot With Pressure Sensor LED Light

Innovation Idea:

In general, the construction industry is a major contributor economic growth and plays a crucial role in shaping a country's image. Given the industry's significance, this research focuses on improving the current safety boots, which are crucial safety gear on construction sites. The research problem addressed in this study includes a lack of safety awareness, poor management, and hazardous working environments. The aims of the research are to identify the construction workers who did not wear safety boots on the construction sites. In addition, the methods used to get information are design thinking, document analysis, review of secondary data, and modelling using SketchUp software. Therefore, the finding of this report are creation of the product idea, development of the proposed product, performance evaluation of the product and marketability potential of the product. The creation of safety boots featuring a pressure sensor light-emitting diode (LED) light offers an advantage to its consumer, especially for construction workers in Malaysia. This product was created as part of this project to ensure that all construction workers are equipping themselves with the supplied boots when working. The device intends to diversify the usage of cutting-edge technology in industrial construction while making it easier to identify employees who are wearing Personal Protection Equipment (PPE) when they are at work. The United Nations Sustainable Development Goal No. 9 supports economic growth and human wellbeing by ensuring that infrastructure is reliable, strong, and of the highest calibre. In addition, this enhanced safety boots were found to have a commercial potential. Finally, the recommendation for this product is that in the future, it should be transformed into a tangible prototype. This prototype can be tested using a computer to verify the functionality of the pressure sensor working as intended. This is necessary because currently, the product is only represented using SketchUp software for presentation purposes.

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

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
Universiti Teknologi MARA
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Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

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Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
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Setuju.

27.1.2023

PROF. MADYA DR. NUR HISHAM IBRAHIM
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