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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
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Malaysia

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RADIO FREQUENCY IDENTIFICATION (RFID) INVENTORY TAG

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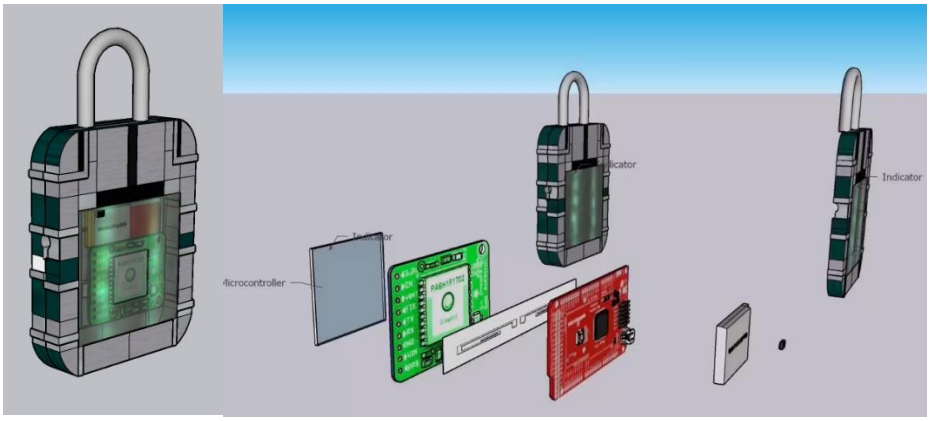

Radio Frequency Identification (RFID) Inventory Tag

Innovation Idea:

This research delves into the transformative potential of RFID inventory tags, aiming to revolutionise stock management systems and address persistent challenges in traditional inventory methods. Despite the existence of RFID technology for over six decades, its continued implementation remains pivotal in contemporary markets, offering a powerful solution to enhance efficiency and accuracy in stock management. Conventional inventory management techniques often struggle with slow tracking processes of incoming and outgoing stock, leading to detrimental consequences like missed sales opportunities, inaccurate inventory planning, and delays in restocking. The lack of real-time visibility in traditional systems hampers businesses' ability to promptly monitor inventory movement and respond rapidly to fluctuations in demand or supply. To overcome these limitations, the research passionately advocates for the seamless integration of RFID electronic tags on the production line and harnessing the automation and monitoring capabilities bestowed by RFID technology. The primary objectives encompass streamlining stock checking and restocking procedures, mitigating errors in stock checking, and establishing real-time tracking mechanisms for remaining and incoming stocks. By seamlessly implementing RFID inventory systems alongside sophisticated number-crunching software, warehouse efficiency is poised to witness a substantial upswing, ushering in reduced costs and the potential for significant savings that can be judiciously allocated across diverse business facets. Importantly, the research findings unequivocally validate that RFID implementation yields higher inventory accuracy in contrast to manual checks and conventional monitoring techniques. This particular advantage assumes critical significance in sectors like retail, perennially grappling with the exigent challenge of maintaining precise inventory records. Ultimately, this research celebrates the transformative power of RFID inventory tags, underscoring their unparalleled potential to usher in innovation and efficiency, thereby revolutionising stock management practices across diverse industries.

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