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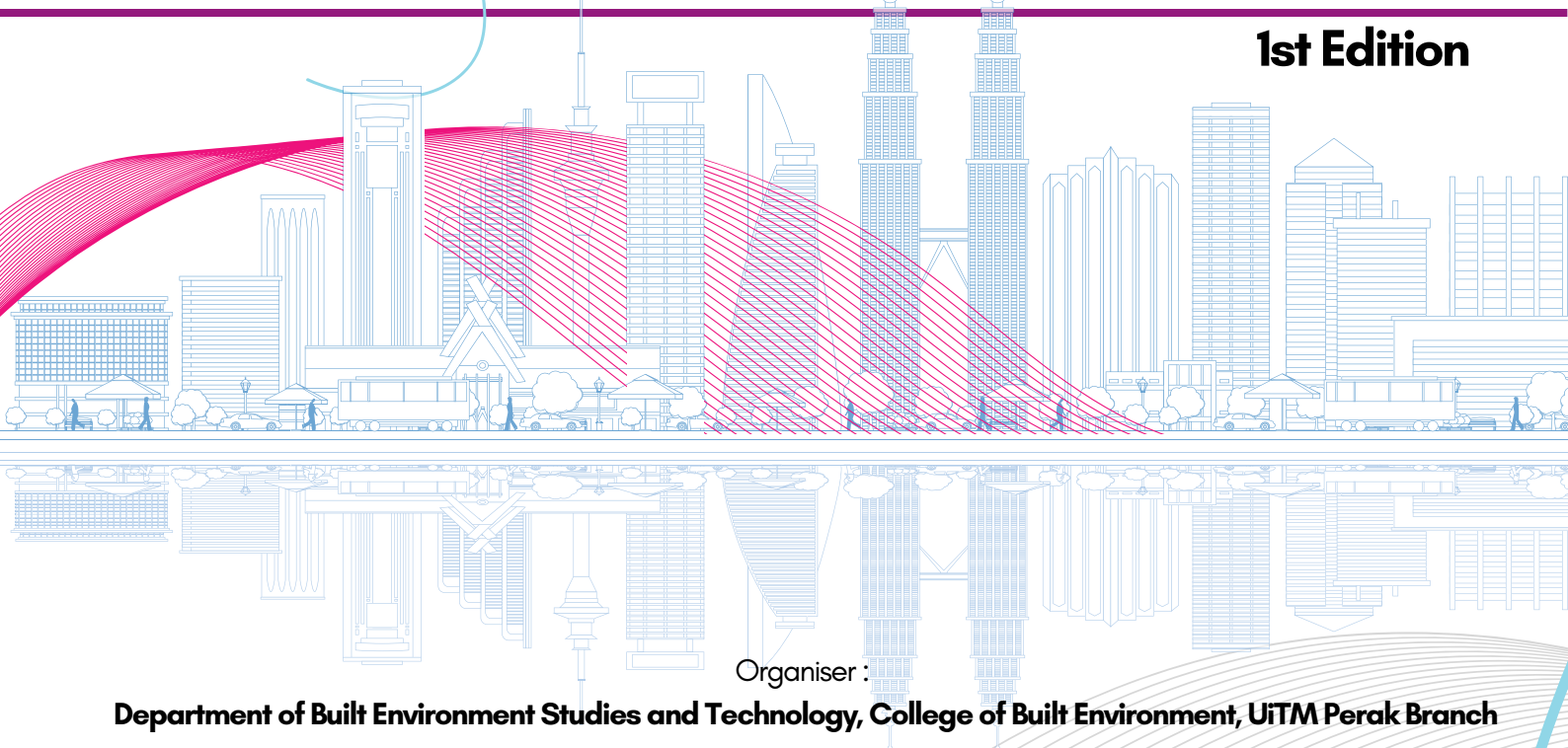
Cawangan Perak

e - Proceedings



Proceeding for International Undergraduates Get Together 2024 (IUGeT 2024)
"Undergraduates' Digital Engagement Towards Global Ingenuity"

1st Edition



Organiser :

Department of Built Environment Studies and Technology, College of Built Environment, UiTM Perak Branch

Co-organiser :

INSPIRED 2024. Office of Research, Industrial Linkages, Community & Alumni (PJIMA), UiTM Perak Branch

Bauchemic (Malaysia) Sdn Bhd

Universitas Sebelas Maret

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Publication date :

October 2024

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Perpustakaan Negara Malaysia

Cataloguing in Publication Data

No e- ISBN:

e-Proceeding IUGeT 2024 1st Edition

e ISBN 978-967-2776-40-6



Unit Penerbitan UiTM Perak.

Cover Design: Muhammad Anas Othman
Typesetting : Arial

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The Petalon

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ABSTRACT

Our outdoor fusion timber furniture design marries the timeless elegance of timber with modern innovation to create a harmonious blend of aesthetics and functionality. Inspired by nature's organic forms, this furniture seamlessly integrates renewable energy technology, modular versatility, and ergonomic comfort to enhance outdoor living spaces. Crafted from sustainably sourced timber fused with weather-resistant materials, it offers durability and resilience against the elements. The design's key features include solar-powered functionalities, customizable configurations, and integrated storage solutions, catering to diverse user needs and preferences. Targeting homeowners, landscape architects, and hospitality businesses, this furniture enriches residential gardens, commercial spaces, and public parks with its aesthetic appeal and practical benefits. With a focus on sustainability, user experience, and versatility, our outdoor fusion timber furniture sets a new standard for eco-friendly and stylish outdoor seating solutions.

KEYWORDS: Timber, petal, solitary, renewable, sustainable

DESIGN DESCRIPTION

The Petalon design draws inspiration from the delicate yet resilient structure of a petal, harmonizing nature-inspired aesthetics with functional outdoor living. The purpose is to offer an inviting and visually captivating seating solution for outdoor spaces, enhancing relaxation and social gatherings while seamlessly blending with natural surroundings.

KEY FEATURES

Petal-Inspired Silhouette:

The furniture's form mimics the gentle curves and organic lines of a petal, creating a visually striking and inviting aesthetic.

Durable Materials:

Crafted from weather-resistant materials such as powder-coated aluminum and treated timber, ensuring longevity and minimal maintenance even in outdoor environments.

Integrated Storage: Some variants feature built-in storage compartments, seamlessly blending functionality with aesthetics.

Functionality and Performance:

The furniture's functionality revolves around providing comfortable seating and enhancing outdoor experiences. Its robust construction ensures stability and durability, capable of withstanding outdoor elements like sun exposure, rain, and temperature fluctuations without compromising performance or aesthetics.

User Interface and User Experience:

The design prioritizes user comfort and ease of use. Its intuitive layout and ergonomic features ensure a pleasant seating experience for users of all ages. The modular design facilitates effortless assembly and reconfiguration, empowering users to adapt the furniture to their evolving needs and preferences.

Fusion Timber Aspects:

For models incorporating timber elements, sustainable sourcing, and responsible forestry practices are emphasized. Fusion timber techniques ensure the integration of natural wood aesthetics with the durability and weather resistance required for outdoor furniture, striking a balance between environmental consciousness and functional design.

Target Audience:

The target audience includes outdoor enthusiasts' students who seek personal space with stylish and durable seating solutions.

Applications and Use Cases:

Residential Gardens and Patios: Enhance outdoor living spaces with inviting seating arrangements.

Commercial Establishments: Beautify restaurant terraces, hotel courtyards, and café gardens to attract customers and create memorable dining experiences.

Public Parks and Recreation Areas: Provide comfortable seating options for visitors to relax and enjoy nature.

Benefits and Advantages:

Aesthetic Appeal: Elevate outdoor spaces with eye-catching petal-inspired design.

Durability: Weather-resistant materials ensure longevity and minimal maintenance.

Versatility: Modular design allows for flexible configurations to suit diverse settings and preferences.

Technical Specifications:

Materials: Reclaimed teak wood, powder-coated aluminum.

Weight Capacity: Designed to support typical seating loads with stability and safety.

NOVELTY AND UNIQUENESS

This design revolutionizes traditional seating solutions by seamlessly integrating renewable energy technology and interactive features. With built-in solar panels, it harnesses the power of the sun to generate electricity for an electromagnetic charging surface, providing convenient device charging for users. The addition of hidden storage beneath the seating ensures safety and functionality, offering a unique blend of sustainability, technology, and practicality that sets it apart from conventional outdoor furniture options.

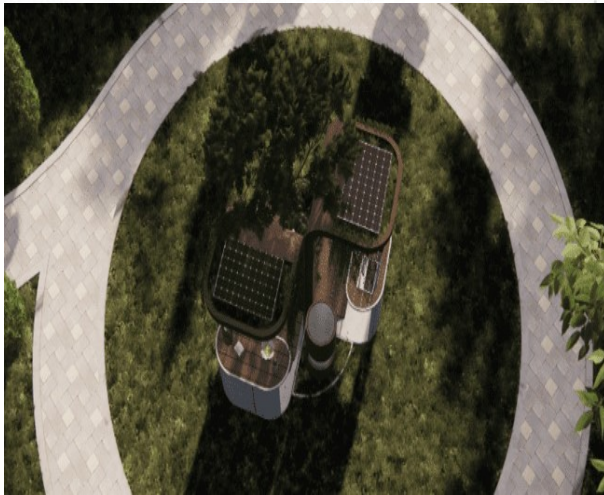
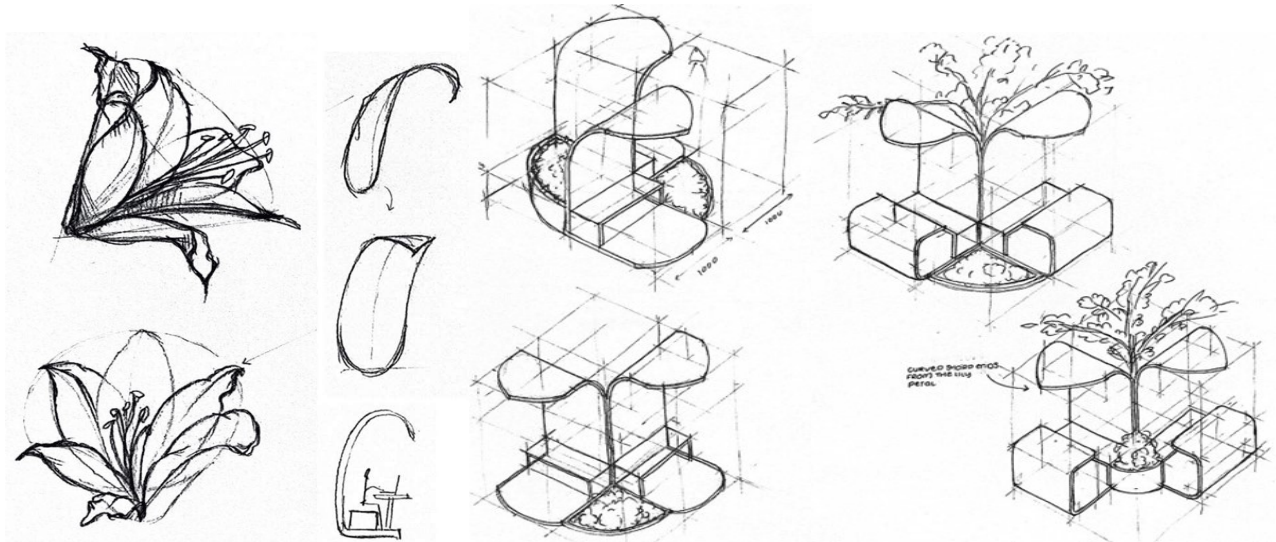


Figure 1: Top view



Figure 2: Back view



Figure 3: Front view



Figure 4: Back view

BENEFITS TO MANKIND

This innovative outdoor furniture design offers numerous benefits across various aspects. By utilizing renewable energy technology, it addresses environmental concerns and reduces reliance on traditional power sources. The integration of an electromagnetic charging surface enhances user convenience, improving the quality of outdoor experiences. Additionally, the hidden storage promotes safety and functionality, solving critical problems of clutter and security. Embracing sustainability and technology, this design sets a precedent for eco-friendly outdoor solutions, contributing to a more environmentally conscious lifestyle and fostering a culture of innovation and efficiency.

COMMERCIAL POTENTIAL

The commercial potential of this outdoor furniture design is promising. Market demand for sustainable and innovative outdoor solutions continues to grow, presenting a sizable opportunity. Its competitive advantage lies in its unique combination of renewable energy technology, convenience features, and hidden storage, setting it apart from conventional offerings. A scalable business model can capitalize on this demand while ensuring cost-effectiveness and regulatory compliance. Profit margins can be optimized through efficient production methods and strategic pricing. Intellectual property protection and certifications further enhance market positioning and credibility, fostering long-term success and growth in the outdoor furniture market.

CONCLUSION

Our outdoor furniture design takes cues from the delicate yet resilient structure of a petal, infusing nature-inspired aesthetics into functional outdoor living. By seamlessly blending organic forms with practical design elements, our purpose is to create an inviting and visually captivating seating solution for outdoor spaces. Beyond mere functionality, our furniture aims to enhance relaxation and facilitate social gatherings, fostering memorable outdoor experiences. With its harmonious integration into natural surroundings, it not only provides comfort but also elevates the ambiance of any outdoor setting, creating a tranquil oasis for individuals to unwind and connect with nature.

ACKNOWLEDGEMENT

To my esteemed lecturers and the organizations whose invaluable support propelled the success of my outdoor furniture design, I extend my deepest gratitude. Your guidance, expertise, and unwavering encouragement have been instrumental in shaping this project from conception to fruition. Your belief in my vision, coupled with your generous contributions of resources and mentorship, have truly made a difference. I am profoundly grateful for the opportunity to learn and grow under your guidance, and I am honored to have such esteemed individuals and organizations. Thank you for your invaluable role in this journey towards innovation and achievement.

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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Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

nar

Setuju.

27.1.2023

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