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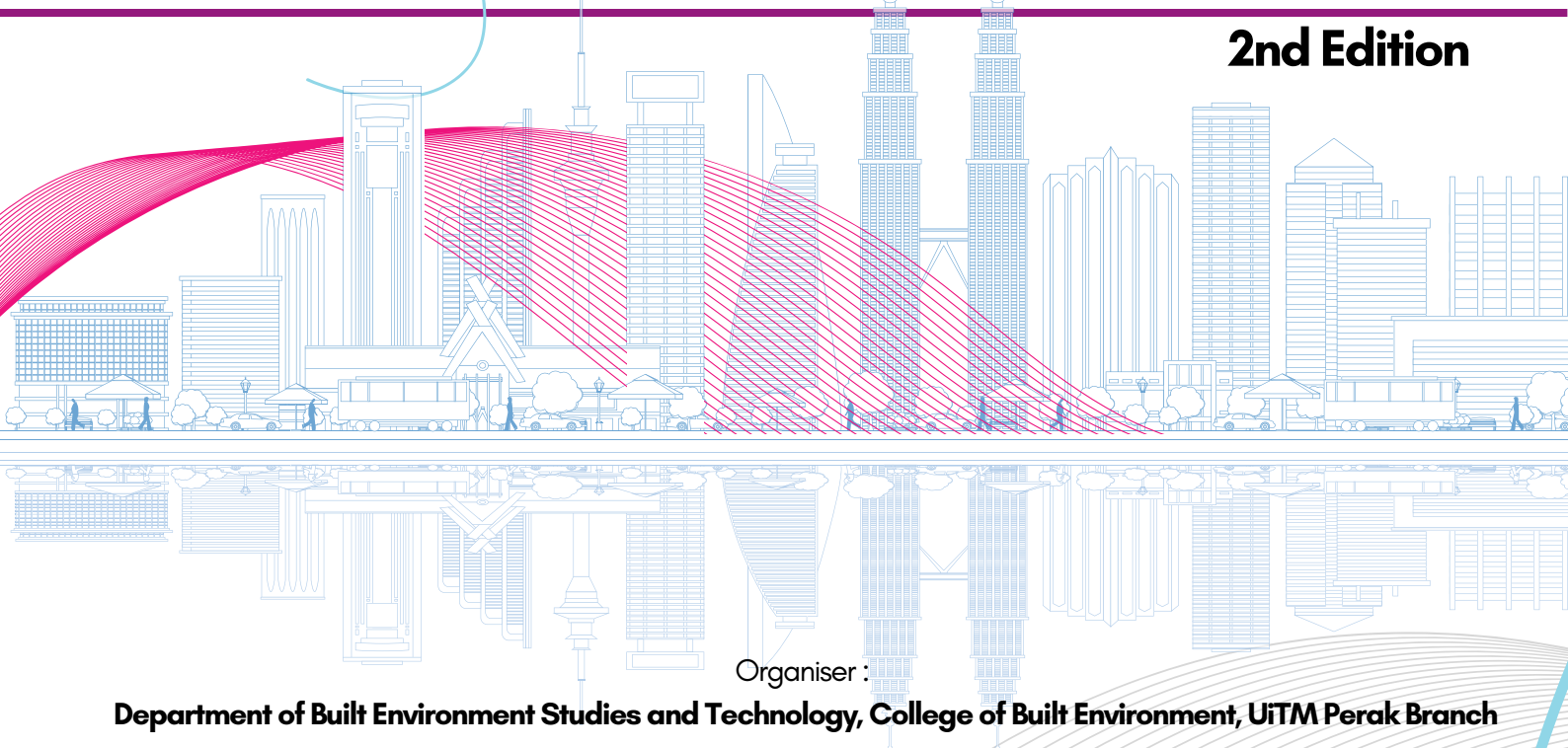
Cawangan Perak

e - Proceedings



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

2nd 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

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Designing A 'Faith' Bench Based On The Cultural Heritage Of Perak Malaysia Through Fusion Timber Challenge

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ABSTRACT

Meeting the challenge of a fusion timber competition that emphasizes the unification of design and sustainability, this project presents an innovative integration of meranti wood, membrane, iron, and concrete in the design of outdoor bench furniture. Using an in-depth research approach, we evaluated various bench sizes to determine the optimal height and depth for comfort and designed variations that can accommodate two to four people. The proposed design concept, Neo Heritage, combines contemporary style with cultural touches to create products that are functional, flexible, and cultural. Meranti wood was chosen as the main element for its strength and beauty of grain, giving the design a natural character and warmth. Membrane, as an innovative material, serves to add functional and aesthetic elements, playing a protective role as well as a visual element that enhances the uniqueness of the design. Iron, with its high structural strength and durability, provides stability and a modern touch that harmonizes with the wood, while concrete is used as the base of the bench to unify the overall design. Inspiration was taken from Wau Seri Bulan, a cultural heritage from Perak, which became the reference form in this project. The design combines the idea of novelty with the implementation of sustainability through the selection of local materials that are easily available. The project aims to prove that sustainability and aesthetics can be harmonized by carefully selecting materials and making the design more sustainable.

KEYWORDS: Sustainability, materials, heritage, bench

DESIGN DESCRIPTION

FAITH (Bench / Outdoor Furniture)

Faith is an outdoor bench designed to enrich the communal experience by drawing users into the landscape and fostering a sense of unity. Positioned within the serene surroundings of the university or tranquil parks, Faith symbolizes a blend of culture and functionality, offering a space for meaningful interactions and enjoyable moments. Inspired by the Neo Heritage concept, Faith's design incorporates the silhouette of the Wau Seri Bulan, a traditional Malay kite, as both the roof and base of the bench. This feature not only serves as a protective shelter but also defines a boundary for the user, creating a sense of enclosure and comfort. The seat slats are arranged in a pattern reminiscent of the Malayan tiger's markings, symbolizing regional strength and unity. The supporting structure, resembling a growing plant, signifies the continuous development of culture, while the soaring roof reflects limitless potential and progress. Faith is crafted from Meranti Sarang Burung wood, a material chosen for its local availability, durability, and workability after 13 years. The wood is finished with Water Based Lacquer, providing a resilient, environmentally friendly protective layer that resists scratches, stains, and moisture. The roof is made from ETFE (Ethylene Tetrafluoroethylene) polymer membrane, a modern material known

for its lightweight, transparency, and durability. The bench's structure is constructed from Cast Iron, enhanced with Powder Coating to ensure long-lasting resistance to scratches, moisture, and UV rays, while the base is reinforced with solid concrete for added stability. Measuring 2m x 2m, Faith is designed to accommodate both university members and the general public, maximizing the user experience. The bench aims to cultivate a culture of sitting, socializing, and engaging in conversations that strengthen community bonds. More than just a piece of furniture, Faith stands as a symbol of synergy, culture, and a forward-moving spirit.

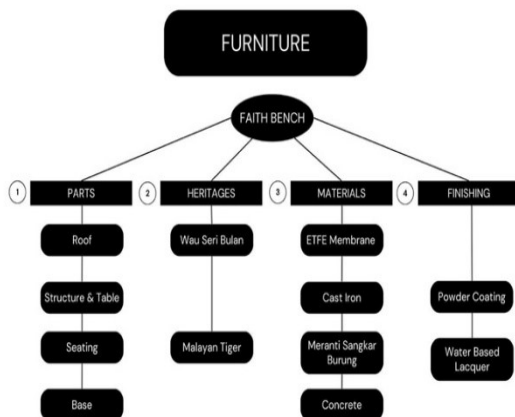


Figure 1: Flow chart Faith bench



Figure 2: Schematic diagram/ dimension



Figure 3: 3D visual render



Figure 4: Side Visual faith bench

NOVELTY AND UNIQUENESS

Faith is an innovative outdoor bench that combines meranti wood, ETFE membrane, cast iron and concrete, creating a unique and modern design. ETFE membrane is used for the roof, adding an element of aesthetics and functionality rarely found in bench designs. Carrying the Neo Heritage concept, Faith combines local culture with contemporary style, producing furniture that is functional and has high cultural value. Eco-friendly finishing technologies such as Water Based Lacquer are applied to protect the wood, while plant-like support structures reflect the evolving culture.

BENEFITS TO MANKIND

Faith's characteristic is the roof in the form of a flat silhouette which is formed into one unit with the rest of the bench which flows gracefully to envelop the seating area. This design not only

provides sturdy support but also serves as a statement to attract attention and admiration from passersby. The circular table was created to encourage moments of pause and reflection around the university environment. The street comes alive with an array of forms and vitality. Faith is not just a piece of furniture; Faith is a catalyst for community, creativity, and joy.

COMMERCIAL POTENTIAL

To successfully launch Faith's design in the market, it's crucial to focus on demand and market size in university settings and public spaces. The design offers a competitive edge by blending local culture with modern materials. The business model emphasizes collaboration with universities, government, and local contractors, allowing for scalability and design variations. Careful cost analysis and profit margins are needed to maintain competitive pricing while ensuring compliance with industry regulations and protecting intellectual property. A marketing strategy that highlights cultural values and sustainability will further solidify Faith's market position.

CONCLUSION

Faith is an innovative outdoor bench that merges meranti wood, ETFE membrane, cast iron, and concrete to create a modern, functional design. Inspired by the Neo Heritage concept and the Wau Seri Bulan, Faith integrates local cultural elements with contemporary aesthetics. The design features a unique ETFE membrane roof, offering both protection and visual appeal, while the seat slats echo the markings of the Malayan tiger to symbolize regional strength. Crafted from durable Meranti Sarang Burung wood with eco-friendly Water Based Lacquer, and supported by cast iron and concrete, Faith ensures long-lasting performance. The bench's design promotes communal interaction and cultural engagement, making it ideal for university and public spaces. To launch Faith successfully, focus on market demand, competitive advantages, and a business model involving collaborations and careful cost analysis. Emphasizing cultural values and sustainability will enhance its market position and appeal.

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- Keep 'the faith' alive.

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