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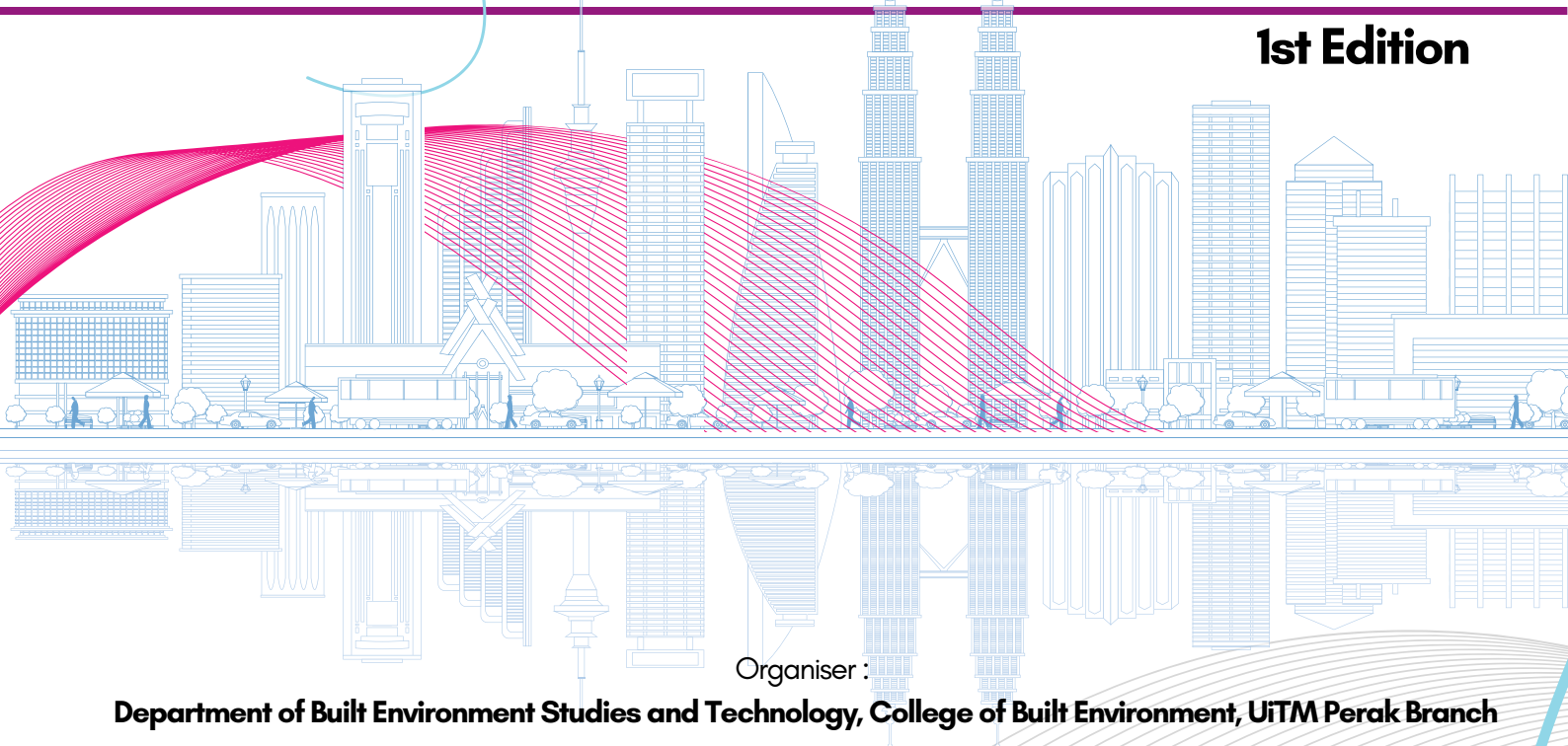
Cawangan Perak

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

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Fatamorgana: Recreational Pop-Up Pavilion in Royal Theme

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ABSTRACT

The pop-up pavilion, Fatamorgana, portrays the versatility and innovative potential of pop-up structures in recreational and practical applications, demonstrating user experience through timber modular structure. Fatamorgana reimagines the pop-up pavilion as a space for cultural rediscovery. Inspired by the royal theme of UiTM as stated in Wasiat Raja-raja Melayu, this biophilic design seamlessly integrates nature with interactive exhibitions to educate visitors about Malay Royal history. The architecture embodies the concept of "blessing" through its form, inspired by the Bunga Mawar, and its innovative use of light, wind, and timber. The modular timber structure promotes sustainability and celebrates the Malay Royal character, while the fabric ceiling acts as both functional louvre and evocative element, mimicking the sea's rhythm. This sustainable haven fosters a deeper appreciation for the environment and royal cultural heritage, catalyzing community engagement and a potential cornerstone for local tourism.

KEYWORDS: Urban park pop-up, Student, UiTM, blessing, interactive

INTRODUCTION

A recreational pop-up structure can take various forms, each designed to provide unique functionalities and user experiences. This pop-up pavilion operates by storing the main space when the enclosure is closed and releasing it upon impact with a fixed surface, causing the enclosure to pop up by modular timber structure and enhancing the play structure experience and emerging in bigger space internally and externally (Dan, 2018). Additionally, pop-up structures can be found in more practical applications such as shelters or pavilions. These shelters use a support assembly with inflatable supports that form a perimeter and are pneumatically connected, providing a robust and easily deployable shelter solution (Lamke.S, 2012). Lastly, a simplified pop-up structure can be seen in devices that include a top and lower cover, which can be folded or unfolded around a folding unit. This design aims to minimize weight and thickness while maintaining functionality, making it suitable for various recreational and practical uses (Park.J.S, 2011). Each of these examples highlights the versatility and innovative potential of pop-up structures in recreational and practical applications, demonstrating how they can enhance user experience through clever engineering and design.

DESIGN DESCRIPTION

Fatamorgana is a recreational park pop-up or pavilion that is located near UiTM PERAK, Seri Iskandar Lake. It is created to provide a shaded retreat for students to relax and learn, as well as a social encouragement space. The concept of this pavilion is related to the royal theme to inspire UiTM students to identify and preserve the Malay Royal History which came from Wasiat Raja-raja Melayu that interprets Malay culture, tradition, and governance. The current trend of the younger generation, who are unaware of the historical and cultural significance of the history of

the wasiat. Thus, our idea is to create a welcoming, informative, and interactive pavilion that exhibits Uitm Malay Royal elements and characters specifically portraying the 7 Wasiat Raja-raja Melayu with the implementation of timber with contemporary design elements.

The pavilion features an integration of a royal Islamic approach and connection with nature that reflects the culture and serves as an immersive experience to visitors as it follows our concept which is Blessing. It refers to the shape and form of a pop-up derived from Bunga Mawar which plays a significant representation of Royal love and blessing toward people, especially the Melayu race. Spaces that are designed in this pavilion provide various activities such as an Interactive Area, a Diorama Area, a Photobooth area, and lastly a small-scale youth cafe that can act as a catalyst to attract students nearby. These spaces are equipped with interactive equipment to promote the culture and enhance the experience of the visitors, fostering an appreciation for the sacrifice and integrity of Raja-raja Melayu toward us. The target users come from all groups specifically UITM students, therefore the pop-up is designed to be fully accessible to people with disabilities. The pop-up also features groundbreaking architectural concepts that are biophilic to play light and wind from the natural environment using solid and void that is inspired by Royal Motifs and Fabric Ceiling. Lastly, this pop-up fusions timber as material to reflect Malay Royal Town culture using modular construction.

Fatamorgana is a biophilic masterpiece that introduces new ideas that harmoniously integrate natural elements such as light, wind, and timber to create the essence of blessings. The Fabric ceiling can function as a louvre while its dynamic movement and ripples produced by wind can create an echo mimicking the tune of the sea. Featuring a living canvas, the pop-up invites the natural world indoors, creating an immersive experience that rejuvenates the human spirit while optimizing natural ventilation and daylighting, reducing energy consumption. The modular timber structure, inspired by Malay Royal History, creates a harmonious dialogue between nature and culture by preserving natural habitats with minimal site disturbance. This pop-up is a testament to the power of innovation, redefining architectural possibilities through a biophilic approach. The pop-up is more than a structure, it is a living organism that responds to its environment, offering comfort and inspiration.

Wasiat Raja-Raja Melayu
(7 Wasiat Raja-Raja Melayu, n.d.-b)



Islamic Architecture
(Regional, 2024)



Shape of Bunga Mawar
(Prill, 2008)



Figure 1: Design inspirations

Muskat Diraja
 Adie's (n.d.)



Fabric Ceiling
 (Barbouni | K-Studio | Archello, n.d.)



Figure 1: Design inspirations (cont'd)

BENEFITS TO MANKIND

By optimizing natural ventilation and daylighting, Fatamorgana significantly reduces energy consumption, addressing critical issues of energy efficiency and environmental impact. The pop-up's integration of light, wind, and nature creates a serene and inspiring environment, enhancing the overall journey experience and prioritizing thermal comfort. By connecting occupants with nature, the pop-up fosters a deeper appreciation for the environment, consequently becoming a unique and sustainable venue that can attract visitors and contribute to the local tourism industry. The pop-up can be used as an educational tool for the students and foster a sense of community and pride among them. It offers a versatile space for taking a break and other community events, strengthening social connections. As a result, it can preserve and promote cultural heritage. The pop-up's design is rooted in the local culture and climate, demonstrating the importance of place-based architecture and thus aligns with global sustainability goals, such as reducing carbon emissions and preserving biodiversity.

COMMERCIAL POTENTIAL

Fatamorgana, the pop-up's commercial potential lies in its unique blend of sustainability, aesthetics, and cultural heritage. Targeting luxury eco-recreational and high-end events, the design offers a strong competitive advantage through eco-friendliness, customizability, and immersive experience. Potential business models include direct sales, licensing, and rental services. Scalability is facilitated by the modular design, while profit margins can be substantial due to the premium nature of the product due to its adaptability to various sizes, configurations, and places. Adherence to regulations and intellectual property protection are crucial for long-term success.

CONCLUSION

Fatamorgana is a groundbreaking recreational park pavilion designed to rekindle interest in the often-overlooked history of Malay royalty value. This innovative structure seamlessly blends nature, culture, and education, creating a tranquil oasis for students and the public. By ingeniously

incorporating natural elements like light, wind, and timber, the pavilion not only reduces its environmental impact but also offers a captivating and immersive experience. Beyond its aesthetic appeal, Fatamorgana is a testament to sustainable design with its modular construction and energy-efficient features. This visionary project not only preserves cultural heritage but also strengthens community bonds, making it a potential cornerstone for local tourism and economic development. Fatamorgana stands as a remarkable example of how architecture can harmonize with nature, educate, and inspire, ultimately shaping a more sustainable and engaging future.

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