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REVITALISING HERITAGE: SUCCESS FACTORS FOR ADAPTIVE REUSE OF HERITAGE BUILDINGS IN PENANG

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Abstract

Heritage buildings serve as vital cultural and architectural assets, yet many face neglect due to urbanisation and changing societal needs. Adaptive reuse offers a sustainable solution by repurposing these structures while preserving their historical significance. This study explores the success factors of adaptive reuse in Penang, Malaysia, where heritage conservation is a key priority. Through a mixed-method approach incorporating case studies, walking surveys, and questionnaire analysis, the research examines three adaptive reuse projects: Sun Yat Sen Museum, Hin Bus Depot, and Cheong Fatt Tze's Blue Mansion. Findings reveal that architectural integrity, economic sustainability, community engagement, accessibility, and a balanced integration of modern and traditional elements are critical to the success of adaptive reuse projects. While successful initiatives foster cultural continuity and economic growth, challenges remain in balancing tourism with local heritage preservation. The study highlights the importance of incorporating a "sense of place" to ensure adaptive reuse projects resonate with both local communities and visitors. The insights gained provide a strategic framework for policymakers, architects, and conservationists to enhance adaptive reuse efforts, ensuring heritage preservation aligns with sustainable urban development.

Keywords: Adaptive reuse, heritage conservation, sense of place, Penang, sustainable urban development

1. INTRODUCTION

Heritage buildings are vital cultural and architectural landmarks, yet many in Penang, Malaysia, face neglect due to urbanisation, inadequate maintenance, and commercialisation pressures. Despite its UNESCO World Heritage status since 2008, Penang struggles to balance modern development with heritage conservation (UNESCO, n.d.; Man, 2021). Adaptive reuse offers a sustainable solution by repurposing historic buildings while preserving their cultural essence, fostering urban growth, and enhancing community participation (Abdulhameed et al., 2019). However, its implementation in Penang remains inconsistent, with limited research on the key success factors (Abdullah, 2020). This study examines three adaptive reuse projects—Sun Yat Sen Museum, Hin Bus Depot, and Cheong Fatt Tze's Blue Mansion—to evaluate their effectiveness in preserving heritage while ensuring economic and functional sustainability. The findings contribute to a strategic framework for balancing conservation and modernisation, supporting Penang's long-term architectural and cultural resilience.

2. LITERATURE REVIEW

Heritage buildings are significant cultural and architectural assets that preserve historical identity and strengthen community ties. However, factors such as urbanisation, climate change, and weak policy enforcement threaten their sustainability (UNESCO, 1972; Jasme et al., 2014). In Malaysia, the National Heritage Act 2005 and Town and Country Planning Act 1976 provide the legal basis for conservation, yet many heritage structures in Penang remain neglected due to tensions between preservation and development priorities (UNESCO World Heritage Centre, n.d.-a). Adaptive reuse has become a viable solution, allowing historical buildings to serve new functions while retaining their architectural character (Love & Bullen, 2009). As emphasised by Viollet-le-Duc, adaptive reuse should integrate modern needs while respecting original designs (Coeterier, 2002), a concept evident since the Renaissance (Cantacuzino, 1989). Penang's rich blend of colonial, Chinese, and Malay architecture underscores the importance of such efforts (Kwong & Badaruddin, 2017), though challenges like gentrification and commercialisation persist (Ooi, 2016). Effective adaptive reuse projects—such as those in Paris and Amsterdam—demonstrate how cultural preservation, economic viability, and community engagement can be achieved simultaneously (Adiwibowo et al., 2015), while cases like Taiwan's Taichung Mayor's House highlight the consequences of inadequate planning and low engagement (Tu, 2020). The Place Diagram Theory identifies sociability, accessibility, comfort, and authenticity as vital to maintaining a “sense of place” (What Makes a Successful Place? n.d.), and studies stress that projects driven by community participation are more successful in sustaining heritage value (Yung & Chan, 2013; Plevoets & Sowińska-Heim, 2018).

3. METHODOLOGY

This study adopts a mixed-method approach, integrating qualitative and quantitative methods to explore adaptive reuse success factors in Penang's heritage buildings. Using a case study strategy, three sites—Sun Yat Sen Museum, Hin Bus Depot, and Cheong Fatt Tze's Blue Mansion—were selected for their architectural and cultural significance. The study applies Place Diagram Theory and Sense of Place Theory, focusing on sociability, accessibility, comfort, and historical continuity (Soh, 2024; Tu, 2020). Data collection involved walking surveys, site observations, and questionnaires targeting residents and visitors. Observations were used to assess architectural and functional adaptation, while surveys used a 5-point Likert scale to gauge public perceptions. Findings were analysed thematically and statistically to inform strategies for sustainable heritage conservation.

4. FINDING AND DISCUSSION

The study discovers four critical success factors for adaptive reuse initiatives in Penang: sense of place, material conservation, programming, and community engagement (refer Figure 1). These aspects are based on the case studies of the Sun Yat Sen Museum, the Hin Bus Depot, and Cheong Fatt Tze's Blue Mansion, which each demonstrate unique methods of blending historical preservation with modern functioning.

Framework for Successful Adaptive Reuse of Penang's Architectural Gems
 Four Keys Dimensions for Successful Adaptive Reuse Project in Penang



Figure 1. Framework for Successful Adaptive Reuse of Penang's Historic Buildings.

The findings reveal that a strong sense of place is vital for the success of adaptive reuse projects. Cheong Fatt Tze's Blue Mansion retains historical authenticity through preserved architectural details and cultural narratives, enhancing visitors emotional connection. In contrast, Hin Bus Depot embraces a contemporary sense of place, evolving through artistic expressions and community interaction, showing that adaptive reuse thrives when it respects heritage while allowing for adaptive, user-driven transformation.

Material conservation also plays a crucial role. The use of traditional materials and techniques, as seen in the Sun Yat Sen Museum, supports both environmental sustainability and historical preservation. However, adapting to modern safety requirements can sometimes compromise material authenticity, suggesting that combining traditional aesthetics with hybrid structural materials is a practical solution.

Programming is key to functionality and sustainability. The Blue Mansion integrates boutique hospitality with cultural programming, while Hin Bus Depot offers flexible space for exhibitions and events. These dynamic uses help maintain financial viability and public engagement.

Lastly, community engagement strongly influences long-term success. Projects like Hin Bus Depot, which actively involve local creatives and small businesses, foster inclusivity and ownership. In contrast, adaptive reuse focused primarily on revenue generation—such as luxury venues—risks alienating local communities, reducing

social relevance and accessibility.

5. CONCLUSION

This study focuses on the critical factors for successful adaptive reuse of Penang's heritage buildings, including architectural integrity, economic sustainability, community engagement, accessibility, and a balanced blending of modern and traditional elements. The findings show that projects with a strong "sense of place" contribute to cultural continuity while promoting economic growth. However, there are still issues in balancing tourism demands with heritage authenticity. This study offers a strategic framework for architects, policymakers, and conservationists to implement in their efforts to preserve heritage efficiently. These measures will not only preserve Penang's architectural and cultural heritage, but will also ensure that restored places are relevant, inclusive, and attached to the local community.

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