

STRATEGIC FACILITIES MANAGEMENT (FM) FOR HERITAGE BUILDINGS IN MALAYSIA

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ABSTRACT

It is becoming increasingly common to apply adaptive reuse to preserve and make use of older structures. Multiple stakeholder scenarios are frequently involved in adaptive re-use; consequently, coordination or administrative concerns may limit the design of adaptable facilities for the purpose of preserving cultural heritage and maximising operational efficiency. This research explores the applicability and benefits of an FM-led adaptive reuse technique to overcome the coordination challenge, a concept not previously explored in the existing literature. Methods of observation and literature review are utilised in this paper. Using field observations, publicly available policies, and project data, this study was able to discover the attitudes and requirements of stakeholders about facilities management (FM) in adaptive reuse projects, including heritage buildings. The paper elaborates on the way FM coordinates adaptive reuse for the benefit of stakeholders and society. Adaptation of heritage buildings, user experience, and community effects are all factors that FM accounts for. The facilitation of innovative facility design, effective decision-making, and public engagement are all made possible by it. Urban regeneration demonstrates the heritage



advantage of FM. The research has not addressed the significance of FM-led business strategy for adaptive reuse in heritage buildings, nor has it discussed the benefits those strategies offer. Not only does it develop a heritage conservation management evaluation methodology, but it also reveals the strategic functions that FM plays.

Keywords: *Facilities management, Heritage building, Strategic management*

INTRODUCTION

Historically significant buildings serve as silent witnesses to the past, encapsulating the cultural, architectural, and social heritage of the places in which they are located (Graham & Graham, 2002). Preservation of historic structures is not only a matter of sentimentality; rather, it is a commitment to preserving our collective identity and developing a better understanding of days gone by. When it involves preserving cultural heritage, the management of facilities is an extremely important factor (Hu, 2020). In preserving these architectural masterpieces for future generations, it is necessary to implement efficient facilities management techniques (Hasbollah, 2015). These methods must cover everything from structural integrity to environmental sustainability. The architectural diversity and rich cultural tapestry of Malaysia are reflected in the country's built heritage, which is a tribute to the country's centuries-long history and culture. These structures are more than just monuments; they are living manifestations of Malaysia's identity and past. From the shophouses of George Town, which date back to the colonial era, to the majestic palaces of Kuala Lumpur, these structures are more than those. It is necessary to strike a delicate balance between conservation and development to preserve built heritage in the context of facility management. This is because the preservation of built heritage presents a unique set of problems and opportunities.

LITERATURE REVIEW

The Challenges

The administration of facilities with respect to Malaysia's built heritage is confronted with a great deal of difficulty. A great number of ancient structures are in danger of being neglected, receiving inadequate maintenance, and being subjected to the pressures of urbanization. The tropical climate and environmental elements, such as humidity and monsoon rains, are also factors that accelerate the process of degradation and structural disintegration (Tsai, 2017). A further obstacle that makes preservation efforts more difficult to accomplish is rapid urban development, which frequently places a higher priority on economic growth than historical conservation. It is a difficult challenge that requires creative solutions and aggressive management methods to strike a balance between the necessity for modernisation and the imperative to maintain Malaysia's architectural legacy (Zahari et al., 2019a).

Maintaining heritage buildings requires striking the right balance between preservation and adaptation. This is one of the biggest challenges that must lie ahead. Although it is of the utmost essential to maintain the historical authenticity of these structures, it is also of the utmost need to modify them so that they can meet the requirements of the present period (Misirlisoy & Günçe, 2016; Zahari et al., 2023). This may necessitate the incorporation of modern heating, ventilation, and air conditioning (HVAC) systems, the installation of lighting that is more energy efficient, or the improvement of accessibility without compromising the structural integrity of the building. To provide unique solutions that are respectful of the building's past while also striving to assure the building's sustainability, facility managers are required to work closely with preservation specialists, architects, and other stakeholders. This is carried out to ensure that the building is sustainable.

Conserving Heritage Buildings through Facilities Management

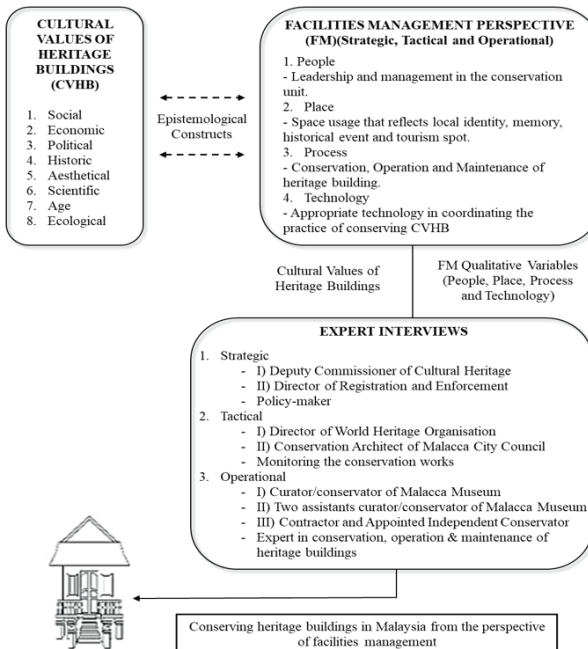
Conserving heritage buildings in Malaysia necessitates implementing various methods to safeguard their historical, cultural, and architectural

importance. In Facilities Management, especially, these techniques are essential in maintaining the authenticity of Malaysia's cultural heritage through systematic operation and maintenance (Adegioriola et al., 2022).

Maintenance of heritage buildings in Malaysia involves implementing both preventive and corrective actions. Preventive maintenance entails periodic examinations and minor repairs to avert deterioration, whereas corrective maintenance deals with issues that have already resulted in damage. Regular inspections are also essential to identify signs of wear and tear, structural issues, or other potential problems. These inspections help in planning timely interventions.

In addition, detailed documentation of the building's condition, maintenance activities, and any changes made are crucial (Kayan, 2019). This helps in tracking the building's history and planning future maintenance.

The conceptual framework for conserving heritage buildings in Malaysia from the perspective of facilities management



Flow Chart 1. The Initial Phase of Developing a Conceptual Framework for Conserving CVHB from the Facilities Management Perspective (FM) in Malaysia

Source: Rafidee Bin Hasbollah & Baldry, (2014)

Facilities Management Value in Built Heritage

Implementing the built heritage project, especially the revitalisation project always neglects the significance of facilities management. Traditionally, conservation principles prioritise the preservation of the heritage's historical and architectural significance, while conservation guidelines are formulated to govern the planning and management of the heritage-constructed structures. However, the rise of Facility Management in built heritage focuses on effectively managing the interactions between a heritage building and its surrounding environment, with a particular emphasis on the role of people (C. Hou & Wu, 2019). Facilities Management is user centred management and service-oriented practice and its contribution in community facilities is well acknowledged. Alexander and Brown (2006) shift FM from the organisation background to a wide scope of context–community and discuss FM's ability to integrate resources – both from hardware and software, to benefit a community's long-term development. In the context of built heritage in Malaysia, it can be considered that most of the conservation projects are community-based facilities that need the touch of a facilities manager to benefit the community's long-term development.

The involvement of the local population is a crucial element in the effort to conserve Malaysia's architectural history. The nearby inhabitants often view structures of historical significance as symbols of pride and identity. Engaging community stakeholders through participatory approaches is an effective way to foster a sense of ownership and responsibility in the community. Examples of such strategies include heritage walks, workshops, and public consultations. Empowering communities to actively participate in heritage preservation not only enhances social cohesion but also improves the effectiveness of preservation efforts.

Another interesting view of implementing Facilities Management in our built heritage is the energy efficiency value added. Energy efficiency is paramount important in a heritage property. Energy audits can be carried out through strategic management to identify areas where energy consumption can be reduced. In addition, the upgrades or modifications of energy could improve energy efficiency while maintaining the building's integrity.

Facilities Management Strategy in Built Heritage

Generally, people view FM as a discipline that focuses on properties. Three primary areas of work, namely property management, property operations and maintenance, and office administration, combine to form FM. More importantly, it emphasizes the concentration on the administration and provision of the commercial "outputs" of both organizations, including the efficient utilization of building assets as workspaces (Zawawi et al., 2016). Lim et al. (2013) define facilities management as a concept that varies in meaning based on its location within the management process or in practice. It might refer to managing a specific task, overseeing and guiding a wide range of operations, or supporting the provision of services. It refers to the activities and tasks related to managing buildings and their assets in the built environment.

The concept emphasises that the preservation of heritage sites extends beyond the physical structures themselves. Effectively managing the community's perception of heritage building conservation is essential, regardless of the physical deterioration of the buildings. World Heritage, for instance, is a collective responsibility of the entire local community rather than solely an administrative matter that may be addressed through a top-down strategy. The key tactics for developing a sustained level of identification among local stakeholders, and sometimes even within different departments from the local administration, include information dissemination, public participation, and the establishment of common aims and duties (Nafrizon et al., 2020). During the planning phase, stakeholders must make decisions regarding their capacity to act and make commitments to future activities that align with their interests. Lai & Ho (2003) asserts that facility management must incorporate the intricate procedures involved in the management of heritage conservation. This is necessary because it encompasses the transformation of purpose, alterations in the environment, involvement of multiple stakeholders, and the balancing of competing demands related to environmental, economic, social, and cultural needs.

Legal and Regulatory Framework

Through the passage of legislation and the construction of regulatory frameworks, Malaysia has made tremendous progress in the preservation of

its cultural assets (Zahari et al., 2019b). The National Heritage Act of 2005, which provides legal protection for heritage sites and structures, grants the Department of National Heritage the authority to establish and administer conservation areas. However, compliance continues to be an issue, and there are often loopholes in planning legislation that allow for the removal or alteration of cultural structures. The preservation of Malaysia's built heritage for future generations requires several crucial initiatives, including the strengthening of enforcement mechanisms and the promotion of better awareness of heritage conservation among policymakers and developers (Zahari et al., 2020). In the operation of conservation maintenance, Malaysia has been governed by several laws and guidelines as follows:

1. National Heritage Act 2005: This Act provides the legal framework for the identification, protection, and conservation of national heritage, including buildings. It outlines the responsibilities of various authorities and the processes for declaring a site as heritage.
2. The Town and Country Planning Act 1976 includes provisions for conserving cultural heritage in urban and rural planning.
3. Local Authority Guidelines: Local authorities often have specific guidelines for maintaining and conserving heritage buildings.

Maintaining the authenticity of heritage buildings requires using traditional materials and construction techniques. This ensures that repairs are in harmony with the original structure (Robiah Abdul Rashid et al., 2015).

METHODOLOGY

This conceptual paper begins with a thorough search of prominent journal databases, specifically Scopus, Web of Science (WOS), and Science Direct. Simultaneously, we explored supplementary journal databases such as Google Scholar and My Cite, a Malaysian database, to broaden the range of resources and strengthen the primary database. The second phase entailed manually looking for further materials. This step encompassed materials for which only the title, author's name, or source was identifiable. Identification involves locating synonymous terms, related concepts, and variations of the primary keywords of the study: 'facilities management', 'historical buildings',

and 'strategic management'. This was done to offer supplementary options to the selected databases for locating relevant content for analysis. Furthermore, manual search methodologies, including handpicking and handsearching, were employed. Three databases, specifically Scopus, WOS, and Science Direct, were chosen for the search of relevant articles and documents, aligning with the recommendation of Gusenbauer & Haddaway (2019), who validated the efficacy of these sources in resource identification. These databases also have many benefits, such as the ability to search through large amounts of historical data, keep an eye on the quality of articles, and include studies that are relevant to environmental management from different fields (Martin et al., 2018; Gusenbauer & Haddaway, 2019). . These terms are employed to determine the focus of this study. The discovery can be understood and altered efficiently.

CONCLUSION

This study explores the significance of heritage building culture and the responsibilities of facility management in shaping people's perceptions of conservation efforts. Most heritage sites prioritize the construction aspect while neglecting the community's perspective. Typically, the responsibility for conservation efforts lies with governmental bodies or groups that can sustainably manage many sites. Indeed, the successful execution of this process necessitates the unwavering dedication of all stakeholders who are directly involved. Facilities management combines the coordination of individuals, procedures, and physical locations. The method regards human traits as influential aspects for achieving success in heritage conservation plans. The proposed structure appears to establish a sense of dedication and responsibility between the governing body and the community. Heritage conservation includes not only the development of specific strategies and financial agreements but also considers the social attitudes and beliefs of the society. Therefore, in such projects, the process of developing a strategy should not only involve creating plans, but also considering corporate social attitudes.

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AUTHOR CONTRIBUTIONS

All authors contributed to the design of the research, the questionnaire, and the write-up. All authors have read and approved the final manuscript.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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