NAVIGATING THE MANAGEMENT OF ASSETS, FACILITIES, AND FINANCIAL STRATEGIES TO ENSURE BUSINESS CONTINUITY IN AGEING BUILDINGS IN THE KLANG VALLEY, MALAYSIA

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ABSTRACT

Ageing buildings, particularly in the Klang Valley, Malaysia, threatens business continuity and financial performance. These under-managed assets pose major risks, including disruption of operations, increased costs, and deterioration of competitiveness, while emphasising the strategic importance of proactive management. However, existing literature tends to discuss asset management, facilities management and financial planning in isolation, emphasising the need for a unified approach. In light of this challenge, this study aims to explore how strategic asset and facilities management, supported by solid financial planning principles such as life cycle costing, can effectively sustain business continuity and foster organisational resilience. Guided by the theoretical framework, this research utilises a qualitative methodology. A semi-structured interview was conducted with professionals involved in the management of ageing buildings, and the data were analysed thematically to identify common practices, strategic gaps and implementation challenges, before it reaches data saturation at the 11th Informant. The findings show that proactive asset management and integrated financial planning through life cycle costing are critical to minimise operating disruptions and long-term costs, yet their efficacy is often hindered by budgetary constraints, lack of management support and commitment, and insufficient asset data. In response, this study proposes a new integrated strategic management framework, presented as a Body of Knowledge (BOK), that systematically links asset management, facilities management and financial planning to improve business continuity, operating efficiency and cost effectiveness in ageing buildings. The framework advances scientific understanding by bringing together previously separate domains and demonstrating the important link between physical asset management and sustainable business performance. At the same time, it provides business leaders, facilities managers and policy makers with actionable guidelines to maintain competitive advantage and operational resilience in the face of ageing infrastructure.

Keywords: Strategic management, operations management, asset management, facilities management, financial management, life cycle costing

APPROVAL

This is to certify that this research conforms to acceptable standards of scholarly presentation and is fully adequate, in quality and scope, for the fulfilment of the requirements for the degree of Doctor of Business Administration.

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DECLARATION

I hereby declare that the research submitted in fulfilment of the Doctor of Business Administration degree is my own work and that all contributions from any other persons or sources are properly and duly cited. I further declare that the material has not been submitted either in whole or in part, for a degree at this or any other university. In making this declaration, I understand and acknowledge any breaches in this declaration constitute academic misconduct, which may result in my expulsion from the programme and/or exclusion from the award of the degree.

Name: Mohd Mazhar bin Mohd Marzuki

Signature of Candidate: Date: 19 September 2025

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AEI	Asset Enhancement Initiative
AFM	Asset and Facilities Management
AMP	Asset Management Plan
APAC	Asia Pacific
APPA	Association of Physical Plant Administrators
BCA	Building Condition Assessment
BCM	Business Continuity Management
BCP	Business Continuity Plan
BIA	Business Impact Analysis
BIM	Building Information Modelling
BMS	Building Management System
BOK	Body of Knowledge
CAPEX	Capital Expenditure
CF	Central Focus of Research
CIBSE	Charted Institute of Building Services Engineers
CIDB	Construction Industry Development Board (Malaysia)
CMMS	Computerised Maintenance Management System
COO	Chief Operating Officer
EMS	Energy Management System
ERM	Enterprise Resource Management
ERP	Enterprise Resource Planning
GLC	Government-linked Company
HVAC	Heating, Ventilation and Air-Conditioning
IoT	Internet of Things

ISO	International Organisation for Standardization
KKR	Kementerian Kerja Raya (Ministry of Works, Malaysia)
KPI	Key Performance Indicator
NAPIC	National Property Information Centre
OPEX	Operating Expenditure
PAM	Pertubuhan Akitek Malaysia (Malaysian Institute of Architects)
PAM	Physical Asset Management
PFI	Private Finance Initiative
REIT	Real Estate Investment Trust
RISM	Royal Institute of Surveyor Malaysia
SAMP	Strategic Asset Management Plan
SCM	Supply Chain Management
SD	Strategic Domain
SLA	Service Level Agreement

CHAPTER 1

INTRODUCTION

1.0 Chapter Overview

The research lies at the intersection of strategic management, operations management, financial management, and asset and facilities management. In general, the research addresses the growing problem of ageing buildings in the Klang Valley and highlights the importance of applying a strategic asset and facilities management approach to ensure business continuity. This strategic focus is crucial because ageing buildings face various operational and financial challenges that can jeopardize ongoing business activities. Therefore, the research explores how asset and facilities management principles can be leveraged to maintain uninterrupted business operations in ageing structures while ensuring the organisation's long-term financial sustainability and overall business excellence.

Chapter 1 covers several foundational elements of the research. It begins by providing the background of the research, outlining the context of ageing building management and explaining why this issue is important to address. Next, the research problem is clearly articulated, highlighting gaps in current knowledge or practice that the research aims to fill. The chapter then sets out the research questions and objectives that guide the direction of the investigation.

In addition, the significance of the research is discussed, emphasizing its potential contributions to business continuity, financial management practices, and strategic as well as operational management. The chapter also delineates the scope and boundaries of the research. Key terms are defined to ensure clarity and consistency in their usage throughout the research. Finally, Chapter 1 closes with an overview of the

research's structure, offering a roadmap for the subsequent chapters and serving as a transition to Chapter 2 (Literature Review).

1.1 Background of the Research

The building industry in the Klang Valley is facing an increasing number of ageing buildings that require special attention. Kuala Lumpur's office market faces challenges due to its ageing building stock, with approximately 70% of buildings constructed before 2015 (Mohd Sahar, 2025). According to JLL research, over 56% of the total office space in Greater Kuala Lumpur is more than 15 years old (Tay, 2024). As buildings age, they inevitably experience deterioration, which is made worse by neglect and environmental factors. Tay Sze Tuck, an industry expert, observed that neglecting maintenance can undermine a building's structural stability and value (Chin, 2024).

While there is abundance of ageing buildings, the Klang Valley is experiencing an oversupply in the property sector, especially in retail and office space. According to the National Property Information Centre (NAPIC, 2024), shopping complexes had an average occupancy rate of only 78.8% in 2024, meaning over one-fifth of retail floor space was vacant. Selangor possesses the largest vacant space in Malaysia, with approximately 20.4% of the country's total, or about 0.78 square meters. Nearly 18.5% of shopping complexes in Selangor had more than half of their space vacant, highlighting the severity of oversupply in older or less competitive malls (NAPIC, 2024). Office occupancy indicates that nearly one of three office floors are vacant. Despite the low occupancy rates, new buildings are being constructed. According to the Property Market Report 2024, published by the Valuation and Property Services Department, Ministry of Finance, 10 new shopping complexes and 11 new purpose-

built office buildings were built, with a recorded 38 new private office buildings was in the pipeline by year end 2024 and another 27 buildings in planned supply.

Beyond the Klang Valley, cities worldwide face similar challenges with ageing commercial building stock. Industry experts estimate that roughly two-thirds of Malaysia's ageing buildings will remain in use until 2050, many of which failing current safety and energy standards. This emphasizes a dire need for refurbishment and strategic maintenance. Former PAM President Sarly Adre Sarkum notes that low emphasis on building upkeep in the past has left many ageing structures with substantial water leaks and inefficient systems, leading to prolonged energy and financial losses. At the same time, urban development in Malaysia continues, despite office vacancy rates nearing 30% in Kuala Lumpur, new office towers and malls are still being built. This oversupply of modern space further diminishes the attractiveness of ageing buildings. In response, Malaysian policy makers are advocating urban renewal initiatives such as a proposed Urban Renewal Act to streamline refurbishing ageing buildings.

New buildings used to offer the latest building technology, compelling layouts to younger generations, and green features as a selling point. This makes ageing buildings far more "unattractive" for businesses to purchase, rent or lease for their core business, hence possible revenue that could be generated from these buildings are affected. In Kuala Lumpur's office market, for example, modern Grade A offices like Menara Prestige and The Horizon at Bangsar South enjoyed rent increases above 6%, yet ageing buildings such as Wisma Boustead and Multi-Purpose building, suffered rent declines exceeding 10% (NAPIC, 2024). Furthermore, ageing buildings, as they grow older, often fail to comply with modern building codes, energy efficiency standards, and safety regulations.

This situation raises the issue of the extent to which asset and facilities management can be strategically applied to address these challenges. According to Harris and McCaffer (2013), weaknesses in asset management as well as inefficiency in making strategic decisions often lead to substantial operational disruptions, while at the same time undermining the long-term competitiveness of an organisation. A life cycle-based asset management approach has been recognised as an important strategy to optimise costs and maximise the value of assets over their lifetime. The ISO 55000:2014 standard confirms that a thorough understanding of the asset life cycle is critical to achieving cost effectiveness and sustainability of an organisation's operations. Meanwhile, a research by Porras (2008) shows that efficient facilities management can not only reduce operating costs but can even increase the effectiveness of operations, which in turn supports business continuity. In Malaysia, the role of facilities management is also increasingly given attention at the strategic stage. For example, the establishment of Bahagian Pengurusan Fasiliti (Facilities management Division) at the Ministry of Works (KKR) reflects the nation’s commitment to implementing the private agreement for the maintenance of the Federal Government buildings. This division is responsible as a control agency for the effective management of Federal roads, as well as Federal Government buildings, thus boosting towards the efficient management of facilities.

However, the management of ageing buildings in Malaysia is not without obstacles. A research by Zulkepeli (2017) found that among the main obstacles to the effectiveness of building management include financial constraints, poorly organised building design, and the absence of a proactive management culture. These constraints lead to management decisions often being made reactively, increasing long-term costs as well as the risk of sudden disruption of operations. These factors emphasise the need

for a more comprehensive and data-driven management strategy to ensure that the operations of ageing buildings can continue smoothly without jeopardising core business.

In this regard, this research focuses on the strategic management in the context of ageing buildings in Klang Valley, by exploring the roles of asset strategy, facilities management strategy and financial strategy with life cycle costing. By emphasising an approach supported by lifecycle data and analysis, this research aims to provide practical and academic guidance to organisational leaders in making decisions that are aligned with the goals of business continuity, operational effectiveness, and risk management. Through this background, it can be seen that the issue of ageing buildings is not only challenging in terms of operations and costs, but requires innovative and strategic management approaches to ensure businesses can operate continuously.

Asset and facilities management (AFM) plays a pivotal role in ensuring that organisation operate smoothly, especially when dealing with ageing buildings that may suffer from deterioration over time. Christiansen (2023) discusses as buildings age, they often experience declining performance, rising maintenance costs, and an increasing risk of failures or non-compliance with modern standards. In Malaysia's context, Chin (2024) reported this particularly pressing issue where experts has estimated about two-thirds of Malaysia's ageing buildings, many of which no longer meet current building codes, energy efficiency, or safety regulations, will remain in use until 2050. These ageing structures, some approaching or exceeding their originally intended 50 to 60 year lifespans, face dire needs for refurbishment and modernisation to ensure they can support ongoing business activities safely and efficiently. Without timely intervention, the poor condition of such facilities could lead

to disruptions in operations, reduced occupant safety, or even catastrophic failures that threaten business continuity.

Christiansen (2023) further shared his opinion about the challenges associated with ageing buildings that are multifaceted where on a global scale, many developed countries are grappling with an infrastructure stock that averages 40–50 years in age, implying that a wave of major renovations or system replacements is due. He further elaborated that in the United States of America, for example, the average age of commercial buildings is over 50 years, and facilities entering this "middle age" often require significant capital investment to replace hidden systems (plumbing, electrical, HVAC, etc.) that are reaching end-of-life. Aging facilities commonly face increased maintenance needs and risks, such as outdated safety features, potential code non-compliance, and obsolescence of critical equipment. As systems fail or perform poorly, organisation may struggle with higher operating costs and more frequent breakdowns. Notably, research shows that when buildings pass roughly the 40-year mark, superficial fixes are no longer sufficient. Elements like the core infrastructure must be overhauled to prevent failures, and doing so often triggers the need to meet newer regulatory standards such as accessibility, environmental and safety. LloydSadd (n.d.) discusses structural issues in aging buildings where if not properly addressed and ignored, issues like small leaks or cracks that can grow into major structural problems, just as deferring maintenance on critical equipment can result in unplanned downtime at best or disasters at worst. Such outcomes would directly undermine an organisation's ability to continue its business operations uninterrupted.

Mohd Sahar (2023) discusses about the Klang Valley, in which ageing building stock presents unique challenges for business continuity. She elaborated that Kuala Lumpur's office market, for example, has a high proportion of ageing buildings;

approximately 70% of office buildings were constructed before 2015. Many structures in the city center date back to the 1980s and 1990s, making them several decades old today. She further described that local market dynamics have begun to "penalise" these older properties in the form of lower occupancy and declining rental rates as tenants gravitate toward newer, greener, and more technologically advanced offices, and this "flight-to-quality" trend means that without substantial upgrades, ageing buildings risk becoming obsolete or financially unsustainable. Malaysia's push for sustainability, including a national aim for carbon neutrality by 2050, have added pressure to upgrade ageing buildings. Many existing buildings will need retrofits such as energy-efficient systems or greener materials to meet future environmental standards. Chin (2024) discussed the opportunity of investing in refurbishing ageing assets that can breathe new life into them, where experts noted that rejuvenating ageing properties can increase their market value and stability, benefiting owners and occupants alike by creating a safer and more efficient environment. He stated that stakeholders in Malaysia have highlighted that neglect of maintenance is culturally common and problematic. Despite regulations requiring maintenance, many older structures show signs of insufficient maintenance such as chronic water leaks, malfunctioning air-conditioning, leading to compounding losses in energy, finances, and functionality over years. This background highlights why a strategic approach to AFM in ageing buildings is critical, not only to avoid negative outcomes, but also to seize potential benefits of extending asset life and supporting business needs.

Centreon (2017) discussed that business continuity is a central concern linking these issues of ageing building to organisational performance. While much of business continuity planning traditionally focuses on IT systems, supply chains, or emergency procedures, the role of physical facilities is equally crucial. A well-maintained building

provides a safe, operable environment that allows core business processes to proceed uninterrupted, as explained by CLR Facility Services Pvt Ltd (2023). The same author elaborated that conversely, poorly managed facilities like an unreliable power system in an old building or a leaky roof can precipitate crises that halt operations. Facilities management is thus increasingly recognised as a key component of business continuity planning where facilities managers are responsible for the maintenance, repair, and overall upkeep of buildings and equipment, ensuring that these assets do not become single points of failure for the organisation, as CLR Facility Services Pvt Ltd (2023) further discussed. The said author further emphasized the role of facilities management team in times of crisis where they must respond first to protect people and critical assets, activate emergency plans such as evacuation or backup power, and coordinate recovery measures. The strategic application of AFM in ageing buildings is about proactively managing these risks by identifying weaknesses in ageing building, prioritising remedial actions, and integrating building contingencies with broader business continuity plans.

Beyond preventing negative outcomes, strategic AFM in ageing buildings can align with broader business management goals. de Oliveira (2022) gives an example that organisation that is striving for operational excellence will find it difficult to achieve consistent, high-quality outputs if its facilities are unreliable. It further stressed that operational excellence involves continuously improving processes and systems for optimal efficiency and effectiveness. Ling and Husain (2024) elaborated about applying this concept to facilities which means implementing robust maintenance processes, lean operations in building management, and data-driven decision-making to eliminate waste like energy waste or redundant space and prevent downtime. In the property industry, there is recognition that effective facilities management is integral

to business success, as it supports productivity, safety, and even corporate reputation. Similarly, from an organisational theory perspective, ageing buildings pose structural and cultural challenges to an organisation. Opoku (n.d.) explained that organisational theory examines how organisation function and respond to their environment. She further elaborated that an organisation that proactively addresses the upkeep of its ageing buildings is demonstrating adaptability to environmental demands such as regulatory changes or stakeholder expectations for safety and sustainability, whereas an organisation that neglects these aspects may suffer from internal inefficiencies or morale issues. She continued stating that according to research in organisational theory, companies often need to adjust their structures, resource allocation, and strategies to cope with changes where managing aging assets effectively is one such adjustment that can reflect a nimble and resilient organisational design.

Another relevant theme is decision-making and critical thinking within the context of AFM. Managing ageing buildings often requires complex decision-making where managers must decide when to repair versus replace a system, how to allocate limited budgets across a portfolio of aging facilities, or which risks to address first. "Decision-making may be described as the process of selecting a course of action from several alternatives so that desired result may be accomplished. Decision-making is the process of reducing the gap between the existing situation and the desired situation through solving problems and making effective use of opportunities that spring up" (Aayat, n.d.). Decision-making demands critical thinking, which is an intellectually disciplined process of analysing and evaluating information as a guide to belief and action (Scriven & Paul, 1987). For example, a facilities manager might use critical thinking to analyse maintenance data from observation and experience, as well as engineering reports such as expert input to determine that a decades-old lift system