

Facilities management practices in rockview hotel and villa gardens hotel, Owerri Imo state

Abstract

The hospitality industry relies heavily on effective facilities management (FM) practices to ensure operational efficiency, service quality, and guest satisfaction. However, many hotels in developing economies face persistent challenges related to maintenance, energy management, infrastructure, and service delivery. This study examined and compared facilities management practices in Villa Garden Hotel and Rockview Hotel, Owerri, Imo State, Nigeria. A descriptive comparative research design was adopted, while data were collected from 168 respondents using questionnaires and semi-structured interviews. Descriptive statistical tools, including mean scores and mean difference analysis, were used for data analysis. The findings revealed that both hotels implement core FM practices such as maintenance and management systems, energy and utility management, waste and environmental management, health and safety measures, customer-focused facility services, and administrative oversight. Villa Garden Hotel recorded higher adoption levels in most FM practices, particularly in customer-focused services and energy management, whereas Rockview Hotel demonstrated relatively stronger waste and environmental management practices. The study further identified strategies for improving FM performance, including increased budgetary allocation, preventive maintenance practices, staff training, adoption of modern FM technologies, regulatory enforcement, and public-private partnerships. The study concludes that effective FM practices are essential for improving hotel operations and sustaining guest satisfaction. It therefore recommends increased investment in FM activities, continuous staff development, integration of smart technologies and renewable energy systems, and stronger collaboration between hotels and government agencies to enhance regulatory compliance and infrastructure support.

Keywords: economies, effective facilities management, maintenance, Rockview Hotel

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Introduction

Facilities management practices is very crucial in ensuring that buildings remain safe, functional, and conducive to the needs of their occupants. This is achieved by integrating infrastructure, organization, people, and maintenance.¹ However, managing facility management in high-rise hotel buildings, such as Villa Garden Hotel and Rock View Hotel in Owerri, Imo State, presents unique and complex challenges that distinguish it from managing low-rise structures.

Facility management refers to the management of amenities that enhance the value of real estate for the benefit and enjoyment of its users. It is a professional discipline focused on the efficient delivery of support services to the organization it serves. In the hospitality sector, FM is essential for guest satisfaction, operational continuity, and regulatory compliance. It operates around the clock and requires a highly coordinated and responsive management system.

The practice of facilities management was largely unknown in Nigeria until 1993 when it became the central theme of discussions at the annual conference of the Nigerian Institution of Estate Surveyors and Valuers. This conference raised awareness among real estate professionals, who had previously been referred to solely as experts in property management. However, this newfound awareness sparked debates among practitioners regarding whether facilities management should be considered the exclusive domain of estate surveyors and valuers, who are trained to manage real property and its associated facilities. Umezuruike (1998) clarified that facilities management is a broad field that requires both technical and management skills, making it a multidisciplinary profession. In 1997, the Nigerian chapter of the International Facilities Management Association (IFMA) was

established with only a few members. Since then, the association has grown to a membership of 700 individuals from diverse professional backgrounds.

The FM profession continues to evolve in response to changing organizational needs, technological advancements, and economic pressures. Increasing competition, corporate restructuring, and past economic downturns have compelled facility managers to adopt more proactive, strategic roles within organizations. This evolution requires continuous professional development, adaptability, and the ability to respond to emerging challenges and opportunities in a rapidly changing environment.

Central to effective FM strategies is the establishment of strong relationships between facility managers and organizational leadership. Strategic alignment with senior management, particularly in financial planning and decision-making, enhances the recognition and value of FM within organizations. Such collaboration is essential for securing the resources required to implement effective FM practices while ensuring that facility managers operate within their professional boundaries and complement the roles of other specialists, including finance and legal experts.

Overall, the concept of facilities management practices and strategies reflects a holistic, integrated approach that combines technical expertise, strategic alignment, and collaborative relationships to support organizational performance, improve user satisfaction, and ensure sustainable facility operations.

Some organizations often delegate the management of their capital assets to administrative or finance officers who provide guidance on property decisions, oversee operations and maintenance

activities, manage budgets, and hire additional professionals. Today, government agencies, corporations, and both profit and non-profit institutions have recognized that managing these functions within traditional organizational structures is inadequate. As a result, facilities management has emerged to address the fragmented management of facilities.

Most facilities management practitioners in Nigeria come from various professional backgrounds, often with little to no specialized training. Fortunately, the global facilities management body, IFMA, now offers guidance and expertise to its members in Nigeria. IFMA Nigeria provides training opportunities for those seeking professional qualifications as facility managers and certified facility managers. Additionally, the University of Lagos and Ahmadu Bello University in Zaria offer master's courses in facility management for those pursuing academic qualifications. Although facilities management has not yet gained wide application in Nigeria, it is being increasingly adopted in both the private and public sectors of the country's economy.

Facilities management (FM) practices and strategies are essential to the effective functioning and sustainability of hotel operations, particularly in rapidly growing urban centers. FM involves the systematic coordination of maintenance, energy management, safety compliance, and service delivery to ensure that hospitality facilities operate efficiently while meeting guest expectations.^{2,3} In the hospitality sector, the adoption of appropriate FM practices and strategic interventions is critical for optimizing operational performance and enhancing service quality.

Despite the growing importance of facilities management practices, many hotels in Nigeria continue to face challenges such as limited maintenance budgets, inadequate integration of modern technologies, and shortages of skilled FM professionals.^{4,5} These limitations often result in inefficient maintenance practices, high energy costs, and reduced service quality. Consequently, there is an increasing need for strategic approaches such as preventive maintenance, energy optimization, staff capacity development, and technology-driven FM systems—to improve operational outcomes in the sector.

Within this context, prominent hotels such as Villa Garden Hotel and Rockview Hotel in Owerri provide a useful basis for examining the effectiveness of FM practices and strategies. These hotels, despite their strategic importance, experience recurring issues including unreliable building systems, rising utility costs, water supply constraints, and aging infrastructure. Such challenges highlight the need for structured FM frameworks that can enhance service reliability and guest satisfaction.

Previous studies have emphasized the importance of facilities management practices such as maintenance, energy management, safety compliance, and service delivery in improving hotel performance.^{2,6} Other studies also identified challenges including inadequate funding, limited technology adoption, and shortages of skilled FM personnel.^{4,5}

However, these studies failed to adequately examine the comparative effectiveness of FM practices and strategies among hotels in emerging Nigerian cities such as Owerri. They also paid limited attention to context-specific challenges like unstable power supply, water shortages, aging infrastructure, and rising operational costs, as well as how these challenges affect operational efficiency, guest satisfaction, and overall hotel performance. Furthermore, limited empirical research has focused on comparing FM practices in hotels such as Villa Garden Hotel and Rockview Hotel despite their importance in the hospitality sector.

Therefore, this study seeks to critically examine and compare FM practices and strategies in Villa Garden Hotel and Rockview Hotel, with the aim of identifying effective approaches for improving operational efficiency and service delivery in the Nigerian hospitality sector. It is guided by the following questions:

- i. What are the facilities management practices adopted in Villa Garden Hotel and Rockview Hotel Owerri, Nigeria?
- ii. What strategies can be adopted to improve facilities management practices in hotel buildings in Villa Garden Hotel and Rockview Hotel, Owerri, Nigeria?

Literature review

Theoretical background of the study

This study is anchored in systems theory. These theories provide valuable insights into understanding the practices of facility management in the hospitality sector.

Systems theory

The systems theory was developed by Ludwig von Bertalanffy in 1945 and later formalized in his influential work, "General System Theory" (1968). This theory marked a paradigm shift from reductionism to holism, suggesting that organizations and structures function as "open systems," which maintain themselves through continuous inflows and outflows, involving the building up and breaking down of components.

At its core, systems theory asserts that a system consists of interdependent subsystems, and their interactions determine the overall performance of the system. Key principles of the theory include interdependence, holism, feedback mechanisms, equifinality, and dynamic interaction with the external environment. The theory emphasizes that "the whole is more than the sum of its parts", indicating that the efficiency of an entire organization relies on the coordination of its subsystems rather than their isolated performance. Applying systems theory to facilities management (FM) in high-rise hotel buildings illustrates how various building components, such as power supply, elevators, plumbing, HVAC systems, and fire safety must function as an integrated whole. A malfunction in one subsystem can lead to cascading effects across others, disrupting service delivery and safety. For instance, if elevator systems fail due to power instability, it not only hampers vertical mobility but may also compromise guest comfort, staff efficiency, and safety systems.

Therefore, systems theory provides a holistic framework for addressing FM challenges in hotels like Imo Concord and Rock View, where the interdependence of physical infrastructure, human resources, and technology influences operational sustainability. The theory's focus on feedback and continuous adaptation resonates with the need for preventive maintenance, real-time monitoring, and coordinated management across hotel systems. In the context of this study, systems theory highlights that facilities management should be approached as a coordinated, feedback-driven process that views high-rise hotels as living systems requiring integration, responsiveness, and synergy among all operational components for sustainable performance.

Concept of Facilities Management Practices

In a hotel context, facilities management encompasses both hard services—such as building structure, mechanical, electrical, plumbing, heating, ventilation, air conditioning (HVAC), elevators, and fire/safety systems and soft services, which include housekeeping,

landscaping, pest control, waste management, security, and front-of-house services. Additionally, FM involves the management systems, policies, and personnel that ensure these services provide value to guests and owners. Consequently, FM operates on both an operational level handling day-to-day maintenance and service delivery and a strategic level addressing asset lifecycle management, capital planning, regulatory compliance, and enhancing guest experience.

Facilities management practices has been studied from various perspectives, and empirical research has significantly clarified its meaning and scope. According to Then (1999), facilities management is an integrated resource management function focused on coordinating people, processes, and the built environment to enhance organizational effectiveness. His empirical analysis of facilities management practices within corporate organizations revealed that facilities management encompasses more than just building maintenance; it also involves the strategic alignment of facilities with core business objectives. This perspective positions FM as both an operational and strategic discipline.

Amaratunga and Baldry³ conducted an empirical examination of FM performance measurement within organizations in the United Kingdom. Their findings indicated that FM should not be viewed solely as a support function but as a driver of performance improvement when properly aligned with organizational strategy.

Facilities management (FM) is a dynamic and evolving discipline that extends beyond the maintenance of physical assets to encompass the strategic coordination of resources, services, and organizational processes to support core business objectives. The concept of “facilities” includes not only buildings but also the systems and services that enhance operational efficiency, safety, comfort, and sustainability within the built environment.² According to the International Facility Management Association,^{4,5} FM comprises both hard services—such as structural systems and mechanical and electrical infrastructure—and soft services, including cleaning, security, and other user-oriented functions that improve overall experience and productivity.

Effective facilities management practices require the integration of strategic planning with operational execution. Adrian et al. (2009) demonstrated this through a collaborative study involving an airline and a facility management consultant, where the success of FM interventions depended on mutual trust, transparency, and a deep understanding of organizational goals. The study highlighted that aligning FM strategies with business objectives enables the development of tailored solutions, including process re-engineering and the implementation of advanced property management systems. This underscores the importance of embedding FM within organizational planning frameworks to enhance performance and maximize returns.

Contemporary studies further emphasize the broad impact of FM practices on organizational outcomes. For instance, Were⁷ found that FM practices such as preventive maintenance and health and safety compliance significantly improve employee performance in hotel settings. Similarly, Au-Yong⁸ reported that effective maintenance management contributes directly to enhanced guest satisfaction in the hospitality industry. These findings reinforce the role of FM as a critical driver of both operational efficiency and service quality. Effective facilities management encompasses a range of practices designed to ensure the smooth operation, safety, and sustainability of hospitality facilities. It includes:

- I. Maintenance and Management Practices – This involves preventive, corrective, and predictive maintenance of building

systems and equipment to reduce downtime, extend asset life, and maintain service quality. Proper maintenance ensures operational efficiency and supports seamless guest experiences.⁷

- II. Energy and Utility Management – Efficient management of energy, water, and other utilities helps reduce operational costs and environmental impact. Practices include energy monitoring, use of energy-efficient technologies, and integration of renewable energy solutions to optimize consumption.⁸
- III. Waste and Environmental Management – FM practices address proper disposal, recycling, and sustainable management of resources to comply with environmental regulations and minimize ecological footprints. This also contributes to the hotel's corporate social responsibility and reputation.
- IV. Health, Safety, and Security Management – Ensuring safe working and guest environments through compliance with health and safety standards, risk assessments, emergency preparedness, and security protocols is essential for protecting both people and assets.
- V. Customer-Focused Facility Services – FM practices in this area prioritize guest satisfaction by maintaining functional facilities, timely response to service requests, and creating comfortable, safe, and aesthetically appealing environments.⁸
- VI. Administrative and Management Practices – Effective FM requires strong administrative systems, including budgeting, record-keeping, process planning, and staff coordination. These practices ensure efficient resource allocation, accountability, and alignment with organizational goals.²

Together, these practices form an integrated FM approach that supports operational efficiency, enhances guest experiences, and ensures sustainable and safe hotel operations.

Facilities management strategies in hotel buildings

Strategic level: Strategic facilities management is essential for every organization seeking to enhance its service value. Facilities management encompasses the management of built assets and includes controlling the services necessary for an organization's successful operations.⁹ It focuses on creating an enabling workplace environment with optimal functional spaces that support business processes and human resources, rather than just the physical infrastructure. Often, the scope of facilities management is interpreted as maintenance management, space management, accommodation standards, project management for new buildings and renovations, management of building stock, and administration of associated support services.¹⁰ Facilities management should be approached strategically, with the understanding that it can add value to organizations by utilizing various strategic models and approaches. Its contributions are evident in the integration and alignment of non-core services necessary for maintaining operations and supporting core objectives.^{11,12}

The delivery of facilities management services is based on two strategic objectives.^{13–15} At the national level, its strategic objective is to provide better infrastructure and logistical support for businesses and public endeavors across all sectors. At the local level, the objective is to effectively manage facility resources and services to support organizational operations, project teams, and individuals.

According to Myeda (2012), the strategic approach to facilities management introduces effective management concepts to support both corporate and public endeavors, which is gaining renewed interest and recognition. Strategic facilities management roles include

the formulation, implementation, and evaluation of market-driven decisions regarding space, services, funding, and performance.¹⁶ Yiu notes that the shift in focus from operational services to strategic management highlights the importance of evaluating asset and service performance to garner interest and recognition. This strategic role emphasizes the formulation of business strategies that align with core values and customer needs, aiming to deliver benefits to end users. Clients also seek cost-effective innovations that can reduce operational costs in facilities management.¹⁷ These strategies include:

- I. Investment in Renewable / Alternative Energy
- II. Stronger Regulatory Enforcement by Government
- III. Public–Private Partnerships in Infrastructure Support
- IV. Increased Budgetary Allocation for Facilities Management

Tactical level: In facilities management practice, the tactical level focuses on translating an organization's strategic goals into practical plans for managing buildings, infrastructure, and support services. At this level, facilities managers develop medium-term plans that ensure the organization's physical assets and workplace environment effectively support its core activities. Key responsibilities include developing maintenance budgets, setting guidelines for facility operations, and planning how resources such as space, equipment, and utilities will be used efficiently. Facilities managers also establish standards for performance, service quality, risk management, and value for money to ensure that facilities support organizational productivity.

At this level, managers also ensure that facilities operations comply with health, safety, and environmental regulations. They coordinate projects such as building maintenance, renovations, and facility upgrades while managing contracts with service providers like cleaning companies, security firms, and technical maintenance contractors. Tactical managers supervise the facilities management team, optimize the use of organizational resources, and adapt plans when operational needs or environmental conditions change. They also maintain communication with both internal departments and external service providers to ensure that facilities services align with organizational objectives. The tactical level translates strategic goals into structured plans and programs within the organization. It focuses on resource allocation, systems development, and managerial coordination:

- I. Adoption of Preventive Maintenance Programs
- II. Use of Modern FM Technologies (e.g., Smart Systems, IoT)
- III. Staff Training and Capacity Development

Operational level: The operational level in facilities management focuses on the day-to-day activities that ensure buildings and facilities function efficiently and provide a safe, comfortable environment for users. This level involves the practical delivery of facility services that support the daily operations of the organization. Operational teams carry out routine tasks such as building maintenance, cleaning, security, waste management, and the monitoring of utilities including electricity, water, and air-conditioning systems. They also oversee the work of contractors and service providers to ensure that services meet the required performance standards.

In addition, operational staff responds to service requests from users through help desks or facility service systems. They collect data on building performance, maintenance needs, and user feedback, which helps assess the effectiveness of facility services and identify

areas for improvement. Operational teams report these findings to the tactical level while maintaining communication with both internal departments and external service providers to ensure that facilities continue to operate efficiently and support the organization's daily activities. Typical operational examples in hotel facilities management would include:

- I. Routine maintenance and repairs
- II. Daily inspection of hotel utilities (HVAC, water, lighting)
- III. Cleaning and housekeeping coordination
- IV. Monitoring energy and equipment performance

Facilities management practices and strategies in hotels buildings

Facilities management in hotels is defined as the proactive management of constructed facilities and organizational assets to enhance their efficiency and add value to their performance and services.¹⁸ This study builds on these definitions and suggests that facilities management, when applied to the hotel business, involves the proactive management of facilities, support services, and organizational assets to improve efficiency and enhance the core services provided to customers in alignment with organizational strategic objectives.

Currently, there is a significant trend in Nigeria, particularly in Plateau State, emphasizing the importance of facilities management across all sectors of the economy, including hotels. For any hotel business to thrive, it is essential to manage constructed assets effectively. This ensures the preservation of invested capital, enhances the value of the business, and sustains a reasonable return.

In order to boost the hospitality sector as a reliable source of foreign exchange—anchored by the hotel and hospitality industry—it is vital to explore every available strategy to make this sector more dynamic. Hotels, like any other investments, are primarily established for profit; they also play a crucial role in supporting other sectors of the economy, including hospitality. Therefore, effective management is critical for these investments. The ultimate goal of any business is to remain operational and profitable by attracting and retaining customers.

In Ghana, Mensah (2006) investigated environmental management practices among hotels in the Greater Accra Region. Through a questionnaire survey, he found that most hotels had only implemented basic environmental practices, such as waste collection and simple water conservation measures. The study concluded that smaller hotels, in particular, lagged behind in advanced sustainability practices due to financial and knowledge constraints. This indicates that policy support and capacity building are vital for enhancing environmental compliance in hotels.

Similarly, Lai (2012) conducted an empirical case study on hotel engineering and maintenance demand patterns. By analyzing maintenance logs and interviewing hotel managers, the study revealed that guest rooms and electrical systems accounted for the highest volume of maintenance tasks. More importantly, it showed that hotels relied heavily on reactive maintenance instead of preventive strategies, leading to higher costs and increased disruptions to guest services. This underscores the need for hotels to adopt preventive and predictive maintenance approaches.

In a follow-up study, Mensah (2014) connected hotel managers' attitudes to the adoption of environmental and waste management practices. Using surveys and operational audits, the research revealed

that positive managerial attitudes significantly predicted higher compliance with environmental standards. This finding highlights the importance of managerial commitment in driving sustainability in hotel facilities management.

Research in developing countries has also provided valuable insights. For instance, case studies from Egypt, Vietnam, and Ghana revealed that hotels faced similar challenges, including inadequate budgets, poor procurement systems, shortages of skilled staff, and weak preventive maintenance programs.^{6,18} These studies consistently found that most hotels depend on reactive maintenance approaches, which increase costs and reduce guest satisfaction. The implication is that effective facilities management requires adequate funding, staff training, and reliable supply chains for spare parts.

Empirical studies on facilities management (FM) in the hospitality sector indicate a wide range of practical challenges, operational realities, and strategic responses across various contexts. Collectively, these studies emphasize how facilities management directly influences operational efficiency, guest satisfaction, and the overall sustainability of hotel enterprises. In the African context, research consistently identifies infrastructural inadequacies and financial limitations as significant constraints on effective FM.

Mensah and Osei-Tutu, in their investigation of hotel facilities in Ghana, reported ongoing challenges such as unreliable power supply, water scarcity, and inadequate fire safety systems. They concluded that “the absence of structured maintenance and safety procedures compromises hotel service quality and international competitiveness”. Similarly, in South Africa, Oladokun found that limited technical training among FM personnel and the slow adoption of sustainability practices significantly hindered the operational performance of high-rise hospitality facilities. These findings highlight the urgent need for both capacity-building and stronger regulatory enforcement mechanisms in African hotel FM practices.

Regarding outsourcing, Lok and Finch conducted a seminal study on hotel facilities management, discovering that the success of outsourcing “depends more on the clarity of service-level agreements and supplier competence than on cost savings alone” (p. 118). Their research emphasized that well-defined contracts, effective relationship management, and accountability mechanisms are vital for achieving service quality in outsourced FM functions.

Recent empirical works have reinforced the argument that facilities management plays a strategic role in organizational outcomes rather than being merely an operational expense. For instance, Were⁷ explored the relationship between FM practices and employee performance in Kenyan hotels. Using regression analysis, he revealed that preventive maintenance and safety compliance practices positively influence employee motivation and productivity. Similarly, Au-Yong⁸ demonstrated that effective maintenance regimes are positively correlated with guest satisfaction and repeat patronage in Malaysian hotels, further underscoring the strategic value of FM as a driver of customer experience and brand competitiveness.

Overall, empirical evidence across global and regional contexts identifies recurring challenges in hotel facilities management, including energy inefficiency, poor waste management, reliance on reactive maintenance, procurement delays, and shortages of skilled personnel.

Nonetheless, the literature affirms that preventive maintenance strategies, strong managerial commitment, outsourcing with proper governance frameworks, and the adoption of smart technologies can significantly improve FM performance and sustainability outcomes.⁷

Despite these insights, there remains a significant research gap regarding secondary urban centers in Nigeria, such as Owerri, where the hospitality industry is expanding but empirical data on facilities management performance are scarce. Much of the existing literature focuses on metropolitan areas like Lagos and Abuja, leaving unanswered questions about how hotels in emerging cities manage FM challenges amid infrastructural and financial constraints. This study, therefore, aims to fill this gap by critically examining the facilities management challenges facing two high-rise hotels, Villa Garden Hotel and Rock View Hotel in Owerri, Imo State. By doing so, it contributes context-specific evidence to the discourse on facilities management practices and operational sustainability in Nigeria’s growing hospitality sector.

Research methodology

The study adopts descriptive comparative design, which is suitable for in-depth examination of facilities management challenges in selected hotels. The population includes the staff and management of the two selected hotels who are directly or indirectly involved in facilities management, as well as the guests who utilize the hotel facilities. This includes: Facilities/maintenance department staff, Hotel managers and administrative staff, Housekeeping, security, and technical staff, selected hotel guests (for perception of FM service quality). The study adopted Cochran’s formula for sample size calculation. The instrument was validated through face and content validity by experts in facilities management and research methodology, with necessary corrections incorporated. Reliability was tested using a pilot study and Cronbach’s Alpha, yielding 0.82, indicating good internal consistency.

The initial sample size of 384 (Cochran’s formula) was adjusted to 168 respondents due to accessibility and population size, and proportionally allocated between Villa Garden Hotel and Rockview Hotel. The researcher believes that this approach will effectively meet the research objectives by providing a diverse range of responses to the questions being investigated, ensuring maximum variability. For the method of data collection; structured questionnaires containing both closed and open-ended questions were distributed to sampled staff, Semi-structured interviews were conducted with facilities managers and senior management staff of both hotels. This allowed for deeper insights into policy issues, operational challenges, and strategic decisions that cannot be captured by questionnaires alone. Data will be analysed using both quantitative and qualitative techniques: Data from questionnaires will be coded and analysed using descriptive statistics (frequencies, percentages, mean scores).

Data presentation and analysis

Both Villa Garden Hotel and Rockview Hotel are privately owned and not listed on the Nigerian Stock Exchange, meaning they operate as independent hospitality businesses rather than publicly traded firms. They are also both located in urban/city environments, meaning they face similar external conditions in infrastructure and service demand (Table 1).

Table 1 Demography of hotels

Name of hotel	Listing status (NSE)	Ownership structure	Geographic coverage	Years of development project	Frequency	%	Valid %	Cumulative %
Villa Garden Hotel	Not listed on NSE	Privately owned	City	6–10 years	85	100	100	100
Rockview Hotel	Not listed on NSE	Privately owned	City	11–15 years	85	100	100	100

The main difference is their development age. Villa Garden Hotel is newer (6–10 years), while Rockview Hotel is older (11–15 years). This is important because newer hotels are still stabilizing systems, while older ones often face more wear and maintenance issues (Table 2).²

Table 2 Facilities management practices adopted in Villa Garden Hotel and Rockview Hotel

Management practice	Villa Garden hotel		Rockview hotel		Mean difference
	Mean	SD	Mean	SD	
Maintenance and Management Practices	3.79	0.41	3.66	0.48	0.13
Energy and Utility Management	4.58	0.82	3.66	0.95	0.92
Waste and Environmental Management	2.98	0.67	3.66	0.95	−0.68
Health, Safety and Security Management	3.79	0.41	3.32	0.95	0.47
Customer-Focused Facility Services	4.34	0.48	3.33	0.47	1.01
Administrative and Management Practices	4	0	3.33	0.47	0.67

Research Question 1: What are the facilities management practices adopted in Villa Garden Hotel and Rockview Hotel?

Both hotels use different levels of facilities management practices, but Villa Garden Hotel performs better in most areas. It scores higher in energy and utility management (4.58 vs. 3.66), customer-focused services (4.34 vs. 3.33), administrative and management practices

(4.00 vs. 3.33), and health, Safety and security management (3.79 vs. 3.32). This shows stronger structure and service delivery. Rockview Hotel performs slightly better only in waste and environmental management (3.66 vs. 2.98), which may reflect simpler operations or stronger environmental routines. Overall, Villa Garden Hotel focuses more on customer service and efficiency, while Rockview Hotel is slightly stronger in environmental management (Table 3).

Table 3 Strategies for improving facilities management practices in hotel buildings

Strategies	Villa Garden hotel		Rockview hotel	
	Mean	SD	Mean	SD
Increased Budgetary Allocation for Facilities Management	3.25	0.43	2.67	0.47
Adoption of Preventive Maintenance Programs	3.66	0.48	2.99	0.82
Investment in Renewable / Alternative Energy	3.45	0.5	2.99	0.82
Staff Training and Capacity Development	3.79	0.41	3.33	0.47
Use of Modern FM Technologies (e.g., Smart Systems, IoT)	3.87	0.74	2.99	0.82
Stronger Regulatory Enforcement by Government	3.04	0.19	2.33	0.47
Public–Private Partnerships in Infrastructure Support	3.55	0.5	2.62	0.49

Both hotels agree that FM needs improvement, but Villa Garden Hotel shows stronger support for most strategies. The biggest differences are in modern FM technology use (3.87 vs. 2.99), staff training (3.79 vs. 3.33), and preventive maintenance (3.66 vs. 2.99). This shows Villa Garden Hotel is more open to modern and proactive FM methods. Rockview Hotel has lower scores overall but still recognizes the need for better funding, maintenance, and government support. In practice, Villa Garden Hotel appears more ready for FM modernization, while Rockview Hotel is still more traditional in its approach.

Discussion of findings

The results indicate that both Villa Garden Hotel and Rockview Hotel implement key facilities management (FM) practices, though Villa Garden consistently demonstrates higher adoption levels. Villa Garden scored notably higher in Customer-Focused Facility Services (mean difference = 1.01) and Energy and Utility Management (0.92), reflecting a stronger emphasis on guest satisfaction and efficient

resource use. Moderate differences were observed in administrative and management practices (0.67) and health, safety, and security management (0.47), while Rockview outperformed Villa Garden only in waste and environmental management (−0.68). Globally, effective FM practices—including preventive maintenance, energy and utility monitoring, and smart technology integration—enhance operational performance and customer experiences. In African contexts, FM adoption is often constrained by financial and infrastructural limitations, leading to reactive maintenance and operational inefficiencies.^{18,19}

Empirical evidence from this study aligns with these patterns. Villa Garden Hotel employs a structured and proactive FM system with scheduled maintenance, systematic energy monitoring, and strong safety and guest-service protocols, reflecting managerial commitment and operational discipline. In contrast, Rockview Hotel maintains similar practices but with less consistency, limited monitoring, and occasional resource-related delays. These findings reinforce global and regional research showing that FM effectiveness

depends on managerial oversight, staff capacity, and structured maintenance systems.^{7,8} Overall, while both hotels recognize the strategic importance of FM, Villa Garden's higher systematization and proactive approach contribute to superior operational efficiency and guest satisfaction.

Table 1 presents the perceived strategies for improving facilities management (FM) practices in Villa Garden Hotel and Rockview Hotel. The highest-rated strategies in Villa Garden Hotel are the use of modern FM technologies (3.87) and staff training and capacity development (3.79), indicating strong emphasis on technology integration and workforce competence. Other strategies, such as increased budgetary allocation (3.25) and investment in renewable/alternative energy (3.45), also suggest proactive efforts toward improving FM performance. In contrast, Rockview Hotel recorded relatively lower scores across most strategies, particularly in stronger regulatory enforcement (2.33) and public-private partnerships (2.62), implying limited engagement with policy-driven or collaborative initiatives. The findings suggest that improving FM practices in hotel buildings requires a combination of financial investment, preventive maintenance, staff development, technological adoption, regulatory support, and collaborative partnerships. Adequate financial allocation enables hotels to maintain equipment, replace obsolete systems, and implement preventive maintenance programs. This supports the findings of Mensah and Osei-Tutu (2020), who noted that limited financial resources often hinder comprehensive FM practices in many African hotels, resulting in operational inefficiencies.

Furthermore, staff training and the adoption of modern FM technologies, such as smart building systems and Internet of Things (IoT) monitoring tools, were identified as critical improvement strategies. According to Chan technology integration in hotel FM enhances energy management, service reliability, and operational monitoring. Likewise, Au-Yong⁸ emphasized that skilled FM personnel are essential for effective preventive maintenance, compliance with safety standards, and the delivery of quality guest services.

The findings indicate that Villa Garden Hotel performs better in facilities management due to its stronger adoption of structured practices, greater investment in operational efficiency, and more proactive service orientation. This is reflected in higher performance in energy management, customer-focused services, and administrative coordination. Overall, this suggests that higher service demand and operational pressure may be driving more efficient FM systems in Villa Garden Hotel compared to Rockview Hotel. When compared with existing literature, these findings align with Atkin and Brooks, who argue that FM performance is strongly influenced by strategic integration, organizational commitment, and technological adoption within facility operations. Similarly, Brooks emphasizes that effective FM systems depend on how well organizations embed facilities management into their overall operational strategy.

However, the findings contrast with Mensah and Osei-Tutu, who reported that hotels in developing economies often demonstrate relatively similar FM performance due to shared constraints such as limited funding, weak infrastructure, and inadequate technical capacity. In this study, the clear difference between Villa Garden Hotel and Rockview Hotel suggests that internal management efficiency and operational priorities can create variation even under similar external conditions. Operationally, Villa Garden Hotel shows greater efficiency in service delivery and resource coordination, particularly in customer-facing functions, while Rockview Hotel reflects a more traditional FM structure with lower technological integration. This supports the position of Amaratunga and Baldry that FM effectiveness

improves significantly when organizations adopt structured systems and align FM with strategic objectives.

From a policy perspective, the findings reinforce the importance of strengthening regulatory support and promoting public-private partnerships to improve FM performance. Lok and Finch argue that collaborative and outsourced FM arrangements enhance service delivery when supported by clear accountability structures and strong governance systems. Overall, while the results support established literature on the importance of FM practices, they also extend it by showing that significant performance differences can exist between hotels operating under similar environmental conditions, largely driven by internal management capacity and strategic orientation.²⁰⁻⁵⁰

Conclusion and recommendations

The study examined facilities management (FM) practices, challenges, and improvement strategies in Villa Garden Hotel and Rockview Hotel, Owerri. The findings show that both hotels implement core FM practices such as maintenance management, energy and utility control, safety and security systems, customer-focused services, and administrative coordination. However, Villa Garden Hotel demonstrates higher levels of FM practice adoption, especially in energy management, customer service delivery, and administrative systems, while Rockview Hotel shows relative strength in waste and environmental management. The study also found that both hotels experience significant FM challenges, including financial constraints, technical and equipment issues, human resource limitations, and customer-related pressures. These challenges negatively affect operational efficiency, create operational deficiencies, and reduce guest satisfaction. The impact is more severe in Villa Garden Hotel due to higher service demand and operational complexity. Furthermore, the study highlights that strategies such as preventive maintenance, adoption of modern technologies, staff training, improved funding, and institutional support are essential for improving hotel performance. It also shows that FM effectiveness differs between hotels based on internal management capacity, operational scale, and strategic orientation. Overall, FM is a key driver of service quality, operational efficiency, and sustainability in hotel operations. The study recommends that hotel managers should move away from reactive maintenance practices and adopt structured preventive maintenance systems. Greater attention should also be given to energy management and the integration of modern facilities management technologies to improve operational efficiency and enhance guest satisfaction. Furthermore, the study recommends that facilities management professionals should shift towards proactive and technology-driven maintenance approaches. The use of smart systems and computerized maintenance management systems (CMMS) is essential for improving efficiency, reducing equipment downtime, and enhancing response time to facility-related issues.

In addition, the study recommends that government and regulatory agencies should strengthen the enforcement of safety, maintenance, and environmental regulations within the hospitality sector. The promotion of public-private partnerships is also necessary to support infrastructure development and improve overall service delivery standards. The study further recommends that training institutions should develop more practical and industry-oriented facilities management curricula. Continuous professional development programmes should also be introduced to equip practitioners with relevant skills aligned with modern technological advancements in the sector. Lastly, the study recommends that investors and stakeholders should consider facilities management performance as a key criterion in investment decisions. Support for hotels adopting

energy-efficient systems, modern infrastructure, and sustainable facilities management practices will enhance long-term returns and operational sustainability.

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Conflicts of interest

The authors declare no conflict of interest.

References

- Eltringham M. BIFM formally adopts new ISO definition of Facilities Management. *Workplace Insight*. Published 2017.
- Atkin B, Brooks A. *Total facilities management*. 3rd ed. Blackwell Publishing; 2021.
- Amaratunga D, Baldry D, Sarshar M, et al. Quantitative and qualitative research in the built environment. *Work Study*. 2002;51(1):17–31.
- International Facility Management Association. *Facility management forecast: exploring the current trends and future outlook for facility management professionals*. IFMA; 2007.
- International Facility Management Association. *Preparing New and Transitioning Facility Professionals for the Demand of Today*. IFMA; 2018.
- Amaratunga D, Baldry D. Assessment of facilities management performance in higher education properties. *Facilities*. 2000;18(7):293–301.
- Were SO, Maranga VN. Hotel facilities' management practices and employee performance in Kenya. *Res Hosp Manag*. 2022;12(2):125–131.
- Au–Yong CP, Hoh PK, Amos D. Enhancing the maintenance practice to improve guests' satisfaction in the hotels industry. *Built Environ J*. 2024;21(1):18–29.
- Lavy S, Garcia JA, Dixit MK. Establishment of KPIs for facility performance measurement: review of literature. *Facilities*. 2010;28(9):440–464.
- Hinks J, McNay P. The creation of a management-by-variance tool for facilities management performance assessment. *Facilities*. 1999;17(2):31–53.
- Tucker M, Pitt M. National standards of customer satisfaction in facilities management. *Facilities*. 2009;27(14):497–514.
- Tucker M, Pitt M. Improving service provision through better management and measurement of customer satisfaction in facilities management. *J Corp Real Estate*. 2010;12(4):220–233.
- Nutt B. Smart knowledge. In: *Premises and facilities management*. Macmillan Press Ltd; 1999.
- Nutt B. Life history of property, facilities and services. Course notes. University College London; 2012.
- Nutt B. The purpose and value of facilities management. Presentation notes. Seminar at Chulalongkorn University; Bangkok, Thailand. 2012.
- Yiu YC. A conceptual link among facilities management, strategic management and project management. *Facilities*. 2008;26(13):501–511.
- Sarshar M, Pitt M. Adding value to clients: learning from four case–studies. *Facilities*. 2009;27(9):399–412.
- Okoroh MI, Jones M, Ilozor BD. Application of facilities management in the Nigeria private and public sectors. Paper presentation. The 28th Annual Conference on Facilities Management in Nigeria: The Estate Surveyor and Valuer's Perspective; 2013.
- Akinsola O. *The relevance of automation in the facility management of selected high-rise buildings in Lagos, Nigeria*. MDPI; 2023.
- Ahmed SZ, Ali SM. People as partners: facilitating people's participation in public–private partnerships for solid waste management. *Habitat Int*. 2006;30(1):781–796.
- Akinsola OE, Hussaini PO, Oyenuga SO, et al. Critical factors influencing maintenance management of tertiary institutional buildings in South West Nigeria. *Mediterr J Soc Sci*. 2012;3(11):23–28.
- Alexander K. *Facilities management: theory and practice*. E & FN Spon; 1996.
- Ameyaw C, Mensah S, Osei–Tutu E. Public procurement in Ghana: the implementation challenges to the Public Procurement Law 2003 (Act 663). *Int J Constr Supply Chain Manag*. 2012;2(2):55–65.
- Aliyu AA, Hussaini A, Abubakar M. The challenges of effective property management. *Anikpress*. 2016;21(26):23–34.
- Asiabaka IP. The need for effective facility management in schools in Nigeria. *NY Sci J*. 2008;1(2):10–21.
- Clairvoyant UAE. What are the common facility management challenges faced by hotels? Published 2025.
- Garcia MC, Sanz–Bobi MA, Del Pico J. SIMAP: Intelligent system for predictive maintenance: application to the health condition monitoring of a windturbine gearbox. *Comput Ind*. 2006;57(6):552–568.
- Hightower R Jr, Highsmith J. Investigating the facility management professional shortage. *Int J Facil Manag*. 2013;4(3):219.
- Industrial polymer applications: essential chemistry and technology*. 1st ed. Royal Society of Chemistry; 2016.
- Johnson B, Onwuegbuzie A. Mixed method research: a research paradigm whose time has come. *Educ Res*. 2006;33(7):14–26.
- Johnson G, Scholes K. *Exploring corporate strategy*. 6th ed. Pearson Education Limited; 2002.
- Jutt B. Four competing futures for facility management. *Facilities*. 2000;18(3):124–132.
- Keady R. Financial impact and analysis of equipment inventories. *Facil Eng J*. 2009;27(5):13–17.
- Kincaid D. Integrated facility management. *Facilities*. 1994;12(8):20–23.
- Kremic T, Tukel OI. Assisting outsourcing in the outsourcing endeavor: a decision support model. Working paper. Cleveland State University; 2003.
- Larson Reeve. *High-rise building maintenance: strategies, solutions and challenges – guide*. Medium Inno State Government; 2025.
- Ling TT. Managing high-rise residential building in Malaysia: where are we? Paper presented at: 2nd NAPREC Conference; INSPEN; 2014.
- Mohammed MA, Hassanain MA. Towards improvement in facilities operation and maintenance through feedback to the design theme. *Built Hum Environ Rev*. 2010;3:72–87.
- Mohd–Tawil N, Che–Ani AI, Sairi A, et al. Facilities management indicators for high rise residential property in Malaysia. *WSEAS Trans Environ Dev*. 2010;6(4):255–264.
- Ojo PK. Property management and facilities management: any difference? Seminar paper. Seminar organized by the Lagos State branch of N.I.E.S.V.; Lagos, Nigeria. 2002.

41. Ojo SA. Corporate property facilities management. Paper presentation. Workshop organized by ESVARBON; Nigeria. May 1997.
42. Tucker M, Pitt M. Customer performance measurement in facilities management: a strategic approach. *Int J Product Perform Manag*. 2009;58(5):407–422.
43. Usher N. Outsource or in-house facilities management. *J Facil Manag*. 2004;2(4):351–359.
44. Viyeda NE. The sphere of performance measurement in strategic facilities management. *J Facil Manag*. 2012;10(3):45–67.
45. Voor NM, Pitt M. A critical review of innovation in facilities management service delivery. *Facilities*. 2009;27(5):221–228.
46. Wiggins JM. *Facilities Manager's Desk Reference*. Wiley–Blackwell; 2010.
47. Wiggins JM. History of facilities management. Published 2010.
48. Wing C. Special issue on information technology in facilities management. *J Inf Technol Constr*. Published 2006.
49. Wise D. Agility spotlight and leadership in project management. *Project Management Institute (PMI)*. 2007:60–61.
50. Zaiser KA, Gebrael NZ. Predictive maintenance management using sensor-based degradation models. *IEEE Trans Syst Man Cybern A Syst Humans*. 2009;39(4):840–849.