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Embedding ESG in facility management practices: a South African corporate real estate perspective

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Abstract

Purpose – Despite growing global emphasis on environmental, social and governance (ESG) principles, South African corporate real estate and facility management practices are not aligned with ESG frameworks. This study examined the understanding, prioritization and implementation of ESG principles within the context of South Africa's facility management (FM) and corporate real estate management (CREM).

Design/methodology/approach – The study adopted a qualitative research approach, comprising a focus group discussion session with FM/CREM professionals. The emergent data were analyzed thematically using Atlas.ti software for a comprehensive interpretation of the findings.

Findings – The study's findings underscore the critical role that FM/CREM professionals play in operationalizing ESG principles, particularly through the adoption of innovative technologies such as building management systems (BMS). However, the findings also reveal that ESG implementation within the FM/CREM context tends to be reactive, driven largely by client expectations. Additionally, the findings identify several barriers to effective ESG implementation, including financial and infrastructural constraints, regulatory complexities and resistance to change, challenges that are especially pronounced among small- and medium-sized enterprises (SMEs). Despite these impediments, the findings highlight opportunities for enhancing ESG outcomes through proactive stakeholder engagement and a sustained commitment to continuous improvement.

Practical implications – The study's findings underscore the importance of developing tailored ESG implementation frameworks that emphasize business objectives whilst meeting modern sustainability goals. It also confirmed the pivotal role of FM/CREM professionals in the implementation of ESG principles and ensuring regulatory compliance.

Originality/value – Besides contributing to a better understanding of ESG principles in the built environment, the study provides practical recommendations for improving ESG implementation performance by FM and CREM professionals.

Keywords Corporate real estate, ESG integration, ESG implementation, ESG indicators, Facility management practices, Sustainability indicators

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Introduction

The global shift toward sustainability and responsible business practices has elevated the integration of environmental, social and governance (ESG) principles as a strategic priority across various sectors (Andrade *et al.*, 2025; Almnadheh *et al.*, 2025), including facility management (FM) (Yin, 2023). ESG has been recognized as a remedial framework aimed at minimizing environmental impact, promoting social inclusion and ensuring ethical compliance (Rane *et al.*, 2024). Within the built environment spectrum, facility managers play a pivotal role in embedding ESG principles into FM practice in a way that engenders seamless alignment with the organization's broader business model (Yin, 2023). From a business governance perspective, it is implied that ESG principles should be integrated into conventional FM practices to support the effective achievement of organizational objectives. Accordingly, FM practices now extend beyond the maintenance of physical assets to include energy efficiency, occupant health and well-being, regulatory compliance and stakeholder engagement, largely due to the incorporation of ESG principles. This expanded scope underscores the growing urgency of embedding sustainability goals within the FM/CREM domain (Riratanaphong and Pewklieng, 2025).

Traditionally, FM/CREM has focused on cost control, maintenance and service delivery within the property management context (Atkin and Brooks, 2021). Over time, however, FM/CREM has evolved from a primarily tactical function into a more strategic and sophisticated discipline. It now plays a critical role in enhancing overall organizational performance, with increasing emphasis on sustainability-related goals (Nielsen *et al.*, 2016). This evolution has prompted FM/CREM professionals to adopt a holistic approach, embedding sustainability principles into daily operations. As FM becomes more data-driven, the integration of monitoring and data gathering technologies like building management systems (BMS) has become essential. These systems enable real-time monitoring and control of energy efficiency, supporting informed decision-making (Marinakis, 2020; Zaporowska and Szczepański, 2022). Consequently, FM today spans beyond attention to the physical structure but also encompasses its environmental impact, thereby advancing sustainability within the property management space.

Despite the growing recognition of benefits associated with the integration of ESG principles within the corporate real estate sector, there remains a significant knowledge gap regarding how these principles can be mainstreamed into traditional FM practice, particularly in developing countries (Riratanaphong and Pewklieng, 2025). Previous literature has predominantly examined ESG integration from a business or strategic perspective, often overlooking the operational viewpoint of facility managers (Robinson and McIntosh, 2022; Morri *et al.*, 2024). Yet, FM/CREM professionals play a pivotal role in the daily routine management of built environments and are therefore central to the practical implementation of ESG principles within such spaces. Their insights are crucial for understanding the challenges and opportunities associated with ESG implementation in the property sector, particularly as it relates to translating strategic goals into actionable practices (Yin, 2023). Therefore, they are better placed to ensure the sustainability performance of the facility, identify knowledge gaps, address structural limitations and initiate innovation initiatives that can be integrated into FM practice. However, extant studies detailing the role and perspectives of FM/CREM professionals regarding ESG implementation remain scant, especially in developing countries like South Africa.

Regardless of the adoption of ESG framework initiatives in South African facility management, it hasn't been fully adopted, as it is still in its early stages of adoption, influenced by the King IV code of corporate governance and countries' commitment to the Sustainable Development Goals (SDGs) (Magau, 2024; Chawarura *et al.*, 2025; Rossouw, 2020). Most facility management organizations still lack operational strategies and performance indicators integrated with ESG, associated with daily facility management functions (Riratanaphong and Pewklieng, 2025). Additionally, South Africa's unique social, economic and environmental challenges, which consist of energy uncertainty, social inequality and changing regulations,

require initiatives in integrating ESG in FM and CREM (Porter, 2024; Yin, 2023). Therefore, this research aims to assess perceptions of FM/CREM professionals regarding the utility of ESG implementation in corporate organizations. By adopting a qualitative research approach, the study seeks to gather rich, context-dependent data reflecting the indicators for measuring ESG implementation performance. The research further focuses on the technologies used to monitor ESG performance, initiatives that enhance social value and governance practices within FM/CREM contexts. Additionally, the study aims to assess the prioritization of ESG indicators by FM/CREM professionals in their organizations and barriers and enablers to ESG implementation in FM/CREM organizations. Through this approach, the research intends to provide contextualized insights into the integration and strategic contribution of FM/CREM to organizational ESG performance and ESG implementation from the perspective of practitioners in the field.

Literature review

Overview of ESG in the built environment

The incorporation of ESG principles is of high importance in the built environment, as the sector struggles with the quest for improved sustainability performance (Martin *et al.*, 2025; Ure *et al.*, 2024). The built environment continues to be a major contributor to global carbon emissions, accounting for approximately 34% of total CO_2 emissions as of 2023, with operational emissions alone reaching 9.8 gigatons (Hu, 2025; Khafiso *et al.*, 2025). A significant portion of these emissions stems from the production and use of construction materials, particularly cement and steel, which are responsible for about 30% of construction-related emissions (McKinsey and Company, 2023a). Cement production alone contributes roughly 8% of global CO_2 emissions, underscoring the urgent need for decarbonization strategies (McKinsey and Company, 2023b). According to the United Nations Environment Program (UNEP) building and construction sector assumes responsibility for an estimated 37% of global CO_2 emissions, with embodied carbon emissions from material production and construction posing a persistent challenge (UNEP, 2023).

Amidst escalating regulatory requirements, technological advancements and shifting market demands, ESG has evolved from a minor concern to a strategic initiative for tackling unsustainable production and consumption patterns in organizations (Kumar, 2025; Yin, 2023). As a result, built environment professionals like FM/CRE professionals are faced with increasing pressure to integrate ESG principles in their practice to mitigate high energy consumption, material usage and other resource-intensive practices (Kane, 2020). These efforts are often guided by established standards such as LEED, BREEAM and EDGE, which provide benchmark frameworks for environmental performance (Adewumi *et al.*, 2024; Saleh *et al.*, 2024).

The social aspects of ESG in the built environment sector encompass health and safety, inclusivity and community engagement (Georgiadou *et al.*, 2025; Haryani and Anjani, 2023). Daly *et al.* (2025) argue that built assets must not only be functional but should also promote the well-being of end users and surrounding communities. This includes ensuring a safe and healthy indoor environment, providing accessible design for individuals with disabilities and actively involving local communities in both the planning and implementation phases of projects (Chaturvedi, 2024). Similarly, Makalima (2024) emphasizes that social equity is gaining attention, especially in developing countries like South Africa, where the built environment is reflective of its historical inequalities.

As the third pillar of ESG, Governance refers to the systems and policies that govern how businesses operate and ensure accountability (Yeoh, 2022). It encompasses transparency, ethical business conduct, regulatory compliance, stakeholder engagement and performance monitoring (Hamis, 2024). Concerning FM/CREM, this means aligning the project and asset management with integrity principles, anti-corruption initiatives and responsible supply chains (Ya'u, 2024). Efficient governance ensures that environmental and social aspirations

are not only ambitious but also supported by established standards and meaningful initiatives (Rabadjieva and Terstriep, 2020). The rising demand for ESG disclosures, driven by clients, end-users and government agencies, is prompting organizations to integrate governance practices into their daily operations (Annesi *et al.*, 2025).

Despite the growing emphasis on ESG principles across ESG dimensions, their implementation in the built environment sector remains complex and fraught with challenges. Several barriers continue to hinder the effective implementation of ESG-related initiatives in the built environment sector (Bezerra *et al.*, 2024). Key barriers identified in the literature include a lack of financial resources, inadequate technical capacity and fragmented frameworks. Furthermore, ESG compliance tends to be prioritized by large firms in the sector, often overlooking small- and medium-sized enterprises (SMEs), hence placing them at a disadvantage (Aliano *et al.*, 2024; Bello *et al.*, 2024). Despite these barriers, the integration of ESG initiatives continues to grow steadily, driven by stakeholder expectations, global sustainability agendas and pressing planetary and societal challenges (Parameswar *et al.*, 2024; Chopra *et al.*, 2024). Therefore, ESG is not merely a peripheral concern but a central component of the strategic transformation of the built environment.

Integrating ESG into facility management and real estate management in the South African context

Yin (2023) affirmed that integrating ESG principles in FM and CREM has become increasingly important, both globally and in South African facility management. Sarma *et al.* (2024) claimed that this is due to rising sustainability regulations and growing stakeholder interest in improving ethical governance within their organizational operations. In South Africa, organizations have been required to submit sustainability reports since 2010 by the Johannesburg Stock Exchange (JSE), aiming to strengthen governance frameworks driven by the King II code (Corvino *et al.*, 2020; Sosola, 2024). Through these initiatives, more organizations, especially in facility management and estates operations, have recognized the importance of integrating ESG goals into their daily activities. Due to these disclosures by the JSE, many facility management companies are compelled to adopt comprehensive ESG practices that extend beyond traditional cost efficiency, focusing instead on organizational sustainability and governance (Morais and De Villiers, 2024; Hariram, 2023). However, the integration of ESG principles in FM and CREM is still behind, as most of the FM organizations are not listed on the JSE in South Africa (Abubakari and Thuranira, 2021).

Akinwusi (2024), Khafiso *et al.* (2024), and Jensen and Voordt (2020) claimed that through the holistic integration of sustainable practices in FM and CREM, economic, environmental and reputational benefits can be achieved, which can consist of the enhancement of property value and long-term facility performance. Furthermore, in relation to the social sustainability pillar, EGS integration can enhance health and safety standards, which are linked to improved employee well-being, higher productivity and a strong corporate reputation (Piao *et al.*, 2022; Jain *et al.*, 2024). In addition, good governance in facility management, which can consist of transparency in procurement and compliance, reduces risks and reinforces accountability, which strengthens organizational resilience (Efunniyi *et al.*, 2024; Fredson *et al.*, 2024). Nguyen *et al.* (2025) assert that proactively integrating ESG practices in FM mostly enhances the organization to adhere to regulatory requirements and investor expectations, which positions the organization in a better competitive advantage in attracting capital and clients. Thus, integrating ESG criteria daily in FM and CREM operations, South African Organizations cannot only adhere to the regulations but also can enhance sustainability as a strategic asset, which aligns with corporate sustainability goals, improvement of risk management and contributing to broader socioeconomic development initiatives.

Role of FM/CREM professionals in ESG implementation

Yin (2023) emphasizes the critical role of FM/CREM professionals in operationalizing the integration of ESG principles within the built environment. As FM promotes enhanced building performance, occupant well-being and comfort, it serves as a bridge between strategic ESG objectives and the day-to-day operations of facilities (Porter, 2024; Yin, 2023). The environmental dimension of ESG is often addressed through reductions in energy consumption via technological solutions such as BMS, as well as through water conservation, waste reduction and the adoption of sustainable supply chains (Kandpal *et al.*, 2024; Leogrande, 2024). FM/CREM professionals are responsible for minimizing carbon emissions and environmental footprints, particularly those associated with HVAC systems, lighting and BMS. According to Ghansah (2025), facility managers play a pivotal role in aligning operational processes with green building standards and certifications, thereby contributing meaningfully to climate mitigation efforts.

Moreover, FM/CREM professionals' duties also cover the integration of innovative technologies into facilities to enhance building efficiency (Atkin and Brooks, 2021). By incorporating technologies such as IoT sensors, real-time monitoring and predictive maintenance platforms, these professionals can now collect, analyze and make data-driven decisions that support environmental sustainability performance (Malik, 2024). This not only facilitates regulatory compliance with energy performance standards, such as the Energy Performance Certificate requirements, but also enables continuous improvement (Mahlangu and Van Wyk, 2023). Flaga-Gieruszyńska *et al.* (2024) states that facility managers' teams frequently act as administrators of data within organizations, responsible for ESG reporting and performance monitoring roles that are becoming increasingly important as ESG measures attract attention from investors and authorities.

With regard to social responsibilities, FM/CREM professionals are expected to foster inclusive, healthy and safe environments for all building occupants (Malik, 2024). They can meet this expectation by ensuring that facilities are accessible to individuals with disabilities, maintaining indoor air quality, enforcing health and safety protocols, and supporting wellness initiatives. Wilkinson and Jupp (2021) argue that these professionals play a crucial role in promoting social equity by creating user-centric environments that enhance both productivity and well-being of occupants. During the COVID-19 pandemic, the role of FM/CREM professionals expanded significantly to include infection control, enforcement of social distancing measures and attention to mental health, highlighting its adaptability and importance in advancing social sustainability (Krasaeyan, 2021).

For the governance dimension, FM/CREM professionals are expected to implement anti-corruption policies, uphold supply chain ethics and engage stakeholders effectively (Silvestre *et al.*, 2018). They collaborate closely with sustainability officers and executive leadership to establish governance structures and embed them into operational routines. According to PwC (2022), organizations are increasingly empowering FM/CREM teams to enhance their ESG performance, as these professionals offer valuable insights into compliance gaps and opportunities for improvement. The evolving demands of ESG reporting have elevated FM's strategic role within organizations (Jensen *et al.*, 2023). Today, services associated with FM/CREM professionals extend beyond routine maintenance to setting ESG goals, engaging stakeholders and ensuring alignment with sustainability frameworks such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB) and the UN SDGs (Levo, 2021). FM/CREM professionals are also working more collaboratively across departments on sustainability planning and risk management, demonstrating FM's cross-cutting role across all ESG dimensions (van der Voordt, 2017). As Jensen *et al.* (2023) noted, FM/CREM professionals are instrumental in achieving long-term corporate sustainability goals by translating ESG strategies into actionable, on-site initiatives.

Whereas the literature reviewed thus far underscores the expanding role of FM/CREM professionals in advancing the implementation of ESG principles in corporate organizations, there remains a limited understanding of how these responsibilities are operationalized in

practice, especially in developing countries like South Africa. This gap forms the basis for this study which seeks to explore the perceptions of a cross-section of South African FM/CREM professionals regarding ESG implementation in their respective organizations.

Research methodology

Research design and approach

This study adopted a qualitative research approach grounded in an interpretivist paradigm to explore how FM/CREM professionals in South Africa understand and implement ESG principles. The interpretivist stance enabled the researchers to delve into the subjective experiences and contextual realities of participants, capturing nuanced insights that a quantitative approach might overlook. This methodology was particularly suited to uncovering the complex, socially constructed nature of ESG implementation within corporate organizations by FM/CREM professionals.

Data collection method: focus groups

Data were collected from eight experts using a focus group discussion session outlined in Table 1. The number of discussants was deemed sufficient according to the studies by Krueger and Casey (2015) and Creswell and Creswell (2017), where it was stated that a typical focus group should consist of between 6 and 10 discussants. Furthermore, the discussion session enabled the elicitation of diverse perspectives from discussants and allowed sufficient time for them to post meaningful contributions in response to the questions posed. Lastly, it enhances effective facilitation, especially on critical topics. Two authors acted as facilitators for the focus group discussion session. This in-person session lasted for 90 min, and it was conducted in June 2024. The questions posed during the session can be viewed in Appendix. The session was audio-recorded with the participants' approval and transcribed verbatim. However, focus groups possess shortcomings. Dominant participants may influence the contributions of others, potentially leading to bias (Kulal *et al.*, 2025). Additionally, the open nature of discussions means focus groups do not provide anonymity, which can lead to participants being reluctant to mention sensitive information, which can reduce the authenticity of the data collected (Sim and Waterfield, 2019). Finally, the small sample size typical of focus groups limits the generalizability of the study's findings (Tipton *et al.*, 2017).

Profile of discussants

Discussants were FM/CREM professionals selected through purposive sampling based on their experience and professional capacity. The sample consisted of senior facility managers, corporate real estate executives, a digital solutions manager and a property manager. The discussants possessed over 10 years' experience, individually, in FM/CREM, spanning the commercial, institutional and mixed-use property sectors, with and held executive/senior management positions in their respective organizations. Further data concerning the research experts are shown in Table 1.

Data analysis techniques

The qualitative data gathered was analyzed using thematic analysis guided by Braun and Clarke's (2006) six-step framework. After transcription, the data were familiarized through repeated reading by the authors, followed by initial coding of key phrases and ideas. Codes were then grouped into themes that reflected patterns of meaning across participants' responses. These themes were reviewed and refined to ensure coherence and alignment with the research objectives. Atlas.ti software was utilized to assist in organizing, categorizing and retrieving coded data efficiently. The analysis was iterative, allowing themes to emerge organically from the data rather than being imposed in advance.

Table 1. Participants in the focus group discussion

Code	Position	Company's area of focus	Overview of the company
FM1	Facility Manager	Food service and support services in the following sectors • Business and Industry • Healthcare and Senior Living • Education • Sports and Leisure • Defence, Offshore and Remote	• Operates in 30 countries • Employing over 580,000 people
DSM 1	Digital Solutions Manager	Real estate services company in Africa, and its services consist of • Property management • Retail leasing and consulting • Facilities management • Valuation and advisory services • Occupier services • Auctions and sales	• Operates in 37 African countries • Employing between 4,000 and 4,500 people
FM2	Facility Manager	A property company that spans the following sectors • Retail • Office • Industrial and logistics • Healthcare • Student accommodation • Mixed-use developments	• It operates in 6 countries across 3 continents • Employs approximately 644 people
FM3	Facility Manager	An investment company specializing in the mining and resources sector. It has a diverse portfolio of mineral assets that it manages, and consists of • Thermal coal • Anthracite • Manganese • Nickel • Gold	• Operates in South Africa in 4 provinces
FM4	Facility Manager	Real Estate Investment trust, and it owns properties in the following sectors • Retail • Office • Industrial and logistics • Healthcare • Student accommodation • Mixed use developments	• It operates in 6 countries across 3 continents • Employs approximately 644 people
EFM1	Executive and Facility Manager	Real estate services company in Africa, and its services consist of • Property Management • Retail Leasing and Consulting • Facilities Management • Valuation and Advisory Services • Occupier Services • Auctions and Sales	• Operates in 37 African countries • Employing between 4,000 and 4,500 people
PM1	Property Manager	Real estate company that offers services in • Property management • Assert management • Urban Renewal	• It operates in South Africa • It employs between 501 and 1,000 people

(*continued*)

Table 1. Continued

Code	Position	Company's area of focus	Overview of the company
FM5	Facility Manager	Government department that offers the following services • Property and Asset Management • Infrastructure Development • Facilities Management • Expanded Public Works Programme • Prestige Portfolio Management • Policy and Regulatory Framework Development • Green Building and Sustainability Initiatives • Professional Services	• It operates only in South Africa • It employs approximately 3,181 individuals

Source(s): Authors' compilation (2025)

Ethical consideration

The study acquired ethical clearance from the University of the Witwatersrand's institutional research ethics committee. The study's participants were assured of anonymity. All the participants were provided with the consent forms before participating in the study, and the study's purpose was explained to them. They were informed that their participation was voluntary that they could withdraw from the study at any time, that the data would be stored on a password-protected device and that only the research team will have access to the raw data. The study ensured that the participants were not subjected to any harm, discomfort or pressure during the focus group discussion session.

Presentation and discussion of findings

In this section, the study presents and discusses the findings as elicited from the perspectives of the participants who took part in the focus group discussion. These findings, derived from the insights gathered during the session and outlined in the research methodology section, have been thematically analyzed. Therefore, all findings presented and discussed in this section are the result of a rigorous thematic analysis process. The rest of the section will be delineated according to the following themes: (1) Perceptions and practices of FM/CREM professionals regarding ESG implementation in Corporate Real Estate; (2) Indicators for measuring ESG implementation performance; (3) Prioritization of ESG indicators by FM/CREM professionals in their organizations; (4) Barriers and enablers to ESG implementation in FM/CREM organizations; (5) Integration and strategic contribution of FM/CREM to organizational ESG performance; and (6) Recommendations for improved ESG implementation performance, respectively.

Theme 1: perceptions of FM/CREM professionals regarding the utility of ESG implementation in corporate organizations

The findings reveal that FM/CREM professionals possess a robust understanding of ESG principles, yet their implementation within facility management remains inconsistent and largely reactive. This inconsistency is primarily influenced by client-driven objectives. As EFM 1 noted, ESG adoption is contingent upon customer demands, particularly when clients prioritize reducing their carbon footprint. In such cases, ESG principles are integrated into operational processes in line with regulatory standards. This underscores a reactive approach, where ESG efforts are initiated in response to client expectations rather than being embedded proactively within organizational strategy.

Despite institutional awareness of ESG benefits, its adoption is often externally motivated, with limited internal initiatives driving integration. ESG alignment tends to reflect external enablers, such as client requirements and regulatory pressures, rather than intrinsic organizational commitment. This results in fragmented implementation and performance disparities across sectors.

Technological enablers, particularly BMS and sensors, were identified as key drivers of ESG implementation. These tools facilitated real-time monitoring of energy, water and resource usage, promoting transparency and accountability. DSM 1 emphasized that such technologies support data-driven decision-making, aligning with Elmagrhi *et al.* (2019) and Hadi and Zeebaree (2025), who advocate for digital transformation to enhance ESG implementation efficiency. However, FM 3 highlighted sectoral disparities, noting that ESG implementation remains limited in the mining sector, a challenge echoed by Vera-Burau *et al.* (2025), Karu and Kekkonen (2025) and Kozakiewicz (2025).

Regulatory complexity further complicates ESG implementation. PM 1 observed that organizations often "*cut corners*" to meet stringent and sometimes unrealistic government regulations. FM 2 added that regulatory pressure is compounded by inadequate support mechanisms. These concerns align with Lozano (2015) and Montfort *et al.* (2025), who critiques overly ambitious frameworks in developing contexts. Nonetheless, experts emphasized the importance of transparency and accountability, with FM 2 advocating for forum-based initiatives and PM 1 linking these values to enhanced stakeholder trust. This perspective resonates with Eccles and Klimenko (2019) and Rasheed *et al.* (2025), who promote integrated governance for sustainable organizational outcomes.

National climate commitments also play a pivotal role in shaping ESG practices. FM 5 noted that macro-level sustainability goals cascade down to organizational planning, necessitating localized climate action plans. This vertical integration, as supported by UNEP (2021), illustrates how international ESG agendas influence institutional policies. FM 5 further stressed the need for ESG to be embedded in performance metrics across sectors, advocating for its institutionalization in both public and private domains.

Discussants acknowledged that ESG implementation is an evolving process, requiring continuous improvement. Public–private partnerships and external audits were recommended as mechanisms to enhance ESG performance, aligning with Kotsantonis and Serafeim (2019). Reporting emerged as a significant challenge, with EFM 1 calling for integrated systems to improve ESG disclosure. Current frameworks lack technological integration, necessitating digital innovation, a view supported by Ioannou and Serafeim (2017) and Gradillas and Thomas (2025).

Finally, the tension between heritage preservation and ESG compliance was noted as a unique challenge. Retrofitting historic buildings to meet modern ESG standards requires tailored solutions that respect architectural integrity while achieving sustainability goals.

Theme 2: indicators for measuring ESG implementation performance

The findings underscore that environmental indicators are central to evaluating ESG implementation performance in property and facilities management. Discussants emphasized the pivotal role of BMS in capturing and analyzing environmental data. FM2 explained that their organization utilizes BMS, sensors and IT platforms to collect real-time data through meter readings and automated systems. According to a discussant (FM2), *"We typically do that through either . . . tapping into BMS systems, so building management systems through meter readings and so forth . . . And we've also got other ways and means in terms of using some sensors or actual meters through an IT platform to gather this data . . . "*. This approach enables monitoring of energy consumption patterns, identification of inefficiencies and discovery of opportunities for energy savings. These insights align with Khan *et al.* (2021), who highlight the utility of the BMS as a comprehensive toolset for energy monitoring, control and optimization.

Experts also pointed to automated technologies, such as occupancy-based lighting systems, as instrumental in reducing energy consumption. Perera *et al.* (2020) and Selvam and Al-Humairi (2025) support this view, noting that automation and real-time tracking enhance sustainability outcomes. Similarly, Andelin *et al.* (2015) and Farinha and de Fátima Pina (2025) emphasize that technological integration is a key enabler for capturing ESG data, which is essential for both environmental performance and regulatory compliance.

Beyond energy, the discussants identified renewable energy integration, water conservation and waste management as critical ESG performance indicators. Solar energy and green building initiatives were frequently mentioned as strategies for advancing decarbonization and sustainability in property management. This reflects the argument by Zuo and Zhao (2014) and Hassan *et al.* (2025), who advocate for green buildings to mitigate environmental impacts.

Water emerged as another vital resource, with participants FM2 and EFM 1 referencing "*water consumption*," "*water utilization*," and "*water efficiency projects*" as key metrics. These insights point to the need for an integrated resource management approach that simultaneously addresses energy and water efficiency, promoting holistic sustainability, an approach supported by UNEP (2021).

Waste management was also highlighted, particularly in the context of circular economy principles. Discussants emphasized the importance of minimizing waste and adopting zero-waste goals, aligning with Ghisellini *et al*. (2016) and Kopnina *et al.* (2025), who advocate for the consideration of circularity principles in ESG reporting frameworks.

Collectively, these indicators, energy efficiency, renewable energy use, water conservation and waste reduction, form a comprehensive framework for assessing ESG performance in the built environment. They also reflect a growing reliance on digital technologies and data-driven strategies to enhance transparency, accountability and continuous improvement in ESG implementation.

Theme 3: prioritization of ESG indicators by FM/CREM professionals in their organizations

The findings reveal that FM/CREM professionals prioritize specific ESG indicators based on their organizational context and strategic sustainability goals. Among the most emphasized indicators were energy management and environmental performance, which consistently identified as foundational to ESG implementation. EFM 1 stated that "*energy environment is the priority*," underscoring the centrality of energy efficiency in property management practices. Indicators such as "*energy management*" and "*energy consumption*" were frequently mentioned, reflecting a strong focus on operational sustainability.

However, sectoral disparities in ESG prioritization were noted. FM 3 highlighted that the mining sector has yet to fully embrace ESG indicators, despite recognizing their potential value. This reflects an industrial lag, where ESG integration varies across sectors due to differing regulatory pressures and strategic orientations. These observations align with Eccles and Klimenko (2019) and Alhoussari (2025) who argue that ESG adoption is uneven across industries, shaped by both external mandates and internal initiatives.

Beyond energy, professionals increasingly prioritize water efficiency and waste management as integral ESG indicators. EFM 1 emphasized a holistic approach, stating, "*We've gone as far as doing energy management, water energy,*" pointing to a broader resource efficiency strategy. This aligns with Ghisellini *et al.* (2016), who advocate for circular economy principles in sustainable property management, and Elmagrhi *et al.* (2019), who highlight the importance of resource utilization metrics in ESG frameworks.

The findings also indicate a growing emphasis on climate-related and governance indicators. FM 2 identified "*greenhouse gas emissions*" and "*carbon tracking*" as key priorities, reflecting alignment with global ESG reporting frameworks such as the Carbon Disclosure Project (CDP) and Global Reporting Initiative (GRI). These indicators are essential

for assessing climate risk and environmental accountability, as supported by UNEP (2021) and Eccles and Klimenko (2019).

In addition to environmental metrics, governance and transparency emerged as critical components of ESG prioritization. Discussants referenced "*disclosure and reporting*" as vital practices that promote equitable and accountable operations. This perspective is reinforced by Andelin *et al.* (2015) and Annesi *et al.* (2025), who argue that balanced ESG strategies, incorporating governance and social dimensions, enhance compliance, stakeholder trust and organizational reputation.

Overall, the prioritization of ESG indicators by FM/CREM professionals reflects a strategic blend of environmental stewardship, technological integration and governance accountability. While energy remains the dominant focus, there is a clear shift toward more comprehensive and sector-sensitive ESG implementation performance frameworks.

Theme 4: barriers and enablers to ESG implementation in FM/CREM organizations

The implementation of ESG in FM/CREM organizations is shaped by a complex interplay of barriers and enablers, particularly within SMEs. One of the most prominent barriers identified by discussants is the pressure of government-imposed environmental regulations. PM 1 remarked, "*It is difficult to implement a lot of the regulations that the government is trying to impose from an environmental perspective*," and further admitted that SMEs often "*cut corners to be able to seem compliant*." This reflects the burden of compliance-driven sustainability, especially in emerging businesses, as noted by Lozano (2015), who argues that stringent regulations can overwhelm smaller firms. Sullivan and Mackenzie (2020) similarly contend that top-down regulatory frameworks often fail to account for the operational and financial constraints of SMEs in the property sector.

Company size was another decisive factor influencing ESG adoption. PM 1 emphasized that ESG implementation is "*a lot more difficult than it sounds*," highlighting the limited capacity of smaller firms to meet ESG requirements. This observation aligns with Andelin *et al.* (2015), who found that SMEs typically lack the governance structures, reporting systems and technical expertise available to larger organizations. These limitations result in inconsistent ESG performance and a reliance on reactive rather than proactive strategies, as also discussed by Eccles and Klimenko (2019).

Financial and infrastructural constraints further compound the challenge. PM 1 noted that "*difficulty in procuring modern infrastructural systems due to financial constraints is the main factor preventing ESG advancements.*" This is corroborated by Ghisellini *et al.* (2016), who argue that the transition to sustainable practices requires significant upfront investment, an obstacle for many SMEs. Technological readiness also emerged as a barrier, particularly in older buildings lacking smart systems. FM 2 explained that "*these old buildings that do not incorporate technological advancements make ESG measurements quite a difficult trend at this point*," a sentiment echoed by Perera *et al.* (2020), who emphasize the role of BMS and IoT platforms in enabling ESG performance and data-driven decision-making.

Organizational culture and resistance to change were also highlighted. FM 3 reflected, "*Trying to give the culture to change . . . is not easy . . . because the company is a very small company*," illustrating the difficulty of embedding ESG into the core values of smaller firms. Eccles and Klimenko (2019) note that ESG initiatives are often perceived as burdensome rather than strategic, particularly in organizations lacking sustainability-oriented leadership. Market dynamics and stakeholder attitudes further hinder ESG investment. FM 3 observed that "*clients are reluctant to invest in renewable sources*," while FM 2 described ESG initiatives as "*wasteful expenditure*." These views align with Zuo and Zhao (2014) and Okoye *et al.* (2025) who argue that misaligned stakeholder expectations can deprioritize long-term ESG value creation.

Measurement of social and governance indicators remains a significant challenge. PM 1 stated, "*It is difficult to measure SG compliance from a smaller company, unlike large*

companies that have sufficient resources and systems in place." This reflects the ESG ecosystem gap described by GRI (2020), where SMEs are disadvantaged due to capacity constraints. Institutional immaturity was also evident, with FM 3 noting, "*This is something that I had to bring forth to the company,*" in reference to previously unknown EPC certificate requirements. UNEP (2021) highlights that such immaturity is common in sectors like mining, where ESG in facilities is often overlooked.

Despite these barriers, several enablers were identified. Regulatory incentives were seen as key drivers, with FM 3 noting, "*You need to achieve a specific percentage of giving back to the community if you want to get the project.*" This aligns with Lozano (2015), who emphasizes that social and environmental performance is increasingly tied to economic outcomes in regulated sectors. Additionally, there is growing awareness of ESG's strategic value. FM 2 stated that "*greenhouse gas emission and carbon tracking are major priorities in our organization*" reflecting alignment with global frameworks such as the CDP and GRI (UNEP, 2021; Eccles and Klimenko, 2019).

Technological solutions also emerged as enablers. EFM 1 described their approach: "*We typically do that through either . . . tapping into BMS systems, so building management systems through meter readings and so forth . . . And we've also got other ways and means in terms of using some sensors or actual meters through an IT platform to gather this data . . .*" This supports findings by Khan *et al.* (2021), who emphasize the role of BMS in energy monitoring and efficiency, and Perera *et al*. (2020), who advocate for digital tools to enhance ESG performance through real-time tracking and automation.

Theme 5: integration and strategic contribution of FM/CREM to organizational ESG performance

The perspectives of FM/CREM professionals reveal that ESG compliance is widely recognized as essential, yet its implementation remains challenging, particularly for SMEs. PM 1 and FM 2 emphasized that SMEs often lack the technological infrastructure necessary for ESG integration, such as BMS and carbon disclosure platforms. These systems are critical for measuring and tracking ESG performance, yet their absence creates a significant compliance gap. This observation aligns with Wójcik and Ioannou (2022), who argue that smaller organizations frequently struggle with ESG infrastructure, leading to inconsistent implementation, especially in resource-intensive areas like energy efficiency and environmental certification.

Despite these limitations, experts acknowledged the reputational and stakeholder value that optimal ESG implementation performance brings. FM 4 noted, "*You look better, and you also have a shareholder responsibility,*" highlighting the strategic importance of ESG in enhancing corporate image and investor confidence. This sentiment is supported by Eccles and Klimenko (2019), who emphasize that ESG is increasingly viewed as a driver of long-term value creation and stakeholder trust.

Environmental benchmarks, such as the EPC certification process, were welcomed by participants as steps toward standardization. However, concerns were raised about the lack of actionable guidance following certification. Discussants pointed out that while certification provides a framework, it does not necessarily translate into operational change. FM/CREM professionals responded proactively by engaging with service providers to understand grading criteria and seeking ways to exceed baseline requirements. FM 3 posed a reflective question: "*How do companies not traditionally involved in property inspire their stakeholders to take ESG seriously*?", indicating a desire to move beyond compliance toward transformative environmental performance. This proactive stance aligns with UNEP (2021), which advocates ESG implementation as a strategic and participatory process.

External factors such as market pressures, government mandates and social context were also identified as influential in ESG implementation. FM 2 stated that client and market expectations were "probably the real key factors driving a lot of our clients" toward ESG. EFM

1 added that regulatory directives help raise awareness about the consequences of inaction. The real estate context further shapes ESG priorities. PM 1 observed that in residential areas, "*there is significant emphasis on the social aspect of ESG*," whereas in urban centers like Pretoria and Johannesburg CBDs, safety, community relations and local impact are especially critical. These findings reinforce the idea that ESG implementation in CRE is shaped not only by internal capacity and intent but also by the urban and regulatory environment, community needs and stakeholder accountability (GRI, 2020; Andelin *et al.*, 2015).

Resource allocation emerged as a key determinant in the successful integration of ESG practices. Larger organizations were seen to integrate ESG more smoothly due to their ability to invest in systems and processes. PM 1 remarked, "*You're given a lot more resources to be more compliant . . . as opposed to the smaller ones*," illustrating the disparity in ESG readiness across organizational sizes. Discussants also highlighted the importance of recurring audits, performance indicators and health and safety checks as mechanisms for embedding ESG into operational routines. However, concerns were raised about token compliance, with PM 1 noting the submission of blank KPI reports as a performative gesture rather than genuine accountability.

Amidst these challenges, there is evidence of progress in formalizing ESG metrics. Experts acknowledged that ESG data and transparency are increasingly being integrated into organizational processes, enhancing risk management and investor confidence. This aligns with the WEF (2021), which emphasizes the role of ESG metrics in driving operational resilience and strategic decision-making.

Theme 6: recommendations for improved ESG implementation performance

To enhance ESG implementation performance within corporate real estate and facilities management, experts proposed several actionable recommendations grounded in both practice and literature. A key recommendation is the active engagement of private companies and third-party consultants in conducting Energy Performance Certificate (EPC) assessments. This approach facilitates knowledge transfer, ensures technical accuracy and supports ESG compliance. Wójcik and Ioannou (2022) and Sharma and Ray (2025) affirm that external service providers play a pivotal role in bridging expertise gaps and guiding organizations through complex ESG requirements.

Another critical recommendation is the adoption of authentic, environmentally impactful measures, rather than superficial compliance. Discussants cautioned against "*box-ticking*" approaches that fail to integrate ESG into core operational systems. Boiral *et al.* (2020) and Mandy (2025) argue that such symbolic implementation undermines ESG effectiveness and can erode stakeholder trust. Instead, ESG practices should be embedded into daily operations to ensure long-term sustainability and measurable outcomes.

Stakeholder collaboration and education were also emphasized. Discussants advocated continuous engagement between ESG specialists and clients to foster understanding of ESG's long-term benefits. FM/CREM professionals noted that informed clients are more likely to support and invest in ESG initiatives. Veldman and Willmott (2020) and Tumpa and Naeni (2025) support this view, highlighting that participatory governance and stakeholder alignment are essential for embedding sustainability into organizational decision-making.

Furthermore, experts recommended the setting of realistic and context-sensitive ESG goals. PM 1 and others warned that overly ambitious targets may lead to compliance fatigue and disengagement. Eccles and Klimenko (2019) suggest that phased implementation, supported by quantifiable benchmarks, is more effective in sustaining momentum and achieving meaningful progress.

Finally, the need to balance financial and environmental interests was underscored. DSM 1 emphasized identifying cost-saving opportunities through environmental improvements, particularly in capital-intensive sectors like mining. This reflects a broader consensus that ESG must be both sustainable and economically viable. Giese *et al.* (2021) and Margiutomo and

Jayanti (2025) argue that integrating environmental initiatives into asset lifecycle planning and operational budgeting enhances financial resilience and long-term investment returns.

Collectively, these recommendations, which have been adumbrated in Table 2, advocate for a strategic, inclusive and performance-driven approach to ESG implementation by FM/CREM professionals, one that aligns environmental responsibility with operational feasibility and stakeholder value.

Conclusion and implications for future research

This study underscores the growing relevance of ESG adoption in the corporate real estate and facility management (FM/CREM) sector, particularly as global sustainability agendas and SDGs continue to shape industry expectations. The findings reveal that while ESG is increasingly recognized as a strategic imperative, enhancing compliance, stakeholder engagement and operational resilience, its implementation remains uneven. Larger, well-resourced organizations are leading the way, leveraging advanced systems and expertise to embed ESG into their operations. In contrast, SMEs face significant barriers, including limited financial resources, technical capacity and awareness, which hinder their ability to adopt and sustain ESG practices.

The study also highlights that ESG integration is still in its formative stages across many property companies, with sectors such as mining only beginning to transition. A key insight is the importance of strategic collaboration between ESG experts and clients, particularly in co-developing realistic, context-sensitive ESG goals. This approach not only ensures legal compliance and operational feasibility but also aligns ESG initiatives with local challenges such as energy instability. The emphasis on setting quantifiable and achievable objectives is critical to avoiding superficial compliance and fostering genuine accountability. Moreover, the research points to the need for stronger feedback mechanisms, especially in certification systems like EPC. Participants called for commercial service providers to offer more actionable guidance, particularly for SMEs that lack internal ESG evaluation capabilities. The role of facility managers was also emphasized as central to ensuring data integrity, audit readiness and performance tracking, key elements in distinguishing authentic ESG performance from symbolic gestures.

Importantly, the study affirms that ESG is evolving from a regulatory obligation to a strategic business function. When effectively implemented, ESG enhances corporate reputation, builds shareholder trust and improves employee well-being through better governance and working conditions. The convergence of environmental and financial goals was particularly noted in capital-intensive sectors, where ESG-driven efficiencies can yield both sustainability and cost–saving benefits. To elevate ESG implementation maturity across the FM/CREM sector, the study recommends targeted capacity-building initiatives, specialized support for SMEs and multi-stakeholder engagement. These efforts can help bridge the implementation gap and ensure that ESG becomes a core component of organizational strategy rather than a peripheral concern. The practical insights offered by

Table 2. Recommendations from the experts

No.	Recommendations
1	Engage Private Companies in EPC Assessments
2	Implement Genuine Environmental Measures
3	Foster Collaboration Between Experts and Clients
4	Set Realistic and Achievable ESG Goals
5	Aim for Practical Environmental Impact Reductions
6	Balance Financial and Environmental Objectives

Source(s): Authors' Compilation (2025)

industry professionals in this study provide information for the policymakers and investors in developing relevant frameworks that embrace responsible and transparent corporate practices in FM and CREM.

However, due to the nature of the study's research design being a focus group, the study possesses shortcomings. Firstly, group dynamics can influence the individual responses through dominant participants in the focus group, which can hinder full participation of the recessive participants, which can lead to some critical information not being gathered, and some participants may turn to agree with the dominant ones to avoid conflicts. Secondly, focus groups lack anonymity, which compromises open discussions of the critical issues that are perceived as sensitive, which in turn reduces data authenticity. Thirdly, the small nature of focus group samples limits the generalizability of the findings. Lastly, the moderator's skill influences the quality of data gathered. Future studies should explore sector-specific ESG strategies, particularly in underrepresented industries such as mining and public sector organizations. There is also a need to investigate the development of integrated ESG reporting systems, the impact of ESG on organizational performance and the dynamics of stakeholder collaboration. Addressing the persistent barriers faced by SMEs will be crucial in ensuring that ESG adoption is inclusive, scalable and impactful across the built environment.

Appendix

Focus Group Interview Protocol

Q1: How do CREM/FMs understand the implementation of environmental, social and governance (environmental, social and governance) reporting/disclosure in your organizations?

Q2: What are the indicators for measuring the ESG performance of CRE?

Q3: What ESG indicators are being prioritized by the FM/CREM in their organizations?

Q4: What factors have influenced the contribution of CRE to the organization's ESG?

Q5: How are ESG practices integrated into real estate and facility management operations?

Q6: How can the implementation of ESG principles by FM/CREM professionals be improved upon in the South African Corporate Real Estate Sector?

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