The Future of Facilities Management for Sustainable Development

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Aim of the Project

It aims to develop strategies that look at current challenges while ensuring the preservation of resources and opportunities for future generations.

Objectives

- Investigate current trends and practices in facilities management with a focus on sustainability initiatives.
- Assess the impact of sustainable facilities management on the overall performance and reputation of organizations.
- Examine case studies that have explored sustainable development and the practice of facilities management.
- Examine the role of technology and innovation in enhancing the sustainability of facilities management processes and strategies.

Background

- The role of the facilities manager is multifaceted and variable in two ways. The first of them goes from "soft" to "hard" facilities manager, to use the language used by facilities managers themselves (Goulden & Spence, 2015).
- Hard facilities managers are the term for activities involving machinery and infrastructure, such as plant maintenance, building management system (BMS) management, and procurement advice (Goulden & Spence, 2015).
- Soft facilities encompass human-related tasks like housekeeping, food service, and security, all of which can be outsourced (Goulden & Spence, 2015).
- Hard and soft facilities management services are depicted in Figure 1 above.

Figure 1 Facilities Management Responsibilities (FTMaintenance, 2020) [Online].

- Sustainable Facility Management (SFM) is a multifaceted approach aimed at minimizing the negative environmental impacts of buildings while enhancing the well-being of occupants (Alfalah & Zayed, 2020).
- This involves implementing changes in building structure, operation, and design to improve energy and water efficiency, waste management, and the use of sustainable materials (Alfalah & Zayed, 2020).
- The challenge in facility management is to include social, environmental, and economic goals into the business plan, as shown below in Figure 2 (Junghans, 2011).
- One element of a sustainable society can be sustainable organisation (Junghans, 2011)

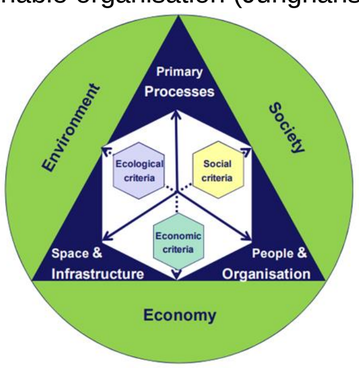

Figure 2 Basic structure of Sustainable Facility Management – SFM-Model (Junghans, 2011)

Methodology

- A survey was developed to gather comprehensive insights into the primary considerations surrounding the future of facilities management for sustainable development.
- Additionally, interviews were conducted with selected experts in the field to delve deeper into specific topics and gain nuanced insights.
- Case studies were also conducted, they provide valuable insights into the impact of sustainable facilities management on organizational performance

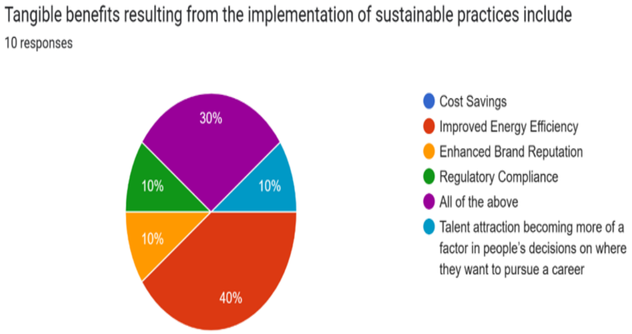

Figure 3 Respondent tangible benefits resulting of sustainable practices.

Evaluation

- Through an exploration of current trends, case studies, and technological innovations, it is evident that integrating sustainability into facilities management processes presents both challenges and opportunities.
- Technological advancements, particularly in Artificial Intelligence (AI), Machine Learning (ML), and Building Information Modelling (BIM), offer transformative opportunities for facilities management.
- These innovations enable predictive maintenance, energy optimization, and precise planning and design, contributing to overall sustainability goals.
- Organizations should prioritize investments in renewable energy technologies such as wind and solar power to reduce reliance on traditional energy sources and mitigate environmental impact

Recommendation

- First, organizations should invest in ongoing education and training programs to enhance the knowledge and skills of facilities managers in sustainable practices and emerging technologies.
- Secondly, is to adopt collaborative partnerships between facilities management professionals, technology providers, and policymakers to drive innovation and knowledge sharing in sustainable facilities management practices.
- Third, is to allocate resources for the adoption of advanced technologies such as AI, ML, IoT, and BIM to optimize facilities management processes, enhance operational efficiency, and achieve sustainability goals.
- Fifth, advocate for supportive policies and regulations that incentivize sustainable practices and investments in green technologies within the facilities management sector. By implementing these recommendations, organizations can strengthen their commitment to sustainability, enhance their competitive advantage, and contribute to the creation of smarter, greener, and more resilient built environments for future generations

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