

Evaluation of the Applications of Contemporary Facilities Management in Nigeria

Daniel Oluwatayomi Fadumo¹, Ngozi Marykate Okoye¹ and Ejike Mbanefo Okeke²

¹Department of Building, Nnamdi Azikiwe University, Awka, Anambra State-Nigeria

²Chukwuemeka Ojukwu University, Igbariam, Anambra State –Nigeria
od.fadumo@unizik.edu.ng

doi: <https://doi.org/10.37745/bjmas.2022.0267>

Published August 4 2023

Citation: Fadumo D.O., Okoye N.M. and Okeke E.M. (2023) Evaluation of the Applications of Contemporary Facilities Management in Nigeria, *British Journal of Multidisciplinary and Advanced Studies: Engineering and Technology, 4(4),14-22,*

ABSTRACT: *This study was aimed at evaluating the applications of contemporary Facilities Management in Nigeria in order to encourage massive adoption over traditional approach. Its objectives range from identifying the applications of both traditional and contemporary Facilities Management practices in Nigeria, to identifying the benefit and challenges of the Modern/contemporary practices over the older form of facility management. Traditional approach to facility management has been proved to be unsuitable and ineffective in the 21st century and at such this independent studies paper seeks to encourage the wide adoption of contemporary facilities management due to its prevailing benefits, added is numerous recommendations to challenges that it may also present since the practice is seemly new in Nigeria. Contemporary practices in facility management in Nigeria which encompasses software and mobile applications have been created to ease facility management in the modern age. Several of such application and mobile software's were discussed and extensively discussed and un-discussed ones are available for further research.*

KEYWORDS: evaluation, applications, contemporary, facilities management, Nigeria

INTRODUCTION

Spedding (1999) defined Facility Management as “the practice of coordinating the physical workplace with the people and work of the organization, integrating the principles of business administration, architecture, behavioral and engineering sciences. As Roper and Beard (2006) rightly argued, “sustainability is really about two things: having both awareness of the fragility of living things, their ecosystems and the resources on which they depend; and about seeking to

implement technical and economic efficiency with a soul and a conscience”. The study contained in this paper however argues that the concept of sustainable facilities management practice in Nigeria is grossly under-researched even as awareness is abysmally low and attitude towards it is inadequate. Although facilities managers remain at the vanguard of promoting sustainable working practices within host organizations through adoption of environmentally friendly technologies, waste and energy management practices (Kadiri, 2006), one contends that lackadaisical commitments by organizations, technical barriers (Finch and Clements-Croome, 1997), economic and social challenges can substantially impact on success of sustainable facilities management practice. The study contained in this paper however argues that the concept of sustainable facilities management practice in Nigeria is grossly under-researched even as awareness is abysmally low and attitude towards it is inadequate. The aim of this seminar paper is to evaluate the applications of contemporary Facilities Management in Nigeria, in order to encourage massive adoption over traditional approach. The specific Objective includes: to Identify and evaluate the various applications of Traditional Facilities Management practices in Nigeria, describe and evaluate the applications of Contemporary Facilities Management practices in Nigeria, identify the Benefits of Contemporary Facilities Management over traditional Facilities Management in Nigeria and explain the Challenges facing Contemporary Facilities Management adoption in Nigeria. The study results are expected to be of advantage to any institutional facilities managers in Nigeria particularly in planning a proper reaction to the recognized problems by following the recommendations and leveraging the benefits.

REVIEW OF RELATED LITERATURE

Gunner (2010) defines Facility Management as: “an interdisciplinary field primarily devoted to the maintenance and care of large commercial and institutional buildings such as hotels, resorts, schools, office complexes, sports arenas and convention centers. Duties may include the care of air conditioning, electric power, plumbing and lighting systems, cleaning, decoration, grounds keeping and security”. Apart from Spedding (1999) and IFMA’s concept of Facilities management, there are other variances of facilities management definitions. This was corroborated by the Royal Institution of Chartered Surveyors (RICS) Research Report of 1999 which highlighted such definitions. Becker (1999) [In Cowan (2001)] defined Facilities Management as “being responsible for co-coordinating all efforts relating to planning, designing and managing buildings and their systems, equipment and furniture to enhance the organization’s ability to compete in a rapidly changing world”. The need for facilities managers to help reduce operating cost, increase operational efficiency and improve bottom-line performance is important as we tend to focus on big issues ignoring small things that need action consistently to make it more functional. Preventive and post maintenance program are to be provided to minimize frequently breakdown of facilities, plant and equipments for higher reliability of the system.

Traditional Facilities Management in Nigeria

Traditional facility management creates increasing problems of staying ahead of operations, balancing everything from changing industry best practices to equipment maintenance schedules. It is not able to supply company with clear, readily available and crucial information. It is not able to leverage increasing amount of data or harness power of internet for manufacturing and can't meet demand for higher information quality i.e. outworn. The Facility Management industries growth over the last twenty years has been led by major corporate leaders seeking real-world solutions to everyday problems. As a result, they have seen long term financial savings. As the field has grown, so have the tools, such as software solutions, making it universally beneficial and affordable for organizations of all sizes. This study tends to be significant in unraveling the continued success or benefits of modern information-based society accepting contemporary facilities management as a staple in the business community. Elizabeth Dukes (2014)

Problem: According to Nwokolo and John (2017) some of problems facing facility management practice in Nigeria are:

1. Limited industry Knowledge and experience among Client and contractors.
2. Also, appreciation of the value of maintenance as people hardly appreciates preventive maintenance and prefers post maintenance work that they can see e.g fire outbreak
3. Lack of willingness to pay the right rates for the level of expertise for value facility management

Contemporary Facilities Management in Nigeria

The Facility Management industries growth over the last twenty years has been led by major corporate leaders seeking real-world solutions to everyday problems. As a result, they have seen long term financial savings. As the field has grown, so have the tools, such as software solutions, making it universally beneficial and affordable for organizations of all sizes. This study tends to be significant in unraveling the continued success or benefits of modern information-based society accepting contemporary facilities management as a staple in the business community (Elizabeth, 2014). Though facilities management is irreplaceable, there are now better ways to make the process even more flexible and user friendly. This involve choosing the correct contemporary facility management software that suit your requirement, Modern facilities management allow collaborative possibilities with innovative solutions. It allows mobility so as to maximize the use of technology while cutting cost. Modern or integrative facility management reduces the overly complicated system and inaccessibility of data. Contemporary facilities Management continues to expand and develop in terms of the volume and diversity of commercial activity, with a significant influence upon organizational success and goal achievement (Peter and Edward, 2013)

Contemporary Softwares Applications For Facility Management

Many contemporary facility management software have been developed and this includes

1. eMaint X3: is an affordable computerized maintenance management software (CMMS) solution for asset management which offers flexibility and scalability. It is for managing assets, streamline workflow, track inventory and schedule preventive and predictive maintenance.

Main use: Asset management, preventive management, inventory management, reporting (Plate1)

2. One Soft Connect: It manage day to day issues from work environment, you can manage your assets, projects, risks, human resources and CRM which has been customized according to personal or company requirements. It reduces messy documents, spread sheet or applications to manage tasks, schedule meetings, activities with customers of all your projects, assets, opportunities, contracts and many other essential tasks. (Plate2)

Main use: HRM, Risk management, Asset Management, Projects, CRM

3. Maintenance Connection: It is targeted at organizations dealing with general facility management tasks, healthcare, manufacturing, government, utilities, warehouses, energy, development, travel agencies and other specialized industries. The maintenance software system aim at maintenance management optimizes lifecycles of assets, tracks and manages maintenance costs, provide insight on possible equipment failures, streamlines labour effort and perform other crucial tasks for meeting the full potential of maintenance and facility management.

It is also a web based system that does cost tracking, predictive analysis, scheduling and overall project management. (Plate3)

4. Hippo CMMS: It offers a graphical view of maintenance operations. Facility Management Organizations can customize their account, import floor plans and drawings, and visually manage their assets and equipment. Hippo standard dash offer clients a data-driven list to view maintenance information while the Hippo calendar dash allows optimized workflow and resource planning. It is a management system that is suitable for a variety of industries and their needs, from manufacturing and health care to hospitality and education. (Plate4)

5. Service Channel: Is an integrated suite for facilities managers to streamline tasks such as finding contractors, managing work orders and completing projects with transaction processing. Provides facility managers a platform to source, procure, manage and pay for repair & maintenance services from commercial contractors across their enterprise. By providing a real time, web and mobile based view of all services data, facility managers drive significant ROL without outsourcing or investing on new infrastructure. Over 250 global brands use service channel daily to conduct business with contractors in different locations. (Plate5)

6. Maintimizer Blackbox2: Maintimizer Blackbox2 is targeted towards smaller facilities that are seeking for fully functional CMMS-it plugs into the company network or can run off of an Ethernet cable or Wireless. Using the Microsoft SQL Express database and a pre-configured web server, it includes a complete set of modules to manage work orders, track inventory, vendor and purchase orders, preventive maintenance and timecards. (Plate6)

7. FMX: FMX is another facility management solution designed with simplicity and efficiency in mind with a web based calendar interface that makes scheduling, planning and maintenance requests a breeze. (Plate7)

Others Contemporary Application Software's

1. FTMaintenance
2. Axxerion`s
3. Directline
4. 306facility
5. Dude solution
6. Agility
7. FAMIS

1. Contemporary Mobile Applications For Facility Management

Smartphone's applications can be used by facility managers for field maintenance or equipment identification, instant inventory and deciding items needing replacement. An example is:

1. HVAC Locator: by CARMEL software for the apple IPHONE and IPOD touch. It allows facility managers and plant operators to input information on all equipments and upload it to a secure remote server.

Working Operations: Takes advantage of the GPS sensors in Smartphone's and tablet computers like the IPAD. The locator identifies equipment by GPS coordinates which become the globally unique identifier for each spare part and appliance. A user can input and retrieve information by doing nothing more than standing next to the item. (Plate8)

Others:

- Crestron Mobile Pro on sale for \$99.99 at iTunes store provides integrated control of lights, media, climate, security and more
- Ilivecenter client uses such building automation protocols as Lon works, Zigbee and PLC Bus
- USE manager 6.1 provides automated control and real time status of subject building systems by saving time spent travelling among properties. It allow online monitoring and control for up to 2 years by integrating EPA's portfolio manager with its own HSE tracker, real-time management and USE- Mobile modules, the product allows online energy monitoring and control status of subject building system
- Kill-O- Watts,
- WattsPlus
- Meter Read

Benefits and Application of Contemporary over Traditional Facility Management Applications in Nigeria.

What Facilities Management has achieved, which is new, is the understanding that a coordinated and integrated approach to a range of business activities adds value to an organization's process. This is aptly captured by Alexander (1996) who defined Facilities Management as "the process by which an organization delivers and sustains support services in a quality environment to meet strategic needs".

- Reporting and Tracking-Managing of field teams such as physical plant engineers or remote facility management personnel who can input information on their applications either mobile or not while working away from the office,
- Data collection:
- Maintenance and inventory control is made possible.

Challenges Facing Contemporary Facility Management Practice In Nigeria

According to an article by Alpha Mead Facilities and management services in EuropeanCeo, Other important challenges which they face include,

1. Misguided idea of the roles and responsibility for Facilities Management practitioners due to not cultivating an understanding of the evolution. Many actors use the term Facilities Management to impress clients but does not provide professional facilities management (David,2000)
2. The current economic slowdown in Nigeria is identified as the biggest challenge to the facilities management sector of Nigeria's economy. Respondents are of the opinion that the recession has also slowed down the growth of several industries and economic sectors which have in turn exerted pressure on facilities management companies. The cost of funding in Nigeria is higher putting a lot of pressure on businesses to procure resources and execute job before clients pay.
3. Government policy which has affected exchange rate, inflation, access to capital, high lending rates, and infrastructure problems including electricity supply. Since running cost account for significant part of annual expenditure there is bound to be pressure to look for savings in non-core business area. Atkins &Rooks (2009)
4. Shortage of skilled workers due to education not improved as economy. Cash is needed to train those hired from school, other industry to train costing money and put business in a difficult situation since some trained workers may not be retained.
5. Lack of public infrastructure like electricity being under generated compare to other countries hindering industrial and economic development of the country. The challenge with electricity supply has led to high cost of power generation which has implications for profitability and cost of doing business.
6. High risk environment in terms of legal structure. taking cases to court takes long process and bureaucratic
7. On the microeconomic level, respondents point to the practice of late payment for services by clients.

Conceptual Framework

As a novel discipline that has been developed quickly in recent years, facility management is a profession that encompasses multiple disciplines to ensure functionality of the built environment by integrating people, place, processes and technology (IFMA, 2010).Facility management is evolved from conventional estates and property management and is now a comprehensive

management approach that comprises of three aspect viz facility management for business management, facility management for management and control and facility management for operation and daily works(JFMA,2006).In other words, a qualified facility manager should be competent in areas such as corporate real estate, project and contract management, maintenance and operations(HKIFM,2010).This paper concerns the measurement of facilities management performance. Empirical researches indicate that facilities management utilizes a wide range of measures aside the traditional financial accounting measures. It also indicates managerial behaviour as well as various measure of effectiveness. Dilanthi Amaratunga, David Baldry, (2003)

RESEARCH METHOD

This paper solely used the qualitative approach. The literature was collected and compiled from various publications and also previous research. Personal analytical review and synthesis have been conducted in order to strengthen the gap of research from literature.

RESULT AND DISCUSSION

From the literature, only a few studies have considered the funding elements or issues in the implementation of Facility Management specifically in the Nigerian context. As study done by Myzatul Aishah Kamarazaly et al shows“that the critical challenges currently facing the UFM (Australasian university facilities managers) comprised issues relating to the following (in diminishing order of significance): inadequate funding, emergency management and business continuity planning, statutory compliance, sustainability and environmental stewardship, keeping up with rapid changes in technology, operational efficiency, identifying and meeting stakeholder needs, maintenance and manpower. Preparing for and responding to disaster/emergency was perceived as the most critical challenge of the future, perhaps, due to the recent natural disasters. Overall, poor funding was identified as the root of all other issues faced by the modern Facility Management, hence suggested strategies for addressing the key challenges harped on financial improvement measures.” Other than that, past studies also have distinguished different elements compelling the accomplishment of key FM functions in many managerial levels in Nigeria context, the components, unfortunately, are not recorded as far as their relative levels of effect on the key FM functional areas. Myzatul Aishah Kamarazaly et al. [18] also stated that “Facilities managers would benefit from the prioritization mainly due to the fact that it would enable them to leverage the limited resources at their disposal to address those factors that have a higher impact on the FM functional areas.” Thus, it is expected that further study should fill this gap.

CONCLUSION AND RECOMMENDATIONS

Conclusion: Facilities management is gradually and steadily becoming an integral part of Nigeria's real estate sector. Nigeria is beginning to see asset owners and Government institutions

employ facilities management companies unlike some years back when the role was left to in-house artisans. These are quite impressive indicators that could improve the industry performance to the level that it adequately supports businesses efficiently.”In spite of the fact that facilities management businesses seem to be responding to the prevailing economic situation, one glaring thing in the industry lately is the level of sophistication, occasioned by the types of project that are coming on stream. This fact has harbingered a season of impressive migration to the use of technology and we can see different technologies coming into the facilities management space to take care of this gap. Finch and Clements-Croome, 1997) .This study has been able to introduce us to problem facing the growth of facility management in Nigeria practice in Nigeria, it explains the traditional and contemporary approaches by looking at application and mobile software’s introduced and finally hinges on the benefits of the contemporary applications.

Recommendations: According to Balami in facilities management Business Confidence Monitor 2016/17 “The Facilities Management industry is gathering momentum, with early contract wins in 2016 and growing pipeline of retail and commercial real estate portfolios. This is quite representative of the level of optimism in the market. Based on the challenges above these recommendations are necessary:

- Misguided idea of the roles and responsibility should be corrected through roles definition and client educations(David,2000)
- The Government should make policies to reduce exchange rates, inflation, lending rates and provide financial support, to reduce pressure on facilities management companies in procuring resources . Atkins &Rooks(2009)
- Establishing of Facilities Management training schools and organizing enlightenment, seminars for secondary school students and fresh graduate to see the place of facilities management in improving the economy
- Provision of public infrastructure like electricity promotes industrial and economic development of the country. So that the cost of personal power generation is eliminated. Nwokolo and John (2017)
- Special industrial court in facilities management issues should be established to provide legal structure to shorten court sessions, late payment by clients and unnecessary bureaucracy.

References

- Adewunmi ,Y. &Adejumo,F. (2012). The practice of Facilities Management in Nigeria, University of Lagos, Akoka, Yaba, Lagos, Nigeria,11th EuroFM ResearchSymposium EFMC 2012.
- Atkin Brian Brooks Adrian(2009),Total Facilities Management `3rd edition Graphicraftlimited,Hong Kong.
- Eprints.covenantuniversity.edu.ng/.../f facility management software applications you should evaluate.
- Elizabeth,D.(2014), Fastest Growing Industries (<http://www.iofficecorp.com/hubfs/Authors/>)

new/Author_Elizabeth.png?t= 1498143178040

Gunner, A.J.(2010).Facilities Management versus properties management, IF MA Shanghai, 13-04-2010. <www.iFacilitiesManagementashanghai.org.t> (accessed online 12.08.15).

Hikmot.K,Yewande.A,and Femi,A.(2012).The practice of Facilities Management in Nigeria, University of Lagos,Akoka,Yaba,Lagos, Nigeria.

Ndubisi Onwanyi,Abiodun K .O (2016),`Revitalizing Nigeria's built heritage using Facility Management service delivery`: The Lagos National Arts Theatre Complex, international journal of sustainable built environment,5(2):579-586

Nnamdi Nwokolo and John Sylvester (2017), `Delivery Value in Facility Management In Nigeria`-the guardian Newspaper of 17th February 2017m by 3:32am

Pastor S.O Jagun, (2015) `Modern trends in facility management as a panacea for sustaining asset values in Nigeria` (MCPD) seminar on 23rd July 2015 at Oakland events center,Ebeano tunnel Enugu, Nigeria

Peter Barrett, Edward Finch, (2013) `Facilities Management: The Dynamics of Excellence`, 3rd Edition pages, Wiley-Blackwell: 334

Olumide Aina,(2015)`Using Facilities Management as a strategic tools for business excellencepart1`

Spedding,(1999) Spedding Facilities management and business organization ,The quantity surveying,29:2-8

[www.europeanceo.com/...management/...](http://www.europeanceo.com/...management/)