

**AN EVALUATION OF AFRICA UNIVERSITY'S STRATEGIC FACILITIES MANAGEMENT**

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**ABSTRACT**

*Facilities Management is an integrated function in which management issues pre-dominate over technical issues. Through examination of documents and participant observation, this study aimed at assessing the strategic direction and specific strategies that Africa University is pursuing in managing its facilities. This study concluded that Africa University is pursuing a growth strategy given the ongoing increase of student numbers. Whereas the performance of the Facilities Management function was over-all above average and adequate for the current status of the University, the growth strategy will lead to inevitable need for changes in the facilities management strategies and procedures in order to match the increasing students population.*

**1.0 INTRODUCTION**

According to Graves et al (2000) starting from the 1970s, Facilities Management (FM) evolved from mere janitorial services to an integrated management discipline. This evolution was a result of changes taking place in the work environment particularly office automation and the need for improved ergonomics. This led to formation of formal professional organizations that recognized the importance of facility managers. The development of FM varies across regions, nations, culture, languages, and market structures. As such FM markets and regulatory bodies have developed at their own pace and in different direction globally. In Europe, all 29 European countries agreed to use the following definition of FM: 'Integration of processes within an organization to maintain and develop the agreed services which support and improve the effectiveness of its primary activities'. They also included in their definition: (1) a classification, and structure for facility management, (2) space and area measurement for planned and existing leased or owned buildings, (3) a guidance on quality in facility management, (4) a guidance on facility management processes. In Africa the sole FM professional body is in South Africa and there has been an attempt by the South African Facilities Management Association to expand its influence beyond the SA borders. (Graves et al, 2000)

The Zimbabwe Council of Higher Education (ZimCHE) has set facilities standards for approval of continued operation of universities and approval of expansion of academic programs (ZIMCHE, 2011). The Environmental Management Agency (EMA) also has minimum environmental and waste disposal standards (EMA, 2000). The compliance with these requirements falls within the FM framework and is critical to the continued survival of e university. Educational institutions offer a service as opposed to a tangible product. The rating of a university's service offering includes its ability to deliver the core service (tuition, research and publishing) in an appropriate environment that includes campus grounds, classrooms, administration buildings, halls of residence and other support facilities such as sports, water, electricity, waste disposal and others. In light of this FM has a bearing on a University's product/service strategy as follows in terms of (1) customer focus, (2) cost control; (3) employee motivation (4) operational capability (5) legal prerequisites.

## 2.0 RESEARCH PROBLEM

There are symptoms that point to a deep problem in facilities management at Africa University: (1) the transport situation at Africa University though not yet at crisis level is not robust. Vehicle replacement is not matched by redundancies. (2) Inadequate staff accommodation e.g. for critical junior staff such as kitchen staff, library staff, security staff and standby staff leads to inefficient use of resources such as transport and staff quality time. (3) The water situation is not strategically secure and an extended drought would lead to a crisis for an institution reliant on boreholes. (4) High energy (electricity and diesel) costs demand a comprehensive energy audit and search for effective alternatives. (5) Conflicts between faculty over basic furniture such as chairs and desks indicate a facility planning problem. (6) Inadequate or non-optimization of office space is evidenced by the shortage of office space in some faculties and departments whilst others have excess. (7) High rental costs for off campus programs such as parallel and post-graduate courses require a comprehensive facilities strategy. Hence this study's aim of evaluating Africa University's strategic facilities management.

## 3.0 LITERATURE REVIEW

FM is at the heart of the support services necessary for the operations of a university. University operations are underpinned by efficient and effective cleaning services, adequate classrooms and administration offices, an efficient transport service and many other essential facilities (Amaratunga and Baldry, 2000). FM is an all-encompassing issue embracing disciplines such as strategic management, change management, marketing, operations management, finance, human resources management, project management and contract management. This complexity of FM means that an institution's FM strategy has to be based on an integrated and factual database relevant to the specific institution (Amaratunga and Baldry, 2000).

The following definitions of FM bring the subject of FM into its strategic perspective. Firstly, "Facilities Management is located in the Support Services Sector of the UK economy and is the efficient integration of support activities within the business environment which is essential to the successful performance of any organization." (International Facilities Management Association (IFMA)). Secondly, "Facilities management is the integration of processes within an organization to maintain and develop the agreed services which support and improve the effectiveness of its primary activities." (British institute of Facilities Management). Thirdly, "Facility Management is the process by which an organization integrates its people, work process and physical assets to serve its strategic objectives. As a discipline, facility management is the science and art of managing this integrative process from operational to strategic levels for promoting the competitiveness of organizations." (Hong Kong Institute of Facilities Management). Fourthly, "It is a comprehensive management approach for the optimization of the ownership, utilization, operation, and maintenance of the business real properties (land, buildings, structures, equipment, etc.) and maintain them in optimal conditions (minimum costs and maximum effects), so that they could contribute to the overall management of the business." (Japan Facilities Management Association). Fifthly, "Facilities management is an enabler of sustainable enterprise performance through the whole life management of productive workplaces and effective business support services." (South African Facilities Management Association)

Grimshaw and Keefe (1993) offer the premise that the organization depends on its facilities for it to be efficient and there is a link between improved facilities and improved business efficiency. Becker (1990) suggests that: "FM is responsible for co-coordinating all efforts related to planning, designing, and managing buildings and their systems, equipment and furniture to enhance the organization's ability to compete successfully in a rapidly changing world". FM is not just about reduction of costs of running physical plants and buildings, but should assist the organization to achieve its mission and vision. Chotipanich (2004) concludes that the wide range of facilities services and their management can contribute to the success or failure of an organization. "The major purposes of FM can be distinguished in two aspects: to support and sustain the operations, work and activities of organizations and their staff and to manage work environment and support services". (Chotipanich 2004)

Different organization have different FM cultures. Some organizations may focus on core business issues and put less emphasis on management of facilities. Others may give FM greater emphasis and priority. "The organizational objectives normally vary by different business environments" (Chotipanich, 2004). Baldry (2009) also weigh in with the idea that different organizations rely on their facilities in different ways depending on the environment and context. As such the FM function may be prioritized based on the contextual issues at play. Fitting FM function to a particular nature and demand of the organization, which is effected by surrounding environment, is crucial. Understanding the organizational needs is the key to effective FM; measured in terms of providing value for money. Amaratunga and Baldry (2000) advise that an understanding of FM is crucial in order to link the FM function to the core business so that the FM function responds to fundamental dynamics of the business. Poor linkage will lead to an incompatible FM function that is a liability to the business.

Varcoe (1996) argues that a university's facilities can assist in increasing efficiency in the face of rising costs. When a university's FM is configured in the proper organizational context it can contribute to delivery of quality education and improved organizational performance. Douglas (1996) points out that, universities have a variety of faculties that have different operational and facilities' needs. The facilities are therefore key functional as well as economic resources (Douglas, 1996). Belcher (1997) has noted that the following trends or changes challenge university FM practices: (1) proliferation and diversity of technology, (2) adaptation of sharing facilities, (3) greater emphasis on quality in the study place, (4) increases in changes in building types and associated services primarily due to technological and economic influences, (5) increase in the interest to assessment of the performance of institutions delivering educational services particularly by Governments that require that public funds are used more effectively. Clarke (1997) also observed that, firstly, changes in teaching technology may lead to redundancies in some facilities whilst requiring modification of others. Moreover, more expansion in higher education participation will lead to the need for more efficient use of existing facilities. (Clarke, 1997). Furthermore, collection, interpretation, and analysis of information is therefore necessary for universities to adapt their facilities in the most appropriate manner to be in sync with changes taking place in the environment and allocate resources to best advantage. (Clarke, 1997).

Some authors have noted inadequate development of standards and limited performance of Facilities Management in universities. A number of reasons have been cited by Amaratunga and Baldry (2000). For instance, there is limited use of facilities management performance evaluation in many institutions of higher learning because "theory development and measurement issues are particularly weak in performance evaluation practices in higher education. (Amaratunga and Baldry, 2000) Moreover, lack of training and acceptance by facilities management personnel of the 'soft' side of performance evaluation, such as behavioral observation and participative management. (Amaratunga and Baldry, 2000) Furthermore, there are differences in interpretation as to what performance evaluation really means and how it is to be pursued. In addition to the difficulty in accepting the premise that things can be further improved based on performance measurement outcomes; performance evaluation remains experience based rather than empirical. (Amaratunga and Baldry, 2000) Therefore, it is difficult to establish objective measures of performance variables especially when management commitment is poor". (Amaratunga and Baldry, 2000)

This approach leads to an integrated resource management framework for FM strategy. The framework consists of the following levels or stages of FM strategy:

- Strategic Business Planning: The crafting of a business plan that shows the chosen business response to market factors. This will clarify the emerging business profile in terms of its mission and vision.
- Strategic Facilities Planning: The task is to determine future requirements of the business and compare them with current provision. The gap and/or mismatch between the two should be identified and detailed specific strategies can then be drafted and implemented to satisfy future needs.
- Strategic Asset Management: This is mainly concerned with the acquisition, disposal and continued possession of physical plant and building assets. The variables on which the asset management depend on are alignment with strategy, timing and availability of resources, knowledge of the required portfolio and knowledge of the source markets.
- Asset Maintenance Management Strategy: The main concern here is with the continuous renewal of assets and the preservation of their capital value. This involves the study of utilization patterns, risks associated with specific assets and options available for procurement. The major variables to consider are life cycle management requirements, demand profiles, procurement and sourcing constraints, desired competencies and knowledge of supply markets.
- Facilities Services Management Strategy: This is focused on the continuous supply of service within the business from the facilities function to assist in the day to day operation of the business. These include continuous water, transport, electricity, cleaning and other services. Key variables include service scope/range, demand profile, knowledge of core business operations, and knowledge of source markets and procurement options for the services.

The various facets described above form a continuum that encompasses an integrated resource management schedule. (Then, 1999)

What one should wary about is the missionary structure. Johnson and Scholes (1997) has pointed out that a missionary structure is most prevalent in not for profit organizations. This structure is dominated by cultural issues and the people employed are normally like-minded individuals who subscribe to the same missionary ideals. Reliance on structures and systems is minimal. However such organizations are forced to move to what Johnson and Scholes call the professional bureaucracy structure so as to grow the organization. The professional

bureaucracy structure has moderate centralization and relies on a central operating core that has some core knowledge and competencies. Professional work is standardized and reinforced through training and peer group interaction and learning.

However, with the unprecedented development and diffusion of electronic computers and related information and communication technologies (ICTs) Facilities Management systems are generally on a computerization trend and many platforms have been developed to integrate most of the relevant FM systems. Gerard Cesa Gabriel argues that Computer Aided Facilities Management (CAFM) will:

- Allow decentralization of decision making by allowing access to information to all levels of the organization
- Allow facilities managers to get real time information that allows speedy decision making
- Enable managers to manage the facilities service in a proactive and cost effective manner by integrating accurate performance information and customer feedback
- Allow managers to make better informed decisions  
(Gerard Cesa Gabriel, 2003)

#### **4.0 RESEARCH METHODOLOGY**

##### **4.1 Research design**

The research design was a case study focusing on one institution namely Africa University.

##### **4.2 Data collection methods**

This study combined three techniques: document review, participant observation and Delphi techniques. Concerning document analysis minutes of the AU Board Meetings from February 2009 to December 2012 were read by the research and decisions concerning facilities management were highlighted. Eight Board meetings have been convened during this period. This period has been chosen because it represents the period after the dollarization and stabilization of the Zimbabwean economy. Prior to that economic and financial instability makes analysis difficult. Moreover, the research examined minutes of the Buildings and Grounds Committee of Africa University for the same period. Furthermore, Africa University Budget reports of the same period were analysed in order to check the amounts of money allocated to facilities management. Another source of valuable data was the minutes of meetings of the Department of Works for the same period

Participant observation was also applied since one of the the researchers is the head of the Department of Works which manages the University facilities. His work diary has a wealth of information in the form of briefings from Executive management, diarization of critical incidences, and instructions to subordinates. Analysis of this data should bring to the fore the tactical issues related to the AU FM.

The Delphi Research Method implied bringing together a team of fourteen individuals who were assembled from the departments most affected by the FM function This team consisted of seven Department of Works staff that consisted of all the functional subunits. The other seven were from other units and were chosen on the basis of their direct involvement with the Department of Works staff on a regular work basis. They were chosen from the halls of residence where heavy routine maintenance work is done; sports directorate, Information and Communication department, Faculty of Management and Administration which has the most number of students, University library, audit section and the University bursar's department. In selecting the panel of experts, consideration was made to make sure that the views of the FM Departments can be benchmarked against those of the customer Department. This was done by selecting equal numbers of staff from the FM Department to those of customer Departments.

##### **4.3 Research Instruments**

In addition to document analysis and participant observation, a questionnaire was administered to the experts.

##### **4.4 Data Presentation and Analysis**

Data obtained from document analysis and participant observation were coded. Coding is the division of documentary, interview or observation research material into major themes or "chunks" for the purpose of analysis and conclusion. This is essentially an indexing process. The major themes can be identified by skimming the research material or from the literature. The advantage of coding is that the research material can be simplified and that material that is not important can be discarded (Collin Fischer, 2004).

In the Delphi method a graphical chart presentation of the ratings of performance by the experts was used following the format recommended by Hinks and McNay (Hinks and McNay, 1999).

## 5.0 FINDINGS AND DISCUSSION

### 5.1 Growth Strategies for AU

Scheming through the minutes and reports of the Board of Directors and Buildings and Ground Committees of AU from 2009 to 2013 has uncovered the strategic issues in Table 5.1.1 and Table 5.1.2. Table 5.1.1 points to external influences while table 5.1.2 points to internal influences.

Table 5.1.1 External Influences on AU Strategy (Source: AU Board Reports 2009-2013)

Strategic Issue	Impact on Business strategy at AU	Implications on Facilities Management at AU.
Stable Government formed. New Constitution successfully written	Opportunities for growth	More infrastructure and maintenance needed
Indigenization policy	Threat of Government takeover of institution	Discourages funding for long term facilities expansion.
World economic meltdown and subsequent sluggish recovery.	Reduction in funding from the Church and reduced donor support.	Reduced donations for infrastructure expansion
Economic growth of +/- 5% per annum 2009 to 2012	Opportunities for market growth and improvement of supply side	Need for more infrastructure
Low liquidity and high interest rates on borrowings on the money market. Low interest on deposits. Only short term loans available to businesses.	Affects cash flows negatively.	Negative effects on cash available for facilities maintenance
Increases in utility costs especially fuel, electricity, rates, and levies	Affects business cash flows negatively	Negative effects on cash available for facilities maintenance
Opening of 3 new state Universities including one +/-20Km from AU.	Attraction of skilled and key staff to new Universities	Attraction of skilled and key staff to new Universities
Increase of State University salaries to 20% above AU.	Attraction of skilled and key staff to State Universities	Attraction of skilled and key staff to State Universities.

Table 5.1.2 Internal Factors influencing AU strategic development.

Strategic Issue	Impact on Business Strategy	Implications on Facilities Management at AU.
Absence of a detailed Business Plan	Mission and Vision may not be properly implemented.	No long term Strategic Facilities Management Plan. Campus Master Plan cannot be updated.
Vacancies in Key posts such as Deputy Vice Chancellor, Registrar, Deans and others.	Campus Leadership compromised.	Facilities Management Leadership Compromised
Budgetary Constraints	Liquidity affected. Campus programs negatively affected	Constraints on maintenance of sporting facilities, roads, buildings. No funding for expansion of needed water infrastructure, halls of residence, maintenance yard, stores and multipurpose hall
High Utility costs	Erosion of financial capability.	Need for alternative sources of energy and requirement for energy efficiency
Low employee salaries compared to poverty datum line and compared to State universities	Brain drain and high staff turnover. Inability to recruit and retain all categories of staff.	Brain drain and high staff turnover. Inability to recruit and retain all categories of staff.
Inadequate student accommodation.	Overcrowding of hostels. May lead to inability to attract high fee paying students.	High demand for routine maintenance of hostel infrastructure. High running and maintenance costs.
Up to date and Continuously improving ICT facilities	A good communication system with external and amongst internal	Opportunities for computerization of FM function

	stakeholders. Good delivery of core education service.	
Reduction of Church funding	Need to leverage existing capabilities to close the funding gap by increasing student enrollment.	Reduced or stagnant funding for facilities expansion and maintenance at a time when demand is increasing.
Good corporate governance evidenced by clean audits	Opportunities for attraction of donor funding	Opportunities for attraction of donor funding for facilities expansion.
Inadequate Transport for staff and students		
Project and Construction management challenges.	May discourage donor funding	May discourage donor funding

### 5.2 FM Priorities and Standards for AU

The document review has uncovered the following issues of concern in terms of adequacy of provision and standards required (Table 5.2.1).

Table 5.2.1 FM Priorities and Standards for AU

Strategic/Operational Issue	Current Status	Desired Standard	FM Intervention Required
Water	Water shortages in dry season; frequent break downs of equipment; Insecure water source(boreholes)	Secure water source; Continuous and reliable water supply; reliable equipment	Project Management capability, Proper vendor selection; Skilled maintenance staff
Electricity	High energy costs; Expensive generator back up service; Costly breakdowns	Cost effective energy solutions; Reliable equipment	Energy management partnerships and cost effective solutions; Skilled maintenance staff
Transport	Inadequate and aging vehicle fleet; high motor vehicle maintenance costs; Frequent break downs; Ad hock rationalization of trips	Number of vehicles to match core business requirements; Reliable transport service; New vehicles to reduce maintenance costs;	Procurement management; Service vendor selection; Competent maintenance staff
Construction of new buildings (Project Management)	Unsatisfactory quality; Time and budget overruns;	Projects completed within budget, schedule and to approved quality	Project Management
Buildings Maintenance	Reactive Maintenance of identified faults; Accumulating Maintenance backlog	Preventative maintenance	Maintenance planning; Procurement management
Grounds Maintenance	Inadequate equipment	Adequate tools and equipment to keep the grounds in sync with desired campus outlook and corporate image	Maintenance planning; procurement management
Staff	Perceived low salaries.	Highly motivated staff to achieve stated objectives	Human resources management

## 6.0 CONCLUSION

This paper aimed at assessing Africa University's Strategic Facilities Management. Was concluded that Africa University is following a growth strategy in the medium term because of (1) increased student intake for existing programs, (2) offering of new courses, (3) parallel programs that will be offered on and off campus, (4) double intake per year that will offer courses on and off campus, (5) increase of endowment funds from \$50 million to \$ 100 million through a sustained donor mobilization program. It is necessary for the AU Executive Management to detail the intended strategies into a strategic business plan available to all relevant stakeholders so that the plan can be interpreted into other departmental strategies. The intended growth will demand more

facilities including (1) more building infrastructure and physical plant, (2) increased movable asset provision, (3) increased maintenance of buildings and other assets, (4) increased demand for facilities services such as water, electricity, waste disposal, cleaning services, transport and other services. As such the Facilities Management function needs to be transformed to be able to manage the change that will happen to the institutional framework.

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