

Evaluation of maintenance culture of christian cathedral church buildings

[Literature](#), [Russian Literature](#)



EVALUATION OF MAINTENANCE CULTURE OF CHRISTIAN CATHEDRAL CHURCH BUILDINGS BY OLAYINKA JOHN AJAYI NOVEMBER, 2012 ABSTRACT The study focused on maintenance culture of cathedral church buildings in Lagos Mainland Area of Lagos State Nigeria. It also assessed the operational state of these church buildings within the study area. In achieving these objectives, opinions of maintenance officers and users of selected cathedral church buildings were sampled through structured questionnaires. The data collected were analyzed using descriptive statistics, upon which 100 respondent were surveyed.

The analysis revealed that the operational state of some of these church buildings as been average. Maintenance officers and users of the buildings both ranked insufficiency of fund for maintenance programme as second most significant factor among other factors responsible for poor maintenance management of these church buildings. Other factors found to be highly significant by the maintenance officers are; cost of maintenance by the operatives. The study recommended proactive measures to reduce the occurrence of defects in the buildings elements and services.

The church board of trustee is to provide adequate funding for the implementation of their maintenance programme. Building elements should be regularly inspected to ensure their functionality. CHAPTER ONE 1. 0INTRODUCTION 1. 1Background of the Study Introduction of Christianity in Nigeria metamorphosed through different phases since the early missionaries stepped feet on the Nigerian soil in the 16th century (Ajayi,

2005), and this has given rise into Christian religious institutional buildings as the Christians need a place called church as a building to worship.

Hence, old religious institutional buildings are considered symbolically and emotionally significant by community members (Cohen and Jaeger, 2008 & Vangelova, 2005), and public perception endows our environments with cultural values and in turn the perception is dictated by these values. Numerous researchers and critics in architectural theory and historic preservation looked at these shared values, that humans' "psychological necessity" to maintain their memory creates the desire for historic preservation Woodcock (2002).

Likewise, the researchers argue that the on-going course of history that contains each generation's culture should be preserved as the public is concerned with the preservation of their memory that has been fashioned in the relationship with their environments (Brand, 2005 and Downing, 2000). Geva (2002) demonstrates that various building types religious, national, residential are a function of the interaction of cultural, regional climate conditions and architectural forms. Geva analyzed the degree of architectural modifications of singlefamilyhouses and community churches.

From research carried out by Geva (2002), people spent more money in maintaining their personal residential building than religious institutional buildings (church). Thus, churches as a building type are significant to the public as they serve primarily as cultural symbols (Cantacuzino, 2009 & Jaeger, 2005). Church Buildings play an important role in the City by

providing venues for a range of activities and services aimed at encouraging community interaction and participation.

Church Buildings are important assets which contribute to the physical, social and moral wellbeing of the community, society at large and the subsequent development of social capital and community strength Robert (2001). The provision of church buildings promote a sense of community identity and "sense of place". At the same time, there are significant cost factors associated with the upkeep (maintaining) and ongoing maintenance of these building assets. Maintenance involves fixing any sort of mechanical, plumbing or electrical device etc should it become out of order or broken (known as repair, unscheduled or casualty maintenance).

It also includes performing routine actions which keep the building in a working order (known as scheduled maintenance) or prevents trouble from arising (preventive maintenance). Maintenance may be defined as, "All actions which have the objective of retaining or restoring an item in or to a state in which it can perform its required function. The actions include the combination of all technical and corresponding administrative, managerial, and supervision actions." The former of these represents a closed loop supply chain and usually has the scope of maintenance, repair or overhaul of the building.

The latter of the categorizations is an open loop supply chain and is typified by refurbishment and remanufacture. The main characteristic of the closed loop system is that the demand for a product is matched with the supply of a used product. Neglecting asset write-offs and exceptional activities the total

population of the product between the customer and the service provider remains constant. Generally speaking, there are three types of maintenance in use: Preventive maintenance, where equipment is maintained before break down occurs.

This type of maintenance has many different variations and is subject of various researches to determine best and most efficient way to maintain equipment buildings inclusive. Recent studies have shown that Preventive maintenance is effective in preventing age related failures of the equipment. For random failure patterns which amount to 80% of the failure patterns, condition monitoring proves to be effective. Corrective maintenance, where equipment is maintained after break down.

This maintenance is often most expensive because worn equipment can damage other parts and cause multiple damage. Reliability centered maintenance, often known as RCM, is a process to ensure that assets continue to do what their users require in their present operating context. All these shall be looked into in detailed the literature review In addition, the management and community at large has a significant duty of care to ensure that these buildings are kept and maintained appropriately to ensure the safety of all users and compliance with all legislative requirements and standards.

While the requirements for good practice in maintenance management of buildings have been established over a considerable period, the achievement of good practice is by no means universal (Turrell, 2007). Furthermore, the maintenance of these religious institutional buildings has a significant impact

on the environment and on the whole nation at large. Additionally, the conditions of the surroundings in which we live and learn, is a reflection of the nation's well being (Lee, 2007).

1. Statement of the problem

Most existing religious institutional buildings in Lagos State lack adequate maintenance attention and as result of this, these buildings are in very poor and deplorable conditions of structural and decorative disrepair Ogunlana (1999),. While considerable research have been carried out on factors responsible for the poor maintenance of these religious institutional buildings in Lagos State but only scant attention has been given to the key parameters affecting the implementation of maintenance programmes for these religious institutional buildings.

There is therefore a need to establish and evaluate the factor affecting maintenance of these religious institutional buildings.

1. Aim and Objectives of the Study The aim of this study is to evaluate the maintenance culture of Christian institutional buildings in Lagos State. To achieve this aim, the following objectives are adopted.
1. To identify the maintenance problem of religious institutional buildings and provide solutions to the problem.
2. To examine the physical conditions of these religious institutional buildings so as to ascertain the level of their maintenance. . To examine the maintenance principle in use for Christian religious institutional buildings in Lagos state.
4. To evaluate the effect of maintenance on the performance of religious institutional buildings in Lagos State.

1. Significance of the Study The study will state how significant the maintenance of our religious institutional buildings is in social economic development of our country at large and the

research finding will contribute to solving problems regarding maintenance culture of these institutional buildings.

The findings of this study will contribute to the improvement of poor maintenance culture of these buildings and lukewarm attitude of maintenance managers in charge of these buildings. The result of the study will determine the quantity of maintainable items supplied to this building. The study will further educate maintenance manager of the building to broaden their horizon in planning day to day maintenance. Furthermore, the outcome of the study will create awareness in maintenance culture in relation to the basic demands of the different subject or maintenance areas. . 5Research Question In order to achieve the objectives of this study, the following questions have to be answered. 1. What are the maintenance problems facing these religious institutional buildings? 2. Are these religious institutional buildings in good physical condition? 3. What are the maintenance principles implore by the maintenance managers in maintaining these institutional buildings? 4. What are the effects of maintenance on the performance of these religious institutional buildings? 1.

6Scope and Limitation of the Study

There is no doubt about the significance Christian Institutional buildings in Lagos State as they also serve as social and moral heritage and they must be maintained properly. Hence the scope of this study shall be limited to Cathedral Churches in Lagos Mainland of Lagos State. HAPTER TWO 2. 0REVIEW OF RELATED LITERATURE 2. 0Preamble Geva (2002) demonstrates that various building types religious, national, residential are a function of

the interaction of cultural, regional climate conditions and architectural forms.

Geva analyzed the degree of architectural modifications of single family houses and community churches. From research carried out by Geva (2002) that the people spent more money in maintaining their personal residential building than religious institutional buildings (church). Thus, churches as a building type are significant to the public as they serve primarily as cultural symbols (Cantacuzino, 2009 & Jaeger, 2005). 2. 1What is Maintenance? History is about the preservation of the past, so that a good use may be made of the future.

Fifty years ago, the challenge was to get people to identify and care about institutional religious buildings while twenty-five years ago, the challenge was to avert development. Today, the challenge is to stop the unnecessary loss of historic religious institutional buildings through neglect, Onifade (2000). There are a substantial number of people who do not know the meaning of maintenance. At least the way they practice it would indicate this. In practice, prevalent interpretation of maintenance is to “ fix” it when “ it breaks”. This is a good definition for repair, but not true maintenance. This style of maintenance is reactive.

Maintenance, according to Smith (2003) means to keep in its existing state, preserve, continue in good operating condition. Maintenance is defined as work undertaken in order to keep, restore or improve every facility, to an acceptable standard and to sustain the utility and value of the facility. This is a proactive maintenance. Historically in both the public sector and the

private sector, maintenance was seen by many as an avoidable task which was perceived as adding little to the quality of the working environment, and expending scarce resources which could be better placed, Smiths (2008).

To some maintenance is war. The enemies are the triumvirate of breakdown, deterioration, and all the types of unplanned events. The soldiers are the maintenance departments, in our organization and as many civilians as we can recruit. Military historians study battles with an eye towards identifying the pattern of conditions that dominated the outcome. As maintenance leaders, we have many strategies and weapons at our disposal, some new, some old, some complex and some simple, some defective as one theater of operations and some better in another.

Each strategy to consider works only with the support of the correct weapons and the logistics. Institutional buildings, which form an integral part of the environment, are severely exposed to agencies such as moisture, intense solar radiation and prevailing winds, which directly change their physical attributes (Ikpo, 2006). The prime effects of these environmental agencies include discoloration, abrasion, cracks, stains and fungal growth. Therefore, regular or periodic maintenance is required to preserve the physical form of severely exposed religious institutional buildings, and landforms among others.

Apart from exposure to weather, biochemical agencies also accelerate decay of institutional buildings. It has become factual that these physical and social changes have affected sites of cultural and historical importance. In the process, potential tourist sites of local and national interest comprising

historical and peculiar architectural buildings, archaeological excavations, palaces, groves, monuments, open spaces and town squares are lost while some are wasting away. The issue is not that of causation of deterioration but of poor response to maintenance demands. 2. 2Maintenance of Institutional Buildings

Religious Institutional buildings today are confronted by unique challenges that threaten their very existence (Stolzenberg, 2004). The characteristics and the structure of these institutional buildings, by their nature lack the capacity to compete with the changing whether again. According to Shoet (2003), the performance of religious institutional buildings and their components depends to a large degree on continuous and planned periodical maintenance. The Built environment expresses in physical form the complex, social and economic factors, which give structure and life to a community (Lee, 2005).

According to Banful (2004) the financial consequences of neglecting maintenance is often not only seen in terms of reduced asset life and premature replacement but also in increased operating cost and waste of related and natural and financial resources. Maintenance is related to the background of any project, unfortunately development plans and approved recurrent and capital estimates in religious institutional buildings in Lagos state have revealed that thought have not be given to maintenance work (Onifade, 2003). 2. Maintenance Problems of Religious Institutional Buildings There are so many problems being faced by attempts to maintain institutional buildings. Aradeon (2006) listed some of these problems to

include inadequate professionals and the closeness of these sites to urban centres thereby making the land occupied by them to attract high value for alternative investment. The major problems confronting the maintenance of institutional buildings revealed by the study are related to finance basically. Repair cost of Religious institutional buildings is usually higher than a modern home.

Some common maintenance needs seen in home are problems such as peeling paints and foundation cracks; minor structural problems such as crack plaster to small movement in the foundation; drainage and grading problems due to the installation of new roof gutter; insufficient electrical system; poorly installed plumbing; older leaking roof; older heating and cooling system; poor ventilation: excessive moisture from un-vented bathrooms and cooking areas causing damaged plaster and deteriorated windows; and excessive air leakage, Onifade (2006). 2. 3. 1Finance Maintenance is essential for the conservation of religious institutional buildings.

Those who participate in the maintenance of religious institutional buildings like the church management committee need to know their likely financial commitment before work commences. This early-stage cost advice can establish realistic budget for decision making (Smith, 2005). The cost of maintenance of a religious institutional building could be high or lower depending on the structure at the beginning and invariably, it is usually high because of the materials that were used in the first place which may not

meet current standard. It is therefore difficult for these properties to be maintaining properly (Mandal, 2004).

The increasing abandonment of these properties by those who were originally responsible for them informed the need for government, NGOs and religious bodies' participation in their maintenance. Finance is the major factor that inhibits the conservation of religious institutional buildings. The maintenance of institutional buildings requires a lot of money that cannot be provided by a single body. Other maintenance problems are; according to Adenuga (1999), various problems of varying magnitudes and origins are encountered in the process of maintenance. Some of these would include:

2. Design Problems Some fundamental maintenance problems originate from the design of the building. These types of problems are usually hard to solve as it may involve complete reconstruction of the entire building or large section of it. It may be avoided or, at least, drastically reduced by involving at the design stages professional experts, including highly competent and experienced Maintenance Managers.
3. Problem of Skill Some Maintenance Managers and their crew of craftsmen and technicians lack the desired skills (which include experience, technical know-how, etc) required on the job.
4. Research and Development Problems There is lack of adequate funds and interest in this direction. In fact, research and development directed towards building maintenance is non-existent or at best, very minimal.
5. Overcrowding Another characteristic common to most homes of poorer groups is crowded, cramped conditions. Many health problems affecting poorer groups are associated with overcrowding, including household accidents, acute respiratory infections (of

which pneumonia is perhaps the most serious), tuberculosis and other airborne infections.

In the predominantly low-income residential areas in Third World cities, there is often an average of four or more persons per room and in many instances less than one square metre of floorspace per person. Diseases such as tuberculosis, influenza and meningitis are easily transmitted from one person to another. Their spread is often aided by low resistance among inhabitants due to malnutrition and by frequent contact between infected and susceptible people. Acute bacterial and viral respiratory infections and lots of others are diseases caused by overcrowding Horner (2007). 2. 3. 6IndoorAir Pollution

Where open fires or relatively inefficient stoves are used indoors for cooking and/or heating, smoke or fumes from coal, wood or other biomass fuels can cause or contribute to serious respiratory problems. Chronic effects include inflammation of the respiratory tract which in turn reduces resistance to acute respiratory infections, while these infections in turn enhance susceptibility to the inflammatory effects of smoke and fumes. Exposure to carcinogens in emissions from biomass fuel combustion has been confirmed in studies in which exposed subjects wore personal monitoring equipment.

Women who may spend 2-4 hours a day at the stove must be at risk. Infants and children may be heavily exposed because they remain with their mothers; the added exposure to pollutants combined with malnutrition may retard growth, leading to smaller lungs and greater prevalence of chronic bronchitis Harvey (2009) 2. 3. 7Disease Vectors A large range of vectors live,

breed or feed within or around houses and settlements. The diseases they cause or carry include some of the major causes of ill health and premature death in many cities - especially malaria (anopheles mosquitoes) and diarrhea diseases (cockroaches, blowflies and houseflies).

But there are also many other diseases caused or carried by insects, spiders or mites including bancroftian filariasis (culex mosquitoes), Chagas disease (triatomine bugs), dengue fever (Aedes mosquitoes), hepatitis A (houseflies, cockroaches), leishmaniasis (sand-fly), plague (certain fleas), relapsing fever (body lice and soft ticks), scabies (scabies mites), trachoma (face flies), typhus (body lice and fleas), yaws (face flies), and yellow fever (Aegypti mosquitoes). Urban expansion may also change the local ecology in ways which favour the emergence or multiplication of particular disease vectors.

For instance, *Aedes aegypti*, the mosquito vector for dengue fever and yellow fever is often found to breed in polluted water sources such as soak-away pits and septic tanks. Anopheline mosquitoes generally shun polluted water but certain species have adapted to the urban environment and now breed in swamps and ditches in or close to urban areas Horner (2007). 2.

4Maintenance System The selection of maintenance system to be operated in the building should take into consideration in terms of the life cycle of the building materials, services installation provided space function or activities to be carried out in that particular building.

In some cases, when the material has reached the 'wear and tear' condition, the maintenance work is then required to rectify those defects. Therefore, it is very important to ensure that the design team understands materials

performance in order to reduce the running cost during building operation. Using so called 'heavy duty' materials and yet producing high quality building fabric, Aradeon (2006). By knowing the physical and detail life p of the materials will allow the maintenance team to forecast the budget allocated for replacement work and planned the maintenance work as per schedule.

With a detail record of the previous maintenance work, it will act as a benchmark to the future maintenance activities where decision be made through this. It shows that, the maintenance work should not only rectify and making good all defects at the affected area but also at the same time should be properly recorded. It is a way to closely monitor the severity of the defects occurring in the building; Arazi (2009). Referring to the previous record will assist the maintenance team to overcome and provide an effective remedial works.

In spite of planned maintenance, emergency maintenance will involve urgent and immediate work prior to the problem. It is to avoid the resultant consequences to other activities which may cause severe failures; Oloyede (1991). By considering those planned and unplanned maintenance, the management should provide a realistic budget and come out with some emergency plans in dealing with uncertainties cases. Therefore, the implementation of an effective maintenance practice must inculcate some indicators to improvise the traditional maintenance management system to reach the needs and nature of the work. . 5Maintenance Needs and Nature It is highly desirable but hardly feasible to produce buildings that are

maintenance-free, although much can be done at the design stage to reduce the amount of subsequent maintenance work. All elements of buildings deteriorate at a greater or lesser rate depending on material and methods of construction, environmental conditions and the use of the building. A prime aim of maintenance is to preserve a building in its initial stage, as far as practicable, so that it effectively serves its purpose. The main purposes of maintaining buildings are; Apwa (2001) i.

Retaining value of investment. ii. Maintaining the building in a condition in which it continues to fulfill its function. iii. Presenting a good appearance. Maintenance work has also been categorized as “predictable” and “avoidable. Predictable maintenance is regularly periodic work that may be necessary to retain the performance characteristic of a product, as well as that required to replace or repair the product after it has achieved a useful life p. Avoidable maintenance is the work required to rectify failures caused by poor design, incorrect installation or the use of faulty materials.

The function of maintenance can be divided into three (3) groups; * Cleaning and servicing, * Rectification and repair and * Replacement. Timely expenditure on the first two can postpone the need to replace materials or components, a very expensive business. Cleaning and servicing should be carried out regularly and may be combined with a system of reporting faults when become apparent, thereby avoiding the need for more expensive repairs or even replacement at a later stage. Apwa (2001) 2. 6Type of Maintenance

According to Avedesian (2006) maintenance can be divided into the following categories:- Breakdown maintenance: It means that people waits until equipment fails and repairs it. Such a thing could be used when the equipment failure does not significantly affect the operation or production or generate any significant loss other than repair cost. Planned maintenance: This is maintenance organized and carried out with forethought, control and the use of records to a predetermined plan, Unplanned maintenance Ad hoc maintenance carried out to no predetermined plan. Preventive maintenance Maintenance carried out at predetermined intervals, or corresponding to prescribed criteria, and intended to reduce the probability of failure, or the performance degradation of an item. Preventive maintenance initiated as a result of knowledge of the condition of an item from routine or continuous monitoring. It is a daily maintenance (cleaning, inspection, oiling and re-tightening), design to retain the healthy condition of equipment and prevent failure through the prevention of deterioration, periodic inspection or equipment condition diagnosis, to measure deterioration.

It is further divided into periodic maintenance and predictive maintenance. Just like human life is extended by preventive medicine, the equipment service life can be prolonged by doing preventive maintenance. | Preventive maintenance as scheduled overhaul or scheduled replacement provides two of the three proactive failure management policies available to the maintenance manager. Common methods of determining what Preventive (or other) failure management policies should be applied are; OEM ecommendations, requirements of codes and legislation within a jurisdiction,

what an "expert" thinks ought to be done, or the maintenance that's already done to similar equipment, and most important measured values and performance indications. To make it simple: * Preventive maintenance is conducted to keep equipment working and/or extend the life of the equipment. * Corrective maintenance, sometimes called "repair," is conducted to get equipment working again. 2. 7Goals of a Successful Maintenance Programme According to Iyagba R.

O (2004) Successful maintenance programs should achieve these goals: 1. Help buildings function as they were intended and operate at peak efficiency, including minimizing energy consumption. Because maintenance keeps equipment functioning as designed, it reduces inefficiencies in operations and energy usage. 2. Failures of building systems that would interrupt occupants' activities and the delivery of public services. Buildings that operate trouble-free allow public employees to do their jobs and serve the public.

Because maintenance includes regular inspections and replacement of equipment crucial to operating a building, maintenance staff reduces the problems that might otherwise lead to a breakdown in operations. 3. Sustain a safe and healthful environment by keeping buildings and their components in good repair and structurally sound. Protecting the physical integrity of building components through preventive maintenance preserves a safe environment for employees and the public. 4. Provide maintenance in ways that are cost-effective.

Preventive maintenance can prevent minor problems from escalating into major system and equipment failures that result in costly repairs. In avoiding costs of major repairs, preventive maintenance creates efficiencies. Increasing preventive maintenance can reduce time spent reacting to crises, which is a more cost-effective way to operate buildings. Deferring preventive maintenance can generate higher costs over the long term.

2. 8 Building Performance

This is a comprehensive whole house approach to identifying and fixing comfort and energy efficiently.

Building performance or home performance is a comprehensive whole-house approach to identifying and fixing comfort and energy efficiency problems in a home. Energy audits are performed by energy auditors, also known as building analysts or consultants, which, in the United States, are usually certified by the Building Performance Institute (BPI). The United States Environmental Protection Agency and Department of Energy started a national program " Home Performance with ENERGY STAR" to offer a comprehensive, whole-house approach to improving energy efficiency and comfort at home, while helping to protect the environment.

The Home Performance with ENERGY STAR program has 40 programs, to date, across the country which are administered by various utilities and state energy offices. Home performance applies buildingscience to address the following issues: Efficient energy use, Durability, Indoor Air Quality, Thermal Comfort, Indoor Moisture sources and solutions. Diagnostic equipment includes: Blower door, Duct blaster, Thermographic camera Combustion analyzer.

A home performance energy audit results in home energy retrofit recommendations to improve the comfort and efficiency of the home, the most common of which include: Sealing air holes and gaps in the building envelope and subsequently adding insulation. Sealing ducts. Upgrading heating and cooling systems, appliances and lighting by replacing them with energy efficient equipment such as ENERGY STAR appliances or devices, compact fluorescent lamps, or LED lamps. Adding heat recovery ventilation or other means to control and upgrade fresh air ventilation, Retrieved fromGoogle(2012). CHAPTER THREE RESEARCH METHODOLOGY Preamble

This chapter housed the method used in gathering the necessary information and source of data used on the research project. The study examines the techniques used in analyzing the data. This research is based on the evaluation of maintenance culture of Christian religious institutional buildings in Lagos State, Nigeria, and the following were looked into, research design, population, sampling technique, instrument for data collection, administration of instrument and technique of data analysis. Technique of Data Analysis The data collected was analyzed with simple percentage for respondents' bio-data, Arithmetic mean for research.

This was done in respects to the four points Likert scale, Analysis of Research Questions Research Question 1: what are the maintenance problems facing Christian institutional buildings? S/N| STATEMENT| SA| A| D| SD| X | Remarks | 1| The church building is in a detoration state| -| 3x39| 2x65| 1x32| 1. 71| Disagree| 2| The church building needs certain level of repair generally| -| 3x35| 2x45| 1x20| 2. 15| Disagree | 3| Most of

the roofing, paints and some parts of the church needs repair| 4x37148| 3x3399| 2x1530| 1x1515| 2. 5| Agree | Source; Field Survey, 2012 From the table above, the respondents disagreed with statement one and statement two respectively with the mean score level of 1. 71 and 2. 15 respectively. But agree with the last statement to show the level of maintenance needed by these church buildings. From the analysis above we discovered that these church buildings are maintained but there are still levels of maintenance needed in the area of roofing due to wear and tear and moisture, which also is applicable to the church painting.

Research Question 2: are these Christian institutional buildings in good physical conditions? S/N| STATEMENT| SA| A| D| SD| X | Remarks | 4| The building equipments has been audited several time to ascertain level of maintenance needs| 4x67268| 3x2369| 2x36| 1x77| 3. 50| Agree| 5| There are certain amounts allocated for the maintenance of this building by the authority. | 4x78312| 3x2266| -| -| 3. 78| Agree| 6| Periodic preventive maintenance is carried out on this church building| 4x85340| 3x1854| 2x510| -| 4. 4| Agree| Source; Field Survey, 2012 The table above shows that the respondents agreed with all of the statements made. The mean scores are 3. 50, 3. 78 and 4. 04 respectively which mean that the majority of the churches surveyed are kept under good conditions with amount allocated for maintenance and periodic preventive maintenance carried out. Research Question 3: what are the maintenance principles implore by the maintenance managers in maintaining these buildings? S/N| STATEMENT| SA| A| D| SD| X | Remarks | | There is a facility maintenance plan for this building| 4x55220| 3x45135| -| -| 3. 55| Agree| 8| The facility maintenance plan includes long

and short term objectives and budgets? | 4x27108| 3x1545| 2x2448| 1x3434| 2. 35| Disagree| 9| The facility manager carry out preventive maintenance regularly| 4x85340| 3x1854| 2x510| -| 4. 04| Agree| Source; Field Survey, 2012 The table above shows that the respondents agreed with statements 7 and 9 with mean score of 3. 55 and 4. 04 respectively, thereby disagreeing with statement 8 made with mean score of 2. 5, which shows an indication that there is facility maintenance plans for all the church building and that there is preventive maintenance carried out by the manager, but there are no adequate budget to execute this maintenance plan. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS Summary Maintenance is regarded to be the most pragmatic and philosophically appropriate conservation method (Forsyth, 2007). Regular maintenance is critical to the survival of any building, be it cultural, heritage or non-heritage and church buildings.

This recognition was made as early as 1877 by William Morris the founder of the Society for the Protection of Ancient Buildings (SPAB), an organization entrusted with caring and preserving United Kingdom's heritage buildings. He considered regular maintenance as " the most practical and economic form of conserving heritage buildings". Kerr (2000) also emphasized that " of all the processes of conserving ancient church buildings, maintenance is the single most important process". To date, regular maintenance is still considered as the most sustainable way of preserving church buildings (Dan and Cantell, 2007).

However, a large number of heritage buildings are decaying due to age, neglect, high maintenance cost and lack of comprehensive guidelines and

understanding of heritage buildings' maintenance management practices 5. 2Conclusion The study has revealed that the operational state (physical-functional condition) of church buildings in Lagos State as carried out by the maintenance department was found to be good, The analysis discloses that the Cathedral church buildings in Lagos State are in a good state of existence in terms of the physical and functional conditions of the building elements and services that constitute these buildings.

But for better performance, a proactive rather than reactive approach should be adopted for effective maintenance practices as some Cathedral church buildings out of the surveyed ones are not properly maintained. This study has raised awareness on the practice and cost of neglect of maintenance of our Cathedral Church buildings. It is not intended to frighten the church owner or user, it is to sound the alarm for the need of imbibing the culture of maintenance of our church buildings as opposed to the culture of lawlessness and arbitrariness that have characterized past management of our building stock.

The research work is wake-up to arresting the menace and embarrassment of the Sick Building Syndrome. 5. 3Recommendations Cathedral church buildings are places of worship as such more has to be done by both the maintenance management staff and the users to improve the operational state (physical-functional condition) more in maintaining those which are not properly maintained as they are place which give moral lessons to the people. Recommendations for these churches cannot be over emphasized.

Hence upon this the following recommendations are made to preserve these church buildings under survey. Maintenance managers and their team should adopt more proactive approach to reduce the occurrence of defects, which will consequently bring about better physical and functional Cathedral church buildings elements and services. The governing councils of these churches should always set aside adequate fund for the running of these Cathedral church buildings as the study shows that there are no long time budgets for these buildings.

Maintenance managers should equally give the narrow managerial p of control a trial in use as this may likely bring about a more effective organizational structure leading to better maintenance management of public hospital buildings. It is also important that maintenance management work together with top administration management so as to secure sufficient funds for maintenance works as well as ensure that such funds is judiciously utilized. Maintenance manager should use authentic materials and skills in repairing and retrofitting these church buildings.

Older buildings require constant maintenance. Current funding programs cover the initial conversion costs, but not longer-term maintenance. Perhaps additional funds for maintenance could be made available when conserving built heritage is part of a housing project's objectives. Building managers should also * coordinate preventive maintenance with other maintenance projects, * prepare a checklist of preventive maintenance tasks, * schedule a timeline for the tasks, * prepare procedures for managing the program, and include preventive maintenance among activities for controlling the quality

of air inside buildings As building managers determine what maintenance projects are needed, they should use an objective process for setting priorities among them. For cost effectiveness, building managers should calculate total costs over the expected lifetime of building and facilities. As a prelude to preventive maintenance, building managers should oversee periodic inspections of buildings' conditions and create an inventory of buildings' components and equipment.

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