

"The Poor Mindset of Citizens on Maintenance aspect Of Infrastructure Projects in Most Developing Countries as Compare to the Advanced Countries” A Study in Ghana.

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Abstract

All three spheres of government, together with the state owned enterprise (SOEs), manage major portfolios of immovable infrastructural assets. While there is much emphasis on delivery of infrastructure, delivery does not in fact end with the commissioning of the infrastructural asset. Once the infrastructure has been commissioned, various activities must be carried out which are necessary to ensure that it continues to perform- such as the allocation of necessary budgets and the retention of appropriate staff to maintain the operation of the assets. “Delivery” needs to be universally understood as embracing not just constructing the infrastructure, but the appropriate operation and maintenance thereafter for the whole design life of the asset. There are so many problems associated with the maintenance of buildings and infrastructural facilities on the economy. One of the serious problems is finance; government financing as regards to maintenance of buildings (both public and private) is minimal. The grant towards maintenance of infrastructural facilities is on its lowest ebb. Most buildings and infrastructures have been neglected by subsequent tenures of government while the private sectors; the individual property owners have little or nothing to contribute towards effective maintenance of their buildings, so long as the buildings affords the owner annual income he could not care less for the maintenance and so long the interior of the building is conducive for the occupants they could not care for outward appearance or other necessary maintenance activity. Another problem to effective maintenance of the built environment in Ghana is corruption. Certain governments which have the welfare of the populace at heart will foster a well finance programme to cater for the maintenance of certain facilities such as road networks bore hole systems, bridge construction, elevation of the power grid for alleviation of suffering and eventual welfare of the populace but certain corrupted officials will channel these funds for personal aggrandizement. As a result of this economic hardship residents and citizens has little or nothing to contribute in terms of effective maintenance of their abode thus leading to neglected effects visualized in our cities and metropolis. Also certain buildings in Ghanaian cities were constructed during the pre-colonial era therefore most of these buildings are aged due to wear and tear, weathering and climatic factors over the years thus resulting in dilapidated nature which might not respond positively to modern day maintenance techniques.

Keywords: *Poor Mind Set, Attitude of Maintenance, Project Development, Infrastructure Maintenance*

INTRODUCTION

Maintenance as a service covers every aspect of the building environment particularly the building assets and infrastructural facilities, such facilities spread across projects in several sectors of the national economy which includes agriculture, health, education, commerce, industry, energy, environment and defense. The spread also extends to social sectors such as roads, water supply, housing, electricity, and telecommunication. It is noteworthy that such projects have implications for regular maintenance for sustainability. Maintenance has been a neglected field of technology in Ghana, yet every infrastructure or equipment requires being maintained to remain in functionality and in up-to-date standard. Buildings and infrastructures are the nation’s most valuable assets, providing people with shelter and facilities for work and leisure. Maintenance starts the day the contractor leaves the site, having completed the project. The design, material specification, construction including workmanship, function and use will determine the amount of maintenance required during the life time of the building or infrastructure. Maintenance is defined in engineering terminology as the continuous upkeep, in good condition of a system(s) to achieve operational reliability with maximum designed output result, endurance and stability. This definition has been adapted for building maintenance as work undertaken to keep or restore every facility, that is, every part of a site, building and contents to an acceptable standard. Thus maintenance aims at retaining components, equipment as well as the entire structure at specified level of performance. The acceptable standard inferred must be no less than the statutory requirements and one which sustains the utility and value of the facility. This may include some degree of improvement over the life of the building as acceptable comfort and amenity standards rise. The principal objective of building and infrastructural maintenance is the upkeep of the building for continuous and reliable use. The wear and tear arising from use or misuse, weathering and other agencies must be anticipated and appropriate measures put in place to adequately take care of them. The concept of maintenance involves taking appropriate measures put in place to adequately take care

of them. The concept of maintenance involves taking appropriate steps and precautions to ensure that a given piece of a capital asset (equipment and infrastructure) attains its possible life span.



A. Classification of maintenance of buildings and infrastructures

Maintenance of buildings and infrastructures can be classified under the following headings;

- **Planned Maintenance:** Planned maintenance is maintenance organized and carried out with fore thought, control and the use of records to pre-determined plan. It was also defined by BS 3811 as “work undertaken in accordance with sandy based system of priorities, each operation properly planned and organized in advance with necessary labour, plant and materials assembled ready for use when required” if this is properly applied it leads to a greater margin of safety and reduce the risk of having to resort to emergency work. Planned maintenance is further divided into;
 - *Planned preventive maintenance.*
 - *Planned corrective maintenance*
 - *Planned preventive maintenance*
- **Unplanned Maintenance:** Unplanned maintenance is maintenance carried out in a pre-determined plan. This is maintenance work resulting from unforeseen breakdown of facilities requiring urgent attention. It is work resulting from unforeseen breakdown or damage due to external causes such as acts of nature, settlement in buildings and shrinkage of building components(BS 3811). It is also categorized by Ivor H. Seeley (1979);
 - *Avoidable maintenance*
 - *Predictable maintenance*

B. Objectives of maintenance of buildings and infrastructure on the economy

- It ensures the functional requirements of the building are attained at all times.
- It creates a conducive and tenantable accommodation for owners and occupiers
- It enhances the quality of building structure to meet modern day requirements.
- It prolongs the life span of buildings and infrastructures.
- It preserves the physical characteristics of the building associated services so as to reflect fewer breakdowns and thereby reducing the probability of early failure.
- To ensure that assets are kept at reasonable standards and at least cost.
- To maximize the economic and financial returns from the use of the building.
- To ensure the safety of the users and occupants

C. The economic and social significance of maintenance of buildings and infrastructural facilities.

The aim and objective of maintenance to buildings and related infrastructures had been examined but there still exists the economic and social significance which includes:

- Dilapidated and unhealthy building depresses the quality of life and in some ways contributes to certain anti-social values. For instance; uncompleted abandoned buildings have continued to serve as hide out to criminals and social miscreants.

- Maintenance as has been shown arrests decay and failures thereby extending the physical life of a building and thereby delays replacement and deters expenditure on new construction.
- The appearance, quality and general physical conditions of a building normally reflect public pride or indifference, the level of prosperity in the area, social values and behavior.
- Certain buildings and infrastructural facilities by their appearance and location in the vicinity or street add or improve the beauty of the environs. So any actions geared towards the maintenance of such a structure will normally draw public attention and sympathy

D. Maintenance of infrastructural facilities

Infrastructural facilities represent the engine of social and economic activities. It is the major challenges of economic development. Services associated with the use of infrastructure accounts roughly 10%-15% of gross domestic product (G.D.P). The importance of infrastructure has strong links towards growth, poverty reduction and environmental sustainability. These social infrastructures encompass education, health care, commerce, industry and almost all other facets of national life. Infrastructures can be said to be the umbrella term for many activities referred to as social overhead capital. Ghana has invested a lot in providing new infrastructures, the result has been a dramatic increase in social infrastructural services- for example transport, water, irrigation, sanitation, power and telecommunication. Such increase does not really raise productivity and improve the living standards of the citizen, because infrastructure ought to be reliable and efficient. In Ghana, infrastructure provides services that respond to effective demand. These services are the goals and the measure of development in a society. These infrastructural assets in Ghana are not generating the quantity or the quality demanded. The cost of this waste in foregone economic growth and cost opportunities for poverty reduction and environmental improvement are high and unacceptable. It can be stated categorically that good infrastructure raise productivity and lowers production cost. Infrastructural investment has been mis-allocated in Ghana. The country has too much new investment but too little of maintenance. Inadequate maintenance has been the failure of infrastructural production.



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E. Conclusions

The maintenance of buildings and infrastructural facilities in Ghana requires attention at the highest level. This attention is of basic importance of which the objective must be to keep buildings and infrastructural facilities to acceptable standard in order to make them functional and reliable. It was seen during the discussions the process that the level of maintenance activities in Ghana is inadequate. Financing by both government and property owners which could have helped to increase buildings and infrastructural maintenance has not be properly implemented. Certain government legislature and policies including taxation and property levies imposed on property owners have certainly affected the efficacy of maintenance activities.

The issue of every contractor being involved in project production with few engage in maintenance has been a major set-back because there are few maintenance professionals as against maintenance work requirement thus most infrastructural facilities are not optimally utilized. The un-involvement of these few and far between maintenance professionals in the design stage of a project is another factor that negatively affect the efficiency of building/project production thus leading to recurrent maintenance work draining the pocket of both property owners and government-owned infrastructural facilities manage. Poor attitude of workers and poor aptitude of the supervisory personnel during project development phase has also been a major problem. This has led to serious defects seen in the life span of buildings and infrastructural facilities which also affect the capacity output of the citizens. Cutting cost in order to maximize profit by contractors through the use of substandard materials causes defects in the long run and subsequent maintenance requirement with its re-occurrent maintenance cost affecting the economic output of citizens.

Lack of effective planning and scheduling also leads re-occurrence of faults due to defects thus subsequent re-occurrence of maintenance work and eventual loss of initial capital investment. Inflation regards with regard to over blow appreciation in the value in the value of material cost and labour cost affects the efficacy of maintenance work requirement thus reduced economic growth. Carelessness and recklessness of the users of the property are also a direct effect of defects and subsequent maintenance work which will affect the economic life of the owner, the user and even the environment. Even-busy attitude of property owners and residents due to bustling and hustling of everyday life is also a cause of neglect especially house-keeping aspect of maintenance and thus has led to low maintenance attitude and subsequent rundown appearance of infrastructural facilities.

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