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## **BUILDING MAINTENANCE POLICY ISSUES IN HIGH RISE COMMERCIAL BUILDINGS**

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**ABSTRACT:** At present, high rise commercial building is quite complex in implementing a building maintenance policy. The quality, safety and service are the criteria of the building maintenance policy which should be provided and implemented in the high rise commercial buildings in order to sustain their value and economics. It also can benefit to the investment aspect as well as the maintenance activities. The purpose of this paper is to look at the implementation of the building maintenance policy in building maintenance management of high rise commercial buildings in Malaysia. Seven high rise office buildings were investigated through randomly selection in Klang Valley, Malaysia. This study attempts to provide a perspective of in-house building maintenance personnel and outsourced consultant as well as contractors on the maintenance policy practiced in building maintenance management of high rise office buildings through unstructured interviews. This paper presents the preliminary finding of a study on the building maintenance policy issues in the particular buildings. The current maintenance policy procedures in Malaysia are however based on house rule and contract agreement. The weaknesses in the current procedures are the primary problems because they do not explicitly link maintenance needs with performance management, strategic management and facilities management. The results had shown that the scope of building maintenance implemented varies from one building to another. This implies the quality of maintenance is not consistent especially in building performance aspect. The most important finding is that the building maintenance policy standard is not available in all buildings. This research establishes the need to develop a standard of building maintenance policy in high rise commercial building to be enforced legally in order to ensure the consistency of quality, safety and service to end users as well as publics all the time. As a conclusion, building maintenance policy can be a tool in order to measure and value the quality of the maintenance and operation processes improvement link with performance management, strategic management and facilities management.

**Keywords:** building maintenance policy, commercial building

### **I. INTRODUCTION**

At the present time high rise commercial building has become necessitate in Malaysia among city areas due to the facilities provided in the building. In order to ensure the building is always in good circumstance and running efficiently, facilities management (FM) and maintenance management (MM) should take a good care of every aspect of the facilities provided.

British Standard 3811: 1964 defined maintenance policy as an approach contained by which maintenance decisions are made. According to British Standard BS8210: 1986 Section 2, a maintenance policy should ensure that value for money expended is obtained, in addition to protecting both the asset value and the resource value of the buildings concerned and the building owner against breaches of statutory and legal obligations. It is important to have a well-developed building management to guarantee the building always in high-quality circumstance. The building maintenance policy is very significant to building owner, tenants, customers, end users and maintenance professionals in order to ensure that they are in safety zone all the time and get the benefits. They also need high level of services and awareness since their expectation is generally high. According to Chan *et al*

(2001), maintenance management operations in high rise building are more complicated, which leads to advanced maintenance policy. There is a connection between improving maintenance effectiveness and the maintenance policy implementation, the top management constantly requests to recognize further on the efficiency of maintenance performance. Chan *et al* (2001) discover that maintenance services are not obvious and are always unseen by the management. Moreover, there are numerous criticisms, especially, incompetence and below standard of building maintenance is closely related to the maintenance policy and limited financial resources (Hui, 2005).

Coetzee (1999) observes that building maintenance is an operational series to establish maintenance policy and its objectives also providing maintenance policy and maintenance resources. Lee et al (2008) identify maintenance policy and strategy, strategic management, facility management and performance management as the four main aspects influencing the management of building maintenance operation processes. It also controls progress of work and monitoring budget expenditure. Constrain of budget in operational level seems to be the ordinary insufficiency in building maintenance (El-Haram and Horner, 2002; Tse, 2002; Shen, 1997). For the building users, building policy is one of factors for the requirement of maintenance management in order to contribute to business (Amaratunga et al., 2000). According to Lee et al (2008), building policy implementation can be an indicator of safety and effectiveness aspect.

## II. STATEMENT OF PROBLEM

Facility effectiveness, cleanliness standard, indoor air quality, energy efficiency, lighting standard, thermal comfort, safety and information technology are several factors related to building policy. Unfortunately in Malaysia most of the high rise office buildings were not effectively managed through specific building maintenance policy. Madu (2000) found that lack of coordination and implementation of building maintenance goals and contradiction of maintenance policy to organizational direction can cause common problems and deficiencies in the building. In Malaysia, there is lack of maintenance and facilities culture, apart from the government circulars and directives outlining processes and procedures to guarantee systematic asset and FM (Hassan, 2007). According to Ruslan (2007), the key issue currently facing FM in Malaysia is the low service quality. In addition, most of the FM activities cannot be carried out on time and thus affect the FM effectiveness for the building as a whole (Malaysia Government, 2003d; Tiun, 2006). There is correlation between maintenance management and maintenance policy implementation which can be used as indicator of improvement on building value. Therefore, the aim of FM should not focus on optimizing the running costs of buildings only, but also raising the efficiency and suitability of the management of space and other related assets management for end user and processes (Kamaruzzaman and Zawawi, 2009). These issues led to the management gap in managing facilities of stratified residential building. Even so, the management gap continued to exist as referred to the on-going issues reported in mass media (Tiun, 2006).

## III. OBJECTIVE OF RESEARCH

The rationale of this study is to look at the implementation of a building maintenance policy in MM of buildings in Malaysia. This research aims to improve the value of buildings depends on the quality, safety and service of the maintenance practice in high rise office buildings through a proactive MM system that is based on the concept of building policy standard. Even though this paper serves as a general idea of current study, it intends to establish the rationalization for further research towards the development of a building maintenance policy standard in Malaysia.

The objective of the research will emphasize on:

- i. To identify the main problems of sustainable MM in high rise office buildings.
- ii. To analyze the relationship between building maintenance policy and operation and maintenance activities.
- iii. To conclude the significant of the building maintenance policy in influencing the practice of MM.

#### **IV. THEORETICAL FRAMEWORK**

This paper focused on high rise commercial building managed by the FM. Theoretically, in managing the particular building, both parties, i.e. in-house FM as well as MM personnel and out-sourced consultant as well as contractor have to attain a consensus in all management-related building maintenance policy. This is to ensure an effective management for the building. This study found that there were some trends of management gap among all parties who are the beneficiary of the FM and MM. In discussing this matter, the paper starts briefly on several key issues that led to a management gap. It is then followed by the methodology in identifying the management gap and the important findings from this study.

#### **V. RESEARCH FRAMEWORK**

The research framework is categorized under three criteria of the existing condition of FM and MM in high rise commercial building specifically quality, safety and service of the building maintenance policy which should be provided and implemented in the buildings in order to sustain their value and economics; there are two categories of respondents namely In-house Experts included Facilities Management (FM) personnel and Maintenance Management (MM) personnel, while the second one is called Out-sourced Experts which included Consultants and Contractors.

The first criterion is looked at the quality aspect. In providing effective FM, all the parties have to respond accordingly to the management. The participation of in-house experts and out-sourced experts were crucial since all the FM and MM activities were designed for and dedicated to them. Other than involvement, they have to understand their responsibilities as related to the building i.e. building maintenance policy and operation and maintenance activities within building, environmental condition as well as maintenance service standard (especially routine maintenance work).

The second criterion is based on safety aspect in FM and MM which is in running the day-to-day activity, the FM needed resources, otherwise there is little can be done. For the safety and health, it was also put under the building management reflection to safeguard the occupants' or end users' health interest, so that they felt secure and comfortable within building. It furthermore played the most important role in given that sustainable building. Theoretically safety maintenance can be seen from a 'hard' and 'soft' viewpoint. The 'hard' viewpoint referred to the maintenance output or product, which the occupant or end user can sense the impact of maintenance work. As an example, provide a good lift system, in which they can satisfy to use it. The 'soft' viewpoint looked into the safety service established on the practice of carrying out the particular work.

The last criterion is focused on service aspect. Unprofessional building management aspect of the building was one of the fundamental tasks in FM and MM (Thompson, 1994). In high rise commercial building, the problem of monthly collection was not threatening since the collection of maintenance charges was just fair enough to run the activity. On top of this, the building maintenance policy need to be implemented via standardization and monitoring of its scope of work in operation and maintenance activities in order to avoid from inadequate FM as well as MM. As an example, allocation for cosmetic revival should be the last list of items in building maintenance activity (Amarilla *et al.*, 2002). An effective FM is not purely based on the standardization of building maintenance policy.

#### **VI. INVESTIGATION METHOD**

This study attempts to provide a perspective on the building maintenance policy practiced in operation and maintenance activities of randomly selected seven high rise office buildings in Klang Valley, Malaysia. The buildings are Telecom Tower, Maybank Square, Maybank Tower, Petronas Twin Tower, Putra World Trade Centre, Vista Tower and Dayabumi Complex. Information on maintenance policy, including the type of existence policy conducted and its originality is collected through unstructured interviews to In-house Experts included

Facilities Management (FM) personnel as well as Maintenance Management (MM) personnel; and Out-sourced Experts which included Consultants and Contractors.

The study consists of two steps. First, to determine the availability of ground rules, and documentation including operation and maintenance manual, maintenance program, maintenance checklist, and monthly maintenance report. Second, to check the practice of annual budget for planned and unplanned maintenance, building services audit as well as space audit.

This research embarks on the following research questions which are based on the current practice of building management:

- i. How buildings were managed?
- ii. Troubles encountered in the building management?
- iii. Whether or not building maintenance policy is provided in practicing FM and MM?
- iv. Where is the originality of building maintenance policy?
- v. Whether building maintenance policy is standardizing among buildings?
- vi. Whether the record management is systematic based on building maintenance policy?
- vii. Whether the building maintenance policy complies with statutory requirement?
- viii. Satisfaction with and expectations of government assistance?

## **VII. RESULTS AND DISCUSSION**

Based on the interview consequences with FM personnel, MM personnel, consultants and contractors, the major issues pertaining to the current status of building management of high rise commercial buildings in Malaysia were identified and arranged into two (2) categories as follows.

### **A. *Building Management Performance Indicator***

The scope of work in building management implemented varies from one building to another. This implies the quality, safety and service of operation and maintenance activities are not consistent. This can be inferred from the finding of this study that building audit, response time, down time, up time, request for repairs, workmanship and benchmarks for operational processes improvement were not implemented.

### **B. *Building Maintenance Development***

It was found comprehensive ground rule, operation and maintenance manual, maintenance checklist, maintenance schedule, and monthly maintenance report were available in all buildings. Most of building maintenance management did not implement the four factors of building maintenance management operation processes in proper manner. It was evident that building maintenance policy standard unavailable in all buildings but strategic management, facilities management and performance management were obviously available in the buildings. However, maintenance policy is mainly based on contract agreement for out sourced consultants and contractors while house rules are implemented for building customers, tenants, users and FM personnel and MM personnel. It varies each other with different maintenance approaches and resources. Planned maintenance and unplanned maintenance are not practiced in proper way in most of the building maintenance organizations.

## **VIII. SUGGESTIONS AND IMPROVEMENT**

Based on the above-mentioned findings, this study proposes the following measures of improvement for both building management organizations and the government:

### **A. *Building Management Organization***

- i. There is a need to develop a standard of building maintenance policy to be enforced legally in order to ensure quality, safety and good service to occupants or end users. Building maintenance policy is a guideline management framework which can be transformed in a written document and it must be standardized and implemented with all the related factors of building maintenance management operation processes in the buildings.
- ii. Define and identify the basic terms in the building maintenance operation processes based on ‘British Standard Definitions’; the crucial theories in building maintenance management are building maintenance definitions, categories of maintenance types, maintenance policy components, maintenance procedures, maintenance programming and scheduling.
- iii. Establishment and implementation of operation and maintenance programs to make sure that FM and MM are effective and sound.
- iv. Frequent organization of operation and maintenance activities as part of building maintenance policy such as fire drills to build up occupants’ crisis awareness and responsiveness.
- v. Proper building management and implementation of the necessary inspections and reports with respect to high rise commercial buildings to guarantee a high quality of service and public safety.
- vi. Establishment of long-term planning improvement programs with specific term and condition in order to fulfill requirements of building refurbishment and replacement in the long run and consequently, to increase the value of buildings.
- vii. Complete operation and maintenance documents and hand over such documents from old management organizations to new ones, and fulfillment of the needs of high rise commercial buildings, namely, building maintenance, refurbishment and replacement.

## **B. *Government***

- i. Strengthening of the established policy instruments by including information tools and economic instruments for building management to meet the requirements of high rise commercial buildings.
- ii. Provision of assistance to the high rise commercial buildings without management organizations to establish such organizations in accordance with the laws such as building by-law, other related acts as well as regulations which effected to building owner and other stakeholders; and afterward, endorsement of the overall development of the particular buildings in order to achieve sustainable development of the quality and safety environment.

## **IX. CONCLUDING REMARK**

As a conclusion, a clear building maintenance policy does not exist yet in the building management of high rise commercial buildings which it can be a tool in order to measure and value the quality, safety and service of the building operational processes improvement through performance management, strategic management and facilities management. It has more expectation from the building owners, tenants and maintenance experts in term of the physical environmental consideration and the maintenance requirements in high rise commercial buildings.

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