

Critical Issues in Maintaining Local Government Property Asset

Shardy Abdullah, Muhammad Rosmizan Abdul Wahab, Arman Abdul Razak and Mohd Hanizun Hanafi

School of Housing, Building and Planning, Universiti Sains Malaysia

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ABSTRACT

Implementation of effective maintenance programmes are critical for the continuous upkeep of property. Local government (LG) organizations have traditionally possessed a large amount of property, both in quantity as well as value. As property assets are key resources, these properties should be properly and well maintained. Studies have however shown that the performance of maintenance programmes in LG to be still unsatisfactory. This paper aims to determine the critical issues that negatively impact LG property maintenance programmes. Secondary data through the review of previous research was used to identify a set of issues which was then presented to the study respondents. Respondents were LG organization representatives within the respective maintenance departments. Questionnaires were distributed to the respondents and the resulting data was then analyzed. Study findings have indicated that the three main critical issues in maintaining LG property assets are lack of fund, insufficient staff and lack of maintenance policy.

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INTRODUCTION

Maintenance programmes are vital in ensuring property assets are able to function well, safe to be used, able to enhance user satisfaction as well as to lower operating costs. A building that is dilapidated is usually associated with a lack of maintenance efforts [1]. Therefore, the need to implement an effective property maintenance programme is seen as an almost mandatory undertaking for any property owner. This also rings true for local government (LG) organizations where they are responsible to conduct maintenance programmes for their respective properties. It is an established fact that LG organizations own or utilize substantial number of property [2]. LG property ownership is at a huge scale in terms of value. In the UK, it was reported that public sector assets amounted to £658 billion where 58% were held by local government [3].

In Malaysia, LG was established under the Local Government Act (Act 171) as a statutory body either in the form of a City Council, Municipal/Town Council or a District Council. LG is mainly responsible to manage and administer local community interests within their operational area. In the context of LG, property is normally developed, owned or leased in order to fulfil certain administrative, economic and social needs. The specific utilization of these properties are based on the needs of the respective LG organizations. As such, there are LG properties that are used for investment purposes (for instance, commercial buildings, shoplots and office space), social/public purposes (such as public halls, sports complexes and public restrooms), small and medium industry purposes (for example, workshops and factories) as well as for other specified purposes or functions. Property ownership among LG organizations differ from one organization to another based on the needs and capacity of the LG to acquire a certain property. LG that has a higher purchasing power or a healthy financial standing may usually procure properties that are more towards investment purposes. On the other hand, another LG may only concern itself with acquiring properties that are able to facilitate the delivery of its core services. The number and value of properties owned by these LG organizations also vary based on the type of the LG itself. As an example, in 2012, the Kuantan Municipal Council was recorded to own assets (including property) amounting to RM29,445,970.00 [4] compared to the Hulu Selangor District Council which amassed assets worth RM 20,299,793.00 [5].

Properties are a fundamental resource in terms of production/operations [6] that are needed by any party (including LG) to enable them to undertake organizational production/operational activities. Maintenance programmes are needed to ensure these properties may be optimally used for their intended purpose. Although it is a general consensus that maintenance programmes are critical for all properties, previous studies have indicated and proven that LG property maintenance programmes were undertaken ineffectively and seldom exhibit inherent implementation problem such as listed in the following Table 1.

Table 1: Statements/Findings on the implementation of maintenance programmes within Local Government organizations

No.	Statement/Finding	Source
1.	Several investigations have raised concerns about low levels of maintenance and poor building conditions.	Borge and Hopland [1]
2.	It was concluded that a vast majority of local governments had insufficient levels of maintenance and indicated that the maintenance backlog amounted to USD 17 billion or 50 percent of local government revenues.	NOU [7]
3.	It has been shown that the priority was not carried out for the maintenance works for the existing facilities in Malaysia.	Adnan et al.[8]
4.	Councils spent over £136 million on property maintenance in 2007/08, but too much is reactive, rather than planned...	Audit Scotland [9]

Based on the statements and findings are listed in Table 1 above, there is a clear indication that the performance of maintenance programmes for LG properties is still unsatisfactory and far from being as effective as they were intended to be. This study was conducted to empirically determine the critical issues which hinder the effective implementation of maintenance programmes for LG properties. This apparent low performance of these maintenance programmes would naturally be due to certain causes. Therefore, the identification of these causal issues would allow the root causes to be fully understood and subsequently allow remedial measures as well as solutions to be formulated.

Literature Review:

The term 'maintenance' has been defined by several parties based on different perspectives and aspects. The most widely used definition comes from the British Standard, where the Glossary of Terms (BS 3811:1993) defines maintenance as the combination of all technical and administrative actions, including supervision actions, intended to retain an item in, or restore it to, a state in which it can perform a required function [10]. Another almost similar definition describes maintenance as the combination of all technical, administrative and managerial actions during the life cycle of an item intended to retain it in, or restore it to, a state in which it can perform the required function (function or a combination of functions of an item which are considered necessary to provide a given service) [11]. There are also several other parties who have defined this term according to specific fields. For instance, in the engineering field, maintenance is defined as the continuous upkeep, in good condition of a system(s) to achieve operational reliability with maximum designed output result, endurance and stability [12]. In the field of asset management on the other hand, maintenance is defined as an action carried out by a group of persons to protect, preserve and maintain the systems, equipment and structures to ensure the asset is capable to function effectively [13] whereas from the facilities management perspective, maintenance is defined as an essential operation that influences the effectiveness of user organizations and can increase the productivity and well-being of employees [14]. Based on these definitions, maintenance can therefore be concluded as any action undertaken to preserve, protect, improve and maintain the conditions of a property in ensuring its functionality. This term also encompasses the aspects of planned maintenance, repair and restoration as well as structural replacement. Within the context of this study, the term 'maintenance' is referred to activities or tasks directly undertaken by LG in maintaining the physical condition and functionality of a property in fulfilling its original intent of construction and establishment.

Findings from previous studies have indicated that there are several issues which affect the effectiveness of property maintenance programmes. A study of maintenance principles and practices of facilities in Botswana reported that over 90 percent of the respondents indicated that there was a severe impact on maintenance due to constraints such as lack of training and transport, insufficient funding, poor top management support, limited skilled personnel, unavailability of parts and the absence of manuals and drawings. This therefore suggests a lack of the implementation of the maintenance policy as well as poor support from top management, especially during budget allocations as well as the overseeing of policy implementation. This study also discovered that personnel managing the maintenance departments lack accurate information in forecasting and presenting their budget estimates to top management to allow for adequate financial allocations [15]. In another study by Borge and Hopland [1] conducted on the effects of maintenance towards building conditions, it was discovered that budgetary allocation and expenditure in maintenance programmes highly influence the performance of the said

programmes and in turn, directly affect building conditions. This finding corresponds with the findings of AuditScotland [9] that states that lack of financial allocations have resulted in a backlog of maintenance work that has subsequently contributed towards a severe backlog of maintenance costs. Audit Scotland [9] also stressed that this financial imbalance has caused maintenance activities to be undertaken merely in a reactive manner.

Another facet that has been previously studied is the correlation between maintenance programme performance and the performance of the maintenance organizations. Within this aspect, the scope of issues negatively affecting maintenance is seen to be much broader. A study undertaken by Ali and Wan Mohammad [16] discovered that these issues can be associated with 5 distinctive elements pertaining to leadership (relating to the capabilities of the parties that lead and handle maintenance programmes); policies, plans and procedures (referring to guide mechanisms which define how the organisation will manage each specific component of the maintenance programme); training and orientation (relating to knowledge and skill of maintenance workers); monitoring and supervision (relating to actions that have been taken in a monitoring and supervisory routine in order to verify that performance meets the target and to identify opportunities and strategies for improvement); and, service performance (which refers to assessing overall performance of the services provided by the appointed contractor). Based on research done on the implementation of maintenance programmes at institutions of higher learning, 16 factors were listed as issues hindering this implementation process. From this list, 5 factors were found to be seriously affecting the implementation process of the related maintenance programmes. These 5 factors are lack of foresight for projection, use of inappropriate materials, poor funding, poor management attitude to maintenance and inadequate maintenance tools [17]. In another study undertaken by Adnan *et al.* [8] on LG infrastructure maintenance, several major issues were found to have disrupted the planned maintenance programmes. Among these issues are insufficient staff, shortage of experienced staff, maintenance budget, lack of maintenance inspection and no regular maintenance planning programmes. These issues actually revolve around the weaknesses of the LG organization itself. A study on preventive maintenance programmes for LG buildings in the state of Minnesota, USA discovered that these hindering issues may also be related to the type of the maintenance programme itself. Issues identified within this study consisted of aspect relating to limited fund, lack of staff, numerous emergency or unscheduled major repairs, maintenance priority, lack of training or expertise, difficulty in hiring contracted maintenance services, lack of maintenance information and communication. Taking into consideration all the issues brought forth by the previous studies discussed herein, the conceptual framework developed for this study is as illustrated below:

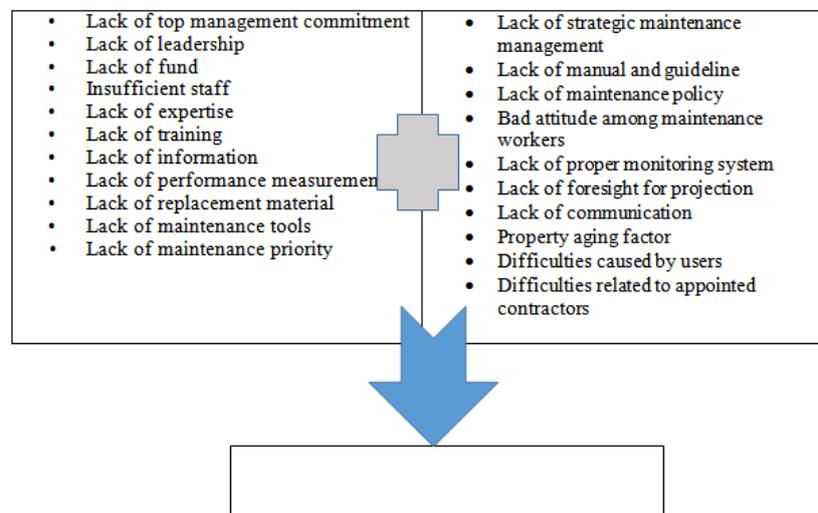


Fig. 1: Research conceptual framework

Methodology:

The questionnaire survey technique was adopted to acquire the data for this study. A set of a questionnaire form had been developed and used as the research tool in this study. The questionnaire contains 21 fundamental statements that are considered as the issues faced in implementing property maintenance programme by local governments. These statements were paired with a corresponding Likert Scale as the response for each listed statement. The response scale was in a range of 6 level of responses as follows; 0 for 'not applicable', 1 for 'strongly disagree', 2 for 'disagree', 3 for 'neutral', 4 for 'agree' and 5 for 'strongly agree'. The questionnaires were then randomly distributed via postal mail as well as direct visitation to maintenance officers in local government organisations operating within Peninsular Malaysia. These maintenance officers were identified as the respondents of this study. Overall, there are 149 local governments in Malaysia, but only 108 are operating in

Peninsular Malaysia while the rest are located in Sabah and Sarawak. Therefore, a total of 108 LG organisations were chosen as the organisations for the study data collection purpose. The collected data was then analysed using the Mean Score analysis. The data set was also initially tested for reliability using Cronbach's Alpha.

Findings and Discussion:

From the 108 LG organisations involved in this study, only 67 organizations returned the questionnaires duly completed. This resulted in a study response rate of 62%. In terms of the different types of LG organisations, the respondents were from 3 City Councils, 19 Municipal Councils and 45 District Councils. Approximately 74% of the maintenance officers involved in this study are male while 62% of the respondents have a working experience of more than 10 years. As for the level of education, 12% of the respondents possess postgraduate level education, 42% with Diploma or Higher Certificate of Education, 28% of the respondents have a bachelor's degree with the remaining having secondary education certificates. The data was initially tested with Cronbach's Alpha in order to determine the internal consistency of the survey instrument. The test produced a Cronbach's Alpha value ranging from 0.802 to 0.852. A reliability value of 0.7 or higher is considered to be adequate [19] where typically, the higher values of Cronbach's Alpha indicate a strong reliability.

Based on the results of the analysis as shown in Table 2 above, it was discovered that there are 8 statement of issues that recorded a mean score exceeding 4.0, namely, lack of fund with a mean score of 4.72; insufficient staff which recorded a mean score of 4.53; lack of maintenance policy with a mean score of 4.52; lack of strategic maintenance management which returned a mean score of 4.19; lack of communication with a mean score of 4.13; lack of proper monitoring system with a mean score of 4.09; lack of performance measurement which recorded a mean score of 4.05; and finally, lack of maintenance priority with a mean score of 4.02. This result directly implies that these eight issues were collectively perceived by the study respondents as being the main issues which hinder the effectiveness of the implemented property maintenance programmes of the LG organizations. As this study is aimed to determine the most critical issues, each issue that records a mean score that exceeds a value of 4.5 will be considered as a major critical issue. Based on this predetermination, Table 2 shows that there are 3 statement of issues that have exceeded this threshold, namely, lack of fund, insufficient staff and lack of maintenance policy. This discovery is not surprising, giving the fact that it is aligned and consistent with findings from previous studies as highlighted and discussed earlier.

Table 2: Mean Score values for the issues in implementing property maintenance programmes in local government organizations

No.	Issues	Mean Score
1.	Lack of fund	4.72
2.	Insufficient staff	4.53
3.	Lack of maintenance policy	4.52
4.	Lack of strategic maintenance management	4.19
5.	Lack of communication	4.13
6.	Lack of proper monitoring system	4.09
7.	Lack of performance measurement	4.06
8.	Lack of maintenance priority	4.02
9.	Lack of information	3.97
10.	Lack of expertise	3.97
11.	Lack of manual and guideline	3.97
12.	Property aging factor	3.92
13.	Difficulties related to appointed contractors	3.88
14.	Lack of top management commitment	3.85
15.	Lack of training	3.42
16.	Lack of maintenance tools	3.40
17.	Difficulties caused by users	3.40
18.	Bad attitude among maintenance workers	3.27
19.	Lack of leadership	3.22
20.	Lack of foresight for projection	2.72
21.	Lack of replacement material	2.52

The issues of lack of funding has actually been put forth by numerous parties as clearly disrupting the effective implementation of maintenance programmes. This is because financial funds are the main resource necessary to initiate and subsequently maintain the consistent implementation of maintenance programmes. There is popular academic debate that revolves on how low levels of maintenance spending leads to poor building conditions, and in the long run also leads to excessive costs by reducing the life time of the buildings [1]. Ironically, this financial distress pertains to the operating budget (inclusive of maintenance budgets) only, for municipalities are able to relatively easily obtain funding from national government for capital expenditure [20]. Insufficient staff has also been identified as another major critical issue as the size of staffing is directly proportionate to the size and number of maintenance works that need to be carried out by the LG organization. In other words, the more maintenance programmes need to be undertaken, the more manpower and staffing will

be required. The issue of insufficient staff will also hinder the implementation of the planned maintenance programmes. A study by Aryee [21] has revealed insufficient manpower as one of the most important factors for maintenance plan execution. The final major critical issue of lack of maintenance policy is a reflection of how seriously maintenance policies are needed by various parties, including the top management and the maintenance team in driving the systematic and structured implementation of maintenance programmes in line with the overall aim and direction of the LG organization. A building maintenance policy should be a clear statement of the objectives and methods to be employed in keeping buildings fit for use and in preserving their asset value [22] The lack of such a policy will undoubtedly exacerbate other negative issues such as difficulty in establishing strategic maintenance management processes, difficulty in developing a performance monitoring and evaluation system as well as other related problems. Furthermore, optimal maintenance policies aim to minimizedowntime and the cost of operations [23].

Conclusion:

This study was undertaken to specifically determine the critical issues negatively affecting the implementation of property maintenance in LG organisations. As the very basis of maintenance programmes is to allow property assets to function well, it is pertinent that organizations dealing with a large of number of property assets, such as LG organizations, understand what the hindrances to their maintenance programmes are. Previous studies and research have identified several key issues that impinge on maintenance programmes where these issues differ based on certain aspects such as the type of property as well as maintenance policy and approach. A total of 21 distinct issues were gleaned through previous studies and used as the basis for this research. These issues were presented to the respondents of this study via the study questionnaire with the aim of identifying the main critical issues afflicting LG organizations.

Data analysis presented 3 main critical issues within the context of this study. These issues are lack of fund, insufficient staff and lack of maintenance policy. These 3 issues were seen and considered as the main hindrances against the effective implementation of maintenance programmes within LG organizations. The identification of these critical issues is the first important step in alleviating the poor performance of maintenance programmes. By strategically mitigating these critical issues, LG organizations would be able to enhance and improve the conditions of their property assets through a more effective and efficient maintenance regime.

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