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### Parameters Issues of Building Maintenance Management at High Rise Residential Building: A Review

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#### ABSTRACT

The high rise residential building is known as separated multiple housing units that share same lot of land. Basically, this type of building provides basic amenities such as covered parking, garbage chute, elevators, 24 hours security system, swimming pool and so on. Residents that live in high-rise residential building need to share the entire basic amenities provided and corporate with Management Corporation to maintain the facilities in a good condition. In fact, there are many issues on the aspect of building maintenance managements faced by residents and the management corporation. Therefore, this paper aims to address the parameters of building maintenance issues at high-rise residential building from year 2005 to 2013. Then, classified the issues into three main categories namely maintenance management fund, maintenance management efficiency and maintenance management satisfaction. This classification is used to determine clearly the issues of building maintenance management faced by residents and Management Corporation at high-rise residential building.

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#### INTRODUCTION

Real Estate is a field that always been discussed in the newspaper and electronic media. The issues discussed are regarding the price of housing increase, service maintenance management at high-rise building and so on. Due to the current scenario, the price for landed property is much higher compared to the non-landed property (Tawil, N.M., 2009). Therefore, the construction of high-rise building at urban area is more demanded compared to rural area from year to year. Furthermore, the increasing of demand for high-rise residential building was due to the present lifestyle of the community in the city (Noor, N.A.M., 2013). The lifestyle to live in a condominium or apartments is due to the factor of housing price and city propagating. Besides that, the facilities provided at high-rise residential building attracts many people in the city to own this kind of housing scheme. Therefore, high-rise building such as condominium and apartment are the best options because it was equipped with all the integrated facilities.

#### Methodology:

The statistics on issues of building maintenance management have been used in this analysis to observe the trends of issues of building maintenance management at high rise residential building from the year 2005 until the year 2013. This study analyse the parameter issues of building maintenance management at high rise residential building from 2005 to 2013 by using secondary data such as journal, article, conference proceeding and electronic media such as newspapers from year 2005 until 2013. This review paper will provide a benchmarking platform from 2005 to 2013 to see the parameters issues of building maintenance management at high-rise building into three (3) main categories such as Maintenance Management Fund, Maintenance Management Efficiency and Maintenance Management Satisfaction.

#### RESULTS AND DISCUSSION

From the analysis, it can be seen that the problems of building maintenance management at

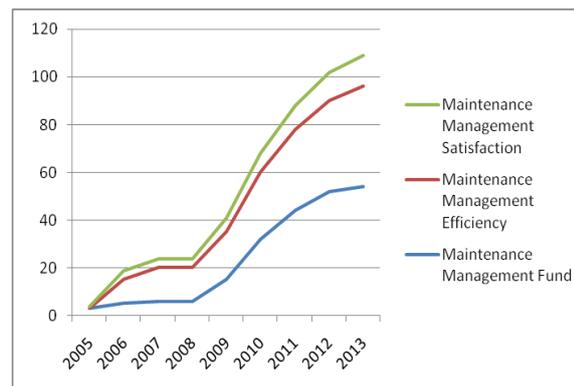
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high-rise residential buildings were increased year by year. Table 1 shows that the highest problems was in parameter issues on maintenance management fund stated about 54 cases followed by parameter issues

on maintenance management efficiency about 43 cases and lastly parameter issues on maintenance management satisfaction about 13 cases.

**Table 1:** Number of cases issues on building maintenance management at high rise residential building from year 2005 to 2013.

Parameter Issues / Years	2005	2006	2007	2008	2009	2010	2011	2012	2013
Maintenance management fund	3	5	6	6	15	32	44	52	54
Maintenance management efficiency	0	10	14	14	20	29	35	39	43
Maintenance management satisfaction	1	4	4	4	6	8	10	12	13



**Fig. 1:** The relationship between maintenance management fund, maintenance management efficiency and maintenance management satisfaction from year 2005 to 2013.

Furthermore, Fig.1 shows that there is a relationship exists between these three parameters. When the parameter issues of maintenance management fund increased, the parameter issues of maintenance management efficiency and maintenance management satisfaction will also increase. Therefore, it can be concluded that the maintenance fund is the main issue that need to be concerned because it can influence the level of maintenance management efficiency and satisfaction.

**(i) Issues on Maintenance Management Fund at High Rise Residential Building:**

Maintenance fund is an amount of money collected by Management Corporation to maintain the building and its facilities. Maintenance works need to be carried out to ensure the building and its facilities are in a good condition. However, the lack of awareness amongst residents on the importance of maintenance fund leads to the poor maintenance work done. The source to maintain high rise residential building was came from the maintenance fund collected from the residents (Yusoff, Y.M., 2011). If the maintenance fund was inadequate, it will affect the efficiency of the maintenance works to be done regularly and diligently. Previous researchers agreed that the reluctance of residents to pay for maintenance fees would cause the maintenance works deferred and suspended (Yusoff, Y.M., 2011; Fakhruddin, I.H., 2007; Tiun, L.T., 2006; Yahya, M.R., 2012; Jamila, H., 1994; Che-Ani, A.I.,2010;

Ammar, S.M.S., 2012; Kuo, Y., J. Chou, 2012; Tuti, H.J. and A.M. Hakim, 2005; Yau, Y., 2011). The residents were refused to pay for the maintenance fees because they claimed that the charge for maintenance fees was not realistic, the allocation of maintenance fees collected was doubtful and not transparent (Kuo, Y., J. Chou, 2012; Ammar, S.M.S., 2012; Che-Ani, A.I., 2010). For example, residents need to pay for maintenance fees to use the gymnasium reason that it will be used for gymnasium's management services. The other issue on maintenance fund was there is no standard to determine the maintenance charges for high-rise buildings. As results, there were management bodies that took an advantage by increasing the maintenance charges to make extra money (Kuo, Y., J. Chou, 2012).

**(ii) Issues on Maintenance Management Efficiency at High Rise Residential Building:**

The maintenance management efficiency is referring to the maintenance works that was carried out successfully. For example the lift that was maintained regularly and diligently always functions in a good condition. Basically, the facilities management is a combination of maintenance management and resident's satisfaction that need to be managed effectively (Che-Ani, A.I., 2010). The maintenance works that not follow maintenance schedule can be categorized as not efficient and it will increase the cost of maintenance works. In order

to determine the effectiveness of maintenance management, the aspect of service quality can be used as a basis to develop an instrument of effectiveness. Besides that, service quality and resident's satisfaction need to be observed regularly to ensure the services meet the standard of requirements. This statement also agreed by mentioned that low service quality and low level of resident's satisfaction will lead to the ineffectiveness of maintenance management works. Otherwise, low quality of maintenance management services can affect the effectiveness of work done (Fakhruddin, I.H., 2007; Che-Ani, A.I., 2010; Kuo, Y., J. Chou, 2012). As results, the functions and the performance of the facilities will be decreased. Furthermore, residents will complain that the performance of the facilities provided were not comparable with the fees that they paid every month to the management. The other issue that led to the maintenance management effectiveness was the lack of awareness amongst residents to involve in the organisation's activities at their place (Fakhruddin, I.H., 2007; Kuo, Y., J. Chou, 2012; Yau, Y., 2011). As conclusion, Management Corporation, residents and management agents must be cooperated to each other to enhance the maintenance management efficiency at high-rise buildings.

### ***(iii) Issues on Maintenance Management Satisfaction at High Rise Residential Building:***

Maintenance management efficiency can lead to the maintenance management satisfaction amongst residents at high-rise building. The management body and residents must cooperate to each other to achieve maintenance management satisfaction (Jamila, H., 1994). Nowadays, residents always point fingers to management when they are not satisfied with the maintenance work done. Residents did not realize that in order to achieve maintenance management satisfaction, they should play their roles in the management matters. For example residents should pay for maintenance fees on time to management to avoid delay on maintenance work done. Besides that, they should attend any mutual activities organized by the management or resident's organization. Then, residents should take care of their common property that belongs to their place such as swimming pool, playground, gymnasium, etc. Furthermore, residents should not place their unused things at the public area such as corridor, staircase, and public area that will make the maintenance works difficult to be done (Tawil, N.M., 2009; Fakhruddin, I.H., 2007; Kuo, Y., J. Chou, 2012; Yau, Y., 2011). Therefore, awareness amongst residents to take care of their property is important to achieve the maintenance management satisfaction at high-rise buildings.

### ***Conclusion:***

High-rise building is one type of residential buildings that need to be given more attention in building maintenance aspect. The facilities provided at high-rise building are the attraction to welcome people to live in this building. These facilities need to be maintained properly. Without proper maintenance management, the buildings were not able to carry out its function well. The trend of issues on building maintenance management at high rise residential building was increased year by year. Suitable approaches need to be found in order to resolve these issues effectively in the long term. Thus, this review paper addresses the parameters of building maintenance issues at high-rise residential buildings from year 2005 to 2013. Then, classified the issues into three main categories namely maintenance management fund, maintenance management efficiency and maintenance management satisfaction. These categories will be able to identify the problems faced by the residents at high-rise building clearly. Therefore, good maintenance management is important to help people live at high-rise buildings achieve sustainability.

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