

THE IMPORTANT OF FACILITY MANAGER IN CONSTRUCTION AT PRE-CONSTRUCTION STAGE

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ABSTRACT

This paper is literature paper where distinguishes the elements of facilities management in Malaysia based from the previous papers. Most past research around there has talked about the history, advancement, information, difficulties, and commitments of facilities management in both the private and the public divisions, yet it is likewise fundamental to investigate the advantages of facilities management association during the pre-construction in Malaysia. This paper gives an outline the facilities management manager role dependent on a literature collected and compiled from various publications. The study adds to current information by tending to the five elements of facilities management functions and their effects on building performance. The findings will illustrate the importance of facilities management functions.

Keywords : *Facilities management; Pre-construction; Facility Manager*

KEPENTINGAN PENGURUS FASILITI DALAM PEMBINAAN DI PERINGKAT PRA-PEMBINAAN

ABSTRAK

Kertas kajian ini adalah kajian literatur di mana menerangkan unsur-unsur pengurusan fasilliti di Malaysia berdasarkan kajian kajian terdahulu. Kebanyakan diambil dari kajian-kajian terdahulu yang telah membincangkan tentang sejarah, kemajuan, maklumat, kesulitan, dan komitmen pengurusan fasiliti di kedua-dua pihak swasta dan pihak awam, akan tetapi juga penting untuk menyiasat kelebihan pengurusan fasiliti semasa pra-pembinaan di Malaysia. Makalah ini memberikan garis panduan tentang fungsi pengurus fasiliti dikumpulkan dari pelbagai penerbitan. Kajian ini menambah maklumat terkini dengan cenderung kepada lima elemen fungsi pengurusan fasiliti dan kesannya terhadap prestasi bangunan. Penemuan ini akan menggambarkan pentingnya fungsi pengurus fasiliti di peringkat pra-pembinaan.

Kata kunci : Pengurusan Fasiliti, Pra-pembinaan, Pengurus Fasiliti

INTRODUCTION

Facilities management is associated considering the way that building is used every day, and the country can't stand to pass by and large quality. Architects, engineers, designers, and occupants expect noteworthy occupations in choosing the estimation of a building, just as any possibility to spare time, cash, or exertion. As demonstrated by Kamaruzzaman et. Al (2010), the term facilities management covers a wide scope of services, including land the executives, contract the executives, change the executives, human asset the executives, budgetary organization, and wellbeing and security the board. The term furthermore covers utility supplies, building support, and local services (for instance cleaning and security).

Tladi (2012) Remarkd that "building would l be able to prop up a very protracted timespan and it is more brilliant to get ready for profitability and practical tasks and maintenance from the pre-construction stage". More likely than not, the elements of facilities management offer certain points of interest. Thusly, when a facility utilizes facilities management works that relate with building execution, the general estimation of the facility will rot proportionately to the expense of building maintenance. Additionally, Xianhai (2013) communicated that an absence of early facilities management duty during the pre-construction stage may cause issues relating to the improper use of building materials and equipment.

In addition, such an oversight may realize each piece of the building being logically complex and exorbitant to fix when the building is done. Without early facilities management contribution, there can be no contribution on proposed building components. In this way, issues may be less characterized and, in this way, thusly, increasingly disinclined to be clarified during the beginning periods.

Issues can make facilities irksome and costly to control and keep up. In any case, instead of doing an investigation recognize setup abandons, organizations frequently accuse the facilities management group. Likewise, as of late, there has been a growing measure of writing on the significance of facilities management contribution during the pre-construction stage (Tladi, 2012)(Jawdeh, 2013)(Wang et. al, 2013). This writing has perceived the significant job of facilities management during the pre-construction stage, which incorporates the going with points of view: (I) customer fulfillment; (ii) energy efficiency; (iii) operation and maintenance; (iv) space management; and (v) sustainability.

Facilities management ought to be applied during the pre-construction stage and all through the whole life cycle of a building (Jensen, 2012). Thusly, the present paper intends to plans to overview the data holes concerning the significance of facilities management for design review. Facilities management association in configuration surveys is significant in light of the fact that support costs increment similar to the inappropriate practicality of maintenance equipment. The literature review shows that facilities management should be consolidated to enable architect to think

about the different parts of facilities management in their designs, as well as to enhance design support functions. Subsequently, this paper looks to identify the importance of facilities manager in Malaysia at pre-construction.

AIMS

The aim of this study is to give important information suitable to the elements of facilities management on the pre-construction in Malaysia. The research looks to build up a more profound comprehension of facilities management functions identifying with customer fulfillment, energy efficiency, operation and maintenance, space management, and sustainability in Malaysia. The paper discoveries of a literature search as they identify with the competency of facility manager in Malaysia at pre-constructions.

LITERATURE REVIEW

A literature search was coordinated to perceive concentrates related to competency of facility manager. The survey system included searching for distributed investigations from the past looks into databases using the keywords facilities management, facility manager, and pre-construction. Related propositions, conference procedures, and survey articles were likewise looked into. The investigation concentrated on contemplates on competency of facility manager distributed somewhere in the range of 2010 and 2019. The pursuit distinguished five develops with 40 things significant for recognizing the elements of facilities management. It is related to competency of facility manager are acquainted in the accompanying subchapter with indicated the associations between these constructions and the contribution the competency of facility manager during the pre-development construction, as delineated in the literature.

Client fulfillment

As indicated by Jawdeh (2013), facility manager must encourage with customers to perceive the prerequisites of clients and proprietor associations. The relationship among facilities management and society can affect the sharing of skill relevant to the various pieces of facilities management with both client and architects. (Jawdeh, 2013) Likewise kept up that the cooperation of facilities manager is significant, particularly concerning reacting to responding to questions presented by architects. Past contemplates have in a general sense removed the possibility of critical architect enthusiasm for building performance at operation stage (Jawdeh, 2013).

Facility manager can in like manner use POEs to redesign building execution (Tladi, 2012). As demonstrated by Yasin (2013), buyer needs are ceaselessly displayed through help level understanding (SLAs). An in-house facilities management arrangement rules facilities management basic leadership, which incorporates the advancement of facilities management, utilizations, and human resources (Yasin, 2013). Meanwhile, a redistributed facilities management is restricted to customer SLAs. There is a difference between the "weightages" of the facilities execution assessments upheld by re-appropriated and in-house facilities management arrangements. Henceforth, it is imperative to recognize administration contributions to the SLA at the most punctual building organize (Koleoso et. al, 2013)(Yasin, 2013)(Ikediashi, 2014)

In another study, Talib (2013) found that facility manager aid the arrangement of project details. Information removed from before undertakings and buildings ought to be evaluated to create plan contemplations for new facilities. To relate Post-Occupancy Evaluations (POEs) to workplace building, That POEs fill in similarly as with facility plan, which envelops: (I) the magnificent effect of work space plan on an affiliation's optimal outcomes; (ii) the dedication of workplace to cutting non-applicable costs and expanding salaries; and (iii) the impacts of workplace plans on improving human asset improvement.

Energy Efficiency

The world is available standing up to a disintegrating of typical assets, growing utility expenses, and an unnatural weather change. Subsequently, partners in the built environment are answerable for centering to manageability endeavors by creating facilities that require negligible assets to assemble, work, and look after (Tladi, 2012). By raising worries at the pre-construction stage, facility manager can add to facility efficiency, or cost-viability. Thusly, they can ably accomplish their targets and execute savvy plan arrangements that advantage as long as buildings can remember cycles (Enoma, 2005). In this way, there is a necessity for facility manager to check the respectability of utility administrations during the pre-construction stage.

Tladi (2012) showed that facility managers must give critical commitments to maintainability techniques that require not many assets. They can accomplish this by aiding the plan of financially savvy facility. Tladi (2012) have made a couple of tries to show that water services must be viably open for normal assistance purposes and to maintain a strategic distance from capricious episodes and furthermore recommended that the building of any water system ought to focusing on effortlessness and expenses of activity and steady maintenance. For instance, to preserve water, a facility managers may prescribe evolving high-compel flush toilets to low-pressure flush toilets.

Hartungi & Jiang (2012) talk about lighting effectiveness, which can be considered to direct essentialness and lessening costs. Facility manager ought to likewise consider the vitality productivity of warm factors. As indicated by Wan Hamdan et. al (2011), a large portion of affiliations wish to give open to workplaces to improve the profitability of representatives and the board, and warm effectiveness is one of the parts of productiveness influenced by natural factors. At long last, McAuley et. al (2015) made an a customer's short that advances better warm productivity, upgraded fake lighting, improved acoustics, and the expansion of a shop unit.

Operations and Maintenance

Facility managers likewise assume a significant job in bringing down maintenance costs (Enoma, 2005)(Che'Mat et. al, 2006). Their research on the advantages of facilities management, particularly in hospital, recommends that an enormous extent of some random building underpins facilities and the management of center exercises. Essentially, Mustapa (2013) perceived that facility managers' position identifies with reasonable building. Mustapa (2013) perceived the three particular degrees of facilities management: (i) strategic facilities management, which is worried about the heading of the facilities management work and consolidates setting goals in light of the motivation behind the facilities management work, completing long haul arranging, and thinking about outside prerequisites; (ii) strategic facilities management, which is worried about making a facilities management association work all in all; and (iii) operational facilities management, which is worried about everyday choices in operating facilities.

A building's present conditions and direct section both sway its support costs. For instance, a building that is ineffectively maintained and offers poor access for maintenance and cleaning purposes will have higher maintenance and cleaning costs. Additionally, buildings that are hard to access may require extraordinary hardware to clean or keep up. Conversely, a well-organized activity and maintenance plan may draw in progressively occupants and assurance the viable intrigue and accomplishment of plans. Numerous analysts have contended that facility manager neglect to use protection gadgets that abatement the utilization of concoction cleaning items, in this manner eliminating maintenance costs (Tladi, 2012). Therefore, the job of the facility manager ought to incorporate essential parts of building the board, for example, checking for simplicity of cleaning and maintenance of building environment.

Tladi (2012) recommended that facility managers should gauge the consequences for the cost of facilities management during the pre-construction stage. Since the conveyance of a facility e at any rate possible cost is never again principal in the construction industry, it is imperative to know about and to consider a facility's entire life cycle cost. Besides, so as to review for all time fixed components, facility managers must focus on zones requiring consistent support. The project team ought to create goals to address business issues all through the lifetime of an facility and diagram prerequisites for future facility maintenance. During the pre-construction, facility managers ought to propose a powerful, yet cost-proficient facility and accomplish regular undertakings concerning other specially appointed jobs inside the facility.

Space Management

Wan Hamdan et. al (2011) characterized the job of facility managers as guaranteeing a high pace of use during the pre-construction stage. Accordingly, the job of the facility manager is to mull over the powerful movement of development. For example, the facility manager ought to educate architect with respect to any data in regards to space, remembering information for room use, useful classifications, shared use, room points of confinement, and room measurements. They explain that the facility manager must ensure a high pace of usage during the pre-construction stage.

Moreover, Wan Hamdan et. al (2011) recommends that information on space ought to be given during the pre-construction stage procedure to trigger a constructive outcome on facilities management and guarantee pride in the facility with regards to advanced education foundations. The facilities management procedure clings to the National Higher Education Strategic Plan (NHESP), which requires examination and early supervision in the advancement of foundation and assets to accomplish ideal usage. Propose that information of proficiency limits wastage as far as building space, space limit, undertakings, activities, and inhabitation. Space arranging the board can likewise bolster concurrent requests on a workspace to extend business activities and accessibility with respect to timing.

Sustainability

Facility managers should give contribution on manageable improvement issues. Regardless, concentrating too vigorously on feasible advancement may dominate issues at the large scale level during the operational stage, since any configuration must be able to confine support costs and guarantee security. Remembering facility managers for the full extent of the plan procedure may limit costs in acquirement accounts and decrease work adjustments and superfluous modifications (Nawawi et al., 2015).

Nawawi et al. (2015) point by point that the dynamic backing of facility managers during pre-construction stages could ensure that feasible techniques are not affected after the conveyance of an facility and that plans and strategies for facility are stayed up with the latest. The facility manager's job in tending to maintainability incorporates checking for the appropriateness of various supportability building angles and offering input concerning waste transfer frameworks. Those respondents for the most part accept that maintainability issues are significant and ought to be given consideration.

The use of new materials and technological advancements could help control energy wastage with regards to increasing the value of existing buildings (Chan, 2014). New things can be required to discharge low or no flighty natural mixes and formaldehydes, the two of which can have negative environmental impacts and negative outcomes on building inhabitants. Poly Vinyl Chloride (PVC) utilization should be restricted through upgrades because of its negative effects similar with its future.

Advantages of FM Involvement in pre-construction

Utilizing facilities management as exhaustive procedure for securing perfect characteristics has a couple of favorable circumstances, including expanded openness to different equipment for maintenance and replacements (Jawdeh, 2013), a superior determination of equipment and materials (Jawdeh, 2013), a strategy for tending to advancement and diminishing multifaceted nature in current buildings (Enoma, 2005)(Tladi, 2012), and improved plan yield and expanded plan proficiency (Enoma, 2005)(Tladi, 2012), Tladi (2012) accepted that architects or civil engineers are liable for settling on materials and equipment dependent on accessibility. The materials chose must fit in with explicit criteria (for example non-dangerous, reasonable, and non-costly), and these criteria ought to be institutionalized over the entire (Jawdeh, 2013). Such measures may help support the adequacy of facilities management. In addition, Jawdeh (2013) and Enoma (2005) found that facilities management cooperation in the plan stage may empower facility manager to accomplish cost investment funds all through a facility's life cycle. To keep away from expensive maintenance, administration charges, and cleaning charges later on, facility manager must participate in pre-construction stage. At the end of the day, facilities management cooperation at a pre-construction stage could limit the dangers relating to outstanding task at hand and use (Jawdeh, 2013).

CONCLUSION

In Malaysia, facilities management has been advanced inside a few associations for quite a long time. Therefore, it is conceivable to comprehend the acts of facilities management works in Malaysia. To guarantee better arrangements and yields and maintain a strategic distance from future issues, facilities management ought to be applied all through a building's entire life cycle, beginning with the pre-construction stages. The present study has attempted to improve our comprehension of the importance of competency facilities manager. The authors trust that the facilities management will be useful in expanding buildings' value and saving time, effort, and money.

More information and data on competency facilities manager would assist us with setting up a more noteworthy level of exactness concerning our discoveries. . On the off chance that the discussion is to push ahead, better understandings of customer fulfillment, energy efficiency, operation and maintenance, space management, and sustainability must be created. These research gaps require further investigation on the benefits of facilities management involvement.

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