

6 MAIN BUILDING MAINTENANCE CHALLENGES AND SOLUTIONS

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INTRODUCTION

After a building has been constructed, it is vital to have proper management to maintain the building. This is to improve the appearance of the building and ensure the health and safety of the users ^[1]. Not only that, regular maintenance is much more cost effective than fixing a problem after it has already failed ^[1]. Having said that, the maintenance of a building can be complicated, managers will face many maintenance challenges throughout the process. The management team must be able to identify these challenges and determine the most effective and efficient solutions to overcome them. Therefore, in this article, 6 major building maintenance challenges will be discussed along with their respective solutions.

1. COST CONTROL

Building maintenance is heavily related to budget constraints. It is especially a challenge for those buildings with many irresponsible users or residents who refuse to pay for the maintenance fee and sinking funds. Therefore, the building manager must carefully plan and allocate the available resources. Cost controlling can be carried out in several ways. One of the ways to help to control the maintenance cost is to obtain few quotations with detailed specifications of a product or service for comparison. The management could have a clearer view on the pricing and their respective proposed specifications based on the comparison. Interview could be also conducted to understand whether the proposal complied with management requirements. With that, the management could ensure the budget spent is justified and no extra cost would be spent for rectifying the wrong purchase decision.

Other than that, the cost of electricity can be further decreased by integrating more environmentally friendly energy like the energy generated by solar panels ^[3]. Even though there is an initial cost for the panels, but the cost saved will eventually exceed the initial cost for the installation of the panels after some time. Other solutions can be allowing more natural lights into the working space to avoid using unnecessary electrical lighting during the day. Replacing light bulbs in the common area with LED light would significantly reduce electrical consumption as well.

2. ACCURATE DATA RECORDING AND ANALYSIS

Data recording is an important aspect that needs to be taken care of by the building managers. The record-keeping helps to keep track of all maintenance activities with respective details for future data analysis, i.e. frequency of maintenance, maintenance expense for each activity, service providers, warranty period, etc. The building manager must setup the system to record all the activities, especially for large building consisting of a lot of different systems. These records included all building as-built drawings, all system as-built drawings, meeting minutes, maintenance logs, service providers details, stock, asset inventory, etc ^[3].

Based on all the maintenance activities records and data, the building manager shall be able to perform proper planning for maintenance and services activities in advance to avoid high maintenance costs due to urgency. Ad-hoc maintenance works could be also reduced if the regular maintenance activities are planned well to prevent the sudden breakdown of the systems.

In some large site, where the amount of data is extremely huge, the building manager could consider leveraging the Internet of Things (IoT) to capture and analyse the data available while utilize the Computer Maintenance Management Software (CMMS) to pick up and report the data back to the user, making the process of work communication much easier and efficient, therefore saving in labour and materials ^[4].

3. EMERGENCY RESPONSE

In an event of an emergency, the management team has the challenge of evacuating everyone safely. Typical emergency activity in Malaysia can be fire incidents, while other emergencies include natural disasters, security breaches, terrorist attacks, etc. To solve this problem, the management team must come in prepared with the list of critical system that must remain running, list of regular occupants, and emergency response procedures [3].

Furthermore, safety (fire) drills are suggested to be done routinely so that residents or occupancies are familiar with the evacuation procedures. In addition, having an automated failure report will keep the maintenance team ahead of potential dangers. Last but not least, the equipment relevant to emergency response such as fire protection systems, walkie talkies should be checked routinely to ensure they can function well in an actual evacuation scenario.

4. SYSTEM MAINTAINANCE

Equipment and facilities will age as time pass by, it is inevitable that those equipment and facilities need to be replaced at some point in the future. However, it should be noted that good maintenance could slow down the process of aging, which in the long run, it is more cost effective. Large systems in buildings such as the Air-Conditioning and Mechanical Ventilation (ACMV), electrical, water, and fire protection system could have detrimental effect if it is not well-maintained, and it will be very costly if it were to be fixed after malfunctioning. Therefore, it is better to maintain these systems regularly with lesser cost to prevent system replacement which would cost a “bomb” to the management. Professional maintenance technicians and competent specialists should be appointed to maintain and keep those systems functioning.

5. COORDINATING TEAMS

Communication is the key to ensure all the maintenance team members are doing their own jobs and scopes accordingly. Proper scheduling and timetable shall be prepared by the management to arrange the works for each of the maintenance team. Regular communication and coordination shall also be done with appointed contractors or specialists for the scheduled maintenance that involved external parties. Regular review on the performance either for internal team or external parties shall be conducted so that the miscommunication between the teams and the management could be minimised. Subsequently, the maintenance works could be performed smoothly and more efficiently.

6. PHYSICAL INTRUSION

Even if there is a security guardhouse in place, physical intrusion is still possible. The intrusion can cause threats such as theft, acts of violence, etc. The potential loss for the building users is not only in terms of physical properties, like jewelry, or expensive devices, etc, but might be also in the form of important or confidential data. The loss of data could cause major damage such as damaging the company’s reputation and leaving the company to legal action [5].

To prevail over physical intrusion, security guards must be well trained and be strict at all times. The security guards should only allow the entry of visitors with approval from the owner, and the credentials from the visitors should be asked at all times as well. CCTV should be installed to monitor any suspicious activities 24 hours a day. Security guards should be arranged to patrol around the building every hour and stationed at the entrance and the exit to prevent any forced intrusion.

CONCLUSION

No matter what type of building it is, the management of the building is important to prolong the lifespan of the building, as well as maintaining the safety and well-being of the people within the building. By considering these few challenges and respective solutions, the management team shall be able to enhance their operation and provide a better experience to the users in the building.

References:

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