

# Case Study on Building Services and Facility Management in Highrise Residential Buildings and DEWAT System Study

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**Abstract**— India will rank as the country with largest urban population in the world, by 2021. Therefore the shortage of land is felt, mainly in urban areas. And the attention to the basic concept of land value as derived from service to people has shifted to the concept of land as a speculative commodity. Generally, 35-40% of construction cost goes to the building services. So it is very needy to study the building services are to be provided to achieve quality standards of the service.[3] The scope is to study various facilities and services which are required to be provided in the high rise residential building. This subject holds very high importance in the field of construction and in good functioning of building and maintenance of the building. This study is done to achieve Indian standards with low cost.[5] Now a days clean water is essential factor of human life and living standard. Thus, DEWAT is the effective system of purification of water to use in residential and domestic purposes. So, it is necessary to provide DEWAT system facility in high rise residential buildings.

**Keywords:** DEWAT System, Highrise Residential Buildings

## I. INTRODUCTION

This paper discusses the objective which has been set for the thesis and the need of the study, emphasizing on the importance of the subject in the field of construction. The later part of the chapter provides with the methodology which has been followed in the thesis and the chapterization scheme. Living in high rise building is becoming a new trade in India, especially among the Major cities like Mumbai, Delhi, Pune etc. One of the reasons many prefer to live in the residential High rise building is the facilities provided in the housing areas the resident pay the money for the facility provided to them. Management corporation is responsible to provide the facilities to them.[3]

A high-rise building is defined as a building 35 meters or greater in height, which is divided at regular intervals into acceptable levels. To be considered a high-rise building an edifice must be based on solid ground, and fabricated along its full height through deliberate processes (as opposed to naturally-occurring formations) High-rise residential buildings play an important role in expanding a country's housing choices. While the benefits of these housing choices are generally considerable - proximity to services, public transportation, efficient use of land and infrastructure - the quality of the housing units must be reflected in recent technological advances. [4]

DEWAT system is one of the best facility now a days which is used is high rise residential buildings to improve the quality of waste water. Decentralized waste water treatment is useful in high rise residential buildings to minimize the wastage of water and also useful to reuse it.

Management Corporations work on the three Levels i.e. Strategic, Tactical & Operation Planning. the scope Management extends from the strategic to tactical planning and the facility management covers from tactical to operational planning thus the facility management concept is applicable as much as building exists.

The management process at the strategic level will require high-level planning starting with the interpretation of residence requirement. Strategic plan normally has a long-term span (10-20years) for estimation of the building represents the overall long-term strategy and translating the residence requirements & expectations into the service and facilities outcomes.[7]

Thus it is essentially BS&FM is at a great strategic level that can have a great impact to be involved with forwarding planning decisions.[6]

## II. STATEMENT OF PROBLEM

As facility effectiveness, cleanliness slandered, indoor air quality, energy efficiency, lighting standards, thermal comfort, safety, and information technology are several factors related to the building policy. Managing and maintaining local residential housing scheme to provide comfort for residents of local Housing and Encouraging a harmony, healthy, co-operative and responsible community.

High rise residential buildings are different and unique properties from landed properties such as bungalows or terrace houses. There are most of the housing schemes were not effectively managed residents complaints about improper facility management such as misuse of sinking fund dispute among the residents, rubbish not collected according to schedule and dysfunctional lift and quality of water.

There may observed that high wastage of water in high rise residential buildings so, it is necessary to reuse the waste water by treating it. In short, the issue raised by residents were centered in three aspects i.e. Finance, maintenance and people (residents) these are the aspects or indicator in determining the performance of the residential high rise building.[1]

## III. OBJECTIVES

Aim of the research is to improve the value of buildings depends on the quality, safety, and service of maintenance practice in high rise residential building. Based on a concept of building policy standards this paper serves as a general idea of current studies, it indicates to establish the rationalization for further research towards the development of a building service and facility management policy standard in India.[3]

The objectives of the research:-

- 1) To analyze the relationship between building maintenance policy and operations and maintenance activity.
- 2) To identify the main problems of sustainable service and facility management in high rise residential buildings.
- 3) To concluded the signing of the building maintenance policy.
- 4) DEWATS make use of the natural biological- and physical-treatment processes discussed above to reduce and remove pollutants from wastewater.

#### IV. RESEARCH FRAMEWORK

The research Framework is categorized in the three areas of quality, safety, and service of the building maintenance policy in order to provide economy and sustain their values. The first criterion is looked at the quality aspect. In providing the effective FM all the parties have to respond according to management. The participation of in-house experts and outsourced experts were crucial since all the FM activities were designed to the building for and dedicated to them.[3]

The second criterion is based on the safety aspect in FM which is day by day activity, the FM needed resources, and otherwise, there is little can be done. For the safety and health, it was also the under the building management reflection to safeguard the users' health interest [4].

The last criterion is focused on the service aspect. The unprofessional building management aspect of the building was one of the fundamental tasks in FM. In high rise building the problem of monthly collection of was not threatening since the collection of the maintenance charges was just fair enough to run the activities at the top of this building maintenance policies are to be implemented via standardization and monitoring its scope of its scope in operation and maintenance activities in order to avoid any inadequate FM.[6]

#### V. DEWAT SYSTEM

“Decentralised Wastewater Treatment Systems” (DEWATS) were developed by an international network of organizations and experts. In this handbook, the term DEWATS may be applied in singular or plural form, referring to a single specific system, to the modular systems approach or the whole range of systems, as the case may be. The approach incorporates lessons learned from the limitations of conventional centralized and decentralized wastewater-treatment systems, thereby assisting to meet the rapidly growing demand for on-site-wastewater solutions.

Nowadays public authorities are challenged to provide sanitation and wastewater treatment services on a large scale. Mainstreaming decentralized waste water treatment solutions is one of the key elements for sustainable infrastructure development.

Typical DEWATS combine the following technical treatment steps in a modular manner:

- primary treatment – in sedimentation ponds, settlers, septic tanks or biodigester
- secondary treatment – in anaerobic baffled reactors, anaerobic filters or anaerobic and facultative pond systems

- secondary aerobic/facultative treatment – in horizontal gravel filters
- post-treatment – in aerobic polishing ponds

#### VI. HOW WE DECIDE THE QUALITY OF SERVICES.

- 1) By taking feedback from people living in high rise residential building.
- 2) Decide the quality by taking complaints from people living in high rise residential building.
- 3) If there is less maintenance of particular services then we definitely say that we have good quality of services.

#### VII. COMPARISON OF SERVICES IN OLD TECHNIQUE AND LATEST TECHNIQUE

Sr.No.	Old Techniques	Latest Techniques
1.	In an old techniques lift and elevators are operated mechanically.	In a new technologies lift and elevators operated on software basis.
2.	In this technology air conditioner liberates maximum amount of carbon monoxide which is harmful for the nature and health.	In this technology air conditioner liberates minimum carbon monoxide as compare to the old techniques.
3.	In a past we were unable to treat the water or reuse the water.	In a new technique we have DEWAT system so, we can treat the water or reuse the water.
4.	In past electricity supply are dangerous in residential building because we don't have fire resisting wires.	Now a days we have fire resisting wires and new technology on installation of electricity.
5.	In past days we don't have fire sensors so we have to call fire fighters it takes more time for extinguishing the fire.	Now days we have fire sensors and also sprinklers are provided in high rise building. Its makes easier to extinguishing the fire.

#### VIII. CONCLUSION

As a conclusion, a clear building maintenance policy does not exist yet in the building management of high rise residential building which can be a tool in order to measure and value the quality, safety, and service of building operations improvements through strategic management, performance management, and facility management. It has more expectations from the building owners, talents and maintenance exports in terms of the physical environmental considerations and the maintenance & requirement in the residential building.

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