

The Underlying Factors of having Computerized Management System in Residential Property Management

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Abstract— Residential property management is a leading job which is evolving rapidly but it is being weighed down by massive administrative tasks still handled manually. Hence there is a need to develop a computer-based management system that can eliminate the challenges faced in this sector and guarantee that work performed will be efficient and effective. The aim of this study is to propose a computer-based management system in residential property management where it can overcome the determined challenges.

Keywords— residential property, management;

I. INTRODUCTION

According to Dobrain (2011), Residential property management is a leading job which is evolving into more strategic market position with the advances in information and communications technology [1] it is becoming a comprehensively weighted administrative tasks, which involves a ton of paperwork and tedious task of following up on, properties with prospective tenants. This industry's management system is now facing heavy computerization to ease the users of the system and those involved in the residential property management. This is due to the phenomenon of a high level of urbanization around the globe. The urge for having an appropriate management system is in high demand and this demand will only continue to increase. The residential property management sector still faces the challenges in applying a new strategy that facilitates easy management. Hence there is a need to develop a computer-based management system that can eliminate the challenges faced in this sector and guarantee that work performed will be efficient and effective. we have structured this paper to deliver a brief understanding of the factors behind having computerized management system in residential property management. Gathering more information and getting a deeper understanding of how residential properties are being managed is crucial to understand it well. Multiple case studies have been carried out, with different methods to gather this information above. The result shows that all works are being carried out manually with a lot of paperwork involved [3, 4, 5]. On the other hand, Carla Carey (2018) has conducted a survey of 100 property management professionals to discover the biggest challenges they face is, Hiring and Maintaining Quality Staff, Growing Revenue, Mitigating Damage, Unexpected Maintenance, Time Management, and Lowering Operating Costs are the top five identified challenges according to the survey [6]. The case study also finds that paper can be easily

damaged or be misplaced, leading to loss of data. It is also expensive to keep on buying files to store your records. A lot of files make a place look untidy and also consume a lot of space, becoming a potential fire hazard as well. Getting a certain file to check data from many files becomes a difficult task [3]. It proves that over the years property managers are experiencing difficulty in maintaining and managing their property and records with existing system. The universal declaration of human rights declares that you have a right to a decent standard of living, central to which is the access to adequate housing [14]). In a more developed nation, residences are expecting a better quality of living with better facility management services from property managers, however if it is mismanaged, it may cause several technical hitches when managers failed to do so, causing many issue to arise. Facility management is another important factor in residential property management. Facility Management is an enabler of sustainable enterprise performance through the whole life management of productive workplaces and effective business support services. This facility management also causes several issues like assigning people to conduct maintenance, keep track on completed and remaining works, and manage the complaints about failure in services and so on. These existing factors are only leads to one conclusion where computerized management systems in residential property management will be the modus operandi. Residential property management system is a computer-based system which is used to observe and manage several activities of residencies. This concept has arisen from several studies based on the challenges of conducting administrative tasks due to paperwork, and human error. In a normal residential society, the everyday jobs include maintenance, plumbing, parking, waste management, security facilities; stalking dues etc. these activities individually are very tedious and long processes [2]. These processes require proper leadership, and an experienced management skill to coordinate between the residential management and service providers. The objective is to provide convenient services to the residence. This system will handle the residential list where they ae also given access, so they can login and use the system according to their hierarchy. All the residences will have their unique profile which allows them to raise complaints, and track its individual status. Apart from the residences benefits, this system will allow the management to maintain the payment and collection history, and assigned complaints made to the right department. As a legal standpoint of view, the system will also allow and incorporate legal advisers to be a part of system and allow them to access and provide legal advice on tenant and owners issue.

PROBLEM, PURPOSE & AIMS

In comprehensive, the challenges of residential property management agreed and executed in society concerns the organizational response to the needs of computerized management system in residential property management in the property industry. It should be noted that the beneficiaries of any management activity provided require direct response and participation in the dedicated management. There are multiple studies conducted on computerized management system in residential property management and list out the major problem. Carla Carey (2018) identified major challenges in property management during his survey. However, all these studies are standing with lack of solutions for all these challenges. There is a tremendous need for coordinated and accessible computer-based residential property management system in the industry. According to Carla Carey (2018) survey, only thirteen percentages (13%) of property managers are adapted to the computer-based management system and the rest still slack under paperwork. Therefore, this paper addresses the major challenges being faced.

'Instant' Communication Expectations of Owners and Tenants - When a property manager gets an email, then a phone call, and then a mobile phone call all from the same person all in the space of 15 minutes about an enquiry, it's a real challenge for the managers. The key here is the management of expectations around the accessibility of the Property Manager at the start of your owner or tenant relationship.

Deficiency in data storage and unable to keep track - One of the major attributes of data is growing rapidly. So, Storing and maintaining all data manually is very difficult and managers are unable to track whole past and future activities.

Data security is not guaranteed - Without a proper system, the conventional method is to keep their expenses recorded daily in a book or in a set of papers which may easily get damaged or lost. It may cause

a severe loss if the data which was lost is highly important. Furthermore, by sharing these data through social media, it eliminates the data integrity.

PURPOSE AND AIM

Paperwork management system in residential property management is lack of access to and non-effective use of information and communication technology (ICT). It represents the difference between property managers with access to ICT and who use it effectively and those who do not. The aim of this study is to propose a computer-based management system in residential property management where it can overcome the determined challenges.

RESEARCH PLAN.

There are three property management companies has been chosen to participate in this survey. This survey mainly focused on the challenges handled by the staffs in property management, barriers in carrying out the day-to-day tasks, and limitation of existing system. Moreover, this survey pays a working day observation for each company to collect data on how residents are being treated by property management companies and list down the types of frequent complaints.

My research plan aims to use a technique and procedure supported by conducting a detailed research and study. My plan outlines how data will be collected and the tools will be used to collect the data. The aim of the research plan is to give overview of why we are doing the study and how we are going to conduct the study. Since, this proposal based on the software engineering, we have conducted qualitative research to collect the secondary data from existing books, internet, journals and magazines that was collected by other researchers and analysis was done. These all can be concluded under case study. Moreover, collecting primary data will play a major role in order to support the research. It will bring the concrete answer to list out the factors behind having a computerized management system in residential property management. So author has decided to collect data through interview and observation.

There are numerous different definitions and types of case studies. Since there are several uses and descriptions about the case study, it could be addressed by either single or multiple. Since, there are various studies existing in body of the knowledge and researches addressed the challenges in residential property management, multiple cases study is the appropriate research plan for this research proposal. Despite the on-going discussion about case studies limitations in association with other methods and its credibility, the case study method is progressively popular among researchers [15]. Interview and observation in research are few appropriate and convenient way of collecting data in corporate companies. Since the audience is having lack of time during their work hours they may not spend time on reading and answering the questionnaires. Lack of conscientious responses, understanding and interpretation in various way, respondents may have a hidden agenda are few cons in questioners. Having open ended interview questionnaires may explore the respondents though and provide solid answer to the questioners.

Title	Week 02	Week 04	Week 06	Week 08	Week 10	Week 12
Select research title						
Collect related work						
Study all related work						
Draft introduction						
Problem, Purpose and Aims						
Research plan						
Related work						
Expected Results or Contribution						
Conclusion						
Submission						

RELATED WORK.

This chapter addresses, we have found literature discussion which stands for the need of computerized management system in residential property management. Conflicts, disputes, disagreements,

misunderstandings and miscommunication between house owners and property management are the crucial factors that create the need for a computerized management system which is fully implemented with the comfort of technology.

Residential property management companies are rapidly adopting computer-based management system to facilitate their daily life management tasks in terms of providing quality and precise services to their clients. A case study about computers in property management companies says that Property management systems facilitate the wide range of everyday jobs that a property manager performs on a regular basis. These include payment management, accounting, preparing reports, web based online platforms and centralized databases, and maintenance activities. Computerized property management systems have freed up much of property managers' time and thus they are able to spend more time on 'hands-on' management rather than paperwork and administration [8]. The most remarkable advantage of property management system is that it is able to integrate and automate virtually all the previously manually performed tasks associated with property management [9]. Greater efficiency in computerized property management systems leads to "cost savings through less repetitive work, improved cash flow, regular and accurate fee information, and better client response with improved service" [8].

The idea that property management needs to embrace computer and apply information technology in the management of property is a matter which has attracted a considerable amount of attention in property research [7]. Computerized management systems have created an enormous revolutionary lifestyle change where it penetrated every corner of employees. Property management job has not so been as easy as now. The overall important factor behind this revolution is information technology. It has improved the working standards and people's approach to challenges in day to day life. Information technology has seen a huge growth and it has become an important communication medium that provides great functionalities and usage to people. Since the computerized management system was made widely available in information technology, it became a major area for advancement for property management professionals to computerize property management tasks.

There was a survey conducted on rental house management system by the authors to collect more information on how rental houses are currently being managed, they prepared questionnaires and submitted to a number of rental house managers. The authors determined that all work was done manually with a lot of paperwork involved. The authors were listed the factors behind having computerized management system that papers can easily get damaged or get lost leading to loss of data. It is also expensive to keep on buying files to store your records. A lot of files make a place look untidy and also consume a lot of space. Getting a certain file to check data from many files becomes a difficult task [3]. This survey shows that the paperwork fell-down under numerous defects and it should be overcome with smart way. Existing systems has various defects like recording information is completely manual and required lots of paperwork. Each property has a file that contains the property number, size, payment, occupant and status. This workflow only provides text base which is not user-friendly and very slow in terms of response [3].

There was another survey conducted on the use of property management software. The study engaged a survey of 30 residential property management companies. These all property management companies located in New Zealand. All property management companies participated in the survey used residential property management software in their company. The questionnaire survey was divided into four major parts. The first part of the survey addressed background information on the property management company and property management software used. The second part of the questionnaire examined the key selection criteria used by property management companies when selecting their property management software. The third section examined property managers' perceptions and satisfaction with their current software. The last section of the survey aimed to examine weaknesses or problems associated with their current software.

Despite their size and the number of properties managed, all property management companies surveyed were using property management software to facilitate property management tasks. They were well-equipped both in computer hardware and software and invested substantially in information technology for further upgrading of software and hardware. Greater efficiency of the company leading to cost savings through improved and faster service was indicated as the main reason for using computerized property management systems by these companies. All property management companies participated in this research

used pre-written software applications programs. These programs did not offer users the ability to tailor the program to their exact needs. Interestingly, 28 out of 30 property management companies participated in the survey used property management software applications developed in Australia while only two companies used a property management software system developed in New Zealand. When asked why their organizations selected property management software developed overseas rather than local software focusing on localized needs and procedures, interviewees indicated that Australian property management software products were more comprehensive, integrated, reliable and easy to use. It was also suggested that those software applications were better suited for the management of a large number of properties.

The existing works are clearly explaining the factors and importance of having computerized management in residential property management. Moreover, literature studies highlights that having a computerized management system not only eliminates the challenges in property management but also it assists the employees to polish their work and improve their quality in terms of management. Moreover, property management companies in developing countries are aware of having computerized management system and property managers are being assisted in terms of their day to day tasks. Survey conducted on the use of property management software addressed that companies are participated in their survey, well equipped with computerized management software packages where each package provides slightly different property management functions. Among various property management tasks, a number of tasks are highly computer automated. These include rental payment management, lease management, vacancy management, preparation of notices and circulars, and preparation of invoices [10].

Case study on system architecture and interface for an apartment management illustrates that the internal architecture of computerized management system. "Apartment blocks have a variety of uses such as dormitories, old people's homes and holiday apartments. These apartments require Facility Management Systems with functions according to the apartment's use" [2]. Facility management is another important factor and challenge in residential property management. Facility management can be part of residential property management. Since, all the residences are targeting management to fix any unexpected failures and be responsible for maintenance, the property management always faces challenges in assigning vendors to overcome the failures and keep track on a particular failure. Assuming greater significance and as more personalities and administrations become involved, its attendant definitions and descriptions continue to increase. International Facility Management Association attempt to define facility management as "the practice of coordinating the people and the work of an organization into the physical workplace." So, this definition state that facility management should be covered in residential property management.

Computerized management system can be implemented in Desktop or Web platforms. These platforms can be customized according to user convenient. Desktop application is a computer program that locally run on a computer device like laptop or personal computer where web application runs on a browser using a webserver and delivered to a local device over the Internet from a remote server. Accessible anywhere, easily customizable, improved interoperability, and increased security are most highlighted benefits of web application over desktop application. Studies on Cloud Based Apartment Management System shows that web application is the most appropriate platform for future application because of it convenience.

The literature review of this paper intent to highlights that the majority of existing works relating to residential property management are strongly recommend a computerized management system. There are various reasons to support this argument. Defects in existing system like paperwork are the key points behind having a computerized management system. Moreover, computerized management system facilitates the manager's daily tasks and improves their work quality. So benefits of computerized management systems are created to support the existing key arguments.

EXPECTED RESULT OR CONTRIBUTION.

The result of the interview and observation shows that two residential property management companies are still using traditional paperwork flow and only few tasks are computerized. These two companies have more than five employees where they all facing challenges in managing their daily tasks. Deficiencies in data storage, unable to keep track the data, and running without a proper communication medium are highlighted challenges. The observation shows that employees in residential property management companies usually

get frustrated by the residents' complaint due to lack of facility management. Moreover, the management company highlighted that they yearly allocate a huge amount of budget to serve their employees even better. However, it usually overdue due to unexpected expenses likes medical, or accident. On the other hand, one residential property management company uses customized compute-based management software. This software facilitates all staffs to polish their day-to-day tasks. Moreover, it eliminates the challenges in data storage and provides functionalities to track the data. Number of staffs were reduced due to this software could be highlighted at this time. However, this company also faces few challenges due to deficiency in functionalities.

The anticipated results of this proposal include benchmark for where this specific computerized management system in residential property management has high demand among property industries. Since, existing studies highlighted that all property managers and employees are having challenges in-order to manage residential property and residents' in-terms of providing services and carrying facility management, this proposal strongly recommend a computerized management system

This result will be used to create the awareness on computer based system where it can neutralize the challenges in property management. There are three residential property management companies participated in the survey. Two out of three companies had been started before five years and they have staffs between five to ten (5 - 10). The other one out of three companies engaged from 2016 with less than five staffs. These all companies are managing residential properties which approximately consist of equal residents.

There few common challenges can be highlighted for all companies participated in the survey. During the interview session, all their staffs touch down that "residents expect them to finish the maintenance or repair in common area on the day report had been made. Moreover, they keep on receiving complaints regarding a same issue several times with the demand on explanation about failure from the residence". This problematic situation occurs every time due to lack of communication medium between residence and management. Furthermore, property management companies face unwanted issues like tenant and owner legal issues and private are maintenance.

This result identify that a proper computerized management system will eliminate the challenges listed by the property management companies.

CONCLUSIONS.

To ensure the coordination and smoothness between residential property management works, a computerized management system that systematically and efficiently required. All data and information must be recorded to carry out maintenance work should be coordinated in a system that is efficient and accessible. The ability of computers to solve various issues and make decisions, no longer is doubted

With the increase of residential properties like apartments, the management and maintenance work also simultaneously increased. The more management work increases, the more data and information needs to be recorded. Most companies are now working to create a generation of information communication technology began creating a computerized system in residential property management as a first step to achieve that goal.

In conclusion, the computerized management system becomes very popular among residential property management companies' daily activities. This management system will completely eliminate the challenges in residential property management and provide new working experience for the employees.

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