

## A STUDY OF CMMS FAILURE

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### ABSTRACT

*Maintenance work has become more important to the organization nowadays. This study is a comprehensive review of the reliability of implementation Computerise Maintenance Management System (CMMS) in construction industry. The focus of the discussion is more related to the cause of failure of CMMS. It based on the disclosed some cases for further understand that particularly about the problem which is including the cause and solution for the future improvement of the problem. In the end of this study, some recommendations have been provided to prevent the failure.*

#### Keywords:

*Maintenance Management, cause of failure, CMMS*

### 1.0 INTRODUCTION

Maintenance work has become more important to the organization nowadays. To ensure the performance of the maintenance work, many methods have been studied and selected. For this paper, we discussed the software used in the maintenance management, which is the computerized maintenance management system (CMMS).

The CMMS is software that maintains a computer database for an organization's maintenance operations and human resources functions. CMMS can be used to gathering, sorting, analyzing and manage the information of the facilities and equipment of the company.

Before this, the organizations were managing their maintenance work manually. This method may cause many problems such as human error and data loss. First, we listed out some benefits of CMMS:

- Reduce risk of data loss
- Increase productivity
- Reduce cost
- Generate high quality report

After the CMMS emerged, the organization reported that their maintenance work can be managed by CMMS easily and the CMMS have overcome some problems that occur. The functions

and features of CMMS designed for helping maintenance department to lighten the maintenance work. In fact, the CMMS can create a balance in preventive maintenance and corrective maintenance, and all the management works are in computerized.

However, many case reported that many organization have failed in implement CMMS or CMMS didn't function as they are expected. Therefore, a research has been conducted to identify the causes; the solutions and recommendations to fully understand what is happen when using the CMMS.

### 2.0 LITERATURE REVIEW

In this research, many articles have been found out to doing the research, which the articles are related to the CMMS or not. These articles can be in many categories to compare the result from different articles to find the problems.

First, the benefits of CMMS are many, but in short, the CMMS provides the ability to obtain information and make good decisions about the assets of an organization. In this case, the CMMS increased efficiency and decreased waste of maintenance management, which usually take major operational budgets.

The benefits of CMMS can be divided into two categories, which are business benefits and operational benefits. The business benefits described the advantage to the business bring by the CMMS software. The operational benefits are related to the maintenance operation of the department. In fact, these benefits can help an organization operate more efficiently.

However, some organizations reported that they are facing trouble when implement CMMS or using CMMS. Some organizations complained that the CMMS is not as good as expected. From the articles, we know that the failure of CMMS can be mainly impute to lack preparation of organization.

The lacking of preparation of organization can lead to incapable to perform CMMS well. In fact, the organization didn't emerge an investigation before the implementation. Some organizations are not treating the implementation of CMMS seriously, they just implement it without emerge the evaluation. The evaluation is to identity which package of CMMS is suitable for their own company. If not,

this will lead to a mismatch in term of job; which means the CMMS package selected is not suitable for the organization.

To implement CMMS, some preparation work should be done by the organization. If not, it will lead to loss in organization and increased the workload of organization also.

### **3.0 RESEARCH METHODOLOGY**

To complete this paper, there are many information has been found out. Before searching the information, some topic has been set to aid the searching process, for example, why the organization is failing to implement or using CMMS. In result, the reasons of organization fail to implement or using CMMS is based on the different situation faced by the organization itself. However, most common factors have been chosen from the articles to do this paper; it will show the most problems facing by organizations.

### **4.0 DATA ANALYSIS**

From the articles, we know that most of the causes of CMMS failure are come from inside of the organization, which mean it is the organization problems when implement or using the CMMS. Actually when to implement or using the CMMS, the organization will take responsible to managing it. The organization should take the case seriously and be prepared before implement the CMMS. Then the organization should prepare a strategic plan to implement CMMS and able to facing any uncertainties.

The following are the factors that cause the CMMS failure:

#### **4.1. Lack of training**

When the organization implemented CMMS, it is possible that their staff didn't know how to operate it, and this always occurs in many organizations. The organization will send their staff to training. However, some CMMS software packages are require a high technique to operate it.

Some CMMS software packages such as "MicroMain Maintenance" are designed to be ease of use. However, it requires adequate training to fully operate it. Some organizations are feeling confident that they are fully prepared with the four hours of online training. But it is not going to work with certain CMMS package.

What happen is, their staff will operate the CMMS in their own way, and this will lead to confusion of database. After all, this will make the workload of maintenance become more and more.

#### **4.2. Lack of Clearly Defined Objective**

Sometimes the organizations implement the CMMS without any problem, but when to start using it, they discover that CMMS is not going to solve their problems. This is because the organization didn't set an objective for the CMMS. An objective is very important to every project or plan in the organization, the objective is like a guide to lead the organization to perform certain job. The objective is simple, to reduce paperwork, reduce time, increase accuracy. These are example of objectives that will lead the organization used the CMMS efficiently.

#### **4.3. Lack of Vendor support**

Sometimes, the failure of CMMS is not cause by the maintenance staff but the upper management. The upper management is deciding which CMMS package is going to purchase. In fact, the CMMS packages are different by the features and functions, and the cost is different also. This will affect the low budget organization to choose the lower cost. Sometimes, the low price of CMMS consist a higher risk, and the critical features of CMMS are usually costly.

The CMMS companies are willing to selling the software, but they don't have the resources to support the customers post-implementation.

#### **4.4. Using CMMS to solve the wrong problem**

Sometimes the organizations choose to implement CMMS to solve the problem that is not related to system at all. They may insist to maintenance practices that are no appropriate or useless. Besides that, the organizational structure maybe wrong for doing business in nowadays environment. In addition, the organization maybe ignored training before it.

#### **4.5. Selecting the wrong software package for the job**

There is a case that the CMMS packages selected are inappropriate for solution that is needed by the organization. This is because the features and functions of one of the software package maybe appropriate for maintaining the rolling stock but inappropriate for maintaining a large amount of fixed equipment.

### **5.0 DISCUSSIONS**

Based on analysis done by journals, books, magazines, and resources from the internet, our discussion had come out a result of method to overcome the question of failure CMMS occurred in

maintenance industry. So we had proposed a few of solutions to get over it and shown as below.

### **5.1. Provided training section**

The organization can find a CMMS vendor with extensive training opportunities that will provide the organization a professional training about the CMMS. Fundamentally, plan company budget accordingly and properly before started any training section. By way of adequate training in order to make sure staff was take full advantage of it and good training also will pay great dividends in future.

### **5.2. Clearly identified objectives**

Organizations exist to achieve certain goals, objectives are important to make these goals effective and efficient. In case, objectives have the following importance likes show direction of company, form standard and they also act as a motivator. Therefore, a clearly identified objective must be set before implement the CMMS. The more complete roadmap had done, the more likely be organization to follow it. This will prevent confusion happen when using the CMMS. Goals can only be achieve if they're properly laid-out and understood.

### **5.3. Looking for appropriate vendors**

Looking a good vendor is an important case also in case the vendors can provide post services after selling the CMMS to organization. The vendor should be knowledgeable, experienced and financially strong. Since a CMMS project can be an investment in time, resources and money, the vendor should be well-established.

When the time of making a CMMS purchasing decision, search for vendors with an established history of providing excellent service and support to their customers. Ordinary, be wary of vendors who've been around for less than five years. The wealth and health of the vendors was directly affected the purchasing decision of the organization as well.

### **5.4. Using CMMS correctly**

A simple way to overcome this problem is before embarking on any CMMS project, make sure the problem has been defined correctly. It is because when selection process CMMS correctly and properly can help managers specify a CMMS that will operate efficiently for years to come. In additional, organization also should be aware of any CMMS limitations before making a selection.

### **5.5. Ensure software packages evaluated objectively and consistently**

A mismatch between system capabilities and solution requirements normally happens because a tight process for evaluating and selecting a package to meet the manner requirements was not followed.

The evaluation process must start with a good definition of requirements: business functions and capabilities that must be supported, technical considerations (computer platform, network, Internet enabled, etc.), integration with other system and financial health of the software vendor. The process must insure that the software packages can be evaluated objectively and consistently.

## **6.0 CONCLUSION**

Computerized maintenance management software or CMMS is easily the most important key to success for a maintenance systems manager. Once implemented, CMMS systems are quite useful to a vast spectrum of industries. It is not at all true that they are only effective when utilized in a factory setting. Churches, medical centers, financial institution, government agencies, and airports are just a few of the establishments that can benefit from implementing asset contract management system, which are designed to aid in total facility administration.

As the conclusion of this paper, we result that the software used in the maintenance management and though CMMS systems provide hundreds of enhancements to the facilities that use them, this paper details failure, manner to overcome and advantages of the software.

Lack of training, lack of clearly defined objective, lack of vendor support, using CMMS to solve the wrong problem and selecting the wrong software package for the job are major issues that point up why implementation CMMS system fail in certain company. Other than that, through our discussion we had result some manners to overcome those issues which is provided training section for staff, clearly identified objectives, looking for capable vendors, using CMMS correctly and ensure software packages evaluated objectively and consistently as well.

Through our researches from many resources we have summarized below advantages that using a fully featured Computerized Maintenance Management System (CMMS) will bring to organization which is reduce risk of data loss, increase productivity, reduce cost and generate high quality reports.

After the CMMS emerged, the maintenance work can be manage by CMMS easily and the CMMS have overcome the problem of manage manually. The functions and features of CMMS can help maintenance department to lighten their work.

In fact, the CMMS can create a balance in preventive maintenance and corrective maintenance, and all the management works are in computerized.

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