

CENTRE OF STUDIES FOR BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA

IMPLEMENTATION OF COMPUTERIZED MAINTENANCE
MANAGEMENT SYSTEMS (CMMS) IN THE GOVERNMENT BUILDING
AT PUTRAJAYA

SITI RUQAIYAH BINTI SHARIFF

Academic Project submitted in partial fulfillment of the requirements for the
degree of

Bachelor of Building Surveying (Hons)
Centre of Studies for Building Surveying
Faculty of Architecture, Planning and Surveying

June 2014

ABSTRACT

In the government buildings at Putrajaya, the maintenance management is emphasizing the use of Computerized Maintenance Management Systems (CMMS) for conducting the maintenance activities. Putrajaya Public Works Department is in charged and responsible for the maintenance contractor to implement the use of CMMS in the government building. For that matter, this research has discussed on the implementation of CMMS in the government building at Putrajaya.

The aim of the research is to improving the implementation of Computerized Maintenance Management Systems (CMMS) in the government building. In order to achieve the research's aim, a few objectives have been identified which are to identify the importance of implementing the CMMS, to identify the level of maintenance achievement through Planned Preventive Maintenance (PPM) by using CMMS, to study the delay caused by the use of the CMMS with the comparison to manual systems and to prepare recommendation for the improvement on the implementation of CMMS in the government building at Putrajaya.

In conclusion, the implementation of CMMS in the government building is successfully implemented as all the respondents were agreed that CMMS has given lots of benefit and it is very important to be implemented for managing the maintenance activities.

ACKNOWLEDGEMENT

I would also like to express my gratitude to my supervisor, Encik Mahayudin bin Mahmood for his encouragement and invaluable guidance in supervising me. Without his continued support and interest, it possible for me to complete the dissertation successfully.

I also wish to express my sincere appreciate to my beloved parents for giving an advice and supportive for me to put more effort in this dissertation. Without prayer and blessing from them, I will not able to do this dissertation properly.

A bunch of thank to all the organizations and individuals who are involved directly or indirectly for their cooperation and assistance for supplying a relevant information that is compulsory for my research. Special thanks to my colleagues for providing me an idea and supportive support.

TABLE OF CONTENTS

AUTHOR DECLARATION.....	ii
ABSTRACT.....	iii
ACKNOWLEDGEMENT.....	iv
TABLE OF CONTENTS.....	v
LIST OF TABLES.....	ix
LIST OF FIGURES.....	xi
CHAPTER 1: INTRODUCTION.....	1
1.1 Background.....	1
1.2 Problems Statement.....	2
1.3 Aim and Objectives.....	3
1.4 Research Questions.....	3
1.5 Scope of Research.....	4
1.6 Methodology.....	4
1.7 Research Outline.....	6
1.8 Summary.....	7
CHAPTER 2: LITERATURE REVIEW.....	8
2.1 Introduction.....	8
2.2 Concepts of Maintenance Management.....	8
2.2.1 Maintenance Policy.....	10
2.2.2 Maintenance Philosophy.....	10
2.2.3 Maintenance Management.....	10
2.2.4 Maintenance Purpose and Goals.....	10
2.2.5 Maintenance Strategy.....	10
2.3 Classification of Maintenance Work.....	11
2.3.1 Planned Maintenance.....	15
2.3.2 Unplanned Maintenance.....	16
2.3.3 Planned Preventive Maintenance.....	16

2.3.4	Corrective Maintenance	17
2.4	Maintenance Management Information Technology Needs.....	18
2.5	Computerized Maintenance Management Systems (CMMS).....	19
2.5.1	CMMS Modules.....	21
2.5.2	Features of CMMS Modules.....:	32
2.5.3	Process for Implementing CMMS.....	36
2.5.4	Critical Factor Using CMMS.....	38
2.5.5	Causes of Delayed by the Use of the CMMS.....	40
2.6	Advantage sand disadvantages of using CMMS.....	41
2.6.1	Advantages of CMMS.....	41
2.6.2	Disadvantages of CMMS.....	42
2.7	Manual Systems.....	42
2.7.1	Computerization of Manual Systems.....	43
2.8	Computerized Maintenance Management Systems VS Manual Systems.....	44
2.9	Summary.....	45

CHAPTER 3: RESEARCH METHODOLOGY.....46

3.1	Introduction.....	46
3.2	Fundamental of Research Methodology.....	47
3.3	Method Preparation of Data Collection.....	48
3.3.1	Identification of Problem Statement, Aim, Objective and Scope of Research.....	48
3.3.2	Literature Review.....	50
3.3.3	Collecting Data.....	50
3.3.3.1	Qualitative Data.....	51
3.3.3.2	Quantitative Data.....	52
3.4	Analysis and Comparative Data.....	61
3.5	Findings and Recommendation.....	62
3.6	Summary.....	62

CHAPTER4: CASE STUDY.....63

4.1	Introduction.....	63
-----	-------------------	----