

**KNOWLEDGE MANAGEMENT CHALLENGES IN
TELECOM IT PROJECTS IMPLEMENTATION**

Don Ravindra Naleen Jayasuriya

(138409E)

Degree of Master of Science

Department of Building Economics

University of Moratuwa

Sri Lanka

April 2017

KNOWLEDGE MANAGEMENT CHALLENGES IN TELECOM IT PROJECTS IMPLEMENTATION

Don Ravindra Naleen Jayasuriya

(138409E)

Thesis/ Dissertation submitted in partial fulfillment of the requirements for the
degree of Master of Science in Project Management

Department of Building Economics

University of Moratuwa

Sri Lanka

April 2017

DECLARATION

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

Also, I hereby grant to University of Moratuwa the non-exclusive right to reproduced and distribute my thesis, in whole or in part in print, electronic or other medium. I retain the right to use this content in whole or part in future works (such as article or books).

Signature:.....

Date:.....

The above candidate has carried out research for the Masters thesis under my supervision.

Signature of the supervisor:.....

Date:.....

ABSTRACT

There are many Information Technology related projects currently being implemented in telecommunication industry. This research work will benefit for all IT project managers in telecom industry in Sri Lanka and System Implementers of such projects. This research project identified the importance of knowledge management in IT project implementation in telecom sector which enable the project managers to think about the project knowledge management in the project organization.

The knowledge management techniques vary with one IT project to another IT project. This research work is to study the effectiveness of knowledge management (KM) techniques used in IT projects implementation at SLT. It also to rank the successful KM methodology and identify the challengers in KM in IT project implementation. Based on the outcome of this research, IT project managers can identify the most effective knowledge management technique to be used in his project. It is also identify the challenge that has to be faced when implementing the project knowledge management techniques.

It was found that brain storming is the best knowledge management methodology used in planning stage and “learning & Idea capturing” is the best knowledge management methodology used in designed stage. In the testing stage “After action review” is the best method to be used. Therefore different knowledge management methodology can be recommended for stage.

Keywords: *IT – Information Technology, KM – Knowledge Management*

ACKNOWLEDGEMENT

In the preparation and finish this research report, I acknowledge the encouragement and assistance given by number of people and companies.

I would like to express my deepest gratitude to my supervisor and the Course Coordinator of the MSc (PM) program Ch.QS. Indunil Seneviratne, former Head of the Department of Building Economics, University of Moratuwa for the valuable guidance given to make this research success.

I must thank to Dr. (Mrs.) Yasangika Sandanayake, Head of the Department of Building Economics for their guidance and advices.

Further, I want to render special thanks for Mrs. Praneetha Ramachandran Deputy General Manager, Sri Lanka Telecom (PLC) & Mr. S. Sakisan, Engineer, Sri Lanka Telecom (PLC) for all the support given for making this research work success.

I would also like to thank all the project managers of IT projects and System Integrators of those projects who participated to complete the questionnaire and support the research study.

I like to express my gratitude to staff of the Department of Building Economics, University of Moratuwa for the support given to me to complete this research work.

TABLE OF CONTENTS

	Page
DECLARATION	i
ABSTRACT	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS	iv
LIST OF FIGURES	vi
LIST OF TABLES	vii
LIST OF ABBREVIATIONS	viii
CHAPTER 1 – INTRODUCTION	01
1.0 Introduction	01
1.1 Background of the study	01
1.1.1 Introduction to research	01
1.1.2 Importance of the study	03
1.2 Identification of Research problem	04
1.3 Research Objectives	04
1.4 Scope of the study	05
CHAPTER 2 – LITERATURE STUDY	06
2.0 Introduction	06
2.1 Literature on Knowledge Management	06
2.2 Literature on Project Management	07
2.3 Literature on Project Knowledge Management	08
2.4 Literature on IT Project Knowledge Management	12
2.5 Literature on Knowledge Management techniques	14
CHAPTER 3 – RESEARCH METHODOLOGY	15
3.0 Introduction	15
3.1 Literature Survey	16
3.2 Questionnaire Survey	16

3.3 Data collection	17
3.4 Data Analysis methods used in the study	18
CHAPTER 4 – DATA ANALYSIS	19
4.0 Introduction	19
4.1 Data Sample	19
4.2 Data Analysis	21
4.2.1 Knowledge Management methodologies use for the projects at “Planning” stage	22
4.2.2 Knowledge Management methodologies use for the projects at “Design” stage	23
4.2.3 Knowledge Management methodologies use for the projects at “Build” stage	25
4.2.4 Knowledge Management methodologies use for the projects at “Testing” stage	27
4.2.5 Knowledge Management methodologies use for the projects at “Launch” stage	29
4.2.6 Challenges in implementing knowledge Management	32
4.2.7 Areas need to improve the KM practice in IT project management	34
CHAPTER 5 – RECCOMANDATIONs & CONCLUSION	36
5.1 Introduction	36
5.2 Findings from the research	36
5.3 Recommendations from findings	37
5.4 Future Research	38
LIST OF REFERENCE	39
APPENDIX A:	44

LIST OF FIGURES

	Page
Figure 3.1 Research Methodology	15
Figure 4.1 Percentage of number of respondents from different projects	19
Figure 4.2 Status of the project	20
Figure 4.3 “Knowledge Manager” Role Identified in respective projects	21
Figure 4.4 Knowledge Management Methods used in “Planning” phase	23
Figure 4.5 Knowledge Management methods used in project “Designing” phase	24
Figure 4.6 Knowledge Management methods used in project “Implementation” Phase	26
Figure 4.7 Knowledge Management methods used in project “Testing” phase ...	28
Figure 4.8 Knowledge Management methods used in project “Completed” phase	30
Figure 4.9 Average Rank of challengers in implementing the Knowledge Management	33

LIST OF TABLES

	Page
Table 4.1 Summary of project status	20
Table 4.2 Role of the person in respective projects	20
Table 4.3 Summary of Knowledge Manger’s role identified in respective projects	21
Table 4.4 Knowledge management methodology use at “planning” phase of the projects	22
Table 4.5 Knowledge Management methods used at “Designing” phase of the Projects	23
Table 4.6 Effectiveness of knowledge management method used at “Designing” Phase	25
Table 4.7 Knowledge Management methods used at “Implementation” phase of the projects	25
Table 4.8 Effectiveness of knowledge management method used at “Implementation” phase	27
Table 4.9 Knowledge Management methods used at “Testing” phase of the projects	27
Table 4.10 Effectiveness of knowledge management method used at “Testing” Phase	29
Table 4.11 Knowledge Management methods used at “Completed” phase of the projects	29
Table 4.12 Effectiveness of knowledge management method used at “Completed” phase	31
Table 4.13 Effectiveness of the knowledge management methods in different life cycle phases of the project	32
Table 4.14 Summary of Challengers in Implementing Knowledge Management	33

LIST OF ABBREVIATIONS

Abbreviation	Description
IT	Information Technology
KM	Knowledge Management
SLT	Sri Lanka Telecom
CRM	Customer Relationship Management
ERP	Enterprise Resource Planning
OSS	Operation Support System
BSS	Billing Support System
PKM	Project Knowledge Management
SI	System Integrator
RII	Relative Importance Index
AAR	After Action Review