# INCENTIVISING KNOWLEDGE SHARING BEHAVIOR AMONG JKR PROFESIONAL

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A capstone project report submitted in partial fulfilment of the requirements for the award of the degree of

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#### **ABSTRACT**

Informative employees are the main part for the effective performance of overall business and need to communicate proper information and knowledge from management as well as between employees to perform better task and to maintain a level of satisfaction and it is possibly through effective knowledge sharing system. Likewise JKR had developed two KM tools IT based initiatives to encourage JKR staff involved in Knowledge sharing. This paper presents a comprehensive study between incentivizing and knowledge sharing behaviors among JKR professionals. Hence, the aim of the study is to proposed incentive scheme in order to promote knowledge sharing behavior among JKR professional and to achieve the following objectives thorough statistical analysis: (1) To identify the level of knowledge sharing behaviors in JKR KM system (JPedia & JCoP) (2) To examine the factors that promotes sharing behaviors (3) To recommend suitable incentives to reinforced desired knowledge sharing behavior among JKR professional. A structured questionnaire will be distributed to various respondents within the JKR headquarters which focus among professional staff. Finally, these finding will highlight the type of incentives can be execute to produce better policy of knowledge sharing in JKR organisation.

#### **ABSTRAK**

Pekerja yang berpengetahuan adalah aset utama dalam pelaksanaan yang berkesan kepada organisasi secara keseluruhanya. Sistem penyampaian maklumat yang betul dan info pengetahuan daripada pihak pengurusan dan di antara pekerja dalam melaksanakan tugas dengan lebih baik dan mengekalkan tahap kepuasan dan ia adalah berasaskan kepada sistem perkongsian pengetahuan yang berkesan. Begitu juga JKR yang telah membangunkan dua inisiatif Penguruan Pengetahuan berasaskan IT untuk menggalakkan kakitangan JKR terlibat dalam akitivit perkongsian ilmu. Kertas kerja ini membentangkan kajian yang komprehensif antara pemberian insentif dan tingkah laku di kalangan profesional JKR dalam sesi perkongsian ilmu. Oleh itu , tujuan kajian ini adalah mencadangkan skim insentif bagi menggalakkan perkongsian ilmu di kalangan JKR professional dan untuk mencapai beberapa objektif menggunapakai kaedah analisis statistic. Objektif berikut ;( 1 ) Untuk mengenal pasti tahap tingkah laku perkongsian ilmu dalam sistem JKR KM ( JPedia & JCoP ) ( 2 ) untuk mengkaji faktor-faktor yang menggalakkan perkongsian ilmu (3) untuk mencadangkan insentif yang sesuai untuk mengukuhkan pengetahuan diingini tingkah laku perkongsian antara JKR profesional. Soal selidik yang berstruktur akan diagihkan kepada responden dalam ibu pejabat JKR dan tumpuan utama adaladh dari kalangan kakitangan profesional . Akhir sekali , hasil kajian ini akan memberikan panduan jenis insentif boleh laksana dan menambahbaik dasar insentif sedia seterusnya menggalakkan aktiviti perkongsian ilmu di dalam JKR.

# **TABLE OF CONTENTS**

CHAPTER	TITLE		PAGE	
	DEC	ii		
	DED	ICATION	iii	
	ACK	iv		
	ABS	ГКАСТ	V	
	ABS	vi		
	TABLE OF CONTENTS LIST OF TABLES LIST OF FIGURES		vii	
			xi	
			xii	
	LIST	LIST OF ABBREVIATIONS		
	LIST	OF APPENDICES	xiv	
1	INTE	RODUCTION	1	
	1.1	Preface	1	
	1.2	Background of the Study	2	
	1.3	Problem Statement	2	
	1.4	Aim of The Study	4	
	1.5	Objectives of the Study	4	
	1.6	Significance of the Study	4	
	1.7	Scope and Limitation of The Study	5	

		٠
V1	1	1

			viii
2	LITE	ERATURE REVIEW	6
	2.1	Introduction	6
	2.2	Knowledge Sharing	6
	2.3	Explicit Knowledge	8
	2.4	Tacit Knowledge	8
	2.5	Knowledge Sharing Behavior	10
		2.5.1 Organisation Context Factor	10
		2.5.2 Team Context Factor	10
		2.5.3 Individual Context Factor	11
	2.6	Information Sharing as Collaboration	11
		Mechanism	
	2.7	Incentives	12
	2.8	Monetary Incentives	13
	2.9	Non-Monetary Incentives	13
	2.10	The Important of Incentives in Knowledge	14
		Sharing	
3	MET	THODOLOGY	15
	3.1	Introduction	15
	3.2	Research Methodology	16
	3.3	Research Design	18
	3.4	Population and Sample	18
	3.5	Data Collection	18
		3.5.1 Primary Data Collection	19
		3.5.2 Secondary Data Collection	19
	3.6	Research Instrument & Measurement	19
		3.6.1 Research Instrument	19
		3.6.1.1 Expert Interview	20
		3.6.1.2 Questionnaire Survey	21
	3.7	Measurement	22
	3.8	Data Analysis	23
	3.9	Constant Comparative Analysis	23

4	RES	ULT AN	ND ANALYSIS	25
	4.1	Introd	uction	25
	4.2	Interv	iew Data	25
		4.2.1	Expert Profile	26
		4.2.2	Expert Interview Related Finding	26
		4.2.3	Expert Interview Analysis	27
	4.3	Quest	ionnaires Survey	31
		4.3.1	Demographic Profile	31
			4.3.1.1 Gender Profile	32
			4.3.1.2 Age Profile	32
			4.3.1.3 Field Background Profile	34
			4.3.1.4 Current Position In JKR	35
			4.3.1.5 Experience Profile	36
		4.3.2	Questionnaire Survey Analysis	37
			4.3.2.1 Use of KM system	38
			4.3.2.2 The Factors sharing	39
			Behaviour in JKR	
			4.3.2.3 Types of Incentives	41
5	DISC	CUSSIO	N AND RECOMMENDATION	43
	5.1	Introd	uction	43
	5.2	Discu	ssion	43
		5.2.1	Objective 1 : To Identify the level of	44
			knowledge sharing behavior in JKR	
			KM system (JPedia & JCoP)	
		5.2.2	Objective 2 : To examine the factors	45
			that promotes sharing behavior	
			5.2.2.1 Organisation Context Factor	46
			5.2.2.2 Team Context Factor	47

3.10 Descriptive Analysis

23

			5.2.2.3 Interpesonal & Individual	48
			Context Factor	
			5.2.2.4 Cultural Context Factor	49
		5.2.3	Objective 3: To recommend suitable	49
			incentives to reinforced desired	
			knowledge sharing behaviour among	
			JKR professional	
	5.3	Recor	nmendation to JKR	53
		5.3.1	Using IS-IS NOT MATRIX	53
			Analysis	
		5.3.2	Root Cause Analysis	53
		5.3.3	Blue Ocean Strategies	54
		5.3.4	Improve Knowledge Policy	57
		5.3.5	Provide Relevant Course	58
		5.3.6	Enhance Knowledge Portal	58
		5.3.7	In House Knowledge Sharing	59
			Session Inter Department	
6	CONCLUSION			61
	6.1	Introd	uction	61
	6.2	Concl	usion	61
	6.3	Recor	nmendation For Future Study	62
REFERENCES				63
APPENDICES				
Appendices A-F				

# LIST OF TABLES

TABLE NO.	TITLE	PAGE
3.1	Interview Question	20
3.2	A Typical five-level Likert Scale	22
4.1	Data Expert Profile	26
4.2	Answer Of Question 1	27
4.3	Answer Of Question 2	27
4.4	Answer Of Question 3	28
4.5	Answer Of Question 4	28
4.6	Answer Of Question 5	29
4.7	Answer Of Question 6	29
4.8	Answer Of Question 7	30
4.9	Answer Of Question 8	30
4.10	Reliability Test Result	37
4.11	JKR Knowledge Sharing capabilities and behaviour	37
	Mean Score Result	
4.12	Use of KM System Mean Result	38
4.13	The Factors of Sharing behaviour in JKR Mean	40
	Score Result	
4.14	Types of Incentives Mean Score Result	41
5.1	Is- Is Not Matrix Question	51
5.2	Output of The Question	53
5.3	Cause and the Action Item	54

# LIST OF FIGURES

FIGURES NO.	TITLE	PAGE
2.1	The Type of Tacit and Explicit Knowledge	9
3.1	Scematic of Research Methodology	17
4.1	Pie Chart of Respondent's Gender Profile	32
4.2	Pie Chart of Respondent's Age Profile	33
4.3	Bar Chart of Respondents's Age Profile	33
4.4	Pie Chart of Respondent's Field Background	34
	Profile	
4.5	Pie Chart of Respondent's Current Position in	35
	JKR	
4.6	Pie Chart of Respondent's Experience Profile	36
5.1	Use of KM level Mean Score	45
5.2	Organisation Factor Mean Score	46
5.3	Team Context Factor Mean Score	47
5.4	Interpersonal & Individual Context Factor Mean	48
	Score	
5.5	Cultural Characteristic Mean Score	49
5.6	Non-Monetary Incentivizing Choices Of	50
	Preference Score	
5.7	Four Action Framework	56
5.8	The ERRC grid for cultivating knowledge sharing	56
	among JKR staff	

## LIST OF ABBREVIATIONS

CoPs Communities Of Practise

ECKM Enterprise Content Knowledge Management

eCOMs Electronic Content Management System

ICT Information and Communication Technology

IT Information Technology

JCoP JKR Communities of Practise

JKR Jabatan Kerja Raya

JPedia JKR Online Repository

JUSA Jawatan Utama Sektor Awam

KKR Kementerian Kerja Raya KM Knowledge Management

MOW Ministry Of Work

PROKOM Cawangan Pengurusan Projek Kompleks

PWD Public Work Department
SKALA Sistem Kawal dan Lapor
SKT Sasaran Kerja Tahunan
SME Subject Matter Expert

SPSS Statistic Package for Social Science

RCA Root Cause Analysis

# LIST OF APPENDICES

APPENDIX	TITLE
A	Sample of Questionnaire
В	Sample of Expert Finding Interview
C	JPEDIA Landing Page
D	JCOP Landing Page
E	RCCA Causal Map
F	SPSS Data Analysis

#### **CHAPTER 1**

#### INTRODUCTION

#### 1.1 Preface

Malaysia has embarked on the transformation from an input-driven growth strategy that had served her well in the past to one that is increasingly driven by knowledge in order to achieve sustainable high growth and development country. The Knowledge-based Economy Master Plan marks yet another key initiative of the Government to further accelerate the development of the nation into a knowledge-based economy as well as in achieving the objectives of Vision 2020. One of the strategic is to develop the knowledge based organization.

Public Works Department (PWD) or Jabatan Kerja Raya Malaysia (JKR) under Ministry of Works Malaysia (MOW) known as a technical body which is responsible for construction and maintenance of public infrastructure in Malaysia. The vision of JKR is to become a World Class Service Provider and Centre of Excellence in Asset Management, Project Management and Engineering Services for the Development of Nation's Infrastructure through creative and Innovative Human and State-of-the Art Technology.

JKR set up ECKM Unit (Enterprise Content Knowledge Management) under Cawangan Pengurusan Projek Kompleks (PROKOM) to looking at the implementation knowledge management in JKR.

### 1.2 Background Of The Study

This study is made to explore the objectives of knowledge sharing behavior among JKR staff. As stated in JKR Strategic Framework and JKR ICT Strategic Plan, one of ECKM initiatives is has to build capacity and competency of its staff. Since June 2008, JKR (Jabatan Kerja Raya) formally embarked on the several JKR ECKM initiatives to implement the practical aspects of knowledge management and continuously evaluate how various information technologies can be used to enable knowledge management processes. In JKR there are a a lot of IT system contains a specific information. Sistem Kawal dan Lapor (SKALA) functions as information center for monitoring project. The information in SKALA related to the percentage of work, percentage of payment, list of Variation order and it is used for specific officer. JKR also provided data container known as Electronic Container Management System (eCOMs). eCOMs contains the only data such as, drawing, standard, guidelines to help JKR staff for seek an information. For improvement in knowledge management, ECKM created IT Knowledge Management system. One of the initiatives is to encourage people in knowledge sharing.

#### 1.3 Problem Statement

All organizations have a desire to become more efficient, more productive, more innovative and more adaptable to change. Resistance to change can be endemic;

business processes remain locked and impervious to improvement. Therefore, JKR ECKM had developed two IT based initiatives to encourage JKR staff involved in Knowledge sharing. JPedia and JCoP are two initiative created by JKR to promote knowledge sharing behaviors among JKR staff.

The JPedia was created based on a wiki technology, using open source software, Mediawiki. It is an online encyclopedia and to be used as a first place to look for subject overviews. It is a collection of know-how, know-what and know-why, in other words, knowledge in context. In JPedia, staffs allow to post, edit and amend the information. It helps staff to update the old version of the article.

JKR has decided to embark on a solution that utilized the concept of cultivating Communities of Practice (CoPs) as a Knowledge Sharing tool to facilitate the creation of a knowledge enabling environment in organizations. JCoP was created to support the facility. The purpose of JCoP is to cultivate a 'guided' knowledge sharing environment in an organization. Based on the challenges faced by community, IN JCoP, staff a free to ask question, to give an opinion to the relevant topic. In addition, it helps the tacit knowledge in JKR staff can expressed become an explicit knowledge.

However, the numbers of staff involvement is minimal compared to total numbers of JKR staff. User statistic extract from JPedia and JCoP has shown only less 7% professional staff involved in both systems. There must factors that lead the problems. This study will identify the factor of knowledge sharing behavior among JKR professional. In other hand; It is incentives will motivate staff to share their knowledge? Might, given the right incentives, people and behaviors will change. Perhaps surprisingly these incentives do not have to be financial there are many others trigger that can deliver more effective knowledge sharing and encourage employee loyalty.

# 1.4 Aim of the Study

The aim of the study is to propose incentive scheme in order to promote knowledge sharing behavior among JKR professional.

## 1.5 Objectives of the Study

Followings are the objectives proposed for this study: -

- a) To identify the level of knowledge sharing behaviors in JKR KM system (JPedia & JCoP)
- b) To examine the factors that promotes sharing behaviors
- c) To recommend suitable incentives to reinforced desired knowledge sharing behavior among JKR professional

## 1.6 Significance of the Study

It is hoped that the study will produce an indication to JKR to implement incentive to people which contribute in knowledge sharing behavior.

# 1.7 Scope and Limitation of the Study

This study mainly focuses on the professional staff in JKR headquarters. Professional staff is chosen for this study because there is no research or study conducted previously. Besides that, the professional level also has the social responsibility toward the knowledge sharing behavior. Questionnaire survey will be designed based on the level knowledge sharing behavior, type of incentive that will encourage behavior change. The categories involve in the distribution of the questionnaire are the engineers, architects, quantity surveyors and administration from grade 41 till JUSA.

#### REFERENCES

- Andreea M. serban and Jing Luan Overview of Knowledge Management. *New Directions For Institution Research*. *No 113*, Spring 2002
- Andrew H.Gold, Arvind Malhorta and Albert H. Segars. Knowledge Management:

  AN Organisational Capabilities Perspective. *Journal Of Management Information System*; Summer 2001
- Bojan Obrenovic and Yuanjian Qin Understanding the concept of individual Level Knowledge Sharing: A Revies of Critical success Factors. *Journal of Information and Knowledge Management*. Vol.4 No4. 2014.
- Clark and Wilson (1961) Incentive System A Theory of *Organisations Administrative*Science Quarterly. Vol. 6. No. 2 September 1961
- Davenport, T., and Prusak, L. Working Knowledge: How Organizations Manage What They Know. Boston: Harvard Business School Press, 1998
- ECKM Framework [cited 8 July 2014. *Available from http://jpedia.jkr.gov.my/index.php/ECKM\_wiki*
- Ghada A/Deghedi (2014) Information Sharing as a Collaboration Mechanism In Supply Chains . *Journal of Information and Knowledge Management*. Vol.4 No4. 2014.
- M.H. Huysman, Dirk de Wit Knowledge Sharing in Practise Springer Science & Business Media. 2002
- Megan Lee Endres, Steven P. Endres, Sanjib K. Chowdhury and Intakhab Alam (2007) Tacit knowledge sharing, self-efficacy theory, and application to the Open Source community. *Journal of Knowledge Management*. Vol.11 No3. 2007, pp. 92-103
- Muhammad Zubair, Nawaz Ahmad and Rizwan Raheem Ahmed (2014) Key Factors to Promote Knowledge Sharing in Karachi Pharmaceutical Industry. *Journal*

- of Information and Knowledge Management. Vol.4 No4. 2014
- Oras O'Dell, Essaides, and Ostro *If Only We Knew What We Know: The Transfer of Internal Knowledge and Best Practice* New York Times: The Free Press 1998
- Pei-Lee The, Chen-Chen Yong, Chin-Wei Chong and Siew-Yong Yew (2011) Do the Big Five Personality Factors affect knowledge sharing behavior? A study of Malaysian universities. *Malaysian Journal of Library & Information Science*. Vol.16 No1. April 2011, 47-62.
- Roznita Othman (2014) Incentivizing Knowledge Sharing Behavior Among JKR Profesional. *Knowledge Café Report Melaka* 23 Mac 2014
- Rumesh (2014) Project Based Knowledge Management. *Manual Training For Project*Manager October 2014
- Sheng Wang, Raymond A. Noe Knowledge sharing: A review and directions for future research *Human Resource Management Review 20 (2010) 115–131*
- Sherry Scott (2013) Rewards And Incentives in The Workplace. Retrieved 9 October 2014 from http://smallbusiness.chron.com/rewards-incentives-workplace1123.htm
- Soortien Anaconda BAngkara and Jann Hidajat Tjakratmadja. Comparison Of Factor Contribute to Knowledge Share Between In National and Multinational Company in JAbabeka Area- Indonesia. *gebrc.nccu.edu*
- Tanu Ghosh (2004) Creating Incentives For Knowledge Sharing . *Journal of MIT Sloan School Management*. 3rd May 2004.
- Uma Sekaran (2003). Research method for business: A skill building approach, 4th edition, John Wiley & Sons.