FACTORS ASSOCIATED WITH COMMUNICATION PERFORMANCE IN JKR

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1.0 INTRODUCTION

- JKR is the largest technical department in Malaysia and the core business of JKR is implementation of goverment projects
- JKR emphasize on successful project implementation by incorporating PMBOK (nine knowledge areas) as guideline and best practice.

2.0 PROBLEM STATEMENT

- **Issues related to JKR's project:**
  - Delays in construction.
  - Poor quality of the completed infrastructure.
  - Additional cost occurring in the course of construction (cost overruns)
- **The reasons:**
  - Weakness in project communication between the various sectors in JKR.
  - Effective Project communication is not properly applied through out project life-cycle
  - Lack of knowledge/understanding on the importance of project communication management

3.0 OBJECTIVES

- To determine whether project communication management is being practised during the design stage in Specialist Sector.
- To identify the main factors that contribute to problems and weaknesses in project communication due to JKR current practiced during design phase in Specialist Sector
- To determine the quality level of project information data during the design phase in Specialist Sector

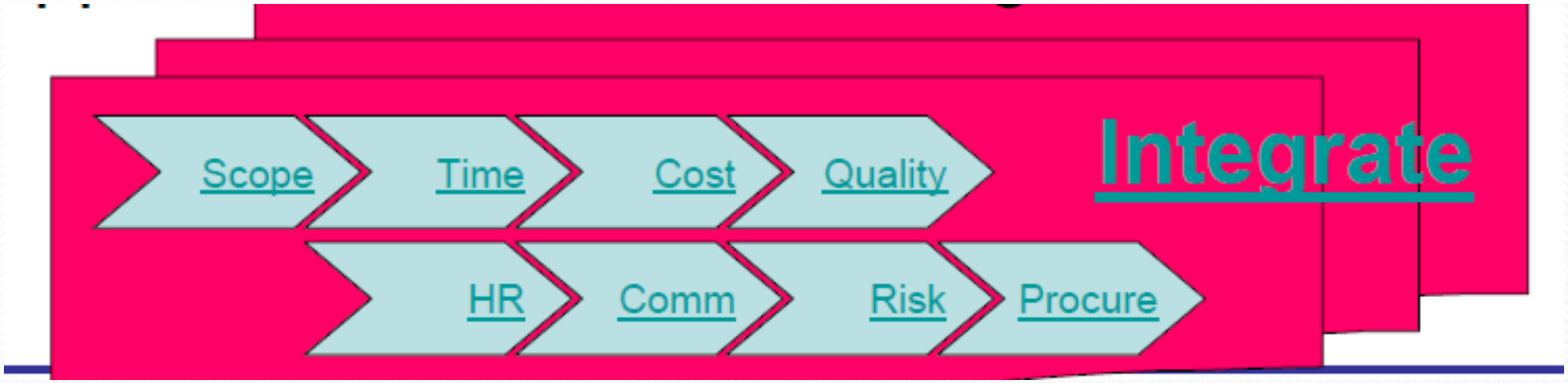
4.0 SCOPE OF THE STUDY

- The study was:
  - Specifically on project communication management, factors related to problems in project communication and project information quality

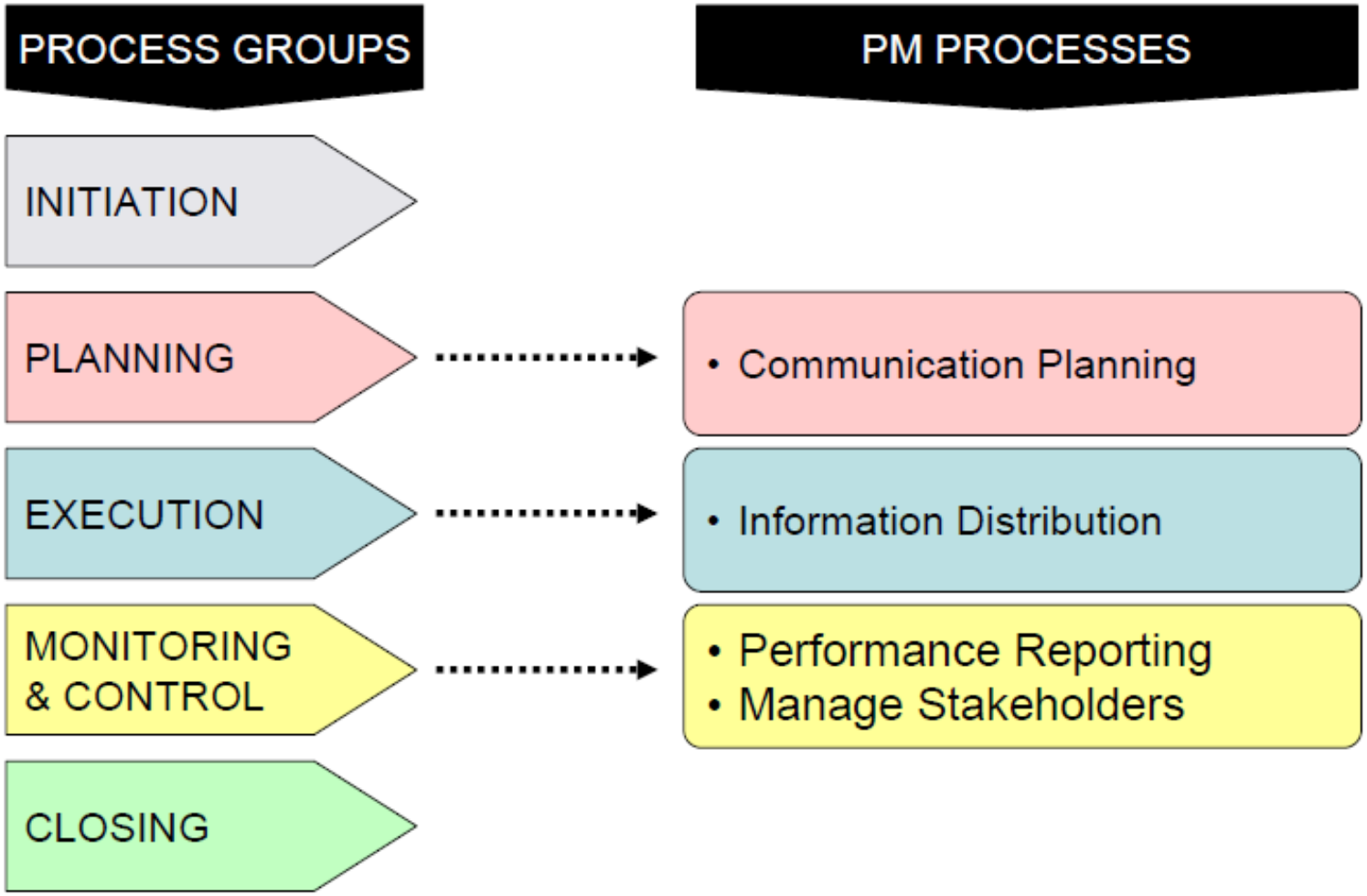
- Location of Study
  - Design office in Specialist Sector
    - Mechanical Engineering Branch,
    - Electrical Engineering Branch,
    - Civil, Structure and Bridge Engineering Branch,
    - Road and Geotechnical Engineering Branch
    - Architectural Branch

4.1 PM Knowledge Areas

- Integration Management
- Scope Management
- Time Management
- Cost Management
- Quality Management
- Risk Management
- Human Resource Management
- Communication Management
- Procurement Management



Project Communication Management



4.2 People, Process & Technology

- People, process, technology :
  - the 3 keys to successful application development projects
- To have any degree of confidence in the outcome of a project you need to:
  - put in place the right people with the right combination of skills.
  - work with the best practice processes and technology to make sure the project is properly defined and run.

4.3 Criteria's of Information Quality (IQ)

Intrinsic IQ	Contextual IQ	Representational IQ	Accessibility IQ
Accuracy	Completeness	Format	Availability
	Relevance		
	Reliability		
	Timeliness		

5.0 RESEARCH INSTRUMENT

- Structured questionnaires
- Divided into 5 parts.
  - Part A : the demographic profile of the respondents – gender, race, name of branch, working experience in the dessign office, designation and knowledge on project communication management
  - Part B: methods currently used in Specialist Sector based on project communication management process
  - Part C: 3 factors that contribute to problems and weaknesses in the implementation of project communication in Specialist Sector
  - Part D: information quality
  - Part E: A list of statements regarding project communication in JKR

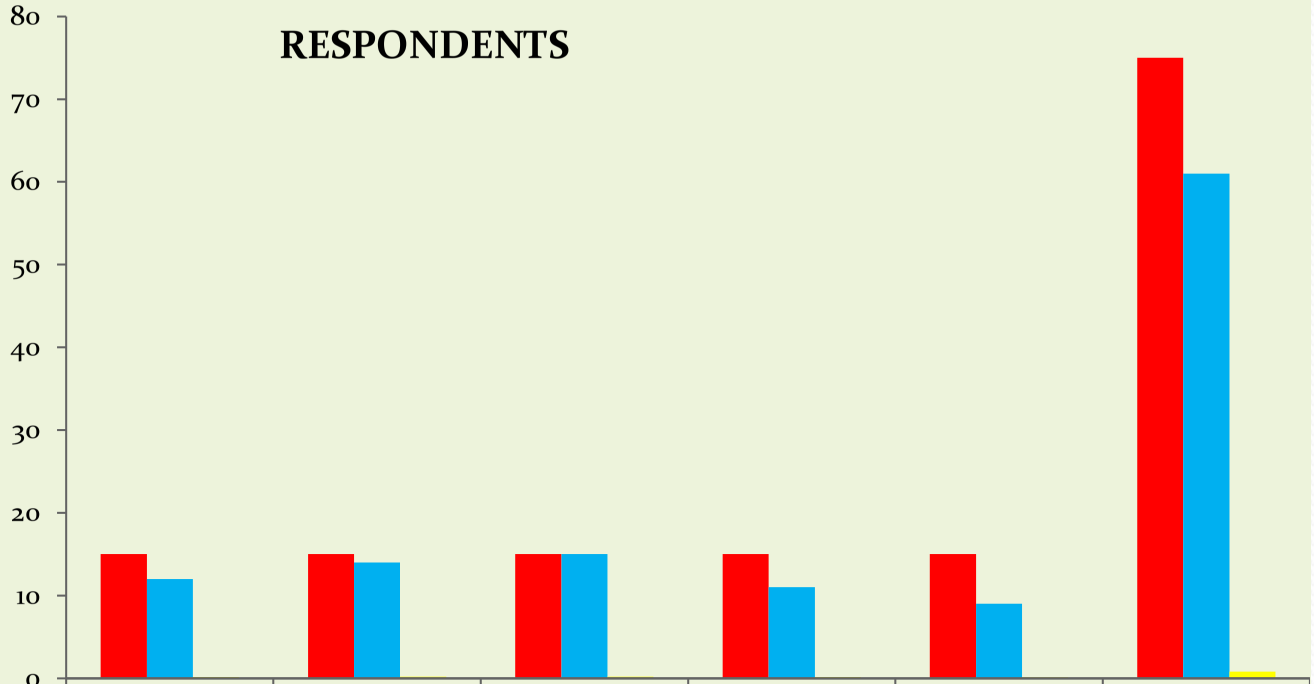
No	Part	Topic	Scale	Descripstion of the questionnaire
1.	Part A	Demography of the respondent	Nominal	gender, race, branch, working experience, designation and knowledges of project communication management
2.	Part B	Methods currently used in project communication management process (Planning, Information distribution, performance reporting & manage stakeholders)	5-point Likert Scale (Frequency of use): 1. 1 – Never 2. 2 – Almost never 3. 3 – Sometimes 4. 4 – Almost every time 5. 5 – Every time	Methods related to gathering, retrieving, distributing, reporting, and records on project communication in specialist sector
3.	Part C	Factors that contribute to problems in implementing project communication management	5-point Likert Scale (Level of agreement): 1. 1 – Strongly disagree 2. 2 – Disagree 3. 3 – Neither agree or disagree 4. 4 – Agree 5. 5 – Strongly agree	Factors related to people, process and technologies that hinder the practising of project communication management in specialist sector
4.	Part D	The quality level of project communication information	5-point Likert Scale (Level of Quality): 1 – Poor 2 – Fair 3 – Good 4 – Very good 5 – Excellent	Related to information dimensions in Information Quality that is accuracy, completeness, relevancy, reliability, timeliness and availibility
5.	Part E	Statements related to project communication	5-point Likert Scale (Level of agreement): 1. 1 – Strongly disagree 2. 2 – Disagree 3. 3 – Neither agree or disagree 4. 4 – Agree 5. 5 – Strongly agree	To have general opinion from respodents the benefit/impact to the organization from project communication maanagement

5.1 Population and Sample

(J41 – J54)

	Name of Branch	Population	Sample	%
1.	Civil, Structure and bridge Engineering Branch	72	15	21
2.	Architecture Branch	94	15	16
3.	Road and geotechnical Engineering Branch	20	15	75
4.	Mechanical Engineering Branch	56	15	27
5.	Electrical Engineering Branch	47	15	32
	Total	289	75	26

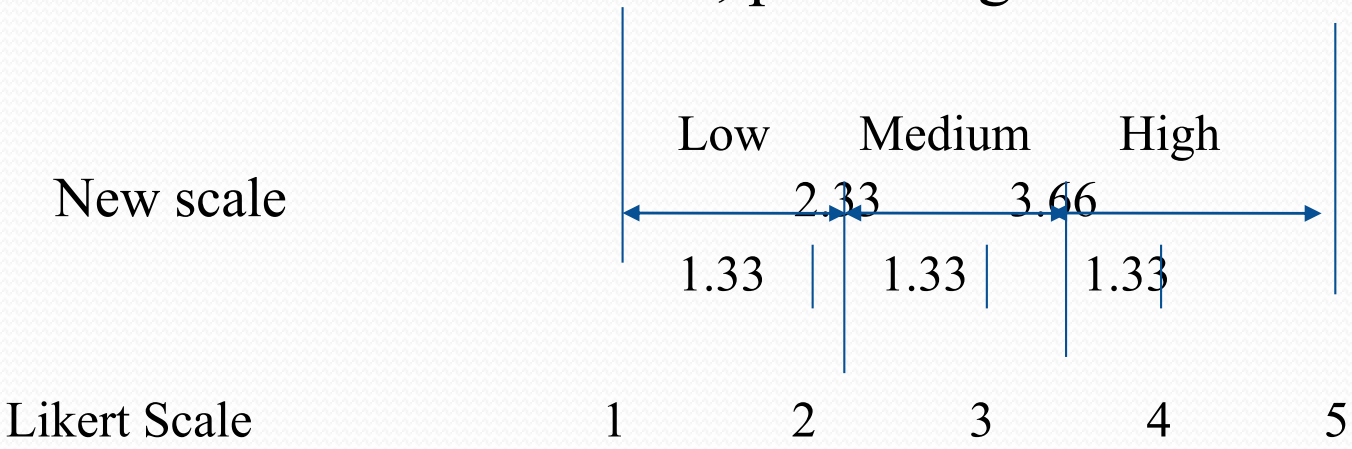
5.2 Data Collection



	Mechanical Engineering Branch	Electrical Engineering Branch	Civil, Structure and Bridge Engineering Branch	Architectural Branch	Road and Geotechnical Engineering Branch	Total
TOTAL GIVEN	15	15	15	15	15	75
TOTAL RECEIVED	12	14	15	11	9	61
PERCENTAGE RECEIVED	16%	18.70%	20.00%	14.70%	12.00%	81.00%

6.0 ANALYSIS OF DATA

- Data gathered from questionnaires are analyzed using descriptive statistic method .
- The results are on mean, percentage and standard deviation



6.1 PART A: Demographic profile of the Respondents

	MALE	FEMALE
1. Gender	45.9 %	54.1 %

	0	<2	2 - 5	5 - 10	10 - 20	20 +
2. Years of Working Experience	1.6 %	13.1 %	24.6 %	18.0 %	24.6 %	18.0 %

	J41	J44	J48	J52	J54
3. Designation	29.5 %	13.1 %	23.0 %	13.1 %	21.3 %

	YES	No
4. Knowledgeable in Project Communication Management	77.0 %	23.0 %

6.2 Part B: To determine whether project communication management is being practised during the design phase in Specialist Sector, JKR

No.	METHODS USED IN PROJECT COMMUNICATION MANAGEMENT		N	MEAN	STD DEVIATION	Frequency of used
1.	**COMMUNICATION PLANNING**					
	Design team gathers stakeholders communication input using	WBS	61	3.21	1.07	Sometimes
		Project Charter	61	3.15	1.11	Sometimes
	Design team identify stakeholders by	Organization Chart	61	3.33	1.06	Sometimes
		Stakeholders' Responsibility Relationship	61	3.38	1.04	Sometimes
	Stakeholders communication requirement are documented in a Communication Matrix		61	3.13	0.94	Sometimes

No.	METHODS USED IN PROJECT COMMUNICATION MANAGEMENT		N	MEAN	STD DEVIATION	Frequency of used
2.	**INFORMATION DISTRIBUTION**					
	Methods of communication between the design teams	Written	61	4.15	0.70	Every time
		Listening	61	4.00	0.71	Every time
		Speaking	61	4.10	0.68	Every time
		Formal	61	3.87	0.74	Every time
		Informal	61	3.85	0.73	Every time
		Vertical up	61	3.82	0.76	Every time
		Horizontal	61	3.87	0.79	Every time
	System used to gather and retrieved information by the design team	Manual Filing Systems	61	4.31	0.72	Every time
		Electronic Databases	61	3.48	0.99	Sometimes
		Engineering Drawings	61	4.07	0.77	Every time
	Methods use to distribute information to stakeholders by the design team:	Project Meetings	61	4.36	0.65	Every time
		Hard-copy document	61	4.18	0.62	Every time
		Shared-access electronic databases	61	3.26	1.18	Sometimes
		Electronic Communication	61	4.33	0.59	Every time
	Update lessons learned		61	3.26	0.87	Sometimes
	Input to Knowledge Mgt System		61	3.08	0.95	Sometimes

No.	METHODS USED IN PROJECT COMMUNICATION MANAGEMENT		N	MEAN	STD DEVIATION	Frequency of used
3.	**PERFORMANCE REPORTING**					
	Design team collecting and distributing performance information using:	Table Reporting	61	3.50	0.81	Sometimes
		Presentation	61	3.33	0.89	Sometimes
		Manual Filing Sys	61	3.87	0.85	Every time
		Electronic Databases	61	3.25	1.11	Sometimes
		Status Review Meeting	61	3.80	0.77	Every time
	Monitor Time reporting system record		61	3.44	0.74	Sometimes
	Monitor Cost reporting system record		61	3.00	0.95	Sometimes
4.	**MANAGE STAKEHOLDER**					
	Face-to-face meetings		61	4.02	0.72	Every time
	Telephone calls		61	3.90	0.79	Every time
	Electronic Mail		61	3.90	0.83	Every time
	Action-item log		61	3.12	0.86	Sometimes

6.3 Part C: To identify main factor that contribute to problems and weaknesses in project communication management

No.	Factors that contribute to problems and weaknesses	Std. Deviation	Mean	N	Group Ranking	Overall Ranking
1.0	**PEOPLE**	**2.75**	**24.08**	**61**	**1**	
a.	Lack of Knowledge in Project Communication Management	0.63	4.03	61	3	3
b.	Staff Shortage	1.01	3.93	61	4	4
c.	Lack of cooperation among the HODT	0.96	3.54	61	5	7
d.	Wrong interpretation of the information received	0.83	3.93	61	4	4
e.	Lack of Good Communication Skill	0.54	4.49	61	1	1
f.	Communication Breakdown	0.75	4.15	61	2	2

No.	Factors that contribute to problems and weaknesses	Std. Deviation	Mean	N	Group Ranking	Overall Ranking
2.0	**PROCESS**	**2.59**	**13.49**	**61**	**2**	
a.	Organization's culture	1.00	3.89	61	1	5
b.	Stringent rules and regulations as main barrier in implementing Project Communication Management	0.88	3.16	61	4	9
c.	The medium selected is not appropriate	0.76	3.18	61	3	8
d.	Inter-personal Conflict among the design team members	0.85	3.26	61	2	7
3.0	**TECHNOLOGY**	**2.02**	**6.87**	**61**	**3**	
a.	Outdated equipments in the design office	1.17	3.26	61	2	7
b.	Inadequate facilities in the design office	1.02	3.61	61	1	6

6.4 Part D: To determine the quality level of project communication information during design phase in Specialist Sector.

QUALITY LEVEL OF PROJECT INFORMATION					
No.	**Criteria for quality information**	**Std. Deviation**	**Mean**	**N**	**Level**
1.	Accuracy of the information	1.35	2.20	61	Medium
2.	Reliability of the information	2.81	3.11	61	Medium
3.	Completeness of the information	1.52	2.69	61	Medium
4.	Relevancy of the information	1.39	3.21	61	Medium
5.	Format of the information	2.04	3.23	61	Medium
6.	Timeliness of receiving and giving the information to stakeholder	3.53	2.85	61	Medium
7.	Availability - Team have an access to information given	0.88	2.95	61	Medium

6.5 Part E: General opinion on the importance of project communication management in specialist sector, JKR

No.	General Statement	N	Std. Deviation	Mean	Ranking
1.	Project communication has a large influence over the success of a project	61	0.71	4.38	3
2.	Project communication has a large influence over the failure of a project	61	1.10	3.95	7
3.	Communication affects performance of an organization	61	0.57	4.51	1
4.	Design work and engineering drawings always completed within the allocated time	61	0.74	2.98	8
5.	Qualities of deliverables do not rely on the level of communication	61	0.96	2.85	9

6.5 Part E: To have general opinion of the respondents on project communication management in specialist sector, JKR

No.	General Statement	N	Std. Deviation	Mean	Ranking
6.	The higher the level the better the relationship	61	0.64	3.95	7
7.	Proper project Communication planning is important for the project to finish in time	61	0.77	4.31	5
8.	Clear, accurate and timely communication is critical to the success of any project	61	0.51	4.34	4
9.	Exchange and feedback are key words in describing communication techniques.	61	0.49	4.23	6
10.	Effective communication is important during every phase of the project life cycle	61	0.59	4.44	2

7.0 FINDINGS OF THE STUDY

OBJECTIVE 1: To determine whether project communication management is being practised during the design stage in Specialist Sector

- YES but not all the times
- PLANNING PROCESS – All methods are not regularly use
- INFORMATION DISTRIBUTION –
  - Electronic Database is not a popular source to retrieve , collecting and distributing information
  - Update lesson learned database and knowledge management system is not a common practice
- PERFORMANCE REPORTING
  - Manual filing system and Status review meeting are the only popular methods used for reporting
- MANAGE STAKEHOLDER
  - Action-item log is not addressed to maintain good relationship

7.0 FINDINGS OF THE STUDY

OBJECTIVE 2: To identify the main factors that contribute to problems and weaknesses in project communication due to JKR current practiced during design phase in Specialist Sector

1. People
   - lack of good communication skill in managing stakeholders,
   - poorly explained or misunderstood message contribute to miscommunication
   - lack of knowledge in project communication management.
2. Process
   - Organization's culture
   - Inter-personal conflict
   - The medium selected
3. Technology
   - Inadequate facilities in the design office

7.0 FINDINGS OF THE STUDY

OBJECTIVE 3: To determine the quality level of project information data during the design phase in Specialist Sector

- MEDIUM
  - Accuracy of the information
  - Reliability of the information
  - Completeness of the information
  - Relevancy of the information
  - Format of the information
  - Timeliness of receiving and giving the information to stakeholder
  - Availability - Team have an access to information given

MEDIUM

7.0 FINDINGS OF THE STUDY…

- 3 Highest rating statement:
  - Communication affects performance of an organization
  - Communication is very important at every phase of the project life cycle
  - Communication give a large influence over the success of a project

8.0 SUGGESTION

i. PROKOM should perform a continuous awareness programs on project communication management to all sectors and JKR states.

ii. A well planned development and implementation strategies must be established by the management in order to ascertain that the project communication management is a compulsory tool in all project life cycle.

iii. Project Management Office must have competent staffs to handle project communication information.

8.0 SUGGESTION…

iv. The management should instill an organization culture on Knowledge Management. Knowledge Management System (KM System) refers to a (generally IT based) system for managing knowledge in organizations in order to support creation, capture, storage and dissemination of information.

v. The three contributors of barrier to effective project communication (People, Process and Technology) must be resolved immediately by the management.

9.0 CONCLUSION

For JKR to achieve its vision to become a world-class service provider in asset and project management, engineering excellence, and infrastructure through creative and innovative human capital and state-of-the-art technology, JKR must focus on project communication improvement. Factors associated with communication performance (methods, barriers and information quality) should be considered seriously because these factors will give big impact to the organization performance.

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THANK YOU