

Project Management Maturity of organizational entities operating in construction in the public sector

According to the “Kerzner” Project
Management Maturity Model – an
updated study

DEFINITIONS

- PMBOK defines project management as, *“the application of skills, knowledge, tools and techniques to project activities to meet project requirements”*.
- Mature according to the Concise Oxford Dictionary, means that an organization has reached the most fully developed stage in a process.

Project Management Maturity

- An organization is mature in project management if the organization has reached the most developed stage in the application of knowledge skills, tools and techniques to project activities to meet project requirements or achieve project success.
- Another definition of project management maturity of organizations is the ability of the collective organizational project management staff to deliver projects meeting specifications, on time, and within budget

OPM3

- PMI Standard to assess the project management maturity of organizations.
- It was intentionally designed without maturity levels although it does mention four levels on the progressive stages of process improvement - standardization, measurement, control and continuous improvement.
- multi-dimensional in that it sets out standards for process improvement, best practices in the domains of project management, program management and portfolio management, incremental capability improvement in the aforementioned domains as well as process improvement and measures the current practices with respect to the five process groups of initiating, planning, execution, control and close-out.
- The OPM3 standard is therefore quite involved and requires in-depth analysis of organizations in order that conclusions can be made on their project management maturity.

Focus of this paper

- A simplistic, linear approach to facilitate a general discussion on project management maturity of public sector organizations
- This is required for the more efficient implementation of projects in the public sector.
- Historically, public sector projects have had a high incidence of cost and time overruns with questionable quality.

Different models of maturity

- In compiling OPM3 the writers mention that more than 20 models of PMM were researched.
- Most models have been designed along the lines of the Capability Maturity Model® (CMM®) developed by the Software Engineering Institute (USA) with assistance of the United States Department of Defense.
- The CMM® detailed five levels of maturity for software design processes; initial, repeatable, defined, managed and optimizing.

Comparison of different Project Management Maturity Models with the Capability Maturity Model®

LEVEL	CMM®*	Model 1 (Kerzner)	Model 2 (PwC)^	Model 3 (Wysocki)	Model 4 (PM Solutions)	Model 5 (KLR Consulting)
1	Initial	Embryonic	Unreliable Processes	Initial process	Initial Process	Adhoc
2	Repeatable	Executive Management Acceptance	Informal Processes	Structured process	Structured process and standards	Foundation
3	Defined	Line Management Acceptance	Standardized Processes	Institutionalized Process	Organizational Standards and Institutionalized Process	Managed
4	Managed	Growth	Monitored Processes	Managed Process	Managed Process	Integrated
5	Optimizing	Maturity	Optimized Processes	Optimizing Process	Optimizing Process	Optimizing

The Kerzner Model

Fives phases an organization goes through;

1. Embryonic,
2. Executive Management Acceptance Phase,
3. Line Management Acceptance Phase
4. Growth Phase and
5. Maturity

The Kerzner Model - Embryonic Phase

- This phase is characterized by recognition of the benefits of the application of project management. Senior management must also understand that project management will affect the overall functioning of the company and the corporate bottom line. As a consequence, the senior management will support training of personnel in project management

The Kerzner Model – Executive Management Acceptance Phase

- Here, executives visibly identify their support for project management. Kerzner adds that perhaps the best way to show support is for the executives to function as project sponsors. This will demonstrate support and understanding of the project management process as well as the desire for project management maturity

The Kerzner Model – Line Management Acceptance Phase

- Line management staff projects and hence they should have an understanding of the principles of project management. Once executive management supports project management then is a comparatively simple procedure for the line managers to act accordingly.

The Kerzner Model – Growth Phase

- Project management systems are developed and refined for control and standardization. This will require an understanding and commitment to project management. The methodology and systems developed should be supported by an appropriate software package for planning and control.

The Kerzner Model – Maturity

- In this phase the company integrates time and cost management. This means that an earned value system should be in place. In addition the company should identify a long-range educational program for its employees so as to sustain the level of maturity in their organization. Kerzner suggests that without a long-range education program an organization can move very quickly from maturity to immaturity

Methodology

- A questionnaire consisting of twenty (20) questions developed by Kerzner was used
- The persons served with the questionnaire were professionals who were in senior positions in their respective organizations as well as the general manager or chief executive officer.
- No formal interviews were held on the questionnaire to verify the information submitted.

Methodology (cont'd)

- The returned questionnaires were scored as advised in the Kerzner's PMM Model.
- High scores (usually 6 or greater) in a particular maturity level indicate that these evolutionary stages of maturity have been achieved or that the company are in this stage.
- If the company had low scores in specific stages then those stages of maturity have not been achieved yet.

Results- Ministry of Health

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Ave
Maturity	7	9	11	2	4	6.6
Growth	6	5	6	5	5	5.4
Line Management	7	7	2	4	3	4.6
Executive	8	10	12	3	6	7.8
Embryonic	9	11	9	4	8	8.2

Results- Ministry of National Security

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Ave
Maturity	4	-2	4	-6	9	1.8
Growth	7	-1	1	-9	11	1.8
Line Management	7	0	0	-11	10	1.2
Executive	7	8	-1	-10	11	3
Embryonic	8	11	7	-3	12	7

Results- Ministry of Social Development

	Respondent A	Respondent B	Respondent C	Respondent D	Ave
Maturity	-11	-2	-11	-10	-8.5
Growth	-1	5	-11	0	-1.75
Line Management	3	4	-1	-1	1.25
Executive	0	5	-12	1	-1.5
Embryonic	3	4	-10	2	-0.25

Results- Ministry of Finance

	Respondent A	Respondent B	Respondent C	Ave
Maturity	-11	-2	-11	-8.5
Growth	-1	5	-11	-1.75
Line Management	3	4	-1	1.25
Executive	0	5	-12	-1.5
Embryonic	3	4	-10	-0.25

Results- Ministry of Works and Transport – Construction Division

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Ave
Maturity	-2	-1	2	-8	-7	-3.2
Growth	2	1	8	-8	-1	0.4
Line Management	6	0	4	-3	-5	0.4
Executive	3	6	2	-5	-8	-0.4
Embryonic	4	3	6	0	-7	1.2

Results- MOW&T: Comparison of results between 2005 & 2009

	2005	2009
Maturity	-5.0	-3.2
Growth	0.2	0.4
Line Management	1.0	0.4
Executive	-1.0	-0.4
Embryonic	-1.0	1.2

Results- National Insurance Property Development Company Limited (NIPDEC)

	Respondents								
	A	B	C	D	E	F	G	H	Avg
Maturity	4	-3	6	7	3	6	3	2	3.5
Growth	3	-2	7	7	6	6	5	3	4.375
Line Management	4	2	8	10	7	8	9	5	6.625
Executive	7	-2	7	10	3	10	5	5	5.625
Embryonic	5	3	8	9	4	10	6	7	6.5

Results- NIPDEC: Comparison of results between 2005 & 2009

	2005	2009
Maturity	4.5	3.5
Growth	5.5	4.375
Line Management	5.5	6.625
Executive	5.75	5.625
Embryonic	7.75	6.5

Results- Urban Development Corporation of Trinidad and Tobago (UDECCOTT)

	Respondent A	Respondent B	Respondent C	Respondent D	Respondent E	Ave
Maturity	-5	3	-5	-1	3	-1
Growth	-7	6	-2	5	2	0.8
Line Management	7	4	5	8	1	5
Executive	-6	4	-5	5	0	-0.4
Embryonic	-4	7	5	4	5	3.4

Results- UDECOTT: Comparison of results between 2005 & 2009

	2005	2009
Maturity	-0.4	-1
Growth	1.6	0.8
Line Management	2.2	5
Executive	-0.2	-0.4
Embryonic	2.6	3.4

Results Summary- 2009

	Health	Nat Security	Social Dev	Finance	Works	NIPDEC	UDECO TT	Average
Maturity	6.6	1.8	-8.5	-5.0	-3.2	3.5	-1.0	-0.8
Growth	5.4	1.8	-1.8	-0.3	0.4	4.4	0.8	1.5
Line Management	4.6	1.2	1.3	2.0	0.4	6.6	5.0	3.0
Executive	7.8	3.0	-1.5	2.0	-0.4	5.6	-0.4	2.3
Embryonic	8.2	7.0	-0.3	1.7	1.2	6.5	3.4	4.0

Results- : Comparison of overall results between 2005 & 2009

	2005	2009 with Health	2009 without Health
Maturity	-0.22	-0.8	-2.1
Growth	1.78	1.5	0.9
Line Management	2.18	3.0	2.7
Executive	0.87	2.3	1.4
Embryonic	-0.22	-0.8	-2.1

Discussions

- Study result is in keeping with another study done by Center for Business Practices, the research arm of the consulting and training organization, PM Solutions
- The CBP surveyed one hundred and twenty-six (126) senior practitioners with knowledge of their organizations' project management practices and their organizations' business results.

Discussions

- The results indicated that
 - 88.9% of organizations are at Level 1 maturity,
 - 6.3% at Level 2,
 - 3.2% at Level 3,
 - 0.8% at Level 4, and
 - 0.8% at Level 5.
- PM Solutions' Project Management Maturity Model was used in the assessment.

Discussions



- The CBP survey was done using a self assessment form as well as the maturity level was calculated based on the nine knowledge areas with 42 specific components.
- It is interesting to note that the self-assessment scores (avg. 2.40) were generally higher than the calculated scores (avg. 1.18).

PwC Survey of 200 companies from all over the world – Some results

- A higher project management maturity will in most cases deliver superior performance
- The current overall maturity level is at 2.5 representing Informal Processes and is probably the main reason why so many projects are unsuccessful
- More than half the companies surveyed (60%) were not satisfied with their current maturity level
- The company's organizational structure has a big influence on overall project performance

Conclusions

- Ministries of Finance, Social Development, National Security, UDeCOTT and the Construction Division of the Ministry of Works are in the embryonic stage of maturity according to the Kerzner Project Management Maturity Model.
- NIPDEC has passed the embryonic stage and is significantly advanced in the stages of Executive Management Acceptance, Line Management Acceptance and Growth.

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- The results of the Ministry of Health shows high scores in all areas except line management and growth indicating that the organization was quite mature. This was opposite to all the other results - anomaly
 - It appears that line management personnel are more exposed to the knowledge, tools and techniques of project management as compared to their executive counterparts.

Recommendations

- A more comprehensive study on the project management maturity of public sector organizations be undertaken.
- Based on the results of the survey, a plan for improving the project management competency and maturity of organizations should be developed.

Closing Note

- The Public Sector is a significant driver of the economy of Trinidad and Tobago and the improvement of project management practices should result in significant savings and improved delivery of services