Organizational Project Management Maturity Model (OPM3): A Case Study

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ABSTRACT

The degree to which an organization practices the project management effectively is referred to as Organizational Project management Maturity (OPM). Organizational project management is defined as the application of knowledge, skills, tools, and techniques to organizational and project activities to achieve the aims of an organization through projects. Effective project management helps organizations to achieve the strategic goals. OPM, by aligning projects to business strategy, fills the gap between organization's strategic planning process and accomplishing successful projects. The objective of this research case is to understand and apply the current OPM framework (OPM3) in context of the company IProcure Systems Inc (ISI).

1. SETTING THE STAGE

IProcure Systems Inc. (ISI), an internet based procurement service provider company, started offering web based procurement services with the vision to host I-Procurement application and offer indirect sourcing services to many small, medium and large companies giving users a self-service purchasing web experience. This strategy intends to offer numerous benefits to many organizations such as standardization of procurement processes, shared technical and functional expertise, and use of common infrastructure, accurate and comprehensive information gathering and reporting. A variety of projects have been executed to bring number of companies on this centralized IProcurement system as well as to introduce efficient processes, which could be used by all companies. This environment is used by number of companies for performing procurement activities using SSP (Self-Service Purchasing) worldwide. ISI continues to provide a very dynamic, innovative and very critical sourcing environment to many companies.

2. CASE DESCRIPTION

Our case will focus on the understanding the OPM3 model and its concepts in ISI organization's functioning, process and environment. The next step was to carry out the assessment of the organization. Two techniques were used to complete the survey - (i) group members individually complete survey independently from his/her operational point of view (ii) discuss the questions and answers of the survey in a group setting and then consolidate the results. The final stage is to generate and analyze results. After feeding answers to the survey questions, OPM3 model returns with the results of the preliminary assessment. It includes total four graphs that visually indicates ISI's organizational project management maturity placement on a continuum of maturity, ISI's attainment of Best Practices against the domains of PPP and the stages of process improvement (SMCI). These results are shown in terms of percentage points. It also identifies the detailed OPM3 components—Best Practices, Capabilities, Outcomes, Key Performance Indicators. The list then generated was analyzed in the areas exposed by the self-assessment as 'Areas requiring improvement'.

Establishing a well-planned project management process, OPM3 demands that projects, programs and Portfolio management processes are controllable. In order to establish a controlled system four steps are meaningful i.e. Standardize, Measure, Control and continuously Improve (SMCI).

3. OPM3

OPM3 is comprised of three, interlocking elements: Knowledge, Assessment and Improvement.

The **Knowledge Element** includes an executive summary, the narrative explanations required for the user to understand organizational project management, its definition and its application toward organizational project management maturity; an explanation of terms specific to the OPM3 Standard; the explanation of the OPM3 steps and an example of application, the appropriate appendices; the OPM3 Glossary; and the OPM3 Index. The **Assessment Element** includes the OPM3 self-assessment, an interactive database application. After completion of the self-assessment, the results include various graphs (spider diagrams) that visually depict an organization's attainment of Best Practices against the domains of Project, Program and Portfolio (PPP) management and the stages of process improvement: Standardize, Measure, Control, and continuously Improve (SMCI). When combined, these values produce a percentage point representative of the organization's organizational project management maturity placement on a continuum of maturity. The OPM3 components—Best Practices, Capabilities, Outcomes, Key Performance Indicators and the relationships across and among Best Practices–are warehoused within a database comprising the **Improvement Element**. This database will include each component's unique identifier, name, and description. Because different organizations might apply OPM3 in differing ways, this database will allow the user to filter specific criteria and parameters important to their organization to obtain various lists of Best Practices and/or Capabilities.

Thus, OPM3 provides answers to very important questions related to the organization's current project management maturity and allow organizations to further improve on the same. OPM3 is a roadmap, a well-structured and detailed guide to the Best Practices that the organization needs to implement to achieve its strategic goals through projects while conserving organizational resources. It promotes organizational maturity awareness among senior management and attributes organizational success to project management.

The detailed aspects and functioning of the company from the subject standpoint, by applying the framework, terminology and concepts used by OPM3 in the company ISI will be discussed at the conference and in our paper which will be submitted to JCIT for possible publication.

4. OTHER MODELS FOR ASSESSING THE PROJECT MATURITY OF A FIRM

Among the project managers, the PMBOK ® Guide [7] is widely accepted as a de-facto standard for PM. In Europe, and more recently in Japan and in US, there are competing standards, showing that there is not established unique standard in PM. The short list of standards in PM is in Table 1., below:

This variety of standards opens the possibilities for development different models for Project Management Maturity apraisals. In this paper, we are examining three other models.

4.1. PMMM

The **Project Management Maturity Online Assessment Survey** is a formal tool developed by PM Solutions and Primavera Systems used to measure an organization's project management maturity. Authors (from PM Solutions) claim that the online model will answer next important questions (PM Solutions (2006)):

1. How well does my organization manage projects?
2. What are the strengths and weaknesses of my organization?
3. How does my organization stand in comparison with others?

Table 1. International PM standards

Standard Name	Country
Open Standards Project Management & Consulting Services	Open standard
A Guide to the Project Management Body of Knowledge(*PMBOK Guide*)	USA
APM Body of Knowledge 5th ed. (*APM - Association for Project Management*)	UK
PRINCE2 (*PRojects IN a Controlled Environment)*	UK – (government sand commerce)
P2M (*A guidebook of Project & Program Management for Enterprise Innovation*)	Japan
V-Modell	Germany
HERMES	Switzerland, Luxembourg

4. What can I do to improve the project management maturity of my organization?

The list of questions for the survey is presented in Appendix 1 (Top 10 CSF (2004)). After taking the survey, PM Solutions offer two-stage pathway using their PMMM (Project Management Maturity model) with 65 questions (Rayner, P. & Reiss G. (2000)), based on Software Engineering Institute Capability Maturity Model's (CMM®) and in compliance with OPM3. Model examines PM maturity level in 5 stages: Initial Process, Structured Process and Standards, Organizational Standards and Institutionalized Process, Managed Process and Optimized Process. User needs to position all PM activities in one of those stages. This extended list of PM activities covers Management of Project Integration, Scope, Time, Cost, Quality, HR, Communications, Risk and Procurement/Vendors.

4.2. $(PM)^2$

The Project Management Process Maturity or $(PM)^2$ maturity model (also known as the Berkley model) is developed by Young Hoon Kwak, Ph.D. and C. William Ibbs, Ph.D., from the Department of Civil Engineering, University of California at Berkeley. This model "measures, locates, and compares an organization's current PM maturity level… The model is continuously being refined to reflect advances in their PM knowledge. Some of the most recent improvements include evaluating replicability of project success" (Kwak, Y.H. William, C. (2000)). This model is in sink with PMI principles and the process is organized in 5 levels (Table 2).

4.3. CMMI

The Capability Maturity Model Integration (CMMI®, CMMI 2006) is developed in 2001 and updated in 2006 by Carnegie Mellon University. The model is based on a premise: " Process, people, and technology are the major determinants of product cost, schedule, and quality". Use CMMI in process improvement activities: as a collection of best practices, framework for organizing and prioritizing activities, support for the coordination of multi-disciplined activities that might be required to successfully build a product, means to emphasize the alignment of the process improvement objectives with organizational business objectives. A CMMI model is not a process, but it describes the characteristics of effective processes. The Standard CMMI Appraisal Method for Process Improvement (SCAMPI) is designed to provide benchmark quality ratings relative to Capability Maturity Model Integration (CMMISM) models. It is applicable to a wide range of appraisal usage modes, including both internal process improvement and external capability determinations (see Appendix 2). Model defines 3 Classes of Appraisal Methods (SCAMPI family): SCAMPI C (provides a wide range of options, including characterization of planned approaches to process implementation according to a scale defined by the user); SCAMPI B (provides options in model scope and organizational scope, but characterization of practices is fixed to one scale and is performed on implemented practices), and SCAMPI A (the most rigorous method, and is the only method that can result in ratings.) The SCAMPI requirements are presented in Table 3.

Table 2. Five levels in the $(PM)^2$ model

Levels		Major characteristics
1	Ad Hoc	Basic PM process
2	Planned	Individual Project Planning
3	Managed	Systematic Project Planning and Control
4	Integrated	Integrated Multi-Project Planning and Control
5	Sustained	Continuous PM Process Improvement

Table 3. SCAMPI requirements

Requirement	**SCAMPI A**	**SCAMPI B**	**SCAMPI C**
Types of Objective Evidence Gathered	Documents and interviews	Documents and interviews	Documents or interviews
Ratings Generated	Goal ratings required	No ratings allowed	No ratings allowed
Organizational Unit Coverage	Required	Not required	Not required
Minimum Team Size Appraisal	4	2	1
Team Leader Requirements	SCAMPI A lead appraiser	SCAMPI B and C team leader	SCAMPI B and C team leader

5. INITIAL CONCLUSIONS AFTER USING THE OPM3 MODEL IN THE COMPANY ISI

In conclusion, applying the OPM3 model, we are able to announce that a percentage point representative of the ISI's organizational project management maturity placement was 68%. Model also provided ISI for the purpose of analysis and focus the improve areas, the list of Best Practices and Capabilities that are currently being observed in ISI and also the ones which need to be focused for further improvement. More details will be available in the JCIT paper.

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APPENDIX 1. TOP 10 CRITICAL SUCCESS FACTORS FOR A PROJECT MANAGEMENT OFFICE (FOR THE ON-LINE PM MATURITY ASSESSMENT)

Rating scale for all questions:	
3 - We've got it covered. 2 - It's OK, but could be better.	1 - Needs some serious improvement. 0 - Couldn't be worse.
Questions	
1. The PMO has senior executive-level support.	6. Training of project managers is competency-based (rather than purely academic).
2. A superior process for selecting project managers and teams has been established.	7. Project management methodologies, tools and templates are standardized.
3. Project teams include participants from multiple business functions and disciplines.	8. A useful knowledge library of best practices is maintained as part of the PMO.
4. A high standard of truthfulness and integrity exists within the PMO.	9. The PMO is involved in all projects from start to finish.
5. The PMO serves as an "ambassador," communicating with all internal and external stakeholders.	10. The organization's project portfolio is managed by the PMO.

APPENDIX 2.

Phases and Processes in SCAMPI appraisal	
Phases	Processes
1: Plan and Prepare for Appraisal	1.1 Analyze Requirements 1.2 Develop Appraisal Plan 1.3 Select and Prepare Team 1.4. Obtain and Analyze Initial Objective Evidence 1.5. Prepare for Collection of Objective Evidence
2: Conduct Appraisal	2.1. Examine Objective Evidence 2.2. Verify and Validate Objective Evidence 2.3. Document Objective Evidence 2.4 Generate Appraisal Results
3. Report Results	3.1 Deliver Appraisal Results 3.2 Package and Archive Appraisal Assets