Role of Project Management Maturity: Substantial Interest to Assess and Improve Development of Viable Methods

Rol de la madurez de la gestión de proyectos: interés sustancial para evaluar y mejorar el desarrollo de métodos viables

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ABSTRACT

To improve and assess the project management maturity in the development of viable methods the community of project management is actively demonstrating substantial interest. To provide several organizations among industries a means to benchmark that their maturity relative to others for assessing project management maturity the interest also underscores the important need. This paper studied to improve and access the method for project management maturity. We studied the concept of project management maturity, its different levels and models.

Keywords: project management maturity, substantial interest, organization.

RESUMEN

Para mejorar y evaluar la madurez de la gestión de proyectos en el desarrollo de métodos viables, la comunidad de gestión de proyectos está demostrando activamente un interés sustancial. Para proporcionar a varias organizaciones entre las industrias un medio para evaluar su madurez en relación con otras para evaluar la madurez de la gestión del proyecto, el interés también subraya la necesidad importante. Este documento estudió para mejorar y acceder al método para la madurez de la gestión de proyectos. Estudiamos el concepto de madurez de gestión de proyectos, sus diferentes niveles y modelos.

Palabras clave: madurez de gestión de proyectos, interés sustancial, organización.

RESUMO

Para melhorar e avaliar a maturidade do gerenciamento de projetos no desenvolvimento de métodos viáveis, a comunidade de gerenciamento de projetos está demonstrando ativamente um interesse substancial. Para fornecer a várias organizações entre os setores um meio de avaliar a maturidade em relação a outras para avaliar a maturidade do gerenciamento de projetos, o interesse também ressalta a necessidade importante. Este artigo estudou para melhorar e acessar o método de maturidade em gerenciamento de projetos. Estudamos o conceito de maturidade em gerenciamento de projetos, seus diferentes níveis e modelos.

Palavras-chave: maturidade em gerenciamento de projetos, interesse substancial, organização.

I. INTRODUCTION

The progressive development of strategy, methodology, project management approach and decision-making process of an enterprise is known as project management maturity (Grant & Pennypacker, 2006). On the basis of its resource capabilities, needs, strategies, scope and specific goals the suitable level of maturity can different for every organization. By a professional project management consulting team during a detailed assessment it can determined the proper level of maturity for an organization.

Figure 1: project managemnet maturity

For project management effectiveness that is defined by Project Management Maturity Model (PMMM) (Koskela & Howell, 2008), when it fulfill the standard and requirements the organization can achieve complete project management maturity. The project management maturity is capable of representing improvements like profitability, cost reductions, on-time project delivery and organizational efficiency.

II. PROJECT MANAGEMENT MATURITY MODEL

In project management processes and systems the main objective of the project management maturity model is to obtain a model for improvement in progressiveness and it also provide a better path (Marshall, 2010). Many models of project management maturity are developed by several organizations in recent years (Crawford, 2006).

TABLE I
COMPARISON OF MATURITY MODELS (MMS) – BY STRUCTURE

Maturity Model(s)	Acronym	Structure			Theoretical Base/CMM Ideology	KPA/KPI
		Staged	Continuous	Multi-Dimensional		
Organizational Project Management Maturity Model	OPM3			Yes	Yes/No	Not Definite
Maturity by Project Category Model	MPCM	Yes			No/Yes	5
PORTFOLIO, PROGRAMME & PROJECT MANAGEMENT MATURITY MODEL	P3M3	Yes		Yes, but limited	No/Yes	42
Projects in Controlled Environments	PRINCE2	Yes			No/Yes	32
Project Management Maturity Model for Business Management Consultants	PMMM (BMC)	Yes			No/Yes	10
Software Capability Maturity Model	CMM	Yes			No/Yes	11
PM Solutions Project Management Maturity Model	PMMM	Yes			No/Yes	9
Project Management Maturity Model	ProMMM	Yes			No/Yes	4

Table 1: Comparsion of different maturity model

In 2000 Project Management Institute (Donaldson, 2001) defined that a number of process-related concepts shares by PMBOK (Project Management Body of Knowledge) and CMM. As shown in figure 2 it also contains some unique features. In the basic concept of generic project management it integrates all of these concepts by Project Maturity Model (Rao, 2005).

Figure 2: PMBOK and CMM Processes

III.   HISTORY OF THE PMMM

A framework is published at Institute at Carnegie Mellon University by the Software Engineering Institute in the mid-1980's (Marshall, 2010; Crawford, 2006). For conveying complex programming ventures this software demonstrate which programming temporary workers would be best equipped planned to enable the legislature to evaluate. While taking a shot at programming ventures the standard practices that are maintained by the company this Capability Maturity Model was depend on an evaluation of the standard practices. over the years there have been implemented number of maturity models and these models has since been adjusted to fit an expansive scope of businesses. The centers explicitly around the appraisal of venture the board capacities although the Project Management Maturity Model, intently lines up with the first model (Milosevic & Srivannaboon, 2006)
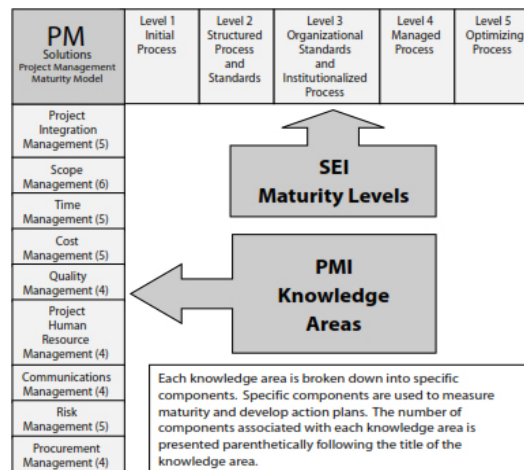
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Figure 3: Project management maturity model based on PM

The Project Management Maturity Model's PM Solutions is depends on two dimensional framework. on the standards that are accepted by industry are basis of both the dimensions. The level of maturity is reflects by first dimension. On the structure of the Software Engineering Institute it is based, this is known as Capability Maturity Model (CMM) (Rezaeean & Falaki, 2012).

The key area of project management is addressed by 2nd dimension. This measurement receives the structure of PMI's nine information regions.

IV.   LEVELS OF MATURITY

In basic project management maturity model there are five levels of maturity are described as follows (Sarshar et al., 2000):

Level 1: Initial Process

In spite of the fact that there is an acknowledgment that there are venturing the executive's forms, there are not built up practices or guidelines, and individual task supervisors are not held to explicit responsibility by any procedure gauges. Documentation is free and specially appointed.

Level 2: Standards and Structured Process

Many project the executives procedures exist in the association; however they are not viewed as a hierarchical standard. Documentation exists on these essential procedures. The board underpins the usage of undertaking the executives, yet there is neither steady getting, inclusion, nor hierarchical command to go along for all tasks.

Level 3: Institutionalized Process and Standards of organizations

All project management process are set up and built up as authoritative benchmarks. These procedures include the customers as dynamic and basic individuals from the venture group. About all tasks utilize these procedures with insignificant special case—the executives have standardized the procedures and measures with formal documentation existing on all procedures and benchmarks.
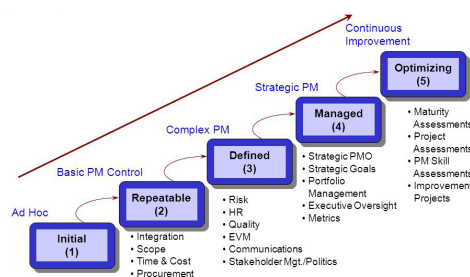
Figure 4: overall project management maturity model (Hutchinson & Finnemore, 1999)

Level 4: Process of management

Projects are dealt with thought to how the undertaking performed previously and what is normal for what's to come (Maseleno et al., 2017). The executives utilize productivity and viability measurements to settle on choices with respect to the undertaking and comprehend the effects on different tasks (Maseleno et al., 2019). All tasks, changes, and issues are assessed dependent on measurements from cost gauges, standard gauges, and earned worth.

Level 5: Process of optimization

Procedures are set up and effectively used to improve venture the board exercises (Maseleno et al., 2016). Exercises scholarly are consistently inspected and used to improve venture the executive's procedures, principles, and documentation. The board and the association are centered around viably overseeing activities as well as on constant improvement.

V. ASSESSING PROJECT MANAGEMENT MATURITY

A holistic and progressive that implement a strategy, approach of organization, methodology, and process of decision-making in explained by project management maturity. These functions are defined though 3 core field of project management i.e.

1. Process
2. Tools and
3. People.

ID	Domain	Current Level	Desired Level
1	Report project / programme status (information) to upper (senior) management	Low	High
2	Development and implement a standard project management methodology	Medium	High
3	Monitor and control project / programme performance	High	High
4	Develop the competences (skills) of professionals, including training	Low	Medium
5	Implement and operate project management information systems	Low	High
6	Provide top management with advice	Low	Medium

Table 2: project mangement maturity assesment (Jugdev & Mathur, 2012)

Towards enhancing its whole culture around project management the Project Management Maturity model can enable the association to distinguish holes and take the steps (Malhotra & Grover, 1998).

The accompanying table demonstrates a rearranged perspective on the Project Management Maturity guide. The guide depicts particular attributes for each center territory like people, process and tools inside the three development levels. Level one is the least full grown and level three is the most developed

	Level 1: Initial	Level 2: Repeatable	Level 3: Defined
People	No PM Background	Basic PM Training	PM Certification
Process	Ad-hoc	PM Standardized	Process Automated workflows Portfolio reporting
Tools	Paper Word Excel Email	Templates Scheduling Collaboration Tools	EPM Tool

Table 3: Project management maturity tools

VI. COMPONENTS

For controlling the scope of project and determining the adequacy of defining six components are given below

that are examined independently (Dooley et al., 2001):

Structure of work breakdown looks at the convention with which an association identifies the total extent of work to be performed. This incorporates taking a gander at the related word reference.

Planning of scope management is the "how to" of defining the undertaking extension. This procedure depicts how the undertaking group builds up a definite venture scope the board plan that archives how the task group defines, approves, and controls venture scope (Filippini et al., 1997).

Change Control of scope takes a gander at the way toward joining increases, changes, and cancellations to an undertaking.

Definition of scope portrays how a point by point depiction of the undertaking or item is created.

Collection of requirement is the appraisal and improvement of procedures, systems, and principles identifying with the accumulation of the business and specialized necessities of the venture.

Validation of scope covers the verification of components of the degree articulation as worthy expectations.
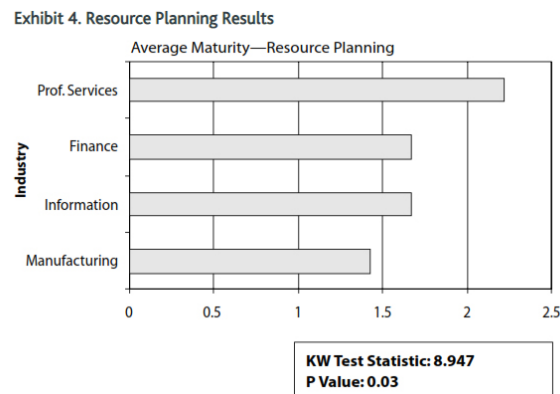

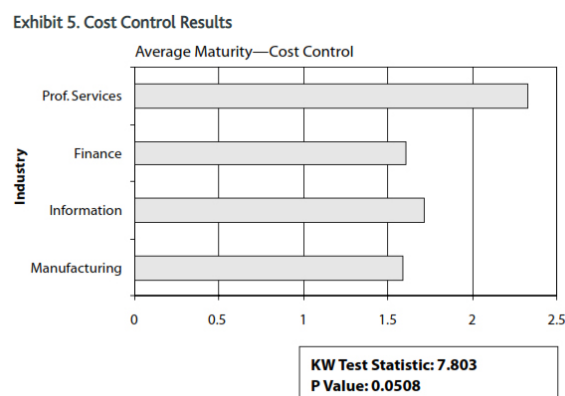Figure 5: result of recourse planning (Pennypacker & Grant, 2002)

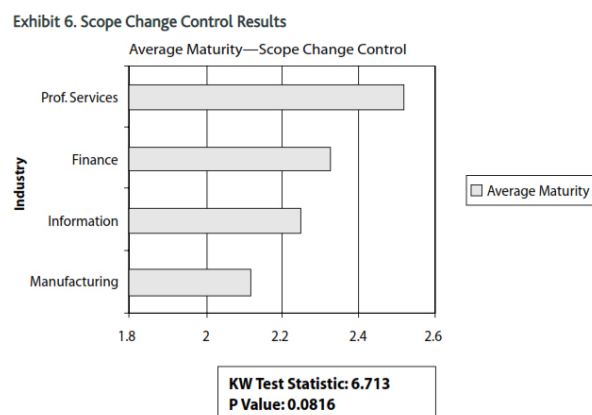Figure 6: result of cost control (Pennypacker & Grant, 2002)

Figure 7: result of change control (Pennypacker & Grant, 2002)

VII. CONCLUSION

To improve and survey the project management maturity in the advancement of feasible techniques the network of project management is effectively demonstrating substantial interest. To give a few associations among ventures a way to benchmark that their development in respect to others for evaluating project management maturity

the intrigue additionally underscores the significant need. This paper concentrated to improve and get to the strategy for project management maturity. We contemplated the idea of undertaking the executives development, its various levels and models.

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