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Estimation of Capability Maturity Level of Project Portfolio Management Reinforcement to New Product Initiation

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ABSTRACT:
Dynamically changing customer expectations, shorter product life cycles caused by rapid technological changes, and heightened global competition now more than ever, business investments in new product developments and resources are paramount to the future prosperity and even the survival of the company. Indeed project portfolio management has become the manifestation of the organization's strategy as part of industrial engineering and management. The main purpose of this study is to measure the capability maturity levels of the project portfolio management in the perspective of strategic business management. This paper presents the study findings which were established based on the statistical data analysis using cumulative weighed average technique that was performed on the primary data. The primary data was collected through a pre-tested and well structured self-administered questionnaire. The results reveal that the organizations have moderate capability maturity levels and further the study recommends that the companies must improve their maturity levels in order to attain the maximum benefits from the implementation of project portfolio management

KEYWORDS: Project Portfolio Management, Capability Maturity, Strategic Business Management.

INTRODUCTION:

Developments in Computer Integrated Management have focused for a long period of time in linking various and production planning and execution. Project portfolio management is a strategic management process that allows organizations to align their projects, resources, and initiatives to strategic goals by developing and monitoring measures that treat assets as cost-effective assets. Over the past few decades, academicians and practitioners have recognized that project and program management disciplines have matured significantly in developing and defining theories of the best practices to successfully deliver project outcomes. Over the past few decades, academicians and practitioners have recognized that project and program management disciplines have matured significantly in developing and defining theories of the best practices to successfully deliver project outcomes. However they are missing the link aligning the projects with strategic goals of the company in order to maintain and/or further strengthen its competitive advantage in the market. The concept of project strategy is still not omnipresent and many companies making it an explicit part of the project management experience is a real challenge. Every organization receives benefits linking the new products with strategic goals.

PROJECT PORTFOLIO MANAGEMENT (PPM):

Traditional management practices such as project management or program management have failed to add more value to the organizations by aligning the projects with the strategic goals of the firm and therefore a new management paradigm has been evolved to complete the addressed issue. Earlier processes like the organizational strategy, decision support systems have given support to the companies to solve the strategic problems to a certain extent, whereas, new management paradigm, project portfolio management (PPM)

helps organizations, enhancing decision-making, improving alignment with business strategy, maximizing resource utilization and enhancing project execution to optimize return on investment (ROI).
In the literature, academicians and practitioners have stated that project portfolio management makes use of continuous and consistent evaluation, prioritization, budget considerations and finally selection for the greatest value and contribution to the strategic interests of the company [1]. In general, growth of organizations results from the successful projects, but selecting right projects that generates more value in the perspective of financial returns and aligning them with strategic goals is an immense and intricate challenge to the companies. Project portfolio management is defined as: *The centralized management one or more portfolios, which includes identifying, prioritizing, authorizing, managing, and controlling projects, programs, and other related work to achieve specific strategic business objectives* [2].

PPM CAPABILITY MATURITY:
Capability Maturity Models (CMM) have become a popular way for organizations to build the capabilities ever since the Software Engineering Institute (SEI) has introduced CMM Levels to measure the capability of Project Management practices of the organizations. Also organizations use CMM levels to compare their capabilities with a standard and identify areas for improvement and development [3]. Perceptibly any maturity models that include PPM Maturity Model provide organizations with an easily understood and applied conceptual framework within which specific management processes can be optimized to efficiently improve the capability of the organization [4]. As organizations begin adopting PPM practices to help support their charter, many are realizing that their organization needs a kind of maturity model to describe or assess the current level of their company's culture, capabilities and processes and set realistic goals to maximize the value for organization with respect to PPM [5]. PPM maturity model is one such model that is used to describe the state of an organization's effectiveness at performing PPM tasks and mapping out the logical ways to improve an organization's services.One of the aims of this research study includes evaluating the levels of the Capability Maturity of PPM in the selected software companies. To execute a pragmatic and ingenuous qualitative research, the concept consists of the six elements which are further considered as parameters to assess the PPM capability maturity level [6,7]. As shown in Figure 1, PPM maturity model consist of

- Portfolio Revision – Frequency
- Selection Methods-Review and Adoption
- PPM Quality Control Process Level
- PPM Process-Maturity Level
- PPM Process-Longevity and
- PPM Process-People Familiarity

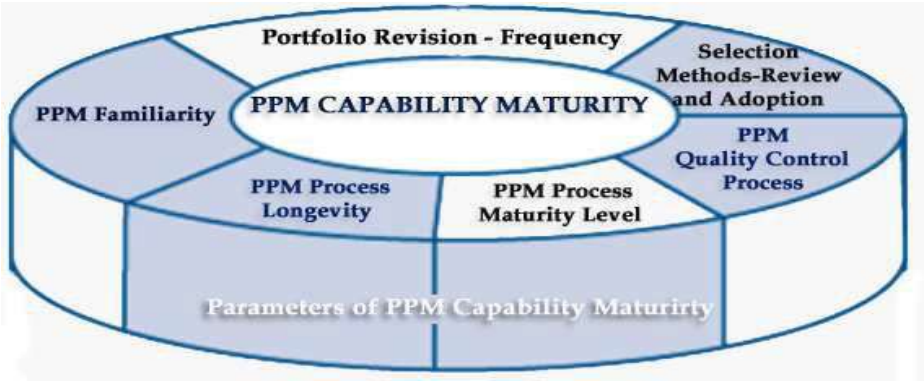

Figure 1: PPM Capability Maturity – Concept Elements

RESEARCH METHODOLOGY:

The current study is in the specialized area of Project Portfolio Management (PPM) with special reference to project portfolio capability maturity model in the view of strategic business management with the following sample design:

Sampling Universe:	Management groups
Sample Frame & Unit:	PPM implementing
Sample Size:	144 respondents
Sampling Tech Used:	Proportionate stratified random sampling
Sampling Procedure:	The study sample respondents in the ratio of 1:2:6:6:1:2 from Tier-I, Tier-II, Tier-III, Senior Tech Management, Operations Management, and Marketing/Sales Management Groups

The following management groups which is presented in Table 1 are selected as respondents, because these groups are the only one involved in decision making process as well as in project management related activities.

Table 1: Profile of Respondents

Occupation Type	Frequency
Tier-I Management	8
Tier-II Management	16
Tier-III Management	48
Senior Technology Management	48
Operations Management	8
Marketing/Sales Management	16

RESULTS AND DISCUSSION:

To perform the data analysis effectively and efficiently, Cumulative Weighted Average (CWA) method was employed to evaluate the objectives of the study. This considered being more relevant and appropriate, because the questionnaire records the responses from the selected respondents on 5-point Likert-scale.

The research study attempts to assess and establish the application levels of Project Portfolio capability maturity methods using the processed primary data that is presented in Table 2.

Table 2: PPM Capability Maturity Level

PPM Capability Maturity – Elements	CWA
Portfolio Revision – Frequency	3.00
Selection Methods-Review and Adoption	3.16
PPM Quality Control Process Level	2.92
PPM Process-Maturity Level	3.02
PPM Process-Longevity	3.08
PPM Process-People Familiarity	2.98
Infrastructure Support to PPM	3.06
Meeting Capability of Unexpected Demands	2.96
Management Support in practicing PPM	3.02
Unit responsibility in improving PPM process	3.24

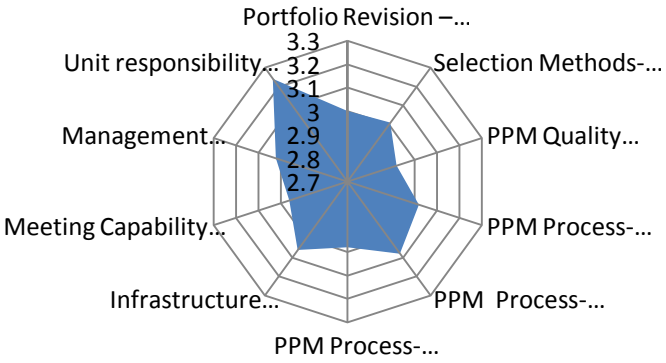

Fig 1. Adherence Levels of PPM Capability Maturity

As shown in Figure 1, the adherence levels are underprivileged and it is essential to improve the levels in order to achieve the benefits of project portfolio management. The unit responsibility is the major factor that influences the implementation and enhancement of PPM capability maturity. The product selection methods and its review and adoption are the next major factor implementation and

enhancement of PPM capability maturity. All other factors such as infrastructure, management support and PPM Process are influencing the maturity.

CONCLUSIONS:

The study findings confirm that the companies prefer to employ traditional methods to introduce new product without considering the benefits of the project portfolio. The capability maturity majorly depends on the technical and production unit members, the product selection stake-holders. The other factors such as infrastructure and PPM process also influence the new production induction as part of strategic planning. This warrants that the companies have to change their product selection process in order to balance the financial and strategic benefits of the company.

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