

The characteristics of benefits realization in the context of portfolio/program/project management maturity models¹

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Abstract

Organizations have embraced benefits realization as a key strategy to obtain and sustain beneficial program and project outcomes in uncertain environments. To manage project-based organizations effectively, to deliver outputs within the criteria of scope, time, and cost, and to realize and sustain benefits successfully, merging benefits management (BM) with traditional project management is inevitable. To handle this issue, matured organizational governance is needed to guide all those who are involved from defining intended values to achieving business outcomes. This governance can help organizations to determine their level of BM maturity, and how they can evaluate their BM strengths and weaknesses. The purpose of this article is to define the level of BM maturity in the context of traditional portfolio/program/project management in different kinds of maturity models. This research outlines where portfolio, program, and project maturity models stand from BM perspective. This research reviews and assesses maturity models; Portfolio, Programme and Project Management Maturity Model (P3M3); Project Management Maturity Model (PMMM); Organizational Project Management Maturity Model (OPM3); Capability Maturity Model Integration (CMMI); and Project Management Process Maturity (PM)² model to find the level of benefits management popularity in maturity models, and reviews Benefits Realization Management practice guide.

Keywords – Benefits Management, Benefits Realization, Maturity Models, Portfolio Management, Program Management, Project Management

1 - Introduction

Managing a portfolio of projects and programs is a key challenge in organizations to align projects and programs with their strategic objectives [1]. Organizations need to enhance their capabilities to plan and manage efficiently their defined projects and program in delivering their outputs and outcomes [2]. This leads to the concept of project management maturity [3] and development of maturity models for organization as a key success factor to raise performance, and reach goals and objectives [4]. Maturity model

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is a measurement tool using to assess the current certain aspects of organizations to define capabilities require for continuous improvement [5]. A Project Management Maturity (PMM) Model helps organizations to understand and analyze their project management processes to develop capabilities in project management [6]. PMM models can be a beneficial management tool which is intended to help managers and organizations in order to face more effectively with these days complex and uncertain business environments [7]. The appropriate level of PMM for each organization will be different based on the organization's strategies, goals, objectives, capabilities, abilities, environment, and requirements [8, 9]. There are different kinds of maturity models to evaluate and determine the level of organizational maturity in project management [6].

Most organizations focus on the implementation of projects and programs, not on the realization of expected business benefits and value [10]. The general view that projects and programs fail continually has made organizations and professionals find effective solutions and approaches to succeed [11]. To help organizations gain their intended outcomes and more value, it is necessary to consider benefits management through projects and programs as well as portfolios and business activities to enhance abilities in driving organizational strategies [10, 12]. Benefits are defined in two types: tangible (objective and financial measure); and intangible (qualitative measure) [13]. Since organizational emphasis gradually shifted from project management to project benefits management [14], PMM models need not incorporate directly the benefits management criteria in their approaches.

The purpose of this research is to determine the level of Benefits Management (BM) maturity within different kinds of PMM models which outlines the strengths and weaknesses of the BM in organizations and accurately indicates where an organization stood from BM perspective. Although an effective and comprehensive framework, tools and techniques help organizations to increase their BM capabilities, BM maturity cannot happen overnight and should be implemented base on a specific roadmap in each organization to optimize their value. Each level of BM capability brings considerably increased ability to obtain the full value. Organizations need to make sure the maturity of benefits management leads to achieving business value.

2 - Portfolio, Program and Project Management

Organizations have realized to reach organizational objectives and survive business, besides ongoing organizational activities, they need to define a portfolio of projects and programs [15]. A project is a set of activities to deliver products, services, or results through project phases [16]. Project management is largely concerned with achieving specific project deliverables that support business and organizational objectives [17]. The life of projects is broken in five phases; initiating, planning, executing, monitoring and controlling, and closing [18]. Project life cycle is followed by project managers throughout moving stages to complete projects and delivers outputs [19]. Project managers use project management processes to lead project activities with a defined duration, costs, resources, and quality to get customer satisfaction [20, 21]. Delivering projects on time,

within budget, and according to qualifications are famous criteria for project success measurement [22, 23] which recognized as an iron triangle (scope, time, cost) [24]. The success of project management is measured by performance of completing project within time, cost, scope and quality [25, 26]. Project-based organizations need a competency greater than just capable of executing projects technically [27]. To manage projects, organizations are required professional project managers with interpersonal and team skill [18]. Many projects do not be successful because they cannot deliver the expected products, services, or results [28]. Effective project management processes and skilled project managers can contribute organizations towards project success but it is unlikely that they can be able to prevent failure [29].

A series of projects which deliver a common output is called program [30]. This collection of projects realizes a benefit for organization which cannot accomplish by each project individually [31]. Program management bridge the gap between project outputs and organisational strategies [32]. Program management processes are used to manage and lead related projects to get an organizational strategy [33]. Programs focus on achieving the intended benefits and business outcomes for which programs was initiated and need to deliver outputs within cost and schedule [32]. Program management coordinates elements and operational initiatives and manages their interdependencies in order to realize strategic benefits [34].

Archer and Ghasemzadeh [35] defined a portfolio as a collection of projects and programs conducted under the sponsorship or management of a company. Project portfolios select projects and programs which are aligned with strategic objectives based on scarce resources [36]. Project portfolio management facilitates initial assessing, selecting, and prioritizing projects and programs [37]. During the project and program executing phase, project portfolio management reprioritize projects and programs, to reallocate resources if necessary [38]. Furthermore, project portfolio management defined by PMI [39]: portfolio management balances conflicting demands among portfolio components, allocates resources based on organizational priorities and capability and integrates management values and wide-ranging practices to deliver business value aligned with the strategic objectives. Portfolio management selects the best portfolio components, prioritizes the work, provides the needed resources, and enables the achievement of portfolio value [36].

3 - Benefits Realisation Management (BRM) and Benefits Management (BM)

Benefits are the crucial cause that organizations undertake investment in projects and programs [40]. BM has a supportive role to bridge the gap between traditional project management and achieving anticipated strategic value for organizations [41]. This requires a reliable method to align project outputs, business outcomes, and benefits to strategic objectives [40, 42]. Project benefits can be realized when deliverables and outputs are provided and used by stakeholders [43].

Other terms such as Benefits Realization [44, 45] and Benefits Realization Management [12, 46] have been used in the literature. Breese [47] considered BM as Benefits Realization Management (BRM) and defined it as a group of processes assuring that portfolios, programs, and projects consider the requirements of business strategies in order to generate value in a significant and meaningful method [48]. PMI [49] defined Benefits realization management as a “collective set of processes and practices for identifying benefits and aligning them with formal strategy, ensuring benefits are realized as project implementation progresses and finishes and that the benefits are sustainable—and sustained—after project implementation is complete”.

BM is a practical approach [50] of how to identify and manage business benefits to achieving organizational value [51]. BM drives the organization to organize for and reach the benefits while investment evaluation provides the reason for investment. In Project Management Institute (PMI) standard for program management [49], program benefits management includes benefits identification, benefits analysis, and planning, benefits delivery, benefits transition, and benefits sustainment. Within program management, BM pairs and links with investment evaluation in the business plan [14].

While project management has an effective governance, tools and techniques in organizations to address the challenges faced by project managers in delivering products, services, and results, an extension of the governance is needed to support organizations in Project Benefits Management (PBM) to generate outcomes and benefits from outputs [52]. Projects, programs, and portfolios governance structures must include benefits management and steps should be considered to ensure benefit management is involved and remains aligned with organizational strategy [41]. PMI [53] defined three major gateways for benefits realization management framework: Identify, Execute, and Sustain which can be accomplished through portfolios, programs, and projects. Benefits realization strategy needs to align with organizational values [53]. Organizations use BM to identify benefits, implementing their BM plans, and keep sustained the realized benefits. The BM framework is considered to define, implement, deliver outcomes, and sustain intended benefits which are embedded from the portfolios, program, and project outputs throughout the BM lifecycle in the identify, execute, and sustain gateways [10]. Utilizing BM framework helps organizations to concentrate on the reason of identifying projects and programs initiatives and the benefits realization which is created as their outputs.

BM plan developed by organizations provides a broad perspective of how BM to be addressed for achieving a group of planned benefits by the submitted explanation of scheduled activities, timelines, and necessities. BM plans are monitored, measured, evaluated, and reported during the BM life cycle (i.e., Identify, Execute, and Sustain). BM provides the monitoring and controlling system to inspect actual benefits realization which tracked by the governance structures to ensure the sustainability of tangible and intangible benefits after projects and program completion. BM tracking includes defining benefits realization metrics which is critical to reaching the tangible and intangible benefits of portfolio, program, and project providing insight into organizations by estimating the level of successful realization and reporting trends. Therefore, in order to

have successful BM, defining measurable, appropriate and understandable metrics is inevitable to make adequate monitoring before, during, and after project benefits realization [54].

Many of those who are involved in portfolio, program, and project management have responsibilities in BM roles and it includes extra roles to concentrate especially on benefit realization activities throughout the benefit realization management life cycle. Depending on the organization size and type, different roles are in charge of BM, for example, business analysts may be responsible for BM and following or portfolio managers may be responsible for portfolio BM. Roles and responsibilities in BM may be handled with a RACI (Responsible, Accountable, Consulted, Informed) chart as helpful tools and technique [53].

4 - Project Management Maturity (PMM) Models

Today's projects and programs are becoming more complex in a turbulent environment for those who perform them. Project management system and governance should be standardized to become understandable for the project team [29] and be matured to get advantages and competencies in competitive environments [55]. For development and continuous improvements of project management systems, PMM models are necessary to help organizations to understand project management effectiveness and success [56]. The maturity can be mentioned to a condition where the organizations are perfect to reach their goals and objectives [57]. Project maturity means that the level of organizations abilities to manage their projects [5]. Maturity in portfolio, program, and project management includes iterative processes and system development leading to organization success [58].

PMM is the basis for measuring the maturity of portfolio, program, and project management methodologies, and processes [59, 60]. PMM models provide a standards framework to empower an enterprises' business results by evaluating and measuring projects, programs, and portfolios management system weaknesses and strengths, by enabling comparison of organizational governance with best practices, and by assessing and gap analyzing between desirable organizations' project management maturity level and their projects' performance.

. Furthermore, maturity models assist to make comparative indicators to utilize project, program, and portfolio management best practices, tools and techniques through organizations driving in similar business environments. PMM models demonstrate how organizations have progressed in portfolio, program, and project management processes, tools and techniques based on the maturity levels and its effectiveness on portfolios, programs, and projects outputs and deliverables [61].

4-1- Organizational Project Management Maturity Model (OPM3)

The Organizational Project Management Maturity Model (OPM3) – 3rd edition published by PMI, is prepared guidelines to improve organizational project management within organizations by assessing the existence of best practices, which are the methods, presently known within a given industry, to realize a specified goal or objective [61]. Process improvement stages are ‘standardize’, ‘measure’, ‘control’, and ‘improve’ among portfolios, programs, and projects utilized to prepare organizational maturity roadmap to reach the desired level of maturity demonstrated in the Figure 1 [61]. This model focuses on organizational environments from strategy to business value realization as an outcome of portfolios, programs and projects, and business impact and value performance analysis as well. OPM3 cycle includes four steps: acquire knowledge, process assessment, manage improvement, and repeat process to compare, design, and improve organizational project management in ten PMBOK knowledge areas. OPM3 does not include foundational concept or best practice to develop benefit management maturity model.

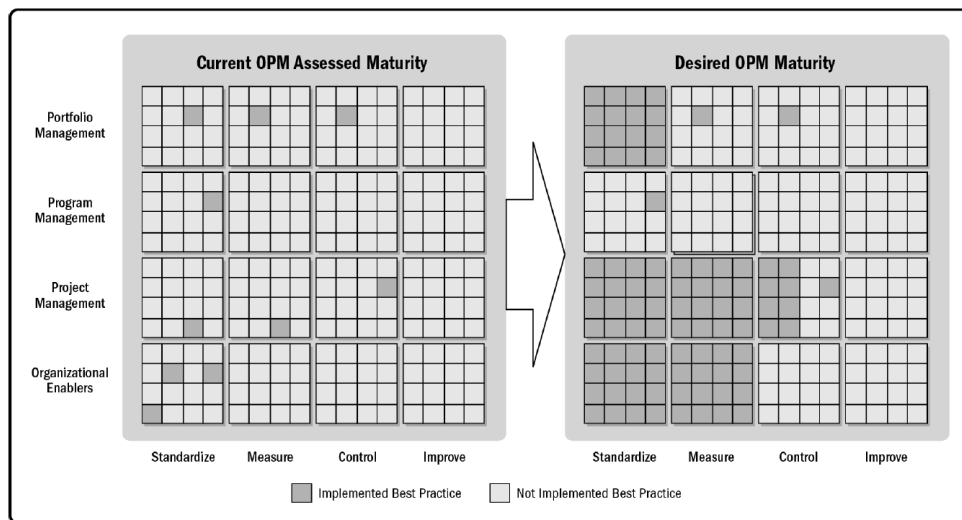


Figure 1: OPM3, Project management institute [61]

4-2- P3M3 (Portfolio, Programme and Project Management Maturity Model)

P3M3 – version 3.0 [62] was one of the primary maturity models in the P3M sector delivered (global best practice). It was primarily released in 2006 and the final edition was published in 2015. P3M3 looks at the entire system, not just at the processes. This tool investigates the balance between the abilities of the persons who drive portfolios, programs, and projects, the process, the tools that are set up to support, and the management information used to develop delivery and improvements. P3M3 is

developed by a five-level maturity framework: awareness; repeatable; defined; managed; and optimized process [62] as illustrated in the Figure 2.

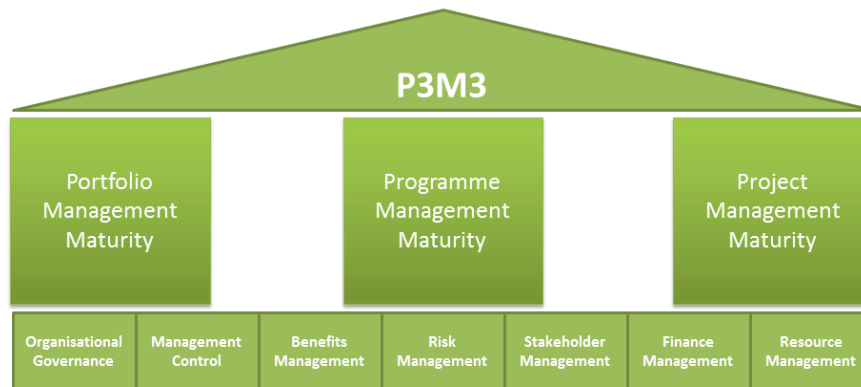


Figure 2: P3M3 [62]

This model provides three maturity models which help organizations to consider a specific business area separately in portfolio, program, and project maturity model. Each sub-model includes seven perspectives: organizational governance, management control, benefits management, risk management, stakeholder management, finance management, and resource management.

In the benefits management perspective, the model concentrate to assure that organizations consider and manage the benefits that are supposed to be gained from the outcomes and investments. The characteristics of the benefits management perspective are as follows:

- Benefits identification and analysis
- Requirements management
- Benefits estimation
- Defined sets of responsibilities
- Benefits management competencies
- Benefit categorization
- Benefit planning
- Value management
- Operational performance management and achievement of outcomes
- Business change management
- Risk rating of benefits
- Evaluation and review of benefits effectiveness
- Benefits accounting
- Business case benefit assessment

Although there is an overview of the description of the benefits management perspectives in each level of maturity, this model does not have the specific area for benefits

management maturity model to dedicate models, inputs, tools and techniques, and outputs as a best practice.

4-3- Project Management Maturity Model (PMMM)

The Project Management Maturity Model (PMMM) is a tool developed by PM Solutions [63] to evaluate an organization's PMM. When the primary level of maturity and area of improvement are recognized, the PMMM offers a roadmap, drawing the required steps to take toward PMM development and performance improvement [63]. Based on the PM solutions model demonstrated in the Figure 3, the PMMM has five maturity levels: 'initial process', 'structured process and standards', 'organizational standard and institutionalized process', 'managed processes', and 'optimizing processes'. Since the structure of this model has been developed based on the PMBOK knowledge areas, and benefits management has not been considered as the main area. BM maturity model is therefore not present and needs developing and implementing.

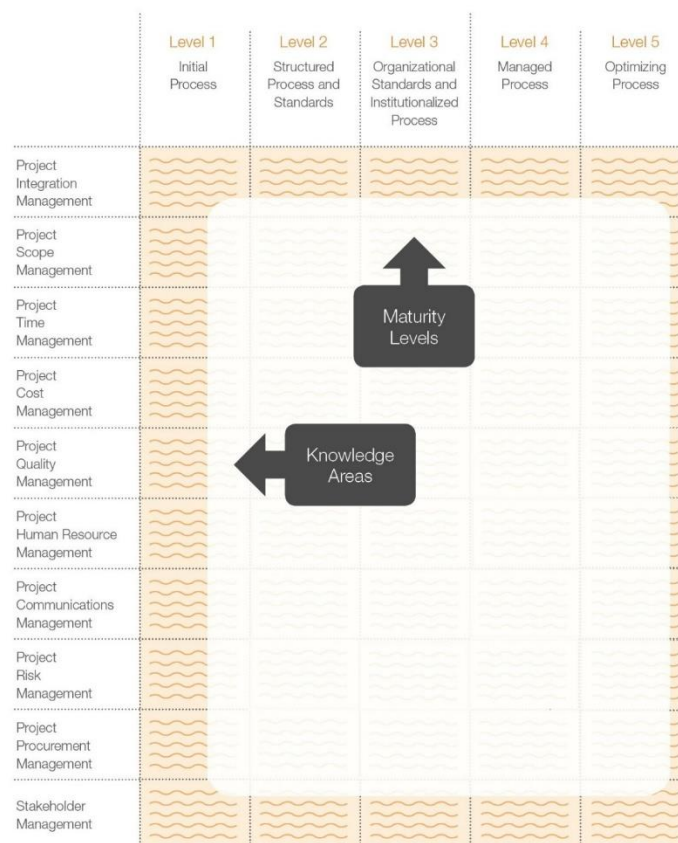


Figure 3: PMMM [63]

4-4- Capability Maturity Model Integration (CMMI)

The CMMI is a maturity model for software process level improvement published by the CMMI institute. The CMMI institute is the subsidiary of Information Systems Audit and Control Association (ISACA). This model has five levels to define the characteristics of

software processes maturity for continuous improvement: ‘initial’, ‘managed’, ‘defined’, ‘quantitatively managed’, ‘optimizing’ (figure 4) [64]. In the CMMI, each level considers a group of key process areas for software organizations to advance maturity. Process areas may be different based on the organizations and projects needs and requirements [65]. For example, in level 2 key process areas are: ‘requirement management’, ‘project planning’, ‘project monitoring and control’, ‘measurement and analysis’, etc. however, this model does not focus on benefits management specifically in process improvement maturity levels. Benefits realization in software projects is inevitable and should be deliberated to increase the success probability in agile environment by aligning stakeholders’ requirements with project deliverables.

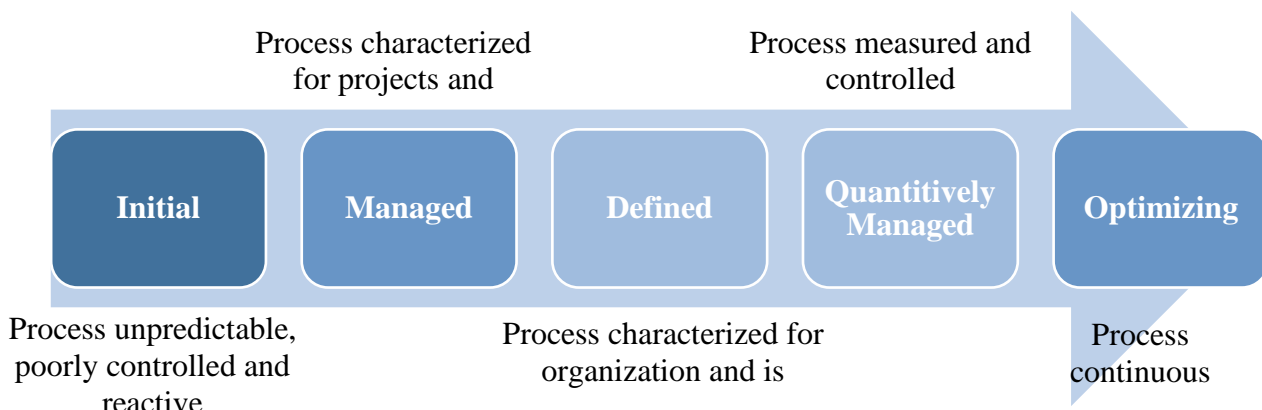


Figure 4: Levels of Capability and Performance [66]

4-5- Project Management Process Maturity Model (PM)2

The Project Management Process Maturity Model (PM)2 is another maturity model for projects which introduced by Kwak and Ibbs [7] for identifying and measuring diverse project management levels by considering project management knowledge areas with project process groups. The (PM)2 has disciplined process to reach higher levels of maturity in five steps: basic PM process, individual project planning, systematic project planning and control, integrated multi-project planning and controlling, and continues project management process improvement which demonstrated in the Figure 5.

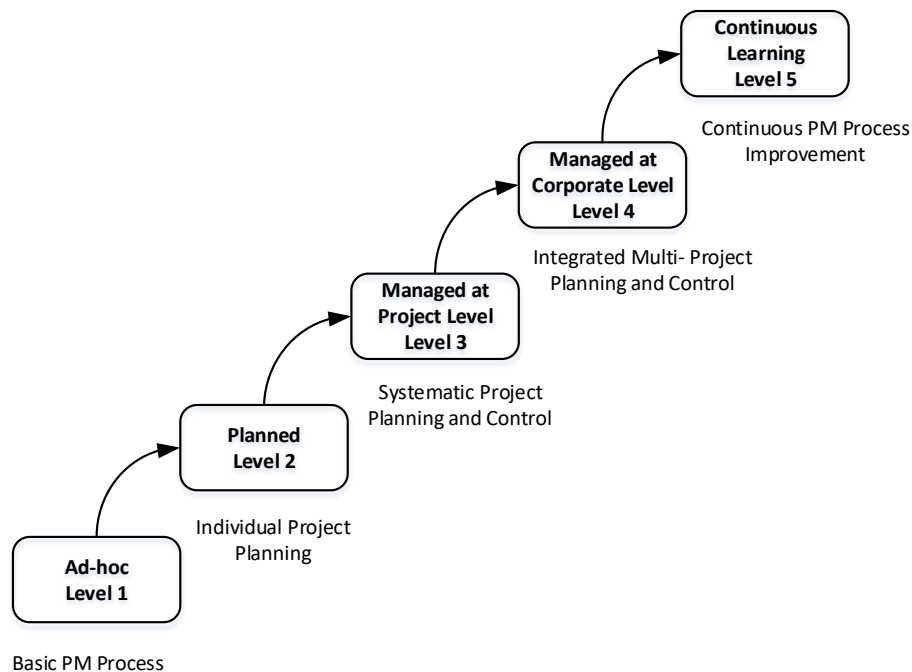


Figure 5: (PM)2 [7]

As (PM)2 integrates project management knowledge areas and process groups against real project performance information, it is a step toward a realistic and quantitative method for project management performance measurement [67]. Since this maturity model focuses on the project area and its outcomes based on Iron triangle (Scope, Time, Cost) from initiating to closing, benefits management maturity is not considered throughout the programs and portfolios in organizations.

4-6- Benefits Realization Management practice guide

The benefits realization management published by the Project Management Institute [53] as a practice guide to introduce the framework of benefits realization management throughout portfolios, programs, and projects. In this practice guide practitioners and project managers encouraged to engage benefit realization management effectively. For the first step, organizations and project managers must find their level of capabilities and abilities to Identify, Execute, and Sustain benefits. To reach this aim, in appendix X2, benefit realization management readiness survey introduced. This survey helps organizations to have a self-assessment and realize where they stand in important factors of benefit realization management. The survey completed by organizational roles who have responsibility in benefit realization management such as benefits owner, executive leader, portfolio, program, and project manager, etc. Core principles and critical success enablers (CSEs) of benefit realization are assessed by this survey which detailed in the practice guide [53].

Although the appendix X2 of the benefits realization management practice guide prepares the assessment framework to recognize the level of organization readiness for benefits management, this practice guide has not introduced a solution by which organizations can develop a benefits management roadmap to get mature.

5 – Discussion

This paper studied the characteristics of benefits realization in the context of the portfolio, program, and project management maturity, and showed the lack of Benefits Management (BM) in the existing maturity models. BM can support organizational decisions and ensure correct strategic attention throughout iterative improvement and maturity advancement [68], which can be applied in organizations regardless of their size and type (i.e., industries) even public and private sector.

BM is important and enhances organizational performance and value [54]. Also, maturity models as a tool can assist organizations of all sizes to determine their current state, to evaluate their improvement progress and to get the desired level in having capabilities. This paper expands portfolio, program, and project management maturity models literature by providing insights on BM. Based on the literature, although Portfolio, Program and Project Management Maturity Model (P3M3) [62] has benefits management perspective, it has not published a specific framework for benefits management maturity model with defined maturity specifications, criteria, steps, tools and techniques. There is a lack in preparing and developing the specific Portfolio, Program, and Project Benefits Management Maturity Model (P3BM3) to help organizations increase their productivity in portfolio, program, and project BM and improve their benefits realization infrastructure aligning with organizational strategic objectives throughout the project executing phase and also monitoring performance in the project commissioning phase.

To reach our aim, two solutions are suggested: 1) incorporating BM in the existing maturity models and developing desired specifications, criteria, tools and techniques; 2) developing an independent Portfolio, Program, and Project Benefits Management Maturity Model (P3BM3) which requires the following steps:

- 1) Defining an effective BM maturity framework
- 2) Preparing steps/gates of BM maturity cycle level, tools and techniques
- 3) Defining criteria affecting project BM maturity (Identifying, Executing, Realizing and making Sustainability)

The proposed P3BM3, as an integrated framework, is applicable in different contexts such as government departments, non-profit enterprises, and private sector to assess their organizational maturity in benefits management. Organisations often respond to the challenging and complex business environments through defining projects or programmes, while at the same time focusing on their organizational objectives and

benefits that should be aligned with their strategies, and help facilitating organizational processes to be faster and more efficient. Furthermore, scales for different levels of maturity needs to be developed in order to help assessors and managers to have a standard to find the current maturity of projects and define the gap improvement roadmap [69].

6 – Conclusion

In recent years, organizations are looking for the efficiency of their investments, benefits realization, and maximize value. This could not be possible without using an effective standard or guide assessing where organizations stand from Benefits Management (BM) perspective. Thus, it needs to have a powerful Benefits Management Maturity Model, with which Organizations can not only assess their current status and define their maturity in BM but also draw their BM roadmap to improve their weaknesses. This paper presents both a summary of portfolio/program/project management maturity models; P3M3; PMMM; OPM3; CMMI; and Project Management Process Maturity (PM)2 model, as well as a definition of benefits management popularity in maturity models. This paper shows that there is a lack in Portfolio, Program, and Project Benefits Management Maturity Model (P3BM3) helping organizations evaluate the level of BM maturity and define improvement points throughout portfolio, program, project management. Further research needs to review other portfolio, program, project maturity models to discuss their point of view on BM. Furthermore, it requires to improve benefits management perspective in existing maturity models or develop an effective conceptual P3BM3.

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