MEASURING PROJECT MANAGEMENT MATURITY: THE CASE OF PRIMER SWITCH SOLUTIONS SHARE COMPANY

By

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DECLARATION

I, the undersigned, hereby declare that the effort contained in this project work is my own original work and that I have not previously submitted it, in whole or in part, to any university for a degree, diploma, or other advanced education organization.

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LETTER OF CERTEFICATION

This is to certify that Tizita Goytabe's project work, titled "**Measuring project management maturity :in the case of Primer Switch Solutions S.C**" submitted in partial fulfillment of the requirements for the degree of Master of Arts in project Management complies with university procedures and meets recognized standards in terms of originality and quality.

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Acronyms

PSS: Primer Switch Solutions share company

PMMM: Project Management maturity Models

CMM: Capability Maturity Model

COVID -19: Corona Virus Disease of 2019

NBE: National Bank of Ethiopia

PMI: Project Management Institute

PMBOK: Project Management Body of Knowledge

SEI: Software engineer Institute

ATM: Automated Teller Machine

POS: Point of sale

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Abstract

Project management maturity is defined as the progressive development of an enterprise-wide project management approach methodology, strategy, and decision-making process and The Project Management Maturity Model (PMMM) is a framework designed for measuring an organization's project management capability when progress or development is required. Measuring the current maturity level plays an important role in improving project management performance and achieving organizational goals. The organization manages a number of Strategic, tactical and operational projects aimed at improving service delivery, product innovation, and gaining a competitive advantage in the payment ecosystem market. The goal of this research is to measure the maturity of the primer switch solution share company, identify gaps, and provide recommendations to close those gaps and progress to the next level of maturity. The PM solutions project management maturity model was implemented, and the study used a mix of qualitative and quantitative approaches. Questionnaire and interview was used as a data collection tool in the study, and the Statistical Package program for Social Sciences was used for data analysis and interpretation. According to the study's findings, All project management knowledge area components were implemented in all projects and scored above average, and the company maturity level was three, indicating that there were organizational standards and an institutional process in place, indicating that there is consistency and comprehensive methods to project implementation; however, there is a gap noticed in project quality management, which received a low score in the assessment agreed upon by the participants and information gained through the assessment of secondary resources, and project scope management received a high score, indicating a good performance in scope plan management., monitoring and controlling of scope and a near high score for other knowledge areas .There was also a gap in focusing mostly on strategical and tactical type of projects, with the majority of the gap observed in operational type of company projects. Furthermore, a knowledge gap regarding project management discipline and practices was discovered in the project team.

Key Words: project management, project maturity level, Project maturity models, project knowledge areas.

CHAPTER 1

1.INTRODUCTION

1.1. Background of the study

Project management maturity level enables the capability examination of project management of organizations. Project management maturity Model (PMMM) is a framework that is designed for a capability measurement of project management of an organization when a progress or development is required. Measuring the existing maturity level has significant role to benefit performances of project management.

The majority of maturity models have adapted five levels of maturity stage beginning from lower level of maturity, initial (Level 1), to the highest level of maturity, optimized (level-5).

Level 1 – Initial level

The processes in the project management are on expedient base and intermittently chaotic. The achievement of projects depends on the abilities of the project teams.

Level 2 – Repeatable level

The basic processes are used to follow cost, schedule and quality. In the project management other processes are repeatable.

Level 3 – Defined level

The processes are well established in this level of project management.

Level 4 – Managed level

In this level processes are well-defined and the organization will set goals.

Level 5_ Optimizing level

Considering lesson learned and flaws prevention, there will be continuous process improvement of project management.

A number of maturity models are available such as Capability Maturity Model Integration (CMMI), PM Solution' Maturity Model, Kerzner's PM Maturity Model-PMMM and Organizational Project Management Maturity Model (OPM3) are relevant maturity models.

Digital Payment service platforms have been well acknowledged by customers and highly spread to the world. In developing countries mostly electronic Banking has been utilized and it is rapidly expanding in emerging countries.

The Ethiopian government established and issued its Growth and Transformation Plan (2010–2015) in order to strengthen modern payment systems. In addition, it unveiled its second Growth and Transformation Plan (2016–2020).

Now, the National Bank of Ethiopia has crafted and announced a National Digital Payment Strategy 2021-2025, which has been forwarded by the Prime Minister, emphasizing nationwide transformation in digital payment by changing regulations based on intercontinental standards, allowing the payment service to be given greater prominence and aligning the NDPS with other transformational plans in Ethiopia.

In the current dynamic and vibrant world of business, continuous improvement in all aspects is a key to success for an organization, Project management has been very popular in the information technology field during the past numerous decades, with specific project management techniques and practices of organizations growing progressively sophisticated. Many Information Technology organizations start "projectize" their operations due to the specific management style Kwak & Ibbs, (2000). Project management tools and practices verified to be supportive in meeting today's time-to-market, highly competitive IT business and E-payment ecosystem. Nowadays, projects are considered to be the media by which organizations turn business opportunities into valued business assets. If a company runs good projects, Revenue will increase, costs will be decreased and less capital is required to achieve its business goals. Lavingia ,(2001).

However, Constricted budgets, shorter timelines, inadequacy of resources and rapidly altering technology demand better project management functions in order to deliver results to come across the intents of business goals. Responses to the impact of changes in a project environment require flexibility and crucial amendment of project management plans. Mostly various professionals relies that a robust project management practice enables attainment of organizational objectives through projects.

The heterogeneous nature, bordered by organization with diverse scope, requirement, and interest make Technology organizations to face lots of challenges. This coupled with absence of proper PM methodology; usually cause poor project planning, lack of responsibility and stakeholder management, lack of risk management strategies, unmotivated project team and eventually leading to project failure.

In order to win over the challenging forces and achieve success in projects, an organization need to look for best practices and focus on well-suited outputs based on the requirements. The projects also need to be able to create, maintain and disseminate knowledge and experiences as well as to establish an organizational culture that supports creativity and knowledge sharing through clear communication channels.

Thus to stay competitive and efficiently manage projects through lessons Learnt, regular assessment of project management development is tremendously significant. It will spectacle how the organization is managing projects and indicate areas that need improvement and also support management decision on prioritizing area of focus. Assessment where the organization is positioned for its projects and where it wants to go is one way to do the improvements. Grant and Pennypacker, (2006). The improvement may even require structural change for project management.

To measure and evaluate project management maturity level of organizations considering the availability of different models, this research will concentrates on implementing a particular project management maturity model to assess the project management practices of premier Switch Solutions S.C. The findings will reveal the gap and provide insight to the project management practice of the company and forward recommendations to improve its practices of project management.

1.2. Back Ground of the Organization

Premier Switch Solutions S.C (PSS) is an organization formed by six private banks i.e. Awash Bank, Hibret Bank, Nib International Bank, Birhan Bank, Addiss International Bank, and Cooperative Bank of Oromia. Deliver electronic payment service to financial institutions and reduce the high investment cost of modern payment platforms with a shared system was the main vision of its formation. It was established in 2009 by the member banks, Also allotment of payment instruments like ATM (Automated teller machine) and POS (Point of sale) with in the interoperability of the shared platform.

A capital of Birr 165 Million on July 5, 2012 PSS starts its operation to serve its member banks. The organization is also committed to contribute to the modernization of National Payment System in the country through providing interconnectivity and interoperability among members through shared network which conforms to all relevant international standards and enhancing economies of scale by investing on e-payment infrastructure. Premier Switch Solution is aggressively operating in the area of digital payment in Ethiopia and shares a common state of the art electronic payment system platform, and provides their customers with secure, efficient and innovative payment means.

Founded with the vision to be the corner stone of attaining a cashless society in Ethiopia, PSS's goals are to: contribute to in the country for the modernization electronic payment ; improve the investment cost on electronic payment infrastructure; provide interconnectivity and interoperability amongst participants; connect to the National Switch; provide vital retail payment statistics for tactical and strategic planning purposes; and provide a mechanism for proactive detection of card frauds.

PSS has planned to accomplish its vision through provision of efficient and diversified e-payment services to a growing number of customers using state of the art technology that is beneficial to both member banks and users, and in compliance with all relevant international standards.

1.3. Statement of the problem

In order to achieve its vision of becoming corner stone of reaching a cashless society in Ethiopia, PSS have many initiatives to undertake which will be managed in the form of projects to achieve the required results which will give a better competitive advantage, excellent service delivery and enhancement of customer satisfaction. Therefore, project management is very crucial for attaining the vision of the company. Based on this fact, the organization did not know where they were or where they wanted to go in project management because no assessment was performed over the course of ten operational years, which could lead to failure in the organization's project management.

Besides this, PSS has established recently a PMO that is functioning under IT department to manage projects. This is an indication that the organization is not focusing on project management, despite the fact that they are handling a large number of projects. In addition, there are customer complaints about time delays, quality, and other unsatisfactory issues raised in the pre-assessment, indicating the need to measure the organization's project management maturity in order to take action.

1.4. Research Questions

The research will respond to the following questions based on the findings of the assessment.

1) What is the project management maturity level of premier switch solutions S.C?
2) What are the gaps in project management practices based on the maturity level of project management?

1.5. Research Objectives

1.5.1. General objective

The study's overall goal is to assess the project management maturity level of premier switch Solutions S.C by implementing the PM solutions maturity model.

1.5.2. Specific objective

- Measure the primer Switch solution Share Company's project management maturity level.
- Identify the gap in project management practice through the project management maturity model.

1.6. Significance of the Study

Primer Switch Solution S.C as a competitive E-payment industry providing a shared switch and serving six private banks, currently the organization is in the movement of implementing five year transformation plan. Understanding where the company is on the project management process has a significant impact on the organization success. Thus it will provide inputs by identifying the gaps and present a direction for the organization change in the project management aspect.

This research enables the company to understand the level of maturity of the project management and comprehend what are the areas they have to work on to align the project management with overall organization strategies objective.

This study also will give insight how they can assess the project maturity and enable primer switch solution Share Company to construct a continuous improvement plan on the matter wherever there is a gap in the project management process to get the competitive advantage they desire in the market of E-payment industry. And entertain the benefit out of the improvements.

Assessing the level of project management maturity of the organization will enable scholars to get a reference while doing research's in related topics especially in the E-payment industry since there are a, few related studies were conducted in E-payment ecosystem.

1.7. Scope of the study

This research delimits itself in the assessment of maturity level of project management, through the selected project maturity model based on theoretical facts to understand the maturity level of primer Switch Share Company and identify the gaps through theoretical and empirical analysis and give insight on the improvement area.

1.8. Limitation of the study

The application of selected model makes it possible to assess the level of maturity of the organization. However, depending on the views of the researcher to select the model for the assessment, it is emphasized that in order to provide an exactitude assessment of the maturity level using the selected model, it is vital to consider the limitation of the model resulting from its use and outcome presented. If the organization maturity level were further analyzed using other maturity models, the result may provide extra information. In addition, in the pre-assessment of the organization project management practice, when observed in holistic manner most of the projects are operational, some of them are tactical and few of them are strategical considering this, the assessment will exclude program management and portfolio management.

1.9. Definition of Terms

Project: It is a temporary endeavor which has definite ending point commenced to create a unique service or product that differs in some distinctive way from other product or services. (PMI, 1996).

Project management: It is the use of knowledge, skills, tools, and techniques to complete project activities in order to meet project requirements. To achieve this, project management process groups like initiation, planning, executing, monitoring and controlling, and closing must be followed. (PMI, 2004).

Project management maturity: refers to the gradual development of a methodology, strategy, and decision-making process for enterprise-wide project management. (PMBOK, 2013).

Project management maturity level; - The maturity level of a project management process is a well-defined indicator of progress toward achieving it. The levels add another layer to the process improvement implementation.

Project management maturity models; A maturity model is a framework for assessing an organization's process capabilities and comparing best practices. It’s a set of dependable, tried-and-true procedures centered on a single discipline. From initial to optimized practices, a five-step framework can be used.

1.10. Organization of the study

This study will be organized in to five chapters. Chapter one focuses on overall introduction of the research that comprises back ground of the study, back ground of the organization, statement of the problem, research questions, objective of the study, significance of the study, scope of the study, limitations of the study and definition of key terms.

Chapter two contains the review of related literatures. In this chapter, the theoretical and empirical studies will be reviewed to have depth understanding towards the subject matter under the study. It also determines how the projected research follows the previous literatures assembled from reputable journals.

The third chapter concentrates on the methodology that will be used in the research. This section gives details on how to collect data and how to perform analysis, interpretation and discussion of results.

The findings and analysis part of the research will be presented and discussed in chapter four. Finally, chapter five presents the summary, conclusion and recommendations section and also states areas of research value considering for future studies. List of references used and appendices are also involved at the end of the research report.

CHAPTER 2

2.REVIEW OF RELATED LITERATURE

This chapter presents the basic theoretical concepts of project and project management, project management maturity, project management maturity models that aid to understand the study and also empirical point of view that reflects studies conducted under project maturity.

2.1. Theoretical Review

2.1.1. Project and Project Management

To understand a project, it is important to go through organizational processes. A process is defined as continuing and day-to-day activities in which companies are engaged in their operation to produce goods and services (Pinto, 2010 pp 24-25). A process uses existing systems to assimilate efforts in a repetitive way. In the other hand, a project is executed separately from repetitive and process-driven work in a unique manner. So a project is non-repetitive action with a definite start and finish of arrangement of tasks (Maylor, 2005, p.4) which need skills and talents from different functions of the organizations. It is sequence of unique, complex, and connected activities that have one goal or purpose and that must be completed by a specific time, within budget, and according to specification. (Wyscocky, 2014).Wysocki (2014) also stated that Projects have a specified completion date.

According to PMBOK (2008) Guide which is considered as a standard definition, project is a ‘temporary endeavor commenced to create a unique product or service. Projects must have a single goal. However, very large or complex projects may be divided into several subprojects, each of which is a project in its own right (Wysocki, 2014).

On the other hand PRINCE2 defined a project as “a management environment that is created for the purpose of delivering one or more business products according to specified business need”. Nicholas and Steyn (2012) also stated that, a project involves a single, definable purpose and well-defined end-items or deliverables. Although repetitive elements may be present in some project deliverables and activities, this repetition does not change the fundamental, unique characteristics of the project work. In the words of Maylor (2010), a project is unique because the exact project has not been performed before.

Like any other organizational activity projects utilize resources. Projects consume human and nonhuman resources (i.e., money, people, and equipment) (kerzner, 2014). But these resources are limited for projects. Projects have resource limits, such as a limited amount of people, money, or machines that are dedicated to the project (Wysocki, 2014).

Moreover, a project comprises a number of activities that must be completed in some specified order, or sequence (Wysocki, 2014). The sequence of the activities is based on technical requirements, not on management prerogatives. To determine the sequence, it is helpful to think in terms of inputs and outputs. The output of one activity or set of activities becomes the input to another activity or set of activities.

Project is considered as achievement of a specific objective while; project management is a process of planning, scheduling and controlling of a project to meet the objectives. This doesn't include the critical human relations and project evaluation performed after project completion. Project brings about change and the management of change in an efficient way is realized as project management (APM, 2006, p.2).

According to the Project Management Institute, project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements (PMI, 2013). Likewise the Association for Project Management also defined project management as the application of processes, methods, knowledge, skills and experience to achieve the project objectives (APM, 2012). These two definitions are oriented towards application of various means to achieve project objectives.

On the other hand, project management has been defined from management functions perspective by Kerzner (2009). Kerzner (2009) stated that, project management is the planning, organizing, directing, and controlling of company resources for a relatively short-term objective that has been established to complete specific goals and objectives.

Project management is accomplished through the appropriate application and integration of project management processes, which are categorized into five Process Groups (PMI, 2013). These five Process Groups are: Initiating, Planning, Executing, Monitoring and Controlling, and Closing.

2.1.2. Understanding project life cycle (Process Groups)

To have repeatable project success and achieve the desired objective of a project a basic understanding of project life cycle is very crucial. When you take the time to establish a clear and consistent vision, imagining who involved in bringing the project to life and secure the resources needed becomes a mandate, and then gives the project a robust start that sets the stage for everything that comes next.

As project, is a process of working to achieve a certain goal, it passes through several distinct phases or stages which is called project life cycle. It is also known as stages in project development. PLC demonstrates the logical framework for managing a project. It provides as a guide to develop our plans, decide when to allocate resources, evaluate the progress of the project (Pinto, 2010, p.32). Since specific deliverables and activities of a project can vary throughout the project it is important to map the life cycle and cost during the time span of the project.

The project life cycle includes the steps required to successfully manage a project .There are 5 phases to the project life cycle (also called the 5 process groups)—initiating, planning, executing, monitoring/controlling, and closing. Each of these project phases represents a group of interrelated processes that must be undertake and are separate divisions to manage the deliverables as well as enabling the project manager to classify the workload into more manageable components. The boundaries may or mayn't be integrated and requires different skills and control and monitoring mechanisms to supervise the overall project stages (PMBOK, 2008, p.15).

Initiating phase: - This project life cycle consists of two separate processes the project charter which consists key component that includes Business case, Project scope , deliverables, objectives, resources needed, milestone plan and timelines, Cost estimate, risks and issues and dependencies. And stakeholder registers that secure approvals from an authorizing stakeholder. At this phase those processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase. Within the Initiating processes, the initial scope is defined and initial financial resources are committed (PMI, 2013). In this phase no actual project activity is not performed (Wysocki, 2014).

Planning phase: - This process group is where the project infrastructure that will enable you to achieve your goal within your predetermined time and budget constraints are constructed, initial with a project management plan, project scope, work breakdown structure and risk analyses and risk responses. Those processes are executed to establish the total scope of the effort, describe and refine the objectives, and progress the course of action required to attain those objectives (PMI, 2013). Definition of the work requirements, definition of the quality and quantity of work, definition of the resources needed, scheduling the activities, evaluation of the various risks are activities included in this group according to Kerzner (2009).

Executing phase is where most of the budget is allocated and most of the project deliverables produced. That is when the project plan is put in to action that might take weeks, months, or even years. The goal of this phases it to effectively manage teams while coordinating timeline expectations and reaching benchmark goals. This phase includes team development, stakeholder engagement, and quality assurance activities. This processes implemented to complete the work defined in the project management plan to satisfy the project conditions. This process group involves organizing people and resources, handling stakeholder expectations, as well as assimilating and performing the activities of the project in accordance with the project management plan (PMBOK, 2013).

Monitoring and controlling: - This phase involves comparing the actual progress of the project against the plan and taking corrective action wherever necessary. This process group consists of processes requisite to track, analyze, and orchestrate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes (PMI, 2013). Under this group, activities that relate to tracking progress, comparing actual outcome to forecast outcome, analyzing variances and effects, and making corrections are performed by the project team (Kerzner, 2009).

Closing phase: This stage is the final phase of the project life cycle that includes one solitary process that enables to simply check the project is done. It is important to formally close the project, secure the sign-off and get approval from the customer, stakeholder and project sponsors. This phase might include project delivery, hosting a review meeting, compiling project records, celebrating or acknowledging the achievement and formally termination of the project team. Therefore, those all activities across all project management process groups are to

officially complete the project, phase, or contractual responsibilities. This process group, when completed, verifies that the defined processes are completed within all of the process groups to close the project or a project phase, as suitable, and formally launches that the project or project phase is complete (PMI, 2013).

2.1.3. Project Management Body of Knowledge

Project management body of knowledge is a comprehensive term which defines the overall knowledge with in the profession of project management. The PM body of knowledge is a standard for managing most projects. It includes proven tools and techniques used to accomplish project management processes towards successful project outcome (PMBOK, 2008 p.13). The Body of knowledge is evolving from the PMI's PMBOK guide which categorizes and recognizes good practices.

Knowledge Area exemplifies a whole set of concepts, terms, and activities that make up a professional field, project management field, or area of specialization and most of the time they are used on most projects (PMI, 2013).This knowledge area incorporates a wider overview of the project management processes and they are used incorporate the outputs of other project management body of knowledge for project planning process and formation of consistent, inclusive and well-designed project processes and activities and also organizing of the various activities of the project planning, execution and control of the project. The ten PM Knowledge Areas are discussed below.

2.1.3.1. Project scope management

Project scope management knowledge area incorporates the processes which are required to confirm that the project comprises all the work required to complete the project successfully and whether the scope is well defined and communicated with all stakeholders clearly. There are four critical activities such as scope definition, work break-down structure (WBS), project delivery plan and scope change control that will be performed under the project scope management. Generally, managing the project scope is mainly concerned with defining and controlling what is and is not included in the project (PMI, 2013).

2.1.3.2. Project time management

Project time management knowledge area provides time estimates for both the duration of a project assignment and the actual effort or labor time required finishing the task, it includes the processes required to handle the timely execution of the project (PMI, 2013). There are four key activities undertaken in this knowledge area; estimating the period of project work packages, estimating the resource requests, project scheduling that includes sequencing and prioritizing and time change control.

In general it encompasses comparing estimated times to actual times as well as managing the schedule and cost variances (Wysocki, 2014).

2.1.3.3.Project cost management

Project cost management knowledge area includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be performed within the approved budget (PMI, 2013). Processes for cost estimation of work packages, project cost plan and cost change control are key main activities undertaken in the project cost management.

2.1.3.4. Project quality management

Project quality management involves the activities and processes of the performing organization that defines and implements quality policies, objectives, standards and responsibilities so that the project will satisfy the needs for which it was undertaken (PMI, 2013). Quality planning, quality assurance and quality control are the main processes in project quality management. This knowledge area is significant as outputs of different project management processes are measured against some specific standards.

2.1.3.5. Project human resource management

Project human resource management is the process enquired to make the most effective utilization of people capability for a project. It focuses on actions related to the human aspect of the project and, according to PMI (2013), it includes the processes that organize, manage, and lead the project team. According to PMBOOK 2008 HRM, project human resource management includes customers, sponsors, project stakeholders, project team members, individual

contributors and others and involves three main key process ;organizational planning which is concerned with identifying , documenting and assigning project role to project team or group and define a reporting relationship among the group, Staff Acquisition which is related to deploy the required resource and assign to required activities and Team development that is about increasing the ability of the team and stakeholders in the technical and managerial aspect.

2.1.3.6. Project risk management

Project risk management knowledge area is concerned with identifying and responding qualitative or quantitative risks in the project. It focuses on threats, opportunities and risk mitigation plan for the successful management of the project, with this action risks can be reduced or eliminated.

The project risk management knowledge area includes risk identification, risk analysis, risk response and contingency plans and risk ownership. In general this knowledge area involves the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project. The purpose is to enhance the probability of positive outcome and reduce the possibility of negative outcome in the project (PMI, 2013).

2.1.3.7. Project communication management

Project Communication Management knowledge area involves the process that are enquired to confirm timely and proper planning , collection , creation , distribution , storage , retrieval , management monitoring , control and the final character of project information(PMI, 2013). This knowledge area links people and information in thoughtful manner for the proper management of the project, it determines which information should be provided to which individual and up to what level, what communication channel will be used and what will be the associated time frame required. When completed this knowledge area provides assurance that it is managed according to the formal communication plan.

2.1.3.8. Project procurement management (Contract management)

Project procurement management knowledge area involves the processes that are necessary to purchase or acquire products, services from outside the project team which are vendors or suppliers (PMI, 2013). This knowledge area also concerned with procurement planning, RFP (request for proposal) preparation bids implore for products and services, evaluating and selecting potential vendors, contract administration (awarding winner) and contract close-out.

2.1.3.9. Project integration management

Project integration Knowledge Area addresses the adhesive that links all of the deliverables from the Process Groups into a unified whole (Wysocki, 2014). This knowledge area is used to integrate the outputs of other project management knowledge areas for project planning process, and to create consistent, comprehensive and well –designed project processes, activities and coordinating them.

Therefore ,the integrated project plan becomes the outcome that provides Project charter, explanation of project management strategy, scope statement, WBS, cost estimates, time table for the project start/finish dates, responsibility assignments, performance measurement, milestones schedules, key staff required for the project, key identified risks, restrictions, assumptions, subsidiary management plans and other Supporting details that are outputs from other planning processes that are not included in the project plan.

2.1.3.10. Project Stakeholder Management

Project Stakeholder management knowledge area is the last of the 10 knowledge areas (KAs) in the PMI's guide to the project management body of knowledge, that involves all the processes required to identify the people, groups, or organizations that could have impact or be impacted by the project, communicate and engage with them to analyze stakeholder expectations and their influence on the project, and to develop applicable management strategies for effectively engaging stakeholders in project decisions and execution (PMI, 2013).

This knowledge area have four key activities; Identifying stakeholders that is understanding the interest , influence , interdependencies and possible impacts of the stake holders, plan stakeholder engagement that concerned about developing an approach to engage with the stakeholder , the third one is manage stake holder engagement that is communicating appropriately and working with the stakeholders and the last is monitoring stakeholder engagement that is monitoring stakeholder relationship and modify strategies on the way whenever necessary .Project management knowledge area and process group matrix. According to PMI has organized on the PMBOK Guide KAs of processes are groups to their similarities and logical categorization for the ease of process of acquiring skills, when processes moves in the work groups from initiation to closing. The below figure will depicts the project management process groups and knowledge area mapping.

Project Management Process Groups

KNOWLEDGE AREAS	INITIATING	PLANNING	EXECUTING	MONITORING & CONTROLLING	CLOSING
Project Integration Management	4.1 Develop project charter	4.2 Develop project management plan	4.3 Direct and manage project work 4.4 Manage project knowledge	4.5 Monitor and control project work 4.6 Perform integrated change control	4.7 Close project or phase
Project Scope Management		5.1 Plan scope management 5.2 Collect requireme nts 5.3 Define scope 5.4 Create wbs		5.5 Validate scope 5.6 Control scope	
Project Schedule Management		6.1 Plan schedule management 6.2 Define activities 6.3 Sequence activities 6.4 Estimate activity durations 6.5 Develop schedule		6.6 Control schedule	
Project Cost Management		7.1 Plan cost management 7.2 Estimate costs 7.3 Determine budget		7.4 Control costs	
Project Quality Management		8.1 Plan quality management	8.2 Manage quality	8.3 Control quality	
Project Resource Management		9.1 Plan resource management 9.2 Estimate activity resources	9.3 Acquire resources 9.4 Develop team 9.5 Manage team	9.6 Control resources	
Project Communications Management		10.1 Plan communications management	10.2 Manage communications	10.3 Monitor communications	
Project Risk Management		11.1 Plan risk management 11.2 Identify risks 11.3 Perform qualitative risk analysis 11.4 Perform quantitative risk analysis 11.5 Plan risk responses	11.6 Implement risk responses	11. 7 Monitor risks	
Project Procurement Management		12.1 Plan procurement management	12.2 Conduct procurements	12.3 Control procurements	
Project Stakeholder Management	13.1 Identify stakeholders	13.2 Plan stakeholder engagement	13.3 Manage stakeholder engagement	13.4 Monitor stakeholder engagement	

Figure 1, Project Management Body of knowledge and Project management Process Groups Mapping (PMI table 1-4 from Page 25)

2.1.4. Project Management Maturity Models

The tendency of using maturity models for examining the level of maturity in project management and enhancing organization's performance have been increasing in recent years (Crawford, 2010). Organizational learning and improvement can be measured by their abilities and competencies. The assessment can be accomplished by providing answer to questions related with performances 'how are we doing?', 'What strength & weakness do we have?', 'In which part to improve?' and so on (Nicholas & Steyn 2008, p.584). Before dealing with the bases of Project management maturity Models, it is crucial to be clear with maturity, project maturity, project management maturity at prior.

The concept of maturity is polysemous. So it is defined in different ways by many writers this indicates the necessity to clearly imply the discipline in which it is operated. Some of the definitions are presented here under.

Maturity in organizational context is a state that generates perfect condition for organization to attain its desired objectives (Mateen, 2015). Also "Maturity is the level of the organization's process maturity identifies the degree to which processes are properly defined, managed, flexible, measured and effective (Grajewski, 2007, pp. 119-120). And "Maturity is the state of the system, in which it is the constantly discounts the benefits of the development of the applied process solutions that is an expression of the contemporary organization's goal to provide concept of the organization process maturity assessment itself with the capability to respond to turbulent challenges requiring flexible solutions of the environment" (Grajewski, 2016, p. 125).

According to PMI, Maturity is a qualified level of advancement an organization has accomplished with regard to any given process or set of activities (PMI, 2008). Maturity implies a potential for growth in capability and specifies both the productivity of an organization's process and the consistency with which it is practical in projects throughout the organization." (Paulk,Curtis,Chrissis,& Weber, 1993).

Project Maturity is the degree to which an organization practices project management measured by the ability of an organization to successfully complete individual projects (PMI, 2003).

Project Management Maturity "The degree to which an organization practices project management measured by the ability of an organization to successfully initiate, plan, execute,

monitor and control individual projects." (Project Management Institute (PMI), 2003). Project management maturity implies the fundamental approach to the development, methodology, tactics and making of decisions (Crowford, 2007). According to (Kerzner 2013) Project management maturity represents application of standardized processes and methodologies that can enhance the possibility of repeated project successes.

According to Crawford, 2007, project management maturity states to the advanced development of an enterprise-wide project management approach, methodology, strategy and decision-making process.

Mateen (2015) also quoted Andersen and Jessen (2003) who stated that maturity, when applied to projects of organization, provides perfect condition to handle projects. Organizational Maturity is "the extent to which an organization has explicitly and consistently deployed processes that are documented, managed, measured, controlled, and continually improved."((CMMI Product Team) 2002, p. 582).

Bearing this in mind, now what the maturity models are and project maturity models mean, and comprehend different types of maturity models will be reviewed.

Maturity Models: are process models (measurement tools) that are used as a framework to direct enhancement efforts (Jugdev & Thomas, 2002; Cleland & Ireland, 2002).

The use of maturity model benefits organizations to advance the competitive advantage by empowering those delivers expectable results and quality products (Jugdev & Thomas, 2002). Effective utilization of such models that benefits them were reported by different scholars in the. For instance, (Sarshar, et al., 2000) reported a development of productivity and return on investment (ROI).

The use of those maturity models in the analysis of Project Management culture in organizations; particularly aim to identifying weaknesses and strengths in their project management processes, so that it can then define a set of actions and measures to better its performance as an organization (Ferreira and Pereira, 2015).

Appropriate project management approaches and tools for the executing of project management in practice, not only appropriate procedures or competences but other presented methodologies and professional literature are recommended by International standards IPMA, PMI, PRINCE 2.

A number of PMMMs have been generated based on these standards, methodologies, and research studies. These models are called Project Management Maturity Models (PMMMs). Backlund et al. (2014) define PMMM as a tool with the purpose to assess project maturity level and to identify improvement areas.

These maturity models follow to quantify the capability of the organization to manage projects successfully this is the purpose that the PMMMs have be designed for.

There are number of maturity models under the discipline of project management. Each maturity model is dissimilar in terms of their features, factors and ways that affect level of maturity , As has been cited under a thesis written by Temesgen (2013) a number of maturity models have been established and none of them has able to get acceptance through all industries and types of projects (Nicholas & Steyn 2008, p.585). In general, maturity models are adopted from three essential classifications (Nicholas & Steyn 2008, p.585);

Technical Delivery Process Models which originates from the movement of Total Quality Management, (TQM) and focused mostly in assessing their quality management abilities as an example Capability Maturity Model Integration (CMMI) is developed by the software engineering institute (SEI). It is main concern is in documentation of process as ISO standards, which evaluates project management practices against the standard criteria and the level of maturity. The second, Project Management Process Models, emphasizes mainly in project management Body of knowledge from PMBOK®Guide of Project Management Institute (PMI) and the level of maturity in each knowledge area, measured by standardized criteria and appropriate maturity levels. Third, is Total Organization Models which considers the whole organization instead of only projects, Organizational project management maturity model (OPM3) is a right example developed by collaboration of the above two models, CMMI and Project management knowledge areas.

The presence of many PMMMs is demonstrated in literatures. As (Chang & Wei, 2014; Yang & Qiu, there are more than 40 PMMMs is existing. Grant & Pennypacker (2006) mention the existence of 30 PMMMs, Spalek (2015) reports the existence of 32 PMMMs, On the basis of professional literature, the authors of the paper managed to identify 43 PMMMs. Those number are based on international project management standards, simple methodologies or individual or

group research according to (Jane Kostalova & LIbena etrevova (2018) the 29 core PMMMs identified are depicted below Figure

No.	Name	Acronym	Theoretical base	Author of the PMMM/References
1	PRINCE 2 Maturity Model	P2MM	PRINCE 2	Axelos, 2013
2	Portfolio Management Maturity Model	P3M3	PRINCE 2	Axelos, 2010
3	P2CMM Project Management Maturity Model	P2CMM	PRINCE 2	Lianying et al., 2012
4	Project Management Maturity Model	PMMM	PMI	Fincher & Levin, 1997
5	Project Management Assessment 2000	PMA 2000 Model	PMI	Lubianiker, 2000
6	Organizational Project Management Maturity Model	OPM3	PMI	Project Management Institute, 2001
7	Project Management Process Maturity	PM^2	PMI	Kwak & Ibbs, 2002
8	Kerzner Project Management Maturity Model	KPM3	PMI	Kerzner, 2014, 2001
9	Project Management Solution Project Management Maturity Model	$PMMM^{SM}$	PMI	Crawford, 2015; PM Solution, 2013
10	ESI's Project Management Maturity Model Project FRAMEWORK	N/A	PMI	ESI International, 2016
11	IPMA Delta Standard	IPMA Delta	IPMA	International Project Management Association,
12	Project Maturity Model	N/A	*	Levene et al., 1995
13	Project Management Maturity Model by Micro-Frame Technologies of Ontario,	PM^3	*	Remy, 1997
14	Project Management Maturity Model	PMMM	*	Jain, 1998
15	Educational Service Institute's Project Management Maturity Model	PMMM	*	Ward, 1998
16	Project Management Capability Maturity	PMCMM	*	Voivedich & Jones, 2001
17	Project Management Maturity Model	ProMMM	*	Hillson, 2001, 2003
18	Prado Project Management Maturity Model	Prado- PMMM; P2M3 Model	PMI, IPMA, PRINCE 2	Prado, 2002
19	Andersen and Jenssen Project Management Maturity Model	N/A	*	Andersen Jenssen, 2003
20	Project, Program Maturity Model for a Project-oriented Organization	Cobweb Model	*	Fuessinger, 2006
21	IBM Project Management Center of Excellence Maturity Model	WWPMM	*	Harrington, 2006
22	Model Maturity Increments in Controlled	MINCE 2	*	Meisner, 2007
23	Five Step and Maturity Level Model by Project Institute Finland	N/A	*	Project Institute Finland, Haukka, 2013
24	Outcomes and Learning-based Maturity	OLMM	*	Killen Hunt, 2013
25	Business Management Consultants - BMC Project Management Maturity Model	PMMM- BMC	*	Farrokh, 2013
26	Gartner's Program and Portfolio Management Maturity Model	Gartner's PPM Model	*	Gartner Inc., 2014
27	PM: Road Map Maturity Assessment	N/A	*	Interthink Consulting, 2016
28	Project Maturity Roadmap	N/A	*	Pcubed, 2016
29	Portfolio Management Maturity Model	ELENA	*	Nikkhoua et al., 2016

Figure 2, Project Management Maturity Models, (Jane Kostalova & LIbena etrevova (2018).

For this Research, an initial four shortlisted maturity models are explained for better understanding and comparison of these four PMMMs is made. Capability Maturity Model (CMM), PM Solution' Maturity Model, Kerzner's PM Maturity Model-PMMM and Organizational Project Management Maturity Model- OPM3 are relevant maturity models which will be reviewed for the research work.

2.1.4.1. Capability Maturity Model Integration (CMMI)

Capability Maturity Model Integration (CMMI) was first proposed by Software Engineering Institute (SEI) in 1991 that was the first version 1.0 CMM (capability Maturity Model (Mateen, 2015). In later the model was replaced by the Capability Maturity Model Integration (CMMI) in 2002, version 1.1 (SEI, 2006). The latest version of CMMI (2.1), released in 2006, contains a framework that permits the generation of several models. By explaining features of best practices CMMI aid organizations to improve their software development processes for products and services, it also provides direction for managing a measuring, and monitoring software development processes it is described as a union of process enhancement models for software engineering, system engineering and integrated product and process development. CMMI Model can be applied to Industries such as Airline, automotive, banking, education, engineering, health care, IT, telecommunications. This model disregards the need to use numerous models for software development by assimilating various CMM models.

However, as the model is descriptive in nature, it does not express an organization how to improve; somewhat it describes important features that would be predictable to characterize an organization at a particular maturity level (Paulk et al, 1993).

In continuous representation, capability levels are functional to an organization's process improvement accomplishment for each process area. Improvement is characterized relative to specific process areas. There are five maturity levels numbered from 1-5 used to represent.((Zafar)2010, p.26). These levels can only be reached one after the other in order to stage the process improvement effort (SEI, 2006).

Level 1- Initial: In this level of the model processes are unpredictable, poorly controlled and reactive to situations.

Level 2- Managed: Processes are planned, documented, performed, monitored and controlled at the project level. This stage is regularly reactive.

Level 3- Defined: Processes are well categorized and understood. Processes, standards, procedures, tools, etc. are defined at the organizational during this maturity level; this stage is a proactive level.

Level 4- Quantitatively Managed: In this stage, using statistical and other quantitative techniques processes are controlled.

Level 5- Optimizing: When an organization reaches this level, process performance is frequently improved through incremental and innovative technological improvements.

2.1.4.2. Project Management Maturity Model (PMMM by H. Kerzner)

According to Kerzner (2014), models can be used to aid organizations in execution strategic planning for project management and accomplishing maturity and excellence in a rational period of time. The basis for achieving excellence in project management can preeminently be described as the project management maturity model (PMMM) that can be used as a foundation for achieving excellence in project management.

The model is encompassed of five levels, each level representing a different degree of maturity in project management.

Level 1- Common Language: In this level, the organization recognizes the importance of project management and the need for a good understanding of the basic knowledge on project management, along with the accompanying language/terminology.

Level 2- Common Processes: The organization recognizes that common processes need to be defined and developed such that successes on one project can be repeated on other projects at this stage. Also the recognition that project management principles can be applied to and support other methodologies employed by the company is included.

Level 3- Singular Methodology: In this level, the organization recognizes the synergistic effect of combining all corporate methodologies into a singular methodology, the center of which is project management. The cooperation effects also make process control easier with a single methodology than with multiple methodologies.

Level 4- Benchmarking: This level contains the recognition that process improvement is necessary to maintain a competitive advantage. Benchmarking must be performed on a continuous basis. The company must decide whom to benchmark and what to benchmark.

Level 5- Continuous Improvement: In this level, the organization evaluates the information obtained through benchmarking and must then decides whether or not this information will enhance the singular methodology (Kerzner, 2014).

According to Kerzner (2014), at model each level may overlap, since no need to be performed sequentially, although overlapping occurs, there could not be a change in the order in which the phases are completed. For example, even Level 1 and Level 2 can overlap, Level 1 is expected to be completed before Level 2 can be completed (Kerzner, 2014).

2.1.4.3. Project Management Maturity Model (PMMM by PM Solutions)

Project management maturity model (PMMM) is developed by Crawford (2002). According to crowford, the model that PM Solutions developed operates with the ten knowledge areas of PMBOK® *Guide's* and it is patterned after the CMM of SEI. This model allows organizations to methodically and competently develop and measure their project management capabilities. The model has five distinct levels of maturity and inspects an organization's implementation across the ten project management knowledge. This model can be applied to Airline, construction, education and Information Technology company's .The five levels are similar to those in the SEI models that represent a distinct organizational capability based on summary-level features (Crawford, 2002). The levels of PM solutions are explained below;

Level 1: Initial Process – processes are Ad hoc, there are no established practices or standard, management awareness is in place, project data and metrics are informally gathered.

Level 2: Structured Process and Standards - Basic processes are developed at this level, there is no standardization for the projects , schedules and estimates are based on expert knowledge , generic tools are utilized the information is mix of transitional and at summary level. Management support and encouragement exists and it is more projects oriented.

Level 3: Organizational Standards and Institutionalized Process – at this level all processes are formally standardized organizationally and repeatable for all projects, summary and detail

data presentation, schedules and estimates may be on the industry standards , it is more of organizational oriented , project performances will be examined informally.

Level 4: Managed Process – All processes is assimilated at corporate level, the management view is at the organization entity, project performance is solid examination, based on organization specifics schedules and estimates will be managed, at this level management will utilize the data for decision making.

Level 5: Optimizing Process – the improvement of project performance through process metrics of project effectiveness and performance, management focus is on lessons learned and regular assessment of processes for the continuous improvements.

2.1.4.4. Organizational Project Management Maturity Model (OPM3)

Organizational Project management maturity model (OPM3) developed by Project Management Institute, Assesses the degree of an organization ability to meet strategic objectives through successful delivery by using accepted Preeminent Practices to manage project , programs and portfolios of an organization (PMI, 2008). This model is a framework that delivers an organization-wide assessment of portfolio management, program management, and project management to aid attaining best practices within each of these domains (PMI, 2008). The purpose of the model is to provide a way for organizations to understand the project management of the organization and their maturity level against a complete and broad- based set of organizational project best practices (PMI, 2003). This model can be applied in construction, education, engineering, gas and energy, health care, information technology industries.

Knowledge, assessment and improvement are three basic elements to implement OPM3 in an organization. .

Acquire Knowledge – This Model helps organizations comprehend project, program, and portfolio management and measuring maturity by a wide-ranging set of best practices. Component of OPM3 cycle requires knowledge of organization project management, maturity practices and how to implement the model is a mandate before carrying out assessment. Also, understanding of organization for project management practices is developed (PMI, 2008).

Perform Assessment – involves tools for the examination to determine strength and weakness in relation to the body of preeminent practice.OPM3 summaries how to conduct detail assessments

in the most supportive way for the organization through the use of directories. Depending on the result of the assessment the organization may decide to continue with a more in depth examination, and proceed to plan for improvements or exit the process (PMI, 2008). The PMI has developed a set of self-assessment method (SAM) questionnaire that permits an organization perform a high-level and an inclusive assessment of its project management practice. The results of data are formulated in a form of graph which depicts organization's maturity level for project, program and portfolio management (PMI, 2008).

Manage Improvements – After the assessment OPM3 provides direction in placing these order forms the basis for any subsequent plans for improvement. The results from perform assessment stage are compared against best practices standard of project, program and portfolio management. This best practice standard defined by PMI provides basis of improvement. The outcome of comparison between existing practices and best practices allows recommendation for improvement (PMI, 2008). The definite process of applying improvements in an organization, which may include initiatives which are beyond the scope of the standard, such us organizational development, change management, restructuring and retraining (PMI, 2008). OPM3 is conducted using an online tool (Product Suite) that includes: forms to start assessments, database of best practices, and electronic version of OPM3 knowledge foundation book and improvement plans based on completed assessments.

2.1.5. Project Management Maturity Models benefits

Maturity models are created to deliver a framework that an organization desires to develop its capabilities, in order to deliver projects successfully in the long term (Jugdev & Thomas, 2002; Mittermaier & Steyn, (2009) cited in Backlund et al, 2014). (Backlund, et al (2014) also stated the following points as importance of using PM maturity models and assessment:

To set direction, arrange actions, and begin cultural change rather than mainly identifying the current level at which an organization is performing.

To compare project competence between organizations, or between a definite organization and industry standards as a means to benchmark their maturity respect to others.

PM maturity valuation can be employed as a "checkup" tool to measure progress and to identify the next rational steps forward and hence support organizations to view PM as a strategic

enabler. In more general term PMMMs are vital for the improvement of organization performance.

2.1.6. Project Management Maturity Models critical views

The focus on explicit PM knowledge areas and not on intangible assets, which are not measurable but can contribute to a mature PM capability, the complete and complex frameworks may prevent potential users to apply the model, The models are uncompromising when a flexible model is required for managing change and improvements; the models are excessively disciplinary, impractical, and overwhelming as methodologies and the models emphasis on the work processes and some ignore the human resource or organizational aspects. (Jugdev & Thomas, 2002 in Backlund et al, 2014) are criticism views in expending of Project Management Maturity Models.

2.1.7. Selecting a Project management Maturity model

The persistence of applying the maturity model is usually to find improvements by measuring existing practices of project management. Khoshgoftar and Osman (2009) describes that maturity model varies with each other in terms of their features, factors and structure to achieve desired purpose.

According to Grant and Pennypacker (2006) survey on project management maturity assessment that includes 126 individuals on the assessment and survey question of on 42 components, they have concluded that the best maturity models based on the five criteria: alignment of project maturity model with organizations, project management methodology, scope covered by project maturity model, number of publications about specific project maturity model, independency from industry/organization's type ,ease and comfort ability to use and Years of existence. Man (2007) summarized criteria for selection of maturity model as: a). Structure, b). Applicability and c).Usage.

Based on this organizational Project Management Maturity Model (OPM3), Capability Maturity Model Integration (CMMI), Kerzner Project Management Maturity Model (K-PMMM) ,Project, Program, Portfolio Management Maturity Model (P3M3) and Maturity Increments IN Controlled Environments (MINCE) was the shortlists maturity models for the comparison .

then evaluation of the shortlisted were made by the scholars and reveal that OPM3 by the feature that it have the multi-dimensional and enables organization to narrow down the gap between its strategic objectives and projects (PMI-OPM3, 2013) and framework to measure project, program and portfolio management with wide spread of best practice standards (Khoshgoftar and Osman, 2009) were refereed as best from other maturity models. Also many other scholars also confirm with different surveys that OPM3 is the preeminent model (Farrokh Jaleel, 2013) and (Muhammad Mateen, 2015).

Nevertheless, for this research work, four project management maturity model that have receive the greatest attention in the research literature (Nydia González, Franck Marle and Jean-Claude Bocquet,2007) were taken and randomly selected and explained in the prior section. CMMI(capability Maturity Model integration), and H.kerzner Project management maturity Model (K-PMMM), project management Maturity Model (PMMM by PM Solutions) and Organizational Project Management(OPM3) . To select the preeminent model , theoretical facts of each model was taken as a ground.

According to Fahrenkrog, S. L. (2004), OPM3 even if labeled as an outstanding maturity model, has not been preferred for this research due to the fact that undoubtedly, embarking on the OPM3 journey throughout its components knowledge, assessment and improvement represents a very serious commitment of organizational time and resources. Besides, it may take some organizations months or even years to implement the OPM3 Steps, reminding that 600 practices should be reviewed, and a serious pre assessment need to be applied. OPM3 is not proposed to be a quick fix, but reasonably a roadmap, a well-structured and comprehensive guide to the best Practices to be implemented in organizations to achieve its strategic goals. Due to the time constraint to conduct this academic research this model is disregarded.

CMMI provides best practice model for system and software engineering. This model reduces the need to use various models for software development by integrating various CMM models. CMMI does not provide framework for improvement in strategy, portfolio or service delivery. It only emphases on project life cycle development areas only (APM, 2007). CMMI follows staged throughout the levels that a higher level can only be accomplished if requirements for lower stages are fulfilled (Constantinescu and Iacob, 2007). For the inflexible improvement prospect of the model, it is not selected for the assessment.

K-PMMM evaluates processes of project management maturity only. It is based on knowledge areas of PMBOK and does not measure maturity for program and portfolio management. This model is derived from CMMI staged-model maturity level (Kerzner, 2002), thus it also follows orthodox of stage representation for maturity levels. For the same reason as CMMI, it is rejected for this research.

PMMM (PM solutions) is selected to be applied and asses the project management maturity level of primer solution S.C due to its two- dimensional framework that are based of accepted industry standards. And allows organizations to systematically and competently develop and determine their project management capabilities. The model is well structured horizontal arrangement presents the Capability Maturity Models of the Software Engineering Institute (SEI) and vertical arrangement depicts. The key areas of project management adopted from the structure of PMI ten Knowledge areas.

Many researchers utilize this model for different organizations for the assessment of maturity model. Ensuring a well-defined knowledge areas developed by PMI and maturity levels and the fact that it integrates different project management maturity models, it is nominated to be the particular PMMM for this project. Furthermore, since the knowledge requirement is very enormous within each of PMBOK guide, it was vital to break down each of ten areas into key components. This will aid to make a real assessment of maturity (Crowford, 2007). The below figure shows the project maturity model with ten knowledge areas broken down in to key components to be inspected independently to determine the capability and controlling of the specified knowledge area ; sample of scope management.

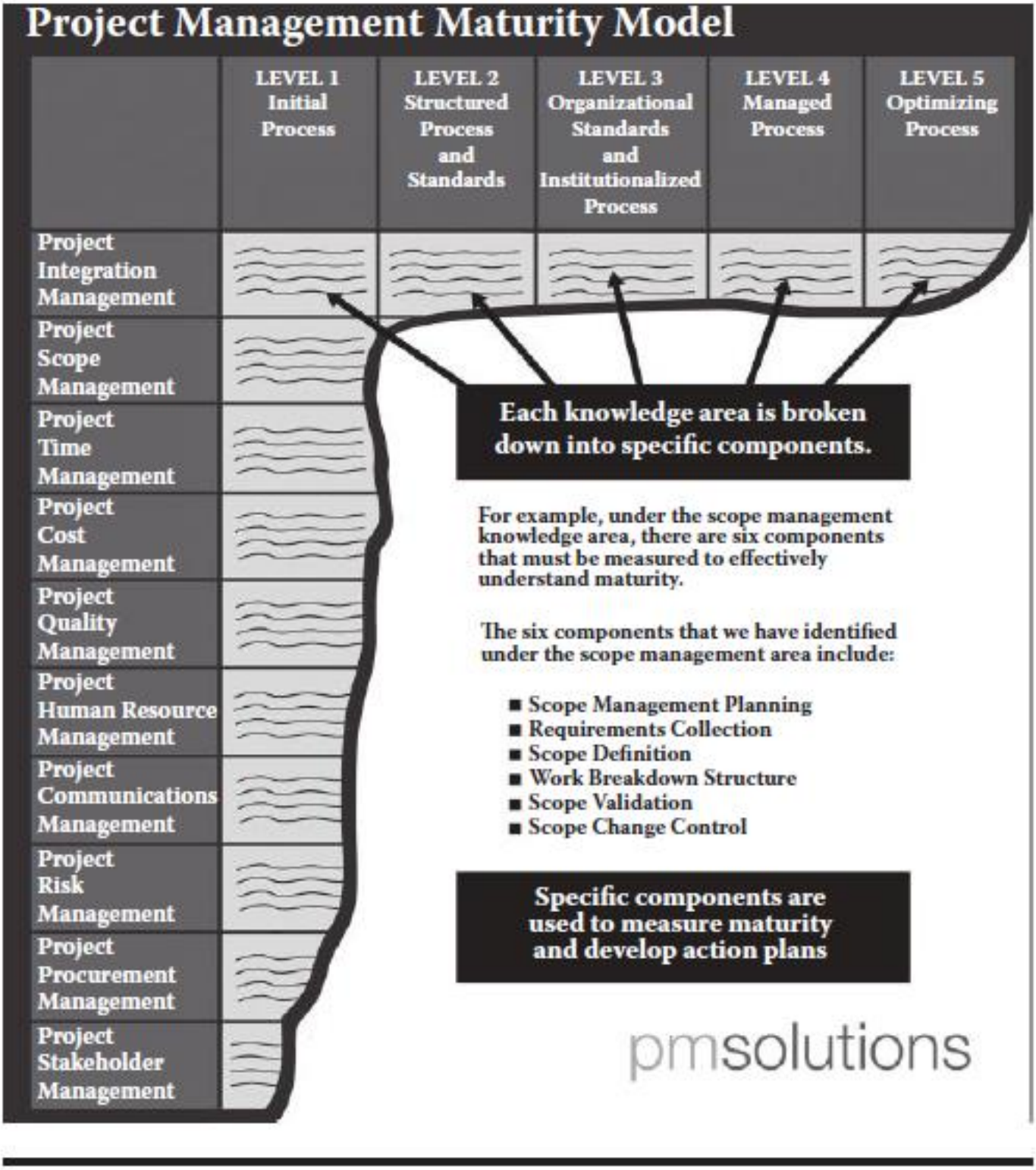

Figure 3, Ten Knowledge areas with its key components, source (PM solutions Figure 1.2 page 5)

2.2. Empirical Review

In the empirical review section related articles and researches will be reviewed to the subject matter under study. Theory only reflects how the maturity of an organization can be assessed and provides a definite frame work to implement and follow some procedures to do it. When it becomes practical and confirmed, that will be an evidence to accept the maturity model implementation for the assessment of maturity level; what will differentiate the maturity of an organization is the score that is revealed by the measurement (González & et al.2007) .The Engineering based organizations do score extremely than industries that adopted project management as a core ability much more recently, such as financial services or pharmaceutical R&D.

Information system and Technology industries, the participants get consensus on the mission, discussion with the project owner, good communication and availability of resources are factors for project success conceHartman & Ashrafi (2002). In the tested organization, based on internal benchmarks, saving on time 10% and cost of 30% were matched by developed quality and customer acceptance. Also another study shows with the involvement of 185 IT specialists there is a statically relationship of project management maturity and overall organization performance Moraes and Laurindo (2011). This shows the importance of project management maturity in every organization for the success of their business.

Grant and Pennypacker (2003), in the research undertaken implementing in their study on Project management maturity an industry the PM Solutions Project Management Maturity Model at the Center for Business Practices (CBP) Consortium , the a benchmarking group involving 900 senior practitioners who have awareness on project management practices and business results across the organization.

The study provides a cross industry benchmark of project management maturity which was conducted using a web-based survey. Out of 123 participant did response from 126, the survey was on 123 firms, and the end result determine that nearly 67% of the firms of project management maturity were level 2 (out of 5) or below. And organizations that companies that depend on their project delivery capability to have a secure future business, need to reach higher level through motivation as a quick win. Also the researchers conclude that there is consistent statistical level of project management among small, medium and large companies.

On project management capabilities through an assessment of project management processes used by organizations, the research designed for the assessment of capability model, focuses on project management process than project performance was conducted in the involvement of 280 respondents from 65 different companies. All of the 65 organizations achieved a level 3 (out of 5) rating. The other 64 organizations were assessed at level 2 (over 70%) or level 1 (25%). In terms of cross-industry comparisons, those industries typically associated with employment of project management as a discipline reflected higher process maturity levels.

In particular, industries such as engineering/architecture, transportation/aerospace, oil and gas, and business services were rated relatively high; while industries such as insurance, financial services, and health services showed lower levels of process maturity. The study reported combined comparisons between organizations of varying size, structure, and risk management approach. This study also performed analysis at one level of decomposition below the aggregated maturity level considering nine key practice areas]. Ibbs and Kwak developed a standard for project management maturity as part of a broader study to determine the financial and organizational impacts of project management. The Ibbs and Kwak study employed the Berkeley PM Process Maturity Model that is an adaptation of the Integrated Project Systems assessment tool. The assessment sample comprised 38 companies, each of which finalized the survey assessment tool.

This study targeted four industries: engineering and construction, telecommunications, information systems, and hi-tech manufacturing. And the scholars revel the overall project management maturity of the 38 companies under the study was 3.26 (of a possible 5), indicating there is a considerable opportunity to improve project management practices in each of the four industries studied. The evaluation of maturity between the four industries was based on the computation of the average maturity level of all organization of the four selected samples.

The researchers reported that engineering and construction (3.36), hi-tech manufacturing (3.34), and telecommunications (3.30) demonstrated relatively high project management maturity compared with information systems (3.06). Also, the researchers completed cross-industry evaluations at one level of decomposition below aggregate project maturity. Precisely, the researchers measured differences based on eight knowledge areas. Similarly, they contrasted maturity levels of the industries with respect to six project management phases.

In Yazici, (2009) study of the role of project management maturity and organizational culture in perceived presentation the PMM was based on eight Knowledge Areas of project management and an average score was calculated for each Knowledge Area and for the Knowledge Are a maturity. Based on the responses collected from 86 project specialists from 75 U.S. organizations, the overall project management maturity was 2.27 (of a possible 5), indicating that there was a great opportunity to progress their project management practices.

Project maturity ranged between 2.6 and 1.93. Looking closely to the sectors, in the case of manufacturing company, the highest project management maturity was found to be attained at the project quality management area, and for service organizations, the highest maturity was achieved at project time management. For both manufacturing and service organizations, the lowest project management maturity was in the area of project risk management, scoring between 1.93 and 2.00.

Project professionals significantly perceived that PMM relates to an organization's internal and external business performances. With higher project maturity, organizations can achieve substantial savings, increase sales growth; show better competitiveness compared with their competitors, and creates best practices in their industry or service sector.

All the above studies focused on the evaluation of project management maturity level by deploying a specific project management maturity model to different industries.to designate the assessment will reveal the gap and identify them for the improvement of the organization performance, success and competitiveness through working on the improvement area.

CHAPTER THREE

3.RESEARCH METHODOLOGY

The methods and techniques used to conduct the study are described in this chapter. It covers the research methodology, research design, population and sample size, data collection procedures, ethical issues, and data analysis.

3.1. Description of the study area

The study was conducted at the premier Switch Solutions Share Company. All of the institutes' projects are included in the investigation.

3.2. Research approach

Researchers use two different and distinct types of research methods Quantitative and Qualitative: The quantitative research can be understood as a research approach that emphasizes on measurement and quantification in the collection and analysis of data while, qualitative research emphasizes on considerate of words than quantification in the collection and analysis of data (Bryman & Bell, 2007).

The selected approach to conduct this research is mixed; both quantitative & Qualitative research approach. Considering the nature of the research problem, purpose of the research and research objectives, Interview will be used for the Qualitative approach and qualitative approach will be used for the analysis method to be applied to examine collected data.

3.3. Research Design

According to Saunders, Lewis, and Thornhill (2009), research design is the overall strategy for how the researcher will respond to the research questions. It includes specific objectives derived from the research question (s), specifies the sources from which the researcher intends to collect data, considers the constraints that will inevitably exist, and discusses ethical issues.

Because the goal of this study is to describe the level of project management maturity, it employs a descriptive study research design. According to Kothari (2004), descriptive research studies attempt to describe the characteristics of a specific individual or group.

3.4. Population and sample

A target population is the collection of those individuals, events and records with the preferred Information for the research study from which a sample is taken (Saunders, Lewis and Thornhill. 2009). Therefore, for this study the targeted population was primer Switch Share Company various projects.

The aim of determining the sample size is to make sure that the population is adequately represented since from the target population applying purposive sampling technique for both interview and questionnaire individuals involving in Projects from different functional unit of PSS and E-banking department of member banks, currently the company have 34 projects and those projects are managed by different functional units of PSS and member bank's employs at different level depending on the project type. Employs are purposely selected informants of which do participate at least in three of the projects from the existing. And three starring committee members of PSS who oversee projects were selected for the interview.

3.5. Data collection procedures

The study employed both primary and secondary data source in order to answer the research questions. A standard questionnaire of liker scale used to collect primary data from the employee. The questioner was developed in google forms and the link was forwarded to the participants through mail, skype and telegram. The questionnaire was constructed based on reviewed literature and tailored to fit with the case under study based on observation of operational activities and documents. The questions are assembled into ten knowledge areas set by PMI in the project management body of knowledge (PMBOK) guide and classified the key components under each knowledge area. To measure those components through the five level of maturity model will help to gain the desired data and analyze the project management practice and the maturity level of the organization.

The indicators of maturity level were evaluated by a five-point Likert scale (1 = initial level, 2 = structured process and standards level, 3 =organizational standards & institutional process level, 4 =managed level and 5 = optimized level) where higher values indicated the maturity level of projects in the organization.

Secondary data like system rule, operational manual, project charter, project plans, project proposal documents, monitoring, periodical reports and other related documents were reviewed as well. This will aid to get further information and strengthen the analysis.

3.6. Ethical consideration

The researcher ensures the confidentiality that the right of the respondent is not violated throughout the overall data collection condition without bargaining the result of the research. The participants were informed the purpose of the research prior of filling the questioner.

Moreover, the researcher protected the data collected from the respondents as the property of Primer Switch Solutions S.C which were not transferred to other competitors of any kind and only used for academic purpose. Both confidentiality and informed consent privileges were secure throughout the life span of the study.

Confidentiality- Protecting the privacy and secrecy of the respondents is one of the main responsibilities of the research professional (Coldwell & Herbst, 2004).

Informed consent – Participants must be well-versed about objectives of the research including the end results if a need arises (Long & Johnson, 2007).

3.7. Data analysis

Statistical Package for Social Sciences (SPSS) tool was used for the data analysis and interpretation and summarizes the collected data of the study in a process that is easy to comprehend.

The respondent's basic information was analyzed through descriptive statistics in the form of frequency and percentage, central tendency (mean) and standard deviation were utilized to analyze the maturity level of projects in each specific knowledge area and overall maturity level of projects in the organization.

3.8. Validity and Reliability Test

The questionnaire were managed to ensure validity through clear goal for the accuracy of the questions. On the other hand other validity issues were handled in existing literatures, different theories of project management maturity levels and comparing explanations for findings. Also referring different data sources and previous scholars and piloting the material aided to enhance the validity.

For the verification of the reliability this study used Cronbach's Alpha coefficient value. According to Serkam (2015) Cronbach Alpha should be greater than 0.70 to create a consistent scale and stated clearly that any scale with a Cronbach Alpha less than 0.70 should be disregarded.

Variables	Cronbach's Alpha Value	N of Items
1. Project Integration Management	.977	7
2. Project Scope Management	.975	6
3. Project Time Management	.977	6
4. Project Cost Management	.972	4
5. Project Quality Management	.901	3
6. Project Resource Management	.922	6
7. Project Communication Management	.973	3
8. Project Risk Management	.973	7
9. Project Procurement Management	.977	3
10. Project Stakeholder Management	.972	4

Table 1,Reliability during pilot Test, Source; SPSS Survey Result

CHAPTER FOUR:

4.RESULTS AND DISCUSSION

4.1. Introduction

This chapter explains the results obtained from the analysis of data's collected from the respondents for the assessment of project management maturity level in the organization under study. Through the employed methodology the analysis of the collected data required to answer the designed research questions. The research utilized a descriptive analysis to interpret the collected data from participants. The data collected by using five levels Likert scale was evaluated by means of Statistical Package for Social Science software. The data was collected from 35 project staffs within the organization using purposive sampling technique. From the total 40 questionnaire forwarded 35 of them filled the questionnaire. This equated to a response rate of 89 percent. According to Mugenda (2003), a response rate of 50% or higher is the minimum for drawing conclusions, 60% is a good response rate and 70% or higher is an adequate and reliable range for further analysis.

4.2. Data Editing and Coding

The first phase of data handling and analysis, according to Zikmund (2003), is editing. To ensure that there are no omissions or missing data from the completed questionnaires, the data was extracted from the Google form using an excel spreadsheet and checked to see if there were any missing values for each parameter. There were no missing or omitted data from any parameter information, demonstrating data completeness and consistency.

		N	%
Cases	Valid	35	100.0
	Excluded [a]	0	.0
	Total	35	100.0

a. List wise deletion based on all variables in the procedure.

Table 2: Case Processing Summary

4.3. Demographic Data Presentation and Analysis

Respondent year of experience, educational level, working experience in the organization, and information related to project management training were the demographic data gathered from participants during the study to ensure that all necessary data were captured to be reliable. The following information presents basic information about respondents based on responses from 35 questioners. The collected data was summarized in a table and analyzed using SPSS.

4.3.1. Respondent education level

The table and graph below show the proportional data on respondents' educational levels. 62 percent of those polled were first-degree holders, while 37.1 were master's degree holders. This implies that all of the respondents are capable of comprehending and responding to the study's designed questions.

Education level		Frequency	Percent	Cumulative Percent
Valid	BA/BSC	22	62.9	62.9
	MA OR ABOVE	13	37.1	100.0
	Total	35	100.0	

Table 3: Educational level of respondents, Source; SPSS Survey Result

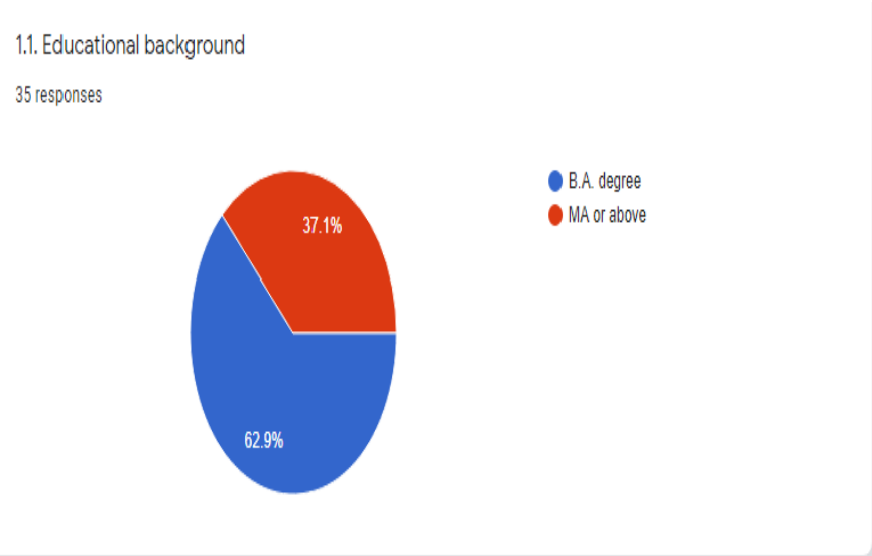

Figure 4, Educational level of respondent, Source; google forms summary Result

4.3.2. Respondent Field of Study

The respondents' field of study was included in the questionnaires to determine that the project teams are multidisciplinary and from various functional units, and that all variables in the knowledge areas can be addressed appropriately, demonstrating that the selected employees are the right individuals for the study.

All of the individuals chosen came from different functional units and fields of study, which will allow for a more diverse and unbiased view of the information. Thus, 45.7 percent of respondents worked in computer science, 17.1 percent in electrical engineering, 5.7 in human resources, 5.7 in marketing, 14.3 percent in accounting and finance, 8.6 percent in project management, and 2.9 percent in leadership. This implies that all of the people who were targeted by the study were included, indicating the study's reliability.

Field of study		Frequency	Valid Percent	Cumulative Percent
Valid	COMPUTER SCIENCE	16	45.7	45.7
	ELECTRIC ENGINERRING	6	17.1	62.9
	HUMAN RESOURCE	2	5.7	68.6
	MARKETING	2	5.7	74.3
	ACCOUNTING AND FINANCE	5	14.3	88.6
	PROJECT MANAGEMENT	3	8.6	97.1
	LEADERSHIP	1	2.9	100.0
	Total	35	100.0	

Table 4, Respondents Field of study Source; SPSS Survey Result

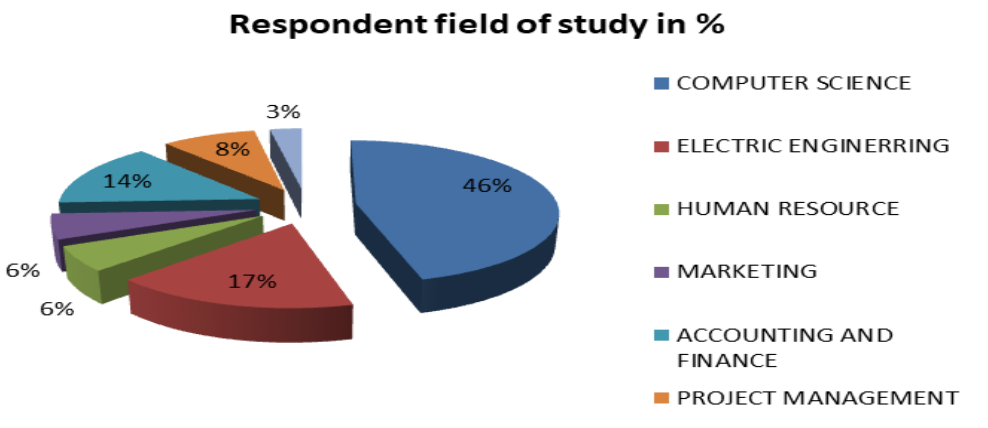

Figure 5, Respondents field of study, source own design

4.3.3. Position of the respondent in the organization

The inclusion of respondents' job positions aids the study in ensuring that the information obtained is complete in terms of the level of responsibility individuals have in the organization, allowing the study to capture all perceptions variations of the participants in overall level of role and responsibilities under their position.

Position of Respondent		Frequency	Percent	Cumulative Percent
Valid	HIGH LEVEL	11	31.4	31.4
	MIDDLE LEVEL	15	42.9	74.3
	LOW LEVEL	9	25.7	100.0
	Total	35	100.0	

Table 5, Position of Respondents, source SPSS Results.

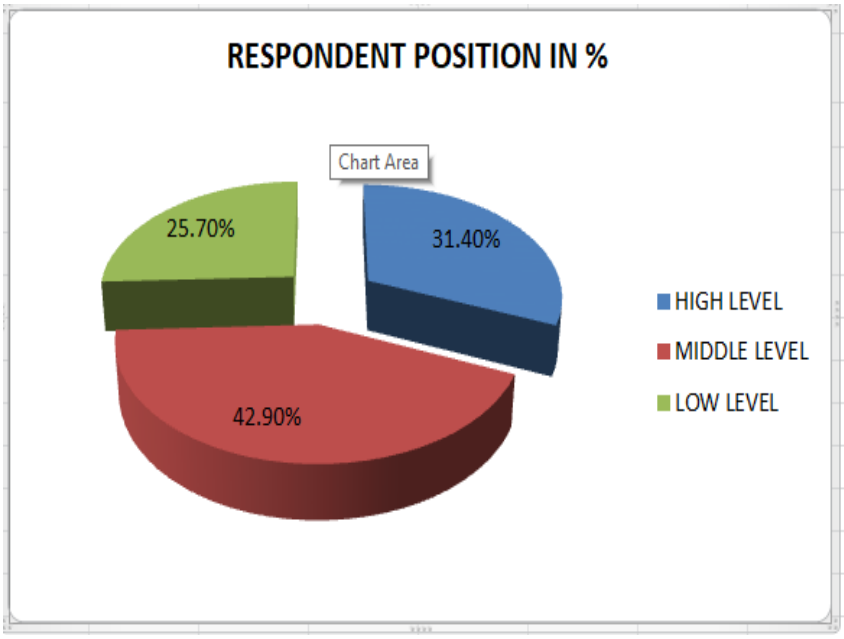

Figure 6, Respondents Position, source own design

4.3.4. Experiences of the Respondents

Participant experience in the organization is critical because it indicates a deep knowledge of the organization's operations and projects to obtain detailed and reliable information. As shown in the table and graph below, 19 of the respondents have worked in the sector for 6 to 10 years, i.e. 54.3 percent, 5 of them for more than ten years, i.e. 14.3 percent, and 11 for less than five years, i.e. 31.4 percent.

Respondent Work Experience		Frequency	Percent	Cumulative Percent
Valid	LESS THAN 5 YEARS	11	31.4	31.4
	SIX TO TEN YEARS	19	54.3	85.7
	MORE THAN TEN YEARS	5	14.3	100.0
	Total	35	100.0	

Table 6, Respondent Work Experience, Source SPSS Result

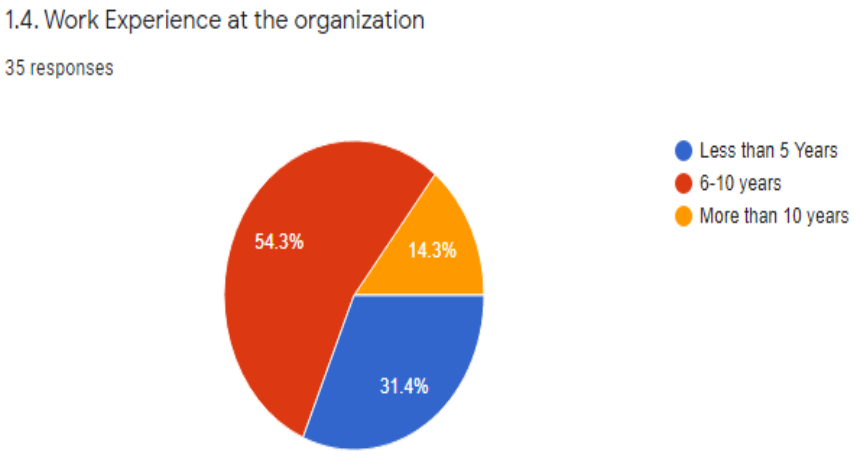

Figure 7, Respondent Work Experience, source Google forms results.

4.3.5. Project Management Training

Knowing whether or not a participant has received project management training will assist in analyzing the participants' perspectives on project management knowledge and disciplines, as well as capturing the perspective of information that were provided in the different categories of participants towards the PMI knowledge areas. The greater the respondents' knowledge and decipherment of project management, the more realistic the response can be obtained. As shown in the table and graph below, 26 participants (74.3 percent) received project management training or a course, while 9 participants (25.7 percent) did not.

Respondent training status		Frequency	Percent	Cumulative Percent
Valid	YES	26	74.3	74.3
	NO	9	25.7	100.0
	Total	35	100.0	

Table 7, Respondent Training Status, Source SPSS Results

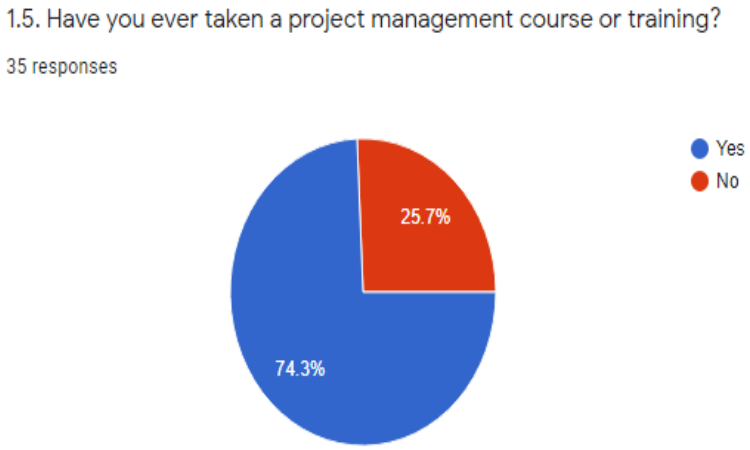

Figure 8, Respondent Training Status, source Google Forms summary

4.4. Descriptive Analysis of Project management Knowledge Areas

Crawford (2002) states that the PM Solutions project management maturity model determines the maturity level of each knowledge area, and the cumulative method can be used to determine an organization's project management maturity level. As a result, the descriptive analysis explains and discusses the findings of the research constructs based on data analysis for each measurement. The findings of the study were discussed in light of the different data sources used in primary and secondary data collection.

4.4.1. Project Integration Management

Project Integration Management					
PIM components	N	Minimum	Maximum	Mean	Std. Deviation
1. Develop Project Charter	35	1	4	2.37	1.060
2. Develop Project Management plan	35	1	4	2.71	1.045
3. Direct and Manage Project work	35	1	5	2.94	.998
4. Manage Project Knowledge	35	1	5	2.94	1.027
5. Monitor and Control Project work	35	1	5	3.14	1.061
6. Perform integrated change control	35	1	5	2.97	1.014
7. Close project or phase	35	1	5	3.14	1.192
Mean of Mean	**35**			**2.9**	**1.05**

Table 8, Project Integration Management, source SPSS Survey.

Table 8 summarizes the project integration maturity level of premier switch Solution Company based on the respondents' agreement on the seven components of the knowledge area. As shown in the table, above average projects has developed a project charter, as measured by a mean score of 2.37 and S.D 1.060. According to respondent data, developing a project management plan has a mean score of 2.71 and a standard deviation of 1.045, directing and managing project work has a mean score of 2.94 and a standard deviation of 0.998, indicating that there is good management and direction of project work in the company, managing project knowledge has a mean score of 2.94 and a standard deviation of 1.027. Monitoring and controlling of project work and close project or phase have the same figure of mean score i.e 3.14 and S.D 1.061 and 1.192 respectively, which shows organization good approach in the two components of the knowledge area and finally the performing of integrated change control has a mean score of 2.97 and S.D. of 1.014.

The findings revealed that the project integration management knowledge area components mean of mean is 2.9 approach to level 3, implying that the primer switch solutions share company project integration management maturity is standardized for all project types, indicating a gap in project charter and project plan development, which necessitates advancement to the next level of maturity in the specified knowledge area. These gaps were also discovered during the assessment of secondary resources for few operational type projects with a timeline of less than a month.

4.4.2. Project Scope Management

Project scope management is the second knowledge area evaluated in the project management maturity level assessment, and it consists of six components. It is an essential stage for any type of project because it aids in the prioritization and reduction of ad hoc work requests, thereby saving time and money. It also serves as a tool for managing client expectations, balancing work loads, and maintaining team morale, all of which are essential for project success.

As shown in the table below, the mean score for the scope management plan is 3 with a standard deviation of 1.3, the mean score for requirement collection is 3.1 with a standard deviation of 1.05, the mean score for defining scope based on respondent collected data is 3.23 with a standard deviation of 1.08, the mean score for creating work breakdown structure for the projects is 3.06 with a standard deviation of 0.998, the mean score for validating scope is 3.17 with a standard deviation of 0.9 and The mean of the final component controlling scope score is 3.2 with a standard deviation of 1.1.

The average mean of project scope management is 3.14, which is close to level 3, according to the respondents' agreement primer switch solution share company has a standardized project scope management to all of its projects, through the document assessment it is also observed that there is a serious scope management to all types of project in the company even if it requires improvements to institutionalize the implementation.

Project Scope Management					
PSM components	N	Minimum	Maximum	Mean	Std. Deviation
1. Plan scope management	35	1	5	3.00	1.260
2. Collect requirements	35	1	5	3.20	1.052
3. Define Scope	35	1	5	3.23	1.087
4. Create Work Breakdown Structure	35	1	5	3.06	.998
5. Validate scope	35	1	5	3.17	.985
6. Control scope	35	1	5	3.20	1.132
Mean of Mean	**35**			**3.14**	**1.08**

Table 9, Project Scope Management, source SPSS Results.

4.4.3. Project Time Management

The assessment of the maturity level of projects at the primer switch solutions share company, the next project management knowledge area is project time management. Project time management is the administration of the time consumed and progress made on project tasks and activities that have a direct influence on the project's quality, scope, and cost. It also aids in project completion time and budgeting.

Project Time Management					
PTM components	N	Minimum	Maximum	Mean	Std. Deviation
1. Plan Schedule Management	35	1	5	2.86	1.141
2. Define Activities	35	1	5	3.03	1.150
3. Sequence Activities	35	1	5	2.89	1.105
4. Estimate Activity durations	35	1	5	3.00	1.029
5. Develop Schedule	35	1	5	3.03	.985
6. Control Schedule	35	1	5	3.03	1.124
Mean of Mean	**35**			**2.97**	**1.08**

Table 10, Project Time Management, source SPSS Results.

According to the data collected from respondents, plan schedule management received a mean score of 2.86 with a standard deviation of 1.1, defining project activities received a mean score of 3.03 with a standard deviation of 1.1, and the sequence of activities received a mean score of 2.89 with a standard deviation of 1.1. Other components, such as estimate activity durations, develop schedule, and control schedule, had mean scores of 3 with SDs of 1.02, 0.98, and 1.12, respectively.

The average mean is 2.97, which is close to level 3, implying that all processes are in place and documented. Nearly all projects use the processes, which are considered an organizational standard. The activity definition process is expanded to include activity templates with time lines that are linked to the responsible business unit or project teams. So that it will be reviewed weekly to amend any schedule changes required due to a variety of factors, thereby controlling the time frame to complete the projects.

4.4.4. Project Cost Management

The other area of project management maturity level knowledge is project cost management, which is the process of managing project costs to establish a baseline for project costs in order to govern actions to keep the budget on track. The main components of this process are developing a cost management plan, estimating costs, determining a budget, and controlling costs.

The analyzed data shows that plan cost management in the organization has a mean score of 2.9 and SD of 1.3, estimating cost has a mean score of 3.06 and SD of 1.08, determining budget of the projects has a mean score of 3.03 and SD of 1.17, and controlling cost process has a mean score of 3.11 and SD of 1.2.

As a result, the average mean of project cost management is 3, indicating a standard process of all projects in primer switch solutions share company regardless of cost management is institutionalized; however, through the assessment of projects, there were projects that did not have a cost management plan; The reason given was that there would be no cost to carrying out the project because it would be carried out using available human and material resources.

Project Cost Management

PCM components	N	Minimum	Maximum	Mean	Std. Deviation
1. Plan cost Management	35	1	5	2.91	1.358
2. Estimate costs	35	1	5	3.06	1.083
3. Determine Budget	35	1	5	3.03	1.175
4. Control costs	35	1	5	3.11	1.207
Mean of Mean	**35**			**3**	**1.2**

Table 11, Project Cost Management, source SPSS Results.

4.4.5. Project Quality Management

One of the knowledge areas in project management that is evaluated for the assessment of project management maturity level of primer switch Share Company is project quality management. It is a process that measures the quality of project deliverables in order to ensure that the project meets or exceeds the needs and expectations of stakeholders. The first step in this process is to plan quality management, followed by quality management and finally quality control.

According to the data summarized below, the organization's development of a quality management plan has a mean score of 2.54 and SD 1.09, the process of managing quality has a mean score of 2.66 and SD 1.08, and quality control has a mean score of 2.7 and SD 1.2.

This implies that the average mean is 2.63, which is close to level three, indicating that all respondents agreed the quality standard processes used in the organization are standardized, but there are some gaps in the quality management plan that are not always addressed by the project team. Even though some projects have a standardized process, testing the quality has not been done for some projects in order not to jeopardize project deadlines. In addition, for some projects, quality will be sacrificed in order to reduce costs by ignoring quality control.

Project Quality Management

PQM components	N	Minimum	Maximum	Mean	Std. Deviation
1. Plan Quality Management	35	1	5	2.54	1.094
2. Manage Quality	35	1	5	2.66	1.083
3. Control Quality	35	1	5	2.71	1.226
Mean of Mean	**35**			**2.63**	**1.13**

Table 12, Project Quality Management, source SPSS Results.

4.4.6. Project Resource Management

Project resource management is the process of planning, scheduling, and managing a project's resources in the most efficient way possible. This includes developing a resource management plan, estimating activity resources, acquiring resources, developing a project team, managing the project team, and controlling resources, all of which will improve resource utilization and project success.

As depicts in the below table all respondents agreed on the plan resource management of primer switch solution that mean score of plan resource management has got 2.6 with SD 1.18, estimate activity resources has Mean score of 2.83 and SD 0.923, acquire resources 0.99, develop project team has obtain a mean score of 2.9 and SD 0.981, managing project team mean score of 2.8 with SD 1.18 and finally control resources has got a mean score of 2.74 and SD 1.19.

As a result of the average mean of 2.79 approaches to level three, the organization's project resource management has a standard process. While evaluating secondary resources and conducting interviews with selected individuals, it was discovered that there was a gap in controlling team resources as well as materials assigned to projects. There was also no resource management plan in place for all operational type projects in the organization, despite the fact that project teams were assigned from various functional units of departments.

Project Resource Management

PRM components	N	Minimum	Maximum	Mean	Std. Deviation
1. Plan Resource Management	35	1	5	2.66	1.187
2. Estimate Activity Resources	35	1	5	2.83	.923
3. Acquire Resources	35	1	5	2.80	.994
4. Develop Team	35	1	5	2.91	.981
5. Manage Team	35	1	5	2.80	1.183
6. Control Resources	35	1	5	2.74	1.197
Mean of Mean	**35**			**2.79**	**1.07**

Table 13, Project Resource Management, source SPSS Results.

4.4.7. Project Communication Management

According to PM Book, the seventh Knowledge Area that ensures the right message is sent, received, and understood among various stakeholders is project communication management, which incorporates three processes: developing a communication management plan, managing communication, and controlling communication. It will aid in keeping projects on track, within budget, and in line with client expectations by defining who will communicate with whom, when, and how.

As per the summarized respondent views below, plan communication management has a mean score of 2.83 and SD1.1, manage communication has a mean score of 2.8 and SD 0.9, and finally control communications has a mean score of 2.7 and SD 1.09.

The average mean of 2.81 indicates that project communication at the primer switch solutions share company is at level three and follows a standard process. All projects, as observed, have a weekly steering committee meeting with the project manager; however, prior to this meeting, all project teams communicate to discuss the project's progress in relation to the time line, budget, cost, scope, other operational issues and stakeholders inquires if any, which will be compiled and reported to the steering committee for status updates and decision on any issues to keep the project on track. Furthermore, meeting minutes will be distributed to the project team so that they can review the action items and, if necessary, inform stakeholders about the project's progress.

Project Communication Management

PCM components	N	Minimum	Maximum	Mean	Std. Deviation
1. Plan communications Management	35	1	5	2.83	1.150
2. Manage communications	35	1	5	2.86	.944
3. Control communications	35	1	5	2.74	1.094
Mean of Mean	**35**			**2.81**	**1.06**

Table 14, Project Communication Management, source SPSS Results.

4.4.8. Project Risk Management

It is well understood that there is uncertainty in the positive outcome of a project, and as a result, there is a need to plan a risk management strategy to mitigate the impact of the project's threat. It is advantageous to deal with numerous unforeseen issues that were not anticipated in the project's plan. It is a method of determining a problem's solution while also addressing budget constraints through budget contingency and improve return on investment by identifying risks. It entails processes such as risk management planning, risk identification, qualitative and quantitative risk analysis, risk response planning, risk response implementation, and risk monitoring.

As shown in the summary plan risk management of the assessed organization has a mean score of 2.6 and SD1.08, identify risks has a mean score of 2.8 and SD 0.96, qualitative risk analysis has a mean score of 2.6 and SD 1, quantitative risk analysis has a mean score of 2.4 and SD 1, implement risk response has a mean score of 2.6 and SD 1.15, and monitoring risks has a mean score of 2.8 and SD 1.15.

Project Risk Management					
PRM components	N	Minimum	Maximum	Mean	Std. Deviation
1. Plan Risk Management	35	1	5	2.63	1.087
2. Identify Risks	35	1	5	2.80	.964
3. Perform Qualitative Risk Analysis	35	1	5	2.63	1.003
4. Perform Quantitative Risk Analysis	35	1	5	2.46	1.010
5. Plan Risk Responses	35	1	5	2.69	.963
6. Implement Risk Responses	35	1	5	2.60	1.035
7. Monitor Risks	35	1	5	2.80	1.158
Mean of Mean	**35**			**2.65**	**1.03**

Table 15, Project Risk Management, source SPSS Results.

The average mean which is 2.65 close to level three, implies that there is project risk management standard process at the primer switch solution company as analyzed the collected respondent data , through the observation and interviews find out that for all strategic type of projects there is a strict project risk management , Even though there is risk management for other projects, less quantitative and qualitative risk analysis has been performed, as well as less risk response implementation. Furthermore, all risks are assessed on a project-by-project basis.

4.4.9. Project Procurement Management

Procurement is an essential component of any project, especially when additional capabilities, products, or services from outside of a company are required to meet project objectives and success of project completion. When project procurement management is well executed, the company reduces risk, reduces costs, and increases the certainty and quality of project deliverables. This process entails planning procurement management, conducting procurement, and controlling procurement.

Premier switch solutions share company project procurement management has a mean score of 2.5 and SD 1.2 for plan procurement management, 2.7 mean score and SD 1.1 for conduct procurement, and 2.7 mean score and 1.2 SD for control procurement, according to the selected respondent. And the average mean as shown in the below table, 2.66, close to level three, indicates that there is a standardize process through the company for project procurement, and also from the assessment through secondary data and interviews, it was observed that there is a procurement plan for strategic type projects and some for tactical type projects. There is also a procurement committee that makes decisions and approves products and services to be purchased from suppliers and/or vendors, as well as follows the process until it is delivered to the project team.

Project Procurement Management

PPM	N	Minimum	Maximum	Mean	Std. Deviation
1. Plan Procurement Management	35	1	5	2.57	1.267
2. Conduct Procurements	35	1	5	2.71	1.178
3. Control Procurements	35	1	5	2.71	1.250
Mean of Mean	**35**			**2.66**	**1.23**

Table 16, Project Procurement Management, source SPSS Results.

4.4.10. Project Stakeholders Management

Stakeholder management is the process of organizing, monitoring, and improving relationships with the people who have the most impact on the project's work, known as stakeholders. Some of the benefits gained from project stakeholder management include reduced risk and cost, a good reputation, and good engagement with stakeholders for smooth communication. This process entails identifying stakeholders, planning stakeholder engagement, managing stakeholder engagement, and monitoring stakeholder management.

According to respondent agreement, primer switch solutions Share Company has a mean score of 3 and SD 1.2 in identifying stakeholders, 2.9 with SD 1.1 in planning stakeholders engagement, 2.9 and SD 1.1 in managing stakeholders, and 2.9 and 1.1 in monitoring stakeholders.

Project Stakeholder Management					
PSM components	N	Minimum	Maximum	Mean	Std. Deviation
1. Identify Stakeholders	35	1	5	3.09	1.222
2. Plan Stakeholder Engagement	35	1	5	2.89	1.183
3. Manage Stakeholder Engagement	35	1	5	2.89	1.105
4. Monitor Stakeholder Engagement	35	1	5	2.86	1.115
Mean of Mean	**35**			**2.9**	**1.15**

Table 17, Project Stakeholder Management, source SPSS Results.

As shown in the table above, the average mean is 2.9, which is close to level three, indicating that the organization project stakeholder management has a standard process for identifying, planning, managing, and monitoring its stakeholders. It was also discovered that most of the projects have project stakeholder management plans. When a project team is formed, stakeholders who are member banks are involved in the majority of the projects, resulting in better engagement and the ability to easily comprehend the needs of stakeholders and change the approach if necessary for the successful completion of the project.

4.4.11. Variable Summary of the Study

The mean of mean score of all variables that is the project management knowledge areas to measure the maturity level of project management in primer Switch Solutions share company as per the selected respondent views relays on level three in accordance with PM solutions project management maturity model (PMMM) measurement is indicated in the table below.

Project Management Knowledge Areas	N	Mean	Std. Deviation

1. PROJECT INTEGRATION MANAGEMENT	35	2.887143	1.056714
2. PROJECT SCOPE MANAGEMENT	35	3.143333	1.085667
3.PROJECT TIME MANAGEMENT	35	2.973333	1.089
4.PROJECT COST MANAGEMENT	35	3.0275	1.20575
5.PROJECT QUALITY MANAGEMENT	35	2.636667	1.134333
6.PROJECT RESOURCE MANAGEMENT	35	2.79	1.0775
7.PROJECT COMMUNICATION MANAGEMENT	35	2.81	1.062667
8.PROJECT RISK MANAGEMENT	35	2.658571	1.031429
9.PROJECT PROCUREMENT MANAGEMENT	35	2.663333	1.231667
10. PROJECT STAKEHOLDER MANAGEMENT	35	2.9325	1.15625
Mean of Mean	**35**	**2.85**	**1.1**

Table 18, Variable Summary of the Study, source SPSS Results.

The model's implementation reveals that those knowledge areas are applicable to the majority of projects, implying that the organization's project management practice is above the average in all knowledge areas. The highest score was given to scope management, while the lowest was given

to project quality management. This is how the practice's areas of strength and weakness were identified.

This figure demonstrates that the company has a good project management practice with organizational standards and institutionalized processes, implying that there is a consistent and understandable method to project management. However, there are some improvement areas to be considered, such as a gap in the quality of deliverables, which of course has a serious impact on the success of a project.

Furthermore, the organization must consider advancing its maturity level to the next level in order to improve service delivery and customer satisfaction while remaining competitive in the industry through better project management.

CHAPTER FIVE:

11. SUMMARY, CONCLUSION AND RECOMMENDATION

11.1. Introduction

This section of the research incorporates the answers to the research questions, the major findings in summary, and will describe the Primer Switch Share Company's maturity level and what gaps have been identified when implementing the PMMM, as well as present recommendations for future consideration.

11.2. Summary of Findings

There are various projects that have been managed in the primer switch solutions share company for the delivery of different services and products in the digital payment ecosystem. This study was conducted to determine the organization's project maturity level, as project management is an enabler for the success of the business to cope with in the industry as a technology company, as well as to identify the major gaps in project management practice.

According to the findings of the study, projects of the strategical, tactical, and operational types are managed well in the company. Even though more emphasis is placed on strategic projects to ensure consistent implementation of all knowledge area components, and tactical projects are also given adequate attention, the operational projects are where the majority of gaps in knowledge area implementation occur.

From the ten knowledge areas, project scope management has received a higher score, indicating the company's great strength in defining, managing, and monitoring scope; the others that follow this knowledge area also have near scores, indicating good practice across all areas that determine the company's strength in stakeholders management ,time management , cost management, procurement management ,integration management , communication management , resource management and risk management except for project quality management, which has the lowest score and requires attention and improvement in the organization's project management practice.

In general, all of the responses gathered from the research participants agree that the level of project management maturity in the organization is level three, indicating that the company has organizational standards and an institutionalized process that denotes a consistent and understandable method for project implementation. Knowing the level of project management maturity and filling the gaps identified will aid the company in the success of its projects and business in the enhancement of service provision, customer satisfaction, and profit as well as increasing the level of maturity to the next step in which all processes will be integrated at a cooperative level.

11.3. Conclusion

For the dynamic business environment and ever- growing technology , a company like primer switch share company, as a technology company , has a strategical road map to manage initiatives for market stability, innovate , and gain a competitive advantage , the need for project management is undeniable and having a vision to be a leading E-payment company need to manage its operations with a robust project management practice, it will not be enough just managing all the projects to be successful, but to see" where we are" and "where we want to go " needs to be determined through assessment to identify what strengths and weaknesses and how mature is the project management practice are carried as a company.

Available project management maturity models are assisting companies in measuring their project management maturity model, which has been discussed in the theoretical and empirical analysis of this study. Thus, this study, based on the above ideas, measured the maturity level of the primer switch solutions share company by implementing PM Solution's PMMM and revealed that the company has strategical, tactical, and operational type projects on hand, and all knowledge area implementation as gathered from the participants, has been collected and analyzed and discovered that the company has a good project management status, with organizational standards and institutionalized processes in place for its projects, and relied on level three. A gap in quality management has been identified, as well as strength in project scope management and other knowledge areas.

This will be a good opportunity for the company to identify its weaknesses and the impact of the gap on business operations, and to take corrective action.

As a result of the study, it is concluded that the project management maturity level of the primer Switch Solutions Share Company is level three, The overall implementation across the knowledge area processes are institutionalized and have organizational standards, All processes are consistent and repeatable across all projects. But there is a gap in quality management that needs to be addressed, and require action to close the gap in order to progress to the next level is critical for the success of a projects and organization.

11.4. Recommendation

Based on the research findings, the following recommendation is made for future consideration.

- To obtain detailed information and to eliminate bias in the chosen PMMM, it is preferable to compare the project management maturity level of primer switch solutions share company with other project management maturity models, such as OPM3, which will confirm the existence of a gap and allow the organization to take action to close it and progress to the next level of maturity. Conducting in-depth research also aids in determining how each of the PM knowledge areas is performed by the organization's PMO in order to prepare a detailed improvement framework. To gain a more in-depth understanding, consider using a case study approach or another method. The organization's PMO should conduct a continuous regular assessment of maturity to determine the success of improvement efforts undertaken and to map a new action plan for future improvement measures.
- To improve the organization's project management maturity level, there is a need to provide training for project teams that do not have project management knowledge. Understanding the overall process will help the team deal with all project management disciplines and practices, allowing for better project management improvement. According to project human resource management, providing training and mentoring to company employees aids in the improvement of their PM knowledge and practice capacity.
- All knowledge area components must be utilized, documented, and implemented to all strategical, tactical, and operational type projects in order to have a standardized process across all projects and be able to progress. In this regard, the use of generic guides such

as the PMBOK may be very beneficial. Attaining a higher level of practice maturity means that the organization is carrying out all of the practices required to achieve the goals of the knowledge areas, thereby increasing the likelihood of achieving knowledge area goals and, as a result, project objectives.

- To improve the overall maturity of the project management level, the company's PMO must be strengthened with various capabilities. As the payment industry grows in the country, there will be a need for enhancements in service provision, product innovation, and market competitiveness, resulting in more projects to be managed through the organization.
- All knowledge areas are above average, according to the analysis of the collected data, information, and interviews, as well as the assessment of secondary resources; however, there is a gap in project quality management in terms of quality management planning, monitoring, and control. The company should pay special attention to quality management in order to achieve the project objectives. Primer Switch Solutions Share Company should consider this as an input and align it with the organization's strategic goals in order to fill the gap in the project management process.
- It is recommended to organize the projects and implement the knowledge areas to program to similar projects and then to portfolios managed at the organization, which will most likely improve project management in the company. This should be managed after further assessing the project details in order to organize them as a program and portfolio.
- This study focused on assessing the organization's project management maturity level through the implementation of a PM solution and determining the level and revealing the gaps, but it is recommended that further research be conducted on the impact of this assessment on project success and organizational growth incorporated into the project management process groups.

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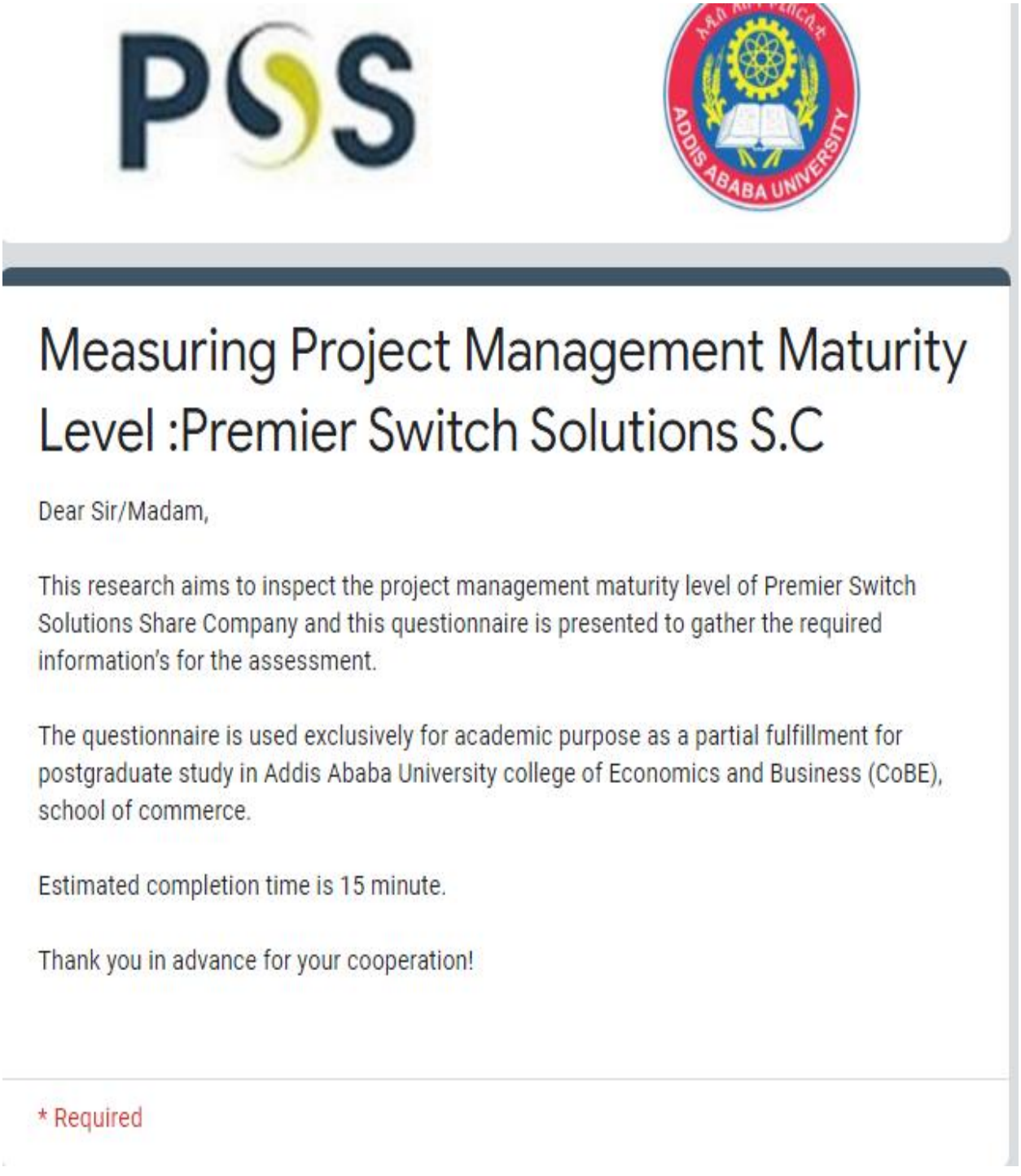
Appendix I: Questionnaire

Google forms link ….. *https://forms.gle/W56jV96P4Hka1ciJ9*



Measuring Project Management Maturity Level :Premier Switch Solutions S.C

Dear Sir/Madam,

This research aims to inspect the project management maturity level of Premier Switch Solutions Share Company and this questionnaire is presented to gather the required information's for the assessment.

The questionnaire is used exclusively for academic purpose as a partial fulfillment for postgraduate study in Addis Ababa University college of Economics and Business (CoBE), school of commerce.

Estimated completion time is 15 minute.

Thank you in advance for your cooperation!

* Required

1. GENERAL QUESTIONS.

1.1. Educational background *

- ◯ B.A. degree
- ◯ MA or above

1.2. Field of study *

Your answer

1.3. Current Position at the organization *

Your answer

1.4. Work Experience at the organization *

- ◯ Less than 5 Years
- ◯ 6-10 years
- ◯ More than 10 years

1.5. Have you ever taken a project management course or training? *

- ◯ Yes
- ◯ No

PM SOLUTIONS.

THE PROJECT MANAGEMENT MATURITY MODEL USED FOR THE ASSESSMENT.

1. QUESTIONS REGARDING TO PROJECT MANAGEMENT KNOWLEDGE AREAS AND MATURITY LEVEL.

Please tick to the level wherever you consider the status is suitable.

Level 1	(Initial) denotes no consistent process to perform a project i.e adhoc process.
Level 2	(Structured Processes and Standards) denotes to consistent, basic methods to project execution is implemented i.e basic process, not all process are standardized.
Level 3	(Organizational Standards and Institutionalized Process) denotes to consistent and comprehensive method to project implementation i.e all process standard for all projects and repeatable.
Level 4	(Managed) denotes to project management is institutionalized and assimilated into the organization business planning process i.e all processes are integrated at corporate level.
Level 5	(Optimized) denotes to project centered organization with an established method to continuous enhancement of project management i.e processes are in place.

1. Project Integration Management *

	Level 1	Level 2	Level 3	Level 4	Level 5
Develop Project Charter	○	○	○	○	○
Develop Project Management plan	○	○	○	○	○
Direct and Manage Project work	○	○	○	○	○
Manage Project Knowledge	○	○	○	○	○
Monitor and Control Project work	○	○	○	○	○
Perform integrated change control	○	○	○	○	○
Close project or phase	○	○	○	○	○

2. Project Scope Management *

	Level 1	Level 2	Level 3	Level 4	Level 5
Plan scope management	○	○	○	○	○
Collect requirements	○	○	○	○	○
Define Scope	○	○	○	○	○
Create Work Breakdown Structure	○	○	○	○	○
Validate scope	○	○	○	○	○
Control scope	○	○	○	○	○

3. Project Time Management *

	Level 1	Level 2	Level 3	Level 4	Level 5
Plan Schedule Management	○	○	○	○	○
Define Activities	○	○	○	○	○
Sequence Activities	○	○	○	○	○
Estimate Activity durations	○	○	○	○	○
Develop Schedule	○	○	○	○	○
Control Schedule	○	○	○	○	○

4. Project Cost Management *

	Level 1	Level 2	Level 3	Level 4	Level 5
Plan cost Management	○	○	○	○	○
Estimate costs	○	○	○	○	○
Determine Budget	○	○	○	○	○
Control costs	○	○	○	○	○

5. Project Quality Management *

	Level 1	Level 2	Level 3	Level 4	Level 5
Plan Quality Management	○	○	○	○	○
Manage Quality	○	○	○	○	○
Control Quality	○	○	○	○	○

6. Project Resource Management *

	Level 1	Level 2	Level 3	Level 4	Level 5
Plan Resource Management	○	○	○	○	○
Estimate Activity Resources	○	○	○	○	○
Acquire Resources	○	○	○	○	○
Develop Team	○	○	○	○	○
Manage Team	○	○	○	○	○
Control Resources	○	○	○	○	○

7. Project Communications Management *

	Level 1	Level 2	Level 3	Level 4	Level 5
Plan communications Management	○	○	○	○	○
Manage communications	○	○	○	○	○
Control communications	○	○	○	○	○

8. Project Risk Management *

	Level 1	Level 2	Level 3	Level 4	Level 5
Plan Risk Management	○	○	○	○	○
Identify Risks	○	○	○	○	○
Perform Qualitative Risk Analysis	○	○	○	○	○
Perform Quantitative Risk Analysis	○	○	○	○	○
Plan Risk Responses	○	○	○	○	○
Implement Risk Responses	○	○	○	○	○
Monitor Risks	○	○	○	○	○

9. Project Procurement Management *

	Level 1	Level 2	Level 3	Level 4	Level 5
Plan Procurement Management	○	○	○	○	○
Conduct Procurements	○	○	○	○	○
Control Procurements	○	○	○	○	○

10. Project Stakeholder Management *

	Level 1	Level 2	Level 3	Level 4	Level 5
Identify Stakeholders	○	○	○	○	○
Plan Stakeholder Engagement	○	○	○	○	○
Manage Stakeholder Engagement	○	○	○	○	○
Monitor Stakeholder Engagement	○	○	○	○	○

Appendix II: List of some Projects

No.	Project Title	Project type (Strategical, Tactical or Operation)
1	Card file integration project	Operation
2	VISA Business enhancement project	Operation
3	ATM denomination project	Operation
4	ATM Screen change project	Operation
5	CBS Upgrade support project	Operation
6	BI report implementation project	Operation
7	Stress test Project	Operation
8	MPOS with SANTIMPAY project	Tactical
9	Zayride mPOS project Project	Tactical
10	Visa acquiring project Project	Tactical
11	Green PIN/ePIN Project	Operation
12	CBS upgrade Project	Operation
13	PCI – DSS Recertification Project	Strategical
14	Card Perso machine project	Strategical
15	MC acquiring project	Tactical
16	Help desk project	Tactical
17	UPI acquiring Project	Tactical
18	E-Commerce gateway Project	Strategical
19	LORO test Project	Operation
20	Call manager project	Tactical